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BULLETIN
OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,
TAKEN SIMULTANEOUSLY ON SEPTEMBER 1, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.11	764.9	83.7	28.7	65	NNW			2		5			0	0	Fair	Charnot.
Algiers			30.08	763.9	79.5	26.4	81	NW			1		2			0	0	Fair	Peter.
La Calle																			Kuntz.
Tunis			30.16	766.0	87.8	31.0	33	NW			4		0			0	0	Fair	Jacques.
Sfax			30.17	766.4	84.2	29.0	57	SE			3		1			0	0	Fair	Chauvey.
Saïda			30.10	764.6	84.2	29.0	29	SW			1		7			0	0	Thunder	Grosjean.
Tebessa			30.15	765.8	85.5	29.7		NNW			3		0			0	0	Clear	Colin.
Geriville			30.15	765.7	87.8	31.0	19	SW			2		4			0	0	Thunder	Bernadach.
Laghouat			30.14	765.6	95.0	35.0		W			3		3			0	0	Sirocco	Simon.
Biskra			30.10	764.6	96.6	35.9		NW			1		0			0	0	Fair	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			29.92	760.0	69.3	20.7	82	SW			3		10			0.327	8.3		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.83	757.7	63.5	17.5	87	W			3		10			0.067	1.7		I. R. Observatory.
Eperies			29.72	755.0	72.7	22.6	54	SE			2					0	0		Julius Mikolik.
Gratz	28.76	731.5	29.04	760.3	63.3	17.4	59	NW			5		2						Andreas Rospini.
Hermannstadt	28.41	721.5	29.79	755.6	62.6	17.0	69	WNW			3		5			0	0		Prof. Reissenberger.
Kremsmünster	28.68	728.4	30.01	76 .2	57.2	14.0	76	WNW			6		10			0.716	18.2		Prof. C. Wagner.
Lemberg			29.70	754.3	55.6	13.1	97	NE			5		10			0.681	17.3	Raining	Dr. T. Stanecki.
Nyiregyhaza			29.76	756.0	69.1	20.6	64	N			1		5			Blank	Blank		Habzsuda Daniel.
Pola			29.97	761.1	71.6	22.0	64	WSW			1		1ks			0	0		I.R. Hydrographic Office
Szegedin			29.86	758.4	69.8	21.0	58	W			2		2			0.177	4.50		Karl Stancel.
Trieste			29.97	761.3	70.3	21.3	71	NW			1		1			0	0		Prof. V. Farolfi.
Vienna			29.90	759.5	59.4	15.2	60	W			6		6			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. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.23	767.7	61.2	16.2	78	WNW			4	0	0			0.051	1.30		Royal Observatory.

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

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LIBRARY MAR 14 '... METEOROLOGICAL OFFICE

BRITISH SERIES.

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

Stations.	Barometer. Instrumental errors. Inches.	Barometer. Instrumental errors. Millimeters.	Barometer. Reduced to sea level. Inches.	Barometer. Reduced to sea level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.21	767.3	55.1	12.8		SSE	13	5.8			1			0.010	0.25	Clear	William Roswell.
Ardrossan			30.19	766.8	59	15.0		SW			1		8					Overcast	James Mayes.
Armagh Observatory			30.19	766.8	63.0	17.2		S	6	2.7			8					*D. clouds	[illegible], for Dr. Robinson.
Bidston, Liverpool Obs.			30.22	767.6	65.4	18.6		SSE			1		10					Misty	John Hartnup, Jr.
Birr Castle, (Parsonstown)			30.17	766.3	67.0	19.4		S			1		8					*D. clouds	J. Dreyer.
Bradford			30.21	767.3	61.5	16.4		E			1		7					Fine	J. McLandsborough.
Bridgetown, (Barbadoes)			30.00	762.0	82	27.8		NE			2		6					Gloomy	T. H. Hunt.
Cambridge Observatory			30.27	768.8	68	20.0		W			1		1					*D. clouds	Sergeant Hunt, A.H.C.
Cape Good Hope Obs.			30.12	765.0	62.6	17.0	68	S	19	8.5			1						Th. Staff, for E. J. Stone.
Cardington			30.28	769.1	66.6	19.2		NW					3					*D. clouds	John McLaren.
Carlisle			30.21	767.3	66.2	19.0		Calm					1			0	0	Clear	T. Bell, for J. Cartmell.
Chatham, School M. E.			30.25	768.3	66.7	19.3		SW			1		1					Clear	Capt. J. Fellowes, R. E.
Dartmoor	28.92	734.6	30.23	769.1	55.5	13.1		SW			2		10					Rain, fog	R. E. Power.
Donaghadee			30.20	767.1	62	16.7		SSE			2		10					Overcast	J. Mac Gowan, Jr.
Dover			30.26	768.6	63	17.2		NNE			3		3						J. Costello.
Eccles, (near Manchester			30.22	767.6	68.7	20.4		WNW	2.2	1.0			5					*D. clouds	Thomas Mackereth.
Falmouth Observatory			30.40	772.1	66.5	19.2		SSW	9	4.0			10					Overcast	The Staff.
Fort Napier, (Natal)	27.64	702.0	29.97	761.2	67.5	19.7		E			2		8					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone			29.98	761.5	77	25.0		W					8						[tis.
Galway, Queen's College																			B. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			30.13	765.3	78.5	25.8		NE			3		8					Levanter	Sergt. E. G. Baker.
Glasgow Observatory			30.18	766.6	60.0	15.6		NE			1		10					Overcast	Lewis Stuart.
Great Yarmouth			30.25	768.3	61	16.1		NNW			3		4					*D. clouds	G. T. Watson.
Greenwich Royal Obs.			30.28	769.1	69.4	20.8		WNW			1		5					Hazy	The Staff, for G. B. Airy.
Guernsey			30.34	770.6	65.5	18.6		NNW			1		7					*D. clouds	Dr. S. E. Hoskins, [illegible]y.
Halifax, Moorside Obs.			30.24	768.1	63.0	17.2		WNW					6					*D. clouds	F. J. Page, for L. J. Cross.
Helston			30.25	768.3	70	21.1		S			4		8					*D. clouds	M. P. Moyle.
Holyhead			30.19	766.8	64	17.8		SSW			2		10					Foggy	John Tilston.
Hull Park																			
Kew Observatory			30.28	769.1	65.2	18.4		NW	5	2.2			8					*D. clouds	The Staff.
Kingstown			30.21	767.3	65	18.3		ESE			2		9					Overcast	George Mitchell.
Leicester Museum			30.27	768.8	64.9	18.3		Calm			0		7					*D. clouds	William J. Harrison.
Llandudno			30.23	767.8	65.6	18.7		S					10					Overcast	Dr. James Nicol.
Malta, (Mediterranean)			30.12	765.0	83.4	28.6		NW			1		2k					D. clouds	Fred Travis, Pvt A.H.C.
Nairn			30.13	765.3	56	13.3		SW			1		5						W. D. Penny.
Nassau, (Bahamas)			30.17	766.3	86.2	30.1		NE			1		3					*D. clouds	Surg.-Maj. Henry.
Nottingham			30.26	768.6	69.5	20.8		SW			1		5k		SW	0	0		E. J. Lowe.
Oscott, St Mary's College			30.25	768.3	67.1	19.5		SSW			1		8					Fair	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			30.26	768.6	68	20.0		WSW			1		9					Overcast	J. Lucas, for R. Main.
Plymouth			30.30	769.6	64.3	17.9		S			1		10					Overcast	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			30.19	766.8	66	18.9		SW			2		8					Foggy	W. Kennedy.
Saint Ann's Head			30.23	767.8	61	16.1		SW			2		8					Overcast	John C. Walker.
Saint Helier, (Jersey)			30.33	770.4	68.2	20.1		W			3		8						A. P. Amy.
Sandwick Manse (Orkneys																			
Scarborough			30.25	768.3	56.0	13.3		ENE			2		4					D. clouds	F. Shaw.
Scutari cemetery, (Turkey			29.77	756.1	88.0	31.1		SW			1		1					D. clouds	Sergt. W. H. Lyne.
Sheffield			30.21	767.3	67	19.4		NNW			1		6					D. clouds	W. F. Cooper.
Stilloth Rectory			30.21	767.3	67.8	19.9		Calm			0		3			0	0	D. clouds	Rev. Francis Redford
Stonyhurst Observatory			30.21	767.3	64.3	17.9		SW			1		4					D. clouds	The Staff.
Stornoway, Lewis C. (Hebr.)			30.10	764.5	54	12.2		SE			3		0					Clear	John Smith.
Stratfield Turgiss			30.27	768.8	68.3	20.2		SW			1		3						Rev. Charles H. Griffith
Streatley Vicarage																			Rev. John Slatter.
Sumburgh Head, (Shetland)																			
Thurso			30.15	765.8	60	15.6		S			2		0					Clear	John Trotter.
Truro, Royal Institution			30.24	768.1	69	20.6		SW			4		9					Gloomy	W. Newcombe.
Valencia Observatory			30.13	765.3	63.9	17.7		SW	12	5.4			4					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			30.22	767.6	59.0	15.0		SE			2					0	0	Fine	Andrew Gibb.
Monach Lt-house, Shet Is)																			
North Unst, (Shetland Is)																			

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error, —.099. *Detached clouds.

DANISH SERIES.

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

Copenhagen			29.82	757.4	61.5	16.4	76	ESE			2		8						
Fanöe			29.96	761.0	65.8	18.8	56	NNE			6		2						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.73	755.2	54.0	12.2	84	SW			6		8						
Thorshavn, (Faröe)			30.07	763.6	55.8	13.2	67	Calm			0		5						
Vestervig			29.98	761.5	64.0	17.8	76	NNE			2		2						

Note.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.34	770.5	69.4	20.8	93	W			2					0	0	Raining	Normal School.
Amiens																			Normal School.
Avignon			30.13	765.3	75.4	24.1	38	NNW			4		0			0	0	Clear	Normal School.
Bar-sur Seine			30.29	769.3	66.7	19.3	50	W			1		5			0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			30.1	769.9	64.6	18.1	71	N			2		5			0	0	Cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.22	767.5	69.4	20.8	58	N			2		..k		S	0	0		Normal School.
Bourges			30.05	763.3	68.0	20	49	WNW			2		2		W	0	0		Normal School.
Brest			30.27	768.9	70.0	21.1	75	SW			1		10		SW	0	0	Cloudy	Naval Observatory.
Caen																			Normal School
Chartres			30.34	770.6	65.1	18.4		N			4		2		SE				Normal School.
Chaumont	29.11	739.3	30.24	768.1	62.1	16.7		WSW			3		8k		WSW	0	0	Cloudy	Normal School.
Commercy			30.30	769.7	61.7	16.5	69	W			4		5k1		W	0	0	Cloudy	Normal School.
Le Mans																			Normal School.
Lons-Le Saulnier			30.24	768.1	65.7	18.7	69	N			1		2		NW	0	0		Normal School.
Mâcon			30.27	768.9	67.6	19.8	57	N			4		5		SW	0	0	Cloudy	Normal School.
Mirecourt			30.26	768.7	62.2	16.8	71	E			4		8		W	0	0	Cloudy	Normal School.
Orleans																			Normal School.
Paris Observatory			30.30	769.5	66.4	19.1	45	NNW			3		5ck		NNW	0	0	Cloudy	National Observatory.
Parthenay			30.19	766.8	65.1	18.4	98	NE			2		10					Cloudy	Normal School.
La Roche sur Yon			30.25	768.4	65.1	18.4	60	S			2		8		W			Cloudy	Normal School.
Rochefort, Observatory			30.34	770.6	74.8	23.8	39	NNW			3		8			0	0		Naval Observatory.
Rouen			30.32	770.0	68.2	20.1	51	NW			2		0			0	0	Clear	Normal School.
Saint Lo																			Normal School.
Villefranche																			Normal School
Sub-Series.																			
Gorée, (Senegambia)																			Frère Pascall.
Mont-Louis	25.11	637.9			64.6	18.1	65	SW	9.3	4.17			1		W	0	0		—. Faiguère.
Montsouris Observatory			30.34	769.5	65.8	18.8	32	NW			2		8k, c		NW	0	0		Marié Davy.
Perpignan			30.20	767.1	78.3	25.7	36	WNW	11.2	5.00			2		SW	0	0		Dr. Fines.
Saint Maur, (near Paris)			30.40	769.6	66.7	19.3	51	NW			2		3c			0	0		E. Renou.
Saint Pierre, (Martinique)																			
Tours			30.31	769.8	69.3	20.7	59	WNW			1		10		N	0	0		C. Marquet.
Versailles, (near Paris)			30.31	769.8	68.4	20.2	53	N			1		7			0	0		Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			29.86	758.4	74.1	23.4	98	SE	2.7	1.2		10ks	0			7.28 / 8.20	185.0 / 208.1		H. Le Lec, S. J.

Note.—The originals give the wind-force by the scale 0 to 7; the weather in general terms; 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,0[illegible]9.9 ft. The rain-fall at ZiKa-Wei is given as recorded by two different gauges.

GERMAN SERIES.

Furnished by the coöperation of Prof. Geo. Neumayer, Superintendent Royal 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.05	763.3	62.6	17.0	71	W	18	8			8			0.236	6.0		Prof. Hoh.
Berlin			29.89	759.2	60.8	16.0	63	NW	18	8			8			0.055	1.4		Prof. Arndt.
Breslau			29.88	759.0	59.0	15.0	76	N	4	2			9			1.008	25.6	Raining	Dr. P. Neugebauer.
Carlsruhe			30.16	766.0	60.1	15.6	71	SW	34	15			10			0.118	3.0		A. Senz.
Cassel			29.83	757.7	64.2	17.9	75	NW	22	10			8			0.181	4.6		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.79	731.3	30.23	767.8	59.9	15.5	63	W					10			0.024	0.6		M. Wilhelm.
Hamburg			29.91	759.8	61.3	16.3	79	NNW	22	10			10			0.075	1.9	Rain-squalls	Deutsche Seewarte.
Kiel			29.85	758.3	59.9	15.5	86	N	22	10			10			0.043	1.0		Prof. G. Karsten.
Königsberg			29.84	758.0	61.7	16.5	75	SE	11	5						0.059	1.5	Cloudy	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			29.94	760.5	54.7	12.6	99	NW	9	4			9			0.441	11.2	Raining	Prof. Bruhns.
Münster			30.04	762.9	64.2	17.9	63	NW	22	10			3			0.370	9.4		Prof. E. Heis.
Posen			29.95	760.8	56.1	13.4	87	NW	9	4			10			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.22	767.5	64.0	17.8	56	W	13	6			10			0	0		Hartwig.
Stuttgart			30.15	765.8	59.0	15.0	73	W					10			0.016	0.4	Light rain	Mr. Würth.
Thorn			29.82	757.4	61.9	16.6	75	E	13	6			10			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.97	766.1	61.3	16.3	77	NW	31	14			10			0.107	2.71		Prof. Flesch.
Wustrow, Naval School			29.85	758.1	61.9	16.6	72	W	13	6			10			0.043	1.1	Raining	E. F. Schütz.

Note.—In the originals the distinction between 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 1,35[illegible].3 feet.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.01	762.2	73.4	23.0	57	SSW			1		1			0	0		
Mondovi			30.01	762.2	71.4	21.9	47	WNW			2		3	WNW		0	0		
Genoa			30.02	762.4	76.8	24.9	56	SW	3.1	1.4			0			0	0		
Pavia			30.00	762.0	75.2	24.0	54	SW			1		0			0	0		
Verona			29.96	760.9	78.3	25.7	55	E			1		9			0	0		
Padua			29.94	760.5	71.6	22.0	61	WSW	5.6	2.5			0			0	0		
Parma																			
Bologna			30.01	762.2	74.1	23.4	63	NW			1		2	W		0	0		
Leghorn			30.03	762.8	77.0	25.0	54	SW					2			0	0		
Urbino																			
Ancona																			
Siena			29.99	761.8	73.6	23.1	55	NNW	1.8	0.8			3	W		0	0		
Rome			30.02	762.5	81.0	27.2	46	WSW	4.9	2.2			2			0	0		
Naples, O.U.			30.02	762.5	78.8	26.0	48	W			4		3	NE		0	0		
Lecce			30.01	762.2	77.2	25.1	58	ENE	15.0	6.7			8	SW		0	0		
Cosenza			30.03	763.4	82.8	28.2	54	SSW			2		6	SE		0	0		
Catania, (Sicily)																			
Ripostto			30.04	763.1	83.8	29.8	64	E			4		1			0	0		
Palermo			30.02	762.5	79.9	26.6	56	N	17.4	7.8			3			0	0		
Sub-Series.																			
Naples, S. R.			30.08	764.1	78.8	26.0	62	W	4.3	1.9			5	SW		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; the cloudiness occasionally by the scale 0 to 4, and generally without distinguishing between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovia is 55[illegible] meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,14[illegible].3 feet.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Flushing			30.27	768.8	62.2	16.8		NNW			4								
Groningen			30.41	76[illegible].3	63.5	17.5		NNW			5								
Helder			30.15	765.7	62.1	16.7		NW			4								
Utrecht			30.13	765.3	65.5	18.6		NW			4		8					Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bergen			29.98	761.5	69.8	16.0	61	NNW	5.8	2.6			0			0	0		
Christiania			30.0[illegible]	762.2	61.7	16.5	58	NE	6.9	3.1			3			0	0		
Tromsö			29.76	755.9	41.2	6.8	94	W			2		10			0.244	6.2	Raining.	

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.15	765.9	80.2	26.8	48	S	6.3	2.8			1						The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

RUSSIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.78	756.3	6[illegible].2	16.8	71	N	9	4			10						Astronomical Obs.
Wilna			29.87	758.8	63.9	17.[illegible]	49	alm	0	0			10						Astronomical Obs.
Dorpat			29.99	761.7	62.2	16.8	43	NNW	2	1			1						Physical Cabinet.
St. Petersburg			29.95	760.8	53.1	11.7	66	WNW	7	3			1						Central Physical Obs.
Kuopio			29.90	759.4	54.0	12.2	63	W					5		E	0	0		Ch. Forsten.
Kieff			29.76	755.8	6[illegible].2	20.1	56	ESE	9	4			9					Light rain	Physical Cabinet.
Nikolaiev			29.7[illegible]	756.6	85.5	29.7	37	NNW	4	2			0						Kurdukof.
Kertch			29.41	757.1	84.7	29.3	54	S	4	2			1						Lagorio.
Moscow			29.55	760.6	59.[illegible]	15.2	55	WSW	10	4.5			6						Meteorological Obs.
Lugan			29.72	755.0	77.2	25.	40	NNE	13	6			0						Meteorological Obs.
Archangel			29.78	756.4	51.3	10.7	80	NNW	4	2			10						Ogorodnikof.
Tiflis	28.38	720.9	29.70	754.3	85.3	29.6	40	SSW	4	2			3						Physical Obs.
Astrakhan			29.85	758.1	78.8	26.0	57	SE	8	3.5			9						Sebasthanof.
Kasan			29.70	754.4	62.[illegible]	16.9	61	NW	4	2			7						Physical Cabinet.
Orenburg			29.76	755.8	76.7	24.7	55	S	4	2			5						Tschernischef.
Ekaterinburg	28.64	727.4	29.63	752.6	50.2	10.1	96	E	8	3.5			10					Raining	Meteorological Obs.
Kasaly			29.91	759.6	82.0	28.1	54	W	8	3.5			3						Bobrof.
Tashkend	28.35	720.3	29.98	761.5	78.1	25.6	67	Calm	0	0			0						Michelson.
Barnaul			29.82	757.3	55.[illegible]	13.1	78	SW	18	8			3					Raining	Meteorological Obs.
Yeniseisk			29.59	751.6	53.2	11.8	91	SE	7	3			10						Marks.
Irkutsk	28.52	724.5	29.89	759.1	52.[illegible]	11.2	85	Calm	0	0			0						Usolzef.
Oorga	25.80	655.2	29.97	761.2	57.4	14.1	63	Calm	0	0			0						Mossin.
Peking (China)			30.19	766.9	70.0	21.1	90	Calm	0	0			10						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. The elevation of Tiflis is 405 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, m. 454.2?, or 1,621.3? ft.; Irkutsk, 392. m., or 1,286. ft.; Nertchinsk, 592.0? m.; or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,20[illegible].6? ft.

SPANISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.06	763.5	90.9	32.7	35	S	5.8	2.6		0	6			0	0	Cloudy	Royal Observatory.
San Fernando																			The Naval Observatory.

Note.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea			29.84	758.0	57.2	14.0	62	NW			2		8			0	0		
Hernosand			30.07	763.7	61.2	16.[illegible]	33	WSW			2		2			0	0		
Stockholm			29.80	759.3	54.[illegible]	12.2	99	NNE			6		10			0.390	9.9	Raining	
Wisby			29.80	756.9	62.6	17.[illegible]	72	WNW			2		5			1.835	46.6		
Sub-Series.																			
Upsala			29.96	760.9	57.4	14.1	64	NE	11.0	4.9			8		E				Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.82	732.0	30.21	767.4	65.8	18.8	41	NE			2		3			0	0		The Observatory.
Zurich	28.62	726.9	30.23	767.9	60.8	16.0	60	NW			2		8			0	0	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +4.5mm.; Thermometer, —1°.2 R. H.; Relative Humidity, —18 per cent.

Note.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria, Lee Obs'y.			29.88	759.0	88.9	31.6	56	SW			3		2						Prof. C. N. A. Van Dyck.
Constantinople			29.82	757.4	82.0	27.8	44	S	4	2			0			0	0	Clear	
Fao, (Persian Gulf)			29.71	754.5	98.6	37.0		SW			3		0					Clear	
Salonica					90.5	32.		S			1		0					Clear	
Valona			29.98	761.6	77.9	25.5		NW			2		5					Cloudy	
Varna			29.84	758.0	78.8	26.0		SE			2		5					Cloudy	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea level. The distinction between upper and lower clouds is not made.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens																			

Note.—Reports commence October 1, 1875.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario			30.18	766.6	72	22.2		Calm	0	0		0	0			0	0	Clear	
Chatham, N. B.			30.17	766.3	62	16.7	77	W	1	0.4		0	0			0	0	Clear	
Charlottetown, P. E. Island			30.[illegible]1	767.[illegible]	65	18.3	91	Calm	0	0		0	0			0	0	Clear	
Fort Garry, Manitoba			29.92	760.0	53	11.7	93	NE	4	1.8		5k	5ks	W		0	0	Cloudy	
Halifax, N. S.			30.15	765.8	60	15.6	88	NW	2	0.9		0	0			0	0	Clear	
Kingston, Ontario			30.16	766.1	67	19.4	98	Calm	0	0			Fog			0	0	Foggy	
Montreal, Quebec			30.14	765.5	66	18.9	82	NE	3	1.3		2c	Haze			0	0	Fair	
Ottawa, Ontario			30.13	765.3	60	15.6	71	W	2	0.9		2c	0			0	0	Clear	
Parry Sound, Ontario			30.07	763.8	67	19.4	74	SE	9	4.0		2ck	2ks	SW	SW	0	0	Fair	
Port Dover, Ontario			30.11	764.8	59	15.0	94	Calm	0	0		2k	0	NW		0	0	Fair	
Port Stanley, Ontario			30.11	764.8	58	14.4	96	E	3	1.3		2c	0	E		0	0	Clear	
Quebec, Quebec			30.15	765.8	69	20.6	61	Calm	0	0			Fog			0	0	Foggy	
Saugeen, Ontario			30.[illegible]4	763.0	[illegible]8	20.0	70	Calm	0	0		8k	0			0	0	Cloudy	
Stayner, Ontario			30.05	763.3	65	18.3	81	SE	3	1.3		2c	0			0	0	Fair	
Sydney, C. B.			30.21	767.3	64	17.8	67	Calm	0	0		0	0			0	0	Clear	
Toronto, Ontario			30.13	765.3	65	18.3	83	Calm	0	0		0	0			0	0	Clear	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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. 1—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.15	765.8	69	20.6	79	Calm	0	0		Haze	Haze			0	0	Hazy	
Alpena, Mich			29.91	759.7	72	22.2	75	S	4	1.8		8k	0	NW		0	0	Cloudy	
Atlantic City, N. J			30.13	765.3	69	20.6	90	N	8	3.6			10s		N	0	0	Cloudy	
Augusta, Ga.			30.12	764.8	73	22.8	81	N	1	0.4		0	0			0	0	Clear	
Baltimore, Md			30.14	765.5	73	22.8	81	N	1	0.4		2c	Sm'e			0	0	Fair	
Barnegat, N. J			30.13	765.3	69	20.6	90	NE	20	8.9			10s		NE	0	0	Cloudy	
Benton, Montana	27.14	689.3	29.94	760.5	42	5.6	91	SW	4	1.8		0	0			0	0	Clear	
Bismarck, Dakota	28.26	718.0	29.90	759.4	48	8.9	63	NW	4	1.8		2c	Haze			0	0	air	
Boston, Mass			30.17	766.3	70	21.1	57	N	7	3.1		0	Haze			0	0	Clear	
Breckenridge, Minn			29.83	757.7	61	16.1	100	NW	4	1.8			10s			0.34	8.6	Cloudy	
Brownsville, Tex																			
Buffalo, N. Y.			30.09	764.3	68	20.0	74	S	1	0.4		0	Sm'e			0	0	Clear	
Burlington, Vt			30.14	765.5	70	21.1	66	S	6	2.7		2c	Sm'e			0	0	Fair	
Cairo, Ill			30.09	764.3	75	23.9	85	S	2	0.9		0	0			0	0	Clear	
Cape Hatteras, N. C			30.01	762.2	74	23.3	90	NE	16	7.2			10s		NE	0	0	Cloudy	
Cape Henry, Va			30.09	764.3	77	25.0	73	N	9	4.0		2c	0			0	0	Fair	
Cape May, N. J			30.19	766.8	69	20.6	90	NE	8	3.6		0	5s		NE	0	0	Fair	
Charleston, S. C			30.09	764.3	77	25.0	82	SW	3	1.3		0	Sm'e			0	0	Clear	
Cheyenne, Wyoming	24.13	612.9	30.07	763.8	44	6.7	71	SE	2	0.9		0	2s			0	0	Fair	
Chicago, Ill			29.98	761.5	75	23.9	81	S	10	4.5		5ck	2s	SW	SW	0	0	Fair	
Cincinnati, Ohio			30.05	763.3	73	22.8	85	S	2	0.9		2k	0			0	0	Clear	
Cleveland, Ohio			30.07	763.8	70.3	21.3	75	SE	8	3.6		0	2ks			0	0	Fair	
Colorado Springs, Col	24.20	614.7	30.07	763.8	51	10.6	86	N	5	2.2		2k	0	NW		0	0	Fair	
Corsicana, Tex			30.04	763.0	76	24.4	91	S	2	0.9		2k	0	S		0	0	Clear	
Davenport, Iowa			29.94	760.5	75	23.9	90	SE	4	1.8			10s		SW	0.02	0.5	Cloud	
Denison, Tex			29.98	761.5	77	25.0		SE				0	0			0	0	Clear	
Denver, Col	24.89	632.2	30.11	764.8	57	13.9	58	E	4	1.8		5k	0	NW		0	0	Fair	
Detroit, Mich			30.04	763.0	71	21.7	85	S	3	1.3		5k	0	SW		0	0	Fair	
Dodge City, Kan	27.31	694.7	29.54	750.3	70	21.1	52	S	10	4.5		10cs	0			0	0	Cloudy	
Dubuque, Iowa			29.91	759.7	74	23.3	90	S	4	1.8			1s		S	0.29	7.4	Cloudy	
Duluth, Minn			29.83	757.7	62	16.7	100	Calm	0	0			Fog			0.18	4.6	Foggy	
Eastport, Me			30.20	767.1	60	15.6	70	NE	5	2.2		5c	0	E		0	0	Fair	
Erie, Pa			30.06	763.5	69	20.6	70	SE	4	1.8		0	Sm'e			0	0	Clear	
Escanaba, Mich			29.79	756.7	67	19.4	95	S	8	3.6			10s		S	0.69	17.5	Cloudy	
Fort Gibson, I. T			29.96	761.0	75	23.9	85	SE	6	2.7		0	0			0	0	Clear	
Fort Sill, I. T																			
Fort Sully, Dakota	28.35	720.1	30.00	762.0	52	11.1	93	NW	6	2.7		0	2s		NW	0	0	Fair	
Galveston, Tex			30.01	762.2	82	27.8	78	S	3	1.3		0	0			0	0	Clear	
Grand Haven, Mich			29.96	761.0	74	23.3	76	S	17	7.6		10c	0	SW		0	0	Cloudy	
Indianapolis, Ind			30.04	763.0	73	22.8	81	S	4	1.8		5c	Sm'e			0	0	Fair	
Indianola, Tex			30.04	763.0	82	27.8	82	S	6	2.7		Haze	2ks		S	0	0	Fair	
Jacksonville, Fla			30.10	764.5	75	23.9	85	Calm	0	0			10s			0.08	2.0	Cloudy	
Keokuk, Iowa			29.89	759.2	79	25.6	74	SW	6	2.7		5k	5s	SW		0	0	Cloudy	
Key West, Fla			30.10	764.5	82.8	28.	71	SE	4	1.8		5c	2ks			0	0	Fair, hazy	
Kittyhawk, N. C			29.03	762.7	73	22.8	90	NE	24	10.7		8cs	2k		N	0	0	Cloudy	
Knoxville, Tenn			30.14	765.5	68	20.0	90	Calm	0	0		0	Fog			0	0	Foggy	
La Crosse, Wis			29.86	758.4	70	21.1	90	S	6	2.7		5cs	5ks	E	SE	2.25	57.1	Cloudy	
Leavenworth, Kan			29.92	760.0	75	23.9	90	S	5	2.2		0	5s		SW	0.04	1.0	Fair	
Lexington, Ky	29.05	737.9	30.10	764.5	76	24.4	72	SE	4	1.8		0	0			0	0	Clear	
Long Branch, N. J			30.16	765.8	70	21.1	75	NE	8	3.6		0	0			0	0	Clear	
Louisville, Ky			30.08	764.0	73	22.8	85	Calm	0	0			Fog			0	0	Foggy	
Lynchburg, Va			30.15	765.8	72	22.2	83	Calm	0	0		0	0			0	0	Clear	
Malone, N. Y			30.13	765.3	66	18.9	78	N	4	1.8		2cs	Haze		N	0	0	Fair	
Marquette, Mich			29.76	755.9	68	20.0	89	S	4	1.8		5cs	5s	S	S	0.98	24.9	Cloudy	
Memphis, Tenn			30.11	764.8	76	24.4	86	S	2	0.9		0	1s			0	0	Clear	
Milwaukee, Wis			29.95	760.7	73	22.8	85	SW	9	4.0			10n		W	0.12	3.0	Light rain	
Mobile Ala			30.12	765.0	74	23.3	90	N	1	0.4			10s		N	0.04	1.0	Cloudy	
Montgomery, Ala			30.14	765.5	73.5	23.1	88	Calm	0	0		10cs	Haze			0.06	1.5	Cloudy	
Morgantown, W. Va			30.12	765.0	69	20.6	90	Calm	0	0			Fog			0	0	Foggy	
Mt. Washington, N. H	24.13	612.9	30.50	774.7	54	12.2	87	Calm	0	0		0	Haze			0	0	Clear	
Nashville, Tenn			30.08	764.0	75	23.9	81	Calm	0	0		2ck	0	W		0	0	Clear	
New Haven, Conn			30.17	766.3	69	20.6	64	N	8	3.6		0	Haze			0	0	Clear	
New London, Conn			30.17	766.3	70	21.1	66	N	5	2.2		0	0			0	0	Clear	
New Orleans, La			30.09	764.3	77	25.0	82	SE	8	3.6		8k	0	W		0	0	Fair	
Newport, R. I			30.16	766.1	67	19.4	79	N	5	2.2		0	0			0	0	Clear	
New York, N. Y			30.17	766.3	72	22.2	50	N	4	1.8		0	Fog			0	0	Clear	
Norfolk, Va			30.09	764.3	74	23.3	81	N	12	5.4		5c	0	NE		0	0	Fair	
North Platte, Neb	27.09	688.1	29.58	751.3	60	15.6	94	N	1	0.4		2k	2s	W		0	0	Fair	
Omaha, Neb	28.83	732.3	29.85	758.2	71	21.7	80	W	6	2.7		2ck	0			0	0	Clear	
Oswego, N. Y			30.14	765.5	67	19.4	84	SSE	6	2.7		0	Haze			0	0	Clear	
Peck's Beach, N. J			30.14	765.5	71	21.7	85	NE	10	4.5			10s		NE	0	0	Cloudy	
Pembina, Dakota			29.89	759.2	54	12.2	86	Calm	0	0			10s		W	0.05	1.3	Cloudy	
Philadelphia, Penn			30.13	765.3	72	22.2	71	NE	11	4.9		6	0			0	0	Clear	
Pike's Peak, Colorado	17.97	456.4	30.18	766.6	29	—1.7	67	SW	24	10.7		0	2ks			0	0	Fair	
Pittsburgh, Penn			30.11	764.8	63	17.2	88	Calm	0	0			Fog			0	0	Foggy	
Port Huron, Mich			30.04	763.0	69	20.6	75	S	6	2.7		5c	0			0	0	Fair	
Portland, Me			30.22	767.6	66	18.9	73	Calm	0	0		0	Haze			0	0	Clear	
Portland, Oregon			30.02	762.5	55	12.8	87	SE	3	1.3			10s			0.09	2.3	Cloudy	
Punta Rassa, Fla			30.12	765.0	78.1	25.6	86	E	6	2.7			8ks			0.49	12.4	Cloudy	
Rochester, N. Y			30.09	764.3	67	19.4	65	S	7	3.1		Haze	Sm'e			0	0	Hazy	
Salt Lake City, Utah	25.54	648.7	29.87	758.7	62	16.7	46	SE	4	1.8			10ks		S	0	0	Cloudy	
Sandy Hook, N. J			30.15	765.8	70	21.1	71	NE	12	5.4		0	Haze			0	0	Clear	
San Diego, Cal			29.91	759.7	66	18.9	78	Calm	0	0			10s			0	0	Cloudy	
San Francisco, Cal			29.94	760.5	57	13.9	87	SW	2	0.9			10s			0	0	Cloudy	
Santa Fe, N. M	23.27	591.0	29.81	757.2	54	12.2	67	NE	8	3.6		0	0			0.05	1.3	Clear	
Savannah, Ga			30.10	764.5	77	25.0	76	NW	4	1.8		2c	0	W		0	0	Clear	
Shreveport, La			30.12	765.0	78	25.6	82	Calm	0	0		0	0			0	0	Clear	
Smithville, N. C																			
Springfield, Mass			30.19	766.8	67	19.4	64	NE	4	1.8		2ck	0	N		0	0	Clear	
St. Louis, Mo			30.04	763.0	76	24.4	81	SW	8	3.6		0	0			0	0	Clear	
St. Marks, Fla			30.13	765.3	74	23.3	90	NW	1	0.4			10n			0.03	0.8	Light rain	
St. Paul, Minn			29.80	756.9	66	18.9	92	Calm	0	0			Fog			1.20	30.5	Foggy	
St. Paul's Island, Alaska																			
Squan Beach, N. J			30.06	763.5	69	20.6	81	NE	10	4.5		5k	0	NE		0	0	Fair	
Toledo, Ohio			30.04	763.0	75	23.9	72	S	5	2.2		2c	Haze			0	0	Clear	
Tucson, Arizona																			
Tybee Island, Ga			30.11	764.8	79	26.1	78	N	8	3.6		2c	2s	N		0	0	Fair	
Vicksburg, Miss			30.18	766.6	73	22.8	90	Calm	0	0		0	2s			0	0	Fair	
Virginia City, Montana	24.18	614.2	29.66	753.4	50	10.0	58	E	2	0.9			10ks		W	0	0	Cloudy	

UNITED STATES SERIES—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.15	765.8	72.5	22.5	83	Calm	0	0		Sm'e	Haze			0	0	Smoky	
Wilmington, N. C.			30.09	764.3	72	22.2	80	N	5	2.2		10ns	Haze			0	0	Cloudy	
Wood's Hole, Mass.			30.16	766.1	71	21.7	74	NE	3	1.3		0	0			0	0	Clear	
Wytheville, Va.			29.96	761.0	64	17.8	94	Calm	0	0			Fog			0	0	Foggy	
Yankton, Dakota	28.69	728.7	29.93	760.2	66	18.9	89	W	2	0.9		0	0			0.39	9.9	Clear	
Yuma, Arizona																			
Sub-Series																			
Bridgetown, Barbadoes, W. I.					85	29.4	79	NE	6	2.7		0	2s			0.85	21.6	Fair	F. Racker.
Pointe-a-Pitre, Guadeloupe, do			29.99	761.7	82	27.8	74	NE				5c	0			0.32	8.1	Fair	L. V. Bigard.
Havana, Cuba, W. I.			30.14	765.5	77	25.0	80	Calm	0	0		2c	1k	NE	E	0	0	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W.			30.23	767.8	78	25.6	78	Calm	0	0		2c	1s	NE	SE	0	0	Fair	James Gall.
St. Thomas, St. T., W. I.			30.27	768.8	81	27.2	78	ENE	3	1.3		5ck	2kn	E		0.01	0.3	Fair	W. S. Cameron.
Santiago de Cuba, W. I.			29.90	759.4	78	25.6	78	Calm	0	0		8c	2cs	N	SW	0	0	Fair	Robert Mason.
St. Georges, Bermudas			30.09	764.3	80	26.7	80	SW	9.5	4.2		0	8k			0	0	Cloudy	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.			29.87	758.7	45.0	7.2	100	NE	12	5.4			10s			0.14	3.6	Cloudy	J. Fortescue.
St. John's, Newfoundland			30.20	767.1	66	18.9	60	W				0	0			0	0	Clear	John Delaney.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Clifton, Jamaica, W. I.	27.20	690.9	30.00	762.0	67	19.4	90									0.59	15.0		C. Partridge.
Navassa																			
Medellin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			30.07	763.8	70	21.1	75	SE	4	1.8			0			0	0	Clear	H. M. Redington.

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

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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, 5,13[illegible] ft., or 1,[illegible]65.1 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,678.4 (?) ft., or 816.4 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Mt. Washington, 6,28[illegible] ft., or 1,915.6 m.; North Platte, 2,816 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,3[illegible]1.1 m.; Santa Fé, 6,86[illegible] (?) ft., or 2,091.6 (?) m.; Virginia City, 5,180 (?) ft., or 1,579.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 5.170 in.; Mt. Washington 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 2, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.01	762.3	86.0	30.0	63	Calm			0		1			0	0	Fair	Charnot.
Algiers			30.05	763.2	85.2	26.8	78	N			1		4			0	0	Fair	Peter.
La Calle																			Kuntz.
Tunis			30.04	763.0	85.8	29.9	36	NW			4		5			0	0	Threatening	Jacques.
Sfax			30.08	764.0	84.9	29.4	55	SE			3		3			0	0	Fair	Chauvey.
Saïda			30.01	762.3	86.0	30.0	25	WSW			2		2			0	0	Hidden	Grosjean.
Tebessa			30.06	763.5	79.7	26.8		NE			1		5			0	0	Cloudy	Colin.
Geriville			30.03	762.7	77.0	25.0	34	NNW			1		2			0.157	4.0	Thunder	Bernadach.
Laghouat			30.04	763.0	86.0	30.0	25	W			5		6			0.079	2.0	Stormy	Simon.
Biskra			30.03	762.7	91.6	33.1	36	NW			1		5			0.024	0.6	Stormy	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.05	763.2	68.2	20.1	48	NW			3		4			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.82	757.5	62.6	17.0	73	W			3		10			0.390	9.9		I. R. Observatory.
Eperies			29.84	757.8	56.1	13.4	52	NW			2					0.500	12.70	Rainy	Julius Mikolik.
Gratz	28.87	733.2	30.05	763.2	63.1	17.3	62	NW			5		5						Andreas Rospini.
Hermannstadt	28.46	722.9	29.85	758.3	63.3	17.4	55	W			4		3			0	0		Prof. Reissenberger.
Kremsmünster	28.77	730.8	30.10	764.6	58.3	14.6	85	WSW			3		10			1.752	44.5		Prof. C. Wagner.
Lemberg			29.61	752.2	51.4	10.8	94	NW			3		10			1.130	28.7	Raining	Dr. T. Stanecki.
Nyiregyhaza			29.85	758.2	56.1	13.4	91	N			3		10			0.400	10.15		Habzsuda Daniel.
Pola			29.98	761.4	73.8	23.2	64	W			1		7ck,s			0	0		I. R. Hydrographic Office.
Szegedin			29.82	757.3	65.8	18.8	62	W			2		9			0	0		Karl Stancel.
Trieste			29.95	760.7	76.1	24.5	76	WNW			1		6			0	0		Prof. V. Farolfi.
Vienna			29.98	761.6	63.5	17.5	58	NW			3		10			0.394	10.0		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. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.25	768.4	63.1	17.3	66	W			1	0	0			0	0		Royal Observatory

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.94	760.5	59.0	15.0		SSE	18	8.0			9			0	0	Misty	William Boswell.
Ardrossan			29.91	759.7	61	16.1		S			3		9					Raining	James Mayes.
Armagh Observatory			29.87	758.9	66.6	19.2		SSW	15	6.7			8					Squally	S. Cal. for Dr. Robinson.
Bidston, Liverpool Obs.			30.04	763.0	65.4	18.6		SSE			3		10					Raining	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.91	759.7	67.4	19.7		SSW			1		9					Showery	J. Dreyer.
Bradford			30.05	763.3	66.1	18.9		S			1		10			Blank	Blank	Overcast	J. McLandsborough.
Bridgetown, (Barbadoes)			29.99	761.7	84	28.9		NE			2		7					*D. clouds	T. H. Hunt.
Cambridge Observatory			30.18	766.6	72.0	22.2		SW			1		10					*D. clouds	Sergeant Hunt, A.H.C.
Cape Good Hope Obs.			30.15	765.8	65.2	18.4	68	SE	7	3.1			2						The Staff, for E. J. Stone.
Cardington			30.19	766.8	70.0	21.1		SW					10					Overcast	John McLaren.
Carlisle			29.96	761.0	62.8	17.1		SW					10			0.03	0.8	Threatening	T. Bell, for J. Cartmell.
Chatham, School M. E.			30.21	767.3	69.2	20.7		NE			1		5						Capt. J. Fellowes, R. E.
Dartmoor	28.82	732.0	30.19	766.8	58	14.4		SW			4		9					*D. clouds	R. E. Power.
Donaghadee			29.77	756.1	65	18.3		S			4		10					Overcast	J. Mac Gowan, Jr.
Dover			30.22	767.6	66	18.9		SW			3		3						J. Costello.
Eccles, (near Manchester)			30.06	763.5	66.8	19.3		S	2.4	1.1			10					Showery	Thomas Mackereth.
Falmouth Observatory			30.29	769.4	67.8	19.9		SSW	8	3.6			7					Overcast	The Staff.
Fort Napier, (Natal)	27.49	698.2	29.82	757.4	74.6	23.8		N			4		0					Clear	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone			29.98	761.5	79	26.1		W					9					*D. clouds	[tis.
Galway, Queen's College																			B. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			30.02	762.5	79.0	26.1		NNE			3		7					*D. clouds	Sergt. E. G. Baker.
Glasgow Observatory			29.87	758.7	61.9	16.6		S			2		10					Raining	Lewis Stuart.
Great Yarmouth			30.19	766.8	65	18.3		SSE			4		3					Hazy	G. T. Watson.
Greenwich Royal Obs.			30.21	767.3	72.6	22.6		SW			2		10					Overcast	The Staff, for G. B. Airy.
Guernsey			30.24	768.1	68.5	20.3		SSW			1		3					*D. clouds	Dr. S. E. Hoskins, [ly.
Halifax, Moorside Obs.			30.08	764.0	68.6	20.3		SSW					10					Threatening	F. J. Page, for L. J. Cro-
Helston			30.16	766.1	69	20.6		SS			4		4					Fine	M. P. Moyle.
Holyhead			29.99	761.7	~~62~~	~~16.7~~		SSW			5		10					Raining	John Tilston.
Hull Park																			
Kew Observatory			30.22	767.6	67.7	19.8		SW	12	5.4			10					Overcast	The Staff.
Kingstown			29.94	760.5	68	20.0		SSW			3		9					Overcast	George Mitchell.
Leicester Museum			30.16	766.1	65.9	18.8		SW			2		10					Overcast	William J. Harrison.
Llandudno			30.01	762.2	64.0	17.8		SSW					10					Raining	Dr. James Nicol.
Malta, (Mediterranean)			30.10	764.5	83.8	28.8		NW			1		4k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			29.82	757.4	62	16.7		Calm			0		10					*D. clouds	W. D. Penny.
Nassau, (Bahamas)			30.20	767.1	86.4	30.3		SE			2		8					*D. clouds	Surg.-Maj. Henry.
Nottingham			30.15	765.8	65.1	18.4		SSE			2		10n		SSE	0	0	Dull	E. J. Lowe.
Oscott, St Mary's College			30.12	765.0	64.7	18.2		S			3		10					Foggy	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			30.16	766.1	69	20.6		SSW			1		10					Overcast	J. Lucas, for R. Main.
Plymouth			30.20	767.1	66.2	19.0		S			1		10						John Merrifield.
Prospect, (Bermuda)																		Raining	
Roche's Point			29.98	761.5	63	17.2		SW			4		10					Raining	W. Kennedy.
Saint Ann's Head			30.10	764.5	62	16.7		S			5		10						John C. Walker.
Saint Helier, (Jersey)			30.25	768.3	72.5	22.5		SE			1		1						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			30.09	764.3	68.0	20.0		SSW			3		10					Overcast	F. Shaw.
Scutari cemetery, (Turkey)			29.85	758.2	75.0	23.9		NE			2		8					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.08	764.0	68.2	20.1		SW			3		9					Overcast	W. F. Cooper.
Silloth Rectory			29.95	760.7	64.0	17.8		SW			3		8			1.330	33.78	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			30.23	767.8	64.4	18.0		S			3		9					Gloomy	The Staff.
Stornoway, Lews C. (Heb.)			29.76	755.9	59	15.0		SW			5		10					Overcast	John Smith.
Strathfield Turgiss			30.22	767.6	67.1	19.5		SW			1		9					*D. clouds	Rev. Charles H. Griffith
Streatley Vicarage																			Rev. John Slatter.
Sumburgh Head, (Shetland)																			
Thurso			29.80	756.9	64	17.8		SSE			3		8					Gloomy	John Trotter.
Truro, Royal Institution			30.14	765.5	71	21.7		SW			6		7					*D. clouds	W. Newcombe.
Valencia Observatory			29.92	760.0	66.0	18.9		SSW	20	8.9								Misty	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			29.90	759.4	66.0	18.9		SW			2		10n			0	0	Raining	Andrew Gibb.
Monach Lt-house, Shet 18																			
North Unst, (Shetland Is.)																			

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error, --.099. * Detached clouds.

DANISH SERIES.

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

Copenhagen			30.15	765.9	63.0	17.2	71	N			2		4						
Fanöe			30.20	767.1	66.2	19.0	63	NW			2		2						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.14	743.2	50.9	10.6	91	NW			4		5						
Thorshavn, (Faröe)			29.54	750.4	56.8	13.8	94	SSE			6		10					Rain & fog	
Vestervig			30.19	766.7	66.4	19.1	57	Calm			0		0						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between upper and lower clouds.

FRENCH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	30.29	769.4	68.0	20.0	64	N	.....	.....	1	.....	k	.....	.....	0.04	1.	.....	Normal School.
Amiens	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Avignon	.....	.....	30.04	763.1	74.5	23.6	37	N	.....	.....	5	.....	0	.....	.....	0	0	Clear	Normal School.
Bar-sur Seine*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. Saillard.
Beaumette, near Angers	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Beaumette Observatory
Beauvais	.....	.....	30.28	769.1	68.2	20.1	50	N	.....	.....	2	.....	5	.....	NNE	0	0	Cloudy	Normal School.
Besançon	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Bourg en Bresse	.....	.....	30.23	767.6	67.5	19.7	57	N	.....	.....	6	.....	0	.....	.....	0	0	Clear	Normal School.
Bourges	.....	.....	30.07	763.6	81.5	27.5	49	N	.....	.....	2	.....	2	.....	NE	0	0	.....	Normal School.
Brest	.....	.....	30.19	766.8	75.0	23.9	61	SW	.....	.....	2	.....	2e	.....	SW	0.010	0.25	Clear	Naval Observatory.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School
Chartres	.....	.....	30.45	770.8	57.9	14.4	.....	NNE	.....	.....	4	.....	0	.....	.....	.....	.....	Clear	Normal School.
Chaumont	29.12	739.7	30.21	767.4	64.0	17.8	.....	WNW	.....	.....	2	.....	2k	.....	WNW	0	0	Clear	Normal School.
Commercy	.....	.....	30.31	769.8	61.9	16.6	61	ENE	.....	.....	2	.....	2e,n	.....	ENE	0	0	.....	Normal School.
Le Mans	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Lons-Le Saulnier	.....	.....	30.17	766.1	66.2	19	64	N	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Mâcon	.....	.....	30.21	767.2	65.5	18.6	60	NNE	.....	.....	6	.....	5	.....	SW	0	0	Cloudy	Normal School.
Mirecourt	.....	.....	30.23	767.9	63.7	17.6	53	N	.....	.....	2	.....	5	.....	NW	0	0	Cloudy	Normal School.
Orleans	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Paris Observatory	.....	.....	30.27	768.9	67.6	19.8	48	ENE	.....	.....	2	.....	8	.....	.....	0	0	Misty	National Observatory.
Parthenay	.....	.....	30.13	765.3	67.5	19.7	78	N	.....	.....	2	.....	0	.....	.....	.....	.....	Clear	Normal School.
La Roche sur Yon	.....	.....	30.23	767.9	76.3	24.6	49	SE	.....	.....	2	.....	5	.....	NW	.....	.....	Cloudy	Normal School.
Rochefort, Observatory	.....	.....	30.24	768.2	76.6	24.8	32	NE	.....	.....	3	.....	1	.....	SW	0	0	Clear	Naval Observatory.
Rouen	.....	.....	30.28	769.0	68.4	20.4	62	SW	.....	.....	1	.....	10	.....	.....	0	0	Cloudy	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Villefranche	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Sub-Series.																			
Gorée, (Senegambia)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Frère Pascall.
Mont-Louis	25.02	635.5	.....	.....	60.4	19.1	60	NNE	5.0	2.50	.....	.....	2	.....	N	0	0	.....	—. Falguère.
Montsouris Observatory	.....	.....	30.27	768.8	68.4	20.2	47	E	.....	.....	1	.....	7e, k	.....	.....	0	0	.....	Marié Davy.
Perpignan	.....	.....	30.08	764.0	81.0	27.2	52	W	11.2	5.00	.....	.....	0	.....	.....	0	0	.....	Dr. Fines.
Saint Maur, (near Paris)	.....	.....	30.27	768.9	68.4	20.2	55	NE	.....	.....	1	.....	3	.....	.....	0	0	.....	E. Renou.
Saint Pierre, (Martinique)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Tours	.....	.....	30.25	768.4	70.5	21.4	39	E	.....	.....	2	.....	2	.....	N	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.28	769.2	69.8	21.0	46	NNW	.....	.....	1	.....	6	.....	.....	0	0	.....	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai	.....	.....	29.82	757.5	73.6	23.1	98	NW	11.2	5.0	.....	.....	10	.....	.....	0 0	0 0	Misty	H. Le Lec, S. J.

Note.—The originals give the wind-force by the scale 0 to 7; the weather in general terms; 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,089.9 ft. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Observation not simultaneous.

GERMAN SERIES.

Furnished by the coöperation of Prof. Geo. Neumayer, Superintendent Royal 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg	.....	.....	30.16	766.1	63.3	18.5	70	W	18	8	.....	.....	4	.....	.....	0.155	1.4	.....	Prof. Hoh.
Berlin	.....	.....	30.13	765.2	65.8	18.8	54	N	9	4	.....	.....	6	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.10	764.4	57.4	14.1	83	N	22	10	.....	.....	10	.....	.....	0.405	11.8	Raining	Dr. P. Neugebauer.
Carlsruhe	.....	.....	30.24	768.1	61.3	17.4	66	SSW	4	2	.....	.....	9	.....	.....	0.028	0.7	.....	A. Senz.
Cassel	.....	.....	30.09	764.2	67.3	19.6	65	NW	9	4	.....	.....	6	.....	.....	0	0	.....	Dr. H. Möhl.
Cologne	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Garthe.
Emden	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Physical Society.
Friedrichshafen	28.81	731.8	30.36	768.5	58.1	14.5	90	W	.....	.....	.....	.....	7	.....	.....	0.008	0.2	.....	M. Wilhelm.
Hamburg	.....	.....	30.20	767.1	65.8	18.8	74	NNW	9	4	.....	.....	9k	N	.....	0	0	Half clear	Deutsche Seewarte.
Kiel	.....	.....	30.18	766.5	64.6	18.1	67	N	13	6	.....	.....	2	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg	.....	.....	29.99	761.8	64.4	18.0	49	NE	22	10	.....	.....	.....	.....	.....	0.001	0.03	Clear	Prof. E. Luther.
Köslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Tägert.
Leipsic	.....	.....	30.17	766.4	64.4	18.0	63	NW	4	2	.....	.....	8	.....	.....	0.224	5.7	.....	Prof. Bruhns.
Münster	.....	.....	30.14	765.6	63.1	17.3	74	SW	13	6	.....	.....	3	.....	.....	0	0	.....	Prof. E. Heis.
Posen	.....	.....	30.04	763.1	66.9	19.4	.....	N	22	10	.....	.....	7	.....	.....	0	0	Cloudy	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.26	768.5	65.5	18.6	51	NE	7	3	.....	.....	5	.....	.....	0	0	.....	Hartwig.
Stuttgart	.....	.....	30.24	768.0	61.7	16.5	60	N	.....	.....	.....	.....	10	.....	.....	0.008	0.2	Light rain	Mr. Würth.
Thorn	.....	.....	29.99	761.8	64.9	18.3	52	NE	22	10	.....	.....	5	.....	.....	0.114	2.89	.....	Dr. Rosenbalg.
Treves, (Trier)	.....	.....	30.23	767.7	66.7	19.3	49	NE	13	6	.....	.....	2	.....	.....	0	0	.....	Prof. Klesch.
Wustrow, Naval School	.....	.....	30.14	765.8	62.2	16.8	77	NW	9	4	.....	.....	3k	.....	.....	0.051	1.3	Clear	E. F. Schütz.

Note.—In the originals the distinction between 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.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri	.....	.....	30.10	762.1	73.4	23.0	75	WSW	.....	.....	2	.....	1	SE	.....	0	0	.....	
Mondovi	.....	.....	30.00	762.1	68.9	20.5	37	NNE	.....	.....	2	.....	0	.....	.....	0	0	.....	
Genoa	.....	.....	29.96	760.9	79.2	26.2	27	N	6.3	2.8	.....	.....	0	.....	.....	0	0	.....	
Pavia	.....	.....	29.98	761.4	76.1	24.5	33	SE	.....	.....	1	.....	0	.....	.....	0	0	.....	
Verona	.....	.....	29.95	760.7	73.9	23.3	44	E	.....	.....	4	.....	0	.....	.....	0	0	.....	
Padua	.....	.....	29.96	761.0	74.5	23.6	56	SE	8.7	3.9	.....	.....	10	NW	.....	0	0	.....	
Parma	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Bologna	.....	.....	29.98	761.6	75.9	24.4	52	W	.....	.....	1	.....	0	.....	.....	0	0	.....	
Leghorn	.....	.....	29.95	760.8	76.8	24.9	33	NW	3.8	1.7	.....	.....	1	.....	.....	0	0	.....	
Urbino	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ancona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Siena	.....	.....	29.93	760.3	75.9	24.4	29	NW	0	0	.....	.....	4	N	.....	0	0	.....	
Rome	.....	.....	29.92	759.9	82.4	28.0	45	W	6.3	2.8	.....	.....	3	.....	.....	0	0	.....	
Naples, O.U.	.....	.....	29.93	760.3	82.2	27.9	46	SW	.....	.....	4	.....	2	.....	.....	0	0	.....	
Lecce	.....	.....	29.95	760.8	77.2	25.1	48	E	7.4	3.3	.....	.....	9	NW	.....	0	0	.....	
Cosenza	.....	.....	29.96	760.9	81.5	27.5	56	SSW	.....	.....	2	.....	8	.....	.....	0	0	.....	
Catania, (Sicily)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Riposto	.....	.....	29.9[illegible]	759.4	81.5	27.5	57	SE	.....	.....	2	.....	5	SE	.....	0	0	.....	
Palermo	.....	.....	29.91	759.6	79.5	26.4	53	N	5.6	2.5	.....	.....	9	.....	.....	0	0	.....	
Sub-Series.																			
Naples, S. R.	.....	.....	29.98	761.5	79.3	26.3	55	SW	9.4	4.2	.....	.....	4	W	.....	0	0	.....	Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; the cloudiness occasionally by the scale 0 to 4, and generally without distinguishing between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovia is 555 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Flushing			30.29	769.3	66.2	19.0		SE			2								
Groningen			30.18	766.6	65.3	18.5		N			2								
Helder			30.24	768.0	62.6	17.0		SW			1								
Utrecht			30.22	767.6	65.7	18.7		W			2		2					Light cloudy	

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bergen			30.00	762.0	63.0	17.2	68	SSW	15.9	7.1			10			0.256	6.5		
Christiania			30.17	766.2	65.5	18.6	58	S	11.9	5.3			2			0	0		
Tromsö			29.97	761.1	47.1	8.4	91	SW			6		10			0	0		

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.08	63.9	81.5	27.5	45	S	4.9	2.2			0						The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

RUSSIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.82	757.5	59.7	15.4	63	NNW	31	14			10						Astronomical Obs.
Wilna			29.86	758.5	57.7	14.3	58	NE	10	4.5			10						Astronomical Obs.
Dorpat			30.08	763.9	59.9	15.[illegible]	48	ENE	11	5			3						Physical Cabinet.
St. Petersburg			30.05	763.2	58.3	14.6	58	W	2	1			2						Central Physical Obs.
Kuopio			30.04	762.9	54.5	12.5	67	N					2			0.040	1.25		Ch. Forsten.
Kieff			29.69	754.0	67.5	19.7	57	SSW	9	4			5						Physical Cabinet.
Nikolaiev			29.82	757.5	76.5	24.7	40	NNE	8	3.5			5						Kurdukof.
Kertch			29.83	757.7	80.1	26.7	64	WSW	9	4			6						Lagorio.
Moscow			30.02	762.6	59.4	15.2	61	SSW	8	3.5			8						Meteorological Obs.
Lugan			29.69	754.2	82.9	27.8	39	E	13	6			5						Meteorological Obs.
Archangel			29.91	759.8	47.7	8.7	89	WNW	13	6			10						Ogorodnikof.
Tiflis	28.45	722.5	29.79	756.6	77.9	25.5	61	Calm	0	0			6						Physical Obs.
Astrakhan			29.89	759.2	77.5	25.3	74	WNW	4	2			10						Sebastianof.
Kasan			29.98	761.4	59.5	15.3	59	W	3	1.5			8						Physical Cabinet.
Orenburg			30.02	762.6	69.3	20.7	36	Calm	0	0			0						Tschernischef.
Ekaterinburg	28.82	732.0	29.82	757.4	50.9	10.5	87	W	8	3.5			10						Meteorological Obs.
Kasaly			29.84	757.8	86.0	30.0	36	W	8	3.5			0						Bobrof.
Tashkend	28.27	718.0	29.89	759.1	78.4	25.8	75	Calm	0	0			0						Michelson.
Barnaul			29.78	756.5	65.1	18.4	56	SE	8	3.5			3						Meteorological Obs.
Yeniseisk			29.54	750.3	54.0	12.2	87	SW	9	4			7						Marks.
Irkutsk	28.44	722.4	29.80	756.9	52.9	11.6	94	SE	9	4			10					Raining	Uselzef.
Oorga	25.62	650.8	29.73	755.2	61.2	16.2	83	E	4	2			10						Mossin.
Peking, (China)			30.02	762.6	72.7	22.6	82	Calm	0	0			2			Blank	Blank		Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. The elevation of Tiflis is 409.[illegible] 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.95	760.6	94.6	34.8	27	SE	5.1	2.3		0	2			0	0		Royal Observatory.
San Fernando																			The Naval Observatory.

NOTE.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea			30.10	764.5	54.7	12.6	80	SW			2		8			0	0		
Hernosand			30.24	768.0	62.6	17.0	50	S			2		6			0	0		
Stockholm			30.13	765.3	59.7	15.4	56	NNW			2		5			0.067	1.7		
Wisby			30.03	762.8	60.4	15.8	68	NE			4		5			0.264	6.7		
Sub-Series.																			
Upsala			30.16	766.0	63.3	17.4	80	WNW	5.1	2.3			1						Dr. Hildebrandsson.

NOTE.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.78	730.9	30.17	766.3	65.1	18.4	45	NNE			4		1			0	0	Clear	The Observatory.
Zurich	28.61	726.7	30.21	767.4	64.8	18.2	51	WNW			1		2			0	0	Clear	The Observatory.

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +3.4mm.; Thermometer, —1°.6 R. H.; Relative Humidity, —14 per cent.

NOTE.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria, Lee Obs'y.			29.85	758.1	88.2	31.2	55	NW			2		0					Clear	Prof. C. N. A. Van Dyck.
Constantinople			29.88	758.0	73.0	22.8	60	NE	12.3	5.5			8		SW	0	0	Cloudy	
Fao, (Persian Gulf)			29.76	756.0	96.8	36.0		S			3		0					Clear	
Salonica					88.0	31.2		SE			2		0					Clear	
Valona			29.90	759.5	74.1	23.4		NW			2		5					Cloudy	
Varna			29.96	761.0	68.0	20.0		S			2		2						

NOTE.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea level. The distinction between upper and lower clouds is not made.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens																			

NOTE.—Reports commence October 1, 1875.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Takio																			

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario			30.04	763.0	69	20.6		W	3	1.3			10s		W	0	0	Cloudy	
Chatham, N. B.			29.98	761.5	65	18.3	82	SW	7	3.1		0	0			0	0	Clear	
Charlottetown, P. E. Island			30.05	763.3	65	18.3	76	SW	10	4.5		0	0			0	0	Clear	
Fort Garry, Manitoba			30.09	764.3	46	7.8	98	N	3	1.3		5c	2ks	W	N	0	0	Fair	
Halifax, N. S.			30.07	763.8	62	16.7	93	E	3	1.3		0	0			0	0	Clear	
Kingston, Ontario			30.04	763.0	72	22.2	85	SW	2	0.9		10cs	0	SW		0	0	Cloudy	
Montreal, Quebec			29.96	761.0	70	21.0	77	SW	12	5.4		5ck	5ks	W		0	0	Cloudy	
Ottawa, Ontario			29.90	759.4	68	20.0	82	W	6	2.7		2k	5n	W	W	0	0	Threatening	
Parry Sound, Ontario			30.00	762.0	67	19.4	99	NW	2	0.9			Fog		NE	0.03	0.8	Cloudy	
Port Dover, Ontario			30.02	762.5	73	22.8	81	SW	3	1.3		10k	0	NW		0	0	Fair	
Port Stanley, Ontario			30.03	762.7	70	21.1	95	E	2	0.9		2k	0	E		0	0	Clear	
Quebec, Quebec			29.97	761.2	64	20.6	75	Calm	0	0		8k	5n	SW	SW	0	0	Cloudy	
Sarnia, Ontario			29.99	761.7	71	21.7	84	Calm	0	0		5k	2n			0	0	Cloudy	
Stayner, Ontario			29.97	761.2	73	22.8	83	Calm	0	0		0	0			0.02	0.5	Clear	
Sydney, C. B.			30.11	764.8	69	20.6	72	SW	9	4.0		8c	2s			0	0	Fair	
Toronto, Ontario			30.01	762.2	72	22.2	82	W	4	1.8		2ck	0	W		0	0	Clear	

NOTE.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

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

Station.	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.03	762.7	71	21.7	75	S	3	1.3		Haze	Haze			0	0	Hazy	
Alpena, Mich.			29.97	761.2	69	20.6	90	W	3	1.3		8k	Haze	S		0.43	10.9	Cloudy	
Atlantic City, N. J.			30.05	763.3	69	20.6	79	N	13	5.8		0	0			0	0	Clear	
Augusta, Ga.			30.15	765.8	75	23.9	77	Calm	0	0		0	H[illegible]			0	0	Fair	
Baltimore, Md.			30.08	764.0	71	21.7	80	Calm	0	0		Haze	Sm'e			0	0	Fair	
Barnegat, N. J.			30.04	763.0	70	21.1	75	N	10	4.5		0	0			0	0	Clear	
Benton, Montana	27.16	689.8	29.96	761.0	56	13.3	68	W	8	3.6			10s			0	0	Cloudy	
Bismarck, Dakota	28.11	714.0	29.71	754.6	56	13.3	80	NE	12	5.4			10s			0.02	0.5	Cloudy	
Boston, Mass.			30.11	764.8	59	15.0	94	NW	3	1.3			Fog			0	0	Foggy	
Breckenridge, Minn.			29.91	759.7	58	14.4	87	SE	4	1.8			10s			0	0	Cloudy	
Brownsville, Tex.																			
Buffalo, N. Y.			30.00	762.0	73	22.8	76	SW	4	1.8		2k	2ks	SW	SW	0	0	Fair	
Burlington, Vt.			30.01	762.2	73	22.8	67	S	8	3.6		2c	Sm'e			0	0	Fair	
Cairo, Ill.			30.10	764.5	76	24.4	85	S	4	1.8		5c	0			0	0	Fair	
Cape Hatteras, N. C.			30.03	762.7	72	22.2	75	N	14	6.3		2c	5s		N	0.01	0.3	Fair	
Cape Henry, Va.			30.05	763.3	78	25.6	65	N	16	7.2		1cs	0			0	0	Fair	
Cape May, N. J.			30.04	763.0	68	20.0	79	N	12	5.4		0	0			0	0	Clear	
Charleston, S. C.			30.15	765.8	76	24.4	81	NW	4	1.8		0	Haze			0	0	Clear	
Cheyenne, Wyoming	24.06	611.1	30.00	762.0	58	14.4	44	W	8	3.6		5ck	2s	W	W	0	0	Fair	
Chicago, Ill.			30.01	762.2	75	23.9	77	SW			3	2k	5s			inap	inap	Fair	
Cincinnati, Ohio			30.01	763.0	72	22.2	85	SE	2	0.9		5c	Fog			0	0	Fair	
Cleveland, Ohio			30.02	762.5	74	23.3	72	S	3	1.3		2c	Sm'e	S	S	0	0	Smoky	
Colorado Springs, Col.	24.11	612.4	29.98	761.5	65	18.3	40	N	2	0.9		10k	0	W		0.06	1.5	Cloudy	
Corsicana, Tex.			30.04	763.0	77	25.0	82	Calm	0	0		0	Haze			0	0	Clear	
Davenport, Iowa			30.02	762.5	72	22.	85	NW	2	0.9			10s		SW	0	0	Cloudy	
Denison, Tex.			30.00	762.0	78	25.6		S					0			0	0	Clear	
Denver, Col.	24.81	630.2	30.03	762.7	60	15.6	71	S	4	1.8		5c	2ck	W	W	0.04	1.0	Fair	
Detroit, Mich.			29.98	761.5	73	22.8	90	SW	3	1.3		2c	Sm'e	N		0	0	Fair	
Dodge City, Kan.	27.37	695.2	29.52	749.8	77	25.0	69	S	12	5.4		5k	0			0	0	Fair	
Dubuque, Iowa			29.98	761.5	73	22.8	81	NW	2	0.9			10s		N	0	0	Cloudy	
Duluth, Minn.			30.03	762.7	59	15.0	87	N	4	1.8		8c	0	N		0	0	Fair	
Eastport, Me.			30.07	763.8	57	13.9	93	S	6	2.7			Fog			0	0	Foggy	
Erie, Pa.			30.00	762.0	75	23.9	76	S	8	3.6		2ck	Sm'e	W		0	0	Fair	
Escanaba, Mich.			30.01	762.2	64	17.8	89	N	10	4.5		5k	0	N		0	0	Fair	
Fort Gibson, I. T.			30.00	762.0	76	24.4	81	E	3	1.3		1c	0			0	0	Clear	
Fort Sill, I. T.																			
Fort Sully, Dakota	28.11	714.0	29.68	753.9	65	18.3	84	SE	10	4.5			8s		SE	0	0	Cloudy	
Galveston, Tex.			30.08	764.0	81	27.2	87	NE	4	1.8		0	8ks		NE	0	0	Fair	
Grand Haven, Mich.			30.02	762.5	72	22.2	85	SW	4	1.8		8k	0	W		0.07	1.8	Cloudy	
Indianapolis, Ind.			30.06	763.5	74	23.3	85	Calm	0	0		2cs	Sm'e	W		0	0	Fair	
Indianola, Tex.			30.08	764.0	81	27.2	86	Calm	0	0		0	5s		S	0	0	Fair	
Jacksonville, Fla.			30.13	765.3	75	23.9	85	E	4	1.8		2c	0	W		0	0	Clear	
Keokuk, Iowa			29.96	761.0	73	22.8	81	SE	3	1.3			10s		SE	0.14	3.6	Cloudy	
Key West, Fla.			30.09	764.5	83.8	28.8	71	SE	8	3.6		Haze	2ks			0	0	Fair	
Kittyhawk, N. C.			30.04	763.0	70	21.1	80	N	14	6.3		2c	0			0	0	Fair	
Knoxville, Tenn.			30.15	765.8	68	20.0	95	Calm	0	0			Fog			0	0	Foggy	
La Crosse, Wis.			30.01	762.2	67	19.4	94	N	2	0.9			Fog			0	0	Dense fog	
Leavenworth, Kan.			29.92	760.0	76	24.4	86	S	6	2.7		0	0			0	0	Clear	
Lexington, Ky.	29.05	737.9	30.12	765.0	71	21.7	84	S	4	1.8		8ck	0	N		0	0	Cloudy	
Long Branch, N. J.			30.07	763.8	70	21.1	71	NE	10	4.5		0	0			0	0	Clear	
Louisville, Ky.			30.08	764.0	77	25.0	77	Calm	0	0			Fog			0	0	Foggy	
Lynchburg, Va.			30.11	764.8	73	22.8	81	Calm	0	0		0	0			0	0	Clear	
Malone, N. Y.			29.95	760.7	72	22.2	67	S	8	3.6		8	0	NW		0	0	Cloudy	
Marquette, Mich.			30.06	763.5	60	15.6	94	Calm	0	0			Fog			0.06	1.5	Foggy	
Memphis, Tenn.			30.12	765.0	79	26.1	82	Calm	0	0		2c	Sm'e			0	0	Fair	
Milwaukee, Wis.			30.06	763.5	73	22.8	81	NE	8	3.6		6ck	2k	N	NE	0.04	1.0	Fair	
Mobile, Ala.			30.13	765.3	74	23.	90	SE	2	0.9		0	0			0	0	Clear	
Montgomery, Ala.			30.16	766.1	71.7	21.9	90	NW	1	0.4		5c	Haze	NE		0.24	6.1	Fair	
Morgantown, W. Va.			30.08	764.0	70	21.1	84	Calm	0	0		0	5s			0	0	Fair	
Mt. Washington, N. H.	24.01	610.4	30.39	771.5	53	11.7	80	NW	3	1.3		0	Haze			0	0	Fair	
Nashville, Tenn.			30.09	764.3	76	24.4	81	Calm	0	0		0	Fog			0	0	Clear	
New Haven, Conn.			30.09	764.3	67	19.4	79	N	8	3.6		Haze	Sm'e			0	0	Fair	
New London, Conn.			30.08	764.0	62	16.7	91	N	5	2.2			Fog		N	0	0	Foggy	
New Orleans, La.			30.11	764.8	78	25.6	82	SE	2	0.9		2k	0			0.01	0.3	Clear	
Newport, R. I.			30.07	763.5	66	18.9	94	NW	7	3.1			1s		NW	0.03	0.8	Cloudy	
New York, N. Y.			30.08	764.0	70	21.1	66	N	3	1.3		0	Fog			0	0	Clear	
Norfolk, Va.			30.08	764.0	71	21.7	75	N	8	3.6		2c	0			0	0	Clear	
North Platte, Neb.	26.99	685.5	29.44	747.8	64	17.8	94	Calm	0	0			1s			0.09	2.3	Cloudy	
Omaha, Neb.	28.83	732.3	29.84	757.9	71	21.7	92	N	3	1.3			10n		SW	0.11	2.8	Light rain	
Oswego, N. Y.			29.92	762.5	70	21.1	79	S	4	1.8		2ck	5s			0	0	Fair	
Peck's Beach, N. J.			30.06	763.5	70	21.1	75	N	12	5.4		0	0			0	0	Clear	
Pembina, Dakota			30.02	762.5	52	11.1	86	S	4	1.8			10s			0	0	Cloudy	
Philadelphia, Penn.			30.07	763.8	68	20.0	79	E	5	2.2		0	Sm'e			0	0	Clear	
Pike's Peak, Colorado	17.96	456.3	30.17	766.3	28	—2.2	88	W	10	4.5		8cs	2s	SW		0.32	8.1	Cloudy	
Pittsburgh, Penn.			30.07	763.8	65	18.3	94	Calm	0	0			Fog			0	0	Foggy	
Port Huron, Mich.			29.98	761.5	74	23.3	81	SW	5	2.2		0	0			0	0	Clear	
Portland, Me.			30.10	764.5	62	16.7	83	Calm	0	0		0	Fog			0	0	Fair	
Portland, Oregon			30.12	765.0	60	15.6	70	S	6	2.7			10s			0	0	Cloudy	
Punta Rassa, Fla.			30.11	764.8	76.7	24.8	90	E	8	3.6			10n		SW	0	0	Threatening	
Rochester, N. Y.			29.99	761.7	70	21.1	75	SW	7	3.1			8s			0	0	Fair	
Salt Lake City, Utah	25.75	654.0	30.08	764.0	50	10.0	32	Calm	0	0		0	0			0	0	Clear	
Sandy Hook, N. J.			30.06	763.0	69	20.6	75	NE	10	4.5		0	0			0	0	Clear	
San Diego, Cal.			29.99	761.7	61	16.1	82	Calm	0	0		0	0			0	0	Clear	
San Francisco, Cal.			30.02	762.5	55	12.8	90	SW	2	0.9		0	Fog			inap	inap	Fair	
Santa Fe, N. M.	23.32	592.3	29.86	758.4	54	12.2	74	NE	4	1.8			8s			0.07	1.8	Cloudy	
Savannah, Ga.			30.14	765.5	77	25.0	86	NE	2	0.9		2c	Sm'e			0.44	11.2	Clear	
Shreveport, La.			30.11	764.8	78	25.6	85	SE	2	0.9		0	0			0	0	Clear	
Smithville, N. C.																			
Springfield, Mass.			30.09	764.3	64	17.8	78	N	4	1.8		0	0			0.01	0.3	Clear	
St. Louis, Mo.			30.05	763.3	78	25.6	81	SW	6	2.7		5c	Haze			0	0	Fair	
St. Marks, Fla.			30.13	765.3	72	22.2	90	N	6	2.7		0	0			0.01	0.3	Clear	
St. Paul, Minn.			29.95	760.7	64	17.8	86	SE	4	1.8			10s			0	0	Cloudy	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			30.00	762.0	69	20.6	85	N	8	3.6		0	Haze			0	0	Clear	
Toledo, Ohio			30.01	762.2	77	25.0	72	SW	6	2.7		8c	0	W		0	0	Fair	
Tucson, Arizona																			
Tybee Island, Ga.			30.11	766.1	78	25.6	73	NW	4	1.8		2c	Haze	NW		0	0	Hazy	
Vicksburg, Miss.			30.18	766.6	74	23.3	85	S	3	1.3		0	2s		S	inap	inap	Fair	
Virginia City, Montana			29.87	757.2	42	5.6	75	W	6	2.7			10ks		W	0.38	9.7	Cloudy	

UNITED STATES SERIES—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.09	764.3	69.5	20.8	87	Calm	0	0		Sm'e	Sm'e			0	0	Smoky	
Wilmington, N. C.			30.12	765.0	71	21.7	85	NW	3	1.3		0	Haze			0	0	Clear	
Wood's Hole, Mass.			30.09	763.5	69	20.6	90	NE	2	0.9			10s			0	0	Cloudy	
Wytheville, Va.			29.97	761.2	64	17.8	89	W	2	0.9		0	0			0.02	0.5	Clear	
Yankton, Dakota	28.63	727.2	29.86	758.4	67	19.4	95	NE	8	3.6			10n		NE	1.50	38.1	Heavy rain	
Yuma, Arizona																			
Sub-Series.																			
Bridgetown, Barbados, W. I.					83	28.3	82	E	5	2.2		5k	5s	NE		0	0	Cloudy	F. Racker.
Pointe-a-Pitre, Guadeloupe, do			29.98	761.5	82	27.8	78	E				0	5k			0.18	4.6	Fair	L. V. Bigard.
Havana, Cuba, W. I.			30.17	766.3	78	25.6	82	SSE	6.0	2.7		1c	1k	NE	E	0	0	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W. I.			30.25	768.3	77	25.0	78	Calm	0	0		8c	2n	S		0.04	1.0	Cloudy	James Gall.
St. Thomas, St. T., W. I.			30.24	768.1	81	27.2	78	ENE	3	1.3		5ck	2kn	E		0.01	0.3	Fair	W. S. Cameron.
Santiago de Cuba, W. I.			29.9	759.7	78	25.6	78	Calm	0	0		0	2ks		SW	0	0	Fair	Robert Mason.
St. Georges, Bermudas			30.06	763.5	80.5	26.9	80	SW	11.6	5.2		0	2ks			0	0	Fair	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.			30.10	764.5	44.5	6.9	96	Calm	0	0		0	0			0	0	Clear	J. Fortescue.
St. John's, Newfoundland			30.16	766.1	65	18.3	57	SW				Sm'e	Sm'e			0	0	Fair	John Delaney.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Clifton, Jamaica, W. I.	27.20	690.9	29.99	761.7	70	21.1	85												C. Partridge.
Navassa																			
Medellin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			30.04	763.0	72	22.2	81	Calm	0	0		0	0			0	0	Clear	H. M. Redington.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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 Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 ft., or 807.4 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 1,3[illegible]1.1 m.; Santa Fé, 6,86[illegible] (?) ft., or 2,091.6 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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.

Albert J. Myer.

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 3, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer
Nemours			29.96	761.0	82.4	28.0	66	NE			1		1			0.039	1.0	Fair	Charnot.
Algiers			30.04	763.1	79.9	26.6	67	NE			1		0					Fair	Peter.
La Calle																			Kuntz.
Tunis			30.08	763.9	83.5	28.6	44	NE			4		4			0	0	Cloudy	Jacques.
Sfax			30.10	764.5	83.1	28.4	54	ESE			3		4			0.024	0.6	Hidden	Chauvey.
Salda			29.98	761.5	82.4	28.0	33	NNE			2		2			0	0	Thunder	Grosjean.
Tebessa			30.08	764.1	79.2	26.2		NNW			2		7			0	0	Cloudy	Colin.
Geriville			29.97	761.3	74.3	23.5	35	E			3		9			0	0	Thunder	Bernadach.
Laghouat			30.02	762.6	86.0	30.0	25	NW			7		5			0.079	2.0	Stormy	Simon.
Biskra			30.07	763.6	88.9	31.6	42	NE			1		7			0.173	4.4	Cloudy	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer
Agram			29.04	762.9	67.5	19.7	43	NE			2		9			0.004	0.1	Raining	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.22	767.5	59.5	15.3	62	W			3		10			0.008	0.2		I. R. Observatory.
Eperies			29.93	760.1	56.7	13.7	69	N			3				S	0	0		Julius Mikolik.
Gratz			30.05	763.2	66.2	19.0	53	NW			5		2						Andreas Rospini.
Hermannstadt	28.88	733.5	29.90	759.4	59.0	15.0	79	N			1		10			0	0		Prof. Reissenberger.
Kremsmünster	28.48	723.4	30.13	765.3	61.2	16.2	67	W			2		7			0.067	1.7		Prof. C. Wagner.
Lemberg	28.80	731.6	29.80	756.9	53.6	12.0	93	NE			5		9			0.661	16.8	Raining	Dr. T. Stanecki.
Nyiregyhaza			29.94	760.5	63.3	17.4	57	N			4		6			0	0		Habzsuda Danie'.
Pola			30.06	763.4	72.3	22.4	63	SSE			2		5ks			0.046	1.17		I.R. Hydrographic Office
Szegedin			29.89	759.3	67.1	19.5	52	SE			1		10			0	0		Karl Stancel.
Trieste			30.07	763.8	72.7	22.6	59	W			1		4			0.386	9.8	Showery	Prof. V. Farolfi.
Vienna			30.03	762.8	63.5	17.5	62	W			2		8			0.008	0.2		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer
Brussels			30.12	765.0	67.8	19.9	59	SW			2	5	5	W		0	0		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.64	752.8	57.9	14.4		W	9	4.0			10			0.610	15.49	Raining	William Boswell.
Ardrossan			29.76	755.9	61	16.1		WNW			4		7					*D. clouds	James Mayes.
Armagh Observatory			29.90	759.4	63.1	17.3		W	12	5.4			5					*D. clouds	[illegible], for Dr. Robinson.
Bidston, Liverpool Obs.			29.88	758.9	61.3	16.3		W			6		5					*D. clouds	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.97	761.2	62.2	16.8		WNW			1		4					*D. clouds	J. Dreyer.
Bradford			29.81	757.2	62.0	16.7		W			3		3			Blank	Blank	*D. clouds	J. McLandsborough.
Bridgetown, (Barbadoes)			29.94	760.5	87.4	30.8		NE			2		2					*D. clouds	T. H. Hunt.
Cambridge Observatory			29.93	760.2	61.0	16.1		SSW			3		10					Raining	Sergeant Hunt, A.H.C.
Cape Good Hope Obs.			30.10	764.5	64.8	18.2	64	W	7	3.1			2						The Staff, for E. J. Stone.
Cardington			29.93	760.2	63.0	17.2		SW					10					Raining	John McLaren.
Carlisle			29.81	757.2	60.9	16.1		W					9			0.65	16.5	*D. clouds	T. Bell, for J. Cartmell.
Chatham, School M. E.			30.01	762.2	61.2	16.2		SW			1		10					Raining	Capt. J. Fellowes, R. E.
Dartmoor	28.66	728.0	30.03	762.7	58.8	14.9		SW			5		4					*D. clouds	R. E. Power.
Donaghadee			29.81	757.2	63	17.2		W			5		7					*D. clouds	J. Mac Gowan, Jr.
Dover			30.04	763.0	65	18.3		SW			5		7						J. Costello.
Eccles, (near Manchester)			29.87	758.7	62.5	16.9		W	8.0	3.6			5					Squall	Thomas Mackereth.
Falmouth Observatory			30.18	766.6	63.7	17.6		WNW	10	4.5			1						The Staff.
Fort Napier, (Natal)	27.53	699.3	29.86	758.4	58.6	14.8		S			4		10					Gloomy	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.98	761.5	81	27.2		W					7					*D. clouds	[illegible]
Galway, Queen's College																			B. G. Clare, for Prof. Cu[illegible]
Gibraltar, (Mediterranean)			30.05	763.3	79.5	26.4		ENE			4		3					*D. clouds	Sergt. E. G. Baker.
Glasgow Observatory			29.73	755.1	59.0	15.0		SW			1		8					Fine	Lewis Stuart.
Great Yarmouth			29.98	761.5	63	17.2		SSW			3		7					Rainy	G. T. Watson.
Greenwich Royal Obs.			29.99	761.7	61.3	16.3		SW			3		10					Raining	The Staff, for G. B. Airy.
Guernsey			30.08	764.0	63	17.2		SSW			2		5			Blank	Blank	*D. clouds	Dr. S. E. Hoskins, [illegible]
Halifax, Moorside Obs.			29.86	758.4	61.6	16.4		WNW					3					Squally	F. J. Page, for L. J. Cr[illegible]
Helston			30.05	763.3	68	20.0		NW			4		3					*D. clouds	M. P. Moyle.
Holyhead			29.94	760.5	61	16.1		SSW			4		3						John Tilston.
Hull Park																			
Kew Observatory			29.99	761.7	61.0	16.1		SSW	21	9.4			10					Threatening	The Staff.
Kingstown			29.94	760.5	62	16.7		WNW			4		5					*D. clouds	George Mitchell.
Leicester Museum			29.91	759.4	62.7	17.1		W			5		6					*D. clouds	William J. Harrison.
Llandudno			29.92	760.0	64.1	17.8		W					6					*D. clouds	Dr. James Nicol.
Malta, (Mediterranean)			29.97	761.2	82.6	28.1		NW			1		4k					*D. clouds	Fred Travis, Pvt. A.H.C.
Nairn			29.67	753.6	59	15.0		SW			1		10					Raining	W. D. Penny.
Nassau, (Bahamas)			30.13	765.3	84.5	29.2		SE			1		4			Blank	Blank	*D. clouds	Surg.-Maj. Henry.
Nottingham			29.91	759.7	65.7	18.7		WSW			5		6ks,k,d		WSW	0	0		E. J. Lowe.
Oscott, St Mary's College			30.12	764.8	64.7	18.2		S			3		10					Dull	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.93	760.2	67	19.4		SSW			2		8					Overcast	J. Lucas, for R. Main.
Plymouth			30.04	763.0	67.5	19.7		NW			4		0					Clear	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			30.01	762.2	63	17.2		NW			1		5					Fine	W. Kennedy.
Saint Ann's Head			30.01	762.2	60	15.6		W			3		1					Clear	John C. Walker.
Saint Helier, (Jersey)			30.10	764.5	63.0	17.2		WSW			4		10						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			29.80	756.9	61.0	16.1		SSW			2		9					Overcast	F. Shaw.
Scutari cemetery, (Turkey)			29.87	758.7	75.8	24.3		NE			2		2			Blank	Blank	*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.84	757.9	64	17.8		WNW			4		4			0.387	9.83		W. F. Cooper.
Stiloth Rectory			29.80	757.2	66.0	18.9		W			5		4			0.050	1.27	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			29.86	758.4	60.6	15.9		W			4		10					Threatening	The Staff.
Stornoway, Lewis C. (Heb.)			29.66	753.4	61	16.1		WNW			2		5					*D. clouds	John Smith.
Stratfield Turgiss			29.99	761.7	60.5	15.8		SW			1		10					Raining	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Sumburgh Head, (Shetland)																			
Thurso			29.63	752.6	56	12.8		Calm			0		9					Raining	John Trotter.
Truro, Royal Institution			30.06	763.5	68	20.0		NW			6		3					*D. clouds	W. Newcombe.
Valencia Observatory			30.07	763.8	62.3	16.8		W	22	9.8			5					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			29.74	755.4	58.4	14.7		W			5				10ks	0.44	11.2		Andrew Gibb.
Monach Lighthouse, Shet. Is.																			
North Unst, (Shetland Is.)																			

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m.. Instrumental error, --.099. * Detached clouds.

DANISH SERIES.

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

Copenhagen			30.12	765.1	64.6	18.1	70	S			2		4						
Fanöe			30.06	763.4	66.4	19.1	67	SSW			6		8						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.15	740.4	48.6	9.2	87	SW			2		8						
Thorshavn, (Faröe)			29.51	749.5	55.0	12.8	85	WSW			4		8						
Vestervig			30.01	762.2	63.3	17.4	78	S			4		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between upper and lower clouds.

FRENCH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.13	765.2	71.6	22.0	49	SW			1		..e			0	0		Normal School.
Amiens																			Normal School.
Avignon			30.1	764.9	79.2	26.2	41	N			1		0			0	0	Clear	Normal School.
Bar-sur Seine			30.11	765.4	69.4	2[illegible].8	39	SSW			1		2k			0	0		C. Saillard.
Beaumette, near Anger																			Beaumette Observatory
Beauvais			30.15	765.9	68.0	20	52	S			2		5		WSW	0	0	Cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.18	766.6	69.8	21	57	S			2		0			0	0	Clear	Normal School.
Bourges			30.07	763.7	66.9	19.4	54	ESE			2		0			0	0	Clear	Normal School.
Brest			30.07	763.6	66.4	19.1	72	N			3		2k		NW	0	0		Naval Observatory.
Caen																			Normal School
Chartres			30.18	766.6	64.4	18		W			2		10		SE			Cloudy	Normal School.
Chaumont	29.03	738.2	30.19	766.9	69.6	20.9		S			1				S	0	0		Normal School.
Commercy			30.2[illegible]	767.0	64.6	17.8	68	E			2		2c		E	0	0		Normal School.
Le Mans																			Normal School.
Lons-Le Saulnier			30.15	765.9	65.1	18.4	73	N			1		0			0	0	Clear	Normal School.
Mâcon			30.11	764.9	65.8	18.8	67	N			2		0			0	0	Clear	Normal School.
Mirecourt			30.11	764.8	63.7	17.6	55	N			2		0			0	0	Clear	Normal School.
Orleans																			Normal School.
Paris Observatory			30.01	765.7	68.9	20.	47	S			2		2c, ck			0	0		National Observatory.
Parthenay			30.06	763.4	66.2	19	70	N			2		2		S				Normal School.
La Roche sur Yon			30.12	765.0	76.6	24.8	39	W			2		2		E				Normal School.
Rochefort, Observatory			29.77	756.1	78.8	26.0	39	N			2		0			0	0	Clear	Naval Observatory.
Rouen			30.13	765.3	72.3	22.4	56	SW			1		0			0	0	Clear	Normal School.
Saint Lo																			Normal School.
Villefranche																			Normal School.
Sub-Series.																			
Gorée, (Senegambia)																			Frère Pascall.
Mont-Louis	25.02	635.5			66.2	19.0	48	ESE	9.3	4.1			1		NW	0	0		—. Falguère.
Montsouris Observatory			30.14	765.6	72.0	22.2	44	S			2		7c, ck		SSW	0	0		Marié Davy.
Perpignan			30.11	764.9	77.0	25.0	39	NW	1.9	0.83			1		NW	0	0		Dr. Fines.
Saint Maur, (near Paris)			30.15	765.7	68.5	20.3	50	SE			2		1			0	0	Clear	E. Renou.
Saint Pierre, (Martinique)																			
Tours			30.15	765.7	68.5	21.0	45	SSW			1		2		WNW	0	0		C. Marquet.
Versailles, (near Paris)			30.15	765.8	71.2	21.8	46	S			1		7			0	0	Cloudy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai			29.94	760.4	73.4	23.0	91	ESE	4.0	1.8		3ck	0			0.004 / 0.035	0.1 / 0.9		H. Le Lec, S. J.

NOTE.—The originals give the wind-force by the scale 0 to 7; the weather in general terms; 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 ft. The rain-fall at ZiKa-Wei is given as recorded by two different gauges.

GERMAN SERIES.

Furnished by the coöperation of Prof. Geo. Neumayer, Superintendent Royal 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.17	766.4	66.2	19.0	59	W	13	6			3			0	0		Prof. Hoh.
Berlin			30.15	765.9	66.2	19.0	56	N	4	2			7			0	0		Prof. Arndt.
Breslau			30.15	765.8	61.9	16.6	58	N	27	12			8			0	0		Dr. P. Neugebauer.
Carlsruhe			30.13	765.2	68.4	20.2	55	E	4	2			1			0	0		A. Senz.
Cassel			30.04	762.9	71.6	22.0	43	SSW	9	4			2			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.72	729.5	30.14	765.6	65.3	18.5	42	W					3			0	0		M. Wilhelm.
Hamburg			30.14	765.6	66.2	19.0	69	SSE	4	2			9k	S		0	0	Cloudy	Deutsche Seewarte.
Kiel			30.11	764.8	69.4	20.8	55	S	13	6			5			0	0		Prof. G. Karsten.
Königsberg			30.09	764.2	63.3	17.4	46	NE	22	10						0.001	0.02	Clear	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			30.16	766.1	68.2	20.1	52	SW	9	4			5			0	0		Prof. Bruhns.
Münster			30.11	764.8	64.2	17.9	81	SW	4	2			0			0	0		Prof. E. Heis.
Posen			30.11	764.8	66.2	19.0	45	N	36	16			10			0.004	0.1	Cloudy	Dr. Magener.
Strassburg, (in Alsace)			30.15	765.7	67.7	19.6	56	NE	7	3			1			0	0		Hartwig.
Stuttgart			30.14	765.5	65.3	18.5	55	NE					4			0	0		Mr. Würth.
Thorn			30.07	763.8	65.3	18.5	57	NNE	13	6			2			0.020	0.51		Dr. Rosenbalg.
Treves, (Trier)			30.10	764.6	68.	20.1	51	S	9	4			2			0	0		Prof. Flesch.
Wustrow, Naval School			30.17	766.2	64.0	17.8	70	NW	13	6			4ck			0	0	Clear	E. F. Schütz.

NOTE.—In the originals the distinction between 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.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.07	763.8	73.9	22.3	43	SE			2		1			0	0		
Mondovi			30.06	763.5	68.4	20.2	47	NE			4		0			0	0		
Genoa			30.07	763.8	77.4	25.2	41	SW	4.9	1.9			0			0	0		
Pavia			30.07	763.6	73.8	23.2	27	S			1		0			0	0		
Verona			30.03	762.7	75.7	24.3	45	E			1		0			0	0		
Padua			30.05	763.3	71.4	21.9	47	SW	7.4	3.3			2			0	0		
Parma																			
Bologna			30.08	764.1	71.1	23.4	54	NW			4		2	N		0	0		
Leghorn																			
Urbino																			
Ancona																			
Siena																			
Rome			30.05	763.3	69.4	20.8	37	SE	4.3	1.9			3	NE		0	0		
Naples, O.U.			29.99	761.8	78.4	25.8	27	NNE	11.2	5.0			3			0	0		
Lecce			29.99	761.7	80.4	26.9	31	SE			1		7	NE		0	0		
Cosenza			29.97	761.3	74.3	23.5	37	ESE	18.6	8.3			9	N		0	0		
Catania, (Sicily)			29.98	761.5	71.2	21.8	59	NW			2		10			0	0		
Ripozzo																			
Palermo			29.88	758.9	80.6	27.0	74	NE			7		0			0	0		
Sub-Series.																			
Naples, S. R.			29.91	759.6	74.1	23.4	64	NE	4.9	2.2			5			0.386	9.8		
			30.01	762.2	74.8	23.8	48	E	0.7	0.3			2	NE		0	0		Prof. F. Brioschi.

NOTE.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; the cloudiness occasionally by the scale 0 to 4, and generally without distinguishing between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovia is 555 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet.

NETHERLANDS' SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 1—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather	Observer
Flushing			30.12	765.0	70.5	21.4		WSW			4								
Groningen			30.03	762.7	66.0	19.[illegible]		SW			4								
Helder			30.03	762.8	68.4	20.[illegible]		SSW			4								
Utrecht			30.03	763.4	71.1	21.[illegible]		SW			4		8					Very cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 1—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather	Observer
Bergen			29.74	755.3	61.9	16.6	73	S	22.8	10.2			10			0.512	13.0	Raining	
Christiania			30.03	762.7	63.0	17.2	64	S	12.8	5.7			10			0	0		
Tromsö			29.64	752.9	59.4	15.2	87	SW			6		10			0	0		

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m. local time.

PORTUGUESE SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 1—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather	Observer
Lisbon			30.03	763.5	81.0	27.2	48	SW	4.9	2.2			0						The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

RUSSIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 1—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather	Observer
Warsaw			30.00	761.9	57.0	14.0	61	N	18	8			10						Astronomical Obs.
Wilna			29.99	761.8	59.2	15.1	65	N	4	2			10						Astronomical Obs.
Dorpat			30.18	766.5	59.9	15.5	44	NNE	7	3			2						Physical Cabinet.
St. Petersburg			30.20	767.1	55.2	12.9	52	ENE	4	2			1						Central Physical Obs.
Kuopio			30.21	767.3	52.2	11.2	73	E					0			0	0		Ch. Forsten.
Kief			29.73	755.2	70.5	21.4	47	S	4	2			0						Physical Cabinet.
Nikolaiev			29.81	758.0	77.2	25.1	35	ENE	20	9			3						Kurd kof.
Kertch			29.87	758.7	77.2	25.1	69	SSW	7	3			8						Lagorio.
Moscow			30.03	762.8	54.3	12.4	80	NW	10	4.5			10						Meteorological Obs.
Lugan			29.76	756.0	72.1	22.3	71	W	10	4.5			10						Meteorological Obs.
Archangel			30.28	769.0	46.9	8.3	67	WNW	4	2			6						Ugorodnikof.
Tiflis	28.47	723.2	29.80	756.8	86.7	30.4	38	SW	4	2			0						Physical Obs.
Astrakhan			29.93	760.1	86.5	30.3	40	SE	8	3.5			1						Sebastianof.
Kasan			30.07	763.7	59.7	15.4	63	WSW	0	0			10						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	29.06	738.1	30.05	763.2	57.2	14.0	64	SW	8	3.5			3						Meteorological Obs.
Kasaly			29.86	758.5	86.7	30.4	35	Calm	0	0			4						Boroff.
Tashkend	28.35	720.1	29.97	761.2	79.5	26.4	64	Calm	0	0			0						Moriel[illegible].
Barnaul			29.62	752.3	64.4	18.0	48	SW	22	10			1						Meteorological Obs.
Yeniseisk			29.44	747.7	53.1	11.7	91	SE	13	6			10					Raining	Marks.
Irkutsk	28.46	723.0	29.82	757.5	54.3	12.4	89	Calm	0	0			0						Ulozef.
Oorga	25.76	654.2	29.97	761.1	52.2	11.2	89	Calm	0	0			0						Mossin.
Peking, (China)			29.96	760.9	75.9	24.4	77	Calm	0	0			3						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. The elevation of Tiflis is 409.[illegible] 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.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 1—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather	Observer
Madrid			29.95	760.8	91.6	33.1	23	NE	3.8	1.7		3	0	NE		0	0		Royal Observatory.
San Fernando																			The Naval Observatory.

NOTE.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea			30.02	762.4	56.1	13.4	87	SW			7		8			0	0		
Hernosand			30.14	765.5	60.8	16.0	72	S			6		3			0	0		
Stockholm			30.10	764.5	63.7	17.5	55	SE			4		4			0	0		
Wisby			30.11	764.9	61.5	16.4	69	NE			4		0			0	0		
Sub-Series.																			
Upsala			30.11	764.8	65.8	18.8	42	SSW	11.9	5.3			1						Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.74	730.1	30.14	765.5	64.8	18.2	69	NE			2		1			0	0	Clear	The Observatory.
Zurich	28.53	724.7	30.10	764.6	65.9	19.4	54	N			1		0			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +2.7mm.; Thermometer, −1°.7 R. H.; Relative Humidity, +1 per cent.

Note.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria, Lee Obs'y.			29.87	758.6	86.0	30.0	61	NW			2		2						Prof. C. N. A. Van Dyck.
Constantinople			29.89	759.1	71.6	22.0	61	N	16.8	7.5			5		N	0	0	Cloudy	
Fao, (Persian Gulf)			29.81	757.2	96.8	36.0		NW			3		0					Clear	
Salonica					82.2	27.9		SE			2		5					Cloudy	
Valona			29.91	759.6	73.8	23.2		NW			2		2						
Varna			29.92	760.0	78.8	26.0		W			6		0					Clear	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea level. The distinction between upper and lower clouds is not made.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens																			

Note.—Reports commence October 1, 1875.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Takio																			

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario			30.00	762.0	64	17.8		SE	8	3.6			10s		SE	0.09	2.3	Cloudy	
Chatham, N. B.			29.88	758.9	64	17.8	75	NW	13	5.8		0	0			0.01	0.3	Clear	
Charlottetown, P. E. Island			29.84	757.9	67	19.4	81	NE	8	3.6			10ks			0	0	Cloudy	
Fort Garry Manitoba			29.80	756.9	54	12.2	99	NE	5	2.2		5k	5n	N	N	0.170	4.32	Cloudy	
Halifax, N. S.			29.83	757.7	68	20.0	95	W	5	2.2			8n		W	0	0	Cloudy	
Kingston, Ontario			29.92	760.0	68	20.0	79	NE	1	0.4			10s			0	0	Cloudy	
Montreal, Quebec			29.99	761.7	60	15.6	70	NE	12	5.4		5ck	7ks	NW		0	0	Cloudy	
Ottawa, Ontario			29.94	760.5	65	18.3	84	E	8	3.6		5k	5n	E	E	0	0	Cloudy	
Parry Sound, Ontario			29.84	757.9	67	19.4	97	E	18	8.0		5k	5ks	NE	NE	0	0	Cloudy	
Port Dover Ontario			29.86	758.4	70	21.1	100	Calm	0	0			Fog			0	0	Foggy	
Port Stanley, Ontario			29.87	758.7	73	22.8	97	SW	2	0.9		8k	0	SW		0.06	1.5	Fair	
Quebec, Quebec			30.00	762.0	63	17.2	72	E	1	0.4		5c	0	SW		0.028	0.71	Fair	
Saugeen, Ontario			29.78	756.4	69	20.6	76	SE	10	4.5		5ks	8s	SW		0	0	Cloudy	
Stayner, Ontario			29.82	757.4	69	20.6	85	SE	5	2.2			Haze			0	0	Hazy	
Sydney, C. B.			29.81	757.2	70	21.1	80	W	10	4.5		8k	8ks	W	W	0	0	Fair	
Toronto, Ontario			29.87	758.7	70	21.1	85	E	7	3.1		8ck	0	W		0.34	8.6	Cloudy	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

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

Station.	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —to.	Clouds. Amount. Up'er —to.	Clouds. Amount. Low'r —to.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.91	759.7	73	22.8	85	NW	1	0.4		Haze	Haze			0	0	Hazy	
Alpena, Mich.			29.67	753.6	67	19.4	100	SE	12	5.4			10n			0.25	6.3	Heavy rain	
Atlantic City, N. J.			29.94	760.5	73	22.8	90	SW	3	1.3		0	0			0	0	Clear	
Augusta, Ga.			30.09	764.3	72	22.2	80	Calm	0	0		0	Haze			0	0	Clear	
Baltimore, Md.			29.94	760.5	78	25.6	73	Calm	0	0		0	Sm'e			0	0	Smoky	
Barnegat, N. J.			29.93	760.2	72	22.2	90	Calm	0	0		0	Haze			0	0	Clear	
Benton, Montana	27.16	689.8	29.96	761.0	48	8.9	77	W	12	5.4		0	0			0.02	0.5	Clear	
Bismarck, Dakota	28.14	714.7	29.75	755.6	54	12.2	86	N	4	1.8			10s		N	0.82	20.8	Cloudy	
Boston, Mass.			29.98	759.4	71	21.7	75	Calm	0	0		2ck	Sm'e			0	0	Fair	
Breckenridge, Minn.			29.60	751.8	58	14.4	100	NE	4	1.8			10s			0.58	14.7	Cloudy	
Brownsville, Tex.																			
Buffalo, N. Y.			29.86	758.4	71.5	21.9	90	SW	4	1.8			Haze		S	inap	inap	Hazy	
Burlington, Vt.			29.96	761.0	63	17.2	72	N	6	2.7			10s		N	0.31	7.9	Cloudy	
Cairo, Ill.			29.95	760.7	75	23.9	90	S	4	1.8			10s		S	0	0	Cloud	
Cape Hatteras, N. C.			29.99	761.7	77	25.0	82	W	9	4.0		5ck	Haze	N		0	0	Fair	
Cape Henry, Va.			29.97	761.2	79	26.1	70	W	8	3.6		Haze	0			0	0	Clear	
Cape May, N. J.			29.92	760.0	73	22.8	90	SE	4	1.8		0	0			0	0	Clear	
Charleston, S. C.			30.10	764.5	74	23.3	85	W	5	2.2		0	Haze			0	0	Clear	
Cheyenne, Wyoming	24.19	614.4	30.13	765.3	47	8.3	24	SW	4	1.8		0	0			0	0	Clear	
Chicago, Ill.			29.68	753.9	77	25.0	77	SW	1	4.5		0	10s		S	0.06	1.5	Cloud	
Cincinnati, Ohio			29.89	759.[illegible]	75	23.9	76	SE	2	0.9		10c	Sm'e			0	0	Cloudy	
Cleveland, Ohio			29.84	757.9	77.1	25.1	69	S	12	5.4		2c	5s	NW		0	0	Fair	
Colorado Springs, Col.	24.30	617.2	30.17	766.3	48	8.9	70	N	3	1.3		0	0			0	0	Clear	
Corsicana, Tex.			29.98	761.[illegible]	76	24.4	90	S	5	2.2		Haze	0			0	0	Clear	
Davenport, Iowa			29.72	754.9	73	22.8	90	S	20	8.9			10s		SW	0.31	7.9	Cloudy	
Denison, Tex.			29.91	759.7	80	26.7		S				2ck	2s	S		0	0	Fair	
Denver, Col.	24.95	633.7	30.17	766.3	50	10.0	58	SE	3	1.3		0	0			0	0	Clear	
Detroit, Mich.			29.79	756.7	76	24.4	86	SW	7	3.1		5k	Haze	S		0	0	Fair	
Dodge City, Kan.	27.46	697.5	29.68	753.9	63	17.2	87	N	8	3.6		0	0			0.01	0.3	Clear	
Dubuque, Iowa			29.66	753.[illegible]	75	23.9	77	W	10	4.5		5k	0	NW		0.83	21.1	Fair	
Duluth, Minn.			29.53	750.[illegible]	56	13.3	100	NE	14	6.3			10n			1.48	37.6	Light rain	
Eastport, Me.			29.87	758.7	63	17.2	83	N	6	2.7		2c	8			0	0	Cloudy	
Erie, Pa.			29.84	757.9	75	23.	81	SE	8	3.6		2c	Sm'e			0	0	Fair	
Escanaba, Mich.			29.50	749.3	67	19.4	89	SW	14	6.3		2k	8s	S	W	0.97	24.6	Cloudy	
Fort Gibson, I. T.			29.95	760.7	73	22.8	90	SE	5	2.2			10n			0.59	15.0	Light rain	
Fort Sill, I. T.																			
Fort Sully, Dakota	28.25	717.3	29.87	758.7	55	12.8	79	NW	10	4.5		0	2s		NW	0.09	2.3	Fair	
Galveston, Tex.			30.01	762.2	82	27.8	74	SE	4	1.8		0	2k		SE	0.58	14.7	Fair	
Grand Haven, Mich.			29.67	753.	74	23.3	81	SW	16	7.2			10s			0	0	Cloudy	
Indianapolis, Ind.			29.84	757.9	77	25.0	77	S	7	3.1		8c	Sm'e			0	0	Fair	
Indianola, Tex.			30.02	762.5	80	26.7	86	S	3	1.3		2k	2ks	E	S	0.35	8.9	Fair	
Jacksonville, Fla.			30.10	764.	75	23.9	85	alm	0	0		0	0			0	0	Clear	
Keokuk, Iowa			29.73	755.4	74	23.3	81	W	14	6.3			10s		W	0.13	3.3	Cloudy	
Key West, Fla.			30.05	763.3	82.2	27.9	74	SE	8	3.6		5ck	1n	E		0	0	Fair	
Kittyhawk, N. C.			29.99	761.7	77	25.0	69	W	14	6.3		2k	0			0	0	Clear	
Knoxville, Tenn.			30.07	763.8	68	20.	90	Calm	0	0		1c	Fog			0	0	Fair	
La Crosse, Wis.			29.56	75[illegible].8	72	22.2	90	W	10	4.5		2c	5ks	W	N	1.66	42.2	Clearing	
Leavenworth, Kan.			29.79	756.[illegible]	71	21.7	90	W	5	2.2		0	2s			0.54	13.7	Fair	
Lexington, Ky.	28.92	734.6	29.98	761.5	73	22.8	76	S	12	5.4		5c	5s	S	S	0	0	Cloudy	
Long Branch, N. J.			29.94	760.2	77	25.0	76	SW	2	0.9		0	Haze			0	0	Clear	
Louisville, Ky.			29.94	760.5	80	26.7	66	SE	4	1.8			10s			0	0	Cloudy	
Lynchburg, Va.			30.00	762.0	75	23.9	77	Calm	0	0			0			0	0	Clear	
Malone, N. Y.			29.94	760.	61	16.1	70	NE	6	2.7		5c	0	W		0.11	2.8	Fair	
Marquette, Mich.			29.47	74[illegible]	61	16.1	82	NW	2	0.9			Fo			0.76	19.3	Foggy	
Memphis, Tenn.			30.01	762.2	77	25.0	82	S	1	0.		Haz	5s			0.03	0.8	Fair	
Milwaukee, Wis.			29.63	752.6	72	22.2	90	SW	12	5.4			10ks		SW	0.14	3.6	Cloudy	
Mobile, Ala.			30.0	763.[illegible]	72	22.2	95	SW	2	0.9		0	0			0.40	10.2	Clear	
Montgomery, Ala.			30.08	764.0	73	22.8	83	S	1	0.4		0	Haze			inap	inap	Clear	
Morgantown, W. Va.			29.95	760.7	73	22.8	85	alm	0	0		0	Fog			0.44	11.2	Fair	
Mt. Washington, N. H.	23.95	607.8	30.29	769.[illegible]	51	10.6	61	NW	12	5.4		8ks	5s			0	0	Cloudy	
Nashville, Tenn.			29.98	761.5	77	25.	77	Calm	0	0		2ck	5s	W		0	0	Fair	
New Haven, Conn.			29.92	760.0	72	22.2	75	Calm	0	0		Haze	Fog			0	0	Fair	
New London, Conn.			29.94	760.	69	20.6	92	Calm	0	0			Fog			0	0	Foggy	
New Orleans, La.			30.04	763.0	79	26.1	78	E	5	2.2		2k	0	E		0	0	Clear	
Newport, R. I.			29.91	759.7	68	20.	89	Calm	0	0			Fog			0	0	Foggy	
New York, N. Y.			29.92	760.0	74	23.3	76	W	2	0.9		0	Fog			0	0	Clear	
Norfolk, Va.			29.99	761.7	75	23.	77	W	4	1.8		0	Haze			0	0	Clear	
North Platte, Neb.	27.16	689.8	29.72	754.9	50	10.0	78	Calm	0	0		0	0			0	0	Clear	
Omaha, Neb.	28.84	731.8	29.83	757.7	63	17.	72	W	10	4.5		0	0			0.85	21.6	Clear	
Oswego, N. Y.			29.92	760.0	71	21.7	90	SSW	3	1.3			10s			0	0	Threatening	
Peck's Beach, N. J.			29.93	760.	73	22.8	85	NE	6	2.7		0	Haze			0	0	Fair	
Pembina, Dakota			29.75	755.6	55	12.8	93	NW	8	3.6			10s		NW	0.62	15.7	Cloudy	
Philadelphia, Penn.			29.92	760.0	75	23.9	81	NW	5	2.2		0	Sm'e			0	0	Clear	
Pike's Peak, Colorado	18.06	458.7	30.27	768.8	28	−2.2	77	W	12	5.4		0	0			0	0	Clear	
Pittsburgh, Penn.			29.93	760.2	72	22.2	80	SE	2	0.9		2c	Sm'e			0	0	Fair	
Port Huron, Mich.			29.77	756.4	73	22.8	90	S	9	4.0			10s		W	0	0	Cloudy	
Portland, Me.			29.93	760.2	67	19.4	84	Calm	0	0		8ck	Haze	NW		0	0	Cloudy	
Portland, Oregon			30.17	766.3	55	12.8	90	S	4	1.8			10s			0.17	4.3	Cloudy	
Punta Rassa, Fla.			30.09	764.3	77.1	25.1	86	E	5	2.2		8cs	1ks			1.44	36.6	Cloudy	
Rochester, N. Y.			29.87	758.7	72	22.2	85	SW	3	1.3		5c	Haze			0.3	0.8	Fair	
Salt Lake City, Utah	25.69	652.5	30.02	762.5	55	12.8	38	Calm	0	0		0	0			0	0	Clear	
Sandy Hook, N. J.			29.91	759.7	72	22.2	85	W	10	4.5		0	Haze			0	0	Clear	
San Diego, Cal.			29.94	760.5	66	18.9	94	Calm	0	0			10n			0	0	Light rain	
San Francisco, Cal.			29.95	760.7	58	14.4	82	SW	4	1.8		0	0			0	0	Clear	
Santa Fe, N. M.	23.37	593.6	29.91	759.7	56	13.3	63	N	12	5.4		0	0			0	0	Clear	
Savannah, Ga.			30.10	764.5	73	22.8	85	NW	4	1.8			Fog			0		Foggy	
Shreveport, La.			30.05	763.3	77	25.0	82	Calm	0	0		2c	0			inap	ina	Fair	
Smithville, N. C.																			
Springfield, Mass.			29.92	760.0	68	20.0	84	NE	4	1.8		2cs	Fog			inap	inap	Fair	
St. Louis, Mo.			29.85	758.2	79	26.1	73	SW	12	5.4		2cs	8s			0	0	Cloudy	
St. Marks, Fla.			30.08	764.0	74	23.3	90	E	6	2.7		0	0			0	0	Clear	
St. Paul, Minn.			29.50	749.3	64	17.8	86	SW	14	6.3			10s		W	0.54	13.7	Cloudy	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			29.88	758.9	72	22.	80	NW	1	0.4		Haze	Haze			0	0	Clear	
Toledo, Ohio			29.80	756.9	76	24.	76	S	4	1.8		10c	2s	W	S	0	0	Cloudy	
Tucson, Arizona																			
Tybee Island, Ga.			30.10	764.5	78	25.6	86	Calm	0	0		Haze	0			0	0	Clear	
Vicksburg, Miss.			30.12	765.0	77	25.0	82	S	1	0.4		0	Haze			0	0	Fair	
Virginia City, Montana	24.29	17.0	29.77	756.1	39	3.9	63	Calm	0	0		0	0			0	0	Clear	

UNITED STATES SERIES—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			29.97	761.2	76.5	24.7	74	NW	4	1.8		Haze	Sm'o			0	0	Smoky	
Wilmington, N. C			30.0	763.5	75	24.2	68	W	8	3.6		0	Haze			0	0	Clear	
Wood's Hole, Mass			29.94	760.2	69	20	100	NW	1	0.4			Fog			0	0	Foggy	
Wytheville, Va	27.76	705.1	29.86	758.0	63	17.2	88	N	1	0.4		0	0			0	0	Clear	
Yankton, Dakota	28.57	725.7	29.81	757.2	61	16.1	66	W	15	6.7		0	0			1.50	38.1	Clear	
Yuma, Arizona																			
Sub-Series																			
Bridgetown, Barbados, W. I					84	28.9	87	E	3	1.3		5c	2ks	E		0	0	Fair	E. Racker.
Pointe-a-Pitre, Gd'loupe, do			29.94	760.5	84	28.9	79	E				5cs	2k			0	0	Fair.	L. V. Bigard.
Havana, Cuba, W. I			30.12	765.0	77	25.0	76	SE	1.2	0.5		2c	1k	NE	E	2.36	59.9	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W			30.18	766.6	79	26.1	74	Calm	0	0		1c	0	E		0.09	2.3	Clear	James Gall.
St. Thomas, St. T., W. I			30.26	768.6	83	28.3	64	E	5	2.2		2ck	5k	E		0	0	Cloudy	W. S. Cameron.
Santiago de Cuba, W. I			29.82	757.4	79	26.1	74	N	3.6	1.6		0	2s		SW	0	0	Fair	Robert Mason.
St. Georges, Bermudas			30.12	765.0	81.0	27.2	81	SW	7.3	3.3			10ks			0	0	Cloudy	C. F. Allen.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.
Cumberland, B. A																			
Ft. Chippewyan, B. A																			
Ft. McPherson, B. A																			
Ft. Simpson, B. A																			
York Factory, B. A			29.70	754.4	57.0	13.9	93	SW	4	1.8			10k			0	0	Cloudy	J. Fortescue.
St. John's, Newfoundland			29.90	759.4	75	23.9	72	S					10s			0	0	Cloudy	John Delaney.
St. John's, Porto Rico, W.																			Leon M. Acuña.
Clifton, Jamaica, W. I	27.26	692.4	30.03	763.5	67	19.4	90	NNW	1.0	0.4		0	2k			0.80	20.3	Clear	C. Partridge.
Navassa																			
Medellin, S. A																			
Paramaribo, S. A																			
Elyria, Ohio			29.96	758.4	74	23.3	81	S	8	3.6			2s			0	0	Fair	H. M. Redington.

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

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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 Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,033 (?) ft., or 330.1 (?) m.; Mt. Washington, 6,288 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, 6,860.2 (?) ft., or 2,091.6 (?) m.; Virginia City, 5,180 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,291.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 1.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 4, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.04	763.0	81.9	27.7	47	NW			3		0			0	0	Fair	Charnot.
Algiers			30.07	763.6	77.7	25.4	67	N			1		1			0	0	Fair	Peter.
La Calle																			Kuntz.
Tunis			30.10	764.5	82.4	28.0	42	E			4		4			0	0	Cloudy	Jacques.
Sfax			30.16	766.0	83.5	28.6	43	E			3		1			0	0	Fair	Chauvey.
Saida			30.02	762.5	82.6	28.1	30	NNW			1		2			0	0	Fair	Grosjean.
Tebessa			30.15	765.8	78.3	25.7		N			2		0			0	0	Clear	Colin.
Gerville			30.02	762.6	80.6	27.0	28	S			3		7			0	0	Thunder	Bernadach.
Laghouat			30.09	764.2	84.6	29.2		E			4		3			0.079	2.0	Stormy	Simon.
Biskra			30.13	765.3	87.8	31.0	40	E			1		1			0	0	Fair	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.01	762.9	69.4	20.8	59	SW			1		6			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.05	763.2	58.1	14.5	81	W			3		10		8	0.102	2.6		I. R. Observatory.
Eperies			29.99	761.7	60.1	15.6	68	Calm			0					0.052	1.3		Julius Mikolik.
Gratz	28.88	733.6	30.06	763.5	63.7	17.6	71	WNW			2		8						Andreas Rospini.
Hermannstadt	28.55	725.1	29.95	760.6	60.1	15.6	57	NW			3		5			0.028	0.70		Prof. Reissenberger.
Kremsmünster	28.75	730.3	30.07	763.7	63.7	17.6	70	NW			2		5			0	0		Prof. C. Wagner.
Lemberg			29.91	759.7	58.1	14.5	70	NW			4		8			0.252	6.4	Rainy	Dr. T. Stanecki.
Nyiregyhaza			30.02	762.4	59.0	15.0	76	N			1		10			0.035	0.90	Raining	Habzsuda Daniel.
Pola			30.07	763.7	72.7	22.6	65	SW			1		6eks			0.004	0.09		I.R. Hydrographic Office
Szegedin			29.98	761.6	64.9	18.3	78	SW			1		6			0	0		Karl Stancel.
Trieste			30.07	763.7	73.6	23.1	64	W			1		5			0	0		Prof. V. Farolfi.
Vienna			30.02	762.5	68.7	20.4	42	NW			2		5			0	0		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.11	764.8	65.5	18.6	63	WNW			2	4	6	WNW		0	0		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Low r. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.80	756.9	59.6	15.3		SSW	14	6.3			6			0.470	11.94	*D. clouds	William Boswell.
Ardrossan			29.93	761.0	58	14.4		WSW			3		5					Rainy	James Mayes.
Armagh Observatory			30.07	763.8	59.7	15.4		SW	10	4.5			10					Gloom	S. Cal., for Dr. Robinson.
Bidston, Liverpool Obs.			30.08	764.0	60.9	16.1		W			4		10					Overcast	John Hartnup, Jr.
Burr Castle, (Parsonstown)			30.12	765.0	63.3	17.4		WNW			3		8					*D. clouds	J. Dreyer.
Bradford			30.02	762.5	61.7	16.5		W			2		7					Fine	J. McLandsborough.
Bridgetown, (Barbadoes)			29.86	758.4	86.2	30.1		W			1		4					*D. clouds	T. H. Hunt.
Cambridge Observatory			30.10	764.5	67.0	19.4		W			1		5					*D. clouds	Sergeant Hunt, A. H. C.
Cape Good Hope Obs.			30.12	765.0	53.0	11.7	77	SSW	12	5.4			9						The Staff, for E. J. Stone.
Cardington			30.12	765.0	66.0	18.9		W					3						John McLaren.
Carlisle			30.00	762.0	63.2	17.3		W					9			0.05	1.3	*D. clouds	T. Bell, for J. Cartmell.
Chatham, School M. E.			30.08	764.0	67.2	19.6		SW			1		5					Fair	Capt. J. Fellowes, R. E.
Dartmoor	28.80	731.5	30.17	766.3	59	15.0		NW			2		4					D. clouds	R. E. Power.
Donaghadee			30.00	762.0	59	15.0		WSW			5		10					Overcast	J. Mac Gowan, Jr.
Dover			30.12	765.0	65	18.3		SW			2		2						J. Costello
Eccles, (near Manchester)			30.05	763.5	64.4	18.0		WSW	8.4	3.8			7					D. clouds	Thomas Mackereth
Falmouth Observatory			30.23	767.8	64.7	18.2		WNW	9	4.0			10					Overcast	The Staff.
Fort Napier, (Natal)	27.44	697.0	29.77	756.4	70.0	21.1		NE			2		1					D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.98	761.5	77	25.0		N					6						
Galway, Queen's College																			B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.05	763.3	76.5	24.7		ENE			4		6					Levanter	Sergt. E. G. Baker.
Glasgow Observatory			29.94	760.5	55.2	12.9		WSW			1		10					Drizzling	Lewis Stuart.
Great Yarmouth			30.08	764.0	64	17.8		N W			2		4					*D. clouds	G. T. Watson.
Greenwich Royal Obs.			30.13	765.3	68.5	20.3		WNW			3		5					*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.21	767.3	64.6	18.1		NW			1		3					*D. clouds	Dr. S. E. Hoskins, R. N.
Halifax, Moorside Obs.			30.06	763.5	63.0	17.6		W					8					*D. clouds	F. J. Page, for L. J. Cro[illegible]
Helston			30.17	766.3	68	20.0		WNW			4		8					*D. clouds	V. P. Moyle.
Holyhead			30.10	764.5	62	16.7		SW			3		5					*D. clouds	John Tilston.
Hull Park																			
Kew Observatory			30.13	765.3	65.4	18.6		W	12	5.4			5					*D. clouds	The Staff.
Kingstown			30.15	765.8	63	17.2		W			4		9					Overcast	George Mitchell
Leicester Museum			30.13	765.3	62.9	17.2		W			2		9					Overcast	William J. Harrison.
Llandudno			30.09	764.3	62.8	17.1		SW					10					Overcast	Dr. James Nicol.
Malta, (Mediterranean)			30.12	765.0	82.6	28.1		NE			1		2k					*D. clouds	Fred Travis, Pvt. A. H. C.
Nairn			29.77	756.1	62	16.7		W			3		10						W. D. Penny.
Nassau, (Bahamas)			30.11	764.8	79.8	26.6		SE			1		8k						Surg.-Maj. Henry.
Nottingham			30.10	764.5	68.0	20.0		WSW			3		10k,d			0	0	Lightning	E. J. Lowe.
Oscott, St Mary's College			30.09	764.3	63.9	17.7		WSW			3		8					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			30.11	764.8	65	18.3		W			2		7					*D. clouds	J. Lucas, for R. Main
Plymouth			30.19	766.8	66.5	19.2		NW			3		10					Overcast	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			30.16	766.1	62	16.7		W			3		8					Cloudy	W. Kennedy.
Saint Ann's Head			30.18	766.6	61	16.1		W			2		2						John C. Walker.
Saint Helier, (Jersey)			30.21	767.3	65.5	18.6		N			2		8						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			30.03	762.7	63.2	17.3		WSW			2		8					Overcast	F. Shaw.
Scutari cemetery, (Turkey)			29.82	757.4	67.4	19.7		E			1		9			Blank	Blank	D. clouds	Sergt. W. H. Lyne.
Sheffield			30.14	765.5	64	17.8		WNW			2		8					Overcast	W. F. Cooper.
Silloth Rectory			30.01	762.2	60.8	16.0		WSW			4		10			0.010	0.25	Overcast	Rev. Francis Redford.
Stonyhurst Observatory			30.05	763.3	59.8	15.4		SW			3		10			Blank	Blank	Gloomy	The Staff.
Stornoway, Lews C. (Heb.)			29.74	755.4	59	15.0		W			4		5					Showery	John Smith.
Stratfield Turgiss			30.14	765.5	65.9	18.8		NW			1-2		7			Blank	Blank	*D. clouds	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Sumburgh Head, (Shetland)																			
Thurso			29.69	754.1	58	14.4		WSW			3		7					D. clouds	John Trotter.
Truro, Royal Institution			30.18	766.6	69	20.6		NW			4		6					D. clouds	W. Newcombe.
Valencia Observatory			30.18	766.6	62.0	16.7		SW	18	8.0			9					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			29.94	760.5	61.1	16.2		W			5		5k			0.03	0.8		Andrew Gibb.
Monach Lighthouse, Shetland																			
North Unst, (Shetland Is.)																			

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error, —.099. *Detached clouds.

DANISH SERIES.

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

Copenhagen			29.96	761.0	58.6	14.8	96	SSW			2		10					Raining	
Fanöe			29.96	760.9	63.1	17.3	68	W			4		7						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.49	749.1	43.9	6.6	74	NW			6		5						
Thorshavn, (Faröe)			29.13	739.9	53.8	12.1	88	W			6		8						
Vestervig			29.92	759.1	62.2	16.8	74	W			4		2						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.17	766.2	71.6	22.0	55	N			1		2c			0.908	0.2		Normal School.
Amiens																			Normal School.
Avignon			30.06	763.4	80.1	26.7	28	NW			3		0			0	0	Clear	Normal School.
Bar-sur Seine			30.11	764.7	69.1	20.6	54	N			3		2c			0	0		C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			30.16	766.0	68.4	20.2	47	WNW			2		5		NW	0	0	Cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.15	765.7	73.4	23	56	SW			4		1		NW	0	0	Clear	Normal School.
Bourges			29.93	760.1	80.2	26.8	63	N			2		1		S	0	0	Clear	Normal School.
Brest			30.18	766.5	67.1	19.5	54	N			2		8		NNW	0.089	2.25	Cloudy	Naval Observatory.
Caen																			Normal School
Chartres			30.17	766.2	64.8	18.2		N			2		4		SE				Normal School.
Chaumont	28.99	736.4	30.13	765.2	69.4	20.8		W			1		8		W	0	0	Cloudy	Normal School.
Commercy			30.13	765.3	67.6	19.8	67	W			2		5k,n			0	0	Cloudy	Normal School.
Commune de Gréasque*			30.13	765.2	81.1	27.3	19	NW			4		2		SW	0	0		
Le Mans																			Normal School.
Lons-Le Saulnier			30.12	765.0	69.8	21	72	N			1		2			0	0		Normal School.
Mâcon			30.10	764.6	71.6	22	51	N			2		5		NE	0	0	Cloudy	Normal School.
Mirecourt			30.13	765.2	64.4	18	58	SE			1		8		NW	0	0	Cloudy	Normal School.
Orleans																			Normal School.
Paris Observatory			30.15	765.9	67.3	19.6	57	W			2		5k, c		NW	0	0	Cloudy	National Observatory.
Parthenay			30.06	763.4	69.1	20.6	73	NW			2		5		NW			Cloudy	Normal School.
La Roche sur Yon			30.15	765.7	74.8	23.8	50	W			2		5		E			Cloudy	Normal School.
Rochefort, Observatory			30.19	766.8	75.2	24.0	60	SW			3		10			0	0	Cloudy	Naval Observatory.
Rouen			30.16	766.0	70.5	21.4	54	NW			1		2		W	0	0		Normal School.
Saint Lo																			Normal School.
Villefranche																			Normal School.
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchési.
Mont-Louis	25.05	636.2			64.2	17.9	46	ESE	9.3	4.17			2		W	0	0		—. Faiguère.
Montsouris Observatory			30.15	765.9	69.4	20.8	92	WNW			3		7k, c			0	0		Marié Davy.
Perpignan			30.10	764.4	84.9	29.4	23	NW	1.9	0.83			1			0	0		Dr. Fines.
Saint Maur, (near Paris)			30.15	765.9	67.5	19.7	59	NW			1		5			0	0		E. Renou.
Tours			30.17	766.3	71.2	21.8	44	SW			1		2		W	0	0		C. Marquet.
Versailles, (near Paris)			30.16	766.1	68.4	20.2	53	NW			2		6			0	0	Cloudy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			29.95	760.6	72.0	22.2	96	E	5.1	2.3		0	0			0 0	0 0	Clear	H. Le Lec, S. J.

Note.—The originals give the wind-force by the scale 0 to 7; the weather in general terms; 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 ft. Commune de Gréasque, 322 m., or 1,056.4 ft. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles.

GERMAN SERIES.

Furnished by the coöperation of Prof. Geo. Neumayer, Superintendent Royal 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.15	765.7	67.1	19.5	63	W	18	8			8			0.004	0.1		Prof. Hoh.
Berlin			30.02	762.5	69.4	20.8	49	S	4	2			8			0	0		Prof. Arndt.
Breslau			30.11	746.8	65.1	18.4	47	WNW	9	4			7			0	0		Dr. P. Neugebauer.
Carlsruhe			30.07	763.8	71.2	21.8	63	SW	11	5			10			0	0		A. Senz.
Cassel			29.98	761.6	67.3	19.6	69	SE	9	4			8			0.110	2.8		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.69	728.6	30.10	764.6	66.2	19.0	58	W					5			0	0		M. Wilhelm.
Hamburg			30.04	762.9	66.0	18.9	62	WNW	13	6			9ks,cs		S	0	0	Light fog	Deutsche Seewarte.
Kiel			29.98	761.6	66.7	19.3	62	W	18	8			9			0	0		Prof. G. Karsten.
Königsberg			30.01	762.3	64.4	18.0	51	SE	11	5						0	0	Clear	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			30.05	763.2	71.8	22.1	45	SW	9	4			7			0	0		Prof. Bruhns.
Münster			30.05	763.2	68.0	20.0	66	SW	4	2			3			0.024	0.6		Prof. E. Heis.
Posen			30.05	763.4	66.2	19.0	41	NW	9	4			6			0	0	Cloudy	Dr. Magener.
Strassburg, (in Alsace)			30.11	764.7	72.1	22.3	46	NW	13	6			10			0	0		Hartwig.
Stuttgart			30.10	764.5	70.7	21.5	49	W					6			0	0		Mr. Würth.
Thorn			30.04	762.7	65.3	18.5	42	NNW	9	4			4			0	0		Dr. Rasenbalg.
Treves, (Trier)																			Prof. Flesch.
Wustrow, Naval School			30.03	762.8	63.7	17.6	70	SW	13	6			10			0	0	Cloudy	E. Fischütz.

Note.—In the originals the distinction between 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.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.05	763.3	72.3	22.4	53	ESE			2		2	SE		0	0		
Mondovi			30.04	763.0	70.3	21.3	52	NW			4		1			0	0		
Genoa			30.08	764.0	78.1	25.6	44	SE	5.6	2.5			2	NW		0	0		
Pavia			30.05	763.2	75.4	24.1	41	W			4		1	SW		0	0		
Verona			30.02	762.5	77.4	25.2	42	E			1		3			0	0		
Padua			30.05	763.2	73.2	22.9	44	SE	1.3	0.6			10	NW		0	0		
Parma																			
Bologna			30.04	763.1	75.2	24.0	48	NNW			1		2	W		0	0		
Leghorn			30.10	764.5	76.8	24.9	52	WSW	0	0			9			0	0		
Urbino																			
Ancona																			
Siena			30.07	763.7	74.3	23.5	31	NW	0	0			3	NE		0	0		
Rome			30.10	764.6	78.8	26.0	38	SW	6.3	2.8			3			0	0		
Naples, O.U.			30.11	764.7	77.4	25.2	32	NE			2		3	NE		0	0		
Lecce			30.08	763.9	73.0	22.8	41	ENE	18.6	8.3			5	N		0	0		
Cosenza			30.09	764.2	74.8	23.8	58	NW			2		2			0	0		
Catania, (Sicily)																			
Rhegio			30.04	763.1	78.8	26.0	52	SE			4		3	S		0	0		
Palermo			30.05	763.2	77.0	25.0	35	NNW	18.6	8.3			3			0	0		
Sub-Series.																			
Naples, S. R.			30.14	765.6	78.4	25.8	44	W	1.3	0.6			3	N		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; the cloudiness occasionally by the scale 0 to 4, and generally without distinguishing between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet.

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'per 0—10.	Clouds. Amount. Low't 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather	Observer.
Flushing			30.15	765.8	64.8	18.2		WNW			3								
Groningen			30.01	76 .3	63.7	17.6		W			4								
Helder			30.06	763.5	63.5	17.5		WSW			4								
Utrecht			30.06	763.5	68.2	20.1		W			2		5					Cloudy	

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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'per 0—10.	Clouds. Amount. Low't 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather	Observer.
Bergen			29.69	754.2	55.8	13.2	87	S	5.4	2.4			10			0.610	15.5		
Christiania			29.71	754.6	63.3	17.4	80	S	15.9	7.1			7			0.209	5.6		
Tromsö			29.60	751.9	54.3	12.4	89	SW			2		10			0	0		

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'per 0—10.	Clouds. Amount. Low't 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather	Observer.
Lisbon			30.05	763.3	80.6	27.0	33	SW	11.2	5.0			0						The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

RUSSIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'per 0—10.	Clouds. Amount. Low't 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather	Observer.
Warsaw			29.97	761.3	61.7	16.7	59	N	9	4			10						Astronomical Obs.
Wilna			29.98	761.5	56.7	13.7	74	N	4	2			10						Astronomical Obs.
Dorpat			30.13	765.3	61.2	16.2	52	E E	7	3			3						Physical Cabinet.
St. Petersburg			30.18	766.6	58.[illegible]	14.8	49	ESE	7	3			0						Central Physical Obs.
Kuopio			30.14	765.6	55.8	13.2	64	SSW					10			0	0		Ch. Forsten.
Kieff			29.7[illegible]	756.7	65.1	18.4	61	SW	13	6			5						Physical Cabinet.
Nikolaiev			29.93	760.1	71.8	22.1	48	SW	4	2			4						Kurdakof.
Kertch			29.90	759.4	79.0	26.1	63	NE	4	2			6						Lagorio.
Moscow			30.10	764.6	54.0	12.2	83	SSE	13	6			10						Meteorological Obs.
Lugan			29.82	757.3	77.5	25.3	52	Calm	0	0			6			Blank	Blank		Meteorological Obs.
Archangel			30.34	770.5	56.3	13.5	56	SW	8	3.5			5						Ogorodnikof.
Tiflis	28.51	724.1	29.82	757.4	89.[illegible]	31.9	40	S	10	4.5			0						Physical Obs.
Astrakhan			29.92	759.9	89.8	32.1	45	SE	4	2			1						Sebastianof.
Kasan			30.16	766.1	60.[illegible]	15.7	49	E	8	3.5			5						Physical Cabinet.
Orenburg			30.01	762.3	73.6	23.1	39	E	4	2			8						Tschernischef.
Ekaterinburg	28.93	739.7	30.12	765.1	53.[illegible]	11.9	55	W	10	4.5			6						Meteorological Obs.
Kasaly			29.97	761.2	85.8	28.9	30	Calm	0	0			1						Bobrof.
Tashkend	28.31	719.1	29.94	760.4	77.0	25.0	62	Calm	0	0			0						Michelson.
Barnaul			30.06	763.5	61.3	16.3	44	W	8	3.5			3						Meteorological Obs.
Yeniseisk			29.45	748.0	54.0	12.2	85	W	11	5			10					Raining	Marks.
Irkutsk	28.24	717.4	29.57	751.0	61.9	16.6	81	SW	11	5			7						Ulolzof.
Oorga																			Mossin.
Peking, (China)			30.01	762.3	73.9	23.3	87	Calm	0	0			9						Physical Observatory
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'per 0—10.	Clouds. Amount. Low't 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather	Observer.
Madrid			29.99	761.8	70.3	21.3	38	E	3.8	1.7		3	5	NW		0	0	Cloudy	Royal Observatory.
San Fernando																			The Naval Observatory.

NOTE.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea	.....	.....	29.91	759.8	59.4	15.[illegible]	85	SW	.....	.....	8	.....	5	.....	.....	0	0	.....	
Hernosand	.....	.....	30.03	762.8	65.3	15.8	77	S	.....	.....	6	.....	2	.....	.....	0	0	.....	
Stockholm	.....	.....	29.98	761.6	61.3	16.3	57	SSE	.....	.....	4	.....	3	.....	.....	0	0	.....	
Wisby	.....	.....	30.01	762.3	64.8	18.2	55	SSE	.....	.....	1	.....	5	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	29.98	761.4	65.5	18.6	48	S	15.7	7.0	.....	.....	4	.....	SSW	.....	.....	.....	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	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 in 24 hours. Inches.	Millimeters.	Weather.	Observer.
Geneva	28.72	729.5	30.11	764.8	67.6	19.8	45	NNE	.....	.....	2	.....	3	.....	.....	0	0	.....	The Observatory.
Zurich	28.52	724.3	30.10	764.6	69.1	20.6	55	NW	.....	.....	1	.....	2	.....	.....	0	0	Clear	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +2.1mm.; Thermometer, +0°.1 R. H.; Relative Humidity, —15 per cent.

Note.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

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 in 24 hours. Inches.	Millimeters.	Weather.	Observer.
Beirut, (Syria, Lee Obs'y	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. C. N. A. Van Dyck.
Constantinople	.....	.....	29.83	757.[illegible]	63.0	17.2	94	NW	18	8	.....	.....	10	.....	NW	0.803	20.4	Thunder-storm	
Fao, (Persian Gulf)	.....	.....	29.77	756.2	95.8	36.0	.....	NW	.....	.....	3	.....	0	.....	.....	.....	.....	Clear	
Salonica	.....	.....	.....	.....	77.4	25.2	.....	N	.....	.....	2	.....	0	.....	.....	.....	.....	Clear	
Valona	.....	.....	29.98	761.6	71.6	22.0	.....	NW	.....	.....	3	.....	0	.....	.....	.....	.....	Clear	
Varna	.....	.....	29.96	761.0	62.6	17.0	.....	N	.....	.....	3	.....	10	.....	.....	Blank	Blank	Cloudy	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea level. The distinction between upper and lower clouds is not made.

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.	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 in 24 hours. Inches.	Millimeters.	Weather.	Observer.
Athens	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—Reports commence October 1, 1875.

JAPANESE SERIES.

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 in 24 hours. Inches.	Millimeters.	Weather.	Observer.
Takio	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the 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.	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 in 24 hours. Inches.	Millimeters.	Weather.	Observer.
Brockville, Ontario	.....	.....	29.59	751.6	76	24.4	.....	SW	18	8.0	.....	0	2s	SW	.....	0.37	9.4	Fair	
Chatham, N. B.	.....	.....	29.85	758.2	58	14.4	90	NE	6	2.7	.....	.....	10s	.....	NE	0.02	0.5	Light rain	
Charlottetown, P. E. Island	.....	.....	29.80	779.[illegible]	61	16.1	82	E	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Fort Garry, Manitoba	.....	.....	29.65	753.1	55	12.8	99	S	1	0.4	.....	2k	2s	S	S	0	0	Fair	
Halifax, N. S.	.....	.....	29.8[illegible]	757.4	62	16.7	87	E	7	3.1	.....	.....	8n	.....	SE	0	0	Cloudy	
Kingston, Ontario	.....	.....	29.62	752.3	72	22.2	72	W	17	7.6	.....	2k	0	W	.....	0.31	7.9	Fair	
Montreal, Quebec	.....	.....	29.48	748.8	73	22.8	90	W	18	8.0	.....	0	Haze	.....	.....	0.18	4.6	Fair	
Ottawa, Ontario	.....	.....	29.45	749.0	70	21.1	84	E	14	6.3	.....	2k	0	E	.....	0.45	11.4	Clear	
Parry Sound, Ontario	.....	.....	29.57	751.1	60	15.6	90	W	20	11.2	.....	.....	10n	.....	NW	1.55	39.4	Light rain	
Port Dover, Ontario	.....	.....	29.71	754.6	67	19.4	69	W	14	6.3	.....	0	0	.....	.....	0	0	Clear	
Port Stanley, Ontario	.....	.....	29.75	755.6	65	18.3	80	W	22	9.8	.....	0	0	.....	.....	0.08	2.0	Clear	
Quebec, Quebec	.....	.....	29.46	748.3	57	13.9	100	NE	20	8.9	.....	.....	10n	.....	NE	1.05	26.7	Heavy rain	
Saugeen, Ontario	.....	.....	29.67	753.6	61	16.1	77	N	24	10.7	.....	.....	10n	.....	W	0.62	15.7	Light rain	
Stayner, Ontario	.....	.....	29.61	752.1	62	16.7	80	NW	5	2.2	.....	.....	8n	.....	NW	0.54	13.7	Threatening	
Sydney, C. B.	.....	.....	29.91	759.7	62	16.7	69	NE	6	2.7	.....	10cs	2ks	.....	.....	0	0	Fair	
Toronto, Ontario	.....	.....	29.64	752.8	68	20.0	76	W	11	4.9	.....	2ck	5ks	NW	NW	0.19	4.8	Threatening	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.62	752.3	78	25.6	77	S	5	2.2		Haze	2k		S	inap	inap	Fair	
Alpena, Mich			29.66	753.4	55	12.8	79	W	20	8.9			10s		W	0.15	3.8	Cloudy	
Atlantic City, N. J			29.78	756.4	76	24.4	85	SW	4	1.8		0	0			0	0	Clear	
Augusta, Ga.			30.02	762.5	74	23.3	81	Calm	0	0		5c	0	S		0	0	Fair	
Baltimore, Md			29.80	756.9	79	26.1	69	S	3	1.3		3cs	0			0	0	Fair	
Barnegat, N. J			29.75	755.6	80	26.7	78	SW	4	1.8		0	0			0	0	Clear	
Benton, Montana	27.13	689.1	29.93	760.2	49	9.4	64	Calm	0	0		0	5s			0	0	Fair	
Bismarck, Dakota	27.97	710.4	29.56	75 .8	53	11.7	79	NW	4	1.8			Haze			0	0	Hazy	
Boston, Mass			29.70	754.4	68	20.0	95	S	12	5.4			10s			0.06	1.5	Cloudy	
Breckenridge, Minn			29.68	753.9	57	13.9	93	SE	4	1.8		8k	0	S		0	0	Fair	
Brownsville, Tex																			
Buffalo, N. Y			29.65	753.1	70	21.1	66	W	28	12.5		0	5ks		N	inap	inap	Fair	
Burlington, Vt			29.54	750.3	73	22.8	76	S	8	3.6		2k	5s	SW	SW	0.16	4.1	Cloudy	
Cairo, Ill			30.01	762.2	72	22.2	80	N	8	3.6		5ck	0	NW		0.05	1.3	Fair	
Cape Hatteras, N. C			29.93	760.2	76	24.4	76	SW	10	4.5		2c	Haze			0	0	Fair	
Cape Henry, Va			29.87	758.7	82	27.8	67	SW	2	0.9		0	Haze			0	0	Clear	
Cape May, N. J			29.75	755.6	75	23.9	90	S	8	3.6		0	0			0	0	Clear	
Charleston, S. C			30.03	762.7	77	25.0	86	SW	8	3.6		2ck	Haze	E		0	0	Fair	
Cheyenne, Wyoming	24.07	611.1	30.01	762.2	50	10.0	32	NW	12	5.4		0	0			0	0	Clear	
Chicago, Ill			29.89	759.2	65	18.3	73	SW	4	1.8		0	0			0	0	Clear	
Cincinnati, Ohio			29.90	759.4	72	22.2	67	NW	6	2.7		2c	0			inap	inap	Clear	
Cleveland, Ohio			29.78	756.4	67.7	19.8	74	SW	14	6.3		8k	0	W		0.05	1.3	Fair	
Colorado Springs, Col	24.12	612.6	30.00	762.0	50	10.0	79	N	4	1.8		2c	0			0	0	Clear	
Corsicana, Tex			29.98	761.5	77	25.0	86	SE	2	0.9			10s		SE	inap	inap	Cloudy	
Davenport, Iowa			29.99	761.7	61	16.1	77	NW	4	1.8		0	Sm'e			0	0	Clear	
Denison, Tex			29.94	760.5	78	25.6		Calm	0	0		Haze	0			0.35	8.9	Clear	
Denver, Col	24.82	630.4	30.04	763.0	57	13.9	41	S	8	3.6		2c	0			0	0	Clear	
Detroit, Mich			29.87	758.7	65	18.3	83	W	11	4.9		0	2ks		SW	0.25	6.3	Fair	
Dodge City, Kan	27.16	697.5	29.93	752.6	73	22.8	76	SW	4	1.8			10s			0	0	Cloudy	
Dubuque, Iowa			29.96	761.0	62	16.7	77	W	4	1.8		0	0			0	0	Clear	
Duluth, Minn			29.87	758.7	54	12.2	93	Calm	0	0		2ck	2s			0.19	4.8	Fair	
Eastport, Me			29.79	756.7	56	13.3	93	SE	3	1.3			Fog			0	0	Threatening	
Erie, Pa			29.71	754.6	70	21.1	75	W	26	11.6		5k	0	SW		inap	inap	Fair	
Escanaba, Mich			29.82	757.4	57	13.9	69	NW	12	5.4		5k	0	N		0.12	3.0	Fair	
Fort Gibson, I. T			29.96	761.0	73	22.8	81	E	6	2.7		8c	0			0.01	0.3	Fair	
Fort Sill, I. T																			
Fort Sully, Dakota	28.04	712.2	29.64	752.8	57	13.9	75	Calm	0	0		0	2s			0	0	Fair	
Galveston, Tex			29.97	761.2	80	26.7	86	NE	6	2.7		0	0			0	0	Clear	
Grand Haven, Mich			29.86	758.4	64	17.8	67	N	16	7.2		8k	0	N		0.02	0.5	Cloudy	
Indianapolis, Ind			29.92	760.0	66	18.9	78	W	8	3.6		0	0			0.34	8.6	Clear	
Indianola, Tex			29.98	761.5	83	28.3	70	SE	8	3.6		0	2ks		SE	0	0	Fair	
Jacksonville, Fla			30.06	763.5	78	25.6	82	Calm	0	0		0	0			0	0	Clear	
Keokuk, Iowa			29.74	755.4	63	17.2	83	W	2	0.9		0	0			0	0	Clear	
Key West, Fla			30.03	762.7	83.4	28.6	67	E	10	4.5		Haze	2ks			0.02	0.5	Fair	
Kittyhawk, N. C			29.88	758.9	78	25.6	73	W	14	6.3		0	0			0	0	Clear	
Knoxville, Tenn			29.98	761.5	73	22.8	85	SW	4	1.8		2ck	1ks	NW	W	0	0	Fair	
La Crosse, Wis			29.95	760.7	61	16.1	82	SW	3	1.3		0	0			0	0	Clear	
Leavenworth, Kan			30.00	762.0	62	16.7	94	Calm	0	0			Fog			0	0	Foggy	
Lexington, Ky	28.91	734.3	29.96	761.0	72	22.2	85	SW	8	3.6		5k	0	SW		0	0	Fair	
Long Branch, N. J			29.76	755.9	80	26.7	78	SW	10	4.5		2c	2ks		W	0	0	Fair	
Louisville, Ky			29.95	760.7	76	24.4	73	Calm	0	0		2k	0			0.69	17.5	Clear	
Lynchburg, Va			29.84	757.9	79	26.1	67	SW	4	1.8		2k	0	SW		0	0	Clear	
Malone, N. Y			29.47	748.5	72	22.2	80	SW	12	5.4		2k	5ks	W	SW	0.33	8.4	Cloudy	
Marquette, Mich			29.84	757.9	54	12.2	87	NW	8	3.6			10s			0.71	18.0	Cloudy	
Memphis, Tenn			30.00	762.0	78	25.6	86	Calm	0	0		2ck	5s			0.01	0.3	Fair	
Milwaukee, Wis			29.91	759.7	63	17.2	72	NW	17	7.6		1k	0	NW		0.13	3.3	Clear	
Mobile, Ala			30.02	762.5	76	24.4	90	SE	4	1.8		5cs	2s	NE	E	0.05	1.3	Cloudy	
Montgomery, Ala			30.05	763.3	79	26.1	64	Calm	0	0		0	Sm'e			0	0	Clear	
Morgantown, W. Va			29.82	757.4	77	25.0	69	SW	12	5.4		0	8s			0	0	Fair	
Mt. Washington, N. H	23.67	601.2	30.01	762.2	54	12.2	100	SW	42	18.8			Fog			0.55	14.0	Foggy	
Nashville, Tenn			29.96	761.0	80	26.7	74	Calm	0	0		5ck	0	W		0	0	Fair	
New Haven, Conn			29.72	754.9	78	25.6	82	SW	4	1.8			10s		SW	0	0	Cloudy	
New London, Conn			29.74	755.4	73	22.8	90	S	6	2.7		5ck	5s	SW	SW	0	0	Cloudy	
New Orleans, La			29.99	761.7	79	26.1	82	NE	6	2.7		2c	0			0	0	Fair	
Newport, R. I			29.75	755.6	71	21.7	90	SE	6	2.7			10ks		S	0	0	Cloudy	
New York, N. Y			29.74	755.4	75	23.9	90	SW	7	3.1		5k	5s	SW	SW	0	0	Cloudy	
Norfolk, Va			29.87	758.7	78	25.6	73	SW	8	3.6		0	Haze		SW	0	0	Clear	
North Platte, Neb	27.00	685.8	29.43	747.5	68	20.0	69	Calm	0	0		0	0			0	0	Clear	
Omaha, Neb	28.88	733.5	29.91	759.7	65	18.3	83	SE	11	4.9		0	0			0	0	Clear	
Oswego, N. Y			29.64	752.8	74	23.3	72	W	12	5.4		6	2ks		W	0.36	9.1	Clearing	
Peck's Beach, N. J			29.79	756.7	78	25.6	77	W	12	5.4		5c	0	SW		0	0	Fair	
Pembina, Dakota			29.59	751.6	60	15.6	90	S	12	5.4		0	10s		SW	0.06	1.5	Threatening	
Philadelphia, Penn			29.76	755.9	75	23.9	90	W	8	3.6		5ck	Sm'e	W		0	0	Fair	
Pike's Peak, Colorado	18.00	457.2	30.21	767.3	32	0.0	69	SW	30	13.4		0	0			0	0	Clear	
Pittsburgh, Penn			29.78	756.4	73	22.8	81	W	11	4.9		2k	0	W		0.05	1.5	Fair	
Port Huron, Mich			29.74	755.4	64	17.8	67	W	16	7.2			10s		W	1.34	34.0	Cloudy	
Portland, Me			29.72	754.9	67	19.4	89	S	3	1.3			10s		SW	0.17	4.3	Threatening	
Portland, Oregon			29.97	761.2	55	12.8	87	SE	4	1.8			10s			0	0	Cloudy	
Punta Rassa, Fla			30.06	763.5	79.9	26.6	86	E	8	3.6		5cs	2ks	SW	SW	inap	inap	Cloudy	
Rochester, N. Y			29.63	752.6	72	22.2	58	W	16	7.2		5k	0	W		inap	inap	Fair	
Salt Lake City, Utah	25.57	649.5	29.90	759.4	70	21.1	23	E	4	1.8		8k	0	SE		0	0	Fair	
Sandy Hook, N. J			29.73	755.1	78	25.6	86	SW	11	4.9		2c	5ks	W		0	0	Cloudy	
San Diego, Cal			29.94	760.5	66	18.9	94	Calm	0	0			10n			0	0	Light rain	
San Francisco, Cal			29.92	760.0	57	13.9	87	SW	6	2.7			10s			0	0	Cloudy	
Santa Fe, N. M	23.33	592.6	29.87	758.7	57	13.9	58	E	8	3.6		2c	0	SW		0	0	Clear	
Savannah, Ga.			30.04	763.0	78	25.6	82	SW	4	1.8		2c	Sm'e			0	0	Fair	
Shreveport, La			30.03	762.7	78	25.6	86	Calm	0	0		2c	Haze	NE	SW	0	0	Fair	
Smithville, N. C																			
Springfield, Mass			29.70	754.1	72	22.2	95	S	4	1.8			10ks		SW	0.02	0.5	Cloudy	
St. Louis, Mo			30.04	763.0	68	20.0	69	N	3	1.3		0	0			0	0	Clear	
St. Marks, Fla			30.05	763.3	78	25.6	86	NE	4	1.8		0	0			0.02	0.5	Clear	
St. Paul, Minn			29.87	758.7	56	13.3	90	SE	4	1.8		0	0			0	0	Clear	
St. Paul's Island, Alaska																			
Squan Beach, N. J			29.70	754.4	78	25.6	82	W	5	2.2		2cs	0			0	0	Fair	
Toledo, Ohio			29.80	756.9	67	19.4	79	SW	12	5.4			10s		SW	0.32	8.1	Cloudy	
Tucson, Arizona																			
Tybee Island, Ga			30.05	763.3	77	25.0	82	NW	12	5.4		2c	Haze	E		0	0	Fair	
Vicksburg, Miss			30.07	763.8	80	26.7	74	Calm	0	0		0	5s			0	0	Fair	
Virginia City, Montana	24.20	616.2	29.58	753.9	41	5.0	56	Calm	0	0		1c	0	W		0	0	Clear	

UNITED STATES SERIES—CONTINUED.

Station	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			29.82	757.4	74	23.3	76	S	2	0.9		0	8s			0	0	Fair	
Wilmington, N. C.			29.98	761.5	78	25.6	69	SW	10	4.5		5c	Haze			0	0	Fair	
Woods Hole, Mass.			29.77	756.1	70	21.1	94	S	17	7.6		2k	5s	W	S	0	0	Fair	
Wytheville, Va.	27.66	702.6	29.72	754.9	69	20.6	84	W	5	2.2		5k	0			0	0	Fair	
Yankton, Dakota	28.56	725.4	29.79	756.7	66	18.9	73	S	10	4.5		0	0			0	0	Clear	
Yuma, Arizona																			
Sub-Series																			
Bridgetown, Barbados, W. I.					83	28.3	87	N	3	1.3		0	5s			0	0	Fair	E. Racker.
Pointe-a-Pitre, Guadeloupe, do			29.87	758.7	82	27.8	78	E				2k	0			0	0	Clear	L. V. Bigard.
Havana, Cuba, W. I.			30.17	766.3	78	25.6	78	Calm	0	0		5c	1k	NE	E	inap	inap	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W.			30.18	766.6	79	26.1	82	Calm	0	0		8c	5n	E		0.02	0.5	Cloudy	James Gall.
St. Thomas, St. T., W. I.			30.20	767.1	81	27.2	70	ENE	3	1.3		5ck	2k	E		0.15	3.8	Fair	W. S. Cameron.
Santiago de Cuba, W. I.			29.81	757.2	80	26.7	78	NW	1.2	0.5		2ck	2cs	N		0	0	Fair	Robert Mason.
St. Georges, Bermudas			30.04	763.0	80	26.7	78	SW	4.8	2.1		0	5k			0.250	6.35	Fair	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.			29.61	752.1	55.0	12.8	81	S	6	2.7			10ks			0	0	Cloudy	J. Fortescue.
St. John's, Newfoundland			30.00	762.0	55	12.8	74	NE					10s			0	0	Cloudy	John Delaney.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Clifton, Jamaica, W. I.	27.23	691.6	30.0[illegible]	762.5	71	21.7	79	N	20	0.9		2c	2k	NNE		0.32	8.1	Fair	C. Partridge.
Navassa																			
Medellin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			29.81	757.2	65	18.3	73	W	12	5.4			5ks			0.04	1.0	Fair	H. M. Redington.

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

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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 Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Mt. Washington, 6,28[illegible] ft., or 1,915.6 m.; North Platte, 2,8[illegible]6 ft., or 867.4 m.; Omaha, 1,054.0 ft., or 321.1 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,3[illegible]1.1 m.; Santa Fé, 6,86[illegible] (?) ft., or 2,091.6 (?) m.; Virginia City, 5,189 (?) ft., or 1,679.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.3 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 0.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 1.33 in.; Santa Fé, 0.54 in.; Virginia City, 5.18 in.

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.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 5, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.11	764.8	80.6	27.0	57	N			1		0			0	0	Fair	Charnot.
Algiers			30.07	763.8	80.2	26.8	72	N			2		0			0	0	Fair	Peter.
La Calle																			Kuntz.
Tunis			30.10	764.6	86.4	30.2	41	E			3		6			0	0	Cloudy	Jacques.
Sfax			30.15	765.8	84.2	29.0	44	ESE			3		1			0	0	Fair	Chauvey.
Saida			30.09	764.	87.8	31.0	17	WSW			1		1			0	0	Fair	Grosjean.
Tebessa			30.15	765.7	85.6	29.8		NNW			1		3			0.12	3.	Fair	Colin.
Geriville			30.10	764.5	78.8	26.0	36	S			3		4			0	0	Thunder	Bernadach.
Laghouat			30.11	764.9	82.4	28.0	33	SW			4		2			0.079	2.0	Cloudy	Simon.
Biskra			30.13	765.3	86.7	30.4	36	E			1		4			0	0	Fair	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.10	764.6	72.7	22.6		SW			1		3			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.10	764.5	58.1	14.5	89	W			3		10			0.299	7.9		I. R. Observatory.
Eperies			30.05	763.3	59.0	15.0	70	Calm			0					0	0		Julius Mikolik.
Gratz			30.05	763.3	68.5	20.3	68	SW			0		8						Andreas Rospini.
Hermannstadt	28.91	734.2	30.08	763.9	68.5	20.3	68	SW			3		5			0	0		Prof. Reissenberger.
Kremsmünster	28.69	728.6	30.08	763.9	66.4	19.1	48	NNW			2		10			0.236	6.0		Prof. C. Wagner.
Lemberg	28.84	732.1	30.17	766.2	60.1	15.6	85	W			3		7			0	0		Dr. T. Stanecki.
Nyiregyhaza			29.99	761.8	61.7	16.5	69	NW			1		3			0	0		Habzsuda Daniel.
Pola			30.09	764.2	69.4	20.8	54	N			1		8n, ks			0	0		I.R. Hydrographic Office
Szegedin			30.15	765.9	74.7	23.6	66	SE			1		4			0	0		Karl Stancel.
Trieste			30.07	763.8	68.4	20.2	48	SW			0		9k			0	0		Prof. V. Farolfi.
Vienna			30.17	766.3	75.0	23.9	76	Calm			3		10			0	0		I. R. Central Institute.
			30.10	764.1	63.5	17.5	70	W											

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. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.25	768.3	64.9	18.3	62	WNW			3	0	0			0	0		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather	Observer
Aberdeen			30.07	763.8	59.7	15.4		SSE	11	4.9			2			0.13	3.3	D. clouds	William Boswell
Ardrossan																			James Mayes.
Armagh Observatory			30.26	768.6	61.2	16.2		WSW	5	2.2			9					Cloudy	Calc. for Dr Robinson
Bidston, Liverpool Obs.			30.27	768.8	61.2	16.2		WNW			2		10					Overcast	John Hartnup, Jr.
Birr Castle, (Parsonstown			30.29	769.4	63.0	17.2		SW			1		10					Overcast	J. Dreyer.
Bradford																			J. McLandsborough
Bridgetown, (Barbadoes)			29.90	759.4	85.0	29.4		SW			2		4					D. clouds	T. H. Hunt
Cambridge Observatory			30.25	768.3	65.0	18.3		W			1		10					Overcast	Sergeant Hunt, A. H. C.
Cape Good Hope Obs.			30.39	771.9	54.5	12.4	72	NW	3	1.3			5						The Staff, for E. J. Stone
Cardington			30.27	768.8	70.0	21.1		NW					9					Overcast	John McLaren.
Carlisle			30.23	767.8	63.8	17.7		W					10			0.08	2.0	Overcast	T. Bell, for J. Cartmell
Chatham, School M. E.			30.14	765.5	65.2	18.4		NW			1		4					Fair	Capt. J. Fellowes, R.E.
Dartmoor	28.92	734.6	30.30	769.6	59.5	15.3		NW			1		10					Overcast	R. E. Power.
Donaghadee			30.24	768.1	63	17.2		WSW			3		10					Overcast	J. Mac Gowan Jr.
Dover			30.26	768.6	65	18.3		WSW			2		5						J. Costello
Eccles, (near Manchester			30.24	768.1	65.8	18.8		NW	4.6	2.1			6					*D. clouds	Thomas Mackeret
Falmouth Observatory			30.34	770.6	64.5	18.1		SSE	13	5.8			10					Overcast	The Staff.
Fort Napier, (Natal)	27.43	696.7	29.77	756.1	61.0	16.4		SE			4		6					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone			29.96	760.7	81	27.2		W					7						[illegible]
Galway, Queen's College																			B. G. Clare, for Prof. Curtis
Gibraltar, (Mediterranean			30.06	763.5	78.5	25.8		ENE			5		4					Fine	Sergt. E. G. Baker.
Glasgow Observatory			30.21	767.3	60.9	16.1		W			2		9					*D. clouds	Lewis Stuart.
Great Yarmouth			30.23	767.8	63	17.2		SW			1		7					*D. clouds	G. T. Watson.
Greenwich Royal Obs.			30.27	768.8	66.4	19.1		W			1		10					Overcast	The Staff, for G. B. Airy
Guernsey			30.20	767.1	66	18.9		NNW			1		3					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs.								WNW					7					*D. clouds	F. J. Page, for L. J. Cr[illegible]
Helston			30.26	768.6	68	20.0		SSW			2		10					Overcast	V. P. Moyle.
Holyhead			30.28	769.1	64	17.8		SW			2		4					Hazy	John Tilston.
Hull Park																			
Kew Observatory			30.27	768.8	66.8	19.3		WNW			6		5					Hazy	The Staff.
Kingstown			30.31	769.9	64	17.8		W			2		10					Gloomy	George Mitchell
Leicester Museum			30.27	768.8	64.5	18.1		W			2		9					Overcast	William J. Harrison.
Llandudno			30.29	769.4	64.9	18.3		WNW					8					Overcast	Dr. James Nicol.
Malta, (Mediterranean)			30.13	765.3	81.8	27.7		NE			1		4k					*D. clouds	Fred Travis, Pvt. A. H. C.
Nairn			30.13	765.3	66	18.9		SW			2		2						W. D. Penny.
Nassau, (Bahamas)			30.12	765.0	84.1	28.9		E			1		6			Blank	Blank		Surg.-Maj. Henry.
Nottingham			30.25	768.3	69.5	20.7		NW			3		5k, ks		WNW	0	0		E. J. Lowe.
Oscott, St Mary's College.			30.25	768.3	67.6	19.4		WSW			2		7					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			30.25	768.3	66	18.9		NW			1		10					Overcast	J. Lucas, for R. Main
Plymouth			30.37	769.6	64.4	18.0		W			1		10					Misty	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			30.29	769.4	63	17.2		WSW			3		2					Fine	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, (Jersey)			30.30	769.6	68.0	20.0		S			3		2						A. P. Amy.
Sandwick Manse (Orkneys																			
Scarborough																			F. Shaw.
Scutari cemetery, (Turkey			30.11	764.8	75.0	23.9		NE			2		1					D. clouds	Sergt. W. H. Lyne.
Sheffield			30.22	767.6	68	20.		NW			1		5					*D. clouds	W. F. Cooper.
Silloth Rectory			30.24	768.1	66.7	19.3		W			3		8			0	0	D. clouds	Rev. Francis Redford
Stonyhurst Observatory			30.24	768.1	63.4	17.4		W			2		8						The Staff.
Stornoway, Lewis C. (Heb			30.08	764.0	62	16.7		WSW			3		5					D. clouds	John Smith.
Stratfield Turgiss			30.26	768.6	69.2	20.7		W			1		8					clouds	Rev. Charles [illegible]
Streatley Vicarage																			Rev. John Slater.
Sumburgh Head, (Shetland																			
Thurso			30.09	764.3	62	16.7		Calm			0		7					D. clouds	John Trotter.
Truro, Royal Institution			30.27	768.8	68	20.0		NW			2		8					Gloomy	W. Newcombe.
Valencia Observatory			30.29	769.4	63.2	17.3		SSW	16	7.2			5					D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			30.21	767.3	59.2	15.1		W			2		2k		2ks	0	0	Fine	Andrew Gibb.
Monach Lighthouse, Shetland Is																			
North Unst, (Shetland Is																			

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m. instrumental error, —.099. *Detached clouds.

DANISH SERIES.

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

Copenhagen			29.96	760.9	65.1	18.4	66	NW			4		7						
Fanöe			30.06	763.4	62.1	16.7	66	NNW			6		5						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.48	748.8	43.2	6.2	82	E			6		10					Raining	
Thorshavn, (Faröe)			29.87	758.7	54.7	12.7	91	SW			7		10					Foggy	
Vestervig			29.99	761.7	60.8	16.0	77	WNW			4		4						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between upper and lower clouds.

FRENCH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alepo																			Normal School.
Amiens			30.29	769.3	71.6	22.0	59	Nr.			1					0	0		Normal School.
Avignon																			Normal School.
Bar-sur Seine			30.15	765.9	70.	26.7	41	N			1		0			0	0	Clear	C. Saillard.
Beaumette, near Angers			30.26	768.5	67.1	19.5	54	NW			1		5		NW	0	0	Cloudy	Beaumette Observatory
Beauvais																			Normal School.
Besançon			30.29	769.3	6[illegible].9	20.5	51	N			2		5		N	0	0		Normal School.
Bourg en Bresse																			Normal School.
Bourges			30.[illegible]0	767.0	72.5	22.5	50	N			2		0			0	0	Clear	Normal School.
Brest			30.08	764.0	84.2	29	52	NE			2		1		NNW	0	0	Clear	Normal School.
Caen			30.2	768.2	65.7	18.7	57	E			3		2k		NE	0	0		Naval Observatory.
Chartres																			Normal School
Chaumont			30.41	769.0	68.	20		NNE			2		2		S				Normal School.
Commercy	9.11	7 9.3	30.24	7 8.2	68.7	20.4		WNW			1		2k		WNW	0	0		Normal School.
Commune de Gréasque*			30.0	76[illegible].0	64.0	17.8	68	NW			2		28,k		NW	0	0		Normal School.
Le Mans			30.1[illegible]	765.8	78.3	25.7	15	NW			1		5		SW	0	0		
Lons-le Saulnier																			Normal School.
Mâcon			30.20	767.1	68.7	20.4	67	N			2		0			0	0	Clear	Normal School.
Mirecourt			30.17	766.3	69.4	20.8	82	Calm			0		0			0	0	Clear	Normal School.
Orleans			30.25	768.4	63.9	17.7	54	NW			1		8		NW	0	0	Cloudy	Normal School.
Paris Observatory																			Normal School.
Parthenay			30.[illegible]8	769.0	67.8	19.9	49	WNW			2		8k		NNW	0	0	Cloudy	National Observatory.
La Roche sur Yon			30.13	7[illegible]5.3	68.4	20.2	44	NE			2		0					Clear	Normal School.
Rochefort, Observatory			30.14	765.5	78.8	26.0	64	NE			4		5		W.				Normal School.
Rouen			30.23	767.8	77.9	25.5	26	E			3		0			0	0	Clear	Naval Observatory.
Saint Lô			30.29	769.3	68.7	20.4	55	N			2		5		SW	0	0		Normal School.
Villefranche																			Normal School.
Villefranche																			Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbé Marchesi.
Mont-Louis																			—. Falguère.
Montsouris Observatory	25.10	637.5			62.4	16.9	66	ESE	11.2	5.00			8		WSW	0	0		Marié Davy.
Perpignan			30.27	768.9	67.3	19.6	55	N			1		7k		NNW	0	0		Dr. Fines.
Saint Maur (near Paris)			30.12	765.0	84.7	29.3	24	S	9.[illegible]	4.17			1		W	0	0		E. Renou.
Tours			30.28	769.0	68.5	20.3	58	NNW			1		8			0	0	Cloudy	C. Marquet.
Versailles (near Paris)			30.26	768.7	70.5	21.4	45	NE			1		2		ENE	0	0		Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai			30.30	769.1	70.	21.2	54	NNW			1		7			0	0	Cloudy	
			29.80	759.1	75.[illegible]	24.2	98	ENE	5.1	2.3		5ks	0			0.290 0.350	7.5 8.9	Lightning	H. Le Leo, S. J.

Note.—The originals give the wind-force by the scale 0 to 7; the weather in general terms; 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,0[illegible]0.9 ft. Commune de Gréasque, 322 m., or 1,056.4 ft. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles.

GERMAN SERIES.

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

Stations																			
Bamberg			30.23	766.7	65.8	18.8	58	W	18	8			8			0.008	0.2		Prof. Hoh.
Berlin			30.09	764.3	64.1	17.3	75	W	9	4			8			0	0		Prof. Arndt.
Breslau			30.15	765.8	62.8	17.1	65	W	13	6			10			0.035	0.9		Dr. P. Neugebauer
Carlsruhe			30.22	767.5	68.0	20.	63	SE	4	2			10			0	0		A. Senz.
Cassel			30.10	764.6	61.3	16.3	81	SW	9	4			9			0.146	3.7		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society
Friedrichshafen	28.79	731.2	30.21	767.3	67.1	19.5	59	W					4			0.010	0.4		M. Wilhelm.
Hamburg			30.[illegible]0	76[illegible].4	64.9	18.3	78	NW	16	7			8k	NW		0.004	0.1	Rain squall.	Deutsche Seewarte.
Kiel			30.01	762.7	65.1	18.4	75	NW	22	10			1			0.213	5.4		Prof. G. Karsten.
Königsberg			29.99	760.9	61.7	16.5	64	W	11	5						0	0	Cloudy	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			30.16	766.0	63.7	17.	62	WNW	4	2			10			0.004	0.1	Light rain	Prof. Bruhns.
Münster			30.23	767.8	60.6	15.9	59	W	4	2			9			0	0		Prof. E. Heis.
Posen			30.07	763.8	61.5	16.4	66	NW	16	7			10			0.169	4.3	Cloudy	Dr. Magener.
Strassburg (in Alsace)			30.24	768.0	68.0	20.0	54	NE	9	4			10			0	0		Hautwig.
Stuttgart			30.18	766.7	68.7	20.4	53	NE					5			0	0		Mr. Würth.
Thorn			30.00	761.9	60.4	15.8	87	NW	18	8			10			0	0		Dr. Grasenbalg.
Treves, (Trier)			30.20	767.0	70.0	21.1	47	NW	27	12			8			0	0		Prof. Flesch.
Wustrow, Naval School			30.03	762.7	64.2	17.9	79	WSW	9	4			8k			0.031	0.8	Cloudy	E. F. Schütz.

Note.—In the originals the distinction between 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.

ITALIAN SERIES.

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

Stations																			
Moncalieri			30.13	76[illegible].2	75.0	23.9	53	SSE			2		3	ENE		0	0		
Mondovi			30.13	765.3	71.4	21.9	55	S			2		3			0	0		
Genoa			30.17	766.2	77.5	25.3	55	SE	4.9	2.2			2			0	0		
Pavia			30.13	765.3	76.3	24.6	48	SW			1		6	SW		0	0		
Verona			30.10	764.6	78.[illegible]	25.9	47	E			2		10			0	0		
Padua			30.12	765.1	74.1	23.4	56	SW	1.3	0.6			2	SW					
Parma																			
Bologna			30.18	766.6	74.1	23.4	62	NE			1		3	NE		0	0		
Leghorn			30.17	766.3	77.0	25.0	61	S	3.1	1.4			3			0	0		
Urbino																			
Ancona																			
Siena																			
Rome			30.14	765.6	76.3	24.6	47	SW	1.3	0.6			9	SW		0.012	0.3		
Naples, O.U.			30.21	767.3	80.[illegible]	26.8	33	SSW	7.4	3.3			3	S		0	0		
Lecce			30.23	767.7	78.8	26.0	55	SW			2		2			0	0		
Cosenza			30.25	768.3	74.3	23.5	34	ENE	15.0	6.7			1	N		0	0		
Catania, (Sicily)			30.23	767.7	78.1	25.6	50	N			2		3						
Rifoso																			
Palermo			30.18	766.5	80.2	26.8	56	SE			4		2	SE		0	0		
Sub-Series.																			
Naples, S. R.			30.14	765.6	77.4	25.2	44	NE	5.6	2.5			1			0	0		Prof. F. Brioschi.
			30.26	768.6	78.4	25.8	56	SW	4.9	2.2			3	NW		0	0		

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; the cloudiness occasionally by the scale 0 to 4, and generally without distinguishing between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovi is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,141.3 feet.

NETHERLANDS' SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 1—10.	Clouds. Amount. U'p'er 1—10.	Clouds. Amount. Low'r 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Flushing			30.29	769.3	64.4	18.0		NW			4								
Groningen			30.10	764.6	63.0	17.2		NW			4								
Helder			30.19	766.7	63.1	17.3		WNW			2								
Utrecht			30.18	766.6	62.6	17.0		W			2		10					Overcast	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 1—10.	Clouds. Amount. U'p'er 1—10.	Clouds. Amount. Low'r 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bergen			29.90	759.5	56.5	13.6	56	W	3.1	1.4			10			0	0		
Christiania			29.84	758.4	66.[illegible]	19.4	53	SSW	5.4	2.4			3			0.04	1.1		
Tromsö			29.61	752.0	6[illegible].9	16.6	57	W			1		10			0	0		

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p.m., local time.

PORTUGUESE SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 1—10.	Clouds. Amount. U'p'er 1—10.	Clouds. Amount. Low'r 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.01	762.7	85.5	29.7	27	S	2.5	1.1			1	S					The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

RUSSIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 1—10.	Clouds. Amount. U'p'er 1—10.	Clouds. Amount. Low'r 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.99	761.8	62.2	16.8	63	W	13	6			10					Raining	Astronomical Obs.
Wilna			29.95	760.7	58.6	14.8	75	Calm	0	0			10						Astronomical Obs.
Dorpat			30.02	762.5	55.0	12.8	80	ENE	7	3			10						Physical Cabinet.
St. Petersburg			30.07	763.6	55.4	13.0	78	ESE	4	2			10					Light rain	Central Physical Ob
Kuopio			30.08	764.0	57.9	14.4	71	SSE					8		NW	0	0		Ch. Forsten.
Kieff			29.94	759.8	60.8	16.0	67	WSW	9	4			9						Physical Cabinet.
Nikolaiev			29.[illegible]9	761.8	68.0	20.0	54	W	20	9			7						Kurdukof.
Kertch			29.82	757.5	67.8	19.9	81	W	7	3			10					Raining	Lagorio.
Moscow			30.11	764.7	54.5	12.5	91	S	8	3.5			10						Meteorological Obs.
Lugan			29.72	754.9	69.6	20.9	74	ENE	17	7.[illegible]			8			Blank	Blank		Meteorological Obs.
Archangel			29.90	759.5	59.9	15.5	57	SW	8	3.5			0						Ogorodnikof.
Tiflis	28.46	722.8	29.76	756.0	90.5	32.5	36	Calm	0	0			0						Physical Obs.
Astrakhan			29.85	758.2	85.5	29.7	46	ESE	13	6			0						Sebastianof.
Kasan			30.25	768.4	59.4	15.2	50	E	8	3.5			0						Physical Cabinet.
Orenburg			30.13	765.4	50.5	10.3	89	E	13	6			10						Tschernischef.
Ekaterinburg	29.[illegible]9	743.9	30.30	769.5	53.1	11.7	56	NW	8	3.5			7						Meteorological Obs.
Kasaly			29.97	761.2	56.5	30.6	40	Calm	0	0			4						Borof.
Tashkend	28.30	718.7	29.91	759.8	78.3	25.8	68	Calm	0	0			0						Michelson.
Barnaul			29.[illegible]9	754.2	64.9	18.3	4[illegible]	Calm	0	0			4						Meteorological Obs.
Yeniseisk			29.67	753.6	50.2	10.1	82	SW	7	3			3						Marks.
Irkutsk	28.37	720.7	29.74	755.4	48.6	9.2	92	Calm	0	0			6						Ulolzef.
Oorga																			Massin.
Peking, (China)			29.94	760.4	67.6	19.8	97	W	4	2			10			Blank	Blank		Physical Observatory
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. The elevation of Tiflis is 403 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 1—10.	Clouds. Amount. U'p'er 1—10.	Clouds. Amount. Low'r 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.99	761.8	91.4	33.0	33	SE	4.5	2.0		0	1			0	0		Royal Observatory.
San Fernando																			The Naval Observatory.

NOTE.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea			29.88	759.0	56.	13.6	87	SSW			4		10			0	0		
Harnosand			29.99	761.8	57.	14.4	74	S			4		9			0	0		
Stockholm			29.88	758.9	59.	15.4	84	S			4		9			0.079	2.0		
Wisby			29.88	759.0	61.	16.2	75	WNW			2		10			0	0		
Sub-Series.																			
Upsala			29.89	759.3	59.7	15.4	84	SE	8.3	3.7			10						Dr. Hildebrandsson.

NOTE.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second. The distinction between upper and lower clouds is not made. In the official series 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 J. Plantamour, Director of the Observatory at Geneva.

Geneva	28.80	731.5	30.18	766.6	68.	20.	56	NNE			2		2			0	0	Clear	The Observatory.
Zurich	28.60	726.5	30.19	766.8	68.	20.1	60	W			1		3			0	0	Clear	The Observatory.

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +4.2mm.; Thermometer, +0°.7; Relative Humidity, +4 per cent.

NOTE.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Beirut, (Syria, Lee Obs'y																			Prof. C. N. A. Van Dyck
Constantinople			30.12	765.0	70.2	21.2	55	NW	7.8	3.5			5		NW	0	0	Cloudy	
Fao, (Persian Gulf)			29.78	756.5	93.2	34.0		SE			1		0					Clear	
Salonica					81.0	27.2		NE			1		0					Clear	
Valona			30.14	765.5	73.8	23.2		W			2		0					Clear	
Varna			30.12	765.0	73.4	23.0		W			2		10					Cloudy	

NOTE.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea level. The distinction between upper and lower clouds is not made.

GREEK SERIES.

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

Athens																			

NOTE.—Reports commence October 1, 1875.

JAPANESE SERIES.

Takio																			

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Brockville, Ontario			29.94	760.5	69	20.6		NW	1	0.4		2c	2s	W	NW	0	0	Fair	
Chatham, N. B.			29.51	749.5	65	18.3	91	SW	1	0.4		2c	8ks	SW	SW	1.25	31.7	Cloudy	
Charlottetown, P. E. Island			29.55	750.6	66	18.9	95	S	10	4.5			10n			0.175	4.45	Cloudy	
Fort Garry, Manitoba			29.84	757.9	49	9.4	94	W	9	4.0		1azc	2ks	W	W	0	0	Fair	
Halifax, N. S.			29.53	750.0	66	18.9	98	S	9	4.0			Fog			0.044	1.12	Foggy	
Kingston, Ontario			29.96	761.0	60	15.6	72	W	1	0.4		5c	0			0	0	Cloudy	
Montreal, Quebec			29.81	757.2	62	16.7	76	W	18	8.0		2k	5ks	W	W	0.19	4.8	Fair	
Ottawa, Ontario			29.89	759.2	60	17.1	73	W	10	4.5		5ck	0	W		0.05	1.3	Clearing	
Parry Sound, Ontario			29.85	758.2	67	19.4	97	SW	18	8.0			10n		W	0.07	1.8	Light rain	
Port Dover, Ontario			29.97	761.2	57	13.9	87	Calm	0	0		8ck	0	SW		0	0	Fair	
Port Stanley, Ontario			29.97	761.7	57	13.9	97	SE	10	4.5		5k	0	SE		0	0	Fair	
Quebec, Quebec			29.67	753.6	60	15.6	82	SW	16	7.2		8k	5ks	SW	SW	1.14	29.0	Fair	
Saugeen, Ontario			29.86	758.4	58	14.4	84	S	4	1.8		5ks	5n		SW	0.01	0.3	Light rain	
Stayner, Ontario																			
Sydney, C. B.			29.66	753.4	66	18.9	97	SE	12	5.4			10s		SE	0.02	0.5	Cloudy	
Toronto, Ontario			29.97	761.2	57	13.9	8	W	1	0.4		5ck	2s	SW		0	0	Cloudy	

NOTE.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

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

Station.	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —to—	Clouds. Amount. Up'er —to—	Clouds. Amount. Low'r —to—	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer
Albany, N. Y.			29.87	758.7	64	17.8	67	NW	9	4.0		5k	0	W		0	0	Fair	
Alpena, Mich			29.71	754.6	61	16.1	83	SW	6	2.7		0	0			0.10	2.5	Clear	
Atlantic City, N. J			29.96	761.0	67	19.4	64	NW	10	4.5		0	0			0	0	Clear	
Augusta, Ga.			30.04	763.0	75	23.9	72	W	2	0.9		k	Haze	W		0	0	Fair	
Baltimore, Md			30.02	762.5	69	20.6	65	NW	6	2.7		0	0			0	0	Clear	
Barnegat, N. J			29.95	760.7	68	20.0	55	NW	15	6.7		0	0			0	0	Clear	
Benton, Montana	27.17	690.1	29.97	761.2	50	10.0	71	Calm	0	0		5ck	0	SW		0	0	air	
Bismarck, Dakota	28.18	715.8	29.82	757.4	46	7.8	76	NE	2	0.9		1k	Haze			0	0	Fair	
Boston, Mass			29.78	756.4	66	18.9	64	W	20	8.9		0	0			0	0	Clear	
Breckenridge, Minn																			
Brownsville, Tex			29.86	758.1	47	8.3	92	Calm	0	0		0	0			0	0	Clear	
Buffalo, N. Y.			29.96	761.0	62	16.7	66	W	5	2.2		5c	1k	NW	W	0	0	Fair	
Burlington, Vt			29.85	758.2	60	15.6	71	W	9	4.0			0s		W	0	0	Cloudy	
Cairo, Ill			30.04	763.0	72	22.2	80	Calm	0	0		0	0			0	0	Clear	
Cape Hatteras, N. C.			29.98	761.5	77	25.0	72	NE	10	4.5		0	H e			0	0	Clear	
Cape Henry, Va			30.01	762.2	81	27.2	52	NW	14	6.3		0	0			0	0	Clear	
Cape May, N. J			29.98	761.5	9	20.6	60	NW	12	5.4		0	0			0	0	Clear	
Charleston, S. C			30.03	762.7	79	26.1	78	W	4	1.8		0	Haze			0	0	Clear	
Cheyenne, Wyoming	4.12	612.6	30.06	763.	54	12.2	23	NW	6	2.7		2cs	0			0	0	Fair	
Chicago, Ill			29.92	760.	68	20.0	69	SW	8	3.6	3	0	5s			0	0	Fair	
Cincinnati, Ohio			30.01	762.2	63	17.2	83	SE	2	0.9		0	Sm'e			0	0	Clear	
Cleveland, Ohio			30.00	762.0	63	17.0	81	S	4	1.8		8c	0	W		0	0	Fair	
Colorado Springs, Col	24.16	613.6	30.05	762.7	60	15.6	49	NW	7	3.1		2k	0	SW		0	0	Fair	
Corsicana, Tex			29.99	761.7	73	22.8	90	S	2	0.9		0	0			0.17	4.3	Clear	
Davenport, Iowa			29.96	761.0	66	18.9	73	E	8	3.6		5c	0	W		0	0	Fair	
Denison, Tex			29.95	760.7	75	23.9		Calm	0	0		0	0			0	0	Clear	
Denver, Col	24.84	630.9	30.06	763.5	58	14.4	42	SE	6	2.7		5c	0	W		0	0	Fair	
Detroit, Mich			29.93	760.2	62	16.7	83	SW	7	3.1		5ck	0	SW		0	0	Fair	
Dodge City, Kan	27.33	693.9	29.48	748.1	74	23.2	76	S	8	3.6		0	0			0	0	Clea	
Dubuque, Iowa			29.91	759.7	71	21.7	95	S	8	3.6			10s		NW	0	0	Threatening	
Duluth, Minn			29.80	756.9	60	15.6	60	W	8	3.6		0	0			0	0	Clear	
Eastport, Me			29.60	751.8	64	17.8	83	W	6	2.7		0	5ks		SW	0.30	7.6	Fair	
Erie, Pa			29.94	760.5	63	17.2	78	SE	12	5.4		5c	0			0	0	Fair	
Escanaba, Mich			29.73	755.1	65	18.3	78	W	6	2.7		0	0			0	0	Clear	
Fort Gibson, I. T			29.94	760.5	70	21.1	84	E	2	0.9		0	0			0	0	Clear	
Fort Sill, I. T																			
Fort Sully, Dakota	28.26	717.8	29.89	759.0	55	12.8	79	Calm	0	0		0	0			0	0	Clear	
Galveston, Tex			30.00	762.0	81	27.	78	S	3	1.3		0	8ks		S	0.03	0.8	Threatening	
Grand Haven, Mich			29.85	758.	69	20.6	75	SW	13	5.8			10s		W	0	0	Cloudy	
Indianapolis, Ind			30.06	763.5	62	16.7	83	N	1	0.4		2c	0			0	0	Clear	
Indianola, Tex			30.0	762.0	80	26.7	82	SE	4	1.8		2ck	0			0.01	0.3	Fair	
Jacksonville, Fla			30.07	763.8	81	27.2	74	S	4	1.8		2c	0			0	0	Fair	
Keokuk, Iowa			29.0	759.	69	20.6	70	S	4	1.8		0	0			0	0	Clear	
Key West, Fla			30.05	763.3	84.7	29.3	68	E	7	3.1		2cs	2k	N		0	0	Hazy	
Kittyhawk, N. C			30.0	762.0	72	22.2	90	NE	18	8.0		0	0			0	0	Clear	
Knoxville, Tenn			30.06	763.5	65	18.3	83	Calm	0	0		0	Fo			inap.	inap.	Fair	
La Crosse, Wis			29.86	758.4	68	20.0	90	S	8	3.6		5cs	5s	S	S	1.26	32.0	Threatening	
Leavenworth, Kan			29.90	759.4	64	17.8	83	S	1	.4		0	0			0	0	Clear	
Lexington, Ky	28.98	736.1	30.05	763.	69	20.6	75	SE	4	1.8		2c	0			0	0	Clear	
Long Branch, N. J			29.94	760.5	69	20.6	56	NW	20	8.9		0	0			0	0	Clear	
Louisville, Ky			30.04	763.0	66	18.9	89	Calm	0	0			Fo			0	0	Foggy	
Lynchburg, Va			30.04	763.0	71	21.7	71	NW	2	0.9		0	0			0	0	Clea	
Malone, N. Y.			29.85	758.2	57	13.9	74	NW	9	4.0			9k			0.08	2.0	Cloudy	
Marquette, Mich			29.71	754.0	65	18.3	73	W	12	5.4		0	0			0	0	Clear	
Memphis, Tenn			30.03	762.7	75	23.9	81	E	1	0.4		0	0			0	0	Clear	
Milwaukee, Wis			29.82	757.	76	24.4	41	W	21	9.4			8s		NW	0	0	Cloud	
Mobile Ala			30.08	764.0	78	25.6	86	Calm	0	0		2k	0	N		0	0	Fair	
Montgomery Ala			30.10	764.5	76	24.	86	SW	2	0.9		0	0			0	0	Clear	
Morgantown, W. Va			30.0	763.5	65	18.3	83	SW	1	0.4		0	Fog			0	0	Fair	
Mt. Washington, N. H	23.57	598.7	29.93	760.2	38	3.	100	NW	56	25.0			Fog		NW	0	0	Foggy	
Nashville, Tenn			30.01	762.2	72	22.	75	N	2	0.9		2k	0	N		0	0	Clear	
New Haven, Conn			29.90	759.4	70	21.1	61	NW	4	1.8		5k	Haze	NW		0	0	Fair	
New London, Conn			29.87	758.7	69	20.6	61	NW	9	4.0		0	0			0	0	Clear	
New Orleans, La			30.05	763.	79	26.1	82	SE	1	0.4		2c	0			inap	inap	Clear	
Newport, R. I			29.89	757.7	67	19.4	64	SW	12	5.4		0	0			0	0	Clear	
New York, N. Y			29.94	760.5	68	20.0	60	W	10	4.5		0	0			0	0	Clear	
Norfolk, Va			30.02	762.5	75	23.9	56	N	12	5.4		0	0			0	0	Clear	
North Platte, Neb	26.94	684.3	29.38	746.2	67	19.4	89	Calm	0	0		5cs	Haze	W		0	0	Fair	
Omaha, Neb	28.82	732.0	29.84	757.9	67	19.	90	S	4	1.8		5c	0	W		0	0	Fair	
Oswego, N. Y			29.97	761.2	61	16.1	70	NW	6	7.2		8ck	0	NW		0	0	Fair	
Peck's Beach, N. J			29.99	761.7	68	20.0	60	NW	8	3.6		0	0			0	0	Clear	
Pembina, Dakota			29.82	757.4	49	9.4	78	W	4	1.8		2ck	2s	SW		0	0	Fair	
Philadelphia, Penn			29.97	761.2	67	19.	55	N	15	6.7		0	0			0	0	Clear	
Pike's Peak, Colorado	18.05	458.5	30.26	768.8	36	2.	70	N	8	3.6		0	2s			0	0	Fair	
Pittsburgh, Penn			30.04	763.0	58	14.4	87	Calm	0	0		0	0			0	0	Clear	
Port Huron, Mich			29.90	759.4	62	16.7	77	S	5	2.2		0	2s			0	0	air	
Portland, Me			29.74	755.4	68	20.0	65	W	7	3.1		0	0			0	0	Clear	
Portland, Oregon			29.88	758.9	59	15.0	88	Calm	0	0			1s			0	0	Cloud	
Punta Rassa, Fla			30.09	764.3	78.3	25.7	86	NE	6	2.7		1cs	Sm'e			0.74	18.8	Clear	
Rochester, N. Y			29.95	760.7	60	15.6	70	W	7	3.1		5c	0	W		0	0	Fair	
Salt Lake City, Utah	25.58	649.7	29.91	759.7	62	16.7	26	E	3	1.3		0	0			0	0	Clear	
Sandy Hook, N. J			29.92	760.0	66	18.9	64	NW	24	10.7		1k	0	W		0	0	Clear	
San Diego, Cal			29.89	759.2	67	19.4	84	Calm	0	0			10s			0.03	0.8	Cloudy	
San Francisco, Cal			29.87	758.7	56	13.3	90	SW	12	5.4			1s			0	0	Cloudy	
Santa Fe, N. M	23.30	591.8	29.84	757.9	57	13.9	47	NE	4	1.8		0	0			0	0	Clear	
Savannah, Ga.			30.0	763.3	80	26.7	70	W	6	2.7		2k	Sm'e			0	0	Fair	
Shreveport, La			30.05	763.3	81	27.2	78	Calm	0	0		0	0			0	0	Clear	
Smithville, N. C																			
Springfield, Mass			29.87	758.7	67	19.4	59	NW	12	5.4		2k	0	NW		0	0	Clear	
St. Louis, Mo			30.02	762.5	69	20.6	74	S	2	0.9		0	0			0	0	Clear	
St. Marks, Fla			30.09	764.3	76	24.4	95	NW	4	1.8		5c	0	W		0	0	Fair	
St. Paul, Minn			29.84	757.9	59	15.0	81	NW	1	0.4		2c	0	W		0.05	1.3	Clear	
St. Paul's Island, Alaska																			
Squan Beach, N. J			29.89	759.2	66	18.9	54	NW	8	3.6		0	Haze			0	0	Clear	
Toledo, Ohio			29.95	60.7	62	16.7	88	S	12	5.4		2c	0			0	0	Clear	
Tucson, Arizona																			
Tybee Island, Ga			30.05	763.3	79	26.1	74	NW	12	5.4		Haze	0			0	0	Hazy	
Vicksburg, Miss			30.12	765.0	74	23.3	85	S	4	1.8		10c	0	SE		0	0	Cloudy	
Virginia City, Montana	24.90	617.0	29.77	761.2	45	7.2	46	Calm	0	0		0	0			0	0	Clear	

UNITED STATES SERIES—CONTINUED.

Station	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.04	763.0	68	20.0	68	NW	8	3.6		0	0			0	0	Clear	
Wilmington, N. C.			30.00	762.0	78	25.6	65	NE	8	3.6		0	Haze			0	0	Clear	
Woods's Hole, Mass.			29.83	757.7	68	20.0	69	NW	10	4.5		0	0			0	0	Clear	
Wytheville, Va.	27.76	705.1	29.86	758.4	62	16.7	88	W	1	0.4		0	0			0	0	Clear	
Yankton, Dakota	28.63	727.2	29.88	758.9	61	16.1	94	NE	8	3.6			10s			0.47	11.9	Cloudy	
Yuma, Arizona																			
Sub-Series																			
Bridgetown, Barbados, W. I.					84	28.9	95	E	4	1.8			Haze			0	0	Hazy	F. Racker.
Pointe-à-Pitre, Guadeloupe, do.			29.88	758.9	81	27.2	87	*E					10n			0.30	7.6	Raining	L. V. Bigard.
Havana, Cuba, W. I.			30.07	763.8	76	24.4	86	Calm	0	0		2c	1k	N	E	0.02	0.5	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W. I.																			James Gall.
St. Thomas, St. T., W. I.																			W. S. Cameron.
Santiago de Cuba, W. I.			29.79	756.7	81	27.2	67	NNE	7.2	3.2		5c	0	N		0	0	Fair	Robert Mason.
St. Georges, Bermudas			30.05	763.3	77.5	25.3	82	SW	5.7	2.5		0	8ks			0.460	11.68	Cloudy	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.																			
St. John's, Newfoundland			29.99	761.7	49	9.4	82	NE	8	3.6		4c	3k	N		0	0	Fair	J. Fortescue.
St. John's, Porto Rico, W. I.			30.04	764.3	59.5	15.3	78	E				5k	5s			0	0	Cloudy	John Delaney.
Clifton, Jamaica, W. I.																			Leon M. Acuña.
Navassa	27.23	691.6	30.01	762.2	70	21.1	79	N	2.0	0.9		2c	5k	NE		0	0	Cloudy	C. Partridge.
Meaellin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			30.25	768.3	61	16.1	71	S	4	1.8			0			0	0	Clear	H. M. Redington.

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

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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, 6,957.3 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 Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Mt. Washington, 6,288 ft., or 1,915.6 m.; North Platte, 2,816 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,866 (?) ft., or 2,091.6 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 6, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.16	766.0	80.2	26.8	62	NNW			1		0			0	0	Fair	Charnot.
Algiers			30.11	764.9	79.5	27.4	87	N			2		2			0	0	Fair	Peter.
La Calle																			Kuntz.
Tunis			30.15	765.9	91.0	32.8	36	E			3		4			0	0	Stormy	Jacques.
Sfax			30.17	766.3	85.2	30.1	59	SE			3		1			0	0	Fair	Chauvey.
Saïda			30.13	765.2	84.2	29.0	24	NW			2		0			0	0	Fair	Grosjean.
Tebessa			30.14	765.6	83.8	28.8		NE			1		0			0.079	2.0	Thunder	Colin.
Geriville			30.14	765.6	80.6	27.0	26	NW			1		2			0	0	Fair	Bernadach.
Laghouat			30.10	764.4	86.0	30.0	36	S			4		2			0	0	Sirocco	Simon.
Biskra			30.08	764.1	88.0	31.1	33	NW			1		0			0	0	Fair	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.17	766.2	62.2	16.8	77	SSW			1		8			0.063	1.6	Raining.	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.14	765.6	59.0	15.0	92	W			2		10			0.492	12.5		I. R. Observatory.
Eperies			30.06	763.4	60.6	15.9	77	Calm			0				8	0.020	0.52	Raining	Julius Mikolik.
Gratz	28.98	736.1	30.16	766.1	65.8	18.8	68	NW			2		5						Andreas Rospini.
Hermannstadt	28.65	727.8	30.07	763.8	56.5	13.6	83	ENE			1		10			0.303	7.70		Prof. Reissenberger.
Kremsmünster	28.89	733.9	30.23	767.7	61.2	16.2	77	NW			2		5			0.413	10.5		Prof. C. Wagner.
Lemberg			30.02	762.4	59.9	15.5	82	NW			2		8			0	0	Rainy	Dr. T. Stanecki.
Nyiregyhaza			30.08	764.1	64.4	18.0	62	Calm			0		8			0.139	3.54	Rainy	Habzsuda Daniel.
Pola			30.15	765.7	68.7	20.4	60	E			1		9n,ks			0	0		I.R. Hydrographic Office
Szegedin			30.05	763.2	68.0	20.0	57	NW			1		4			0.028	0.70		Karl Stancel.
Trieste			30.11	764.9	73.9	23.3	58	Calm			0		6k			0	0		Prof. V. Faroli.
Vienna			30.16	766.1	62.1	16.7	61	W			3		10			0.075	1.9		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. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.34	770.7	64.6	18.1	65	NE			1	0	0			0	0		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Cloud. Amount. Upper. 0—10.	Cloud. Amount. Lower. 0—10.	Cloud. Direction. Upper. From—	Cloud. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen	.....	.....	30.14	765.5	65.7	18.7	.....	SSW	20	8.9	.....	.....	1	.....	.....	0	0	Clear	William Boswell.
Ardrossan	.....	.....	30.08	760.6	62	16.7	.....	SE	.....	.....	2	.....	7	.....	.....	.....	.....	*D. clouds	James Mayes.
Armagh Observatory	.....	.....	30.21	767.3	61.8	16.6	.....	.....	.....	.....	.....	.....	9	.....	.....	.....	.....	.....	Capt. for Dr. Robinson
Bidston Liverpool Obs.	.....	.....	30.26	768.6	67.2	19.4	.....	SSW	...	.....	1	.....	10	.....	.....	.....	.....	Overcast	John Hartnup, Jr.
Birr Castle, (Parsonstown	.....	.....	30.20	767.1	64.[illegible]	17.[illegible]	.....	SSW	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast	J. Dreyer.
Bradford	.....	.....	30.23	767.8	66.	19.1	.....	S	.....	.....	1	.....	6	.....	.....	.....	.....	Fine	J. McLandsborough.
Bridgetown, (Barbadoes)	.....	.....	29.90	759.4	85.	29.7	.....	E	.....	.....	2	.....	2	.....	.....	.....	.....	*D. clouds	T. H. Hunt.
Cambridge Observatory	.....	.....	30.30	769.6	75.0	22.8	.....	Calm	.....	.....	0	.....	1	.....	.....	.....	.....	D. clouds	Sergeant Hunt, A. H. C.
Cape Good Hope Obs.	.....	.....	30.21	767.3	60.0	15.9	49	[illegible]	10	4.5	.....	.....	1	.....	.....	.....	.....	.....	The Staff, for E. J. Stone
Cardington	.....	.....	30.30	769.6	71.0	21.7	.....	W	.....	.....	.....	.....	7	.....	.....	.....	.....	*D. clouds	John McLaren.
Carlisle	.....	.....	30.23	767.	65.	18.	.....	SW	.....	.....	.....	.....	10	.....	.....	0	0	Threatening	T. Bell, for J. Cartmell
Chatham, School M. E.	.....	.....	30.29	769.1	70.2	21.	.....	NW	.....	.....	1	.....	4	.....	.....	.....	.....	Fair	Capt. [illegible], Fellowes, R.E.
Dartmoor	28.89	732.8	30.26	768.	61.2	16.2	.....	E	.....	.....	3	.....	0	.....	.....	.....	.....	Clear	R. E. Power.
Donaghadee	.....	.....	30.21	767.3	64	17.8	.....	SW	.....	.....	3	.....	7	.....	.....	.....	.....	*D. clouds	J. Mac Gowan, Jr.
Dover	.....	.....	30.32	770.1	65	18.	.....	ENE	.....	.....	3	.....	2	.....	.....	.....	.....	.....	J. Costello.
Eccles, (near Manchester)	.....	.....	30.23	768.6	69.	19.	.....	SSW	2.0	0.9	.....	.....	0	.....	.....	.....	.....	D. clouds	Thomas Mackeret
Falmouth Observatory	.....	.....	30.25	768.	64.	17.	.....	SE	22	9.8	.....	.....	1	.....	.....	.....	.....	D. clouds	The Staff.
Fort Napier, (Natal)	27.72	704.1	30.4	763.0	62.	16.	.....	SE	.....	.....	2	.....	0	.....	.....	.....	.....	Clear	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	29.78	756.	80	26.	.....	W	.....	.....	.....	.....	8	.....	.....	.....	.....	D. clouds	[illegible]
Galway, (Queen's College)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	B. G. Clare, for Prof. Carr.
Gibraltar, (Mediterranean)	.....	.....	30.14	765.	77.	25.	.....	ENE	.....	.....	5	.....	3	.....	.....	.....	.....	Fine	Secret. E. G. Baker.
Glasgow Observatory	.....	.....	30.18	766.0	62.	16.	.....	[illegible]	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast	Lewis Stuart.
Great Yarmouth	.....	.....	30.32	770.	65	18.	.....	ESE	.....	.....	3	.....	0	.....	.....	.....	.....	Clear	G. T. Watson.
Greenwich Royal Obs.	.....	.....	30.1	769.	74.	23.0	.....	SSE	.....	.....	1	.....	3	.....	.....	.....	.....	D. clouds	The Staff, for G. B. Airy.
Guernsey	.....	.....	30.26	768.	67.5	19.	.....	ESE	.....	.....	1	.....	0	.....	.....	.....	.....	Clear	Dr. S. E. Hoskins.
Halifax, Moorside Obs.	.....	.....	30.8	769.1	68.	20.	.....	SW	.....	.....	.....	.....	8	.....	.....	.....	.....	Hazy	F. J. Page, for L. J. Cro[illegible]
Helston	.....	.....	30.22	767.6	70	21.1	.....	E	.....	.....	4	.....	2	.....	.....	.....	.....	Clear	[illegible]. P. Moyle.
Holyhead	.....	.....	30.25	768.3	64	17.8	.....	SSW	.....	.....	2	.....	10	.....	.....	.....	.....	Mist	John Tilston.
Lord Park	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kew Observatory	.....	.....	30.30	769.6	71.	22.	.....	SSW	6	2.7	.....	.....	5	.....	.....	.....	.....	Hazy	The Staff.
Kingstown	.....	.....	30.27	768.8	64	17.	.....	SSE	.....	.....	3	.....	8	.....	.....	.....	.....	Overcast	George Mitchell
Leicester Museum	.....	.....	30.31	769.9	68.1	20.	.....	S	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast	William J. Harrison.
Llandudno	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. James Nicol.
Malta, (Mediterranean)	.....	.....	30.20	767.	82.	28.	.....	SE	.....	.....	1	.....	4k	.....	.....	.....	.....	D. clouds	Fred Travis, Pvt. A. H. C.
Nairn	.....	.....	30.10	764.	65	18.	.....	W	.....	.....	1	.....	5	.....	.....	.....	.....	.....	W. D. Lenny.
Nassau, (Bahamas)	.....	.....	30.4	765.	85.1	29.	.....	NE	.....	.....	2	.....	3	.....	.....	.....	.....	.....	Surg.-Maj. Henry.
Nottingham	.....	.....	30.20	767.1	73.6	22.7	.....	S	.....	.....	1	.....	5k	.....	.....	0	0	.....	E. J. Lowe.
Oscott, St. Mary's College	.....	.....	30.29	769.	[illegible]	19	.....	S[illegible]	.....	.....	1	.....	8	.....	.....	.....	.....	Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.	.....	.....	30.27	768.8	69	20.	.....	Calm	.....	.....	0	.....	7	.....	.....	.....	.....	D. clouds	J. Lucas, for R. Main.
Plymouth	.....	.....	30.26	768.	66.8	19.	.....	SE	.....	.....	3	.....	1	.....	.....	.....	.....	Clear	John Merrifield.
Prospect, (Bermuda)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Roche's Point	.....	.....	30.21	767.1	66	18.	.....	S	.....	.....	2	.....	0	.....	.....	.....	.....	Fine	W. Kennedy.
Saint Ann's Head	.....	.....	30.25	768.3	64	17.	.....	SE	.....	.....	3	.....	7	.....	.....	.....	.....	D. clouds	John C. Walker.
Saint Helier, (Jersey)	.....	.....	30.25	768.3	73.	23.	.....	E	.....	.....	2	.....	0	.....	.....	.....	.....	.....	A. P. Amy.
Sandwick Manse (Orkneys)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Scarborough	.....	.....	30.30	769.6	65.	18.	.....	SSE	.....	.....	1	.....	6	.....	.....	.....	.....	D. clouds	F. Shaw.
Scutari cemetery, (Turkey)	.....	.....	30.05	763.3	77.	25.	.....	NE	.....	.....	2	.....	1	.....	.....	.....	.....	Clear	Sergt. W. H. Lyne.
Sheffield	.....	.....	30.27	768.8	70.	21.	.....	S	.....	.....	1	.....	6	.....	.....	.....	.....	D. clouds	W. F. Cooper.
Silloth Rectory	.....	.....	30.24	768.1	66.	19.4	.....	W	.....	.....	2	.....	10	.....	.....	0	0	Overcast	Rev. Francis Redford
Stonyhurst Observatory	.....	.....	30.26	768.	66.0	19.	.....	S	.....	.....	2	.....	10	.....	.....	Blank	Blank	Gloomy	The Staff.
Stornoway, Lewis C. (Heb)	.....	.....	30.03	762.7	61	16.	.....	SW	.....	.....	7	.....	8	.....	.....	.....	.....	D. clouds	John Smith.
Stratfield Turgiss	.....	.....	30.21	767.	71.7	22.	.....	SE	.....	.....	0–1	.....	5	.....	.....	.....	.....	D. clouds	Rev. Charles H. Griffith
Streatley Vicarage	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Rev. John Cutter.
Sumburgh Head, (Shetland)	.....	.....	.....	.....	71	21.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Thurso	.....	.....	30.1[illegible]	763.3	70	21.1	.....	SSW	.....	.....	4	.....	6	.....	.....	.....	.....	D. clouds	John Trotter.
Truro, Royal Institution	.....	.....	30.22	767.6	64.8	18.	.....	E	.....	.....	4	.....	4	.....	.....	.....	.....	D. clouds	W. Newcombe.
Valencia Observatory	.....	.....	30.18	766.	.....	.....	.....	SSE	10	8.5	.....	.....	9	.....	.....	.....	.....	D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leith, Restalrig Park	.....	.....	30.24	768.1	63.2	17.	.....	W	.....	.....	2	.....	1-k	.....	.....	0	0	Cloudy	Andrew Gibb.
Monach Lighthouse, Shetland	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
North Unst, (Shetland Is.)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters: Fort Napier, 2,200 ft., or 670.6 m., instrumental error, --.099. * Detached clouds.

DANISH SERIES.

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

Copenhagen	.....	.....	30.21	767.2	63.5	17.5	69	Calm	.....	.....	0	.....	1	.....	.....	.....	.....	.....	.....
Fanöe	.....	.....	30.28	769.1	64.2	17.9	63	NW	.....	.....	4	.....	5	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stykkisholm, (Iceland)	.....	.....	29.58	751.2	41.4	5.2	81	NE	.....	.....	9	.....	5	.....	.....	.....	.....	.....	.....
Thorshavn, (Faröe)	.....	.....	29.65	753.0	56.5	13.6	95	SW	.....	.....	6	.....	10	.....	.....	.....	.....	Rain & fog	.....
Vestervig	.....	.....	30.25	768.3	62.2	16.8	72	WNW	.....	.....	4	.....	2	.....	.....	.....	.....	.....	.....

Note.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between upper and lower clouds.

FRENCH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alengo			30.27	768.8	72.5	22.5	65	NE			2					0	0		Normal School.
Amiens																			Normal School.
Avignon			30.[illegible]	75[illegible]	79.3	26.[illegible]	49	[illegible]			1		0			0	0	Clear	Normal School.
Bar-sur Seine*																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			30.[illegible]2	770.0	68.[illegible]	20.1	61	E			2		8		E	0	0	Cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.21	767.4	73.8	23.[illegible]	59	NW			2		0			0	0	Clear	Normal School.
Bourges			30.21	767.4	72.5	22.5	44	NE			2		0			0	0	Clear	Normal School.
Brest			30.16	766.0	76.5	24.7	56	ESE			2		0			0	0	Clear	Naval Observatory.
Caen																			Normal School
Chartres			30.28	769.1	71.[illegible]	21.8		ENE			3		0					Clear	Normal School.
Chaumont	29.1	740.2	30.28	769.0	67.6	19.8		WNW			2		1		WNW	0	0	Clear	Normal School.
Comnercy			30.12	770.0	66.2	19	66	NE			2		[illegible]		NE	0	0	Clear	Normal School.
Commune de Gréasque†			30.22	767.6	81.9	27.7	35	W			4		5		W	0	0		
Le Mans																			Normal School.
Lons-Le Saunier			30.19	766.8	72.3	2[illegible].1	60	NE			2		0			0	0	Clear	Normal School.
Mâcon			30.19	766.8	69.8	21	59	Calm			0		0			0	0	Clear	Normal School.
Mirecourt			30.29	7[illegible].3	64.8	18.2	50	NNE			2		8		NNE	0	0	Cloudy	Normal School.
Orleans																			Normal School.
Paris Observatory			30.29	769.4	70.3	21.3	49	E			3		5k		E	0	0	Cloudy	National Observatory.
Parthenay			30.[illegible]4	763.0	65.3	18.	49	NE			4		0					Clear	Normal School.
La Roche sur Yon			30.15	765.7	8[illegible]	26.8	81	E			4		0					Clear	Normal School.
Rochefort, Observatory			30.16	766.0	81.5	27.5	28	E			4		0			0	0	Clear	Naval Observatory.
Rouen			30.30	769.7	73.[illegible]	22.9	55	SE			2		2		E	0	0		Normal School.
Saint Lo																			Normal School.
Villefranche																			Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchésl.
Mont-Louis	25.10	637.6	[illegible]		65.3	18.5	67	SE	13.0	5.8			2		NW	0	0		—, Fauguère.
Montsouris Observatory			30.[illegible]8	769.	71.4	21.9	92	E			2		3k			0	0		Marié Davy.
Perpignan			30.[illegible]8	7[illegible]6.5	77.[illegible]	25.4	38	SE	5.1	2.5			0			0	0		Dr. Fines.
Saint Maur, (near Paris)			30.30	769.5	71.[illegible]	22.	54	E			1		1			0	0	Clear	E. Renou.
Tours			30.21	768.0	75.0	24.0	40	E			2		0			0	0	Clear	C. Marquet.
Versailles, (near Paris)			30.[illegible]0	769	71.	22.0	56	NE			1		1			0	0	Clear	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai			29.75	755.6	75.0	23.8	94	SSW	8.5	3.8		k	n			0.016 / 0.016	0.4 / 0.4	Raining	H. Le Leo, S. J.

Note.—The originals give the wind-force by the scale 0 to 7; the weather in general terms; 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,58[illegible].40 meters, or 5,204.8 feet: Chaumont, 332 m., or 1,0[illegible]9 ft. Commune de Gréasque, 322 m., or 1,055.4 ft. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Observation not simultaneous. †Near Marseilles.

GERMAN SERIES.

Furnished by the coöperation of Prof. Geo. Neumayer, Superintendent Royal 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.24	768.2	63.1	17.3	62	NW	13	6			6			0	0		Prof. Hoh.
Berlin			30.27	768.8	64.4	18.0	47	NW	4	2			5			0.012	0.3		Prof. Arndt.
Breslau			30.26	768.6	61.2	16.2	67	NW	31	14			10			0.213	5.4	Raining	Dr. P. Neugebauer.
Carlsruhe			30.29	769.3	67.6	19.8	63	N	4	2			8			0	0		A. Senz.
Cassel			30.23	767.8	67.3	19.6	60	NNW	13	6			6			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.85	732.8	30.27	768.9	67.1	19.5	39	NE					5			0.008	0.2		M. Wilhelm.
Hamburg			30.31	769.	64.4	18.0	61	NNW	16	7			7k	NW		0.083	2.1	Half clear	Deutsche Seewarte.
Kiel			30.23	767.9	64.9	18.3	58	N	18	8			3			0	0		Prof. G. Karsten.
Königsberg			30.1[illegible]	765.9	65.1	18.4	57	N	11	5						0.002	0.04	Clear	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			30.32	770.2	62.2	16.8	56	N	9	4			9			0	0		Prof. Bruhns.
Münster			30.37	771.5	61.0	17.8	76	W	4	2			8			0	0		Prof. E. Heis.
Posen			30.20	767.0	64.6	18.1	73	NW	16	7			9			0.071	1.8	Cloudy	Dr. Magener.
Strassburg, (in Alsace)			30.30	769.[illegible]	68.0	20.0	58	NE	11	5			2			0	0		Ha twig.
Stuttgart			30.27	768.9	68.4	20.2	57	E					8			0	0		Mr. Würth.
Thorn			30.15	765.7	64.0	17.8	72	N	22	10			7			0.043	1.09		Dr. Rosenbalg.
Treves, (Trier)			30.[illegible]8	769.2	70.9	21.6	47	NE	18	8			3			0	0		Prof. Flesch.
Wustrow, Naval School			30.25	768.3	62.4	16.9	73	SW	13	6			3k			0.035	0.9	Clear	E. F. Schütz.

Note.—In the originals the distinction between 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 1,355.3 feet.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.13	765.4	76.6	24.8	55	SSW			2		3	ENE		0	0		
Mondovi			30.12	765.1	73.6	23.1	56	NW			4		1	E		0	0		
Genoa			30.16	766.1	77.0	25.0	52	SW	3.1	1.4			0			0	0		
Pavia			30.13	765.4	77.0	25.0	49	S			1		1	SW		0	0		
Verona			30.1[illegible]	764.4	80.6	27.0	57	E			1		0			0	0		
Padua			30.12	765.1	75.2	24.0	58	SW	1.3	0.6			5	WNW		0	0		
Parma																			
Bologna																			
Leghorn			30.1[illegible]	765.0	76.1	24.5	57	WNW			1		4	N		0	0		
Urbino			30.15	765.7	76.8	24.9	63	W	1.3	0.6			3			0	0		
Ancona																			
Siena																			
Rome			30.11	764.9	75.6	24.2	49	WSW	0	0			8	W		0	0		
Naples, O.U.			30.17	766.4	73.9	22.8	67	S	4.9	2.2			9			0.055	1.4		
Lecce			30.17	766.4	80.2	26.8	53	SW			2		4	NE		0	0		
Cosenza			30.17	766.2	77.4	25.2	34	ENE	7.4	3.3			3	N		0	0		
Catania, (Sicily)			30.17	766.4	77.4	25.2	62	NW			2		6			0	0		
Ripozzo																			
Palermo			30.10	764.5	81.5	27.5	58	E			2		1	NE		0	0		
Sub-Series.																			
Naples, S. R.			30.11	764.7	78.3	25.7	51	NE	8.7	3.9			1			0	0		
			30.21	767.2	78.4	25.8	56	SW	4.3	1.9			3	W		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; the cloudiness occasionally by the scale 0 to 4, and generally without distinguishing between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovi is 55[illegible] meters, or 1,821.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 318.5 m., or 1,14[illegible].3 feet.

NETHERLANDS' SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 1—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Flushing	.....	.....	30.33	771.[illegible]	66.[illegible]	19.0	.....	NW	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	
Groningen	.....	.....	30.28	769.[illegible]	63.5	17.	.....	N	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	
Helder	.....	.....	30.33	770.1	64.2	17.[illegible]	.....	ENE	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	
Utrecht	.....	.....	30.30	769.7	69.3	20.	.....	W	.....	.....	2	.....	5	.....	.....	.....	.....	Cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 1—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bergen	.....	.....	30.15	765.9	60.8	16.0	69	SSW	9.8	4.4	.....	.....	10	.....	.....	0	0	.....	
Christiania	.....	.....	29.71	755.5	65.5	18.[illegible]	55	.....	1.6	0.7	.....	.....	4	.....	.....	0	0	.....	
Tromsö	.....	.....	29.76	755.9	5[illegible].5	10.[illegible]	76	W	.....	.....	6	.....	10	.....	.....	0.181	4.6	.....	

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 1—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon	.....	.....	30.05	763.2	89.1	31.7	21	NE	6.3	2.8	.....	.....	1	.....	.....	.....	.....	.....	The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

RUSSIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 1—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw	.....	.....	30.10	764.4	61.0	16.1	78	N	9	4	.....	.....	4	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.05	763.3	63.9	17.7	56	N	4	2	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.07	763.9	62.6	17.0	66	NNW	4	2	.....	.....	9	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.05	763.2	54.7	12.6	90	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	30.05	763.3	56.8	13.8	94	S[illegible]	.....	.....	.....	.....	10	.....	.....	0.059	1.50	.....	Ch. Forsten.
Kieff	.....	.....	29.91	759.8	62.6	17.0	63	NW	13	6	.....	.....	5	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.[illegible]	762.8	71.1	21.7	36	W	8	3.5	.....	.....	5	.....	.....	.....	.....	.....	Kurd kof.
Kertch	.....	.....	30.[illegible]	762.9	78.6	25.9	53	W	4	2	.....	.....	4	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.07	763.7	49.5	9.7	80	S E	10	4.5	.....	.....	10	.....	.....	.....	.....	Light rain	Meteorological Obs.
Lugan	.....	.....	29.74	755.5	66.0	18.9	57	SW	25	11	.....	.....	9	.....	.....	Blank	Blank	.....	Meteorological Obs.
Archangel	.....	.....	30.21	767.4	60.3	15.7	52	SS[illegible]	13	6	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.54	724.8	29.87	758.8	80.2	26.8	44	N	25	11	.....	.....	2	.....	.....	.....	.....	.....	Physical Obs.
Astrakhan	.....	.....	30.0[illegible]	762.8	76.3	24.6	59	WNW	4	2	.....	.....	7	.....	.....	.....	.....	Light rain	Sebastianof.
Kasan	.....	.....	30.[illegible]2	767.6	61.9	16.6	42	E	8	3.5	.....	.....	1	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.30	769.6	6[illegible].3	15.7	43	SE	8	3.5	.....	.....	3	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	29.28	743.6	30.26	768.7	60.3	15.7	49	W	4	2	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Kasaly	.....	.....	30.02	762.4	68.0	20.	66	N	22	10	.....	.....	0	.....	.....	.....	.....	.....	Sorof.
Tashkend	28.33	719.6	29.97	761.1	75.9	24.4	66	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.93	760.3	51.4	10.2	70	W	8	3.5	.....	.....	2	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.46	748.2	47.3	8.5	89	NE	7	3	.....	.....	9	.....	.....	.....	.....	Raining	Marks.
Irkutsk	28.15	715.1	29.50	749.3	54.0	12.2	80	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Usolzef.
Oorga	25.57	649.4	29.70	754.3	58.3	14.6	76	Calm	0	0	.....	.....	2	.....	.....	.....	.....	.....	Massin.
Peking, (China)	.....	.....	29.85	758.3	72.1	22.3	82	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. The elevation of Tiflis is 403. meters, or 1,321.8 feet; Ekaterinburg, 305.4? m., or 1,005.2? 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, 1,281.0? m., or 4,203.6? ft.

SPANISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 1—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid	.....	.....	30.01	763.0	93.2	34.0	32	SE	5.1	2.3	.....	0	1	.....	.....	0	0	.....	Royal Observatory.
San Fernando	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	The Naval Observatory.

NOTE.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea	.....	.....	29.97	761.2	60	15.8	81	NW	.....	.....	2	.....	2	.....	.....	0	0	.....	
Hernosand	.....	...	30.20	767.1	63.[illegible]	17.6	45	W	.....	.....	2	.....	6	.....	.....	0.008	0.2	.....	
Stockholm	.....	.....	30.[illegible]0	761.0	63.	17.2	71	NNW	.....	.....	2	.....	5	.....	.....	0.028	0.7	.....	
Wisby	.....	.....	30.13	765.	63.[illegible]	17.4	72	N	.....	.....	4	.....	5	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	30.14	765.5	64.8	18.2	54	N	5.4	2.4	.....	.....	5	.....	NNW	.....	.....	.....	Dr. Hildebrandsson.

NOTE.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Geneva	28.82	732.0	30.[illegible]1	767.2	68.4	20.[illegible]	69	NNE	.....	.....	2	.....	1	.....	.....	0	0	Clear	The Observatory.
Zurich	28.65	727.7	30.24	768.0	69.8	21.	52	NE	.....	.....	1	.....	2	.....	.....	0	0	Clear	The Observatory.
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +4.7mm.; Thermometer, +0°.7; Relative Humidity, −0.0 per cent.

NOTE.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Beirut, (Syria, Lee Ots'y	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. C. N. A. Van Dyck.
Constantinople	.....	.....	30.07	763.8	71.5	21.4	.48	NE	13	6	.....	.....	2	.....	NE	0	0	.....	
Fao, (Persian Gulf)	.....	.....	29.73	755.1	91.4	33.0	.....	S	.....	.....	3	.....	0	.....	.....	.....	.....	Clear	
Salonica	.....	.....	.....	.....	85.7	28.7	.....	SE	.....	.....	1	.....	0	.....	.....	.....	.....	Clear	
Valona	.....	.....	30.11	764.8	73.0	23.1	.....	W	.....	.....	2	.....	0	.....	.....	.....	.....	Clear	
Varna	.....	.....	30.08	764.0	74.3	23.5	.....	SE	.....	.....	3	.....	5	.....	.....	.....	.....	Cloudy	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea level. The distinction between upper and lower clouds is not made.

GREEK SERIES.

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

Athens	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—Reports commence October 1, 1875.

JAPANESE SERIES.

Takio	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Brockville, Ontario	.....	.....	29.83	757.7	70	21.1	.....	SW	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Chatham, N. B.	.....	.....	29.66	753.4	58	14.4	92	SW	2	0.9	.....	5ck	5ks	SW	SW	0.02	0.5	Cloudy	
Charlottetown, P. E. Island	.....	.....	29.71	754.6	65	18.3	78	SW	6	2.7	.....	5k	0	.....	.....	0	0	Fair	
Fort Garry Manitoba	.....	.....	30.0[illegible]	762.0	47	8.3	66	E	4	1.8	.....	0	28	.....	.....	0	0	Fair	
Halifax, N. S.	.....	.....	29.72	754.9	66	18.9	78	S	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Kingston, Ontario	.....	.....	29.85	758.2	65	18.3	60	NW	8	3.6	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Montreal, Quebec	.....	.....	29.67	753.6	62	16.7	86	W	20	8.9	.....	2k	5ks	NW	W	0	0	Cloudy	
Ottawa, Ontario	.....	.....	29.76	755.9	62	16.7	80	W	12	5.4	.....	2cs	0	W	.....	0.10	2.5	Clear	
Parry Sound, Ontario	.....	.....	29.86	758.4	62	16.7	72	NW	15	6.7	.....	2ck	0	NW	.....	0.15	3.8	Fair	
Port Hope, Ontario	.....	.....	29.96	761.0	62	16.7	88	W	3	1.3	.....	0	0	.....	.....	0.55	14.0	Clear	
Fort Stanley, Ontario	.....	.....	29.97	761.2	60	15.6	96	N	1	0.4	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Quebec, Quebec	.....	.....	29.64	752.8	60	15.6	88	Calm	0	0	.....	.....	10n	.....	SW	0.10	2.5	Cloudy	
St. Joseph, Ontario	.....	.....	29.91	759.7	62	16.7	74	NW	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Stayner, Ontario	.....	.....	29.96	761.0	64	17.8	67	NW	10	4.5	.....	0	0	.....	.....	0.03	0.8	Clear	
Sydney, C. B.	.....	.....	29.74	755.4	67	19.4	71	W	8	3.6	.....	8k	0	NW	.....	0.05	1.3	Fair	
Toronto, Ontario	.....	.....	29.91	759.7	61	16.1	75	W	9	4.0	.....	0	0	.....	.....	0	0	Clear	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

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

Station.	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer
Albany, N. Y.			29.78	756.4	70	21.1	66	W	1	0.4		0	0			0.12	3.0	Clear	
Alpena, Mich			29.92	760.0	59	15.0	76	W	12	5.4		0	0			0	0	Clear	
Atlantic City, N. J.			29.92	760.0	72	22.2	85	SW	8	3.6		0	0			0	0	Clear	
Augusta, Ga.			30.04	763.0	74	23.3	68	NW	5	2.2		2c	0	W		0	0	Fair	
Baltimore, Md.			29.94	760.5	72	22.2	75	Calm	0	0		2k	8m'e			0	0	Fair	
Barnegat, N. J.			29.89	759.2	75	23.9	72	SW	7	3.1		5ck	0	SW		0	0	Fair	
Benton, Montana	27.14	689.3	29.95	760.7	50	10.0	71	SW	8	3.6		0	0			0	0	Clear	
Bismarck, Dakota	28.18	715.8	29.79	756.7	56	13.3	62	E	3	1.3		Haze	Haze			0	0	Hazy	
Boston, Mass			29.77	756.1	65	18.3	84	SW	12	5.4			10s		W	0.05	1.3	Cloudy	
Breckenridge, Minn			29.98	761.5	50	10.0	93	SE	1	0.4		0	0			0	0	Clear	
Brownsville, Tex.																			
Buffalo, N. Y.			29.89	759.2	67	19.4	59	W	8	3.6		2k	0	W		0.12	3.0	Fair	
Burlington, Vt.			29.74	755.[illegible]	67	19.4	69	W	4	1.8		5k	0	W		0	0	Fair	
Cairo, Ill.			30.08	764.0	7	23.3	85	SE	4	1.8			10ks		W	0	0	Cloudy	
Cape Hatteras, N. C.			30.02	762.5	75	23.9	85	SW	6	2.7		Haze	Haze			0	0	Haz	
Cape Henry, Va			29.99	761.7	79	26.1	66	S	11	4.9		0	0			0	0	Clear	
Cape May, N. J.			29.95	760.7	72	22.2	80	W	12	5.4		0	0			0	0	Clear	
Charleston, S. C.			30.04	763.0	82	27.8	74	S	2	0.9		2ck	Haze	S		0	0	Fair	
Cheyenne, Wyoming	24.17	613.9	30.11	764.8	62	16.7	0	S	4	1.8		10k	0	SW		0	0	Cloudy	
Chicago, Ill.			30.0	763.5	67	19.4	64	N	2	0.9		0	0			0	0	Clear	
Cincinnati, Ohio			30.01	762.2	70	21.1	75	SW	1	0.4		2c	8m'e			0	0	Clear	
Cleveland, Ohio			29.95	760.7	70	21.3	75	NW	11	4.9		8k	0	NW		0	0	Fair	
Colorado Springs, Col.	24.22	615.2	30.09	764.3	59	15.0	48	N	4	1.8		0	0			0	0	Clear	
Corsicana, Tex			30.08	764.0	75	23.9	85	S	1	0.4		0	0			0	0	Clear	
Davenport, Iowa			30.10	764.5	68	20.0	64	E	12	5.4		2ck	8m'e			0	0	Fair	
Denison, Tex.			30.01	762.2	77	25.0		S				0	0			0	0	Clear	
Denver, Col.	24.87	631.7	30.09	764.3	64	17.8	48	S	4	1.8		8ck	Haze			0	0	Fair	
Detroit, Mich			29.98	761.5	64	17.8	94	NW	4	1.8		0	0			0	0	Clear	
Dodge City, Kan	27.44	697.0	29.60	751.8	76	24.4	60	S	8	3.6		0	0			0	0	Clear	
Dubuque, Iowa			30.09	764.3	63	17.2	78	calm	0	0		2ck	2s	W	W	0.04	1.0	Fair	
Duluth, Minn			30.05	763.3	57	13.9	87	Calm	0	0		2ck	0			0	0	Clear	
Eastport, Me.			29.66	761.0	57	13.9	93	SW	8	3.6		2cs	10ks			0	0	Threatening	
Erie, Pa.			29.90	759.0	68	20.0	79	NW	8	3.6		2k	0	NW		0.01	0.3	Fair	
Escanaba, Mich			30.01	762.2	58	14.4	64	NW	9	4.0		0	0			0	0	Clear	
Fort Gibson, I. T.			30.02	762.5	74	23.3	81	SE	2	0.9		1c	0			0	0	Clear	
Fort Sill, I. T.																			
Fort Sully, Dakota	28.28	718.3	29.89	759.2	61	16.1	83	SE	4	1.8		2c	0			0	0	Fair	
Galveston, Tex			30.09	764.3	81	27.2	78	SW	6	2.7		2ck	0	W		0.33	8.4	Fair	
Grand Haven, Mich			30.04	763.0	66	18.9	68	NE	3	1.3		0	8m'e		NE	0	0	Clear	
Indianapolis, Ind			30.03	762.7	68	26.0	79	Calm	0	0		0	Haze			0	0	Clear	
Indianola, Tex			30.11	764.8	81	27.2	82	S	2	0.9		5ck	5s		S	0	0	Cloudy	
Jacksonville, Fla			30.06	763.5	81	27.2	74	S	4	1.8		0	0			0	0	Clear	
Keokuk, Iowa			29.99	761.7	76	24.4	65	NE	6	2.7		5c	0	W		0	0	Fair	
Key West, Fla			30.06	763.5	84	18.9	71	E	8	3.6		0	2ks			0	0	Fair	
Kittyhawk, N. C.			30.02	762.5	75	23.9	81	W	10	4.5		0	0			0	0	Clear	
Knoxville, Tenn			30.09	764.3	66	18.9	90	calm	0	0		5cs	5ks			0	0	Cloudy	
La Crosse, Wis.			30.09	764.3	60	15.6	82	S	2	0.9			Fog			0	0	Foggy	
Leavenworth, Kan			29.97	761.2	73	22.8	81	S	5	2.2		2c	0			0	0	Clear	
Lexington, Ky.	29.01	736.8	30.09	764.3	64	17.8	89	SW	4	1.8		5c	5s	SW		0	0	Cloudy	
Long Branch, N. J.			29.88	758.9	75	23.9	68	SW	5	2.2		0	2ks		SW	0	0	Fair	
Louisville, Ky.			30.04	763.0	74	23.3	68	S	3	1.3			Fo			0	0	Foggy	
Lynchburg, Va			29.96	761.0	73	22.8	72	SW	3	1.3		0	0			0	0	Fair	
Malone, N. Y.			29.65	753.1	62	16.7	66	W	10	4.5		2k	0	W		Inap.	nap	Fair	
Marquette, Mich			30.02	762.5	59	15.0	70	W	8	3.6		0	0			0	0	Clear	
Memphis, Tenn			30.09	764.3	78	25.6	82	Calm	0	0		2cs	Haze			0	0	Fair	
Milwaukee, Wis.			30.10	764.5	64	17.8	58	NW	6	2.7		0	8m'e		NW	0	0	Clear	
Mobile, Ala.			30.14	765.5	77	25.0	88	S	3	1.3		2c	0	W		0.19	4.8	Fair	
Montgomery, Ala.			30.10	764.5	78	25.6	82	W	3	1.3		2c	Haze			0	0	Clear	
Morgantown, W. Va.			29.98	761.5	73	22.8	73	S	5	2.2		0	2s			0	0	Fair	
Mt. Washington, N. H.	23.61	599.7	29.96	761.0	43	6.1	100	NW	50	22.4			Fog			0	0	Foggy	
Nashville, Tenn			30.05	763.3	75	23.9	85	Calm	0	0		8k	2s	SW	N	0	0	Cloudy	
New Haven, Conn			29.84	757.9	75	23.9	63	SW	12	5.4		5k	Haze	SW		0		Fair	
New London, Conn			29.83	757.7	71	21.7	78	SW	8	3.6		2c	2ks	W	Ss	0	0	Fair	
New Orleans, La			30.12	765.0	79	26.1	82	SW	3	1.3		2c	0			0.01	0.3	Clear	
Newport, R. I.			29.84	757.9	69	20.6	80	SW	1	0.4			10n		SW	0	0	Light rain	
New York, N. Y.			29.90	759.4	69	20.6	79	SW	8	3.6		5k	0	W		0	0	Fair	
Norfolk, Va			30.01	762.2	72	22.2	89	SW	9	4.0		2c	Haze	W	SW	0	0	Fair	
North Platte, Neb.	27.12	688.8	29.57	751.1	70	21.1	90	E	4	1.8			10s			0	0	Cloudy	
Omaha, Neb.	28.94	735.1	29.96	761.0	69	20.6	90	Calm	0	0		2k	0	W		0.51	13.0	Fair	
Oswego, N. Y.			29.8[illegible]	758.4	66	18.9	68	NW	12	5.4		0	2s			0.02	0.5	Clear	
Peck's Beach, N. J.			29.83	760.2	73	22.8	81	W	12	5.4		0	0			0	0	Clear	
Pembina, Dakota			29.63	753.2	49	9.4	85	Calm	0	0		0	0			0	0	Clear	
Philadelphia, Penn			29.90	759.4	71	21.7	75	SW	8	3.6		0	0	W		0	0	Fair	
Pike's Peak, Colorado	18.09	459.5	30.30	769.6	36	2.2	80	SW	24	10.7		5cs	0	NW		0	0	Fair	
Pittsburgh, Penn			29.94	760.5	68	20.0	74	W	2	0.9		5ck	0	NW		0	0	Fair	
Port Huron, Mich			29.97	761.2	64	17.8	89	W	7	3.1		0	0			Inap	Inap.	Clear	
Portland, Me.			29.71	754.6	66	18.9	73	SW	10	4.5		5c	2s	NW		0.01	0.3	Clearing	
Portland, Oregon			30.02	762.5	58	14.4	93		0	0			10s			0.51	13.0	Cloudy	
Punta Rassa, Fla.			30.10	765.5	80.0	27.0	85	E	5	2.2		Haze	8m'e			0.62	15.7	Clear	
Rochester, N. Y			29.85	758.2	65	18.3	68	W	9	4.0		5ck	0	W		0.02	0.5	Fair	
Salt Lake City, Utah	25.62	650.7	29.95	760.7	69	20.6	43	SE	6	2.7		5k	0			0	0	Fair	
Sandy Hook, N. J.			29.87	758.7	72	22.2	71	W	16	7.2		5k	0	W		0	0	Fair	
San Diego, Cal.			29.94	760.5	67	19.4	90	Calm	0	0			10s			0	0	Cloudy	
San Francisco, Cal.			29.94	760.2	58	14.4	91	SW	6	2.7			10s			0	0	Cloudy	
Santa Fe, N. M	23.36	593.3	29.90	759.4	57	13.9	47	N	8	3.6		0	0			Inap.	Inap.	Clear	
Savannah, Ga.			30.04	763.0	81	27.2	70	SW	6	2.7		5ck	8m'e	W		0	0	Fair	
Shreveport, La.			30.13	765.3	79	26.1	82	Calm	0	0		0	0			0	0	Clear	
Smithville, N. C.																			
Springfield, Mass.			29.79	756.7	67	19.4	84	S	4	1.8		2cs	5s		W	0.02	0.5	Cloudy	
St. Louis, Mo.			30.07	763.8	76	24.4	76	SW	3	1.3		2c	2s			0	0	Fair	
St. Marks, Fla			30.09	764.3	76	24.4	90	NW	5	2.2		0	0			0	0	Clear	
St. Paul, Minn.			30.03	763.3	57	13.9	87	Calm	0	0		0	0			0	0	Clear	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			29.84	757.9	73	22.8	71	W	5	2.2		2c	2ks	W		0	0	Fair	
Toledo, Ohio			30.00	762.0	67	19.4	79	NW	8	3.6		0	0			0	0	Clear	
Tucson, Arizona																			
Tybee Island, Ga.			30.05	763.3	81	27.2	74	NW	6	2.7		Haze	2s			0	0	Hazy	
Vicksburg, Miss.			30.18	766.6	78	25.6	86	SW	3	1.3			10s		SW	0	0	Cloudy	
Virginia City, Montana	24.27	16.4	29.75	755.6	50	10.0	38	Calm	0	0		0	0			0	0	Clear	

UNITED STATES SERIES—CONTINUED.

Station	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 1—10.	Clouds. Amount. Upper. 1—10.	Clouds. Amount. Low'r. 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.	.....	.....	29.96	761.0	70.5	21.4	75	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Smoky	
Wilmington, N. C.	.....	.....	30.05	763.3	72	22.2	95	NE	2	0.9	.....	.....	Fog	.....	W	0	0	Foggy	
Woods Hole, Mass.	.....	.....	29.83	757.7	73	22.8	67	W	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Wytheville, Va.	.....	.....	29.83	757.7	73	22.8	67	W	1	0.4	.....	5cs	0	W	.....	0	0	Fair	
Yankton, Dakota	27.76	705.1	29.88	758.9	61	16.1	88	W	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Yuma, Arizona	28.75	730.2	30.00	762.	67	19.4	79	E	4	1.8	.....	.....	.....	.....	.....	.....	.....	.....	
Sub-Series																			
Bridgetown, Barbados, W. I.	.....	.....	.....	.....	86	30.0	83	NE	2	0.9	.....	5k	8s	NE	.....	0	0	Cloudy	E. Racker.
Pointe-a-Pitre, Guadeloupe, do	.....	.....	29.88	758.9	80	26.7	86	E	.....	.....	.....	5k	2ks	.....	.....	0	0	Fair	L. V. Bigard.
Havana, Cuba, W.	.....	.....	30.15	765.8	80	26.7	78	Calm	0	0	.....	3k, c	0	E	.....	0	0	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	James Gall.
St. Thomas, St. T., W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. S. Cameron.
Santiago de Cuba, W. I.	.....	.....	29.80	756.9	80	26.7	78	NE	7.2	3.2	.....	0	2k	.....	NE	Blank	Blank	Fair	Robert Mason.
St. Georges, Bermudas	.....	.....	30.05	763.3	78.5	25.8	83	SW	3.0	1.3	.....	0	2cs	.....	.....	0.087	2.21	Clear	C. F. Allen.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. P. Church.
Makawao, Maui, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. L. Clarke.
Cumberland, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ft. Chipewyan, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ft. McPherson, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ft. Simpson, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
York Factory, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
St. John's, Newfoundland	.....	.....	30.00	761.5	42.5	5.8	83	NE	16	7.2	.....	9ks	4k	.....	.....	0	0	Cloudy	J. Fortescue.
St. John's, Porto Rico, W.	.....	.....	29.84	757.2	60	15.6	100	S	.....	.....	.....	.....	10n	.....	.....	1.10	27.9	Foggy	John Delaney.
Clifton, Jamaica, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Nassau	27.21	691.1	30.00	762.0	70	21.1	84	S	1.0	0.4	.....	8c	2k	N	.....	0	0	Cloudy	C. Partridge.
Meaglin, S. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Paramaribo, S. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Zyra, Ohio	.....	.....	30.03	762.7	68	20.0	84	SW	4	1.8	.....	0	8ks	.....	.....	0	0	Cloudy	H. M. Redington.

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

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Zyra reports all the clouds as lower. 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 2,812 ft., or 881.5 m.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,13 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 Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Mt. Washington 6,28 ft., or 1,915.6 m.; North Platte, 2,8 6 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, 4,368.8 ft., or 1,331.1 m.; Santa Fé, 6,86 (?) ft., or 2,091.6 (?) m.; Virginia City, 5,8 (?) ft., or 1,67 3 (?) m.; Wytheville, 2,291.8 ft., or 699.1 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.91 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in., Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 7, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.17	766.4	80.6	27.0	64	NNW			1		0			0	0	Fair	Charnot.
Algiers			30.12	765.1	78.4	25.8	80	N			1		1			0	0	Fair	Peter.
La Calle																			Kuntz.
Tunis			30.17	766.2	83.8	28.8	83	E			3		3			0.031	0.8	Stormy	Jacques.
Sfax			30.21	767.3	84.2	29.0	60	NE			4		2			0	0	Fair	Chauvey.
Saida			30.13	765.2	84.2	29.0	24	NNW			2		0			0	0	Fair	Grosjean.
Tebessa			30.17	766.2	76.6	24.8		N			1		3			0.039	1.0	Fair	Colin.
Gerville			30.17	766.4	77.0	25.0	72	NE			1		0			0	0	Clear	Bernadach.
Laghouat			30.10	764.4	86.0	30.0	41	N			2		3			0	0	Thunder	Simon.
Biskra			30.09	764.3	88.9	31.6	30	E			3		8			0	0	Cloudy	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.19	766.7	71.1	21.7	53	ENE			2		4			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.20	767.0	62.2	16.8	68	W			2		10			0.024	0.6		I. R. Observatory.
Eperies			30.12	765.0	64.0	17.8	60	N			2				S	0	0	Raining	Julius Mikolik.
Gratz	29.00	736.7	30.18	766.5	66.7	19.3	75	SE			2		8						Andreas Rospini.
Hermannstadt	28.64	727.5	30.03	762.7	64.	17.9	60	ENE			1		4			0	0		Prof. Reissenberger.
Kremsmünster	28.89	733.9	30.22	767.6	62.2	16.8	66	ENE			2		1			0	0		Prof. C. Wagner.
Lemberg			30.07	763.8	57.4	14.1	93	NE			2		7			0	0	Rainy	Dr. T. Stanecki.
Nyiregyhaza			30.10	764.6	66.6	19.2	59	N			2		2			0.204	5.19		Habzsuda Daniel.
Pola			30.21	767.3	70.5	21.4	48	ESE			2		1ks			0	0		I. R. Hydrographic Office
Szegedin			30.08	764.0	68.4	20.2	56	NW			1		5			0	0		Karl Stancel.
Trieste			30.19	766.9	74.7	24.7	54	NW			1		3			0	0		Prof. V. Farolfi.
Vienna			30.19	766.8	67.1	19.5	45	NW			1		4			0.051	1.3		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.17	766.3	68.7	20.4	59	SE			3	0	0			0	0		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.93	761.5	64.0	17.8		SE	18	8.0			3			0	0	*D. clouds	William Boswell.
Ardrossan			29.94	760.5	65	18.3		E			2		2					Clear	James Mayes.
Armagh Observatory			29.88	758.9	65.2	18.4		SSE	14	6.3			9					Gloomy	Capt. for Dr Robinson
Bidston, Liverpool Obs.			29.90	761.7	70.9	21.6		SSE			3		0					Clear	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.87	758.7	69.0	20.6		S			1		9					*D. clouds	J. Dreyer.
Bradford			30.00	762.0	72.0	22.2		S			1		0					Clear	J. McLandsborough
Bridgetown, (Barbadoes)			29.91	761.2	86.0	30.0		NE			1		8					Overcast	T. H. Hunt.
Cambridge Observatory			30.09	764.3	76.2	24.6		S			1		0					Clear	Sergeant Hunt, A. H. C.
Cape Good Hope Obs.			29.98	761.5	57.0	13.9	57	W	24	10.7			10						Th Staff, for E. J. Stone
Carlington			30.09	764.3	73.4	23.0		S			1		1					Clear	John McLaren.
Carlisle			29.97	761.2	72.3	21.8		S					7					*D. clouds	T. Bell, for J. Cartmell
Chatham, School M. E.			30.09	764.3	76.2	24.6		NW			1		0					Clear	Capt. J. Fellowes.
Dartmoor	28.65	727.7	30.02	762.5	66	18.9		NE			2		1					Clear	R. E. Power.
Donaghadee			29.93	760.2	63	17.2		SSW			3		5					*D. clouds	J. Mac Gowan Jr.
Dover			30.13	765.3	66	18.9		NE			2		1						J. Costello
Eccles, (near Manchester			29.99	761.7	74.0	23.3		SSE	3.8	1.7			3					*D. clouds	Thomas Mackeret
Falmouth Observatory			30.09	764.3	68.5	20.3		SSE	11	4.9			2					D. clouds	The Staff.
Fort Napier, (Natal)	27.56	700.0	29.89	759.2	74.0	23.3		NE			2		0					Clear	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.98	761.	77	25.0		N					8					*D. clouds	
Galway, Queen's College																			B. G. Clare for Prof.
Gibraltar. (Mediterranean			30.14	765.5	79.0	26.1		E E			3		8					*D. clouds	Sergt. E. G. Baker.
Glasgow Observatory			29.95	761.7	64.4	18.0		SSW			2		10					Gloomy	Lewis Stuart.
Great Yarmouth			30.14	765.5	65	18.3		SE			3		0					Clear	G. T. Watson.
Greenwich Royal Obs.			30.10	764.5	75.7	24.3		S			2		0					Clear	The Staff, for G. B. Airy
Guernsey			30.04	763.0	70.5	21.4		SE			2		0					Clear	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			30.3	762.7	72.5	22.5		SSE					6					D. clouds	F. J. Page, for L. J. Cr
Helston			29.97	761.2	70	21.1		SE			4		6					Fine	. P. Moyle.
Holyhead			29.93	760.2	71	21.7		SSE			3		2					Clear	John Tilston.
Hull Park																			
Kew Observatory			30.9	769.4	73.8	23.2		S	14	6.3			0					Clear	The Staff.
Kingstown			30.03	762.2	64	17.8		SE	4	1.8			5					D. clouds	George Mitchell
Leicester Museum			30.03	762.0	72.0	22.2		SE			2		2					Clear	William J. Harrison
Llandudno			29.94	760.5	77.8	25.4		WSW					5					D. clouds	Dr. James Nicol.
Malta, (Mediterranean)			30.18	766.3	80.6	27.0		SE			1		4k					D. clouds	Fred Travis, Pvt A. H. C.
Nairn			29.89	759.2	65	18.3		SSW			1		10						W. D. Penny.
Nassau, (Bahamas)			30.11	764.8	81.2	27.0		NE			2		3						Surg.-Maj. Henry.
Nottingham			30.18	766.6	76.3	24.6		SSE			5		2k		SSE	0	0	Clear	E. J. Lowe.
Oscott, St Mary's College			30.03	762.7	72.5	22.5		SSE			3		3					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			30.04	763.0	73	22.8		SSE			2		1					Clear	J. Lucas, for R. Main.
Plymouth			30.12	762.5	69.4	20.8		SE			2		0					Clear	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.90	759.4	65	18.3		S			4		8					Cloud	W. Kennedy.
Saint Ann's Head			29.96	761.0	64	17.8		SE			3		4					Hazy	John C. Walker.
Saint Helier, (Jersey)			30.03	762.7	78.6	25.9		SSE			3		0						A. P. Amy.
Sandwick Manse (Orkneys																			
Scarborough			30.07	763.8	61.0	16.1		SE			5		5					D. clouds	F. Shaw.
Scutari cemetery, (Turkey			29.99	761.7	75.4	24.1		SE			2		3					D. clouds	Sergt. W. H. Lyne.
Sheffield			30.01	763.0	73	22.8		W			2		4						W. F. Cooper.
Silloth Rectory			29.98	761.5	76.6	24.4		W			1		4			0	0	D. clouds	Rev Francis Redford.
Stonyhurst Observatory			30.00	762.0	69.4	20.8		S			3		6					Hazy	The Staff.
Stornoway, Lewis C. (Heb.)			29.83	757.7	62	16.7		S			2		8					D. clouds	John Smith.
Strathfield Turgiss			29.17	740.3	73.3	22.9		SE			1		0					Clear	Rev Charles H. Griffith
Streatley Vicarage																			Rev. John Slatter.
Sumburgh Head, (Shetland)																			
Thurso			29.90	759.4	63	17.2		S			3		7					D. clouds	John Trotter.
Truro, Royal Institution			29.96	761.0	74	23.3		SW			4		6					D. clouds	W. Newcombe.
Valencia Observatory			29.83	757.7	64.2	17.9		S	23	10.3			10					Threatening	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			29.99	761.7	68.0	20.0		SW			2		8k			0	0		Andrew Gibb.
Monach Lighthouse, Shetland																			
North Unst, (Shetland Is.)																			

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m.. instrumental error, --.099. * Detached clouds.

DANISH SERIES.

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

Copenhagen			30.23	767.7	65.3	18.5	68	NNW			2		5						
Fanöe			30.25	768.3	64.6	18.1	66	SW			2		1						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.98	761.4	39.9	4.4	80	Calm			0		0						
Thorshavn, (Faröe)			29.80	756.9	55.0	12.8	94	SE			2		10						
Vestervig			30.20	767.2	63.7	17.6	74	WSW			2		6						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between upper and lower clouds.

FRENCH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.10	764.6	68.0	23.0	50	SW			1					0	0		Normal School.
Amiens																			Normal School.
Avignon			30.17	766.3	81.5	27.5	43	ESE			1		0			0	0	Clear	Normal School.
Bar-sur Seine			30.09	764.2	75.0	23.9	43	S			2		1ck			0	0	Clear	C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			30.15	765.7	70.3	21.3	58	ESE			1		0			0	0	Clear	Normal School.
Besançon			30.15	765.9	77.9	25.5	62	S			1		0			0	0	Clear	Normal School.
Bourg en Bresse			30.14	765.5	74.5	23.6	58	SE			2		0			0	0	Clear	Normal School.
Bourges																			Normal School.
Brest			29.98	761.5	77.2	25.1	66	S			2		0			0	0	Clear	Naval Observatory.
Caen																			Normal School.
Chartres			30.13	765.2	74.1	23.4		S			1		0					Clear	Normal School.
Chaumont	29.00	736.6	30.13	765.4	68.9	20.5		E			1		0			0	0	Clear	Normal School.
Commercy			30.24	768.2	65.8	18.8	67	E			2	..e		E		0	0	Clear	Normal School.
Commune de Gréasque*			30.24	768.1	81.0	27.2	42	SW			4		2		SW	0	0		
Lons-Le Saulnier																			Normal School.
Le Mans			30.13	765.3	72.7	22.6	69	N			1		0			0	0	Clear	Normal School.
Mâcon			30.11	764.9	70.5	21.4	68	Calm			0		0			0	0	Clear	Normal School.
Mirecourt			30.15	765.9	70.0	21.1	55	ESE			2		0			0	0	Clear	Normal School.
Orleans																			Normal School.
Paris Observatory			30.13	765.2	74.1	23.4	47	SSE			3		0			0	0	Clear	National Observatory.
Parthenay			29.95	760.6	73.1	23	50	SE			4		0					Clear	Normal School.
La Roche sur Yon			30.02	762.6	87.1	30.6	32	E			4		0					Clear	Normal School.
Rochefort, Observatory			30.07	763.7	86.0	30.5	31	S			1		0			0	0	Clear	Naval Observatory.
Rouen			30.11	764.9	77.2	25.1	47	S			1		0			0	0	Clear	Normal School.
Saint Lo																			Normal School.
Villefranche																			Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchesi.
Mont-Louis	25.12	638.0			69.8	21.0	51	ENE	7.4	3.33			2		N	0	0		—. Falguère.
Montsouris Observatory			30.12	765.0	77.9	25.4	44	ESE			2		0			0	0	Clear	Marié Davy.
Perpignan			30.16	766.1	76.1	24.8	58	ENE	5.6	2.50			0			0	0		Dr. Fines.
Saint Maur, (near Paris)			30.13	765.3	76.3	24.6	49	SSE			2		0			0	0	Clear	E. Renou.
Tours			30.09	764.3	79.2	26.2	26	SSW			1		0			0	0	Clear	C. Marquet.
Versailles, (near Paris)			30.14	765.6	74.8	24.8	61	S			1		0			0	0	Clear	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			29.80	757.0	73.2	22.9	63	NW	4.0	1.8		..ks	..kn			0.047 0.047	1.2 1.2		H. Le Lec, S. J.

NOTE.—The originals give the wind-force by the scale 0 to 7; the weather in general terms; 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 ft.; Commune de Gréasque, 322 m., or 1,056.4 ft. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.23	767.8	66.2	19.0	62	N	13	6			4			0	0		Prof. Hoh.
Berlin			30.27	768.9	68.5	20.3	43	S	4	2			0			0	0		Prof. Arndt.
Breslau			30.33	770.3	63.7	17.6	62	NW	13	6			8			0	0		Dr. P. Neugebauer.
Carlsruhe			30.19	766.7	70.2	21.2	51	NE	11	5			0			0	0		A. Senz.
Cassel			30.17	766.3	72.5	21.5	49	ESE	9	4			0			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.78	731.0	30.21	767.3	63.5	17.5	48	W					0			0	0		M. Wilhelm.
Hamburg			30.30	769.7	63.5	17.5	73	SW	4	2			1k			0	0	Clear	Deutsche Seewarte.
Kiel			30.26	768.7	66.0	18.9	64	WNW	9	4			4			0	0		Prof. G. Karsten.
Königsberg			30.17	766.3	65.8	18.8	63	N	11	5						0.331	8.4		Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			30.30	769.5	63.7	17.6	59	NE	4	2			4			0	0		Prof. Bruhns.
Münster			30.26	768.7	68.0	20.0	71	W	4	2			2			0	0		Prof. E. Heis.
Posen			30.26	768.5	67.1	19.5	61	NW	22	10			9			0	0	Cloudy	Dr. Magener.
Strassburg, (in Alsace)			30.20	767.1	70.0	21.1	54	NE	9	4			0			0	0		Hartwig.
Stuttgart			30.21	767.2	68.9	20.5	48	E					0			0	0		Mr. Würth.
Thorn			30.19	766.9	66.0	18.9	71	NNW	9	4			9			0.004	0.11		Dr. Hasenbalg.
Treves, (Trier)			30.18	766.5	71.4	21.9	47	NE	4	2			0			0	0		Prof. Blesch.
Wustrow, Naval School			30.28	769.2	64.2	17.9	75	W	13	6			4k			0	0		E. F. Schütz.

NOTE.—In the originals the distinction between 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 1,355.3 feet.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.22	767.5	68.7	20.4	75	N			1		10			0	0		
Mondovi			30.19	766.7	67.5	19.7	77	NW			4		3	W		0	0		
Genoa			30.18	766.5	77.4	25.2	64	SW	4.3	1.9			2	N		0	0		
Pavia			30.19	766.9	74.8	23.8	59	NE			4		6	E		0	0		
Verona			30.17	766.4	77.0	25.0	48	E			1		0			0	0		
Padua			30.21	767.3	71.2	21.8	50	SE	8.1	3.6			8			0	0		
Parma																			
Bologna			30.20	767.0	77.5	25.3	63	NW			1		4	NW		0	0		
Leghorn			30.17	766.4	77.4	25.2	60	NW	4.3	1.9			3			0	0		
Urbino																			
Ancona																			
Siena																			
Rome			30.15	765.8	75.0	23.9	41	ENE	0.7	0.3			4	NW		0	0		
Naples, O.U.			30.14	765.6	83.5	28.6	37	NW	3.8	1.7			5	NE		0	0		
Lecce			30.15	765.8	81.9	27.7	35	SE			4		6	N		0	0		
Cosenza			30.14	765.5	72.3	22.4	57	NW	7.4	3.3			6	N		0	0		
Catania, (Sicily)			30.14	765.7	77.0	25.0	62	NW			2		8			0	0		
Girgenti																			
Palermo			30.07	763.7	81.5	27.5	64	ENE			7		8	SW		0	0		
Sub-Series.																			
Naples, S. R.			30.08	764.1	77.0	25.5	68	NE	9.4	4.2			3			0	0		
			30.19	766.7	80.2	26.8	37	E			4		0			0	0		Prof. F. Brioschi

NOTE.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; the cloudiness occasionally by the scale 0 to 4, and generally without distinguishing between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovi is 553 meters, or 1,821.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Flushing			30.19	766.9	70.5	21.4		SE			3								
Groningen			30.19	766.7	66.2	19.0		SE			2								
Helder			30.18	766.5	65.3	18.5		ESE			4								
Utrecht			30.17	766.4	66.3	20.7		SSE			3		0					Clear	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Millimeters.	Temperature. Fahrenheit.	Temperature. Centigrade.	Relative Humidity.	Wind. Direction.	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force.	Clouds. Amount. Up'er	Clouds. Amount. Low'r	Clouds. Direction. Upper.	Clouds. Direction. Lower.	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Bergen			30.13	765.2	61.7	16.5	82	SSW	9.4	4.2			10			0	0		
Christiania			30.08	764.1	63.9	17.7	75	SSW	2.7	1.2			1			0	0		
Tromsö			29.58	751.2	48.6	9.2	91	SW			2		10			0.350	8.9	Raining	

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Millimeters.	Temperature. Fahrenheit.	Temperature. Centigrade.	Relative Humidity.	Wind. Direction.	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force.	Clouds. Amount. Up'er	Clouds. Amount. Low'r	Clouds. Direction. Upper.	Clouds. Direction. Lower.	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Lisbon			30.14	765.6	73.2	22.9	68	SW	0.2	5.0			2						The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

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. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Millimeters.	Temperature. Fahrenheit.	Temperature. Centigrade.	Relative Humidity.	Wind. Direction.	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force.	Clouds. Amount. Up'er	Clouds. Amount. Low'r	Clouds. Direction. Upper.	Clouds. Direction. Lower.	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Warsaw			30.19	766.8	54.7	12.6	97	N	4	2			10					Raining	Astronomical Obs.
Wilna			30.07	763.8	62.4	16.9	58	N	10	4.5			7						Astronomical Obs.
Dorpat			30.11	764.8	64.4	18.0	55	N	7	3			5						Physical Cabinet.
St. Petersburg			30.07	763.8	61.0	16.1	72	NW	7	3			5						Central Physical Obs.
Kuopio			30.00	762.1	61.7	16.5	73	W					8		E	0	0		Ch. Forsten.
Kieff			29.95	760.8	63.9	17.7	65	WNW	4	2			4						Physical Cabinet.
Nikolaiev			29.07	763.7	70.9	21.5	48	NW	10	4.5			7						Kurdakof.
Kertch			30.40	762.9	73.2	22.9	53	NW	2	1			4						Lagorio.
Moscow			29.85	758.3	54.9	12.7	100	S	8	3.5			10						Meteorological Obs.
Lugan			29.41	759.7	69.4	20.8	50	SSW	8	3.5			4						Meteorological Obs.
Archangel			30.06	763.4	60.3	15.7	63	SW	10	4.5			0						Ogorodnikof.
Tiflis	28.58	725.8	29.92	760.0	79.5	26.4	70	Calm	0	0			8						Physical Obs.
Astrakhan			30.06	763.5	70.2	21.2	68	Calm	0	0			10						Sebastianof.
Kasan			30.16	766.1	59.9	15.5	52	SSE	7	3			6						Physical Cabinet.
Orenburg			30.30	769.6	59.0	15.0	43	SE	8	3.5			10						Tschernischef.
Ekaterinburg	29.31	744.4	30.29	769.4	64.2	17.9	45	SW	4	2			0						Meteorological Obs.
Kasaly			30.07	763.7	66.9	19.4	43	NNW	13	6			0						Bobrof.
Tashkend	28.40	721.4	30.06	763.5	70.9	21.6	37	NNW	8	3.5			0						Michelson.
Barnaul			30.02	762.5	53.2	11.8	46	N	3	1.5			0						Meteorological Obs.
Yeniseisk			29.76	755.8	49.3	9.6	85	NW	4	2			10					Raining	Marks.
Irkutsk	28.44	722.4	29.82	757.3	47.1	8.4	84	Calm	0	0			5						Usolzef.
Oorga	25.41	745.4	29.50	749.4	58.8	14.9	70												Mossin.
Peking, (China)			29.85	758.1	72.5	22.5	61	Calm	0	0			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Millimeters.	Temperature. Fahrenheit.	Temperature. Centigrade.	Relative Humidity.	Wind. Direction.	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force.	Clouds. Amount. Up'er	Clouds. Amount. Low'r	Clouds. Direction. Upper.	Clouds. Direction. Lower.	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Madrid			30.02	762.5	94.8	34.9	24	S	5.1	2.3		0	1			0	0		Royal Observatory.
San Fernando																			The Naval Observatory.

Note.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea			29.93	760.1	67.3	19.6	70	WNW			2		6			0	0		
Hernosand			30.13	765.3	65.7	18.6	57	SSW			2		5			0	0		
Stockholm			30.07	763.6	66.7	19.3	51	WSW			2		2			0	0		
Wisby			30.11	764.7	63.0	17.2	80	NNW			2		0			0	0		
Sub-Series.																			
Upsala			30.08	763.9	68.7	20.4	55	SSW	11.0	4.9			1	N					Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	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. Inches.	Millimeters.	Weather.	Observer.
Geneva	28.79	731.2	30.17	766.4	68.0	20.0	63	NW			2		0			0	0	Clear	The Observatory.
Zurich	28.60	726.3	30.18	766.6	68.7	20.4	60	NE			1		1			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —3.0mm.; Thermometer, +0°.6; Relative Humidity, +3 per cent.

Note.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

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. Inches.	Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y			29.84	757.9	80.5	30.3	49	W			1		0					Clear	Prof. C. N. A. Van Dyck.
Constantinople			30.02	762.4	70.2	21.2	53	NE	20	9			2		NE	0	0		
Fao, (Persian Gulf)			30.13	755.3	97.7	36.5		SE			3		0					Clear	
Salonica					79.7	26.5		SE			3		10					Cloudy	
Valona			30.04	763.0	70.2	21.2		W			2		2			Blank	Blank		
Varna			30.04	763.0	73.4	23.0		NE			2		10					Cloudy	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea level. The distinction between upper and lower clouds is not made.

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.	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. Inches.	Millimeters.	Weather.	Observer.
Athens																			

Note.—Reports commence October 1, 1875.

JAPANESE SERIES.

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. Inches.	Millimeters.	Weather.	Observer.
Takio																			

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the 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.	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. Inches.	Millimeters.	Weather.	Observer.
Brockville, Ontario			30.19	766.8	59	15.0		NW	9	4.0		0	2s		NW	0	0	Fair	
Chatham, N. B.			29.62	752.3	59	15.0	78	W	12	5.4		8k	2ks	NW	NW	0.09	2.3	Fair	
Charlottetown, P. E. Island			29.62	752.3	59	15.0	87	W	10	4.5			10n			0.460	11.68	Cloudy	
Fort Garry, Manitoba			29.75	755.6	60	15.6	94	W	7	3.1		0	0			0	0	Clear	
Halifax, N. S.			29.64	752.8	62	16.7	79	W	13	5.8		0	0			0.017	0.43	Clear	
Kingston, Ontario			30.10	764.5	58	14.4	73	Calm	0	0		0	0			0	0	Clear	
Montreal, Quebec			29.97	761.2	57	13.9	75	NW	4	1.8		0	2ks		NW	0.11	2.8	Clear	
Ottawa, Ontario			30.08	764.0	55	12.8	76	NW	8	3.6		0	0			0	0	Clear	
Parry Sound, Ontario			30.14	765.5	50	10.0	93	NE	1	0.4		0	0			0	0	Clear	
Port Dover, Ontario			30.13	765.8	55	12.8	93	N	6	2.7		0	0			0	0	Clear	
Fort Stanley, Ontario			30.13	765.8	53	11.7	92	NW	3	1.3		0	0			0	0	Clear	
Quebec, Quebec			29.88	758.9	57	13.9	67	SW	3	1.3		8k	0	SW		0.20	5.1	Fair	
Saugeen, Ontario			30.12	765.0	54	12.2	94	SE	3	1.3			Fog			0	0	Foggy	
Stayner, Ontario			30.11	764.8	57	13.9	78	Calm	0	0		0	0			0	0	Clear	
Sydney, C. B.			29.62	752.3	69	20.6	79	SW	9	4.0		2k	2ks	SW	SW	0.05	1.3	Fair	
Toronto, Ontario			30.14	765.5	56	13.3	78	N	4	1.8		0	0			0	0	Clear	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.97	761.2	63	17.2	72	NW	8	3.6		0	0			0	0	Clear	
Alpena, Mich.			30.08	764.0	53	11.7	86	Calm	0	0		1k	0			0	0	Clear	
Atlantic City, N. J.			30.03	762.7	66	18.9	64	NW	8	3.6		0	0			0.26	6.6	Clear	
Augusta, Ga.			30.05	763.3	76	24.4	64	NW	2	0.9		0	0			0	0	Clear	
Baltimore, Md.			30.07	763.8	68	20.0	51	NW	3	1.3		0	0			0	0	Clear	
Barnegat, N. J.			30.01	762.2	68	20.0	69	NW	10	4.5		0	0			0	0	Clear	
Benton, Montana	27.25	692.1	30.05	763.3	50	10.0	78	Calm	0	0		0	0			0	0	Clear	
Bismarck, Dakota	28.18	715.8	29.78	756.4	60	15.6	76	NW	6	2.7			10ks		NW	0	0	Cloudy	
Boston, Mass.			29.93	760.2	63	17.2	67	W	11	4.9		0	Haze			0	0	Clear	
Breckenridge, Minn.			29.76	755.9	64	17.8	94	SE	8	3.6		2k	0	NE		0.72	18.3	Fair	
Brownsville, Tex.																			
Buffalo, N. Y.			30.10	764.5	59	15.0	81	Calm	0	0		0	Sm'e			0	0	Clear	
Burlington, Vt.			29.95	760.7	60	15.6	71	N	5	2.2		5k	2s	N		0.04	1.0	Cloudy	
Cairo, Ill.			30.10	764.5	77	25.0	86	E	1	0.4		2c	0			0	0	Clear	
Cape Hatteras, N. C.			29.99	761.7	77	25.0	72	NE	13	5.8		Haze	Haze			0	0	Hazy	
Cape Henry, Va.			30.05	763.3	77	25.0	55	NE	11	4.9		0	0			0	0	Clear	
Cape May, N. J.			30.04	763.0	67	19.4	68	NW	8	3.6		0	0			0.08	2.0	Clear	
Charleston, S. C.			30.02	762.5	78	25.6	69	N	7	3.1		0	0			0	0	Clear	
Cheyenne, Wyoming	24.14	613.1	30.08	764.0	61	16.1	61	NW	4	1.8		2cs	0			Inap.	Inap.	Fair	
Chicago, Ill.			30.11	764.8	65	18.3	63	S	2	0.9		0	Sm'e			0	0	Clear	
Cincinnati, Ohio			30.11	764.8	65	18.3	68	NE	4	1.8		0	Sm'e			0	0	Clear	
Cleveland, Ohio			30.12	765.0	59.4	15.2	76	E	5	2.2		2k	Sm'e	W	E	0	0	Smoky	
Colorado Springs, Col.	24.21	614.9	30.08	764.0	60	15.6	76	N	4	1.8		0	0			0	0	Clear	
Corsicana, Tex.			30.06	763.5	74	23.3	85	S	4	1.8		0	0			0	0	Clear	
Davenport, Iowa			30.10	764.5	63	17.2	78	SW	4	1.8			10n			0.33	8.4	Light rain	
Denison, Tex.			29.99	761.7	79	26.1		S				0	0			0	0	Clear	
Denver, Col.	24.86	631.4	30.08	764.0	63	17.2	62	S	4	1.8		5ck	0	W		0.02	0.5	Fair	
Detroit, Mich.			30.13	765.3	59	15.0	81	NW	3	1.3		Haze	0			0	0	Clear	
Dodge City, Kan.	27.45	697.2	29.63	752.6	71	21.7	71	S	9	4.0		0	0			0	0	Clear	
Dubuque, Iowa			30.06	763.5	66	18.9	78	SE	6	2.7			10s			0	0	Cloudy	
Duluth, Minn.			29.81	757.2	57	13.9	81	Calm	0	0		2ck	5s	S	S	0	0	Cloudy	
Eastport, Me.			29.77	756.1	59	15.0	76	W	7	3.1		8c	0	SW		0.30	7.6	Fair	
Erie, Pa.			30.08	764.0	61	16.1	77	N	4	1.8		2k	0	N		0	0	Clear	
Escanaba, Mich.			30.02	762.5	59	15.0	76	Calm	0	0		0	0			0	0	Clear	
Fort Gibson, I. T.			30.02	762.5	76	24.4	81	E	5	2.2		0	0			0	0	Clear	
Fort Sill, I. T.																			
Fort Sully, Dakota	28.13	714.5	29.71	754.6	64	17.8	94	Calm	0	0		0	0			0.63	0.8	Clear	
Galveston, Tex.			30.10	764.5	81	27.2	82	NW	12	5.4		0	0			0	0	Clear	
Grand Haven, Mich.			30.11	764.8	57	13.9	84	SE	3	1.3		0	Sm'e			0	0	Smoky	
Indianapolis, Ind.			30.13	765.3	62	16.7	71	Calm	0	0		8c	Sm'e			0	0	Fair	
Indianola, Tex.			30.12	765.0	80	26.7	86	SW	2	0.9		2c	0			0.06	1.5	Fair	
Jacksonville, Fla.			30.01	762.2	80	26.7	78	SW	4	1.8			8s		SW	0	0	Cloudy	
Keokuk, Iowa			30.05	763.3	65	18.3	94	NE	12	5.4			10s		NE	0.25	6.3	Cloudy	
Key West, Fla.			30.06	763.5	81.8	27.7	67	N	13	5.8			10ks			0.39	9.9	Cloudy	
Kittyhawk, N. C.			30.02	762.5	74	23.3	86	NE	26	11.6		5k	0	NE		0	0	Fair	
Knoxville, Tenn.			30.11	764.8	65	18.3	89	NE	1	0.4		1cs	Haze	E		0	0	Hazy	
La Crosse, Wis.			29.96	761.0	67	19.4	90	S	12	5.4		8cs	2ks	SSW		0	0	Threatening	
Leavenworth, Kan.			29.97	761.2	74	23.3	85	S	4	1.8		0	0			0	0	Clear	
Lexington, Ky.	29.05	737.9	30.13	765.3	64	17.8	78	NE	2	0.9		2c	0	NE		0	0	Clear	
Long Branch, N. J.			30.02	762.5	69	20.6	60	NW	16	7.2		0	0			0	0	Clear	
Louisville, Ky.			30.12	765.0	67	19.4	69	NW	4	1.8		5ck	0	NW		0	0	Fair	
Lynchburg, Va.			30.11	764.8	71	21.7	59	Calm	0	0		0	0			0	0	Clear	
Malone, N. Y.			29.98	761.5	54	12.2	79	NW	9	4.0			10ks		NW	0.01	0.3	Cloudy	
Marquette, Mich.			29.99	761.7	57	13.9	87	SE	8	3.6		0	0			0	0	Clear	
Memphis, Tenn.			30.10	764.	76	24.4	81	NE	1	0.4		0	Haze			0	0	Clear	
Milwaukee, Wis.			30.11	764.8	66	18.9	54	SW	8	3.6		2c	Sm'e	NW	SW	0	0	Fair	
Mobile, Ala.			30.08	764.0	80	26.7	78	W	4	1.8		5c	0	SW		0	0	Fair	
Montgomery, Ala.			30.08	764.0	79	26.1	72	NW	1	0.4		0	Haze			Inap.	Inap.	Clear	
Morgantown, W. Va.			30.14	765.5	60	15.6	73	N	1	0.4		0	Fog			Inap.	Inap.	Fair	
Mt. Washington, N. H.	23.67	601.2	30.03	762.7	37	2.8	100	NW	50	22.4			Fog			0.65	16.5	Foggy	
Nashville, Tenn.			30.08	764.0	72	22.2	85	Calm	0	0		2ck	Sm'e	W		0	0	Clear	
New Haven, Conn.			29.97	761.2	68	20.0	56	NW	14	6.3		Haze	0			0	0	Clear	
New London, Conn.			29.97	761.2	69	20.6	65	N	1	0.4		0	0			0	0	Clear	
New Orleans, La.			30.09	764.3	80	26.7	82	SW	3	1.3		2k	0			0	0	Clear	
Newport, R. I.			29.94	760.5	65	18.3	68	N	7	3.1		0	2ks		S	0	0	Fair	
New York, N. Y.			30.02	762.5	69	20.6	56	NW	8	3.6		0	Sm'e			0	0	Clear	
Norfolk, Va.			30.06	763.5	74	23.3	51	NE	8	3.6		0	Haze			0	0	Clear	
North Platte, Neb.	27.01	686.0	29.45	747.8	68	20.0	64	Calm	0	0		0	2s			0	0	Fair	
Omaha, Neb.	28.84	732.5	29.84	757.9	74	23.3	83	S	11	4.9		0	0			0	0	Clear	
Oswego, N. Y.			30.08	764.0	60	15.6	70	NNW	10	4.5		5k	2ks	N	SW	0	0	Fair	
Peck's Beach, N. J.			30.05	763.3	66	18.9	68	N	12	5.4		0	0			0.03	0.8	Clear	
Pembina, Dakota			29.74	755.4	64	17.8	83	Calm	0	0		0	Haze			0	0	Clear	
Philadelphia, Penn.			30.04	763.0	66	18.9	59	N	11	4.9		0	0			0	0	Clear	
Pike's Peak, Colorado	18.08	459.2	30.29	769.4	36	2.2	80	SW	8	3.6		0	0			0	0	Clear, frost	
Pittsburgh, Penn.			30.11	764.8	53	11.7	93	NW	1	0.4		0	Fog			0	0	Fair	
Port Huron, Mich.			30.13	765.3	58	14.4	81	W	3	1.3		0	0			0	0	Clear	
Portland, Me.			29.90	759.4	63	17.2	67	NW	4	1.8		5k	0	NW		0	0	Fair	
Portland, Oregon			30.18	766.6	56	13.3	87	[illegible]	0	0		5k	5ks			0	0	Cloudy	
Punta Rassa, Fla.			30.07	763.8	80.1	26.7	84	NW	7	3.1		0	2ks			0.14	3.6	Clear	
Rochester, N. Y.			30.08	764.0	60	15.6	65	NW	11	4.9		0	0			0	0	Clear	
Salt Lake City, Utah	25.64	651.2	29.97	761.2	68	20.0	47	SW	3	1.3			10s		W	0	0	Cloudy	
Sandy Hook, N. J.			30.00	762.0	66	18.9	68	NW	18	8.0		0	0			0	0	Clear	
San Diego, Cal.			30.01	762.2	66	18.9	90	NE	4	1.8			10s			0	0	Cloudy	
San Francisco, Cal.			30.00	762.0	56	13.3	87	SW	12	5.4		0	0			0	0	Clear	
Santa Fe, N. M.	23.36	593.3	29.90	759.4	55	12.8	56	S	4	1.8		2c	0	SW		0	0	Fair	
Savannah, Ga.			30.01	762.2	80	26.7	74	NW	4	1.8		0	Sm'e			0	0	Clear	
Shreveport, La.			30.11	764.8	81	27.2	87	Calm	0	0		0	0			0	0	Clear	
Smithville, N. C.																			
Springfield, Mass.			29.97	761.2	67	19.4	64	NW	4	1.8		1k	0	N		0	0	Clear	
St. Louis, Mo.			30.08	764.0	72	22.2	71	SE	6	2.7		2ck	5s			0	0	Fair	
St. Marks, Fla.			30.03	762.7	79	26.1	95	N	1	0.4		10k	0	N		Inap.	Inap.	Cloudy	
St. Paul, Minn.			29.85	758.2	68	20.0	99	SW	4	1.8			10s			0	0	Threatening	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			29.95	760.7	65	18.3	68	NW	5	2.2		0	0			Inap.	Inap.	Clear	
Toledo, Ohio			30.13	765.3	61	16.1	71	N	2	0.9		0	Fog			0	0	Clear	
Tucson, Arizona																			
Tybee Island, Ga.			30.00	762.0	83	28.3	67	NW	4	1.8		Haze	Sm'e			0	0	Hazy	
Vicksburg, Miss.			30.15	765.8	78	25.6	90	Calm	0	0		2c	0			0	0	Fair	
Virginia City, Montana	24.33	618.0	29.81	757.2	51	10.6	33	Calm	0	0		0	0			0	0	Clear	

UNITED STATES SERIES—CONTINUED.

Station	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force 1—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.10	764.5	65	18.3	64	NW	12	5.4		0	Sm'e			0	0	Clear	
Wilmington, N. C			30.03	762.7	73	22.8	76	NE	5	2.2		0	Haze			0	0	Clear	
Wood's Hole, Mass			29.94	760.5	67	19.4	64	NW	9	4.0		0	0			0	0	Clear	
Wytheville, Va	27.80	706.1	29.91	759.7	63	17.2	88	W	1	0.4		0	0			0	0	Clear	
Yankton, Dakota	28.58	725.9	29.80	756.9	72	22.2	80	SW	6	2.7		5c	8s	W	W	0	0	Cloudy	
Yuma, Arizona																			
Sub-Series																			
Bridgetown, Barbadoes, W. I					84	28.9	87	NE	5	2.2		5k	5s	NE		0	0	Fair	E. Racker.
Pointe-aPitre, Guadeloupe, do			29.89	759.2	80	26.7	82	E				0	5k			0	0	Fair	L. V. Bigard.
Havana, Cuba, W. I			30.12	765.0	78	25.6	86	ESE	1.2	0.5		1c	2k	N	E	0	0	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W.																			James Gall.
St. Thomas, St. T., W. I																			W. S. Cameron.
Santiago de Cuba, W. I			29.81	757.2	80	26.7	74		4.8	2.1		2c	2s	SW	SW	Blank	Blank	Fair	Robert Mason.
St. Georges, Bermudas			29.99	761.7	77.5	25.3	82	SW	2.7	1.2		0	2s			0	0	Clear	C. F. Allen.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.
Cumberland, B. A																			
Ft. Chippewyan, B. A																			
Ft. McPherson, B. A																			
Ft. Simpson, B. A																			
York Factory, B. A			30.10	764.5	38.5	3.6	81	E	12	5.4			10s			0	0	Cloudy	J. Fortescue.
St. John's, Newfoundland			30.00	762.0	55.5	13.1	83	S					10s			0.01	0.3	Cloudy	John Delaney.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Clifton, Jamaica, W. I	27.21	691.1	30.00	762.0	72	22.2	81	SE	2.5	1.1		2c	2k	SE		0.41	10.4	Fair	C. Partridge.
Navassa																			
Medellin, S. A																			
Paramaribo, S. A																			
Elyria, Ohio			30.37	771.4	56	13.3	62	Calm	0	0			0			0	0	Clear	H. M. Redington.

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

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the cloud as lower. 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 Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Mt. Washington, 6,28[illegible] ft., or 1,915.6 m.; North Platte, 2,8[illegible]6 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, 6,86[illegible] (?) ft., or 2,091.6 (?) m.; Virginia City, 5,58[illegible] (?) ft., or 1,67[illegible] (?) m.; Wytheville, 2,291.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 8, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.04	762.9	78.3	25.7	77	Calm			0		7			0	0	Lightning	Charnot.
Algiers			30.02	762.6	80.2	26.8	72	NE			2		0			0	0	Fair	Peter.
La Calle																			Kuntz.
Tunis			30.15	765.9	82.6	28.1	58	E			3		4			0	0	Fair	Jacques.
Sfax			30.21	767.3	83.1	28.4	54	NE			4		2			0	0	Fair	Chauvey.
Saida			30.06	763.4	88.7	31.6		N			2		0			0	0	Fair	Grosjean.
Tebessa			30.16	766.0	75.7	24.3		NNW			2		6			0	0	Fair	Colin.
Gerlville			30.16	766.0	75.2	24.0	26	NW			2		2			0	0	Fair	Bernadach.
Laghouat			30.10	764.6	80.6	27.0	31	SE			4		1			0	0	Fair	Simon.
Biskra			30.10	764.5	89.6	32.0	36	NW			2		4			0	0	Fair	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.14	765.6	71.2	21.8	51	NE			2		8			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.20	767.0	63.5	17.5	88	NE			2		2			0.016	0.4		I. R. Observatory.
Eperies			30.13	765.2	62.2	16.8	63	NE			3				S	0.297	7.55		Julius Mikolik.
Gratz	28.99	736.4	30.17	766.2	67.6	19.8	61	S			2		8						Andreas Rospini.
Hermannstadt	28.63	727.2	30.03	762.8	59.4	15.2	81	SW			1		5			0.276	7.00	Showery	Prof. Reissenberger.
Kremsmünster	28.85	732.8	30.17	766.2	64.9	18.3	54	E			2		0			0	0		Prof. C. Wagner.
Lemberg			30.09	764.3	54.0	12.2	82	N			3		7			0	0	Rainy	Dr. T. Stanecki.
Nylregyhaza			30.08	764.1	65.8	18.8	54	N			3		2			0	0		Habzsuda Daniel.
Pola			30.15	765.9	73.8	23.2	62	SSW			1		6k8			0	0		I.R. Hydrographic Office
Szegedin			30.04	763.0	63.3	17.4	74	NE			1		9			0.319	8.10		Karl Stancel.
Trieste			30.15	765.9	74.7	23.7	69	W			1		10			0	0		Prof. V. Farolfi.
Vienna			30.15	765.7	69.4	20.9	42	NE			1		4			0	0		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 427.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.98	761.4	73.4	23.0	61	SE			2	1	0	WSW		0	0		Royal Observatory

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.90	759.4	63.1	17.3		SE	15	6.9			6			0	0	*D. clouds	William Boswell.
Ardrossan			29.86	758.4	60	15.6		N			2		8					Rainy	James Mayes.
Armagh Observatory			29.92	760.0	58.9	14.9		WNW	4	1.8			8					Overcast	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			29.87	758.7	67.2	19.5		SE			1		10					Overcast	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.92	760.0	57.8	14.3		SW			1		7					*D. clouds	J. Dreyer.
Bradford			29.89	759.2	63.2	17.3		E			0		10					Raining	J. McLandsborough.
Bridgetown, (Barbadoes)			29.86	758.4	86.0	30.0		W			1		10					Overcast	T. H Hunt.
Cambridge Observatory			29.90	759.4	70.5	21.4		SW			1		10					Overcast	Sergeant Hunt, A. H. C.
Cape Good Hope Obs.			30.08	764.0	59.5	15.3	62	SW	20	8.9			4						Th Staff, for E. J. Stone.
Cardington			29.91	759.7	68.4	20.2		E					9					Overcast	John McLaren.
Carlisle			29.89	759.2	62.5	16.9		NW					10			0	0	Threatening	T. Bell, for J. Cartmell.
Chatham, School M. E.			29.87	758.7	79.5	26.4		SW			1		3					Fine	Capt. J. Fellowes, R. E.
Dartmoor	28.49	723.6	29.87	758.7	61.2	16.2		N			2		10					Overcast	R. E. Power.
Donaghadee			29.86	758.4	60	15.6		ESE			1		10					Overcast	J. Mac Gowan, Jr.
Dover			30.92	760.0	70	21.1		ENE			2		3						J. Costello.
Eccles, (near Manchester)			29.88	758.9	62.1	16.7		SE					10					Raining	Thomas Mackereth.
Falmouth Observatory			29.90	759.1	62.0	16.7		NNW	13	5.8			10					Overcast	The Staff.
Fort Napier, (Natal)	27.41	696.2	29.74	755.4	83.5	28.6		NW			3		0					Clear	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.98	761.5	82	27.8		N					7						(tis.
Galway, Queen's College																			
Gibraltar, (Mediterranean)			30.10	764.5	79.0	26.1		SW			2		6						B. G. Clare, for Prof. Curr.
Glasgow Observatory			29.86	758.4	59.5	15.3		SW			1		10					*D. clouds	Sergt. E. G. Baker.
Great Yarmouth			29.93	760.2	67	19.4		SE			3		2					Raining	Lewis Stuart.
Greenwich Royal Obs			29.90	759.4	76.7	24.8		WSW			1		7					Clear	G. T. Watson.
Guernsey			29.82	757.4	70.5	21.4		NNW			1		3					*D. clouds	The Staff, for G. B. Airy.
Halifax, Moorside Obs			29.94	760.5	62.8	17.1		W					10					*D. clouds	Dr. S. E. Hoskins. [Dy.
Helston			29.87	758.7	66	18.9		NW			4		8					Fog & rain	F. J. Page, for L. J. Cro[illegible]
Holyhead			29.89	759.2	58	14.4		WNW			3		10					*D. clouds	M. P. Moyle.
Hull Park																		Overcast	John Tilston.
Kew Observatory			29.88	758.9	73.0	22.8		S	13	5.8			5						
Kingstown			29.94	760.5	59	15.0		WNW			4		9					*D. clouds	The Staff.
Leicester Museum			29.88	758.9	62.1	16.7		Calm			0		10					Overcast	George Mitchell.
Llandudno			29.89	759.2	60.6	15.9		W					10					Raining	William J. Harrison.
Malta, (Mediterranean)			30.1	767.3	82.0	27.8		SW			1		2k					Showery	Dr. James Nicol.
Nairn			29.85	758.2	64	17.8		SSE			1		5					*D. clouds	Fred Travis, Pvt A. H. C.
Nassau, (Bahamas)			30.13	765.3	85.5	29.7		NE			3		5						W. D. Penny.
Nottingham			29.89	758.9	62.0	16.7		NNE			2		10b,8		NNE	0	0	*D clouds	Surg.-Maj. Henry.
Oscott, St Mary's College			29.87	758.7	60.4	15.8		NE			3		10					Thunder, light'ng	E. J. Lowe.
Oxford, Radcliffe Obs			29.83	757.9	66	18.9		E			1		10					Overcast	Rev. Stephen Whitty.
Plymouth			29.86	758.4	67.0	19.4		NW			1		10					Foggy	J. Lucas, for R. Main.
Prospect, (Bermuda)																		Gloomy	John Merrifield.
Roche's Point			29.94	760.5	58	14.4		SW			4		8						
Saint Ann's Head			29.91	759.7	58	14.4		NW			2		8					Cloudy	W. Kennedy.
Saint Helier, (Jersey)			29.82	757.4	75.0	23.9		N			1		5					Overcast	John C. Walker.
Sandwick Manse (Orkneys)																			A. P. Amy.
Scarborough			29.95	760.7	59.4	15.2		SE			2		10						
Scutari cemetery, (Turkey)			29.91	759.7	70.4	21.3		NNW			3		6					Raining	F. Shaw.
Sheffield			29.90	759.4	66	18.9		SSW			1		9					*D. clouds	Sergt. W. H. Lyne.
Silloth Rectory			29.89	759.2	58.8	14.9		WSW			2		10					Raining	W. F. Cooper.
Stonyhurst Observatory			29.88	758.9	61.9	16.6		SE			0		10			1.123	28.53	Raining	Rev Francis Redford.
Stornoway, Lewis C. (Hebr)			29.83	757.7	61	16.1		SE			1		5					Raining	The Staff.
Stratfield Turgiss			29.90	759.4	68.0	20.0		SE			1		5					*D. clouds	John Smith.
Streatley Vicarage																		*D. clouds	Rev Charles H. Griffith
Sumburgh Head, (Shetland)																			Rev. John Slatter.
Thurso			29.86	758.4	61	16.1		NNE			1		4					*D. clouds	John Trotter.
Truro, Royal Institution			29.88	758.9	65	18.3		NW			6		8					Gloomy	W Newcombe.
Valencia Observatory			29.94	760.5	57.0	13.9		W	12	5.4			5					Showery	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			29.90	759.4	63.9	17.7		SE			1		10k			0	0	Showery	Andrew Gibb.
Monach Lt-house, (Shet. Is)																			
North Unst, (Shetland Is)																			

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error, --.099. * Detached clouds.

DANISH SERIES.

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

Copenhagen			30.16	766.1	66.6	19.2	67	Calm			0		0						
Fanöe			30.11	764.8	68.5	20.3	62	SSW			4		1						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			30.05	763.3	45.0	7.2	94	Calm			0		0						
Thorshavn, (Faröe)			29.81	757.0	52.5	11.4	98	Calm			0		10						
Vestervig			30.09	764.3	70.5	21.4	56	SE			2		0					Foggy	

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Ajonçon			29.86	758.5	73.4	23.0	46	S			3					0	0		Normal School.
Amiens																			Normal School.
Avignon			30.11	764.9	79.0	26.1	56	SSE			1		5		SSW	0	0	Cloudy	Normal School.
Bar-sur Seine			29.98	761.5	80.8	27.1	42	SSW			2		2		SW	0	0		C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			29.93	760.3	74.8	23.8	61	ESE			2		5		SSW	0	0	Cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.01	762.3	82.9	28.3	52	S			4		0			0	0	Clear	Normal School.
Bourges			29.94	760.5	73.4	23	58	SW			2		5		SW	0	0	Cloudy	Normal School.
Brest			29.85	758.1	64.6	18.1	82	N			3		10		N	0	0	Stormy	Naval Observatory.
Caen																			Normal School
Chartres			29.93	760.1	77.4	25.2		SW			4		2		SE				Normal School.
Chaumont	28.94	735.1	30.08	763.9	78.3	25.7		SSE			1		2c		W	0	0	Clear	Normal School.
Commercy			30.16	766.0	73.4	23	60	E			2		3c		E	0	0	Clear	Normal School.
Commune de Gréasque*			30.19	766.7	80.8	27.1	38	SE			3		2		SE	0	0		
Le Mans																			Normal School.
Lons-Le Saulnier			29.99	761.8	76.6	24.8	60	W			2		0			0	0	Clear	Normal School.
Mâcon			30.00	762.0	76.3	24.6	65	SSE			4		0			0	0	Clear	Normal School.
Mirecourt			30.05	763.2	72.1	22.3	62	S			2		2		S	0	0		Normal School.
Orleans																			Normal School.
Paris Observatory			29.93	760.2	81.0	27.2	39	S			3		8k, c		SW	0	0		National Observatory.
Parthenay			29.92	760.0	67.1	19.5	81	W			2		5		W			Cloudy	Normal School.
La Roche sur Yon			29.93	760.3	73.8	23.2	62	SW			6		8		NE			Cloudy	Normal School.
Rochefort, Observatory			30.02	762.4	76.6	24.8	52	SW			6		10		E	0	0	Cloudy	Naval Observatory.
Rouen			29.89	759.2	81.5	27.5	43	SSE			2		0			0	0	Clear	Normal School.
Saint Lo																			Normal School.
Villefranche																			Normal School.
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchési.
Mont-Louis								SSW	13.0	5.83			5		SSW	0	0		—. Faiguère.
Montsouris Observatory	25.04	636.0			75.2	24.0	48	SE			2		0k, ck		SW	0	0		Marié Davy.
Perpignan			29.97	761.3	81.5	27.5	44	E	3.7	1.67			1		W	0	0		Dr. Fines.
Saint Maur, (near Paris)			30.12	765.0	77.4	26.2	69	SE			1		7			0	0	Cloudy	E. Ranou.
Tours			29.94	760.4	79.5	26.4	45	WSW			3		5		WSW	0	0		C. Marquet.
Versailles, (near Paris)			29.91	759.8	82.9	28.3	40	S			1		5			0	0	Cloudy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			29.80	756.8	72.9	22.7	85	ESE	5.4	2.4			10k			0 / 0	0 / 0	Misty	H. Le Lec, S. J.

Note.—The originals give the wind-force by the scale 0 to 7; the weather in particular terms; 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 ft.; Commune de Gréasque, 322 m., or 1,056.4 ft. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles.

GERMAN SERIES.

Furnished by the coöperation of Prof. Geo. Neumayer, Superintendent Royal 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.15	765.7	68.0	20.0	54	SE	13	6			2			0	0		Prof. Hoh.
Berlin			30.19	766.9	71.8	22.1	42	N	4	2			0			0	0		Prof. Arndt.
Breslau			30.27	768.9	65.3	18.5	63	N	9	4			8			0	0		Dr. P. Neugebauer.
Carlsruhe			30.05	763.3	76.3	24.6	52	NE	11	5			0			0	0		A. Senz.
Cassel			30.02	762.4	76.1	24.5	41	SE	18	8			0			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.71	729.3	30.13	765.4	64.4	18.0	71	SW					0			0.008	0.2	Lightning	M. Wilhelm.
Hamburg			30.16	766.1	70.3	21.3	52	SE	13	6			2cs					Clear	Deutsche Seewarte.
Kiel			30.15	765.5	73.2	22.9	48	SE	13	6			0			0	0		Prof. G. Karsten.
Königsberg			30.16	766.1	65.1	18.4	75	W	11	5						0.008	0.2	Clear	Prof. E. Luther.
Köslin																0	0		Dr. Tägert.
Leipsic			30.17	766.4	71.4	21.9	44	E	4	2			1			0	0		Prof. Bruhns.
Münster			30.07	763.6	75.0	23.9	56	S	4	2			0			0	0		Prof. E. Heis.
Posen			30.21	767.3	67.6	16.8	61	NW	4	2			10			0	0	Cloudy	Dr. Magener.
Strassburg, (in Alsace)			30.08	763.9	71.2	21.8	58	NE	4	2			0			0	0		Hartwig.
Stuttgart			30.07	763.8	73.9	23.3	43	E					0			0	0		Mr. Würth.
Thorn			30.17	766.4	67.1	19.5	60	W	9	4			6			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.02	762.5	75.9	24.4	47	E	27	12			2			0	0		Prof. Flesch.
Wustrow, Naval School			30.19	766.8	68.5	20.3	75	NNW	9	4			3s			0	0	Clear	E. F. Schütz.

Note.—In the originals the distinction between 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.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.13	765.3	74.7	23.7	60	ESE			1		9			0	0		
Mondovi			30.12	765.0	72.9	22.7	62	N			1		10			0	0		
Genoa			30.13	765.2	78.2	25.6	62	SW	4.9	2.2			2	SE		0	0		
Pavia			30.12	765.1	75.9	24.4	51	E			1		1	W		0	0		
Verona			30.05	763.3	77.9	25.5	54	E			1		6			0	0		
Padua			30.14	765.5	71.1	21.7	59	ESE	1.8	0.8			8	SSW		0	0		
Parma																			
Bologna			30.13	765.4	77.9	25.4	49	NE			1		2	NE		0	0		
Leghorn			30.15	765.8	66.8	21.9	57	WSW	1.8	0.8			3			0	0		
Urbino																			
Ancona																			
Siena																0	0		
Rome			30.11	764.8	76.1	24.5	43	E	0	0			4	NW		0	0		
Naples, O. U.			30.02	765.1	80.6	27.0	34	WNW	3.1	1.4			1			0	0		
Lecce			30.13	765.3	81.1	27.3	43	SW			4		3	E		0	0		
Cosenza			30.11	764.8	73.0	22.8	41	NNW	18.6	8.3			3	N		0	0		
Catania, (Sicily)			30.15	765.8	72.3	24.4	53	NW			2		3						
Hipponio																			
Palermo			30.10	764.5	78.3	25.7	60	S			2		5	NE		0	0		
Sub-Series.			30.08	764.0	77.9	25.5	58	E	3.8	1.7			2			0	0		
Naples, S. R.			30.17	766.3	79.2	26.2	42	ESE					3	SE		0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; the cloudiness occasionally by the scale 0 to 4, and generally without distinguishing between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovia is 553 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Flushing			30.00	762.0	73.9	23.3		SE			2								
Groningen			30.00	762.1	70.2	21.2		S			2								
Helder			30.01	762.3	69.3	20.7		SE			2								
Utrecht			29.99	761.8	72.9	22.7		ESE			3		0					Clear	

Note.—The originals give the wind-pressure in kilograms per square meter; the 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			30.07	763.6	66.9	19.4	63	SSW	8.5	3.8			3			0	0		
Christiania			30.10	764.5	67.6	19.8	58	SW	5.4	2.4			0			0	0	Hazy	
Tromsö			30.07	763.9	44.8	7.1	65	SW			6		8			0.256	6.5		

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Lisbon			30.19	766.9	73.4	23.0	47	NNW	13.7	6.1			4	WSW					The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

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	765.9	63.7	17.6	68	NW	9	4			6						Astronomical Obs.
Wilna			30.10	764.6	64.6	18.1	52	N	8	3.5			4						Astronomical Obs.
Dorpat			30.07	763.6	68.0	20.0	45	WSW	7	3			2						Physical Cabinet.
St. Petersburg			30.01	762.2	60.6	15.9	78	NW	4	2			9						Central Physical Obs.
Kuopio			29.94	760.4	59.7	15.4	85	NNW					10			0	0		Ch. Forsten.
Kieff			29.98	761.5	58.5	14.7	71	NNW	11	5			8						Physical Cabinet.
Nikolaiev			29.00	761.9	66.7	19.3	57	SSE	4	2			8						Kurdakof.
Kertch			29.85	758.2	72.1	22.3	62	NNE	7	3			8						Lagorio.
Moscow			29.95	760.8	56.5	13.6	90	S	10	4.5			10						Meteorological Obs.
Lugan			29.84	757.9	72.0	22.2	49	NNE	8	3.5			5						Meteorological Obs.
Archangel			29.89	759.3	52.3	11.3	96	NNW	10	4.5			10						Ogorodnikof.
Tiflis	28.45	722.6	29.77	756.1	85.8	29.9	42	SE	10	4.5			3						Physical Obs.
Astrakhan			29.88	759.0	79.2	26.2	56	ESE	2	1			9			Blank	Blank		Sebastianof.
Kasan			30.06	763.5	58.1	14.5	60	SSE	3	1.5			10						Physical Cabinet.
Orenburg			30.30	769.6	59.9	15.5	45	E	8	3.5			10						Tschernischef.
Ekaterinburg	29.20	741.6	30.19	766.7	61.7	16.5	43	SW	13	6			4						Meteorological Obs.
Kasaly			30.12	765.0	70.2	21.2	53	N	8	3.5			3						Bobrof.
Tashkend	28.41	721.6	30.08	763.9	68.0	20.0	56	Calm	0	0			0						Michelson.
Barnaul			30.05	763.3	55.8	13.2	60	NW	8	3.5			0						Meteorological Obs.
Yeniseisk			29.83	757.6	47.7	8.7	85	W	4	2			10						Marks.
Irkutsk	28.52	724.3	29.89	759.2	48.9	9.4	71	Calm	0	0			10						Usolzef.
Oorga	25.60	650.2	29.88	758.9	42.1	5.6	70	W	17	7.5			10						Mossin.
Peking, (China)			29.80	756.8	71.8	22.1	91	Calm	0	0			10						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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			29.94	760.4	89.1	31.7	27	SW	16.3	7.3		1	0	SW		0	0	Clear	Royal Observatory.
San Fernando																			The Naval Observatory.

Note.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea			30.11	764.2	54.7	12.6	69	SE			4		9			0	0		
Hernosand			30.23	767.8	60.4	15.8	61	SE			2		10			0	0	Raining	
Stockholm			30.02	762.5	66.7	19.3	71	W			2		3			0	0	Foggy	
Wisby			30.07	763.7	62.6	17.0	80	WNW			2		7			0	0		
Sub-Series.																			
Upsala			30.06	763.4	68.0	20.0	64	N	12.1	5.4			1		N				Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	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. Inches.	Millimeters.	Weather.	Observer.
Geneva	28.69	728.6	30.07	763.6	71.2	21.8	63	N			2		0			0	0	Clear	The Observatory.
Zurich	28.50	724.0	30.08	763.9	74.5	23.6	58	W			1		1			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +1.4mm.; Thermometer, +2°.5; Relative Humidity, +2 per cent.

Note.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

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. Inches.	Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y																			Prof. C. N. A. Van Dyck.
Constantinople			29.94	760.4	67.6	19.8	61	N	13	6			5		N	0.189	4.8	Cloudy	
Fao, (Persian Gulf)			29.72	755.0	109.4	38.0		NW			3		0					Clear	
Salonica					81.7	27.6		N			1		5					Cloudy	
Valona			30.03	762.8	70.3	21.3		W			2		2						
Varna			30.00	762.0	62.6	17.0		W			2		10					Raining	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea level. The distinction between upper and lower clouds is not made.

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.	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. Inches.	Millimeters.	Weather.	Observer.
Athens																			

Note.—Reports commence October 1, 1875.

JAPANESE SERIES.

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. Inches.	Millimeters.	Weather.	Observer.
Takio																			

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the 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.	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. Inches.	Millimeters.	Weather.	Observer.
Brockville, Ontario			30.06	763.5	63	17.2		SW	9	4.0		0	5s		SW	0	0	Fair	
Chatham, N. B.			29.87	758.7	54	12.2	75	SW	5	2.2		8c	0	W		0	0	Fair	
Charlottetown, P. E. Island			29.88	758.9	56	13.3	77	W	13	5.8		2k	0	W		0.070	1.78	Fair	
Fort Garry, Manitoba			29.90	759.4	45	7.2	98	E	3	1.3		2c	2ks	W	W	0	0	Fair	
Halifax, N. S.			29.90	759.4	57	13.9	70	NW	10	4.5		2cs	0			0	0	Fair	
Kingston, Ontario			30.07	763.8	66	18.9	76	W	20	8.9		5k	0	W		0	0	Cloudy	
Montreal, Quebec			29.94	760.5	57	13.9	92	SW	18	8.0		5ck	5ks	W		0.10	2.5	Threatening	
Ottawa, Ontario			29.95	760.7	41	16.1	87	S	18	8.0		2k	8n	W	W	0.03	0.8	Fair	
Parry Sound, Ontario			29.93	760.2	68	20.0	74	SW	17	7.6		2cs	0	W		0	0	Clear	
Port Dover, Ontario			30.06	763.5	65	18.3	84	SW	7	3.1		0	0			0	0	Clear	
Port Stanley, Ontario			30.05	763.3	67	19.4	91	W	5	2.2		0	0			0	0	Light rain	
Quebec, Quebec			29.92	760.0	53	11.7	86	S	5	2.2			10n		S	0	0	Clear	
Sarnia, Ontario			29.96	761.0	70	21.1	72	SW	8	3.6		2cs	0	W		0	0	Fair	
Stayner, Ontario			29.95	760.7	60	20.6	65	SW	8	3.6		2k	0			0	0	Clear	
Sydney, C. B.			29.83	757.7	64	17.8	71	SW	12	5.4		5k	..ks	NW	W	0.16	4.1	Fair	
Toronto, Ontario			30.04	763.0	64	17.8	83	SW	3	1.3		0	0			0	0	Clear	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.10	764.5	59	15.0	81	S	1	0.4		5k	0	W		0	0	Fair	
Alpena, Mich			29.88	758.9	65	18.3	78	SW	4	1.8		5ck	Haze			0	0	Fair	
Atlantic City, N. J			30.16	766.1	66	18.9	68	NW	4	1.8		0	0			0	0	Clear	
Augusta, Ga.			30.14	765.5	72	22.2	90	E	4	1.8			10s		E	0	0	Cloudy	
Baltimore, Md			30.16	766.1	66	18.9	68	N	1	0.4		0	0			0	0	Clear	
Barnegat, N. J			30.15	765.8	67	19.4	69	NW	1	0.4		0	0			0	0	Clear	
Benton, Montana	27.31	693.7	30.11	764.8	45	7.2	84	W	8	3.6			10s			0	0	Cloudy	
Bismarck, Dakota	28.03	711.9	29.61	752.1	58	14.4	75	E	2	0.9			10s			0	0	Cloudy	
Boston, Mass			30.10	764.5	63	18.3	52	SW	6	2.7		5cs	Haze	NW		0	0	Fair	
Breckenridge, Minn			29.68	753.9	68	20.0	94	SE	8	3.6		8k	0	NE		0.04	1.0	Fair	
Buffalo, N. Y			30.04	763.0	66	18.9	59	SW	8	3.6		0	0			0	0	Clear	
Burlington, Vt			30.02	762.5	60	15.6	71	S	12	5.4		2k	5s			0	0	Cloudy	
Cairo, Ill			30.06	763.5	77	25.0	82	Calm	0	0		0	0			0	0	Clear	
Cape Hatteras, N. C			30.14	765.5	73	22.8	67	NE	11	4.9		0	0			0	0	Clear	
Cape Henry, Va			30.19	766.8	81	27.2	59	Calm	0	0		2k	0			0	0	Clear	
Cape May, N. J			30.17	766.3	67	19.4	67	Calm	0	0		0	0			0	0	Clear	
Charleston, S. C			30.13	765.3	78	25.6	86	N	6	2.7		0	0			0	0	Clear	
Cheyenne, Wyoming	24.06	611.4	30.00	762.0	53	11.7	73	NW	12	5.4		2c	0			0	0	Fair	
Chicago, Ill			29.97	761.2	70	21.1	85	S	2	0.9			10s			0.02	0.5	Threatening	
Cincinnati, Ohio			30.06	763.5	66	18.9	73	E	2	0.9		5ck	Sm'e	W		0	0	Fair	
Cleveland, Ohio			30.07	763.8	63.1	17.3	72	SE	6	2.7		0	2s			0	0	Fair	
Colorado Springs, Col	24.13	612.9	30.00	762.0	54	12.2	80	N	4	1.8		0	0			0	0	Clear	
Corsicana, Tex			30.00	762.0	75	23.9	85	S	4	1.8		0	Haze			0	0	Clear	
Davenport, Iowa			29.95	760.7	73	22.8	90	SW	4	1.8		5ck	Sm'e			0.05	1.3	Fair	
Denison, Tex			29.94	760.5	80	26.7		Calm	0	0		0	0			0	0	Clear	
Denver, Col	24.80	629.9	30.02	762.5	56	13.3	87	S	4	1.8		2cs	0			0.19	4.8	Fair	
Detroit, Mich			30.02	762.5	66	18.9	78	SW	4	1.8		0	Sm'e			0	0	Clear	
Dodge City, Kan	27.30	693.4	29.43	747.5	77	25.0	61	S	8	3.6		0	0			0	0	Clear	
Dubuque, Iowa			29.89	759.2	72	22.2	90	S	2	0.9		2ck	5ks	W	W	0.06	1.5	Cloudy	
Duluth, Minn			29.83	757.7	66	18.9	73	NE	4	1.8			10s			0	0	Cloudy	
Eastport, Me			30.00	762.0	56	13.3	68	W	5	2.2		0	0			0	0	Clear	
Erie, Pa			30.05	763.3	65	18.3	68	SE	12	5.4		2ck	Haze	SE		0	0	Fair	
Escanaba, Mich			29.90	759.4	62	16.7	88	W	4	1.8		5k	2s	W	W	0	0	Cloudy	
Fort Gibson, I. T			29.94	760.5	78	25.6	77	E	5	2.2		0	0			0	0	Clear	
Fort Sill, I. T																			
Fort Sully, Dakota	28.05	712.5	29.62	752.3	66	18.9	84	NW	8	3.6		2c	1s	W	NW	0	0	Fair	
Galveston, Tex			30.06	763.5	81	27.2	82	W	4	1.8		1c	5s	W	E	0	0	Fair	
Grand Haven, Mich			29.96	761.0	69	20.6	84	S	14	6.3		10k	0	SW		0	0	Cloudy	
Indianapolis, Ind			30.06	763.5	68	20.0	62	SE	4	1.8		2ck	Sm'e			0	0	Fair	
Indianola, Tex			30.06	763.5	82	27.8	83	S	4	1.8		0	0			0	0	Clear	
Jacksonville, Fla			30.08	764.0	75	23.9	90	E	4	1.8			Fog			1.28	7.1	Foggy	
Keokuk, Iowa			29.89	759.2	76	24.4	81	SW	7	3.1		0	0			0.09	2.3	Clear	
Key West, Fla			30.08	764.0	81.3	27.4	74	NE	7	3.1		Haze	8ks			0	0	Threatening	
Kittyhawk, N. C			30.18	766.6	73	22.8	59	E	6	2.7		2k	0	E		0	0	Fair	
Knoxville, Tenn			30.12	765.0	70	21.1	68	Calm	0	0		1cs	Fog			0	0	Fair	
La Crosse, Wis			29.85	758.2	71	21.7	90	S	11	4.9		5cs	5s	SE	S	0.21	5.3	Threatening	
Leavenworth, Kan			29.88	758.9	74	23.3	81	S	4	1.8		5k	0	SW		0	0	Fair	
Lexington, Ky	29.03	737.4	30.10	764.5	66	18.9	73	SE	8	3.6		0	5ks			0	0	Fair	
Long Branch, N. J			30.16	766.1	69	20.6	65	W	5	2.2		0	0			0	0	Clear	
Louisville, Ky			30.06	763.5	75	23.9	64	Calm	0	0			10ks		SW	0.13	3.3	Cloudy	
Lynchburg, Va			30.19	766.8	64	17.8	78	Calm	0	0		0	0			0	0	Clear	
Malone, N. Y			29.92	760.0	64	17.8	62	S	16	7.2		2ck	5s	NW	S	0	0	Cloudy	
Marquette, Mich			29.88	758.9	64	17.8	89	NW	4	1.8			10s		NW	0	0	Cloudy	
Memphis, Tenn			30.07	763.8	78	25.6	77	Calm	0	0		0	0			Inap.	Inap.	Clear	
Milwaukee, Wis			29.95	760.7	69	20.6	56	S	4	1.8		8k	Sm'e	NW	S	0	0	Cloudy	
Mobile Ala			30.06	763.5	80	26.7	82	N	2	0.9		0	0			0	0	Clear	
Montgomery, Ala			30.09	764.3	76	24.4	66	N	2	0.9		2c	Haze	N		0	0	Fair	
Morgantown, W. Va			30.14	765.5	60	15.6	83	Calm	0	0		1c	Fog	W		0	0	Fair	
Mt. Washington, N. H	23.86	606.0	30.22	767.6	38	3.3	90	N	40	17.9		8s	0	NW		0	0	Cloudy	
Nashville, Tenn			30.04	763.0	76	24.4	72	N	1	0.4		0	0			0	0	Clear	
New Haven, Conn			30.11	764.8	65	18.3	68	N	2	0.9		Haze	Sm'e			0	0	Fair	
New London, Conn			30.14	765.5	66	18.9	59	N	3	1.3		0	0			0	0	Clear	
New Orleans, La			30.07	763.8	80	26.7	82	SW	4	1.8		0	0			0	0	Clear	
Newport, R. I			30.12	765.0	64	17.8	73	NW	1	0.4		0	2s		NW	0	0	Fair	
New York, N. Y			30.15	765.8	65	18.3	59	NW	4	1.8		0	Fog			0	0	Clear	
Norfolk, Va			30.19	766.8	68	20.0	79	SE	4	1.8		2c	Haze			0	0	Fair	
North Platte, Neb	26.94	684.3	30.36	771.1	70	21.1	80	NW	2	0.9			10s		W	0.20	5.1	Cloudy	
Omaha, Neb	28.76	730.5	29.75	755.6	76	24.4	84	S	10	4.5		8c	0	W		0	0	Fair	
Oswego, N. Y			30.08	764.0	59	15.0	70	S	6	2.7		0	Haze			0	0	Clear	
Peck's Beach, N. J			30.18	766.6	65	18.3	73	Calm	0	0		0	0			0	0	Clear	
Pembina, Dakota			29.84	755.9	40	8.9	88	NE	3	1.3		5cs	0			0	0	Fair	
Philadelphia, Penn			30.14	765.5	67	19.4	64	N	1	0.4		Haze	Sm'e			0	0	Fair	
Pike's Peak, Colorado	17.99	457.9	30.20	767.1	35	1.7	80	Calm	0	0		0	0			0.02	0.5	Clear	
Pittsburgh, Penn			30.13	765.3	56	13.3	87	Calm	0	0		10ck	Fog	NW		0	0	Cloudy	
Port Huron, Mich			30.01	762.2	67	19.4	90	SW	8	3.6		0	0			0	0	Clear	
Portland, Me			30.07	763.8	61	16.1	61	SW	2	0.9		1c	Haze			0	0	Fair	
Portland, Oregon			30.20	767.1	48	8.9	85	Calm	0	0		5k	Haze			0	0	Fair	
Punta Rassa, Fla			30.10	764.5	79.4	26.3	82	E	8	3.6		1cs	2ks	NE		0.01	0.3	Fair	
Rochester, N. Y			30.04	763.0	62	16.7	66	SW	8	3.6		0	Haze			0	0	Clear	
Salt Lake City, Utah	25.55	649.0	29.88	748.9	73	22.8	42	S	4	1.8		5k	0			0	0	Fair	
Sandy Hook, N. J			30.14	765.5	64	17.8	75	NW	12	5.4		0	0			0	0	Clear	
San Diego, Cal			29.95	760.7	66	18.9	90	Calm	0	0			10s			0	0	Cloudy	
San Francisco, Cal			29.96	761.0	56	13.3	87	SW	8	3.6			10s			0	0	Cloudy	
Santa Fe, N. M	23.31	642.9	29.85	758.2	58.5	14.7	73	Calm	0	0			8s		SW	0	0	Cloudy	
Savannah, Ga			30.12	765.0	75	23.9	95	NE	6	2.7			Fog			0	0	Foggy	
Shreveport, La			30.07	763.8	82	27.8	92	Calm	0	0		0	0			0	0	Clear	
Smithville, N. C																			
Springfield, Mass			30.13	765.3	59	15.0	70	Calm	0	0		2cs	Fog			0	0	Foggy	
St. Louis, Mo			30.02	772.5	78	25.6	73	S	4	1.8		2ck	2s			0	0	Fair	
St. Marks, Fla			30.08	764.0	75	23.9	95	E	5	2.2		2c	0			0.05	1.3	Clear	
St. Paul, Minn			29.74	755.4	71	21.7	93	SE	4	1.8			10s			0.18	4.6	Cloudy	
St. Paul's Island, Alaska																			
Squan Beach, N. J			30.08	764.0	65	18.3	73	NW	2	0.9		0	0			0	0	Clear	
Toledo, Ohio			30.02	762.5	69	20.6	65	S	5	2.2		0	Haze			0	0	Clear	
Tucson, Arizona																			
Tybee Island, Ga			30.13	765.3	82	27.8	74	NE	16	7.2		5k	Haze	NE		0	0	Fair	
Vicksburg, Miss			30.12	765.0	81	27.2	82	W	1	0.4			10s			0	0	Cloudy	
Virginia City, Montana	24.31	617.5	29.79	757.7	48	8.9	42	SE	4	1.8		4c	0	W		0	0	Fair	

UNITED STATES SERIES—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.18	766.6	65	18.3	76	Calm	0	0		Haze	Sm'e			0	0	Clear	
Wilmington, N. C.			30.17	766.3	72	22.2	71	NE	6	2.7		0	0			0	0	Clear	
Wood's Hole, Mass.			30.13	765.3	67	19.4	64	N	1	0.4		0	0			0	0	Clear	
Wytheville, Va.			30.00	762.0	55	12.8	87	Calm	0	0		0	0			0	0	Clear	
Yankton, Dakota	27.85	707.4	29.70	754.4	72	22.2	85	NE	1	0.4			8s			Inap.	Inap.	Cloudy	
Yuma, Arizona																			
Sub-Series.																			
Bridgetown, B'b'does, W. I.					87	30.6	86	NE	6	2.7		5k	0	E		0	0	Fair	E. Racker.
Pointe-a-Pître, G'd'loupe, do			29.90	759.4	83	28.3	78	NE				5c	5ks			0	0	Cloudy	L. V. Bigard.
Havana, Cuba, W. I.			30.09	764.3	78	25.6	86	E	1.2	0.5		1ck	1k	N	E	0	0	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W. I.																			James Gall.
St. Thomas, St. T., W. I.																			W. S. Cameron.
Santiago de Cuba, W. I.			29.87	758.7	78	25.6	82	NW	2.4	1.1			8k		SW	Blank	Blank	Cloudy	Robert Mason.
St. Georges, Bermudas			30.05	763.3	79	26.1	87	N	2.5	1.1		0	2k			0	0	Clear	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.																			
St. John's, Newfoundland			30.06	763.5	35.5	1.9	95	E	12	5.4			10s			0.45	11.4	Cloudy	J. Fortescue.
St. John's, Porto Rico, W. I.			29.80	759.2	62	16.7	91	S					10s			0	0	Cloudy	John Delaney.
Clifton, Jamaica, W. I.																			Leon M. Acuña.
Navassa	27.24	691.9	30.03	762.7	69	20.6	84	N	2.0	0.9		0	0			0	0	Clear	C. Partridge.
Medellin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			30.30	769.6	62	16.7	77	SW	4	1.8			0			0	0	Clear	H. M. Redington.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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, 6,957.3 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 Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 9, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.06	763.4	84.0	28.9	53	Calm			0		6			0	0	Lightning	Charnot.
Algiers			29.91	759.7	82.4	28.0	57	N			1		2			Inap	Inap.	Cloudy	Peter.
La Calle																			Kuntz.
Tunis			30.08	763.9	84.2	29.0	47	E			3		3			0	0	Fair	Jacques.
Sfax			30.13	765.3	86.0	30.0	52	E			3		2			0	0	Fair	Chauvey.
Saida			29.97	761.2	83.3	28.5	28	N			1		6			0.039	1.0	Stormy	Grosjean.
Tebessa			30.04	764.1	80.8	27.1		NE			1		6			0	0	Fair	Colin.
Gerlville			30.06	763.4	79.7	26.5	22	SE			3		8			Inap.	Inap	Cloudy	Bernadach.
Laghouat			30.02	762.4	86.0	30.0	21	E			4		2			0	0	Thunder	Simon.
Biskra			30.01	762.2	89.6	32.0	39	E			1		0			0	0	Fair	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.10	764.4	70.3	21.3	41	NE			2		3			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.13	765.3	66.7	19.3	75	NE			1		7			0	0		I. R. Observatory.
Eperies			30.08	763.9	65.1	18.4	55	N			2				S	0	0		Julius Mikolik.
Gratz	28.91	734.2	30.08	764.0	68.0	20.0	55	SE			2		10						Andreas Rospini.
Hermannstadt	28.63	727.2	30.02	762.4	64.4	18.0	57	NNE			1		5			0	0		Prof. Reissenberger.
Kremsmünster	28.73	729.7	30.04	763.0	65.1	18.4	65	ENE			3		0			0	0		Prof. C. Wagner.
Leimberg			30.02	762.5	64.2	17.9	79	NE			4		7			0	0	Rainy	Dr. T. Stanecki.
Nyiregyhaza			30.08	763.9	70.2	21.2	42	N			2		2			0	0		Habzsuda Daniel.
Pola			30.10	764.4	72.0	22.7	59	SSW			1		2k s			0	0		I.R. Hydrographic Office
Szegedin			29.98	761.6	68.9	20.5	67	Calm			0		5			0	0		Karl Stancel.
Trieste			30.10	764.5	73.9	23.3	70	Calm			0		4k			0	0		Prof. V. Farolfi.
Vienna			30.07	763.6	69.8	21.0	48	SE			1		0			0	0		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 4.7.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.99	761.8	63.5	17.5	86	SW			1	0	0			0	0		Royal Observatory

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.70	754.4	60.4	15.8		SE	13	5.8			4			1.505	38.23	*D. clouds	William Boswell.
Ardrossan			29.77	756.1	60	15.6		NW			2		0					Clear	James Mayes.
Armagh Observatory			29.79	756.7	60.0	15.6		SSE	3	1.3			7					*D. clouds	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs.			29.83	757.7	63.3	17.4		W			1		3						John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.74	755.4	55.0	12.8		Calm			0		9					*D. clouds	J. Dreyer.
Bradford			29.81	757.2	63.5	17.5		W			1		2			Blank	Blank	*D. clouds	J. McLandsborough.
Bridgetown, (Barbadoes)			29.96	761.0	80	26.7		SE			1		10			Blank	Blank		T. H. Hunt.
Cambridge Observatory			29.91	759.7	69.0	20.6		SW			2		1					Fine	Sergeant Hunt, A.H.C.
Cape Good Hope Obs.			30.30	769.6	62.3	16.8	67	SW	13	5.8			7						The Staff, for E. J. Stone.
Cardington			29.92	760.0	67.6	19.7		W					2					*D. clouds	John McLaren.
Carlisle			29.81	757.2	64.8	18.2		W					2			1.13	28.70	Clear	T. Bell, for J. Cartmell.
Chatham, School M. E.			29.92	760.0	67.7	19.8		SW			1		3					Fine	Capt. J. Fellowes, R. E.
Dartmoor	28.52	724.4	29.89	759.2	51.5	10.8		SW			2		8			Blank	Blank	*D. clouds	R. E. Power.
Donaghadee			29.79	756.7	61	16.1		SSE			4		3					*D. clouds	J. Mac Gowan, Jr.
Dover			29.96	761.0	64	17.8		WSW			3		4						J. Costello.
Eccles, (near Manchester)			29.83	757.7	63.8	17.7		SW	0.8	0.4			8					Threatening	Thomas Mackereth.
Falmouth Observatory			29.87	758.7	6[illegible].6	15.9		SSW	26	11.6			7					Overcast	The Staff.
Fort Napier, (Natal)	27.71	703.8	30.03	762.7	63.0	17.2		SE			2		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone			29.98	761.5	81	27.2		N					6						
Galway, Queen's College																			B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.01	762.2	74.5	23.6		SW			5		3					*D. clouds	Sergt. E. G. Baker.
Glasgow Observatory			29.75	755.6	60.6	15.9		W			2		2					Fine	Lewis Stuart.
Great Yarmouth			29.92	760.0	66	18.9		WSW			3		4					*D. clouds	G. T. Watson.
Greenwich Royal Obs.			29.94	760.5	71.5	21.9		WSW			1		3					*D. clouds	The Staff, for G. B. Airy.
Guernsey			29.96	761.0	65.5	18.6		SSW			2		3					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.86	758.4	62.0	16.7		SW					6			Blank	Blank	*D. clouds	F. J. Page, for L. J. Cross.
Helston			29.86	758.4	64	17.8		SW			6		8					Showery	M. P. Moyle.
Holyhead			29.82	757.4	62	16.7		SSW			3		3						John Tilston.
Hull Park																			
Kew Observatory			29.94	760.5	65.6	18.7		SSW	13	5.8			5					*D. clouds	The Staff.
Kingstown			29.82	757.4	59	15.0		SSE			3		6					*D. clouds	George Mitchell.
Leicester Museum			29.91	759.7	65.0	18.3		SW			3		5					*D. clouds	William J. Harrison.
Llandudno			29.97	761.2	64.0	17.8		ESE					3					*D. clouds	Dr. James Nicol.
Malta, (Mediterranean)			30.09	764.3	80.2	26.8		SW			1		8k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			29.75	755.6	65	18.3		SE			1		5						W. D. Penny.
Nassau, (Bahamas)			30.20	767.1	85.1	29.5		NE			3		6						Surg.-Maj. Henry.
Nottingham			29.89	759.2	67.0	19.4		SSW			4		4k		SSW	0	0		E. J. Lowe.
Oscott, St Mary's College			29.89	759.2	63.0	17.2		S			3		7					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.90	759.4	64	17.8		SW			1		3						J. Lucas, for R. Main.
Plymouth			29.90	759.4	59.8	15.4		SW			1		4					Showery	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.75	755.6	57	13.9		WNW			5		8					Misty	W. Kennedy.
Saint Ann's Head			29.81	757.2	59	15.0		SSW			2		8					Showery	John C. Walker.
Saint Helier, (Jersey)			29.97	761.2	65.4	18.6		SW			3		2						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			29.83	757.7	62.0	16.7		WSW			2		1					Clear	F. Shaw.
Scutari cemetery, (Turkey			29.97	761.2	61.0	16.1		N			3		10					Raining	Sergt. W. H. Lyne.
Sheffield			29.85	758.2	65	18.3		W			3		2					Clear	W. F. Cooper.
Silloth Rectory			29.81	757.2	67.9	19.4		W			2		2			0	0	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			29.83	757.7	61.8	16.6		W			1		6					Thunder-storm	The Staff.
Stornoway, Lews C. (Hebr)			29.64	752.8	59	15.0		W			1		5					*D. clouds	John Smith.
Stratfield Turgiss			29.92	760.0	68.0	20.0		SW			1		3						Rev. Charles H. Griffith
Streatley Vicarage																			Rev. John Slatter.
Sumburgh Head, (Shetland)																			
Thurso			29.65	753.1	58	14.4		ESE			5		10					Raining	John Trotter.
Truro, Royal Institution			29.84	757.9	62	16.7		SW			7		10					Raining	W. Newcombe.
Valencia Observatory			29.74	755.4	58.8	14.9		WSW	14	6.3			10			Blank	Blank	Threatening	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			29.78	756.4	63.0	17.2		W			4					0.91	23.1	Fine	Andrew Gibb.
Monach Lt-house, (Shet. Is.)																			
North Unst, (Shetland Is.)																			

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error, --.099. *Detached clouds.

DANISH SERIES.

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

Copenhagen			30.11	764.9	66.7	19.3	71	SSE			2		5						
Fanöe			29.95	760.7	75.7	24.3	54	SE			6		2						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.98	761.6	47.1	8.4	92	Calm			0		0						
Thorshavn, (Faröe)			29.94	760.4	52.2	11.2	90	NW			2		10					Foggy	
Vestervig			30.08	763.9	76.6	24.8	50	SE			4		0						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			29.98	761.4	71.6	22.0	70	NE			1		..c			0	0		Normal School.
Amiens																			Normal School.
Avignon			30.08	763.9	62.8	17.1	100	S			1		10			1.567	39.8	Thunder-storm	Normal School.
Bar-sur Seine			29.99	761.7	71.1	21.7	67	SW			1		8c		W	0.185	4.7	Cloudy	C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			29.99	761.8	68.4	20.2	72	SE			2		5		S	0	0	Cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.04	763.1	68.0	20	91	S			2		5			0	0	Cloudy	Normal School.
Bourges			29.97	761.3	72.5	22.5	84	SW			2		10		SW	0.24	6.	Cloudy	Normal School.
Brest			29.91	759.6	68.9	20.5	55	WSW			3		5		WSW	0.030	0.75		Naval Observatory.
Caen																			Normal School.
Chartres			30.03	762.8	60.1	15.6		NW			2		10		NE			Cloudy	Normal School.
Chaumont	28.90	734.0	30.03	762.8	67.5	19.7		SSE			2		..n		SE	0.47	12		Normal School.
Commercy			30.05	763.2	66.2	19	86	SE			2		10n		SE	0.087	2.2		Normal School.
Commune de Gréasque*			30.13	765.3	75.6	24.2	37	SW			3		8		SW	0	0		
Le Mans																			Normal School.
Lons-Le Saulnier			30.03	762.8	73.4	23	77	W			2		10		W	0.059	1.5	Raining	Normal School.
Mâcon			29.93	760.3	69.1	20.6	85	WSW			1		10			0.055	1.4	Cloudy	Normal School.
Mirecourt			30.00	762.1	66.7	19.3	78	S			2		10		S	0	0	Cloudy	Normal School.
Orleans																			Normal School.
Paris Observatory			29.99	761.7	68.0	20.0	67	NNE			1		10k		SW	Inap.	Inap.	Misty	National Observatory.
Parthenay			29.89	759.1	62.6	17	70	NW			4		5		N			Cloudy	Normal School.
La Roche sur Yon			30.00	761.9	67.3	19.6	55	N			2		8		SE			Cloudy	Normal School.
Rochefort, Observatory			30.04	763.0	74.3	23.5	45	NW			2		5		NE	0	0	Cloudy	Naval Observatory.
Rouen			29.99	761.7	67.3	19.6	55	NW			1		10			0	0	Cloudy	Normal School.
Saint Lo																			Normal School.
Villefranche																			Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchési.
Mont-Louis	24.93	633.1			59.2	15.1	49	ESE	7.4	3.33			0			0	0		—. Faiguère.
Montsouris Observatory			29.99	761.7	67.5	19.7	72	N			1		10			0	0	Cloudy	Marié Davy.
Perpignan			30.17	766.2	68.9	20.5	60	SE	1.9	0.83			8		E	0.220	5.6		Dr. Fines.
Saint Maur, (near Paris)			29.99	761.8	66.6	19.2	77	NE			1		10			0	0	Cloudy	E. Renou.
Tours			29.97	761.3	68.7	20.4	72	SSW			1		10		SE	0	0		C. Marquet.
Versailles, (near Paris)			30.00	762.0	68.7	20.4	68	SE			1		10			0	0	Cloudy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			29.70	754.4	75.2	24.0	98	W	4.0	1.8			10kn			0.276 / 0.327	7.0 / 8.3	Misty	H. Le Lec, S. J.

Note.—The originals give the wind-force by the scale 0 to 7; the weather in general terms; 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 ft.; Commune de Gréasque, 322 m., or 1,056.4 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. *Near Marseilles.

GERMAN SERIES.

Furnished by the coöperation of Prof. Geo. Neumayer, Superintendent Royal 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.01	762.3	69.8	21.0	54	SE	9	4			2			0	0		Prof. Roh.
Berlin			30.09	761.3	75.4	24.1		S	9	4			0			0	0		Prof. Arndt.
Breslau			30.20	767.0	69.6	20.9	57	E	9	4			1			0	0		Dr. P. Neugebauer.
Carlsruhe			29.98	761.5	74.1	23.4	70	W	4	2			2			0	0		A. Senz.
Cassel			29.83	757.7	78.4	25.8	42	ESE	9	4			0			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.64	727.5	30.06	763.5	65.3	18.5	67	SW					0			0	0	Lightning	M. Wilhelm.
Hamburg			30.03	762.7	73.0	22.8	52	SE	18	8			1s			0	0	Clear	Deutsche Seewarte.
Kiel			30.03	762.7	75.7	24.3	45	SE	13	6			1			0	0		Prof. G. Karsten.
Königsberg			30.08	764.0	65.3	18.5	74	N	11	5						0.001	0.02	Cloudy	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			30.07	763.6	75.9	24.4	38	SE	18	8			0			0	0		Prof. Bruhns.
Münster			30.00	762.1	71.4	21.9	78	SW	4	2			8			0	0		Prof. E. Heis.
Posen			30.14	765.6	69.6	20.9	70	NW	2	1			0			0	0	Clear	Dr. Magener.
Strassburg, (in Alsace)			30.05	762.2	73.4	23.0	63	E	4	2			4			0	0		Hartwig.
Stuttgart			30.00	761.9	75.9	24.4	48	E					0			0	0		Mr. Würth.
Thorn			30.12	765.1	66.7	19.3	62	SE	4	2			1			0	0		Dr. Rosenbalg.
Treves, (Trier)			29.95	760.8	72.3	22.4	69	S	9	4			8			0	0		Prof. Flesch.
Wustrow, Naval School			30.15	765.8	73.2	22.9	56	SE	13	6			2c			0	0		E. F. Schütz.

Note.—In the originals the distinction between 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.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.07	763.6	74.1	23.4	59	ESE			2		3	E		0.008	0.2		
Mondovi			30.05	763.3	70.9	21.6	67	NW			2		3			0	0		
Genoa			30.07	763.7	77.4	25.2	66	SW	2.5	1.1			2	S		0	0		
Pavia			30.06	763.4	75.2	24.0	53	NE			2		2	NW		0	0		
Verona			30.05	763.2	80.6	27.0	39	E			2		0			0	0		
Padua			30.07	763.6	72.5	22.5	55	S	3.8	1.7			2	E		0	0		
Parma																			
Bologna			30.09	764.2	77.5	25.3	62	ESE			1		3	E		0	0		
Leghorn			30.07	763.7	77.2	25.1	59	WSW	0.7	0.3			0			0	0		
Urbino																			
Ancona																			
Siena																			
Rome			30.04	763.0	75.7	24.3	38	NE	0	0			4	W		0	0		
Naples, O.U.			30.07	763.7	80.6	27.0	47	SSW	4.3	1.9			5	NW		0	0		
Lecce			30.09	764.2	80.2	26.8	37	SSW			2		1	NE		0	0		
Cosenza			30.10	764.5	72.7	22.6	40	NNE	12.5	5.6			3	N		0	0		
Catania, (Sicily)			30.10	764.5	75.9	24.4	50	NW			2		2			0	0		
Ripozzo																			
Palermo			30.06	763.5	77.0	25.0	85	SW			2		4	NE		0	0		
Sub-Series.																			
Naples, S. R.			30.02	762.5	77.7	25.4	52	NE	11.2	5.0			1			0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; the cloudiness occasionally by the scale 0 to 4, and generally without distinguishing between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovia is 551 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Flushing			30.01	762.3	62.8	17.1		W			4								
Groningen			29.89	759.3	68.7	20.4		S			4								
Helder			29.93	760.3	65.5	18.6		SW			4								
Utrecht			29.93	760.3	66.9	19.4		SW			4		8					Very cloudy	

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bergen			30.00	762.1	68.4	20.2	58	Calm	0	0			7			0	0		
Christiania			30.14	765.6	63.3	17.4	70	SSE	3.1	1.4			0			0	0	Hazy	
Tromsö			30.07	763.8	39.7	4.3	79	SW			6		10			0.067	1.7	Raining	

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.04	765.6	68.7	20.4	42	N	21.0	0.4			2	WNW					The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

RUSSIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			30.08	764.0	66.6	19.2	64	WNW	7	3			5						Astronomical Obs.
Wilna			30.04	762.9	65.7	18.7	61	N	4	2			10						Astronomical Obs.
Dorpat			30.04	763.1	65.1	18.4	53	NNW	4	2			2						Physical Cabinet.
St. Petersburg			30.01	762.2	59.7	15.4	69	W	7	3			3						Central Physical Obs.
Kuopio			30.02	762.4	54.0	12.2	59	WNW					0			0	0		Ch. Forsten.
Kieff			29.89	759.3	62.4	16.9	70	N	7	3			7						Physical Cabinet.
Nikolaiev			29.94	760.5	68.5	20.3	44	WSW	4	2			4						Kurdakof.
Kertch			29.76	755.9	63.5	17.5	91	NNW	7	3			10					Raining.	Lagorio.
Moscow			29.93	760.3	59.4	15.2	86	W	8	3.5			10					Raining	Meteorological Obs.
Lugan			29.70	754.4	65.5	18.6	65	N	8	3.5			10					Raining	Meteorological Obs.
Archangel			29.97	761.3	50.5	10.3	79	WNW	10	4.5			10						Ogorodnikof.
Tiflis	28.31	719.0	29.63	752.7	79.9	26.6	43	NW	10	4.5			0						Physical Obs.
Astrakhan			29.69	754.2	79.0	26.1	60	WNW	2	1			6					Rainy	Sebastianof.
Kasan			29.85	758.1	67.3	19.6	47	SE	2	1			7						Physical Cabinet.
Orenburg			29.71	754.6	66.4	19.1	45	E	8	3.5			10						Tschernischef.
Ekaterinburg	29.63	737.4	30.02	762.4	58.5	14.7	69	S	4	2			5						Meteorological Obs.
Kasaly			30.00	762.0	74.8	23.7	52	N	8	3.5			3						Bobrof.
Tashkend	28.32	719.3	29.97	761.3	70.9	21.6	65	Calm	0	0			0						Michelson.
Barnaul			30.04	762.9	61.2	16.2	47	Calm	0	0			1						Meteorological Obs.
Yeniseisk			29.82	757.3	54.5	12.5	79	SW	4	2			3						Marks.
Irkutsk	28.65	727.6	29.99	761.8	47.5	8.6	81	Calm	0	0			0						Usolzef.
Oorga	25.70	652.7	29.99	761.8	42.1	5.6	60	Calm	0	0			3						Mossin.
Peking, (China)			30.89	759.2	73.6	23.1	89	Calm	0	0			2			Blank	Blank		Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.84	757.9	86.0	30.0	34	SW	5.1	2.3		0	8			0	0	Cloudy	Royal Observatory.
San Fernando																			The Naval Observatory.

NOTE.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea			30.01	762.2	60.3	15.7	67	WSW			2		6			0	0		
Hernosand			30.18	766.5	63.0	17.2	43	NE			2		2			0.185	4.7		
Stockholm			30.10	764.5	66.7	19.3	57	Calm			0		4			0.004	0.1		
Wisby			30.10	764.4	62.6	17.0	84	NNE			4		0			0	0		
Sub-Series.																			
Upsala			30.11	764.8	69.4	20.8	50	WSW	4.9	2.2			3						Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.62	727.0	29.98	761.6	76.5	24.7	53	WSW			2		6			0	0	Cloudy	The Observatory.
Zurich	28.44	722.3	30.04	763.1	74.5	23.6	62	W			1		2			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —0.2mm.; Thermometer, +5°.6; Relative Humidity, —8 per cent.

Note.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y			29.80	756.8	86.0	30.0	49	SW			3		2						Prof. C. N. A. Van Dyck.
Constantinople			29.98	761.4	59.7	15.4	79	NNW			4		10		N	0.795	20.2	Raining	
Fao, (Persian Gulf)			29.64	752.8	97.3	36.3		NW			3		0					Clear	
Salonica					79.0	26.1		N			1		2						
Valona			30.01	762.3	72.0	22.2		W			2		0					Clear	
Varna			30.04	763.0	69.8	21.0		NW			4		8					Cloudy	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea level. The distinction between upper and lower clouds is not made.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens																			

Note.—Reports commence October 1, 1875.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Takio																			

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario			30.09	764.3	74	23.3		SW	1	0.4		5c	0	SW		0	0	Fair	
Chatham, N. B.			30.07	763.8	55	12.8	67	SW	9	4.0		0	0			0.01	0.3	Clear	
Charlottetown, P. E. Island			30.04	763.0	50	13.3	77	N	13	5.8			10s			0	0	Clear	
Fort Garry, Manitoba			30.15	765.8	45	7.2	99	NW	6	2.7		2k	5n	W	W	0.030	0.76	Cloudy	
Halifax, N. S.			30.00	762.0	62	16.7	71	NW	16	7.2		2c	2ks		NW	0	0	Fair	
Kingston, Ontario			30.09	764.3	69	20.6	81	S	2	0.9		8cs	Smoe			0	0	Fair	
Montreal, Quebec			30.10	764.5	58	14.4	73	E	5	2.2		Haze	Haze			0.08	2.0	Cloudy	
Ottawa, Ontario			30.05	763.3	61	16.1	87	E	9	4.0		5k	5s	SW	SW	0	0	Cloudy	
Parry Sound, Ontario			29.92	760.0	69	20.6	92	S	10	4.5		2k	5ks	SW	SW	0.03	0.8	Fair	
Port Dover, Ontario			30.06	763.5	68	20.0	84	S	8	3.6		10k	0	NW		0	0	Fair	
Port Stanley, Ontario			30.04	763.0	76	24.4	88	W	2	0.9			10s	W		0	0	Cloudy	
Quebec, Quebec			30.17	766.3	55	12.8	81	E	4	1.8			8n		SW	0	0	Cloudy	
Saugeen, Ontario			29.94	760.5	73	22.8	90	SW	10	4.5			8n			0	0	Cloudy	
Stayner, Ontario			29.94	760.5	73	22.8	78	W	3	1.3			8n		NW	0	0	Threatening	
Sydney, C. B.			30.00	759.4	64	17.8	81	W	16	7.2			8ks		NW	0	0	Threatening	
Toronto, Ontario			30.04	763.0	66	18.9	83	S	4	1.8		5cs	5s	W	W	0	0	Cloudy	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.12	765.0	67	19.4	79	S	1	0.4		Haze	Haze			0	0	Fair	
Alpena, Mich.			29.84	757.9	69	20.6	90	S	3	1.3		8cs	Haze	W		0.15	3.8	Cloudy	
Atlantic City, N. J.			30.26	768.6	70	21.1	84	SW	8	3.6		0	0			0	0	Clear	
Augusta, Ga.			30.23	767.8	74	23.3	80	Calm	0	0		8k	0	S		0	0	Cloudy	
Baltimore, Md.			30.23	767.8	68	20.0	79	SW	2	0.9		2c	Sm'e			0	0	Fair	
Barnegat, N. J.			30.24	768.1	72	22.2	80	SW	4	1.8		0	0			0	0	Clear	
Benton, Montana	27.57	700.3	30.37	771.4	42	5.6	83	E	8	3.6			10s			0	0	Cloudy	
Bismarck, Dakota	28.50	723.9	30.17	766.3	47	8.3	62	NW	14	6.3			10ks		N	0	0	Cloudy	
Boston, Mass.			30.15	765.8	65	18.3	79	SW	2	0.9		0	Haze			0	0	Clear	
Breckenridge, Minn.			30.11	764.8	52	11.1	93	N	8	3.6		10k	0	NW		0	0	Cloudy	
Buffalo, N. Y.			30.04	763.0	72	22.2	58	S	4	1.8		8c	Sm'e	W		0	0	Fair	
Burlington, Vt.			30.10	764.5	69	20.6	70	S	4	1.8		5c	2s			0	0	Fair	
Cairo, Ill.			30.07	763.8	76	24.4	81	S	4	1.8		2c	0	N		0	0	Clear	
Cape Hatteras, N. C.			30.25	768.3	76	24.4	76	E	4	1.8		0	Haze			0	0	Clear	
Cape Henry, Va.			30.27	768.8	83	28.3	53	SW	2	0.9		0	0			0	0	Clear	
Cape May, N. J.			30.25	768.3	70	21.1	84	SW	8	3.6		0	0			0	0	Clear	
Charleston, S. C.			30.23	767.8	72	22.2	90	N	5	2.2		0	Sm'e			0	0	Clear	
Cheyenne, Wyoming	24.23	615.4	30.17	766.3	43	6.1	91	NE	24	10.7			10n			0.33	8.4	Light rain	
Chicago, Ill.			29.91	759.7	72	22.3	90	S	5	2.2			10n			1.14	29.0	Light rain	
Cincinnati, Ohio			30.03	762.7	73	22.8	71	SE	4	1.8		10c	Sm'e	W		0	0	Cloudy	
Cleveland, Ohio			30.03	762.7	69.8	21.0	61	SE	8	3.6		5c	0	W		0	0	Fair	
Colorado Springs, Col.	24.24	615.7	30.11	764.8	55	12.8	81	N	20	8.9		2k	5ks	N	N	0.02	0.5	Cloudy	
Corsicana, Tex.			30.05	763.3	76	24.4	86	S	6	2.7		0	0			0	0	Clear	
Davenport, Iowa			29.92	760.0	71	21.7	90	SW	4	1.8			10s		SW	1.12	28.4	Cloudy	
Denison, Tex.			29.98	761.5	80	26.7		S				0	0			0	0	Clear	
Denver, Col.	25.01	635.2	30.23	767.8	54	12.2	76	N	8	3.6			Fog			0.04	1.0	Foggy	
Detroit, Mich.			29.97	761.2	73	22.8	76	SW	6	2.7		8k	0	SW		0	0	Fair	
Dodge City, Kan.	27.33	694.2	29.47	748.5	75	23.9	60	S	12	5.4		0	0			0	0	Clear	
Dubuque, Iowa			29.86	758.4	71	21.7	75	S	6	2.7			8ks		SW	1.83	46.5	Cloudy	
Duluth, Minn.			29.91	759.7	61	16.1	77	N	8	3.6		Haze	8ks		N	0	0	Cloudy	
Eastport, Me.			30.12	765.0	57	13.9	68	N	14	6.3		0	0			0	0	Clear	
Erie, Pa.			30.02	762.5	73	22.8	50	SE	12	5.4		8c	Haze	W		0	0	Fair	
Escanaba, Mich.			29.78	756.4	65	18.3	94	SW	8	3.6			10s		S	0.16	4.1	Cloudy	
Fort Gibson, I. T.			29.93	760.2	79	26.1	78	SE	9	4.0		0	0			0	0	Clear	
Fort Sill, I. T.																			
Fort Sully, Dakota	28.53	724.6	30.21	767.3	50	10.0	89	NE	14	6.3			10n		NE	0.07	1.8	Heavy rain	
Galveston, Tex.			30.10	764.5	83	28.3	74	Calm	0	0		0	1ks		E	0	0	Clear	
Grand Haven, Mich.			29.89	759.2	70	21.1	93	S	15	6.7			10n		SW	0.34	8.6	Light rain	
Indianapolis, Ind.			29.99	761.7	74	23.3	76	S	5	2.2			10s			0	0	Cloudy	
Indianola, Tex.			30.11	764.8	83	28.3	79	S	4	1.8		2k	0	S		0	0	Fair	
Jacksonville, Fla.			30.20	767.1	77	25.0	90	Calm	0	0		0	0			0	0	Clear	
Keokuk, Iowa			29.90	759.4	69	20.6	95	SE	6	2.7			10n		SE	2.40	61.0	Light rain	
Key West, Fla.			30.15	765.8	82.8	28.3	71	NE	10	4.5		0	5ks			0	0	Fair	
Kittyhawk, N. C.			30.29	769.4	73	22.8	76	SE	7	3.1		0	0			0	0	Clear	
Knoxville, Tenn.			30.19	766.8	69	20.6	90	Calm	0	0		1k	Fog			0	0	Fair	
La Crosse, Wis.			29.80	756.9	72	22.2	90	S	12	5.4			10s		S	0	0	Threatening	
Leavenworth, Kan.			29.85	758.2	77	25.0	80	S	2	0.9		0	10ks		SW	0	0	Threatening	
Lexington, Ky.	29.05	737.9	30.11	764.8	72	22.2	80	S	12	5.4		5c	2s	S		0	0	Fair	
Long Branch, N. J.			30.22	767.6	72	22.2	75	SW	10	4.5		2c	Haze	SW		0	0	Fair	
Louisville, Ky.			30.06	763.5	77	25.0	69	SE	2	0.9			Fog			0	0	Foggy	
Lynchburg, Va.			30.25	768.3	64	17.8	89	Calm	0	0			Fog			0	0	Foggy	
Malone, N. Y.			30.03	762.7	66	18.9	68	S	6	2.7		8cs	0	W		Inap.	Inap.	Cloudy	
Marquette, Mich.			29.76	755.9	67	19.4	89	S	6	2.7			10s		SE	0.09	2.3	Cloudy	
Memphis, Tenn.			30.10	764.5	80	26.7	78	S	3	1.3		1cs	0			0	0	Clear	
Milwaukee, Wis.			29.90	759.4	69	20.6	69	S	6	2.7			Fog			1.45	36.8	Foggy	
Mobile, Ala.			30.18	766.6	77	25.0	86	Calm	0	0		5k	Sm'e	NW		Inap.	Inap.	Fair	
Montgomery, Ala.			30.21	767.3	78	25.6	82	S	6	2.7		2k	Haze		S	0	0	Fair	
Morgantown, W. Va.			30.17	766.3	61	16.1	79	Calm	0	0		0	Fog			0	0	Foggy	
Mt. Washington, N. H.	24.05	610.9	30.41	772.4	49	9.4	93	NW	35	15.6			Fog		NW	0	0	Clearing	
Nashville, Tenn.			30.06	763.5	78	25.6	65	SE	1	0.4		2ck	0	S		0	0	Fair	
New Haven, Conn.			30.20	767.1	73	22.8	67	SW	4	1.8		Haze	Sm'e			0	0	Fair	
New London, Conn.			30.20	767.1	73	22.8	76	W	6	2.7		0	Haze			0	0	Clear	
New Orleans, La.			30.15	765.8	82.5	28.1	73	Calm	0	0		5c	0	W		0	0	Fair	
Newport, R. I.			30.19	766.8	69	20.6	90	SW	4	1.8		0	0			0	0	Clear	
New York, N. Y.			30.22	767.6	68	20.0	74	SW	5	2.2		0	Sm'e			0	0	Clear	
Norfolk, Va.			30.20	769.4	69.5	20.8	82	S	4	1.8		0	Haze			0	0	Clear	
North Platte, Neb.	27.11	688.6	29.63	752.6	55	12.8	74	NE	30	13.4			10s		SW	0	0	Cloudy	
Omaha, Neb.	28.76	730.5	29.77	756.1	73	22.8	95	N	11	4.9			10s			0.19	4.8	Cloudy	
Oswego, N. Y.			30.08	764.0	68	20.0	68	S	5	2.2		5ck	5s	NW		0	0	Cloudy	
Peck's Beach, N. J.			30.26	768.6	74	23.3	76	SW	12	5.4		0	0			0	0	Clear	
Pembina, Dakota			30.14	765.5	45	7.2	87	NW	12	5.4		8c	2s			0	0	Cloudy	
Philadelphia, Penn.			30.22	767.6	67	19.4	90	SW	8	3.6		1c	Sm'e	W		0	0	Fair	
Pike's Peak, Colorado	18.01	457.7	30.24	768.1	34	1.1	100	SW	12	5.4		5cs	5s			0.18	4.6	Cloudy	
Pittsburgh, Penn.			30.13	765.3	59	15.0	87	Calm	0	0			Fog			0	0	Foggy	
Port Huron, Mich.			29.98	761.5	72	22.2	80	W	5	2.2			10s		SW	0	0	Cloudy	
Portland, Me.			30.16	766.1	67	19.4	74	Calm	0	0		1c	Haze			0	0	Fair	
Portland, Oregon			30.19	766.8	46	7.8	84	E	1	0.4		Haze	Haze			0	0	Hazy	
Punta Rassa, Fla.			30.18	766.6	78.6	25.9	84	NE	8	3.6		Haze	1ks			0.20	5.1	Clear	
Rochester, N. Y.			30.05	763.3	69	20.6	56	SW	8	3.6		2ck	Haze	SW		0	0	Fair	
Salt Lake City, Utah	25.60	650.2	29.93	760.2	65	18.3	39	SE	4	1.8		0	0			0.76	19.3	Clear	
Sandy Hook, N. J.			30.21	767.3	69	20.6	70	W	17	7.6		5c	Haze	NW		0	0	Fair	
San Diego, Cal.			30.03	762.7	66	18.9	84	Calm	0	0			10s			0	0	Cloudy	
San Francisco, Cal.			29.98	761.5	54	12.2	87	SW	4	1.8		0	0			0	0	Clear	
Santa Fe, N. M.	23.36	593.3	29.90	759.4	57	13.9	75	SW	4	1.8			10s			0.55	14.0	Cloudy	
Savannah, Ga.			30.23	767.8	77	25.0	76	NE	4	1.8		0	Sm'e			0	0	Clear	
Shreveport, La.			30.13	765.3	83	28.3	78	Calm	0	0		2c	0			0	0	Fair	
Smithville, N. C.																			
Springfield, Mass.			30.19	766.8	64	17.8	83	S	4	1.8		5cs	Fog			0.005	0.13	Fair	
St. Louis, Mo.			30.00	762.0	70	21.1	73	S	8	3.6			10s			0	0	Cloudy	
St. Marks, Fla.			30.20	767.1	77	25.0	90	E	6	2.7		5k	0	E		0	0	Fair	
St. Paul, Minn.			29.80	756.9	68	20.0	79	NW	18	8.0			10s			0.02	0.5	Cloudy	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			30.16	766.1	69	20.6	84	W	7	3.1		Haze	Haze			0	0	Clear	
Toledo, Ohio			29.98	761.5	73	22.8	71	S	8	3.6		5c	2s	SW		0	0	Fair	
Tucson, Arizona																			
Tybee Island, Ga.			30.24	768.1	78	25.6	72	NE	8	3.6		Haze	Haze			0	0	Hazy	
Vicksburg, Miss.			30.19	766.8	78	25.6	90	S	4	1.8		0	Haze			0.85	21.6	Fair	
Virginia City, Montana	24.34	618.2	29.82	757.4	44	6.7	59	SE	10	4.5		0	0			0	0	Clear	

UNITED STATES SERIES—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.	.....	.....	30.23	767.8	69	20.6	79	SW	6	2.7	.....	8c	Sun'e	W	.....	0	0	Fair	
Wilmington, N. C.	.....	.....	30.25	768.3	74	23.3	72	NE	5	2.2	.....	0	Sun'e	.....	NE	0	0	Clear	
Wood's Hole, Mass.	.....	.....	30.20	767.1	72	22.2	80	SW	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Wytheville, Va.	27.91	708.9	30.05	763.3	61	16.1	88	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Yankton, Dakota	28.76	730.6	30.02	762.5	60	15.6	82	N	18	8.0	.....	.....	10s	.....	NW	0	0	Cloudy	
Yuma, Arizona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub-Series.																			
Bridgetown, B'b'does, W. I.	.....	.....	.....	.....	77	25.0	95	S	15	6.7	.....	.....	10n	.....	.....	0	0	Thunder-storm	E. Racker.
Pointe-aPitre, G'd'loupe, do	.....	.....	29.98	761.5	80	26.7	79	S	.....	.....	.....	10es	2n	.....	.....	0.32	8.1	Cloudy	L. V. Bigard.
Havana, Cuba, W. I.	.....	.....	30.19	766.8	80	26.7	82	E	1.2	0.5	.....	1e	1k	SW	E	0	0	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	James Gall.
St. Thomas, St. T., W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. S. Cameron.
Santiago de Cuba, W. I.	.....	.....	29.85	758.2	80	26.7	74	N	12.0	5.4	.....	0	0	.....	.....	.....	.....	Clear	Robert Mason.
St. Georges, Bermudas	.....	.....	30.26	768.6	78	25.6	80	NE	4.3	1.9	.....	0	5k	.....	.....	0	0	Fair	C. F. Allen.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. P. Church.
Makawao, Maui, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. L. Clarke.
Cumberland, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ft. Chippewyan, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ft. McPherson, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ft. Simpson, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
York Factory, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9ks	.....	.....	0.65	16.5	Sleet	J. Fortescue.
St. John's, Newfoundland	.....	.....	29.96	761.0	35.5	1.9	95	N	18	8.0	.....	.....	5s	.....	.....	0	0	Cloudy	John Delaney.
St. John's, Porto Rico, W. I.	.....	.....	30.02	762.5	61	16.1	70	W	.....	.....	.....	5k	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Clifton, Jamaica, W. I.	27.27	692.9	30.06	763.5	71	21.7	90	SE	0.5	0.2	.....	0	0	.....	.....	0.52	13.2	Clear	C. Partridge.
Navassa	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Meaellin, S. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Paramaribo, S. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Elyria, Ohio	.....	.....	30.29	769.4	70	21.1	57	S	8	3.6	.....	.....	5es	.....	.....	0	0	Fair	H. M. Redington.

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

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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 Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) 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.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 10, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			29.93	760.3	81.9	27.7	47	NNW			3		1			0	0	Fair	Charnot.
Algiers			29.86	758.5	80.6	27.0	69	NE			1		0			Inap.	Inap.	Cloudy	Peter.
La Calle																			Kuntz.
Tunis			30.02	762.4	89.6	32.0	42	E			2		7			0	0	Cloudy	Jacques.
Sfax			30.08	764.1	86.0	30.0	53	SE			3		2			0	0	Fair	Chauvey.
Saida			29.91	759.6	63.5	17.5	67	SSE			2		6			0.157	4.0	Stormy	Grosjean.
Tebessa			30.04	762.9	86.0	30.0		S			1		1			0	0	Fair	Colin.
Gerlville			29.98	761.6	72.5	22.5	41	NW			2		6			0.118	3.0	Hidden	Bernadach.
Laghouat			29.96	761.0	81.2	29.0	34	SW			3		6			0.039	1.0	Stormy	Simon.
Biskra			29.95	760.8	88.7	31.5	3:	SE			2		2			0.012	0.3	Thunder	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is not made. Th 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.06	763.4	72.3	22.4	54	SW			2		1			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.11	764.9	69.4	20.8	62	NE			1		7			0	0		I. R. Observatory.
Eperies			30.04	763.0	66.2	19.0	60	Calm			0				S	0	0		Julius Mikolik.
Gratz			30.04	762.9	68.5	20.3	63	SE			2		2						Andreas Rospini.
Hermannstadt	28.87	733.3	30.04	762.5	61.4	18.0	68	WNW			1		5			0	0		Prof. Reissenberger.
Kremsmünster	28.63	727.3	30.02	761.6	66.4	19.1	65	E			3		0			0	0		Prof. C. Wagner.
Lemberg	28.68	728.4	29.98	762.0	65.3	18.5	67	NE			3		6			0	0	Rainy	Dr. T. Stanecki.
Nyiregyhaza			30.00	763.6	72.0	22.2	51	N			2		7			0	0		Habzsuda Danie'.
Pola			30.07	763.4	73.9	23.3	51	SSE			1		1ks			0	0		I.R. Hydrographic Office
Szegedin			30.06	760.8	73.0	22.8	41	SW			1		4			0	0		Karl Stancel.
Trieste			29.95	763.4	74.3	23.5	70	Calm			0		3ks			0	0		Prof. V. Farolfi.
Vienna			30.00	761.9	74.7	23.7	40	ESE			1		0			0	0		I. R. Central Institute

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.85	758.3	67.5	19.7	87	E			1	1	0	ENE		0.059	1.50		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.02	762.5	59.5	15.3		SSE	13	5.8			3			0	0	*D. clouds	William Boswell.
Ardrossan			29.95	760.7	64	17.8		SW			2								James Mayes.
Armagh Observatory			30.96	761.0	59.0	15.0		SSW	6	2.7			5					*D. clouds	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs.			29.96	761.0	64.5	18.1		SSE			2		6					*D. clouds	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.97	761.2	59.4	15.2		SW			1		4					*D. clouds	J. Dreyer.
Bradford			29.95	760.7	62.5	16.9		E			1		2					*D. clouds	J. McLandsborough.
Bridgetown, (Barbadoes)			29.96	761.0	81	27.2		E			4		10					*D. clouds	T. H Hunt.
Cambridge Observatory			29.95	761.7	64.0	17.8		N			1		10					Overcast	Sergeant Hunt, A. H. C.
Cape Good Hope Obs.			30.22	767.6	58.4	14.7	61	ESE	5	2.2			1						The Staff, for E. J. Stone.
Cardington			29.97	761.2	64.0	17.8		S					9					Overcast	John McLaren.
Carlisle			29.98	761.5	65	18.3		SE					9			0	0	*D. clouds	T. Bell, for J. Cartmell.
Chatham, School M. E.			29.94	760.5	61.7	16.5		W			1		10					Raining	Capt. J. Fellowes, R. E.
Dartmoor	28.55	725.2	29.92	760.0	59	15.0		E			2		5					*D. clouds	R. E. Power.
Donaghadee			29.94	760.5	60	15.6		S			3		5					*D. clouds	J. Mac Gowan, Jr.
Dover			29.93	760.2	61	16.1		N			3		8					Rainy	J. Costello.
Eccles, (near Manchester)			29.96	761.0	67.7	19.8		SE	0.8	0.4			3					*D. clouds	Thomas Mackereth.
Falmouth Observatory			29.93	760.2	60.7	15.9		E	26	11.6			4					*D. clouds	The Staff.
Fort Napier, (Natal)	27.70	703.1	30.03	762.7	55.0	12.8		E			2		10					Gloomy	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	82	27.8		N					8						
Galway, Queen's College																			B. G. Clare, for Prof. Cu[illegible]
Gibraltar, (Mediterranean)			29.95	760.7	75.4	24.1		W			4		8					*D. clouds	Sergt. E. G. Baker.
Glasgow Observatory			29.94	760.5	62.0	16.7		S			2		6					Fine	Lewis Stuart.
Great Yarmouth			29.93	760.2	58	14.4		N			3		8					Overcast	G. T. Watson.
Greenwich Royal Obs.			29.96	761.0	64.4	18.0		NE			1		10					Overcast	The Staff, for G. B. Airy.
Guernsey			29.91	759.7	65	18.3		ESE			1		0					Clear	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.98	761.5	63.2	17.3		ESE					5			Blank	Blank	*D. clouds	F. J. Page, for L. J. Cr[illegible]
Helston			29.89	759.2	67	19.4		E			4		6					*D. clouds	M. P. Moyle.
Holyhead			29.98	761.5	61	16.1		SW			3		1					Clear	John Tilston.
Hull Park																			
Kew Observatory			29.96	761.0	61.7	16.5		SSE	3	1.3								Misty	The Staff.
Kingstown			29.98	761.5	59	15.0		SE			1		8					Foggy	George Mitchell.
Leicester Museum			29.98	761.5	64.8	18.2		E			1		9					Overcast	William J. Harrison.
Llandudno			29.97	761.2	64.0	17.8		ENE			1		3					*D. clouds	Dr. James Nicol.
Malta, (Mediterranean)			30.07	763.8	80.8	27.1		SE			1		6k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn																			W. D. Penny.
Nassau, (Bahamas)			30.17	766.3	77.4	25.2		SE			1		8n					Thunder-storm	Surg.-Maj. Henry.
Nottingham			29.98	761.5	66.8	19.3		ESE			1		9k, ks		SE	0	0	Solar halo	E. J. Lowe.
Oscott, St Mary's College			29.97	761.2	65.0	18.3		SE			2		6					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.93	760.2	65	18.3		E			1		10					Overcast	J. Lucas, for R. Main.
Plymouth			29.92	760.0	64.8	18.2		SSE			2		7					*D. clouds	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.95	760.7	58	14.4		NNW			3		2			Blank	Blank	Fair	W. Kennedy.
Saint Ann's Head			29.95	760.7	62	16.7		SE			1		0					Clear	John C. Walker.
Saint Helier, (Jersey)			29.90	759.4	67.8	19.9		SE			3		2						A. P. Amy.
Sandwick Manse(Orkneys)																			
Scarborough			30.01	762.2	59.0	15.0		SE			1		9					Overcast	F. Shaw.
Scutari cemetery,(Turkey)			30.02	762.5	72.0	22.2		NE			2		4					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.96	761.0	65	18.3		SE			1		4						W. F. Cooper.
Silloth Rectory			29.96	761.0	66.2	19.0		W			2		3			0	0	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			29.96	761.0	62.4	16.9		NW			1		10					Threatening	The Staff.
Stornoway, Lews C. (Hebr)			29.90	759.4	59	15.0		S			3		5					*D. clouds	John Smith.
Stratfield Turgiss			29.95	760.7	64.3	17.9		ENE			1		5					*D. clouds	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Sumburgh Head,(Shetland)																			
Thurso			29.96	761.0	63	17.2		SSE			2		4					*D. clouds	John Trotter.
Truro, Royal Institution			29.89	759.2	69	20.6		E			4		5					*D. clouds	W. Newcombe.
Valencia Observatory			29.97	761.2	60.3	15.7		NW	8	3.6			3					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			30.00	762.0	64.0	17.8		S			1		7k			0	0	Fine, cloudy	Andrew Gibb.
Monach Lt-house,(Shet. Is)																			
North Unst, (Shetland Is)																			

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error, —.099. * Detached clouds.

DANISH SERIES.

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

Copenhagen			30.16	766.0	66.4	19.1	70	SSE			2		0						
Fanöe			30.04	763.0	75.7	24.3	51	SE			6		1						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.45	748.0	49.3	9.6	80	Calm			0		8					Rainy	
Thorshavn, (Faröe)			29.93	760.1	57.6	14.2	83	SSE			6		6						
Vestervig			30.08	763.9	76.6	24.8	50	SE			4		0						

Note.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			29.94	760.4	71.6	22.0	80	SW			1					0	0		Normal School.
Amiens																			Normal School.
Avignon			29.96	760.9	71.1	21.7	78	SE			1		8		S	0.220	5.6	Cloudy	Normal School.
Bar-sur Seine			29.9[illegible]	761.0	62.1	16.7	83	NW			1		10kn			0.504	12.8	Cloudy	C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			29.97	761.3	62.1	16.7	81	W			2		10		W	0.256	6.50	Cloudy	Normal School.
Bewangon																			Normal School.
Bourg en Bresse			29.96	760.9	71.6	22	66	SW			2		n			0	0		Normal School.
Bourges			29.98	761.4	60.6	15.7	73	SW			2		10		SW	0.51	13.	Cloudy	Normal School.
Brest			29.83	757.7	71.8	22.1	62	SSW			2		5		SW	0.285	7.25	Stormy	Naval Observatory.
Caen																			Normal School
Chartres			30.03	762.8	60.4	15.8		SSE			1		4		NE				Normal School.
Chaumont	28.85	732.8	29.98	761.6	69.4	20.8		SW			2		kn		SW	0.08	2.		Normal School.
Commercy			29.97	761.2	70.2	21.2	68	SW			4		5cn		SW	0.031	0.8	Cloudy	Normal School.
Commune de Gréasque*			30.02	762.5	76.8	24.9	48	E			3		8		E	0.299	7.6		
Le Mans																			Normal School.
Lons-Le Saulnier			29.92	759.9	70.2	21.2	80	W			2		10		S	0	0	Cloudy	Normal School.
Mâcon			29.93	760.3	66.2	19	83	SSW			6		5		N	0.071	1.8	Cloudy	Normal School.
Mirecourt			29.92	759.9	66.7	19.3	66	S			1		5		SW	0.031	0.8	Cloudy	Normal School.
Orleans																			Normal School.
Paris Observatory			29.97	761.3	59.0	15.0	76	W			2		10n		WNW	0.069	1.76	Raining	National Observatory
Parthenay			30.34	770.6	71.6	22	89	SW			4		8		W			Cloudy	Normal School.
La Roche sur Yon			29.89	759.2	65.7	18.7	66	SE			4								Normal School.
Rochefort, Observatory			29.93	760.2	70.5	21.4	43	S			4		8		NE	0.039	1.0	Cloudy	Naval Observatory.
Rouen			29.96	761.0	59.7	15.4	84	W			1		10			0.094	2.4	Cloudy	Normal School.
Saint Lo																			Normal School.
Villefranche																			Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchési.
Mont-Louis	24.82	630.4			51.8	11.0	95	E	7.4	3.33			10		SSW	1.331	33.8		—. Falguère.
Montsouris Observatory			29.96	761.0	59.0	15.0	90	W			1		9			0.157	4.0	Raining	Marié Davy.
Perpignan			29.94	760.5	68.4	20.2	69	E	3.7	1.67			8		W	1.528	38.8		Dr. Finos.
Saint Maur, (near Paris)			29.97	761.3	57.6	14.2	95	NW			1		10			0.004	0.1	Clearing	E. Renou.
Tours			29.95	760.6	67.3	19.6	49	E			1		5		NNW	0	0		C. Marquet.
Versailles, (near Paris)			29.97	761.2	58.3	14.6	89	NW			1		10			1.370	34.8	Raining	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			29.94	760.5	68.7	20.4	90	N	5.4	2.4		2ks	0			0.039 0.012	1.0 0.3	Clear	H. Le Lec, S. J.

Note.—The originals give the wind-force by the scale 0 to 7; the weather in general terms; 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 ft.; Commune de Gréasque, 322 m., or 1,056.4 ft. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles.

GERMAN SERIES.

Furnished by the coöperation of Prof. Geo. Neumayer, Superintendent Royal 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			29.97	761.3	71.6	22.0	51	SE	9	4			2			0	0		Prof. Hoh.
Berlin			30.10	764.4	73.6	23.1	33	SE	18	8			0			0	0		Prof. Arndt.
Breslau			30.17	766.2	71.6	22.0	56	SSE	4	2			7			0	0		Dr. P. Neugebauer.
Carlsruhe			29.92	759.9	75.2	24.0	68	NE	4	2			1			0	0		A. Senz.
Cassel			29.84	757.9	78.3	25.7	38	ESE	9	4			0			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.01	726.6	30.02	762.4	65.3	18.5	62	W					1			0.016	0.4		M. Wilhelm.
Hamburg			30.07	763.7	74.5	23.6	50	SE	18	8			0			0	0	Clear	Deutsche Seewarte.
Kiel			30.07	763.7	75.0	23.9	54	E	18	8			0			0	0		Prof. G. Karsten.
Königsberg			30.17	766.3	66.2	19.0	55	NE	11	5						0.001	0.03	Clear	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			30.06	763.4	76.6	24.8	32	ESE	13	6			0			0	0		Prof. Bruhns.
Münster			29.97	761.3	77.5	25.3	62	S	13	6			0			0	0		Prof. E. Heis.
Posen			30.13	765.4	68.5	20.3	58	SE	22	10			2			0	0	Clear	Dr. Magener.
Strassburg, (in Alsace)			29.94	760.4	75.4	24.1	61	NE	4	2			1			0	0		Hartwig.
Stuttgart			29.92	760.0	77.9	25.5	47	E					0			0	0		Mr. Würth.
Thorn			30.13	765.4	71.4	21.9	51	NE	13	6			1			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.91	759.6	77.0	25.0	50	S	22	10			8			0	0		Prof. Plesch.
Wustrow, Naval School			30.04	765.5	71.4	21.9	61	ENE	13	6			0			0	0	Clear	E. Fischutz.

Note.—In the originals the distinction between 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.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.04	763.0	66.6	19.2	78	NNW			2		9	NE		0	0		
Mondovi			30.03	762.8	62.2	16.8	86	NNW			2		10			0.157	4.0		
Genoa			30.03	762.8	77.4	25.2	66	SW	1.8	0.8			4	S		0	0		
Pavia			30.04	762.9	76.1	24.5	48	E			1		8	NW		0	0		
Verona			29.98	761.6	77.0	25.0	37	E			1		0			0	0		
Padua			30.01	762.3	72.7	22.6	56	SE	1.8	0.8			3	S		0	0		
Parma																			
Bologna			30.05	763.3	75.2	24.0	60	W			1		3	W		0	0		
Leghorn			30.02	762.5	78.8	26.0	60	SSE	5.6	2.5			3			0	0		
Urbino																			
Ancona																			
Siena			30.01	762.2	78.8	26.0	42	SSW	0	0			4	W		0	0		
Rome			30.04	763.0	81.7	27.6	78	W	5.6	2.5			4	ENE		0	0		
Naples, O.U			30.07	763.7	80.1	26.7	48	SW			2		2			0	0		
Lecce			30.06	763.5	73.4	23.0	45	NNE	5.6	2.5			4	NW		0	0		
Cosenza			30.08	764.0	77.4	25.2	61	NW			2		2			0	0		
Catania, (Sicily)																			
Riposto			30.04	763.0	75.2	24.0	78	NNW			4		2	SE		0.008	0.2		
Palermo			29.97	761.2	77.7	25.4	60	NE	9.8	4.4			4			0	0		
Sub-Series.																			
Naples, S. R.			30.10	764.5	80.2	26.8	52	W	8.1	3.6			4	SW		0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; the cloudiness occasionally by the scale 0 to 4, and generally without distinguishing between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovin is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Flushing			29.93	760.3	67.6	19.8		S			1								
Groningen			29.89	759.2	76.1	24.5		SE			3								
Helder			29.91	759.7	69.8	21.0		ESE			2								
Utrecht			29.87	758.8	73.8	23.2		SE			2		8					Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the 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			30.06	763.4	64.8	18.2	78	NW	2.9	1.3			10			0	0		
Christiania			30.19	766.9	61.5	16.4	79	SSW	2.2	1.0			3			0	0	Haze	
Tromsö			30.22	767.5	44.1	6.7	66	Calm			0		8			0.028	0.7		

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Lisbon			30.12	765.0	67.5	19.7	43	N	23.7	10.6			9	NW					The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

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	68.7	20.4	54	NNE	9	4			4						Astronomical Obs.
Wilna			30.08	764.1	63.3	17.4	47	N	8	3.5			1						Astronomical Obs.
Dorpat			30.13	765.3	59.7	15.4	54	NNE	7	3			3						Physical Cabinet.
St. Petersburg			30.15	765.7	51.3	10.7	48	NNE	9	4			1						Central Physical Obs.
Kuopio			30.22	767.5	48.9	9.4	57	N					0			0	0		Ch. Forsten.
Kieff			29.88	759.0	65.3	18.5	56	NNW	9	4			4						Physical Cabinet.
Nikolaiev			29.95	760.8	62.1	16.7	70	NW	10	4.5			9						Kurdakof.
Kertch			29.85	758.2	71.8	22.1	60	NW	4	2			3						Lagorio.
Moscow			29.86	758.4	55.9	13.3	80	NNE	13	6			8						Meteorological Obs.
Lugan			29.69	754.0	66.0	18.9	57	W	10	4.5			9					Raining	Meteorological Obs.
Archangel			30.11	764.7	45.1	7.3	74	NNW	17	7.5			5						Ogorodnikof.
Tiflis	28.35	720.2	29.71	754.5	73.0	22.8	41	NW	10	4.5			3						Physical Obs.
Astrakhan			29.76	756.0	75.4	24.1	47	WNW	10	4.5			10			Blank	Blank		Sebastianof.
Kasan			29.51	749.6	54.7	12.6	95	E	0	0			10					Raining	Physical Cabinet.
Orenburg			29.61	752.1	77.2	25.1	32	SE	17	7.5			10						Tschernischef.
Ekaterinburg	28.83	732.5	29.83	757.6	55.2	12.9	91	E	4	2			9						Meteorological Obs.
Kasaly			29.93	760.1	77.7	25.4	43	NE	8	3.5			3						Bobrof.
Tashkend	28.25	717.6	29.90	759.5	70.0	21.1	71	Calm	0	0			0						Michelson.
Barnaul			30.02	762.4	65.7	18.7	46	Calm	0	0			3						Meteorological Obs.
Yeniseisk			29.83	757.6	57.0	13.9	85	S	2	1			2						Marks.
Irkutsk	28.67	728.1	30.06	763.5	43.9	6.6	85	Calm	0	0			0						Usolzef.
Oorga	25.79	655.1	30.11	764.7	42.1	5.6	81	NE	4	2			7						Mossin.
Peking, (China)			30.08	764.1	73.6	23.1	85	SW	4	2			9						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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			29.84	757.9	75.0	23.9	43	W	9.6	4.3		1	8	SW		0	0	Cloudy	Royal Observatory.
San Fernando																			The Naval Observatory.

Note.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea			30.27	768.9	53.2	11.8	55	S			2		2			0	0		
Hernosand			30.43	772.8	59.4	15.2	58	E			2		2			0	0		
Stockholm			30.18	766.6	61.0	16.1	62	E			4		3			0	0	Foggy	
Wisby			30.14	765.5	64.0	17.8	84	NW			4		0			0	0		
Sub-Series.																			
Upsala			30.23	767.8	63.0	17.2	38	NE	11.0	4.9			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 distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	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 in 24 hours. Inches.	Millimeters.	Weather.	Observer.
Geneva	28.57	725.5	29.95	760.6	70.2	21.2	61	WSW			2		10			0.146	3.7	Cloudy	The Observatory.
Zurich	28.34	719.9	29.91	759.7	75.4	24.1	60	NE			1		1			0	0	Clear	The Observatory.

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, —1.7mm.; Thermometer, +2°.2; Relative Humidity, 0.0 per cent.

NOTE.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

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 in 24 hours. Inches.	Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y.																			Prof. C. N. A. Van Dyck.
Constantinople			30.03	762.8	68.0	20.0	60	N	12.3	5.5			5			0	0	Cloudy	
Fao, (Persian Gulf)			29.63	752.7	105.1	40.6		NW			3		0					Clear	
Salonica					85.6	29.8		SE			2		0					Clear	
Valona			30.03	762.7	72.1	22.3		W			2		0					Clear	
Varna			30.04	763.0	71.6	22.0		SE			2		10					Light rain	

NOTE.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea level. The distinction between upper and lower clouds is not made.

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.	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 in 24 hours. Inches.	Millimeters.	Weather.	Observer.
Athens																			

NOTE.—Reports commence October 1, 1875.

JAPANESE SERIES.

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 in 24 hours. Inches.	Millimeters.	Weather.	Observer.
Takio																			

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the 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.	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 in 24 hours. Inches.	Millimeters.	Weather.	Observer.
Brockville, Ontario			30.02	762.5	51	10.6		N	10	4.5			10s		N	0.32	8.1	Light rain	
Chatham, N. B.			29.58	751.3	60	15.6	92	SW	11	4.9			10ks		W	0.05	1.3	Cloudy	
Charlottetown, P. E. Island			29.63	752.6	64	17.8	83	S	20	8.9			10s			Inap.	Inap.	Cloudy	
Fort Garry, Manitoba			30.56	776.5	30	— 1.1	97	S	3	1.3		0	2s			0	0	Fair	
Halifax, N.S.			29.73	755.1	65	18.3	82	SW	23	10.3		0	5ks		SW	0	0	Fair	
Kingston, Ontario			30.05	763.3	52	11.1	83	N	10	4.5			10s		NE	0.38	9.7	Cloudy	
Montreal, Quebec			29.88	758.9	53	11.7	94	NW	18	8.0			10n		N	1.05	26.7	Light rain	
Ottawa, Ontario			29.96	761.0	52	11.1	74	N	20	8.9		5ck	5n	N	N	0.30	7.6	Clearing	
Parry Sound, Ontario			30.17	766.3	44	6.7	68	N	26	11.6		2ck	0	N		0.12	3.0	Fair	
Port Dover, Ontario			30.00	762.0	58	14.4	82	N	9	4.0		10k	0	N		0.15	3.8	Cloudy	
Port Stanley, Ontario			30.01	762.2	57	13.9	80	N	20	8.9			10n		N	0.41	10.4	Light rain	
Quebec, Quebec			29.78	756.4	51	10.6	86	Calm	0	0			10n			1.36	34.5	Cloudy	
Saugeen, Ontario			30.14	765.5	50	10.0	93	N	10	4.5		8k	0	N		0.06	1.5	Cloudy	
Stayner, Ontario			30.13	765.3	48	8.9	66	N	13	5.8		5k	0	NW		0.46	11.7	Clearing	
Sydney, C. B.			29.70	756.7	62	16.7	84	SW	14	6.3		8k	5s	W	SW	0.01	0.3	Cloudy	
Toronto, Ontario			30.45	773.4	47	8.3	66	NE	6	2.7		0	0			0	0	Clear	

NOTE.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.72	754.9	69	20.6	79	S	5	2.2			10s		S	0.11	2.8	Cloudy	
Alpena, Mich.			30.26	768.6	47	8.3	61	N	16	7.2		8k	0	NE		0.69	17.5	Cloudy	
Atlantic City, N. J.			29.94	760.5	74	23.3	85	S	12	5.4		2cs	0			0	0	Fair	
Augusta, Ga.			30.17	766.3	74	23.3	86	Calm	0	0		0	Haze			0	0	Clear	
Baltimore, Md.			29.92	760.0	74	23.3	76	SW	9	4.0		5cs	0	W		0	0	Fair	
Barnegat, N. J.			29.92	760.0	77	25.0	77	SW	18	8.0		2ck	0	SW		0	0	Fair	
Benton, Montana	27.41	696.2	30.21	767.3	41	5.0	91	Calm	0	0		0	0			0	0	Clear	
Bismarck, Dakota	28.66	728.0	30.38	771.6	41	5.0	65	SE	4	1.8		5k	1s	S		0	0	Cloudy	
Boston, Mass.			29.79	756.7	69	20.6	80	SW	8	3.6		5c	2cs	S	S	0	0	Fair	
Breckenridge, Minn			30.47	773.9	35	1.7	90	Calm	0	0		0	0			0	0	Clear	
Buffalo, N. Y.			29.97	761.2	57	13.9	87	NE	12	5.4			10n		N	0.23	5.8	Light rain	
Burlington, Vt.			29.86	758.4	55	12.8	93	N	12	5.4			10n		N	0.57	14.5	Light rain	
Cairo, Ill.			30.05	763.5	77	25.0	90	W	8	3.6			10ks		W	0	0	Cloudy	
Cape Hatteras, N. C.			30.13	765.3	78	25.6	86	W	10	4.5		5c	0	W		0	0	Fair	
Cape Henry, Va.			30.08	764.0	77	25.0	77	SW	14	6.3		8ck	Haze	SW		0	0	Fair	
Cape May, N. J.			29.96	761.0	74	23.3	81	S	20	8.9		5ck	0	SW		0	0	Fair	
Charleston, S. C.			30.17	766.3	80	26.7	86	S	1	0.4		0	2ks		SW	0	0	Clear	
Cheyenne, Wyoming	24.34	618.2	30.28	769.1	45	7.2	92	S	20	8.9			10s			0	0	Cloudy	
Chicago, Ill.			30.23	767.8	56	13.3	63	N	26	11.6		5k	0	N		2.39	60.7	Fair	
Cincinnati, Ohio			29.94	760.5	75	23.9	81	W	4	1.8			10s		W	0.15	3.8	Cloudy	
Cleveland, Ohio			29.98	761.5	61.3	16.3	88	N	23	10.3			10n		N	2.04	51.8	Light rain	
Colorado Springs, Col.	24.36	618.7	30.23	767.8	46	7.8	100	SE	8	3.6			10s			0	0	Threatening	
Corsicana, Tex.			30.15	765.8	75	23.9	90	S	4	1.8		0	0			0	0	Clear	
Davenport, Iowa			30.35	770.9	53	11.7	73	NE	24	10.7		0	5s		NE	0	0	Fair	
Denison, Tex.			30.16	766.1	67	19.4		N				0	0			0	0	Clear	
Denver, Col.	25.10	637.5	30.32	770.1	53	11.7	80	NE	2	0.9			10ks			Inap.	Inap.	Cloudy	
Detroit, Mich.			30.08	764.0	55	12.8	87	N	5	2.2			10n		N	1.36	34.5	Light rain	
Dodge City, Kan.	27.78	705.6	30.10	764.5	51	10.6	72	N	11	4.9			10n			0.05	1.3	Light rain	
Dubuque, Iowa			30.30	769.6	51	10.6	72	N	8	3.6		0	2s			3.67	93.2	Fair	
Duluth, Minn.			29.54	750.3	45	7.2	60	NW	8	3.6		0	0			0	0	Clear	
Eastport, Me.			29.63	752.6	61	16.1	94	SW	16	7.2			10s			0	0	Cloudy	
Erie, Pa.			29.96	761.0	60	15.6	94	N	3	1.3			10n		N	1.25	31.7	Light rain	
Escanaba, Mich.			30.42	772.7	45	7.2	61	NE	22	9.8		0	0			0.12	3.0	Clear	
Fort Gibson, I. T.			30.16	766.1	68	20.0	84	NW	12	5.4			10n		NW	0	0	Light rain	
Fort Sill, I. T.																			
Fort Sully, Dakota	28.75	730.2	30.49	774.4	42	5.6	83	E	12	5.4		0	0			0.09	2.3	Clear	
Galveston, Tex.			30.17	766.3	81	27.2	82	NW	8	3.6		0	5ks		E	0	0	Fair	
Grand Haven, Mich.			30.27	768.8	51	10.6	65	NE	17	7.6		5c	0	NE		1.88	47.0	Fair	
Indianapolis, Ind.			30.08	764.0	60	15.6	82	N	10	4.5			10n			0.62	15.7	Light rain	
Indianola, Tex.			30.17	766.3	81	27.2	82	Calm	0	0		2k	Sm'e			0	0	Fair	
Jacksonville, Fla.			30.19	766.8	73	22.8	95	Calm	0	0			Fog			0	0	Foggy	
Keokuk, Iowa			30.24	768.1	59	15.0	82	NE	11	4.9			10s		NE	1.02	25.9	Cloudy	
Key West, Fla.			30.12	765.0	82.4	28.0	79	NE	9	4.0		2cs	8ks			0.96	24.4	Cloudy	
Kittyhawk, N. C.			30.13	765.3	76	24.4	91	SW	16	7.2		1c	2k			0	0	Fair	
Knoxville, Tenn			30.10	764.5	72	22.2	85	NW	4	1.8			10ks		SW	0	0	Cloudy	
La Crosse, Wis.			30.46	773.7	49	9.4	71	N	6	2.7		0	0			0.13	3.3	Clear	
Leavenworth, Kan.			30.27	768.8	58	14.4	84	N	10	4.5			10s		N	0.51	13.0	Clear	
Lexington, Ky.	29.07	738.4	30.14	765.5	72	22.2	80	SW	4	1.8			10ks		SW	0.03	0.8	Cloudy	
Long Branch, N. J.			29.88	758.9	76	24.4	72	SW	18	8.0		5cs	0	SW		0	0	Fair	
Louisville, Ky.			30.03	762.7	72	22.2	95	Calm	0	0			10s		SW	0.35	8.9	Cloudy	
Lynchburg, Va.			30.07	762.0	75	23.9	72	W	4	1.8		10c	0	W		0	0	Cloudy	
Malone, N. Y.			30.03	762.7	66	18.9	68	NE	6	2.7			10n		NE	0.94	23.9	Light rain	
Marquette, Mich.			30.47	773.9	44	6.7	68	N	10	4.5		2k	0			0.40	10.2	Fair	
Memphis, Tenn.			30.11	764.8	78	25.6	73	SW	10	4.5		0	5ks		SW	Inap.	Inap.	Cloudy	
Milwaukee, Wis.			30.37	771.4	48	8.9	70	NE	18	8.0		0	5ks		NW	1.11	28.2	Fair	
Mobile Ala.			30.20	767.1	77	25.0	86	SW	1	0.4		0	0			0	0	Clear	
Montgomery, Ala.			30.19	766.8	78	25.6	76	SW	8	3.6		10cs	Haze			0	0	Threatening	
Morgantown, W. Va.			29.85	758.2	77	25.0	74	SW	14	6.3			10s			0	0	Threatening	
Mt. Washington, N. H.	23.58	593.8	29.94	760.5	52	11.1	100	NW	48	21.5			10n		NW	0.73	18.5	Heavy rain	
Nashville, Tenn.			30.04	763.0	79	26.1	78	S	3	1.3			10s			0	0	Cloudy	
New Haven, Conn			29.84	757.9	74	23.3	76	SW	14	6.3		5k	2s	SW		0	0	Cloudy	
New London, Conn.			29.85	758.2	72.5	22.5	83	SW	18	8.0		5ck	2s	W	SW	0	0	Fair	
New Orleans, La			30.18	766.6	80.5	26.9	80	SE	1	0.4			1k			0	0	Clear	
Newport, R. I.			29.85	758.2	69	20.6	90	SW	12	5.4		5cs	0	W		0	0	Fair	
New York, N. Y.			29.87	758.7	71	21.7	85	SW	10	4.5		5k	2s	W		0	0	Fair	
Norfolk, Va.			30.10	764.5	72	22.2	85	SW	10	4.5		8ck	0	W		0	0	Fair	
North Platte, Neb.	27.51	698.7	30.17	766.3	44	6.7	92	Calm	0	0		1c	0			0.53	13.5	Fair	
Omaha, Neb.	29.32	744.7	30.41	772.4	50	10.0	86	N	11	4.9		0	0			0.51	13.0	Clear	
Oswego, N. Y.			29.97	761.2	56	13.3	87	NE	29	13.0			10n			0.33	8.4	Light rain	
Peck's Beach, N. J.			29.95	760.7	76	24.4	76	SW	24	10.7		1c	4s	W		0	0	Fair	
Pembina, Dakota			30.55	776.0	31	—0.6	89	Calm	0	0		0	0			0	0	Clear	
Philadelphia, Penn.			29.90	759.4	73	22.8	76	SW	16	7.2		2ck	0	W		0	0	Fair	
Pike's Peak, Colorado	18.12	460.2	30.33	770.4	30	—1.1	89	N	2	0.9			10s			0.07	1.8	Cloudy	
Pittsburgh, Penn.			29.80	756.9	77	25.0	77	W	13	5.8			10s		W	0	0	Cloudy	
Port Huron, Mich.			30.11	764.8	56	13.3	62	N	33	14.8			10s		N	0.12	3.0	Cloudy	
Portland, Me.			29.67	753.6	68	20.0	84	SW	8	3.6		2c	8ks	W	SW	0	0	Cloudy	
Portland, Oregon			30.30	769.6	46	7.8	92	Calm	0	0			Fog			0	0	Fair	
Punta Rassa, Fla.			30.16	766.1	78.9	26.1	82	NE	6	2.7		Haze	Sm'e			Inap.	Inap.	Clear	
Rochester, N. Y.			29.97	761.2	57	13.9	87	N	15	6.7			10n		NE	0.52	13.2	Light rain	
Salt Lake City, Utah	25.69	652.5	30.02	762.5	64	17.8	29	N	2	0.9		0	0			0	0	Clear	
Sandy Hook, N. J.			29.86	758.4	74	23.3	81	SW	26	11.6		5ck	0	W		0	0	Fair	
San Diego, Cal.			30.09	764.3	67	19.4	100	Calm	0	0			Fog			0	0	Foggy	
San Francisco, Cal.			30.11	764.8	55	12.8	80	S	4	1.8			10s			0	0	Cloudy	
Santa Fe, N. M.	23.49	596.6	30.03	762.7	55	12.8	81	Calm	0	0			10s			0.95	24.1	Cloudy	
Savannah, Ga.			30.20	767.1	74	23.3	95	NW	4	1.8			Fog			0	0	Foggy	
Shreveport, La.			30.19	766.8	81	27.2	82	SW	1	0.4		0	0			0	0	Clear	
Smithville, N. C.																			
Springfield, Mass.			29.79	756.7	70	21.1	84	SW	8	3.6			10ks		SW	0	0	Threatening	
St. Louis, Mo.			30.19	766.8	59	15.0	94	NE	18	8.0			10s		SW	0.05	1.3	Cloudy	
St. Marks, Fla			30.18	766.6	73	22.8	90	SE	1	0.4		0	0			0	0	Clear	
St. Paul, Minn.			30.50	774.7	44	6.7	87	N	3	1.3		0	0			0.19	4.8	Clear	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			29.84	757.9	75	23.9	76	SW	20	8.9		5cs	0	W		0	0	Fair	
Toledo, Ohio			30.08	764.0	57	13.9	93	N	14	6.3			10n			1.05	26.7	Light rain	
Tucson, Arizona																			
Tybee Island, Ga.			30.19	766.8	76	24.4	91	NW	8	3.6			10s			0	0	Cloudy	
Vicksburg, Miss.			30.24	768.1	77	25.0	82	S	4	1.8		10cs	0	W		0	0	Cloudy	
Virginia City, Montana	24.42	620.3	29.90	759.4	41	5.0	65	SE	1	0.4		0	0			0	0	Clear	

UNITED STATES SERIES—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			29.95	760.7	74	23.3	76	SW	8	3.6		2cs	5s	W	SW	0	0	Fair	
Wilm ngton, N. C			30.17	766.3	75	23.9	90	SW	3	1.3		2c	2ks		SW	0	0	Fair	
Wood's Hole, Mass.			29.86	758.4	70	21.1	79	SW	24	10.7		2c	8s		SW	0	0	Cloudy	
Wytheville, Va.	27.78	705.6	29.86	758 4	69	20.6	84	W	4	1.8			10s			0	0	Cloudy	
Yankton, Dakota	29.21	741.9	30.54	775.7	49	9.4	85	Calm	0	0		0	0			0.40	10.2	Clear	
Yuma, Arizona																			
Sub-Series.																			
Bridgetown, B'b'does, W. I					80	26.7	95	E	9	4.0		8k	2ks	NE		2.25	57.1	Fair	F. Racker.
Pointe-aPitre, G'd'loupe, do			29.97	761.2	81	27.2	83	SE				5c	5k			0.15	3.8	Cloudy	L. V. Bigard.
Havana, Cuba, W. I.			30.18	766.6	79	26.1	86	E	1.2	0.5		1k	0	E		0	0	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W.																			James Gall.
St. Thomas, St. T., W. I.																			W. S. Cameron.
Santiago de Cuba, W. I.			29.84	757.9	78	25.6	82	NE	6.0	2.7		0	0			Blank	Blank	Clear	Robert Mason.
St. Georges, Bermudas			30.21	767.3	79	26.1	80	E	6.3	2.8		0	2ks			0	0	Clear	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.			30.13	765.3	38	3.3	90	W	8	3.6		0	7k			0	0	Fair	J. Fortescue.
St. John's, Newfoundland			30.01	764.5	52	11.1	90	NW				5k	10s			0.05	1.3	Cloudy	John Delaney.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Clifton, Jamaica, W. I.	27.21	691.1	29.97	761.2	71	21 7	85	N	4.0	1.8		0	2k			0	0	Clear	C. Partridge.
Navassa																			
Meacilin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			30.24	768.1	50	15.0	94	NE	8	3.6			10n			0.10	2.5	Raining	H. M. Redington.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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 Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) 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.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 11, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			29.96	760.9	79.7	26.5	65	NNW			2		3			Inap.	Inap.	Hidden	Charnot.
Algiers			29.90	759.4	84.6	27.0	60	S			1		10			Inap.	Inap.	Thunder	Peter.
La Calle																			Kuntz.
Tunis																			
Sfax			30.10	764.4	91.4	33.0	39	SE			4		6			0	0	Stormy	Jacques.
Safda			30.15	765.9	86.7	30.4	55	SE			4		2			0	0	Fair	Chauvey.
Tebessa			29.97	761.1	8[illegible].4	28.0	27	SW			4		2			0.039	1.0	Stormy	Grosjean.
Geriville			30.01	763.0	75.6	24.2		NNE			1		7			0.157	4.0	Thunder, l'tn'g.	Colin.
Laghouat			30.00	762.0	75.2	24.0	26	S			5		1			0	0	Hidden	Bernadach.
Biskra			29.97	761.2	81.2	29.0	24	SW			5		4			0.118	3.0	Light rain	Simon.
			30.00	762.0	90.5	32.5	32	SE			2		3			0	0	Sirocco	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.19	766.7	74.8	23.8	47	NE			2		2			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.30	769.7	67.1	19.5	55	NE			2		0			0	0		I. R. Observatory.
Sperles			30.17	766.2	68.4	20.2	45	NE			3					0	0		Julius Mikolik.
Gratz			30.21	767.4	69.6	20.9	57	SW			2		0						Andreas Rospini.
Hermannstadt	29.04	737.6	30.13	765.2	67.6	19.2	46	NE			1		4			0	0		Prof. Reissenberger.
Kremsmünster	28.71	730.0	30.12	765.0	68.9	20.5	56	E			5		0			0	0		Prof. C. Wagner.
Lemberg	28.81	731.8	30.23	767.7	62.4	16.9	66	NE			2		5			0	0		Dr. T. Stanecki.
Nyiregyhaza			30.21	767.2	73.4	23.	43	NE			3		0			0	0		Habzsuda Daniel.
Pola			30.17	766.3	73.6	23.1	66	W			1		1ks			0	0		I.R. Hydrographic Office
Szegedin			30.12	765.0	71.1	23.[illegible]	35	W			1		2			0	0		Karl Stancel.
Trieste			30.16	766.0	77.5	25.[illegible]	57	Calm			0		4k			0	0		Prof. V. Farolfi.
Vienna			30.17	766.2	75.[illegible]	24.0	38	SSE			2		1			0	0		I. R. Central Institute

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

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.06	7[illegible]5.4	69.4	20.8	73	NNE			3	0	0			0.094	2.40		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.02	762.5	64.0	17.8		S	11	4.9			2			0	0	*D. clouds	William Boswell.
Ardrossan			30.25	768.3	61	16.1		WSW			1		4					*D. clouds	James Mayes.
Armagh Observatory			30.27	768.8	64.0	17.8		SSW	8	3.6			3					*D. clouds	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			30.25	768.3	64.8	18.2		NW			1		0					Clear	John Hartnup, Jr.
Birr Castle, (Parsonstown)			30.25	768.3	66.3	19.1		SW			1		2					*D. clouds	J. Dreyer.
Bradford			30.22	767.6	65.9	18.8		NE			1		0					Clear	J. McLandsborough.
Bridgetown, (Barbadoes)			29.92	760.0	84.6	29.2		E			4		7					Overcast	T. H Hunt.
Cambridge Observatory			30.21	767.3	65.0	18.3		NNE			1		10			Blank	Blank	*D. clouds	Sergeant Hunt, A. H. C.
Cape Good Hope Obs.			30.14	765.5	62.9	17.2	66	W	14	6.3			0						The Staff, for E. J. Stone.
Cardington			30.20	767.1	66.6	19.2		NE					7					*D. clouds	John McLaren.
Carlisle			30.26	768.6	64.4	18.0		Calm					2			0	0	*D. clouds	T. Bell, for J. Cartmell.
Chatham, School M. E.			30.20	767.1	61.2	16.2		NW			1		8					Overcast	Capt. J. Fellowes, R. E.
Dartmoor	28.79	731.2	30.17	766.3	63	17.2		NE			1		2					Clear	R. E. Power.
Donaghadee			30.25	768.3	63	17.2		S			2		3					*D. clouds	J. Mac Gowan, Jr.
Dover			30.18	766.6	64	17.8		NE			3		7						J. Costello.
Eccles, (near Manchester)			30.23	767.8	66.6	19.2		W	1.4	0.6								Misty	Thomas Mackereth.
Falmouth Observatory			30.23	767.8	64.5	18.1		SE	12	5.4			1					*D. clouds	The Staff.
Fort Napier, (Natal)	27.63	701.8	29.96	761.0	70.6	21.4		E			2		1					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	81	27.2		NW					5						
Galway, Queen's College																			B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			29.90	759.4	73.0	22.8		WSW			5		6					*D. clouds	Sergt. E. G. Baker.
Glasgow Observatory			30.23	767.8	61.8	16.6		W			2		3					Fine	Lewis Stuart.
Great Yarmouth			30.20	767.1	60	15.6		N			4		8					Overcast	G. T. Watson.
Greenwich Royal Obs			30.22	767.6	63.6	17.6		NE			1		10					Overcast	The Staff, for G. B. Airy.
Guernsey			30.17	766.3	64.5	18.1		NNE			2		4					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs			30.25	768.3	66.4	19.1		NNE					0					Hazy	F. J. Page, for L. J. Cross.
Helston			30.17	766.3	68	20.0		E			2		0					Clear	M. P. Moyle.
Holyhead			30.27	768.8	61	16.1		NNW			3		1					Clear	John Tilston.
Hull Park																			
Kew Observatory			30.22	767.6	63.2	17.3		NNE	12	5.4			10					Overcast	The Staff.
Kingstown			30.31	769.9	58	14.4		ESE			2		1					Clear	George Mitchell.
Leicester Museum			30.24	768.1	67.3	19.6		NE			1		0					Clear	William J. Harrison.
Llandudno			29.28	769.1	62.8	17.1		NE					1					Clear	Dr. James Nicol.
Malta, (Mediterranean)			30.09	764.3	82.6	28.1		SE			1		4k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn																			W. D. Penny.
Nassau, (Bahamas)			30.07	763.8	85.1	29.5		E			2		4					*D. clouds	Surg.-Maj. Henry.
Nottingham			30.24	768.1	68.0	20.0		NNE			2		0			0	0	Clear	E. J. Lowe.
Oscott, St Mary's College			30.22	767.6	65.3	18.5		NNE			2		1					Hazy	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			30.20	767.1	67	19.4		Calm			0		2					Clear	J. Lucas, for R. Main.
Plymouth			30.19	766.8	67.4	19.7		E			1		2					*D. clouds	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			30.24	768.1	62	16.7		SSE			2		2					Fine	W. Kennedy.
Saint Ann's Head			30.23	767.8	63	17.2		Calm			0		2					Clear	John C. Walker.
Saint Helier, (Jersey)			30.15	765.8	67.2	19.6		E			2		8						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			30.26	768.6	59.1	15.1		E			1		0					Clear	F. Shaw.
Scutari cemetery, (Turkey)			30.11	764.8	71.6	22.0		NNE			2		7					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.23	767.8	66	18.9		NW			1		2					Clear	W. F. Cooper.
Silloth Rectory			30.36	768.6	70.0	21.1		W			1		0			0	0	Clear	Rev Francis Redford.
Stonyhurst Observatory			30.25	768.1	65.2	18.4		W			1		0						The Staff.
Stornoway, Lewis C. (Hebr)			30.09	764.3	57	13.9		SW			6		10					Overcast	John Smith.
Stratfield Turgiss			30.20	767.1	66.4	19.1		NE			1		10					Overcast	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Sumburgh Head, (Shetland)																			
Thurso			30.12	765.0	64	17.8		SW			1		7					*D. clouds	John Trotter.
Truro, Royal Institution			30.15	765.8	74	23.3		N			2		4					*D. clouds	W. Newcombe.
Valencia Observatory			30.24	768.1	62.9	17.2		SSE	11	4.9			3					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			30.25	768.3	62.9	17.2		W			2					0	0	Fine	Andrew Gibb.
Monach Lighthouse, (Shet Is)																			
North Unst, (Shetland Is)																			

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error, --.099. * Detached clouds.

DANISH SERIES.

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

Copenhagen			30.30	769.7	67.5	19.7	54	SE			2		0						
Fanöe			30.23	767.9	72.9	22.7	61	SSE			4		1						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.44	747.8	50.9	10.5	81	S			2		8						
Thorshavn, (Faröe)			29.73	755.2	54.0	12.2	93	SSW			0		10					Rain & mist.	
Vestervig			30.25	768.3	74.1	23.4	49	SSE			4		2						

Note.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.10	764.5	68.0	20.0	72	SW			1					0	0		Normal School.
Amiens																			Normal School.
Avignon			30.05	763.2	67.6	19.8	77	E			3		8		SE	2.614	66.4	Cloudy	Normal School.
Bar-sur Seine			30.07	763.7	72.3	22.4	71	NW			3		5			0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			30.15	765.7	69.3	20.7	82	ENE			2		5		E	0.138	3.50	Cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.06	763.5	76.1	22	77	SW			1		5a			0	0		Normal School.
Bourges			30.04	763.1	74.1	23.4	63	E			4		8		E	0.35	9.	Cloudy	Normal School.
Brest			30.08	764.0	64.6	18.1	72	NNE			3		8		NE	0.138	3.50		Naval Observatory.
Caen																			Normal School
Chartres			30.07	763.6	71.6	22		NE			3		4		NE				Normal School.
Chaumont	29.00	736.6	30.13	765.3	69.8	21		NW			2		2c		NW	0	0		Normal School.
Commercy			30.01	762.3	68.4	20.2	71	N			4		2k		N	0	0		Normal School.
Commune de Gréasque*			30.11	764.9	65.1	18.4	75	SE			3		10		SE	0.953	24.2		
Le Mans																			Normal School.
Lons-Le Saulnier			30.18	766.5	73.0	22.8	72	N			2		0			0	0	Clear	Normal School.
Mâcon			29.81	757.8	69.8	21	89	E			2		5		N	0.228	5.8	Cloudy	Normal School.
Mirecourt			30.10	764.4	66.6	19.2	76	N			2		5		N	0.114	2.9	Cloudy	Normal School.
Orleans																			Normal School.
Paris Observatory			30.12	765.0	70.3	21.3	65	E			2		5k, c		NE	0.122	3.10	Cloudy	National Observatory
Parthenay			30.19	766.8	70.5	21.4	83	NE			4		10		N			Cloudy	Normal School.
La Roche sur Yon			29.78	756.4	61.4	15.8	90	S			4		10		WSW			Cloudy	Normal School.
Rochefort, Observatory			30.04	763.1	67.1	19.5	59	SE			3		10		NW	0.256	6.5	Cloudy	Naval Observatory.
Rouen			30.13	765.4	70.7	21.5	62	NE			2		5		E	0.130	3.3	Cloudy	Normal School.
Saint Lo																			Normal School.
Villefranche																			Normal School.
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchési.
Mont-Louis	24.85	631.2			50.0	10.0	93	ESE	13.6	5.83			10		SW	0.689	17.5		—. Faignère.
Montsouris Observatory			30.11	764.7	70.5	21.4	65	E			3		8c.k			0.035	0.9		Marié Davy.
Perpignan			30.01	762.2	70.3	21.3	99	N	3.7	1.65			5		NW	0.53	13.5		Dr. Fines.
Saint Maur, (near Paris)			30.12	765.0	71.1	21.7	72	NE			2		3			0.26	6.7	Cloudy	E. Renou.
Tours			30.07	763.7	66.9	19.4	72	ESE			1		10		ESE	0.908	0.2		C. Marquet.
Versailles, (near Paris)			30.13	765.2	70.9	21.6	70	E			3		6			0.038	0.98	Misty	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai			29.97	761.1	70.3	21.3	96	NE	3.1	1.4		10ck	0	NE		0 / 0	0 / 0	Lunar corona	H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 ft.; Commune de Gréasque, 322 m., or 1,056.4 ft. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles.

GERMAN SERIES.

Furnished by the coöperation of Prof. Geo. Neumayer, Superintendent Royal 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.02	762.6	71.6	22.0	48	E	13	6			2			0	0		Prof. Hoh.
Berlin			30.25	768.3	75.2	24.0	37	SE	9	4			0			0	0		Prof. Arndt.
Breslau			30.34	770.7	70.7	21.5	53	ESE	9	4			1			0	0		Dr. P. Neugebauer.
Carlsruhe			30.07	763.6	74.8	23.8	56	NE	11	5			1			0	0		A. Senz.
Cassel			30.02	762.6	78.4	25.8	36	SE	13	6			0			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.66	727.9	30.06	763.5	69.8	21.0	65	W					0			0.016	0.4		M. Wilhelm.
Hamburg			30.24	768.2	71.8	22.1	57	ESE	11	5			0			0	0	Clear	Deutsche Seewarte.
Kiel			30.19	766.9	73.9	23.3	60	ESE	13	6			0			0	0		Prof. G. Karsten.
Königsberg			30.31	769.8	65.1	18.4	63	N	11	5						0.047	1.2	Nearly clear	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			30.21	767.4	76.5	24.7	35	E	13	6			0			0	0		Prof. Bruhns.
Münster			30.16	766.0	77.2	25.1	54	S	4	2			0			0	0		Prof. E. Heis.
Posen			30.33	770.4	71.2	21.8	41	E	22	10			0			0	0	Clear	Dr. Magener.
Strassburg, (in Alsace)			30.08	764.1	72.7	22.6	61	NE	7	3			2			0	0		Hartwig.
Stuttgart			30.06	763.4	75.2	24.0	51	E					0			0	0		Mr. Würth.
Thorn			30.33	770.1	69.6	20.9	51	NNW	9	4			2			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.07	763.6	77.2	25.1	38	NE	27	12			0			0	0		Prof. Flesch.
Wustrow, Naval School			30.25	768.4	73.4	23.0	58	E	13	6			0			0	0	Clear	E. F. Schütz.

Note.—In the originals the distinction between 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.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.19	766.9	72.1	22.3	57	NNW			2		7	N		0	0		
Mondovi			30.17	766.4	64.2	17.9	83	NW			4		10			0	0		
Genoa			30.13	765.2	79.0	26.1	60	SW	3.1	1.4			4	N		0	0		
Pavia			30.15	765.8	75.9	24.4	45	NE			2		1	NE		0	0		
Verona			30.13	765.3	70.2	26.2	42	E			2		0			0	0		
Padua			30.16	766.0	74.5	23.6	59	SE	3.1	1.4			2			0	0		
Parma																			
Bologna			30.09	764.3	77.0	25.0	57	ENE			6		3	W		0	0		
Leghorn			30.11	764.8	78.1	25.6	46	W	4.9	2.2			3			0	0		
Urbino																			
Ancona																			
Siena																			
Rome			30.10	764.5	78.3	25.7	43	S	0	0			4	E		0	0		
Naples, O.U.			30.13	765.2	83.5	28.6	43	SW	7.4	3.3			5			0	0		
Lecce			30.15	765.7	81.9	27.7	47	SW			2		3			0	0		
Cosenza			30.18	766.6	73.9	23.3	48	NNE			2		2	N		0	0		
Catania, (Sicily)			30.17	766.2	73.0	22.8	61	NW			2		2			0	0		
Ripozzo																			
Palermo			30.11	764.7	79.2	26.2	68	SE			2		4	NE		0	0		
Sub-Series.																			
Naples, S. R.			30.03	762.7	81.5	27.5	60	NE	8.1	3.6			8			0	0		
			30.17	766.2	80.6	27.0	49	WSW	(?)	(?)			(?)	W		0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; the cloudiness occasionally by the scale 0 to 4, and generally without distinguishing between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovia is 553 meters, or 1,821.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,144.3 feet.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Flushing			30.19	766.8	69.8	21.0		NNE			2								
Groningen			30.11	764.8	74.3	23.7		SE			1								
Helder			30.17	766.2	68.5	20.3		NW			1								
Utrecht			30.11	764.8	74.7	23.7		NNW			3		5					Cloudy	

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bergen			30.12	765.1	60.8	16.0	79	S	3.6	1.6			10			0.492	12.5	Raining	
Christiania			30.29	769.3	64.4	18.0	70	SW	11.2	5.0			9			0	0		
Tromsö			30.11	764.9	47.8	8.8	71	W			2		3			0	0		

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.04	763.0	70.5	21.4	35	NNW	17.4	7.8			2						The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

RUSSIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			30.29	769.4	64.9	18.3	65	N	13	6			2						Astronomical Obs.
Wilna			30.32	770.0	59.5	15.3	43	Calm	0	0			4						Astronomical Obs.
Dorpat			30.37	771.5	55.0	12.8	48	ENE	4	2			10						Physical Cabinet.
St. Petersburg			30.29	769.4	51.6	10.9	54	WNW	4	2			8						Central Physical Obs.
Kuopio			30.25	768.4	51.4	10.8	70	NW					8		ESE	0	0		Ch. Forsten.
Kieff			30.15	765.8	57.6	14.2	44	NNE	13	6			6						Physical Cabinet.
Nikolaiev			30.08	764.0	57.7	14.3	82	N	10	4.5			6						Kurdakof.
Kertch			29.96	761.0	69.4	20.9	65	NW	4	2			6						Lagorio.
Moscow			30.23	767.8	48.0	8.9	44	NNW	13	6			2						Meteorological Obs.
Lugan			29.80	756.8	66.4	19.1	57	NNW	17	7.5			6					Rainy	Meteorological Obs.
Archangel			30.22	767.5	43.3	6.3	83	NW	17	7.5			10					Raining	Ogorodnikof.
Tiflis	28.56	725.5	29.93	760.1	74.1	23.4	37	NW	20	9			3						Physical Obs.
Astrakhan			29.95	760.6	75.4	24.1	37	SW	13	6			5						Sebastianof.
Kasan			29.84	758.0	48.7	9.3	39	N	17	7.5			5						Physical Cabinet.
Orenburg			29.76	755.9	59.9	15.5	61	W	17	7.5			7						Tschernischef.
Ekaterinburg	28.47	723.2	29.44	747.8	58.3	14.6	88	Calm	0	0			6						Meteorological Obs.
Kasaly			29.76	755.9	86.2	30.1	36	S	8	3.5			3						Bobrof.
Tashkend	28.31	719.1	29.95	760.7	73.6	23.1	68	Calm	0	0			0						Michelson.
Barnaul			30.05	763.2	66.7	19.3	43	Calm	0	0			2						Meteorological Obs.
Yeniseisk			29.89	759.1	62.1	16.7	77	SE	4	2			6						Marks.
Irkutsk	28.72	729.6	30.11	764.7	50.7	10.4	72	Calm	0	0			0						Usolzef.
Oorga	25.95	659.0	30.24	768.2	46.0	7.8	70	Calm	0	0			0						Mossin.
Peking, (China)			30.00	762.1	70.5	21.4	91	Calm	0	0			8					Rainy	Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 305.4? m., or 1,005.2? ft.; Tashkend, m 494.2?, or 1,621.3? ft.; Irkutsk, 392. m., or 1,286. ft.; Nertchinsk, 592.0? m, or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.92	760.0	65.5	18.6	34	N	11.9	5.3		1	7			0	0	Cloudy	Royal Observatory.
San Fernando																			The Naval Observatory.

NOTE.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea			30.18	766.6	56.7	13.7	82	SSE			4		9			0	0		
Hernosand			30.29	769.4	62.6	17.0	59	SSW			2		2			0	0		
Stockholm			30.29	769.4	63.3	17.4	51	SSW			2		8			0.004	0.1		
Wisby			30.24	768.1	62.2	16.8	68	N			4		0			0	0		
Sub-Series.																			
Upsala			30.30	769.5	63.0	17.2	55	SSW	11.6	5.2			8						Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.67	728.3	30.06	763.5	68.7	20.4	68	NNE			2		8			0	0	Cloudy	The Observatory.
Zurich	28.46	722.9	30.03	762.8	73.9	23.3	65	WNW			1		2			0.138	3.5	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +1.1mm.; Thermometer, +1°.7; Relative Humidity, +7 per cent.

Note.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y.																			Prof. C. N. A. Van Dyck.
Constantinople			30.12	765.0	69.6	20.9	62	NNE			4		8		NE	0	0	Cloudy	
Fao, (Persian Gulf)			29.79	756.0	95.8	36.0		NW			4		0					Clear	
Salonica					84.6	29.2		SE			2		5					Cloudy	
Valona			30.11	764.9	73.0	22.8		W			1		0					Clear	
Varna			30.08	764.0	75.2	24.0		N			2		5					Cloudy	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea level. The distinction between upper and lower clouds is not made.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens																			

Note.—Reports commence October 1, 1875.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Takio																			

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario			30.48	774.2	51	10.6		N	1	0.4		0	0			0	0	Clear	
Chatham, N. B.			30.07	763.8	47	8.3	65	NW	14	6.3		0	0			0	0	Clear	
Charlottetown, P. E. Island			30.00	762.0	47	8.3	61	NW	14	6.3		0	5ks		W	0.460	11.68	Fair	
Fort Garry, Manitoba			30.03	762.7	51	10.6	86	S	12	5.4			2ks			0	0	Cloudy	
Halifax, N. S.			30.00	762.0	47	8.3	66	NW	15	6.7		0	0			0	0	Clear	
Kingston, Ontario			30.47	773.9	47	8.3	64	N	1	0.4		0	0			0	0	Clear	
Montreal, Quebec			30.40	772.1	45	7.2	68	W	20	8.9		0	0			0.01	0.3	Clear	
Ottawa, Ontario			30.41	773.2	46	7.8	83	W	5	2.2		0	0			0	0	Clear	
Parry Sound, Ontario			30.46	773.7	41	5.0	87	E	3	1.3		0	0			0	0	Clear	
Port Dover, Ontario			30.40	772.1	45	7.2	76	NE	8	3.6		0	0			0	0	Clear	
Port Stanley, Ontario			30.40	772.1	45	7.2	74	NE	4	1.8		0	0			0.04	1.0	Clear	
Quebec, Quebec			30.28	769.1	45	7.2	68	W	8	3.6		0	0			0	0	Clear	
Saugeen, Ontario			30.43	772.9	44	6.7	83	SE	3	1.3		0	0			0	0	Clear	
Stayner, Ontario			30.43	772.9	40	4.4	82	Calm	0	0		0	0			0	0	Clear	
Sydney, C. B.			29.99	759.4	52	11.1	63	NW	12	5.4		8k	2ks	NW	NW	0.27	6.9	Fair	
Toronto, Ontario			30.45	773.4	47	8.3	66	NE	6	2.7		0	0			0	0	Clear	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.38	771.6	47	8.3	70	NW	8	3.6		0	0			0.08	2.0	Clear	
Alpena, Mich.			30.40	772.4	43	6.1	83	W	5	2.2		0	Haze			0	0	Clear	
Atlantic City, N. J.			30.29	769.4	54	12.8	73	NE	18	8.0		0	2s		NE	0.53	13.5	Fair	
Augusta, Ga.			30.01	762.2	76	23.9	86	Calm	0	0		5k	2s	S		0	0	Cloudy	
Baltimore, Md.			30.34	770.6	52	11.1	59	N	6	2.7		0	1s		W	0.87	22.1	Clear	
Barnegat, N. J.			30.32	770.1	58	14.4	58	N	22	9.8		8k	0	N		0.93	49.0	Fair	
Benton, Montana	27.38	694.5	30.18	766.6	40	4.4	84	SW	4	1.8		0	0			0	0	Clear	
Bismarck, Dakota	28.18	715.8	29.79	756.7	52	11.1	79	NW	3	1.3			10s			0	0	Cloudy	
Boston, Mass.			30.30	769.6	45	7.2	62	NW	12	5.4		0	0			0	0	Clear	
Breckenridge, Minn.			30.09	764.3	45	7.2	92	SE	6	2.7		8k	0	SE		0	0	Fair	
Buffalo, N. Y.			30.41	772.4	46	7.8	61	E	4	1.8		0	0			0.03	0.8	Clear	
Burlington, Vt.			30.41	772.4	47	8.3	62	N	1	0.4		2k	0	N		0.17	4.3	Fair	
Cairo, Ill.			30.16	766.1	61	16.1	82	NE	4	1.8			10s		N	0.06	1.5	Cloudy	
Cape Hatteras, N. C.			30.06	763.5	69	20.6	84	NE	30	13.4			10s		NE	1.30	33.0	Cloudy	
Cape Henry, Va.			30.20	767.1	62	16.7	83	N	28	12.5			10s		N	0.83	21.1	Cloudy	
Cape May, N. J.			30.28	769.1	51	10.6	79	N	12	5.4		2c	2s	W	E	0.60	15.2	Fair	
Charleston, S. C.			30.02	762.5	79	26.1	86	N	5	2.2		5ck	5ks		SW	0	0	Cloudy	
Cheyenne, Wyoming	24.08	611.6	30.02	762.5	57	13.9	48	NW	12	5.4		0	2ks		NW	0	0	Fair	
Chicago, Ill.			30.32	770.1	54	12.2	67	E	9	4.0		2c	5k	SW	E	0	0	Fair	
Cincinnati, Ohio			30.20	767.1	55	12.8	62	NE	4	1.8		2c	8m'c			0.20	5.1	Clear	
Cleveland, Ohio			30.37	771.4	52.5	11.3	60	E	6	2.7		2c	2ks	W	E	0.11	2.8	Fair	
Colorado Springs, Col.	24.13	612.9	30.00	762.0	46	7.8	92	N	3	1.3		5c	0	SW		Inap.	Inap.	Fair	
Corsicana, Tex.			30.09	764.3	65	18.3	90	N	5	2.2			10s			0	0	Cloudy	
Davenport, Iowa			30.31	769.9	49	9.4	77	E	12	5.4		5ck	0			0	0	Fair	
Denison, Tex.			30.08	764.0	63	17.2		W					10s			0	0	Cloudy	
Denver, Col.	24.84	630.9	30.06	763.5	55	12.8	74	S	4	1.8		2ck	0	W		0.07	1.8	Clear	
Detroit, Mich.			30.36	771.4	54	12.2	73	E	12	5.4		2ck	2ks	W	E	0.01	0.3	Fair	
Dodge City, Kan.	27.54	699.5	29.76	755.9	63	17.2	78	S	11	4.9		10k	0	S		0.03	0.8	Cloudy	
Dubuque, Iowa			30.32	770.1	48	8.9	49	E	4	1.8		5c	2s	NW	NW	0	0	Cloudy	
Duluth, Minn.			30.30	769.6	48	8.9	77	SW	8	3.6		5c	2s	SW		0	0	Fair	
Eastport, Me.			30.18	766.6	46	7.8	60	NW	9	4.0		0	0			0	0	Clear	
Erie, Pa.			30.36	771.1	50	10.0	64	E	8	3.6		0	0			0.04	1.0	Clear	
Escanaba, Mich.			30.40	772.1	42	5.6	66	N	6	2.7		0	0			0	0	Clear	
Fort Gibson, I. T.			30.06	763.5	68	20.0	79	W	3	1.3			10s		N	Inap.	Inap.	Threatening	
Fort Sill, I. T.																			
Fort Sully, Dakota	28.30	718.8	29.94	760.5	52	11.1	86	SE	12	5.4		2k	2s	SW		0	0	Fair	
Galveston, Tex.			30.07	763.8	80	26.7	86	NW	12	5.4		2c	8ks	W	NE	0.03	0.8	Cloudy	
Grand Haven, Mich.			30.40	772.1	48	8.9	77	E	5	2.2		1c	0	NW		0	0	Clear	
Indianapolis, Ind.			30.25	768.3	49	9.4	77	Calm	0	0		2ck	0			Inap.	Inap.	Clear	
Indianola, Tex.			30.09	764.3	79	26.1	90	N	8	3.6		0	5ks			0	0	Fair	
Jacksonville, Fla.			30.02	762.5	79	26.1	78	S	4	1.8		2c	0	SE		0	0	Fair	
Keokuk, Iowa			30.25	768.3	48	8.9	78	E	4	1.8		8k	0	E		0	0	Fair	
Key West, Fla.			30.00	762.0	82.8	28.2	75	NE	8	3.6		Haze	2ks			0	0	Fair	
Kittyhawk, N. C.			30.14	765.5	66	18.9	84	NE	42	18.8			10n		NE	3.35	85.1	Light rain	
Knoxville, Tenn.			30.06	763.5	65	18.3	83	NE	8	3.6			10ks		NE	0.15	3.8	Cloudy	
La Crosse, Wis.			30.32	770.1	48	8.9	77	S	4	1.8		0	0			0	0	Clear	
Leavenworth, Kan.			30.17	766.3	56	13.3	84	SE	4	1.8			10s			0	0	Cloudy	
Lexington, Ky.	29.08	738.6	30.20	767.1	49	9.4	85	N	12	5.4		5c	0			0.04	1.0	Fair	
Long Branch, N. J.			30.33	770.4	53	11.7	60	NE	30	13.4		0	0			0.79	20.1	Clear	
Louisville, Ky.			30.19	766.8	53	11.7	80	N	16	7.2		5k	0	N		0.06	1.5	Fair	
Lynchburg, Va.			30.32	770.1	56	13.3	56	NE	8	3.6		10k	0	NE		0.03	0.8	Cloudy	
Malone, N. Y.			30.41	772.4	43	6.1	75	SE	3	1.3		0	0			0.02	0.5	Clear	
Marquette, Mich.			30.40	772.4	44	6.7	60	S	4	1.8		0	0			0	0	Clear	
Memphis, Tenn.			30.12	765.0	64	17.8	83	NE	6	2.7			10s			0.31	7.9	Cloudy	
Milwaukee, Wis.			30.38	771.6	52	11.1	72	SE	18	8.0		8c	2s	NW		0	0	Cloudy	
Mobile, Ala.			30.03	762.7	76	24.4	81	SW	3	1.3		10cs	0			0	0	Cloudy	
Montgomery, Ala.			30.01	763.0	74	23.3	88	Calm	0	0		5c	Haze		SW	0.48	12.2	Fair	
Morgantown, W. Va.			30.39	769.6	51	10.6	65	NE	1	0.4		0	0			0.82	20.8	Clear	
Mt. Washington, N. H.	23.87	606.3	30.23	767.8	22	—5.6	72	NW	60	26.8		0	1s		NW	0.30	7.6	Clear	
Nashville, Tenn.			30.08	764.0	61	16.1	88	NE	8	3.6			10s			0.45	11.4	Cloudy	
New Haven, Conn.			30.36	771.1	50	10.0	59	N	12	5.4		Haze	0			0.32	8.1	Clear	
New London, Conn.			30.35	770.9	54	12.2	52	N	7	3.1		0	0			0.45	11.4	Clear	
New Orleans, La.			30.01	763.0	79	26.1	82	SW	6	2.7		10cs	0			0	0	Cloudy	
Newport, R. I.			30.33	770.4	50	10.0	58	N	8	3.6		0	0			0.75	19.1	Clear	
New York, N. Y.			30.34	770.6	50	10.0	51	NW	8	3.6		0	0			0.95	24.1	Clear	
Norfolk, Va.			30.22	767.6	61	16.1	77	NE	8	3.6			10s		NE	0.25	6.3	Cloudy	
North Platte, Neb.	27.14	689.3	29.67	753.6	55	12.8	80	Calm	0	0		5k	2s	W		0	0	Fair	
Omaha, Neb.	29.09	738.9	30.16	766.1	51	10.6	86	SE	8	3.6		5ck	0	SW		0	0	Fair	
Oswego, N. Y.			30.45	773.4	49	9.4	64	S	4	1.8		0	0			0.10	2.5	Clear	
Peck's Beach, N. J.			30.00	769.6	54	12.2	73	NE	16	7.2		Haze	4s			0.62	15.7	Fair	
Pembina, Dakota			30.01	762.2	48	8.9	92	SE	20	8.9			10s		SE	0	0	Threatening	
Philadelphia, Penn.			30.35	770.9	50	10.0	58	NE	17	7.6		0	0			0.94	23.9	Clear	
Pike's Peak, Colorado	18.01	457.4	30.22	767.6	28	—2.2	100	W	20	8.9			10s		W	0.06	1.5	Cloudy	
Pittsburgh, Penn.			30.35	770.9	46	7.8	84	E	6	2.7		0	0			0.55	14.0	Clear	
Port Huron, Mich.			30.43	772.9	47	8.3	55	E	10	4.5		0	0			0	0	Clear	
Portland, Me.			30.31	769.9	48	8.9	56	N	9	4.0		0	0			0.25	6.3	Clear	
Portland, Oregon			30.24	768.1	47	8.3	100	Calm	0	0			Fog			0	0	Foggy	
Punta Rassa, Fla.			30.04	763.0	79	26.1	78	E	6	2.7		Haze	8m'c			0	0	Clear	
Rochester, N. Y.			30.42	772.7	49	9.4	57	SE	7	3.1		2k	0	SE		0.08	2.0	Clear	
Salt Lake City, Utah	25.64	651.2	29.97	761.2	58	14.4	46	NE	8	3.6		0	0			0	0	Clear	
Sandy Hook, N. J.			30.31	770.6	51	10.6	59	N	24	10.7		1k	0	NE		0.79	20.1	Clear	
San Diego, Cal.			30.02	762.5	59	15.0	87	NE	8	3.6		0	0			0	0	Clear	
San Francisco, Cal.			30.01	762.2	54	12.2	87	SW	16	7.2			10s			Inap.	Inap.	Cloudy	
Santa Fe, N. M.	23.38	593.8	29.92	760.0	52	11.1	79	NW	4	1.8			10s			0.44	11.2	Cloudy	
Savannah, Ga.			30.01	762.2	79	26.1	74	S	4	1.8		2ck	8m'c			0	0	Fair	
Shreveport, La.			30.09	764.3	77	25.0	86	ENE	4	1.8			10s		NE	0	0	Cloudy	
Smithville, N. C.																			
Springfield, Mass.			30.37	771.4	49	9.4	57	N	8	3.6		0	0			0.30	7.6	Clear	
St. Louis, Mo.			30.19	766.8	51	10.6	86	E	12	5.4		0	0			0	0	Clear	
St. Marks, Fla.			30.02	762.5	75	23.9	90	W	3	1.3		5cs	5ks		N	0	0	Cloudy	
St. Paul, Minn.			30.27	768.8	45.5	7.5	76	SE	10	4.5		8c	0	W		0	0	Fair	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			30.24	768.1	54	12.2	60	NE	20	8.9		5k	0	NE		2.07	52.6	Fair	
Toledo, Ohio			30.31	769.9	51	10.6	78	SW	3	1.3		8c	5s	W		0.02	0.5	Cloudy	
Tucson, Arizona																			
Tybee Island, Ga.			30.01	762.2	80	26.7	78	SW	4	1.8		2c	2s	SW		0	0	Fair	
Vicksburg, Miss.			30.13	765.3	72	22.2	90	NE	4	1.8			10s		NE	0.21	5.3	Cloudy	
Virginia City, Montana	24.39	619.5	29.87	758.7	41	5.0	48	SE	7	3.1		0	0			0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.37	771.4	51.5	10.8	62	N	16	7.2		2c	1s	NW	N	0.03	0.8	Fair	
Wilmington, N. C.			30.10	764.5	65	18.3	83	NE	12	5.4			10s		NE	0	0	Cloudy	
Wood's Hole, Mass.			30.30	769.6	54	12.2	55	NE	6	2.7		2k	2s	NE	NE	0.48	12.2	Fair	
Wytheville, Va.	27.87	707.9	30.03	762.7	54	12.2	73	E	8	3.6			10s			0.40	10.2	Cloudy	
Yankton, Dakota	28.87	733.3	30.18	766.6	46	7.8	88	SE	10	4.5		5c	0	W		0	0	Fair	
Sub-Series.																			
Bridgetown, B'b'does, W. I.					80	26.7	95	NE	10	4.5			10ks			0	0	Cloudy	E. Racker.
Pointe-aPitre, G'd'loupe, do			29.86	758.4	82	27.8	74	SE				0	8k			0.21	5.3	Fair.	L. V. Bigard.
Havana, Cuba, W. I.			30.14	765.5	78	25.6	86	Calm	0	0		5c	5ks, k	NNW	NE	0.25	6.3	Cloudy	Charles Hasselbrink.
Kingston, Jamaica, W.																			James Gall.
St. Thomas, St. T., W. I.																			W. S. Cameron.
Santiago de Cuba, W. I.			29.70	754.4	80	26.7	70	N	9.6	4.3		0	2ks		NE	0	0	Fair	Robert Mason.
St. Georges, Bermudas			30.01	764.5	79	26.1	72	SW	2.7	1.2		0	8n			0.340	8.64	Cloudy	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.			29.86	758.4	43.5	24.4	76	SW	6	2.7		5c	0	W		0	0	Fair	J. Fortescue.
St. John's, Newfoundland			29.67	753.6	52	11.1	80	SW				Sm'c	5s			0.35	8.9	Fair	John Delaney.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Clifton, Jamaica, W. I.	27.13	689.1	29.90	759.4	70	21.1	84	S	1	0.4		2c	0	NE		0.29	7.4	Fair	C. Partridge.
Navassa																			
Meseilin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			30.56	776.2	51	10.6	65	E	12	5.4			8ks			2.00	50.8	Cloudy	H. M. Redington.

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

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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 Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,089 (?) ft., or 330.1 (?) 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.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 0.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 12, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.04	762.9	79.9	26.6	49	NNW			1		0			0	0	Fair	Charnot.
Algiers			29.98	761.5	79.5	26.4	71	NNE			2		5			0.039	1.0	Lightning	Peter.
La Calle																			Kuntz.
Tunis			30.19	766.9	86.9	30.5	49	ESE			4		4			0.209	5.3	Threatening	Jacques.
Sfax			30.26	768.7	82.8	28.2	58	ESE			3		2			0	0	Fair	Chauvey.
Saida			30.08	764.1	79.7	26.5	34	NNE			2		2			Inap	Inap	Foggy	Grosjean.
Tebessa			30.07	763.8	77.7	25.4		NE			1		2			0.039	1.0	Thunder	Colin.
Gerlville			30.07	763.8	82.4	28.0	17	SE			5		3			Inap.	Inap.	Cloudy	Bernadach.
Laghouat			30.05	763.3	82.4	28.0	33	S			4		2			0	0	Cloudy	Simon.
Biskra			30.10	764.6	90.0	32.2	34	E			2		2			0	0	Sirocco	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.26	768.6	77.0	25.0	46	NE			1		2			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.34	770.5	69.8	21.0	60	NE			1		5			0	0		I. R. Observatory.
Eperies			30.26	768.7	68.9	20.5	68	NE			3				S	0	0		Julius Mikolik.
Gratz			30.25	768.1	70.5	21.4	60	NE			2		0						Andreas Rospini.
Hermannstadt	29.08	738.6	30.22	767.5	64.8	18.2	55	NNW			2		3			0	0		Prof. Reissenberger.
Kremsmünster	28.82	732.0	30.19	766.9	72.7	22.6	48	E			3		0			0	0		Prof. C. Wagner.
Lemberg	28.90	734.0	30.27	768.9	60.6	15.9	80	NW			2		4			0	0		Dr. T. Stanecki.
Nytregyhaza			30.36	771.1	70.5	21.4	45	NE			3		1			0	0		Habzsuda Daniel.
Pola			30.27	768.9	74.8	23.8	67	WNW			2		1k			0	0		I. R. Hydrographic Office
Szegedin			30.21	767.2	71.6	22.0	53	SW			1		1			0	0		Karl Stancel.
Trieste			30.27	768.9	74.7	23.7	63	NW			1		0			0	0		Prof. V. Farolfi.
Vienna			30.24	768.0	75.7	24.3	38	SE			2		1			0	0		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.21	767.2	71.8	22.1	63	E			3	1	0			0	0		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.39	771.9	58.1	14.5		ESE	5	2.2			1			0	0	*D. clouds	William Boswell.
Ardrossan																			James Mayes.
Armagh Observatory			30.40	772.1	65.0	18.3		SE	3	1.3			0					Hazy	S. Cali, for Dr. Robinson.
Bidston, Liverpool Obs			30.3	770.6	64.8	18.2		ESE			1		0					Hazy	John Hartnup, Jr.
Birr Castle, (Parsonstown)			30.35	770.9	62.7	17.1		Calm			0		0					Clear	J. Dreyer.
Bradford																			*J. McLandsborough.
Bridgetown, (Barbadoes)			29.94	760.5	84.0	28.9		E			1		8					*D. clouds	T. H Hunt.
Cambridge Observatory			30.32	770.1	65.0	18.3		NE			1		10					Overcast	Sergeant Hunt, A. H. C.
Cape Good Hope Obs			30.05	763.3	64.6	18.1	65	SSE	14	6.3			1						Th Staff, for E. J. Stone.
Cardington			30.33	770.4	63.0	17.2		NE					10					Overcast	John McLaren.
Carlisle			30.37	771.4	70.7	21.5		Calm					0					Clear	T. Bell, for J. Cartmell.
Chatham, School M. E			30 26	768.6	65.7	18.7		N			2		7						Capt. J. Fellowes, R. E.
Dartmoor	28.84	732.5	30.21	767 3	58.5	14.7		NE			2		2					Clear	R. E. Power.
Donaghadee			30.39	771.9	62	16.7		E			2		3					*D. clouds	J. Mac Gowan, Jr.
Dover			30.25	768.3	65	18.3		NE			5		7						J. Costello.
Eccles, (near Manchester)			30.34	770.6	70.8	21.6		NE	1.2	0.5								Misty	Thomas Mackereth.
Falmouth Observatory			30.27	768.8	63.9	17.7		ESE	19	8.5			7					Overcast	The Staff.
Fort Napier, (Natal)	27.73	704.3	29.96	761.0	74.8	23.8		E			3		5					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.98	761.5	78	25.6		W					7						
Galway, Queen's College																			B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.05	763 3	75.5	24.2		WSW			4		4					*D. clouds	Sergt. E. G. Baker.
Glasgow Observatory			30.37	771.4	64.5	18.1		W			1		3					Fine	Lewis Stuart.
Great Yarmouth			30.32	770.1	62	16.7		NE			4		8					Overcast	G. T. Watson.
Greenwich Royal Obs			30.29	769.4	70.1	21.2		NE			1		3					Hazy	The Staff, for G. B. Airy.
Guernsey			30.20	767.1	62	16.7		NE			2		10					Misty	Dr. S. E. Hoskins, R. N.
Halifax, Moorside Obs			30.38	771.6	67.3	19.6		E					0					Clear	F. J. Page, for L. J. Crosse.
Helston			30.22	767.6	69	20.6		ESE			4		32					*D clouds	M. P. Moyle.
Holyhead			30.34	770.6	64	17.8		NE			4		0					Clear	John Tilston.
Hull Park																			
Kew Observatory			30.30	769.6	65.9	18.8		NNE	13	5.8			6					Misty	The Staff.
Kingstown			30.40	772.1	59	15.0		NE			1		3					Light fog	George Mitchell.
Leicester Museum			30.38	771.6	60.5	15.8		NE			1		10					Overcast	William J. Harrison.
Llandudno			30.35	770 9	67.0	19.4		NE					0					Clear	Dr. James Nicol.
Malta, (Mediterranean)			30.24	768.1	82.8	28.2		SE			1		2k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			30.23	770.4	70	21.1		Calm			0		0						W. D. Penny.
Nassau, (Bahamas)			30.04	763.0	83.2	28.4		E			3		6					Thunder-storm	Surg.-Maj. Henry.
Nottingham			30.37	771.4	67.6	19.8		NNE			4		2k		ENE	0	0	Clear	E. J. Lowe.
Oscott, St Mary's College			30.36	771.1	58.2	14.6		NE			4		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			30.30	769.6	61	16.1		NE			2		10					Gloomy	J. Lucas, for R. Main.
Plymouth			30.24	768.1	70.5	21.4		NE			1		0					Clear	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			30.33	770.4	63	17.2		SSE			2		2					Fine	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, (Jersey)			30.16	766.1	67.8	19.9		E			6		8						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough																			F. Shaw.
Scutari cemetery, (Turkey)			30.21	767.3	72.0	22.2		NE			2		4					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.37	771.4	65	18.3		ESE			2		1					Clear	W. F. Cooper.
Silloth Rectory			30.38	771.6	67.1	19.5		Calm			0		0			0	0	Clear	Rev Francis Redford.
Stonyhurst Observatory			30.35	770.9	67.6	19.8		E			1		0					Clear	The Staff.
Stornoway, Lews C. (Hebr)			30.32	770.1	63	17.2		WSW			4		2					Clear	John Smith.
Strathfield Turgiss			30.30	769.6	65.2	18.4		E			1-2		8					*D. clouds	Rev Charles H. Griffith
Streatley Vicarage																			Rev. John Slatter.
Sumburgh Head, (Shetland)																			
Thurso			30.32	770.1	63	17.2		NNE			2		0					Clear	John Trotter.
Truro, Royal Institution			30.22	767.6	74	23.3		E			2		10					Gloomy	W Newcombe.
Valencia Observatory			30.35	770.9	63.9	17.7		SSW	5	2.2			0					Hazy	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			30.38	771.6	69.0	20.6		NW			1					0	0		Andrew Gibb.
Monach Lt-house, (Shet Is)																			
North Unst, (Shetland Is)																			

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			30.23	767.7	73.6	23.1	56	NW			2		7						
Faröe			30.28	769.0	69.4	20.8	70	WNW			4		3						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.65	753.2	50.7	10.4	80	SSW			7		5						
Thorshavn, (Faröe)											4		10					Foggy	
Vestervig			30.27	768.9	63.1	17.3	77	WSW			4		6						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Agen			30.11	764.7	68.0	20.0	66	N			3					0.079	2.0	Raining	Normal School.
Amiens																			Normal School.
Avignon			30.15	765.5	72.7	22.6	68	ESE			3		8		S	0.031	0.8	Cloudy	Normal School.
Bar-sur Seine			30.08	76..0	79.0	26.0	54	E			2		2ck			0	0		C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais																			Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.11	764.9	75.[illegible]	24	70	SW			1		10			0	0	Cloudy	Normal School.
Bourges			30.08	763.9	78.8	26	62	ENE			4		8		ENE	0	0	Cloudy	Normal School.
Brest			30.07	763.8	66.0	18.9	80	NE			4		10		NE	0	0	Misty	Naval Observatory.
Caen																			Normal School
Chartres			30.20	767.1	73.4	23		NE			3		5		N				Normal School.
Chaumont	29.08	738.5	30.21	767.2	69.8	21		NW			1		2c		NW	0	0		Normal School.
Commercy			30.20	767.1	70.9	21.6	69	E			2		..k		E	0	0	Clear	Normal School.
Commune de Gréasque*			30.23	767.8	70.3	21.3	61	SE			4		10		SE	0.157	4.0		
Le Mans																			Normal School.
Lons-Le Saulnier			30.11	764.8	76.5	24.7	74	N			1		0			0	0	Clear	Normal School.
Mâcon			30.11	764.7	69.8	21	89	ESE			2		5		NNW	0	0	Cloudy	Normal School.
Mirecourt			30.15	765.7	69.3	20.7	59	N			1		0			0	0	Clear	Normal School.
Orleans																			Normal School.
Paris Observatory			30.14	765.5	75.4	24.1	55	ENE			2		0			0	0	Clear	National Observatory.
Parthenay			30.22	767.5	67.3	19.6	82	NW			2		0					Clear	Normal School.
La Roche sur Yon			29.97	761.3	67.5	19.7	98	NE			6								Normal School.
Rochefort, Observatory			29.97	761.2	70.3	21.3	63	E			4		8		W	0.110	2.8	Cloudy	Naval Observatory.
Rouen			30.16	766.1	77.5	25.3	56	NE			2		0			0	0	Clear	Normal School.
Saint Lo																			Normal School.
Villefranche																			Normal School.
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchésl.
Mont-Louis					58.2	14.6	49	S	31.7	14.17			5		S	1.941	49.3		—. Faiguère.
Montsouris Observatory			30.11	765.6	77.7	25.4	60	E			3		1c			0	0		Marié Davy.
Perpignan			30.01	762.3	74.5	23.6	51	E	11.1	5.06			8		SE	4.394	111.6		Dr. Fines.
Saint Maur, (near Paris)			30.15	765.7	75.7	24.3	63	NE			1		0			0.011	0.4	Clear	E. Renou.
Tours			30.07	763.6	73.4	23.0	59	SSE			2		8		SE	0.024	0.6		C. Marquet.
Versailles, (near Paris)			30.15	765.9	75.9	24.4	62	E			3		0			0	0	Clear	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai			29.96	760.9	74.8	23.8	86	ESE	6.9	3.1		..ks	..kn			0.039 / 0.063	1.0 / 1.6	Lunar corona	H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,201.8 feet; Chaumont, 332 m., or 1,090.9 ft.; Commune de Gréasque, 322 m., or 1,056.4 ft. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles.

GERMAN SERIES.

Furnished by the coöperation of Prof. Geo. Neumayer, Superintendent Royal 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.22	767.5	71.6	22.0	46	E	13	6			3			0	0		Prof. Hoh.
Berlin			30.31	769.9	76.6	24.8	31	SE	4	2			0			0	0		Prof. Arndt.
Breslau			30.41	772.5	70.5	21.4	50	SE	2	1			0			0	0		Dr. P. Neugebauer.
Carlsruhe			30.16	766.0	76.6	24.8	54	NE	11	5			1			0	0		A. Senz.
Cassel			30.13	765.4	80.2	26.8	34	E	13	6			0			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.76	730.6	30.19	766.7	67.1	19.5	72	W					0			0.008	0.2		M. Wilhelm.
Hamburg			30.31	769.8	71.6	22.0	50	SE	11	5			0			0	0	Clear	Deutsche Seewarte.
Kiel			30.27	768.9	75.7	24.3	51	NNW	18	8			0			0	0		Prof. G. Karsten.
Königsberg			30.28	769.2	66.2	19.0	54	NW	11	5						0.001	0.02	Cloudy	Prof. E. Luther.
Koslin																			Dr. Tägert.
Leipsic			30.31	769.8	76.6	24.8	39	E	4	2			0			0	0		Prof. Bruhns.
Münster			30.27	768.8	78.4	25.8	53	S	13	6			0			0	0		Prof. E. Heis.
Posen			30.35	770.9	72.7	22.6	44	SSE	9	4			0			0	0	Clear	Dr. Magener.
Strassburg, (in Alsace)			30.17	766.3	73.4	23.0	58	N	7	3			0			0	0		Hartwig.
Stuttgart			30.17	766.4	77.0	25.0	51	E					0			0	0		Mr. Würth.
Thorn			30.32	770.2	71.2	21.8	47	W	13	6			2			0	0		Dr. Rasenbalg.
Trever, (Trier)			30.14	765.6	79.3	26.3	37	NE	27	12			0			0	0		Prof. Flesch.
Wustrow, Naval School			30.32	770.1	67.1	19.5	76	W	13	6			2c			0	0	Clear	E. F. Schütz.

Note.—In the originals the distinction between 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.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.32	770.3	73.9	23.3	52	WNW			1		3	S		0	0		
Mondovi			30.30	769.6	69.4	20.8	54	NW			2		4	SE		0	0		
Genoa			30.25	768.4	82.0	27.8	45	N	1.8	0.8			0			0	0		
Pavia			30.28	769.1	77.0	25.0	45	N			1		0			0	0		
Verona			30.26	768.5	80.6	27.0	50	E			2		4			0	0		
Padua			30.26	768.5	75.0	23.9	56	SSW	0.7	0.3			1			0	0		
Parma																			
Bologna			30.29	769.4	77.5	25.3	52	SE			1		3	N		0	0		
Leghorn			30.26	768.5	80.1	26.7	50	WSW	3.1	1.4			3			0	0		
Urbino																			
Ancona																			
Siena																			
Rome			30.23	767.8	78.1	25.6	38	E	0	0			1	W		0	0		
Naples, O. U.			30.26	768.5	83.7	28.7	47	SW	6.9	3.1			3			0	0		
Lecce			30.27	768.8	82.4	28.0	42	SW			2		0			0	0		
Cosenza			30.28	769.2	74.7	23.7	53	NNE			4		1	N		0	0		
Catania, (Sicily)			30.30	769.5	73.0	22.8	59	NW			2		2			0	0		
Ripozzo																			
Palermo			30.19	766.9	79.7	26.5	64	SE			2		1	NE		0.205	5.2		
Sub-Series.																			
Naples, S. R.			30.19	766.8	79.3	26.3	65	NE	9.8	4.4			7			0	0		
			30.30	769.7	82.4	28.0	46	WNW	(?)	(?)			(?)	NW		0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; the cloudiness occasionally by the scale 0 to 4, and generally without distinguishing between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovi is 555 meters, or 1,821.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 318.5 m., or 1,144.3 feet.

NETHERLANDS' SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 1—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Flushing			30.26	768.5	74.1	23.4		NE			3								
Groningen			30.23	767.8	75.6	24.2		ENE			1								
Helder			30.27	768.9	69.4	20.8		NNE			3								
Utrecht			30.21	767.3	77.9	25.5		E			3		0					Clear	

Note.—The originals give the wind-pressure in kilograms per square meter; the 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			30.22	767.5	58.5	14.6	93	W	0.4	0.2			10			0.551	14.0	Foggy	
Christiania			30.14	765.5	66.7	19.3	61	W	3.1	1.4			4			0	0		
Tromsö			29.95	760.7	49.1	9.5	94	W			2		10			0.205	5.2	Raining	

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Lisbon			30.07	763.6	68.7	20.4	47	NNW	19.9	8.9			1						The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

RUSSIAN SERIES.

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

Warsaw			30.31	769.8	67.1	19.5	52	N	2	1			7						Astronomical Obs.
Wilna			30.30	769.5	60.8	16.0	36	NW	4	2			10						Astronomical Obs.
Dorpat			30.22	767.5	52.9	11.6	61	SSW	7	3			10						Physical Cabinet.
St. Petersburg			30.17	766.4	56.1	13.4	53	W	4	1			2						Central Physical Obs.
Kuopio			30.10	764.6	53.8	12.1	66	E					0			0	0		Ch. Forsten.
Kieff			30.26	768.6	55.2	12.9	43	NW	7	3			2						Physical Cabinet.
Nikolaiev			30.28	769.0	59.5	15.3	40	N	13	6			1						Kurdakof.
Kertch			30.09	764.2	60.3	15.7	73	NNW	9	4			9						Lagorio.
Moscow			30.27	768.8	44.4	6.9	80	NW	8	3.5			7					Rainy	Meteorological Obs.
Lugan			29.99	761.7	55.8	13.2	39	NNE	20	9			8						Meteorological Obs.
Archangel			30.39	771.9	45.9	7.7	72	N	4	2			9						Ogorodnikof.
Tiflis	28.57	723.6	29.95	760.6	67.6	19.8	58	N	4	2			9						Physical Obs.
Astrakhan			30.02	762.5	75.4	24.1	40	SW	8	3.5			3						Sebastianof.
Kasan			30.11	765.5	46.9	8.3	52	N	0	0			9						Physical Cabinet.
Orenburg			30.13	765.4	53.4	11.9	35	E	10	4.5			10						Tschernischef.
Ekaterinburg	28.99	736.3	30.02	761.6	36.3	2.4	79	W	20	9			10						Meteorological Obs.
Kasaly			29.95	760.7	77.0	25.0	47	W	8	3.5			0						Bobrof.
Tashkend	28.39	721.1	30.04	762.9	73.8	23.2	72	Calm	0	0			0						Michelson.
Barnaul			29.85	758.1	72.5	22.5	35	Calm	0	0			3						Meteorological Obs.
Yeniseisk			29.79	756.7	64.8	18.2	71	SE	2	1			0						Marks.
Irkutsk	28.70	729.0	30.00	764.2	47.8	8.8	54	Calm	0	0			0						Usolzef.
Oorga																			Mossin.
Peking, (China)			30.34	770.7	57.7	14.3	69	Calm	0	0			8			Blank	Blank		Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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			29.96	761.0	71.1	21.7	33	SW	12.8	5.7		0	4			0	0		Royal Observatory.
San Fernando																			The Naval Observatory.

Note.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea			29.89	759.3	55.8	13.2	91	NW			2		10			0	0	Rain, fog	
Hernosand			30.04	762.9	62.6	17.0	76	S			2		8			0	0		
Stockholm			30.00	762.0	64.9	18.3	70	WSW			2		10			0	0		
Wisby			30.12	765.1	64.4	18.0	82	WSW			4		5			0	0		
Sub-Series.																			
Upsala			30.02	762.5	63.3	17.4	78	WSW	10.3	4.6			10		W				Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.76	730.5	30.14	765.6	70.7	21.5	68	NW			2		5			0	0	Misty	The Observatory.
Zurich	28.57	725.6	30.13	765.3	77.0	25.0	54	NW			1		1			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +3.4mm.; Thermometer, +3°.0; Relative Humidity, +6 per cent.

Note.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y.																			Prof. C. N. A. Van Dyck.
Constantinople			30.22	767.5	64.9	18.3	52	NNE	19.0	8.5			8		N	0	0	Cloudy	
Fao, (Persian Gulf)			29.81	757.3	95.6	35.0		NW			3		0					Clear	
Salonica					84.2	29.8		S			1		2						
Valona			30.21	767.3	73.8	23.2		W			1		0					Clear	
Varna			30.16	766.0	73.4	23.0		NE			2		5					Cloudy	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea level. The distinction between upper and lower clouds is not made.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens																			

Note.—Reports commence October 1, 1875.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Takio																			

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario			30.38	771.6	53	11.7		W	1	0.4		5c	1s	W	W	0	0	Cloudy	
Chatham, N. B.			30.41	772.4	48	8.9	77	W	3	1.3		0	0			0	0	Clear	
Charlottetown, P. E. Island			30.43	773.2	52	11.1	68	NW	8	3.6		0	0			0	0	Clear	
Fort Garry, Manitoba			30.01	762.2	42	5.6	91	W	8	3.6		0	0			0	0	Clear	
Halifax, N. S.			30.43	773.2	54	12.2	68	NW	3	1.3		0	0			0	0	Clear	
Kingston, Ontario			30.38	771.6	57	13.9	73	S	11	4.9		5ck	1s			0	0	Fair	
Montreal, Quebec			30.37	771.4	49	9.4	92	S	11	4.9		Haze	8s			0	0	Cloudy	
Ottawa, Ontario			30.36	771.1	44	6.7	83	E	5	2.2		8c	Sm'e		E	0	0	Fair	
Parry Sound, Ontario			30.19	766.8	52	11.1	79	SE	12	5.4		2k	5ks	SE	SE	0	0	Fair	
Port Dover, Ontario			30.20	767.1	58	14.4	58	S	20	8.9		10k	0	SW		0	0	Cloudy	
Port Stanley, Ontario			30.20	767.1	57	13.9	68	SE	30	13.4			10s		SE	0	0	Clear	
Quebec, Quebec			30.39	771.9	51	10.6	72	Calm	0	0		0	0			0	0	Cloudy	
Saugeen, Ontario			30.16	766.1	51	10.6	96	SE	6	2.7		5ck	1ks		W	0	0		
Stayner, Ontario																0	0	Clear	
Sydney, C. B.			30.42	772.7	56	13.3	72	W	3	1.3		2k	0	N				Cloudy	
Toronto, Ontario			30.22	767.6	56	13.3	74	SE	4	1.8		5cs	5s	W	W				

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.43	772.9	45	7.2	100	Calm	0	0			Fog			0	0	Foggy	
Alpena, Mich.			30.06	763.5	55	12.8	79	S	4	1.8		2c	0			0	0	Clear	
Atlantic City, N. J.			30.38	771.6	64	17.8	67	E	20	8.9			10s		E	0	0	Cloudy	
Augusta, Ga.			30.21	767.3	62	16.7	77	N	6	2.7			10s		N	Inap.	Inap.	Cloudy	
Baltimore, Md.			30.37	771.4	58	14.4	69	NE	8	3.6			10s			0	0	Cloudy	
Barnegat, N. J.			30.40	772.1	63	17.2	65	E	15	6.7		0	8ks		E	0	0	Cloudy	
Benton, Montana	27.34	694.4	30.14	765.5	38	3.3	71	Calm	0	0		0	0			0	0	Clear	
Bismarck, Dakota	28.38	720.8	30.07	763.8	41	5.0	64	SW	2	0.9		Haze	0			0	0	Clear	
Boston, Mass.			30.47	773.9	54	12.2	68	Calm	0	0		8c	Fog			0	0	Foggy	
Breckenridge, Minn.			30.19	766.8	40	4.4	91	S	2	0.9		0	0			0.04	1.0	Clear	
Buffalo, N. Y.			30.21	767.3	56	13.3	45	S	4	1.8		10k	0	SW		0	0	Cloudy	
Burlington, Vt.			30.41	772.4	51	10.6	65	S	5	2.7		5c	0			0	0	Fair	
Cairo, Ill.			30.12	765.0	63	17.2	88	Calm	0	0			10s		SW	0	0	Cloudy	
Cape Hatteras, N. C.			30.16	766.1	72	22.2	80	E	28	12.5			10s		E	0.10	2.5	Cloudy	
Cape Henry, Va.			30.26	768.6	70	21.1	70	E	34	15.2		5ck	Haze	E		0	0	Fair	
Cape May, N. J.			30.36	771.1	65	18.3	58	E	12	5.4			10s		E	0	0	Cloudy	
Charleston, S. C.			30.14	765.5	65	18.3	83	N	12	5.4			10s		E	0.35	8.9	Cloudy	
Cheyenne, Wyoming	24.19	614.4	30.13	765.3	51	10.6	93	SE	6	2.7		0	10s		SW	0.04	1.0	Cloudy	
Chicago, Ill.			30.07	763.8	58	14.4	76	Calm	0	0		0	0			0	0	Clear	
Cincinnati, Ohio			30.03	762.7	62	16.7	88	SE	5	2.2			Fog			0	0	Foggy	
Cleveland, Ohio			30.15	765.8	51.2	10.7	65	SE	16	7.2			8ks		W	0	0	Fair	
Colorado Springs, Col.	24.25	615.9	30.12	765.0	52	11.1	79	N	4	1.8		10k	0	N		0	0	Cloudy	
Corsicana, Tex.			30.03	762.7	72	22.2	90	E	1	0.4		2c	0			0	0	Fair	
Davenport, Iowa			30.12	765.0	51	10.6	86	N	4	1.8		0	Fog			0	0	Clear	
Denison, Tex.			30.01	762.2	72	22.2		SE					Fog			0	0	Foggy	
Denver, Col.	24.93	633.2	30.15	765.8	57	13.9	81	N	2	0.9		5ck	5ks	W	NW	0.02	0.5	Cloudy	
Detroit, Mich.			30.12	765.0	57	13.9	75	SE	3	1.3		2ck	5ks		SE	0	0	Fair	
Dodge City, Kan.	27.44	697.0	29.65	753.1	65	18.3	89	E	12	5.4			Fog			0	0	Foggy	
Dubuque, Iowa			30.13	765.3	50	10.0	86	NE	4	1.8			Fog			0	0	Foggy	
Duluth, Minn.			30.01	762.2	54	12.2	73	W	20	8.9		0	0			0	0	Clear	
Eastport, Me.			30.47	773.9	51	10.6	72	Calm	0	0		5c	0	NW		0	0	Fair	
Erie, Pa.			30.14	765.5	53	11.7	60	SE	34	15.2		8cs	0	SW		0	0	Fair	
Escanaba, Mich.			30.05	763.3	48	8.9	49	SW	5	2.2		5k	0	S		0	0	Fair	
Fort Gibson, I. T.			30.02	762.5	69	20.6	90	E	4	1.8		2ck	5s	W	W	0	0	Fair	
Fort Sill, I. T.																			
Fort Sully, Dakota	28.48	723.4	30.16	766.1	46	7.8	85	Calm	0	0		0	0			0	0	Clear	
Galveston, Tex.			30.03	762.7	80	26.7	78	NE	7	3.1			10s		NE	0.08	2.0	Cloudy	
Grand Haven, Mich.			30.09	764.3	55	12.8	68	E	5	2.2		1cs	0			0	0	Clear	
Indianapolis, Ind.			30.06	763.5	61	16.1	77	E	1	0.4			10s			0	0	Cloudy	
Indianola, Tex.			30.02	762.5	79	26.1	74	S	4	1.8		5cs	5ck		S	0	0	Cloudy	
Jacksonville, Fla.			30.07	763.8	71	21.7	90	N	8	3.6			10s			0.09	2.3	Cloudy	
Keokuk, Iowa			30.08	764.0	52	11.1	86	Calm	0	0		0	0			0	0	Clear	
Key West, Fla.			29.95	760.7	82.9	28.3	71	NE	11	4.9		Haze	2ks			0	0	Fair	
Kittyhawk, N. C.			30.19	766.8	71	21.7	95	NE	26	11.6		0	1ks		S	0.12	3.0	Threatening	
Knoxville, Tenn.			30.18	766.6	58	14.4	87	NE	3	1.3			10n			0.11	2.8	Light rain	
La Crosse, Wis.			30.10	764.5	53	11.7	86	S	1	0.4			Fog			0	0	Foggy	
Leavenworth, Kan.			30.09	764.3	61	16.1	76	E	1	0.4			10s			0	0	Cloudy	
Lexington, Ky.	29.03	737.4	30.12	765.0	61	16.1	100	S	8	3.6			10n			0.11	2.8	Light rain	
Long Branch, N. J.			30.42	772.7	62	16.7	61	SE	15	6.7		10ck	0	E		0	0	Cloudy	
Louisville, Ky.			30.10	764.5	62	16.7	94	Calm	0	0			Fog			Inap.	Inap.	Foggy	
Lynchburg, Va.			30.34	770.6	58	14.4	64	NE	3	1.3			10s			0	0	Cloudy	
Malone, N. Y.			30.32	770.1	57	13.9	59	SE	12	5.4		10cs	0			0	0	Cloudy	
Marquette, Mich.			30.00	762.0	54	12.2	61	SW	16	7.2			8s		SW	0	0	Cloudy	
Memphis, Tenn.			30.12	765.0	65	18.3	89	E	1	0.4		2ck	5s		NW	0	0	Cloudy	
Milwaukee, Wis.			30.10	764.5	49	9.4	93	NW	4	1.8			Fog			0	0	Foggy	
Mobile, Ala.			30.05	763.3	76	24.4	90	N	6	2.7		5ck	2s		E	0.01	0.3	Cloudy	
Montgomery, Ala.			30.15	765.8	65.5	18.6	78	E	6	2.7			10s		E	0.01	0.3	Cloudy	
Morgantown, W. Va.			30.23	767.8	55	12.8	67	SE	2	0.9		2cs	8s	NW		0	0	Threatening	
Mt. Washington, N. H.	24.16	613.6	30.52	775.2	37	2.8	48	Calm	0	0		2c	2s			0	0	Fair	
Nashville, Tenn.			30.41	764.8	63	17.2	88	SE	6	2.7			10s		SE	0.09	2.3	Cloudy	
New Haven, Conn.			30.47	773.9	57	13.9	69	NE	8	3.6		8cs	0			0	0	Fair	
New London, Conn.			30.47	773.9	54	12.2	74	N	5	2.2		8c	0	W		0	0	Fair	
New Orleans, La.			30.02	762.5	79	26.1	78	NE	12	5.4			10s		NE	0	0	Cloudy	
Newport, R. I.			30.47	773.9	57	13.9	69	E	4	1.8		8ks	0	W		0	0	Cloudy	
New York, N. Y.			30.43	772.9	55	12.8	68	Calm	0	0		2c	Fog			0	0	Fair	
Norfolk, Va.			30.27	768.8	68	20.0	69	E	10	4.5		5c	0	N		0	0	Fair	
North Platte, Neb.	27.20	690.9	29.72	754.9	59	15.0	94	Calm	0	0			10s		SW	0	0	Cloudy	
Omaha, Neb.	29.03	737.4	30.08	764.0	60	15.6	88	S	1	0.4		10ck	0	N		0	0	Cloudy	
Oswego, N. Y.			30.35	770.9	54	12.2	73	SSE	5	2.2		4cs	4s	SW		0	0	Fair	
Peck's Beach, N. J.			30.38	771.6	64	17.8	67	E	22	9.8		0	8k		E	0	0	Cloudy	
Pembina, Dakota			30.00	762.0	43	6.1	87	Calm	0	0		0	0			0	0	Clear	
Philadelphia, Penn.			30.40	772.1	54	12.2	79	E	8	3.6		10k	0	S		0	0	Cloudy	
Pike's Peak, Colorado	17.97	456.4	30.18	766.6	29	−1.7	89	NW	14	6.3		0	2s		W	0.02	0.5	Fair	
Pittsburgh, Penn.			30.24	768.1	51	10.6	72	E	6	2.7		8ck	0	W		0	0	Fair	
Port Huron, Mich.			30.15	765.8	55	12.8	68	S	8	3.6		5c	2s	W	W	0	0	Cloudy	
Portland, Me.			30.51	774.9	50	10.0	72	N	2	0.9		2c	Haze			0	0	Fair	
Portland, Oregon			30.06	763.5	52	11.1	72	N	1	0.4		Haze	0			0	0	Clear	
Punta Rassa, Fla.			30.02	762.5	77.9	25.5	78	NE	6	2.7		Haze	Sm'e			0	0	Clear	
Rochester, N. Y.			30.25	768.3	54	12.2	61	SE	8	3.6		8cs	0	SE		0	0	Fair	
Salt Lake City, Utah	25.49	647.4	29.82	757.4	63	17.2	29	SE	4	1.8		0	8cs			0	0	Fair	
Sandy Hook, N. J.			30.41	772.4	62	16.7	61	E	16	7.2		2cs	5ks		E	0	0	Cloudy	
San Diego, Cal.			29.92	760.0	62	16.7	77	Calm	0	0			10s			0	0	Cloudy	
San Francisco, Cal.			29.91	759.7	55	12.8	84	SW	4	1.8			10s			0	0	Cloudy	
Santa Fe, N. M.	23.31	591.8	29.85	758.2	54	12.2	67	N	8	3.6		5c	5s	SW		0.14	3.6	Cloudy	
Savannah, Ga.			30.14	765.5	66	18.9	84	N	12	5.4			10s		N	0	0	Threatening	
Shreveport, La.			30.10	764.5	75	23.9	90	E	4	1.8			10s		SE	0	0	Cloudy	
Smithville, N. C.																			
Springfield, Mass.			30.48	774.4	48	8.9	77	N	4	1.8		10cs	0			0.01	0.3	Fair	
St. Louis, Mo.			30.12	765.0	63	17.2	83	W	4	1.8			0			0	0	Clear	
St. Marks, Fla.			30.06	763.5	76	24.4	86	E	12	5.4		5ck	2s			0	0	Fair	
St. Paul, Minn.			30.05	763.3	53.5	11.9	83	S	2	0.9		0	0			0	0	Clear	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			30.33	770.4	63	17.2	57	SE	12	5.4		2c	5cs		SE	0	0	Cloudy	
Toledo, Ohio			30.10	764.5	55	12.8	80	SE	8	3.6		2k	8s		S	0	0	Cloudy	
Tucson, Arizona																			
Tybee Island, Ga.			30.17	766.3	67	19.4	90	N	25	11.2			10s		NE	0.02	0.5	Threatening	
Vicksburg, Miss.			30.16	766.1	71	21.7	90	NE	2	0.9			10s		NE	0	0	Cloudy	
Virginia City, Montana	24.31	617.5	29.79	756.7	42	5.6	42	SE	13	5.8		4c	0	W		0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.	.....	.....	30.37	771.4	58	14.4	76	NE	8	3.6	.....	2ck	2s	SW	SE	0	0	Fair	
Wilmington, N. C.	.....	.....	30.16	766.1	65	18.3	83	NE	13	5.8	.....	5ck	5s	E	E	0.09	2.3	Cloudy	
Woods Hole, Mass.	.....	.....	30.47	773.9	59	15.0	63	SE	8	3.6	.....	8c	2ks	.....	E	0	0	Cloudy	
Wytheville, Va.	27.93	709.4	30.12	765.0	50	10.0	83	E	4	1.8	.....	.....	10n	.....	.....	0	0	Light rain	
Yankton, Dakota	28.87	733.3	30.15	765.8	54	12.2	90	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub-Series.																			
Bridgetown, B'dos, W. I.	.....	.....	.....	.....	81	27.2	90	E	2	0.9	.....	2ck	2s	.....	.....	0	0	Fair	E. Racker.
Pointe-aPitre, G'Ploupe, do	.....	.....	29.88	758.9	84	28.9	79	E	.....	.....	.....	5c	2ks	E	.....	0	0	Fair	L. V. Bigard.
Havana, Cuba, W. I.	.....	.....	29.98	761.5	83	28.3	74	Calm	0	0	.....	8k, fk	5ks	NE	NE	0	0	Fair	Charles Hasselbrink.
Kingston, Jamaica, W.	.....	.....	29.93	760.2	80	26.7	86	W	1	0.4	.....	2c	8n	S	.....	0	0	Threatening	James Gall.
St. Thomas, St. T., W. I.	.....	.....	30.16	766.1	83	28.3	74	SE	10	4.5	.....	5cs	2k	SE	.....	0	0	Fair	W. S. Cameron.
Santiago de Cuba, W. I.	.....	.....	29.59	751.6	79	26.1	78	N	10.6	4.7	.....	8cs	3n	NE	E	0	0	Cloudy	Robert Mason.
St. Georges, Bermudas	.....	.....	30.10	764.5	78.5	25.8	72	NE	2.7	1.2	.....	0	2k	.....	.....	0	0	Clear	C. F. Allen.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Makawao, Maui, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. P. Church.
Cumberland, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. L. Clarke.
Ft. Chippewyan, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ft. McPherson, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ft. Simpson, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
York Factory, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
St. John's, Newfoundland	.....	.....	29.79	756.7	41.5	5.1	87	NW	15	6.7	.....	0	8k	.....	.....	0.15	3.8	Cloudy	J. Fortescue.
St. John's, Porto Rico, W. I.	.....	.....	30.35	770.9	49	9.4	81	NW	.....	.....	.....	5k	5s	.....	.....	0	0	Cloudy	John Delaney.
Clifton, Jamaica, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Nyassa	27.02	686.3	29.77	756.1	69	20.6	79	NNW	45.0	20.1	.....	.....	10k	.....	.....	1.76	44.7	Raining	C. Partridge.
Medellin, S. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Paramaribo, S. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Elyria, Ohio	.....	.....	30.35	770.9	54.5	12.5	44	E	12	5.4	.....	.....	8ks	.....	.....	0	0	Cloudy	H. M. Redington.

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

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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 Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) 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, 6,86[illegible] (?) ft., or 2,091.6 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.31 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 13, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.08	763.9	79.5	26.4	54	Calm			0		0			0	0	Fair	Charnot.
Algiers			30.01	762.3	80.6	27.0	84	N			2		6			0.118	3.0	Cloudy	Peter.
La Calle																			Kuntz.
Tunis			29.11	764.8	90.3	32.4	37	SE			3		0			0	0	Sirocco	Jacques.
Sfax			30.19	766.9	85.3	29.6	55	S			1		2					Fair	Chauvey.
Saïda			30.09	764.3	84.2	29.0	26	NNE			2		2			0	0	Sirocco	Grosjean.
Tebessa			30.08	764.1	85.3	29.6		SSE			1		0			0	0	Fair	Colin.
Gerlville			30.09	764.3	83.3	28.5	21	SE			4		0			0	0	Clear	Bernadach.
Laghouat			30.10	764.4	86.0	30.0	30	SE			4		2			0	0	Fair	Simon.
Biskra			30.11	764.9	88.7	31.5	33	E			3		2			0	0	Fair	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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			30.05	763.2	75.9	24.4	51	SW			1		3			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.93	760.2	68.5	20.3	63	W			4		10			0.051	1.3		I. R. Observatory.
Eperies			30.00	762.0	66.2	19.0	65	S			2				S	0	0	Thunder-storm.	Julius Mikolik.
Gratz			30.02	762.5	70.3	21.3	68	SW			2		2						Andreas Rospini.
Hermannstadt	28.86	733.0	30.08	764.1	68.0	20.0	69	N			1		7			0	0		Prof. Reissenberger.
Kremsmünster	28.70	728.9	30.04	762.8	71.6	22.0	61	NW			1		3			0	0		Prof. C. Wagner.
Lemberg	28.74	729.9	29.89	759.1	64.8	18.2	77	SW			4		7			0.933	23.7	Rainy	Dr. T. Stanecki.
Nyiregyhaza			30.04	762.9	72.7	22.6	51	SE			3		5			0.178	4.51	Rainy	Habsuda Daniel.
Pola			30.13	765.2	74.5	23.6	73	SW			1		1ks			0	0		I. R. Hydrographic Of'ce
Szegedin			30.00	762.0	71.6	22.0	54	W			1		9			0	0		Karl Stancel.
Trieste			30.11	764.9	75.6	24.2	61	Calm			0		0			0	0		Prof. V. Farolfi.
Vienna			29.99	761.7	75.7	24.3	40	NW			3		7			0	0		I. R. Central Institute.

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

BELGIAN SERIES.

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

Brussels			30.18	766.5	73.8	23.2		ENE			5	0	0			0	0		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.46	773.7	53.2	11.8		E	10	4.5			0			0	0	Clear	William Boswell.
Ardrossan			30.33	770.4	66	18.9		NNE			2		4					*D. clouds	James Mayes.
Armagh Observatory			30.34	770.6	65.3	18.5		NE	7	3.1			0					Clear	S. Cal., for Dr. Robinson.
Bidston, Liverpool Obs.			30.30	769.6	68.5	20.3		ESE			1		0					Hazy	John Hartnup, Jr.
Birr Castle, (Parsonstown)			30.28	769.1	70.7	21.5		NE			1		0					Clear	J. Dreyer.
Bradford			30.31	769.9	66.1	18.9		E			0		0					Clear	J. McLandsborough.
Bridgetown, (Barbadoes)			29.97	761.2	82.4	28.0		E			1		7					*D. clouds	T. H. Hunt.
Cambridge Observatory			30.26	768.6	75.0	23.9		E			1		0					Clear	Sergeant Hunt, A. H. C.
Cape Good Hope Obs.			30.04	763.0	58.0	14.4	84	WNW	13	5.8			10						The Staff, for E. J. Stone.
Cardington			30.26	768.6	74.0	23.3		NE					0					Clear	John McLaren.
Carlisle			30.33	770.4	74	23.3		Calm					0			0	0	Clear	T. Bell, for J. Cartmell.
Chatham, School M. E.			30.23	767.8	68.2	20.1		NE			2		4					Fair	Capt. J. Fellowes, R. E.
Dartmoor	28.77	730.7	30.15	765.8	64.5	18.1		E			5		3					*D. clouds	R. E. Power.
Donaghadee			30.34	770.6	61	16.1		N			3		0					Clear	J. Mac Gowan, Jr.
Dover			30.18	766.6	67	19.4		NE			5		5						J. Costello.
Eccles, (near Manchester)			30.30	769.6	70.7	21.5		E	3.2	1.4			3					Clear	Thomas Mackereth.
Falmouth Observatory			30.14	765.5	66.4	19.1		E	18	8.0			10					Foggy	The Staff.
Fort Napier, (Natal)	27.48	698.0	29.71	754.6	89.8	32.1		NW			4		5					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	83	28.3		N					6						
Galway, Queen's College																			B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.07	763.8	76.0	24.4		NNE			2		0					Clear	Sergt. E. G. Baker.
Glasgow Observatory			30.33	770.	67.0	19.4		NE			1		2					Fine	Lewis Stuart.
Great Yarmouth			30.28	769.1	64	17.8		ENE			4		2					Clear	G. T. Watson.
Greenwich Royal Obs.			30.23	767.8	75.7	24.3		ENE			3		0					Clear	The Staff, for G. B. Airy.
Guernsey			30.09	764.3	66	18.9		NE			1		7					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			30.34	770.6	68.5	20.3		E					0					Clear	F. J. Page, for L. J. Cross.
Helston			30.10	764.5	70	21.1		E			4		4ck					*D. clouds	M. P. Moyle.
Holyhead			30.27	768.8	67	19.4		ENE			5		0					Clear	John Tilston.
Hull Park																			
Kew Observatory			30.22	767.6	74.1	23.4		ENE	22	9.8			1					Hazy	The Staff.
Kingstown			30.32	770.1	60	15.6		NNE			2		1					Clear	George Mitchell.
Leicester Museum			30.30	769.6	71.4	21.9		NE			2		0					Clear	William J. Harrison.
Llandudno			30.29	769.4	68.2	20.1		E										Clear	Dr. James Nicol.
Malta, (Mediterranean)			30.29	769.4	80.8	27.1		SE			1		ck					*D. clouds	Fred Travis, Pvt A. H. C.
Nairn			30.25	770.9	67	19.4		Calm			0		0						W. D. Penny.
Nassau, (Bahamas)			29.99	761.7	81.2	27.3		NE			5		10n					Heavy rain	Surg.-Maj. Henry.
Nottingham			30.32	770.1	71.1	21.7		NNE			4		0			0	0	Clear	E. J. Lowe.
Oscott, St Mary's College			30.28	769.1	68.9	20.5		NE			4		0					Clear	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			30.23	767.8	69	20.6		NE			1		1					Clear	J. Lucas, for R. Main.
Plymouth			30.12	765.0	69.4	20.8		E			5		7					*D. clouds	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			30.23	767.8	67	19.4		E			4		2					Fine	W. Kennedy.
Saint Ann's Head			30.19	766.8	65	18.3		SE			1		1					Hazy	John C. Walker.
Saint Helier, (Jersey)			30.07	763.8	73.8	23.2		E			2		8						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			30.38	771.6	59.4	15.2		NNE			2		1					Clear	F. Shaw.
Scutari cemetery, (Turkey)			30.19	766.8	71.0	21.7		NE			2		1					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.33	770.4	68.4	20.2		NE			3		2					Clear	W. F. Cooper.
Silloth Rectory			30.33	770.4	71.2	21.8		N			1		0			0	0	Clear	Rev. Francis Redford.
Stonyhurst Observatory			30.32	770.1	67.7	19.8		NE			2		0					Clear	The Staff.
Stornoway, Lews C. (Hebr.)			30.35	770.9	60	15.6		Calm			0		5					*D. clouds	John Smith.
Stratfield Turgiss			30.23	767.8	69.4	20.8		E			1-2		0					Clear	Rev. Charles H. Griffith
Streatley Vicarage																			Rev. John Slatter.
Sumburgh Head, (Shetland)																			
Thurso			30.36	771.1	64	17.8		Calm			0		0					Clear	John Trotter.
Truro, Royal Institution			30.10	764.5	74	23.3		E			4		10					Gloomy	W. Newcombe.
Valencia Observatory			30.22	767.6	70.1	21.2		ENE	12	5.4			0					Hazy	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			30.38	771.6	61.1	16.2		E			2					0	0		Andrew Gibb.
Monach Lt-house, (Shet. Is)																			
North Unst, (Shetland Is)																			

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			30.18	766.5	63.0	17.2	60	NNE			6		1						
Faröe			30.22	767.5	72.5	22.5	41	N			4		6						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.88	758.9	47.5	8.6	81	SW			6		8						
Thorshavn, (Faröe)			30.26	768.7	54.7	12.6	97	WSW			2		8					Foggy	
Vestervig			30.30	769.6	64.8	18.2	60	NNE			4		2						

Note.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.08	764.1	68.0	20.0	72	SE			2		..k			0.059	1.5	Raining	Normal School.
Amiens																			Normal School.
Avignon			30.12	765.0	71.8	22.1	84	N			1		8		S	0.449	11.4	Cloudy	Normal School.
Bar-sur Seine			30.05	763.3	81.0	27.2	66	W			2		5c			0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			30.13	765.2	75.7	24.3	46	E			3		2			0	0		Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.11	764.9	70.2	21.2	83	N			1		10		S	0	0	Cloudy	Normal School.
Bourges			30.06	763.4	72.5	22.5	65	ESE			2		5		SSE	0.177	4.5	Cloudy	Normal School.
Brest			29.97	761.1	72.5	22.5	72	ENE			3		10		ENE	0	0	Stormy	Naval Observatory.
Caen																			Normal School
Chartres			30.13	765.4	75.2	24		E			2		5		NW				Normal School.
Chaumont	29.06	738.1	30.17	766.4	77.0	25		SW			1		2c		SW	0	0		Normal School.
Commerey			30.17	766.4	71.6	22	70	E			2		..c,h		E	0	0	Clear	Normal School.
Commune de Gréasque*			30.17	766.3	72.1	22.3	64	SE			3		10		SW	0.020	0.5		
Le Mans																			Normal School.
Lons-Le Saulnier			30.13	765.2	74.3	23.5	72	S			1		2			0	0		Normal School.
Mâcon			30.10	764.6	68.7	20.4	89	Calm			0		5		NE	0	0	Cloudy	Normal School.
Mirecourt			30.13	765.3	68.5	20.3	66	N			1		1		N	0	0	Clear	Normal School.
Orleans																			Normal School.
Paris Observatory			30.08	764.0	79.0	26.1	48	E			3		2ck			0	0		National Observatory.
Parthenay			30.15	765.8	63.1	17.3	61	E			2		10					Cloudy	Normal School.
La Roche sur Yon			29.97	761.3	75.3	24.6	92	SE			2		5					Cloudy	Normal School.
Rochefort, Observatory			30.00	762.0	74.8	23.8	56	E			2		8		N	0	0	Cloudy	Naval Observatory.
Rouen			30.10	764.4	81.7	27.6	41	NE			2		0			0	0	Clear	Normal School.
Saint Lo																			Normal School.
Villefranche																			Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchésl.
Mont-Louis	24.96	633.9			61.9	16.6	50	SW	13.0	5.83			2		SW	0	0		—, Faiguère.
Montsouris Observatory			30.08	764.0	81.5	27.5	49	NNE			3		2c,ck,k			0	0		Marié Davy.
Perpignan			30.04	762.8	74.7	23.7	73	SE	5.6	2.50			2		SE	0.256	6.5		Dr. Fines.
Saint Maur, (near Paris)			30.08	764.0	79.0	26.1	51	ENE			2		0			0	0	Clear	E. Renou.
Tours			30.07	763.7	71.4	21.9	72	E			2		8		SSE	0.205	5.2		C. Marquet.
Versailles, (near Paris)			30.04	764.1	80.6	27.0	50	E			2		2			0	0	Clear	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai			30.02	762.4	71.6	22.0	91	NNE	4.7	2.1		3ck	0	W		0 / 0	0 / 0		H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,201.8 feet; Chaumont, 332 m., or 1,030.9 ft.; Commune de Gréasque, 322 m., or 1,056.4 ft. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles.

GERMAN SERIES.

Furnished by the coöperation of Prof. Geo. Neumayer, Superintendent Royal 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.08	764.1	71.6	22.0	49	N	13	6			4			0	0		Prof. Hoh.
Berlin			30.10	764.5	70.7	21.5	49	W	4	2			6			0	0		Prof. Arndt.
Breslau			30.07	763.8	64.4	18.0	70	W	22	10			2			0.25	6.4		Dr. P. Neugebauer.
Carlsruhe			29.10	764.5	77.4	25.2	47	NE	11	5			0			0	0		A. Senz.
Cassel			30.07	763.8	75.9	24.4	51	NNW	13	6			3			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society
Friedrichshafen	28.71	729.3	30.12	765.1	68.9	20.5	69	W					0			0	0		M. Wilhelm.
Hamburg			30.21	767.3	68.7	20.4	51	NNE	13	6		8ks, s		N		0	0	Cloudy	Deutsche Seewarte.
Kiel			30.21	767.3	66.9	19.4	48	NNE	18	8			8			0	0		Prof. G. Karsten.
Königsberg			30.26	768.6	62.2	16.8	77	N	22	10						0.059	1.5	Nearly clear	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			30.15	765.7	66.0	18.9	69	NNW	18	8			10			0	0		Prof. Bruhns.
Münster			30.24	768.2	66.7	19.3	91	E	13	6			9			0	0		Prof. E. Heis.
Posen			30.01	762.3	60.4	15.8	72	N	36	16			10			0.012	0.3	Cloudy	Dr. Magener.
Strassburg, (in Alsace)			30.12	765.1	74.5	23.6	53	NE	9	4			0			0	0		Hartwig.
Stuttgart			30.10	764.6	76.6	24.8	45	E					0			0	0		Mr. Würth.
Thorn			29.95	760.8	61.7	16.5	72	NNW	22	10			7			0.127	3.22		Dr. Rasenbalg.
Treves, (Trier)			30.11	764.8	78.1	25.6	38	N	22	10			0			0	0		Prof. Flesch.
Wustrow, Naval School			30.19	766.8	64.2	17.9	67	NNE	22	10			38			0	0	Clear	E. F. Schütz.

Note.—In the originals the distinction between 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.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.15	765.9	75.6	24.2	51	NW			1		2			0	0		
Mondovi			30.14	765.6	71.4	21.9	56	NW			2		3	SW		0	0		
Genoa			30.16	766.1	77.7	25.4	66	SW	4.9	2.2			0			0	0		
Pavia			30.12	765.0	77.5	25.3	53	NW			2		0			0	0		
Verona			30.20	767.0	81.4	29.1	42	NW			6		0			0	0		
Padua			30.08	764.0	76.3	24.6	61	NW	4.9	2.2			2	W		0	0		
Parma																			
Bologna			30.18	766.5	79.7	26.5	52	NNW			1		3	NE		0	0		
Leghorn			30.18	766.5	78.6	25.9	51	SSW	4.9	2.2			3			0	0		
Urbino																			
Ancona																			
Siena			30.14	765.6	81.1	27.3	37	SSW	6.3	2.8			1	SW		0	0		
Rome			30.20	767.1	82.8	28.2	43	S-W	5.6	2.5			1			0	0		
Naples, O.U.			30.23	767.9	81.7	27.6	55	SW			2		1			0	0		
Lecce			30.21	767.3	75.7	24.3	59	NNW			2		2	N		0	0		
Cosenza			30.23	767.9	73.9	23.3	63	NW			2		3			0	0		
Catania, (Sicily)																			
Ripozzo			30.08	763.9	79.2	26.2	61	SE								0	0		
Palermo			30.17	766.3	77.9	25.7	58	NE	3.8	1.7			1			0	0		
Sub-Series.																			
Naples, S. R.			30.25	768.4	79.5	26.4	66	WSW	8.7	3.9			3	SW		0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovia is 555 meters, or 1,821.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet.

NETHERLANDS' SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Flushing			30.24	768.1	72.0	22.2		NE			4								
Groningen			30.21	767.2	65.3	18.5		N			4								
Helder			30.25	768.3	65.5	18.6		NNE			4								
Utrecht			30.21	767.4	68.7	20.4		NE			4		5					Cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bergen			30.29	769.3	63.7	17.6	89	NNW	9.8	4.4			0			0	0		
Christiania			30.30	769.7	67.8	19.9	57	NE	10.5	4.7			1			0	0		
Tromsö			30.00	761.9	52.2	11.2	80	SW			6		10			0.047	1.2		

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.16	766.0	69.1	20.6	66	WNW	8.7	3.9			0						The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

RUSSIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.85	758.3	62.8	17.1	57	N	20	9			10					Raining	Astronomical Obs.
Wilna			29.90	759.4	54.5	12.5	89	Calm	0	0			10					Foggy	Astronomical Obs.
Dorpat			30.21	767.2	53.2	11.8	75	ESE	11	5			9						Physical Cabinet.
St. Petersburg			30.31	769.9	52.9	11.6	46	E	9	4			3						Central Physical Obs.
Kuopio			29.96	761.0	52.5	11.4	66	E					0			0	0		Ch. Forsten.
Kieff			30.05	763.4	60.4	15.8	64	W	4	2			10					Light rain	Physical Cabinet.
Nikolaiev			30.27	768.8	62.4	16.9	35	SSE	8	3.5			3						Kurdakof.
Kertch			30.25	768.4	61.0	16.1	55	N	7	3			5						Lagorio.
Moscow			30.26	768.5	46.0	7.8	65	NW	10	4.5			7						Meteorological Obs.
Lugan			30.10	764.4	51.6	10.9	51	NW	4	2			10						Meteorological Obs.
Archangel			30.43	772.9	48.4	9.1	76	NNW	10	4.5			0						Ogorodnikof.
Tiflis	28.64	727.5	30.02	762.6	68.0	20.0	53	NW	17	7.5			4						Physical Obs.
Astrakhan			30.04	762.9	62.4	16.9	79	NNW	8	3.5			10			Blank	Blank		Sebasthuof.
Kasan			30.21	767.3	49.1	9.5	42	ESE	0	0			9						Physical Cabinet.
Orenburg			30.08	764.1	59.5	15.3	42	E	13	6			10						Tschernischef.
Ekaterinburg	29.29	743.9	30.31	769.9	45.9	7.7	43	W	4	2			1						Meteorological Obs.
Kasaly			29.91	759.7	79.9	26.6	61	NE	8	3.5			0						Bobrof.
Tashkend	28.37	720.5	30.00	762.1	74.7	23.7	78	Calm	0	0			0						Michelson.
Barnaul			30.02	762.4	55.9	13.3	44	W	8	3.5			1						Meteorological Obs.
Yeniseisk			29.42	747.3	63.0	17.2	73	SE	4	2			7						Marks.
Irkutsk	28.41	721.6	29.78	756.4	48.2	9.0	54	Calm	0	0			0						Usolzef.
Oorga																			Mossin.
Peking, (China)			30.28	769.0	60.4	15.8	62	Calm	0	0			3						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. The elevation of Tiflis is 409. m., 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.97	761.2	74.7	23.7	31	SW	17.9	8.0		0	2			0	0		Royal Observatory.
San Fernando																			The Naval Observatory.

Note.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea			30.29	769.4	56.5	13.6	82	NW			2		3			0	0		
Hernosand			30.48	774.1	52.9	11.6	86	NE			2		10			0.071	1.8		
Stockholm			30.19	766.8	56.3	13.5	76	NNE			4		10			0	0		
Wisby			30.00	762.0	59.7	15.4	81	NE			6		10			0.004	0.1		
Sub-Series.																			
Upsala			30.23	767.8	55.4	13.0	85	NNE	10.7	4.8			10		NE				Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.75	730.3	30.12	765.0	75.7	24.3	59	SW			2		8			0	0	Cloudy	The Observatory.
Zurich	28.56	725.4	30.12	765.0	77.9	25.5	57	W			1		1			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +3.2mm.; Thermometer, +5°.8; Relative Humidity, —3 per cent.

Note.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria, Lee Obs'y.			29.89	759.1	82.9	28.3	51	W			2		0					Clear	Prof. C. N. A. Van Dyck.
Constantinople			30.19	766.7	66.2	19.0	44	NE	19.0	8.5			2		NE	0	0		
Fao, (Persian Gulf)			29.89	759.1	95.0	35.0		NW			3		0					Clear	
Salonica					77.4	25.2		SE			2		0					Clear	
Valona			30.15	765.7	74.1	23.4		W			1		0					Clear	
Varna			30.24	768.0	64.4	18.0		SE			2		0					Clear	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea level. The distinction between upper and lower clouds is not made.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens																			

Note.—Reports commence October 1, 1875.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Takio																			

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario			30.36	771.1	53	11.7		SW	1	0.4		0	28		NW	0	0	Fair	
Chatham, N. B.			30.27	768.8	53	11.7	86	SW	11	4.9		2ck	8ks	SW	SW	0	0	Cloudy	
Charlottetown, P. E. Island			30.37	771.4	57	13.9	74	SW	11	4.9			8ks			0	0	Cloudy	
Fort Garry, Manitoba			30.12	765.0	45	7.2	92	SW	13	5.8		2c	2s	W		0	0	Fair	
Halifax, N. S.			30.37	771.4	55	12.8	86	S	5	2.2			10n		S	0	0	Threatening	
Kingston, Ontario			30.35	770.9	58	14.4	85	Calm	0	0		2k	0	W		0	0	Clear	
Montreal, Quebec			30.29	769.4	59	15.0	84	SW	17	7.6		2k	5ks	W	W	0	0	Cloudy	
Ottawa, Ontario			30.34	770.6	53	11.7	75	W	3	1.3		0	0			0	0	Clear	
Parry Sound, Ontario			30.36	771.1	49	9.4	100	NE	4	1.8			Fog		NE	0	0	Foggy	
Port Dover, Ontario			30.36	771.1	45	7.2	100	N	6	2.7			Fog			0	0	Foggy	
Port Stanley, Ontario			30.33	770.4	50	10.0	96	N	2	0.9		2k	0	N		0	0	Clear	
Quebec, Quebec			30.21	768.1	56	13.3	81	SW	9	4.0			10n		SW	0	0	Cloudy	
Saugeen, Ontario			30.35	770.9	49	9.4	93	SE	3	1.3		0	0			0	0	Clear	
Stayner, Ontario			30.32	770.1	52	11.1	93	Calm	0	0		0	0			0	0	Clear	
Sydney, C. B.			30.45	773.4	57	13.9	75	SW	9	4.0		10cs	2ks		SW	0	0	Fair	
Toronto, Ontario			30.36	771.1	51	10.6	87	W	2	0.9		0	0			0	0	Clear	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.33	770.4	57	13.9	100	Calm	0	0			10n			0.10	2.5	Light rain	
Alpena, Mich.			30.33	770.4	50	10.0	86	W	6	2.7		0	Haze			0	0	Clear	
Atlantic City, N. J.			30.28	769.1	68	20.0	90	N	2	0.9		2cs	0	N		0	0	Fair	
Augusta, Ga.			30.20	767.1	67	19.4	84	N	4	1.8			8ks		NE	0.02	0.5	Cloudy	
Baltimore, Md.			30.29	769.4	65	18.3	78	N	3	1.3		0	Sm'e			Inap.	Inap.	Clear	
Barnegat, N. J.			30.28	769.1	67	19.4	94	N	2	0.9		8ck	Haze	SW		0	0	Fair	
Benton, Montana	27.32	693.9	30.12	765.0	43	6.1	75	SW	4	1.8		0	0			0	0	Clear	
Bismarck, Dakota	28.32	719.3	29.95	760.7	54	12.2	79	E	5	2.2			10ks			0.64	16.3	Cloudy	
Boston, Mass.			30.36	771.1	57	13.9	94	NE	4	1.8			10n			0.15	3.8	Light rain	
Breckenridge, Minn.			30.13	765.3	54	12.2	86	SE	4	1.8			10s			0	0	Cloudy	
Buffalo, N. Y.			30.34	770.6	56	13.3	87	Calm	0	0			Haze			Inap.	Inap.	Hazy	
Burlington, Vt.			30.35	770.9	57	13.9	69	S	4	1.8		2k	2s	S		0.12	3.0	Fair	
Cairo, Ill.			30.28	769.1	62	16.7	94	N	4	1.8			10ks		NE	0	0	Cloudy	
Cape Hatteras, N. C.			30.17	766.3	73	22.8	100	NW	4	1.8			Fog			0.88	22.4	Foggy	
Cape Henry, Va.			30.23	767.8	77	25.0	82	N	8	3.6		5ck	Haze	NW		Inap.	Inap.	Fair	
Cape May, N. J.			30.26	768.6	68	20.0	94	NE	4	1.8		5k	0	W		0	0	Fair	
Charleston, S. C.			30.15	765.8	73	22.8	85	N	14	6.3			10s		NE	0.01	0.3	Cloudy	
Cheyenne, Wyoming	24.19	614.4	30.13	765.3	51	10.6	93	SE	6	2.7		0	10s			0	0	Cloudy	
Chicago, Ill.			30.33	770.4	55	12.8	93	Calm	0	0		0	Fog			0	0	Foggy	
Cincinnati, Ohio			30.26	768.6	63	17.2	88	NE	4	1.8			10s			0.01	0.3	Cloudy	
Cleveland, Ohio			30.35	770.9	51.5	12.5	93	SE	8	3.6			Fog		SE	0.02	0.5	Foggy	
Colorado Springs, Col.	24.22	615.2	30.09	764.3	54	12.2	93	E	1	0.4			10s			0.02	0.5	Cloudy	
Corsicana, Tex.			30.13	765.3	72	22.2	90	NE	6	2.7		0	2s			0	0	Fair	
Davenport, Iowa			30.33	770.4	55	12.8	87	NE	4	1.8		0	Fog		NE	0	0	Clear	
Denison, Tex.			30.11	764.8	72	22.2		SE				2k	0	SE		0	0	Clear	
Denver, Col.	24.91	632.7	30.13	765.3	56	13.3	93	N	1	0.4			Fog			0	0	Foggy	
Detroit, Mich.			30.12	765.0	57	13.9	75	SE	3	1.3		2ck	5ks			0	0	Fair	
Dodge City, Kan.	27.58	700.5	29.80	756.9	68	20.0	29	S	9	4.0			Fog			0	0	Foggy	
Dubuque, Iowa			30.39	771.9	64	17.8	73	E	2	0.9			Fog			0	0	Foggy	
Duluth, Minn.			30.26	768.6	53	11.7	79	Calm	0	0		Haze	2s			0	0	Fair	
Eastport, Me.			30.33	770.4	55	12.8	93	S	4	1.8			10s		SW	0	0	Cloudy	
Erie, Pa.			30.32	770.1	55	12.8	87	S	4	1.8		2k	Sm'e	SE		Inap.	Inap.	Fair	
Escanaba, Mich.			30.34	770.6	49	9.4	78	N	2	0.9		0	0			0	0	Clear	
Fort Gibson, I. T.			30.15	765.8	72	22.2	90	SE	4	1.8		1c	8s		S	0.18	4.6	Cloudy	
Fort Sill, I. T.																			
Fort Sully, Dakota	28.36	720.3	29.98	761.5	62	16.7	83	S	13	5.8			10s		SW	0.49	12.4	Cloudy	
Galveston, Tex.			30.06	763.5	79	26.1	86	NE	11	4.9		0	5ks		NE	0	0	Fair	
Grand Haven, Mich.			30.36	771.1	52	11.1	93	E	3	1.3		0	Sm'e		E	0	0	Foggy	
Indianapolis, Ind.			30.29	769.4	58	14.4	90	N	3	1.3		Haze	5s			0	0	Fair	
Indianola, Tex.			30.05	763.3	78	25.6	82	NE	10	4.5		2cs	5n	NE	NE	0	0	Light rain	
Jacksonville, Fla.			30.10	764.5	71	21.7	85	NW	12	5.4		0	8s		NE	0	0	Fair	
Keokuk, Iowa			30.25	768.3	57	13.9	75	E	2	0.9		0	0			0	0	Clear	
Key West, Fla.			29.89	759.2	79.8	26.6	78	NE	11	4.9		Haze	2s		E	0.22	5.6	Fair	
Kittyhawk, N. C.			30.19	766.8	71	21.7	95	NE	26	11.6		0	10ks		E	0.12	3.0	Threatening	
Knoxville, Tenn.			30.26	768.6	63	17.2	88	NE	3	1.3			10ks		NE	0	0	Cloudy	
La Crosse, Wis.			30.31	769.9	54	12.2	100	Calm	0	0			Fog			0	0	Foggy	
Leavenworth, Kan.			30.21	767.3	60	15.6	84	E	1	0.4		0	0			0	0	Clear	
Lexington, Ky.	29.19	741.4	30.29	69.4	63	17.2	94	NE	4	1.8			10s			0.06	1.5	Cloudy	
Long Branch, N. J.			30.30	769.6	65	18.3	89	NW	10	4.5			10s		NE	0.02	0.5	Cloudy	
Louisville, Ky.			30.26	768.6	63	17.2	94	NW	4	1.8			10s			0	0	Cloudy	
Lynchburg, Va.			30.28	769.4	65	18.3	84	W	2	0.9		5k	0	NE		Inap.	Inap.	Clearing	
Malone, N. Y.			30.28	769.4	58	14.4	81	SW	4	1.8			10ks		SW	0	0	Cloudy	
Marquette, Mich.			30.31	769.9	58	14.4	58	SW	4	1.8		0	0			0	0	Clear	
Memphis, Tenn.			30.24	768.1	65	18.3	89	NE	6	2.7		5k	2s			0	0	Cloudy	
Milwaukee, Wis.			30.38	771.6	47	8.3	85	E	4	1.8			Fog			0	0	Foggy	
Mobile, Ala.			30.15	765.8	72	22.2	80	NE	8	3.6		5cs	5s	SE	SE	0	0	Cloudy	
Montgomery, Ala.			30.22	767.6	66.5	19.2	84	NE	6	2.7			10s		SW	0	0	Cloudy	
Morgantown, W. Va.			30.29	769.4	60	15.6	97	NW	2	0.9			10n			0.23	5.8	Light rain	
Mt. Washington, N. H.	24.03	610.4	30.39	771.9	37	2.8	100	NW	40	17.9			10n		NW	0.25	6.3	Light rain	
Nashville, Tenn.			30.21	767.3	66	18.9	90	NE	2	0.9			10s			0	0	Cloudy	
New Haven, Conn.			30.34	770.6	57	13.9	93	N	12	5.4			10s		N	0.01	0.3	Cloudy	
New London, Conn.			30.34	770.6	61	16.1	82	N	4	1.8			10s		S	0	0	Cloudy	
New Orleans, La.			30.08	764.0	75	23.9	81	NE	8	3.6		0	8ks		SE	0.16	4.1	Threatening	
Newport, R. I.			30.33	770.4	64	17.8	89	NW	1	0.4		0	5ks		NW	0	0	Fair	
New York, N. Y.			30.32	770.1	61	16.1	94	N	3	1.3			Fog			0.05	1.3	Foggy	
Norfolk, Va.			30.23	767.8	72	22.2	85	N	9	4.0		0	8s			0.02	0.5	Fair	
North Platte, Neb.	27.19	690.6	29.69	754.1	62	16.7	94	SE	12	5.4			10s		SE	0.04	1.0	Cloudy	
Omaha, Neb.	29.12	739.6	30.18	766.6	60	15.6	82	SE	8	3.6		8k	0	W		0	0	Cloudy	
Oswego, N. Y.			30.33	770.4	61.5	16.4	77	S	1	0.4		Haze	4ks			0.04	1.0	Fair	
Peck's Beach, N. J.			30.30	769.6	68	20.0	96	N	8	3.6		1c	1s	W		0	0	Fair	
Pembina, Dakota			30.13	765.3	47	8.3	84	SE	4	1.8		2cs	0			0	0	Clear	
Philadelphia, Penn.			30.29	769.4	64	17.8	89	NE	8	3.6		8k	2s	W		0	0	Cloudy	
Pike's Peak, Colorado	18.00	457.2	30.21	767.3	30	—1.1	100	Calm	0	0			10s		E	0.12	3.0	Cloudy	
Pittsburgh, Penn.			30.32	770.1	36	13.3	80	N	7	3.1		8k	0	N		0.50	12.7	Fair	
Port Huron, Mich.			30.35	770.9	54	12.2	93	E	5	2.2			Fog			0	0	Foggy	
Portland, Me.			30.35	770.9	59	15.0	76	SW	3	1.3			10s		W	0	0	Cloudy	
Portland, Oregon			30.10	764.5	69	20.6	85	Calm	0	0		Haze	Haze			0	0	Hazy	
Punta Rassa, Fla.			29.98	761.6	77	25.0	83	NE	14	6.3		8cs	0	E		0.31	7.9	Cloudy	
Rochester, N. Y.			30.33	770.4	57	13.9	87	W	4	1.8		0	Haze			0.02	0.5	Clear	
Salt Lake City, Utah	25.62	650.7	29.95	760.7	63	17.2	33	S	10	4.5		0	0			0	0	Clear	
Sandy Hook, N. J.			30.29	769.4	64	17.8	89	N	12	5.4			10ks		N	0.07	1.8	Cloudy	
San Diego, Cal.			29.95	760.7	61	16.1	82	Calm	0	0			10s			0	0	Cloudy	
San Francisco, Cal.			29.95	760.7	54	12.2	87	SW	6	2.7			10s			0	0	Cloudy	
Santa Fe, N. M.	23.35	593.1	29.80	759.2	54	12.2	80	SE	4	1.8			10s			0.06	1.5	Cloudy	
Savannah, Ga.			30.12	765.0	70	21.1	90	N	12	5.4			10s		N	0.05	1.3	Threatening	
Shreveport, La.			30.19	766.8	73	22.8	85	NE	2	0.9		0	0			0	0	Clear	
Smithville, N. C.																			
Springfield, Mass.			30.35	770.9	55	12.8	93	NW	4	1.8			10ks		SE	0.10	2.5	Cloudy	
St. Louis, Mo.			30.30	769.6	61	16.1	82	NE	4	1.8		5c	0			0	0	Fair	
St. Marks, Fla.			30.10	764.5	72	22.2	85	NE	12	5.4		0	0			0	0	Clear	
St. Paul, Minn.			30.25	768.3	54	12.2	86	E	2	0.9		5c,ck	2s	W		0	0	Fair	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			30.21	767.3	68	20.0	90	N	3	1.3		5c	2s		NW	0	0	Cloudy	
Toledo, Ohio			30.30	769.6	56	13.3	87	W	4	1.8		0	Fog			0	0	Clear	
Tucson, Arizona																			
Tybee Island, Ga.			30.11	764.8	73	22.8	95	NE	4	1.3			10n		NE	0.11	2.8	Light rain	
Vicksburg, Miss.			30.21	767.3	68	20.0	90	Calm	0	0		2cs	2s	N		0	0	Fair	
Virginia City, Montana	24.34	618.2	29.82	757.4	43	6.1	50	SE	5	2.2		1c	0			0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.31	769.9	63.5	17.5	86	N	4	1.8		0	8s		N	0	0	Fair	
Wilmington, N. C.			30.18	766.6	70	21.1	95	NE	7	3.1			10s		NE	0.05	1.3	Threatening	
Woods Hole, Mass.			30.35	770.9	65	18.3	83	S	11	4.9		0	8s		NW	0	0	Fair	
Wytheville, Va.	27.95	709.9	30.10	764.5	59	15.0	94	E	1	0.4			10s			0.13	3.3	Cloudy	
Yankton, Dakota	28.92	734.6	30.19	766.8	62	16.7	83	S	8	3.6			10s		W	0	0	Cloudy	
Yuma, Arizona																			
Sub-Series.																			
Bridgetown, Barbados, W. I.					84	28.9	87	SE	10	4.5		8ck	10s	NE		0	0	Cloudy	E. Racker.
Pointe-a-Pitre, Gd'loupe, do			29.92	760.0	81	27.2	87	E				5c8	2ks			0.27	6.9	Fair	L. V. Bigard.
Havana, Cuba, W. I.			29.91	760.5	82	27.8	78	SE	2.4	1.7		8k	0	NE		0.06	1.5	Fair	Charles Hasselbrink.
Kingston, Jamaica, W. I.			29.90	759.4	80	26.7	90	SW					10n			0	0	Raining	James Gall.
St. Thomas, St. T., W. I.			30.18	766.6	82	27.8	74	SE				0	0			0	0	Clear	W. S. Cameron.
Santiago de Cuba, W. I.			29.58	751.3	77	25.0	90	SE	19.2	8.6			10n		SE			Raining	Robert Mason.
St. Georges, Bermudas			30.21	767.3	79.5	26.4	72	E	4.8	2.1		0	8fk			0.110	2.79	Fair	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.																			
St. John's, Newfoundland			29.61	752.1	47.5	8.6	92	SW	18	8.0			10n			0.02	0.5	Rainy	J. Fortescue.
St. John's, Porto Rico, W. I.			30.58	776.7	56	13.7	56	S				2k	2s			0	0	Fair	John Delaney.
Clifton, Jamaica, W. I.																			Leon M. Acuña.
Navassa	27.04	686.8	29.79	756.7	67	19.4	94	W	10.0	4.5			10k			3.75	95.3	Raining	C. Partridge.
Medellin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			30.51	774.9	54	12.2	80	E	4	1.8			10n			0	0	Cloudy	H. M. Redington.

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

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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 Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) 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, 6,86[illegible] (?) ft., or 2,091.6 (?) m.; Virginia City, 5,180 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,291.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 14, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.04	763.1	77.7	25.4	63	NNW			1		7			0	0	Cloudy	Charnot.
Algiers			29.99	761.7	78.4	25.8	78	N			2		3			Inap.	Inap.	Lightning	Peter.
La Calle																			Kuntz.
Tunis			30.01	762.2	96.8	36.0	29	W			2		3			0	0	Stormy	Jacques.
Sfax			30.05	763.2	82.4	28.0	17	S			4		2			0	0	Fair	Chauvey.
Saida			30.05	763.3	80.6	27.0	31	NE			2		2			Inap.	Inap.	Fair	Grosjean.
Tebessa			30.03	762.7	90.3	32.4		N			1		5			Inap.	Inap.	Thunder	Colin.
Gerville			30.06	763.5	85.1	29.5	18	S			4		4			0	0	Fair	Bernadach.
Laghouat			30.04	763.0	86.9	30.0	36	S			3		5			0	0	Hidden	Simon.
Biskra			30.01	762.3	87.3	30.7	56	NW			1		7			0	0	Fair	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.01	762.0	70.7	21.5	46	SW			2		5			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.14	765.4	59.9	10.5	87	NNW			3		10			0.272	6.8		I. R. Observatory.
Eperies			29.99	761.8	50.7	10.4	85	N			5				S	0.301	7.65	Raining	Julius Mikolik.
Gratz	28.87	733.1	30.02	762.5	71.2	21.8	49	SW			5		0						Andreas Rospini.
Hermannstadt	28.41	721.7	29.81	757.1	59.9	15.5	76	N			3		8			0	0		Prof. Reissenberger.
Kremsmünster	28.89	731.4	30.12	765.0	61.9	16.6	71	E			1		3			0	0		Prof. C. Wagner.
Lemberg			29.94	760.3	43.2	9.0	81	NE			5		0			0.598	15.2	Raining	Dr. T. Stanecki.
Nyiregyhaza			29.94	760.4	58.3	14.6	74	N			5		2			0	0		Habzsuda Danie'.
Pola			29.97	761.1	68.4	20.2	82	SE			3		9k8			0.035	0.88		I.R. Hydrographic Office
Szegedin																0.055	1.40		Karl Stancel.
Trieste			29.94	760.4	77.0	25.0	53	E			1		0			0	0		Prof. V. Faroffi.
Vienna			30.04	762.9	64.0	17.8	59	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. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.14	765.6	66.9	19.4	58	ENE			6	1	0	ENE		0	0		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.46	773.7	53.2	11.8		ENE	10	4.5			2			0.010	0.25	Clear	William Boswell.
Ardrossan			30.37	771.4	68	20.0		NNE			3		5					*D. clouds	James Mayes.
Armagh Observatory			30.34	770.6	65.7	18.7		ENE	9	4.0			4					*D. clouds	S. Cal., for Dr. Robinson.
Bidston, Liverpool Obs			30.30	769.6	65.0	18.3		ENE			3		3					Hazy	John Hartnup, Jr.
Birr Castle, (Parsonstown)			30.27	768.8	69.4	20.8		ESE			1		2					Clear	J. Dreyer.
Bradford			30.29	769.4	65.3	18.5		NE			4		6					Fine	J. McLandsborough.
Bridgetown, (Barbadoes)			29.95	760.7	80	26.7		NE			1		8					*D. clouds	T. H Hunt.
Cambridge Observatory			30.24	768.1	68.0	20.0		E			1		7					*D. clouds	Sergeant Hunt, A. H. O.
Cape Good Hope Obs.			30.20	767.1	58.5	14.7	63	SSW	9	4.0			8						Th Staff, for E. J. Stone.
Cardington			30.24	768.1	67.0	19.4		NE					7					*D. clouds	John McLaren.
Carlisle			30.36	771.1	67	19.4		NE					2					*D clouds	T. Bell, for J. Cartmell.
Chatham, School M. E.			30.21	767.3	64.2	17.9		ENE			2		10						Capt. J. Fellowes, R. E.
Dartmoor	28.74	730.0	30.11	764.8	62.8	17.1		E			7		7		E			*D. clouds	R. E. Power.
Donaghadee			30.35	770.9	63	17.2		ESE			3		8					*D. clouds	J. Mac Gowan, Jr.
Dover			30 16	766.1	67	19.4		NE			5		2						J. Costello.
Eccles, (near Manchester)			30.30	769.6	65.8	18.8		ENE	2.4	1.1			6					*D. clouds	Thomas Mackereth.
Falmouth Observatory			30.15	765.8	65.7	18.7		ENE	17	7.6			3					*D. clouds	The Staff.
Fort Napier, (Natal)	27.44	697.0	29.77	756.1	68.0	20.0		E			2		2					*D. clouds	Pvt. G. Salmon, A. H. O.
Free Town, (Sierra Leone)			29.98	761.5	80	26.7		N					7						
Galway, Queen's College																			B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			29.99	761.7	77.2	25.1		SW			5		0					Clear	Sergt. E. G. Baker.
Glasgow Observatory			30.38	771.6	62.6	17.0		ENE			3		7					Fine	Lewis Stuart.
Great Yarmouth			30.27	768.8	64	17.8		ENE			4		1					Clear	G. T. Watson.
Greenwich Royal Obs			30. 0	767 1	70.7	21.5		NE			4		5					*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.07	763.8	64.5	18.1		ENE			4		7					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs			30.34	770.6	64.8	18.2		E					6					*D. clouds	F. J. Page, for L. J. Crossley.
Helston			30.09	764.3	70	21.1		E			6		4					*D. clouds	M. P. Moyle.
Holyhead			30.27	768.8	63	17.2		ENE			5		4					*D. clouds	John Tilston.
Hull Park																			
Kew Observatory			30.19	766.6	67.3	19.6		NE	25	11.2			6					*D. clouds	The Staff.
Kingstown			30.33	770.4	60	15.6		NNE			2		6					*D. clouds	George Mitchell.
Leicester Museum			30.28	769.1	66.4	19 1		NE			4		4					*D. clouds	William J. Harrison.
Llandudno			30.30	769.6	65.0	18.3		E					3					Hazy	Dr. James Nicol.
Malta, (Mediterranean)			30.20	767.1	81.2	27.3		SW			1		4k					*D. clouds	Fred Travis, Pvt A.H.O.
Nairn			30.35	770 9	67	19.4		Calm			0		0						W. D. Penny.
Nassau, (Bahamas)			30.06	763.5	84.2	29.0		SE			4		8s						Surg.-Maj. Henry.
Nottingham			30.31	769.9	66.0	18.9		NNE			5		5k,d		NNE	0	0	*D. clouds	E. J. Lowe.
Oscott, St Mary's College			30.25	768.3	65.0	18.3		NNE			4		8					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			30.18	766.6	67	19.4		NE			4		10					Overcast	J. Lucas, for R. Main.
Plymouth			30.12	765.0	68.8	20.4		NE			5		4					*D. clouds	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			30.22	767.6	65	18.3		ESE			5		5					Fine	W. Kennedy.
Saint Ann's Head			30.20	767.1	67	19.4		E			3		2					Hazy	John C. Walker.
Saint Helier, (Jersey)			30.03	762.7	66.5	19.2		E			6		8						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			30.38	771.6	60.1	15.6		ENE			3		1					Clear	F. Shaw.
Scutari cemetery, (Turkey			29.95	760.7	72.4	22.4		SW			1		1					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.29	769.4	67	19.4		E			2		6					*D. clouds	W. F. Cooper.
Silloth Rectory			30.35	770.9	65.2	18.4		E			4		0			0.020	0.51	Hazy	Rev Francis Redford.
Stonyhurst Observatory			30.31	769.9	65.0	18.3		E			3		5					*D. clouds	The Staff.
Stornoway, Lews C. (Hebr.)			30.41	772.4	61	16.1		NE			3		0					Clear	John Smith.
Stratfield Turgiss			30.24	768.1	69.7	20.9		NE			1		4					*D. clouds	Rev Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Sumburgh Head, (Shetland)																			
Thurso			30.45	773.4	55	12.8		ENE			1		10					Overcast	John Trotter.
Truro, Royal Institution			30.10	764.5	74	23.3		E			6		6					*D. clouds	W Newcombe.
Valencia Observatory			30.30	769.6	70.0	21.1		SSW	4	1.8			1					Hazy	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			30.44	773.2	57.5	14.2		NE			2		10s			0	0	Foggy	Andrew Gibb.
Monach Lt-house, (Shet Is)																			
North Unst, (Shetland Is)																			

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. *Detached clouds.

DANISH SERIES.

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

Copenhagen			30.32	770.0	63.7	17.6	63	E			2		3						
Fanöe			30.31	769.9	64.8	18 2	63	N			2		10						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			30.26	768.6	46.4	8.0	83	SE			2		8						
Thorshavn, (Faröe)			30.55	775.9	56.3	13.5	82	NE			2		8						
Vestervig			30.36	771.2	61.9	16.6	71	Calm			0		4						

Note.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.03	762.8	68.9	20.5	62	NE			1		..k			0.157	4.0	Raining	Normal School.
Amiens																			Normal School.
Avignon			29.93	760.2	78.4	25.8	64	N			1		0			0	0	Clear	Normal School.
Bar-sur Seine			29.97	761.2	74.7	23.7	47	E			3		2ck			0	0		C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			30.08	764.0	69.0	20.9	63	E			2		2			0	0		Normal School.
Besançon																			Normal School.
Bourg en Bresse			29.94	760.5	75.7	24.3	80	N			2		10		S	0	0	Cloudy	Normal School.
Bourges			29.94	760.5	71.6	22	65	NE			2		8		NE	0	0	Cloudy	Normal School.
Brest			29.96	761.0	67.1	19.5	87	NE			3		5		NE	0.010	0.25	Stormy	Naval Observatory.
Caen																			Normal School
Chartres			30.10	764.6	70.5	21.4		NE			2		4		N				Normal School.
Chaumont	28.95	735.3	30.08	764.0	66.6	19.2		N			4		2c		NE	0	0		Normal School.
Commercy			30.12	765.0	67.6	19.8	63	ENE			6		2ck		ENE	0	0		Normal School.
Commune de Gréasque*			30.00	761.9	79.0	26.1	56	W			2		5		W	0.043	1.1		
Le Mans																			Normal School.
Lons-Le Saulnier			29.97	761.2	72.9	22.7	74	S			2		2			0	0		Normal School.
Mâcon			29.94	760.4	74.5	23.6	78	N			4		5		S	0	0	Cloudy	Normal School.
Mirecourt			30.02	762.4	67.8	19.9	59	NE			2		0			0	0	Clear	Normal School.
Orleans																			Normal School.
Paris Observatory			30.04	763.0	73.6	23.1	54	NE			3		2ck		E	0	0		National Observatory.
Parthenay			30.11	764.9	68.0	20	78	N			2		0					Clear	Normal School.
La Roche sur Yon			30.00	761.9	78.3	25.7	92	SE			4		0					Clear	Normal School.
Rochefort, Observatory			29.97	761.8	80.1	26.7	45	W			1		1		NE	0	0	Clear	Naval Observatory.
Rouen			30.07	763.8	73.4	23.0	60	E			1		0			0	0	Clear	Normal School.
Saint Lo																			Normal School.
Villefranche																			Normal School
Sub-Series.																			
Fort de France, Martinique					63.5	17.5	52	SW	14.9	6.66			1		SW	0	0		L'Abbe Marchési.
Mont-Louis	24.91	632.7																	—. Falguère.
Montsouris Observatory			30.04	763.0	73.9	23.3	54	ENE			3		4c,ck,k		SSW	0	0		Marié Davy.
Perpignan			29.96	761.0	75.7	24.3	66	NE	3.7	1.67			1		NW	0	0		Dr. Fines.
Saint Maur, (near Paris)			30.04	763.0	73.8	23.2	62	NNE			2		1			0	0	Clear	E. Renou.
Tours			30.00	762.0	78.4	25.8	49	WSW			1		2		E	0	0		C. Marquet.
Versailles, (near Paris)			30.06	763.4	74.5	23.6	26	E			3		5			0	0		Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai			30.08	764.0	66.4	19.1	80	NNW	6.5	2.9			10			0.004 0.024	0.1 0.6	Misty	H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 ft.; Commune de Gréasque, 322 m., or 1,056.4 ft. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles.

GERMAN SERIES.

Furnished by the coöperation of Prof. Geo. Neumayer, Superintendent Royal 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. Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Lower 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.15	765.7	66.2	19.0	58	W	13	6		2			0	0		Prof. Hoh.
Berlin			30.27	768.9	65.1	18.4	46	E	9	4		7			0	0		Prof. Arndt.
Breslau			30.27	768.8	57.6	14.2	60	NE	27	12		7			0.031	0.8		Dr. P. Neugebauer.
Carlsruhe			30.08	764.0	70.2	21.2	48	NE	22	10		0			0	0		A. Senz.
Cassel			30.11	764.8	66.4	19.1	59	NE	9	4		2			0	0		Dr. H. Möhl.
Cologne																		Dr. Garthe.
Emden																		Prof. Prestel.
Frankfort on the Main																		Physical Society.
Friedrichshafen																		M. Wilhelm.
Hamburg	28.63	727.2	30.03	762.8	69.8	21.0	45	NE				0			0.024	0.6		Deutsche Seewarte.
Kiel			30.22	767.6	64.4	18.0	51	NE	11	5		8k	E		0	0		Prof. G. Karsten.
Königsberg			30.28	769.2	65.3	18.5	76	NE	22	10		9			0	0		Prof. E. Luther.
Köln			30.29	769.3	57.9	14.4	40	NE	22	10					0.001	0.02	Clear	Dr. Tägert.
Leipsic																		Prof. Bruhns.
Münster			30.25	768.3	63.7	17.6	55	NE	13	6		9			0	0		Prof. E. Heis.
Posen			30.27	768.8	67.6	19.8	67	E	9	4		9			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.24	768.2	61.9	16.6	46	N	16	7		0			0	0	Clear	Hartwig.
Stuttgart			30.09	763.5	70.5	21.4	47	NE	16	7		0			0	0		Mr. Würth.
Thorn			30.08	764.1	69.4	20.8	43	E				0			0	0		Dr. Rosenbalg.
Trèves, (Trier)			30.22	767.6	61.7	16.5	39	NE	13	6		2			0	0		Prof. Flesch.
Wustrow, Naval School			30.08	764.1	69.8	21.0	42	E	22	10		0			0	0		E. F. Schütz.
			30.28	769.2	64.9	18.3	69	NE	13	6		7s			0	0	Cloudy	

Note.—In the originals the distinction between 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.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Lower 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			29.94	760.4	79.0	26.1	54	NE		1		4	NNE		0.221	5.7		
Mondovi			29.92	760.0	72.5	22.5	57	WNW		4		1	W		0	0		
Genoa			29.92	759.9	81.0	27.2	56	SE	9.4	4.2		2	NW		0	0		
Pavia			29.88	758.8	76.6	24.8	61	NE		2		9			0	0		
Verona			29.89	759.3	81.0	27.2	62	E		2		10			0	0		
Padua			29.90	759.6	76.3	24.6	58	E	8.7	3.9		10	NE		0	0		
Parma																		
Bologna			29.96	760.9	82.4	28.0	57	WNW		1		6	N		0	0		
Leghorn			29.93	760.3	80.6	27.0	68	SSW	13.7	6.1		4			0	0		
Urbino																		
Ancona																		
Siena																		
Rome			29.89	759.3	81.7	27.6	51	SW	3.1	1.4		5	SW		0	0		
Naples, O. U.			29.98	761.4	82.0	27.8	60	SW	8.7	3.9		7	SW		0	0		
Lecce			30.03	762.8	82.0	27.8	57	SW				3	W		0	0		
Cosenza			29.98	761.4	79.9	26.6	36	WSW		2		5	N		0	0		
Catania, (Sicily)			30.05	763.2	76.6	24.8	60	NW		2		2			0	0		
Ripostto																		
Palermo			29.98	761.5	82.2	27.9	65	E		2					0	0		
Sub-Series.																		
Naples, S. R.			29.97	761.3	80.1	26.7	54	E	4.9	2.2		0			0	0		
			30.09	764.2	79.2	26.2	52	SW	0.8	4.4		2	S		0.335	8.5		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S R., is for the five hours preceding. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Flushing			30.21	767.2	68.0	20.0		ENE			4								
Groningen			30.23	767.8	65.1	18.4		NE			4								
Helder			30.28	769.0	65.3	18.5		NE			4								
Utrecht			30.19	766.9	67.6	19.8		ENE			4		2					Light cloudy	

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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.	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Bergen			30.34	770.5	59.0	15.0	87	NNW	3.8	1.7			10			0	0		
Christiania			30.32	770.0	65.1	18.4	64	SW	10.3	4.6			0			0	0		
Tromsö			29.81	757.2	50.4	10.2	65	SW			6		7			0.150	3.8		

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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.	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Lisbon			30.12	765.1	73.6	23.1	47	NNW	7.4	3.3			7	WNW					The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

RUSSIAN SERIES.

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

Stations.	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Warsaw			30.17	766.2	55.4	13.0	48	NE	22	10			3						Astronomical Obs.
Wilna			30.27	768.9	53.6	12.0	45	ENE	8	3.5			3						Astronomical Obs.
Dorpat			30.39	771.0	53.2	11.8	57	SE	4	2			0						Physical Cabinet.
St. Petersburg			30.33	770.4	50.5	10.3	54	NW	2	1			9						Central Physical Obs.
Kuoplo			30.13	765.2	55.4	13.0	77	WSW					10			0	0		Ch. Forsten.
Kieff			29.89	757.0	48.4	9.1	100	NE	9	4			10					Rain and fog	Physical Cabinet.
Nikolaiev			30.09	762.0	64.6	18.1	56	S	17	7.5			7						Kurdakof.
Kertch			30.07	763.8	65.1	18.4	49	SE	7	3			2						Lagorio.
Moscow			30.35	770.9	46.8	8.2	63	SSE	10	4.5			7						Meteorological Obs.
Lugan			30.10	764.8	61.0	16.1	31	ESE	17	7.5			1						Meteorological Obs.
Archangel			30.03	762.7	52.2	11.2	82	W	17	7.5			10						Ogorodnikof.
Tiflis	28.67	728.2	30.02	762.6	77.0	25.0	31	SE	10	4.5			4						Physical Obs.
Astrakhan			30.28	769.1	56.7	13.7	40	N	8	3.5			1						Sebastianof.
Kasan			30.00	762.0	47.1	8.4	41	N	13	6			5						Physical Cabinet.
Orenburg			29.78	756.4	42.4	5.8	67	SW	20	9			10						Tschernischef.
Ekaterinburg	28.91	734.3	29.95	760.7	32.5	0.3	98	N	10	4.5			10						Meteorological Obs.
Kasaly			29.79	756.7	75.2	24.0	52	SW	13	6			0						Bobrof.
Tashkend	28.30	718.7	29.93	760.3	74.1	23.4	81	Calm	0	0			0						Michelson.
Barnaul			30.17	766.4	45.1	7.3	50	Calm	0	0			3						Meteorological Obs.
Yeniseisk			29.67	753.7	40.6	4.8	74	SW	7	3			10						Marks.
Irkutsk	28.29	718.6	29.64	752.9	55.4	13.0	70	Calm	0	0			8						Usolzef.
Oorga	25.51	656.6	29.88	758.9	47.8	8.8	50	SE	4	2			9						Mossin.
Peking, (China)			30.15	765.7	61.7	16.5	67	Calm	0	0			1						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 305.4? m., or 1,005.2? ft.; Tashkend, m. 494.2?, or 1,621.3? ft.; Irkutsk, 392. m., or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

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

Stations.	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Madrid			29.99	761.8	74.5	23.6	40	SW	11.2	5.0		1	4	NE		0	0	Cloudy	Royal Observatory.
San Fernando																			The Naval Observatory.

NOTE.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lund			30.03	762.8	64.6	18.1	73	NW			4		9			0.413	10.5		
Gernosund			30.08	764.0	66.2	19.0	79	SW			2		9			0	0		
Stockholm			30.29	769.4	63.7	17.6	47	SSE			2		6			0.004	0.1		
Visby			30.27	768.8	57.9	14.4	65	NW			4		3			0	0		
Sub-Series.																			
Upsala			30.32	770.1	60.6	15.9	62	SW	10.1	4.5			9		W				Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.57	725.7	29.95	760.6	72.3	22.4	62	NNE			4		7			0	0	Cloudy	The Observatory.
Zurich	28.43	722.2	30.01	762.3	71.0	22.0	55	NE			2		2			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —1.4mm.; Thermometer, +4°.1; Relative Humidity, 0.0 per cent.

Note.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y.																			Prof. C. N. A. Van Dyck.
Constantinople			29.97	761.2	68.4	20.2	58	SSW	7	3			0			0	0	Clear	
Fao, (Persian Gulf)			29.84	758.0	94.8	34.9		NW			3		0					Clear	
Salonica					79.3	26.3		SE			2		0					Clear	
Valona			29.97	761.1	78.3	25.7		SW			2		10					Cloudy	
Varna			30.30	769.5	73.4	23.0		NE			3		5					Cloudy	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea level. The distinction between upper and lower clouds is not made.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens																			

Note.—Reports commence October 1, 1875.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Tokio																			

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario			30.34	770.6	55	12.8		Calm	0	0			10s		SW	0	0	Cloudy	
Chatham, N. B.			30.33	770.4	51	10.6	82	SW	2	0.9		0	0			0.01	0.3	Clear	
Charlottetown, P. E. Island			30.30	769.6	55	12.8	86	NW	6	2.7		0	0			0.50	12.7	Clear	
Fort Garry, Manitoba			30.17	766.3	55	12.8	100	SW	2	0.9		Haze	Fog			0	0	Foggy	
Halifax, N. S.			30.29	769.4	53	11.7	97	NW	3	1.3			Fog			0.060	1.52	Foggy	
Kingston, Ontario			30.42	772.7	63	17.2	87	Calm	0	0		10cs	0			0	0	Cloudy	
Montreal, Quebec			30.37	771.4	61	16.1	73	W	2	0.9		2cs	2s			0	0	Fair	
Ottawa, Ontario			30.40	772.1	53	11.7	80	E	2	0.9		5ck	5s	SE	SE	0	0	Cloudy	
Parry Sound, Ontario			30.38	771.6	52	11.1	100	Calm	0	0		2k	5ks	W	W	0	0	Fair	
Port Dover, Ontario			30.38	771.6	54	12.2	93	Calm	0	0		10k	0	W		0	0	Cloudy	
Port Stanley, Ontario			30.36	771.1	55	12.8	95	Calm	0	0			10s			0	0	Cloudy	
Quebec, Quebec			30.35	770.9	54	12.2	74	Calm	0	0		0	0			0	0	Clear	
Sarnia, Ontario			30.37	771.4	53	11.7	96	Calm	0	0			10n			0	0	Cloudy	
Stayner, Ontario			30.36	771.1	54	12.2	90	Calm	0	0			10ks		NW	0	0	Cloudy	
Sydney, C. B.			30.27	768.8	61	16.1	79	NW	5	2.2		2k	2ks	N	N	0.15	3.8	Clear	
Toronto, Ontario			30.37	771.4	57	13.9	75	Calm	0	0		5ck	8ks	W		0	0	Cloudy	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.37	771.4	57	13.9	93	Calm	0	0		10k	Fog	N		0.02	0.5	Cloudy	
Alpena, Mich.			30.31	769.9	60	15.6	81	Calm	0	0			10s			0	0	Cloudy	
Atlantic City, N. J.			30.33	770.4	67.5	19.7	94	NE	8	3.6		8cs	2s	N	NE	0	0	Cloudy	
Augusta, Ga.			30.27	768.8	75	23.9	77	E	10	4.5		5k	0	E	E	0	0	Fair	
Baltimore, Md.			30.36	771.1	66	18.9	78	N	3	1.3		8ck	0			0	0	Fair	
Barnegat, N. J.			30.36	771.1	68	20.0	94	NE	4	1.8		8ck	2ks	NE	NE	0.02	0.5	Cloudy	
Benton, Montana	27.41	696.2	30.20	767.1	45	7.2	85	Calm	0	0		0	0			0	0	Clear	
Bismarck, Dakota	28.47	722.1	30.07	763.8	57	13.9	97	E	4	1.8			Fog		E	0.02	0.5	Foggy	
Boston, Mass.			30.38	771.6	58	14.4	81	W	4	1.8		8k	Haze	NW		0.20	5.1	Fair	
Breckenridge, Minn.			30.12	765.0	59	15.0	94	SE	4	1.8			10s			0.18	4.6	Cloudy	
Buffalo, N. Y.			30.36	771.1	55	12.8	89	E	4	1.8		8cs	Haze			0	0	Cloudy	
Burlington, Vt.			30.40	772.1	58	14.4	70	Calm	0	0		5k	2s			0	0	Cloudy	
Cairo, Ill.			30.28	769.1	68	20.0	90	Calm	0	0			10s		SW	0	0	Cloudy	
Cape Hatteras, N. C.			30.21	767.3	73	22.8	90	NE	25	11.2		0	5s			0.30	7.6	Clearing	
Cape Henry, Va.			30.31	769.9	73	22.8	81	NE	18	8.0		5k	0	NE		0	0	Fair	
Cape May, N. J.			30.33	770.4	67	19.4	90	NE	4	1.8		2c	2s	NW	NE	0	0	Fair	
Charleston, S. C.			30.25	768.3	72	22.2	85	NE	12	5.4		1k	1ks	NE	NE	0.01	0.3	Fair	
Cheyenne, Wyoming	24.27	616.4	30.21	767.3	48	8.9	92	NW	8	3.6		2cs	0			Inap.	Inap.	Fair	
Chicago, Ill.			30.27	768.8	63	17.2	83	SE	2	0.9		5c	Sm'e	W		0	0	Fair	
Cincinnati, Ohio			30.28	769.1	66	18.9	73	NE	2	0.9			10s			0	0	Cloudy	
Cleveland, Ohio			30.36	771.1	56.1	13.4	81	E	4	1.8		2k	Sm'e	W	E	0	0	Smoky	
Colorado Springs, Col.	24.33	617.7	30.20	767.1	53	11.7	86	N	4	1.8		8k	0	S		0.09	2.3	Cloudy	
Corsicana, Tex.			30.18	766.6	67	19.4	90	E	5	2.2		2c	0			0	0	Clear	
Davenport, Iowa			30.28	769.1	59	15.0	87	E	4	1.8		5ck	Fog	W		0	0	Fair	
Denison, Tex.			30.18	766.6	71	21.7		Calm	0	0		0	0			0	0	Clear	
Denver, Col.	25.03	637.8	30.25	768.3	57	13.9	50	SE	4	1.8		10k	0			0.16	4.1	Cloudy	
Detroit, Mich.			30.33	770.4	60	15.6	94	NE	3	1.3		10ck	Fog	W		0	0	Cloudy	
Dodge City, Kan.	27.64	702.0	29.86	758.4	71	21.7	75	S	4	1.8		0	0			0	0	Clear	
Dubuque, Iowa			30.26	768.6	61	16.1	83	SE	4	1.8			10n		E	0.02	0.5	Light rain	
Duluth, Minn.			30.21	767.3	57	13.9	93	NE	4	1.8			10n			0.40	10.2	Light rain	
Eastport, Me.			30.34	770.6	56	13.3	80	NW	3	1.3		0	0			0	0	Clear	
Erie, Pa.			30.34	770.6	58	14.4	81	SE	8	3.6		2ck	Sm'e	W		0	0	Fair	
Escanaba, Mich.			30.28	769.1	59	15.0	88	E	2	0.9			10s			0	0	Cloudy	
Fort Gibson, I. T.			30.21	767.3	69	20.6	79	E	3	1.3		5ck	0	NE		0	0	Fair	
Fort Sill, I. T.																			
Fort Sully, Dakota	28.41	721.6	30.05	763.3	58	14.4	100	Calm	0	0			Fog		SE	0	0	Foggy	
Galveston, Tex.			30.08	764.0	76	24.4	86	E	12	5.4		2ck	8ks		E	0.20	5.1	Cloudy	
Grand Haven, Mich.			30.30	769.6	59	15.0	84	S	3	1.3			10s		NW	0	0	Cloudy	
Indianapolis, Ind.			30.31	769.9	59	15.0	87	E	2	0.9			10s		E	0	0	Cloudy	
Indianola, Tex.			30.09	764.3	76	24.4	90	NE	22	9.8			10s		NE	0.04	1.0	Cloudy	
Jacksonville, Fla.			30.11	764.8	80	26.7	86	NE	12	5.4			9s		NE	0.13	3.3	Cloudy	
Keokuk, Iowa			30.22	767.6	62	16.7	85	Calm	0	0		0	0			0	0	Clear	
Key West, Fla.			29.75	755.6	78.3	25.7	86	SE	39	17.4			10n		E	2.08	52.8	Light rain	
Kittyhawk, N. C.			30.27	768.8	72	22.2	85	NE	28	12.5		5k	0	E		0	0	Fair	
Knoxville, Tenn.			30.28	769.1	68	20.0	84	NE	4	1.8		10ck	0		N	0	0	Cloudy	
La Crosse, Wis.			30.24	768.1	62	16.7	88	SE	6	2.7			10n		SE	0.49	12.4	Light rain	
Leavenworth, Kan.			30.19	766.8	66	18.9	84	S	2	0.9		0	0			0	0	Clear	
Lexington, Ky.	29.23	742.4	30.33	770.4	60	15.6	100	NE	4	1.8			10ks		NE	0	0	Cloudy	
Long Branch, N. J.			30.36	771.1	67	19.4	90	NE	8	3.6		2c	8k	SW	NE	0	0	Cloudy	
Louisville, Ky.			30.28	769.1	66	18.9	83	N	4	1.8		10k	0			0	0	Cloudy	
Lynchburg, Va.			30.38	771.6	64	17.8	83	Calm	0	0		10k	0	NE		0	0	Cloudy	
Malone, N. Y.			30.35	770.9	56	13.3	81	S	4	1.8			8ks			0	0	Cloudy	
Marquette, Mich.			30.28	769.1	59	15.0	82	Calm	0	0			10s			0.08	2.0	Cloudy	
Memphis, Tenn.			30.27	768.8	67	19.4	90	NE	3	1.3		2ks	Haze			0	0	Fair	
Milwaukee, Wis.			30.33	770.4	60	15.6	88	Calm	0	0			Fog			0	0	Foggy	
Mobile, Ala.			30.12	765.0	75	23.9	85	NE	8	3.6		5c	5s		E	0	0	Cloudy	
Montgomery, Ala.			30.22	767.6	74	23.3	81	NE	4	1.8			10s		E	0	0	Cloudy	
Morgantown, W. Va.			30.32	770.1	59	15.0	91	N	1	0.4		2c	Fog	W		Inap.	Inap.	Foggy	
Mt. Washington, N. H.	24.14	613.1	30.50	774.7	37	2.8	81	N	20	8.9		5cs	5s	N	N	0.10	2.5	Fair	
Nashville, Tenn.			30.26	768.6	66	18.9	90	Calm	0	0		10k	0	NW		0	0	Cloudy	
New Haven, Conn.			30.38	771.6	65	18.3	83	NE	10	4.5		8k	Sm'e	N		0.14	3.6	Fair	
New London, Conn.			30.37	771.4	65	18.3	84	N	3	1.3		2c	2ck	NW	SW	0	0	Fair	
New Orleans, La.			30.08	764.0	76	24.4	77	NE	12	5.4			10s		NE	Inap.	Inap.	Cloudy	
Newport, R. I.			30.37	771.4	64	17.8	89	NE	4	1.8			10ks		W	0	0	Cloudy	
New York, N. Y.			30.38	771.6	65	18.3	83	N	2	0.9		5k	Fog	S		0.10	2.5	Fair	
Norfolk, Va.			30.32	770.1	70	21.1	85	NE	8	3.6		0	5s		NE	0	0	Fair	
North Platte, Neb.	27.30	693.4	29.81	757.2	64	17.8	83	Calm	0	0		0	5s			0	0	Fair	
Omaha, Neb.	29.10	739.1	30.14	765.5	69	20.6	95	Calm	0	0			10s			Inap.	Inap.	Cloudy	
Oswego, N. Y.			30.40	772.1	56.6	13.7	87	S	4	1.8			10s			0	0	Cloudy	
Peck's Beach, N. J.			30.36	771.1	69	20.6	84	E	8	3.6		4c	2s			0	0	Fair	
Pembina, Dakota			30.14	765.5	60	15.6	88	Calm	0	0			10s			0	0	Cloudy	
Philadelphia, Penn.			30.36	771.1	65	18.3	83	NE	6	2.7		10k	0	N		0	0	Cloudy	
Pike's Peak, Colorado	18.10	459.7	30.31	769.9	31	—0.6	89	Calm	0	0		2k	2s	W		0.30	9.9	Fair	
Pittsburgh, Penn.			30.34	770.6	53	11.7	93	NE	5	2.2			Fog			0	0	Foggy	
Port Huron, Mich.			30.36	771.1	56	13.3	93	Calm	0	0			10s			0	0	Cloudy	
Portland, Me.			30.39	771.9	60	15.6	76	Calm	0	0		10ck	Haze	NW		0	0	Cloudy	
Portland, Oregon			30.21	767.3	50	10.0	92	Calm	0	0			Fog			0	0	Foggy	
Punta Rassa, Fla.			29.86	758.4	79.5	26.3	82	E	24	10.7			8ks		E	0.20	5.1	Thr't'ng cyclone.	
Rochester, N. Y.			30.38	771.6	55	12.8	80	SW	4	1.8			10s		SW	0	0	Cloudy	
Salt Lake City, Utah	25.77	654.6	30.10	764.5	55	12.8	38	Calm	0	0		5c	0			0	0	Fair	
Sandy Hook, N. J.			30.35	770.9	67	19.4	90	NE	9	4.0		5ck	Haze	N		0.02	0.5	Fair	
San Diego, Cal.			29.96	761.0	68	20.0	79	E	12	5.4			10s		NE	0.03	0.8	Cloudy	
San Francisco, Cal.			30.00	762.0	53	11.7	93	SW	4	1.8			Fog			0	0	Foggy	
Santa Fe, N. M.	23.43	595.1	29.97	761.2	57	13.9	63	SE	8	3.6			8s			0.14	3.6	Cloudy	
Savannah, Ga.			30.22	767.6	76	24.4	81	NE	8	3.6		2c	5k		NE	Inap.	Inap.	Fair	
Shreveport, La.			30.22	767.6	70	21.1	90	N	4	1.8		8c	2s	S		0	0	Cloudy	
Smithville, N. C.																			
Springfield, Mass.			30.39	771.9	60	15.6	82	N	4	1.8		2c	5k	NW	W	0.05	1.3	Fair	
St. Louis, Mo.			30.30	769.6	64	17.8	78	SE	3	1.3		2c	0			0	0	Fair	
St. Marks, Fla.			30.10	764.5	76	24.4	86	E	16	7.2		0	8s		E	0	0	Fair	
St. Paul, Minn.			30.14	765.5	61.5	16.4	91	SE	6	2.7			10s			0.19	4.8	Cloudy	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			30.28	769.1	68	20.0	90	NE	4	1.8		2c	5s		NE	0	0	Cloudy	
Toledo, Ohio			30.31	769.9	59	[illegible]	87	N	2	0.9		8ck	2s	W	N	0	0	Cloudy	
Tucson, Arizona																			
Tybee Island, Ga.			30.23	767.8	76	24.4	83	NE	25	11.2		2cs	5ks		NE	0.04	1.0	Fair	
Vicksburg, Miss.			30.26	768.6	69	20.6	90	NE	1	0.4		5c	0	W		0	0	Fair	
Virginia City, Montana	24.50	622.3	29.95	761.5	41	5.0	56	SE	3	1.3		0	0			0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.37	771.4	66	18.9	84	N	4	1.8		Haze	8s			0	0	Smoky	
Wilmington, N. C.			30.28	769.1	70	21.1	84	NE	7	3.1			10s			0.32	8.1	Cloudy	
Wood's Hole, Mass.			30.38	771.6	66	18.9	84	Calm	0	0			10s			0	0	Cloudy	
Wytheville, Va.	28.01	711.4	30.15	765.8	63	17.2	88	E	1	0.4		10k	0			0	0	Cloudy	
Yankton, Dakota	28.89	732.8	30.16	766.1	63	17.2	94	Calm	0	0			Fog			0.51	13.0	Foggy	
Yuma, Arizona																			
Sub-Series.																			
Bridgetown, B'b'does, W. I.					78	25.6	95	NE	6	2.7			10s			0	0	Cloudy	F. Racker.
Pointe-a-Pitre, G'd'loupe, do			29.95	760.7	82	27.8	83	E				5k	2cs			0	0	Fair.	L. V. Bigard.
Havana, Cuba, W. I.			29.80	756.9	78	25.6	90	SSE	8.4	3.8		10k	0	S		2.44	62.0	H'vy rain(?)	Charles Hasselbrink.
Kingston, Jamaica, W. I.			30.15	765.8	80	26.7	86	E	8	3.6			8n			4.48	113.8	Raining.	James Gall.
St. Thomas, St. T., W. I.			30.21	767.3	82	27.8	70	E											W. S. Cameron.
Santiago de Cuba, W. I.			29.79	756.7	79	26.1	90	SE	3.6	1.6			8n		SE			Raining.	Robert Mason.
St. Georges, Bermudas			30.06	763.3	79	26.1	74	N	16	7.2		2c	8fk			0.455	11.56	Cloudy	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.																			
St. John's, Newfoundland			30.36	771.1	60	15.6	83	S					10s			0	0	Fair.	J. Fortescue.
St. John's, Porto Rico, W. I.																			John Delaney.
Clifton, Jamaica, W. I.																			Leon M. Acuña.
Navassa	27.19	690.6	29.97	761.2	67	19.4	90	S	4.0	1.8			10k			5.08	129.0	Raining.	C. Partridge.
Mesellin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			30.33	770.4	53	11.7	86	Calm	0	0			2c			0	0	Clear.	H. M. Redington.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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 Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,263.8 ft., or 1,301.1 m.; Santa Fé, 6,862.3 (?) ft., or 2,091.6 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,291.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 15, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.01	762.3	89.2	26.8	50	WNW			1		7			0	0	Fair	Charnot.
Algiers			29.97	761.2	78.8	26.0	76	N			2		3			Inap	Inap	Lightning	Peter.
La Calle																			Kuntz.
Tunis			30.04	763.0	85.9	30.5	53	E			2		3			0	0	Stormy	Jacques.
Sfax			30.05	763.2	87.3	30.7	59	NE			4		2			0	0	Stormy	Chauvey.
Saïda			30.04	762.9	78.8	26.0	24	SW			2		2			0	0	Hidden	Grosjean.
Tebessa			30.04	763.0	85.1	29.5		SE			1		5			0	0	Thunder	Colin.
Geriville			30.05	763.3	77.0	25.0	25	SE			4		4			Inap.	Inap.	Cloudy	Bernadach.
Laghouat			30.01	762.3	91.4	33.0		S			3		5			0	0	Sirocco	Simon.
Biskra			29.99	761.7	96.8	36.0		N			1		7			0	0	Fair	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.13	765.4	61.7	16.5	41	NE			2		4			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.21	767.3	51.4	10.8	67	NNW			3		10			0	0		I. R. Observatory.
Sperles			30.18	764.9	50.4	10.2	59	N			3				S	0.639	1.0		Julius Mikolik.
Gratz			30.15	765.9	61.0	16.1	51	ESE			2		0						Andreas Rospini.
Hermannstadt	28.94	735.7	30.15	765.9	61.0	16.1	51	ESE			3		10			0.110	2.80	Showery	Prof. Reissenberger.
Kremsmünster	28.55	725.1	29.98	761.6	48.7	9.3	68	NNW			3		0			0	0		Prof. C. Wagner.
Lemberg	28.87	733.4	30.22	767.5	55.8	13.2	35	ESE			4		10			0	0		Dr. T. Stanecki.
Nyiregyhaza			30.12	762.6	42.1	5.6	89	NE			3		10			0.293	7.44	Raining	Habzsuda Daniel.
Pola			30.15	765.7	47.1	8.4	70	N			3		6ks			0	0		I.R. Hydrographic Off'ce
Szegedin			30.08	764.1	65.1	18.4	59	E											Karl Stancel.
Trieste																			Prof. V. Farolfi.
Vienna			30.09	764.3	65.1	18.4	75	ESE			3		1			0	0		I. R. Central Institute.
			30.17	766.4	61.5	16.4	25	N			2		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. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.11	765.6	65.7	18.7	56	E			4	0	0			0	0		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.42	772.7	55.9	13.3		ENE	6	2.7			9			0.015	0.38	Gloomy	William Boswell.
Ardrossan			30.35	770.9	62	16.7		NNE			4		8					Foggy	James Mayes.
Armagh Observatory			30.31	769.9	61.3	16.3		ENE	11	4.9			9					Overcast	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs.			30.24	768.1	62.8	17.1		ENE			3		4					Hazy	John Hartnup, Jr.
Birr Castle, (Parsonstown)			30.23	767.8	62.8	17.1		NE			1		9					*D. clouds	J. Dreyer.
Bradford			30.24	768.1	62.6	17.0		NE			2		8					Gloomy	J. McLandsborough.
Bridgetown, (Barbadoes)			29.91	759.7	86	30.0		NE			2		7					*D. clouds	T. H Hunt.
Cambridge Observatory			30.20	767.1	68.0	20.0		E			2		7					*D. clouds	Sergeant Hunt, A.H.C.
Cape Good Hope Obs.			30.20	767.1	59.0	15.0	58	S	9	4.9			1						The Staff, for E. J. Stone.
Cardington			30.19	766.8	69.0	20.6		SE					3						John McLaren.
Carlisle			30.32	770.1	61.2	16.2		E					10			0.05	1.3	Overcast	T. Bell, for J. Cartmell.
Chatham, School M. E.			30.15	765.8	66.2	19.0		NE			2		8					Fair	Capt. J. Fellowes, R. E.
Dartmoor	28.74	730.0	30.10	764.5	61.5	16.4		E			8		4		E			*D. clouds	R. E. Power.
Donaghadee			30.32	770.1	60	15.6		ESE			4		5					*D. clouds	J. Mac Gowan, Jr.
Dover			30.19	766.8	64	17.8		ENE			5		0						J. Costello.
Eccles, (near Manchester)			30.25	768.3	62.1	16.7		ENE	2.8	1.3			10					Gloomy	Thomas Mackereth.
Falmouth Observatory			30.09	764.3	63.2	17.3		E	12	5.4			4					*D. clouds	The Staff.
Fort Napier, (Natal)	27.60	701.0	29.92	760.0	53.0	11.7		SE			2		10					Drizzling	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	79	26.1		Calm					9					*D. clouds	
Galway, Queen's College																			B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.01	762.2	77.0	25.0		SW			5		0					Clear	Sergt. E. G. Baker.
Glasgow Observatory			30.35	770.9	59.8	15.4		NE			3		10					Overcast	Lewis Stuart.
Great Yarmouth			30.25	768.3	65	18.3		ENE			3		1					Clear	G. T. Watson.
Greenwich Royal Obs.			30.17	766.3	68.7	20.4		ENE			5		3			Blank	Blank	*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.04	763.0	66	18.9		NE			3		0					Clear	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			30.29	769.4	62.5	16.9		E					10					Overcast	F. J. Page, for L. J. Cross.
Helston			30.06	763.5	68	20.0		E			6		6ck					*D. clouds	M. P. Moyle.
Holyhead			30.22	767.6	64	17.8		ENE			5		1					Clear	John Tilston.
Hull Park																			
Kew Observatory			30.16	766.1	67.0	19.4		NE	31	13.9			5					*D. clouds	The Staff.
Kingstown			30.31	769.9	60	15.6		E			4		1					Clear	George Mitchell.
Leicester Museum			30.23	767.8	67.0	19.4		E			2		7					*D. clouds	William J. Harrison.
Llandudno			30.24	768.1	67.0	19.4		E					8					Overcast	Dr. James Nicol.
Malta, (Mediterranean)			30.07	763.8	81.8	27.7		NW			1		6k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			30.39	771.9	60	15.6		E			1		8						W. D. Penny.
Nassau, (Bahamas)			30.11	764.8	82.2	27.9		SE			2		4					*D. clouds	Surg.-Maj. Henry.
Nottingham			30.25	768.3	67.0	19.4		NNE			4		8k,d			0	0	*D. clouds	E. J. Lowe.
Oscott, St Mary's College			30.19	766.8	67.7	19.8		ENE			3-5		9					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			30.15	765.8	67	19.4		ENE			2		9					Overcast	J. Lucas, for R. Main.
Plymouth			30.09	764.3	66.2	19.0		E			5		1					*D. clouds	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			30.17	766.3	63	17.2		ESE			5		5					Cloudy	W. Kennedy.
Saint Ann's Head			30.15	765.8	64	17.8		ESE			4		4					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			30.02	762.5	70.5	21.4		E			4		0						A. P. Amy.
Sandwick Manse(Orkneys)																			
Scarborough			30.33	770.4	60.0	15.6		ENE			2		10					Overcast	F. Shaw.
Scutari cemetery,(Turkey)			29.92	760.2	66.6	19.2		NNE			2		10					Gloomy	Sergt. W. H. Lyne.
Sheffield			30.25	768.3	65.8	18.8		ESE			3		9			Blank	Blank	Gloomy	W. F. Cooper.
Silloth Rectory			30.32	770.1	60.4	15.8		ENE			3		9			0	0	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			30.26	768.6	61.8	16.6		E			2		10					Gloomy	The Staff.
Stornoway, Lews C. (Hebr).			30.35	770.9	58	14.4		ESE			1		0					Clear	John Smith.
Strathfield Turgiss			30.15	765.8	69.5	20.8		NE			1-2		4					*D. clouds	Rev. Charles H. Griffith
Streatley Vicarage																			Rev. John Slatter.
Sumburgh Head,(Shetland)																			
Thurso			30.40	772.1	58	14.4		SE			2		9					Overcast	John Trotter.
Truro, Royal Institution			30.06	763.5	70	21.1		E			7		5					*D. clouds	W. Newcombe.
Valencia Observatory			30.15	765.8	65.3	18.5		ESE	13	5.8			7					Hazy	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			30.39	771.9	59.0	15.0		E			3		8k			0.04	1.0	Cloudy	Andrew Gibb.
Monach Lt-house,(Shet. Is)																			
North Unst, (Shetland Is)			30.44	773.2	53	11.7		N			3	4	6	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., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			30.34	770.6	63.5	17.5	63	Calm			0		9						
Fanöe			30.31	769.9	66.2	19.	61	SE			2		1						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			30.13	765.4	50.0	10.0	83	SE			2		8						
Thorshavn, (Faröe)			30.41	772.4	54.5	12.5	83	S			2		4						
Vestervig			30.35	771.0	64.4	18.0	64	C 1m			0		6						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Algeria			30.01	762.2	68.0	20.0	67	NE			1		..k			0	0		Normal School.
Amiens																			Normal School.
Avignon			30.0	762.1	75.4	24.8	76	NNW			1		8n			0	0	Cloudy	Normal School.
Bar-sur Seine			29.97	761.2	70.9	21.6	49	S			2		10			0	0	Clear	G. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory.
Beauvais			30.08	764.1	66.4	19.1	72	E			3		10			0	0	Cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.32	770.0	74.3	23.5	66	W			1		0			0	0	Clear	Normal School.
Bourges			30.01	762.2	71.6	22	82	NE			2		5		E	0	0	Cloudy	Normal School.
Brest			29.93	760.3	66.7	19.3	86	ENE			2		10		E	0.128	3.25	Stormy	Naval Observatory.
Caen																			Normal School.
Chartres			30.10	764.6	71.6	22		E			2		3		E				Normal School.
Chaumont	28.97	735.9	30.11	764.7	64.4	18.0		SE			1		20		SE	0	0	Clear	Normal School.
Commercy			30.11	764.9	65.5	18.6	69	ENE			6		..e		ENE	0	0	Clear	Normal School.
Commune de Gréasque*			30.08	764.1	71.2	21.8	74	SE			1		8		SE	0	0		
Le Mans																			Normal School.
Lons-Le Saulnier			30.08	764.0	67.5	19.7	77	W			2		0			0	0	Clear	Normal School.
Mâcon			29.99	761.8	67.3	19.6	79	N			2		0			0	0	Clear	Normal School.
Mirecourt			30.04	763.1	66.7	19.3	63	NE			2		0			0	0	Clear	Normal School.
Orleans																			Normal School.
Paris Observatory			30.04	762.9	68.5	20.3	65	ENE			3		0			0	0	Clear	National Observatory.
Parthenay			30.15	765.8	68.4	20.2	80	N			4		8		NW			Cloudy	Normal School.
La Roche sur Yon																			Normal School.
Rochefort, Observatory			29.99	761.7	76.3	24.6	56	S			1		8		N	0.087	2.2	Cloudy	Naval Observatory.
Rouen			30.06	763.4	72.3	22.4	44	E E			3					0	0	Clear	Normal School.
Saint Lo																			Normal School.
Villefranche																			Normal School.
Sub-Series.																			
Fort de France, Martinique																			L'Abbé Marchésl.
Mont-Louis	24.04	633.4			62.4	16.9	61	SW	14.9	6.66			4		SW	0	0		—. Falguère.
Montsouris Observatory			30.04	762.9	68.7	20.4	50	ENE			3		0			0	0	Misty	Marié Davy.
Perpignan			29.99	761.8	77.4	25.2	61	NE	5.0	2.50			1		SW	0	0		Dr. Fines.
Saint Maur (near Paris)			30.04	763.1	69.4	20.8	52	NE			2		0			0	0	Clear	E. Renou.
Tours			30.01	762.1	71.1	21.7	67	E			1		5		E	0.346	8.8		C. Marquet.
Versailles, (near Paris)			30.05	763.2	70.9	21.6	46	E			2		0			0	0		Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai			30.09	764.2	64.6	18.1	89	NNW	4.0	1.8		10ks	0	S		0 / 0	0 / 0		H. Le Leo, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,580.40 meters, or 5,204.8 feet; Chaumont, 382 m., or 1,060.9 ft.; Commune de Gréasque, 322 m., or 1,056.4 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. *Near Marseilles.

GERMAN SERIES.

Furnished by the coöperation of Prof. Geo. Neumayer, Superintendent Royal 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.17	766.4	64.4	18.0	65	SE	13	6			2			0	0		Prof. Hoh.
Berlin			30.31	769.9	63.5	17.5	30	NE	9	4			0			0	0		Prof. Arndt.
Breslau			29.95	770.8	57.4	14.1	40	NNE	13	6			0			0	0		Dr. P. Neugebauer.
Carlsruhe			30.11	764.7	68.4	20.2	37	NE	11	5			0			0	0		A. Senz.
Cassel			30.19	766.9	70.3	21.3	32	SE	22	10			0			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society
Friedrichshafen	28.08	728.5	30.11	764.9	60.8	16.0	69	NE					1			0.024	0.6		M. Wilhelm.
Hamburg			30.34	770.5	64.4	18.0	43	E	20	9			0			0	0	Clear	Deutsche Seewarte.
Kiel			30.29	769.4	63.9	17.7	54	ENE	18	8			4			0	0		Prof. G. Karsten.
Königsberg			30.28	769.2	59.2	15.1	53	NE	22	10						0	0	Clear	Prof. E. Luther.
Köslin																			Dr. Tügert.
Leipsic			30.31	769.9	63.3	17.4	34	NNE	4	2			0			0	0		Prof. Brahns.
Münster			30.26	768.7	67.1	19.5	59	E	9	4			0			0	0		Prof. E. Hois.
Posen			30.32	770.1	59.9	15.5	36	NE	22	10			0			0	0	Clear	Dr. Magener.
Strassburg, (in Alsace)			30.09	764.2	68.[illegible]	20.1	40	NE	4	2			0			0	0		Hartwig.
Stuttgart			30.13	765.3	49.67	9.77	30	E					0			0	0		Mr. Würth.
Thorn			30.29	769.3	61.0	16.1	43	NE	22	10			2			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.19	764.4	68.2	20.1	37	E	22	10			0			0	0		Prof. Klesch.
Wustrow, Naval School			30.34	770.7	61.3	16.3	67	NNE	9	4			7ks			0	0	Cloudy	E. F[illegible]chütz.

Note.—In the originals the distinction between 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.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.07	763.7	72.5	22.5	61	S			1		4	N		0	0		
Mondovi			30.05	763.2	68.2	20.1	68	NW			2		9			0.700	10.3		
Genoa			30.00	762.1	80.2	26.8	47	NW	2.5	1.1			0			Blank	Blank		
Pavia			30.03	762.8	75.2	24.0	46	SE			2		3	NE		0	0		
Verona			30.02	762.4	75.6	24.2	57	E			2		10			0	0		
Padua			30.06	763.4	70.0	21.1	62	E	6.9	3.1			10	N		0	0		
Parma																			
Bologna			30.06	763.5	77.9	25.5	61	SE			1		4	W		0	0		
Leghorn			30.00	761.9	80.8	27.1	31	NNE	6.3	2.8			1			0	0		
Urbino																			
Siena																			
Rome			29.99	761.8	73.9	23.3	40	ENE	1.8	0.8			1	W		0	0		
Naples, O.U.			29.98	761.5	76.8	24.9	48	NW	4.3	1.9			3			0	0		
Lecce			29.98	761.5	77.7	25.4	48	SW			2		2			0	0		
Cosenza			30.02	762.4	72.0	22.2	65	NNW			4		9	N		0	0		
Catania (Sicily)			30.01	762.3	74.1	23.4	64	NW			2		9			0	0		
Ripozzo																			
Palermo			29.95	760.8	78.8	26.0	76	E			2					0	0		
Sub-Series.																			
Naples, S. R.			29.90	759.4	81.0	27.2	55	WSW	16.8	7.5			3			0	0		
			30.02	762.5	77.0	25.0	59	E					3	SE		0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,144.3 feet.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Flushing			30.19	766.9	67.3	19.6		E			4								
Groningen			30.23	767.8	65.3	18.5		E			4								
Helder			30.25	768.3	65.7	18.7		ENE			4								
Utrecht			30.18	766.6	66.2	19.0		E			5		0					Clear	

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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	63.3	17.4	76	S	8.3	3.7			3			0	0		
Christiania			30.43	772.9	59.0	15.0	59		1.1	0.5			10			0	0		
Tromsö			30.15	765.8	41.5	5.3	80	SW			6		10			0.146	3.7		

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Lisbon			30.11	764.7	68.9	20.5	70	SW	18.6	8.3			2						The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

RUSSIAN SERIES.

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

Warsaw			30.19	766.9	57.9	14.4	34	N	18	8			8						Astronomical Obs.
Wilna			30.25	768.3	56.[illegible]	13.5	43	E	4	2			6						Astronomical Obs.
Dorpat			30.27	768.8	55.9	13.3	86	NNW	2	1			8						Physical Cabinet.
St. Petersburg			30.21	767.2	55.0	12.8	36	N	7	3			5						Central Physical Obs.
Kuopio			30.29	769.3	46.9	8.5	51	N					10			0	0		Ch. Forsten.
Kieff			30.00	762.1	48.4	9.1	92	ENE	13	6			10					Light rain	Physical Cabinet.
Nikolaiev			29.96	760.9	55.9	13.3	76	SW	8	3.5			9						Kurdakof.
Kertch			29.95	760.8	68.[illegible]	20.1	71	SSE	7	3			7						Lagorio.
Moscow			30.25	768.4	52.9	11.6	65	SW	13	6			7						Meteorological Obs.
Lugan			30.04	763.1	57.0	13.9	44	E	25	11			9						Meteorological Obs.
Archangel			29.99	761.7	41.5	5.3	82	NNW	25	11			7						Ogorodnikof.
Tiflis	28.69	728.8	30.07	763.6	71.8	22.1	58	SE	8	3.5			9						Physical Obs.
Astrakhan			30.29	769.4	59.[illegible]	15.1	47	NE	8	3.5			1						Sebastianof.
Kasan			29.97	761.2	50.0	10.0	45	WNW	10	4.5			6						Physical Cabinet.
Orenburg			30.11	764.8	53.0	12.0	37	NW	4	2			1						Tschernischef.
Ekaterinburg	28.69	728.7	29.70	754.3	42.1	5.4	71	SW	17	7.5			8						Meteorological Obs.
Kasaly			29.96	760.9	54.9	12.7	70	W	8	3.5			0						Hobref.
Tashkend	28.39	721.2	30.02	762.6	77.9	25.5	36	Calm	0	0			0						Michelson.
Barnaul			29.46	748.3	61.2	16.[illegible]	32	Calm	0	0			4						Meteorological Obs.
Yeniseisk			29.63	752.6	40.5	4.7	87	SW	2	1			10						Marks.
Irkutsk	28.43	722.1	29.83	757.6	40.3	4.6	81	Calm	0	0			0						Usolzef.
Oorga	25.54	648.8	29.83	757.7	40.[illegible]	4.0	68	Calm	0	0			5						Mossin.
Peking, (China)			30.11	764.8	63.5	17.5	72	NW	4	2			9						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. The elevation of Tiflis is 403. meters, or 1,311.8 feet; Ekaterinburg, 305.4? m., or 1,005.2? ft.; Tashkend, m 494.2?, or 1,621.3? ft.; Irkutsk, 392. m., or 1,286. ft.; Nertchinsk, 592.0? m, or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

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

Madrid			29.96	760.9	78.4	25.8	36	SW	15.0	6.7		1	1	SW		0	0		Royal Observatory.
San Fernando																			The Naval Observatory.

NOTE.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea			30.33	770.3	47.8	8.8	63	NW			4		0			0	0		
Hernosand			30.53	775.4	54.3	12.4	48	S			2		2			0	0		
Stockholm			30.35	770.8	57.7	14.3	46	ENE			4		7			0	0		
Visby			30.28	769.0	59.0	15.0	64	NE			4		5			0	0		
Sub-Series.																			
Upsala			30.39	771.9	57.2	14.0	48	N	8.1	3.6			5		NNW				Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.64	727.5	30.03	762.8	66.0	18.9	66	NE			2		3			0	0		The Observatory.
Zurich	28.50	723.9	30.12	765.0	59.4	15.2	74	E			1		6			0	0	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +0.4mm.; Thermometer, +0°.7; Relative Humidity, +4 per cent.

Note.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y			29.97	761.3	80.4	26.9	57	N			2		0					Clear	Prof. C. N. A. Van Dyck.
Constantinople			29.98	761.1	68.9	20.5	76	NE	9	4			10		SW	0.51	13.	Cloudy	
Fao, (Persian Gulf)			29.84	758.0	91.8	34.9		NW			3		0					Clear	
Salonica					71.2	21.8		NW			1		10					Cloudy	
Valona			29.94	760.5	73.8	23.2		W			2		2						
Varna			30.00	762.0	64.4	18.0		SE			2		10					Cloudy	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea level. The distinction between upper and lower clouds is not made.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens																			

Note.—Reports commence October 1, 1875.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Takio																			

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario			30.17	766.3	69	20.6		Calm	0	0			10s		SW	0	0	Cloudy	
Chatham, N. B.			30.12	764.8	48	8.9	94	SW	1	0.4		8ck	0	SW		0	0	Fair	
Charlottetown, P. E. Island			30.14	765.5	58	14.4	79	S	4	1.8		0	2cs			0	0	Fair	
Fort Garry, Manitoba			30.13	765.3	54	12.2	100	E	6	2.7		5k	5ks	S	S	0.020	0.51	Cloudy	
Halifax, N. S.			30.11	764.8	57	13.9	92	SW	3	1.3		5cs	0			0	0	Fair	
Kingston, Ontario			30.16	766.1	62	16.7	84	Calm	0	0		10cs	Sm'e			0	0	Cloudy	
Montreal, Quebec			30.09	764.3	60	15.6	82	SW	11	4.9		Haze	5s			0	0	Cloudy	
Ottawa, Ontario			30.11	764.8	56	13.3	85	SE	2	0.9		10k	0			0	0	Cloudy	
Parry Sound, Ontario			30.10	764.5	58	14.4	94	S	7	3.1		5ck	5ks	W	W	0	0	Fair	
Port Dover, Ontario			30.13	765.3	60	15.6	88	NW	4	1.8		10k	0	SW		0	0	Cloudy	
Fort Stanley, Ontario			30.15	765.8	70	15.6	93	NE	2	0.9			10n		NE	0	0	Cloudy	
Quebec, Quebec			30.08	764.0	59	15.0	82	Calm	0	0		0	0			0	0	Clear	
Saugeen, Ontario			30.11	764.5	59	15.0	93	Calm	0	0			10n			0.08	2.0	Cloudy	
Stayner, Ontario			30.12	765.0	57	13.9	87	Calm	0	0			10ks			0	0	Cloudy	
Sydney, C. B.			30.18	766.6	57	13.9	84	SW	2	0.9		8c	0	W		0	0	Fair	
Toronto, Ontario			30.13	765.3	56	13.3	87	NW	1	0.4		8cs	2s	W	W	0	0	Cloudy	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 4—10.	Clouds. Amount. Low'r 4—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.13	765.3	58	14.4	87	Calm	0	0		10k	Fog	W		0	0	Cloudy	
Alpena, Mich.			30.07	763.8	59	15.0	94	W	7	3.1			10n			0.09	2.3	Light rain	
Atlantic City, N. J.			30.17	766.3	66.5	19.2	94	Calm	0	0		10k	0	W		0	0	Cloudy	
Augusta, Ga.			30.19	766.8	70	21.1	81	Calm	0	0		0	0			0	0	Clear	
Baltimore, Md.			30.17	766.3	65	18.3	83	Calm	0	0		Haze	Sm'e			0	0	Fair	
Barnegat, N. J.			30.16	766.1	67	19.4	94	Calm	0	0		8ck	2ks		SW	0.07	1.8	Cloudy	
Benton, Montana	27.63	701.8	30.44	772.9	44	6.7	84	Calm	0	0		0	0			0	0	Clear	
Bismarck, Dakota	28.33	719.6	29.95	760.7	58	14.4	87	SW	3	1.3		Haze	Fog			0	0	Foggy	
Boston, Mass.			30.18	766.6	59	15.0	94	W	5	2.2			Fog			0	0	Foggy	
Breckenridge, Minn.			30.08	764.0	57	13.9	93	SE	4	1.8			10s		SE	0	0	Cloudy	
Buffalo, N. Y.			30.10	764.5	63	17.2	83	Calm	0	0			10s		SW	0	0	Cloudy	
Burlington, Vt.			30.14	765.5	60	15.6	71	S	6	2.7		2k	5s			0	0	Cloudy	
Cairo, Ill.			30.17	766.3	67	19.4	90	NE	4	1.8			1ks		W	0	0	Cloudy	
Cape Hatteras, N. C.			30.10	764.5	73	22.8	85	NE	17	7.6		0	5s		NE	0	0	Fair	
Cape Henry, Va.			30.16	766.1	72	22.2	80	N	3	1.3		2ck	0			0	0	Fair	
Cape May, N. J.			30.17	766.3	68	20.0	94	N	4	1.8			10s		W	0	0	Cloudy	
Charleston, S. C.			30.16	766.1	73	22.8	85	N	6	2.7		5c	0	SE		0	0	Fair	
Cheyenne, Wyoming	24.29	617.0	30.23	767.8	54	12.2	86	NW	2	0.9		5k	0	NW		0.20	5.1	Fair	
Chicago, Ill.			30.09	764.3	67	19.4	84	SW	5	2.2		0	10s			0	0	Cloudy	
Cincinnati, Ohio			30.13	765.3	63	17.2	85	NE	1	0.4		5c	Fog			0	0	Foggy	
Cleveland, Ohio			30.12	765.0	62.9	17.2	78	SE	5	2.2		5c	Sm'e	W	SE	0	0	Fair	
Colorado Springs, Col.	24.32	617.7	30.19	766.8	58	14.4	88	N	5	2.2		5k	2s	W	N	0	0	Cloudy	
Corsicana, Tex.			30.01	763.0	69	20.6	90	N	4	1.8		2c	0			0	0	Fair	
Davenport, Iowa			30.11	764.8	68	20.0	90	S	1	0.4			10s			0.12	3.0	Cloudy	
Denison, Tex.			30.08	764.0	70	21.1		N				0	0			0	0	Clear	
Denver, Col.	25.05	636.3	30.27	768.8	58	14.4	58	NW	1	0.4		10ck	0	NE		0	0	Cloudy	
Detroit, Mich.			30.10	764.5	64	17.8	89	S	2	0.9		10k	0	W		0	0	Cloudy	
Dodge City, Kan.	27.59	700.8	29.70	756.7	72	22.2	71	S	2	0.9		0	0			0	0	Clear	
Dubuque, Iowa			30.10	764.5	66	18.9	89	SE	2	0.9			Fog			0.16	4.1	Foggy	
Duluth, Minn.			30.12	765.0	59	15.0	94	Calm	0	0			10s			0.05	1.3	Cloudy	
Eastport, Me.			30.09	764.3	55	12.8	86	S	2	0.9		2c	5s			0	0	Fair	
Erie, Pa.			30.10	794.5	62	16.7	83	SE	4	1.8		10cs	Sm'e			0	0	Cloudy	
Escanaba, Mich.			30.07	763.8	59	15.0	88	N	12	5.4			10s		N	0	0	Cloudy	
Fort Gibson, I. T.			30.11	764.8	70	21.1	83	Calm	0	0		5c	0	W		0	0	Fair	
Fort Sill, I. T.																			
Fort Sully, Dakota	28.45	722.6	30.08	764.0	62	16.7	88	NW	8	3.6		0	2s		NW	0.02	0.5	Fair	
Galveston, Tex.			29.86	758.4	77	25.0	82	N	33	14.8		10cs	0	E		0	0	Cloudy	
Grand Haven, Mich.			30.11	764.8	63	17.2	88	NE	2	0.9			10s			0.04	1.0	Cloudy	
Indianapolis, Ind.			30.14	765.5	63	17.2	83	Calm	0	0		5ck	Haze			Inap.	Inap.	Fair	
Indianola, Tex.			29.91	759.7	76	24.4	86	N	28	12.5			10s			0.40	2.5	Cloudy	
Jacksonville, Fla.			30.09	764.3	80	26.7	86	NE	4	1.8		Haze	2s		NE	0	0	Fair	
Keokuk, Iowa			30.11	764.8	67	19.4	84	N	4	1.8			10s		N	0	0	Threatening	
Key West, Fla.			29.99	761.7	81.8	27.7	70	SE	9	4.0		8cs	2s	SE		0.05	1.3	Cloudy	
Kittyhawk, N. C.			30.14	765.5	71	21.7	85	NE	16	7.2		10k	0	NE		0	0	Cloudy	
Knoxville, Tenn.			30.19	766.8	65	18.3	94	Calm	0	0		8ck	Fog	W		0	0	Cloudy	
La Crosse, Wis.			30.10	764.5	63	17.2	94	E	2	0.9			10s		E	0.02	0.5	Cloudy	
Leavenworth, Kan.			30.09	764.3	68	20.0	90	Calm	0	0		2ck	2s			0	0	Fair	
Lexington, Ky.	29.09	738.9	30.17	766.3	67	19.4	78	NE	2	0.9		5c	0	NE		0	0	Fair	
Long Branch, N. J.			30.18	766.6	68	20.0	90	SE	1	0.4			10ks		SW	0	0	Cloudy	
Louisville, Ky.			30.15	765.8	65	18.3	88	NW	1	0.4		5k	0			0	0	Fair	
Lynchburg, Va.			30.17	766.3	61	16.1	85	Calm	0	0		0	0			0	0	Clear	
Malone, N. Y.			30.08	764.0	60	15.6	76	SE	6	2.7			10s			0	0	Cloudy	
Marquette, Mich.			30.12	765.0	56	13.3	100	N	4	1.8			Fog			0.12	3.0	Foggy	
Memphis, Tenn.			30.16	766.1	69	20.6	90	NE	6	2.7		5cs	Haze			0	0	Fair	
Milwaukee, Wis.			30.14	765.5	60	15.6	94	NE	5	2.2			Fog			0.12	3.0	Foggy	
Mobile, Ala.			30.09	762.0	79	26.1	73	E	12	5.4			10s		E	0	0	Cloudy	
Montgomery, Ala.			30.13	765.3	73	22.8	76	E	11	4.9		8c	0			0	0	Fair	
Morgantown, W. Va.			30.15	765.3	61	16.1	85	Calm	0	0		0	2s			0	0	Fair	
Mt. Washington, N. H.	23.97	608.8	30.33	770.4	38	3.3	100	NW	12	5.4			Fog		NW	0	0	Foggy	
Nashville, Tenn.			30.14	765.5	68	20.0	90	Calm	0	0		8cs	Fog	NW		0	0	Fair	
New Haven, Conn.			30.20	767.1	63	17.2	94	W	4	1.8			10s			0	0	Cloudy	
New London, Conn.			30.20	767.1	66	18.9	87	Calm	0	0		5ck	2s	W	W	0	0	Fair	
New Orleans, La.			29.89	759.2	80	26.7	82	NE	24	10.7			10s		E	0.01	0.3	Threatening	
Newport, R. I.			30.19	766.8	63	17.2	89	SW	1	0.4		8ck	2s	SW	SW	0	0	Cloudy	
New York, N. Y.			30.18	766.6	66	18.9	90	SE	1	0.4			Fog			0	0	Foggy	
Norfolk, Va.			30.16	766.1	68	20.0	84	NE	4	1.8		5ck	2s	SW	NE	0	0	Fair	
North Platte, Neb.	27.26	693.4	29.76	755.9	65	18.3	94	NE	2	0.9			10s		N	0.54	13.7	Cloudy	
Omaha, Neb.	29.03	737.4	30.06	763.5	69	20.6	95	S	4	1.8			10n		W	0.12	3.0	Light rain	
Oswego, N. Y.			30.15	765.8	60.7	15.8	82	S	2	0.9			10s		W	0	0	Cloudy	
Peck's Beach, N. J.			30.18	766.6	67	19.4	90	NE	2	0.9		1k	8s			0	0	Cloudy	
Pembina, Dakota			30.08	764.0	53	11.7	93	Calm	0	0			10s		SE	0	0	Cloudy	
Philadelphia, Penn.			30.16	766.1	65	18.3	94	W	3	1.3		5k	5s	W	W	0	0	Cloudy	
Pike's Peak, Colorado	18.13	460.5	30.34	770.6	34	0.6	89	SW	8	3.6			10s			0.23	5.8	Cloudy	
Pittsburgh, Penn.			30.14	765.5	57	13.9	87	N	2	0.9		5c	Fog	NW		0	0	Fair	
Port Huron, Mich.			30.12	765.0	62	16.7	88	Calm	0	0			10s			Inap.	Inap.	Cloudy	
Portland, Me.			30.16	766.1	58	14.4	82	Calm	0	0		2ck	8s		NW	0	0	Threatening	
Portland, Oregon			30.16	766.1	55	12.8	80	N	4	1.8		5k	0			0	0	Fair	
Punta Rassa, Fla.			30.03	762.7	77	25.0	86	E	8	3.6		8cs	1k	E	E	0.36	9.1	Cloudy	
Rochester, N. Y.			30.11	764.8	59	15.0	81	SW	4	1.8			10s		SW	0	0	Cloudy	
Salt Lake City, Utah	25.72	653.5	30.05	763.3	69	20.6	35	S	7	3.1			10s			0	0	Cloudy	
Sandy Hook, N. J.			30.16	766.1	67	19.4	94	SW	4	1.8		2ck	8ks	NW	SW	0	0	Cloudy	
San Diego, Cal.			29.96	761.0	70	21.1	90	Calm	0	0			10n			0.33	8.4	Light rain	
San Francisco, Cal.			29.98	761.5	53	11.7	90	SW	6	2.7		5ck	2s	NE	SW	0	0	Fair	
Santa Fe, N. M.	23.44	595.4	29.98	761.5	53	11.7	67	SE	4	1.8		0	5s			0.04	1.0	Fair	
Savannah, Ga.			30.14	765.5	73	22.8	85	N	4	1.8		5k	Sm'e	NE		0	0	Fair	
Shreveport, La.			30.08	764.0	72	22.2	90	N	8	3.6			10s		E	0	0	Cloudy	
Smithville, N. C.																			
Springfield, Mass.			30.18	766.6	57	13.9	87	Calm	0	0			Fog			0.01	0.3	Foggy	
St. Louis, Mo.			30.17	766.3	67	19.4	83	S	4	1.8		0	0			0	0	Clear	
St. Marks, Fla.																			
St. Paul, Minn.			30.08	764.0	62	16.7	97	SE	1	0.4			Fog			0.01	0.3	Foggy	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			30.11	764.8	66	18.9	94	SW	1	0.4		5c	2s			0	0	Cloudy	
Toledo, Ohio			30.11	764.8	64	17.8	83	W	6	2.7			10s		NW	0	0	Cloudy	
Tucson, Arizona																			
Tybee Island, Ga.			30.13	765.3	77	25.0	83	NE	18	8.0		2cs	2d		NE	0	0	Fair	
Vicksburg, Miss.			30.03	764.3	72	22.2	90	E	3	1.3			10s		E	0	0	Cloudy	
Virginia City, Montana	24.57	624.1	30.05	763.3	50	10.0	32	SE	10	4.5		8c	0	W		0	0	Cloudy	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.18	766.6	62	16.7	94	Calm	0	0			Fog			0	0	Foggy	
Wilmington, N. C.			30.16	766.1	66	18.9	94	NE	6	2.7			10s		NE	0	0	Threatening	
Woods Hole, Mass.			30.20	767.1	63	17.2	83	S	4	1.8			10s			0	0	Cloudy	
Wytheville, Va.	27.86	707.6	30.01	762.2	56	13.3	93	N	1	0.4			10s			0	0	Cloudy	
Yankton, Dakota	28.84	732.5	30.10	764.5	63	17.2	94	SE	8	3.6			8s		NW	0.53	13.5	Clearing	
Yuma, Arizona																			
Sub-Series.																			
Bridgetown, B'b'does, W. I.					84	28.9	83	NE	3	1.3		5c	5s	E		1.31	33.3	Cloudy	E. Racker.
Pointe-aPitre, G'd'loupe, do			29.92	760.0	82	27.8	78	E				2c	2s			0.03	0.8	Fair	L. V. Bigard.
Havana, Cuba, W. I.			30.04	763.0	77	25.0	86	SSE	3.6	1.6		10c	2k	SW	E	0.06	1.5	Cloudy	Charles Hasselbrink.
Kingston, Jamaica, W. I.			30.14	765.5	78	25.6	82	Calm	0	0		1c	5n			0	0	Threatening	James Gall.
St. Thomas, St. T., W. I.			30.19	766.8	81	27.2	74	E	4	1.8		5cs	2k	E		0.45	11.4	Fair	W. S. Cameron.
Santiago de Cuba, W. I.			29.80	756.9	79	26.1	82	Calm	0	0		0	3s			0	0	Fair	Robert Mason.
St. Georges, Bermudas			29.99	761.7	78	25.6	64	NNE	6.0	2.7		1cs	2fk	NW		0	0	Fair	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.			30.51	774.9	32	0.0	90	W	8	3.6		0	0			0	0	Clear	J. Fortescue.
St. John's, Newfoundland			30.26	768.6	56	13.3	87	S				5c	5s			0.03	0.8	Cloudy	John Delaney.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Clifton, Jamaica, W. I.	27.17	690.1	30.00	762.0	65	18.3	94	SSE	0.5	0.2			10k			1.29	32.8	Cloudy	C. Partridge.
Navassa																			
Medellin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			30.12	765.6	59	15.0	93	Calm	0	0			5ks			0	0	Fair	H. M. Redington.

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

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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 Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 0.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.31 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 16, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			29.99	761.8	79.0	26.1	69	N			1		8			0	0	Hidden	Charnot.
Algiers			29.97	761.1	80.6	27.0	77	N			2		6			0.008	0.2	Cloudy	Peter.
La Calle																			Kuntz.
Tunis					84.2	29.0	65	E			3		4			0	0	Cloudy	Jacques.
Sfax					87.1	30.6	50	SE			2		1			0	0	Fair	Chauvey.
Salda			30.02	762.5	91.4	33.0		S			2		2			0	0	Thunder	Grosjean.
Tebessa					83.8	28.8		NE			2		10			0.157	4.0	Hidden	Colin.
Gerlville			30.05	763.2	85.1	29.5	24	SE			2		4			0	0	Fair	Bernadach.
Laghouat			30.03	762.7	87.8	31.0	27	SSW			5		2			0	0	Fair	Simon.
Biskra			29.99	761.8	91.8	33.2	30	E			1		5			0	0	Fair	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.21	767.2	67.3	19.6	42	NE			2		3			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.33	770.3	61.5	16.4	63	NE			3		9			0	0		I. R. Observatory.
Eperies			30.24	768.2	58.8	14.9	55	N			2		5		S	0	0		Julius Mikolik.
Gratz	29.06	738.1	30.25	768.4	61.7	16.5	58	SE			2		0						Andreas Rospini.
Hermannstadt	28.72	729.4	30.15	765.9	51.1	10.6	57	NW			1		5			0.197	5.00		Prof. Reissenberger.
Kremsmünster	28.02	734.6	30.26	768.5	59.4	15.2	51	E			6		0			0	0		Prof. C. Wagner.
Lemberg			30.21	767.4	55.8	13.2	59	NE			2		6			0	0		Dr. T. Stanecki.
Nyiregyhaza			30.22	767.5	60.4	15.8	48	N			1		3			0	0		Habzsuda Daniel.
Pola			30.20	767.0	67.5	19.7	38	E			2		0			0	0		I.R. Hydrographic Of'ce
Szegedin																			Karl Stancel.
Trieste			30.21	767.3	68.7	20.4	37	ENE			2		0			0	0		Prof. V. Faroiff.
Vienna			30.24	768.2	64.9	18.3	40	NE			1		1			0	0		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. The elevation of Gratz is 313.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.13	765.2	66.6	19.2	45	SE			3	0	0			0	0		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.36	731.1	55.5	13.1		E	8	3.6			7			0.080	2.03	*D. clouds	William Boswell.
Ardrossan			30.24	768.1	63	17.2		NNE			3		5					*D. clouds	Wm. McNeil.
Armagh Observatory			30.17	766.3	60.9	16.1		E E	11	4.9			9					Overcast	S. Cali, for Dr. Robinson.
Bidston, Liverpool Obs			30.11	764.8	67.3	19.6		E			4		2					Haze	John Hartnup, Jr.
Birr Castle, (Parsonstown)			30.10	764.5	62.3	16.8		E			1		9					*D. clouds	J. Dreyer.
Bradford			30.13	765.3	65.3	18.5		E			2		3					*D. clouds	J. McLandsborough.
Bridgetown, (Barbadoes)			30.92	760.0	86	30.0		E			1		10					Showery	T. H. Hunt.
Cambridge Observatory			30.10	764.8	73.2	22.9		E			2		0					Clear	Sergeant Hunt, A. H. C.
Cape Good Hope Obs.			29.99	761.7	66.0	18.9	54	WNW	10	4.5			1						Th Staff, for E. J. Stone.
Cardington			30.11	764.8	70.0	21.1		E					0					Clear	John McLaren.
Carlisle			30.20	767.1	67	19.4		E					2			0	0	Clear	T. Bell, for J. Cartmell.
Chatham, School M. E.			30.10	764.5	65.2	18.4		NE			2		0					Clear	Capt. J. Fellowes, R. E.
Dartmoor	28.65	727.7	30.02	762.5	57	13.9		E			5		10					Gloomy	R. E. Power.
Donaghadee			30.18	766.6	60	15.6		E			4		0					Clear	J. Mac Gowan, Jr.
Dover			30.08	764.0	65	18.3		E			3		1						J. Costello.
Eccles, (near Manchester)			30.11	764.8	68.8	20.4		ENE	2.2	1.0								Clear	Thomas Mackereth.
Falmouth Observatory			30.06	763.5	59.7	15.4		E	20	8.9			10					Foggy	The Staff.
Fort Napier, (Natal)	27.76	705.1	30.00	762.0	56.0	13.3		NE			2		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	81	27.3		N					7						
Galway, Queen's College																			B. G. Clare, for Prof. Chr.
Gibraltar, (Mediterranean)			29.96	761.0	74.5	23.6		E			2		0					Clear	Sergt. E. G. Baker.
Glasgow Observatory			30.26	768.6	58.7	14.8		NE			3		6					Fine	Lewis Stuart.
Great Yarmouth			30.16	766.1	63	17.2		ESE			4		1					Clear	G. T. Watson.
Greenwich Royal Obs			30.09	764.3	71.0	21.7		ENE			2		0					Clear	The Staff, for G. B. Airy.
Guernsey			30.00	762.0	64	17.8		ESE			1		7					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs			30.15	765.8	68.0	20.0		E					3					*D. clouds	F. J. Page, for L. J. Cross.
Helston			29.98	761.5	64	17.8		E			4		10					Showery	M. P. Moyle.
Holyhead			30.09	764.3	65	18.3		ENE			5		0					Clear	John Tilston.
Hull Park																			
Kew Observatory			30.08	764.0	69.0	20.6		E	17	7.6								*D clouds	The Staff.
Kingstown			30.18	766.6	61	16.1		E			4		1					Hazy	George Mitchell.
Leicester Museum			30.10	764.5	69.7	20.9		E			2		0					Clear	William J. Harrison.
Llandudno			30.06	763.5	67.4	19.7		E					1					Clear	Dr. James Nicol.
Malta, (Mediterranean)			30.15	766.1	78.1	25.6		SE			1		6k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			30.30	769.6	60	15.6		Calm			0		2						W. D. Penny.
Nassau, (Bahamas)			30.07	763.8	84.	29.0		E			2		5					Lightning	Surg.-Maj. Henry.
Nottingham			30.14	765.5	70.3	21.3		ENE			4		3k		SE	0	0		E. J. Lowe.
Oscott, St Mary's College			30.08	764.0	69.1	20.6		ENE			3-4		1					Clear	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			30.06	764.5	69	20.6		E			2		0					Clear	J. Lucas, for R. Main.
Plymouth			30.00	762.0	60.3	15.7		E			1		4?					Showery	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			30.04	763.0	61	16.1		E			5		8					Cloudy	W. Kennedy.
Saint Ann's Head			30.03	762.7	66	18.9		E			4		5					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			30.00	762.0	69.0	20.6		SW			3		5						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			30.24	768.1	59.1	15.1		ENE			3		2					Clear	F. Shaw.
Scutari cemetery, (Turkey)			30.05	763.3	60.0	15.6		N			3		10					Showery	Sergt. W. H. Lyne.
Sheffield			30.13	765.3	68	20.0		ESE			4		3						W. F. Cooper.
Silloth Rectory			30.19	766.8	66.9	19.4		E			5		5			0	0	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			30.14	765.5	65.5	18.6		E			4		1			Blank	Blank	Clear	The Staff.
Stornoway, Lews C. (Heb.)			30.28	769.1	59	15.0		SE			1		0					Clear	John Smith.
Strathfield Turgiss			30.07	763.8	70.8	21.6		E			1-2		0					Clear	Rev Charles H. Griffith
Streatley Vicarage																			Rev. John Slatter.
Sumburgh Head, (Shetland)																			
Thurso			30.33	770.4	55	12.8		SSE			2		8					Overcast	John Trotter.
Truro, Royal Institution			29.95	761.0	63	17.2		E			4		10					Raining	W Newcombe.
Valencia Observatory			30.03	762.7	65.8	18.8		E	12	5.4			5					*D clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			30.29	769.4	58.0	14.4		E			4		6k			0	0	Fine, cloudy	Andrew Gibb.
Monach Lt-house, Shet Is			30.27	768.8	61	14.1		SE			3	0	0			0	0		
North Unst, (Shetland Is)			30.41	772.4	55	12.8		S			3	5	7	SW					

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			30.35	770.9	63.0	17.2	74	Calm			0		4						
Faröe			30.33	770.4	69.1	20.6	51	SE			2		7						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.94	760.4	53.2	11.8	84	SW			6		8						
Thorshavn, (Faröe)			30.32	770.1	55.6	13.1	77	Calm			0		8						
Vestervig			30.35	771.0	66.6	19.2	64	SW			2		0						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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.	Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			29.99	761.7	66.2	19.0	81	S			1		8			0	0		Normal School.
Amiens																			Normal School.
Avignon											2		0			0	0	Misty	Normal School.
Bar-sur Seine			30.13	765.4	77.9	25.5	58	S			1		2			0	0		C. Saillard.
Beaumette, (near Angers)			30.08	763.9	75.9	24.4	52	S											Beaumette Observatory.
Beauvais											1		0			0	0	Clear	Normal School.
Besançon			30.09	764.2	64.4	18.0	50	ENE											Normal School.
Bourg en Bresse																0	0	Clear	Normal School.
Bourges			30.10	764.4	78.4	25.8	65	S			4		0			0	0	Cloudy	Normal School.
Brest			30.05	763.2	74.3	23.4	65	ENE			2		8		ENE	0	0	Raining	Naval Observatory.
Caen			29.93	760.1	70.0	21.1	78	SSE			2		10		S	0.138	3.50		Normal School
Chartres																			Normal School.
Chaumont			30.13	765.2	73.0	22.8		S			2		5		NNE				Normal School.
Commercy	29.00	736.6	30.12	765.1	73.4	23		SSE			3		.k		SE	0	0		Normal School.
Commune de Gréasque*			30.18	766.6	66.2	19	51	ENE			4		.ck			0	0	Clear	Normal School.
Le Mans			30.19	766.9	71.6	22.0	66	SE			3		8		SE	1.598	40.6		
Lons-Le Saulnier																			Normal School.
Mâcon			30.06	763.4	74.7	23.7	63	SW			2		2			0	0		Normal School.
Mirecourt			30.07	763.6	73.8	23.2	73	SE			2		0			0	0	Clear	Normal School.
Orleans			30.11	764.9	68.2	20.1	67	NE			2		2		S	0	0		Normal School.
Paris Observatory																			Normal School.
Parthenay			30.07	767.3	73.9	23.3	53	ESE			1		0			0	0	Misty	National Observatory
La Roche sur Yon			29.93	760.3	68.0	20	67	SE			2		0					Clear	Normal School.
Rochefort, Observatory																			Normal School.
Rouen			30.04	763.0	75.2	24.0	59	SE			2		8		NE	0.079	2.0	Cloudy	Naval Observatory.
Saint Lo			30.05	763.2	77.2	25.1	47	SE			2		2			0	0	Clear	Normal School.
Villefranche																			Normal School.
Sub-Series.																			Normal School
Fort de France, Martinique																			L'Abbe Marchesi.
Mont-Louis	25.00	635.0			64.9	18.3	66	SSW	13.0	5.83			5		SW	0	0		—. Faiguère.
Montsouris Observatory			30.07	763.8	77.9	25.5	50	ESE			2		1k			0	0		Marié Davy.
Perpignan			30.08	764.0	73.9	23.3	81	E	9.3	4.17			7			0	0		Dr. Fines.
Saint Maur, (near Paris)			30.08	763.9	75.6	24.2	52	SE			1		0			0	0		E. Renou.
Tours			30.09	759.5	65.3	18.5		SE			1		5		E	0.843	21.4		C. Marquet.
Versailles, (near Paris)			30.08	764.1	76.6	24.8	53	SE			1		0			0	0	Clear	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.11	764.8	66.4	19.1	87	NE	0	0		.ck	.k	S		0 / 0	0 / 0		H. Le Lec, S. J.

NOTE.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 ft.; Commune de Gréasque, 322 m., or 1,056.4 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. *Near Marseilles.

GERMAN SERIES.

Furnished by the coöperation of Prof. Geo. Neumayer, Superintendent Royal 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.	Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.21	767.2	66.2	19.0	56	SE	13	6			2			0	0		Prof. Hoh.
Berlin			30.34	770.6	65.1	18.4	40	E	9	4			2			0	0		Prof. Arndt.
Breslau			30.43	772.9	59.7	15.4	47	NE	4	2			0			0	0		Dr. P. Neugebauer.
Carlsruhe			29.14	765.6	70.9	21.6	21	E	11	5			0			0	0		A. Senz.
Cassel			30.13	765.3	73.0	22.8	28	SSE	9	4			0			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society
Friedrichshafen	28.76	730.6	30.20	767.0	59.9	15.5	68	W					0			0	0		M. Wilhelm.
Hamburg			30.35	771.0	65.3	18.5	47	E	20	9			4ks	SE		0	0	Fine, lt. fog.	Deutsche Seewarte.
Kiel			30.31	769.9	66.2	19.0	54	ESE	22	10			4			0	0		Prof. G. Karsten
Königsberg			30.35	770.9	62.6	17.0	45	SW	11	5						0.001	0.02	Clear	Prof. E. Luther.
Köslin																			Dr. Tügert.
Leipsic			30.32	770.0	65.3	18.5	27	E	9	4			0			0	0		Prof. Bruhns.
Münster			30.28	769.0	67.1	19.5	73	E	4	2			0			0	0		Prof. E. Heis.
Posen			30.37	771.5	62.4	16.9	44	NE	2	1			1			0	0	Clear	Dr. Mugener.
Strassburg, (in Alsace)			30.17	766.2	66.7	19.3	42	NE	4	2			0			0	0		Hartwig.
Stuttgart			30.16	766.0	69.3	20.7	31	E					0			0	0		Mr. Würth.
Thorn			30.36	771.1	63.3	17.4	45	NE	18	8			2			0	0		Dr. Hasenbalg.
Treves, (Trier)																			Prof. Hesch.
Wustrow, Naval School			30.39	771.8	65.5	18.6	55	NE	13	6			7ks			0.908	0.2	Cloudy	E. F. Schütz.

NOTE.—In the originals the distinction between 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.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.23	767.9	67.6	19.8	63	NW			1		9			0	0		
Mondovi			30.19	766.7	61.5	16.4	78	NW			1		10			0.146	3.7		
Genoa			30.16	766.0	75.2	24.0	59	SW	4.3	1.9			0			0	0		
Pavia			30.19	766.9	70.7	21.5	37	NE			2		0			0	0		
Verona			30.21	767.2	75.2	24.0	40	E			2		0			0	0		
Padua			30.21	767.4	67.3	19.6	37	NE	3.1	1.4			0			0	0		
Parma																			
Bologna			30.22	767.5	74.5	23.6	59	SE			1		4	W		0	0		
Leghorn			30.15	765.7	76.8	24.9	26	E	9.4	4.2			1			0	0		
Urbino																			
Ancona																			
Siena																0	0		
Rome			30.13	765.2	68.9	20.5	35	ENE	3.8	1.7			0			0	0		
Naples, S. U.			30.11	764.9	76.1	24.5	37	N	4.3	1.9			0			0	0		
Lecce			30.17	766.4	74.3	23.5	34	NE			2		0			0	0		
Cosenza			30.11	764.9	69.3	20.7	50	WNW			6		6	N		0	0		
Catania, (Sicily)			30.13	765.3	72.7	22.6	65	NW			2		2						
Erice																			
Palermo			29.97	761.2	77.0	25.0	81	NW			2		9	SE		0.213	5.4		
Sub-Series.																			
Naples, S. R.			30.02	762.6	78.3	25.7	59	NE	3.8	1.7			6			0	0		
			30.16	766.0	74.5	23.6	40	E					0			0	0		Prof. F. Brioschi.

NOTE.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 248.5 m., or 1,141.3 feet.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Flushing			29.92	760.0	67.3	19.6		SE			4								
Groningen			30.21	767.4	66.7	19.3		E			4								
Helder			30.21	767.3	65.5	18.6		ENE			2								
Utrecht			30.15	765.8	70.3	21.3		ESE			4		0					Clear	

Note.—The originals give the wind-pressure in kilograms per square meter; the 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			30.33	770.3	63.3	17.4	63	NNW	2.9	1.3			3			0	0		
Christiania			30.31	769.9	64.2	17.9	63	WSW	2.5	1.1			0			0	0		
Tromsö			29.89	759.1	44.1	6.7	64	W			6		9			0.220	5.6		

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Lisbon			30.04	763.1	70.9	21.6	63	SSE	4.9	2.2			7	SSW					The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

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	770.2	60.4	15.8	56	N	7	3			2						Astronomical Obs.
Wilna			30.32	770.2	59.9	15.5	57	Calm	0	0			3						Astronomical Obs.
Dorpat			30.22	767.5	56.1	13.4	57	NW	9	4			8						Physical Cabinet.
St. Petersburg			30.05	763.2	53.1	11.7	70	W	13	6			4						Central Physical Obs.
Kuopio			29.95	760.8	52.2	11.2	68	NW					10			0	0		Ch. Forsten.
Kieff			30.15	765.8	57.4	14.1	51	NE	13	6			6						Physical Cabinet.
Nikolaiev			30.06	763.4	61.7	16.5	64	NE	10	4.5			8						Kurdukof.
Kertch			29.96	760.9	64.9	18.3	78	NE	2	1			10					Raining.	Lagorio.
Moscow			30.27	768.8	50.5	10.3	55	W	8	3.5			7						Meteorological Obs.
Lugan			30.04	763.1	63.1	17.7	93	ENE	13	6			10					Light rain	Meteorological Obs.
Archangel			29.87	758.7	41.9	5.5	91	WNW	10	4.5			10						Ogorodnikof.
Tiflis	28.60	726.3	29.95	760.8	75.2	24.0	56	Calm	0	0			9						Physical Obs.
Astrakhan			30.21	767.4	63.7	17.6	51	ESE	8	3.5			5						Sebastianof.
Kasan			30.05	763.3	48.2	9.0	41	N	4	2			3						Physical Cabinet.
Orenburg			30.09	764.3	51.3	10.7	64	NW	10	4.5			4						Tschernischef.
Ekaterinburg	28.75	730.2	29.77	756.1	39.7	4.2	73	NW	17	7.5			7						Meteorological Obs.
Kasaly			30.13	765.4	60.1	15.6	67	Calm	0	0			3						Bobrof.
Tashkend	28.50	723.9	30.16	766.1	70.2	21.2	36	Calm	0	0			0						Michelson.
Barnaul			29.72	754.9	44.1	6.7	56	SW	28	12.5			4						Meteorological Obs.
Yeniseisk			29.15	740.5	42.8	6.0	84	SE	4	2			10					Raining	Marks.
Irkutsk	28.13	714.6	29.49	749.0	47.5	8.6	73	Calm	0	0			5						Usolzef.
Oorga	25.50	647.7	29.72	755.0	46.6	8.1	67	Calm	0	0			0						Mossin.
Peking, (China)			30.00	761.9	67.3	19.6	53	Calm	0	0			7			Blank	Blank		Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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			29.94	760.5	81.9	27.7	34	S	6.0	2.7		2	0	S		0	0		Royal Observatory.
San Fernando																			The Naval Observatory.

Note.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea			30.01	762.3	58.3	14.6	62	NW			4		9			0	0		
Hernosand			30.20	767.4	60.1	15.6	44	WNW			4		6			0	0		
Stockholm			30.21	767.4	62.1	16.8	46	WSW			2		2			0	0		
Wisby			30.29	769.3	57.9	14.4	60	W			4		0			0	0		
Sub-Series.																			
Upsala			30.25	768.3	64.9	18.3	31	NNW	8.5	3.8			1	NW					Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Geneva	28.74	729.9	30.14	765.5	61.9	16.6	84	NNE			2		2			0	0	Clear	The Observatory.
Zurich	28.56	725.4	30.15	765.9	66.7	19.3	62	N			1		1			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +2.8mm.; Thermometer, —1°.4; Relative Humidity, +21 per cent.

Note.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Beirut, (Syria,) Lee Obs'y																			Prof. C. N. A. Van Dyck.
Constantinople			30.04	763.0	58.3	14.6	68	NNW	20	9.			10		NNW	0.496	12.6	Cloudy	
Fao, (Persian Gulf)			29.78	756.5	95.0	35.0		NW			4		0					Clear	
Salonica					73.8	23.2		NW			4		0					Clear	
Valona			30.04	763.0	69.0	20.0		NW			3		0					Clear	
Varna			30.08	764.0	57.2	14.0		NE			4		5					Cloudy	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea level. The distinction between upper and lower clouds is not made.

GREEK SERIES.

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

Athens

Note.—Reports commence October 1, 1875.

JAPANESE SERIES.

Takio

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Brockville, Ontario			29.99	761.7	50	10.0		NE	15	6.7			10s		NE	0.01	0.3	Light rain	
Chatham, N. B.			29.98	761.5	46	7.8	92	N	4	1.8			10s		NW	0.18	4.6	Light rain	
Charlottetown, P. E. Island			29.89	759.2	58	14.4	86	Calm	0	0			10s			0	0	Cloudy	
Fort Garry, Manitoba			30.36	771.1	35	1.7	97	NE	4	1.8			2s			0.040	1.02	Fair	
Halifax, N. S.			29.87	758.7	56	13.3	96	SW	7	3.1			5ks		W	0	0	Fair	
Kingston, Ontario			29.93	760.2	50	10.0	90	NE	4	1.8			10s		NE	0.13	3.3	Cloudy	
Montreal, Quebec			30.00	762.0	47	8.3	81	NE	13	5.8			10n		E	0.17	4.3	Cloudy	
Ottawa, Ontario			29.99	761.7	51	10.6	87	NE	12	5.4			10n		NE	0.01	0.3	Threatening	
Parry Sound, Ontario			29.90	759.4	52	11.1	93	NE	16	7.2			10n		NE	0.08	2.0	Cloudy	
Port Dover, Ontario			29.78	756.4	61	16.1	94	E	5	2.2			10n		SE	0	0	Light rain	
Port Stanley, Ontario			29.75	755.6	64	17.8	94	SE	8	3.6			10n		SE	0.04	1.0	Heavy rain	
Quebec, Quebec			30.02	762.5	47	8.3	77	NE	15	6.7			10n		NE	0.73	18.5	Cloudy	
Sarnia, Ontario			29.49	749.0	55	12.8	86	E	7	3.1			10n		E	0.22	5.6	Light rain	
Stayner, Ontario			29.83	757.7	53	11.7	93	SE	3	1.3			10n		SE	0.12	3.0	Heavy rain	
Sydney, C. B.			29.94	760.5	54	12.2	88	SW	1	0.4		8cs	2ks			0	0	Fair	
Toronto, Ontario			29.84	757.9	56	13.3	95	E	10	4.5			10n		E	0.20	5.1	Light rain	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.88	758.9	57	13.9	87	Calm	0	0		5c	2k	W		0	0	Cloudy	
Alpena, Mich.			29.83	757.7	48	8.9	100	NE	12	5.4			10n			0.61	15.5	Heavy rain	
Atlantic City, N. J.			29.89	759.2	68	20.0	90	W	2	0.9		0	8s		W	0	0	Fair	
Augusta, Ga.			30.00	762.0	73	22.8	85	Calm	0	0		5k	0	S		0	0	Fair	
Baltimore, Md.			29.87	758.7	68	20.0	90	Calm	0	0			10s		W	0.69	17.5	Threatening	
Barnegat, N. J.			29.88	758.9	65	18.2	100	Calm	0	0			Fog			0	0	Foggy	
Benton, Montana	27.55	699.8	30.35	770.9	41	5.0	83	Calm	0	0		0	0			0	0	Clear	
Bismarck, Dakota	28.53	724.6	30.23	767.8	43	6.1	75	N	4	1.8			10ks		N	0	0	Cloudy	
Boston, Mass.			29.91	759.7	60	15.6	94	W	3	1.3			Fog			0.35	8.9	Foggy	
Breckenridge, Minn.			30.13	765.3	47	8.3	85	N	16	7.2			10s			0.07	1.8	Cloudy	
Buffalo, N. Y.			29.76	755.9	57	13.9	87	E	4	1.8			10s			Inap.	Inap.	Cloudy	
Burlington, Vt.			29.97	761.2	50	10.0	72	N	7	3.1			10s			0.09	2.3	Cloudy	
Cairo, Ill.			29.94	760.5	70	21.1	99	Calm	0	0		0	5ks			0	0	Fair	
Cape Hatteras, N. C.			29.95	760.7	70	21.1	90	N	1	0.4		2c	Haze			0	0	Fair	
Cape Henry, Va.			29.92	760.0	74	23.3	76	S	7	3.1		2c	0			0	0	Clear	
Cape May, N. J.			29.91	759.7	69	20.6	84	SW	3	1.3		5c	2s	W	W	0	0	Fair	
Charleston, S. C.			30.01	762.2	77	25.0	81	SW	3	1.3		5c.	Sm'e			0	0	Fair	
Cheyenne, Wyoming	24.27	616.4	30.21	767.3	62	16.7	79	SE	8	3.6			10s			0.07	1.8	Cloudy	
Chicago, Ill.			29.73	755.1	64	17.8	93	SW	4	1.8			10s			0.12	3.0	Cloudy	
Cincinnati, Ohio			29.74	755.4	71	21.7	75	W	6	2.7			10s			0.01	0.3	Threatening	
Cleveland, Ohio			29.72	754.9	63.2	17.2	100	S	7	3.1			10n		W	0.91	23.1	Light rain	
Colorado Springs, Col.	24.36	618.7	30.23	767.8	53	11.7	89	S	1	0.4			10s			0.50	12.7	Cloudy	
Corsicana, Tex.			29.84	757.9	75	23.9	81	NE	8	3.6			10s			0	0	Cloudy	
Davenport, Iowa			29.87	758.7	63	17.2	88	NW	24	10.7		0	5s		NW	0.75	19.1	Fair	
Denison, Tex.			29.90	759.4	74	23.3		N				Haze	0			0	0	Fair	
Denver, Col.	25.04	636.0	30.26	768.6	59	15.0	82	S	2	0.9			10s		S	0.34	8.6	Threatening	
Detroit, Mich.			29.67	753.6	64	17.8	100	SW	6	2.7			10n			0.15	3.8	Light rain	
Dodge City, Kan.	27.58	698.5	29.81	757.2	63	17.2	78	N	9	4.0			10s			0.18	4.6	Cloudy	
Dubuque, Iowa			29.84	757.9	62	16.7	83	NW	8	3.6			10s		NW	0.12	3.0	Cloudy	
Duluth, Minn.			30.10	764.5	46	7.8	85	NE	12	5.4			10n			0.22	5.6	Light rain	
Eastport, Me.			29.89	759.2	55	12.8	87	N	12	5.4		2c	5s	NW	W	0	0	Fair	
Erie, Pa.			29.74	755.4	62	16.7	94	SW	4	1.8			10n		SW	0.41	10.4	Light rain	
Escanaba, Mich.			29.85	758.2	47	8.3	92	N	24	10.7			10n		N	0.86	21.8	Light rain	
Fort Gibson, I. T.			29.96	761.0	69	20.6	79	W	2	0.9		8c	0			0	0	Fair	
Fort Sill, I. T.																			
Fort Sully, Dakota	28.58	725.9	30.28	769.1	45	7.2	84	N	8	3.6		0	5s			0	0	Fair	
Galveston, Tex.			29.53	750.0	80	26.7	91	NE	33	14.8			10n			3.01	76.5	Light rain	
Grand Haven, Mich.			29.71	754.6	61	16.1	91	W	5	2.2			10s		NW	0.36	9.1	Cloudy	
Indianapolis, Ind.			29.72	754.9	68	20.0	90	SW	10	4.5			10s			0.14	3.6	Cloudy	
Indianola, Tex.			29.36	745.7	74	23.3	100	NE	58	25.9			10n			1.03	26.2	Light rain	
Jacksonville, Fla.			30.02	762.5	78	25.6	90	NE	1	0.4		0	0			0	0	Clear	
Keokuk, Iowa			29.85	758.2	67	19.4	84	NW	8	3.6			10s		NW	0.09	2.3	Cloudy	
Key West, Fla.			29.98	761.5	80.8	27.1	70	SE	6	2.7		2k	Sm'e	SE	SE	0	0	Hazy	
Kittyhawk, N. C.			29.94	760.5	69	20.6	90	NE	4	1.8		2c	0			0	0	Clear	
Knoxville, Tenn.			29.96	761.0	66	18.9	90	NW	4	1.8		5cs	0	W		0	0	Fair	
La Crosse, Wis.			29.87	758.7	61	16.1	82	N	8	3.6		8k	0	N		0.30	7.6	Cloudy	
Leavenworth, Kan.			30.02	762.5	64	17.8	88	N	6	2.7		0	0			1.01	25.7	Clear	
Lexington, Ky.	28.79	731.2	29.84	757.9	69	20.6	79	SW	16	7.2		0	5ks		SW	0	0	Fair	
Long Branch, N. J.			29.90	759.4	64	17.8	89	N	1	0.4			10s		NW	0.06	1.5	Cloudy	
Louisville, Ky.			29.83	757.7	71	21.7	75	S	6	2.7		5k	5s	S		0	0	Cloudy	
Lynchburg, Va.			29.89	759.2	65	18.3	78	Calm	0	0		10ck	0	W		0	0	Cloudy	
Malone, N. Y.			29.93	760.2	48	9.4	77	NE	8	3.6			10s		NE	0.01	0.3	Threatening	
Marquette, Mich.			29.98	761.5	44	6.7	92	NE	28	12.5			10n		NE	1.68	42.7	Light rain	
Memphis, Tenn.			29.97	761.2	72	22.2	85	N	1	0.4		Haze	5ks		SW	0	0	Cloudy	
Milwaukee, Wis.			29.77	756.1	59	15.0	87	W	3	1.3		5k	Fog	W		0.36	9.1	Fair	
Mobile, Ala.			29.94	760.5	80	26.7	91	SE	6	2.7		5c	5s		SW	0.09	2.3	Cloudy	
Montgomery, Ala.			29.99	761.7	77.5	25.3	73	S	1	0.4		10cs	Haze	SW		0	0	Cloudy	
Morgantown, W. Va.			29.83	757.7	61	16.1	94	Calm	0	0			10n			0.01	0.3	Light rain	
Mt. Washington, N. H.	23.78	604.0	30.14	765.5	39	3.9	100	NW	20	8.9		10s	5s	NW		0	0	Cloudy	
Nashville, Tenn.			29.92	760.0	71	21.7	85	Calm	0	0		5cs	0			0	0	Fair	
New Haven, Conn.			29.89	759.2	63	17.2	88	NW	4	1.8			10s			0.01	0.3	Foggy	
New London, Conn.			29.90	759.4	67	19.4	84	E	1	0.4			10s		SW	0.05	1.3	Cloudy	
New Orleans, La.			29.87	758.7	79	26.1	86	E	8	3.6		5cs	2k	W	SE	0.19	4.8	Fair	
Newport, R. I.			29.90	759.4	66	18.9	89	SE	4	1.8		5k	2s	SW	SE	Inap.	Inap.	Cloudy	
New York, N. Y.			29.89	759.2	64	17.8	88	N	1	0.4			Fog			0.11	2.8	Foggy	
Norfolk, Va.			29.91	759.7	68	20.0	89	S	3	1.3		Haze	0			0	0	Clear	
North Platte, Neb.	27.33	694.2	29.90	759.4	53	11.7	86	Calm	0	0		Haze	0			0	0	Fair	
Omaha, Neb.	29.01	736.8	30.07	763.8	58	14.4	93	NW	11	4.9			10s		NW	0.02	0.5	Cloudy	
Oswego, N. Y.			29.84	757.9	62	16.7	91	W	1	0.4			10s		W	0.03	0.8	Threatening	
Peck's Beach, N. J.			29.89	759.2	72	22.2	80	W	4	1.8		4ck	8s			0	0	Cloudy	
Pembina, Dakota			30.30	769.6	41	5.0	100	N	8	3.6			10s		N	0.08	2.0	Cloudy	
Philadelphia, Penn.			29.88	758.9	64	17.8	94	NE	2	0.9			10s			0	0	Cloudy	
Pike's Peak, Colorado	18.06	458.7	30.27	768.8	30	−1.1	78	Calm	0	0			10s		S	0.85	21.6	Cloudy	
Pittsburgh, Penn.			29.80	756.9	63	17.2	88	S	5	2.2			10n			0.03	0.8	Light rain	
Port Huron, Mich.			29.68	753.9	61	16.1	94	Calm	0	0			Fog			0	0	Foggy	
Portland, Me.			29.93	760.2	57	13.9	87	Calm	0	0		8ck	Haze			0.01	0.3	Cloudy	
Portland, Oregon			30.09	764.3	60	15.6	76	Calm	0	0		8ck	Haze			0	0	Fair	
Punta Rassa, Fla.			30.02	762.5	78.9	26.1	86	E	6	2.7		Haze	2ks			0.04	1.0	Fair	
Rochester, N. Y.			29.80	756.9	61	16.1	94	E	3	1.3			Fog			0.12	3.0	Foggy	
Salt Lake City, Utah	25.78	654.8	30.11	764.8	59	15.0	69	Calm	0	0			10s			0.02	0.5	Cloudy	
Sandy Hook, N. J.			29.87	758.7	64	17.8	89	Calm	0	0		1c	8ks	W	N	0.11	2.8	Cloudy	
San Diego, Cal.			29.96	761.0	67	19.4	90	NE	4	1.8		0	0			0	0	Clear	
San Francisco, Cal.			29.98	761.5	54	12.2	93	SW	8	3.6		5ck	0	SW		0	0	Fair	
Santa Fe, N. M.	23.38	593.8	29.92	760.0	53	11.7	80	E	8	3.6			8s			0.22	5.6	Cloudy	
Savannah, Ga.			30.01	762.2	74	23.3	90	Calm	0	0			Fog			0	0	Foggy	
Shreveport, La.			29.92	760.0	76	24.4	86	NE	4	1.8			10s			0	0	Cloudy	
Smithville, N. C.																			
Springfield, Mass.			29.90	759.4	59	15.0	94	S	4	1.8			Fog			0.41	10.4	Foggy	
St. Louis, Mo.			29.92	760.0	70	21.1	90	NW	12	5.4		0	10s		NW	0.07	1.8	Fair	
St. Marks, Fla.																			
St. Paul, Minn.			29.95	760.7	50.5	10.3	86	N	14	6.3			10s		N	0.38	9.7	Cloudy	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			29.83	757.7	63	17.2	100	Calm	0	0			Fog			0.09	2.3	Foggy	
Toledo, Ohio			29.68	753.9	66	18.9	94	S	5	2.2			10s		SW	0.53	13.5	Cloudy	
Tucson, Arizona																			
Tybee Island, Ga.			30.00	762.0	76	24.4	95	SW	1	0.4			Fog			0	0	Foggy	
Vicksburg, Miss.			29.98	761.5	75	23.9	90	Calm	0	0			10s			0	0	Cloudy	
Virginia City, Montana	24.47	621.5	29.95	760.7	46	7.8	47	SE	2	0.9		1c	0	W		0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			29.88	758.9	65	18.3	92	Calm	0	0			10s		W	0	0	Cloudy	
Wilmington, N. C.			29.98	761.5	71	21.7	85	W	5	2.2		8ck	0	N		0	0	Fair	
Wood's Hole, Mass.			29.92	760.0	66	18.9	89	SW	7	3.1		0	8s		SW	0	0	Fair	
Wytheville, Va.	27.64	702.0	29.73	755.1	60	15.6	88	NW	1	0.4		0	0			0	0	Clear	
Yankton, Dakota	28.61	726.7	30.22	767.6	50	10.0	79	NW	13	5.8		0	2s		NW	0.09	2.3	Fair	
Yuma, Arizona																			
Sub-Series.																			
Bridgetown, Barbados, W. I.					80	26.7	95	E	5	2.2		5k	2ks	E		0	0	Cloudy	E. Racker.
Pointe-a-Pitre, Guadeloupe, do			29.90	759.4	81	27.2	83	E				2c	5ks			0.18	4.6	Fair	L. V. Bigard.
Havana, Cuba, W. I.			30.02	762.5	79	26.1	78	E	0.6	0.3		2c, cs	0	SSE		0.44	11.2	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W. I.			30.13	765.3	80	26.7	82	SE	5	2.2		3c	1s			0.21	5.3	Fair	James Gall.
St. Thomas, St. T., W. I.			30.19	766.8	83	28.3	76	ESE	3	1.3		2ck	5k	E		0.02	0.5	Fair	W. S. Cameron.
Santiago de Cuba, W. I.			29.79	756.7	78	25.6	82	Calm	0	0		4k	4n	SW	SW	Blank	Blank	Fair	Robert Mason.
St. Georges, Bermudas			29.87	758.7	77	25.0	71	SW	5.6	2.5		10c	5k	SW		0	0	Hazy	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.			30.33	770.4	32.5	0.3	94	W	6	2.7		0	4k			0	0	Fair	J. Fortescue.
St. John's, Newfoundland			30.12	765.0	52.5	11.4	87	SE				Sm'e	Sm'e			0	0	Smoky	John Delaney.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Clifton, Jamaica, W. I.	27.21	691.1	29.99	761.7	68	20.0	90	C lm	0	0		5c	0			0.21	5.3	Fair	C. Partridge.
Navassa																			
Menelik, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			29.73	755.1	65	18.3	83	S	8	3.6			10n			0	0	Raining	H. M. Redington.

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

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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 Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 ft., or 807.4 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, 6,86[illegible] (?) ft., or 2,091.6 (?) m.; Virginia City, 5,180 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 (?) ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.34 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 17, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			29.95	760.8	82.0	27.8	64	N			1		5			0	0	Hidden	Charnot.
Algiers			29.92	760.0	84.2	29.0	60	NNE			0		7			0	0	Thunder	Peter.
La Calle																			Kuntz.
Tunis					79.9	26.6	55	E			4		2			0	0	Stormy	Jacques.
Sfax					87.8	31.0	57	SE			3		2			0	0	Fair	Chauvey.
Saida			29.97	761.2	82.4	28.0	39	WSW			3		2			0	0	Hidden	Grosjean.
Tebessa					67.5	19.7		NW			5		10			0.197	5.0	Hidden	Colin.
Geriville			29.99	761.8	75.2	21.0	20	SE			4		10			0	0	Cloudy	Bernadach.
Laghount			30.00	761.9	83.3	28.5	26	ESE			5		4			0	0	Sirocc	Simon.
Biskra			29.98	761.3	88.7	31.5	36	E			2		4			0	0	Lightning	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.39	769.7	70.2	21.2	41	NE			2		2			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.49	772.0	62.8	17.1	65	NE			1		0			0	0		I. R. Observatory.
Eperies			30.28	769.2	62.2	16.8	47	N			2		3		S	0	0		Julius Mikolik.
Gratz			30.31	769.9	63.3	17.4	62	W			2		0						Andreas Rospini.
Hermannstadt	29.12	739.6	30.24	767.8	59.2	15.1	59	NW			1		7			0	0		Prof. Reissenberger.
Kremsmünster	28.82	731.9	30.24	768.2	61.0	16.6	62	ENE			2		1			0	0		Prof. C. Wagner.
Lemberg	28.92	734.5	30.29	769.3	58.6	14.9	62	NE			1		7			0	0	Misty	Dr. T. Stanecki.
Nyiregyhaza			30.30	769.7	64.8	18.2	45	N			1		0			0	0		Habzsuda Daniel.
Pola			30.28	769.0	68.7	20.4	42	E			2		0			0	0		I. R. Hydrographic Office
Szegedin																			Karl Stancel.
Trieste			30.27	768.8	71.6	22.0	52	WSW			1		0			0	0		Prof. V. Farolfi.
Vienna			30.26	768.7	68.0	20.0	40	SE			3		0			0	0		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.13	765.3	73.9	23.3	64	SSE			1	2	4			0	0		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.20	767.1	59.0	15.0		SE	8	3.6			3			0	0	*D. clouds	William Boswell.
Ardrossan			30.14	765.5	62	16.7		ENE			2		7					*D. clouds	Wm. McNeil.
Armagh Observatory			30.08	764.0	60.0	15.6		ENE	10	4.5			6					*D. clouds	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			30.07	763.8	70.1	21.2		ESE			2		4					*D. clouds	John Hartnup, Jr.
Birr Castle, (Parsonstown)			30.02	762.5	65.6	18.7		ENE			1		10					*D. clouds	J. Dreyer.
Bradford			30.08	764.0	64.2	17.9		E			1		9			Blank	Blank	Gloomy	J. McLandsborough.
Bridgetown, (Barbadoes)			30.83	757.7	82.0	28.1		E			1		10					Thunder	T. H. Hunt.
Cambridge Observatory																			Sergeant Hunt, A. H. C.
Cape Good Hope Obs.			30.25	768.3	61.9	16.6	68	W	9	4.0			7						Th Staff, for E. J. Stone.
Cardington			30.10	764.5	74.0	23.3		S					5					*D. clouds	John McLaren.
Carlisle			30.10	764.5	68.8	20.4		Calm					5			0.18	4.6	*D. clouds	T. Bell, for J. Cartmell.
Chatham, School M. E.			30.10	764.5	70.2	21.2		S			1		8					Fair	Capt. J. Fellowes, R. E.
Dartmoor	28.68	728.5	30.05	763.3	66	18.9		S			2		4		NNE			*D. clouds	R. E. Power.
Donaghadee			30.10	764.5	62	16.7		E			4		5					*D. clouds	J. Mac Gowan, Jr.
Dover			30.08	764.0	66	18.9		Calm			0		2						J. Costello.
Eccles, (near Manchester)			29.67	753.6	71.8	22.1		ESE	4.2	1.9			10					Gloomy	Thomas Mackereth.
Falmouth Observatory			30.01	762.2	64.0	17.8		SSE	14	6.3			3					*D. clouds	The Staff.
Fort Napier, (Natal)	27.55	699.8	29.78	756.4	72.4	22.4		W			3		9					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	86	30.0		N					8						
Galway, Queen's College																			B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			29.88	758.9	74.5	23.6		NE			1		10					Levanter	Sergt. E. G. Baker.
Glasgow Observatory			30.02	762.5	58.0	14.4		ENE			2		10					Raining	Lewis Stuart.
Great Yarmouth			30.13	765.3	65	18.3		SE			1		3					Hazy	G. T. Watson.
Greenwich Royal Obs			30.09	764.3	76.1	24.5		S			1		7			0.18	4.6	*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.07	763.8	68	20.0		ESE			1		5					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs			30.12	765.0	65.6	18.3		E					8			Blank	Blank	*D. clouds	F. J. Page, for L. J. Cross.
Helston			30.01	762.2	70	21.1		S			4		4					Fair	M. P. Moyle.
Holyhead			30.06	763.5	66	18.9		NNE			2		3						John Tilston.
Hull Park																			
Kew Observatory			30.06	763.5	73.9	23.3		S	8	3.6			8					*D. clouds	The Staff.
Kingstown			30.11	764.8	62	16.7		ESE			1		3					Slightly hazy	George Mitchell.
Leicester Museum			30.10	764.5	71.4	21.9		E			1		2					*D. clouds	William J. Harrison.
Llandudno			30.07	763.8	69.0	20.6		E					8					*D. clouds	Dr. James Nicol.
Malta, (Mediterranean)			30.21	767.3	76.0	24.4		SE			1		6k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			30.18	766.6	60	15.6		NE			1		0						W. D. Penny.
Nassau, (Bahamas)			30.09	764.3	84.1	28.9		E			2		3						Surg.-Maj. Henry.
Nottingham			30.12	765.0	75.6	23.9		NNE			1		5k		NNE	0	0	*D. clouds	E. J. Lowe.
Oscott, St Mary's College			30.07	763.8	70.0	21.1		ENE			1		5					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			30.06	763.5	72	22.2		SE			1		6					*D. clouds	J. Lucas, for R. Main.
Plymouth			30.04	763.0	68.8	20.4		SE			1		0					Clear	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.95	760.7	63	17.2		SE			5		10					Showery	W. Kennedy.
Saint Ann's Head			30.03	762.7	66	18.9		ESE			2		2					Clear	John C. Walker.
Saint Helier, (Jersey)			30.06	763.5	75.2	24.0		E			1		2						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			30.15	765.8	59.1	15.1		ESE			1		3						F. Shaw.
Scutari cemetery, (Turkey)			30.15	765.8	65.4	18.6		N			2		3					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.13	765.3	65.7	18.7		SE			1		7					Showery	W. E. Cooper.
Siloth Rectory			30.10	764.5	66.3	19.1		SE			3		4			0.055	1.40	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			29.98	764.0	67.4	19.7		NE			0		6					Hazy	The Staff.
Stornoway, Lewis C. (Hebr)			30.18	766.6	59	15.0		NE			3		2					Clear	John Smith.
Stratfield Turgiss			30.08	764.0	72.2	22.3		S			1		2					Clear	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Sumburgh Head, (Shetland)																			
Thurso			30.17	766.3	64	17.8		SSE			2		8					Overcast	John Trotter.
Truro, Royal Institution			29.98	761.5	70	21.1		SE			5		5			Blank	Blank	*D. clouds	W. Newcombe.
Valencia Observatory			29.94	760.5	67.4	19.7		NE	13	5.8			8					Gloomy	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			30.18	766.6	58.1	14.5		E			3		8k			0	0		Andrew Gibb.
Monach Lt-house, (Shet Is)			30.16	766.1	62	16.7		E			3	5	5	NE		0	0		
North Unst, (Shetland Is)			30.25	768.3	54	12.2		SW			3	10	6	SW					

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			30.29	769.4	63.1	17.3	76	Calm			0		0						
Faröe			30.27	768.7	67.0	19.4	51	SSE			4		5						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			30.12	765.1	50.4	10.2	89	SW			6		8						
Thorshavn, (Faröe)			30.16	766.0	55.9	13.3	75	W			2		9						
Vestervig			30.26	768.6	65.8	19.8	63	W			2		2						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.09	764.3	68.0	20.0	76	S			1		8			0.051	1.3	Raining	Normal School.
Amiens																			Normal School.
Avignon			30.21	767.2	75.9	24.4	61	S			1		20		S	0	0		Normal School.
Bar-sur Seine			30.10	764.5	78.1	25.6	44	S			2		2ck			0	0		C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			30.11	764.9	74.8	23.8	61	E			1		8		SW	0	0	Cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.17	766.4	78.8	26	55	S			4		0			0	0	Clear	Normal School.
Bourges			30.19	764.3	75.2	24	78	ENE			2		2		ENE	0	0		Normal School.
Brest			29.97	761.2	71.4	21.9	73	S			2		8		S	0.207	5.25	Stormy	Naval Observatory.
Caen																			Normal School
Chartres			30.13	765.2	74.1	23.4		ESE			1		0					Clear	Normal School.
Chaumont	29.05	737.9	30.17	766.3	75.6	24.2		S			6		0			0	0	Clear	Normal School.
Commerey			30.21	767.2	71.8	22	69	ENE			4		ck			0	0	Clear	Normal School.
Commune de Gréasque*			30.26	768.5	77.2	25.1	48	SE			2		2		SE	0.04	1.		
Le Mans																			Normal School.
Lons-Le Saulnier			30.12	765.0	75.8	23.9	55	SW			1		0			0	0	Clear	Normal School.
Mâcon			30.11	764.8	74.1	23.4	65	SE			6		0			0	0	Clear	Normal School.
Mirecourt			30.17	766.2	66.7	19.3	62	SSW			1		2		SW	0	0		Normal School.
Orleans																			Normal School.
Paris Observatory			30.10	764.6	76.8	24.9	52	NE			2		2ck		SW	0	0		National Observatory
Parthenay			29.97	761.3	68.7	20.4	78	W			4		5		W			Cloudy	Normal School.
La Roche sur Yon			29.91	759.7	78.8	26.0	64	SE			4		5		NW				Normal School.
Rochefort, Observatory			30.03	762.7	76.1	24.5	63	S			2		5		N	0.063	1.6	Cloudy	Naval Observatory.
Rouen			30.10	764.5	72.7	22.6	62	SSE			1		2		S	0.260	6.6		Normal School.
Saint Lo																			Normal School.
Villefranche																			Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchesi.
Mont-Louis	25.03	635.8			54.5	12.5	93	SSE	13.0	5.83			5		SSW	0	0		—. Falguère.
Montsouris Observatory			30.11	764.7	77.5	25.3	54	E			2		3ck,k,c			0	0		Marié Davy.
Perpignan			30.12	765.1	75.2	24.0	73	SE	16.8	7.50			1		SSE	0	0		Dr. Fines.
Saint Maur, (near Paris)			30.11	764.7	77.0	25.0	57	NW			2		0			0	0	Clear	E. Renou.
Tours			29.97	761.2	74.8	23.8		SE			1		5		ESE	0.067	1.7		C. Marquet.
Versailles, (near Paris)			30.11	764.9	78.1	25.6	55	SE			1		7			0	0	Cloudy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.11	764.9	63.0	17.2	79	E	5.1	2.3		0	0			{ 0	0 }		H. Le Leé, S. J.
																{ 0	0 }		

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 ft.; Commune de Gréasque, 322 m., or 1,056.4 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. *Near Marseilles.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Lower 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.21	767.2	66.2	19.0	56	SE	13	6			3			0	0		Prof. Hoh.
Berlin			30.29	769.4	68.9	20.5	36	SE	4	2			0			0	0		Prof. Arndt.
Breslau			30.41	772.3	64.2	17.9	51	SE	4	2			0			0	0		Dr. P. Neugebauer.
Carlsruhe			30.18	766.5	70.9	21.6	52	SE	11	5			0			0	0		A. Senz.
Cassel			30.05	763.3	77.0	25.0	38	SSE	9	4			0			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen																			M. Wilhelm.
Hamburg	28.80	731.5	30.23	767.9	61.7	16.5	74	SW					1			0	0		Deutsche Seewarte.
Kiel			30.29	769.3	66.0	18.9	45	SE	16	7			0			0	0	Clear	Prof. G. Karsten.
Königsberg			30.25	768.3	66.2	19.0	40	SE	22	10			0			0	0		Prof. E. Luther.
Köslin			30.35	770.8	64.6	18.1	50	W	11	5						0.001	0.02	Nearly clear	Dr. Tägert.
Leipsic																			Prof. Bruhns.
Münster			30.27	768.9	70.3	21.3	29	SE	9	4			1			0	0		Prof. E. Heis.
Posen			30.21	767.3	71.4	21.9	37	SE	4	2			0			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.37	771.4	65.1	18.4	51	S	16	7			0			0	0	Clear	Hartwig.
Stuttgart			30.20	767.0	70.3	21.3	57	E	4	2			1			0	0		Mr. Würth.
Thorn			30.19	766.9	71.6	22.0	38	E					0			0	0		Dr. Busenbalg.
Treves, (Trier)			30.35	770.8	64.9	18.3	43	SE	9	4			1			0	0		Prof. Klesch.
Wustrow, Naval School			30.14	765.5	74.3	23.5	45	E	9	4			2			0	0		E. F. Schütz.
			30.35	770.8	66.9	19.4	47	SE	9	4			0			0	0	Clear	

Note.—In the originals the distinction between 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.

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.	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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.28	769.2	71.6	22.0	54	ESE			2		3	E		0	0		
Mondovi			30.25	768.3	65.5	18.6	63	ENE			4		2	NW		0	0		
Genoa			30.16	766.0	75.2	24.0	59	SW	4.3	1.9			0			0	0		
Savona			30.27	768.9	69.6	20.9	42	NE			2		0			0	0		
Verona			30.25	768.3	73.4	23.0	37	E			4		0			0	0		
Padua			30.28	769.0	69.1	20.6	42	SE	4.9	2.2			0			0	0		
Parma																			
Pelogotto			30.26	768.5	70.9	21.6	59	NW			1		4	WSW		0	0		
Leghorn			30.23	767.9	75.6	24.2	30	ENE	10.5	4.7			2			0	0		
Urbino																			
Ancona																			
Siena																			
Rome			30.21	767.2	69.1	20.6	37	E	1.8	0.8			0			0	0		
Naples, O. U.			30.21	767.3	75.2	24.0	36	NW	4.9	2.2			1			0	0		
Lecce			30.21	767.4	74.3	23.5	32	NE			4		0			0	0		
Cosenza			30.22	767.5	68.0	20.0	42	WNW			6		1	W		0	0		
Catania, (Sicily)			30.23	767.8	68.4	20.2	57	NW			4		2			0	0		
Palermo																			
Sub-Series.			30.19	766.9	72.0	22.2	72	W			4		9			0	0		
Naples, S. R.			30.11	764.7	76.1	24.5	48	NE	5.6	2.5			1			0	0		
			30.24	768.2	74.3	23.5	44	NE			4		0			0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Flushing			30.17	766.2	72.0	22.2		SE			2								
Groningen			30.14	765.5	69.8	21.0		SE			2								
Helder			30.16	766.0	65.8	18.8		E			2								
Utrecht			30.13	765.2	71.8	22.1		ESE			3		0					Clear	

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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			30.28	769.1	58.6	14.8	87	SSW	1.0	0.5			10			0	0		
Christiania			30.19	766.7	63.5	17.5	71	S	2.9	1.3			0			0	0		
Tromsö			29.59	751.5	48.2	9.0	81	SW			7		10			0.433	11.0	Raining	

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Lisbon			29.98	761.5	71.2	21.8	62	ESE	7.4	3.3			5	SSW		Blank	Blank		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

RUSSIAN SERIES.

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

Warsaw			30.30	770.3	63.1	17.3	38	N	2	1			0						Astronomical Obs.
Wilna			30.28	769.2	62.1	16.7	56	NW	4	2			4						Astronomical Obs.
Dorpat			30.19	766.8	59.4	15.2	54	NW	7	3			7						Physical Cabinet.
St. Petersburg			30.09	764.3	55.0	12.8	32	NW	7	3			5						Central Physical Obs.
Kuopio			30.06	763.5	50.9	10.5	62	W					5			0	0		Ch. Forsten.
Kieff			30.10	766.1	60.6	15.9	55	NW	9	4			4						Physical Cabinet.
Nikolaiev			30.12	765.1	54.9	12.7	90	NE	20	9			9						Kurdakof.
Kertch			29.96	760.9	63.7	17.6	80	NW	7	3			9						Lagorio.
Moscow			30.01	762.4	54.7	12.6	58	NW	13	6			4						Meteorological Obs.
Lugan			29.97	761.3	61.7	16.5	60	E	10	4.5			8						Meteorological Obs.
Archangel			29.93	760.1	42.3	5.7	79	NNW	17	7.5			9						Ogorodnikof.
Tiflis	28.47	723.1	29.80	757.0	82.4	28.0	32	N	10	4.5			0						Physical Obs.
Astrakhan			30.03	763.5	67.6	19.8	52	ESE	8	3.5			4						Sebastianof.
Kasan			29.73	755.1	46.2	7.9	65	W	8	3.5			10						Physical Cabinet.
Orenburg			30.05	763.2	47.5	8.6	65	W	7	3			10						Tschernischef.
Ekaterinburg	28.82	732.0	29.85	758.2	36.7	2.6	65	S	13	6			8						Meteorological Obs.
Kasaly			30.02	762.4	65.7	18.7	46	SE	8	3.5			0						Bobrof.
Tashkend	28.41	721.6	30.00	764.2	64.8	18.2	79	Calm	0	0			0						Michelson.
Barnaul			29.91	759.6	50.9	10.5	51	W	8	3.5			4						Meteorological Obs.
Yeniseisk			29.46	748.3	42.4	5.8	87	SW	7	3			10					Raining	Marks.
Irkutsk	28.48	723.4	29.87	758.8	42.4	5.8	67	Calm	0	0			0						Usolzef.
Oorga	25.53	648.4	29.73	755.1	49.3	9.6	63	Calm	0	0			0						Mossin.
Peking, (China)			29.96	760.9	68.5	20.3	80	Calm	0	0			5						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. The elevation of Tiflis is 403. meters, or 1,341.8 feet; Ekaterinburg, 305.4? m., or 1,005.2? ft.; Tashkend, m 494.2?, or 1.621.3? ft.; Irkutsk, 392. m., or 1,286. ft.; Nertchinsk, 592.0? m, or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

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

Madrid			29.95	760.6	70.9	21.6	72	SW	6.7	3.0		0	9			0.094	2.4	Cloudy	Royal Observatory.
San Fernando																			The Naval Observatory.

NOTE.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea			29.97	761.1	60.4	15.8	68	NW			2		5			0	0		
Harnosand			30.38	771.7	63.0	17.2	76	SSW			4		1			0	0		
Stockholm			30.10	766.8	65.1	18.4	49	WSW			4		2			0	0		
Wisby			30.24	768.2	61.2	16.2	83	WNW			4		0			0	0		
Sub-Series.																			
Upsala			30.19	766.9	67.8	19.9	41	SW	11.2	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 distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.78	731.0	30.16	766.1	70.2	21.2	73	N			2		2			0	0	Clear	The Observatory.
Zurich	28.60	726.3	30.17	766.3	72.5	22.5	56	NW			1		1			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +4.0mm.; Thermometer, +3°.2; Relative Humidity, +10 per cent.

Note.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria, Lee Obs'y																			Prof. C. N. A. Van Dyck.
Constantinople			30.15	765.7	60.8	16.0	53	NW	7.8	3.5			5		NNW	0.126	3.2	Cloudy	
Fao, (Persian Gulf)			29.79	756.7	94.1	34.5		NW			3		10					Cloudy	
Salonica					73.6	23.1		NW			2		0					Clear	
Valona			30.11	764.8	70.7	21.5		NW			3		0					Clear	
Varna			30.16	766.0	57.2	14.0		W			6		0					Clear	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea level. The distinction between upper and lower clouds is not made.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens																			

Note.—Reports commence October 1, 1875.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Takio																			

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario			29.82	757.4	39	3.9		N	5	2.2			10s		N	1.10	27.9	Light rain	
Chatham, N. B.			29.96	761.0	27	— 2.8	96	N	8	3.6			10ks		NE	0.08	2.0	Light rain	
Charlottetown, P. E. Island			29.95	760.7	53	11.7	79	NE	14	6.3			10s			Inap.	Inap	Cloudy	
Fort Garry, Manitoba			30.26	768.6	28	— 2.2	94	SW	8	3.6		2c	2s	S	S	0	0	Fair	
Halifax, N. S.			29.85	758.2	57	13.9	84	E	8	3.6			8c		SE	Inap.	Inap.	Cloudy	
Kingston, Ontario			29.83	757.7	42	5.6	80	N	7	3.1			1s			0.52	13.2	Cloudy	
Montreal, Quebec			29.64	752.8	40	4.4	97	N	35	15.6			10n		N	1.16	29.5	Light rain	
Ottawa, Ontario			29.77	756.1	41	5.0	87	N	18	8.0			10n		NE	0.88	22.4	Heavy rain	
Parry Sound, Ontario			29.95	760.7	39	3.9	82	N	9	4.0		2k	5ks	N	N	0.45	11.4	Cloudy	
Port Dover, Ontario			29.91	759.7	43	6.1	83	N	10	4.5		10k	0	N		1.24	31.5	Cloudy	
Fort Stanley, Ontario			29.92	760.0	45	7.2	74	N	8	3.6		10k	0	N		0.50	12.7	Clearing	
Quebec, Quebec			29.74	755.4	37	2.8	100	NE	50	22.4			10n		NE	0.37	9.4	Heavy rain	
Saugeen, Ontario			29.96	761.0	42	5.6	79	N	9	4.0			10n		N	0.21	5.3	Cloudy	
Stayner, Ontario			29.79	756.7	40	4.4	87	NE	5	2.2			10n		NE	1.33	33.8	Light rain	
Sydney, C. B.			29.96	761.0	56	13.3	84	NE	6	2.7			10s		NE	0	0	Cloudy	
Toronto, Ontario			29.89	759.2	43	6.1	91	NW	8	3.6			10ks		N	1.26	32.0	Cloudy	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.64	752.8	53	11.7	93	NW	3	1.3			10s			1.24	31.5	Cloudy	
Alpena, Mich.			30.05	763.3	41	5.0	74	N	9	4.0		8c	2s	S		1.65	41.9	Cloudy	
Atlantic City, N. J.			29.70	754.4	67	19.4	84	W	9	4.0		8cs	0			0.51	13.0	Fair	
Augusta, Ga.			29.90	759.4	73	22.8	95	SW	1	0.4			10k		SW	0.17	4.3	Cloudy	
Baltimore, Md.			29.73	755.1	66	18.9	78	W	5	2.2		5ck	5s			0.21	5.3	Cloudy	
Barnegat, N. J.			29.69	754.1	66	18.9	84	W	4	1.8		5c	0	W		0.46	11.7	Fair	
Benton, Montana	27.41	696.2	30.21	767.3	41	5.0	83	NE	4	1.8		0	0			0	0	Clear	
Bismarck, Dakota	28.50	723.9	30.20	767.1	41	5.0	91	NE	2	0.9			10ks			0.10	2.5	Cloudy	
Boston, Mass.			29.46	748.3	62	16.7	94	SW	8	3.6		0	8ks		SW	1.43	36.3	Clearing	
Breckenridge, Minn.			30.27	768.8	35	1.7	90	NW	4	1.8		8k	0	NW		0	0	Clear	
Buffalo, N. Y.			29.82	757.4	43	6.1	83	N	7	3.1			10n		N	0.81	20.6	Light rain	
Burlington, Vt.			29.57	751.1	45	7.2	100	N	8	3.6			10n			1.56	39.6	Light rain	
Cairo, Ill.			30.03	762.7	59	15.0	82	N	12	5.4			10ks		N	0	0	Cloudy	
Cape Hatteras, N. C.			29.80	756.9	76	24.4	90	SW	10	4.5		2c	2cs	SW	SW	0	0	Fair	
Cape Henry, Va.			29.77	756.1	73	22.8	81	W	4	1.8		5cs	2s	W		0.22	5.6	Fair	
Cape May, N. J.			29.73	755.1	69	20.6	75	NW	16	7.2			10s		W	0.69	17.5	Cloudy	
Charleston, S. C.			29.93	760.2	76	24.4	85	SW	6	2.7		2k	2s	SW		0.02	0.5	Fair	
Cheyenne, Wyoming	24.26	616.2	30.20	767.1	47	8.3	92	N	3	1.3		0	0			0.08	2.0	Clear	
Chicago, Ill.			30.11	764.8	44	6.7	81	NW	16	7.2			10n		NW	0.04	1.0	Light rain	
Cincinnati, Ohio			29.90	759.4	57	13.9	68	NW	10	4.5			10s		NW	0.02	0.5	Cloudy	
Cleveland, Ohio			29.85	758.2	53.4	11.9	72	N	26	11.6			10ks		N	0.98	24.9	Cloudy	
Colorado Springs, Col.	24.34	618.2	30.21	767.3	49	9.4	100	Calm	0	0			10s			0.12	3.0	Cloudy	
Corsicana, Tex.			29.73	755.1	68	20.0	100	NE	26	11.6			10n		NE	0.93	23.6	Light rain	
Davenport, Iowa			30.24	768.1	43	6.1	75	N	8	3.6		2ck	0			0.03	0.8	Clear	
Denison, Tex.			29.89	759.2	63	17.2	78	NE					10s			0.48	12.2	Cloudy	
Denver, Col.	25.04	636.0	30.26	768.6	53	11.7	86	W	5	2.2		8k	0	W		0.34	8.6	Fair	
Detroit, Mich.			29.95	760.7	47	8.3	77	N	12	5.4		8k	2ks	SW		0.33	8.4	Cloudy	
Dodge City, Kan.	27.07	687.6	29.98	761.5	51	10.6	79	NE	8	3.6		10k	0	N		0.01	0.3	Cloudy	
Dubuque, Iowa			30.26	768.6	41	5.0	74	N	8	3.6		0	0			0.02	0.5	Clear	
Duluth, Minn.			30.33	770.4	38	3.3	63	NW	1	0.4		2k	2s	NW	NW	0.03	0.8	Fair	
Eastport, Me.			29.69	754.1	55	12.8	100	E	19	8.5			10n		E	0.20	5.1	Heavy rain	
Erie, Pa.			29.82	757.4	49	9.4	77	NW	12	5.4			10ks		W	0.69	17.5	Threatening	
Escanaba, Mich.			30.21	767.3	40	4.4	64	N	10	4.5			10s		N	0.28	7.1	Cloudy	
Fort Gibson, I. T.			30.06	763.5	59	15.0	76	N	7	3.1		10cs	0	W		0	0	Cloudy	
Fort Sill, I. T.																			
Fort Sully, Dakota	28.60	726.4	30.29	769.4	49	9.4	85	SE	5	2.2			10s		S	0	0	Cloudy	
Galveston, Tex.			29.11	739.4	77	25.0	100	SE			7		10n			7.02	178.3	Heavy rain	
Grand Haven, Mich.			30.13	765.3	43	6.1	71	NE	10	4.5		2k	0	N		0.01	0.3	Fair	
Indianapolis, Ind.			29.98	761.5	52	11.1	66	NW	10	4.5			10s		N	Inap.	Inap.	Cloudy	
Indianola, Tex.			29.24	742.7	73	22.8	100	NW			7		10s			2.87	72.9	Cloudy	
Jacksonville, Fla.			29.97	761.2	79	26.1	90	E	4	1.8		2k	0			0.43	10.9	Cloudy	
Keokuk, Iowa			30.17	766.3	49	9.4	78	NE	7	3.1			10s		NE	0	0	Cloudy	
Key West, Fla.			29.95	761.5	82.0	27.8	70	SE	9	4.0			Sm'e			0	0	Clear	
Kittyhawk, N. C.			29.78	756.4	74	23.3	90	W	12	5.4		8ck	0			0	0	Fair	
Knoxville, Tenn.			29.86	758.4	69	20.6	87	N	4	1.8		5ck	5s	W	W	0.02	0.5	Cloudy	
La Crosse, Wis.			30.30	769.6	38	3.3	81	N	7	3.1		0	0			0	0	Clear	
Leavenworth, Kan.			30.21	767.3	51	10.6	71	N	10	4.5		0	0			0	0	Clear	
Lexington, Ky.	28.88	733.5	29.97	761.2	56	13.3	87	NW	8	3.6			10ks		NW	0	0	Cloudy	
Long Branch, N. J.			29.66	753.4	67	19.4	74	NW	16	7.2		5c	0	SW		0.91	23.1	Fair	
Louisville, Ky.			29.95	760.7	56	13.3	75	NW	16	7.2			10s		NW	0.03	0.8	Cloudy	
Lynchburg, Va.			29.77	756.1	68	20.0	79	SW	2	0.9			10s			0	0	Cloudy	
Malone, N. Y.			29.62	752.3	39	3.9	100	N	6	2.7			10n			1.84	46.7	Light rain	
Marquette, Mich.			30.25	768.3	41	5.0	57	N	8	3.6			10s		N	0.36	9.1	Cloudy	
Memphis, Tenn.			30.00	762.0	63	17.2	88	N	10	4.5			10n			0.18	4.6	Light rain	
Milwaukee, Wis.			30.22	767.6	40	4.4	73	N	12	5.4		5k	0	N		0.17	4.3	Fair	
Mobile, Ala.			29.90	759.4	80	26.7	85	S	6	2.7			10s		S	0.53	13.5	Cloudy	
Montgomery, Ala.			29.91	759.7	77	25.0	86	S	4	1.8		10cs	0	SW		0.77	19.6	Cloudy	
Morgantown, W. Va.			29.78	756.4	59	15.0	94	SW	5	2.2			10s			1.84	46.7	Cloudy	
Mt. Washington, N. H.	23.42	594.9	29.78	756.4	38	3.3	100	SE	40	17.9			10n		SE	0.35	8.9	Heavy rain	
Nashville, Tenn.			29.92	760.0	67	19.4	64	NW	4	1.8		0	10s			0	0	Cloudy	
New Haven, Conn.			29.60	751.8	66	18.9	73	NW	12	5.4		5k	0	W		0.75	19.1	Fair	
New London, Conn.			29.56	750.8	66	18.9	79	W	14	6.3		2c	2k	W	W	2.21	56.1	Fair	
New Orleans, La.			29.80	756.9	79.5	26.4	84	SE	12	5.4		5c	5k		S	0.18	4.6	Cloudy	
Newport, R. I.			29.53	750.0	65	18.3	84	W	24	10.7		5k	0	W		1.05	26.7	Fair	
New York, N. Y.			29.66	753.4	64	17.8	67	W	18	8.0		2c	0	W		0.35	8.9	Clear	
Norfolk, Va.			29.78	756.4	78	25.6	57	W	6	2.7		8c	0			0.11	2.8	Fair	
North Platte, Neb.	27.36	694.9	29.97	761.2	48	8.9	85	NE	4	1.8			10s			0	0	Cloudy	
Omaha, Neb.	29.19	741.4	30.28	769.1	47	8.3	73	N	12	5.4		0	0			0	0	Clear	
Oswego, N. Y.			29.77	756.1	45.5	7.5	92	N	11	4.9			10n			2.05	52.1	Light rain	
Peck's Beach, N. J.			29.70	754.4	68	20.0	84	W	12	5.4		0	Haze			0.85	21.6	Clear	
Pembina, Dakota			30.28	769.1	25	—3.9	87	Calm	0	0		2c	0			0	0	Clear	
Philadelphia, Penn.			29.59	751.6	65	18.3	73	NW	8	3.6		5ck	0	NW		0.29	7.4	Fair	
Pike's Peak, Colorado	18.01	457.4	30.22	767.6	21	—6.1	85	Calm	0	0		0	10s			0.55	14.0	Cloudy	
Pittsburgh, Penn.			29.74	755.4	59	15.0	81	W	12	5.4		2c	5k	W	W	0.48	12.2	Fair	
Port Huron, Mich.			29.94	760.5	45	7.2	84	NW	13	5.8			10n		SW	0.44	11.2	Light rain	
Portland, Me.			29.56	750.8	56	13.3	93	E	19	8.5			10n		NE	1.87	47.5	Heavy rain	
Portland, Oregon			30.06	763.5	58	14.4	87	Calm	0	0		5c	Haze			0	0	Hazy	
Punta Rassa, Fla.			30.01	762.2	80	26.7	86	SE	12	5.4		8cs	1ks	NE	SE	0.02	0.5	Cloudy	
Rochester, N. Y.			29.79	756.7	45	7.2	92	W	8	3.6			10n			1.38	35.1	Light rain	
Salt Lake City, Utah	25.76	654.3	30.09	764.3	58	14.4	70	W	1	0.4		0	0			0	0	Clear	
Sandy Hook, N. J.			29.65	753.1	65	18.3	68	NW	26	11.6		5c	0	W		0.43	10.9	Fair	
San Diego, Cal.			29.97	761.2	69	20.6	90	N	4	1.8			10s			0	0	Cloudy	
San Francisco, Cal.			29.98	761.5	55	12.8	93	SW	5	2.2			Fog			0	0	Foggy	
Santa Fe, N. M.	23.36	593.3	29.90	759.4	52	11.1	79	NE	2	0.9		0	5s			0.15	3.8	Fair	
Savannah, Ga.			29.93	760.2	77	25.0	82	SW	6	2.7		8ck	0	SW		0.53	13.5	Fair	
Shreveport, La.			29.84	757.9	70	21.1	95	N	16	7.2			10n		N	2.16	54.9	Light rain	
Smithville, N. C.																			
Springfield, Mass.			29.56	750.8	59	15.0	76	NW	12	5.4		2ck	8ks	W	W	0.89	22.6	Cloudy	
St. Louis, Mo.			30.14	765.5	54	12.2	73	NE	15	6.7			10s			0	0	Cloudy	
St. Marks, Fla.																			
St. Paul, Minn.			30.31	769.9	38	3.3	90	Calm	0	0		0	0			0	0	Clear	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			29.62	752.3	65	18.3	78	W	5	2.2		5c	0	SW		0.71	18.0	Fair	
Toledo, Ohio			29.95	760.7	49	9.	77	NW	14	6.3			10s		NW	0.25	6.3	Cloudy	
Tucson, Arizona																			
Tybee Island, Ga.			29.94	760.5	78	25.6	90	SW	12	5.4		5c	2s		SW	0.27	6.9	Fair	
Vicksburg, Miss.			29.88	758.9	74	23.3	90	E	3	1.3			10s		W	0	0	Cloudy	
Virginia City, Montana	24.48	621.8	29.96	761.0	45	7.2	52	SE	4	1.8		0	0			0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			29.76	755.9	66	18.9	75	W	4	1.8		8cs	1s	W	W	0.22	5.6	Cloudy	
Wilmington, N. C.			29.85	758.2	79	26.1	73	W	13	5.8		5ck	5ks	W	NW	0	0	Cloudy	
Wood's Hole, Mass.			29.52	749.8	67	19.4	90	W	12	5.4		0	5s		W	0	0	Fair	
Wytheville, Va.	27.53	699.3	29.60	751.8	63	17.2	94	W	2	0.9			10s			0.16	4.1	Cloudy	
Yankton, Dakota	29.02	737.1	30.34	770.6	48	8.9	92	NE	2	0.9			10n			0	0	Light rain	
Yuma, Arizona																			
Sub-Series.																			
Bridgetown, B'b'does, W. I.					83	28.3	82	SE	6	2.7		5k	5ks	E		0.23	5.8	Cloudy	F. Racker.
Pointe-aPitre, G'd'loupe, do			29.88	758.9	82	27.8	78	E				0	5ks			0.13	3.3	Fair	L. V. Bigard.
Havana, Cuba, W. I.			30.04	763.0	78	25.6	78	SSE	4.8	2.1		2c	1k	SE	E	0	0	Foggy	Charles Bosselbrink.
Kingston, Jamaica, W.			30.12	765.0	79	26.1	82	SE	6	2.7		2c	1s	SE		0.55	14.0	Fair	James Gall.
St. Thomas, St. T., W. I.			30.21	768.1	83	28.3	70	E	2	0.9		2ck	2k	SE		0	0	Fair	W. S. Cameron.
Santiago de Cuba, W. I.			29.84	757.9	79	26.1	82	Calm	0	0		2c	2s	NW	S			Fair	Robert Mason.
St. Georges, Bermudas			29.87	758.7	79	26.1	80	WSW	7.0	3.1		10c	0	SW		0	0	Fair	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.			29.75	755.6	41.5	5.3	100	SW	16	7.2			10n			0	0	Cloudy	J. Fortescue.
St. John's, Newfoundland			29.84	757.9	53	11.7	100	NE					10n			0.10	2.5	Foggy	John Delaney.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Clifton, Jamaica, W. I.	27.22	691.4	30.01	762.2	69	20.6	90	SSE	0.5	0.2		8c	0	SSE		0	0	Cloudy	C. Partridge.
Navassa																			
Mazatlan, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			29.90	759.4	51.5	10.8	90	SE	12	5.4			10n			1.00	25.4	Cloudy	H. M. Redington.

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

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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 Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,053 (?) ft., or 320.1 (?) 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, 6,86[illegible].2 (?) ft., or 2,091.6 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.34 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 18, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			29.98	761.6	81.3	27.4	64	NNW			2		6			0	0	Fair	Charnot.
Algiers			29.93	760.1	80.6	27.0	77	NNE			1		1			0.020	0.5	Fair	Peter.
La Calle																			Kuntz.
Tunis			30.12	765.1	82.0	27.8	62	SE			4		8			0.197	5.0	Stormy	Jacques.
Sfax			30.11	764.9	85.5	29.7	55	E			4		2			0	0	Cloudy	Chauvey.
Gafsa			29.95	760.8	81.2	29.0	37	NE			1		2			0	0	Fair	Grosjean.
Tebessa			30.00	762.1	73.2	22.9		NE			1		8			0.079	2.0	Hidden	Colin.
Geriville			29.94	760.4	79.7	26.5	22	NE			1		3			0	0	Lightning	Bornadach.
Laghouat			29.91	759.7	80.6	27.0	43	N			5		1			0	0	Sirocco	Simon.
Biskra			29.95	760.5	89.6	32.8	30	E			5		10			0	0	Stormy	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.21	767.3	68.7	20.4	44	NE			1		0			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.24	768.0	65.1	18.4	61	NE			1		1			0	0		I. R. Observatory.
Eperies			30.22	767.6	66.9	19.4	49	Calm			0		5			0	0		Julius Mikolik.
Gratz			30.19	766.9	61.6	18.1	63	SW			2		0						Andreas Rospini.
Hermannstadt	29.01	736.9	30.20	767.1	61.5	16.4	47	NE			3		5			0	0		Prof. Reissenberger.
Kremsmünster	28.81	731.4	30.15	765.9	53.7	17.6	67	E			1		0			0	0		Prof. C. Wagner.
Lemberg	28.84	732.4	30.21	767.3	61.5	16.4	66	NE			2		4			0	0		Dr. T. Stanecki.
Kolozsvár			30.26	768.7	64.0	17.8	48	NE			2		0			0	0		Habzsuda Daniel.
Szegedin			30.28	767.8	68.5	20.3	54	SSW			1		18			0	0		I.R. Hydrographic Of'ce
Trieste																			Karl Stancel.
Vienna			30.22	767.6	71.1	21.7	58	NW			1		0			0	0		Prof. V. Farolfi.
			30.14	765.6	71.4	21.9	38	SE			2		1			0	0		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.09	764.2	76.3	24.6	58	SSE			2	0	3			0	0		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.24	768.1	56.4	13.6		NNW	7	3.1			9			0	0	Gloomy	William Boswell.
Ardrossan																			William McNeil.
Armagh Observatory			30.15	766.1	60.2	15.7		NE	6	2.7			10					F g & rain	S. Cali, for Dr. Robinson.
Bidston, Liverpool Obs.			30.10	764.5	64.0	17.8		E			2		10					Foggy	John Hartnup, Jr.
Birr Castle, (Parsonstown)			30.05	763.3	62.0	16.7		E			1		10					Raining	J. Dreyer.
Bradford			30.12	765.0	62.7	17.1		E			1		9					Gloomy	J. McLandsborough.
Bridgetown, (Barbadoes)			29.97	761.2	84	28.9		E			2		9						T. H. Hunt.
Cambridge Observatory																			Sergeant Hunt, A.H.C.
Cape Good Hope Obs.			30.06	763.5	63.1	17.3	65	SSE	14	6.3			6					*D. clouds	Th Staff, for E. J. Stone.
Cardington			30.07	763.8	74.0	23.3		NE					3						John McLaren.
Carlisle			30.08	764.0	58	14.4		E					7			0	0	*D. clouds	T. Bell, for J. Cartmell.
Chatham, School M. E.			29.96	761.0	71.7	22.1		SSE			1		2					Fair	Capt. J. Fellowes, R. E.
Dartmoor	28.59	726.3	29.97	761.2	65.5	18.6		E			5		5					*D. clouds	R. E. Power.
Donaghadee			30.13	765.3	61	16.1		NNE			2		10					Overcast	J. Mac Gowan, Jr.
Dover			30.04	763.0	69	20.6		Calm			0		0						J. Costello.
Eccles, (near Manchester)			30.10	764.5	64.8	18.2		NE	3.2	1.4			10					Showery	Thomas Mackereth.
Falmouth Observatory			30.14	765.5	63.4	17.4		E	21	9.4			9					Foggy	The Staff.
Fort Napier, (Natal)	27.70	703.6	30.03	760.2	69.6	20.9		NE			2		9					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone			29.96	761.0	84	28.9		E					8					*D. clouds	(tis.
Galway, Queen's College																			B. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			29.93	760.2	74.0	23.5		W			3		10					Gloomy	Sergt. E. G. Baker.
Glasgow Observatory			30.20	767.1	55.2	12.9		NE			4		8					Gloomy	Lewis Stuart.
Great Yarmouth			30.11	764.8	67	19.4		ENE			1		2					Hazy	G. T. Watson.
Greenwich Royal Obs.			30.05	763.3	79.5	26.4		ENE			1		0					Clear	The Staff, for G. B. Airy.
Guernsey			29.93	760.2	70	21.1		SE			1		6					*D. clouds	Dr. S. E. Hoskins. [Dy.
Halifax, Moorside Obs.			30.17	766.3	62.0	16.7		E					8					Hazy	F. J. Page, for L. J. Cross-
Helston			29.88	758.9	68	20.0		E			4		10					Showery	M. P. Moyle.
Holyhead			30.07	763.8	64	17.8		ENE			3		10					Drizzling	John Tilston.
Hull Park																			
Kew Observatory			30.03	762.7	77.6	25.3		E	15	6.7								Misty	The Staff.
Kingstown			30.12	765.0	62	16.7		NNE			1		10					Raining	George Mitchell.
Leicester Museum			30.11	764.8	68.0	20.0		NE			3		4					Hazy	William J. Harrison.
Llandudno			30.11	764.8	61.8	16.6		E					10			Blank	Blank		Dr. James Nicol.
Malta, (Mediterranean)			30.22	767.6	74.0	23.3		SE			1		6k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			30.23	767.8	58	14.4		Calm			0		2			Blank	Blank		W. D. Penny.
Nassau, (Bahamas)			30.11	764.8	84.	29.0		SE			4		5						Surg.-Maj. Henry.
Nottingham			30.14	765.5	63.0	17.2		NNE			2		7c		NNE	0	0		E. J. Lowe.
Oscott, St Mary's College			30.08	764.0	61.8	16.6		NNE			3		10					Misty	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			30.01	762.2	74	23.3		NE			1		3						J. Lucas, for R. Main.
Plymouth																			John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.96	761.0	62	16.7		E			4		10					Raining	W. Kennedy.
Saint Ann's Head			29.97	761.2	62	16.7		ENE			3		10					Overcast	John C. Walker.
Saint Helier, (Jersey)			29.96	761.0	74.2	23.4		SSE			3		8						A. P. Amy.
Sandwick Manse (Orkneys																			
Scarborough			30.19	766.8	58.5	14.7		N			2		10					Foggy	F. Shaw.
Scutari cemetery, (Turkey			30.10	764.5	65.6	18.7		N			4		7					Misty	Sergt. W. H. Lyne.
Sheffield			30.15	765.8	64.0	17.8		NE			1		7					Overcast	W. F. Cooper.
Stiloth Rectory			30.14	765.5	63.4	17.4		SE			4		5			0	0	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			30.12	765.0	61.5	16.4		W			1		10					Gloomy	The Staff.
Stornoway, Lewis C. (Hebr)			30.24	768.1	57	13.9		NE			1		8					Overcast	John Smith.
Strathfield Turgiss			30.24	768.1	77.4	25.2		SE			1		3						Rev Charles H. Griffith
Streatley Vicarage																			Rev. John Slatter.
Sumburgh Head, (Shetland)																			
Thurso			30.23	767.8	54	12.2		NNW			2		8					Gloomy	John Trotter.
Truro, Royal Institution			29.88	758.9	68	20.0		E			2		6			Blank	Blank	*D. clouds	W Newcombe.
Valencia Observatory			29.97	761.2	65.0	18.3		NE	15	6.7			10					Gloomy	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			30.24	768.1	56.0	13.3		E			2		10s			0	0	Overcast	Andrew Gibb.
Monach Lighthouse, (Shet Is			30.22	767.6	58	14.4		NE			1	3	3	NE		0	0		
North Unst, (Shetland Is)			30.18	766.6	52	11.1		W			4	10	4	SW					

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			30.10	761.5	65.7	18.7	60	Calm			0		1						
Fanöe			30.12	765.1	66.6	19.2	74	W			2		1						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.98	761.5	51.4	10.8	86	SW			6		8					Rainy	
Thorshavn, (Faröe)			29.94	760.4	53.6	12.0	72	NW			2		8						
Vestervig			30.01	764.8	65.5	18.6	68	WNW			2		2						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alengo			30.01	762.3	71.6	22.0	52	S			3					0	0		Normal School.
Amiens																			Normal School.
Avignon			30.13	765.5	77.8	25.4	53	ESE			1		0			0	0	Clear	Normal School.
Bar-sur Seine			30.02	762.5	78.3	25.8	45	S			3		2ck			0	0		C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			30.04	763.1	74.	23.5	43	E			2		0			0	0	Clear	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.15	766.7	77.1	25.5	54	SE			4		0			0	0	Clear	Normal School.
Bourges			30.09	762.1	76.1	24.5	39	ENE			2		2		ENE	0	0		Normal School.
Brest			29.82	757.3	70.1	21.1	82	SSE			2		8		S	0.059	1.5	Stormy	Naval Observatory.
Caen																			Normal School
Chartres			30.07	763.8	72.3	22.4		ESE			2		5		NE				Normal School.
Chaumont	29.02	737.0	30.13	765.4	75.2	24		S			0		..c		S	0	0		Normal School.
Commercy			30.21	767.2	70.5	21.4	71	SW			2		..c		SW	0	0	Clear	Normal School.
Commune de Gréasque*			30.19	766.9	75.7	24.3	43	SE			3		2		SE	0	0		
Le Mans																			Normal School.
Lons-Le Saulnier			30.07	764.8	73.8	23.2	65	NW			1		2			0	0		Normal School.
Mâcon			30.07	765.0	74.3	23.5	63	SE			0		0			0	0	Clear	Normal School.
Mirecourt			30.11	764.8	69.4	20.8	68	SSW			1		2		S	0	0		Normal School.
Orleans																			Normal School.
Paris Observatory			30.04	762.8	75.6	24.2	40	SE			3		2c			0	0	Clear	National Observatory
Parthenay			29.97	761.2	66.2	19	56	SE			0		0					Clear	Normal School.
La Roche sur Yon			29.91	759.7	77.7	25.4	47	SE			4		5		NW			Cloudy	Normal School.
Rochefort, Observatory			29.96	761.9	76.3	24.6	52	S			2		10		NW	0	0	Cloudy	Naval Observatory.
Rouen			30.02	762.5	78.1	25.7	52	SSE			1		0			0	0	Clear	Normal School.
Saint Lo																			Normal School.
Villefranche																			Normal School
Sub-Series.																			
Fort de France, Martinique					54.7	12.6	93	S	1.9	0.83			10		SSW	0	0		L'Abbe Marchési.
Mont-Louis	24.98	634.5			70.1	26.6	45	SSE			2		1c, ck		S	0	0		—. Faïguère.
Montsouris Observatory			30.18	764.0	70.7	21.5	88	SE	13.0	5.8			10		SE	0.020	0.5		Marié Davy.
Perpignan			30.01	763.0	77.0	25.5	45	SE			2		0			0	0		Dr. Fines.
Saint Maur, (near Paris)			30.10	762.0	75.6	24.2	46	SE			2		2			0	0		E. Renou.
Tours			30.05	763.2	76.0	24.8	47	S			1		0			0	0		C. Marquet.
Versailles, (near Paris)																0	0		Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai			30.05	763.2	63.0	17.2	91	SE	5.1	2.3		0	0			0 / 0	0 / 0	Clear	H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,680.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,030.9 ft.; Commune de Gréasque, 322 m., or 1,056.4 ft. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles.

GERMAN SERIES.

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

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. Inches.	Millimeters.	Weather.	Observer.
Bamberg			30.17	766.3	68.0	20.0	55	E	13	6			4			0	0		Prof. Hoh.
Berlin			30.15	765.7	73.4	23.0	23	S	4	2			0			0	0		Prof. Arndt.
Breslau			30.28	769.2	68.7	20.4	33	SSE	13	6			0			0	0		Dr. P. Neugebauer.
Carlsruhe			30.11	764.8	73.8	23.2	53	SE	4	2			0			0	0		A. Senz.
Cassel			30.08	763.9	78.4	25.8	40	SE	9	4			1			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.74	730.0	30.17	766.2	64.4	18.0	71	W					0			0	0		M. Wilhelm.
Hamburg			30.15	765.8	68.5	20.3	50	SW	9	4			2cs		SW	0	0	Clear	Deutsche Seewarte.
Kiel			30.12	765.1	68.2	20.1	48	E	13	6			0			0	0		Prof. G. Karsten.
Königsberg			30.18	766.5	65.3	18.5	43	W	22	10						0.600	0.01	Clear	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			30.17	766.2	74.1	23.4	29	SW	4	2			2			0	0		Prof. Bruhns.
Münster			30.16	766.0	77.7	25.4	81	SE	4	2			0			0	0		Prof. E. Heis.
Posen			30.19	766.9	70.3	21.3	39	S	9	4			0			0	0	Clear	Dr. Magener.
Strassburg, (in Alsace)			30.13	765.4	73.0	22.8	54	NE	4	2			0			0	0		Hartwig.
Stuttgart			30.13	765.2	75.5	24.3	34	E					0			0	0		Mr. Würth.
Thorn			30.17	766.4	71.8	21.1	39	SSW	13	6			0			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.10	764.5	76.1	24.5	51	E	4	2			0			0	0		Prof. Flesch.
Wustrow, Naval School			30.16	766.0	64.9	18.3	62	NNW	13	6			0			0	0	Clear	E. F. Schütz.

Note.—In the originals the distinction between 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.

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.	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. Inches.	Millimeters.	Weather.	Observer.
Moncalieri			30.23	767.8	72.5	22.5	52	WSW			2		2	NNW		0	0		
Mondovi			30.20	767.1	66.2	19.0	57	NE			2		3	SW		0	0		
Genoa			30.20	767.0	76.6	24.8	45	SW	2.5	1.1			0			0	0		
Pavia			30.22	767.6	70.7	21.5	49	NE			1		0			0	0		
Verona			30.15	765.9	75.6	23.9	40	E			2		0			0	0		
Padua			30.20	767.1	69.1	20.6	45	NW	1.8	0.8			0			0	0		
Parma																			
Bologna			30.22	767.5	76.1	24.5	53	W			1		3	N		0	0		
Leghorn			30.21	767.3	72.9	22.7	46	SW	4.3	1.9			1			0	0		
Urbino																			
Ancona																			
Siena																			
Rome			30.17	766.3	71.4	21.9	34	ESE	0	0			0			0	0		
Naples, O. U.			30.22	767.6	77.4	25.2	48	SSW	5.6	2.5			5	W		0	0		
Lecce			30.24	768.1	70.0	24.8	31	SW			4					0	0		
Cosenza			30.25	768.3	70.9	21.6	35	ENE			4		1	N		0	0		
Catania, (Sicily)			30.31	769.9	66.9	19.4	61	NW			4		1			0	0		
Rhegio																			
Palermo			30.20	767.4	72.1	22.3	72	S			4		8	SE		0.083	2.1		
Sub-Series.																			
Naples, S. R.			30.12	765.0	76.3	24.6	58	NE	7.4	3.3			7			0	0		
			30.21	768.0	76.6	24.8	31	SW	0.9	1.4			0			0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovia is 550 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1 143.3 feet.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Flushing			30.19	766.9	77.7	25.4		SE			2								
Groningen			30.09	764.2	71.6	22.0		SE			1								
Helder			30.12	765.0	68.7	20.4		E			1								
Utrecht			30.09	764.2	77.2	25.1		SSE			1		2					Light cloudy	

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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	765.3	57.9	14.4	81	SSE	0	0			10			0	0		
Christiania			29.99	761.7	64.9	18.3	41	W	6.7	3.0			4			0	0		
Tromsö			29.49	749.1	37.8	3.2	87	W			6		10			0.787	20.0	Rain & snow	

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Lisbon			29.96	761.0	66.2	19.0	75	S	4.9	2.2			2			Blank	Blank		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

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	767.4	65.5	18.6	47	S	13	6			0						Astronomical Obs.
Wilna			30.17	766.4	62.8	17.1	57	W	4	2			2						Astronomical Obs.
Dorpat			30.07	763.6	63.3	17.4	63	WSW	13	6			7						Physical Cabinet.
St. Petersburg			29.81	757.1	59.4	15.2	73	W	9	4			5						Central Physical Obs.
Kuopio			29.67	753.6	55.9	13.3	59	W					2			0	0		Ch. Forsten.
Kieff			30.20	767.0	59.4	15.2	59	E	2	1			5						Physical Cabinet.
Nikolaiev			30.15	765.9	63.5	17.5	53	NE	20	9			7						Kurdakof.
Kertch			30.00	762.0	64.9	18.3	76	ENE	9	4			6						Lagorio.
Moscow			30.18	766.6	52.9	11.6	49	S	8	3.5			0						Meteorological Obs.
Lugan			30.05	763.2	63.1	17.3	37	ENE	17	7.5			2						Meteorological Obs.
Archangel			29.41	746.9	51.6	10.9	86	W	17	7.5			4						Ogorodnikof.
Tiflis	28.45	722.5	29.78	756.3	81.7	27.6	41	S	4	2			1						Physical Obs.
Astrakhan			30.11	764.8	61.3	16.3	51	N	8	3.5			10						Sebastianof.
Kasan			30.02	762.4	43.3	6.3	65	NW	10	4.5			9						Physical Cabinet.
Orenburg			29.81	757.1	48.8	9.1	70	Calm	0	0			10						Tschernischef.
Ekaterinburg	28.82	731.9	29.83	757.6	44.4	6.9	45	SW	4	2			4						Meteorological Obs.
Kasaly			29.85	758.1	76.1	24.5	75	SSE	8	3.5			0						Bobrof.
Tashkend	28.41	721.5	30.07	763.8	68.4	20.2	72	Calm	0	0			0						Michelson.
Barnaul			29.90	759.4	52.2	11.2	52	Calm	0	0			3						Meteorological Obs.
Yeniseisk			29.67	753.6	41.5	5.3	67	SW	4	2			4						Marks.
Irkutsk	28.55	725.1	29.97	761.3	35.2	1.8	85	Calm	0	0			3						Usolzef.
Oorga	25.76	654.4	30.25	765.8	33.8	1.0	52	Calm	0	0			0						Mossin.
Peking, (China)			29.90	759.5	69.8	21.0	80	Calm	0	0			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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			29.92	759.9	68.0	20.0	73	E	5.1	2.3		0	9			0.012	0.3	Cloudy	Royal Observatory.
San Fernando																			The Naval Observatory.

NOTE.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea			29.68	753.8	63.0	17.2	52	NW			7		7			0	0	Frost	
Hernosand			29.96	760.9	59.5	15.3	44	NW			4		2			0	0		
Stockholm			29.91	759.7	63.0	17.2	63	WSW			2		8			0	0		
Wisby			29.99	761.8	63.0	17.2	72	W			6		3			0	0		
Sub-Series.																			
Upsala			29.93	760.1	63.0	17.2	59	W	7.6	3.4			5	W	W				Dr. Hildebrandsson.

NOTE.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.72	720.6	30.10	764.6	72.3	22.4	61	N			2		2			0	0	Clear	The Observatory.
Zurich	28.53	724.6	30.10	764.5	74.3	23.5	51	NW			1		0			0	0	Clear	The Observatory.

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, —2.7mm.; Thermometer, +4°.7; Relative Humidity, 0.6 per cent.

NOTE.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y			30.15	765.7	61.3	16.3	61	NNW	22	10			10		N	0.47	12.		Prof. C. N. A. Van Dyck.
Constantinople			29.81	757.2	92.3	33.4		NW			3		0					Raining	
Fao, (Persian Gulf)					77.0	25.0		SE			2		0					Clear	
Salonica			30.17	766.2	73.4	23.0		SW			2		0					Clear	
Valona			30.46	766.0	59.0	15.0		NW			4		5					Cloudy	
Varna																			

NOTE.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens																			

NOTE.—Reports commence October 1, 1875.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Takio																			

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario			30.10	764.5	43	6.1		NW	8	3.6		0	0			0.07	1.8	Clear	
Chatham, N. B.			29.28	743.7	50	10.0	99	N	14	6.3			10s		N	2.50	63.5	Light rain	
Charlottetown, P. E. Island			29.28	743.7	51	12.2	80	W	18	8.0			10s		W	0.390	9.91	Cloudy	
Fort Garry, Manitoba			29.90	759.4	48	8.9	96	N	16	7.2		5k	2n	NW	NW	0.110	2.79	Cloudy	
Halifax, N. S.			29.34	745.2	51	10.6	84	W	19	8.5			10n		W	0.504	12.80	Cloudy	
Kingston, Ontario			30.10	764.5	40	4.4	83	N	4	1.8		0	0			0.04	1.0	Clear	
Montreal, Quebec			29.92	760.0	41	5.0	80	NW	12	5.4		0	2ks			0.43	10.9	Clear	
Ottawa, Ontario			30.03	762.7	38	3.3	80	W	10	4.5		2ck	0	W		0.06	1.5	Clear	
Parry Sound, Ontario			30.11	764.8	34	1.1	95	Calm	0	0		0	0			0	0	Clear	
Port Dover, Ontario			30.11	764.8	37	2.8	90	N	7	3.1		8ck	0			0	0	Fair	
Port Stanley, Ontario			30.13	765.3	38	3.3	93	Calm	0	0		10k	0			0	0	Fair	
Quebec, Quebec			29.77	756.4	40	4.4	91	NW	3	1.3			10n		NW	1.20	30.5	Cloudy	
Saugeen, Ontario			30.11	764.8	35	1.7	90	Calm	0	0		5k	2n			0	0	Cloudy	
Stayner, Ontario			30.10	764.5	42	5.6	83	Calm	0	0		8k	0	NW		0.02	0.5	Cloudy	
Sydney, C. B.			30.33	745.0	59	15.0	98	SW	5	2.2		8ck	8ks	S	SW	0.38	9.7	Clearing	
Toronto, Ontario			30.12	765.0	45	7.2	63	N	4	1.8		5cs	0	NW		0	0	Fair	

NOTE.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.91	759.7	44	6.7	67	NW	14	6.3		8c	0	W		0	0	Fair	
Alpena, Mich.			30.09	764.3	37	2.8	80	NW	5	2.2		8k	0	NW		0	0	Cloudy	
Atlantic City, N. J.			30.06	763.5	50	10.0	64	NW	12	5.4		5cs	0	NW		0	0	Fair	
Augusta, Ga.			29.92	760.0	70	21.1	99	SE	7	3.1			10ks		S	1.03	26.2	Cloudy	
Baltimore, Md.			30.10	764.5	51	10.6	59	NW	5	2.2		5k	5ks	W		0	0	Cloudy	
Barnegat, N. J.			30.01	763.0	52	11.1	60	NW	12	5.4		8c	0	NW		0	0	Fair	
Benton, Montana	27.49	698.2	30.29	769.4	46	7.8	78	Calm	0	0		0	0			0	0	Clear	
Bismarck, Dakota	28.22	716.8	29.86	758.4	48	8.9	70	N	17	7.6			10ks			0	0	Threatening	
Boston, Mass.			29.83	757.7	46	7.8	55	W	15	6.7		8c	0	NW		0	0	Fair	
Breckenridge, Minn.			29.75	755.6	47	8.3	92	NW	10	4.5		2k	0	NW		0.07	1.8	Fair	
Buffalo, N. Y.			30.10	764.5	43	6.1	66	Calm	0	0		8k	Sm'e	N		Inap.	Inap.	Fair	
Burlington, Vt.			29.92	760.0	42	5.6	74	N	4	1.8		5k	2s	N	N	0.18	4.6	Cloudy	
Cairo, Ill.			29.95	760.7	49	9.4	85	NE	8	3.6			10s		NE	0	0	Cloudy	
Cape Hatteras, N. C.			30.00	762.0	66	18.9	85	NE	21	9.4			10s		NE	0.61	15.5	Cloudy	
Cape Henry, Va.			30.07	763.8	58	14.4	70	N	12	5.4			10s		NW	0.01	0.3	Cloudy	
Cape May, N. J.			30.06	763.5	51	10.6	59	N	14	6.3		5cs	0			0	0	Fair	
Charleston, S. C.			29.95	760.2	73	22.8	85	SE	6	2.7		5k	2s	SW	SW	0.67	17.0	Clearing	
Cheyenne, Wyoming	24.21	614.9	30.15	765.8	45	7.2	60	NW	6	2.7		0	0			0	0	Clear	
Chicago, Ill.			30.05	763.3	47	8.3	77	SW	3	1.3			10s			Inap.	Inap.	Cloudy	
Cincinnati, Ohio			30.01	762.2	50	10.0	71	NE	4	1.8			10s		NE	0	0	Cloudy	
Cleveland, Ohio			30.08	764.0	49.2	9.6	57	E	14	6.3			10ks		N	0.08	2.0	Cloudy	
Colorado Springs, Col.	24.88	631.9	30.16	766.1	55	12.8	80	N	8	3.6		0	0			0	0	Clear	
Corsicana, Tex.			29.92	760.0	51	10.6	78	NW	14	6.3		0	0			0.30	7.6	Clear	
Davenport, Iowa			30.11	764.8	43	6.1	83	E	4	1.8		2ck	0		W	0	0	Fair	
Denison, Tex.			29.95	760.7	49	9.4	85	N	9	4.0		0	0			0	0	Clear	
Denver, Col.	24.98	634.5	30.20	767.1	50	10.0	79	SE	6	2.7		2ck	0			0	0	Clear	
Detroit, Mich.			30.10	764.5	38	3.3	90	N	5	2.2		8ck	Fog	W		0	0	Fair	
Dodge City, Kan.	27.48	698.0	29.71	755.4	55	12.8	74	S	2	0.9		0	0			0	0	Clear	
Dubuque, Iowa			30.08	764.0	44	6.7	84	S	6	2.7			10s		NW	0	0	Cloudy	
Duluth, Minn.			29.87	758.7	46	7.8	69	SW	8	3.6			10s		SW	0.03	0.8	Cloudy	
Eastport, Me.			29.40	746.7	44	6.7	83	NW	15	6.7			10s			0.45	62.2	Cloudy	
Erie, Pa.			30.06	763.5	48	8.9	56	NW	12	5.4		0	8ks		NW	Inap.	Inap.	Fair	
Escanaba, Mich.			30.06	763.5	39	3.3	72	SW	8	3.6			10s		W	0	0	Cloudy	
Fort Gibson, I. T.			29.99	761.7	46	7.8	85	NW	7	3.1		0	0			0	0	Clear	
Fort Sill, I. T.																			
Fort Sully, Dakota	28.26	717.8	29.90	759.4	52	11.1	86	Calm	0	0		0	5s		NW	0	0	Fair	
Galveston, Tex.			29.76	755.9	62	16.7	72	N			7		10s		N	0.50	12.7	Cloudy	
Grand Haven, Mich.			30.14	765.5	38	3.3	80	E	3	1.3			10s		SW	0	0	Cloudy	
Indianapolis, Ind.			30.03	762.7	45	7.2	76	NE	6	2.7			10s		NE	0	0	Cloudy	
Indianola, Tex.			29.93	760.2	62	16.7	83	N			4	0	0			0.20	7.4	Clear	
Jacksonville, Fla.			29.93	760.2	79	26.1	82	SE	12	5.4		5ks	2s		NE	0	0	Fair	
Keokuk, Iowa			30.06	763.5	43	6.1	75	Calm	0	0		0	0			0	0	Clear	
Key West, Fla.			29.98	761.5	82.1	27.8	74	SE	10	4.5		2k	Haze	SE	SE	0.04	1.0	Fair	
Kittyhawk, N. C.			30.04	763.0	62	16.7	66	NE	24	10.7		0	10ks		NE	0.29	7.4	Cloudy	
Knoxville, Tenn.			29.92	762.0	54	11.7	93	NE	12	5.4			10n			0.78	19.8	Light rain	
La Crosse, Wis.			30.04	763.0	46	7.8	76	S	8	3.6			10s		S	0	0	Cloudy	
Leavenworth, Kan.			30.04	763.0	45	7.2	85	Calm	0	0		0	Fog			0	0	Fair	
Lexington, Ky.	28.89	732.8	30.00	762.0	46	7.8	92	NE	8	3.6			10s			0	0	Cloudy	
Long Branch, N. J.			30.02	762.5	50	10.0	64	W	8	3.6		10c	0			0	0	Cloudy	
Louisville, Ky.			29.99	761.7	48	8.9	78	N	12	5.4			10s			0	0	Cloudy	
Lynchburg, Va.			30.10	764.5	54	12.2	67	E	3	1.3			10s			0	0	Cloudy	
Malone, N. Y.			29.95	760.7	37	2.8	80	W	5	2.2		2k	0	NW		0.53	13.5	Fair	
Marquette, Mich.			30.01	762.2	39	3.9	73	S	16	7.2			10s		W	0	0	Cloudy	
Memphis, Tenn.			29.86	758.4	50	10.0	100	NE	10	4.5			10n			1.24	31.5	Light rain	
Milwaukee, Wis.			30.11	764.8	38	3.3	71	NW	4	1.8		5ck	Fog	N		0	0	Fair, frost	
Mobile, Ala.			29.63	752.6	81	27.2	86	S	30	13.4			10n		SW	0.29	7.4	Threatening	
Montgomery, Ala.			29.74	755.4	73	22.8	90	SE	8	3.6		8cs	2s		SE	0.60	15.2	Cloudy	
Morgantown, W. Va.			30.09	764.3	47	8.3	85	NE	1	0.4			10s			0.10	2.5	Cloudy	
Mt. Washington, N. H.	23.31	592.1	29.67	753.6	17	—8.3	100	NW	72	32.2			Fog			0.90	22.7	Foggy	
Nashville, Tenn.			29.85	758.2	53	11.7	86	N	6	2.7			10n			0.56	14.2	Light rain	
New Haven, Conn.			29.95	760.7	53	11.7	43	NW	10	4.5		Haze	8s		NW	0	0	Cloudy	
New London, Conn.			29.92	760.0	49	9.4	53	NW	12	5.4		2c	0	W		0	0	Fair	
New Orleans, La.			29.57	751.1	74.5	23.6	79	SW	24	10.7			10ks		SW	0.31	7.9	Threatening	
Newport, R. I.			29.87	758.7	48	8.9	63	W	20	8.9		2cs	0	NW		0	0	Fair	
New York, N. Y.			30.01	762.2	48	8.9	62	W	12	5.4		Haze	Fog			0	0	Fair	
Norfolk, Va.			30.07	763.8	55	12.8	74	N	8	3.6			10n			0	0	Light rain	
North Platte, Neb.	27.07	687.6	29.64	752.8	47	8.3	92	SW	2	0.9		0	2s			0	0	Fair	
Omaha, Neb.	28.88	733.5	29.94	760.5	50	10.0	78	S	8	3.6			10s		W	0.07	1.8	Cloudy	
Oswego, N. Y.			30.07	763.8	46.5	8.1	70	N	10	4.5		Haze	5ks		N	0.07	1.8	Fair	
Peck's Beach, N. J.			30.07	763.8	51	10.6	59	N	12	5.4		4c	4s	SW	SW	0	0	Cloudy	
Pembina, Dakota			29.84	757.7	46	7.8	96	N	4	1.8			10s			0.09	2.3	Cloudy	
Philadelphia, Penn.			29.93	760.2	47	8.3	69	NW	6	2.7		Haze	Sm'e		W	0	0	Fair	
Pike's Peak, Colorado	18.00	457.2	30.21	767.3	25	—3.9	88	NE	21	10.7		0	0			0	0	Clear	
Pittsburgh, Penn.			30.09	764.3	44	6.7	92	N	2	0.9			Fog			0	0	Foggy	
Port Huron, Mich.			30.12	765.0	41	5.0	73	Calm	0	0		0	2s		NW	0.34	8.6	Fair	
Portland, Me.			29.73	755.1	47	8.3	62	W	7	3.1		0	0			0.36	9.1	Clear	
Portland, Oregon			30.03	764.0	60	15.6	88	NW	2	0.9		5ck	Haze			0	0	Fair	
Punta Rassa, Fla.			29.99	761.7	82	27.8	78	S	16	7.2		Haze	8ks	S	S	0.03	0.8	Threatening	
Rochester, N. Y.			30.08	764.0	42	5.6	74	W	4	1.8		2c	2s	W	NE	0.05	1.3	Fair	
Salt Lake City, Utah	25.75	654.0	30.08	764.0	61	16.1	45	E	4	1.8		0	0			0	0	Clear	
Sandy Hook, N. J.			29.98	761.5	49	9.4	63	NW	21	9.4		10cs	0			0	0	Cloudy	
San Diego, Cal.			29.95	760.7	67	19.4	84	Calm	0	0			10s			0	0	Cloudy	
San Francisco, Cal.			29.99	761.7	54	12.2	93	W	8	3.6			Fog			0	0	Foggy	
Santa Fe, N. M.	23.35	593.1	29.89	759.2	47	8.3	77	Calm	0	0		0	0			0	0	Clear	
Savannah, Ga.			29.93	760.2	76	24.4	95	NE	4	1.8		5ks	Fog			0	0	Foggy	
Shreveport, La.			29.79	756.2	52	11.1	100	N	18	8.0			10n		N	5.43	137.9	Light rain	
Smithville, N. C.																			
Springfield, Mass.			29.91	759.7	46	7.8	54	NW	16	7.2		8cs	0	W		0	0	Fair	
St. Louis, Mo.			30.06	763.5	44	6.7	84	NE	10	4.5			8s		NW	0	0	Clearing	
St. Marks, Fla.																			
St. Paul, Minn.			29.88	758.9	46	7.8	77	SE	8	3.6			10n			0.02	0.5	Light rain	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			29.97	761.2	47	8.3	69	W	6	2.7		8c	0			0	0	Cloudy	
Toledo, Ohio			30.08	764.0	44	6.7	84	N	4	1.8		8c	2s	SW	E	0	0	Cloudy	
Tucson, Arizona																			
Tybee Island, Ga.			29.94	760.5	78	25.6	95	Calm	0	0			10ks		SW	0.07	1.8	Threatening	
Vicksburg, Miss.			29.60	751.8	57	13.9	93	NE	19	8.5			10n			4.99	126.7	Light rain	
Virginia City, Montana	24.45	621.0	29.96	761.0	53	11.7	42	SE	8	3.6		1c	0	W		0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.12	765.0	50	10.0	68	N	8	3.6		2ck	8s	W	W	0	0	Cloudy	
Wilmington, N. C			30.00	762.0	64	17.8	88	NE	9	4.0			10s		NE	0.21	5.3	Cloudy	
Wood's Hole, Mass			29.84	757.9	40	9.4	57	NW	22	9.8		0	2s		NW	0	0	Clear	
Wytheville, Va	27.68	703.1	29.82	757.4	51	10.6	86	E	2	0.9			10n			0.19	4.8	Light rain	
Yankton, Dakota	28.61	726.7	29.88	758.9	52	11.1	86	SW	5	2.2			8s		NW	0.02	0.5	Cloudy	
Yuma, Arizona																			
Sub-Series.																			
Bridgetown, B'b'does, W. I					82	27.8	91	E	7	3.1		5k	0	E		0	0	Fair	F. Racker.
Pointe-aPitre, G'Loupe, do			29.98	761.5	83	28.3	70	E				0	2ks			0.02	0.5	Clear	L. V. Bigard.
Havana, Cuba, W. I			30.00	764.3	79	26.1	82	SSE	8.4	3.8		1c	1k	SE		0	0	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W.			30.18	766.6	79	26.1	78	Calm	0	0		8c	2s	N		0	0	Cloudy	James Gall.
St. Thomas, St. T., W. I			30.24	768.1	83	28.3	70	E	7	3.1		2ck	2ks	SE		0.04	1.0	Fair	W. S. Cameron.
Santiago de Cuba, W. I			29.85	758.2	79	26.1	78	Calm	0	0		0	2s					Fair	Robert Mason.
St. Georges, Bermudas			29.92	760.0	81.0	27.2	83	WSW	14.3	6.4		Haze	..d		WSW	0.040	1.02	Fair	C. F. Allen.
Honolulu, Oahu, H. I																			
Makawao, Maui, H. I																			E. P. Church.
Cumberland, B. A																			F. L. Clarke.
Ft. Chippewyan, B. A																			
Ft. McPherson, B. A																			
Ft. Simpson, B. A																			
York Factory, B. A			29.91	759.7	34	1.1	100	NE	30	13.4			10n			0.05	1.3		J. Fortescue.
St. John's, Newfoundland			29.66	753.4	52	11.1	100	NE					10n			0.95	24.1	Raining	John Delaney.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Clifton, Jamaica, W. I	27.26	692.4	30.04	763.0	69	20.6	90	NE	0.5	0.2		8c	0	NE		0.05	1.3	Cloudy	C. Partridge.
Savasso																			
Menelik, S. A																			
Paramaribo, S. A																			
Elyria, Ohio			30.07	763.8	50	10.0	93	NE	4	1.8			10n			0	0	Cloudy	H. M. Redington.

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

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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 Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) 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, 6,86[illegible] (?) ft., or 2,091.6 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,291.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.90 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.; Virginia City, 5.48 in.

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.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 19, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.06	763.1	80.4	26.9	62	N			1		6			0	0	Fair	Charnot.
Algiers			29.98	761.5	82.0	27.8	69	N			2		1			0	0	Fair	Peter.
La Calle																			Kuntz.
Tunis			30.14	765.6	84.1	28.4	56	S			5		6			0	0	Stormy	Jacques.
Sfax			30.13	765.4	85.3	29.6	55	E			5		2			0	0	Fair	Chauvey.
Saida			29.99	761.7	85.1	29.5	33	N			2		1			0	0	Fair	Grosjean.
Tebessa			30.03	762.7	83.3	28.5		NE			1		1			0	0	Fair	Colin.
Geriville			29.95	760.8	80.6	27.0	28	NW			1		3			0	0	Lightning	Bernadach.
Laghouat			29.92	760.0	77.0	25.0	61	E			2		2			0	0	Fair	Simon.
Biskra			29.96	761.0	92.7	33.7	34	E			1		3			0	0	Fair	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.14	765.6	71.8	22.1	51	NE			1		0			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.13	765.4	68.9	20.5	51	WSW			1		8			0	0		I. R. Observatory.
Eperies			30.10	764.6	65.1	18.4	55	Calm			0		5			0	0		Julius Mikolik.
Gratz	28.94	735.2	30.12	765.0	67.8	19.9	57	SSW			2		0						Andreas Rospini.
Hermannstadt	28.69	728.7	30.09	764.3	64.0	17.2	54	E			1		0			0	0		Prof. Reissenberger.
Kremsmünster	28.84	732.4	30.15	765.8	65.1	18.4	59	E			2		0			0	0		Prof. C. Wagner.
Lemberg			30.07	763.8	63.3	17.4	55	W			2		5			0	0		Dr. T. Stanecki.
Nytregyhaza			30.18	766.6	68.4	20.2	51	W			1		4			0	0	Solar corona	Habasuda Danie'.
Pola			30.16	766.1	68.4	20.2	67	SW			1		1s			0	0		I.R. Hydrographic Of'ce
Szegedin																			Karl Stancel.
Trieste			30.10	766.9	70.2	21.2	64	Calm			0		0			0	0		Prof. V. Farolfi.
Vienna			30.13	765.2	71.1	21.7	31	NE			2		2			0	0		I. R. Central Institute.

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

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.06	763.5	75.0	23.9	60	S			2	1	2	S		0	0		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.15	765.8	56.6	13.7		SSE	10	4.5			9			0	0	Gloomy	William Boswell.
Ardrossan																			Wm. McNeil.
Armagh Observatory			30.01	762.2	60.9	16.1		ENE	11	4.9									S. Cali, for Dr. Robinson.
Bidston, Liverpool Obs.			29.97	761.2	70.0	21.1		E			1		1					Clear	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.90	759.4	62.5	16.9		SE			1		10					Showery	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbadoes)			30.00	762.0	85.2	29.6		NE			4		9					Gloomy	T. H. Hunt.
Cambridge Observatory																			Sergeant Hunt, A.H.C.
Cape Good Hope Obs.			29.99	761.7	61.2	16.2	62	WNW	14	6.3			8						The Staff, for E. J. Stone.
Cardington			29.98	761.5	77.0	25.0		SW					4					*D. clouds	John McLaren.
Carlisle			30.03	762.7	68.3	20.2		NE					5			0.01	0.3	*D. clouds	T. Bell, for J. Cartmell.
Chatham, School M. E.			30.00	762.0	77.2	25.1		S			1		8					Fine	Capt. J. Fellowes, R. E.
Dartmoor	28.58	725.9	29.95	760.7	59.5	15.3		SW			5		10					Overcast	R. E. Power.
Donaghadee			30.02	762.5	62	16.7		NE			3		7					*D. clouds	J. Mac Gowan, Jr.
Dover			30.03	762.7	68	20.0		S			2		1						J. Costello.
Eccles, (near Manchester)			29.97	761.2	74.8	23.8		E	2.4	1.1			6					*D. clouds	Thomas Mackereth.
Falmouth Observatory			30.20	767.1	63.0	17.2		SSE	15	6.7			10					Overcast	The Staff.
Fort Napier, (Natal)	27.50	698.5	29.73	755.1	83.0	28.2		NW			4		1						Pvt. G. Salmon, A. H. C. (tis.
Free Town, (Sierra Leone			29.96	761.0	82	27.8		W					9					*D. clouds	
Galway, Queen's College																			B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.01	762.2	75.5	24.2		WSW			3		0					Clear	Sergt. E. G. Baker.
Glasgow Observatory			30.17	766.3	60.1	15.6		NE			2		7					*D. clouds	Lewis Stuart.
Great Yarmouth			30.06	763.5	67	19.4		E			2		2					Hazy	G. T. Watson.
Greenwich Royal Obs.			30.00	762.0	79.9	26.6		SSW			1		7					*D. clouds	The Staff, for G. B. Airy.
Guernsey			29.97	761.2	67	19.4		SSE			1		5			Blank	Blank	*D. clouds	Dr. S. E. Hoskins. (Day.
Halifax, Moorside Obs.			30.04	763.0	68.6	20.3		E					8					Hazy	F. J. Page, for L. J. Cross.
Helston			29.90	759.4	68	20.0		SSW			4		8					Fair	M. P. Moyle.
Holyhead			29.93	760.2	69	20.6		WSW			2		9					*D. clouds	John Tilston.
Hull Park																			
Kew Observatory			29.99	761.7	76.9	24.9		SE	8	3.6			6					*D. clouds	The Staff.
Kingstown			29.97	761.2	62	16.7		E			2		10					Misty	George Mitchell.
Leicester Museum			29.99	761.7	76.0	24.4		E			2		8					*D. clouds	William J. Harrison.
Llandudno			29.95	760.7	68.4	20.2		E					6					*D. clouds	Dr. James Nicol.
Malta, (Mediterranean)			30.25	768.3	77.6	25.3		SE			1		6k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			30.13	765.3	58	14.4		Calm			0		5						W. D. Penny.
Nassau, (Bahamas)			30.06	763.5	85.2	29.6		SE			5		6						Surg.-Maj. Henry.
Nottingham			30.02	762.5	77.3	25.2		SE			3		9c		ENE	0	0	Overcast	E. J. Lowe.
Oscott, St Mary's College			29.98	761.5	71.3	21.8		ENE			2		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.96	761.0	74	23.3		SE			1		7					*D. clouds	J. Lucas, for R. Main.
Plymouth			29.95	760.7	64.5	18.1		SE			3		10					Overcast	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.87	758.7	64	17.8		SE			4		10					Showery	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, (Jersey)			29.97	761.2	70.0	21.1		SE			3		2						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough																			F. Shaw.
Scutari cemetery, (Turkey			30.11	764.8	63.6	17.6		NW			2		9					Dull	Sergt. W. H. Lyne.
Sheffield			29.99	764.3	71.2	21.8		E			1		3						W. F. Cooper.
Silloth Rectory			30.08	764.0	66.9	19.4		E			2		3			0.500	12.70	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			30.0	762.0	68.0	20.0		E			2		4			Blank	Blank	*D. clouds	The Staff.
Stornoway, Lews C. (Hebr.)			30.13	765.3	55	12.8		NE			2		0					Clear	John Smith.
Stratfield Turgiss			29.98	761.5	75.0	23.9		S			0–1		6					*D. clouds	Rev. Charles H. Griffith
Streatley Vicarage																			Rev. John Slatter.
Sumburgh Head, (Shetland)																			
Thurso			30.13	765.3	57	13.9		NNW			1		6					*D. clouds	John Trotter.
Truro, Royal Institution			29.90	759.4	65	18.3		SE			4		8					Gloomy	W. Newcombe.
Valencia Observatory			29.82	757.4	63.3	17.4		SE	2	0.9			5					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			30.12	765.0	58.4	14.7		NE			3		8k			0	0	Fine, cloudy	Andrew Gibb.
Monach Lt-house, (Shet. Is)			30.05	763.3	57	13.9		NE			4	2	0			0	0		
North Unst, (Shetland Is)			30.02	762.5	52	11.1		W			6		10						

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			30.13	765.2	63.0	17.2	66	SW			2		1						
Fanöe			30.15	765.8	63.0	17.2	68	W			4		1						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			30.02	762.4	47.5	8.6	71	W			7		8						
Thorshavn, (Faröe)			29.99	761.7	54.0	12.2	64	W			6		5						
Vestervig			30.07	763.7	62.8	17.1	63	NW			2		4						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between upper and lower clouds.

FRENCH SERIES.

Furnished by the coöperation o His Excellency, U. J. Le Verrier, Director o 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.03	762.8	67.1	19.5	87	S			1		..k			0	0		Normal School.
Amiens																			Normal School.
Avignon			30.15	765.9	75.0	23.9	54	SE			1		5s		SSW	0	0	Cloudy	Normal School.
Bar-sur Seine			30.07	763.8	76.1	24.5	63	SW			6		2ck			0	0		C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			30.04	763.1	74.5	23.6	53	SSE			1		8		SSE	0	0	Cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.15	765.7	77.0	25	50				6					0	0	Misty	Normal School.
Bourges			30.08	764.0	72.9	22.7	72	SE			2		8		SE	0	0	Cloudy	Normal School.
Brest			29.90	759.5	71.8	22.1	75	SW			2		5		SW	0.177	4.50	Stormy	Naval Observatory.
Caen																			Normal School
Chartres			30.13	765.4	73.8	23.2		S			3		10		NE			Cloudy	Normal School.
Chaumont	29.06	738.1	30.17	766.2	74.5	23.6		S			6	..c		SE		0	0		Normal School.
Commercy			30.14	765.6	73.4	23	63	E			2	2c		E		0	0		Normal School.
Commune de Gréasque*			30.22	767.6	78.3	25.7	36	SE			2		5		SW	0	0		
Le Mans																			Normal School.
Lons-Le Saulnier			30.09	764.2	73.4	23	52	NW			2					0	0	Misty	Normal School.
Mâcon			30.08	763.9	73.8	23.2	58	SE			6		0			0	0	Clear	Normal School.
Mirecourt			30.06	763.5	69.4	20.8	58	SE			2		2		E	0	0		Normal School.
Orleans																			Normal School.
Paris Observatory			30.05	763.2	73.6	23.1	44	S			3		8cs		S	0	0	Cloudy	National Observatory
Parthenay			29.99	761.8	67.5	19.7	77	W			4		5					Cloudy	Normal School.
La Roche sur Yon			29.99	761.8	73.6	23.1	59	SE			4		5		N			Cloudy	Normal School.
Rochefort, Observatory			30.05	763.3	76.6	24.8	47	SSE			4		2		NE	0	0		Naval Observatory.
Rouen			30.02	762.4	68.2	20.1	66	SE			2		5		S	0	0	Cloudy	Normal School.
Saint Lo																			Normal School.
Villefranche																			Normal School.
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchési.
Mont-Louis	25.00	635.1			60.4	15.8	71	SW	26.1	11.67			4		SW	0.299	7.6		—. Falguère.
Montsouris Observatory			30.06	763.4	77.0	25.0	55	S			2	..c	8ck		SW	0	0		Marié Davy.
Perpignan			30.08	764.1	77.0	25.0	62	SE	13.0	5.83			8		SE	0	0		Dr. Fines.
Saint Maur, (near Paris)			30.06	763.4	74.1	23.4	45	S			2		8			0	0		E. Renou.
Tours			29.99	761.8	69.6	20.9		SE			1		5		SSE	0	0		C. Marquet.
Versailles, (near Paris)			30.07	763.6	72.3	22.4	53	SW			2		9			0	0	Cloudy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			29.97	761.2	65.5	18.6	93	SE	5.4	2.4		0	0			0 0	0 0	Clear	H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 ft.; Commune de Gréasque, 322 m., or 1,056.4 ft. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles.

GERMAN SERIES.

Furnished by the coöperation of Prof. Geo. Neumayer, Superintendent Royal 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.13	765.4	69.8	21.0	55	SW	18	8			3			0	0		Prof. Hoh.
Berlin			30.14	765.6	73.2	22.9	84	S	9	4			2			0	0		Prof. Arndt.
Breslau			30.20	767.0	70.0	21.1	42	NW	22	10			3			0	0		Dr. P. Neugebauer.
Carlsruhe			30.09	764.2	71.8	23.8	48	NE	11	5			5			0	0		A. Senz.
Cassel			30.10	764.5	79.3	26.3	45	SE	18	8			0			0	0		Dr. H. Möll.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.72	729.6	30.15	765.7	65.3	18.5	58	W					0			0	0		M. Wilhelm.
Hamburg			30.17	766.2	68.7	20.4	35	NE	9	4			5cs	NW		0	0		Deutsche Seewarte.
Kiel			30.13	765.4	72.1	22.3	67	NE	13	6			5			0.035	0.9		Prof. G. Karsten.
Königsberg			30.10	764.4	65.3	18.5	54	NE	11	5						0	0	Clear	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			30.16	766.0	73.8	23.2	38	WSW	4	2			5			0	0		Prof. Bruhns.
Münster			30.08	764.0	78.4	25.8	71	SE	0	0			0			0.008	0.2		Prof. E. Heis.
Posen			30.14	765.6	71.2	21.8	38	SW	4	2			0			0	0	Clear	Dr. Magener.
Strassburg, (in Alsace)			30.11	764.8	72.9	22.7	52						0			0.043	1.1		Hartwig.
Stuttgart			30.11	764.7	75.9	24.4	35	E					0			0	0		Mr. Würth.
Thorn			30.11	764.8	71.4	21.9	40	N	13	6			2			0	0		Dr. Rosenbaly.
Treves, (Trier)			30.08	763.9	77.0	25.0	41	SW	27	12			1			0	0		Prof. Flesch.
Wustrow, Naval School			30.15	765.9	62.8	17.1	67	WNW	9	4			3c			0	0	Clear	E. F. . chütz.

Note.—In the originals the distinction between 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.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.21	767.2	73.4	23.0	50	SW			2		1			0	0		
Mondovi			30.16	766.1	70.7	21.5	58	NW			2		0			0	0		
Genoa			30.20	767.0	75.7	24.3	52	SW	5.6	2.5			0			0	0		
Pavia			30.17	766.3	73.0	22.8	43	SW			1		0			0	0		
Verona			30.15	765.9	75.0	23.9	40	E			2					0	0		
Padua			30.20	767.1	69.1	20.6	45	NW	1.8	0.8			0			0	0		
Parma																			
Bologna			30.22	767.5	76.1	24.5	53	W			1		3	N		0	0		
Leghorn			30.21	767.4	75.7	24.3	41	SSW	2.	1.0			0			0	0		
Urbino																			
Ancona																			
Siena																			
Rome			30.16	766.0	71.4	21.9	34	ESE	0	0			0			0	0		
Naples, U. U.			30.20	767.1	77.7	25.4	44	SSW	3.8	1.7			1			0	0		
Lecce			30.24	768.0	78.4	25.8	83	SW			4		1			0	0		
Cosenza			30.24	768.0	71.2	21.8	50	NE			2		0			0	0		
Catania, (Sicily)			30.28	769.1	67.6	19.8	64	NW			2		3			0	0		
Ripozzo																			
Palermo			30.13	765.3	78.8	26.0	77	ESE			4		7	WNW		0	0		
Sub-Series.																			
Naples, S. R.			30.13	765.4	77.4	25.2	60	NE	3.1	1.4			8			0	0		
			30.24	768.2	76.6	24.8	47	SW	7.4	3.3						0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Flushing			30.08	764.1	75.6	24.2		SE			2								
Groningen			30.08	764.1	72.7	22.6		E			1								
Helder			30.10	764.4	68.9	20.5		E			2								
Utrecht			30.06	763.5	78.1	25.6		ESE			2		2					Light cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the 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			30.10	764.5	54.9	12.7	74	SSW	5.8	2.6			10			0	0		
Christiania			29.98	761.4	61.5	16.4	55	WSW	11.4	5.1			1			0	0		
Tromsö			29.17	740.9	40.5	4.7	76	S			7		10			0.276	7.0	Raining	

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Lisbon			30.11	764.7	68.9	20.5	55	SW	9.8	4.4			9						The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

RUSSIAN SERIES.

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

Warsaw			30.07	763.8	69.1	20.6	41	N	9	4			0						Astronomical Obs.
Wilna			30.01	762.3	60.6	15.9	67	N	4	2			4						Astronomical Obs.
Dorpat			30.02	762.6	55.4	13.0	45	N	4	2			1						Physical Cabinet.
St. Petersburg			29.93	760.1	53.6	12.0	40	NW	7	3			0						Central Physical Obs.
Kuopio			29.89	759.2	47.5	8.6	56	WNW					2		E	0	0		Ch. Forsten.
Kieff			30.04	762.9	61.9	16.6	56	SW	4	2			5						Physical Cabinet.
Nikolaiev			30.12	765.1	62.1	16.7	58	NE	10	4.5			6						Kurdakof.
Kertch			29.84	758.0	56.5	13.6	92	ENE	13	6			10					Raining	Lagorio.
Moscow			29.92	759.9	59.7	15.4	64	SW	10	4.5			8						Meteorological Obs.
Lugan			29.99	761.7	61.0	16.1	31	E	13	6			5						Meteorological Obs.
Archangel			29.61	752.2	39.7	4.3	90	NW	17	7.5			9						Ogorodnikof.
Tiflis	28.51	724.1	29.87	758.7	71.8	22.1	62	E	4	2			10						Physical Obs.
Astrakhan			30.17	766.2	61.0	16.1	54	ENE	13	6			4						Sebastianof.
Kasan			29.80	756.9	59.0	15.0	59	WSW	9	4			10						Physical Cabinet.
Orenburg			30.21	767.2	51.3	10.7	51	W	8	3.5			0						Tschernischef.
Ekaterinburg	28.86	733.1	29.89	759.1	38.8	3.8	82	SW	13	6			9						Meteorological Obs.
Kasaly			29.97	761.2	58.1	14.5	72	NW	8	3.5			0						Bobrof.
Tashkend	28.42	721.9	30.08	764.0	70.0	21.1	72	Calm	0	0			0						Michelson.
Barnaul			29.41	747.1	44.4	6.9	90	NE	13	6			4					Rainy	Meteorological Obs.
Yeniseisk			29.63	752.5	39.7	4.3	73	NW	4	2			0						Marks.
Irkutsk	28.37	620.7	29.74	755.3	49.3	9.6	65	Calm	0	0			6						Usolzef.
Oorga	25.71	653.1	30.02	762.4	41.9	5.5	70	Calm	0	0			0						Mossin.
Peking, (China)			30.05	763.2	63.7	17.6	35	NW	4	2			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. The elevation of Tiflis is 403. meters, or 1,341.8 feet; Ekaterinburg, 305.4? m., or 1,005.2? ft.; Tashkend, m 494.2?, or 1,621.3? ft.; Irkutsk, 392. m., or 1,286. ft.; Nertchinsk, 592.0? m, or 1,942.2? ft.; Oorga, 1,281.0? m., or 4.202.6? ft.

SPANISH SERIES.

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

Madrid			30.04	762.9	73.4	23.0	50	SW	4.9	2.3		0	5			0	0	Cloudy	Royal Observatory.
San Fernando																			The Naval Observatory.

Note.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea			29.79	756.7	53.6	12.0	63	WSW			2		8			0	0	Stormy	
Hernosand			29.99	761.8	52.2	11.2	63	SSW			6		8			0	0		
Stockholm			30.04	762.9	58.1	14.5	47	WSW			2		2			0	0		
Wisby			30.04	762.9	58.6	14.8	60	N			4		0			0	0		
Sub-Series.																			
Upsala			30.03	762.8	56.5	13.6	43	SW	13.2	5.9			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 distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Geneva	28.73	729.7	30.10	764.4	77.7	25.4	48	WSW			2		3			0	0	Misty	The Observatory.
Zurich	28.54	724.9	30.11	764.9	73.4	23.0	49	W			1		1	SW		0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +2.8mm.; Thermometer, +7°.7; Relative Humidity, —16 per cent.

Note.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Beirut, (Syria,) Lee Obs'y																			Prof. C. N. A. Van Dyck
Constantinople			30.16	766.1	61.9	16.6	61	NW	9	4			8		NW	0	0	Cloudy	
Fao, (Persian Gulf)			29.88	759.0	92.5	33.5		NW			3		0					Clear	
Salonica					77.4	25.2		SE			1		0					Clear	
Valona			30.17	766.4	69.4	20.8		NW			2		0					Clear	
Varna			30.08	764.0	64.4	18.0		N			3		0					Clear	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea level. The distinction between upper and lower clouds is not made.

GREEK SERIES.

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

Athens																			

Note.—Reports commence October 1, 1875.

JAPANESE SERIES.

Takio																			

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Brockville, Ontario			29.89	759.2	42	5.6		NE	4	1.8			10s		NW	0	0	Cloudy	
Chatham, N. B.			29.77	756.1	45	7.2	84	N	6	2.7		10c	6	NW		0.07	1.8	Fair	
Charlottetown, P. E. Island			29.72	754.9	48	8.9	85	N	7	3.1			10n			0.240	6.10	Cloudy	
Fort Garry, Manitoba			30.07	763.8	37	2.8	97	N	17	7.6		2k	2n	N	N	0.030	0.76	Clearing	
Halifax, N. S.			29.72	754.9	49	9.4	78	NW	10	4.5			10ks		W	Inap.	Inap.	Cloudy	
Kingston, Ontario			29.87	758.7	44	6.7	84	E	2	0.9		8cs	0	E		0	0	Cloudy	
Montreal, Quebec			29.88	758.9	41	5.0	86	E	4	1.8		Haze	5s	W		0	0	Cloudy	
Ottawa, Ontario			29.86	758.4	42	5.6	82	E	6	2.7		5ck	5s		E	0	0	Cloudy	
Parry Sound, Ontario			29.82	757.4	41	5.0	79	E	1	0.4		2ck	5ks	SE	SE	0	0	Fair	
Port Dover, Ontario			29.71	754.6	42	5.6	91	N	6	2.7			10n		S	0.03	0.8	Light rain	
Port Stanley, Ontario			29.70	754.1	45	7.2	83	NE	8	3.6		10k	0	NE		0	0	Fair	
Quebec, Quebec			29.88	758.9	44	6.7	84	Calm	0	0		0	0			0	0	Clear	
Saugeen, Ontario			29.73	755.1	44	6.7	79	SE	9	4.0		2cs	8n		W	0	0	Cloudy	
Stayner, Ontario																			
Sydney, C. B.			29.59	751.6	54	12.2	64	NW	10	4.5		2ck	5ks	NW	N	0	0	Fair	
Toronto, Ontario			29.73	755.1	47	8.3	79	E	10	4.5			10n		SE	0.01	0.3	Light rain	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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. 1—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.82	757.4	44	6.7	100	Calm	0	0			10n			0.04	1.0	Light rain	
Alpena, Mich.			29.65	753.1	50	10.0	64	SE	3	1.3			10s		S	0.15	3.8	Cloudy	
Atlantic City, N. J.			29.58	751.3	59	15.0	94	NE	40	17.9			10n		NE	0.91	23.1	Light rain	
Augusta, Ga.			29.67	753.6	71	21.7	95	SW	5	2.2		0	2s		W	1.32	33.5	Fair	
Baltimore, Md.			29.73	755.1	50	10.0	86	NW	6	2.7			10n			1.64	41.7	Light rain	
Barnegat, N. J.			29.60	751.8	56	13.3	87	NE	28	12.5			10ks			1.42	36.1	Threatening	
Benton, Montana	27.29	693.2	30.09	764.3	50	10.0	64	E	16	7.2			10s			0	0	Cloudy	
Bismarck, Dakota	28.42	721.8	30.15	765.8	30	—1.1	68	N	10	4.5		8k	0	N		0	0	Cloudy	
Boston, Mass.			29.84	757.9	47	8.3	77	NE	9	4.0			10n		E	0.07	1.8	Light rain	
Breckenridge, Minn.			29.96	761.0	39	3.9	80	NW	12	5.4		10k	0	NW		0	0	Cloudy	
Buffalo, N. Y.			29.68	753.9	45	7.2	76	E	8	3.6		2ck	5k	SW		0	0	Fair	
Burlington, Vt.			29.87	758.7	42	5.6	74	E	1	0.4			10s			0	0	Cloudy	
Cairo, Ill.			29.85	758.2	47	8.3	85	SW	8	3.6			10s			0	0	Cloudy	
Cape Hatteras, N. C.			29.67	753.6	79	21.6	84	SW	33	14.8		5k	Haze	SW		Inap.	Inap.	Fair	
Cape Henry, Va.			29.59	751.6	67	19.4	95	SW	6	2.7			10n		SW	0.54	13.7	Light rain	
Cape May, N. J.			29.54	750.3	58	14.4	92	NE	20	8.9			10n			1.18	30.0	Light rain	
Charleston, S. C.			29.71	754.6	77	25.0	86	SW	14	6.3		0	8ks		SW	0.76	19.3	Clearing	
Cheyenne, Wyoming	24.09	611.9	30.03	762.7	46	7.8	85	NW	3	1.3		5k	0	NW		0	0	Fair	
Chicago, Ill.			29.56	750.8	49	9.4	93	SW	10	4.5			10n			0.11	2.8	Light rain	
Cincinnati, Ohio			29.71	754.6	46	7.8	85	W	4	1.8		0	Sm'e			Inap.	Inap.	Clear	
Cleveland, Ohio			29.63	752.6	46.4	8.0	92	SE	6	2.7		2ck	1ks	SE		0	0	Fair	
Colorado Springs, Col.	24.13	612.9	30.00	762.0	46	7.8	84	N	4	1.8		0	0			0	0	Clear	
Corsicana, Tex.			30.00	762.0	55	12.8	80	NW	4	1.8		0	0			0	0	Clear	
Davenport, Iowa			29.74	755.4	47	8.3	77	NW	12	5.4		2k	0			Inap.	Inap.	Clear	
Denison, Tex.			29.97	761.2	56	13.3	80	NW	1	0.4		0	0			0	0	Clear	
Denver, Col.	24.85	631.2	30.07	763.8	50	10.0	65	NW	6	2.7		2k	0	NW		0	0	Clear	
Detroit, Mich.			29.61	752.1	49	9.4	77	NE	8	3.6			10s			0	0	Cloudy	
Dodge City, Kan.	27.49	698.2	29.78	756.4	50	10.0	86	N	5	2.2		0	0			0	0	Clear	
Dubuque, Iowa			29.69	754.1	48	8.9	70	NW	8	3.6			10s		W	0.06	1.5	Cloudy	
Duluth, Minn.			29.74	755.4	42	5.6	74	SW	2	0.9		5k	5s	N	N	0.60	15.2	Fair	
Eastport, Me.			29.82	757.4	44	6.7	75	N	8	3.6			10s		W	0	0	Cloudy	
Erie, Pa.			29.64	752.8	48	8.9	93	SE	4	1.8			10ks		SE	Inap.	Inap.	Cloudy	
Escanaba, Mich.			29.60	751.8	45	7.2	84	E	8	3.6			10n		E	0.49	12.4	Light rain	
Fort Gibson, I. T.			29.98	761.5	53	11.7	86	W	2	0.9		0	0			0	0	Clear	
Fort Sill, I. T.																			
Fort Sully, Dakota	28.45	722.6	30.19	766.8	33	0.6	89	NW	7	3.1		0	2s			0	0	Fair	
Galveston, Tex.			29.96	761.0	65	18.3	73	N	12	5.4		0	0			0	0	Clear	
Grand Haven, Mich.			29.54	750.3	46	7.8	92	SE	8	3.6			10n		S	0.08	2.0	Light rain	
Indianapolis, Ind.			29.70	754.4	45	7.2	84	S	6	2.7		10cs	0			0	0	Cloudy	
Indianola, Tex.			30.05	763.3	65	18.3	88	N			2	0	0			0	0	Clear	
Jacksonville, Fla.			29.78	756.4	77	25.0	86	S	16	7.2			9n		SW	0.22	5.6	Light rain	
Keokuk, Iowa			29.77	756.1	49	9.4	71	NW	12	5.4		5k	0	NW		0.07	1.8	Fair	
Key West, Fla.			29.92	760.0	81.4	27.4	79	S	15	6.3			10s			0.81	20.6	Cloudy	
Kittyhawk, N. C.			29.61	752.1	77	25.0	86	W	32	14.3		5ck	0	SW		0.12	3.0	Fair	
Knoxville, Tenn.			29.76	755.9	53	11.7	86	N	4	1.8			10ks		N	2.97	75.4	Cloudy	
La Crosse, Wis.			29.69	754.1	47	8.3	77	NW	20	8.9			10s		W	0.15	3.8	Cloudy	
Leavenworth, Kan.			29.99	761.7	46	7.8	85	NW	6	2.7		0	0			1.10	27.9	Clear	
Lexington, Ky.	28.70	729.0	29.79	756.7	49	9.4	93	W	8	3.6		2k	0	NW		0.03	0.8	Clear	
Long Branch, N. J.			29.59	751.6	55	12.8	87	NE	36	16.1			10n		NE	1.45	36.8	Light rain	
Louisville, Ky.			29.77	756.1	47	8.3	85	S	4	1.8		0	Fog			0	0	Clear	
Lynchburg, Va.			29.67	753.6	50	10.0	85	N	3	1.3			10s		N	0.97	24.6	Cloudy	
Malone, N. Y.			29.81	757.2	44	6.7	67	E	1	0.4			10s			0	0	Cloudy	
Marquette, Mich.			29.66	753.4	44	6.7	84	E	8	3.6			10n		E	0.34	8.6	Light rain	
Memphis, Tenn.			29.93	760.2	50	10.0	93	W	3	1.3		0	0			0.70	17.8	Clear	
Milwaukee, Wis.			29.56	750.8	47	8.3	92	W	9	4.0			10n		W	0.16	4.1	Light rain	
Mobile, Ala.			29.81	757.9	60	15.6	82	N	10	4.5			10s		N	0.26	6.6	Cloudy	
Montgomery, Ala.			29.83	757.7	59.5	15.3	85	NW	12	5.4			10s		N	0.17	4.3	Threatening	
Morgantown, W. Va.			29.63	752.6	51	10.6	78	SE	1	0.4			10s			1.20	30.5	Cloudy	
Mt. Washington, N. H.	23.58	598.9	29.94	760.5	27	—2.8	100	NW	8	3.6		10s	2s			0	0	Cloudy	
Nashville, Tenn.			29.82	757.4	53	11.7	79	NW	2	0.9		0	Fog			0.51	38.4	Clear	
New Haven, Conn.			29.72	754.9	44	6.7	100	NE	14	6.3			10n		NE	0.40	10.2	Heavy rain	
New London, Conn.			29.80	756.9	47	8.3	85	NE	5	2.2			10s		NE	0.32	8.1	Threatening	
New Orleans, La.			29.90	759.4	63	17.2	67	NW	8	3.6		2k	0	NW		0.04	1.0	Clear	
Newport, R. I.			29.81	757.2	48	8.9	92	NE	5	2.2			10n		NE	0.22	5.6	Light rain	
New York, N. Y.			29.72	754.9	46	7.8	100	NE	16	7.2			10n			0.60	15.2	Light rain	
Norfolk, Va.			29.58	751.3	65	18.3	89	W	8	3.6			10s		W	0.23	5.8	Cloudy	
North Platte, Neb.	27.15	689.6	29.73	755.1	47	8.3	77	Calm	0	0			10s			0	0	Cloudy	
Omaha, Neb.	28.91	734.3	30.00	762.0	41	5.0	91	NW	12	5.4		0	0			0	0	Clear	
Oswego, N. Y.			29.80	756.9	48	8.9	75	SSE	6	2.7			10s			0	0	Threatening	
Peck's Beach, N. J.			29.54	750.8	57	13.9	93	E	40	17.9			10n		E	1.53	38.9	Light rain	
Pembina, Dakota			30.03	762.7	38	3.3	90	NW	20	8.9			10s			0.02	0.5	Cloudy	
Philadelphia, Penn.			29.65	753.1	49	9.4	100	NE	17	7.6			10n		NE	1.09	27.7	Light rain	
Pike's Peak, Colorado	17.92	455.2	30.13	765.3	28	—2.2	77	NW	24	10.7		0	2s			0	0	Fair	
Pittsburgh, Penn.			29.64	752.8	46	7.8	92	E	6	2.7			10s			0.61	15.5	Cloudy	
Port Huron, Mich.			29.64	752.8	46	7.8	69	SE	4	1.8			10s		S	0	0	Cloudy	
Portland, Me.			29.87	758.7	47	8.3	77	N	4	1.8		10c	Haze	SW		0	0	Cloudy	
Portland, Oregon			30.20	767.1	59	15.0	82	S	2	0.9		5ck	2ks			0	0	Cloudy	
Punta Rassa, Fla.			29.89	759.2	81	27.2	84	S	20	8.9			10ks		SE	0.27	6.9	Threatening	
Rochester, N. Y.			29.74	755.4	44	6.7	84	SE	5	2.2			10s		S	0	0	Cloudy	
Salt Lake City, Utah	25.60	650.2	29.93	760.2	63	17.2	37	SE	3	1.3		5k	0			0	0	Fair	
Sandy Hook, N. J.			29.69	754.1	51	10.6	100	NE	35	15.6			10n		NE	0.23	31.2	Light rain	
San Diego, Cal.			29.94	760.5	67	19.4	90	[illegible]	8	3.6			1s			0	0	Cloudy	
San Francisco, Cal.			29.95	760.7	55	12.8	87	SW	6	2.7		0	0			0	0	Clear	
Santa Fe, N. M.	23.29	591.6	29.83	757.7	50	10.0	72	E	8	3.6		0	0			0	0	Clear	
Savannah, Ga.			29.73	755.1	75	23.9	95	SW	12	5.4			10n		SW	0.46	11.7	Light rain	
Shreveport, La.			29.95	760.7	54	12.2	86	Calm	0	0		0	0			0.05	1.3	Clear	
Smithville, N. C.																			
Springfield, Mass.			29.85	758.2	44	6.7	92	N	4	1.8			10n			0.08	2.0	Light rain	
St. Louis, Mo.			29.82	757.4	53	11.7	79	NW	13	5.8			10s		NW	0	0	Cloudy	
St. Marks, Fla.			29.75	755.6	74	23.3	95	Calm	0	0			10s			1.90	48.3	Cloudy	
St. Paul, Minn.			29.78	756.4	38.5	3.6	85	NW	12	5.4			10ks		NW	0.14	3.6	Cloudy	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			29.59	751.6	56	13.3	80	NE	30	13.4			10n		E	1.38	35.1	Light rain	
Toledo, Ohio			29.63	752.6	49	9.4	78	NW	4	1.8		2c	5s	W	SW	0	0	Fair	
Tucson, Arizona																			
Tybee Island, Ga.			29.73	755.1	78	25.6	87	SW	20	8.9			10s		SW	0.02	0.5	Threatening	
Vicksburg, Miss.			30.01	762.2	54	12.2	79	N	1	0.4		0	2s		N	0.62	15.7	Fair	
Virginia City, Montana	21.33	618.0	29.81	757.2	51	12.2	49	NW	13	5.8		9k	0	E		0.04	1.0	Cloudy	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			29.66	753.4	48.5	9.2	96	N	8	3.6			10n			1.68	42.7	Light rain	
Wilm ngton, N. C			29.67	753.6	79	26.1	82	SW	26	11.6			8ks		SW	0.10	2.5	Threatening	
Wood's Holo, Mass			29.84	757.9	48	8.9	92	NE	4	1.8			10n			0.21	5.3	Light rain	
Wytheville, Va	27.54	699.5	29.44	747.8	50	10.0	86	W	4	1.8		5k	0	W		1.25	31.7	Fair	
Yankton, Dakota	28.75	730.2	30.12	765.0	35	1.7	90	NW	8	3.6		0	0			0	0	Clear	
Yuma, Arizona																			
Sub-Series.																			
Bridgetown, B b'does, W. I					81	27.2	95	SE	8	3.6		5k	2ks	NE		0	0	Fair	E. Racker.
Pointe-aPitre, G'd'loupe, do			29.98	761.5	81	27.2	70	E				2k	5ks	E		0	0	Fair	L. V. Bigard.
Havana, Cuba, W. I			30.04	763.0	80	26.7	91	S	3.6	1.6		10pc	0	SSW		0.42	10.7	Cloudy	Charles Hasselbrink.
Kingston, Jamaica, W			30.14	765.5	80	26.7	61	SE	6	2.7		2ck	2s	E		0	0	Fair	James Gall.
St. Thomas, St. T., W. I																			W. S. Cameron.
Santiago de Cuba, W. I			29.81	757.2	80	26.7	78	Calm	0	0		2c	0	NW		Blank	Blank	Fair	Robert Mason.
St. Georges, Bermudas			30.00	762.0	81	27.2	81	SW	8.0	3.6		8c	5k. f'k			0	0	Cloudy	C. F. Allen.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.
Cumberland, B. A																			
Ft. Chippewyan, B. A																			
Ft. McPherson, B. A																			
Ft. Simpson, B. A																0.03	0.8		J. Fortescue.
York Factory, B. A																0.50	12.7	Raining	John Delaney.
St. John's, Newfoundland			29.29	744.0	52	11.1	96	NW					10n						Leon M. Acuña.
St. John's, Porto Rico, W. I																0	0	Cloudy	C. Partridge.
Clifton, Jamaica, W. I	27.24	691.9	30.02	762.5	68	20.0	90	E	0.5	0.2		0	10k						
Navassa																			
Maselin, S. A																			
Paramaribo, S. A																			
Elyria, Ohio			29.64	752.8	49	9.4	71	SW	4	1.8			5cs			0	0	Fair	H. M. Redington.

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

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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 Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) 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.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.31 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 20, 1875.

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 à Alger.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.07	763.6	80.6	27.0	60	NNE			1		1			0	0	Cloudy	Charnot.
Algiers			30.00	762.1	82.4	28.0	73	N			2		1			0	0	Fair	Peter.
La Calle																			Kuntz.
Tunis			30.14	765.6	85.6	29.8	46	SW			3		3			0	0	Cloudy	Jacques.
Sfax			30.10	766.8	84.6	29.2	62	NE			4		2			0	0	Fair	Chauvey.
Saida			30.00	762.1	81.2	29.0	21	SSE			1		1			0	0	Sirocco	Grosjean.
Tebessa			30.07	763.7	83.8	28.8		NE			1		0			0	0	Fair	Colin.
Geriville			29.98	761.6	85.1	29.5	18	SW			2		2			0	0	Fair	Bernadach.
Laghouat			29.97	761.2	86.9	30.5	29	S			2		2			0	0	Fair	Simon.
Biskra			29.99	761.8	92.8	33.8	37	NW			1		2			0	0	Fair	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.07	763.6	73.2	22.9	51	NE			1		0			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.99	761.7	72.7	22.6	58	W			1		3			0	0		I. R. Observatory.
Eperies			30.02	762.4	68.0	20.0	53	Calm			0		9			0	0		Julius Mikolik.
Gratz			30.02	762.5	70.0	21.1	62	SW			2		0						Andreas Rospini.
Hermannstadt	28.86	732.9	30.02	762.2	66.6	19.2	43	NNE			3		0			0	0		Prof. Reissenberger.
Kremsmünster	28.66	727.9	30.05	763.2	73.2	21.2	55	WNW			2		3			0	0		Prof. C. Wagner.
Lemberg	28.72	729.6	30.02	762.5	70.0	19.7	57	SW			4		1			0	0		Dr. T. Stanecki.
Nyiregyhaza			29.95	760.8	67.5	22.2	47	SW			2		0			0	0		Habzsuda Daniel.
Pola			30.07	763.7	72.0	21.0	68	WSW			1		7ck,s			0	0		I.R. Hydrographic Office
Szegedin			30.13	765.4	69.8														Karl Stancel.
Trieste																			Prof. V. Farolfi.
Vienna			30.13	765.3	71.6	22.0	72	Calm			0		1			0	0		I. R. Central Institute.
			30.00	762.0	73.8	23.2	47	SE			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. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.02	762.6	66.6	19.2	81	SW			2	0?	8			0.201	5.10	Rainy	Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.67	753.6	52.5	11.4		N	8	3.6			9			0.015	0.38	Gloomy	William Boswell.
Ardrossan			29.91	759.7	57	13.9		NE			1		10					Fog & rain	Wm. McNeil.
Armagh Observatory			29.90	759.4	62.0	16.7		ENE	3	1.3			6					*D. clouds	S. Cal., for Dr. Robinson.
Bidston, Liverpool Obs			29.92	760.0	64.5	18.1		W			1		6					*D. clouds	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.86	758.4	67.0	19.4		SE			1		7					*D. clouds	J. Dreyer.
Bradford			29.88	758.9	66.6	18.9		W			1		4			Blank	Blank	Fine	J. McLandsborough.
Bridgetown, (Barbadoes)			30.00	762.0	81.6	27.2		NE			4		9					Thunder	T. H Hunt.
Cambridge Observatory																			Sergeant Hunt, A.H.C.
Cape Good Hope Obs.			29.86	758.4	56.6	13.7	87	WNW	19	8.5			10						Th Staff, for E. J. Stone.
Cardington			29.97	761.2	71.0	21.7		W					3					*D. clouds	John McLaren.
Carlisle			29.89	759 2	57.7	14.3		NW					10			0.31	7.9	Threatening	T. Bell, for J. Cartmell.
Chatham, School M. E.			29.99	761.7	69.2	20.7		S			1		9						Capt. J. Fellowes, R. E.
Dartmoor	28.62	726.9	30.00	762 0	58.2	14.6		W			3		9					Gloomy	R. E. Power.
Donaghadee			29.89	759.2	60	15.0		NNW			2		10					Overcast	J. Mac Gowan, Jr.
Dover			29.99	761.7	66	18.9		WSW			2		3						J. Costello.
Eccles, (near Manchester)			29.91	759.7	65.1	18.4		SW	3.2	1.4			8					Gloomy	Thomas Mackereth.
Falmouth Observatory			30.31	769.9	66.9	19.4		SSW	17	7.6			7					Overcast	The Staff.
Fort Napier, (Natal)	27.48	698.4	29.72	754.9	87.0	30.6		NE			2		8					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	83	28.3		W					8						[tis.
Galway, Queen's College																			B. G. Clare, for Prof. Car-
Gibraltar. (Mediterranean)			30.07	763.8	75.6	24.2		ENE			1		6					*D. clouds	Sergt. E. G. Baker.
Glasgow Observatory			29.92	760.0	55.2	12.9		NE			3		10					Overcast	Lewis Stuart.
Great Yarmouth			29.95	760.7	69	20.6		WSW			3		2					Clear	G. T. Watson.
Greenwich Royal Obs			29.98	761.7	72.3	22.4		SW			2		6					*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.04	763.0	66.5	19.2		SW			1		5					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs			29.92	760.0	64.5	18.1		WNW					8			Blank	Blank	Threatening	F. J. Page, for L. J. Cross.
Helston			29.96	761.0	70	21.1		S			4		5ck					Fair	M. P. Moyle.
Holyhead			29.92	760.0	62	16.7		SSW			3		3						John Tilston.
Hull Park																			
Kew Observatory			29.98	760.5	66.5	19.2		SSW	12	5.4			8					Rainy	The Staff.
Kingstown			29.94	760.5	64	17.8		E			1		7					*D. clouds	George Mitchell
Leicester Museum			29.96	761.0	65.1	18.4		SW			2		4					*D. clouds	William J. Harrison.
Llandudno			29.92	760.0	63.0	17.2		WSW					7					Showery	Dr. James Nicol.
Malta, (Mediterranean)			30.22	767.6	76.8	24.6		NE			1		2k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			29.97	761.2	53	11.7		E			1		10						W. D. Penny.
Nassau, (Bahamas)			30.06	763.5	81.5	27.5		NW			2		9s			Blank	Blank	Cloudy	Surg.-Maj. Henry.
Nottingham			30.96	761.0	69.7	20.9		WSW			4		5k		W	0	0	*D. clouds	E. J. Lowe.
Oscott, St Mary's College			29.94	760.5	67.3	19.6		SW			2		9					Overcast	Rev. Stephen Whitty.
Oxford. Radcliffe Obs			29.95	760.7	67	19.4		SW			1		9			Blank	Blank	Overcast	J. Lucas, for R. Main.
Plymouth			29.99	761.7	65.5	18.6		SW			2		10					Overcast	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.86	758.4	63	17.2		SW			3		5					Cloudy	W. Kennedy.
Saint Ann's Head			29.94	760.5	64	17.8		SSW			3		3					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			30.05	763.3	69.8	21.0		S			1		5						A. P. Amy.
Sandwick Manse(Orkneys)																			
Scarborough			29.88	758.9	64.0	17.8		W			2		9					Overcast	F. Shaw.
Scutari cemetery,(Turkey)			30.14	765.5	71.6	22.0		SW			1		2					Fine	Sergt. W. H. Lyne.
Sheffield			29.91	759.7	69.5	20.8		WSW			3		4						W. F. Cooper.
Silloth Rectory			29.91	759.7	59.9	15.5		Calm			0		10			0.020	0.51	Thunder-storm	Rev Francis Redford.
Stonyhurst Observatory			29.99	759.4	64.8	18.2		W			2		8					Threatening	The Staff.
Stornoway, Lews C. (Heb.)			29.99	761.7	53	11.7		NE			4		5					*D. clouds	John Smith.
Stratfield Turgiss			29.99	761 7	66.2	19.0		W			0–1		8					Overcast	Rev Charles H. Griffith
Streatley Vicarage																			Rev. John Slatter.
Sumburgh Head,(Shetland)																			
Thurso			29.98	761.5	57	13.9		N			2		2					Clear	John Trotter.
Truro. Royal Institution			29.93	760.2	65	18.3		SW			2		8					Gloomy	W Newcombe.
Valencia Observatory			29.83	757.7	63.8	17.7		SE	14	6.3			6					Threatening	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			29.94	760.5	54.4	12.4		E			3		10s			0	0	Overcast	Andrew Gibb.
Monach Lt-house, (Shet. Is)			29.96	761.0	56	13.3					4	0	0			0	0		
North Unst, (Shetland Is)			29.97	761.2	47	8.3		NNW			4	6	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., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.82	756.5	63.7	17.6	68	NW			2		2						
Faröe			29.83	757.7	66.4	19.1	62	SW			2		7						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			30.01	763.1	47.5	8.6	73	W			4		8						
Thorshavn, (Faröe)			30.08	764.0	44.4	6.9	62	N			2		5						
Vestervig			29.82	757.5	58.6	14.8	83	WNW			4		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.05	763.3	70.7	21.5	72	S			1		k			0.20	5.	Raining	Normal School.
Amiens																			Normal School.
Avignon			30.17	766.4	66.7	19.3	83	SE			1		8		SW	0.039	1.0	Cloudy	Normal School.
Bar-sur Seine *																1.001	25.5		C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais													5		SW	0.075	1.90	Cloudy	Normal School.
Besançon			30.08	764.1	69.8	20.7	62	SSW			2								Normal School.
Bourg en Bresse																0	0	Misty	Normal School.
Bourges			30.14	765.5	77.9	25.5	61	SW			4		8		SW	0.846	21.5	Cloudy	Normal School.
Brest			30.08	764.0	70.5	21.4	69	SW			2		5		SW	0.010	0.25	Misty	Naval Observatory.
Caen			29.97	761.1	71.4	21.9	75	SW			3								Normal School
Chartres																		Cloudy	Normal School.
Chaumont			30.23	767.7	69.8	21		SE			1		10						Normal School.
Commercy	29.04	737.7	30.17	766.4	70.2	21.2		SSW			2		k		SW	0.16	4.		Normal School.
Commune de Gréasque†			30.11	764.7	69.4	20.8	75	W			4		5ck		W	0	0	Cloudy	Normal School.
Le Mans			30.19	766.8	79.0	26.1	35	W			2		2		SW	0.031	0.8		
Lons-Le Saulnier																			Normal School.
Mâcon			30.08	763.9	73.4	23	55	W			2		10		SW	0	0	Cloudy	Normal School.
Mirecourt			30.08	764.0	71.6	22	84	Calm			0		5			0	0	Cloudy	Normal School.
Orleans			29.08	764.0	66.9	19.4	67	SSW			1		8		W	0	0	Cloudy	Normal School.
Paris Observatory																			Normal School.
Parthenay			30.08	764.1	71.4	21.9	52	S			2		8k			0.050	1.25	Cloudy	National Observatory
La Roche sur Yon			30.04	762.9	68.4	20.2	81	NE			2		8		W			Cloudy	Normal School.
Rochefort, Observatory			30.04	762.9	76.5	24.7	59	SE			4		5		N			Cloudy	Normal School.
Rouen			30.08	764.0	77.9	25.5	39	E			2		2		E	0	0		Naval Observatory.
Saint Lo			30.10	764.5	68.4	20.2	62	S			2		0			0	0	Clear	Normal School.
Villefranche																			Normal School.
																			Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchésl.
Mont-Louis	25.03	635.8			64.4	18.0	57	SSW	22.4	10.00			4		SW	0.024	0.6		—. Faïguère.
Montsouris Observatory			30.04	763.0	73.4	23.0	50	WSW			3		7k, ck		WSW	0.039	1.0		Marié Davy.
Perpignan			30.10	764.4	74.5	23.6	80	SE	5.6	2.50			6		SE	0	0		Dr. Fines.
Saint Maur, (near Paris)			30.09	764.2	71.6	22.0	44	SSW			2		7			0.079	2.0	Cloudy	E. Renou.
Tours			30.06	763.4	70.0	21.1	65	SSW			1		5		SW	0.130	3.3		C. Marquet.
Versailles, (near Paris)			30.10	764.4	73.0	22.8	52	SW			1		7			0.036	0.92	Cloudy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			29.96	761.0	68.4	20.2	98	SE	6.3	2.8		0	3			{0 / 0}	{0 / 0}	Misty	H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,089.9 ft.; Commune de Gréasque, 322 m., or 1,056.4 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. *Observation not simultaneous. †Near Marseilles.

GERMAN SERIES.

Furnished by the coöperation of Prof. Geo. Neumayer, Superintendent Royal 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			29.10	764.6	66.7	19.3	64	W	18	8			7			0.031	0.8		Prof. Hoh.
Berlin			29.84	757.9	78.8	26.0	37	SW	4	2			7			0	0		Prof. Arndt.
Breslau			30.03	762.8	77.0	25.0	34	SW	9	4			3			0	0		Dr. P. Neugebauer.
Carlsruhe			30.06	763.5	72.7	22.6	60	SW	22	10			5			0	0		A. Senz.
Cassel			29.93	760.1	65.8	16.0	85	SW	22	10			8			Inap.	Inap.		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society
Friedrichshafen	28.76	729.6	30.15	765.7	65.3	18.5	62	W					8			0	0	Light rain	M. Wilhelm.
Hamburg			29.91	759.6	65.3	18.5	76	SW	13	6			10			0	0	Cloudy, Lt. fog	Deutsche Seewarte.
Kiel			29.84	757.8	65.5	18.6	67	NE	18	6			10			0	0		Prof. G. Karsten.
Königsberg			29.89	759.1	62.6	17.0	70	SW	22	10						0.001	0.02	Clear	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			29.95	760.8	78.3	25.7	31	WSW	18	8			8			0	0		Prof. Bruhns.
Münster			29.95	760.8	67.8	19.9	79	SW	13	6			8			0.311	7.9		Prof. E. Heis.
Posen			29.95	760.7	75.4	24.1	44	SW	16	7			2			0	0	Clear	Dr. Magener.
Strassburg, (in Alsace)			30.08	764.0	75.9	24.4	56	S	11	5			4			0.001	0.1		Hartwig.
Stuttgart			30.08	764.1	68.0	20.0	71	E					4			0.028	0.7	Light rain	Mr. Würth.
Thorn			29.91	759.7	76.1	24.5	30	WSW	18	8			4			0	0		Dr. Rosenbalg.
Treves, (Trier)			30.02	762.6	72.1	22.3	79	W	18	8			2			0	0		Prof. Fleseh.
Wustrow, Naval School			29.91	759.7	67.6	19.8	67	WSW	9	4			8cs			0	0	Cloudy	E. F. Schütz.

Note.—In the originals the distinction between 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.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.13	765.2	73.2	22.9	48	ESE			2		2	S		0	0		
Mondovi			30.13	765.4	70.9	21.6	61	ESE			4		6	S		0	0		
Genoa			30.14	765.6	74.5	23.6	55	SW	4.3	1.9			8	S		0	0		
Pavia			30.10	764.6	75.2	24.0	43	W			1		8	W		0	0		
Verona			30.07	763.8	79.7	26.5	38	E			2					0	0		
Padua			30.08	764.1	72.9	22.7	57	S	3.1	1.4			3	W		0	0		
Parma																			
Bologna			30.18	766.6	75.2	24.0	61	W			1		3	N		0	0		
Leghorn			30.15	765.8	75.4	24.1	72	S	3.8	1.7			3			0	0		
Urbino																			
Ancona																			
Siena																			
Rome			30.12	765.0	76.1	24.5	39	SSW	0	0			3	W		0	0		
Naples, O.U.			30.17	766.4	78.8	26.0	55	SSW	5.6	2.5			5			0	0		
Lecce			30.19	766.9	78.8	26.0	42	SW			4		0			0	0		
Cosenza			30.20	767.0	71.6	22.0	55	N			2		0			0	0		
Catania, (Sicily)			30.21	767.3	70.9	21.6	62	SE			2		0			0	0		
Ripozzo																			
Palermo			30.11	764.9	78.8	26.0	65	SE			2					0	0		
Sub-Series.																			
Naples, S. R.			30.13	765.3	76.3	24.6	54	NE	4.3	1.9			1			0	0		
			30.23	767.8	77.4	25.2	48	WSW	9.4	4.2			0			0	0		Prof. F. Brioschr

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,144.3 feet.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Flushing			30.04	763.1	66.9	19.4		W			3								
Groningen			29.85	758.2	66.4	19.1		W			4								
Helder			29.92	759.9	65.8	18.8		WSW			4								
Utrecht			29.94	760.3	71.1	21.7		WSW			8		5					Cloudy	

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bergen			29.86	758.4	49.6	9.8	68	W	2.0	0.9			10			0	0	Raining	
Christiania			29.72	755.0	55.8	13.2	35	NW	0.4	0.2			7			0	0		
Tromsö			29.18	741.2	34.2	1.2	92	SW			6		10			0.323	8.2	Rain & snow	

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.08	764.0	69.8	21.0	53	SW	12.5	5.6			3						The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

RUSSIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.93	760.3	70.0	21.1	42	NW	11	5			6						Astronomical Obs.
Wilna			29.82	757.5	66.7	19.3	55	W	8	3.5			1						Astronomical Obs.
Dorpat			29.65	753.1	60.4	15.8	64	WSW	11	5			9						Physical Cabinet.
St. Petersburg			29.51	749.6	54.9	12.7	77	WSW	9	4			8						Central Physical Obs.
Kuopio			29.37	746.1	48.4	9.1	66	W					8		E	0	0		Ch. Forsten.
Kieff			30.00	762.1	53.6	12.0	83	NE	7	3			2						Physical Cabinet.
Nikolaiev			30.06	763.5	64.9	18.3	51	SSW	4	2			8						Kurdakof.
Kertch			29.93	760.1	57.4	14.1	95	NW	13	6			10					Raining	Lagorio.
Moscow			29.99	761.8	54.5	12.5	53	SW	10	4.5			0						Meteorological Obs.
Lugan			29.93	760.1	55.6	13.1	64	ENE	10	4.5			9			Blank	Blank		Meteorological Obs.
Archangel			29.15	740.6	37.9	3.3	92	SSW	20	9			10					Raining	Ogorodnikof.
Tiflis	28.56	725.5	29.94	760.5	68.4	20.2	51	N	13	6			1						Physical Obs.
Astrakhan			29.97	761.3	63.9	17.7	66	N	10	4.5			9			Blank	Blank		Sebastianof.
Kasan			29.98	761.5	53.6	12.0	40	W	4	2			1						Physical Cabinet.
Orenburg			30.11	764.9	58.8	14.9	38	SE	4	2			7						Tschernischef.
Ekaterinburg	28.94	735.2	29.96	761.0	44.6	7.0	48	W	17	7.5			0						Meteorological Obs.
Kasaly			30.01	762.3	75.2	24.0	38	NE	8	3.5			3						Bobrof.
Tashkend	28.40	721.4	30.07	763.7	68.7	20.4	78	Calm	0	0			0						Michelson.
Barnaul			30.21	767.4	40.5	4.7	73	Calm	0	0			1						Meteorological Obs.
Yeniseisk			29.65	753.0	44.1	6.7	64	NE	4	2			10						Marks.
Irkutsk	28.96	710.2	29.27	743.6	60.1	15.6	57	Calm	0	0			10						Usolzef.
Oorga	25.45	646.5	30.57	751.1	57.0	13.9	75	NW	10	4.5			5						Mossin.
Peking, (China)			30.08	763.9	62.1	16.7	40	Calm	0	0			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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.; Ne tchi sk, 592.0? m, or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.02	762.4	79.3	26.3	45	S	7.4	3.3		4	2	SW		0	0	Cloudy	Royal Observatory.
San Fernando																			The Naval Observatory.

NOTE.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea			29.45	747.9	48.6	9.2	68	NW			4		0			0	0		
Hernosand			29.69	754.1	51.4	10.8	39	WNW			4		5			0	0		
Stockholm			29.65	753.2	57.6	14.2	34	WNW			2		9			0	0		
Wisby			29.74	755.3	58.3	14.6	61	NNW			7		5			0	0		
Sub-Series.																			
Upsala			29.67	753.7	56.5	13.6	38	WSW	6.9	3.1			9						Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Temperature. Fahrenheit.	Centigrade.	Relative Humidity.	Winds. Direction.	Velocity.	Force.	Clouds. Amount. Up'er	Low'r	Direction. Upper.	Lower.	Rain-fall. Inches.	Millimeters.	Weather.	Observer.
Geneva	28.72	729.5	30.12	765.0	76.5	24.7	46	W		2		3			0.024	0.6		The Observatory.
Zurich	28.53	724.6	30.11	764.9	69.6	20.9	71	SW		1		4			0	0		The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +2.5mm.; Thermometer, +7°.2; Relative Humidity, —18 per cent.

Note.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Temperature. Fahrenheit.	Centigrade.	Relative Humidity.	Winds. Direction. From—	Velocity. Miles per hour.	Force.	Clouds. Amount. Up'er	Low'r	Direction. Upper. From—	Lower. From—	Rain-fall. Inches.	Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y			29.95	760.6	77.0	25.0	66	N		2		0					Clear	Prof. C. N. A. Van Dyck.
Constantinople			30.19	766.7	67.5	19.7	57	SW	4	2		2		NW	0	0		
Fao, (Persian Gulf)			29.88	759.0	92.1	33.4		NW		3		0					Clear	
Salonica					78.3	25.8		NW		2		0					Clear	
Valona			30.13	765.3	68.5	20.3		W		1		0					Clear	
Varna			30.12	765.0	71.6	22.0		SW		2		10					Cloudy	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea level. The distinction between upper and lower clouds is not made.

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.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Temperature. Fahrenheit.	Centigrade.	Relative Humidity.	Winds. Direction. From—	Velocity. Miles per hour.	Force.	Clouds. Amount. Up'er	Low'r	Direction. Upper. From—	Lower. From—	Rain-fall. Inches.	Millimeters.	Weather.	Observer.
Athens																		

Note.—Reports commence October 1, 1875.

JAPANESE SERIES.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Temperature. Fahrenheit.	Centigrade.	Relative Humidity.	Winds. Direction. From—	Velocity. Miles per hour.	Force.	Clouds. Amount. Up'er	Low'r	Direction. Upper. From—	Lower. From—	Rain-fall. Inches.	Millimeters.	Weather.	Observer.
Takio																		

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Temperature. Fahrenheit.	Centigrade.	Relative Humidity.	Winds. Direction. From—	Velocity. Miles per hour.	Force.	Clouds. Amount. Up'er	Low'r	Direction. Upper. From—	Lower. From—	Rain-fall. Inches.	Millimeters.	Weather.	Observer.
Brockville, Ontario			29.74	755.4	46	7.8		E	1	0.4		8s		W	0.02	0.5	Cloudy	
Chatham, N. B.			29.82	757.4	50	10.0	85	N	4	1.8	2ck	1sks	N	N	0	0	Cloudy	
Charlottetown, P. E. Island			29.82	757.4	51	10.6	72	N	5	2.2	5k	0			0	0	Fair	
Fort Garry, Manitoba			30.37	771.4	37	2.8	95	NE	5	2.2	5k	2ks	N		0	0	Cloudy	
Halifax, N. S.			29.76	755.9	51	10.6	78	NE	5	2.2		5ks		NE	0.010	0.25	Fair	
Kingston, Ontario			29.70	754.4	55	12.8	76	W	17	7.6	5ks	2ks	W		0.03	0.8	Threatening	
Montreal, Quebec			29.76	755.9	41	5.0	88	E	5	2.2	Haze	5s	E	E	0	0	Cloudy	
Ottawa, Ontario			29.70	754.4	42	5.6	78	E	13	5.8		10n		E	0	0	Light rain	
Parry Sound, Ontario			29.61	752.1	40	4.4	95	NE	17	7.6		10n		NE	0.42	10.7	Light rain	
Port Dover, Ontario			29.70	754.4	45	7.2	76	W	10	4.5	2ck	0	SW		0.24	6.1	Fair	
Port Stanley, Ontario			29.68	753.9	44	6.7	90	W	5	2.2	2k	0	W		0.04	1.0	Clear	
Quebec, Quebec			29.70	754.7	44	6.7	84	SW	16	7.2		10n		NE	0	0	Cloudy	
Saugeen, Ontario			29.56	750.8	47	8.3	86	SE	3	1.3		10n		W	0.43	10.9	Cloudy	
Stayner, Ontario			29.59	751.6	47	8.3	85	Calm	0	0	8cs	0	W		0.52	13.2	Cloudy	
Sydney, C. B.			29.76	755.9	51	10.6	75	NW	6	2.7		10ks		N	0	0	Cloudy	
Toronto, Ontario			29.66	753.4	42	5.6	93	SW	3	1.3	2ck	0	SW		0.17	4.3	Clearing	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper.	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.76	755.9	50	10.0	86	SE	1	0.4			10ks		W	0.06	1.5	Cloudy	
Alpena, Mich.			29.66	753.4	41	5.0	100	N	16	7.2			10n		NE	1.97	50.0	Heavy rain	
Atlantic City, N. J.			29.85	758.2	50	10.0	96	W	4	1.8			Fog		W	0.10	2.5	Foggy	
Augusta, Ga.			29.87	758.7	60	15.6	84	Calm	0	0		8k	0	W		0	0	Cloudy	
Baltimore, Md.			29.91	759.7	54	12.2	87	SW	3	1.3			10ks		W	0.03	0.8	Cloudy	
Barnegat, N. J.			29.84	757.9	56	13.3	87	W	3	1.3		5c	0	S		0.06	1.5	Fair	
Benton, Montana	27.47	697.7	30.27	768.8	39	3.9	71	E	8	3.6		0	0			0	0	Clear	
Bismarck, Dakota	28.53	724.6	30.25	768.3	36	2.2	90	N	2	0.9			1n			0.02	0.5	Light rain	
Boston, Mass.			29.83	757.7	49	9.4	71	Calm	0	0		5c	Sm'e	NW		0	0	Fair	
Breckenridge, Minn.			30.23	767.8	39	3.9	91	NW	1	0.4			10s			0	0	Cloudy	
Buffalo, N. Y.			29.67	753.6	46	7.8	77	W	12	5.4			10n		SW	1.42	36.1	Heavy rain	
Burlington, Vt.			29.75	755.6	47	8.3	70	S	5	2.2		5k	5s	SW		0	0	Cloudy	
Cairo, Ill.			30.08	764.0	48	8.9	62	NW	16	7.2		8c	0	W		0	0	Fair	
Cape Hatteras, N. C.			29.78	756.4	67	19.4	90	NE	11	4.9			8s		NE	0.94	23.9	Cloudy	
Cape Henry, Va.			29.85	758.2	69	20.6	75	N	4	1.8		5k	0	W		0.20	5.1	Fair	
Cape May, N. J.			29.84	757.9	52	11.1	100	Calm	0	0			Fog			0	0	Foggy	
Charleston, S. C.			29.86	758.2	69	20.6	79	W	6	2.7		5ck	0	W		0	0	Fair	
Cheyenne, Wyoming	24.08	611.6	30.02	762.5	34	2.2	100	E	20	8.9			10n			0.54	13.7	Light rain	
Chicago, Ill.			29.90	759.4	45	7.2	84	[illegible]	8	3.6			10s		W	0	0	Cloudy	
Cincinnati, Ohio			29.89	759.2	46	7.8	69	W	6	2.7		0	0			0	0	Clear	
Cleveland, Ohio			29.72	754.9	44.8	7.1	71	S	16	7.2		0	2ks			Inap.	Inap.	Fair	
Colorado Springs, Col.	24.14	613.1	30.01	762.2	40	4.4	100	SE	12	5.4			10n			0.30	7.6	Light rain	
Corsicana, Tex.			29.99	761.7	59	15.0	76	NE	7	3.1		2ck	5k			0	0	Cloudy	
Davenport, Iowa			30.06	763.5	43	6.1	83	NW	8	3.6		0	6s		NW	Inap.	Inap.	Fair	
Denison, Tex.			30.01	762.2	57	13.9	57	NE	8	3.6			10s			0	0	Cloudy	
Denver, Col.	24.82	630.4	30.04	763.0	48	8.9	85	SE	4	1.8			10n			0.30	7.6	Drizzling	
Detroit, Mich.			29.67	753.6	43	6.1	83	W	10	4.5			10s		W	0	0	Threatening	
Dodge City, Kan.	27.45	697.2	29.66	753.4	43	6.1	83	NE	7	3.1			10n			0.46	11.7	Light rain	
Dubuque, Iowa			30.07	763.8	41	6.7	75	NW	8	3.6			10s		NW	0.03	0.8	Cloudy	
Duluth, Minn.			30.10	766.8	37	2.8	89	NW	12	5.4		2c	0	NW		0.21	5.3	Clear	
Eastport, Me.			29.78	756.4	49	9.4	85	N	4	1.8		8k	0	SW		0	0	Fair	
Erie, Pa.			29.66	753.4	47	8.3	69	SE	16	7.2		2c	1ks	W	N	Inap.	Inap.	Fair	
Escanaba, Mich.			29.91	759.7	42	5.6	74	N	16	7.2			10s		N	0.84	21.3	Cloudy	
Fort Gibson, I. T.			30.13	765.3	48	8.9	92	SE	6	2.7			10n			0.31	7.9	Light rain	
Fort Sill, I. T.																			
Fort Sully, Dakota	28.57	725.7	30.32	770.1	31	—0.6	89	NW	2	0.9		0	5s		N	0	0	Fair	
Galveston, Tex.			29.97	761.2	68	20.0	75	NW	4	1.8		0	0			0	0	Clear	
Grand Haven, Mich.			29.83	757.7	46	7.8	76	N	17	7.6		8c	0	N		0.29	7.4	Fair	
Indianapolis, Ind.			29.91	759.7	43	6.1	75	W	5	2.2		0	10s		W	0	0	Cloudy	
Indianola, Tex.			29.96	761.0	71	21.7	95	S			2	0	0			0	0	Clear	
Jacksonville, Fla.			29.90	759.4	69	20.6	79	W	3	1.3		6k	0	SW		1.72	43.7	Fair	
Keokuk, Iowa			30.10	764.5	41	5.0	82	N	6	2.7		0	0			0	0	Clear	
Key West, Fla.			29.91	759.7	79.6	26.4	78	S	13	5.8			10s			0.58	14.7	Threatening	
Kittyhawk, N. C.			29.82	757.4	65	18.3	78	NE	18	8.0		2c	5ks			0.82	20.8	Fair	
Knoxville, Tenn.			29.98	761.5	50	10.0	78	NE	4	1.8		0	0			0	0	Clear	
La Crosse, Wis.			30.06	763.5	42	5.6	74	N	16	7.2			10s		N	0.05	1.3	Cloudy	
Leavenworth, Kan.			30.18	766.6	40	4.4	80	NW	2	0.9		2c	0	NW		0	0	Clear	
Lexington, Ky.	28.87	733.3	29.99	761.7	44	6.7	84	SW	8	3.6		0	0			0	0	Clear	
Long Branch, N. J.			29.84	757.9	59	15.0	81	NW	6	2.7		5c	2ks	SW	NW	0.59	15.0	Clearing	
Louisville, Ky.			29.77	756.1	47	8.3	85	S	4	1.8		0	Fog			0	0	Clear	
Lynchburg, Va.			29.88	758.9	53	11.7	86	NW	3	1.3		10k	0			0	0	Cloudy	
Malone, N. Y.			29.70	754.4	47	8.3	55	NE	5	2.2			10s		SW	0	0	Cloudy	
Marquette, Mich.			29.98	761.5	42	5.6	66	N	16	7.2			10s		N	0.83	21.1	Cloudy	
Memphis, Tenn.			30.11	764.8	52	11.1	79	NE	5	2.2		2cs	1s	NW		0	0	Fair	
Milwaukee, Wis.			29.95	760.7	44	6.7	67	NW	17	7.6		10k	0	NW		0.11	2.8	Cloudy	
Mobile, Ala.			29.99	761.7	59	15.0	81	N	5	2.2		0	0			0	0	Clear	
Montgomery, Ala.			29.98	761.5	57	13.9	81	NW	2	0.9		0	0			0	0	Clear	
Morgantown, W. Va.			29.83	757.7	50	10.0	77	SW	9	4.0		0	0			0.06	1.5	Clear	
Mt. Washington, N. H.	23.55	598.2	29.91	759.7	26	—3.3	100	NW	12	5.4			Fog			0.16	4.1	Foggy	
Nashville, Tenn.			30.04	763.0	49	9.4	77	NW	4	1.8		5ck	Sm'e	W		0	0	Fair	
New Haven, Conn.			29.84	757.9	49	9.4	85	N	4	1.8			10s		SW	0.35	8.9	Cloudy	
New London, Conn.			29.85	758.2	56	13.3	69	NE	5	2.2		5c	0	SW		0.29	7.4	Fair	
New Orleans, La.			29.98	761.5	66	18.9	68	NE	12	5.4		0	0			0	0	Clear	
Newport, R. I.			29.83	757.7	52	11.1	79	NE	4	1.8		5cs	0	SW		0.28	7.1	Fair	
New York, N. Y.			29.86	758.4	52	11.1	86	Calm	0	0			Fog			0.29	7.4	Foggy	
Norfolk, Va.			29.87	758.7	60	15.6	82	N	8	3.6		5c	0			0.13	3.3	Fair	
North Platte, Neb.	27.30	693.4	29.94	760.5	40	4.4	73	Calm	0	0			10s		W	0	0	Cloudy	
Omaha, Neb.	29.11	739.4	30.22	767.6	38	3.3	91	NW	6	2.7		0	0			0	0	Clear	
Oswego, N. Y.			29.69	754.1	51.7	10.9	86	S	8	3.6		Haze	8ks		SW	0.03	0.8	Fair	
Peck's Beach, N. J.			29.86	758.4	50	10.0	100	NE	1	0.4			Fog			0.20	5.1	Foggy	
Pembina, Dakota			30.33	770.4	38	3.3	90	N	4	1.8		5k	5s	NW		0	0	Cloudy	
Philadelphia, Penn.			29.87	758.7	51	10.6	8[illegible]	NW	2	0.9		8k	0	W		0.12	3.0	Clearing	
Pike's Peak, Colorado	17.78	451.6	29.99	761.7	24	—4.4	100	NW	12	5.4		0	2s			0.07	1.8	Fair, frost	
Pittsburgh, Penn.			29.79	756.7	46	7.8	76	W	11	4.9		0	0			0.09	2.3	Clear	
Port Huron, Mich.			29.62	752.3	42	5.6	83	SW	12	5.4			8s		W	0.04	1.0	Cloudy	
Portland, Me.			29.84	757.9	47	8.3	77	Calm	0	0			Fog			0	0	Foggy	
Portland, Oregon			30.21	767.3	60	15.6	88	Calm	0	0			10s			0.03	0.8	Cloudy	
Punta Rassa, Fla.			29.93	760.2	73.5	23.1	90	SW	28	12.5			10n		SW	2.01	51.1	Heavy rain	
Rochester, N. Y.			29.66	753.4	49	9.4	77	SW	6	2.7			10s		SW	0.01	0.3	Cloudy	
Salt Lake City, Utah	25.49	647.4	29.82	757.4	54	12.2	67	NE	4	1.8			10s			0.38	9.7	Cloudy	
Sandy Hook, N. J.			29.84	757.9	55	12.8	80	NW	4	1.8		1c	8ks			1.16	4.1	Cloudy	
San Diego, Cal.			29.84	757.9	63	17.2	83	Calm	0	0			10s			0	0	Cloudy	
San Francisco, Cal.			29.77	756.1	57	13.9	81	Calm	0	0		0	0			0	0	Clear	
Santa Fe, N. M.	23.15	588.0	29.69	754.1	51	10.6	65	Calm	0	0		0	5s			0.04	1.0	Fair	
Savannah, Ga.			29.87	758.7	66	18.9	68	W	6	2.7		0	0			0.18	4.6	Clear	
Shreveport, La.			30.07	763.8	64	17.8	57	NE	8	3.6		0	0			0	0	Clear	
Smithville, N. C.																			
Springfield, Mass.			29.84	757.9	51.5	10.8	76	Calm	0	0		1cs	8ks		W	0.135	3.43	Cloudy	
St. Louis, Mo.			30.12	765.0	42	5.6	83	NW	12	5.4		0	0			0	0	Clear	
St. Marks, Fla.			29.92	760.0	62	16.7	83	N	6	2.7		0	0			0	0	Clear	
St. Paul, Minn.			30.16	766.1	36	2.2	85	N	6	2.7		0	5ks		NE	0.04	1.0	Fair	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			29.77	756.1	55	12.8	87	Calm	0	0		5c	0	NE		0.45	11.4	Fair	
Toledo, Ohio			29.71	754.6	45	7.2	84	SW	14	6.3			10n		SW	0.98	2.0	Light rain	
Tucson, Arizona																			
Tybee Island, Ga.			29.95	758.2	67	19.4	68	NW	12	5.4		2cs	0			0	0	Fair	
Vicksburg, Miss.			30.11	764.8	55.7	13.1	90	Calm	0	0		0	Haze			0	0	Fair	
Virginia City, Montana	24.28	616.7	29.76	755.9	41	5.0	83	NE	12	5.4		2c	6ks	NE	NE	0.87	22.1	Cloudy	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			29.88	758.9	53	11.7	93	N	4	1.8		2k	8s	W	W	0	0	Cloudy	
Wilmington, N. C.			29.87	758.7	61	16.1	88	NW	8	3.6		2c	5s	SW	N	0.46	11.7	Fair	
Wood's Hole, Mass.			29.85	758.2	52	11.1	79	N	1	0.4			10s			0.43	10.9	Cloudy	
Wytheville, Va.	27.54	699.5	29.67	753.6	51	10.6	78	W	3	1.3		5k	0	W		0	0	Fair	
Yankton, Dakota	28.95	735.3	30.31	769.9	31	1.1	89	NW	8	3.6			Fog			0	0	Foggy	
Yuma, Arizona																			
Sub-Series.																			
Bridgetown, B'b'does, W. I.					82	27.8	91	NE	15	6.7			8s			0	0	Cloudy	E. Racker.
Pointe-a-Pitre, G'd'loupe, do			30.00	762.0	81	27.2	83	E				10c	2ks			0.21	5.3	Cloudy	L. V. Bigard.
Havana, Cuba, W. I.			30.07	763.8	75	23.9	95	S	2.4	1.1		10pc	0	S		0.05	1.3	Cloudy	Charles Hasselbrink.
Kingston, Jamaica, W.			30.13	765.3	83	28.3	79	SE	8	3.6		1c	8s	SE		0	0	Cloudy	James Gall.
St. Thomas, St. T., W. I.																			W. S. Cameron.
Santiago de Cuba, W. I.			29.82	757.4	80	26.7	78	Calm	0	0		8cs	2ks	W	S			Cloudy	Robert Mason.
St. Georges, Bermudas			29.99	761.7	81	27.2	83	SW	10.4	4.6		0	8f'k			0	0	Fair	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.			30.26	768.6	40	4.4	82	W	6	2.7		0	0			0	0	Clear	J. Fortescue.
St. John's, Newfoundland			29.63	752.6	50	10.0	85	NW					10n			0.01	0.5	Cloudy	John Delaney.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Clifton, Jamaica, W. I.	27.24	691.9	30.07	763.8	71	21.7	85	Calm	0	0		0	10k			0	0	Cloudy	C. Partridge.
Navassa																			
Meaclin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			29.73	755.1	43	6.1	72	SW	12	5.4			28			0.04	1.0	Fair	H. M. Redington.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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 Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,053 (?) ft., or 320.1 (?) 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.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.5 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 0.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.31 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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. With the exception of the United States and Canadian Series, the distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., and published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction is carefully made, and the types indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 21, 1875.

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 —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches	Rainfall in 24 hours. Millimeters.	Weather.	Observer
Nemours			30.07	763.7	81.1	27.3	64	Calm			0		0			0	0	Fair	Charnot.
Aiglers			30.01	762.1	82.4	28.0	70	WSW			3		2			0	0	Fair	Peter.
La Calle																			Kuntz.
Tunis			30.10	764.5	89.1	31.7	35	SE			3		0			0	0	Sirocco	Jacques.
Sfax			30.18	766.6	85.6	29.8	50	SE			2		2			0	0	Fair	Chauvey.
Saida			30.01	762.3	87.8	31.0		NNE			1		2			0	0	Fair	Grosjean.
Tebessa			30.06	763.4	84.2	29.0		SE			1		0			0	0	Clear	Colin.
Gerlville			29.99	761.7	80.6	27.0	20	SE			2		3			0	0	Fair	Bernadach.
Laghouat			29.95	760.8	86.0	30.0	36	S			2		2			0	0	Thunder	Simon.
Biskra			29.96	761.0	88.5	31.4	39	NW			2		3			0	0	Fair	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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 —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches	Rainfall in 24 hours. Millimeters.	Weather.	Observer
Agram			29.95	760.8	71.2	21.8	87	NE			2		10			0.083	2.1	Raining	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.84	757.9	64.9	18.3	67	W			4		8			0.256	6.5		I. R. Observatory.
Eperies			29.86	758.4	58.3	14.6	78	Calm			0		8			0.045	1.12		Julius Mikolik.
Gratz	28.76	730.6	29.94	760.5	63.3	17.4	84	SSW			2		10						Andreas Rospini.
Hermannstadt	28.59	723.8	29.95	758.6	69.8	21.0	42	NE			2		2			0	0		Prof. Reissenberger.
Kremsmünster	28.67	728.3	30.01	762.2	56.3	13.5	89	W			3		10			1.083	27.5		Prof. C. Wagner.
Lemberg			29.79	756.7	58.1	14.5	87	W			1		7			0.067	1.7	Rainy	Dr. T. Stanecki.
Nyiregyhaza			29.91	759.7	64.4	18.0	71	W			1		8			Blank	Blank		Habzsuda Danie'.
Pola			30.00	762.0	73.2	22.9	77	S			1		10ks			0	0		I.R. Hydrographic Of'ce
Szegedin			29.87	758.8	74.5	23.6	41	W			3		8			0	0		Karl Stancel.
Trieste			30.00	761.9	68.0	20.0	88	Calm			0		10			0.370	9.4	Raining	Prof. V. Farolfi.
Vienna			29.90	759.4	66.6	19.2	66	W			4		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. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches	Rainfall in 24 hours. Millimeters.	Weather.	Observer
Brussels			29.97	761.3	66.4	19.1	71	WNW			1	10	4			0.236	6.00	Solar halo	Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.95	760.5	51.0	10.6		ENE	6	2.7			7			0.005	0.13	*D. clouds	William Boswell.
Ardrossan			29.89	759.2	51	10.6		NE			3		5					Foggy	Wm. McNeil.
Armagh Observatory			29.84	757.9	60.9	16.1		ENE	5	2.2			7					*D. clouds	S. Cali, for Dr. Robinson.
Bidston, Liverpool Obs.			29.86	758.4	60.8	16.0		ESE			2		10					Overcast	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.75	755.6	61.3	16.3		SE			1–2		10					Overcast	J. Dreyer.
Bradford			29.84	757.9	65.0	18.3		SW			1		2					*D. clouds	J. McLandsborough.
Bridgetown, (Barbadoes)			29.93	760.2	78.4	25.8		NE			2		10					Overcast	T. H. Hunt.
Cambridge Observatory																			Sergeant Hunt, A.H.C.
Cape Good Hope Obs.			29.75	755.6	59.3	15.2	59	W	29	13.0			6					Th Staff, for E. J. Stone.
Cardington			29.94	760.5	65.0	18.3		W					10					Overcast	John McLaren.
Carlisle			29.87	758.7	60.1	15.6		NE					3			0.11	2.8	*D. clouds	T Bell, for J. Cartmell.
Chatham, School M. E.			29.96	761.0	65.2	18.4		S			1		6					Overcast	Capt. J. Fellowes, R. E.
Dartmoor	28.48	723.4	29.85	758.2	55	12.8		SE			4		10					Raining	R. E. Power.
Donaghadee			29.84	757.9	60	15.6		S			2		7					*D. clouds	J. Mac Gowan, Jr.
Dover			29.95	760.7	62	16.7		Calm			0		7					Gloomy	J. Costello.
Eccles, (near Manchester)			29.85	758.2	64.3	17.9		SSW	2.0	0.9			10					Overcast	Thomas Mackereth.
Falmouth Observatory			30.38	771.6	59.4	15.2		SSE	26	11.6			10					Raining	The Staff.
Fort Napier, (Natal)	27.34	694.2	29.57	751.1	89.0	31.7		NW			5		0					Clear	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	81	27.2		N					8						
Galway, Queen's College																			B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.05	763.3	76.5	24.7		E			1		6					*D. clouds	Sergt. E. G. Baker.
Glasgow Observatory			29.89	759.2	48.9	9.4		NE			1		10					Drizzling	Lewis Stuart.
Great Yarmouth			29.93	760.2	65	18.3		SSW			1		5					Hazy	G. T. Watson.
Greenwich Royal Obs.			29.94	760.5	64.5	18.1		S			1		10			Blank	Blank	Overcast	The Staff, for G. B. Airy.
Guernsey			29.87	758.7	61.5	16.4		SE			2		7			Blank	Blank	*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.89	759.2	64.6	18.1		SW					9					Threatening	F. J. Page, for L. J. Cross.
Helston			29.76	755.9	64	17.8		SE			6		10					Raining	M. P. Moyle.
Holyhead			29.81	757.2	64	17.8		S			1		5					Hazy	John Tilston.
Hull Park																			
Kew Observatory			29.93	760.2	64.1	17.8		SSE	6	2.7			10					Threatening	The Staff.
Kingstown			29.83	757.7	61	16.1		SE			2		9					Overcast	George Mitchell
Leicester Museum			29.92	760.0	60.0	15.6		S			1		10					Overcast	William J. Harrison.
Llandudno			29.84	757.9	63.0	17.2		E					10					Threatening	Dr. James Nicol.
Malta, (Mediterranean)			30.21	767.3	75.6	24.2		NE			1		4k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			29.92	760.0	54	12.2		NE			1		8						W. D. Penny.
Nassau, (Bahamas)			30.07	763.8	83.4	28.6		SW			3		7						Surg.-Maj. Henry.
Nottingham			29.92	760.0	62.6	16.7		SW			1		10k,d		SW	0	0	Overcast	E. J. Lowe.
Oscott, St Mary's College			29.91	759.7	58.0	14.4		S			1		10					Misty	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.89	759.2	62	16.7		SE			1		10					Misty	J. Lucas, for R. Main.
Plymouth			29.83	757.7	59.5	15.3		ESE			2		10					Raining	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.65	753.1	61	16.1		SE			6		10					Raining	W. Kennedy.
Saint Ann's Head			29.79	756.7	60	15.6		SE			4		10					Raining	John C. Walker.
Saint Helier, (Jersey)			29.88	758.9	64.5	18.1		E			4		10						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			29.89	759.2	60.0	15.6		SE			1		5					*D. clouds	F. Shaw.
Scutari cemetery, (Turkey)			30.03	762.7	73.0	22.8		SW			1		1					Clear	Sergt. W. H. Lyne.
Sheffield			29.88	758.9	67.4	19.7		SW			2		6					*D. clouds	W. F. Cooper.
Silloth Rectory			29.86	758.4	58.4	14.7		E			2		7			0.015	0.38	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			29.85	758.2	64.0	17.8		S			0		6			Blank	Blank	Hazy	The Staff.
Stornoway, Lews C. (Hebr.)			29.92	760.0	53	11.7		NE			1		0					Clear	John Smith.
Strathfield Turgiss			29.94	760.5	62.2	16.8		S			0–1		10					Raining	Rev Charles H. Griffith
Streatley Vicarage																			Rev. John Slatter.
Sumburgh Head, (Shetland)																			
Thurso			29.94	760.5	51	10.6		E			2		7					*D. clouds	John Trotter.
Truro, Royal Institution			29.74	755.4	62	16.7		SSE			6		10					Raining	W Newcombe.
Valencia Observatory			29.54	750.3	64.3	17.9		E	25	11.2			10					Drizzling	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			29.93	760.2	49.9	9.9		E			2		10s			0.05	1.3		Andrew Gibb.
Monach Lt-house, (Shet. Is)			29.87	758.7	58	14.4		E			4	0	0			0	0		J. Youyclause.
North Unst, (Shetland Is)			29.96	761.0	45	7.2		N			4	10	4						

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., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.74	755.3	57.0	13.9	41	NNW			4		1						
Fanöe			29.83	757.7	58.5	14.7	54	NNW			6		7						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			30.05	762.2	45.7	7.6	89	W			6		8						
Thorshavn, (Faröe)			29.87	758.7	46.4	8.0	85	SW			2		10					Raining	
Vesterviz			29.80	756.8	58.1	14.5	58	Calm			0		8						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.97	761.2	68.9	20.5	85	SE			1		..k			0.08	2.	Raining	Normal School.
Amiens																			Normal School.
Avignon			30.02	762.6	78.7	25.7	65	E			1		0			0	0	Clear	Normal School.
Bar-sur Seine			29.95	760.9	69.1	20.6	62	E SE			1		10kn		W	0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			29.98	761.6	78.7	25.7	69	S			1		10			0	0	Cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.01	762.3	78.8	26	57	S			4		10			0	0	Cloudy	Normal School.
Bourges			29.91	759.6	77.2	25.1	64	SW			2		10		E	0	0	Cloudy	Normal School.
Brest			29.79	756.7	66.0	18.9	90	SW			3		10		SW	0.177	4.5	Raining	Naval Observatory.
Caen																			Normal School
Chartres			30.16	766.0	65.1	18.4		SE			1		10					Cloudy	Normal School.
Chaumont	28.83	732.2	29.96	761.0	70.5	21.4		SSW			1		..kn		SSW	0	0		Normal School.
Commercy			30.00	762.0	68.0	20	67	W			2		10kn		W	0	0	Cloudy	Normal School.
Commune de Gréasque*			30.09	764.2	74.7	23.7	78	NW			2		8		NW	0.051	1.3		
Le Mans																			Normal School.
Lons-Le Saulnier			29.95	760.8	74.5	23.6	66	W			2		10		W	0	0	Cloudy	Normal School.
Mâcon			29.97	761.2	70.9	21.6	86	Calm			0		5			0	0	Cloudy	Normal School.
Mirecourt			30.01	762.3	66.0	19.2	68	SE			1		10		W	0.189	4.8	Cloudy	Normal School.
Orleans																			Normal School.
Paris Observatory			29.98	761.4	69.1	20.6	66	S			1		10k		SW	0.02	0.55	Cloudy	National Observatory
Parthenay			30.10	764.6	71.6	22	78	N			2		0					Clear	Normal School.
La Roche sur Yon			29.91	759.8	76.8	24.9	68	SE			4		5		N			Cloudy	Normal School.
Rochefort, Observatory			29.93	760.2	81.0	27.2	55	SSW			2		2		N	0	0		Naval Observatory.
Rouen			29.95	760.8	68.9	20.5	61	S			2		10			0	0	Cloudy	Normal School.
Saint Lo																			Normal School.
Villefranche																			Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchésl.
Mont-Louis			30.29	767.1	66.4	19.2	61	SSW	14.9	6.66			2		SW	0	0		—. Faiguère.
Montsouris Observatory			29.98	761.6	69.8	21.0	71	S			1		10			0.016	0.4		Marié Davy.
Perpignan			30.06	763.5	76.3	24.6	77	NE	3.7	1.67			4		NW	0	0		Dr. Fines.
Saint Maur, (near Paris)			29.98	761.6	68.2	20.1	72	S			1		10			Inap.	Inap.	Cloudy	E. Renou.
Tours			29.95	760.6	73.8	23.2	74	E			1		5		W	0.224	7.5		C. Marquet.
Versailles, (near Paris)			29.99	761.7	69.4	20.8	63	S			1		5			0.018	0.42		Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.07	763.7	71.6	22.0		ENE	4.0	1.8		1ks	0			{ 0 / 0	{ 0 / 0		H. Le Léc, S. J.

NOTE.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 ft.; Commune de Gréasque, 322 m., or 1,056.4 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. *Near Marseilles.

GERMAN SERIES.

Furnished by the coöperation of Prof. Geo. Neumayer, Superintendent Royal 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.01	762.2	67.1	19.5	56	W	27	12			5			0	0		Prof. Hoh.
Berlin			29.80	756.9	66.4	19.1	66	SW	9	4			7			0.091	2.3	Rainy	Prof. Arndt.
Breslau			30.27	768.8	69.4	20.8	46	NW	27	12			8			0	0	Rainy	Dr. P. Neukrauer.
Carlsruhe			29.99	761.7	69.4	20.8	60	SW	11	5			5			0	0		A. Senz.
Cassel			29.80	757.0	68.2	20.1	63	SW	18	8			6			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.65	727.7	30.07	763.8	63.5	17.5	70	W					10			0.169	4.3	Raining	M. Wilhelm.
Hamburg			29.86	758.5	59.7	15.4	69	WNW	18	8			9k	NW		0.157	4.0	Cloudy	Deutsche Seewarte.
Kiel			29.80	757.0	69.4	20.8	56	W	22	10			3			0.583	14.8		Prof. G. Karsten.
Königsberg			29.60	751.7	53.8	12.1	85	NW	11	5			10			0.827	21.0	Cloudy	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic													8			0	0		Prof. Bruhns.
Münster			29.89	759.1	68.9	20.5	54	SW	18	8			5			0.134	3.4		Prof. E. Heis.
Posen			29.92	759.9	64.8	18.2	85	SW	4	2			10			0.094	2.4	Cloudy	Dr. Mazeuer.
Strassburg, (in Alsace)			29.77	756.2	67.1	19.5	57	SW	29	13			10			0	0		Hartwig.
Stuttgart			30.00	762.1	72.7	22.6	60	S	11	5			10			0	0	Rainy	Mr. Würth.
Thorn			29.98	761.6	71.2	21.8	40	W					8			0.114	2.9		Dr. Rosenbalz.
Treves, (Trier)			29.70	754.4	59.2	15.1	92	W	9	4			10			0	0		Prof. Clesen.
Wustrow, Naval School			29.95	760.7	72.5	22.5	46	SW	22	10			8			0.157	4.0	Cloudy	E. F. Schultz.
			29.79	756.6	59.2	15.1	64	WNW	18	8			10						

NOTE.—In the originals the distinction between 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 1,359.3 feet.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			29.98	761.5	73.4	23.0	63	SSE	0	0			9	NNE		0	0		
Mondovi			30.01	762.2	71.2	21.8	68	N			2		7			0	0		
Genoa			30.00	762.1	75.7	24.3	60	SE	10.5	4.7			10	SE		0	0		
Pavia			29.97	761.2	75.9	24.4	55	NNW			1		9	SW		0	0		
Verona			29.93	760.3	78.8	26.0	61	E			2		10			0	0		
Padua			29.95	760.8	71.8	22.1	68	SW	1.3	0.6			10	SW		0	0		
Parma																			
Bologna			30.02	762.5	76.1	24.5	63	SW			1		4	W		0	0		
Leghorn			30.02	762.6	72.0	22.2	82	NE	4.3	1.9			10			0.094	2.4		
Urbino																			
Ancona			30.00	762.1	75.6	24.2	52	WSW			2		10			0.118	3.0		
Siena			30.02	762.5	102.02	38.9?	61	SSW	0.7	0.3			9	W		0	0		
Rome			30.09	764.3	77.9	25.5	66	SW	10.5	4.7			9	SW		0	0		
Naples, O. U.			30.13	765.1	77.9	25.5	63	SW			2		8	NW		0	0		
Lecce			30.09	764.2	76.5	24.7	41	SSE			2		2			0	0		
Cosenza			30.12	765.1	76.3	24.6	62	SE			1		2	SW		0	0		
Catania, (Etna)																			
Ripozzo			30.06	764.6	78.4	25.8	66	ESE			2		0			0	0		
Palermo			30.09	764.2	75.2	24.0	60	NE	4.9	2.2			0			0	0		
Sub-Series.																			
Naples, S. R.			30.17	766.4	72.1	22.3	78	WNW	8.7	3.9			10	NW		0	0		Prof. F. Brioschi.

NOTE.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovia is 553 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 248.5 m., or 1,1[illegible]3 feet.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Flushing			29.97	761.7	66.6	19.2		NW			2								
Groningen			29.87	758.8	58.3	14.6		NW			2								
Helder			29.94	760.4	62.6	17.0		WNW			2								
Utrecht			29.91	759.7	61.9	16.6		WNW			2		8					Very cloudy	

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bergen			29.85	758.1	46.4	8.0	50	NNW	3.6	1.6			5			Inap.	Inap.		
Christiania			29.78	756.5	49.6	9.8	25	WNW	4.0	1.8			3			0	0		
Tromsö			29.31	744.5	36.5	2.5	91	NW			2		10			0.327	8.3		

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.05	763.2	72.1	22.3	70	SSW	18.6	8.3			10						The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

RUSSIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.69	754.0	66.0	18.9	57	W	22	10			10						Astronomical Obs.
Wilna			29.49	749.0	58.5	14.7	92	S	10	4.5			10					Raining	Astronomical Obs.
Dorpat			29.52	749.7	44.2	6.8	87	NNW	7	3			10						Physical Cabinet.
St. Petersburg			29.47	748.6	44.6	7.0	65	NNW	2	1			9						Central Physical Obs.
Kuopio			29.41	747.1	41.0	5.0	64	W					8		E	0	.0		Ch. Forsten.
Kieff			29.75	755.7	69.3	20.7	48	SW	13	6			5						Physical Cabinet.
Nikolaiev			30.04	762.9	67.5	19.7	58	SW	13	6			2						Kurdakof.
Kertch			30.04	763.1	67.8	19.9	65	SE	2	1			3						Lagorio.
Moscow			29.66	753.3	63.7	17.6	62	S	10	4.5			4						Meteorological Obs.
Lugan			29.91	759.7	63.9	17.7	35	W	8	3.5			1						Meteorological Obs.
Archangel			29.41	747.0	41.9	5.5	82	SW	13	6			3						Ogorodnikof.
Tiflis	28.56	725.4	29.92	759.9	74.8	23.8	34	N	8	3.5			0						Physical Obs.
Astrakhan			30.08	763.9	68.5	20.3	41	NNW	2	1			2						Sebastianof.
Kasan			29.78	756.4	62.6	17.0	54	WSW.	11	5			5						Physical Cabinet.
Orenburg			30.03	762.7	55.9	13.3	52	NE	4	2			8						Tschernischef.
Ekaterinburg																			Meteorological Obs.
Kasaly			29.83	757.6	73.4	23.0	52	S	13	6			0						Bobrof.
Tashkend	28.37	720.7	30.03	762.8	69.1	20.6	74	Calm	0	0			0						Michelson.
Barnaul			30.09	764.2	51.3	10.7	55	SW	8	3.5			0						Meteorological Obs.
Yeniseisk			29.82	757.5	43.2	6.2	71	S	4	2			10					Raining	Marks.
Irkutsk	28.67	728.1	30.09	764.3	37.8	3.2	80	Calm	0	0			0						Usolzef.
Oorga	25.59	649.9	29.91	759.7	37.8	3.2	78	NW	8	3.5			10						Mossin.
Peking, (China)			30.12	765.0	66.4	19.2	78	Calm	0	0			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. The elevation of Tiflis is 403. meters, or 1,341.8 feet; Ekaterinburg, 305.4? m., or 1,005.2? ft.; Tashkend, in 494.2?, or 1,621.3? ft.; Irkutsk, 392. m., or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.00	762.0	82.0	27.8	33	SW	10.5	4.7		1	0	SW		0	0	Clear	Royal Observatory.
San Fernando																			The Naval Observatory.

NOTE.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea			29.36	744.8	50.4	10.2	45	NW			7		8			0	0	Frost	
Hernosand			29.69	754.0	47.3	8.7	38	WNW			4		6			0	0		
Stockholm			29.61	752.2	47.1	8.4	37	WNW			2		3			0	0	Snowy	
Wisby			29.62	752.3	50.4	10.2	65	NNE			2		5			0	0		
Sub-Series.																			
Upsala			29.58	753.8	48.0	9.4	87	NW	10.3	4.6			1		NW				Dr. Hildebrandsson.

NOTE.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	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. Inches.	Millimeters.	Weather.	Observer.
Geneva	28.61	726.6	29.97	761.3	77.5	25.3	47	SW			2		8			0	0	Cloudy	The Observatory.
Zurich	28.46	722.9	30.07	763.8	62.2	16.8	88	SE			1		10			0.217	5.5	Cloudy	The Observatory.

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, —0.3mm.; Thermometer, +8°.0; Relative Humidity, —18 per cent.

NOTE.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

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. Inches.	Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y			29.90	759.4	78.8	26.0	56	N			3		0					Clear	Prof. C. N. A. Van Dyck.
Constantinople			30.07	763.7	68.0	20.0	33	S	4	2			2		N	0	0		
Fao, (Persian Gulf)			29.87	758.7	85.0	32.0		NW			4		0					Clear	
Salonica					77.0	25.0		SE			1		0					Clear	
Valona			30.05	763.2	76.5	24.7		W			1		2						
Varna			30.04	763.0	68.0	20.0		NE			3		0					Clear	

NOTE.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea level. The distinction between upper and lower clouds is not made.

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.	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. Inches.	Millimeters.	Weather.	Observer.
Athens																			

NOTE.—Reports commence October 1, 1875.

JAPANESE SERIES.

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. Inches.	Millimeters.	Weather.	Observer.
Takio																			

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the 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.	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. Inches.	Millimeters.	Weather.	Observer.
Brockville, Ontario			30.15	765.8	41	5.1		NW	4	1.8			8s		W	0.15	3.8	Cloudy	
Chatham, N. B.			29.75	755.6	50	10.0	82	SW	10	4.5		2k	2ks	W	W	0.01	0.8	Fair	
Charlottetown, P. E. Island			29.82	757.4	52	11.1	75	SW	11	4.9		5k	0	SW		0.110	2.79	Fair	
Fort Garry, Manitoba			30.25	768.3	33	0.6	94	SW	5	2.2		2c	2s			0	0	Fair	
Halifax, N. S.			29.81	757.2	53	11.7	81	SW	9	4.0		2c	0	SW		0.021	0.58	Fair	
Kingston, Ontario			30.11	764.8	42	5.6	77	NW	3	1.3		5k	0	NW		Imp.	Imp.	Fair	
Montreal, Quebec			30.00	762.0	43	6.1	89	W	10	4.5		5k	Haze	NW		0.10	2.5	Cloudy	
Ottawa, Ontario			30.07	763.8	41	5.0	80	W	8	3.6		8k	0	NW		0.20	5.1	Fair	
Parry Sound, Ontario			30.17	766.3	36	2.2	85	N	13	5.8		5k	2s	N	N	0.03	0.8	Fair	
Port Dover, Ontario			30.17	766.3	40	4.4	82	NW	10	4.5		10k	0	NW		0	0	Fair	
Port Stanley, Ontario			30.16	766.1	40	4.4	91	W	5	2.2		10k	0	W		0.04	1.0	Fair	
Quebec, Quebec			29.90	759.4	45	7.2	84	SW	16	7.2		0	2ks		SW	0	0	Clear	
Sarnia, Ontario			30.15	765.8	40	4.4	82	Calm	0	0		8k	2n			0.11	2.8	Cloudy	
Stayner, Ontario			30.15	765.8	39	3.9	93	Calm	0	0			10n		N	0.54	13.7	Light rain	
Sydney, C. B.			29.85	758.2	55	12.8	81	SW	9	4.0			10n		SW	0	0	Cloudy	
Toronto, Ontario			30.16	766.1	40	4.4	81	NW	5	2.2			8ks		W	0.05	1.3	Cloudy	

NOTE.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.99	761.7	50	10.0	78	Calm	0	0		10k	0	W		0.02	0.5	Cloudy	
Alpena, Mich.			30.18	766.6	40	4.4	83	NW	4	1.8		5c	5ks	W	NW	0.27	6.9	Cloudy	
Atlantic City, N. J.			30.10	764.5	51	10.6	68	W	8	6.3		1cs	0	W		0	0	Clear	
Augusta, Ga.			30.14	765.5	61	16.1	50	NE	5	2.2		5k	0	NW		0	0	Fair	
Baltimore, Md.			30.19	766.8	49	9.4	71	NW	8	3.6		5ck	2ks			0	0	Fair	
Barnegat, N. J.			30.09	764.3	53	11.7	66	W	12	5.4		5ck	0	W		0	0	Fair	
Benton, Montana	27.36	694.9	30.16	766.1	34	1.1	79	E	4	1.8		2c	0			0	0	Fair	
Bismarck, Dakota	28.48	723.4	30.22	767.6	29	—1.7	89	Calm	0	0		0	Haze			0.04	1.0	Clear	
Boston, Mass.			29.97	761.2	50	10.0	72	W	7	3.1		1cs	0			0.09	2.3	Clear	
Breckenridge, Minn.			30.36	771.1	37	2.8	90	NW	2	0.9			10s			0.03	0.8	Cloudy	
Buffalo, N. Y.			30.12	765.0	41	5.0	82	NW	8	3.6		2k	5ks	NW		0.98	24.9	Fair	
Burlington, Vt.			30.01	762.2	47	8.3	70	N	7	3.1			10s		N	0.05	1.3	Cloudy	
Cairo, Ill.			30.34	770.6	46	7.8	76	N	8	3.6		8ck	0	W		0	0	Fair	
Cape Hatteras, N. C.			30.04	763.0	66	18.9	68	NE	24	10.7			10s		NE	0	0	Cloudy	
Cape Henry, Va.			30.13	765.3	60	15.6	60	N	22	9.8		5ck	2s	W		0	0	Fair	
Cape May, N. J.			30.11	764.8	55	12.8	56	NW	12	5.4		0	0			0	0	Clear	
Charleston, S. C.			30.06	763.5	63	17.2	57	NW	12	5.4		0	1ks		N	0	0	Clear	
Cheyenne, Wyoming	24.10	614.4	30.13	765.3	32	0.0	100	S	6	2.7			10ks			0.01	0.3	Cloudy	
Chicago, Ill.			30.29	769.4	43	6.1	75	NW	7	3.1		5ck	5s	W		0	0	Cloudy	
Cincinnati, Ohio			30.22	767.6	45	7.2	84	[illegible]	3	1.3			Fog			Inap.	Inap.	Foggy	
Cleveland, Ohio			30.17	766.3	49.1	9.5	57	W	10	4.5			8ks		NW	0.13	3.3	Fair	
Colorado Springs, Col.	24.29	617.0	30.16	766.1	29	—1.7	100	SE	4	1.8			10n			0.97	24.6	Light snow.	
Corsicana, Tex.			30.22	767.6	52	11.1	86	E	7	3.1			10n			0.05	1.3	Light rain	
Davenport, Iowa			30.37	771.4	39	3.9	81	NW	4	1.8		0	Fog			0	0	Clear	
Denison, Tex.			30.30	769.6	48	8.9	100	E	4	1.8			10n			0.56	14.2	Light rain	
Denver, Col.	25.00	635.0	30.22	767.6	36	2.2	80	NW	1	0.4			10s		N	0.46	11.7	Cloudy.	
Detroit, Mich.			30.20	767.1	38	3.3	90	W	4	1.8		2k	0	SW		0	0	Clear	
Dodge City, Kan.	27.73	704.3	30.09	764.3	46	7.8	77	E	3	1.3			10n			0.51	13.0	Light rain	
Dubuque, Iowa			30.36	771.1	40	9.4	51	NW	3	1.3			10s		NW	0	0	Cloudy	
Duluth, Minn.			30.33	770.4	39	3.9	72	NW	12	5.4			10s			0.02	0.5	Cloudy	
Eastport, Me.			29.87	758.7	49	9.4	85	W	6	2.7		0	0			0	0	Clear	
Erie, Pa.			30.09	764.3	49	9.4	57	NW	12	5.4		0	5ks		NW	0.31	7.9	Fair	
Escanaba, Mich.			30.28	769.1	36	2.2	89	NW	4	1.8		2k	5s	N		0.07	1.8	Cloudy	
Fort Gibson, I. T.			30.31	769.9	52	11.1	79	E	2	0.9			10s			0.25	6.3	Cloudy	
Fort Sill, I. T.																			
Fort Sully, Dakota	28.50	723.9	30.23	767.8	34	1.1	84	NW	3	1.3		0	0			0	0	Clear	
Galveston, Tex.			30.14	765.5	67	19.4	79	E	12	5.4		5c	0	SW		0	0	Fair	
Grand Haven, Mich.			30.27	768.8	43	6.1	67	N	5	2.2			10s		N	0.05	1.3	Cloudy	
Indianapolis, Ind.			30.28	769.1	40	4.4	82	W	3	1.3		0	Haze			0	0	Clear	
Indianola, Tex.			30.12	765.0	75	24.0	81				2	0	0			0	0	Clear	
Jacksonville, Fla.			30.01	762.2	65	18.3	73	NW	8	3.6		0	0			0	0	Clear	
Keokuk, Iowa			30.26	768.6	43	6.1	83	Calm	0	0		8k	0	N		0	0	Fair	
Key West, Fla.			30.00	762.0	75.0	23.9	86	NW	26	11.6			10n			3.41	86.6	Light rain	
Kittyhawk, N. C.			30.10	764.5	63	17.2	67	NE	30	13.4		2c	5ks			0	0	Fair	
Knoxville, Tenn.			30.22	767.6	45	7.2	89	N	4	1.8		0	0			0	0	Clear	
La Crosse, Wis.			30.35	770.9	43	6.1	83	Calm	0	0			10s			0.02	0.5	Cloudy	
Leavenworth, Kan.			30.40	772.1	43	6.1	75	Calm	0	0		5c	Fog			0	0	Fair	
Lexington, Ky.	29.14	740.1	30.29	769.4	40	4.4	100	NW	4	1.8		2c	0	NW		0	0	Clear	
Long Branch, N. J.			30.08	764.0	52	11.1	65	NW	17	7.6		5ck	0	SW		0	0	Fair	
Louisville, Ky.			30.28	769.1	45	7.2	84	NW	3	1.3		0	0			0	0	Clear	
Lynchburg, Va.			30.18	766.6	51	10.6	79	Calm	0	0		10k	0	W		0	0	Cloudy	
Malone, N. Y.			29.99	761.7	42	5.6	83	NW	7	3.1			10s		W	0.01	0.3	Cloudy	
Marquette, Mich.			30.27	768.8	39	3.9	82	Calm	0	0			8s		NW	0.08	2.0	Cloudy	
Memphis, Tenn.			30.42	772.7	47	8.3	76	NE	5	2.2		0	0			0	0	Clear	
Milwaukee, Wis.			30.35	770.9	39	3.9	81	NW	9	4.0		2k	5ks	W	NW	Inap.	Inap.	Fair, frost	
Mobile, Ala.			30.18	766.6	57	13.9	68	N	8	3.6		0	0			0	0	Clear	
Montgomery, Ala.			30.17	766.3	54	12.2	64	N	8	3.6		0	0			0	0	Clear	
Morgantown, W. Va.			30.18	766.6	44	6.7	87	Calm	0	0		5c	Fog	W		0	0	Fair	
Mt. Washington, N. H.	23.59	599.2	29.95	760.7	26	—3.3	100	NW	30	13.4			Fog			0.39	9.9	Foggy	
Nashville, Tenn.			30.27	768.8	49	9.4	71	N	2	0.9		2c	Haze	W		0	0	Clear	
New Haven, Conn.			30.03	762.7	50	10.0	78	NW	6	2.7		5k	Sm'e	NW		0	0	Fair	
New London, Conn.			30.03	762.7	54	12.2	67	NW	2	0.9		5ck	0	SW		0.26	6.6	Fair	
New Orleans, La.			30.17	766.3	63	17.2	52	NE	12	5.4		5c	0	W		0	0	Fair	
Newport, R. I.			30.00	762.0	53	11.7	73	W	4	1.8		5ck	0	SW		0.20	5.1	Fair	
New York, N. Y.			30.07	763.8	51	10.6	64	W	12	5.4		1ck	0	W		0	0	Clear	
Norfolk, Va.			30.14	765.5	57	13.9	58	N	10	4.5		5c	0	SW		0	0	Fair	
North Platte, Neb.	27.38	695.4	30.07	763.8	35	1.7	90	Calm	0	0		2c	Fog			0	0	Fair	
Omaha, Neb.	29.28	743.7	30.39	771.9	39	3.9	91	Calm	0	0		2ck	Sm'e			0	0	Fair	
Oswego, N. Y.			30.09	764.3	47.1	8.4	71	NW	9	4.0			10ks		N	0.20	5.1	Cloudy	
Peck's Beach, N. J.			30.11	764.8	51	10.6	71	NW	16	7.2		1c	0	W		0	0	Fair	
Pembina, Dakota			30.24	768.1	38	3.3	81	S	4	1.8		2c	2s	NW		0	0	Fair	
Philadelphia, Penn.			30.12	765.0	50	10.0	64	NW	19	8.5		2ck	0	NW		0	0	Fair	
Pike's Peak, Colorado	17.77	451.4	29.98	761.5	22	—5.6	100	Calm	0	0			10n			0.25	6.3	Light snow	
Pittsburgh, Penn.			30.18	766.6	40	4.4	91	NW	2	0.9		8ck	Fog	W		0	0	Cloudy	
Port Huron, Mich.			30.19	766.8	39	3.9	91	NW	8	3.6		2c	5s			0	0	Cloudy	
Portland, Me.			29.95	760.7	48	8.9	78	NW	6	2.7		0	Haze			0	0	Clear	
Portland, Oregon			30.03	762.7	55	12.8	87	N	4	1.8		Haze	Haze			0	0	Haze	
Punta Rassa, Fla.			30.03	762.7	74.0	23.7	78	NE	5	2.2			10ks		SW	0.21	5.3	Threatening	
Rochester, N. Y.			30.09	764.3	47	8.3	77	W	7	3.1			10s		W	0.05	1.3	Cloudy	
Salt Lake City, Utah	25.63	651.0	29.76	755.9	49	9.4	57	SE	10	4.5		0	0			0.06	1.5	Clear	
Sandy Hook, N. J.			30.05	763.3	51	10.6	65	NW	28	12.5		5ck	0	W		0	0	Fair	
San Diego, Cal.			29.87	758.7	61	17.8	72	SE	4	1.8			10s			0	0	Cloudy	
San Francisco, Cal.			29.76	755.9	57	13.9	87	W	10	4.5		0	0			0	0	Clear	
Santa Fe, N. M.	23.24	590.3	29.78	756.4	42	5.6	74	SE	12	5.4			10s			0.32	8.1	Cloudy	
Savannah, Ga.			30.06	763.5	63	17.8	78	N	12	5.4		0	0			0	0	Clear	
Shreveport, La.			30.30	769.6	55	12.8	87	NNE	6	2.7			10s			Inap.	Inap.	Cloudy	
Smithville, N. C.																			
Springfield, Mass.			30.01	762.2	50	10.0	78	Calm	0	0		1cs	1ks	SW		0.20	5.1	Smoky	
St. Louis, Mo.			30.37	771.4	44	6.7	75	N	4	1.8		0	0			0	0	Clear	
St. Marks, Fla.			30.06	763.5	59	15.0	65	N	8	3.6		0	0			0	0	Clear	
St. Paul, Minn.			30.34	770.4	40	4.4	82	Calm	0	0			10s		W	0	0	Cloudy	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			30.00	762.0	59	15.0	78	NW	7	3.1		5c	0	N		0	0	Fair	
Toledo, Ohio			30.22	767.6	41	5.0	82	W	6	2.7		0	0			0.01	0.3	Clear	
Tucson, Arizona																			
Tybee Island, Ga.			30.03	763.3	67	19.4	73	NE	18	8.0		0	0			0	0	Clear	
Vicksburg, Miss.			30.32	770.1	55	12.8	73	Calm	0	0		0	5ks			0	0	Fair	
Virginia City, Montana	24.40	619.8	29.88	758.9	35	1.7	61	SE	8	3.6		3c	0	NE		0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.16	766.1	48	8.9	77	NW	8	3.6		0	8s		W	0	0	Fair	
Wilmington, N. C.			30.08	764.0	59	15.0	58	NE	12	5.4		2c	0	SW		0	0	Fair	
Wood's Hole, Mass.			30.01	762.2	56	13.3	62	NW	4	1.8		2c	0	W		0.07	1.8	Clear	
Wytheville, Va.	27.81	706.4	30.01	762.2	43	6.1	91	W	1	0.4		0	0			0	0	Clear	
Yankton, Dakota	29.08	738.6	30.44	773.2	36	2.2	95	Calm	0	0		0	0			0.01	0.3	Clear	
Yuma, Arizona																			
Sub-Series.																			
Bridgetown, B'b'does, W. I.					78	25.6	95	E	2	0.9						1.80	45.7	Cloudy	E. Racker.
Pointe-aPitre, G'd'loupe, do			29.97	761.2	84	28.9	75	E				2c8	2k8			0	0	Fair	L. V. Bigord.
Havana, Cuba, W. I.			30.07	763.8	87	30.6	90	SSW				8ck	1k	SW		1.70	43.2	Cloudy	Charles Hasselbrink.
Kingston, Jamaica, W.			30.19	766.8	82	27.8	58	Sse	7	3.1		2ck	2s			1.20	30.5	Fair	James Gall.
St. Thomas, St. T., W. I.																			W. S. Cameron.
Santiago de Cuba, W. I.			29.84	757.9	80	26.7	78	NW	1.2	0.5		8ck	2s	S	SW	0	0	Cloudy	Robert Mason.
St. Georges, Bermudas			30.02	762.5	81	27.2	81	SW	10.8	4.8			10n			0.015	0.38	Raining	C. F. Allen.
Honolulu, Oahu, H. I.																			
Makawao, Maui, H. I.																			E. P. Church.
Cumberland, B. A.																			F. L. Clarke.
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.			29.88	758.9	37	2.8	81	W	10	4.5		2c	0	W		0	0	Fair	J. Fortescue.
St. John's, Newfoundland			29.94	760.5	49	9.4	85	N					10s			0	0	Cloudy	John Delaney.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Clifton, Jamaica, W. I.	27.24	691.9	30.03	762.7	65	18.3	91	N	0.5	0.2		0	8k			2.43	61.7	Cloudy	C. Partridge.
Navassa																			
Medellin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			30.10	766.8	46	7.8	92	W	4	1.8			5ks			0.08	2.0	Fair	H. M. Redington.

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

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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 Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,083 (?) ft., or 330.1 (?) m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,86[illegible] (?) ft., or 2,091.6 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.34 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 22, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.07	763.7	81.0	27.2	65	N			1		8			0	0	Fair	Charnot.
Algiers			30.04	762.9	81.3	27.4	78	N			1		2			0	0	Cloudy	Peter.
La Calle																			Kuntz.
Tunis			30.09	764.2	85.1	29.5	53	E			3		0			0	0	Fair	Jacques.
Sax			30.30	769.6	84.2	29.0	52	S			3		1			0	0	Fair	Chauvey.
Saida			30.03	762.7	95.0	35.0		S W			1		0			0	0	Sirocco	Grosjean.
Tebessa			30.04	763.1	86.0	30.0		N W			2		2			0	0	Thunder	Colin.
Geriville			30.03	762.7	85.1	29.5	18	N SW			2		3			0	0	Cloudy	Bernadach.
Laghouat			29.98	761.4	89.6	32.0	19	SW			1		3			0	0	Fair	Simon.
Biskra			29.95	760.8	90.9	32.7	42	E			1		3			0	0	Fair	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			29.93	760.3	71.2	21.8	64	S W			2		5			0.031	0.8	Rainy	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.85	758.1	64.4	18.0	67	W			3		4			0.224	5.7		I. R. Observatory.
Eperies			29.85	758.1	63.3	17.4	73	Calm			0		4			0	0		Julius Mikolik.
Gratz			29.91	759.6	63.7	17.6	73	S			0		10						Andreas Rospini.
Hermanustadt	28.73	729.8	29.80	759.2	69.3	20.7	48	N W			2		2			0	0		Prof. Reissenberger.
Kremsmünster	28.52	724.4	29.80	759.3	59.7	15.4	93	Calm			0		10			0.134	3.4		Prof. C. Wagner.
Lemberg	28.58	725.9	29.78	756.5	62.8	17.0	68	N W			5		3			0.091	2.3	Rainy	Dr. T. Stanecki.
Nytregyhaza			29.87	758.7	68.0	20.0	71	Calm			0		5			0	0		Habzsuda Daniel.
Pola			29.99	761.8	72.0	22.2	83	SE			3		8ks		SE	0.027	0.68		I.R. Hydrographic Office
Szegedin			29.90	759.5	71.6	22.0	44	Calm			0		5			0	0		Karl Stancel.
Trieste			29.98	761.4	68.0	20.0	84	E S E			1		10			0.114	2.9	Raining	Prof. V. Farolfi.
Vienna			29.84	757.9	66.2	19.0	60	N E			1		10			Inap.	Inap.		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermanstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.74	755.3	66.6	19.2	85	W			5	0?	10			0.425	10.80		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.00	762.0	52.5	11.2		N	10	4.5			3			0.220	5.50	*D. clouds	William Boswell.
Ardrossan			29.94	760.5	56	13.3		ENE			5		5					*D. clouds	Wm. McNeil.
Armagh Observatory			29.89	759.2	55.9	13.3		SE	11	4.9			9					Overcast	S. Cali, for Dr. Robinson.
Bidston, Liverpool Obs			29.82	757.4	56.0	13.3		ENE			3		10					Foggy	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.81	757.2	58.7	14.8		ENE			1		10					Overcast	J. Dreyer.
Bradford			29.83	757.7	54.6	12.6		NE			1		10					Raining	J. McLandsborough.
Bridgetown, (Barbadoes)			29.95	760.7	78.2	25.7		NE			2		10					Overcast	T. H Hunt.
Cambridge Observatory																			Sergeant Hunt, A. H. C.
Cape Good Hope Obs.			30.01	762.2	49.5	9.7	82	W	18	8.0			8						Th Staff, for E. J. Stone.
Cardington			29.77	756.1	63.0	17.2		NE					10					Overcast	John McLaren.
Carlisle			29.89	759.2	55.4	13.0		NE					9			0.02	0.5	*D. clouds	T Bell, for J. Cartmell.
Chatham, School M. E.			29.72	754.9	68.2	20.1		SW			2		8					Overcast	Capt. J. Fellowes, R. E.
Dartmoor	28.43	722.1	29.80	756.9	63.2	17.3		W			3		8					*D. clouds	R. E. Power.
Donaghadee			29.89	759.2	58	14.4		ENE			3		7					*D. clouds	J. Mac Gowan, Jr.
Dover			29.75	755.6	69	20.6		WNW			3		7					Threatening	J. Costello.
Eccles, (near Manchester)			29.81	757.2	57.7	14.3		ENE	4.6	2.1			10					Squally	Thomas Mackereth.
Falmouth Observatory			30.29	769.4	67.3	19.6		WSW	10	4.5			7					Overcast	The Staff.
Fort Napier, (Natal)	27.47	697.7	29.80	756.9	76.0	24.4		E			3		0					Clear	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	81	27.2		E					8						
Galway, Queen's College																			B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.08	764.0	74.0	23.3		ENE			1		2					*D. clouds	Sergt. E. G. Baker.
Glasgow Observatory			29.96	761.0	52.4	11.3		NE			2		8					*D. clouds	Lewis Stuart.
Great Yarmouth			29.73	755.1	61	16.1		NE			3		5					Rainy	G. T. Watson.
Greenwich Royal Obs			29.76	755.9	69.0	20.6		W			1		10					Overcast	The Staff, for G. B. Airy.
Guernsey			29.85	758.2	65	18.3		SW			4		10			Blank	Blank	Misty	Dr. S. E. Hoskins.
Halifax, Moorside Obs			29.88	758.9	54.0	12.2		ENE					10			Blank	Blank	Overcast	F. J. Page, for L. J. Cropley.
Helston			29.80	756.9	68	20.0		SSW			2		10					Drizzling	M. P. Moyle.
Holyhead			29.81	757.2	58	14.4		ENE			6		10					Misty	John Tilston.
Hull Park																			
Kew Observatory			29.76	755.9	67.5	19.7		W	10	4.5			9					*D. clouds	The Staff.
Kingstown			29.83	757.7	58	14.4		ENE			3		10					Drizzling	George Mitchell
Leicester Museum			29.81	757.2	59.0	15.0		NE			1		10					Raining	William J. Harrison.
Llandudno			29.84	757.9	56.0	13.3		E					10					Overcast	Dr. James Nicol.
Malta, (Mediterranean)			30.17	766.3	80.6	27.0		SW			1		4k					*D. clouds	Fred Travis, Pvt A. H. C.
Nairn			30.13	762.7	54	12.2		NE			2		10						W. D. Penny.
Nassau, (Bahamas)			30.13	765.3	80.1	26.7		W			2		7			Blank	Blank		Surg.-Maj. Henry.
Nottingham			29.83	757.7	57.6	13.9		NNW			3		10n			1.04	26.4	Raining	E. J. Lowe.
Oscott, St Mary's College			29.79	756.7	57.1	13.9		NNE			3		10					Drizzling	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			30.04	763.0	66	18.9		WNW			1		10					Drizzling	J. Lucas, for R. Main.
Plymouth			29.80	756.9	67.3	19.6		SW			2		10					Overcast	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.76	755.9	64	17.8		SE			2		8					Foggy	W. Kennedy.
Saint Ann's Head			29.75	755.6	63	17.2		WSW			3		10					Foggy	John C. Walker.
Saint Helier, (Jersey)			29.85	758.2	66.4	19.1		W			4		10					Raining	A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			29.87	758.7	55.3	12.9		ENE			4		10					Overcast	F. Shaw.
Scutari cemetery, (Turkey)			30.01	762.2	68.8	20.4		Calm			0		9					Gloomy	Sergt. W. H. Lyne.
Sheffield			29.83	757.7	55.0	12.8		NNE			2		10					Raining	W. F. Cooper.
Silloth Rectory			29.91	759.7	55.5	13.1		E			6		5			0	0	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			29.84	757.9	55.5	13.1		E			2		10					Threatening	The Staff.
Stornoway, Lews C. (Heb.)			30.06	762.5	49	9.4		ENE			4		10					Overcast	John Smith.
Stratfield Turgiss			29.78	756.4	67.3	19.6		NW			1		9					Drizzling	Rev Charles H. Griffith
Streatley Vicarage																			Rev. John Slatter.
Sumburgh Head, (Shetland)																			
Thurso			30.04	763.0	50	10.0		NNE			5		7					*D. clouds	John Trotter.
Truro, Royal Institution			29.73	755.4	70	21.1		NW			4		7					Gloomy	W Newcombe.
Valencia Observatory			29.71	755.4	64.7	18.2		SSW	3	1.3			10					Threatening	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			29.99	761.7	54.4	12.2		E			3		9k			0.02	0.5	Fine, cloudy	Andrew Gibb.
Monach Lt-house, (Shet. Is)			30.98	761.5	56	13.3		E			7	0	0			0	0		J. Youyclause.
North Unst, (Shetland Is)			30.09	762.0	43	6.1		N			6	0	3						

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.72	754.8	51.4	10.8	63	NW			2		1						
Fanöe			29.76	755.9	56.8	13.8	56	NW			4		1						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			30.13	765.4	45.3	7.4	77	Calm			0		5						
Thorshavn, (Faröe)								N			6		8						
Vestervig			29.78	756.4	57.6	14.2	61	W			2		0						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			29.80	759.2	60.8	21.0	95	SW			1		..k			0.138	3.5	Raining	Normal School.
Amiens																			Normal School.
Avignon			30.02	762.6	78.6	25.9	74	E			1		0			0	0	Cloudy	Normal School.
Bar-sur Seine			29.87	758.8	68.4	20.2	89	SW			2		10		W	0.197	5.0	Cloudy	C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			29.85	758.3	71.2	21.8	75	W			1		10		W	0.085	2.15	Cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.03	762.7	73.8	23.[illegible]	82	SW			2					0	0	Misty	Normal School.
Bourges			29.94	760.5	75.0	24.[illegible]	70	WSW			2		10		WSW	0	0	Cloudy	Normal School.
Brest			29.85	758.3	66.0	18.9	92	WSW			3		10			0.709	18.0	Fog & rain	Naval Observatory.
Caen																			Normal School
Chartres			30.13	765.2	62.8	17.1		S			1		10					Cloudy	Normal School.
Chaumont	28.75	730.3	29.80	759.1	65.7	18.7		SW			4		..n		W	0.189	4.8		Normal School.
Commercy			29.91	759.7	65.3	18.5	94	W			6		10k0		W	0.98	25.	Cloudy	Normal School.
Commune de Gréasque*			30.09	764.3	76.1	24.5	66	NW			3		5		NW	0	0		
Le Mans																			Normal School.
Lons-Le Saulnier			29.98	761.4	73.2	22.9	64	S			2		10		W	0.020	0.5	Raining	Normal School.
Mâcon			29.95	760.7	73.9	23.3	74	Calm			0		5			0	0	Cloudy	Normal School.
Mirecourt			29.91	759.7	64.9	18.3	92	SW			2		10		SW	0.146	3.7	Cloudy	Normal School.
Orleans																			Normal School.
Paris Observatory			29.85	758.3	70.5	21.4	87	W			2		10n		W	0.144	3.59	Raining	National Observatory
Parthenay			29.95	760.8	75.9	24.4	80	SW			4		8		S			Cloudy	Normal School.
La Roche sur Yon			29.95	760.7	78.4	25.8	62	SE			4		2		NW				Normal School.
Rochefort, Observatory			30.02	762.3	68.0	20.0	50	W			1		8		E	0	0	Cloudy	Naval Observatory.
Rouen			29.82	757.3	70.3	21.3	70	S			2		10			0.256	6.5	Cloudy	Normal School.
Saint Lo																			Normal School.
Villefranche																			Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchésl.
Mont-Louis			30.24	768.2	67.8	19.9	63	ESE	13.0	5.83			6		W	0	0		—. Faiguère.
Montsouris Observatory			29.85	758.1	73.4	23.0	83	WSW			3		10n		WSW	0.138	3.5	Sprinkling	Marié Davy.
Perpignan			30.09	764.0	74.3	23.5	79	ENE	5.0	2.50			5			0	0		Dr. Fines.
Saint Maur, (near Paris)			29.86	758.5	69.4	20.8	93	SW			3		10			0.165	4.2	Raining	E. Renou.
Tours			29.96	760.9	74.8	23.8	75	WSW			2		10			0.087	2.2		C. Marquet.
Versailles, (near Paris)			29.86	758.5	73.0	22.8	79	W			2		10			0.188	4.78	Raining	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.03	762.7	67.8	19.9	91	E	5.8	2.6		0	1k			0 0	0 0	Clear	H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,580.40 meters, or 5,201.8 feet; Chaumont, 332 m., or 1,090.9 ft.; Commune de Gréasque, 322 m., or 1,056.4 ft. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Lower 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			29.75	755.6	59.5	15.3	95	SW	22	10			10			0.118	3.0	Raining	Prof. Hoh.
Berlin			29.72	755.0	62.6	17.0	81	SW	4	2			10			1.106	2.7	Raining	Prof. Arndt.
Breslau			29.84	757.8	65.5	18.6	59	SW	22	10			10			0	0	Raining	Dr. P. Neugebauer.
Carlsruhe			29.80	756.9	64.4	18.0	90	S	22	10			9			0	0		A. Senz.
Cassel			29.63	752.7	63.5	17.5	70	SW	18	8			9			0.535	13.6		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.54	724.8	29.95	760.8	63.5	17.5	85	W					10			0.102	2.6	Heavy rain	M. Wilhelm.
Hamburg			29.78	756.3	51.8	11.0	97	NNE	7	3			10			0.106	2.7	Raining	Deutsche Seewarte.
Kiel			29.77	756.1	58.8	14.9	79	SW	13	6			7			0.140	3.7		Prof. G. Karsten.
Königsberg			30.62	752.3	56.1	13.4	68	W	22	10						0.067	1.7	Nearly clear	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			29.74	755.5	59.4	15.2	97	SSE	4	2			10			0.165	4.2	Raining	Prof. Bruhns.
Münster			29.66	753.3	60.8	16.0	100	SW	9	4			10			0.520	13.2		Prof. E. Hois.
Posen			29.74	755.5	66.7	19.3	60	SW	29	13			10			0.142	3.6	Cloudy	Dr. Magener.
Strassburg, (in Alsace)			29.88	758.9	66.7	19.3	81	SW	20	9			10			0.2[illegible]0	32.5		Dr. Schur.
Stuttgart			29.82	757.4	67.1	19.5	84	W					8			0.504	12.8	Rainy	Mr. Würth.
Thorn			29.73	755.1	59.5	15.3	69	W	27	12			9			0	0		Dr. [illegible]senbalg.
Treves, (Trier)			29.75	755.6	69.1	20.6	83	W	27	12			10			0.386	9.8		Prof. [illegible]lesch.
Wustrow, Naval School			29.76	755.9	54.7	12.6	69	W	13	6			10			0.939	1.0	Light rain	E. F. [illegible]ntz.

Note.—In the originals the distinction between 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.

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.	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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			29.98	761.5	70.2	21.2	55	ESE	1.3	0.6			9	NNE		0	0		
Mondovi			29.99	761.7	72.3	22.4	62	NW			2		8	SE		0	0		
Genoa			30.00	762.1	75.6	24.2	74	SW	4.3	1.9			8	SE		0.161	4.1		
Pavia			29.97	761.3	75.2	24.0	60	NW			1		8	SW		0	0		
Verona			29.93	760.2	79.3	26.3	61	E			2		10			0	0		
Padua			29.95	760.8	74.5	23.6	67	NNW	1.8	0.8			10	W		0	0		
Parma																			
Balagna			29.98	761.6	75.9	24.4	62	SE			1		5	NE		0	0		
Leghorn			30.[illegible]4	762.3	74.1	23.4	76	W	3.1	1.4			4			0	0		
Urbino																			
Ancona			29.99	761.7	75.2	24.0	69	SE			2		3						
Siena			30.00	762.1	76.3	24.6	62	S	0	0			9	SW		0	0		
Rome			30.05	763.3	79.9	26.6	62	S	13.6	6.1			5	SSE		0	0		
Naples, O. U.			30.09	764.3	79.5	26.4	63	SW			2		3	NW		0	0		
Lecce			30.05	763.2	76.8	24.9	58	N			4		8			0	0		
Cosenza			30.07	763.6	84.6	29.2	57	SE			6		2	ESE		0	0		
Catania, (Sicily)																			
Riposto			30.00	762.0	80.8	27.1	57	SE			4		1			0	0		
Palermo			30.00	762.1	78.8	26.0	45	NE	3.8	1.7			0			0	0		
Sub-Series.																			
Naples, S. R.			30.12	765.1	77.4	25.2	66	SW	10.5	4.7			4	S		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovia is 553 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena 318.5 m., or 1,1413 feet.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Flushing			29.73	755.2	65.1	18.4		WNW			5								
Groningen			29.65	753.2	54.7	12.6		ENE			1								
Helder			29.68	753.4	61.5	16.4		NNE			2								
Utrecht			29.64	752.7	62.6	17.0		SE			2		10					Overcast	

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bergen			29.81	757.1	40.6	4.8	87	S	2.7	1.2			10			0.571	14.5		
Christiania			29.74	755.3	49.6	9.8	38		1.6	0.7			2			0	0		
Tromsö			29.57	751.1	35.8	2.1	93	Calm			0		10			0.067	1.7	Raining	

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.02	762.5	79.9	26.6	30	S	15.0	6.7			3						The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

RUSSIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.76	755.8	60.1	15.6	59	WSW	7	3			10						Astronomical Obs.
Wilna			29.65	753.1	47.7	8.7	87	N	4	2			10					Raining	Astronomical Obs.
Dorpat			29.71	754.5	42.6	5.9	78	NW	7	3			9						Physical Cabinet.
St. Petersburg			29.61	752.2	41.7	5.3	78	Calm	0	0			8					Graupel	Central Physical Obs.
Kuopio			29.51	749.5	41.0	5.0	69	WNW					5		ESE	0	0		Ch. Forsten.
Kieff			29.72	755.0	62.8	17.1	69	W	9	4			6						Physical Cabinet.
Nikolaiev			29.94	760.5	72.1	22.3	52	WSW	10	4.5			4						Kurdakof.
Kertch			30.02	762.6	69.1	20.6	64	SSW	9	4			4						Lagorio.
Moscow			29.67	753.6	45.1	7.3	74	NW	10	4.5			10						Meteorological Obs.
Lugan			29.83	757.6	67.6	19.8	42	SW	20	9			7						Meteorological Obs.
Archangel			29.35	745.5	36.3	2.4	93	SW	17	7.5			10					Raining	Ogorodnikof.
Tiflis	28.64	727.5	30.00	762.1	74.1	23.4	32	NNW	10	4.5			0						Physical Obs.
Astrakhan			30.14	765.6	60.3	15.7	67	Calm	0	0			7					Rainy	Sebastianof.
Kasan			29.62	752.3	64.6	18.1	41	S	10	4.5			6						Physical Cabinet.
Orenburg			29.99	761.7	60.6	15.9	47	Calm	0	0			9						Tschernischef.
Ekaterinburg	28.87	733.3	29.85	758.2	58.8	14.9	46	S	4	2			2						Meteorological Obs.
Kasaly			29.76	755.9	64.6	18.1	60	Calm	0	0			0						Bobrof.
Tashkend	28.39	721.0	30.04	763.0	72.0	22.2	77	Calm	0	0			0						Michelson.
Barnaul			30.17	766.2	51.8	11.0	42	Calm	0	0			0						Meteorological Obs.
Yeniseisk			30.02	762.6	39.7	4.3	79	W	4	2			1						Marks.
Irkutsk	28.50	723.9	29.90	759.4	41.4	5.2	66	Calm	0	0			4						Usolzef.
Oorga	25.71	653.0	30.11	764.7	32.0	0.0	65	Calm	0	0			0						Mossin.
Peking, (China)			30.15	765.7	56.8	13.8	88	Calm	0	0			10					Raining	Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.03	762.7	83.8	28.8	33	W	5.1	2.3		2	0	E		0	0	Misty	Royal Observatory.
San Fernando																			The Naval Observatory.

NOTE.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea			29.56	750.8	46.0	7.8	48	NW			2		2			0	0	Frost	
Hernosand			29.74	755.3	49.6	9.8	33	WNW			2		2			0	0		
Stockholm			29.67	753.7	45.7	7.6	34	NNW			2		3			0	0	Frost	
Wisby			29.65	753.1	49.6	9.8	42	N			4		5			0.004	0.1		
Sub-Series.																			
Upsala			29.69	754.1	48.9	9.4	28	NNW	8.1	3.6			1		NNW				Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.65	727.6	30.02	762.5	71.6	22.0	67	SW			2		10			0	0	Cloudy	The Observatory.
Zurich	28.37	720.7	29.98	761.4	64.2	17.9	88	WSW			6		10		W	0.64	16.3	Raining	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +0.7mm.; Thermometer, +5°.0; Relative Humidity, +2 per cent.

Note.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria) Lee Obs'y			29.93	760.2	81.0	27.2	56	N			2		0					Clear	Prof. C. N. A. Van Dyck.
Constantinople			30.04	763.0	70.3	21.3	61	SW	2	1			10		SW	0	0	Cloudy	
Fao, (Persian Gulf)			29.88	759.[illegible]	92.1	33.4		NW			4		0					Clear	
Salonica					82.8	28.2		S			1		0					Clear	
Valona			30.03	762.8	77.9	25.5		W			2		5					Cloudy	
Varna			30.01	762.2	69.8	21.0		NW			3		10					Cloudy	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea level. The distinction between upper and lower clouds is not made.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens																			

Note.—Reports commence October 1, 1875.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Tokio																			

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario			30.26	768.0	37	2.8		Calm	0	0			10s			0	0	Cloudy	
Chatham, N. B.			30.00	762.0	44	6.7	82	W	4	1.8		5c	0	SW		0.01	0.3	Fair	
Charlottetown, P. E. Island			29.99	761.7	51	10.6	73	NW	5	2.2			8ks		NW	0	0	Cloudy	
Fort Garry, Manitoba			29.77	756.1	44	6.7	92	SW	6	2.7		2k	2st	NW	NW	0	0	Fair	
Halifax, N. S.			29.97	761.2	48	8.9	93	NE	1	0.4			5n	SW		0.05	0.13	Fair	
Kingston, Ontario			30.26	768.6	42	5.6	71	Calm	0	0			10s			0	0	Cloudy	
Montreal, Quebec			30.20	767.1	40	4.4	78	NW	7	3.1		5k	5ks			0	0	Cloudy	
Ottawa, Ontario			30.23	767.8	41	5.0	82	S	2	0.9		5k	5n	N	N	0	0	Threatening	
Parry Sound, Ontario			30.23	767.8	39	3.9	92	N	4	1.8		5ck	2ks	W	W	0	0	Fair	
Port Dover, Ontario			30.30	769.6	40	4.4	91	NW	5	2.2		10k	0	NW		0	0	Cloudy	
Port Stanley, Ontario			30.27	768.8	42	5.6	82	NW	2	0.9		10k	0	NW		0	0	Fair	
Quebec, Quebec			30.12	765.0	41	5.0	65	NW	6	2.7			10n		NW	0	0	Cloudy	
Saugeen, Ontario			30.24	768.1	37	2.8	94	S	1	0.4		5ck	2n			0.05	1.3	Cloudy	
Stayner, Ontario			30.23	767.8	38	3.3	90	Calm	0	0		5k	0	NW		0.07	1.8	Cloudy	
Sydney, C. B.			30.00	762.0	58	14.4	73	S	2	0.9		5ck	2ks	W	SW	0.01	0.4	Fair	
Toronto, Ontario			30.26	768.6	34	1.1	89	W	3	1.3		2ck	2s	NW		0	0	Fair	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.22	767.6	41	5.0	82	Calm	0	0		2k	0	W		0	0	Clear	
Alpena, Mich.			30.23	767.8	37	2.8	80	W	4	1.8		5k	0	W		0.01	0.3	Fair	
Atlantic City, N. J.			30.26	768.6	49	9.4	63	N	12	5.4		5cs	0	S		0	0	Fair	
Augusta, Ga.			30.27	768.8	56	13.3	69	E	4	1.8		5cs	0	NW		0	0	Fair	
Baltimore, Md.			30.32	770.1	51	10.6	64	NW	5	2.2		2k	5ks	W	W	0	0	Fair	
Barnegat, N. J.			30.25	768.6	48	8.9	70	NW	6	2.7		2ck	0	W		0	0	Fair	
Benton, Montana	27.14	689.3	29.94	760.5	41	5.0	70	Calm	0	0		Sm'e	0			0	0	Smoky	
Bismarck, Dakota	28.12	714.2	29.78	756.4	38	3.3	71	SW	4	1.8		1c	Haze	SW		0	0	Fair	
Boston, Mass.			30.17	766.3	44	6.7	60	W	11	4.9		0	0			Inap.	Inap.	Clear	
Breckenridge, Minn.			29.95	760.7	39	3.9	91	SE	8	3.6			10s			0	0	Cloudy	
Buffalo, N. Y.			30.25	768.3	43	6.1	66	W	4	1.8		5k	2ks	NW	W	Inap.	Inap.	Fair	
Burlington, Vt.			30.22	767.6	44	6.7	68	N	7	3.1		5k	2s			0	0	Cloudy	
Cairo, Ill.			30.35	770.9	49	9.4	71	N	4	1.8		5ck	0	W		0	0	Fair	
Cape Hatteras, N. C.			30.20	767.1	63	17.2	51	NE	18	8.0		0	5s			0	0	Fair	
Cape Henry, Va.			30.24	768.1	63	17.2	52	N	9	4.0		2k	0	N		0	0	Fair	
Cape May, N. J.			30.25	768.3	48	8.9	70	N	8	3.6		2c	0	W		0	0	Fair	
Charleston, S. C.			30.22	767.6	62	16.7	56	N	14	6.3		5c	0			0	0	Fair	
Cheyenne, Wyoming	24.09	611.9	30.03	762.7	29	—1.7	100	W	4	1.8		0	0			0	0	Clear	
Chicago, Ill.			30.30	769.6	46	7.8	69	SW	6	2.7		8ck	0	SW		0	0	Fair	
Cincinnati, Ohio			30.31	769.9	44	6.7	84	E	2	0.9		2c	Fog			0	0	Foggy	
Cleveland, Ohio			30.28	769.1	44.8	7.1	75	SW	10	4.5			10n		SW	0.08	2.0	Light rain	
Colorado Springs, Col.	24.19	614.4	30.06	763.5	33	0.6	100	N	2	0.9			10s			0.15	3.8	Cloudy	
Corsicana, Tex.			30.25	768.3	54	12.2	79	E	7	3.1		2k	8s			0.01	0.3	Cloudy	
Davenport, Iowa			30.31	769.9	45	7.2	67	SW	8	3.6		2ck	1s	W	W	0	0	Fair	
Denison, Tex.			30.28	769.1	50	10.0	86	E	5	2.2			10s			0.43	10.9	Cloudy	
Denver, Col.	24.89	632.2	30.11	764.8	36	2.2	90	N	2	0.9		5c	0	W		0	0	Fair	
Detroit, Mich.			30.28	769.1	43	6.1	75	NW	4	1.8			10s			0	0	Cloudy	
Dodge City, Kan.	27.64	702.0	29.94	760.5	54	12.2	80	S	3	1.3		10k	0	S		0.08	2.0	Cloudy	
Dubuque, Iowa			30.27	768.8	44	6.7	76	Calm	0	0			10ks		NW	0	0	Cloudy	
Duluth, Minn.			30.04	763.0	42	5.6	74	Calm	0	0			10s			0	0	Cloudy	
Eastport, Me.			30.05	763.3	47	8.3	70	NW	11	4.9			10s		W	0	0	Cloudy	
Erie, Pa.			30.24	768.1	46	7.8	69	NW	2	0.9			10ks			0.39	9.9	Cloudy	
Escanaba, Mich.			30.21	767.3	39	3.9	73	W	4	1.8		5k	0	W		0.20	5.1	Fair	
Fort Gibson, I. T.																			
Fort Sill, I. T.																			
Fort Sully, Dakota	28.39	721.1	30.06	763.5	47	8.3	62	S	4	1.8		5c	0			0	0	Fair	
Galveston, Tex.			30.16	766.1	64	17.8	85	NE	16	7.2		0	5s			0	0	Fair	
Grand Haven, Mich.			30.28	769.1	44	6.7	70	W	3	1.3			10s		W	0	0	Cloudy	
Indianapolis, Ind.			30.34	770.6	45	7.2	76	Calm	0	0		8ck	Fog			0	0	Cloudy	
Indianola, Tex.			30.15	765.8	66	18.9	94	E			4	0	1s			0	0	Clear	
Jacksonville, Fla.			30.13	765.3	65	18.3	83	N	1	0.4		4k	0	E		0	0	Fair	
Keokuk, Iowa			30.31	769.9	44	6.7	84	Calm	0	0		0	0			0	0	Clear	
Key West, Fla.			30.04	763.0	77	25.0	86	Calm	0	0			Sm'e			0.11	2.8	Cloudy	
Kittyhawk, N. C.			30.24	768.1	59	15.0	70	N	16	7.2		2k	0	N		0	0	Fair	
Knoxville, Tenn.			30.31	769.9	46	7.8	85	NE	5	2.2			10ks		SW	0	0	Cloudy	
La Crosse, Wis.			30.20	767.1	46	7.8	69	S	8	3.6			10s		S	0	0	Cloudy	
Leavenworth, Kan.			30.28	769.1	46	7.8	77	Calm	0	0			5s		W	0	0	Fair	
Lexington, Ky.	29.23	742.4	30.38	771.6	42	5.6	91	N	4	1.8		2c	5s			0	0	Cloudy	
Long Branch, N. J.			30.25	768.3	52	11.1	60	NW	10	4.5		0	0			0	0	Clear	
Louisville, Ky.			30.34	770.6	45	7.2	76	Calm	0	0			10s			0	0	Cloudy	
Lynchburg, Va.			30.32	770.1	48	8.9	77	NW	2	0.9		10k	0	W		0	0	Cloudy	
Malone, N. Y.			30.18	766.6	40	4.4	73	SW	2	0.9			10s			Inap.	Inap.	Cloudy	
Marquette, Mich.			30.19	766.8	40	4.4	73	SW	8	3.6		0	0			0.07	1.8	Clear	
Memphis, Tenn.			30.34	770.6	51	10.6	72	NE	4	1.8			10s			0	0	Cloudy	
Milwaukee, Wis.			30.30	769.6	42	5.6	57	SW	6	2.7		5k	Fog	W		0	0	Fair	
Mobile, Ala.			30.20	767.1	57	13.9	75	N	10	4.5		2ck	0			0	0	Fair	
Montgomery, Ala.			30.23	767.8	56	13.3	69	N	3	1.3		8ck	0	W		0	0	Fair	
Morgantown, W. Va.			30.31	769.9	46	7.8	76	Calm	0	0		8c	Haze	SW		Inap.	Inap.	Fair	
Mt. Washington, N. H.	23.73	602.7	30.09	764.3	19	—7.2	100	NW	15	6.7			Fog			0	0	Foggy	
Nashville, Tenn.			30.28	769.1	49	9.4	71	NW	1	0.4			10s			0	0	Cloudy	
New Haven, Conn.			30.23	767.8	50	10.0	64	NW	8	3.6		Haze	0			0	0	Clear	
New London, Conn.			30.23	767.8	51	10.6	59	NW	4	1.8		0	0			0	0	Clear	
New Orleans, La.			30.18	766.6	63.5	17.5	57	NE	12	5.4		2c	0	W		0	0	Clear	
Newport, R. I.			30.20	767.1	48	8.9	63	NW	6	2.7		0	0			0	0	Clear	
New York, N. Y.			30.27	768.8	48	8.9	62	NW	8	3.6		0	0			0	0	Clear	
Norfolk, Va.			30.26	768.6	56	13.3	81	N	8	3.6		Haze	0			0	0	Clear	
North Platte, Neb.	27.22	691.4	29.82	757.7	42	5.6	74	SW	10	4.5		Haze	0			0	0	Fair	
Omaha, Neb.	29.14	740.1	30.24	768.1	41	5.0	91	SW	4	1.8		2c	0			0	0	Fair	
Oswego, N. Y.			30.24	768.1	43.5	6.4	75	SSE	4	1.8			10s		W	Inap.	Inap.	Cloudy	
Peck's Beach, N. J.			30.16	766.1	50	10.0	64	NE	10	4.5		1c	0			0	0	Fair	
Pembina, Dakota			29.77	756.1	42	5.6	83	SE	8	3.6		5cs	2s	NW		0	0	Cloudy	
Philadelphia, Penn.			30.28	769.1	49	9.4	37	N	9	4.0		2ck	0	W		0	0	Fair	
Pike's Peak, Colorado	17.79	451.8	30.00	762.0	19	—7.2	100	NE	8	3.6		0	10s		N	0.04	1.0	Cloudy	
Pittsburgh, Penn.			30.28	769.1	41	5.0	83	NW	3	1.3		0	5ck		NW	0	0	Fair	
Port Huron, Mich.			30.28	769.1	40	4.4	82	W	6	2.7			10s		W	0.01	0.3	Cloudy	
Portland, Me.			30.15	765.8	44	6.7	68	NW	5	2.2		8k	0	NW		Inap.	Inap.	Cloudy	
Portland, Oregon			29.92	760.0	54	12.2	86	N	1	0.4		Haze	Haze			0	0	Hazy	
Punta Rassa, Fla.			30.07	763.8	73.5	23.1	90	NE	12	5.4		Haze	2ks		NE	0	0	Hazy	
Rochester, N. Y.			30.23	767.8	45	7.2	76	W	8	3.6		0	5s		W	0	0	Fair	
Salt Lake City, Utah	25.67	652.0	30.00	762.0	49	9.4	31	E	4	1.8		0	0			0	0	Clear	
Sandy Hook, N. J.			30.24	768.1	49	9.4	50	N	12	5.4		2c	0	SW		0	0	Clear	
San Diego, Cal.			29.96	761.0	66	18.9	68	Calm	0	0			10s			0	0	Cloudy	
San Francisco, Cal.			29.91	759.7	57	13.9	87	W	4	1.8		0	0			0	0	Clear	
Santa Fe, N. M.	23.27	591.7	29.79	759.2	40	4.4	82	SW	4	1.8			10n			0.50	12.7	Light rain	
Savannah, Ga.			30.20	767.1	60	15.6	70	N	8	3.6		8k	0	NW		0	0	Fair	
Shreveport, La.			30.31	769.9	53	11.7	79	NE	5	2.2			10s			Inap.	Inap.	Cloudy	
Smithville, N. C.																			
Springfield, Mass.			30.23	767.8	45	7.2	68	NW	4	1.8		0	0			0.01	0.3	Clear	
St. Louis, Mo.			30.38	771.6	46	7.8	76	NE	1	0.4			Fog			0	0	Foggy	
St. Marks, Fla.			30.14	765.5	65	18.3	83	NE	6	2.7		0	0			0	0	Clear	
St. Paul, Minn.			30.06	763.5	41	5.0	79	SE	8	3.6			10s			0	0	Cloudy	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			30.19	766.8	48	8.9	71	N	3	1.3		2cs	0	W		0	0	Fair	
Toledo, Ohio			30.29	769.4	44	6.7	75	W	4	1.8			10s			0	0	Cloudy	
Tucson, Arizona																			
Tybee Island, Ga.			30.19	766.8	66	18.9	64	NE	22	9.8		2k	8ks	NE	N	0	0	Cloudy	
Vicksburg, Miss.			30.33	770.4	51	10.6	84	NE	2	0.9		10cs	0	S		0	0	Cloudy	
Virginia City, Montana	24.33	618.0	29.81	757.2	41	5.0	56	SE	1	0.4		0	0			0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.31	769.9	48.5	9.2	71	NW	8	3.6		1ck	1s	W		0	0	Fair	
Wilmington, N. C.			30.24	767.8	56	13.3	68	N	7	3.1		2c	0	W		0	0	Clear	
Wood's Hole, Mass.			30.19	766.8	50	10.0	52	NW	13	5.8		0	5s		SW	0	0	Fair	
Wytheville, Va.	27.90	708.6	30.14	765.5	38	3.3	90	NW	2	0.9		8ck	0	W		0	0	Cloudy	
Yankton, Dakota	28.84	732.5	30.16	766.1	40	4.4	91	SW	6	2.7			8s			0	0	Cloudy	
Yuma, Arizona																			
Sub-Series.																			
Bridgetown, B'b'does, W. I.					78	25.6	95	SE	15	6.7						0.55	14.0	Rainy	E. Racker.
Pointe-aPitre, Gd'loupe, do			29.95	760.7	84	28.3	70	NE				2k	2s			0	0	Clear	L. V. Bigard.
Havana, Cuba, W. I.			30.11	764.8	76	24.4	90	SE	0.7	0.3		1ck	1k	SW	SE	3.00	76.2	Fair	Charles Hasselbrink.
Kingston, Jamaica, W.			30.19	766.8	78	25.6	78	Calm	0	0		1c	2s	E		0	0	Fair	James Gall.
St. Thomas, St. T., W. I.																			W. S. Cameron.
Santiago de Cuba, W. I.			29.87	758.7	79	25.0	76	N	4.8	2.1		8cs	0	NW		Blank	Blank	Cloudy	Robert Mason.
St. Georges, Bermudas			29.97	761.2	80	26.7	87	SW	8.0	3.6		5pk	10pk			0.200	5.08	Cloudy	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.			29.44	747.8	50	10.0	49	W	8	3.6		10k	0	NE		0	0	Cloudy	J. Fortescue.
St. John's, Newfoundland			30.08	764.0	57	13.9	93	SW								0	0	Cloudy	John Delaney.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Clifton, Jamaica, W. I.	27.26	692.4	30.04	763.1	71	21.7	85	S	0.5	0.2		8c	0	S		0	0	Cloudy	C. Partridge.
Navassa																			
Meselin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			30.27	768.8	52	11.1	53	SW	4	1.8			10n			0.03	0.8	Cloudy	H. M. Redington.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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 2,832 ft., or 863.5 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 Sully, 1,678 (?) ft., or 511.4 (?) m.; Lexington, 1,053 (?) ft., or 320.1 (?) m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,263.8 ft., or 1,301.1 m.; Santa Fé, 6,86[illegible] (?) ft., or 2,091.6 (?) m.; Virginia City, 5,180 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.49 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.31 in.; Santa Fé, 6.54 in.; Virginia City, 5.18 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 23, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.06	763.5	81.3	27.4	63	Calm			0		0			0	0	Fair	Charnot.
Algiers			30.04	763.0	78.8	26.0	78	NNW			2		2			0	0	Fair	Peter.
La Calle																			Kuntz.
Tunis			30.07	763.6	82.4	28.0	64	E			3		2			0	0	Cloudy	Jacques.
Sfax			30.08	763.9	84.9	29.4	68	NE			2		2			0	0	Fair	Chauvey.
Saida			30.02	762.5	86.9	30.5	24	NNW			1		0			0	0	Fair	Grosjean.
Tebessa			30.03	762.7	87.3	30.7		N			2		7			0.236	6.0	Heavy rain	Colin.
Geriville			30.03	762.8	82.4	28.0	27	NW			2		1			0	0	Fair	Bornadach.
Laghouat			29.99	761.7	89.6	32.0	24	W			2		2			0	0	Thunder	Simon.
Biskra			29.94	760.5	94.1	34.5	25	S			2		3			0	0	Fair	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			29.84	757.8	75.6	24.2	76	SW			2		7			0.138	3.5	Rainy	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.89	759.1	51.5	12.5	60	W			3		4			0.106	2.7		I. R. Observatory.
Eperies			29.80	757.0	57.2	14.0	42	N			5		5		S	0.165	4.20		Julius Mikolik.
Gratz	28.74	730.1	29.91	759.8	66.0	18.9	75	SSW			2		8						Andreas Rospini.
Hermannstadt	28.32	719.3	29.69	754.0	68.7	20.4	59	WSW			5		5			0.031	0.80	Rainy	Prof. Reissenberger.
Kremsmünster	28.67	728.3	30.00	762.1	57.2	14.0	90	WSW			2		10			0.622	15.8		Prof. C. Wagner.
Lemberg			29.73	755.2	52.0	11.1	73	NW			4		3			0.358	9.1	Rainy	Dr. T. Stanecki.
Nyiregyhaza			29.80	756.8	60.4	15.8	57	NE			4		5			0.178	4.51		Habzsuda Daniel.
Pola			29.89	759.3	75.6	24.2	84	SSE			3		10s		SE	0	0		I.R. Hydrographic Office
Szegedin			29.79	756.7	70.0	21.6	55	NW			4		10			0	0		Karl Stancel.
Trieste			29.90	759.4	74.3	23.5	87	Calm			0		10			Blank	Blank		Prof. V. Farolfi.
Vienna			29.93	760.1	60.8	16.0	52	NW			2		2			0.374	9.5		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. The elevation of Gratz is 313.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.16	766.1	59.5	15.3	56	E			2	9	2	NW		0.016	0.40		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.27	768.8	49.0	9.4		ENE	11	4.9			3			0	0	*D. clouds	William Boswell.
Ardrossan			30.16	766.1	54	12.2		E			4		7					Mist	Wm. McNell.
Armagh Observatory			30.05	763.3	53.7	12.1		ESE	12	5.4			10					Raining	S. Cali, for Dr. Robinson.
Bidston, Liverpool Obs			30.10	764.5	53.0	11.7		ESE			4		10					Overcast	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.88	758.9	60.2	15.7		SE			1		10					Overcast	J. Dreyer.
Bradford			30.14	765.5	54.3	12.4		E			1		9					Gloomy	J. McLandsborough.
Bridgetown, (Barbadoes)			29.96	761.0	82.6	28.1		NE			2		6					Gloomy	T. H Hunt.
Cambridge Observatory																			Sergeant Hunt, A. H. C.
Cape Good Hope Obs.			30.32	770.1	58.3	14.6	76	WNW	5	2.2			7						Th Staff, for E. J. Stone.
Cardington			30.16	766.1	55.0	12.8		E					10					Overcast	John McLaren.
Carlisle			30.16	766.1	56	13.3		NE					10			0	0	Overcast	T. Bell, for J. Cartmell.
Chatham, School M. E.			30.14	765.5	59.2	15.1		SW			1		10					Raining	Capt. J. Followes, R. E.
Dartmoor	28.63	727.2	30.00	762.0	60	15.6		SE			5		10					Fog & rain	R. E. Power.
Donaghadee			30.01	762.2	55	12.8		E			6		10					Overcast	J. Mac Gowan, Jr.
Dover			30.15	765.8	59	15.0		E			3		8						J. Costello.
Eccles, (near Manchester)			30.13	765.3	54.3	12.4		SE	4.8	2.1			10					Gloomy	Thomas Mackereth.
Falmouth Observatory			30.06	763.5	61.2	17.9		SE	17	7.6			3					*D. clouds	The Staff.
Fort Napier, (Natal)	27.60	701.0	29.82	757.4	56.5	13.6		SE			2		10					Raining	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	83	28.3		N					7						[tus.
Galway, Queen's College																			B. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			30.08	764.0	74.5	23.6		ENE			1		2						Sergt. E. G. Baker.
Glasgow Observatory			30.18	766.6	51.1	10.6		E			4		9					Squally	Lewis Stuart.
Great Yarmouth			30.17	766.3	58	14.4		E E			2		4					*D. clouds	G. T. Watson.
Greenwich Royal Obs			30.14	765.5	56.7	13.7		SE			2		10					Raining	The Staff, for G. B. Airy.
Guernsey			29.99	761.7	68.5	20.3		SE			2		5					*D. clouds	Dr. S. E. Hoskins. [ley.
Halifax, Moorside Obs			30.18	766.6	54.3	12.4		ESE					10					Threatening	F. J. Page, for L. J. Cro ss-
Helston			29.90	759.4	71	21.7		S			4		6k					*D. clouds	M. P. Moyle.
Holyhead			30.01	762.2	57	13.9		E			2		10					Raining	John Tilston.
Hull Park																			
Kew Observatory			30.14	765.5	57.6	14.-		E	13	5.8			10					Raining	The Staff.
Kingstown			30.01	762.2	57	13.9		SE			4		5					*D. clouds	George Mitchell
Leicester Museum			30.18	766.6	52.9	11.6		E			1		10					Raining	William J. Harrison.
Llandudno			30.09	764.3	52.9	11.6		ESE					10						Dr. James Nicol.
Malta, (Mediterranean)			30.09	764.3	83.8	28.8		SW			1		4k					*D. clouds	Fred Travis, Pvt A. H. C.
Nairn			30.22	767.6	51	10.6		SSE			1		8						W. D. Penny.
Nassau, (Bahamas)			30.12	765.0	83.1	28.4		SW			2		4			Blank	Blank	*D. clouds	Surg.-Maj. Henry.
Nottingham			30.17	766.3	55.1	12.8		SE			3		10d			0	0	Raining	E. J. Lowe.
Oscott, St Mary's College			30.14	765.5	50.9	10.5		ENE			2		10					Raining	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			30.09	764.3	57	13.9		Calm			0		10					Raining	J. Lucas, for R. Main.
Plymouth			29.98	761.5	65.2	18.4		E			3		10					Overcast	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.84	757.9	62	16.7		SSE			5		10					Rain & fog	W. Kennedy.
Saint Ann's Head			29.97	761.2	59	15.0		ESE			6		10					Misty	John C. Walker.
Saint Helier, (Jersey)			30.01	762.2	74.2	23.4		ESE			2		5						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			30.21	767.3	53.3	11.8		ENE			2		7					*D. clouds	F. Shaw.
Scutari cemetery, (Turkey			29.86	758.4	74.0	23.3		SW			1		4c					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.16	766.1	56.7	13.7		SE			2		10					Overcast	W. F. Cooper.
Silloth Rectory			30.14	765.5	56.7	13.4		E			5		4			0.210	5.33	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			30.14	765.5	54.1	12.3		E			2		10					Threatening	The Staff.
Stornoway, Lews C. (Hebr.)			30.18	766.6	50	10.0		E			4		4					*D. clouds	John Smith.
Stratfield Turgiss			30.11	764.8	62.5	16.9		E			0-1								Rev Charles H. Griffith
Streatley Vicarage																			Rev. John Slatter.
Sumburgh Head, (Shetland)																			
Thurso			30.26	768.6	49	9.4		E			3		6					*D. clouds	John Trotter.
Truro, Royal Institution			29.92	760.0	70	21.1		E			6		5					*D. clouds	W Newcombe.
Valencia Observatory			29.74	755.4	63.6	17.6		SE	27	12.1			10					Gloomy	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			30.24	768.1	52.0	11.1		SE			3		10k			0	0	Overcast	Andrew Gibb.
Monach Lt-house, (Shet Is			30.16	763.5	56	13.3		ESE			6	5	5		SE	0	0	Solar halo	J. Youyclause.
North Unst, (Shetland Is)			30.28	769.1	45.5	7.		N			6	9	6		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., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.78	756.3	49.3	9.6	56	N			7		7					Rainy	
Faröe			29.80	756.9	52.9	11.6	57	NNW			6		5						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			30.08	763.9	46.8	8.2	81	Calm			0		8						
Thorshavn, (Faröe)			30.31	769.9	45.0	7.8	65	SE			2		0						
Vestervig			29.94	760.4	52.5	11.4	52	WNW			6		2						

Note.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between upper and lower clouds.

FRENCH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Low 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.08	763.9	71.6	22.0	91	S			1		..e 7			0.16	4.1	Raining	Normal School.
Amiens																			Normal School.
Avignon			30.02	762.6	77.7	25.4	51	N			4		2		NW	0	0		Normal School.
Bar-sur Seine			30.07	763.8	70.	21.1	73	N			1		8		W	0.68	17.3	Cloudy	C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			30.13	765.2	62.8	17.1	88	E			2		10		E	0.191	4.8	Cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.11	764.7	76.1	24.5	65	NW			1		0			0	0	Clear	Normal School.
Bourges			30.07	763.7	77.2	25.1	68	SW			2		2		SW	0.12	3.		Normal School.
Brest			29.92	760.0	77.5	25.3	71	SSW			1		0			0.16	2.75	Clear	Naval Observatory.
Caen																			Normal School.
Chartres			30.14	765.5	58.1	14.5		SW			1		10					Cloudy	Normal School.
Chaumont	28.94	735.0	30.07	763.8	67.3	19.6		NNW			2		..k0		W	0.957	24.3		Normal School.
Commercy			30.17	766.2	60.1	15.6	87	NE			6		10k0		NE	0.39	10.	Cloudy	Normal School.
Commune de Gréasque*			30.03	762.7	81.1	27.3	33	NW					5		NW	0	0		
Le Mans																			Normal School.
Lons-Le Saulnier			30.08	763.9	71.6	22	71	SW			1		5		W	0.854	21.7	Rainy	Normal School.
Mâcon			30.08	764.0	74.1	23.4	80	Calm			0		5			0.008	0.2	Cloudy	Normal School.
Mirecourt			30.11	764.9	64.6	18.1	94	N			1		10		N	2.142	54.4	Cloudy	Normal School.
Orleans																			Normal School.
Paris Observatory			30.11	764.8	70.0	21.1	73	W			1		10k		W	0.44	11.28	Cloudy	National Observatory
Parthenay			30.46	773.6	76.3	24.6	70	SE			1		0					Clear	Normal School.
La Roche sur Yon			30.06	763.5	83.1	28.4	53	SE			4		5		N			Cloudy	Normal School.
Rochefort, Observatory			30.04	763.0	86.0	30.0	41	S			1		0			0	0	Clear	Naval Observatory.
Rouen			30.07	763.7	68.5	20.3	79	W			3		10			0.689	17.5	Cloudy	Normal School.
Saint Lo																			Normal School.
Villefranche																			Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchésl.
Mont-Louis			30.28	769.1	71.3	21.8	55	SW	7.4	3.33			2		SW	0	0		—, Falguère.
Montsouris Observatory			30.10	764.5	68.9	20.5	77	NNE			1		10			0.374	9.5	Misty	Marié Davy.
Perpignan			30.12	765.0	71.1	21.7	99	E	3.7	1.65			1			0	0		Dr. Flues.
Saint Maur, (near Paris)			30.11	764.8	68.9	20.5	84	NW			1		10			0.579	14.7	Cloudy	E. Renou.
Tours			30.08	764.1	77.7	25.4	61	W			1		2		N	0.020	0.5		C. Marquet.
Versailles, (near Paris)			30.11	764.8	72.0	22.2	74	W			1		8			0.384	9.70	Cloudy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai			29.87	753.7	73.9	23.3	98	SE	12.1	5.4			10n			0.020 / 0.028	0.5 / 0.7	Light rain	H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,0[illegible]0.0 ft.; Commune de Gréasque, 322 m., or 1,056.4 ft. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Low 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.01	762.3	56.8	13.8	57	NW	22	10			3			0.315	8.0		Prof. Hoh.
Berlin			29.97	761.2	56.3	13.5	54	W	13	6			8			0.374	9.5		Prof. Arndt.
Breslau			29.97	761.3	55.2	12.9	43	NW	36	16			8			0.236	6.0		Dr. P. Neugebauer.
Carlsruhe			30.11	764.7	59.4	15.2	66	N	11	5			3			0.689	17.5		A. Senz.
Cassel			29.85	758.3	61.3	16.3	54	NW	22	10			4			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.69	728.8	30.12	765.0	62.6	17.0	75	NW	22	10						3.280	83.3	Light rain	M. Wilhelm.
Hamburg			30.02	762.5	52.9	11.6	72	NW	18	8			7k, ks	NW		0.398	10.1	Rain squalls	Deutsche Seewarte.
Kiel			29.98	761.6	55.4	13.0	66	WNW	27	12			5			0	0		Prof. G. Karsten.
Königsberg			29.54	750.4	49.8	9.9	59	W	34	15						0.197	5.0	Thunder-storm	Prof. E. Luther.
Koslin																			Dr. Tägert.
Leipsic																			Prof. Bruhns.
Münster			30.06	763.5	55.9	13.3	48	WNW	13	6			10			0.358	9.1		Prof. E. Heis.
Posen			30.10	764.6	55.6	13.1	84	NW	9	4			4			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.86	758.4	56.1	13.4	62	NW	36	16			5			0	0	Nearly clear	Dr. Schur.
Stuttgart			30.13	765.2	61.2	16.2	71	NE	9	4			10			0.012	0.3		Mr. Würth.
Thorn			30.10	764.5	50.9	15.5	66	W					5			0.035	0.9	Light rain	Dr. Hasenbalg.
Trevers, (Trier)			29.75	755.6	55.6	13.1	50	W	22	10			7			0.232	5.9		Prof. [illegible]
Wusirow, Naval School			30.10	764.6	62.6	17.0	52	E	18	8			3			0	0		E. F. [illegible]chütz.
			29.89	759.3	55.2	12.9	46	SW	27	12			8k			0.002	0.04	Cloudy	

Note.—In the originals the distinction between 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.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Low 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			29.86	758.5	76.1	24.5	65	NW	0	0			7	S		0	0		
Mondovi			29.91	759.8	79.5	26.4	46	SE			2		5	NW		0	0		
Genoa			29.93	760.1	78.3	25.7	69	SE	7.4	3.3			2	SE		0	0		
Pavia			29.87	758.7	79.7	26.5	59	SW			4		8	SW		0	0		
Verona			29.83	757.5	85.1	29.5	45	NW			2		0			0	0		
Padua			29.84	758.4	73.2	22.9	71	SE	3.1	1.4			10	NW		0	0		
Parma																			
Bologna			29.90	759.4	77.0	25.0	63	W			1		4	N		0	0		
Leghorn			29.93	760.3	77.0	25.0	73	SW	11.2	5.0			6			0	0		
Urbino																			
Ancona			29.91	759.6	79.5	26.4	60	ESE			2		0						
Siena			29.93	760.2	77.2	25.1	54	NW	0	0			10	W		0	0		
Rome			29.99	761.7	79.2	26.2	67	SW	7.4	3.3			8	W3W		0	0		
Naples, O. U			30.00	762.0	81.7	27.6	60	SW			4		4			0	0		
Lecce			29.98	761.5	79.3	26.3	48	SW			4		5	SW		0	0		
Cosenza			30.04	762.9	82.0	28.0	53	WNW			6		6						
Catania, (Sicily)																			
Riposto			29.95	760.7	81.1	27.3	69	S			2		3	S		0	0		
Palermo			29.98	761.4	80.8	27.1	61	NE	2.5	1.1			9			0	0		
Sub-Series.																			
Naples, S. R			30.05	763.3	77.2	25.1	75	WSW	6.9	3.1			5	SW		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovia is 536 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,144.3 feet.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Flushing			30.20	767.1	64.4	18.0		SE			2								
Groningen					56.3	13.5		WNW			4								
Helder			30.15	765.8	57.7	14.3		NW			4								
Utrecht			30.13	765.3	61.0	16.1		NNW			2		10					Overcast	

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bergen			29.96	761.0	45.3	7.4	45	N	11.2	5.0			7			0	0		
Christiania			29.81	757.2	48.6	9.2	27	N	15.0	6.7			6			0	0		
Tromsö			29.91	759.8	37.0	2.8	100	Calm			0		10			0.240	6.1		

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.02	762.6	85.3	29.6	25	S	12.5	5.6			2	SSW					The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

RUSSIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.76	755.9	52.9	11.6	45	WNW	16	7			7						Astronomical Obs.
Wilna			29.60	751.7	45.9	7.7	65	WNW	10	4.5			2						Astronomical Obs.
Dorpat			29.60	751.9	42.3	5.7	70	NW	7	3			7						Physical Cabinet.
St. Petersburg			29.58	751.	44.2	6.8	63	NE	4	2			9						Central Physical Obs.
Kuopio			29.66	753.4	43.0	6.1	62	NNW					5		SSE	0	0		Ch. Forsten.
Kieff			29.47	748.6	50.5	10.3	73	WNW	18	8			9						Physical Cabinet.
Nikolaïev			29.68	753.8	65.7	18.7	73	SW	31	14			8						Kurdukof.
Kertch			29.82	757.3	68.4	20.2	71	S-W	13	6			6						Lagorio.
Moscow			29.42	744.7	42.6	5.9	97	S	10	4.5			10					Raining	Meteorological Obs.
Lugan			29.66	753.3	68.0	20.0	53	SSW	25	11			8						Meteorological Obs.
Archangel			29.61	752.1	39.7	4.3	90	W	4	2			7						Ogorodnikof.
Tiflis	28.62	726.8	29.97	761.3	74.8	23.8	59	Calm	0	0			6						Physical Obs.
Astrakhan			30.07	763.7	68.5	20.5	49	S	10	4.5			2						Sebastianof.
Kasan			29.77	756.1	46.2	7.9	61	NE	8	3.5			9						Physical Cabinet.
Orenburg			29.91	759.8	64.9	18.3	43	S	4	2			10						Tschernischeff.
Ekaterinburg	28.70	728.9	29.67	753.6	59.9	15.5	44	SW	4	2			8						Meteorological Obs.
Kasaly			29.90	759.4	63.1	17.3	82	Calm	0	0			2						Robrof.
Tashkend	28.30	718.7	29.95	760.6	70.3	21.3	76	Calm	0	0			0						Michelson.
Barnaul			30.14	765.5	53.4	11.9	34	SE	8	3.5			0						Meteorological Obs.
Yeniseisk			29.97	761.1	45.7	7.6	67	Calm	0	0			0						Marks.
Irkutsk	28.49	623.7	29.91	759.6	68.0	20.0	93	NW	7	3			10					Snow & rain	Usolzef.
Oorga	25.60	650.1	29.98	761.6	30.9	— 0.6	75	Calm	0	0			4						Mossin.
Peking, (China)			30.10	764.6	55.8	13.2	58	Calm	0	0			2						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. The elevation of Tiflis is 403.0 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 1,941.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.04	763.1	89.4	31.9	31	SE	6.0	2.7		0	0			0	0	Clear	Royal Observatory.
San Fernando																			The Naval Observatory.

NOTE.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Lower 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea			29.81	757.1	44.4	6.[illegible]	37	NNW			2		5			0	0	Frost	
Hernosand			29.96	760.9	39.[illegible]	4.[illegible]	89	NE			4		7			0	0	Snow & hail.	
Stockholm			29.62	752.4	37.4	3.0	93	NE			6		10			0	0	Rain, hail, snow	
Wisby			29.55	750.5	42.1	5.[illegible]	91	NE			2		10			0.165	4.2		
Sub-Series.																			
Upsala			29.66	753.4	44.1	6.7	63	ENE	10.1	4.5			10					Raining	Dr. Hildebrandsson.

NOTE.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Geneva	28.71	729.2	30.08	763.9	75.6	24.2	56	WSW			2		8			0.439	11.16	Cloudy	The Observatory.
Zurich	28.50	724.0	30.11	764.8	63.1	17.3	90	SW			1		10		W	0.16	41.5	Raining	The Observatory.

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +2.4mm.; Thermometer, +7.3; Relative Humidity, −9 per cent.

NOTE.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Beirut, (Syria,) Lee Obs'y			29.95	760.6	79.9	26.6	63	N			2		0					Clear	Prof. C. N. A. Van Dyck.
Constantinople			29.80	759.5	73.0	22.8	51	SW	9	4			2		SW	0	0		
Fao, (Persian Gulf)			29.88	759.0	91.4	33.0		NW			4		0					Clear	
Salonica					79.2	26.2		S			1		0					Clear	
Valona			29.95	760.7	82.0	27.8		S			2		5					Cloudy	
Varna			29.88	759.0	78.8	26.0		N			2		0					Clear	

NOTE.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms; and it is assumed that the barometer is reduced to sea level. The distinction between upper and lower clouds is not made.

GREEK SERIES.

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

Athens																			

NOTE.—Reports commence October 1, 1875.

JAPANESE SERIES.

Tokio																			

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Brockville, Ontario			30.39	771.9	45	7.2		Calm	0	0		0	0			0	0	Clear	
Chatham, N. B.			30.14	765.5	42	5.6	71	W	10	4.5		0	0			0	0	Clear	
Charlottetown, P. E. Island			30.13	765.3	47	8.3	63	N	6	2.7		0	0			0	0	Clear	
Fort Garry, Manitoba			29.61	752.1	49	9.4	96	SW	18	8.0		0	0			0	0	Clear	
Halifax, N. S.			30.12	765.0	47	8.3	82	N	9	1.0		2k	0	N		0.092	0.81	Fair	
Kingston, Ontario			30.37	771.4	41	5.0	75	Calm	0	0		0	0			0	0	Clear	
Montreal, Quebec			30.20	769.6	42	5.6	74	W	15	6.7		0	28			0	0	Clear	
Ottawa, Ontario			30.31	769.9	38	3.3	75	SW	2	0.9		0	0			0	0	Clear	
Parry Sound, Ontario			30.27	768.8	38	3.3	95	SW	9	4.0		0	0			0	0	Clear	
Port Dover, Ontario			30.39	771.9	36	2.2	90	NW	4	1.8		2k	0	SW		0	0	Fair	
Port Stanley, Ontario			30.35	770.9	33	0.6	89	N	1	0.4		5k	0	N		0	0	Fair	
Quebec, Quebec			30.25	768.3	41	5.0	83	W	4	1.8		10k	0	W		0	0	Cloudy	
Saugeen, Ontario			30.25	768.3	41	5.0	80	S	3	1.3		2k	0	W		0	0	Clear	
Stayner, Ontario			30.28	769.1	39	3.9	41	S	1	0.4		0	0			0	0	Clear	
Sydney, C. B.			30.12	765.0	54	12.2	57	W	10	4.5		2ck	1ks	NW	W	0	0	Fair	
Toronto, Ontario			30.35	770.9	36	2.2	78	NW	2	0.9		0	0			0	0	Clear	

NOTE.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.36	771.1	42	5.6	783	Calm	0	0		0	Fog			0	0	Fair	
Alpena, Mich.			30.16	766.1	46	7.8	77	SW	8	3.6		0	0			0	0	Clear	
Atlantic City, N. J.			30.36	771.1	54	12.2	55	NE	6	2.7		0	0			0	0	Clear	
Augusta, Ga.			30.31	769.9	59	15.0	62	NE	3	1.3			10s		NE	0	0	Cloudy	
Baltimore, Md.			30.42	772.7	51	10.6	71	N	4	1.8		2k	5ks	W		0	0	Fair	
Barnegat, N. J.			30.33	771.1	54	12.2	54	NW	3	1.3		2ck	0	W		0	0	Fair	
Benton, Montana	27.05	687.1	29.88	758.9	47	8.3	55	Calm	0	0		0	0			0	0	Clear	
Bismarck, Dakota	27.97	710.4	29.60	751.8	45	7.2	76	NW	4	1.8			Haze			0	0	Hazy	
Boston, Mass.			30.34	770.6	41	5.6	66	W	7	3.1		0	Haze			0	0	Clear	
Breckenridge, Minn.			29.80	756.9	42	5.6	91	SE	8	3.6		0	0			0	0	Clear	
Buffalo, N. Y.			30.35	770.9	43	6.1	75	SE	4	1.8		0	Sm'e			Inap.	Inap.	Clear	
Burlington, Vt.			30.33	770.4	45	7.2	68	S	3	1.3		2k	5s	N		0	0	Cloudy	
Cairo, Ill.			30.32	770.1	47	8.3	85	Calm	0	0		2cs	0	W		0	0	Fair	
Cape Hatteras, N. C.			30.24	768.1	64	17.8	52	NE	22	9.8		2ck	8s	W	NE	0	0	Cloudy	
Cape Henry, Va.			30.33	770.4	62	16.7	56	NE	20	8.9		2ck	0			0	0	Fair	
Cape May, N. J.			30.36	771.1	51	10.6	71	N	6	2.7		0	0			0	0	Clear	
Charleston, S. C.			30.27	768.8	62	16.7	61	N	12	5.4		5ck	0	NW		0	0	Fair	
Cheyenne, Wyoming	24.05	610.9	29.99	761.7	42	5.6	56	NW	9	4.0		0	0			0	0	Clear	
Chicago, Ill.			30.28	769.1	45	7.2	68	S	10	4.5		0	0			0	0	Clear	
Cincinnati, Ohio			30.33	770.4	44	6.7	75	E	1	0.4			Fog			0	0	Foggy	
Cleveland, Ohio			30.37	768.8	44.9	7.2	63	S	5	2.2			8ks		N	0.01	0.3	Fair	
Colorado Springs, Col.	24.13	612.9	30.01	762.0	43	6.1	59	N	8	3.6		0	0			0	0	Clear	
Corsicana, Tex.			30.19	766.8	55	12.8	87	NE	5	2.2		2c	2s	NW		0	0	Fair	
Davenport, Iowa			30.26	768.6	47	8.3	69	SW	8	3.6		1cs	Sm'e		SW	0	0	Fair	
Denison, Tex.			30.21	767.3	52	11.1	93	NE	3	1.3			10s			0.07	1.8	Cloudy	
Denver, Col.	24.82	630.4	30.04	763.0	42	5.6	66	S	5	2.2		0	0			0	0	Clear	
Detroit, Mich.			30.33	770.4	45	7.2	68	W	8	3.6			10ks		W	0	0	Cloudy	
Dodge City, Kan.	27.50	698.5	29.75	755.6	57	13.9	81	S	2	0.9		10k	0	S		0	0	Cloudy	
Dubuque, Iowa			30.20	767.1	48	8.9	70	S	10	4.5		2c	2s			0	0	Fair	
Duluth, Minn.			29.91	759.7	47	8.3	85	SW	4	1.8		0	0			0	0	Clear	
Eastport, Me.			30.22	767.6	44	6.7	67	N	8	3.6		8k	0	W		0.02	0.5	Fair	
Erie, Pa.			30.33	770.4	46	7.8	77	SE	8	3.6		0	5ks			0.18	4.6	Fair	
Escanaba, Mich.			30.07	763.8	47	8.3	70	SW	12	5.4		0	5k		W	0	0	Fair	
Fort Gibson, I. T.																			
Fort Sill, I. T.	29.00	736.6						Calm	0	0			10s			0	0	Cloudy	
Fort Sully, Dakota	28.16	715.2	29.82	757.4	43	6.1	67	Calm	0	0		0	0			0	0	Clear	
Galveston, Tex.			30.12	765.0	65	18.3	84	NE	13	5.8		0	0			0	0	Clear	
Grand Haven, Mich.			30.25	768.3	56	13.3	62	SW	18	8.0		0	0			0	0	Clear	
Indianapolis, Ind.			30.40	772.1	40	4.4	82	E	2	0.9			Fog			0	0	Foggy	
Indianola, Tex.			30.11	764.8	69	20.6	95	NE			4	0	0			0	0	Clear	
Jacksonville, Fla.			30.18	766.6	69	20.6	71	N	4	1.8		0	0			0	0	Clear	
Keokuk, Iowa			30.21	767.3	48	8.9	70	Calm	0	0		0	0			0	0	Clear	
Key West, Fla.			30.07	763.8	77.2	25.1	82	NE	6	2.7		2ck	8s	N		0.39	9.9	Cloudy	
Kittyhawk, N. C.			30.32	770.1	62	16.7	66	NE	24	10.7		8k	0	E		0	0	Fair	
Knoxville, Tenn.			30.32	770.1	46	7.8	76	Calm	0	0		4ck	Fog	SW		0	0	Fair	
La Crosse, Wis.			30.11	764.8	52	11.1	79	S	10	4.5		0	0			0	0	Clear	
Leavenworth, Kan.			30.21	767.3	43	6.1	75	Calm	0	0		0	0			0	0	Clear	
Lexington, Ky.	29.22	742.2	30.36	771.1	43	6.1	84	NE	7	3.1		0	2c			0	0	Clear	
Long Branch, N. J.			30.37	771.4	59	15.0	59	NW	2	0.9		0	0			0	0	Clear	
Louisville, Ky.			30.35	770.9	43	6.1	83	NW	4	1.8		0	0			0	0	Clear	
Lynchburg, Va.			30.39	771.9	49	9.4	92	Calm	0	0		10c	0	W		0	0	Cloudy	
Malone, N. Y.			30.32	770.1	41	5.0	65	S	7	3.1		0	0			Inap.	Inap.	Clear	
Marquette, Mich.			30.01	762.2	47	8.3	70	S	8	3.6		0	0			0	0	Clear	
Memphis, Tenn.			30.3[illegible]	769.6	53	11.7	94	NW	3	1.3			10n		NE	0.20	5.1	Light rain	
Milwaukee, Wis.			30.27	768.8	45	7.2	68	SW	9	4.0		5ck	0	NW		0	0	Fair	
Mobile, Ala.			30.17	766.3	59	15.0	76	N	6	2.7		5ck	0	SW		0	0	Fair	
Montgomery, Ala.			30.22	767.6	59	15.0	82	N	2	0.9		10ck	0	W		0	0	Cloudy	
Morgantown, W. Va.			30.40	772.1	44	6.7	91	Calm	0	0			Fog			0	0	Foggy	
Mt. Washington, N. H.	23.85	605.8	30.21	767.3	18	−7.8	100	W	20	8.9			Fog			0	0	Foggy	
Nashville, Tenn.			30.26	768.6	49	9.4	85	Calm	0	0		10k	Sm'e	W		0	0	Cloudy	
New Haven, Conn.			30.37	771.4	49	9.4	71	N	4	1.8		Haze	Sm'e			0	0	Clear	
New London, Conn.			30.38	771.6	48	8.9	70	N	3	1.3		0	Haze			0	0	Clear	
New Orleans, La.			30.15	765.8	63.5	17.5	60	NE	10	4.5		2k	0	SE		0	0	Clear	
Newport, R. I.			30.36	771.1	47	8.3	70	NW	2	0.9		0	0			0	0	Clear	
New York, N. Y.			30.38	771.6	50	10.0	64	NW	1	0.4		0	Fog			0	0	Clear	
Norfolk, Va.			30.45	770.9	58	14.4	53	NE	4	1.8		2c	0			0	0	Fair	
North Platte, Neb.	27.07	687.6	29.66	753.4	42	5.6	91	Calm	0	0		0	0			0	0	Clear	
Omaha, Neb.	29.01	736.8	30.10	764.5	46	6.7	88	S	8	3.6		0	0			0	0	Clear	
Oswego, N. Y.			30.37	771.4	46.2	7.9	76	SSW	4	1.8		Haze	8ks		NW	0.15	3.8	Cloudy	
Peck's Beach, N. J.			30.34	771.0	52	11.1	65	NE	4	1.8		0	2s			0	0	Fair	
Pembina, Dakota			29.63	752.6	45	7.2	92	SE	8	3.6		0	Haze			0	0	Clear	
Philadelphia, Penn.			30.39	771.9	51	10.6	59	E	3	1.3		0	0			0	0	Clear	
Pike's Peak, Colorado	17.89	454.4	30.10	764.5	27	−2.8	88	NE	12	5.4		0	0			0	0	Clear	
Pittsburgh, Penn.			30.39	771.9	42	5.6	83	NW	2	0.9			Fog			0	0	Foggy	
Port Huron, Mich.			30.32	770.1	44	6.7	67	SW	10	4.5			10s		W	0	0	Cloudy	
Portland, Me.			30.34	770.4	44	6.7	68	W	4	1.8		0	0			0	0	Clear	
Portland, Oregon			30.12	765.0	58	14.4	81	Calm	0	0		5ck	5ks			0	0	Cloudy	
Punta Rassa, Fla.			30.12	765.0	74	23.3	72	NE	12	5.4		5cs	Sm'e	SW		0	0	Fair	
Rochester, N. Y.			30.35	770.9	42	5.6	74	SW	6	2.7		0	Haze			0	0	Clear	
Salt Lake City, Utah	25.66	651.8	29.99	761.7	48	8.9	56	Calm	0	0		0	0			0	0	Clear	
Sandy Hook, N. J.			30.37	771.4	51	10.6	52	N	7	3.1		1c	Haze	SW		Inap.	Inap.	Clear	
San Diego, Cal.			29.97	761.2	64	17.8	78	NE	4	1.8			10s			0	0	Cloudy	
San Francisco, Cal.			29.97	761.2	55	12.8	87	SW	4	1.8			10s			0	0	Cloudy	
Santa Fe, N. M.	23.26	590.8	29.80	756.9	39	3.9	64	Calm	0	0		0	0			0.01	0.3	Clear	
Savannah, Ga.			30.25	768.3	62	16.7	70	N	8	3.6		2cs	0			0	0	Clear	
Shreveport, La.			30.25	768.3	54	12.2	86	NE	3	1.3		5ck	0	SW		0	0	Clear	
Smithville, N. C.																			
Springfield, Mass.			30.38	771.6	35	1.7	95	Calm	0	0			Fog		N	0.02	0.5	Foggy	
St. Louis, Mo.			30.31	769.9	48	8.9	70	SE	3	1.3		0	0			0	0	Clear	
St. Marks, Fla.			30.19	766.8	67	19.4	79	E	6	2.7		5ck	0			0	0	Fair	
St. Paul, Minn.			29.96	761.0	47	8.3	88	SE	7	3.1		5cs	0			0	0	Fair	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			30.30	769.6	51	10.6	59	N	1	0.4		2c	Haze	W		0	0	Fair	
Toledo, Ohio			30.35	770.9	44	6.7	75	N	3	1.3		2ck	Haze	N	N	0	0	Fair	
Tucson, Arizona																			
Tybee Island, Ga.			30.25	768.3	70	21.1	69	N	20	8.9		2k	0			0	0	Fair	
Vicksburg, Miss.			30.28	769.1	54	12.2	86	E	1	0.4		0	8ks			0	0	Cloudy	
Virginia City, Montana	24.30	617.2	29.78	756.4	46	6.7	47	Calm	0	0		0	0			0	0	Clear	

UNITED STATES SERIES - CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.40	772.1	49	9.4	77	Calm	0	0		0	10s		W	0	0	Cloudy	
Wilmington, N. C.			30.29	769.4	58	14.4	69	NE	10	4.5		8c	0	W		0	0	Fair	
Woods Hole, Mass.			30.35	770.9	48	8.9	49	NW	7	3.1		0	0			0	0	Clear	
Wytheville, Va.	27.94	709.7	30.20	767.1	37	2.8	90	NE	1	0.4		2cs	0	W		0	0	Fair	
Yankton, Dakota	28.70	729.0	30.00	762.0	45	7.[illegible]	92	S	6	2.7		0	0			0	0	Clear	
Yuma, Arizona																			
Sub-Series.																			
Bridgetown, Barbados, W. I.					81	27.2	90	E	3	1.3		2c	10ks	E		1.00	25.4	Cloudy	E. Backer.
Pointe-a-Pitre, Guadeloupe, do			29.95	760.7	81	27.2	78	E				0	5ks			0	0	Fair	L. V. Bigard.
Havana, Cuba, W. I.			30.11	764.8	76	24.4	86	Calm	0	0		2ck	1k	SW	SE	0.36	9.1	Fair	Charles Hasselbrink.
Kingston, Jamaica, W. I.			30.18	766.6	78	25.6	82	Calm	0	0		2c	0	SE		0	0	Clear	James Gall.
St. Thomas, St. T., W. I.																			W. S. Cameron.
Santiago de Cuba, W. I.			29.84	757.9	78	25.6	78	Nc	1.2	0.5		0	0					Clear	Robert Mason.
St. Georges, Bermudas			30.02	762.5	77.5	25.3	84	SW	0.4	0.2			10pk			0.965	24.51	Cloudy	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.			29.54	750.0	43	6.1	79	NW	10	4.5		6cs	0	NW		0	0	Fair	J. Fortescue.
St. John's, Newfoundland			30.07	763.8	55	12.8	93	S								0.25	6.3	Cloudy	John Delaney.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Clifton, Jamaica, W. I.	27.26	692.4	30.03	762.7	70	21.1	99	Calm	0	0		0	0			0	0	Clear	C. Partridge.
Navassa																			
Mesaillin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			30.34	770.6	50	10.0	50	SW	4	1.8			8ks			0	0	Cloudy	H. M. Redington.

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

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; 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, 6,86[illegible].3 (?) ft., or 2,091.0 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 24, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.05	763.3	79.9	26.6	71	Calm			0		3			0	0	Fair	Charnot.
Algiers			30.02	762.5	80.2	26.8	71	NNE			1		3			0	0	Fair	Peter.
La Calle																			Kuntz.
Tunis			30.01	762.3	90.5	32.5	37	N			4		0			0	0	Cloudy	Jacques.
Sfax			30.01	762.3	84.9	29.4	63	SE			3		2			0	0	Fair	Chauvey.
Saida			30.00	762.0	80.6	27.0	26	N			1		2			0	0	Fair	Grosjean.
Tebessa			29.99	761.7	79.0	26.1		NNW			1		7			0	0		Colin.
Geriville			30.00	762.1	77.0	25.0	28	NW			2		4			0	0	Fair	Bernadach.
Laghouat			29.93	760.3	86.0	30.0	30	SW			2		1			0	0		Simon.
Biskra			29.88	759.0	91.6	33.1	23	E			2		3			0	0	Fair	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.14	765.6	59.7	15.4	40	NE			1		10			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.23	767.8	46.0	7.8	67	WNW			4		7			0.071	1.8		I. R. Observatory.
Eperies			29.99	761.8	48.2	9.0	55	N			6		5		S	0	0		Julius Mikolik.
Gratz			30.11	764.7	58.1	14.5	54	SW			5		5						Andreas Rospini.
Hermannstadt	28.91	734.3	29.93	760.1	45.3	7.4	66	N			5		5			0	0		Prof. Reissenberger.
Kremsmünster	28.48	723.3	30.26	768.5	51.8	11.0	51	NW			3		3			0	0		Prof. C. Wagner.
Lemberg	28.90	734.1	29.80	756.8	45.5	7.5	54	NW			5		9			0.228	5.8	Rain & snow	Dr. T. Stanecki.
Nyiregyhaza			30.02	762.4	53.2	11.8	33	N			5		5			0	0		Habzsuda Daniel.
Pola			29.95	760.7	69.8	21.0	57	E			5		8ks			0	0		I.R. Hydrographic Of'ce
Szegedin			30.05	763.2	61.8	16.0	45	N			4		7			0	0		Karl Stancel.
Trieste			29.97	761.3	68.9	20.5	52	ENE			2		0			0	0		Prof. V. Farolfi.
Vienna			30.17	766.2	55.4	13.0	35	NW			4		7			0.020	0.5		I. R. Central Institute.

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

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0–10.	Clouds. Amount. Up'er 0–10.	Clouds. Amount. Low'r 0–10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.26	768.6	55.4	13.0	71	ESE			4	0?	10			0.059	1.50		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.17	766.3	54.0	12.2		SSE	28	12.5			9			0	0	Squally	William Boswell.
Ardrossan			29.99	761.7	55	12.8		ESE			4		9					Overcast	Wm. McNeil.
Armagh Observatory			29.82	757.4	59.8	15.4		SE	22	9.8			10					Squally	S. Cull, for Dr. Robinson.
Bidston, Liverpool Obs.			29.97	761.2	54.1	12.8		ESE			6		10					Overcast	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.71	754.6	65.2	18.4		SW			3		10					Overcast	J. Dreyer.
Bradford			30.07	763.8	52.8	11.6		E			1		10					Raining	J. McLandsborough.
Bridgetown, (Barbadoes)			29.94	760.5	82.2	27.9		NE			1		7					Gloom	T. H. Hunt.
Cambridge Observatory																			Sergeant Hunt, A.H.C.
Cape Good Hope Obs.			30.44	773.2	61.1	16.2	62	SSE	20	8.9			1						The Staff, for E. J. Stone.
Cardington			30.13	765.3	57.0	14.2		ESE					9					Overcast	John McLaren.
Carlisle			30.09	762.0	57.9	14.4		S					8			0.09	2.3	*D. clouds	T. Bell, for J. Cartmell.
Chatham, School M. E.			30.16	766.1	56.2	13.4		SE			3		9					Fair	Capt. J. Fellowes, R. E.
Dartmoor	28.56	725.4	29.93	760.2	59	15.0		E			2		10					Fog and rain	R. E. Power.
Donaghadee			29.88	758.9	56	13.3		SE			6		10					Overcast	J. Mac Gowan, Jr.
Dover			30.17	766.3	57	13.9		ESE			4		8						J. Costello.
Eccles, (near Manchester)			30.05	763.3	53.7	12.1		S	5.8	2.6			10					Drizzling	Thomas Mackereth.
Falmouth Observatory			29.90	759.4	63.8	17.7		SE	16	7.2			10					Overcast	The Staff.
Fort Napier, (Natal)	27.78	705.6	30.01	762.2	61.5	16.8		S			3		10					Drizzling	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	84	28.9		N					9					*D. clouds	[tis.
Galway, Queen's College																			B. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			30.04	763.0	75.5	24.2		E			1		0					Clear	Sergt. E. G. Baker.
Glasgow Observatory			30.01	762.2	51.1	10.6		NNE			1		10					Overcast	Lewis Stuart.
Great Yarmouth			30.23	767.8	57	13.9		SE			6		5					*D. clouds	G. T. Watson.
Greenwich Royal Obs.			30.13	765.3	58.1	14.5		E			2		10			Blank	Blank	Overcast	The Staff, for G. B. Airy.
Guernsey			29.90	759.4	70.5	21.4		SSE			1		7					*D. clouds	Dr. S. E. Hoskins. [ley.
Halifax, Moorside Obs.			30.13	765.3	52.5	11.4		ESE					10					Drizzling	F. J. Page, for L. J. Cross-
Helston			29.84	757.9	69	20.6		ESE			4		8					Drizzling	M. P. Moyle.
Holyhead			29.87	758.7	65	18.3		E			4		5					Gloomy	John Tilston.
Hull Park																			
Kew Observatory			30.11	764.8	57.5	14.2		E	24	10.7			9					*D. clouds	The Staff.
Kingstown			29.83	757.7	60	15.6		SSE			4		10			Blank	Blank	Overcast	George Mitchell
Leicester Museum			30.13	765.3	56.0	13.3		SE			6		10					Raining	William J. Harrison.
Llandudno			29.94	760.5	58.2	14.6		E					10					Showery	Dr. James Nicol.
Malta, (Mediterranean)			30.02	762.5	81.2	27.3		NW			1		6k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			30.00	762.0	59	15.0		S E			2		5						W. D. Penny.
Nassau, (Bahamas)			30.15	765.8	84.1	28.9		NE			2		5					*D. clouds	Surg.-Maj. Henry.
Nottingham			30.12	765.0	56.0	13.3		SSE			5		10d.k		SE	0.73	18.5	Overcast	E. J. Lowe.
Oscott, St Mary's College			30.04	763.0	55.1	12.8		E			4–5		10					Drizzling	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			30.05	763.3	58	14.4		ESE			2		10					Gloomy	J. Lucas, for R. Main.
Plymouth			29.88	758.9	67.0	19.4		E			4		10					Overcast	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.67	753.6	64	17.8		SSE			5		10					Overcast	W. Kennedy.
Saint Ann's Head			29.82	757.4	61	16.1		ESE			6		10					Misty	John C. Walker.
Saint Helier, (Jersey)			29.90	759.4	75.8	24.3		SSE			2		10						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			30.18	766.6	56.0	13.3		SSE			6		10					Overcast	F. Shaw.
Scutari cemetery, (Turkey)			29.89	756.9	68.2	20.1		SSW			1		10					Showery	Sergt. W. H. Lyne.
Sheffield			30.11	764.8	56.0	13.3		SSE			2		10					Gloomy	W. F. Cooper.
Silloth Rectory			30.00	762.0	57.2	14.0		ESE			5		8			0.260	6.60	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			30.05	763.3	53.8	12.1		E			2		9			Blank	Blank	Threatening	The Staff.
Stornoway, Lews C. (Hebr.)																			John Smith.
Stratfield Turgiss			30.09	764.3	57.8	14.3		SE			1–2		10					Drizzling	Rev Charles H. Griffith
Streatley Vicarage																			Rev. John Slatter.
Sumburgh Head, (Shetland)																			
Thurso			30.05	763.3	55	12.8		SE			6		6					*D. clouds	John Trotter.
Truro, Royal Institution			29.82	757.4	70	21.1		SW			4		8					Gloomy	W Newcombe.
Valencia Observatory			29.53	750.0	65.2	18.5		WSW	16	7.2			10					Threatening	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			30.08	764.0	52.8	11.6		SE			2		10			0	0	Raining	Andrew Gibb.
Monach Lt-house, (Shet. Is)			29.74	755.4	55	12.8		SSE			8		10			0	0		J. Youyclause.
North Unst, (Shetland Is)			30.24	768.1	52	11.1		SE			6	3	3	W					

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			30.33	770.3	49.3	9.6	43	NW			6		0						
Faröe			30.40	772.1	52.9	11.6	46	NE			2		1						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.34	745.3	53.6	12.0	79	SE			7		10					Raining	
Thorshavn, (Faröe)			30.03	762.7	51.4	10.8	81	SE			7		10						
Vestervig			30.39	772.0	55.2	11.8	42	S			2		0						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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.	Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Lower 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.04	762.9	70.7	21.5	92	S			1		.8			0	0		Normal School.
Amiens																			Normal School.
Avignon			30.09	764.8	82.0	27.8	42	NNW			3		0			0	0	Clear	Normal School.
Bar-sur Seine*																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			30.15	765.8	64.4	18.0	72	SE			3		5	NW	SE	0	0	Cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.11	764.7	76.1	24.5	67	N			2		10			0	0	Cloudy	Normal School.
Bourges			30.04	763.1	79.5	26.4	66	SE			2		2		SE	0	0		Normal School.
Brest			29.84	757.7	80.4	26.9	64	S			1		5		SW	0	0	Stormy	Naval Observatory.
Caen																			Normal School.
Chartres			30.19	766.7	48.7	9.3		W			4		4		NW				Normal School.
Chaumont	29.04	737.7	30.18	766.5	59.0	15		E			4				NW	0.0 8	0.2		Normal School.
Commercy			30.27	768.9	56.1	13.4	68	E			4		2c.n		E	0.110	2.8		Normal School.
Commune de Gréasque†			30.02	762.4	87.8	31.0	20	NW			3		0			0	0		
Le Mans																			Normal School.
Lons-Le Saulnier			30.08	764.1	72.7	22.6	67	NE			1		0			0	0	Clear	Normal School.
Mâcon			30.11	764.7	67.1	19.5	77	Calm			0		0			0	0	Clear	Normal School.
Mirecourt			30.22	767.6	61.5	16.4	78	N			1		10		NE	0.331	8.4	Cloudy	Normal School.
Orleans																			Normal School.
Paris Observatory			30.14	765.6	66.0	19.2	73	E			3		8k, ck	WNW	ESE	0	0	Cloudy	National Observatory
Parthenay			29.96	761.0	77.5	25.3	54	SE			1		0					Clear	Normal School.
La Roche sur Yon			29.94	760.4	85.8	29.9	36	S			4		5		N			Cloudy	Normal School.
Rochefort, Observatory			29.96	761.0	87.8	31.0	40	S			3		5		NE	0	0	Cloudy	Naval Observatory.
Rouen			30.03	762.7	68.4	20.2	72	SE			8		10			0	0	Cloudy	Normal School.
Saint Lo																			Normal School.
Villefranche																			Normal School
Sub-Series.																			
Fort de France, Martinique			30.26	768.6	72.7	22.6	52	E	5.6	2.5			2		SW	0	0		L'Abbe Marchési.
Mont-Louis			30.13	765.2	66.9	19.4	77	ESE			3		8ck		W	0	0		—, Falguère.
Montsouris Observatory			30.08	764.1	87.8	30.9	29	E	3.7	1.67			1			0	0		Marié Davy.
Perpignan			30.14	765.6	66.2	19.0	77	ESE			3		8			0	0	Cloudy	Dr. Fines.
Saint Maur, (near Paris)			30.01	762.3	75.7	24.3	65	SW			1		10		WNW	0.331	8.4		E. Renou.
Tours			30.14	765.5	67.3	19.6	81	SE			4		10			0	0	Clearing	C. Marquet.
Versailles, (near Paris)			30.01	762.2	67.1	19.5	93	SW	8.5	3.8		0	1k			0.516 / 0.530	13.1 / 13.7		Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)																			H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,0 0.9 ft.; Commune de Gréasque, 322 m., or 1,056.4 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. *Observation not simultaneous. †Near Marseilles.

GERMAN SERIES.

Furnished by the coöperation of Prof. Geo. Neumayer, Superintendent Royal 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.	Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Lower 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.24	768.0	51.8	11.0	42	NW	22	10			3			0	0		Prof. Hoh.
Berlin			30.34	770.5	51.8	11.0	52	N	13	6			4			0.016	0.4		Prof. Arndt.
Breslau			30.25	768.3	46.8	8.2	74	W	31	14			9			0.016	0.4	Showery	Dr. P. Neugebauer.
Carlsruhe			30.28	769.0	56.8	13.8	59	NE	11	5			10			0	0		A. Senz.
Cassel			30.12	765.1	62.2	16.8	42	NE	18	8			2			0	0		Dr. H. Möll.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society
Friedrichshafen	28.82	732.1	30.27	768.9	56.3	13.5	61	NE					10			0.102	2.6	Light rain	M. Wilhelm.
Hamburg			30.1	772.3	51.4	10.8	36	NE	13	6			5k	NE		0.039	1.0	Tolerably fine	Deutsche Seewarte.
Kiel			30.32	770.2	50.9	10.5	44	NE	22	10			0			0	0		Prof. G. Karsten.
Königsberg			30.00	762.0	48.7	9.3	47	N	22	10						0.406	10.3	Nearly clear	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			30.35	770.9	52.5	11.4	41	N	13	6			4			0.031	0.8		Prof. Bruhns.
Münster			30.33	770.4	54.5	12.5	80	E	9	4			4			0	0		Prof. E. Heis.
Posen			30.22	767.6	48.0	8.9	68	SW	36	16			9			0.142	3.6	Cloudy	Dr. Magener.
Strassburg, (in Alsace)			30.23	769.4	57.4	14.1	61	E	4	2			10			0	0		Dr. Schur.
Stuttgart			30.30	769.5	55.8	13.2	53	NE					8			0	0		Mr. Würth.
Thorn			30.11	764.9	42.8	6.0	78	NW	18	8			7			0.185	4.7		Dr. Hasenbalg.
Treves, (Trier)			30.26	768.6	59.0	15.0	49	NE	27	12			10			0	0		Prof. [illegible]
Wustrow, Naval School			30.34	770.7	50.7	10.4	41	NNE	22	10			6k			0.008	0.2	Cloudy	E. F. [illegible]

Note.—In the originals the distinction between 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.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Lower 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			29.93	760.3	78.6	25.9	64	NNW	0	0			1			0	0		
Mondovi			29.93	760.3	81.0	27.2	33	NNW			4		1	NW		0	0		
Genoa			29.95	760.8	77.7	25.4	69	SW	2.5	1.1			0			0	0		
Pavia			29.92	759.9	78.3	25.7	57	NE			4		0			0	0		
Verona			29.90	759.4	82.4	28.0	56	E			1		0			0	0		
Padua			29.93	760.3	75.4	24.1	70	SE	9.8	4.4			5	SE		0	0		
Parma																			
Bologna			29.95	760.6	76.1	24.5	66	N			1		4	W		0	0		
Leghorn			29.94	760.5	75.6	24.2	72	W	8.1	3.6			1			0	0		
Urbino																			
Ancona			29.91	759.5	77.4	25.2	57	NW			2		3			0	0		
Siena			29.93	760.3	77.7	25.4	54	NW	0	0			1	W		0	0		
Rome			29.92	760.0	83.5	28.6	56	W	6.3	2.8			5	E		0	0		
Naples, O. U			29.94	760.1	81.1	27.3	61	SW			4		2	N		0	0		
Lecce			29.91	759.6	77.9	25.5	59	NNE	12.5	5.6			6	NW		0	0		
Cosenza			29.95	760.9	82.0	27.8	55	WNW			1		3	SE		0	0		
Catania, (Sicily)																			
Hipposto			29.85	758.1	82.0	27.8	73	S			2		2			0	0		
Palermo			29.89	759.1	80.0	27.0	63	W	11.2	5.0			4			0	0		
Sub-Series.																			
Naples, S. R.			30.04	762.2	80.4	26.9	65	SW	6.9	3.1			8	S		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovi is 553 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,144.3 feet.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Flushing			30.26	768.7	57.2	14.0		SE			5								
Groningen			30.32	770.0	56.3	13.5		E			2								
Helder			30.32	770.0	57.0	13.9		E			4								
Utrecht			30.28	769.0	56.5	13.6		ESE			4		8					Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bergen			30.32	770.0	50.7	10.4	53	SSW	4.7	2.1			3			0	0		
Christiania			30.37	771.3	49.3	9.6	29	NNW	2.2	1.0			0			0	0		
Tromsö			29.97	761.1	37.0	2.8	86	SW			2		10			0.134	3.4	Rain & snow	

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.09	764.3	71.6	22.0	86	SW	12.5	5.6			9			Blank	Blank		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

RUSSIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.98	761.5	49.1	9.5	45	N	16	7			7					Graupel	Astronomical Obs.
Wilna			29.82	757.5	43.5	6.4	62	NW	10	4.5			5						Astronomical Obs.
Dorpat			29.80	758.5	37.4	3.0	83	NNW	9	4			9						Physical Cabinet.
St. Petersburg			29.69	754.1	41.7	5.4	55	N	16	7			10					Rain, graupel	Central Physical Obs.
Kuopio			29.88	758.9	42.4	5.8	53	N					10		S	0	0		Ch. Forsten.
Kieff			29.5	749.4	35.6	2.0	55	NNW	13	6			10					Rain & fog	Physical Cabinet.
Nikolaiev			29.72	754.8	43.0	6.1	100	NW	31	14			10					Raining	Kurdakof.
Kertch			29.65	753.0	63.1	17.3	90	NW	4	1			7						Lagorio.
Moscow			29.45	748.0	38.7	3.7	66	SE	17	7.5			10					Light rain	Meteorological Obs.
Lugan			29.50	749.4	54.9	12.7	80	WNW	8	3.5			3						Meteorological Obs.
Archangel			29.62	752.3	39.7	4.3	48	NE	13	6			10						Ogorodnikof.
Tiflis	28.32	719.4	29.80	753.8	78.1	25.6	57	N	4	2			5						Physical Obs.
Astrakhan			29.76	755.9	71.4	21.9	29	S	8	3.5			9						Sebastianof.
Kasan			29.45	748.1	49.8	9.9	67	W	4	2			8						Physical Cabinet.
Orenburg			29.87	758.8	66.0	18.8	78	SE	4	2			5						Tschernischef.
Ekaterinburg	28.93	734.9	29.93	760.2	51.3	10.7	37	SE	4	2			7						Meteorological Obs.
Kasaly			30.00	762.1	62.1	16.7	76	Calm	0	0			3						Bobrof.
Tashkend	28.28	718.4	29.94	760.5	68.7	20.4	71	Calm	0	0			0						Michelson.
Barnaul			29.70	754.4	36.5	2.7	74	NE	8	4.5			3						Meteorological Obs.
Yeniseisk			29.78	756.3	49.5	9.7	36	NE	2	1			0						Marks.
Irkutsk	28.37	720.7	29.78	756.5	36.3	2.4	64	Calm	0	0			10					Snow & rain	Usolzef.
Oorga																			Mossin.
Peking (China)			30.10	764.6	60.6	15.9	56	Calm	0	0			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. The elevation of Tiflis is 450 meters, or 1,541.8 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.98	761.4	93.7	34.3	26	SE	6.0	2.7		0	1			0	0	Clear	Royal Observatory.
San Fernando																			The Naval Observatory.

Note.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea			30.09	764.3	46.2	7.9	53	N			2		3			0	0		
Hernosand			30.34	770.7	46.2	7.9	32	N			4		0			0.256	6.5		
Stockholm			30.17	765.9	43.2	6.2	40	NNW			6		5			0.094	2.3	Snowy	
Wisby			30.07	763.6	44.6	7.0	66	N			7		3			0.547	13.9		
Sub-Series.																			
Upsala			30.25	768.4	42.6	5.9	45	N	17.9	8.0			3		NNW				Dr. Hildebrandsson.

NOTE.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.74	729.9	30.12	765.0	69.4	20.8	72	NNE			2		1			0	0	Clear	The Observatory.
Zurich	28.63	727.1	30.24	768.0	54.5	12.5	82	NE			1		10			0.839	21.3	Cloudy	The Observatory.

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +3.1mm.; Thermometer, +4.0; Relative Humidity, +7 per cent.

NOTE.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y			29.90	759.5	85.3	29.6	52	SW			2		2						Prof. C. N. A. Van Lyck.
Constantinople			29.84	757.9	69.8	21.0	81	W	2	1			10		NNW	0.087	2.2	Cloudy	
Fao, (Persian Gulf)			29.79	756.7	89.6	32.0		NW			3		0					Clear	
Salonica					84.7	29.3		W			1		5					Cloudy	
Valona			29.89	759.2	81.5	27.5		SW			2		2						
Varna			29.72	755.0	68.0	20.0		NW			10		5			Blank	Blank	Cloudy	

NOTE.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea level. The distinction between upper and lower clouds is not made.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens																			

NOTE.—Reports commence October 1, 1875.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Tokio																			

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario			30.32	770.1	49	9.4		SW	1	0.4		2c	0	E		0	0	Fair	
Chatham, N. B.			30.04	763.0	43	6.1	72	SW	9	4.0		2ck	8ks	W	W	0	0	Cloudy	
Charlottetown, P. E. Island			30.12	765.0	50	10.0	63	W	8	3.6		0	5cs			0	0	Fair	
Fort Garry, Manitoba			30.05	763.3	39	3.9	98	NW	4	1.8		5k	2s	W	W	0	0	Cloudy	
Halifax, N. S.			30.14	765.5	48	8.9	79	W	11	4.9		0	0			0	0	Clear	
Kingston, Ontario			30.31	769.9	54	12.2	81	SW	15	6.7		0	0			0	0	Clear	
Montreal, Quebec			30.22	767.6	51	10.6	80	W	15	6.7		2c	2s	N		0	0	Fair	
Ottawa, Ontario			30.24	768.1	48	8.9	76	S	4	1.8		2c	0			0	0	Clear	
Parry Sound, Ontario			30.16	766.1	54	12.2	67	SW	15	6.7		5ck	2ks	W	W	0	0	Fair	
Port Dover, Ontario			30.31	769.9	55	12.8	74	SW	9	4.0		5k	0			0	0	Clear	
Fort Stanley, Ontario			30.31	769.9	41	5.0	90	W	3	1.3		0	0			0	0	Fair	
Quebec, Quebec			30.13	765.3	48	8.9	85	E	12	5.4		8k	2ks	SW	SW	0	0	Clear	
Saugeen, Ontario			30.20	767.1	45	7.2	0	Calm	0	0		0	0			0	0	Clear	
Stayner, Ontario			30.19	766.8	54	12.2	59	SW	10	4.5		0	0			0	0	Clear	
Sydney, C. B.			30.12	765.0	53	11.7	62	W	11	4.9		2c	2ks	N	W	0	0	Clear	
Toronto, Ontario			30.28	769.1	43	6.1	80	SW	4	1.8		0	0						

NOTE.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.35	770.9	45	7.2	76	S	1	0.4		0	Fog			0	0	Fair	
Alpena, Mich.			30.07	763.8	50	10.0	71	SW	8	3.6		0	0			0	0	Clear	
Atlantic City, N. J.			30.40	772.1	51	10.0	72	Calm	0	0		0	0			0	0	Clear	
Augusta, Ga.			30.34	770.6	57	13.9	75	Calm	0	0			10ks		W	0.05	1.3	Cloudy	
Baltimore, Md.			30.44	773.2	49	9.4	71	Calm	0	0		0	Fog			0	0	Foggy	
Barnegat, N. J.			30.49	772.1	57	13.9	57	W	1	0.4		0	0			0	0	Clear	
Benton, Montana	27.62	701.5	30.42	772.7	46	7.8	69	Calm	0	0		5k	0	NW		0	0	Fair	
Bismarck, Dakota	28.41	721.6	30.07	763.8	46	7.8	76	NW	6	2.7			10ks		NW	0	0	Cloudy	
Boston, Mass.			30.34	770.6	50	10.0	59	SW	10	4.5		0	0			0	0	Clear	
Breckenridge, Minn.			30.02	762.5	44	6.7	92	NW	12	5.4		5k	2s			0	0	Fair	
Buffalo, N. Y.			30.30	769.6	50	10.0	58	S	4	1.8		0	0			0	0	Clear	
Burlington, Vt.			30.31	769.9	49	9.4	71	S	5	2.2		2s	0			0	0	Fair	
Cairo, Ill.			30.28	769.1	51	10.6	93	Calm	0	0		0	Fog			0	0	Foggy	
Cape Hatteras, N. C.			30.29	769.4	63	17.2	61	NE	28	12.5			10s		W	0	0	Cloudy	
Cape Henry, Va.			30.38	771.6	61	16.1	50	NE	14	6.3		5k	0	E		0	0	Fair	
Cape May, N. J.			30.41	772.4	52	11.1	73	Calm	0	0		0	0			0	0	Clear	
Charleston, S. C.			30.31	769.9	59	15.0	65	N	13	5.8		2ck	0	E		0	0	Clear	
Cheyenne, Wyoming	24.18	614.2	30.12	765.0	47	8.3	48	N	32	14.3		2k	0			0	0	Fair	
Chicago, Ill.			30.19	766.8	50	10.0	65	S	8	3.6		0	0			0	0	Clear	
Cincinnati, Ohio			30.29	769.4	45	7.2	76	SE	1	0.4		0	Fog			0	0	Foggy	
Cleveland, Ohio			30.32	770.1	43.9	6.6	67	SE	7	3.1			Sm'e		SE	0	0	Smoky	
Colorado Springs, Col.	24.18	614.2	30.05	763.3	53	11.7	67	N	8	3.6		0	0			0	0	Clear	
Corsicana, Tex.			30.14	765.5	57	13.9	81	NE	6	2.7		5cs	0			0	0	Fair	
Davenport, Iowa			30.18	766.6	50	10.0	64	SW	4	1.8		0	0			0	0	Clear	
Denison, Tex.			30.15	765.8	58	14.4	81	Calm	0	0		Haze	0			0	0	Clear	
Denver, Col.	24.87	631.7	30.05	764.3	47	8.3	62	S	7	3.1		0	0			0	0	Clear	
Detroit, Mich.			30.27	768.8	47	8.3	69	SW	8	3.6		0	0			0	0	Clear	
Dodge City, Kan.	27.49	698.2	29.75	755.6	57	13.9	58	N	4	1.8		0	0			0	0	Clear	
Dubuque, Iowa			30.13	765.3	52	11.1	73	S	4	1.8		0	0			0	0	Clear	
Duluth, Minn.			29.85	758.2	55	12.8	79	SW	8	3.6			10s			0	0	Cloudy	
Eastport, Me.			30.20	767.1	51	10.6	59	SW	6	2.7		5c	5ks	N	N	0	0	Fair	
Erie, Pa.			30.29	769.4	47	8.3	70	SE	8	3.6		0	Sm'e			0	0	Clear	
Escanaba, Mich.			29.94	760.5	54	12.2	74	SW	20	8.9		0	0			0	0	Clear	
Fort Gibson, I. T.																			
Fort Sill, I. T.	28.93	734.8						Calm	0	0		2k	5ks			0	0	Cloudy	
Fort Sully, Dakota	28.52	724.4	30.18	766.6	53	11.7	68	N	20	8.9		0	8s		N	0	0	Cloudy	
Galveston, Tex.			30.03	762.7	70	21.1	84	E	13	5.8		10cs	0	SW		0	0	Cloudy	
Grand Haven, Mich.			30.17	766.3	58	14.4	69	SW	14	6.3		0	0			0	0	Clear	
Indianapolis, Ind.			30.28	769.1	44	6.7	71	Calm	0	0		0	Fog			0	0	Foggy	
Indianola, Tex.			30.03	762.7	70	21.1	95	NE			4	10cs	0	SW		0	0	Cloudy	
Jacksonville, Fla.			30.20	767.1	66	18.9	84	N	4	1.8		4k	0	NE		0	0	Fair	
Keokuk, Iowa			30.15	765.8	51	10.6	79	Calm	0	0		0	0			0	0	Clear	
Key West, Fla.			30.08	764.0	78.4	25.8	86	E	14	6.3		10ck	2ks	SE	E	1.61	40.9	Cloudy	
Kittyhawk, N. C.			30.36	771.1	61	16.1	66	E	25	11.2		2k	0	E		0	0	Fair	
Knoxville, Tenn.			30.34	770.6	54	12.2	83	NE	6	2.7			10s			0.05	1.3	Cloudy	
La Crosse, Wis.			30.05	763.3	54	12.2	73	SE	12	5.4		0	0			0	0	Clear	
Leavenworth, Kan.			30.13	765.3	53	11.7	86	S	1	0.4			10s			0	0	Cloudy	
Lexington, Ky.	29.22	742.2	30.34	770.6	50	10.0	78	SE	4	1.8		0	0			0	0	Clear	
Long Branch, N. J.			30.40	772.1	57	13.9	63	SW	3	1.3		0	0			0	0	Clear	
Louisville, Ky.			30.31	769.9	45	7.2	100	Calm	0	0			Fog			0	0	Foggy	
Lynchburg, Va.			30.44	773.2	43	6.1	87	E	2	0.9		0	0			0	0	Clear	
Malone, N. Y.			30.22	767.6	54	12.2	67	SW	12	5.4		10cs	0	NW		0	0	Cloudy	
Marquette, Mich.			29.85	758.2	51	10.6	79	S	6	2.7		0	0			0	0	Clear	
Memphis, Tenn.			30.27	768.8	53	11.7	87	Calm	0	0		0	Fog			0.10	2.5	Clear	
Milwaukee, Wis.			30.17	766.3	47	8.3	77	SW	8	3.6		0	0			0	0	Clear	
Mobile, Ala.			30.16	766.1	67	19.4	90	N	6	2.7		5c	0	W		0	0	Fair	
Montgomery, Ala.			30.26	768.6	62.5	16.9	75	E	10	4.5		8ck	0			0	0	Fair	
Morgantown, W. Va.			30.37	771.4	43	6.1	87	Calm	0	0			Fog			0	0	Foggy	
Mt. Washington, N. H.	23.88	606.5	30.24	768.1	29	--1.7	100	NW	40	17.9			Fog			0	0	Foggy	
Nashville, Tenn.			30.26	768.6	53	11.7	86	SE	1	0.4		10k	0	S		0	0	Cloudy	
New Haven, Conn.			30.38	771.6	47	8.3	77	NW	2	0.9		Haze	Fog			0	0	Fair	
New London, Conn.			30.40	772.1	51	10.6	72	[illegible]	2	0.9		0	Fog			0	0	Clear	
New Orleans, La.			30.10	764.5	70	21.1	75	NE	10	4.5		2c	8k	W	SE	0	0	Cloudy	
Newport, R. I.			30.38	771.6	55	12.8	56	W	8	3.6		0	0			0	0	Clear	
New York, N. Y.			30.41	772.4	50	10.0	71	W	1	0.4		0	Fog			0	0	Clear	
Norfolk, Va.			30.39	771.9	55	12.8	62	NE	4	1.8		5c	0	W		0	0	Fair	
North Platte, Neb.	27.11	688.6	29.69	754.1	45	7.2	92	Calm	0	0		0	Fog			0	0	Fair	
Omaha, Neb.	28.98	736.1	30.04	763.0	51	10.6	93	S	6	2.7			Fog			0	0	Foggy	
Oswego, N. Y.			30.33	770.4	50	10.0	64	S	6	2.7		Haze	Haze			0	0	Clear	
Peck's Beach, N. J.			30.43	772.9	51	10.6	71	NE	6	2.7		0	Haze			0	0	Clear	
Pembina, Dakota			30.05	763.3	39	3.9	81	SW	4	1.8		2c	2s			0	0	Fair	
Philadelphia, Penn.			30.43	772.9	51	10.6	65	W	1	0.4		0	Sm'e			0	0	Clear	
Pike's Peak, Colorado	17.96	456.2	30.16	766.1	26	--3.3	88	NE	24	10.7		0	0			0	0	Clear	
Pittsburgh, Penn.			30.38	771.6	38	3.9	99	NE	4	1.8			Fog			0	0	Foggy	
Port Huron, Mich.			30.26	768.6	48	8.9	70	S	10	4.5		0	0			0	0	Clear	
Portland, Me.			30.32	770.1	46	7.8	69	W	10	4.5		0	Haze			0	0	Clear	
Portland, Oregon			30.17	766.3	53	11.7	81	N	4	1.8		0	0			0	0	Clear	
Punta Rassa, Fla.			30.12	765.0	75	23.9	85	NE	14	6.3			10s		NE	0	0	Cloudy	
Rochester, N. Y.			30.31	769.9	47	8.3	62	S	10	4.5		0	Haze			0	0	Clear	
Salt Lake City, Utah	25.72	653.3	30.05	763.3	52	11.1	40	SE	2	0.9		0	0			0	0	Clear	
Sandy Hook, N. J.			30.39	771.9	51	10.6	78	W	9	4.0		0	0			0	0	Clear	
San Diego, Cal.			29.98	761.5	64	17.8	89	N	4	1.8			10s			0	0	Cloudy	
San Francisco, Cal.			29.97	761.2	53	11.7	93	SW	2	0.9			Fog			0	0	Foggy	
Santa Fe, N. M.	23.25	590.5	29.79	756.7	44	6.7	76	Calm	0	0			10s			0.02	0.5	Cloudy	
Savannah, Ga.			30.29	769.4	60	15.6	76	N	8	3.6		2ck	0	W		0	0	Clear	
Shreveport, La.			30.22	767.6	56	13.3	87	NE	5	2.2		8c	0	SW		0	0	Fair	
Smithville, N. C.																			
Springfield, Mass.			30.39	771.9	40	4.4	91	W	4	1.8			Fog			0.01	0.3	Foggy	
St. Louis, Mo.			30.26	768.6	51	10.6	71	S	4	1.8		0	0			0	0	Clear	
St. Marks, Fla.			30.21	767.3	65	18.3	78	E	6	2.7		5ck	0	E		0	0	Fair	
St. Paul, Minn.			29.91	759.7	50	10.0	86	S	2	0.9		2cs	0			0	0	Clear	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			30.32	770.1	48	8.9	77	NW	3	1.3		0	Sm'e			0	0	Clear	
Toledo, Ohio			30.28	769.1	47	8.3	69	S	6	2.7		0	0			0	0	Clear	
Tucson, Arizona																			
Tybee Island, Ga.			30.31	769.9	65	18.3	73	NE	20	8.9		Haze	2s			0	0	Hazy	
Vicksburg, Miss.			30.12	765.0	57.5	14.2	93	NE	1	0.4		10cs	0	NW		0	0	Cloudy	
Virginia City, Montana	24.53	623.0	30.01	762.2	44	6.7	67	SE	11	4.9		0	0			0	0	Clear	

UNITED STATES SERIES - CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.42	772.7	47	8.3	85	Calm	0	0		0	Sm'e			0	0	Smoky	
Wilmington, N. C.			30.33	770.4	56	13.3	62	NE	10	4.5		2cs	0	W		0	0	Clear	
Wood's Hole, Mass.			30.38	771.6	56	13.3	56	NW	7	3.1		0	0			0	0	Clear	
Wytheville, Va.	28.00	711.2	30.23	768.3	40	4.4	100	NE	1	0.4			Fog			0	0	Foggy	
Yankton, Dakota	28.71	729.2	30.00	762.0	47	8.3	92	S	2	0.9		0	0			0	0	Clear	
Yuma, Arizona																			
Sub-Series.																			
Bridgetown, Barbadoes, W. I.					82	27.8	91	E	3	0.3		2k	5s	N		0	0	Fair	E. Racker.
Pointe-aPitre, Guadeloupe, do			29.93	760.2	81	27.2	74	E				0	2s			0	0	Clear	L. V. Bivard.
Havana, Cuba, W. I.			30.05	763.3	77	25.0	90	Calm	0	0		5s ck	1ks	SW	E	0	0	Fair	Charles Hasselbrink.
Kingston, Jamaica, W. I.			30.18	766.6	79	26.1	82	Calm	0	0		1k	0	S		0	0	Clear	James Gall.
St. Thomas, St. T., W. I.			29.82	757.4	79	26.1	74	NE	6.0	2.7		0	0					Clear	W. S. Cameron.
Santiago de Cuba, W. I.																			Robert Mason.
St. Georges, Bermudas			30.11	764.8	74	23.3	83	NE	18.7	8.4			10n			1.640	41.66	Raining	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.			29.90	759.4	35.5	1.9	80	W	10	4.5		10k.ks	0	N		0	0	Cloudy	J. Fortescue.
St. John's, Newfoundland			30.09	764.3	50	10.0	71	NW				0	0			0	0	Clear	John Delaney.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Clifton, Jamaica, W. I.	27.24	691.9	30.04	763.0	66	18.9	84	Calm	0	0		0	0			0	0	Clear	C. Partridge.
Navassa																			
Medellin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			30.33	770.4	45	7.2	85	S	8	3.6			0			0	0	Clear	H. M. Redington.

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

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; 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.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 25, 1875.

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. Upper. —10.	Clouds. Amount. Lower. —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.10	764.4	81.7	27.6	68	Calm			0		2			0	0	Fair	Charnot.
Algiers			30.06	763.4	84.1	28.4	70	NNW			3		3			0	0	Fair	Peter.
La Calle																			Kuntz.
Tunis			30.11	764.7	82.0	27.8	60	N			4		6			0	0	Cloudy	Jacques.
Sfax			30.09	764.3	81.3	27.4	67	NE			2		5			0	0	Stormy	Chauvey.
Saida			30.06	763.5	86.0	30.0	28	NNE			1		1			0	0	Fair	Grosjean.
Tebessa			30.05	764.2	81.1	27.3		SE			3		4			0	0	Cloudy	Colin.
Geriville			30.04	763.0	78.8	26.0	21	NE			1		2			0	0	Hail	Bernadach.
Laghouat			30.01	762.2	87.8	31.0	22	N			2		1			0	0	Fair	Simon.
Biskra			29.98	761.4	93.2	34.0	23	NW			3		0			0	0	Cloudy	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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. Upper. —10.	Clouds. Amount. Lower. —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.39	771.8	55.8	13.2	39	NE			3		2			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.37	771.3	48.4	9.1	55	WNW			2		9			0.012	0.3		I. R. Observatory.
Sperles			30.42	770.0	46.8	8.2	54	N			3		9		S	0.020	0.50	Sleet	Julius Mikolik.
Gratz	29.17	740.8	30.39	771.8	52.0	11.0	39	SSW			2		0						Andreas Rospini.
Hermannstadt	28.78	730.9	30.22	767.5	49.3	9.6	34	NNE			2		4			0	0		Prof. Reissenberger.
Kremsmünster	28.98	736.0	30.34	770.6	49.6	9.8	46	ENE			5		0			0	0		Prof. C. Wagner.
Lemberg			30.39	772.0	43.7	6.5	54	NW			3		5			0	0	Rain & snow	Dr. T. Stanecki.
Nyiregyhazn			30.35	770.8	51.8	11.0	52	N			3		1			0	0		Habsuda Danie'.
Pola			30.42	770.0	58.6	14.8	31	E			5		28			0	0		I.R. Hydrographic Of'ce
Szegedin			30.34	77.01	51.2	12.4	38	N			2		8			0	0		Karl Stancel.
Trieste			30.33	770.4	59.0	15.0	49	ENE			2		0			0	0		Prof. V. Farolfi.
Vienna			30.37	771.3	53.6	12.0	34	NW			1		2			0.008	0.2		I. R. Central Institute.

NOTE.—The originals give [illegible] 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. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0-10.	Clouds. Amount. Upper. —10.	Clouds. Amount. Lower. —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.01	762.8	55.9	13.3	86	S			4	0?	10			0.035	0.90		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.66	753.4	55.9	13.3		SSE	18	8.0			9			1.065	27.05	Gloomy	William Boswell.
Ardrossan			29.72	754.9	60	15.6		W			2		7					*D. clouds	Wm. McNeil.
Armagh Observatory			29.80	756.9	58.9	14.9		WSW	11	4.9			7					*D. clouds	S. Cali, for Dr. Robinson.
Bidston, Liverpool Obs			29.82	757.4	59.9	15.4		WSW			6		5					*D. clouds	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.86	758.4	59.8	15.5		WSW			1		8					*D. clouds	J. Dreyer.
Bradford			29.77	756.1	61.0	16.1		W			1		10					Gloomy	J. McLandsborough.
Bridgetown, (Barbadoes)			29.98	761.5	82	27.8		NE			2		4					*D. clouds	T. H. Hunt.
Cambridge Observatory																			Sergeant Hunt, A.H.C.
Cape Good Hope Obs.			30.37	771.4	68.7	20.4	48	S	10	4.5			1						Th Staff, for E. J. Stone.
Cardington			29.88	758.9	67.4	19.7		W					7					Overcast	John McLaren.
Carlisle			29.78	756.4	63.6	17.6		SW					4			0.10	2.5	*D. clouds	T. Bell, for J. Cartmell.
Chatham, School M. E.			29.90	759.4	66.2	19.0		SE			2		6					Fair	Capt. J. Fellowes, R. E.
Dartmoor	28.56	725.4	29.96	761.0	57	13.9		W			5		7					*D. clouds	R. E. Power.
Donaghadee			29.77	756.1	59	15.0		WSW			4		10					Overcast	J. Mac Gowan, Jr.
Dover			29.93	760.2	65	18.3		SW			4		4						J. Costello.
Eccles, (near Manchester)			29.82	757.4	61.9	16.6		W	6.6	3.0			5					Squally	Thomas Mackereth.
Falmouth Observatory			29.90	752.6	63.0	17.2		WSW	23	10.3			9					Overcast	The Staff.
Fort Napier, (Natal)	27.92	709.2	30.05	763.3	54.0	10.6		S			3		10					Raining	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone			29.96	761.0	85	29.4		W					8					*D. clouds	Lieut. Curtis.
Galway, Queen's College																			B. G. Clare, for Prof. Carr.
Gibraltar, (Mediterranean)			30.09	764.3	75.0	23.9		ENE			2		0					Clear	Sergt. E. G. Baker.
Glasgow Observatory			29.71	754.6	58.2	14.6		WSW			4		8					Squally	Lewis Stuart.
Great Yarmouth			29.87	758.7	63	17.2		SSW			5		6					Hazy	G. T. Watson.
Greenwich Royal Obs			29.91	759.7	63.9	17.7		WSW			2		6			0.66	16.8	*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.04	763.0	64	17.8		WNW			3		5					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs								WNW					7			Blank	Blank	*D. clouds	F. J. Page, for L. J. Cross.
Helston			29.99	761.7	67	19.4		WSW			4		4					*D. clouds	M. P. Moyle.
Holyhead			29.94	760.5	62	16.7		WSW			5		3						John Tilston.
Hull Park																			
Kew Observatory			29.91	759.7	65.5	18.6		WSW	15	6.7			7					*D. clouds	The Staff.
Kingstown			29.85	758.2	61	16.1		W			4		5					*D. clouds	George Mitchell
Leicester Museum			29.86	758.4	64.8	18.2		W			6		10					Gloomy	William J. Harrison.
Llandudno			29.87	758.7	63.0	17.2		SSW					5					*D. clouds	Dr. James Nicol.
Malta, (Mediterranean)			30.05	763.3	74.0	23.3		NE			1		8k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			29.60	751.8	63	17.2		SSE			1		8						W. D. Penny.
Nassau, (Bahamas)			30.13	765.3	82.4	28.0		NE			4		6						Surg.-Maj. Henry.
Nottingham			29.86	758.4	67.5	19.7		WNW			2		7k,d		WNW	0	0	*D. clouds	E. J. Lowe.
Oscott, St Mary's College			29.87	758.7	61.9	16.6		W			5		9					Drizzling	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.88	758.9	66	18.9		WSW			3		7					*D. clouds	J. Lucas, for R. Main.
Plymouth			29.99	761.7	65.4	18.6		SW			4		2					*D. clouds	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.92	760.0	60	15.6		WSW			4		8					Cloudy	W. Kennedy.
Saint Ann's Head			29.92	760.0	62	16.7		W			4		5					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			30.06	763.5	66.2	19.0		W			5		8						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			29.77	756.1	61.5	16.4		SSW			4		10					Raining	F. Shaw.
Scutari cemetery, (Turkey)			30.16	766.1	57.8	14.3		NE			3		7			Blank	Blank	*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.85	758.2	62.8	17.1		SW			1		9					Showery	W. F. Cooper.
Silloth Rectory			29.76	755.9	61.7	16.5		WSW			3		5			0.225	5.72	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			29.82	757.4	60.0	15.6					4		8			Blank	Blank	Threatening	The Staff.
Stornoway, Lewis C. (Hebr)			29.44	747.8	58	14.4		SSW			8		5					*D. clouds	John Smith.
Strathfield Turgiss			29.94	760.5	64.3	17.9		NW			1-2		5			Blank	Blank	*D. clouds	Rev Charles H. Griffith
Streatley Vicarage																			Rev. John Slatter.
Sumburgh Head, (Shetland)																			
Thurso			29.55	750.6	59	15.0		S			4		8					Gloomy	John Trotter.
Truro, Royal Institution			29.99	761.7	66	18.9		W			4		4					*D. clouds	W Newcombe.
Valencia Observatory			29.90	759.4	58.9	15.5		SE	45	20.1			10					Threatening	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			29.70	754.4	59.0	15.0		SW			3		10k			0.40	10.2	Showery	Andrew Gibb.
Monach Lt-house, (Shet. Is)			29.44	747.8	57	13.9		SSW			8	5	5	SW		0.1	2.5		J. Youyclause.
North Unst, (Shetland Is)			29.65	753.1	53	11.7		SSE			8		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., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			30.24	768.2	51.4	10.8	52	S			2		3						
Faröe			30.12	765.1	55.1	13.0	30	S			6		1						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.07	738.4	53.2	11.8	88	SE			2		10					Raining	
Thorshavn, (Faröe)			29.33	745.0	53.0	12.0	94	SE			6		10						
Vestervig			30.13	765.3	57.6	14.2	29	SSE			6		0						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between upper and lower clouds.

FRENCH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.08	763.9	71.6	22.0	71	SW			1		8			0.12	3.	Raining	Normal School.
Amiens																			Normal School.
Avignon			30.15	765.7	78.8	26	62	N			1		0			0	0	Clear	Normal School.
Bar-sur Seine			30.08	764.0	62.2	16.8	93	S			1		10			0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			30.03	762.7	70.3	21.3	75	SW			3		8		WSW	0.22	5.75	Cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.11	764.7	68.9	20.5	81	NW			1		1		NW	0	0	Clear	Normal School.
Bourges			30.10	764.4	67.8	19.9	83	SW			2		10		SW	0	0	Cloudy	Normal School.
Brest			30.04	763.1	70.0	21.1	62	W			3		8		WSW	0.039	1.00	Cloudy	Naval Observatory.
Caen																			Normal School
Chartres			30.15	764.5	54.5	12.5		W			4		7		W				Normal School.
Chaumont	28.96	735.5	30.10	764.5	66.9	19.4		SSE			1		2		SW	0	0		Normal School.
Commercy			30.19	766.9	56.3	13.5	79	ENE			2		5c,n		ENE	0.091	2.3	Cloudy	Normal School.
Commune de Gréasque*			30.19	766.9	83.8	28.8	43	SE			2		5		NE	0	0		
Le Mans																			Normal School.
Lons-Le Saulnier			30.09	764.2	66.6	19.2	81	NE			1		5		N	0	0	Cloudy	Normal School.
Mâcon			30.10	764.5	66.2	19	63				2		5		N	0	0	Cloudy	Normal School.
Mirecourt			30.10	764.4	62.4	16.9	85	SE			2		10		W	0.020	0.5	Cloudy	Normal School.
Orleans																			Normal School.
Paris Observatory			30.06	763.5	67.5	19.7	83	SW			2		8kn		SW	0.271	6.88	Cloudy	National Observatory
Parthenay			30.04	762.9	71.6	22	79	SW			2		8		S			Cloudy	Normal School.
La Roche sur Yon			30.15	765.9	70.9	2 .6	66	S			4		5		NE			Cloudy	Normal School.
Rochefort, Observatory			30.10	76 .8	72.9	22.7	61	SW			3		10		NE	0.039	1.0	Cloudy	Naval Observatory.
Rouen			30.01	762.2	71.4	21.9	67	SW			3		8		SW	0.118	3.0	Cloudy	Normal School.
Saint Lo																			Normal School.
Villefranche																			Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchesi.
Mont-Louis			30.38	771.6	68.9	20.5	56	S	11.1	5.00			8		WSW	0.409	10.4		—. Falguère.
Montsouris Observatory			30.06	763.5	68.7	20.4	90	SW			2		10			0.311	7.9	Raining	Marié Davy.
Perpignan			30.23	767.7	77.5	25.3	68	SE	5.6	2.50			5		W	0.039	1.0		Dr. Fines.
Saint Maur, (near Paris)			30.07	763.8	66.4	19.1	94	S			1		10			0.102	2.6	Cloudy	E. Renou.
Tours			30.04	762.8	71.6	22 0		SW			1		10		WNW	0.008	0.2		C. Marquet.
Versailles, (near Paris)			30.06	763.5	69.1	20.6	75	W			3		9			0.362	9.20	Cloudy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.03	762.7	66.6	19.2	95	NNE	3.8	1.7		0	0			{ 0 / 0.043	{ 0 / 1.1		H. Le Léc, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.0 ft.; Commune de Gréasque, 322 m., or 1,056.4 ft. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.27	768.9	53.6	12.0	45	E	18	8			2			0	0		Prof. Hoh.
Berlin			30.31	770.6	54.5	12.5	31	S	9	4			3			0	0		Prof. Arndt.
Breslau			30.43	772.9	50.9	10.5	50	NW	13	6			7			0	0		Dr. P. Neugebauer.
Carlsruhe			30.15	765.9	63.0	17.2	43	E	11	5			9			0	0		A. Senz.
Cassel			30.17	766.3	57.9	14.4	79	NNW	9	4			1			Inap.	Inap.		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.79	731.2	30.24	768.1	53.6	12.0	76	W					6			0.323	8.2	Raining	M. Wilhelm.
Hamburg			30.26	768.6	54.9	12.7	39	SSE	27	12			5cs	SE		0	0		Deutsche Seewarte.
Kiel			30.18	766.5	55.0	12.8	32	SE	22	10			0			0	0		Prof. G. Karsten.
Königsberg			30.24	768.0	50.5	10.3	45	N	11	5						0.287	7.3	Cloudy	Prof. E. Luther.
Köslin																			Dr. Tiegert.
Leipsic			30.33	770.4	54.7	12.6	38	SE	9	4			2			0	0		Prof. Bruhns.
Münster			29.98	761.5	55.2	12.9	62	SE	18	8			10			0	0		Prof. E. Heis.
Posen			30.38	771.7	51.8	11.0	40	NW	22	10			1			0	0	Clear	Dr. Magener.
Strassburg, (in Alsace)			30.19	766.8	59.2	15.1	60	E	4	2			10			0.102	2.6		Dr. Schur.
Stuttgart			30.23	766.7	59.5	15.3	58	SE					6			0.043	1.1	Rainy	Mr. Würth.
Thorn			30.32	770 2	52.5	11.4	49	NW	18	8			4			0	0		Dr. Hasenbalg.
Treves, (Trier)			30.14	765.5	57.0	14.4	44	SE	18	8			10			0.181	4.6		Prof. [illegible]
Wustrow, Naval School			30.25	768.3	48.0	8.9	42	S	13	6			68			0	0	Clear	E. F. [illegible].

Note.—In the originals the distinction between 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.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.20	769.6	59.4	15.2	73	NW	1.3	0.6			10			0	0		
Mondovi			30.27	768.8	52.0	11.1	93	NW			4		10			0	0		
Genoa			30.19	766.7	74.5	23.6	44	N	8.1	3.6			0			0	0		
Pavia			30.27	768.9	65.3	18.5	40	E			6		1	E		0	0		
Verona			30.28	769.2	67.3	19.6	32	E			6		0			0	0		
Padua			30.32	770.1	60.6	15.9	28	E	13.0	5.8			5	NW		0	0		
Parma																			
Bologna			30.30	769.7	70.9	21.6	66	SE			1		4	N		0	0		
Leghorn			30.15	765.8	71.2	21.8	38	ESE	16.8	7.5			4			0	0		
Urbino																			
Ancona			30.30	769.7	67.3	19.6	46	SE			2		1						
Siena			30.16	766.0	66.7	19.3	43	E	6.9	3.1			2	E		0	0		
Rome			30.11	764.9	77.	25 2	39	NNE	15.0	6.7			1			0	0		
Naples, O. U			30.13	765.3	74.4	23.0	35	NE			6		3	NE		0	0		
Lecce			30.17	766.4	64.0	17.8	40	E	12.5	5.6			1			0	0		
Cosenza			30.16	766.0	68 5	20.3	60	N			6		4	NE		0.035	0.9		
Catania, (Sicily)																			
Riposto			30.02	762.6	74.9	23.7	78	SW			2		10	NE		0.535	13.6		
Palermo			29.94	760.4	77.4	25.2	71	NE	2.5	1.1			10			0	0		
Sub-Series.																			
Naples, S. R.			30.16	766 0	73.4	23.0	35	E	4.3	1.9			6	SW		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovia is 559 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,144.3 feet.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Flushing			30.01	762.3	57.2	14.0		S			5								
Groningen			30.02	762.4	56.8	13.8		S			5								
Helder			29.98	761.4	52.2	11.2		SE			4								
Utrecht			30.00	762.1	50.9	10.5		SSE			4		10					Overcast	

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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	762.5	55.4	13.0	48	S	6.5	2.9			0			0	0		
Christiania			30.11	764.7	50.7	10.4	46		1.1	0.5			0			0	0		
Tromsö			29.71	754.5	37.8	3.2	80	SW			2		10			0.012	0.3	Rain & snow	

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Lisbon			30.21	767.3	76.6	24.8	56	(?)	6.3	2.8			3	SW					The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

RUSSIAN SERIES.

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

Warsaw			30.28	769.1	49.6	9.8	52	NW	7	3			7						Astronomical Obs.
Wilna			30.11	764.8	46.6	8.1	49	WNW	10	4.5			9						Astronomical Obs.
Dorpat			29.94	760.5	43.5	6.4	62	WNW	9	4			10					Raining	Physical Cabinet.
St. Petersburg			29.75	755.7	42.8	6.0	57	NW	9	4			10						Central Physical Obs.
Kuopio			29.64	752.8	37.8	3.2	95	W					10		E	0	0		Ch. Forsten.
Kieff			30.02	762.4	43.2	6.2	59	NW	13	6			7						Physical Cabinet.
Nikolaiev			30.10	764.6	42.6	5.9	69	N	25	11			5						Kurdakof.
Kertch			30.00	762.0	50.4	10.2	60	WNW	13	6			6						Lagorio.
Moscow			29.68	753.8	38.5	3.6	62	N	17	7.5			8						Meteorological Obs.
Lugan			29.63	752.7	44.6	7.0	70	NW	20	9			9					Raining	Meteorological Obs.
Archangel			29.47	748.5	37.9	3.3	78	N	13	6			10						Ogorodnikof.
Tiflis	28.43	722.2	29.83	757.7	59.4	15.2	50	NW	31	14			7						Physical Obs.
Astrakhan			29.88	759.0	53.8	12.1	49	WNW	17	7.5			10			Blank	Blank		Sebastianof.
Kasan			29.30	744.3	33.8	1.0	90	NE	6	2.5			10					Raining	Physical Cabinet.
Orenburg			29.72	754.8	70.7	21.5	22	SE	4	2			8						Tschernischef.
Ekaterinburg	28.90	734.1	29.87	758.8	61.9	16.6	49	SE	8	3.5			4						Meteorological Obs.
Kasaly			30.11	764.7	68.7	20.4	54	E	20	9			0						Bobrof.
Tashkend	28.26	716.3	29.83	758.3	68.7	20.4	74	Calm	0	0			0						Michelson.
Barnaul			29.99	761.7	49.1	9.5	53	NW	8	3.5			0						Meteorological Obs.
Yeniseisk			29.97	761.3	48.2	9.0	64	NE	2	1			10						Marks.
Irkutsk	28.53	724.7	29.85	760.6	37.4	3.0	90	Calm	0	0			7						Usolzef.
Oorga	25.59	648.9	29.92	759.9	32.0	0.0	70	Calm	0	0			0						Mossin.
Peking, (China)			30.03	762.7	63.3	17.4	73	Calm	0	0			5						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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			30.03	762.7	91.2	32.9	28	SW	9.8	4.4		1	0	SW		Inap.	Inap.	Clear	Royal Observatory.
San Fernando																			The Naval Observatory.

NOTE.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea			29.73	755.2	50.9	10.5	50	NW			6		10			0	0		
Hernosand			30.02	762.4	48.4	9.1	56	NW			2		10			0	0		
Stockholm			30.09	762.0	48.9	9.4	42	W			4		9			0	0		
Wisby			30.11	764.8	40.8	8.2	81	WNW			4		5			0.001	0.1		
Sub-Series.																			
Upsala			30.02	762.5	47.8	8.8	42	WNW	8.5	3.8			10						H. Hildebrandsson.

NOTE.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES

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

Geneva	28.78	731.0	30.18	766.6	62.2	16.8	82	ENE			2		9			0.012	0.3	Raining	The Observatory.
Zurich	28.69	726.4	30.23	767.7	57.7	14.3	78	SW			1		9			0	0	Cloudy	The Observatory.

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +4.3mm.; Thermometer, +0°.1; Relative Humidity, +16 per cent.

NOTE.—The originals give the wind-force by the scale 0 to 4; the 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 479 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Beirut, (Syria,) Lee Obs'y.																			Prof. C. N. A. Van Dyck.
Constantinople			30.18	766.5	55.0	12.8	43	NE			9		8		N	0.16	4.	Cloudy	
Fao, (Persian Gulf)			29.87	758.7	89.4	31.4		NW	2	1			0					Clear	
Salonica					68.4	20.2		N			1		0					Clear	
Valona			30.02	762.2	65.8	18.8		NW			4		0					Clear	
Varna			30.20	767.0	57.2	14.0		N			2		10					Cloudy	

NOTE.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

GREEK SERIES.

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

Athens																			

NOTE.—Reports commence October 1, 1875.

JAPANESE SERIES.

Tokio																			

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Brockville, Ontario			30.03	762.7	49	9.4		SW	1	0.4		0	0			0	0	Clear	
Chatham, N. B.			29.94	760.5	50	10.0	81	SW	5	2.2		0	0			0	0	Clear	
Charlottetown, P. E. Island			30.02	762.5	55	12.8	74	SW	13	5.8		0	0			0	0	Clear	
Fort Garry, Manitoba			30.14	765.5	31	− 0.6	95	S	1	0.4		5c	2s	W	W	0	0	Fair	
Halifax, N. S.			30.07	763.8	55	12.8	82	SW	12	5.4		0	0			0	0	Clear	
Kingston, Ontario			29.93	759.7	58	14.4	78	SW	11	4.9		0	Sn'e			0	0	Clear	
Montreal, Quebec			29.97	761.2	50	10.0	79	SW	18	8.0		0	0			0	0	Clear	
Ottawa, Ontario			29.95	760.7	49	9.4	84	S	6	2.7		0	Sn'e		S	0	0	Clear	
Parry Sound, Ontario			29.87	758.7	55	12.8	86	W	15	6.7		5k	5ks	SW	SW	0	0	Cloudy	
Port Dover, Ontario			30.03	762.7	57	13.9	94	S	12	5.4		5k	0	SW		0	0	Fair	
Port Stanley, Ontario			29.99	761.7	59	15.0	80	SW	14	7.2		2k	0	SW		0	0	Clear	
Quebec, Quebec			29.96	761.0	51	10.6	79	SW	2	0.9		2k	0	SW		0	0	Fair	
Saugeen, Ontario			29.92	760.0	53	11.7	86	N	10	4.5			10n		NW	0	0	Cloudy	
Stayner, Ontario			29.90	759.4	55	12.8	74	W	4	1.8		8ck	0			0	0	Cloudy	
Sydney, C. B.			30.06	763.5	60	15.6	70	W	12	5.4		0	0			0	0	Clear	
Toronto, Ontario			29.97	761.2	47	8.3	82	SW	2	0.9		5ck	0	W		0	0	Fair	

NOTE.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.07	763.8	50	10.0	86	S	1	0.4		0	Haze			0	0	Clear	
Alpena, Mich.			29.92	760.0	50	10.0	93	W	8	3.6			10s		W	0.20	5.1	Cloudy	
Atlantic City, N. J.			30.22	767.6	58	14.4	69	W	6	2.7		0	0			0	0	Clear	
Augusta, Ga.			30.26	768.6	56	13.3	81	Calm	0	0		Haze	Haze			0	0	Fair	
Baltimore, Md.			30.26	768.6	52	11.1	79	SW	1	0.4		0	Sm'e			0	0	Smoky	
Barnegat, N. J.			30.21	767.3	59	15.0	70	SW	2	0.9		0	0			0	0	Clear	
Benton, Montana	27.47	697.7	30.27	768.8	38	3.3	71	S	4	1.8		0	0			0	0	Clear	
Bismarck, Dakota	28.41	721.6	30.11	764.8	30	2.2	70	NE	8	3.6		5c	Haze	E		0	0	Fair	
Boston, Mass.			30.14	765.5	55	12.8	68	SW	11	4.9		0	Haze			0	0	Clear	
Breckenridge, Minn.			30.22	767.6	39	3.9	91	Calm	0	0		8k	0			0	0	Fair	
Buffalo, N. Y.			29.28	761.5	56	13.3	62	SW	8	3.6		0	0			0	0	Clear	
Burlington, Vt.			30.05	763.3	54	11.7	67	E	11	4.9		0	Haze			0	0	Clear	
Cairo, Ill.			30.16	766.1	57	13.9	87	S	2	0.9			10s			0	0	Cloudy	
Cape Hatteras, N. C.			30.18	766.6	69	20.6	60	NE	14	6.3		0	2s			0	0	Fair	
Cape Henry, Va.			30.24	768.1	64	17.8	73	NE	6	2.7		2k	8s	SE	SE	0	0	Cloudy	
Cape May, N. J.			30.22	767.6	58	14.4	76	W	6	2.7		0	0			0	0	Clear	
Charleston, S. C.			30.23	767.6	60	15.6	70	N	9	4.0		0	0			0	0	Clear	
Cheyenne, Wyoming	24.32	617.7	30.26	768.6	34	1.1	100	W	5	2.2		0	0			0	0	Clear	
Chicago, Ill.			30.06	763.5	53	11.7	85	N	9	4.0			10s		NW	0.16	4.1	Cloudy	
Cincinnati, Ohio			30.07	763.8	60	15.6	82	SW	3	1.3		8ck	2s	SW	SW	0	0	Cloudy	
Cleveland, Ohio			30.02	762.5	56.8	13.8	72	S	10	4.5			10ks		W	0	0	Cloudy	
Colorado Springs, Col.	24.42	620.3	30.29	769.4	42	5.6	91	SE	2	0.9		0	0			0	0	Clear	
Corsicana, Tex.			30.09	764.3	63	17.2	94	NE	6	2.7			10n			0.06	1.5	Light rain	
Davenport, Iowa			30.20	767.1	49	9.4	77	NW	8	3.6		0	Sm'e			0	0	Clear	
Denison, Tex.			30.14	765.5	62	16.7	94	NE	4	1.8			10s			0	0	Cloudy	
Denver, Col.	25.10	637.5	30.32	770.1	43	6.1	67	S	4	1.8		0	0			Inap.	Inap.	Clear	
Detroit, Mich.			29.96	761.0	51	10.6	78	SW	4	1.8		2cs	2ks	W	W	0	0	Fair	
Dodge City, Kan.	27.60	701.0	29.83	757.7	66	18.9	68	W	12	5.4		0	5s			0	0	Fair	
Dubuque, Iowa			30.18	766.6	49	9.4	78	SW	4	1.8		2c	0	W		0	0	Fair	
Duluth, Minn.			30.17	766.3	41	5.0	65	NW	20	8.9		2cs	5ks	NW	NW	Inap.	Inap.	Fair	
Eastport, Me.			30.06	763.5	54	12.2	73	S	6	2.7		0	0			0	0	Clear	
Erie, Pa.			29.99	761.7	56	13.3	62	S	16	7.2		8k	0	S		0	0	Fair	
Escanaba, Mich.			30.03	762.7	43	6.1	75	NW	12	5.4		0	0			0.04	1.0	Clear	
Fort Gibson, I. T.																			
Fort Sill, I. T.	29.00	736.6						NE	3	1.3			10s		E	0	0	Cloudy	
Fort Sully, Dakota	28.48	723.4	30.20	767.1	37	2.8	71	Calm	0	0		0	2s			0.05	1.3	Fair	
Galveston, Tex.			29.85	758.2	70	21.1	100	E	20	8.9			10n		E	2.45	62.2	Heavy rain	
Grand Haven, Mich.			30.04	763.0	52	11.1	68	N	8	3.6		4ck	0	W		0.13	3.3	Fair	
Indianapolis, Ind.			30.07	763.8	55	12.8	80	S	4	1.8			10s		W	0	0	Cloudy	
Indianola, Tex.			29.82	757.4	66	18.9	100	S			6		10n			5.90	149.9	Heavy rain	
Jacksonville, Fla.			30.19	766.8	63	17.2	83	N	6	2.7		9k	0	NE		0	0	Cloudy	
Keokuk, Iowa			30.17	766.3	48	8.9	78	N	8	3.6		0	0			0	0	Clear	
Key West, Fla.			30.06	763.5	81.5	27.5	74	E	8	3.6		Haze	2ks			0	0	Fair	
Kittyhawk, N. C.			30.20	767.1	67	19.4	84	E	10	4.5		2c	0			0	0	Clear	
Knoxville, Tenn.			30.21	767.3	57	13.9	93	SW	2	0.9			10n		SW	0	0	Light rain	
La Crosse, Wis.			30.20	767.1	46	7.8	76	N	3	1.3		0	0			0	0	Clear	
Leavenworth, Kan.			30.30	769.6	46	7.8	85	NW	6	2.7		0	0			0	0	Clear	
Lexington, Ky.	29.05	737.9	30.15	765.8	57	13.9	93	S	8	3.6			10ks		W	0	0	Cloudy	
Long Branch, N. J.			30.20	767.1	57	13.9	69	SW	10	4.5		0	Haze			0	0	Clear	
Louisville, Ky.			30.12	765.0	59	15.0	88	S	4	1.8		5k	Fog	SW		0	0	Cloudy	
Lynchburg, Va.			30.24	768.1	45	7.2	84	E	2	0.9			Fog			0	0	Foggy	
Malone, N. Y.			29.94	760.5	57	13.9	57	SW	13	5.8		0	0			0	0	Clear	
Marquette, Mich.			30.05	763.3	45	7.2	76	W	8	3.6			8s		NW	0.01	0.3	Cloudy	
Memphis, Tenn.			30.20	767.1	57	13.9	93	Calm	0	0			10s			0	0	Cloudy	
Milwaukee, Wis.			30.12	765.0	50	10.0	78	NW	8	3.6		0	0			0.41	10.4	Clear	
Mobile, Ala.			30.09	764.3	69	20.6	90	E	13	5.8			10n		S	0.21	5.3	Light snow	
Montgomery, Ala.			30.18	766.6	63	17.2	72	E	6	2.7			10s			0	0	Cloudy	
Morgantown, W. Va.			30.14	765.5	48	8.9	85	S	1	0.4		0	Fog			0	0	Fair	
Mt. Washington, N. H.	23.85	605.8	30.21	767.3	32	0.0	79	NW	10	4.5		0	0			0	0	Clear	
Nashville, Tenn.			30.15	765.3	59	15.0	87	Calm	0	0		10k	Fog			0	0	Cloudy	
New Haven, Conn.			30.18	766.6	57	13.9	74	SW	8	3.6		Haze	Sm'e			0	0	Clear	
New London, Conn.			30.19	766.8	59	15.0	70	SW	4	1.8		0	0			0	0	Clear	
New Orleans, La.			30.00	762.0	71	21.7	90	E	12	5.4			10s		E	0.78	19.8	Threatening	
Newport, R. I.			30.18	766.6	58	14.4	76	SW	8	3.6		0	0			0	0	Clear	
New York, N. Y.			30.21	767.3	52	11.1	78	SW	8	3.6		0	0			0	0	Clear	
Norfolk, Va.			30.23	767.8	60	15.6	76	N	4	1.8			10ks		SE	0	0	Cloudy	
North Platte, Neb.	27.40	696.0	30.06	763.5	41	5.0	91	Calm	0	0		0	0			0	0	Clear	
Omaha, Neb.	29.22	742.2	30.32	770.1	44	6.7	84	NW	4	1.8		0	Sm'e			Inap.	Inap.	Clear	
Oswego, N. Y.			30.03	762.7	54.5	12.5	65	S	7	3.1		Haze	Haze			0	0	Clear	
Peck's Beach, N. J.			30.23	767.8	60	15.6	66	SW	4	1.8		0	Haze			0	0	Clear	
Pembina, Dakota			30.14	765.5	36	2.2	90	Calm	0	0		5ck	2s	NW		0	0	Fair	
Philadelphia, Penn.			30.23	767.8	51	10.6	78	W	5	2.2		0	Sm'e			0	0	Clear	
Pike's Peak, Colorado	18.06	458.7	30.27	768.8	22	—5.6	72	NE	16	7.2		0	0			Inap.	Inap.	Clear	
Pittsburgh, Penn.			30.13	765.3	45	7.2	92	Calm	0	0		8s	Sm'e	W		0	0	Fair	
Port Huron, Mich.			29.95	760.7	50	10.0	78	S	8	3.6		0	8s		W	0	0	Cloudy	
Portland, Me.			30.10	764.5	51	10.6	79	W	2	0.9		0	Haze			0	0	Clear	
Portland, Oregon			30.09	764.3	55	12.8	68	NW	6	2.7		5c	Haze			0	0	Hazy	
Punta Rassa, Fla.			30.12	765.0	75	23.9	81	NE	12	5.4		5cs	Haze	NW		0	0	Fair	
Rochester, N. Y.			30.00	762.0	54	12.2	61	S	9	4.0		0	Haze			0	0	Clear	
Salt Lake City, Utah	25.85	656.6	30.18	766.6	59	15.0	43	NE	4	1.8		0	0			0	0	Clear	
Sandy Hook, N. J.			30.20	767.1	53	11.7	79	W	16	7.2		0	Haze			0	0	Clear	
San Diego, Cal.			29.98	761.5	62	16.7	94	NE	4	1.8			Fog			0	0	Foggy	
San Francisco, Cal.			30.01	762.2	53	11.7	93	SW	2	0.9			Fog			0	0	Foggy	
Santa Fe, N. M.	23.42	594.9	29.96	761.0	44	6.7	84	Calm	0	0			10s		E	0.44	11.2	Cloudy	
Savannah, Ga.			30.22	767.6	58	14.4	76	NW	4	1.8		2c	Haze	SW		0	0	Hazy	
Shreveport, La.			30.14	765.5	64	17.8	94	N	4	1.8			10n			0.01	0.3	Light rain	
Smithville, N. C.																			
Springfield, Mass.			30.16	766.1	47	8.3	85	Calm	0	0			Fog			0.01	0.3	Foggy	
St. Louis, Mo.			30.16	766.1	58	14.4	87	N	10	4.5			10s			0	0	Cloudy	
St. Marks, Fla.			30.16	766.1	66	18.9	73	E	10	4.5			10s		E	0	0	Cloudy	
St. Paul, Minn.			30.19	766.8	42	5.6	83	W	4	1.8		8c	0	NW		0.01	0.3	Fair	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			30.16	766.1	52	11.1	79	W	3	1.3		0	Haze			0	0	Clear	
Toledo, Ohio			29.99	761.7	56	13.3	74	S	8	3.6			8s		W	0	0	Cloudy	
Tucson, Arizona																			
Tybee Island, Ga.			30.21	767.3	66	18.9	65	NE	14	6.3		8cs	Sm'e	NW		0	0	Smoky	
Vicksburg, Miss.			30.16	766.1	65	18.3	83	NE	6	2.7			10s		NE	0	0	Threatening	
Virginia City, Montana	24.55	623.6	30.03	762.7	41	5.0	57	SE	1	0.4		0	0			0	0	Clear	

UNITED STATES SERIES - CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force 0—10.	Clouds. Amount. Upp'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.23	767.8	53	11.7	70	SW	1	0.4		0	Sm'e			0	0	Clear	
Wilm ngton, N. C			30.20	767.1	62	16.7	71	NE	9	4.0		0	5c		E	0	0	Fair	
Wood's Hole, Mass			30.19	766.8	61	16.1	66	SW	10	4.5		0	0			0	0	Clear	
Wytheville, Va	27.84	707.1	30.04	763.0	45	7.2	92	Calm	0	0		5k	0	W		0	0	Fair	
Yankton, Dakota	29.05	737.9	30.40	772.1	35	2.2	90	Calm	0	0		0	0			0	0	Clear	
Yuma, Arizona																			
Sub-Series.																			
Bridgetown, B b'does, W. I					81	27.2	90	NE	7	3.1		0	2s			0	0	Fair	E Racker.
Pointe-aPitre, Gd'loupe, do			29.98	761.5	81	27.2	70	E				2cs	2s			0	0	Fair	L. V. Bicard.
Havana, Cuba, W. I			30.06	763.5	79	26.1	90	Calm	0	0		1c	1k	SW	E	0.72	18.3	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W			30.16	766.1	78	25.6	78	Calm	0	0		8c	2s			0	0	Cloudy	James Gall.
St. Thomas, St. T., W. I																			W. S. Cameron.
Santiago de Cuba, W. I			29.83	757.7	77	25.0	78	NW	2.4	1.1		0	2s			Blank	Blank	Fair	Robert Mason.
St. Georges, Bermudas			29.96	761.0	74	23.3	88	Calm	0	0			10n			0.44	13.18	Raining	C. F. Allen.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maul, H. I																			F. L. Clarke.
Cumberland, B. A																			
Ft. Chippewyan, B. A																			
Ft. McPherson, B. A																			
Ft. Simpson, B. A																			
York Factory, B. A			29.77	756.1	34	1.1	89	W	4	1.8			10s			0	0	Cloudy	J. Fortescue.
St. John's, Newfoundland			30.07	763.8	58	14.4	75	SW				0	0			0	0	Clear	John Delaney.
St. John's, Porto Rico, W. I																			Leon M. Acuña
Clifton, Jamaica, W. I	27.24	691.9	30.03	762.7	67	19.4	90	SE	1.0	0.4		8c	0	SE		0	0	Cloudy	C. Partridge.
Navassa																			
Medellin, S. A																			
Paramaribo, S. A																			
Elyria, Ohio			30.00	762.0	58	14.4	63	SW	4	1.8			10ks			0	0	Cloudy	H. M. Redington.

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

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; 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.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 0.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 26, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.13	765.2	82.0	27.8	66	ENE			1		1			0	0	Fair	Charnot.
Algiers			30.06	763.4	80.2	26.8	78	NNE			1		2			0	0	Fair	Peter.
La Calle																			Kuntz.
Tunis																			
Sfax			30.22	767.5	79.7	26.5	64	E			3		1			0.256	6.5	Fair	Jacques.
Saida			30.22	767.5	80.2	26.8	57	NE			4		3			0.748	19.0	Heavy rain	Chauvey.
Teheran			30.12	765.0	86.0	30.0		NE			1		2			0	0	Fair	Grosjean.
Gerlville			30.21	767.2	77.2	25.1		NE			2		4			0	0	Cloudy	Colin.
Laghouat			30.11	764.8	78.8	26.0	21	SE			1		3			0	0	Thunder	Bernadach.
Biskra			30.13	765.3	84.2	29.0	24	N			2		1			0	0	Fair	Simon.
			30.13	765.4	86.0	30.0	40	NW			1		8			0	0	Fair	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.17	766.4	60.1	15.6	41	NE			1		3			0.130	3.3	Rainy	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.09	764.2	57.7	14.3	46	W			3		0			0	0		I. R. Observatory.
Eperies			30.11	764.9	55.4	13.0	38	S			5		1			0	0		Julius Mikolik.
Gratz	28.94	735.1	30.14	765.6	56.3	12.5	60	SSW			2		8						Andreas Rospini.
Hermannstadt	28.82	732.0	30.28	769.0	52.5	11.4	29	N			2		0			0	0		Prof. Reissenberger.
Kremsmünster	28.80	731.4	30.15	765.8	50.0	10.0	84	Calm			0		10			0.095	2.4		Prof. C. Wagner.
Lemberg			30.06	763.4	52.7	11.5	52	NW			3		2			0.	0		Dr. T. Stanecki.
Nyiregyhaza			30.22	767.6	59.0	15.0	34	SW			4		0			0	0		Habsuda Daniel.
Pola			30.24	768.1	63.5	17.5	46	SSW			1		9c, ks			0.205	0.52		I.R. Hydrographic Of'ce
Szegedin			30.11	764.8	66.2	19.0	26	Calm			0		0			0	0		Karl Stancel.
Trieste			30.23	767.9	62.2	16.8	63	N			1		10			0	0		Prof. V. Farolfi.
Vienna			30.15	765.9	48.6	9.2	72	SSE			1		8			0	0		I. R. Central Institute.
																		Misty	

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. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.99	761.9	63.3	17.3	75	W			2	10	0	W		0.098	2.50		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.38	746.2	55.0	12.8		SSE	29	11.6			10			0.080	2.03	Squally	William Boswell.
Ardrossan			29.332	744.7				SSW			6		9					Raining	Wm. McNeil.
Armagh Observatory			29.40	746.7	55.0	12.8		SSW	8	3.6									S. Calcott for Dr Robinson.
Bidston, Liverpool Obs.			29.57	751.1	63.9	17.7		SSW			5		10					Overcast	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.38	746.2	65.5	18.6		SE			1		10					Raining	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbadoes)			29.94	760.5	82.0	28.0		NE			4		5						T. H. Hunt.
Cambridge Observatory																			Sergeant Hunt, A.H.C.
Cape Good Hope Obs.			30.14	765.5	75.5	24.2	39	WNW			6		0						The Staff, for E. J. Stone.
Carlington			29.81	757.2	65.0	18.3		SW					9					Overcast	John McLaren.
Carlisle			29.51	749.5	61.2	16.2		S					10			0.18	4.6	Threatening	T. Bell, for J. Cartmell.
Chatham, School M. E.			29.98	761.5	66.2	19.0		SE			2		8					Fair	Capt. J. Fellowes, R. E.
Dartmoor	28.40	721.3	29.78	756.4	54.0	13.3		SW			6		10					Overcast	R. E. Power.
Donaghadee			29.37	746.0	59	15.0		SSW			6		10					Overcast	J. Mac Gowan, Jr.
Dover			29.87	758.7	62	16.7		S W			4		5						J. Costello.
Eccles, (near Manchester)			29.69	754.1	61.7	16.4		SSW	3.0	1.3			10					Squall	Thomas Mackereth.
Falmouth Observatory			30.03	762.7	63.8	17.7		S	34	15.2			10					Gloomy	The Staff.
Fort Napier, (Natal)	27.88	708.0	30.11	764.8	62.0	16.9		NE			2		8					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone			29.98	761.5	80	26.7		W					7						
Galway, Queen's College																			B. G. Clare, for Prof. Curtis.
Gibraltar. (Mediterranean)			30.10	764.5	76.0	24.4		NE			4		0					Clear	Sergt. E. G. Baker.
Glasgow Observatory					59.6	15.3		SW			2		10					Raining	Lewis Stuart.
Great Yarmouth			29.83	757.7	63	17.2		SSW			3		5					*D. clouds	G. T. Watson.
Greenwich Royal Obs.			29.45	758.2	65.7	18.7		SW			5		0					Cloudy	The Staff, for G. B. Airy.
Guernsey			29.87	758.7	66.5	19.2		SSW			2		5					*D. clouds	Dr. S. E. Hoskins, Jersey.
Halifax, Moorside Obs.			29.54	752.8	61.5	16.4		SSW					10					Threatening	F. J. Page, for L. J. Crossley.
Helston			29.72	754.0	66	18.9		S			6		10					Gloomy	M. P. Moyle.
Holyhead			29.51	749.5	62	16.7		SSW			7		10					Misty	John Tilston.
Hull Park																			
Kew Observatory			29.84	757.0	64.5	18.1		SSW	24	10.7			8					*D. clouds	The Staff.
Kingstown			29.48	748.8	63	17.2		SSE			3		10					Raining	George Mitchell
Leicester Museum			29.74	755.4	63.7	17.6		SW			6		10					Threatening	William J. Harrison.
Llandudno			29.54	750.3	63.7	17.6		SW					10					Overcast	Dr. James Nicol.
Malta, (Mediterranean)			30.28	769.1	71.0	21.7		NE			1		6k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			29.28	743.7	63	17.2		Calm			0		10						W. D. Penny.
Nassau, (Bahamas)			30.07	763.8	82.0	27.8		NE			2		4						Surg.-Maj. Henry.
Nottingham			29.72	754.9	63.7	17.6		S			6		10d.k			0	0	Overcast	E. J. Lowe.
Oscott, St Mary's College			29.72	754.9	64.8	16.0		SSW			5		10					Misty	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.76	755.9	65	18.3		SW			5		10					Overcast	J. Lucas, for R. Main.
Plymouth			29.79	756.7	63.8	17.7		S			4		3					*D. clouds	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.42	747.3	61	16.1		SSW			8		10					Raining	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, (Jersey)			29.89	759.2	66.8	19.3		S			6		8						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough																			F. Shaw.
Scutari cemetery, (Turkey			30.31	769.6	56.0	13.3		NNE			2		4					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.65	753.1	63.0	17.2		SW			4		9					Cloudy	W. F. Cooper.
Silloth Rectory			29.46	748.5	61.0	16.1		SW			7		10			0.150	3.81	Squally	Rev Francis Redford.
Stonyhurst Observatory			29.59	751.8	60.0	15.8		S			5		10			Blank	Blank	Threatening	The Staff.
Stornoway, Lews C. (Heb.)			29.30	744.2	49	9.4		N			4		10					Raining	John Smith.
Stratfield Turgiss			29.82	757.4	64.7	18.2		SW			2		9			Blank	Blank	*D. clouds	Rev Charles H. Griffith
Streatley Vicarage																			Rev. John Slatter.
Sumburgh Head, (Shetland)																			
Thurso			29.26	743.2	55	12.8		SSE			4		9					Raining	John Trotter.
Truro, Royal Institution			29.70	754.4	66	18.9		SW			7		8					Gloomy	W. Newcombe.
Valencia Observatory			29.34	746.2	55.7	13.2		NNW	16	7.2			10					Raining	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			29.40	746.7	65.2	18.4		SW			7		10ks			0.10	2.5	Cloudy	Andrew Gibb.
Monach Lt-house, Shet Is			29.26	743.2	55	12.8		NE			7		10			0.4	10.2		J. Youyclause.
North Unst, (Shetland Is)			29.72	749.8	53	11.7		SE			4	10	5						

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., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.61	752.2	54.9	12.7	90	SW			2		10						
Faröe			29.85	758.3	61.3	16.3	68	W			4		6						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.82	732.1	45.0	7.2	93	SW			6		10					Raining	
Thorshavn, (Faröe)			29.41	746.9	52.9	11.6	71	Calm			0		4						
Vestervig			29.79	756.7	62.6	17.0	89	S			4		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			29.99	761.8	72.5	22.5	73	S			2		..k			0.08	2.	Raining	Normal School.
Amiens																			Normal School.
Avignon			30.15	765.8	75.2	24	62	SSW			1		5		NNW	0	0	Cloudy	Normal School.
Bar-sur Seine			30.04	762.9	70.1	21.6	63	SSW			2		8			0.150	3.8	Raining	C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais																			
Besançon			29.98	761.6	67.[illegible]	19.[illegible]	67	S			2		8		SW	0	0	Cloudy	Normal School.
Bourg en Bresse																			Normal School.
Bourges			30.13	765.3	76.1	24.5	67	S			4		5			0	0	Cloudy	Normal School.
Brest			30.07	763.7	68.9	20.5	85	SW			6		2		SW	0	0		Normal School.
Caen			29.81	757.1	67.8	19.9	79	SW			4		10		SW	0	0	Cloudy	Naval Observatory.
Chartres																			Normal School
Chaumont			30.14	765.5	56.7	13.7		W			1		9		W				Normal School.
Commercy	28.91	734.4	30.05	763.3	69.8	21		S			2		..n		WSW	0.15	3.8		Normal School.
Commune de Gréasque*			30.09	764.3	66.2	19	72	W			2		5kn		W	0.04	1.	Cloudy	Normal School.
Le Mans			30.21	767.2	77.2	25.1	48	S			3		5		SE	0	0		
Louhans-Le Sauloier																			Normal School.
Mâcon			30.01	762.9	72.7	22.6	74	NW			1		2		NW	0.028	0.7	Rainy	Normal School.
Mirecourt			30.98	761.6	66.2	19	81				2		5		NW	0	0	Cloudy	Normal School.
Orleans			30.04	763.1	64.0	17.8	81	S			1		8		SW	0.189	4.8	Cloudy	Normal School.
Paris Observatory																			Normal School.
Parthenay			30.00	761.9	69.3	20.7	59	S			3		5k, c		SSW	0.026	0.65	Cloudy	National Observatory
La Roche sur Yon			30.07	763.7	71.8	22.1	73	S			2		0					Clear	Normal School.
Rochefort, Observatory			29.95	760.8	75.0	23.9	60	SE			4		2		N				Normal School.
Rouen			29.97	761.3	79.3	26.3	52	S			2		10		N	0.047	1.2	Cloudy	Naval Observatory.
Saint Lo			29.95	760.7	70.5	21.4	52	SSE			2		2		SW	0.079	2.0		Normal School.
Villefranche																			Normal School.
Sub-Series.																			Normal School
Fort de France, Martinique																			L'Abbé Marchési.
Mont-Louis			30.31	769.8	61.0	19.8	63	SSW	18.6	8.33			2		SW	0.008	0.2		—. Faiguère.
Montsouris Observatory			29.99	761.7	68.9	20.5	67	SW			2		8k, c			0.012	0.3		Marié Davy.
Perpignan			30.14	765.6	75.[illegible]	24.1	86	E	5.0	2.50			8		E	0	0		Dr. Fines.
Saint Maur, (near Paris)			30.0[illegible]	761.9	70.1	21.1	63	SSW			2		2			0.161	4.1		E. Renou.
Tours			30.08	764.0	70.2	21.2		S			1		5		SW	0.024	0.6		C. Marquet.
Versailles, (near Paris)			30.00	762.0	70.2	21.2	63	SW			2		5			0	0		Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.02	762.5	64.4	18.0	97	ENE	1.1	0.5		0	..k			0 / 0	0 / 0	Light fog	H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,580.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,030.9 ft.; Commune de Gréasque, 322 m., or 1,056.4 ft. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. *Near Marseilles.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Lower 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.08	764.0	55.0	12.8	85	SE	9	4			9			0.079	2.0		Prof. Hoh.
Berlin			29.97	761.3	61.0	16.1	78	W	13	6			7			0.083	2.1		Prof. Arndt.
Breslau			30.10	764.5	55.2	12.9	49	W	18	8			10			0	0		Dr. P. Neugebauer.
Carlsruhe			30.08	764.0	64.8	18.2	74	SW	11	5			8			0.177	4.5		A. Senz.
Cassel			29.94	760.4	57.7	14.3	52	SSW	9	4			3			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Eindon																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.72	729.5	30.15	765.8	62.6	17.0	75	W					10			0.051	1.3	Light rain	M. Wilhelm.
Hamburg			29.96	760.9	62.8	17.1	51	W	18	8			5k	W		0.055	1.4	Clear	Deutsche Seewarte.
Kiel			29.87	758.7	61.7	16.5	35	W	18	8			2			0	0		Prof. G. Karsten.
Königsberg			30.88	759.0	51.8	11.0	50	W	11	5						0	0	Clear	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			30.06	763.4	60.8	16.0	76	SW	13	6			8			0.146	3.7		Prof. Bruhns.
Münster			30.11	764.7	60.4	15.8	94	SW	4	2			4			0	0		Prof. E. Heis.
Posen			30.02	762.4	54.6	12.0	68	SW	22	10			10			0.035	0.9	Cloudy	Dr. Magener.
Strassburg, (in Alsace)			30.09	764.3	67.6	19.8	82	E	4	2			10			0	0		Dr. Schur.
Stuttgart			30.10	764.4	66.2	19.0	65	W	20	9			0			0	0		Mr. Würth.
Thorn			29.97	761.1	55.4	13.0	50	SW	18	8			9			0.004	0.1		Dr. Hasenbalg.
Treves, (Trier)			30.03	762.7	66.4	19.1	62	W	18	8			6			0	0		Prof. [illegible]esen
Wustrow, Naval School			29.92	760.0	58.1	14.5	82	SW	13	6			88			0	0	Cloudy	E. F. [illegible]chütz.

Note.—In the originals the distinction between 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.

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.	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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.23	767.8	58.6	14.8	64	WNW	0	0			10			0	0		
Mondovi			30.18	766.6	54.3	12.4	70	NNW			4		10			0	0		
Genoa			30.19	766.8	67.1	19.5	57	E	2.5	1.1			10	S		0	0		
Pavia			30.23	767.9	61.3	16.3	46	NE			2		9			0	0		
Verona			30.18	766.5	67.6	19.8	32	SW			2		10			0	0		
Padua			30.22	767.5	62.6	17.0	44	SSE	0.7	0.3			10	E		0	0		
Parma																			
Bologna			30.29	769.3	65.7	18.7	67	SE			1		6	W		0	0		
Leghorn			30.19	766.8	66.2	19.0	43	ENE	3.8	1.7			0			0	0		
Urbino																			
Ancona			30.19	766.8	65.8	18.8	57	SE			2		9						
Siena			30.18	766.5	67.5	19.7	61	E	0	0			10	SW		0	0		
Rome			30.24	768.0	73.9	23.3	50	SW	4.3	1.9			9	W		0	0		
Naples, O. U.			30.27	768.8	74.8	23.8	32	S			2		6			0	0		
Lecce			30.29	769.3	63.7	17.6	31	NE	18.6	8.3			4			0	0		
Cosenza			30.28	769.1	68.2	20.1	62	NE			6		4	SE		0	0		
Catania, (Sicily)																			
Riposto			30.18	766.6	71.6	22.0	67	SE			4		9	NE		0	0		
Palermo			30.18	766.6	72.5	22.5	45	NE	6.9	3.1			2			0	0		
Sub-Series.																			
Naples, S. R.			30.20	769.4	72.0	22.2	39	SW	3.1	1.4			4	WNW		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovia is 559 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,144.3 feet.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Flushing			29.98	761.6	64.9	18.3		SSW			4								
Groningen			29.89	759.1	61.9	16.6		WSW			4								
Helder			29.90	759.5	63.3	17.4		SSW			4								
Utrecht			29.93	760.1	65.8	18.8		SW			3		5					Cloudy	

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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.	Corrected for instrumental errors. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Bergen			29.68	753.8	57.2	14.0	80	S	5.6	2.5			10			0.315	8.0		
Christiania			29.70	754.3	53.8	12.1	56	SW	0.4	0.2			6			0	0		
Tromsö			29.72	754.8	39.2	4.0	77	SE			2		2			0.205	5.2		

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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.	Corrected for instrumental errors. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Lisbon			30.11	764.7	76.6	24.8	48	WSW	4.9	2.2			0						The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

RUSSIAN SERIES.

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

Stations.	Corrected for instrumental errors. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Warsaw			29.98	761.5	55.6	13.1	36	NNW	16	7			0						Astronomical Obs.
Wilna			29.82	757.3	52.3	11.3	66	W	8	3.5			9						Astronomical Obs.
Dorpat			29.65	753.1	49.8	9.9	53	NW	9	4			9						Physical Cabinet.
St. Petersburg			29.53	750.1	41.4	5.2	56	NW	16	7			9						Central Physical Obs.
Kuopio			29.53	750.0	39.9	4.4	70	NW					10		S	0.098	2.50		Ch. Forsten.
Kieff			29.92	760.0	49.8	9.9	45	W	18	8			7						Physical Cabinet.
Nikolaiev			30.25	768.3	52.0	11.1	44	N	20	9			6						Kurdakof.
Kertch			30.21	767.3	53.6	12.0	54	NNW	7	3			4						Lagorio.
Moscow			29.54	750.4	41.2	5.1	78	S	10	4.5			8						Meteorological Obs.
Lugan			29.99	761.7	47.7	8.7	41	SW	17	7.5			8						Meteorological Obs.
Archangel			29.07	738.3	37.9	3.3	93	NW	17	7.5			10					Rain & snow	Ogorodnikof.
Tiflis	28.64	727.4	30.08	764.1	47.8	8.8	86	N	8	3.5			10					Raining	Physical Obs.
Astrakhan			30.21	767.1	48.4	9.1	49	NNE	8	3.5			10						Sebastianof.
Kasan			29.76	756.0	38.8	3.8	58	SW	13	6			10						Physical Cabinet.
Orenburg			30.06	763.5	44.1	6.7	58	SE	8	3.5			10						Tscherutschef.
Ekaterinburg	28.90	734.1	29.91	759.7	45.5	7.5	69	S	4	2			9						Meteorological Obs.
Kasaly			29.94	760.5	71.4	21.9	53	Calm	0	0			0						Bobrof.
Tashkend	28.34	719.7	30.09	762.0	67.6	19.8	80	Calm	0	0			0						Michelson.
Barnaül			30.12	765.1	50.9	10.5	57	NNE	8	3.5			0						Meteorological Obs.
Yeniseisk			30.18	766.5	50.4	10.2	63	Calm	0	0			0						Marks.
Irkutsk	28.72	729.4	30.14	765.6	39.2	4.0	97	Calm	0	0			7						Usolzef.
Oorga	25.63	650.9	29.91	759.6	42.6	5.9	60	Calm	0	0			10						Mossin.
Peking, (China)			30.00	762.1	65.1	18.4	77	Calm	0	0			7						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. The elevation of Tiflis is 403. 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.	Corrected for instrumental errors. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Madrid			30.02	762.4	89.6	32.0	32	E	6.7	3.0		0	0			0	0	Clear	Royal Observatory.
San Fernando																			The Naval Observatory.

NOTE.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea			29.63	752.7	48.6	9.2	48	NW			2		8			0	0		
Hernosand			29.80	756.8	46.8	8.2	65	SSE			2		10			0	0		
Stockholm			29.70	754.4	51.[illegible]	10.9	55	WSW			2		8			0	0		
Wisby			29.77	756.2	50.7	10.4	72	WNW			2		7			0	0		
Sub-Series.																			
Upsala			29.72	754.8	50.4	10.2	54	W	5.4	2.4			9						Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.69	728.8	30.07	763.6	74.1	23.4	61	WSW			2		9			0.114	2.9	Cloudy	The Observatory.
Zurich	28.55	725.1	30.15	765.9	63.1	17.3	86	SE			1		9			0.122	3.1	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +2.1mm.; Thermometer, +6°.9; Relative Humidity, —5 per cent.

Note.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y.																			Prof. C. N. A. Van Dyck.
Constantinople			30.34	770.5	53.6	12.0	37	N	19.0	8.5			5		N	0	0	Cloudy	
Fao, (Persian Gulf)			29.84	758.0	91.4	33.0		NW			3		0					Clear	
Salonica					70.9	21.5		W			1		0					Clear	
Valona			30.17	766.2	64.9	18.3		N			2		0					Clear	
Varna			30.32	770.0	55.4	13.0		N			2		5					Cloudy	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea level. The distinction between upper and lower clouds is not made.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens																			

Note.—Reports commence October 1, 1875.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Tokio																			

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario			29.87	758.7	42	5.6		Calm	0	0			10s		N	0.04	1.0	Cloudy	
Chatham, N. B.			29.66	753.4	53	11.7	89	SW	6	2.7			10ks		SW	0	0	Cloudy	
Charlottetown, P. E. Island			29.70	755.9	51	12.2	80	S	13	5.8			10n			0	0	Cloudy	
Fort Garry, Manitoba			29.91	759.7	37	2.8	95	W	4	1.8		0	2s			0	0	Fair	
Halifax, N. S.			29.86	758.4	57	13.9	77	SW	15	6.7			10n		SW	0	0	Threatening	
Kingston, Ontario			29.86	758.4	42	5.6	87	NW	6	2.7		8c	0			0.01	0.3	Fair	
Montreal, Quebec			29.74	755.4	45	7.2	82	N	7	3.1			10s		N	Inap.	Inap.	Cloudy	
Ottawa, Ontario			29.82	757.4	41	5.0	81	W	11	4.9		2c	2s	W	W	0.5	1.3	Clearing	
Parry Sound, Ontario			29.88	758.9	44	6.7	87	SW	10	4.5		2ck	2ks	SW	SW	0.26	6.6	Fair	
Port Dover, Ontario			29.96	761.0	46	7.8	78	NW	13	5.8		5k	0	NW		0	0	Fair	
Port Stanley, Ontario			30.98	761.5	42	5.6	87	W	10	4.5		0	0			0.04	1.0	Clear	
Quebec, Quebec			29.67	753.6	48	8.9	78	Calm	0	0			10n		N	0	0	Cloudy	
Sarnia, Ontario			29.91	759.7	46	7.8	92	NW	11	4.9		5k	2n	N	N	0.27	6.9	Cloudy	
Stayner, Ontario																			
Sydney, C. B.			29.84	757.9	57	13.9	78	SW	10	4.5		5c	8ks	SW	SW	0	0	Fair	
Toronto, Ontario			29.93	760.2	44	6.7	84	NW	4	1.8			10ks		W	0.01	0.3	Cloudy	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

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

Station.	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.63	753.9	52	11.1	100	Calm	0	0			10n			0.64	16.3	Light rain	
Alpena, Mich.			29.80	756.2	39	3.9	81	SW	5	2.2		5cs	0	W		0.06	1.5	Fair	
Atlantic City, N. J.			29.75	755.6	58	14.4	100	W	14	6.3			10n			0.14	3.6	Light rain	
Augusta, Ga.			30.04	763.0	62	16.7	94	NW	3	1.3			10n		NW	0.26	6.6	Light rain	
Baltimore, Md.			29.89	759.2	56	13.3	81	W	6	2.7			10s			0.09	2.3	Cloudy	
Barnegat, N. J.			29.79	756.7	58	14.4	93	W	23	10.3			10s		W	0.03	0.8	Threatening	
Benton, Montana	27.29	693.2	30.09	764.3	42	5.6	83	Calm	0	0		0	0			0	0	Clear	
Bismarck, Dakota	28.19	716.0	29.84	757.9	43	6.1	66	W	1	0.4		Haze	Haze			0	0	Hazy	
Boston, Mass.			29.95	753.1	57	13.9	84	NW	8	3.6			10s		SW	0	0	Threatening	
Breckenridge, Minn.			30.30	769.6	31	−0.6	89	Calm	0	0		0	0			0	0	Clear	
Buffalo, N. Y.			29.88	758.9	46	7.8	81	NW	8	3.6		2k	8ks	NW	NW	0.12	3.0	Cloudy	
Burlington, Vt.			29.71	754.6	47	8.3	85	N	10	4.5			10s			0.16	4.1	Cloudy	
Cairo, Ill.			30.20	767.1	49	9.4	77	NE	4	1.8		0	0			0	0	Clear	
Cape Hatteras, N. C.			29.93	760.2	66	18.9	78	W	10	4.5			10n		W	0.01	0.3	Misty	
Cape Henry, Va.			29.89	759.2	62	16.7	88	SW	14	6.3			10n		SW	0.02	0.5	Light rain	
Cape May, N. J.			29.78	756.4	57	13.9	93	W	20	8.9			10n			0.11	2.8	Light rain	
Charleston, S. C.			30.04	763.0	65	18.3	83	NW	3	1.3			10s		NW	0.04	1.0	Cloudy	
Cheyenne, Wyoming	24.12	612.	30.16	766.1	44	6.7	54	NW	12	5.4		0	0			0	0	Clear	
Chicago, Ill.			30.07	763.8	46	7.8	62	SW	5	2.2		0	0			0	0	Clear	
Cincinnati, Ohio			30.12	765.0	47	8.3	77	NW	2	0.9		0	Fog			0.07	1.8	Clear	
Cleveland, Ohio			29.99	761.7	50.6	10.3	51	NW	20	8.9		2k	0	W		0.13	3.3	Fair	
Colorado Springs, Col.	24.21	614.9	30.08	764.0	52	11.1	61	N	10	4.5		0	0			0	0	Clear	
Corsicana, Tex.			30.18	766.6	54	12.2	79	N	11	4.9		2ck	5k		N	0.08	2.0	Fair	
Davenport, Iowa			30.12	765.0	48	8.9	77	SW	4	1.8		0	Sm'e			0	0	Clear	
Denison, Tex.			30.21	767.3	48	8.9	85	NW	5	2.2		5c	0			0	0	Fair	
Denver, Col.	25.02	635.5	30.14	768.1	43	6.1	67	S	7	3.1		0	Haze			0	0	Clear	
Detroit, Mich.			30.11	762.2	40	4.4	82	W	6	2.7		0	0			0	0	Clear	
Dodge City, Kan.	27.48	698.0	29.70	754.4	60	15.6	65	S	3	1.3		0	0			0	0	Clear	
Dubuque, Iowa			30.16	766.5	50	10.0	65	W	4	1.8			8ks		NW	0	0	Cloudy	
Duluth, Minn.			29.85	758.2	47	8.3	70	NW	20	8.9		0	0			0	0	Clear	
Eastport, Me.			29.65	753.1	54	12.2	83	S	13	5.8			10s			0	0	Cloudy	
Erie, Pa.			29.91	759.7	50	10.0	64	NW	20	8.9		0	5ks		NW	0.12	3.0	Fair	
Escanaba, Mich.			29.83	757.7	41	5.0	82	SW	6	2.7			10s		SW	0.02	0.5	Cloudy	
Fort Gibson, I. T.																			
Fort Sill, I. T.	29.03	737.4						NE	2	0.9		5cs	0	E		0	0	Fair	
Fort Sully, Dakota	28.36	720.3	30.04	763.0	43	6.1	53	NW	2	0.9		0	0			0	0	Clear	
Galveston, Tex.			30.02	762.5	65	18.3	90	N	32	14.3		8ck	0	SW		4.18	106.2	Fair	
Grand Haven, Mich.			30.00	762.0	54	12.2	73	W	13	5.8		0	0			0	0	Clear	
Indianapolis, Ind.			30.15	765.8	45	7.2	76	W	2	0.9		Haze	Haze			0	0	Hazy	
Indianola, Tex.			30.08	764.0	66	18.9	91	N			4	5ck	0	SW		0	0	Fair	
Jacksonville, Fla.			29.96	761.0	72	22.2	85	E	4	1.8			10n			0.05	1.3	Light rain	
Keokuk, Iowa			30.16	766.1	50	10.0	72	W	6	2.7		0	0			0	0	Clear	
Key West, Fla.			29.98	761.5	81.8	27.7	74	S	10	4.5		5k	Haze	S		0	0	Fair	
Kittyhawk, N. C.			29.92	760.0	61	16.1	94	NW	16	7.2			10n		NW	0.10	2.5	Light rain	
Knoxville, Tenn.			30.13	765.1	51	10.6	78	NE	8	3.6		2cks	Fog	SW		0.01	0.3	Fair	
La Crosse, Wis.			30.09	764.1	54	12.2	55	SW	4	1.8		5k	0	S		0	0	Fair	
Leavenworth, Kan.			30.21	767.3	46	7.8	77	S	2	0.9		0	0			0	0	Clear	
Lexington, Ky.	29.06	738.1	30.19	766.8	47	8.3	92	NW	4	1.8		0	Haze			0.06	1.5	Clear	
Long Branch, N. J.			29.72	754.9	59	15.0	87	W	15	6.7			10n		W	0.12	3.0	Light rain	
Louisville, Ky.			30.18	766.6	48	8.9	85	NW	3	1.3			Fog			Inap.	Inap.	Foggy	
Lynchburg, Va.			29.93	760.2	58	14.4	53	NW	8	3.6		5k	0	W		0.02	0.5	Fair	
Malone, N. Y.			29.71	754.6	41	5.0	100	NW	6	2.7			10n			0.09	2.3	Light rain	
Marquette, Mich.			29.77	756.1	50	10.0	58	SW	16	7.2		8c	2s	N	S	0.11	2.8	Cloudy	
Memphis, Tenn.			30.19	766.8	54	12.2	73	NE	4	1.8		0	0			0.06	1.5	Clear	
Milwaukee, Wis.			30.03	762.7	45	7.2	76	SW	9	4.0		5ck	0	NW		Inap.	Inap.	Fair	
Mobile, Ala.			29.93	760.5	63	17.2	100	NE	10	4.5			10n			4.22	105.9	Light rain	
Montgomery, Ala.			30.02	762.5	61.5	16.4	97	NE	3	1.3			10s		NE	2.48	63.0	Cloudy	
Morgantown, W. Va.			29.99	761.7	50	10.0	78	W	11	4.9			10s			0.42	10.7	Cloudy	
Mt. Washington, N. H.	23.52	597.4	29.88	758.9	35	1.7	100	NW	15	6.7			Fog			0	0	Foggy	
Nashville, Tenn.			30.14	765.3	56	13.3	80	NE	6	2.7		0	0			0	0	Clear	
New Haven, Conn.			29.68	753.9	61	16.1	88	SW	12	5.4			10n		SW	0.08	2.0	Light rain	
New London, Conn.			29.69	754.1	61	16.1	85	SW	7	3.1			10s		SW	0	0	Threatening	
New Orleans, La.			29.89	759.2	65	18.3	89	NE	14	6.3			10n		NE	5.95	151.1	Light rain	
Newport, R. I.			29.99	754.1	60	15.6	91	S	8	3.6			10n		S	0.01	0.3	Light rain	
New York, N. Y.			29.72	754.9	56	13.3	100	SW	18	8.0			10n			0.06	1.5	Light rain	
Norfolk, Va.			29.90	759.4	61	16.1	88	SW	10	4.5			10n		W	0.15	3.8	Heavy rain	
North Platte, Neb.	27.22	691.4	29.84	757.9	41	5.0	91	Calm	0	0		0	0			0	0	Clear	
Omaha, Neb.	29.01	736.8	30.09	764.3	47	8.3	77	S	4	1.8		0	0			0	0	Clear	
Oswego, N. Y.			29.83	757.7	47.5	8.6	75	N	12	5.4			10s			0.16	4.1	Threatening	
Peck's Beach, N. J.			29.77	756.1	58	14.4	93	NW	24	10.7			10n			0.19	4.8	Light rain	
Pembina, Dakota			29.85	758.2	44	6.7	75	N	4	1.8		0	0			0	0	Clear	
Philadelphia, Penn.			29.78	756.4	56	13.3	87	NW	15	6.7			10ks		NW	0.03	0.8	Cloudy	
Pike's Peak, Colorado	18.09	459.5	30.29	769.4	26	−3.3	88	NW	8	3.6		0	0			0	0	Clear	
Pittsburgh, Penn.			29.95	760.7	50	10.0	78	W	9	4.0			10s		NW	0.22	5.6	Cloudy	
Port Huron, Mich.			30.00	762.0	41	5.0	82	W	8	3.6		0	0			0.09	2.3	Clear	
Portland, Me.			29.65	753.1	55	12.8	80	S	8	3.6			10s			0	0	Cloudy	
Portland, Oregon			30.04	763.0	52	11.1	86	Calm	0	0		Haze	Haze			0	0	Hazy	
Punta Rassa, Fla.			29.99	761.7	78	25.6	96	SE	16	7.2			10ks		SE	Inap.	Inap.	Threatening	
Rochester, N. Y.			29.85	758.2	45	7.2	84	W	10	4.5			10s		W	0.22	5.6	Cloudy	
Salt Lake City, Utah	25.82	655.8	30.15	765.8	53	11.7	43	Calm	0	0		0	0			0	0	Clear	
Sandy Hook, N. J.			29.69	754.1	58	14.4	93	W	18	8.0			10n		W	0.12	3.0	Light rain	
San Diego, Cal.			29.99	761.7	63	17.2	88	Calm	0	0			10s			0	0	Cloudy	
San Francisco, Cal.			30.04	763.0	53	11.7	86	SW	8	3.6			10s			0	0	Cloudy	
Santa Fe, N. M.	23.45	595.6	29.99	761.7	39	3.9	82	NE	4	1.8		0	0			0	0	Clear	
Savannah, Ga.			29.99	761.7	63	17.2	94	NW	8	3.6			10n		SE	0.10	2.5	Light rain	
Shreveport, La.			30.16	766.1	60	15.6	94	N	6	2.7		2ck	0			0.37	9.4	Fair	
Smithville, N. C.																			
Springfield, Mass.			29.66	753.4	55	12.8	93	SW	4	1.8			10n			0.16	4.1	Heavy rain	
St. Louis, Mo.			30.22	767.6	47	8.3	69	NW	3	1.3		0	0			0	0	Clear	
St. Marks, Fla.			29.92	760.0	70	21.1	100	Calm	0	0			10n		W	2.22	56.4	Light rain	
St. Paul, Minn.			29.93	760.2	45	7.2	88	SW	6	2.7		0	0			0	0	Clear	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			29.67	753.6	57	13.9	100	W	10	4.5			10n		W	0.23	5.8	Light rain	
Toledo, Ohio			30.03	762.7	44	6.7	84	SW	7	3.1		0	0			0.08	2.0	Clear	
Tucson, Arizona																			
Tybee Island, Ga.			29.98	761.5	63	17.2	100	N	16	7.2			10n		E	0.02	0.5	Light rain	
Vicksburg, Miss.			30.13	765.3	61	16.1	88	NE	8	3.6			10ks		NE	0.88	22.4	Cloudy	
Virginia City, Montana	24.46	621.3	29.94	760.5	46	7.8	33	SE	1	0.4		0	0			0	0	Clear	

UNITED STATES SERIES—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.	.....	.....	29.89	759.2	54	12.2	86	NW	8	3.6	.....	1k	8s	SW	W	0.05	1.3	Clearing	
Wilmington, N. C.	.....	.....	29.90	761.7	61	17.8	83	W	4	1.8	.....	.....	10m	.....	.....	0.03	0.8	Light rain	
Woods Holo, Mass.	.....	.....	29.70	754.1	61	16.1	88	SW	13	5.8	.....	.....	10s	.....	.....	0	0	Threatening	
Wytheville, Va.	27.67	702.8	29.82	757.4	48	8.9	62	NW	6	2.7	.....	2k	0	W	.....	0.24	6.1	.....	
Yankton, Dakota	28.81	731.8	30.13	765.3	43	6.1	91	W	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub-Stations.																			
Bridgetown, Barbados, W. I.	.....	.....	.....	.....	86	30.0	83	NE	5	2.2	.....	5k	2s	SE	.....	0	0	Fair	E. Racker.
Pointe-a-Pitre, Guadeloupe, do	.....	.....	29.95	760.7	81	27.2	70	SE	.....	.....	.....	0	2ks	.....	.....	0.04	1.0	Clear	L. V. Bisard.
Havana, Cuba, W. I.	.....	.....	29.92	760.0	79	26.1	90	SE	6.0	2.7	.....	1c	1k	SW	SE	0.06	1.5	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W. I.	.....	.....	30.18	766.6	79	26.1	78	Calm	0	0	.....	1c	0	.....	.....	0	0	Clear	James Gall.
St. Thomas, St. T., W. I.	.....	.....	30.25	768.3	81	27.2	78	E	4	1.8	.....	2ck	2k	SE	.....	0	0	Fair.	W. S. Cameron.
Santiago de Cuba, W. I.	.....	.....	29.83	757.7	77	25.0	78	NW	2.4	1.1	.....	2c	0	NE	.....	.....	.....	Fair	Robert Mason.
St. Georges, Bermudas	.....	.....	30.05	763.3	74.5	23.6	77	NW	2.6	1.2	.....	8c	5fc	.....	.....	0.196	4.83	Cloudy	C. F. Allen.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. P. Church.
Makawao, Maui, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. L. Clarke.
Cumberland, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ft. Chippewyan, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ft. McPherson, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ft. Simpson, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
York Factory, B. A.	.....	.....	29.59	750.8	31	-0.6	79	NW	20	8.9	.....	6k	0	.....	.....	0	0	Fair	J. Fortescue.
St. John's, Newfoundland	.....	.....	30.09	764.3	62.5	16.9	69	S	.....	.....	.....	2k	2s	.....	.....	0	0	Fair	John Delaney.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Clifton, Jamaica, W. I.	27.24	691.9	30.03	762.7	65	18.3	83	Calm	.....	.....	.....	0	0	.....	.....	0	0	Clear	C. Partridge.
Nassau	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Medellin, S. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Panamarbo, S. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Elyria, Ohio	.....	.....	30.01	762.2	44	6.7	84	W	4	1.8	.....	.....	2k	.....	.....	0.20	5.1	Fair	H. M. Redington.

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

Note.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; 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, 6,866.2 (?) ft., or 2,091.6 (?) m.; Virginia City, 5,181 (?) ft., or 1,579.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.30 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 27, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.14	765.6	81.0	27.2	69	NNW			1		1			0	0	Fair	Charnot.
Algiers			30.08	764.1	88.0	31.6	45	N			2		2			0	0	Sirocco	Peter.
La Calle																			Kuntz.
Tunis			30.18	766.6	84.6	29.2	34	SE			4		4			0	0	Sirocco	Jacques.
Sfax			30.21	767.4	80.6	27.0	50	SE			1		2			0	0	Fair	Chauvey.
Saida			30.11	764.7	85.1	29.5	27	SW			1		2			0	0	Thunder	Grosjean.
Tebessa			29.19	766.7	80.2	26.8		NE			2		4			0	0	Cloudy	Colin.
Geriville			30.10	764.6	79.7	26.5	27	NE			1		5			0	0	Fair	Bernadach.
Laghouat			30.13	765.2	77.0	25.0	47	SW			2		2			0	0	Hidden.	Simon.
Biskra			30.15	765.7	78.6	25.8	45	N			1		3			0	0	Hidden.	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.08	764.0	65.8	18.8	70	SW			2		4			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.96	761.0	67.1	19.5	57	W			3		1			0	0		I. R. Observatory.
Eperies			30.04	763.0	60.8	16.0	37	S			5		5			0	0		Julius Mikolik.
Gratz	28.85	732.7	30.04	762.7	62.8	17.1	69	SW			2		0						Andreas Rospini.
Hermannstadt	28.71	729.3	30.13	765.2	59.5	15.3	36	ENE			1		1			0	0		Prof. Reissenberger.
Kremsmünster	28.68	728.5	30.00	762.1	59.0	15.0	89	Calm			0		7			0.890	22.6		Prof. C. Wagner.
Lemberg			29.99	761.7	60.8	16.0	55	NE			2		3			0	0		Dr. T. Stanecki.
Nyiregyhaza			30.12	765.1	64.8	18.2	43	SW			3		1			0	0		Habzsuda Daniel.
Pola			30.19	766.7	61.0	16.1	76	SE			3		10u,ks			0.005	0.14		I.R. Hydrographic Office
Szegedin			30.04	762.7	68.4	20.2	43	Calm			0		0			0	0		Karl Stancel.
Trieste			30.21	767.2	62.6	17.0	87	ENE			1		10			0.327	8.3	Raining	Prof. V. Farolfi.
Vienna			29.96	761.0	69.8	21.0	56	S			1		0			0.055	1.4		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. The elevation of Gratz is 313.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmünster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.86	758.4	54.7	12.6	86	SW			4	0	9			0.018	0.45	Hv'y shower.	Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.16	740.7	53.1	11.7		W	31	15.2			6			1.456	36.83	Squally	William Boswell.
Ardrossan			29.43	747.5	57	13.9		WNW			6		7					Showery	Wm. McNeil.
Armagh Observatory			29.61	752.1	54.0	12.2		WSW	12	5.4			6					*D. clouds	S. Cal., for Dr. Robinson.
Bidston, Liverpool Obs.			29.50	751.6	56.0	13.3		WS			6		8					Overcast	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.73	755.1	55.3	12.9		WSW			3		7					*D. clouds	J. Dreyer.
Bradford			29.51	750.3	53.0	11.7		SW			2		10					Raining	J. McLandsborough.
Bridgetown, (Barbadoes)			29.92	760.0	76.0	24.4		NE			5		10					Squally	T. H. Hunt.
Cambridge Observatory																			Sergeant Hunt, A.H.C.
Cape Good Hope Obs.			30.10	764.5	67.0	19.4	53	WNW	16	7.2			5						The Staff, for E. J. Stone.
Cardington			29.72	754.9	61.0	16.1		SW					2					Clear	John McLaren.
Carlisle			29.46	748.3	53	11.7		W					8			0.06	1.5	*D. clouds	T. Bell, for J. Cartmell.
Chatham, School M. E.			29.76	756.9	6[illegible].2	16.[illegible]		SE			3		10						Capt. J. Fellowes, R. E.
Dartmoor	28.48	723.4	29.86	758.4	51.2	10.7		W			7		9					Showery	R. E. Power.
Donaghadee			29.53	750.0	53	11.7		W			4		5					*D. clouds	J. Mac Gowan, Jr.
Dover			29.76	755.9	61	16.1		W			5		4						J. Costello.
Eccles, (near Manchester)			29.60	751.8	57.5	14.2		W	7.0	3.4			5					Squally	Thomas Mackereth.
Falmouth Observatory			30.22	767.6	54.3	14.6		W	36	16.1			7					Gloomy	The Staff.
Fort Napier, (Natal)	27.67	702.8	29.90	759.4	77.7	25.4		NW			4		1					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	83	28.3		W					8					*D. clouds	Pvt. Curtis.
Galway, Queen's College																			B. G. Clare, for Prof. Carr.
Gibraltar, (Mediterranean)			30.08	764.0	76.0	24.4		NE			1		2					*D. clouds	Sergt. E. G. Baker.
Glasgow Observatory			29.39	746.5	52.4	11.2		WS			4		7					Showery	Lewis Stuart.
Great Yarmouth			29.55	755.1	61	16.1		W			5		4					*D. clouds	G. T. Watson.
Greenwich Royal Obs.			29.76	755.9	61.8	16.4		WSW			4		6			Blank	Blank	*D. clouds	The Staff, for G. B. Airy.
Guernsey			29.65	753.7	61	16.1		WSW			6		5					*D. clouds	Dr. S. E. Hoskins, Jersey.
Halifax, Moorside Obs.								W					5					Showery	F. J. Page, for L. J. Crosse.
Helston			29.92	760.0	64	17.8		W			4		4k					*D. clouds	V. P. Moyle.
Holyhead			29.65	753.1	56	13.3		W			5		5					Squally	John Tilston.
Hull Park																			
Kew Observatory			29.76	755.6	59.0	15.3		WSW	33	14.8			5					*D. clouds	The Staff.
Kingstown			29.67	753.6	56	13.3		W			4		6					*D. clouds	George Mitchell.
Leicester Museum			29.68	753.9	58.6	14.8		W			5		4					*D. clouds	William J. Harrison.
Llandudno			29.66	752.4	56.2	13.4		SW					7					Showery	Dr. James Nicol.
Malta, (Mediterranean)			30.27	768.8	74.4	23.		S			1		0k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			29.20	741.7	59	15.0		NW					10						W. D. Penny.
Nassau, (Bahamas)			30.12	765.0	85.2	28.4		E			3		5						Surg.-Maj. Henry.
Nottingham			29.66	753.4	60.7	15.9		WSW			6	k,ks,c	..d	W	S	0	0	D. clouds	E. J. Lowe.
Oscott, St Mary's College			29.57	753.6	57.7	14.3		WSW			6		9			Blank	Blank	Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.72	755.9	59	15.0		W			4		1					Clear	J. Lucas, for R. Main.
Plymouth			29.90	759.4	58.5	14.7		W			4		3			Blank	Blank	*D. clouds	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.79	756.7	57	13.9		WNW			5		5					Cloudy	W. Kennedy.
Saint Ann's Head			29.77	756.1	57	13.9		W			6		4					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.97	761.2	63.0	17.2		W			6		5						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			29.48	748.8	57.0	13.9		W			6		7					*D. clouds	F. Shaw.
Scutari cemetery, (Turkey)			30.28	769.1	65.0	18.7		SW			1		1					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.59	751.6	59.0	15.0		W			5		5					*D. clouds	W. F. Cooper.
Silloth Rectory			29.48	748.8	55.4	11.9		WNW			6		10			0.275	6.99	Squally	Rev. Francis Redford.
Stonyhurst Observatory			29.57	751.1	53.8	12.1		SW					8			Blank	Blank	Threatening	The Staff.
Stornoway, Lewis C. (Heo)			29.24	742.7	52	11.1		NW			5		10					Showery	John Smith.
Strathfield Turgiss			29.78	756.4	57.5	14.2		W			2-3		7					*D. clouds	Rev. Charles H. Griffith
Streatley Vicarage																			Rev. John Slatter.
Sumburgh Head, (Shetland)																			
Thurso			29.37	758.4	51	10.6					6		7					*D. clouds	John Trotter.
Truro, Royal Institution			29.91	759.7	62	16.7		W			6		6					*D. clouds	W. Newcombe.
Valencia Observatory			29.37	758.7	56.0	13.3		W	26	11.6			10					Raining	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			29.36	746.[illegible]	57.0	13.9		NW			5		2k			0.46	11.7	Fine	Andrew Gibb.
Monach Lighthouse, Shetland			29.29	744.0	54	12.2		SW			6	5	5	NW		0.2	5.1		J. Youyclause.
North Unst, (Shetland Is.)			28.76	730.5	54	12.2		NE			2							Dense fog	

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., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m.; instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.50	749.2	63.9	17.7	59	SW			2		5						
Faröe			29.43	747.4	57.9	14.4	66	WSW			8		8						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.11	739.4	49.3	9.6	79	SE			4		8						
Thorshavn, (Faröe)			29.12	739.6	49.8	9.9	73	N			4		8						
Vestervig			29.22	742.3	54.0	12.2	81	SW			8		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.02	762.6	71.2	21.8	70	SW			4		..k			0.04	1.	Rainy	Normal School.
Amiens																			Normal School.
Avignon			30.10	764.6	78.8	25.8	67	SSW			1	..k	..n	NW	SW	0	0		Normal School.
Bar-sur Seine			30.05	762.4	60.8	15.1	76	W			3		8			0.039	1.0	Cloudy	C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			29.95	761.5	57.	14.4	72	W			3		8		W	0.031	0.79	Cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.14	766.5	71.6	22	82	SW			1		5			0	0	Cloudy	Normal School.
Bourges			29.99	761.7	65.7	18.7	72	SSW			6		2		SSW	0.16	4.		Normal School.
Brest			30.02	762.5	64.6	18.1	62	WNW			4		5		WNW	0.098	2.50	Squally	Naval Observatory.
Caen																			Normal School
Chartres			30.10	764.4	57.	14		S			1		1		NW			Clear	Normal School.
Chaumont	28.88	733.4	30.01	762.3	64.9	17.7		SW			2		..k		SW	0.024	0.6		Normal School.
Commercy			30.04	763.0	63.3	17.4	76	W			6	..c	5n		W	0	0	Cloudy	Normal School.
Commune de Gréasque*			30.17	766.2	75.4	24.1	69	W			2		8		NW	0	0		
Le Mans																			Normal School.
Lons-Le Saulnier			30.09	764.3	65.8	18.8	73	SW			2		10		SW	0	0	Cloudy	Normal School.
Mâcon			29.98	761.6	65.3	18.5	63				2		5		NW	0	0	Cloudy	Normal School.
Mirecourt			30.02	762.5	65.5	18.6	59	WSW			4		2		ENE	0	0		Normal School.
Orleans																			Normal School.
Paris Observatory			29.98	761.5	64.2	17.9	46	WSW			3		5		W	0	0	Cloudy	National Observatory
Parthenay			30.06	763.5	73.8	23.2	69	W			2		0					Clear	Normal School.
La Roche sur Yon																			Normal School.
Rochefort, Observatory			30.24	767.3	72.1	22.3	39	W			4		2		E	0	0		Naval Observatory.
Rouen			29.93	760.3	62.1	16.7	71	W			4		5		W	0	0	Cloudy	Normal School.
Saint Lo																			Normal School.
Villefranche																			Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchésl.
Mont-Louis			30.44	773.1	55.8	13.2	83	SW	29.8	13.33			8		W	0.016	0.4		—, Faiguère.
Montsouris Observatory			29.97	761.3	66.4	19.4	51	WSW			4		5k,kn		SW	0	0		Marié Davy.
Perpignan			30.22	767.6	72.	22.3	62	NW	7.4	3.3			9		W	0	0		Dr. Fines.
Saint Maur, (near Paris)			29.98	761.6	65.7	18.7	48	SW			4		3			0	0		E. Renou.
Tours			29.18	741.0	65.7	18.7	48	SW			4		3		WNW	0.067	1.7		C. Marquet.
Versailles, (near Paris)			29.18	741.5	66.9	19.4		W			3		5			0	0	Cloudy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai			29.95	760.6	66.2	19.0	91	ESE?	2.2	1.0		0	3k			0 / 0	0 / 0		H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,588.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.0 ft.; Commune de Gréasque, 322 m., or 1,056.4 ft. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Lower 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			29.82	757.4	66.7	19.3	51	W	27	12			7			0.071	1.8		Prof. Hoh.
Berlin			29.75	755.7	71.3	21.3	58	SW	4	2			6			0	0		Prof. Arndt.
Breslau			29.94	760.5	68.7	20.4	50	SW	22	10			3			0	0		Dr. P. Neugebauer.
Carlsruhe			29.95	760.6	68.0	20.0	56	SW	67	30			1			0	0		A. Senz.
Cassel			29.64	752.8	69.8	21.0	51	WSW	22	10			3			0.169	4.3		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society
Friedrichshafen	28.60	726.5	30.02	762.5	65.3	18.5	85	W					10			0.118	3.0	Light rain	M. Wilhelm.
Hamburg			29.9	754.2	62.8	17.1	59	W	36	16			4k		W	0	0	Stormy, squally	Deutsche Seewarte.
Kiel			29.58	751.3	63.1	17.3	51	SW	22	10			2			0.020	0.5		Prof. G. Karsten.
Königsberg			29.73	755.2	64.0	17.8	61	SW	22	10						0.002	0.05	Nearly clear	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			29.81	757.0	69.4	20.8	59	SW	13	6			8			0	0		Prof. Bruhns.
Münster			29.75	755.7	60.4	15.6	70	SW	4	2			6			0.059	1.5		Prof. E. Heis.
Posen			29.81	757.7	67.8	19.9	55	W	22	10			4			0	0	Nearly clear	Dr. Magener.
Strassburg, (in Alsace)			29.99	761.8	69.1	20.6	67	W	4	2			8			0	0		Dr. Schur.
Stuttgart			29.94	760.2	71.1	22.0	49	W					8			0	0		Mr. Würth.
Thorn			29.80	757.0	67.1	19.5	52	S	18	8			4			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.90	759.5	66.4	19.1	48	SW	27	12			3			0.024	0.6		Prof. Clesen.
Wustrow, Naval School			29.64	753.4	62.4	16.7	65	SW	18	8			28			0	0		E. F. Schütz.

Note.—In the originals the distinction between 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.

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.	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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.17	766.3	59.7	15.4	69	N	0	0			10	N		0	0		
Mondovi			30.14	766.5	56.5	13.6	70	NW			2		10			0	0		
Genoa			30.12	765.0	68.5	20.2	53	N	3.1	1.4			10	S		0	0		
Pavia			30.17	766.4	64.5	17.5	54	NE			1		9			0	0		
Verona			30.12	765.0	66.4	19.2	53	E			1		10			0	0		
Padua			30.17	766.2	62.1	16.7	62	NE	4.3	1.9			10			0	0		
Parma																			
Bologna			30.19	766.9	67.5	19.7	69	E			1		7	N		0	0		
Leghorn			30.12	765.1	65.1	18.4	85	W	2.5	1.1			10			0	0		
Urbino																			
Ancona			30.17	766.3	64.8	18.2	66	SE			2		10			0.236	6.0		
Siena			30.10	764.6	65.5	18.6	94	E	0	0			10	E		0	0		
Rome			30.15	765.9	61.4	18.0	82	SE	3.1	1.4			10			0.028	0.7		
Naples, O. U.			30.21	767.3	73.0	22.8	48	SE			1		10	SW		0.031	0.8		
Lecce			30.26	768.6	71.6	22.0	42	SW	18.6	8.3			9			0	0		
Cosenza			30.25	768.3	70.7	21.5	60	SW			2		10			0.008	0.2		
Catania, (Sicily)																			
Riposto			30.17	766.4	71.1	21.7	78	SE			4		10	N		0	0		
Palermo			30.15	765.9	75.6	24.2	50	NE	6.3	2.8			9			0	0		
Sub-series.																			
Naples, S. R.			30.25	768.4	67.1	19.5	63	WSW	1.8	0.8			6	SW		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Flushing			29.83	757.6	57.2	14.0		W			5								
Groningen			29.62	752.4	60.	15.8		WSW			6								
Helder			29.55	753.1	59.7	15.4		SW			5								
Utrecht			29.72	751.9	63.1	17.3		SW			5		8					Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the 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			28.85	732.9	56.3	13.5	83	S	4.0	1.8			10			0.827	21.0		
Christiania			29.44	740.2	55.8	13.2	94	SSE	13.9	6.2			10			0.323	8.2	Raining	
Tromsö			29.54	750.2	37.0	2.8	64	NE			2		10			0	0		

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Lisbon			30.11	764.8	76.6	24.8	42	NNW	11.2	5.0			8						The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

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	63.9	17.7	53	SSW	16	7			7						Astronomical Obs.
Wilna			29.83	757.6	53.8	12.1	90	Calm	0	0			10					Foggy	Astronomical Obs.
Dorpat			29.66	753.3	52.2	11.2	84	SSW	7	3			10						Physical Cabinet.
St. Petersburg			29.61	752.1	46.0	7.8	65	S	4	2			10						Central Physical Obs.
Kuopio			29.52	749.8	38.3	3.5	92	SW					10		ESE	0	0		Ch. Forsten.
Kieff			30.11	762.3	54.7	12.6	67	WSW	13	6			9						Physical Cabinet.
Nikolaev			30.26	768.6	59.9	15.5	39	SW	25	11			0						Kurdukof.
Kertch			30.29	769.4	61.0	16.1	55	WNW	4	2			6						Lagorio.
Moscow			29.85	758.2	43.2	6.2	58	SW	10	4.5			8						Meteorological Obs.
Lugan			30.02	762.6	55.9	13.3	45	WSW	17	7.5			3						Meteorological Obs.
Archangel			29.32	744.6	34.2	1.2	92	SW	21	9			10					Snowing	Ogorodnikof.
Tiflis	28.78	730.9	30.22	767.6	48.4	9.1	67	NE	8	3.5			10					Raining	Physical Obs.
Astrakhan			30.32	770.2	55.9	13.3	57	WSW	10	4.5			2						Sebastianof.
Kasan			29.72	754.8	39.2	4.0	92	S	6	2.5			10						Physical Cabinet.
Orenburg			30.15	765.8	46.0	7.8	48	S	8	3.5			10						Tschernischef.
Ekaterinburg	29.06	738.1	30.09	764.3	36.7	2.6	79	E	4	2			10						Meteorological Obs.
Kasaly			29.85	758.1	72.5	20.5	62	Calm	0	0			3						Bobrof.
Tashkend	28.35	720.1	30.00	762.1	70.5	21.4	75	Calm	0	0			0						Michelson.
Barnaul			30.31	769.9	52.7	11.5	42	N	8	3.5			0						Meteorological Obs.
Yeniseisk			30.31	769.8	48.6	9.2	55	NE	2	1			0						Marks.
Irkutsk	28.84	732.4	30.25	768.	41.7	5.4	72	Calm	0	0			10						Usolzef.
Oorga	25.82	655.8	30.10	764.5	46.4	8.0	60	Calm	0	0			8						Mossin.
Peking (China)			29.96	761.0	65.3	18.5	87	Calm	0	0			5						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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			30.10	764.4	71.1	21.7	53	SE	16.3	7.3		0	10			0.055	1.4	Stormy	Royal Observatory.
San Fernando																			The Naval Observatory.

Note.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea			29.42	747.3	39.7	4.3	93	E			2		10			0	0	Raining	
Hernosand			29.49	749.0	48.[illegible]	9.0	78	ESE			2		10			0	0		
Stockholm			29.40	[illegible]	59.[illegible]	15.3	67	SSW			4		3			0.004	0.1	Stormy	
Wisby			29.49	749.1	60.4	15.8	89	SW			7		0			0	0		
Sub-Series.																			
Upsala			29.38	746.3	61.5	16.4	67	S	13.9	6.2			9		SW				Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	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 in 24 hours. Inches.	Millimeters.	Weather.	Observer.
Geneva	28.68	728.5	30.07	763.6	69.3	20.7	60	S			2		7			0	0	Cloudy	The Observatory.
Zurich	28.44	722.4	30.05	763.3	62.4	16.9	90	W			2		9		N	0	0	Raining	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +1.8mm.; Thermometer, +4.4; Relative Humidity, —6 per cent.

Note.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

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 in 24 hours. Inches.	Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y																			Prof. C. N. A. Van Dyck.
Constantinople			30.31	769.9	59.4	15.2	48	S	4	2			0			0	0	Clear	
Fao, (Persian Gulf)			29.92	760.0	91.4	33.0		NW			3		0					Clear	
Salonica					72.1	22.3		N			1		0					Clear	
Valona			30.13	765.2	72.3	22.4		W			1		5					Cloudy	
Varna			30.20	767.0	59.0	15.0		SE			3		0					Clear	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea level. The distinction between upper and lower clouds is not made.

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.	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 in 24 hours. Inches.	Millimeters.	Weather.	Observer.
Athens																			

Note.—Reports commence October 1, 1875.

JAPANESE SERIES.

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 in 24 hours. Inches.	Millimeters.	Weather.	Observer.
Tokio																			

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the 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.	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 in 24 hours. Inches.	Millimeters.	Weather.	Observer.
Brockville, Ontario			29.86	758.4	49	9.4		SW	5	2.2			10s		SW	0.01	0.3	Cloudy	
Chatham, N. B.			29.34	745.2	45	7.2	76	W	15	6.7		5c	0	NW		1.08	25.60	Fair	
Charlottetown, P. E. Island			29.30	744.2	47	8.3	70	NW	24	10.7			8ks		W	0.390	9.91	Cloudy	
Fort Garry, Manitoba			29.96	761.0	36	2.2	97	N	8	3.6		0	5s			0	0	Fair	
Halifax, N. S.			29.48	748.8	49	9.4	74	W	24	10.7			5ks		NW	0.614	15.59	Clearing	
Kingston, Ontario			29.81	757.2	53	11.7	83	W	1	0.4			10s		W	0.12	3.0	Cloudy	
Montreal, Quebec			29.71	754.6	47	8.3	85	W	15	6.7		0	2ks		W	Inap.	Inap.	Clear	
Ottawa, Ontario			29.73	755.1	45	7.2	80	S	7	3.1		10k	0	SW		Inap.	Inap.	Cloudy	
Parry Sound, Ontario			29.66	753.4	55	12.8	80	SW	20	8.9		2ks	2ks	W	W	0.02	0.5	Fair	
Port Dover, Ontario			29.89	759.2	53	11.7	80	SW	7	3.1		2c	0	W		0	0	Fair	
Fort Stanley, Ontario			29.89	759.2	53	11.7	79	W	27	12.1		5ck	0	W		0	0	Fair	
Quebec, Quebec			29.59	751.6	46	7.8	69	SW	5	2.2		0	0			0	0	Clear	
Saugeen, Ontario			29.74	755.4	52	11.1	86	SW	7	3.1		5k	0			0.04	1.0	Fair	
Stayner, Ontario			29.71	754.6	55	12.8	68	W	10	4.5		5k	0	NW		0.05	1.3	Fair	
Sydney, C. B.			29.11	739.4	48	8.9	86	W	30	13.4			10n		W	0.37	9.4	Light rain	
Toronto, Ontario			29.80	756.9	52	11.1	63	SW	7	3.1		5es	0	W		0	0	Fair	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	29.85	758.2	50	10.0	78	S	1	0.4	.....	5k	5k8	W	N	0.07	1.8	Cloudy	
Alpena, Mich.	.....	.....	29.52	749.8	53	11.7	60	SW	10	4.5	.....	0	8s	.....	W	Inap.	Inap.	Cloudy	
Atlantic City, N. J.	.....	.....	30.07	763.8	56	13.3	62	W	15	5.7	.....	0	0	.....	.....	0	0	Clear	
Augusta, Ga.	.....	.....	30.11	764.8	55	12.7	62	E	7	3.1	.....	5k	0	S	.....	0.17	4.3	Fair	
Baltimore, Md.	.....	.....	30.14	765.5	52	11.1	64	SW	4	1.8	.....	0	Fog	.....	.....	0	0	Foggy	
Barnegat, N. J.	.....	.....	30.04	763.0	56	13.3	62	SW	16	7.2	.....	0	0	.....	.....	Inap	Inap	Clear	
Benton, Montana	27.93	694.2	30.03	762.7	36	2.2	70	N	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Bismarck, Dakota	28.17	715.5	29.81	757.2	46	7.8	68	S	3	1.3	.....	Haze	Haze	.....	.....	0	0	Hazy	
Boston, Mass.	.....	.....	29.83	757.7	51	10.6	66	SW	12	5.4	.....	8c	0	W	.....	0.25	6.3	Fair	
Breckenridge, Minn.	.....	.....	29.78	756.4	42	5.6	83	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	29.82	757.4	56	13.3	74	SW	12	5.4	.....	2k	0	SW	.....	Inap.	Inap.	Fair	
Burlington, Vt.	.....	.....	29.74	755.4	52	11.1	73	S	5	2.2	.....	5k	0	N	.....	0	0	Fair	
Cairo, Ill.	.....	.....	30.13	765.3	49	9.4	92	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Cape Hatteras, N. C.	.....	.....	30.11	764.8	65	18.3	53	NE	13	5.8	.....	5c	0	W	.....	0.01	0.3	Fair	
Cape Henry, Va.	.....	.....	30.15	765.8	65	18.3	44	NE	2	0.9	.....	0	0	.....	.....	0.05	1.3	Clear	
Cape May, N. J.	.....	.....	30.06	763.5	57	13.9	57	W	14	6.3	.....	0	0	.....	.....	0	0	Clear	
Charleston, S. C.	.....	.....	30.10	764.5	61	16.1	71	N	9	4.0	.....	5k	2s	S	S	0.77	19.6	Cloudy	
Cheyenne, Wyoming	24.18	614.2	30.12	765.0	40	4.4	56	NW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	29.89	756.9	52	11.1	73	SW	11	4.9	.....	0	0	.....	.....	0	0	Clear	
Cincinnati, Ohio	.....	.....	30.07	763.8	50	10.0	71	SE	4	1.8	.....	Haze	Fog	.....	.....	0	0	Foggy	
Cleveland, Ohio	.....	.....	29.93	760.2	54.4	12.4	79	SW	20	8.9	.....	0	0	.....	.....	0	0	Clear	
Colorado Springs, Col.	24.21	614.9	30.03	764.0	52	11.1	60	N	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Corsicana, Tex.	.....	.....	30.17	765.5	47	8.3	85	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Davenport, Iowa	.....	.....	29.91	759.7	53	11.7	79	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Denison, Tex.	.....	.....	30.10	764.5	57	13.9	75	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Denver, Col.	24.92	633.0	30.14	765.5	48	8.9	49	S	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	29.86	758.4	51	10.6	72	SW	11	4.9	.....	5ck	0	W	.....	0	0	Fair	
Dodge City, Kan.	27.43	696.7	29.94	759.8	68	20.0	56	SW	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	29.85	758.2	54	12.2	80	S	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Duluth, Minn.	.....	.....	29.70	754.4	54	12.2	68	SW	4	1.8	.....	5ck	0	NW	.....	0	0	Fair	
Eastport, Me.	.....	.....	29.58	751.3	48	8.9	77	SW	12	5.1	.....	2k	5s	SW	SW	0.51	13.0	Fair	
Erie, Pa.	.....	.....	29.87	758.7	54	12.2	61	S	18	8.0	.....	1c8	Haze	.....	.....	0	0	Fair	
Escanaba, Mich.	.....	.....	29.66	753.4	49	9.4	71	NW	6	2.7	.....	5k	0	NW	.....	0	0	Fair	
Fort Gibson, I. T.	.....	.....	.....	.....	.....	.....	.....	Calm	0	0	.....	0	Fog	.....	.....	0	0	Clear	
Fort Sill, I. T.	28.80	731.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sully, Dakota	28.22	716.8	29.85	758.2	52	11.1	41	N	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.06	763.5	63	17.2	66	N	15	6.7	.....	0	0	.....	.....	0	0	Clear	
Grand Haven, Mich.	.....	.....	29.82	757.4	59	15.0	81	S	16	7.2	.....	5ck	0	NW	.....	0	0	Fair	
Indianapolis, Ind.	.....	.....	30.06	763.5	50	10.0	71	S	4	1.8	.....	Haze	Haze	.....	.....	0	0	Hazy	
Indianola, Tex.	.....	.....	30.11	764.8	64	17.8	83	N	.....	.....	3	0	0	.....	.....	0	0	Clear	
Jacksonville, Fla.	.....	.....	30.03	762.7	69	20.6	95	NW	4	1.8	.....	.....	10s	.....	.....	1.58	40.1	Cloudy	
Keokuk, Iowa	.....	.....	29.92	760.0	57	13.9	69	SW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Key West, Fla.	.....	.....	30.04	763.0	82.7	28.2	75	SE	2	0.9	.....	Haze	5s	.....	.....	0	0	Fair	
Kittyhawk, N. C.	.....	.....	30.14	765.5	64	17.8	57	NE	7	3.1	.....	0	0	.....	.....	0.05	1.3	Clear	
Knoxville, Tenn.	.....	.....	30.16	766.1	45	7.2	84	NE	7	3.1	.....	0	0	.....	.....	0	0	Clear	
La Crosse, Wis.	.....	.....	29.79	756.7	55	12.8	74	SE	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Leavenworth, Kan.	.....	.....	29.94	760.5	52	11.1	73	S	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Lexington, Ky.	29.04	737.6	30.16	766.1	48	8.9	77	S	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Long Branch, N. J.	.....	.....	30.02	762.5	55	12.2	62	SW	15	6.7	.....	0	0	.....	.....	0.04	1.0	Clear	
Louisville, Ky.	.....	.....	30.12	765.0	48	8.9	85	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Lynchburg, Va.	.....	.....	30.16	766.1	49	9.4	70	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Malone, N. Y.	.....	.....	29.71	754.6	50	10.0	70	SW	8	3.6	.....	2ck	2s	NW	.....	0.12	3.0	Fair	
Marquette, Mich.	.....	.....	29.65	753.1	51	10.6	86	NW	8	3.6	.....	.....	1s	.....	NW	0	0	Cloudy	
Memphis, Tenn.	.....	.....	30.14	765.5	50	10.0	78	NE	1	0.4	.....	0	Fog	.....	.....	0	0	Clear	
Milwaukee, Wis.	.....	.....	29.82	757.4	54	12.2	73	W	13	5.8	.....	0	0	.....	.....	0	0	Clear	
Mobile, Ala.	.....	.....	29.93	760.2	65	18.3	100	N	7	3.1	.....	.....	10n	.....	.....	1.99	50.5	Light rain	
Montgomery, Ala.	.....	.....	30.02	762.5	62	16.7	88	E	8	3.6	.....	.....	10n	.....	SE	0.03	0.8	Light rain	
Morgantown, W. Va.	.....	.....	30.09	764.3	52	11.1	66	S	4	1.8	.....	0	Haze	.....	.....	0	0	Clear	
Mt. Washington, N. H.	23.39	594.1	29.75	755.6	26	−3.3	100	NW	40	17.9	.....	.....	Fo	.....	.....	1.90	48.3	Foggy	
Nashville, Tenn.	.....	.....	30.02	762.5	45	7.2	84	Calm	0	0	.....	0	Fog	.....	.....	0	0	Clear	
New Haven, Conn.	.....	.....	29.95	760.7	55	12.8	73	W	8	3.6	.....	Haze	Sm'e	.....	.....	0.04	1.0	Clear	
New London, Conn.	.....	.....	29.95	760.7	56	13.3	57	W	10	4.5	.....	0	0	.....	.....	0.53	13.5	Clear	
New Orleans, La.	.....	.....	29.94	760.5	65	18.3	78	N	10	4.5	.....	.....	10n	.....	.....	0.23	5.8	Light rain	
Newport, R. I.	.....	.....	29.92	760.0	53	11.7	67	SW	16	7.2	.....	0	0	.....	.....	0.36	9.1	Clear	
New York, N. Y.	.....	.....	30.00	762.0	50	10.0	64	SW	13	5.8	.....	0	0	.....	.....	0	0	Clear	
Norfolk, Va.	.....	.....	30.16	766.1	56	13.3	81	Calm	0	0	.....	0	Haze	.....	.....	0.15	3.8	Clear	
North Platte, Neb.	27.06	687.3	29.62	752.3	47	8.3	62	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Omaha, Neb.	28.76	730.5	29.81	757.2	53	11.7	86	S	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	29.82	757.4	55.8	13.8	71	SW	4	1.8	.....	.....	10ks	.....	NW	0.13	3.3	Cloudy	
Peck's Beach, N. J.	.....	.....	30.00	761.3	57	13.9	62	W	16	7.2	.....	0	0	.....	.....	0.03	0.8	Clear	
Pembina, Dakota	.....	.....	29.91	759.7	40	4.4	91	NW	8	3.6	.....	0	Haze	.....	.....	0	0	Clear	
Philadelphia, Penn.	.....	.....	30.05	763.5	51	10.6	65	W	9	4.0	.....	0	0	.....	.....	0.01	0.3	Clear	
Pike's Peak, Colorado	18.02	457.7	30.23	767.8	27	−2.8	77	NE	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Pittsburgh, Penn.	.....	.....	30.02	762.5	50	10.0	64	S	14	6.3	.....	0	0	.....	.....	0	0	Clear	
Port Huron, Mich.	.....	.....	29.84	757.9	49	9.4	77	SW	9	4.0	.....	2c	0	W	.....	0	0	Fair	
Portland, Me.	.....	.....	29.73	755.1	42	8.9	78	SW	6	2.7	.....	0	Haze	.....	.....	0.60	15.2	Clear	
Portland, Oregon	.....	.....	30.12	765.0	57	13.9	81	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Punta Rassa, Fla.	.....	.....	30.04	762.0	80.8	27.1	82	S	10	4.5	.....	.....	1s	.....	S	0	0	Threatening	
Rochester, N. Y.	.....	.....	29.79	756.7	55	12.8	74	SW	11	4.9	.....	2c	Haze	SW	.....	Inap.	Inap.	Fair	
Salt Lake City, Utah	25.72	653.3	30.06	763.5	53	11.7	28	S	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J.	.....	.....	30.09	764.0	53	11.7	67	W	30	13.4	.....	0	0	.....	.....	0.05	1.3	Clear	
San Diego, Cal.	.....	.....	29.93	760.2	62	16.7	94	Calm	0	0	.....	Haze	5s	.....	.....	0	0	Fair	
San Francisco, Cal.	.....	.....	29.95	761.5	53	11.7	86	W	14	6.3	.....	0	2s	.....	W	0	0	Clear	
Santa Fe, N. M.	23.34	592.8	29.88	758.9	52	3.9	72	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	30.07	763.8	39	17.2	83	N	7	3.1	.....	.....	10s	.....	.....	0.95	24.1	Threatening	
Shreveport, La.	.....	.....	30.15	765.8	63	11.1	83	N	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Smithville, N. C.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Springfield, Mass.	.....	.....	29.89	759.2	52	11.1	66	S	4	1.8	.....	2cs	0	W	.....	0.26	6.6	Clear	
St. Louis, Mo.	.....	.....	30.09	764.3	53	11.7	72	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla.	.....	.....	30.00	762.0	66	18.9	100	E	9	4.0	.....	.....	10n	.....	E	1.38	35.1	Heavy rain	
St. Paul, Minn.	.....	.....	29.72	754.9	49	9.4	85	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Squan Beach, N. J.	.....	.....	29.97	761.2	53	11.7	66	S	18	8.0	.....	0	Haze	.....	.....	0	0	Clear	
Toledo, Ohio	.....	.....	29.91	759.7	45	12.8	62	SW	12	5.4	.....	0	Haze	.....	.....	0	0	Clear	
Tucson, Arizona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Tybee Island, Ga.	.....	.....	30.08	764.0	65	18.3	90	NE	16	7.2	.....	.....	10s	.....	NE	0.94	23.9	Threatening	
Vicksburg, Miss.	.....	.....	30.12	765.0	51.7	10.8	86	NE	7	3.1	.....	5ck	0	SW	.....	0	0	Fair	
Virginia City, Montana	24.36	618.7	29.84	757.7	45	7.2	45	SE	1	0.4	.....	4c	0	W	.....	0	0	Fair	

UNITED STATES SERIES—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.	.....	.....	30.12	765.0	51	10.6	68	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Wilmington, N. C.	.....	.....	30.13	765.3	55	12.8	73	N	7	3.1	.....	2cs	0	NW	.....	0.06	1.5	Fair	
Woods Hole, Mass.	.....	.....	29.91	759.7	57	13.9	57	NW	17	7.6	.....	0	0	.....	.....	0.23	5.8	Clear	
Wytheville, Va.	27.79	705.8	30.02	762.5	38	3.3	99	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear, frost.	
Yankton, Dakota	28.54	724.9	29.82	757.4	46	7.8	88	W	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub-Series																			
Bridgetown, Barbados, W. I.	.....	.....	.....	.....	81	27.2	99	SE	4	1.8	.....	5k	2ks	NE	.....	0.50	12.7	Fair	E. Racker.
Pointe-a-Pitre, Guadeloupe, do	.....	.....	29.95	760.7	82	27.8	74	E	.....	.....	.....	5pc	5n	.....	.....	0.11	2.8	Cloudy	L. V. Bigard.
Havana, Cuba, W. I.	.....	.....	30.04	762.7	79	26.1	82	Calm	0	0	.....	5c	0	NNE	.....	0	0	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W. I.	.....	.....	30.19	766.8	80	26.7	82	Calm	0	0	.....	3ck	2s	SE	.....	0	0	Fair	James Gall.
St. Thomas, St. T., W. I.	.....	.....	30.21	767.1	83	28.3	70	E	7	3.1	.....	2cs	5k	E	.....	0	0	Fair	W. S. Cameron.
Santiago de Cuba, W. I.	.....	.....	29.84	757.9	78	25.6	78	Calm	0	0	.....	8c	2s	.....	SW	.....	.....	Cloudy	Robert Mason.
St. Georges, Bermudas	.....	.....	30.12	765.0	75.0	23.9	77	N	5.2	2.3	.....	10ks	5fk	.....	.....	0.13	3.3	Cloudy	C. F. Allen.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. P. Church.
Makawao, Maui, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. L. Clarke.
Cumberland, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ft. Chippewyan, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ft. McPherson, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ft. Simpson, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
York Factory, B. A.	.....	.....	29.84	758.9	28	-2.	100	W	20	8.9	.....	4k	0	W	.....	0	0	Fair	J. Fortescue.
St. John's, Newfoundland	.....	.....	29.37	746.0	53.5	11.9	70	SE	.....	.....	.....	.....	1cn	.....	.....	0.15	3.8	Threatening	John Delaney.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Clifton, Jamaica, W. I.	27.24	691.9	30.01	762.2	69	20.6	84	SE	1.0	0.4	.....	0	0	.....	.....	0	0	Clear	C. Partridge.
Navassa	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Measlin, S. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Paramaribo, S. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Elyria, Ohio	.....	.....	29.91	760.5	57	13.9	56	SW	12	5.4	.....	.....	2s	.....	.....	0	0	Fair	H. M. Redington.

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

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 ft., or 807.4 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 1,283.1 m.; Santa Fé, 6,86[illegible] (?) ft., or 2,091.6 (?) m.; Virginia City, 5,18[illegible] (?) ft., or 1,67[illegible].3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 0.30 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 28, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.16	766.0	81.9	27.7	60	NW			1		2			0	0	Fair	Charnot.
Algiers			30.09	764.3	81.7	27.6	87	NNE			2		4			0	0	Fair	Peter.
La Calle																			Kuntz.
Tunis			30.12	765.1	87.1	30.6	35	E			3		0			0	0	Fair	Jacques.
Sfax			30.16	766.0	83.1	28.4	55	SE			2		2			0	0	Fair	Chauvey.
Saida			30.12	765.0	82.4	28.0	33	SW			1		2			0	0	Fair	Grosjean.
Tebessa			30.15	765.7	81.5	27.5		NE			2		2			0	0	Fair	Colin.
Geriville			30.10	764.5	72.5	22.5	36	WNW			2		2			0.236	6.0		Bernadach.
Laghouat			30.11	764.6	82.4	28.0	27	NW			4		2			0.039	1.0	Stormy	Simon.
Biskra			30.12	765.0	85.1	29.5	45	SE			1		3			0	0	Thunder	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.11	764.7	67.8	19.9	75	NE			2		6			0.067	1.8	Rainy	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.01	762.2	64.0	17.8	53	W			4		2			0.016	0.4		I. R. Observatory.
Eperies			30.05	764.2	56.7	13.7	77	Calm			0		10			0	0		Julius Mikolik.
Gratz	28.92	734.5	30.10	764.5	55.6	13.1	94	SW			2		10						Andreas Rospini.
Hermannstadt	28.65	727.7	30.04	763.0	96.0	18.9	43	E			1		0			0	0		Prof. Reissenberger.
Kremsmünster	28.73	729.8	30.06	763.5	58.8	14.9	75	Calm			0		8			0	0		Prof. C. Wagner.
Lemberg			29.96	761.0	60.6	15.9	68	W			3		7			0	0		Dr. T. Stanecki.
Nyiregyhaza			30.07	763.7	67.3	19.6	61	Calm			0		8			Blank	Blank		Habzsuda Daniel.
Pola			30.08	764.0	60.6	15.9	94	SE			3		10n,s		SE	0.395	9.99		I.R. Hydrographic Of'ce
Szegedin			30.03	762.7	58.4	20.2	43	Calm			0		0			0	0		Karl Stancel.
Trieste			30.09	764.3	58.8	14.9	98	Calm			0		10			1.709	45.7	Raining	Prof. V. Farolfi.
Vienna			30.04	762.8	63.9	17.7	70	SSW			2		8			0.094	2.4		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.76	756.0	55.0	12.8	94	SW			5	0?	10			0.205	5.20	Raining	Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.36	745.7	54.0	12.2		WNW	31	13.9			3			0	0	*D. clouds	William Boswell.
Ardrossan			29.50	749.3	56	13.3		WNW			5		7					Showery	Wm. McNell.
Armagh Observatory			29.52	752.3	54.7	12.6		WNW	12	5.4			6					*D. clouds	S. Cal., for Dr. Robinson.
Bidston, Liverpool Obs.			29.59	751.6	57.0	13.9		W			6		9					Overcast	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.72	754.9	57.2	14.0		WNW			1		9					Showery	J. Dreyer.
Bradford			29.53	750.0	57.5	14.2		W			1		3					*D. clouds	J. McLandsborough.
Bridgetown, (Barbadoes)			30.00	762.0	83.0	28.7		NE			2		8					*D. clouds	T. H. Hunt.
Cambridge Observatory																			Sergeant Hunt, A. H. C.
Cape Good Hope Obs.			30.30	769.6	65.5	18.6	55	S	11	4.9			3						The Staff, for E. J. Stone.
Cardington			29.66	753.4	62.0	16.7		SW					8					Overcast	John McLaren.
Carlisle			29.52	749.8	56.5	13.6		W					6			0.32	8.1	*D. clouds	T. Bell, for J. Cartmell.
Chatham, School M. E.			29.71	754.6	66.2	19.0		SW			2		10						Capt. J. Fellowes, R. E.
Dartmoor	28.46	722.9	29.82	757.4	52	11.1		W			8		10					Raining	R. E. Power.
Donaghadee			29.57	751.1	54	12.8		W			5		3					*D. clouds	J. Mac Gowan, Jr.
Dover			29.70	754.4	59	15.0		W			4		5						J. Costello.
Eccles, (near Manchester)			29.58	751.3	58.5	14.7		W	3.6	1.6			6					Squall	Thomas Mackereth.
Falmouth Observatory			30.08	764.0	59.3	15.2		W	24	10.7			10					Overcast	The Staff.
Fort Napier, (Natal)	27.70	703.6	29.93	760.2	77.0	25.0		E			4		8					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone			29.97	761.2	80	26.7		W					6					*D. clouds	
Galway, Queen's College																			B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.17	766.3	76.5	24.7		NE			4		3					*D. clouds	Sergt. E. G. Baker.
Glasgow Observatory			29.48	748.8	53.8	12.1		WNW			3		5					Fine	Lewis Stuart.
Great Yarmouth			29.59	751.6	59	15.0		W			5		6					*D. clouds	G. T. Watson.
Greenwich Royal Obs.			29.70	754.4	61.5	16.6		WSW			4		9					Showery	The Staff, for G. B. Airy.
Guernsey			29.90	759.4	59.5	15.3		WSW			6		8					Squally	Dr. S. E. Hoskins, Jersey.
Halifax, Moorside Obs.			29.58	751.3	54.4	12.4		WNW					6			Blank	Blank	*D. clouds	F. J. Page, for L. J. Crosley.
Helston			29.97	761.2	62	16.7		W			4		10					Showery	M. P. Moyle.
Holyhead			29.64	752.8	57	13.9		W			4		10					Showery	John Tilston.
Kew Park																			
Kew Observatory			29.70	754.4	61.7	16.5		SW	20	8.9			7					*D. clouds	The Staff.
Kingstown			29.69	754.1	57	13.9		W			4		6					*D. clouds	George Mitchell.
Leicester Museum			29.64	752.8	55.9	13.3		W			2		10					Raining	William J. Harrison.
Llandudno			29.65	753.1	54.0	12.2		W					10					Showery	Dr. James Nicol.
Malta, (Mediterranean)			30.21	767.3	78.4	25.8		SW			1		6k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			29.38	746.2	55	12.8		SW			4		8						W. D. Penny.
Nassau, (Bahamas)			30.17	766.3	86.0	30.1		SE			3		6						Surg.-Maj. Henry.
Nottingham			29.62	752.3	56.0	13.7		WNW			6	..k,c	..n.d		W	0	0	*D. clouds	E. J. Lowe.
Oscott, St Mary's College			29.66	753.4	52.9	11.6		W			4		10					Raining	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.66	753.4	62	16.7		W			5		9					Overcast	J. Lucas, for R. Main.
Plymouth			29.85	758.2	60.8	16.0		WSW			4		4			Blank	Blank	Squally	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.78	756.4	60	15.6		W			5		8					Dull	W. Kennedy.
Saint Ann's Head			29.74	755.4	60	15.6		W			6		8					Overcast	John C. Walker.
Saint Helier, (Jersey)			29.93	760.2	60.0	15.6		W			7		10						A. P. Amy.
Sandwick Manse (Orkneys																			
Scarborough			29.50	749.3	57.1	13.4		WNW			3		9					Overcast	F. Shaw.
Scutari cemetery, (Turkey			30.14	765.5	69.0	20.6		SW			1		1					Clear	Sergt. W. H. Lyne.
Sheffield			29.56	750.8	59.0	15.0		NW			5		4						W. F. Cooper.
Silloth Rectory			30.51	749.5	57.1	13.9		NW			6		5			0.010	0.25	*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			29.55	750.6	55.0	12.8		W			4		4			Blank	Blank	*D. clouds	The Staff.
Stornoway, Lewis C. (Heb.)			29.39	746.5	50	10.0		NW			4		10					Overcast	John Smith.
Stratfield Turgiss			29.74	755.4	59.6	15.3		W			2		10					Raining	Rev. Charles H. Griffith.
Streatley Vicarage																			Rev. John Slatter.
Sumburgh Head, (Shetland)																			
Thurso			29.20	744.0	52	11.1		WNW			5		7					*D. clouds	John Trotter.
Truro, Royal Institution			29.84	757.9	61	16.1		W			7		10					Raining	W. Newcombe.
Valencia Observatory			29.77	757.1	58.5	14.7		SW	17	7.6			10					Gloomy	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			29.45	748.0	55	12.8		W			3		2k			0.22	5.6	Fine	Andrew Gibb.
Monach Lt-house, Shet Is			29.50	749.3	57	12.8		NW			6	3	3	NW		0	0		J. Youyclause.
North Unst, (Shetland Is)			29.11	739.4	49	9.4		N			7		10						

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.42	747.2	55.8	63.2	85	WSW			7		10						
Fanöe			29.32	744.6	58.1	14.5	75	WSW			7		8						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.69	751.7	46.8	8.2	87	E			4		5						
Thorshavn, (Faröe)			29.44	746.9	47.3	8.5	69	NNE			4		8						
Vestervig			29.26	743.1	52.5	11.4	86	WSW			4		10					Raining	

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			29.99	761.7	68.0	20.0	76	W			3		[illegible]			0.12	3.	Raining	Normal School.
Amiens																			Normal School.
Avignon			30.12	765.1	70.3	21.3	41	NNW			3		5		NNW	0	0	Cloudy	Normal School.
Bar-sur Seine*																			C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			29.92	759.9	58.1	14.5	82	W			6		10		W	0.108	2.75	Cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.19	766.8	65.7	18.7	56	W			2		5			0	0	Cloudy	Normal School.
Bourges			29.93	760.2	76.1	24.5	77	SW			2		5		S W	0	0	Cloudy	Normal School.
Brest			29.96	761.0	61.0	16.1	87	WSW			3		10		W	0.098	2.50	Misty	Naval Observatory.
Caen																			Normal School
Chartres			30.19	766.4	59.5	10.3		NW			1		10		NW			Cloudy	Normal School.
Chaumont	28.92	734.5	30.07	763.6	58.8	14.9		SSW			4		..kn		SSW	0.031	0.8		Normal School.
Commercy			30.07	764.8	58.3	14.6	72	W			6		5ck		W	0.098	2.5	Cloudy	Normal School.
Commune de Gréasque†			30.15	765.8	71.1	21.7	31	SW			3		2		NW	0	0		
Le Mans																		Cloudy	Normal School.
Lons-Le Saulnier			30.13	765.2	63.9	17.7	57	SW			2		5		SW	0	0	Cloudy	Normal School.
Mâcon			30.11	764.7	63.3	17.4	56				2		5		W	0	0	Cloudy	Normal School.
Mirecourt			29.99	761.7	61.3	16.3	69	WSW			4		5		SW	0	0		Normal School.
Orleans																			Normal School.
Paris Observatory			29.97	761.1	59.2	15.1	78	SW			3		10		SW	0	0	Cloudy	National Observatory
Parthenay			30.07	763.7	65.7	18.7	83	SW			6		5		SW			Cloudy	Normal School.
La Roche sur Yon			29.13	765.3	63.7	17.6	90	S			6		8		NE			Cloudy	Normal School.
Rochefort, Observatory			30.17	766.4	68.0	20.0	47	SW			4		10		NE	0.016	0.4	Cloudy	Naval Observatory.
Rouen			29.86	758.1	59.4	15.2	82	SSW			10		10			0.122	3.1	Cloudy	Normal School.
Saint Lo																			Normal School.
Villefranche																			Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchesi.
Mont-Louis			30.31	770.5	62.6	17.0	67	SW	11.2	5.00			4		SW	0	0		—. Faignère.
Montsouris Observatory			29.95	760.8	58.5	14.7	83	SW			3		10kn			0.001	0.1	Sprinkling	Marié Davy.
Perpignan			30.10	766.8	75.7	24.3	47	SW	3.7	1.67			2		SW	0	0		Dr. Fines.
Saint Maur, (near Paris)			29.96	761.0	58.3	14.6	83	SW			3		10			0	0	Raining	E. Renou.
Tours			30.14	765.2	62.2	16.8		SW			3		10		W	0	0		C. Marquet.
Versailles, (near Paris)			29.92	760.0	59.0	15.0	82	W			4		10			0	0	Cloudy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			29.86	758.1	69.6	20.9	88	E	3.6	3.4		0	0			0 0	0 0	Clear	H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,201.8 feet; Chaumont, 332 m., or 1,090.9 ft.; Commune de Gréasque, 322 m., or 1,056.4 ft. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Observation not simultaneous. †Near Marseilles.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Lower 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			29.92	760.0	59.9	15.5	70	W	31	14			5			0.220	5.6		Prof. Hoh.
Berlin			29.76	755.8	61.7	16.5	51	SW	31	14			8			0.008	0.2		Prof. Arndt.
Breslau			29.98	761.5	64.6	18.1	35	SW	27	12			2			0	0		Dr. P. Neugebauer.
Carlsruhe			29.99	761.7	61.5	16.4	55	SW	67	30			9			0.004	0.1		A. Senz.
Cassel			29.68	753.9	58.1	14.5	69	S	27	12			8			0.047	1.2		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society
Friedrichshafen	28.07	728.1	30.10	764.4	61.7	16.5	56	W					3			0.583	14.8	Light rain	M. Wilhelm.
Hamburg			29.58	751.3	54.5	12.5	93	SW	40	18			10			0.110	2.8	Cloudy	Deutsche Seewarte.
Kiel			29.45	748.1	55.2	12.9	89	SW	36	16			10			0.165	4.2		Prof. G. Karsten
Königsberg			29.71	754.5	58.6	14.8	56	SW	34	15						0.001	0.02	Cloudy	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			29.84	757.8	62.0	17.0	46	SW	27	12			9			0	0		Prof. Bruhns.
Münster			29.69	754.1	54.5	12.5	100	SW	22	10			10			0.134	3.4		Prof. E. Heis.
Posen			29.88	758.9	66.0	18.9	40	NW	22	10			2			0.008	0.2	Clear	Dr. Magener.
Strassburg, (in Alsace)			30.04	763.0	61.5	16.4	65	SW	18	8			10			0.248	6.3		Dr. Schur.
Stuttgart			30.04	762.7	54.1	12.3	47	W					10			0.016	0.4	Raining	Mr. Würth.
Thorn			29.81	757.1	64.2	17.9	42	WSW	22	10			6			0	0		Dr. Hasenbalg.
Treves, (Trier)			29.80	759.1	58.1	14.5	59	W	36	16			10			0.260	6.6		Prof. Hesen.
Wustrow, Naval School			29.60	751.9	55.6	13.1	60	SW	31	14			10			0.004	0.1	Cloudy	E. F. Schütz.

Note.—In the originals the distinction between 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.

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.	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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.07	763.7	66.6	19.2	54	SE	0	0			3	S		0	0		
Mondovi			30.07	763.6	59.4	15.2	61	NW			2		8	WSW		0	0		
Genoa			30.05	763.2	73.0	22.8	51	N	1.3	0.6			4	S		0	0		
Pavia			30.07	763.7	71.8	22.1	49	SW			1		8	SW		0	0		
Verona			30.01	763.1	73.4	23.0	49	E			1		0			0	0		
Padua			30.04	763.0	67.1	19.5	66	NE	4.9	2.2			10	SW		0	0		
Parma																			
Bologna			30.16	766.1	65.3	18.5	68	W			1		6	W			0		
Leghorn			30.04	763.0	72.3	22.4	64	WNW	13.6	6.1			2			0	0		
Urbino																			
Ancona			30.07	763.7	67.6	19.8	60	SE			2		8			0.047	1.2		
Siena			30.03	762.8	70.7	21.5	60	SW	0	0			7	SW		0	0		
Rome			30.10	764.5	64.4	18.0	96	SE	6.9	3.1			10			0.535	13.6		
Naples, O. U.			30.19	765.9	73.4	23.0	71	SW			1		10	SW		0.815	20.7		
Lecce			30.17	766.2	70.0	21.1	83	ENE	6.3	2.8			10			0	0		
Cosenza			30.18	766.6	73.0	22.8	68	SW			1		8			0.130	3.3		
Catania, (Sicily)																			
Riposto			30.08	764.0	75.7	24.3	71	NE			4		7	SW		0	0		
Palermo			30.09	764.3	76.6	24.8	61	NE	6.3	2.8			2			0	0		
Sub-Series.																			
Naples, S. R.			30.17	766.2	68.4	20.2	87	SW	3.1	1.4			6	W		0.303	7.7		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,144.3 feet.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Flushing			29.72	755.0	59.0	15.0		W			5								
Groningen			29.49	749.0	58.6	14.8		W			5								
Helder			29.54	750.4	60.1	15.6		WSW			5								
Utrecht			29.60	751.8	58.3	14.6		SW			5		10					Overcast	

Note.—The originals give the wind-pressure in kilograms per square meter; the 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			28.95	735.2	50.4	10.2	95	SSW	15.4	6.7			10			1.717	43.6	Fog and rain	
Christiania			28.99	736.4	54.9	12.7	67	SW	13.4	6.0			10			0.039	1.0		
Tromsö			29.19	741.5	38.5	3.6	80	W			2		10			0.008	0.2		

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Lisbon			30.14	765.6	79.2	26.2	39	NE	6.3	2.8			0						The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

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	62.4	16.9	45	WNW	22	10			5						Astronomical Obs.
Wilna			29.75	755.7	60.6	15.9	53	SW	8	3.5			6						Astronomical Obs.
Dorpat			29.52	749.8	49.3	9.6	95	W	11	5			10					Thunder-storm	Physical Cabinet.
St. Petersburg			29.42	747.2	59.5	15.3	59	SSW	11	5			4						Central Physical Obs.
Kuopio			29.16	740.7	51.8	11.0	83	SW					10		NE	0.102	2.6		Ch. Forsten.
Kieff			29.98	761.4	63.9	17.7	48	SSW	11	5			3						Physical Cabinet.
Nikolaiev			30.24	768.0	61.3	16.3	57	S	10	4.5			2						Kurdokof.
Kertch			30.29	769.3	64.9	18.3	56	ESE	4	2			0						Lagorio.
Moscow			29.86	758.4	54.9	12.7	85	SW	10	4.5			8						Meteorological Obs.
Lugan			30.15	765.8	62.6	17.0	43	SW	20	9			1						Meteorological Obs.
Archangel			29.38	746.3	34.5	1.4	96	SSW	8	3.5			10					Snowing	Ogorodnikof.
Tiflis	28.93	734.9	30.37	771.3	54.1	12.3	71	Calm	0	0			10						Physical Obs.
Astrakhan			30.38	771.7	63.9	17.7	35	SW	8	3.5			0						Sebastianof.
Kasan			29.99	761.8	48.4	9.1	53	SW	8	3.5			4						Physical Cabinet.
Orenburg			30.06	763.5	48.7	5.3	47	N	4	2			5						Tschernischef.
Ekaterinburg	28.97	735.9	29.99	761.8	42.3	5.7	67	SW	4	2			7						Meteorological Obs.
Kasaly			30.12	765.1	53.6	12.0	67	NE	8	3.5			2						Bobrof.
Tashkend	28.42	721.8	30.09	764.2	66.6	19.2	71	Calm	0	0			0						Michelson.
Barnaul			30.01	762.3	51.3	10.7	45	Calm	0	0			1						Meteorological Obs.
Yeniseisk			30.08	764.1	50.4	10.2	47	E	4	2			9						Marks.
Irkutsk	28.82	732.0	30.25	768.4	36.7	2.6	85	Calm	0	0			0						Usolzef.
Oorga																			Mossin.
Peking, (China)			30.04	762.9	60.1	15.6	43	NW	9	4			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. The elevation of Tiflis is 403. 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			30.08	763.9	82.9	28.3	40	SE	3.8	1.7		0	1			0	0	Clear	Royal Observatory.
San Fernando																			The Naval Observatory.

Note.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea			28.93	734.9	42.3	5.7	100	ENE			4		10			0	0	Raining	
Hernosand			28.98	736.0	50.4	10.2	93	S			2		10			0.563	14.3	Raining	
Stockholm			29.12	739.6	55.0	12.8	67	SSW			6		7			0.008	0.2	Stormy	
Wisby			29.32	744.7	57.2	14.0	69	WSW			6		5			0	0		
Sub-Series.																			
Upsala			29.09	738.8	53.2	11.8	71	SW	22.4	10.0			10		WSW			Raining	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsa'a also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.72	729.6	30.12	765.0	66.0	18.9	43	WSW			4		2			0	0	Clear	The Observatory.
Zurich	28.47	723.2	30.09	764.2	61.2	16.2	59	W			4		5		W	0.059	1.5	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +3.0mm.; Thermometer, +2°.7; Relative Humidity, —23 per cent.

Note.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria, Lee Obs'y																			Prof. C. N. A. Van Dyck.
Constantinople			30.17	766.4	65.1	18.4	44	S	7.8	3.5			0			0	0	Clear	
Fao, (Persian Gulf)			29.96	761.0	86.2	30.1		NW			4		10					Dusty	
Salonica					75.6	24.2		S			1		0					Clear	
Valona			30.12	765.0	68.0	20.0		S			2		0					Clear	
Varna			30.11	764.7	65.7	18.7		W			1		10					Cloudy	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea level. The distinction between upper and lower clouds is not made.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens																			

Note.—Reports commence October 1, 1875.

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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Tokio																			

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario			30.17	766.3	42	5.6		Calm	0	0		0	0			0.16	4.1	Clear	
Chatham, N. B.			29.78	756.4	40	4.4	74	NW	13	5.8		0	0			0	0	Clear	
Charlottetown, P. E. Island			29.74	755.4	47	8.3	73	NW	13	5.8		2k	0			0.125	2.92	Fair	
Fort Garry, Manitoba			30.02	762.5	42	5.6	100	E	8	3.6			10n			0.12	3.0	Heavy rain	
Halifax, N. S.			29.74	755.4	51	10.6	84	W	10	4.5		2k	2n			0.019	0.46	Clearing	
Kingston, Ontario			30.15	765.8	41	5.0	63	NE	2	0.9		0	0			0.03	0.8	Clear	
Montreal, Quebec			30.09	764.3	38	3.3	67	NW	7	3.1		0	0			0.41	10.4	Clear	
Ottawa, Ontario			30.14	765.5	38	3.3	76	Calm	0	0		0	0			0.10	2.5	Clear	
Parry Sound, Ontario			30.15	765.8	34	1.1	95	NE	7	3.1		0	0			0.13	3.3	Clear	
Port Dover, Ontario			30.07	763.8	51	10.6	49	N	12	5.4		10k	0	NW		0	0	Fair	
Port Stanley, Ontario			30.04	763.0	52	11.1	80	N	3	1.3		10k	0	NW		0	0	Cloudy	
Quebec, Quebec			29.99	761.7	37	2.8	48	SW	6	2.7		0	0			0	0	Clear	
Sarnia, Ontario			30.08	764.0	40	4.4	86	E	3	1.3		0	0			0.01	0.3	Clear	
Stayner, Ontario			30.12	765.0	41	5.0	74	Calm	0	0		0	0			Inap.	Inap.	Clear	
Sydney, C. B.			29.68	753.9	52	11.1	91	W	7	3.1		2k	8ks	W	W	0.25	6.3	Cloudy	
Toronto, Ontario			30.09	764.3	47	8.3	81	N	9	4.0		5ek	5ks	SW		0.10	2.5	Cloudy	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

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

Station.	Barometer. Corrected or instrumental errors. Inches.	Barometer. Corrected or instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.99	761.7	51	10.6	86	N	2	0.9		2k	0	W		0.05	1.3	Clear	
Alpena, Mich.			30.10	764.5	38	3.9	81	NW	2	0.9		2k	0			0	0	Clear	
Atlantic City, N. J.			30.05	763.3	61	16.1	71	W	8	3.6		0	0			0	0	Clear	
Augusta, Ga.			30.07	763.8	63	17.2	94	N	1	0.4			8ks		N	0.05	1.3	Cloudy	
Baltimore, Md.			30.10	764.5	55	12.8	73	W	1	0.4		0	Sm'e			0	0	Smoky	
Barnegat, N. J.			30.04	763.0	62	16.7	66	SW	4	1.8		0	0			0	0	Clear	
Benton, Montana	27.94	694.4	30.14	765.5	50	10.0	58	SW	4	1.8		8k	Sm'e	SW		0	0	Fair	
Bismarck, Dakota	28.02	711.7	29.63	752.6	50	10.0	64	S	9	4.0		5ck	Haze	S		0	0	Fair	
Boston, Mass.			29.96	761.0	55	12.8	62	NW	8	3.6			10s		NW	0	0	Cloudy	
Brackenridge, Minn.			30.02	762.5	31	—0.6	89	Calm	0	0		0	5s			0	0	Fair	
Buffalo, N. Y.			30.02	762.5	51	10.6	86	NE	8	3.6		5k	2s	NW		0.02	0.5	Fair	
Burlington, Vt.			30.09	764.3	41	5.0	74	N	6	2.7		5k	0	W		0.19	4.8	Fair	
Cairo, Ill.			30.07	763.8	52	11.1	93	Calm	0	0			Fog			0	0	Foggy	
Cape Hatteras, N. C.			30.11	764.8	68	20.0	74	NE	6	2.7		5ck	0	W		0	0	Fair	
Cape Henry, Va.			30.12	765.0	70	21.1	66	SW	4	1.8		0	0			0	0	Clear	
Cape May, N. J.			30.07	763.8	61	16.1	76	W	12	5.4		0	0			0	0	Clear	
Charleston, S. C.			30.09	764.3	67	19.4	90	N	6	2.7		2k	5ks	N	N	0.69	17.5	Clearing	
Cheyenne, Wyoming	24.13	612.9	30.07	763.8	45	7.2	35	NW	12	5.4		0	0			0	0	Clear	
Chicago, Ill.			29.97	761.2	56	13.2	75	N	11	4.9		0	0			0	0	Clear	
Cincinnati, Ohio			30.05	763.3	51	10.6	78	SE	2	0.9			Fog			0	0	Foggy	
Cleveland, Ohio			29.99	761.7	56.6	13.7	62	SW	6	2.7		2ck	0	W		0	0	Fair	
Colorado Springs, Col.	24.12	612.9	29.99	761.7	46	7.8	77	N	6	2.7		0	0			0	0	Clear	
Corsicana, Tex.			30.10	764.5	52	11.1	86	S	2	0.9		0	0			0	0	Clear	
Davenport, Iowa			29.99	761.7	53	11.7	79	E	16	7.2		0	0			0	0	Clear	
Denison, Tex.			30.04	763.0	57	13.9	69	SW	4	1.8		0	0			0	0	Clear	
Denver, Col.	24.99	632.4	30.12	765.0	46	7.8	62	S	4	1.8		8c	0	W		0	0	Fair	
Detroit, Mich.			30.01	762.2	52	11.1	73	NE	8	3.6			10s		NE	0	0	Cloudy	
Dodge City, Kan.	27.45	697.2	29.93	760.2	53	11.7	68	N	4	1.8			Fog			0	0	Foggy	
Dubuque, Iowa			30.04	763.0	50	10.0	72	NE	8	3.6		0	0			0	0	Clear	
Duluth, Minn.			30.10	764.5	46	7.8	85	N	4	1.8		8k	0	N		0	0	Fair	
Eastport, Me.			29.87	758.7	45	7.2	60	NW	14	6.3		0	0			0.15	3.8	Clear	
Erie, Pa.			29.99	761.7	58	14.4	69	N	8	3.6		5ck	1s	NW		0	0	Fair	
Escanaba, Mich.			30.15	765.8	35	1.7	80	NW	4	1.8		0	0			0	0	Clear	
Fort Gibson, I. T.																			
Fort Sill, I. T.	28.83	732.3						Calm	0	0		0	Haze			0	0	Clear	
Fort Sully, Dakota	28.17	715.5	29.81	757.2	50	10.0	64	SE	16	7.2		8c	0	W		0	0	Fair	
Galveston, Tex.			30.11	764.8	64	17.8	73	NE	7	3.1		0	0			0	0	Clear	
Grand Haven, Mich.			30.03	762.7	50	10.0	64	NE	11	4.9		5ck	0	NW		0	0	Fair	
Indianapolis, Ind.			30.02	762.5	55	12.8	68	S	5	2.2		Haze	Haz			0	0	Hazy	
Indianola, Tex.			30.14	765.5	67	19.4	79	N			2	0	0			0	0	Clear	
Jacksonville, Fla.			30.07	763.8	75	23.9	95	SE	4	1.8			10s			0	0	Cloudy	
Keokuk, Iowa			29.87	758.7	62	16.7	72	SW	4	1.8		0	Haze			0	0	Clear	
Key West, Fla.			30.10	764.5	82.2	27.9	79	SE	6	2.7		2cs	2ks			0	0	Fair	
Kittyhawk, N. C.			30.14	765.5	65	18.3	83	W	4	1.8		0	0			0	0	Clear	
Knoxville, Tenn.			30.12	765.0	49	9.4	93	NE	4	1.8		5ck	0	SW		0	0	Fair	
La Crosse, Wis.			30.07	763.8	48	8.9	77	Calm	0	0		0	0			0	0	Clear	
Leavenworth, Kan.			29.93	760.2	56	13.3	74	Calm	0	0		0	0			0	0	Clear	
Lexington, Ky.	29.01	736.8	30.11	764.8	54	12.2	67	SE	4	1.8		0	0			0	0	Clear	
Long Branch, N. J.			30.03	762.7	62	16.7	62	SW	8	3.6		0	0			0	0	Clear	
Louisville, Ky.			30.08	764.0	51	10.6	86	Calm	0	0			Fog			0	0	Foggy	
Lynchburg, Va.			30.10	764.5	51	10.6	79	S	1	0.4		0	0			0	0	Clear	
Malone, N. Y.			30.08	764.0	38	3.3	71	NW	2	0.9		0	0			0.14	3.6	Clear	
Marquette, Mich.			30.16	766.1	35	1.7	80	NW	3	2.7		0	0			0	0	Clear	
Memphis, Tenn.			30.08	764.0	53	11.7	86	Calm	0	0		0	Fog			0	0	Foggy	
Milwaukee, Wis.			30.09	764.3	49	9.4	57	NE	13	5.8		0	0			0	0	Clear	
Mobile, Ala.			30.07	763.8	63	17.2	94	Calm	0	0			Fog			0.28	7.1	Cloudy	
Montgomery, Ala.			30.04	763.0	61	16.1	97	Calm	0	0			10n			3.34	84.8	Light rain	
Morgantown, W. Va.			30.10	764.5	53	11.7	79	SE	1	0.4		0	Haze			0	0	Clear	
Mt. Washington, N. H.	23.57	598.7	29.93	760.2	19	—7.2	100	NW	42	18.8			Fog			1.48	37.6	Foggy	
Nashville, Tenn.			30.07	763.8	53	11.7	79	Calm	0	0		5ck	Fog	SW		0	0	Fair	
New Haven, Conn.			30.00	762.0	58	14.4	81	NW	4	1.8		5ck	Sm'e	NW		0	0	Fair	
New London, Conn.			30.00	762.0	63	17.2	62	W	5	2.2		0	Haze			0	0	Clear	
New Orleans, La.			30.06	763.5	67	19.4	87	S	4	1.8		10k	0	NW		0.02	0.5	Cloudy	
Newport, R. I.			29.96	761.0	60	15.6	71	W	8	3.6		2ks	0	SW		0	0	Fair	
New York, N. Y.			30.03	762.7	58	14.4	69	SW	6	2.7		0	0			0	0	Clear	
Norfolk, Va.			30.13	765.3	57	13.9	81	S	2	0.9		0				0	0	Clear	
North Platte, Neb.	27.99	688.1	29.66	753.4	45	7.2	92	Calm	0	0		0	Fog			0	0	Fair	
Omaha, Neb.	28.89	732.8	29.95	760.7	52	11.1	93	N	3	1.3		0	Sm'e			0	0	Clear	
Oswego, N. Y.			30.08	764.0	46	7.8	76	NE	8	3.6			8ks		NW	0.28	7.1	Cloudy	
Peck's Beach, N. J.			30.03	764.0	60	15.6	82	W	10	4.5		0	0			0	0	Clear	
Pembina, Dakota			29.96	761.0	40	4.4	86	NE	4	1.8		8c	2s			0	0	Cloudy	
Philadelphia, Penn.			30.05	763.5	55	12.8	80	W	7	3.1		0	0			0	0	Clear	
Pike's Peak, Colorado	18.03	458.0	30.24	768.1	23	—2.2	77	SW	12	5.4		0	0			0	0	Clear	
Pittsburgh, Penn.			30.05	763.3	53	11.7	67	S	1	0.4		0	Sm'e			0	0	Clear	
Port Huron, Mich.			30.05	763.3	50	10.0	78	NW	6	2.7		0	2s		W	0	0	Fair	
Portland, Me.			29.97	761.2	53	11.7	61	NW	4	1.8		0	0			0.04	1.0	Clear	
Portland, Oregon			30.12	765.0	46	7.8	92	Calm	0	0			Fog			0	0	Foggy	
Punta Rassa, Fla.			30.11	764.8	78.9	26.1	90	E	5	2.2		8cs	2ks	NE		0	0	Cloudy	
Rochester, N. Y.			30.05	763.3	48	8.9	77	NE	11	4.9			10s			0.23	5.8	Cloudy	
Salt Lake City, Utah	25.71	653.0	30.04	763.0	54	12.2	38	S	1	0.4		0	0			0	0	Clear	
Sandy Hook, N. J.			30.01	762.2	57	13.9	69	W	20	8.9		0	Haze			0	0	Clear	
San Diego, Cal.			29.96	761.0	63	17.2	100	Calm	0	0			Fog			0	0	Foggy	
San Francisco, Cal.			29.98	761.5	56	13.3	93	Calm	0	0			Fog			0	0	Foggy	
Santa Fe, N. M.	23.35	593.1	29.89	759.2	38	3.3	63	N	8	3.6		0	0			0	0	Clear	
Savannah, Ga.			30.07	763.8	68	20.0	90	NE	5	2.2			10s		NE	1.03	26.2	Cloudy	
Shreveport, La.			30.13	765.3	52	11.1	93	Calm	0	0			Fog			0	0	Foggy	
Smithville, N. C.																			
Springfield, Mass.			29.99	761.7	64	17.8	47	NW	2	0.9		1k	Haze			0	0	Fair	
St. Louis, Mo.			30.03	762.7	58	14.4	75	SW	9	4.0		0	0			0	0	Clear	
St. Marks, Fla.			30.04	763.0	75	23.9	95	S	3	1.3		2ck	2s	SW		2.08	52.8	Fair	
St. Paul, Minn.			30.01	762.2	46	7.8	85	Calm	0	0		0	0			0	0	Clear	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			29.97	761.2	58	14.4	69	W	3	1.3		0	Haze			0	0	Clear	
Toledo, Ohio			29.99	761.7	56	13.3	80	NE	18	8.0		0	0			0	0	Clear	
Tucson, Arizona																			
Tybee Island, Ga.			30.06	763.5	69	20.6	10[illegible]	NE	10	4.5			10s		NE	0.61	15.5	Threatening	
Vicksburg, Miss.																			
Virginia City, Montana	24.38	619.2	29.86	758.4	50	10.0	25	SE	2	0.9		3k	0	W		0	0	Fair	

UNITED STATES SERIES—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.	.....	.....	30.09	764.3	54	12.2	73	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Wilmington, N. C	.....	.....	30.12	765.0	67	19.4	79	NE	3	1.3	.....	2ck	2s	NW	.....	0	0	Fair	
Woods Hole, Mass	.....	.....	29.98	761.5	62	16.7	71	W	6	2.7	.....	0	5s	.....	W	0	0	Fair	
Wytheville, Va	27.78	705.6	29.97	761.2	45	7.2	84	W	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Yankton, Dakota	28.72	729.5	30.01	762.2	45	7.2	88	NE	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub-Series																			
Bridgetown, Barbados, W. I	.....	.....	.....	.....	80	26.7	95	E	10	4.5	.....	.....	10ks	.....	.....	1.05	26.7	Cloudy	E Racker.
Pointe-a-Pitre, Guadeloupe, do	.....	.....	29.98	761.5	81	27.2	83	E	.....	.....	.....	5s	5n	.....	.....	0.27	6.9	Foggy	L. V. Bigard.
Havana, Cuba, W. I	.....	.....	30.06	763.5	78	25.6	90	Calm	0	0	.....	8c	1k	NE	E	0	0	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W	.....	.....	30.2[illegible]	767.1	79	26.1	78	Calm	0	0	.....	5c	1s	SE	.....	0	0	Fair	James Gall.
St. Thomas, St. T., W. I	.....	.....	30.26	768.6	83	28.3	67	E	6	2.7	.....	2ck	2k	E	.....	0.25	6.3	Hazy	W. S. Cameron.
Santiago de Cuba, W. I	.....	.....	29.86	758.4	79	26.1	74	NW	4.8	2.1	.....	0	0	.....	.....	Blank	Blank	Clear	Robert Mason.
St. Georges, Bermudas	.....	.....	30.06	763.5	77	25.0	91	SW	10.0	4.5	.....	.....	10pk	.....	.....	0.04c	1.02	Sprinkling	C. F. Allen.
Honolulu, Oahu, H. I	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Makawao, Maui, H. I	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. P. Church.
Cumberland, B. A	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. L. Clarke.
Ft. Chippewyan, B. A	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ft. McPherson, B. A	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ft. Simpson, B. A	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
York Factory, B. A	.....	.....	30.02	762.5	28	—2.2	100	W	8	3.6	.....	2c	0	W	.....	0.01	0.3	Clear	J. Fortescue.
St. John's, Newfoundland	.....	.....	29.76	755.9	54	12.2	77	SW	.....	.....	.....	5k	10s	.....	.....	0.18	4.6	Cloudy	John Delaney.
St. John's, Porto Rico, W.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Clifton, Jamaica, W. I	27.26	692.4	30.01	763.0	69	20.6	79	S	1.0	0.4	.....	8c	0	S	.....	0	0	Cloudy	C. Partridge.
Navassa	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Medellin, S. A	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Paramaribo, S. A	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Elyria, Ohio	.....	.....	29.98	761.5	59.5	15.3	59	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	H. M. Redington.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 ft., or 807.4 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, 6,86[illegible] (?) ft., or 2,091.6 (?) m.; Virginia City, 5,48[illegible] (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 29, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.10	764.4	78.1	25.6	74	N			1		0			0	0	Fair	Charnot.
Algiers			30.04	762.9	79.2	26.2	80	N			2		2			0	0	Fair	Peter.
La Calle																			Kuntz.
Tunis			30.04	762.7	82.0	27.8	63	E			4		0			0	0	Fair	Jacques.
Sfax			30.08	764.0	82.8	28.2	68	SE			2		2			0	0	Stormy	Chauvey.
Saida			30.07	763.8	81.5	27.5	70	N			1		1			0	0	Fair	Grosjean.
Tehessa			30.08	764.0	78.8	26.0		SE			2		2			0	0	Fair	Colin.
Geriville			30.09	764.3	73.4	23.0	31	N			2		2			0.118	3.0	Cloudy	Bernadach.
Laghouat			30.07	763.8	82.4	28.0	27	NW			4		2			0	0	Threatening	Simon.
Biskia			30.07	763.7	97.5	36.4		N			2		5			0	0	Lightning	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			29.08	753.9	59.0	15.0	86	NW			2		10			0.839	21.3	Thunder-storm	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.91	752.	61.4	15.8	67	W			3		7			0.020	0.5		I. R. Observatory.
Eperies			29.35	753.1	55.0	12.8	94	S			1		10			0.348	8.85	Raining	Julius Mikolik.
Gratz	28.54	724.8	29.72	754.8	57.9	14.4	80	NW			2		10						Andreas Rospini.
Hermannstadt	28.30	718.7	29.61	753.4	67.1	19.8	36	SE			4		6			0.014	0.35		Prof. Reissenberger.
Kremsmünster	28.42	721.9	29.74	755.5	55.0	12.8	73	W			3		3			0.709	18.0		Prof. C. Wagner.
Lemberg			29.31	752.1	56.5	13.6	92	W			1		9			0.220	5.6	Raining	Dr. T. Stanecki.
Nyiregyhaza			29.72	751.9	56.[illegible]	13.[illegible]	96	SW			3		10			0.355	9.02		Habzsuda Daniel.
Pola			29.69	751.0	69.1	20.6	82	S			1		10m, ks			0.245	6.23		I.R. Hydrographic Of'ce
Szegedin			29.73	755.2	58.0	14.8	100	Calm			0		10						Karl Stancel.
Trieste			29.[illegible]9	754.9	64.4	18.0	99	Calm			0		10			Blank	Blank		Prof. V. Farolfi.
Vienna			29.55	753.2	61.0	17.2	59	WSW			4		9			0.031	0.8		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 417.8 m., or 1,337.9 ft.; Kremsmünster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.82	757.5	57.6	14.2	58	NW			4	0	4			1.043	26.50		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 1—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.54	750.3	52.1	11.2		W	2	0.9			9			0.015	0.38	Gloomy	William Roswell.
Ardrossan			29.61	752.1	56	13.3		W			5		7					Showery	Wm. McNeil.
Armagh Observatory			29.41	757.2	56.8	13.8		W	14	6.3			7					Squally	S. Cole, for Dr. Robinson.
Bidston, Liverpool Obs.			29.74	754.4	55.4	13.0		W			6		3					Hazy	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.94	760.5	59.3	15.		W			3		9					*D. clouds	J. Dreyer.
Bradford			29.66	753.4	55.	12.8		W			1		8					Gloomy	J. McLandsborough.
Bridgetown, (Barbadoes)			29.96	761.0	85.6	29.4		NE			2		6					*D. clouds	T. H. Hunt.
Cambridge Observatory																			Sergeant Hunt, A. H. C.
Cape Good Hope Obs.			30.17	766.3	62.2	16.8	66	S	24	10.7			7						The Staff, for E. J. Stone.
Cardington			29.79	756.7	60.0	15.		W					8					Overcast	John McLaren.
Carlisle			29.64	752.8	52.6	11.4		W					10			0.01	0.03		T. Bell, for J. Cartmell.
Chatham, School M. E.			29.81	757.2	60.7	15.9		SW			2		9						Capt. J. Fellowes, R. E.
Dartmoor	28.54	724.9	29.91	759.7	54.2	11.8		W			8		10					Fog & rain	R. E. Power.
Donaghadee			29.74	755.1	56	13.3		WNW			5		8					*D. clouds	J. Mac Gowan, Jr.
Dover			29.82	757.4	60	15.6		SSW			3		3						J. Costello.
Eccles, (near Manchester)			29.74	755.1	52.5	11.4		SW	2.4	1.1			10					Drizzling	Thomas Mackereth.
Falmouth Observatory			30.06	763.5	58.7	14.8		NW	40	17.9			4					*D. clouds	The Staff.
Fort Napier, (Natal)	27.74	704.6	29.47	761.2	71.2	21.8		E			3		8					D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.78	761.5	81	27.2		N					7						[Obs.
Galway, Queen's College																			B. G. Clare, for Prof. Car-
Gibraltar, (Mediterranean)			30.10	764.5	74.8	23.8		W			1		0					Clear	Sergt. E. G. Baker.
Glasgow Observatory			29.57	751.1	52.2	11.		WSW			6		10					Raining	Lewis Stuart.
Great Yarmouth			29.75	755.6	58	14.4		WNW			3		4					*D. clouds	G. T. Watson.
Greenwich Royal Obs.			29.83	757.7	62.4	16.9		WSW			3		9					Showery	The Staff, for G. B. Airy.
Guernsey			29.66	761.0	62	16.7		SW			2		7					Misty	Dr. S. E. Hoskins. [ley.
Halifax, Moorside Obs.			29.73	755.1	51.7	10.9		WSW					10					Drizzling	F. J. Page, for L. J. Cro-
Helston			29.94	760.5	63	17.2		NW			6		6					*D. clouds	M. P. Moyle.
Holyhead			29.82	757.4	58	14.4		WNW			6		3						John Tilston.
Hull Park																			
Kew Observatory			29.83	757.7	60.3	15.7		WSW	13	5.8			6					*D. clouds	The Staff.
Kingstown			29.83	757.7	59	15.0		WNW			6		5						George Mitchell
Leicester Museum			29.79	756.7	56.6	13.7		W			4		10					Raining	William J. Harrison.
Llandudno			29.81	757.2	60.6	15.9		WNW			1		1					Fine	Dr. James Nicol.
Malta, (Mediterranean)			30.05	763.3	79.6	26.4		SW			1		8k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			29.53	750.0	50	10.0		Calm			0		10						W. D. Penny.
Nassau, (Bahamas)			30.19	766.8	84.2	29.0		S			2		6						Surg.-Maj. Henry.
Nottingham			29.77	756.1	58.0	14.4		WSW			2		10			0	0	Overcast	E. J. Lowe.
Oscott, St Mary's College			29.74	755.1	54.2	12.3		SW			2		10					Drizzling	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.71	754.6	60	15.6		SW			1		10					Overcast	J. Lucas, for R. Main.
Plymouth			29.93	760.2	61.6	16.4		NW			4		2					*D. clouds	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.97	761.2	59	15.0		NNW			6		5					Cloudy	W. Kennedy.
Saint Ann's Head			29.91	759.7	59	15.0		NW			4		5					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.95	760.7	63.5	17.5		W			4		10						A. P. Amy.
Sandwick Manse (Orkneys																			
Scarborough			29.66	753.4	55.8	13.2		WSW			2		10					Overcast	F. Shaw.
Scutari cemetery, (Turkey			29.89	759.2	68.0	20.0		SW			1		10					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.73	755.4	57.0	13.9		WNW			3		10					Gloomy	W. F. Cooper.
Silloth Rectory			29.64	752.8	55.5	13.1		W			5		7			0.970	1.93	Squally	Rev Francis Redford.
Stonyhurst Observatory			29.69	754.1	52.5	11.4		SW			3		10			Blank	Blank	Threatening	The Staff.
Stornoway, Lews C. (Heb.)			29.51	749.5	51	10.6		W			1		10					Raining	John Smith.
Stratfield Turgiss			29.86	758.4	59.8	15.4		W			1		10					Overcast	Rev Charles H. Griffith
Streatley Vicarage																			Rev. John Slatter.
Sumburgh Head, (Shetland																			
Thurso			29.51	749.5	50	10.0		NNW			2		8					Overcast	John Trotter.
Truro, Royal Institution			29.95	760.7	64	17.8		NW			7		5					*D. clouds	W Newcombe.
Valencia Observatory			30.08	763.0	59.6	15.3		WNW	11	4.9			3					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			29.59	749.5	51.0	10.6		W			3		10k			0	0	Showery	Andrew Gibb.
Monach Lighthouse, Shet Is			29.66	753.4	54	12.2		NW			6	5	5	NW		0	0		J. Youyclause.
North Unst, (Shetland Is)			29.46	748.3	47	8.3		N			6	6	7	NW					

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.23	742.5	56.1	13.4	72	NW			6		9						
Faröe			29.38	746.2	54.5	12.5	86	WNW			7		9						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.64	752.8	44.6	7.0	82	SE			4		8						
Thorshavn, (Faröe)			29.56	751.9	46.0	7.8	69	Calm			0		9						
Vestervig			29.29	744.0	52.3	11.4	81	NW			6		7						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			29.98	761.5	66.2	19.0	81	W			2		m, k			0.08	2.	Raining	Normal School.
Amiens																			Normal School.
Avignon			29.9[illegible]	759.9	69.5	20.7	68	WSW			1		8		NW	0	0	Cloudy	Normal School.
Bar-sur Seine			29.9[illegible]	759.4	61.5	16.4	61	N			3		5c,n			0.610	15.5	Cloudy	C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory.
Beauvais			29.92	760.0	6[illegible]	16.0	53	WNW			3		8		WNW	0.285	7.25	Cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.0	762.0	61.[illegible]	16.5	83	N			4		10			0	0	Cloudy	Normal School.
Bourges			29.98	761.5	64.[illegible]	17.8	76	WSW			2		5		WSW	0.638	16.2	Cloudy	Normal School.
Brest			29.98	761.4	63.1	17.3	88	NW			3		10		NW	0.246	6.25	Fog & rain	Naval Observatory.
Caen																			Normal School
Chartres			30.06	763.6	49.1	9.5		NW			1		6		W				Normal School.
Chaumont	28.74	729.9	29.89	759.1	57.4	14.1		NW			[illegible]		k		W	0.67	17.		Normal School.
Commercy			29.95	760.6	56.8	13.8	80	WNW			4		2kn		W	0.67	17.		Normal School.
Commune de Gréasque*			29.95	760.6	70.1	21.1	55	NW			4		8		E	0	0		
Le Mans																			Normal School.
Lons-Le Saulnier			29.93	760.2	61.5	16.4	67	N			2		5		N	0.587	14.9	Raining	Normal School.
Mâcon			29.90	759.5	65.5	18.6	88	N			4		5		N	0.161	4.1	Cloudy	Normal School.
Mirecourt			29.91	759.7	61.7	16.5	61	NW			2		5		NW	0.677	17.2	Cloudy	Normal School.
Orleans																			Normal School.
Paris Observatory			29.94	760.2	61.3	16.3	56	NW			2		5k		NW	0.210	5.34	Cloudy	National Observatory.
Parthenay			29.99	761.7	65.5	18.6	79	W			4		5		W			Cloudy	Normal School.
La Roche sur Yon			30.05	763.2	67.3	19.6	76	SW			6		8		E			Cloudy	Normal School.
Rochefort, Observatory			30.00	762.1	69.8	21.0	65	W			0		10		ESE	0.228	5.8	Cloudy	Naval Observatory.
Rouen			29.91	759.8	63.7	17.6	59	WNW			2		2		W	0.890	22.6		Normal School.
Saint Lo																			Normal School.
Villefranche																			Normal School.
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchésl.
Mont-Louis			30.32	770.1	55.9	13.3	66	WNW	13.0	5.83			8		WNW	0	0		—. Faiguère.
Montsouris Observatory			29.93	760.1	62.2	16.8	60	NW			2–4		4c, k, kn		NW	0.189	4.8		Marié Davy.
Perpignan			30.05	763.2	76.1	24.5	40	W	14.9	6.66			6		NW	0	0		Dr. Fines.
Saint Maur, (near Paris)			29.94	760.1	63.7	17.6	58	W			3		4			0.315	8.0		E. Renou.
Tours			29.91	760.3	66.9	19.4		NW			2		8		NNW	0.346	8.8		C. Marquet.
Versailles, (near Paris)			29.93	760.3	63.3	17.4	61	N			2		7			0.338	8.59	Cloudy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai			29.71	754.6	71.4	21.9	94	NW	5.4	2.4			10n			0 0	0 0	Light rain	H. Le Lec, S. J.

NOTE.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m. local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 ft.; Commune de Gréasque, 322 m., or 1,056.4 ft. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Lower 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			29.63	752.5	57.2	14.0	68	W	18	8			4			0	0	Rainy	Prof. Hoh.
Berlin			29.56	750.8	59.7	15.4	57	S	22	10			6			0.118	3.0		Prof. Arndt.
Breslau			29.67	753.5	59.0	15.0	59	W	22	10			8			0.063	1.6		Dr. P. Neugebauer.
Carlsruhe			29.80	756.9	61.5	16.4	56	SW	11	5			10			0.370	9.4		A. Senz.
Cassel			29.53	750.1	60.8	16.0	59	Calm	18	8			8			0.142	3.6		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.43	722.0	29.85	758.3	56.3	13.5	77	W					7			0.555	14.1	Raining	M. Wilhelm.
Hamburg			29.53	750.1	55.9	13.3	86	WNW	25	11			9			0.803	20.4	Squally	Deutsche Seewarte.
Kiel			29.38	746.2	56.8	13.8	82	W	22	10			10			0	0		Prof. G. Karsten.
Königsberg			29.42	747.3	53.6	12.0	91	SW	22	10						0.002	0.06	Cloudy	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			29.65	753.2	61.0	16.1	45	W	18	8			7			0.020	0.5		Prof. Bruhns.
Münster			29.[illegible]	751.5	55.9	13.3	78	SW	13	6			5			0.209	5.3		Prof. E. Heis.
Posen			29.56	750.8	59.7	15.4	50	SW	36	16			4			0	0	Nearly clear	Dr. Magener.
Strassburg, (in Alsace)			29.86	758.5	60.1	15.6	54	NW	4	2			6			0.024	0.6		Dr. Schur.
Stuttgart			29.8[illegible]	756.8	55.4	13.0	72	NW					9			0.193	4.9	Raining	Mr. Würth.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.80	756.8	60.1	15.6	46	W	22	10			4			0	0		Prof. [illegible]esch.
Wustrow, Naval School			29.41	747.0	58.1	14.5	76	WSW	22	10			6k			0.059	1.5	Cloudy	E. F. [illegible]chütz.

NOTE.—In the originals the distinction between 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.

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.	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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			29.67	753.7	67.3	19.6	63	SE	1.8	0.8			0			0	0		
Mondovi			29.57	753.6	65.8	18.8	66	NNW			2		1	NW		0	0		
Genoa			29.70	754.4	75.2	24.0	57	SW	4.3	1.9			0			0	0		
Pavia			29.70	753.4	70.5	21.4	54	NW			2		1	W		0	0		
Verona			29.64	752.9	73.0	22.8	61	E			1		5			0	0		
Padua								NE	1.3	0.6						0	0		
Parma																			
Bologna			29.76	755.9	72.7	22.6	56				1		4	N		0	0		
Leghorn			29.73	755.1	72.7	22.6	56	WSW	19.9	8.9			8			0	0		
Urbino																			
Ancona			29.69	754.0	72.0	22.2	65	W			4		5			0.114	2.9		
Siena			29.74	755.5	69.6	20.9	57	SW	4.9	2.2			8	W		0	0		
Rome			29.81	757.2	74.1	23.4	70	SW	11.2	5.0			7	SW		0	0		
Naples, O. U.			29.91	759.7	74.8	23.8	62	WSW			2		9	SW		0.291	7.4		
Lecce			29.85	758.3	74.5	23.6	59	W	15.0	6.7			5	W		0	0		
Cosenza			29.95	760.6	73.9	23.3	67	WNW			1		10			0.433	12.0		
Catania, (Sicily)																			
Riposto			29.87	758.7	77.7	25.4	75	SE			4		8	NW		0	0		
Palermo			29.90	759.5	79.9	26.6	44	W	14.3	6.4			8			0	0		
Sub-Series.																			
Naples, S. R.			29.93	760.1	70.7	21.5	75	WNW	4.9	2.2			6	NW		0.201	5.1		Prof. F. Brioschi.

NOTE.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Flushing			29.83	757.7	57.6	14.2		WNW			4								
Groningen			29.59	751.5	52.9	11.6		WNW			6								
Helder			29.7	753.7	57.2	14.0		W			5								
Utrecht			29.69	754.2	61.0	16.1		WSW			4		5					Cloudy	

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

NORWEGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Millimeters.	Temperature. Fahrenheit.	Temperature. Centigrade.	Relative Humidity.	Wind. Direction.	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force.	Clouds. Amount. Up'er	Clouds. Amount. Low'r	Clouds. Direction. Upper.	Clouds. Direction. Lower.	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Bergen			29.21	742.0	54.0	12.2	67	NNW	4.5	2.0			10			0	0	Fog & rain	
Christiania			29.17	740.9	56.3	13.5	61	N	1.6	0.7			7			0.051	1.3		
Tromsö			29.13	739.8	36.7	2.6	87	Calm			0		10			0	0		

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Millimeters.	Temperature. Fahrenheit.	Temperature. Centigrade.	Relative Humidity.	Wind. Direction.	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force.	Clouds. Amount. Up'er	Clouds. Amount. Low'r	Clouds. Direction. Upper.	Clouds. Direction. Lower.	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Lisbon			30.14	765.6	74.7	23.7	51	ESE	3.8	1.7			0						The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

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. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Millimeters.	Temperature. Fahrenheit.	Temperature. Centigrade.	Relative Humidity.	Wind. Direction.	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force.	Clouds. Amount. Up'er	Clouds. Amount. Low'r	Clouds. Direction. Upper.	Clouds. Direction. Lower.	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Warsaw			29.53	750.0	57.7	14.3	85	S	13	6			10						Astronomical Obs.
Wilna			29.52	749.8	57.7	14.3	71	SE	10	4.5			10					Raining	Astronomical Obs.
Dorpat			29.41	746.9	55.2	12.9	77	SSW	11	5			10						Physical Cabinet.
St. Petersburg			29.41	747.0	55.6	13.1	71	SSE	7	3			10						Central Physical Obs.
Kuopio			29.12	739.6	51.4	10.8	94	SW					10			0.110	2.80		Ch. Forsten.
Kieff			29.76	756.0	62.1	16.7	60	SSE	11	5			4						Physical Cabinet.
Nikolaiev			29.98	761.5	64.9	18.3	49	SSE	8	3.5			2						Kurdukof.
Kertch			29.98	761.5	66.0	18.9	63	NE	4	2			2						Lagorio.
Moscow			29.86	758.4	61.0	16.1	55	S	10	4.5			4						Meteorological Obs.
Lugan			30.02	762.4	62.8	17.1	42	SSE	10	4.5			4						Meteorological Obs.
Archangel			29.39	746.6	48.4	9.1	84	SSW	13	6			10						Ogorodnikof.
Tiflis	28.79	731.3	30.21	767.3	58.3	14.6	71	SE	4	2			9						Physical Obs.
Astrakhan			30.30	769.6	60.6	15.9	54	ESE	10	4.5			4						Sebastianof.
Kasan			29.93	760.2	58.5	14.7	77	NW	3	1.5			10						Physical Cabinet.
Orenburg			30.27	768.9	61.2	16.3	41	SW	8	3.5			0						Tschernischef.
Ekaterinburg	29.01	736.6	30.02	762.6	41.2	5.1	86	S	4	2			10						Meteorological Obs.
Kasaly			30.16	766.1	54.9	12.7	88	NW	13	6			0						Bobrof.
Tashkend	28.60	726.3	30.32	770.2	55.0	12.8	71	Calm	0	0			0						Michelson.
Barnaul			29.76	755.9	51.1	10.6	45	Calm	0	0			4						Meteorological Obs.
Yeniseisk			29.87	758.7	52.2	11.2	53	E	11	5			0						Marks.
Irkutsk	28.60	726.3	29.99	761.8	41.7	5.4	75	Calm	0	0			0						Usolzef.
Oorga	25.66	651.7	29.98	761.4	39.0	3.9	70	Calm	0	0			0						Mossin.
Peking, (China)			29.84	757.9	52.7	11.5	92	Calm	0	0			4					Rainy	Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. The elevation of Tiflis is 405. 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. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Millimeters.	Temperature. Fahrenheit.	Temperature. Centigrade.	Relative Humidity.	Wind. Direction.	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force.	Clouds. Amount. Up'er	Clouds. Amount. Low'r	Clouds. Direction. Upper.	Clouds. Direction. Lower.	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Madrid			30.06	763.4	81.7	27.6	29	W	5.1	2.3		3	0	NW		0	0		Royal Observatory.
San Fernando																			The Naval Observatory.

Note.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea			29.10	739.0	37.6	3.1	95	N			2		10			0.118	3.0	Raining	
Hernosand			29.25	743.0	39.6	4.2	82	N			2		10			0.138	3.5		
Stockholm			29.13	739.8	56.1	13.4	57	WSW			4		6			0	0		
Visby			29.20	741.6	55.0	12.8	70	W			4		3			0	0		
Upsala Sub-Series.			29.14	740.2	54.9	12.7	63	WSW	9.6	4.3			9		WSW			Raining	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES

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

Geneva	28.53	724.6	29.92	760.0	64.4	18.0	50	NNW			4		4			0.091	2.3		The Observatory.
Zurich	28.29	718.5	29.92	760.0	55.6	13.1	79	W			2		6		NW	0.866	22.0	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —2.0mm.; Thermometer, +2°.0; Relative Humidity, —16 per cent.

Note.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Beirut, (Syria,) Lee Obs'y																			Prof. C. N. A. Van Dyck.
Constantinople			29.93	760.1	65.1	18.4	60	SW	4	2			8		SW	0	0	Cloudy	
Fao, (Persian Gulf)			29.92	760.0	82.4	28.0		NW			4		0					Clear	
Salonica					73.8	23.2		NW			2		2						
Valona			29.82	757.5	76.1	24.5		S			2		10					Cloudy	
Varna			29.92	760.0	69.8	21.0		N			2		2						

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea level. The distinction between upper and lower clouds is not made.

GREEK SERIES.

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

Athens																			

Note.—Reports commence October 1, 1875.

JAPANESE SERIES.

Tokio																			

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Brockville, Ontario			30.19	766.8	36	2.2		Calm	0	0		2c	2s	W	N	0	0	Fair	
Chatham, N. B.			30.15	765.8	35	1.7	71	SW	7	3.1		5c	2ks	W	W	0	0	Fair	
Charlottetown, P. E. Island			30.15	765.8	39	3.9	64	NW	13	5.8		0	0			0	0	Clear	
Fort Garry, Manitoba			30.05	763.3	44	6.7	100	Calm	0	0		Haze	Fog	SW		0.24	6.1	Foggy	
Halifax, N. S.			30.19	766.8	39	3.9	77	NW	8	3.6		0	0			0	0	Clear	
Kingston, Ontario			30.16	766.1	41	5.0	78	NE	1	0.4		8c	0	NE		0	0	Fair	
Montreal, Quebec			30.17	766.3	39	3.9	86	SE	4	1.8		Haze	5ks	NW		0	0	Cloudy	
Ottawa, Ontario			30.17	766.3	38	3.3	76	N	6	2.7		2k	8s	N	N	0	0	Cloudy	
Parry Sound, Ontario			30.04	763.0	43	6.1	67	SE	11	4.9		2ck	5ks	W	W	0	0	Fair	
Port Dover, Ontario			30.04	763.0	48	8.9	63	NE	9	4.0		10k	0	SW		0	0	Fair	
Port Stanley, Ontario			30.00	762.0	50	10.0	70	NE	3	1.3			10n			0	0	Cloudy	
Quebec, Quebec			30.16	766.1	39	3.9	68	Calm	0	0			10n			0	0	Cloudy	
Sherbrooke, Quebec			30.01	762.2	42	5.6	91	SE	7	3.1			10ks		W	0	0	Cloudy	
Stayner, Ontario			30.09	764.3	40	4.4	86	S	5	2.2			10n		W	0	0	Cloudy	
Sydney, C. B.			30.11	764.8	47	8.3	76	SW	12	5.4		2k	2ks	W	W	0.01	0.3	Clear	
Toronto, Ontario			30.06	763.5	43	6.1	79	NE	8	3.6			10ks		W	0	0	Cloudy	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.13	765.3	43	6.1	91	Calm	0	0			10s			0.02	0.5	Threatening	
Alpena, Mich.			29.91	759.7	48	8.9	100	E	16	7.2			10n			0.15	3.8	Heavy rain	
Atlantic City, N. J.			30.08	764.9	61	17.8	89	SE	10	4.5		10cs	0	SW		0	0	Cloudy	
Augusta, Ga.			30.13	765.3	64	17.8	94	NW	5	2.2			10s		NW	0.05	1.3	Cloudy	
Baltimore, Md.			30.10	764.5	57	13.9	81	N	4	1.8		2ck	5ks			0	0	Fair	
Barnegat, N. J.			30.07	763.8	67	19.4	84	SE	2	0.9		2c	0	W		0	0	Fair	
Benton, Montana	27.43	696.7	30.23	767.8	51	10.6	45	Calm	0	0		5c	Haze			0	0	Fair	
Bismarck, Dakota	28.3	718.8	29.96	761.0	45	7.2	76	W	2	0.9			10ks		W	0	0	Cloudy	
Boston, Mass.			30.22	767.6	51	10.6	66	E	11	4.9			10s		W	0.01	0.3	Cloudy	
Breckenridge, Minn.			30.01	762.2	43	6.1	91	N	8	3.6			Fog			0	0	Foggy	
Buffalo, N. Y.			30.00	762.0	47	8.3	62	NE	9	4.0		10cs	Haze	SW		0	0	Cloudy	
Burlington, Vt.			30.17	766.3	41	5.0	65	Calm	0	0		2k	5s			0	0	Cloudy	
Cairo, Ill.			30.08	764.0	56	13.3	87	S	4	1.8		0	0			0	0	Clear	
Cape Hatteras, N. C.			29.96	761.0	70	21.1	90	W	6	2.7			8ks			1.39	35.3	Cloudy	
Cape Henry, Va.			29.96	761.0	69	20.6	95	SW	3	1.3		2k	5s	W	E	1.05	26.7	Fair	
Cape May, N. J.			30.06	763.5	65	18.3	89	SE	8	3.6			10s		W	0	0	Cloudy	
Charleston, S. C.			30.08	764.0	71	21.7	85	W	8	3.6		5k	2s	W	W	0.03	0.8	Cloudy	
Cheyenne, Wyoming	24.27	616.4	30.21	767.3	40	4.4	48	W	8	3.6		haze	0			0	0	Clear	
Chicago, Ill.			29.76	755.9	58	14.4	82	S	10	4.5		2k	2s	W		0	0	Fair	
Cincinnati, Ohio			30.00	762.0	57	13.9	81	S	1	0.4			Fog			0	0	Foggy	
Cleveland, Ohio			29.95	760.2	56.5	13.6	80	SE	4	1.8			Sm'e			0	0	Smoky	
Colorado Springs, Col.	24.31	617.5	30.18	766.6	48	8.9	56	N	6	2.7		0	0			0	0	Clear	
Corsicana, Tex.			30.12	765.0	54	12.2	86	S	4	1.8		0	0			0	0	Clear	
Davenport, Iowa			29.81	757.2	60	15.6	82	W	4	1.8		2ck	Sm'e			0	0	Fair	
Denison, Tex.			30.06	763.5	58	14.4	81	S	6	2.7		0	0			0	0	Clear	
Denver, Col.	25.07	636.8	30.19	769.1	46	7.8	54	SE	5	2.2			Fog			0	0	Foggy	
Detroit, Mich.			29.87	758.7	55	12.8	93	E	4	1.8		5k	Haze	E		0	0	Fair	
Dodge City, Kan.	27.50	698.7	29.99	759.2	52	11.1	73	NE	3	1.3		0	0			0	0	Clear	
Dubuque, Iowa			29.76	755.9	58	14.4	76	NW	4	1.8		0	0			0	0	Clear	
Duluth, Minn.			29.96	761.0	45	7.2	84	NE	10	4.5			10s			0.07	1.8	Cloudy	
Eastport, Me.			30.24	768.1	40	4.4	73	W	5	2.2		2cs	2ck	SW	SW	0	0	Fair	
Erie, Pa.			29.93	760.2	56	13.3	80	SE	8	3.6		2k	Sm'e	W		0	0	Fair	
Escanaba, Mich.			29.88	758.9	45	7.2	84	NE	9	4.0			10n			0.11	2.8	Light rain	
Fort Gibson, I. T.			30.03	762.7	57	13.9	75	SE	5	2.2		0	0			0	0	Clear	
Fort Sill, I. T.	28.83	732.3						Calm	0	0		0	0			0	0	Clear	
Fort Sully, Dakota	28.43	722.1	30.10	764.8	45	7.2	68	NW	7	3.1		8cs	2s	NW	N	0	0	Cloudy	
Galveston, Tex.			30.14	765.5	67	19.4	90	NE	10	4.5		5ck	0	SW		0	0	Fair	
Grand Haven, Mich.			29.76	755.9	58	14.4	87	SW	5	2.2		5ck	Haze	W		0	0	Fair	
Indianapolis, Ind.			29.95	760.7	58	14.4	69	S	8	3.6		Haze	Sm'e			0	0	Hazy	
Indianola, Tex.			30.17	766.3	67	19.4	95	N			3	2cs	0	SW		0	0	Fair	
Jacksonville, Fla.			30.14	765.7	74	23.3	90	SW	3	1.3			10s			0	0	Cloudy	
Keokuk, Iowa			29.84	757.9	60	15.6	82	W	7	3.1		0	Haze			0	0	Clear	
Key West, Fla.			30.13	765.3	82.5	28.1	79	E	10	4.5		Haze	5ks			0	0	Fair	
Kittyhawk, N. C.			29.96	761.0	72	22.2	80	S	8	3.6		5k	0			0.71	18.0	Fair	
Knoxville, Tenn.			30.15	765.8	52	11.1	93	SW	3	1.3			Fog			0.09	2.3	Foggy	
La Crosse, Wis.			29.74	755.4	50	10.0	86	NE	6	2.7			10s			0	0	Cloudy	
Leavenworth, Kan.			29.98	761.5	57	13.9	69	NW	1	0.4		0	0			0	0	Clear	
Lexington, Ky.	28.99	736.3	30.09	764.3	56	13.3	79	S	4	1.8		0	0			0	0	Clear	
Long Branch, N. J.			30.08	764.0	65	18.3	89	SE	8	3.6		2c	2k	SW	SE	0	0	Fair	
Louisville, Ky.			30.05	763.3	58	14.4	82	SE	6	2.7			Fog			0	0	Foggy	
Lynchburg, Va.			30.03	762.7	60	15.6	88	W	2	0.9		0	0			1.55	39.4	Clear	
Malone, N. Y.			30.10	764.5	44	6.7	60	SE	4	1.8		5cs	0	W		0	0	Fair	
Marquette, Mich.			29.94	760.5	47	8.3	70	NE	12	5.4			10s		NE	0	0	Cloudy	
Memphis, Tenn.			30.09	764.3	59	15.0	76	SW	3	1.3		0	Fog			0	0	Clear	
Milwaukee, Wis.			29.78	756.4	49	9.4	93	NW	3	1.3			Fog			0	0	Foggy	
Mobile, Ala.			30.18	766.6	64	17.8	94	NE	2	0.9		5ck	0			0	0	Fair	
Montgomery, Ala.			30.19	766.8	62.5	16.9	89	Calm	0	0		5k	Haze	N		0	0	Fair	
Morgantown, W. Va.			30.07	763.8	52	11.1	86	SE	2	0.9			Fog			0	0	Foggy	
Mt. Washington, N. H.	23.84	605.5	30.20	767.1	25	—3.9	100	W	25	11.2			Fog			0	0	Foggy	
Nashville, Tenn.			30.10	764.5	56	13.3	74	E	1	0.4		0	0			0	0	Clear	
New Haven, Conn.			30.16	766.1	53	11.7	79	NE	12	5.4			10s		S	0	0	Cloudy	
New London, Conn.			30.18	766.6	54	12.2	74	NE	6	2.7			10s		S	0	0	Cloudy	
New Orleans, La.			30.17	766.3	67	19.4	89	N	4	1.8		5ck	2s	NW		0	0	Fair	
Newport, R. I.			30.19	766.8	56	13.3	75	E	8	3.6		5ck	2s	NW	E	0.01	0.3	Cloudy	
New York, N. Y.			30.09	764.3	60	15.6	93	E	8	3.6			Fog			0	0	Foggy	
Norfolk, Va.			29.97	761.2	68	20.0	89	Calm	0	0		2cs	5ks	SW	W	0.98	24.9	Clearing	
North Platte, Neb.	27.24	691.9	29.82	757.4	49	9.4	71	Calm	0	0			10s		W	0	0	Cloudy	
Omaha, Neb.	28.95	735.3	30.02	762.5	52	11.1	72	NW	13	5.8		0	Haze			0	0	Clear	
Oswego, N. Y.			30.08	764.0	49	9.4	68	SE	3	1.3			10s		SE	0	0	Cloudy	
Peck's Beach, N. J.			30.08	764.0	64	17.8	89	SE	12	5.4		2k	8s			0	0	Cloudy	
Pembina, Dakota			30.02	762.5	43	6.1	91	Calm	0	0			10s			0	0	Cloudy	
Philadelphia, Penn.			30.04	763.0	54	12.2	100	NE	7	3.1			Fog			0	0	Foggy	
Pike's Peak, Colorado	18.08	459.2	30.29	769.4	27	—2.8	77	NW	12	5.4		0	0			0.03	0.8	Clear	
Pittsburgh, Penn.			30.02	762.5	50	10.0	93	N	1	0.4			Fog			0	0	Foggy	
Port Huron, Mich.			29.93	760.2	50	10.0	64	E	9	4.0			10s			0	0	Cloudy	
Portland, Me.			30.28	769.1	43	6.1	67	N	1	0.4		8k	Haze	NW		0	0	Cloudy	
Portland, Oregon			30.22	767.6	56	13.3	81	N	3	1.3		Haze	Haze			0	0	Hazy	
Punta Rassa, Fla.			30.15	765.8	79.5	26.4	82	E	8	3.6		2cs	Haze	NE		0	0	Clear	
Rochester, N. Y.			30.05	763.3	47	8.3	62	NE	5	2.2		8k	Haze	NE		0	0	Fair	
Salt Lake City, Utah	25.85	656.6	30.18	766.6	55	12.8	38	E	3	1.3		0	0			0	0	Clear	
Sandy Hook, N. J.			30.07	763.8	62	16.7	100	SE	7	3.1			10ks		SE	0	0	Cloudy	
San Diego, Cal.			30.07	763.8	65	18.3	82		4	1.8			10s			0	0	Cloudy	
San Francisco, Cal.			30.04	763.0	54	12.2	93	SW	8	3.6		0	Fog			0	0	Fair	
Santa Fe, N. M.	23.38	539.8	29.92	760.0	46	7.8	54	N	4	1.8		0	0			0	0	Clear	
Savannah, Ga.			30.11	764.8	71	21.7	85	SW	8	3.6		2k	0			0.21	5.3	Clear	
Shreveport, La.			30.19	766.8	55	12.8	93	Calm	0	0			Fog			0	0	Fair	
Smithville, N. C.															S				
Springfield, Mass.			30.20	767.1	45	7.2	92	N	4	1.8			10s			0.02	0.5	Threatening	
St. Louis, Mo.			29.99	761.7	61	16.1	70	SW	14	6.3		0	0			0	0	Clear	
St. Marks, Fla.			30.14	765.5	69	20.6	95	W	2	0.9		5ck	0	W		0	0	Fair	
St. Paul, Minn.			29.86	758.4	48.5	9.2	74	N	5	2.2			10s			0	0	Cloudy	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			30.01	762.2	63	17.2	94	SE	5	2.2		5c	0	NW		0	0	Fair	
Toledo, Ohio			29.88	758.9	57	13.9	81	S	8	3.6		2c	0	W		0	0	Clear	
Tucson, Arizona																			
Tybee Island, Ga.			30.10	764.5	70	21.1	90	W	10	4.5		0	2s			0.10	2.5	Fair	
Vicksburg, Miss.			30.23	767.8	59	15.0	87	S	1	0.4		0	0			0	0	Clear	
Virginia City, Montana	24.56	623.8	30.04	763.0	41	5.0	33	Calm	0	0		1c	0	W		0	0	Clear	

UNITED STATES SERIES - CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.05	763.3	58	14.4	90	Calm	0	0			10s		NE	0	0	Cloudy	
Wilmington, N. C			30.01	762.2	72	22.2	85	W	12	5.4			10s		W	0.91	23.1	Threatening	
Woods Hole, Mass			30.22	767.6	57	13.9	63	SE	8	3.6			10s			0	0	Fogg	
Wytheville, Va			29.91	759.7	55	12.8	87	W	3	1.3		0	0			0.02	0.5	Clear	
Yankton, Dakota	27.77	705.4	29.91	759.7	55	12.8	87	W	3	1.3		0	0			0	0	Clear	
Yuma, Arizona	28.82	732.0	30.12	765.0	45	7.2	80	NW	12	5.4									
Sub-Series																			
Bridgetown, Barbados, W. I					81	27.2	86	E	7	3.1		10k	8ks	E		0	0	Cloudy	E Racker.
Pointe-a-Pitre, Guadeloupe, de			29.91	761.7	80	26.7	83	E				0	5k			0	0	Fair	L. V. Bigard.
Havana, Cuba, W. I			30.12	765.0	80	26.7	91	SE	0.6	0.3		1c	1k	NE	E	0	0	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W. I			30.19	766.8	80	26.7	74	Calm	0	0		3c	1s	SE		0	0	Fair	James Gall.
St. Thomas, St. T., W. I			30.27	768.8	82	27.8	70	E	8	3.6		2ck	5k	E	N	0	0	Cloudy	W. S. Cameron.
Santiago de Cuba, W. I			29.88	758.9	80	26.7	74	NNE	6.0	2.7		0	Sm'e		ENE			Fair	Robert Mason.
St. Georges, Bermudas			30.18	766.6	76	24.4	81	Ne	4.7	2.1		0	1f'k			0.250	6.35	Clear	C. F. Allen.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.
Cumberland, B. A																			
Ft. Chippewyan, B. A																			
Ft. McPherson, B. A																			
Ft. Simpson, B. A																			
York Factory, B. A																			J. Fortescue.
St. John's, Newfoundland			29.95	750.7	30	−1.1	95	Calm	0	0		6k	0	W		0	0	Fair	John Delaney.
St. John's, Porto Rico, W. I			30.03	762.7	44	6.7	68	W				2c	2s			0	0	Fair	Leon M. Acuña.
Clifton, Jamaica, W. I	27.24	692.4	30.01	763.0	68	20.0	84	SE	1.6	0.4		2c	0	SE		0	0	Clear	C. Partridge.
Navassa																			
Medellin, S. A																			
Paramaribo, S. A																			
Elyria, Ohio			29.93	760.2	60.0	15.6	65	SE	4	1.8			0			0	0	Clear	H. M. Redington.

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

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,86[illegible] (?) ft., or 2,091.6 (?) m.; Virginia City, 5,180 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,291.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 1.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON SEPTEMBER 30, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.08	764.0	81.5	27.5	67	NNW			1		5			0	0	Fair	Charnot.
Algiers			30.02	762.6	80.2	26.8	72	NNE			1		4			0	0	Lightning	Peter.
La Calle																			Kuntz.
Tunis			29.97	761.1	75.4	24.1	69	NW			4		4			0.079	2.0	Rainy	Jacques.
Sfax			30.02	762.5	84.9	29.4	31	W			2		4			0	0	Cloudy	Chauvey.
Saïda			30.05	763.3	83.3	28.5	31	NW			1		0			0	0	Fair	Grosjean.
Tebessa			30.07	763.8	72.0	22.2		NE			2		4			0	0	Cloudy	Colin.
Geriville			30.08	764.0	74.3	23.5	99	NW			2		2			0	0	Fair	Bernadach.
Laghouat			30.06	763.4	82.4	28.0	17	E			3		1			0	0	Fair	Simon.
Biskra			30.07	763.6	89.4	31.9	37	NW			2		3			0	0	Cloudy	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			29.74	755.3	64.6	18.1	64	NE			2		4			0.169	4.3	Rainy	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.67	753.7	59.0	15.0	54	W			3		7			0.008	0.2		I. R. Observatory.
Eperies			29.65	753.1	59.7	15.4	62	S			1		5			0	0		Julius Mikolik.
Gratz	28.60	726.4	29.79	756.7	53.4	11.9	81	NW			5		10						Andreas Rospini.
Hermannstadt	28.30	718.7	29.69	754.2	56.5	13.6	90	E			1		10			0.246	6.25		Prof. Reissenberger.
Kremsmünster	28.49	723.7	29.83	757.6	52.7	11.5	72	WNW			3		10			0.370	9.4		Prof. C. Wagner.
Lemberg			29.65	753.1	58.6	14.8	70	S			2		6			0	0		Dr. T. Stanecki.
Nyiregyhaza			29.72	754.8	60.1	15.6	77	N			1		2			0	0		Habzsuda Daniel.
Pola			29.75	755.7	66.7	19.3	65	S			1		1ks			0.031	0.79		I.R. Hydrographic Office
Szegedin			29.73	755.3	62.2	16.8	42	W			2		2			?	?		Karl Stancel.
Trieste			29.77	756.2	67.1	19.4	79	WSW			1		1?			0.322	8.2	Thunder-storm	Prof. V. Farolfi.
Vienna			29.72	754.8	54.3	12.4	62	W			6		7			0.047	1.2		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.96	760.8	54.0	12.2	85	WNW			1	0	7			0.535	13.60		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.92	760.0	53.0	11.7		WNW	7	3.1			6			0.170	4.32	*D. clouds	William Boswell.
Ardrossan			29.98	761.5	60	15.6		SW			1		3						Wm. McNeil.
Armagh Observatory			30.03	762.7	58.1	14.5		SW	4	1.8			7					D. clouds	S. Cal., for Dr Robinson.
Bidston, Liverpool Obs.			30.03	762.7	57.1	13.9		WNW			3		1					Clear	John Hartnup, Jr.
Birr Castle, (Parsonstown)			30.04	763.0	58.1	14.5		SW			1		9					*D. clouds	J. Dreyer.
Bradford			29.97	761.2	57.2	14.0		W			1		8					Fine	J. McLandsborough.
Bridgetown, (Barbadoes)			29.95	760.7	83.0	28.7		NE			4		6					*D. clouds	T. H. Hunt.
Cambridge Observatory																			Sergeant Hunt, A.H.C.
Cape Good Hope Obs.			29.98	761.5	70.0	20.1	45	W	3	1.3			8						The Staff, for E. J. Stone.
Cardington			30.01	763.0	59.0	15.0		NW					5					*D. clouds	John McLaren.
Carlisle			29.86	758.4	58.9	14.9		W					9			0.07	1.8	*D. clouds	T. Bell, for J. Cartmell.
Chatham, School M. E.			30.02	762.5	59.7	15.4		SW			2		8					Fine	Capt. J. Fellowes, R. E.
Dartmoor	28.73	729.7	30.17	766.3	54	12.2		NW			1		8					*D. clouds	R. E. Power.
Donaghadee			29.99	761.7	59	15.0		SW			3		0					Clear	J. Mac Gowan, Jr.
Dover			30.04	763.0	59	15.0		NW			3		2						J. Costello.
Eccles, (near Manchester)			30.02	762.5	57.7	14.3		NW	0.4	0.2			8					Threatening	Thomas Mackereth.
Falmouth Observatory			30.21	767.3	60.5	16.0		WSW	9	4.0			10					Overcast	The Staff.
Fort Napier, (Natal)	27.76	705.1	29.98	761.5	70.0	21.1		NW			1		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.98	761.5	80	16.7		W					5						[tis.
Galway, Queen's College																			B. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			30.12	765.0	77.2	25.1		WSW			4		0					Clear	Sergt. E. G. Baker.
Glasgow Observatory			29.95	760.7	55.0	12.8		W			1		8					*D. clouds	Lewis Stuart.
Great Yarmouth			29.98	761.5	55	12.8		NW			4		6			Blank	Blank	*D. clouds	G. T. Watson.
Greenwich Royal Obs.			30.06	763.5	63.0	17.0		NW			2		6					*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.17	766.3	60.5	15.8		WNW			2		7					*D. clouds	Dr. S. E. Hoskins. [ley.
Halifax, Moorside Obs.			30.03	762.7	57.1	13.9		WNW			1		8			Blank	Blank	*D. clouds	F. J. Page, for L. J. Cro ss-
Helston			30.12	765.0	64	17.8		SW			2		10c					Overcast	M. P. Moyle.
Holyhead			30.05	763.3	58	14.4		WNW			3		3					Fine	John Tilston.
Kew Park																			
Kew Observatory			30.07	763.8	59.3	15.2		WNW	10	4.5			8					*D. clouds	The Staff.
Kingstown			30.06	763.5	58	14.4		W			2		5					*D. clouds	George Mitchell.
Leicester Museum			30.05	763.3	57.0	13.9		W			4		8					*D. clouds	William J. Harrison.
Llandudno			30.05	763.3	58.6	14.8		NW					7					Overcast	Dr. James Nicol.
Malta, (Mediterranean)			29.93	760.2	77.8	25.4		NW			1		8k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			29.98	758.9	58	14.4		SW			1		8						W. D. Penny.
Nassau, (Bahamas)			30.13	765.3	85.1	29.5		SE			2		5						Surg.-Maj. Henry.
Nottingham			30.03	762.7	59.0	15.0		WNW			3		dk,ks,d		NW	0	0	D. clouds	E. J. Lowe.
Oscott, St Mary's College			30.01	763.0	58.8	14.9		WNW			3		8					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			30.05	763.3	59	15.0		NW			3		6					*D. clouds	J. Lucas, for R. Main.
Plymouth			30.14	765.5	62.6	17.0		WNW			1		4						John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			30.09	764.3	57	13.9		SW			3		10					Dull	W. Kennedy.
Saint Ann's Head			30.12	765.0	59	15.0		WSW			1		10					Overcast	John C. Walker.
Saint Helier, (Jersey)			30.17	766.3	63.0	17.2		NNW			3		5						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			29.98	761.5	59.0	15.0		NNW			2		10					*D. clouds	F. Shaw.
Scutari cemetery, (Turkey			29.77	756.1	71.4	21.9		SSW			1		8					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.00	762.0	59.0	15.0		NW			2		7					Overcast	W. F. Cooper.
Filleigh Rectory			29.98	761.5	64.2	17.9		W			2		4			0.095	2.43	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			30.01	762.2	55.9	13.3		W			2		5			Blank	Blank	*D. clouds	The Staff.
Stornoway, Lews C. (Heb.)			29.83	757.7	52	11.1		SW			1		10					Gloomy	John Smith.
Strathfield Turgiss			30.08	764.0	59.8	15.4		NW			1-2		5					*D. clouds	Rev Charles H. Griffith
Streatley Vicarage																			Rev. John Slatter.
Sumburgh Head, (Shetland)																			
Thurso			29.84	757.9	55	12.8		WNW			3		5					*D. clouds	John Trotter.
Truro, Royal Institution			30.11	764.8	64	17.8		W			6		10					Gloomy	W. Newcombe.
Valencia Observatory			30.03	762.7	54.9	12.7		S	30	13.4			10					Drizzling	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			
Leith, Restalrig Park			29.96	761.0	51.0	13.3		W			2		9k			0.02	0.5	Cloudy, fine.	Andrew Gibb.
Monach Lt-house, (Shet Is)			29.79	756.7	55	12.8		S W			4	5	5	S		0.4	10.2		J. Youyclause.
North Unst, (Shetland Is)			29.79	756.7	46	7.8		NW			4	2	6	NW					

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.52	749.7	54.3	12.4	68	NW			2		7						
Faröe			29.58	751.4	54.1	12.3	80	NNW			7		9						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.21	752.0	45.0	7.2	86	SE			4		10					Raining	
Thorshavn, (Faröe)			29.77	756.3	44.8	7.1	93	SSE			2		8						
Vestervig			29.58	751.4	56.1	13.4	69	NNW			2		4						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.11	764.8	64.4	18.0	15	N			3		8k			0.12	3.	Rainy	Normal School.
Amiens																			Normal School.
Avignon			30.00	761.9	69.3	20.7	50	N			4		0			0	0	Clear	Normal School.
Bar-sur Seine			30.02	762.5	59.4	15.2	57	NNE			3		8kn			0	0		C. Saillard.
Beaumette, (near Angers)																			Beaumette Observatory
Beauvais			30.08	764.1	59.2	15.1	56	WNW			3		5		WNW	0.030	0.75	Cloudy	Normal School.
Besançon																			Normal School.
Bourg en Bresse			30.10	764.6	61.7	16.5	83	N			1		10			0	0	Cloudy	Normal School.
Bourges			30.08	764.1	58.3	14.6	76	WSW			2		5		SW	0	0	Cloudy	Normal School.
Brest			30.14	765.5	65.7	18.7	71	Calm			0		8		NW	0.030	0.75	Cloudy	Naval Observatory
Caen																			Normal School
Chartres			30.03	763.8	50.7	10.4		NW			1		6		W				Normal School.
Chaumont	28.80	733.0	30.01	762.3	57.2	14		WSW			4		8k		NW	0.055	1.4		Normal School.
Commercy			30.05	763.2	53.6	12	76	W			4		10k		W	0	0	Cloudy	Normal School.
Commune de Gréasque*			29.95	760.6	70.3	21.3	30	NW			8		0			0	0		
Le Mans																			Normal School.
Lons-Le Saulnier			30.07	763.6	52.9	11.6	64	NW			1		5		NW	0.043	1.1	Cloudy	Normal School.
Mâcon			30.00	762.0	58.6	14.8	78	WNW			2		5		N	0	0	Cloudy	Normal School.
Mirecourt			29.99	761.8	57.7	14.3	80	WNW			2		8		WNW	0.094	2.4	Cloudy	Normal School.
Orleans																			Normal School.
Paris Observatory			30.08	764.1	60.4	15.8	53	WNW			3		8k		NW	0.024	0.60	Cloudy	National Observatory
Parthenay			30.15	765.8	63.3	17.4	76	NW			1		0					Clear	Normal School.
La Roche sur Yon			30.18	766.5	64.4	18	60	W			2		5		S			Cloudy	Normal School.
Rochefort, Observatory			30.21	767.2	68.7	20.4	53	WNW			2		5			0.012	0.3	Cloudy	Naval Observatory.
Rouen			30.10	764.6	61.5	16.4	56	NW			4		2		NW	0.031	0.8		Normal School.
Saint Lo																			Normal School.
Villefranche																			Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchésí.
Mont-Louis			30.29	769.3	60.6	15.9	37	N	9.3	4.17			0			0	0		—, Faiguère.
Montsouris Observatory			30.03	761.0	61.0	16.1	56	NW			3		9k		NW	0.016	0.4		Marié Davy.
Perpignan			30.03	762.8	73.8	23.2	59	NW	20.5	9.17			0			0	0		Dr. Flues.
Saint Maur, (near Paris)			30.08	764.0	60.3	15.7	60	WNW			3		8			0.024	0.6		E. Renou.
Tours			30.08	764.0	60.3	15.7		NW			2		5		NNW	0	0		C. Marquet.
Versailles, (near Paris)			30.00	764.3	60.4	15.8	59	NW			3		5			0.011	0.28		Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai			29.94	760.4	62.4	16.6	91	NNW	2.7	1.2		0	0			0.413 / 0.512	10.5 / 13.0	Clear	H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 ft.; Commune de Gréasque, 322 m., or 1,056.4 ft. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Lower 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			29.67	753.5	50.5	10.3	77	W	31	14			9			0.299	7.6		Prof. Hoh.
Berlin			29.64	752.8	54.7	12.6	74	SW	18	8			7			0.110	2.8		Prof. Arndt.
Breslau			29.72	754.8	51.1	10.8	86	WNW	4	2			10			0.079	2.0		Dr. P. Neugebauer.
Carlsruhe			29.92	759.9	53.6	12.0	86	SW	11	5			10			0.358	9.1		A. Senz.
Cassel			29.58	751.2	52.3	11.3	79	NW	9	4			6			0.091	2.3		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society
Friedrichshafen	28.52	724.5	29.96	760.9	56.3	13.5	61	NW					6			0.043	1.1	Light rain	M. Wilhelm.
Hamburg			29.95	753.2	53.8	12.1	73	WNW	22	10			7ks	W		0.177	4.5		Deutsche Seewarte.
Kiel			29.56	750.8	55.0	12.8	72	W	22	10			3			0	0		Prof. G. Karsten.
Königsberg			29.57	751.1	54.5	12.5	74	SW	22	10						0.134	3.4		Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			29.71	754.6	53.6	12.2	70	WNW	18	8			9			0.134	1.2	Rainy	Prof. Bruhns.
Münster			30.03	762.8	54.5	12.5	72	NW	13	6			5			0.362	9.2		Prof. E. Hess.
Posen			29.61	752.2	57.0	13.9	70	SW	20	13			10			0.004	0.1	Cloudy	Dr. Mazener.
Strassburg, (in Alsace)			29.97	761.0	58.8	14.9	61	W	18	8			10			0.031	0.8		Dr. Schur.
Stuttgart			29.89	759.1	54.5	12.5	68	NW					10			0.177	4.5	Raining	Mr. Würth.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.89	759.3	55.9	13.3	71	W	27	12			10			0.386	9.8		Prof. Plesch
Wustrow, Naval School			29.47	748.5	56.8	13.8	75	W	13	6			5k			0.075	1.9	Cloudy	E. F. Schütz.

Note.—In the originals the distinction between 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.

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.	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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			29.80	757.0	68.9	20.5	42	SSE	1.3	0.6			1			0	0		
Mondovi			29.77	756.2	66.7	19.3	43	NW			2		0			0	0		
Genoa			29.77	756.1	75.2	24.0	42	SE	4.9	2.2			0			0	0		
Pavia			29.77	756.2	68.4	20.2	49	N			2		0			0	0		
Verona			29.69	754.2	73.8	23.2	47	E			2		0			0	0		
Padua			29.72	755.0	68.2	20.1	57	SW	13.0	5.8			5	SW		0	0		
Parma																			
Bologna			29.81	757.1	74.5	23.6	52	W			1		4	W		0	0		
Leghorn			29.78	756.3	72.3	22.4	54	W	3.1	1.4			1			0	0		
Urbino																			
Ancona			29.71	754.7	68.0	20.0	61	E			2		0			0.402	10.2		
Siena			29.70	755.8	70.5	21.4	46	SW	0	0			3	W		0	0		
Rome			29.78	756.3	76.1	24.5	50	NW	4.9	2.2			3	W		0	0		
Naples, O. U.			29.70	756.7	76.8	24.9	54	SW			2		3	SW		0	0		
Lecce			29.77	756.1	72.0	22.2	57	ENE	15.0	6.7			4	W		0	0		
Cosenza			29.82	757.5	73.6	23.1	66	W			2		9			0.024	0.6		
Catania, (Sicily)																			
Riposto			29.70	754.4	77.5	25.3	73	E			2		7	W		0	0		
Palermo			29.77	756.3	77.4	25.2	50	W	11.2	5.0			6			0	0		
Sub-Series.																			
Naples, S. R.			30.81	757.2	73.9	23.3	67	W	3.8	1.7			4	NW		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for the five hours preceding. The altitude of Mondovia is 559 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 feet.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Flushing			29.99	761.8	55.6	13.1		WNW			5								
Groningen			29.74	755.5	53.4	11.9		NW			6								
Helder			29.80	758.5	55.8	13.2		NW			5								
Utrecht			29.85	758.2	53.1	11.7		NNW			4		8					Very cloudy	

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bergen			29.58	751.3	48.9	9.4	60	NNW	16.8	7.5			10			0	0	Raining	
Christiania			29.56	750.9	52.7	11.5	52	SW	5.1	2.3			4			0.012	0.3		
Tromsö			29.37	746.0	36.7	2.6	93	Calm			0		10			0.012	0.3		

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.11	764.8	71.8	22.1	71	WSW	15.0	6.7			0						The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

RUSSIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.63	752.6	57.0	13.9	60	SSW	16	7			10						Astronomical Obs.
Wilna			29.56	750.8	54.5	12.5	75	S	10	4.5			10						Astronomical Obs.
Dorpat			29.33	744.9	52.5	11.4	93	SSW	11	5			9						Physical Cabinet.
St. Petersburg			29.32	744.8	55.0	12.8	77	S	9	4			7						Central Physical Obs.
Kuopio			29.25	742.9	43.7	6.5	77	WNW					5		ESE	0.112	2.85		Ch. Forsten.
Kieff			29.69	754.2	55.8	13.2	90	SE	7	3			4						Physical Cabinet.
Nikolaiev			29.82	757.3	62.4	16.9	67	SSE	10	4.5			8						Kurdakof.
Kertch			29.85	758.2	70.7	21.5	64	S	7	3			2						Lagorio.
Moscow			29.82	757.4	56.3	13.5	57	SSW	13	6			8						Meteorological Obs.
Lugan			29.80	756.8	66.4	19.1	53	SE	8	3.5			4						Meteorological Obs.
Archangel			29.37	746.0	50.5	10.3	95	S	8	3.5			10					Raining	Ogorodnikof.
Tiflis	28.55	725.1	29.92	760.0	69.1	20.6	48	S	8	3.5			0						Physical Obs.
Astrakhan			30.15	765.8	63.3	17.4	53	ESE	10	4.5			3						Sebastianof.
Kasan			30.05	763.2	60.8	16.0	54	SW	3	1.5			7						Physical Cabinet.
Orenburg			30.30	769.5	64.2	17.9	40	Calm	0	0			8						Tschernischef.
Ekaterinburg	29.24	742.6	30.24	768.1	53.8	12.1	73	N	4	2			9						Meteorological Obs.
Kasaly			30.21	767.3	55.6	13.1	53	NE	8	3.5			3						Bobrof.
Tashkend	28.39	721.0	30.08	764.1	59.2	15.1	84	Calm	0	0			0						Michelson.
Barnaul			30.19	766.8	44.1	6.7	78	Calm	0	0			3						Meteorological Obs.
Yeniseisk			29.95	760.6	52.7	11.5	47	SE	4	2			0						Marks.
Irkutsk	28.65	727.8	30.08	763.9	39.9	4.4	87	Calm	0	0			0						Usolzef.
Oorga	26.19	665.3	30.15	765.7	29.5	1.4	55	Calm	0	0			9						Mossin.
Peking, (China)			30.02	762.6	51.4	10.8	59	N	4	2			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.05	763.3	78.1	25.6	45	W	3.8	1.7		0	0			0	0	Clear	Royal Observatory.
San Fernando																			The Naval Observatory.

NOTE.—The originals for Madrid give the wind-velocity in kilometers per hour; the rain-fall for the previous 8 hours; the weather in general terms.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Umea			29.29	744.4	41.7	5.8	72	NNW			2		0			0.638	16.2	Frost	
Hernosand			29.50	749.2	47.8	8.8	48	WNW			2		8			0	0		
Stockholm			29.47	748.6	49.3	9.6	49	W			4		3			0.020	0.5		
Wisby			29.43	747.4	52.5	11.4	66	NNE			6		3			0	0		
Sub-Series.																			
Upsala			29.40	749.0	50.0	10.0	45	WNW	0.4	4.2			1		NW				Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES

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

Geneva	28.65	727.7	30.06	763.5	60.4	15.8	49	WNW			2		5			0.035	0.9	Cloudy	The Observatory.
Zurich	28.37	720.5	29.98	761.5	56.1	13.4	59	W			4		4		NW	0.732	18.6	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +1.1mm.; Thermometer, —0°.1; Relative Humidity, —18 per cent.

Note.—The originals give the wind-force by the scale 0 to 4; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Beirut, (Syria,) Lee Obs'y			29.92	760.0	75.6	24.2	52	N			2		0					Clear	Prof. C. N. A. Van Dyck.
Constantinople			29.80	756.8	72.0	22.2	61	SW	7.8	3.5			8		SW	0.110	2.8	Cloudy	
Fao, (Persian Gulf)			29.92	759.9	84.6	29.2		NW			3		0					Clear	
Salonica					74.3	23.5		SW			1		10					Light rain	
Valona			29.76	755.8	73.4	23.0		S			2		5					Cloudy	
Varna			29.92	760.0	71.6	22.0		E			1		0					Clear	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut by the scale 0 to 10) are given in general terms, and it is assumed that the barometer is reduced to sea level. The distinction between upper and lower clouds is not made.

GREEK SERIES.

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

Athens																			

Note.—Reports commence October 1, 1875.

JAPANESE SERIES.

Tokio																			

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Brockville, Ontario			29.67	751.1	45	7.2		E	1	0.4			10s		E	1.72	33.7	Cloudy	
Chatham, N. B.			30.01	762.2	39	3.9	95	SE	1	0.4			10ks		SE	0.07	1.8	Light rain	
Charlottetown, P. E. Island			30.05	763.3	41	5.0	93	E	5	2.2			10n			0.230	5.84	Light rain	
Fort Garry, Manitoba			29.93	760.2	43	6.1	100	NW	1	0.4		8k	5ks	N		0	0	Cloudy	
Halifax, N. S.			29.95	760.7	46	7.8	91	E	12	5.4			10n		SE	0.052	1.32	Cloudy	
Kingston, Ontario			29.52	749.8	56	13.3	95	SW	3	1.3		8ck	2s	SW	SW	1.87	47.5	Cloudy	
Montreal, Quebec			29.60	751.8	41	5.0	96	E	11	4.9			10n		E	1.19	30.2	Heavy rain	
Ottawa, Ontario			29.52	749.8	41	5.0	87	NE	6	2.7			10n		NE	0.30	7.6	Threatening	
Parry Sound, Ontario			29.41	747.0	40	4.4	100	NE	19	8.5			10n		NE	1.18	31.0	Heavy rain	
Port Dover, Ontario			29.61	752.1	53	11.7	67	W	19	8.5		10k	0	SW		0.33	8.4	Cloudy	
Port Stanley, Ontario			29.64	752.8	49	9.4	86	SW	2	0.9			10n		W	0.12	3.0	Cloudy	
Quebec, Quebec			29.76	755.9	34	1.1	89	NE	36	16.1			10n		NE	0.05	1.3	Sleet	
Saugeen, Ontario			29.48	748.8	45	7.2	96	N	10	4.5			10n		N	0.98	24.9	Cloudy	
Stayner, Ontario			29.40	746.7	50	10.0	82	SW	15	6.7			10n		W	0.69	17.5	Threatening	
Sydney, C. B.			30.15	765.8	43	6.1	92	Calm	0	0			10n		S	0.01	0.3	Light rain	
Toronto, Ontario			29.50	749.3	52	11.1	78	SW	13	5.8			10ks		SW	0.38	9.7	Cloudy	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	29.62	752.3	69	15.6	82	S	15	6.7	.....	5k	5s	S	S	0.06	1.5	Cloudy	
Alpena, Mich.	.....	.....	29.60	751.8	40	4.4	100	N	14	6.3	.....	.....	1n	.....	NE	1.45	36.8	Heavy rain	
Atlantic City, N. J.	.....	.....	29.78	756.4	65	18.3	94	S	13	5.8	.....	2c	0	NE	.....	0	0	Clear	
Augusta, Ga.	.....	.....	29.99	761.7	64	17.8	89	Calm	0	0	.....	.....	8s	.....	W	0	0	Cloudy	
Baltimore, Md.	.....	.....	29.82	757.4	60	15.6	94	S	5	2.2	.....	2k	5ks	SW	SW	0	0	Fair	
Barnegat, N. J.	.....	.....	29.77	756.1	66	18.9	90	S	12	5.4	.....	2c	0	S	.....	0	0	Fair	
Benton, Montana	27.69	701.0	30.40	772.1	54	12.2	68	W	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Bismarck, Dakota	28.10	713.7	29.73	755.1	48	8.9	85	NW	10	4.5	.....	.....	1n	.....	NW	0.18	4.6	Light rain	
Boston, Mass.	.....	.....	29.78	756.4	55	12.8	100	SE	1	0.4	.....	.....	Fog	.....	.....	0.07	1.8	Foggy	
Breckenridge, Minn.	.....	.....	29.79	756.7	41	5.0	91	N	4	1.8	.....	2c	5s	.....	N	0	0	Cloudy	
Buffalo, N. Y.	.....	.....	29.50	749.3	56.5	13.7	72	SW	28	12.5	.....	.....	10ks	.....	SW	0.36	9.1	Cloudy	
Burlington, Vt.	.....	.....	29.59	751.6	52	11.1	100	S	4	1.8	.....	.....	10s	.....	S	1.04	26.4	Cloudy	
Cairo, Ill.	.....	.....	29.83	758.9	58	14.4	93	S	4	1.8	.....	5ck	Sm'e	W	.....	0	0	Fair	
Cape Hatteras, N. C.	.....	.....	29.93	760.2	72	22.2	90	SW	12	5.4	.....	5ck	2k	W	W	Inap.	nap.	Fair	
Cape Henry, Va.	.....	.....	29.88	758.9	66	18.9	89	SW	10	4.5	.....	8ck	0	N	.....	0	0	Fair	
Cape May, N. J.	.....	.....	29.78	756.4	64	17.8	88	S	20	8.9	.....	0	2s	.....	S	0	0	Fair	
Charleston, S. C.	.....	.....	30.00	762.0	67	19.4	85	SW	4	1.8	.....	5c	0	SW	.....	0	0	Fair	
Cheyenne, Wyoming	24.20	614.7	30.14	765.5	46	7.8	42	NW	6	2.7	.....	2cs	Haze	.....	.....	0	0	Fair	
Chicago, Ill.	.....	.....	29.77	756.1	50	10.0	72	W	3	1.3	.....	2k	5s	W	.....	0	0	Fair	
Cincinnati, Ohio	.....	.....	29.79	756.7	58	14.4	63	NW	3	1.3	.....	2c	8s	.....	NW	0	0	Cloudy	
Cleveland, Ohio	.....	.....	29.68	753.9	53	11.7	66	SW	16	7.2	.....	.....	10ks	.....	SW	0.11	2.8	Cloudy	
Colorado Springs, Col.	24.26	616.2	30.13	765.3	48	8.9	49	NW	4	1.8	.....	5c	0	.....	.....	0	0	Fair	
Corsicana, Tex.	.....	.....	29.98	761.5	60	15.6	89	SW	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Davenport, Iowa	.....	.....	29.77	756.1	53	11.7	86	SW	4	1.8	.....	.....	10n	.....	.....	0.17	4.3	Light rain	
Denison, Tex.	.....	.....	29.92	760.0	62	16.7	77	S	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Denver, Col.	24.96	634.0	30.18	766.6	45	7.2	53	S	4	1.8	.....	2c	Haze	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	29.67	753.6	48	8.9	70	W	12	5.4	.....	.....	10ks	.....	W	0	0	Cloudy	
Dodge City, Kan.	27.43	696.7	29.70	754.4	54	12.2	74	NW	5	2.2	.....	2cs	0	.....	.....	0	0	Fair	
Dubuque, Iowa	.....	.....	29.73	755.1	49	9.4	85	E	4	1.8	.....	.....	10s	.....	SE	0.02	0.5	Cloudy	
Duluth, Minn.	.....	.....	29.83	757.7	43	6.1	83	N	4	1.8	.....	.....	10s	.....	.....	0.20	5.1	Cloudy	
Eastport, Me.	.....	.....	29.86	758.4	46	7.8	92	E	8	3.6	.....	.....	10s	.....	S	0.70	17.8	Cloudy	
Erie, Pa.	.....	.....	29.58	751.3	58	14.4	64	SW	28	12.5	.....	.....	10ks	.....	SW	Inap.	Inap	Cloudy	
Escanaba, Mich.	.....	.....	29.74	755.4	41	5.0	82	NW	8	3.6	.....	.....	10s	.....	NW	0.23	5.8	Cloudy	
Fort Gibson, I. T.	.....	.....	29.87	758.7	59	15.0	76	Calm	0	0	.....	1c	0	.....	.....	0	0	Clear	
Fort Sill, I. T.	28.75	730.2	29.84	757.9	57	13.9	81	N	2	0.9	.....	2c	0	.....	.....	0	0	Clear	
Fort Sully, Dakota	28.23	717.0	29.87	758.7	50	10.0	86	NW	12	5.4	.....	.....	10n	.....	.....	0.03	0.8	Light rain	
Galveston, Tex.	.....	.....	30.05	763.3	69	20.6	95	NE	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Grand Haven, Mich.	.....	.....	29.74	755.4	47	8.3	77	N	4	1.8	.....	2ck	8s	NW	W	0	0	Cloudy	
Indianapolis, Ind.	.....	.....	29.80	756.9	54	12.2	70	S	2	0.9	.....	.....	Haze	.....	.....	0	0	Cloudy	
Indianola, Tex.	.....	.....	30.07	763.8	67	19.4	100	N	.....	.....	3	.....	Fog	.....	.....	0	0	Foggy	
Jacksonville, Fla.	.....	.....	30.03	762.7	70	21.1	79	SW	2	0.9	.....	2c	0	SW	.....	0	0	Clear	
Keokuk, Iowa	.....	.....	29.76	755.9	55	12.8	87	Calm	0	0	.....	.....	10s	.....	N	0.25	6.3	Cloudy	
Key West, Fla.	.....	.....	30.03	762.7	81.8	27.7	70	SE	10	4.5	.....	5ck	Sm'e	S	.....	0	0	Fair	
Kittyhawk, N. C.	.....	.....	29.90	759.4	67	19.4	83	SW	16	7.2	.....	8c	0	.....	.....	0	0	Fair	
Knoxville, Tenn.	.....	.....	29.91	759.7	57	13.9	87	S	5	2.2	.....	5cs	2ks	SW	SW	0	0	Cloudy	
La Crosse, Wis.	.....	.....	29.78	756.4	47	8.3	85	NE	2	0.9	.....	.....	10n	.....	.....	0.02	0.5	Light rain	
Leavenworth, Kan.	.....	.....	29.79	756.7	56	13.3	74	NW	1	0.4	.....	.....	10s	.....	NW	0	0	Threatening	
Lexington, Ky.	28.77	730.7	29.84	757.9	59	15.0	81	SW	8	3.6	.....	2c	2s	SW	.....	0	0	Fair	
Long Branch, N. J.	.....	.....	29.76	755.9	66	18.9	78	SW	14	6.3	.....	2c	2k	SW	S	0	0	Fair	
Louisville, Ky.	.....	.....	29.83	757.7	60	15.6	71	W	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Lynchburg, Va.	.....	.....	29.81	757.2	62	16.7	72	Calm	0	0	.....	10c	0	W	.....	0	0	Cloudy	
Malone, N. Y.	.....	.....	29.49	749.0	43	6.1	100	N	6	2.7	.....	.....	10n	.....	N	1.60	40.6	Heavy rain	
Marquette, Mich.	.....	.....	29.78	756.4	43	6.1	83	NW	4	1.8	.....	.....	10s	.....	N	0.05	1.3	Cloudy	
Memphis, Tenn.	.....	.....	29.91	759.7	64	17.8	78	SW	2	0.9	.....	1ck	Haze	NW	.....	0	0	Fair	
Milwaukee, Wis.	.....	.....	29.81	757.2	43	6.1	91	NW	3	1.3	.....	8ks	Fog	NW	NW	0.02	0.5	Cloudy	
Mobile, Ala.	.....	.....	30.05	763.3	67	19.4	90	Calm	0	0	.....	.....	10s	.....	N	0	0	Cloudy	
Montgomery, Ala.	.....	.....	30.03	762.7	65.5	18.6	92	Calm	0	0	.....	10cs	Fog	W	.....	0	0	Cloudy	
Morgantown, W. Va.	.....	.....	29.71	754.6	64	17.8	72	S	12	5.4	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Mt. Washington, N. H.	23.51	597.1	29.87	758.7	36	2.2	100	SW	30	13.4	.....	.....	Fog	.....	SW	1.68	42.7	Foggy	
Nashville, Tenn.	.....	.....	29.89	759.2	63	17.2	83	W	3	1.3	.....	2ck	Haze	SW	.....	0	0	Fair	
New Haven, Conn.	.....	.....	29.78	756.4	63	17.2	88	S	12	5.4	.....	.....	10s	.....	SW	0	0	Cloudy	
New London, Conn.	.....	.....	29.81	757.2	60	15.6	91	SW	8	3.6	.....	.....	Fog	.....	S	0	0	Cloudy	
New Orleans, La.	.....	.....	30.05	763.3	68.5	20.3	84	SW	6	2.7	.....	5cs	5s	W	SW	0	0	Cloudy	
Newport, R. I.	.....	.....	29.80	756.9	59	15.0	100	S	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	
New York, N. Y.	.....	.....	29.78	756.4	59	15.0	93	SW	10	4.5	.....	.....	10s	.....	.....	0	0	Cloudy	
Norfolk, Va.	.....	.....	29.88	758.9	64	17.8	89	SW	7	3.1	.....	10ck	0	W	.....	0.01	0.3	Cloudy	
North Platte, Neb.	27.05	687.1	29.60	751.8	42	8.9	63	W	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Omaha, Neb.	28.73	729.7	29.78	756.4	54	12.2	93	W	4	1.8	.....	.....	10s	.....	NW	0.05	1.3	Cloudy	
Oswego, N. Y.	.....	.....	29.53	75[illegible].0	60	15.6	79	WSW	6	2.7	.....	.....	10ks	.....	SW	0.06	1.5	Cloudy	
Peck's Beach, N. J.	.....	.....	29.79	756.7	66	18.9	83	SW	20	8.9	.....	9ck	4s	.....	.....	0	0	Cloudy	
Pembina, Dakota	.....	.....	29.88	758.9	42	5.6	91	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Philadelphia, Penn.	.....	.....	29.77	756.1	60	15.6	94	SW	11	4.9	.....	.....	10s	.....	SW	0	0	Cloudy	
Pike's Peak, Colorado	18.03	458.0	30.24	768.1	27	−2.8	88	NW	28	12.5	.....	0	2s	.....	.....	0	0	Fair	
Pittsburgh, Penn.	.....	.....	29.64	752.8	64	17.8	67	W	13	5.8	.....	.....	10ks	.....	W	0	0	Cloudy	
Port Huron, Mich.	.....	.....	29.64	752.8	44	6.7	75	W	16	7.2	.....	.....	10s	.....	W	0	0	Cloudy	
Portland, Me.	.....	.....	29.79	756.7	49	9.4	85	N	3	1.3	.....	.....	Fog	.....	.....	0.15	3.8	Foggy	
Portland, Oregon	.....	.....	30.18	766.6	58	14.4	87	NW	6	2.7	.....	Haze	Haze	.....	.....	0	0	Haze	
Punta Rassa, Fla.	.....	.....	30.05	763.3	76.2	24.6	95	NE	6	2.7	.....	.....	10s	.....	NE	0.18	4.6	Cloudy	
Rochester, N. Y.	.....	.....	29.54	749.3	59	15.0	70	W	22	9.8	.....	0	5s	.....	W	0.14	3.6	Fair	
Salt Lake City, Utah	25.85	656.6	30.18	766.6	57	13.9	30	S	2	0.9	.....	2c	0	.....	.....	0	0	Fair	
Sandy Hook, N. J.	.....	.....	29.76	755.9	60	15.6	94	SW	15	6.7	.....	1cs	5ks	W	W	0	0	Fair	
San Diego, Cal.	.....	.....	30.06	763.5	62	16.7	94	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
San Francisco, Cal.	.....	.....	30.14	765.5	55	12.8	87	SW	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Santa Fe, N. M.	23.37	593.6	29.91	759.7	46.5	8.1	51	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	30.01	762.2	66	18.9	84	SW	4	1.8	.....	5cs	0	W	.....	0	0	Fair	
Shreveport, La.	.....	.....	30.05	763.3	58	14.4	94	SW	1	0.4	.....	0	Fog	.....	SW	0	0	Fair	
Smithville, N. C.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Springfield, Mass.	.....	.....	29.76	755.9	56	13.3	93	S	4	1.8	.....	.....	10ks	.....	S	0.07	1.8	Cloudy	
St. Louis, Mo.	.....	.....	29.85	758.2	61	16.1	66	NW	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
St. Marks, Fla.	.....	.....	30.06	763.5	66	18.9	94	W	1	0.4	.....	8ck	0	W	.....	0	0	Fair	
St. Paul, Minn.	.....	.....	29.73	755.1	44.5	6.9	84	NE	4	1.8	.....	.....	10n	.....	NE	0.16	4.1	Light rain	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Squan Beach, N. J.	.....	.....	29.71	754.6	64	17.8	94	S	5	2.2	.....	5cs	0	.....	.....	0	0	Fair	
Toledo, Ohio	.....	.....	29.70	754.4	53	11.7	73	SW	16	7.2	.....	2c	8s	.....	NW	0	0	Cloudy	
Tucson, Arizona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Tybee Island, Ga.	.....	.....	30.02	762.5	66	18.9	90	NW	8	3.6	.....	5cs	2s	W	.....	0	0	Fair	
Vicksburg, Miss.	.....	.....	30.10	764.5	64	17.8	83	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Virginia City, Montana	24.58	624.3	30.06	763.5	37	2.8	35	SE	4	1.8	.....	1c	0	.....	.....	0	0	Clear	

UNITED STATES SERIES—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.	.....	.....	29.77	756.1	63	17.2	83	S	8	3.6	.....	1cs	1s	SW	S	0	0	Fair	
Wilmington, N. C.	.....	.....	29.95	760.7	68	20.0	84	SW	7	3.1	.....	8ck	0	SW	.....	0	0	Cloudy	
Wood's Hole, Mass.	.....	.....	29.81	757.2	59	15.0	100	SE	5	2.2	.....	.....	Fog	.....	.....	0	0	Foggy	
Wytheville, Va.	27.57	700.3	29.67	753.6	57	13.9	87	W	4	1.8	.....	10k	0	W	.....	0	0	Cloudy	
Yankton, Dakota	28.56	734.0	29.83	757.7	53	11.7	93	NW	5	2.2	.....	.....	10s	.....	.....	0.10	2.5	Cloudy	
Yuma, Arizona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub-Series.																			
Bridgetown, Barbados, W. I.	.....	.....	.....	.....	80	26.7	90	E	4	1.8	.....	5k	2s	NE	.....	0	0	Fair	E Racker.
Pointe-a-Pitre, Guadeloupe, do	.....	.....	29.95	760.7	79	26.1	87	E	.....	.....	.....	8cs	2k	.....	.....	0.24	6.1	Cloudy	L. V. Bigard.
Havana, Cuba, W. I.	.....	.....	30.05	763.3	80	26.7	91	Calm	0	0	.....	8c	1k	SW	E	0.31	7.9	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W.	.....	.....	30.15	765.8	80	26.7	78	Calm	0	0	.....	2ck	1s	SE	.....	0	0	Fair	James Gall.
St. Thomas, St. T., W. I.	.....	.....	30.29	769.4	82	27.8	74	E	4	1.8	.....	2cs	2k	E	.....	0.85	21.6	Fair	W. S. Cameron.
Santiago de Cuba, W. I.	.....	.....	29.81	757.2	79	26.1	70	NE	8.4	3.8	.....	2cs	0	NW	.....	.....	.....	Fair	Robert Mason.
St. Georges, Bermudas	.....	.....	30.17	766.3	77.5	25.3	86	SW	9.2	4.1	.....	1c	1fk	.....	.....	0.036	7.62	Clear	C. F. Allen.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. P. Church.
Makawao, Maui, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. L. Clarke.
Cumberland, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ft. Chippewyan, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ft. McPherson, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ft. Simpson, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
York Factory, B. A.	.....	.....	29.95	760.7	33	0.6	100	N	9	4.0	.....	.....	1cn	.....	.....	Inap.	Inap.	.....	J. Fortescue.
St. John's, Newfoundland	.....	.....	30.18	766.6	45.5	7.5	52	W	.....	.....	.....	5k	5s	.....	.....	0	0	Cloudy	John Delaney.
St. John's, Porto Rico, W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Clifton, Jamaica, W. I.	27.25	692.1	30.02	762.5	71	21.7	84	S	2.0	0.9	.....	2c	2k	S	.....	0	0	Fair	C. Partridge.
Navassa	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Measlin, S. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Paramaribo, S. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Elyria, Ohio	.....	.....	29.69	754.1	54	12.2	61	W	16	7.2	.....	.....	10n	.....	.....	0.20	5.1	Cloudy	H. M. Redington.
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. Elyria records all the clouds as lower. 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, 6,957.3 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.; 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, 6,86[illegible] (?) ft., or 2,091.6 (?) m.; Virginia City, 5,180 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 0.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 1, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.10	764.6	79.3	26.3	65	N			1		0			0	0		Charnot.
Algiers			30.05	763.2	73.1	25.6	82	N			2		2			0	0		Peter.
La Calle																			Kuntz.
Tunis			30.01	762.3	78.8	26.0	37	NW			5		5			0	0	Cloudy	Jacques.
Sfax			30.17	766.2	86.4	30.2	29	NW			2		2			0	0	Cloudy	Chauvey.
Saïda			30.07	763.7	79.7	26.5	40	NNE			1		0			0	0		Grosjean.
Tebessa			30.10	764.4	73.0	22.8		NE			4		0						Colin.
Geriville			30.08	764.1	70.7	21.5	32	N			1		0			0	0		Bernadach.
Laghouat			30.06	763.1	78.8	26.0	18	E			2		1			0	0		Simon.
Biskra			30.08	764.1	86.7	30.4	29	NW			1		2			0	0	Stormy	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.02	762.4	60.6	15.9	88	NE			2		6			0.047	1.2	Rainy	Prof. Ivan Stosir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.99	761.7	53.6	12.0	71	W			3		6			0.004	0.1		I. R. Observatory.
Eperies			29.91	759.7	55.4	13.0	64	NW			2		6		SE	0	0		Julius Mikolik.
Gratz	28.86	733.1	30.07	763.6	54.1	12.3	55	NW			5		5						Andreas Rospini.
Hermannstadt	28.42	721.9	29.81	757.2	60.4	15.8	51	NW			3		7			0.061	1.55		Prof. Reissenberger.
Kremsmünster	28.78	731.0	30.13	765.4	50.0	10.0	72	NW			3		8			0.106	2.7		Prof. C. Wagner.
Lemberg			29.85	758.3	54.5	12.5	69	NW			3		6			0	0		Dr. T. Stanecki.
Nyiregyhaza			29.92	759.9	59.0	15.0	66	NE			4		7			0	0		Habzsuda Daniel.
Pola			30.03	762.1	64.0	17.8	44	ENE			2		5ks			0.024	0.61		I.R. Hydrographic Of'ce
Szegedin			29.93	760.2	51.8	11.0	65	NW			2		6			0	0		Karl Stancel.
Trieste			30.03	762.8	65.1	18.4	72	NE			1		9			0	0		Prof. V. Farolfi.
Vienna			30.04	763.0	50.5	10.3	77	NW			2		9			0.039	1.0	Raining	I. R. Central Institute.

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

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.08	764.0	59.0	15.0	76	SW			4	0?	10			0.112	2.85		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.63	752.6	58.6	14.8		SW	14	6.3			6			0.050	1.27	*D. clouds	William Boswell.
Ardrossan			29.71	754.6	58	14.4		SW			2		7					*D. clouds	Wm. McNeil.
Armagh Observatory			29.74	755.4	56.2	13.4		SSW	6	2.7			10					Gloomy	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs.			29.79	756.7	62.1	16.7		SW			1		10					Overcast	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.75	755.6	62.2	16.8		SW			1-2		7					*D. clouds	J. Dreyer.
Bradford			29.78	756.4	62.4	16.9		W			1		8					Gloomy	J. McLandsborough.
Bridgetown, (Barbadoes)			29.97	761.2	78.0	25.6		NE			2		10					Raining	T. H Hunt.
Cambridge Observatory			29.93	760.2	63.0	17.2		SW			1		7			Blank	Blank	*D. clouds	Sergeant Hunt, A. H. C.
Cape Good Hope Obs.			30.11	764.8	69.0	20.6	66	SSE	14	6.3			9						The Staff, for E. J. Stone.
Cardington			29.01	759.7	64.0	17.8		SW					8					Overcast	John McLaren.
Carlisle			29.74	755.4	62	16.7		W					8			0.17	4.3	*D. clouds	T. Bell, for J. Cartmell.
Chatham, School M. E.			29.99	761.7	61.2	16.2		S			2		0					Gloomy ?	Major C. W. Martin, R. E.
Dartmoor	28.57	725.7	29.94	760.5	55.8	14.9		SW			5		10					Rain & fog	R. E. Power.
Donaghadee			29.71	754.6	60	15.6		WSW			2		8					*D. clouds	J. Mac Gowan, Jr.
Dover			30.02	762.5	62	16.7		SW			4		7						J. Costello.
Eccles, (near Manchester)			29.81	757.2	60.5	15.8		SW	0.6	0.3			10					Drizzling	Thomas Mackereth.
Falmouth Observatory			29.98	761.5	62.0	16.7		WSW	21	9.4			10					Drizzling	The Staff.
Fort Napier, (Natal)	27.56	700.0	29.76	755.9	82.0	27.8		NW			4		9					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	85.0	29.4		W					8					*D. clouds	[tis.
Galway, Queen's College																			B. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			30.08	764.0	79.2	26.5		E			1		0					Clear	Sergt. E. G. Baker.
Glasgow Observatory			29.68	753.9	58.5	14.7		W			4		7					Gloomy	Lewis Stuart.
Great Yarmouth			29.92	760.0	57	13.9		SW			2		8					Rain & Mist	G. T. Watson.
Greenwich Royal Obs.			29.98	761.5	61.3	16.3		SW			3		10					Overcast	The Staff, for G. B. Airy.
Guernsey			30.05	763.3	62	16.7		SW			2		8					Gloomy	Dr. S. E. Hoskins. [ley.
Halifax, Moorside Obs.			29.82	757.4	59.7	15.4		WSW					10					Raining	F. J. Page, for L. J. Cross-
Helston			29.92	760.0	64	17.8		SW			4		10					Misty	M. P. Moyle.
Holyhead			29.75	755.6	60	15.6		SW			5		10					Misty	John Tilston.
Kew Observatory			29.98	761.5	59.6	15.3		SSW	15	6.7			10					Threatening	The Staff.
Kingstown			29.77	756.1	63	17.2		SW			3		6					*D. clouds	George Mitchell.
Leicester Museum			29.90	759.4	62.0	16.7		W			3		10					*D. clouds	William J. Harrison.
Llandudno			29.79	756.7	61.0	16.1		W					10			Blank	Blank	Overcast	Dr. James Nicol.
Malta, (Mediterranean)			29.86	758.4	78.2	25.7		NW			1		2k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			29.63	752.6	53	11.7		Calm			0		10					Showery	W. D. Penny.
Nassau, (Bahamas)			30.07	763.8	85.2	29.7		SE			4		6					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.86	758.4	62.4	16.9		SSW			4		10d		SW			Raining	E. J. Lowe.
Oscott, St Mary's College			29.88	758.9	59.1	15.1		SSW			4		10					Misty	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.92	760.0	65	18.3		SW			3		10					Overcast	J. Lucas, for R. Main.
Plymouth			29.98	761.5	60.3	15.7		SSW			3		10					Raining	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.83	757.7	60	15.6		WSW			4		8					Cloudy	W. Kennedy.
Saint Ann's Head			29.87	758.7	60	15.6		SW			4		10					Misty	John C. Walker.
Saint Helier, (Jersey)			30.06	763.5	64.2	17.9		SW			4		8						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			29.80	756.9	62.0	16.7		WSW			2		7					*D. clouds	F. Shaw.
Scutari cemetery, (Turkey)			29.83	757.7	70.6	21.4		NW			2		9					Threatening	Sergt. W. H. Lyne.
Sheffield			29.81	757.2	64	17.8		SW			2		9			Blank	Blank	Overcast	W. F. Cooper.
Silloth Rectory			29.74	755.4	65.2	18.4		SW			3		3			0.050	1.27	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			29.80	756.9	59.0	15.0		S			1		10					Threatening	The Staff.
Stornoway, Lews C. (Hebr).			29.52	749.8	52	11.1		SW			3		5					*D. clouds	John Smith.
Stratfield Turgiss			29.97	761.2	61.6	16.4		SW			1		10					Drizzling	Rev. Charles H. Griffith
Streatley Vicarage			29.84	757.9	65.0	18.3		SW			4		7						Rev. John Slatter.
Thurso			29.57	751.1	56	13.3		WSW			2		8					Overcast	John Trotter.
Truro, Royal Institution			29.93	760.2	65	18.3		SW			4		8					Gloomy	W. Newcombe.
Valencia Observatory			29.82	757.4	59.0	15.0		WSW	11	4.9			4					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					55	12.8		SW			1					0	0		
Leith, Restalrig Park			29.80	756.9	62.3	16.8		W			3		5k			0.02	0.5	Fine, cloudy	Andrew Gibb.
Monach Lt-house, (Shet. Is)			29.54	750.3	55	12.8		SW			6	5	5	SW		0.6	1.5		J. Youyclause.
North Unst, (Shetland Is)			29.51	749.5	52	11.1		SW			6	7	10	SW					

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.89	759.3	54.9	12.7	59	W			2		5						
Faröe			29.95	760.6	57.0	13.9	64	W			4		5						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.19	741.4	45.7	7.6	93	SE			2		8					Raining	
Thorshavn, (Faröe)			29.42	747.2	51.1	10.6	74	SW			1		8						
Vestervig			29.91	759.7	52.9	11.6	76	SW			2		8						

Note.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between upper and lower clouds.

FRENCH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.11	764.7	62.6	17.0	59	SW			3		10n, k						Normal School.
Amiens			30.08	764.0	54.0	12.2	78	WSW			2		5		WSW	0	0	Cloudy	Normal School.
Avignon			30.05	763.2	66.0	19.2	34	N			4		0			0	0	Clear	Normal School.
Bar-sur Seine			30.12	765.0	60.2	15.7	45	SSW			2		2			0	0		C. Saillard.
Beaumette, (near Angers)			30.10	764.6	65.1	18.4	63	SW	3.0	1.6			5		S	0	0	Cloudy	Beaumette Observatory
Beauvais			30.20	767.1	57.0	13.9	63	SW			3		8		W	0	0	Cloudy	Normal School.
Besançon			30.19	766.8	57.9	14.4	57	NE			3		2		SW	0.20	5.		Normal School.
Bourg en Bresse			30.19	766.7	60.8	16	75	NW			2		1		S	0	0	Clear	Normal School.
Bourges			30.14	765.5	60.1	15.0	79	WNW			2		5		WNW	0	0	Cloudy	Normal School.
Brest			30.02	762.5	62.8	17.1	85	SW			3		8		SW	0	0	Misty	Naval Observatory.
Caen																			Normal School
Chartres																			Normal School.
Chaumont	28.99	736.3	30.07	763.6	56.8	13.8		S			1		..ks		W	0.031	0.8		Normal School.
Commercy			30.21	767.2	55.4	13	83	NW			2		5		NW	0.059	1.5	Cloudy	Normal School.
Commune de Gréasque*			30.05	763.3	69.8	21.0	34	E			2		2		NW	0	0		
Le Mans																			Normal School.
Lons-Le Saulnier			30.16	766.0	57.6	14.2	65	N			1		2		N	0	0		Normal School.
Mâcon			30.13	765.2	56.8	13.8	89	N			2		5		NW	0	0	Cloudy	Normal School.
Mirecourt			30.19	766.8	57.7	14.3	80	WSW			2		5		NW	0.059	1.5	Cloudy	Normal School.
Orleans			29.80	757.0	59.0	15	68	N			2		8		SSW	0	0	Cloudy	Normal School.
Paris Observatory			30.12	765.0	62.6	17.0	60	SW			1		5			0.026	0.5	Cloudy	National Observatory
Parthenay			30.09	764.2	68.0	20	72	NW			2		8			0	0	Cloudy	Normal School.
La Roche sur Yon			30.17	766.4	68.7	20.4	58	W			1		5		NE	0	0	Cloudy	Normal School.
Rochefort, Observatory			30.15	765.9	69.3	20.7	54	NW			1		2		SE	0	0		Naval Observatory.
Rouen			30.09	764.3	66.6	19.2	58	S			1		5		W	0	0	Cloudy	Normal School.
Saint Lo			29.89	759.3	59.0	15	90	NW			3		7		NW	0	0		Normal School.
Villefranche																			Normal School
Sub-Series.																			
Fort de France, Martinique													4		WNW	0	0		L'Abbe Marchesi.
Mont-Louis			30.26	768.6	61.7	16.5	38	N	11.2	5.00			6ck, k		SSW	0	0		—. Falguère.
Montsouris Observatory			30.12	765.0	62.4	16.9	61	SSW			2		3		NW	0	0		Marié Davy.
Perpignan	†30.10	764.5			77.4	25.2	45	SE	1.9	0.83			4			0	0		Dr. Fines.
Pic du Midi, (Summit) H. P.	21.39	543.1			44.6	7.0	48	NW			3		3			0	0		M. Baylac.
Pic du Midi, (Plantade) H.P.													4			0	0		General de Nansouty.
Saint Maur, (near Paris)			30.12	765.1	65.1	18.4	64	SW			2		8		WNW	0	0		E. Renou.
Tours			30.11	764.7	59.4	15.2		W			1		4			0	0		C. Marquet.
Versailles, (near Paris)			30.12	765.1	63.0	17.2	61	SW			1					0	0		Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.10	764.5	61.5	16.4	85	NE	2.0	0.9		0	0			0 / 0	0 / 0	Clear	H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 ft.; Commune de Gréasque, 322 m., or 1,055.4 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. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also.

GERMAN SERIES.

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

Stations.	Corrected for instrumental errors. Inches.	Corrected for instrumental errors. Millimeters.	Reduced to sea-level. Inches.	Reduced to sea-level. Millimeters.	Fahrenheit.	Centigrade.	Relative Humidity. Per cent.	Direction. From—	Velocity. Miles per hour.	Velocity. Meters per second.	Force. 0—10.	Amount. Upper 0—10.	Amount. Low'r 0—10.	Direction. Upper From—	Direction. Lower. From—	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Bamberg			30.07	763.8	52.7	11.5	73	NW	18	8			9			0	0		Prof. Hoh.
Berlin			30.02	762.5	56.8	13.8	52	SW	4	2			7			0	0		Prof. Arndt.
Breslau			30.06	763.4	49.3	9.6	89	W	22	10			10			0.063	1.6	Raining	Dr. P. Neugebauer.
Carlsruhe			30.15	765.9	56.5	13.6	62	SW	13	6			9			0	0		A. Senz.
Cassel			29.94	760.4	56.3	13.5	69	NW	9	4			6			0.047	1.2		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.74	730.1	30.19	766.8	54.5	12.5	65	S					4			0	0		M. Wilhelm.
Hamburg			30.04	763.1	55.0	12.8	70	W	13	6			8k8	W		0.075	1.9	Showery	Deutsche Seewarte.
Kiel			29.98	761.4	56.3	13.5	87	WSW	13	6			10			0.114	2.9		Prof. G. Karsten.
Königsberg			29.91	759.6	57.2	14.0	71	W	11	5						0.106	2.68	Cloudy	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			30.08	764.2	54.0	12.2	67	WNW	13	6			10			0.016	0.4	Raining	Prof. Bruhns.
Münster			30.10	764.6	55.2	12.9	81	NW	18	8			10			0	0		Prof. E. Heis.
Posen			29.98	761.4	55.0	12.8	69	NW	29	13			7			0	0	Cloudy	Dr. Magener.
Strassburg, (in Alsace)			30.18	766.5	59.0	15.0	54	Calm	0	0			9			0	0		Dr. Schur.
Stuttgart			30.17	766.2	55.4	13.0	63	W					7			0	0		Mr. Würth.
Thorn			30.13																Dr. Hasenbalg.
Treves, (Trier)				765.2	51.5	12.5	71	W	22	10			10			0	0		Prof. Frosch.
Wustrow, Naval School			29.98	761.4	55.4	13.0	67	NW	13	6			7k8			0.010	0.25	Cloudy	E. F. Schütz.

Note.—In the originals the distinction between 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.	Corrected for instrumental errors. Inches.	Corrected for instrumental errors. Millimeters.	Reduced to sea-level. Inches.	Reduced to sea-level. Millimeters.	Fahrenheit.	Centigrade.	Relative Humidity. Per cent.	Direction. From—	Velocity. Miles per hour.	Velocity. Meters per second.	Force. 0—10.	Amount. Upper 0—10.	Amount. Low'r 0—10.	Direction. Upper From—	Direction. Lower. From—	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Athens			29.82	757.3	70.7	21.5		SW										Covered	

Note.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.03	762.8	66.4	19.1	33	SE	6.9	3.1			5	NW		0	0		
Mondovi			30.02	762.5	63.0	17.2	31	WNW			1		8	NW		0	0		
Genoa			29.98	761.6	73.4	23.0	30	N	1.8	0.8			2	SW		0	0		
Pavia			30.01	762.2	65.8	18.8	41	NE			1		1	NE		0	0		
Verona			29.97	761.1	71.2	21.8	29	E			1		0			0	0		
Padua			30.00	762.0	65.5	18.6	44	SSW	6.9	3.1			4			0	0		
Parma																			
Bologna			29.94	760.5	66.2	19.0	71	WNW			1		4	W		0	0		
Leghorn			29.98	761.4	71.1	21.7	23	W	6.3	2.8			2			0	0		
Urbino			30.00	762.0	59.5	15.3	84	NNE			4		3			0	0		
Ancona			30.02	762.5	63.9	17.7	51	NNE			4		0			0	0		
Siena			29.98	761.5	64.0	17.8	38	NE	1.8	0.8			3	NE		0	0		
Rome			29.93	760.1	72.0	22.2	28	NE	14.0	6.7			1			0	0		
Naples, O. U.			29.90	759.5	71.2	21.8	36	NE			6		2	NNE		0	0		
Lecce			29.85	758.1	63.1	17.3	84	NNW	6.3	2.8			10	NE		0.559	14.2		
Cosenza			29.87	758.7	65.8	18.8	57	NW			1		6	NW		0.161	4.1		
Catania, (Sicily)																			
Riposto			29.72	755.0	79.5	26.[illegible]	55	N			6		4	S		0	0		
Palermo			29.84	757.8	75.0	23.9	34	WNW	21.0	9.4			2	NW		0	0		
Sub-Series.																			
Naples, S. R.			29.94	760.5	68.5	20.3	48	SW			6		0			0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for twenty-four hours. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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	58.3	14.6		SW			4								
Groningen			29.97	761.1				S			3								
Helder			29.98	761.4	57.2	14.0		SSW			4								
Utrecht			29.99	761.8	60.1	15.6		SSW			3		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the 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			29.73	755.1	50.0	10.0	62	S	10.5	4.7			10			0.394	10.0		
Christiania			29.85	758.3	51.4	10.8	58	SW	1.3	0.6			3			0	0		
Tromsö			29.76	755.9	38.8	3.8	83	NE			2		10			0	0		

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.12	765.1	71.2	21.8	69	S	4.9	2.2			8						The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

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. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Millimeters.	Temperature. Fahrenheit.	Temperature. Centigrade.	Relative Humidity.	Winds. Direction.	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force.	Clouds. Amount. Up'er	Clouds. Amount. Low'r	Clouds. Direction. Upper.	Clouds. Direction. Lower.	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Warsaw			29.90	759.4	54.9	12.7	74	W	7	3			7						Astronomical Obs.
Wilna			29.86	758.4	56.7	13.7	72	S	4	2			9						Astronomical Obs.
Dorpat			29.87	758.7	51.4	10.8	52	WSW	7	3			6						Physical Cabinet.
St. Petersburg			29.81	757.2	48.4	9.1	62	Calm	0	0			4						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kieff			29.80	757.0	56.1	13.4	67	SE	7	3			10						Physical Cabinet.
Nikolaiev			29.84	758.0	62.8	17.1	90	S	10	4.5			10					Light rain	Kurdakof.
Kertch			29.89	759.2	72.3	22.4	88	S	4	2			6						Lagorio.
Moscow			29.95	760.6	55.6	13.1	72	S	10	4.5			4						Meteorological Obs.
Lugan			29.87	758.8	68.0	20.0	73	SE	8	3.5			9						Meteorological Obs.
Archangel			29.76	756.0	39.7	4.3	54	WSW	13	6			7						Ogorodnikof.
Tiflis	28.59	726.2	29.96	760.9	70.7	21.5	73	S	8	3.5			0						Physical Obs.
Astrakhan			30.23	767.8	66.8	16.0	47	E	13	6			1						Sebastianof.
Kasan			30.16	766.1	57.6	14.2	55	S	8	3.5			10						Physical Cabinet.
Orenburg			30.35	770.8	67.3	19.6	62	Calm	0	0			0						Tschernischef.
Ekaterinburg	29.37	746.1	30.37	771.3	60.1	15.6	36	W	4	2			7						Meteorological Obs.
Kasaly			30.11	764.9	50.4	10.2	83	NE	20	9			3						Bobrof.
Tashkend																			Michelson.
Barnaul			30.19	766.9	49.6	9.8	50	Calm	0	0			0						Meteorological Obs.
Yeniseisk			30.12	765.0	52.7	11.5	59	Calm	0	0			0						Marks.
Irkutsk																			Usolzef.
Oorga	25.77	654.6	30.15	765.8	34.5	1.4	72	Calm	0	0			0						Mossin.
Peking, (China)			30.15	765.8	53.1	11.7	42	WNW	4	4			3						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Millimeters.	Temperature. Fahrenheit.	Temperature. Centigrade.	Relative Humidity.	Winds. Direction.	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force.	Clouds. Amount. Up'er	Clouds. Amount. Low'r	Clouds. Direction. Upper.	Clouds. Direction. Lower.	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Madrid			29.99	761.7	82.6	28.1	31	NW	2.9	1.3		2	0	E		0	0	Light clouds	Royal Observatory.
San Fernando			30.11	764.7	74.7	23.7	75	WNW	12.1	5.4		0	0			0	0		The Naval Observatory.

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

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Millimeters.	Temperature. Fahrenheit.	Temperature. Centigrade.	Relative Humidity.	Winds. Direction.	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force.	Clouds. Amount. Up'er	Clouds. Amount. Low'r	Clouds. Direction. Upper.	Clouds. Direction. Lower.	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Haharanda			29.76	755.8	39.9	4.4	71	N			2		2			0.118	3.0		
Umea			29.84	757.8	43.5	6.4	73	Calm			0		7			0	0		
Hernosand			29.84	758.0	43.2	6.2	49	N			2		6			0	0		
Stockholm			29.85	758.3	47.1	8.4	52	NW			2		2			0	0		
Wisby			29.91	759.7	51.4	10.8	68	NNW			4		0						
Sub-Series.																			
Upsala			29.87	758.8	48.2	9.0	48	NW	5.8	2.7			0						Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.74	729.6	30.15	765.7	56.3	13.5	55	NNE			1		4			0	0	Cloudy	The Observatory.
Zurich	28.54	724.8	30.17	766.2	56.3	13.5	54	W			1		3			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +3.1mm.; Thermometer, —2°.0; Relative Humidity, —13 per cent.

Note.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y			29.96	760.9	75.9	24.4	58	N			2					0	0		Prof. C. N. A. Van Dyck.
Constantinople			29.87	758.6	68.4	20.2	72	NNW	7	3			10		SW	0.406	12.6	Thunder-storm	
Fao, (Persian Gulf)			29.92	760.0	84.6	29.2		NW			3		0					Clear	
Salonica					61.2	16.2		NW			2		8					Stormy	
Valona			29.76	755.8	64.8	18.2		W			4		10					Stormy	
Varna			29.92	760.0	68.0	20.0		S			3		10					Cloudy	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario			29.77	756.1	37	2.8		Calm	0	0			10s		E	0	0	Cloudy	
Chatham, N. B.			29.66	753.4	43	6.1	100	W	1	0.4		2c	8ks	W	W	1.01	25.7	Cloudy	
Charlottetown, P. E. Island			29.68	753.9	56	13.3	96	SW	3	1.3			10n			0.915	0.38	Cloudy	
Fort Garry, Manitoba			30.18	766.6	24	— 4.4	96	NW	1	0.4		0	2s		NW	0	0	Fair	
Halifax, N. S.			29.70	754.4	57	13.9	95	S	9	4.0			8n			0.237	6.02	Cloudy	
Kingston, Ontario			29.75	755.6	37	2.8	87	Calm	0	0			10s			0	0	Cloudy	
Montreal, Quebec			29.66	753.4	38	3.3	84	W	10	4.5		Haze	2ks	W		0.15	3.8	Cloudy	
Ottawa, Ontario			29.71	754.6	37	2.8	88	NW	6	2.7		2cs	3n	N	N	0.01	0.3	Clearing	
Parry Sound, Ontario			29.81	757.2	32	0.0	95	NE	8	3.6		2cs	0	NW		0.32	8.1	Fair	
Port Dover, Ontario			29.76	755.9	36	2.2	80	N	4	1.8		10k	0	SW		0	0	Cloudy	
Fort Stanley, Ontario			29.75	755.6	38	3.3	72	N	3	1.3			10n		N	0	0	Cloudy	
Quebec, Quebec			29.64	752.8	41	5.0	82	S	9	4.0			10n		S	0.15	3.8	Cloudy	
Saugeen, Ontario			29.80	756.9	35	1.7	85	E	2	0.9		5k	0	N		0.08	2.0	Fair	
Stayner, Ontario			29.80	756.9	33	0.6	84	Calm	0	0		5ck	0	NW		0.08	2.0	Fair	
Sydney, C. B.			29.72	754.9	60	15.6	97	SW	7	3.1		0	8ks		W	0.21	5.3	Clearing	
Toronto, Ontario			29.77	756.1	37	2.8	80	NW	3	1.3		5ck	5ks	W	W	0	0	Cloudy	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.63	752.6	46	7.8	100	Calm	0	0			10n			0.25	6.3	Light rain	
Alpena, Mich.			29.80	756.9	34	1.1	90	NW	6	2.7		2cs	0			0.05	1.3	Clear	
Atlantic City, N. J.			29.60	751.8	66	18.9	84	S	12	5.4		0	8s		SW	0	0	Cloudy	
Augusta, Ga.			29.83	757.7	65	18.3	94	SW	4	1.8		0	2s		SW	0	0	Fair	
Baltimore, Md.			29.64	752.8	60	15.6	81	Calm	0	0		2k	5ks	SW		0.17	4.3	Clearing	
Barnegat, N. J.			29.59	751.6	66	18.9	90	SW	16	7.2			10ks		SW	0	0	Cloudy	
Benton, Montana	27.22	691.4	30.02	762.5	40	4.4	82	Calm	0	0		0	0			0	0	Clear	
Bismarck, Dakota	28.34	719.8	30.06	763.5	30	—1.1	78	S	4	1.8		5c	Haze	SW		0.01	0.3	Fair	
Boston, Mass.			29.67	753.6	55	12.8	62	W	4	1.8			10s		SW	0	0	Cloudy	
Breckenridge, Minn.			30.14	765.5	28	—2.2	88	N	4	1.8		2c	5s			0.08	2.0	Cloudy	
Buffalo, N. Y.			29.70	754.4	38	3.3	81	NE	6	2.7		Haze	2ks	NW	N	Inap.	Inap.	Cloudy	
Burlington, Vt.			29.64	752.8	44	6.7	76	NE	5	2.2			10s			0.12	3.0	Cloudy	
Cairo, Ill.			29.93	760.2	52	11.1	86	NW	12	5.4			10ks		W	0.04	1.0	Cloudy	
Cape Hatteras, N. C.			29.81	757.2	74	23.3	81	SW	22	9.8		8ck	2s	W	SW	0	0	Cloudy	
Cape Henry, Va.			29.76	754.6	71	21.7	71	SW	12	5.4		2k	0	SW		0	0	Fair	
Cape May, N. J.			29.62	752.3	65	18.3	84	S	18	8.0		0	0			0	0	Clear	
Charleston, S. C.			29.88	758.9	71	21.7	80	S	6	2.7		5c	0	SW		0	0	Fair	
Cheyenne, Wyoming	24.17	613.9	30.11	764.8	38	3.3	63	SW	4	1.8		0	0			0	0	Clear	
Chicago, Ill.			29.85	758.2	45	7.2	84	NW	7	3.1			10s		NW	0.75	19.1	Threatening	
Cincinnati, Ohio			29.64	752.8	50	10.0	86	N	18	8.0			10n		N	0.63	16.0	Light rain	
Cleveland, Ohio			29.65	753.1	46.3	7.9	76	N	14	6.3			10n		N	0.91	23.1	Light rain	
Colorado Springs, Col.	24.28	616.7	30.15	765.8	35	1.7	99	Calm	0	0		0	Haze			0	0	Fair	
Corsicana, Tex.			30.10	764.5	59	15.0	53	N	10	4.5		0	0			0	0	Clear	
Davenport, Iowa			29.98	761.5	43	6.1	83	NW	8	3.6		0	5s		NW	0.40	10.2	Fair	
Denison, Tex.			30.12	765.0	53	11.7	79	N	7	3.1		0	0			0	0	Clear	
Denver, Col.	24.97	634.2	30.19	766.8	40	4.4	56	Calm	0	0		0	0			0	0	Clear	
Detroit, Mich.			29.75	755.6	41	5.0	73	N	8	3.6		8k	5ks	SW	W	0	0	Cloudy	
Dodge City, Kan.	27.62	701.5	29.98	761.5	40	4.4	73	N	4	1.8		0	0			0	0	Clear	
Dubuque, Iowa			29.98	761.5	39	3.9	82	NW	6	2.7		2k	0	NW		0.06	1.5	Fair	
Duluth, Minn.			29.97	761.2	39	3.9	82	SW	6	2.7		5k	2s	N	N	0.09	2.3	Fair	
Eastport, Me.			29.63	752.6	51	10.6	93	S	3	1.3			Fog			0.14	3.6	Foggy	
Erie, Pa.			29.64	752.8	44	6.7	92	E	12	5.4			10n		NE	0.12	3.0	Light rain	
Escanaba, Mich.			29.87	758.7	34	1.1	79	NW	3	1.3		0	0			0	0	Clear	
Fort Gibson, I. T.			30.12	765.0	40	9.4	85	NW	6	2.7		0	0			0	0	Clear	
Fort Sill, I. T.	28.98	736.1	30.11	764.8	51	10.6	79	N	1	0.4		0	Haze			0	0	Clear	
Fort Sully, Dakota	28.47	723.1	30.19	766.8	35	1.7	90	NW	3	1.3		5c	0	NW		0.02	0.5	Fair	
Galveston, Tex.			30.00	762.0	69	20.6	95	E	8	3.6		0	0			0	0	Clear	
Grand Haven, Mich.			29.86	758.4	39	3.9	81	N	4	1.8		8ck	0	N		0.02	0.5	Fair	
Indianapolis, Ind.			29.78	756.4	46	7.8	85	NW	10	4.5			10s		N	1.08	27.4	Cloudy	
Indianola, Tex.			30.03	762.7	69	20.6	100	W			3	0	Fog			0	0	Clear	
Jacksonville, Fla.			29.95	760.7	73	22.8	85	SW	6	2.7		9k	0	SW		0	0	Cloudy	
Keokuk, Iowa			29.99	761.7	42	5.6	83	N	6	2.7		2k	0	N		0.18	4.6	Clear	
Key West, Fla.			29.96	761.0	81.2	27.3	74	SE	7	3.1		8c	2ks	W		0	0	Cloudy	
Kittyhawk, N. C.			29.76	755.9	70	21.1	80	SW	20	8.9		8c	0	SW		0	0	Fair	
Knoxville, Tenn.			29.76	755.9	56	13.3	93	SW	16	7.2			10n			0.43	10.9	Light rain	
La Crosse, Wis.			30.01	762.2	38	3.3	80	N	2	0.9		0	0			0.25	6.3	Clear	
Leavenworth, Kan.			30.11	764.8	45	7.2	85	NW	4	1.8		0	2s		NW	0.07	1.8	Clear	
Lexington, Ky.	28.69	726.4	29.67	753.6	51	10.6	100	SW	20	8.9			10s		SW	0.37	9.4	Clearing	
Long Branch, N. J.			29.59	751.6	59	15.0	94	NW	2	0.9			10ks		SW	0.06	1.5	Cloudy	
Louisville, Ky.			29.73	755.1	51	10.6	86	W	20	8.9			10s		W	0.25	6.3	Cloudy	
Lynchburg, Va.			29.61	752.1	71	21.7	73	SW	2	0.9		2k	0	W		0	0	Clear	
Malone, N. Y.			29.65	753.1	40	4.4	73	SW	4	1.8			10s		SW	0.10	2.5	Cloudy	
Marquette, Mich.			29.87	758.7	39	3.9	82	W	12	5.4		5ck	2s	W		0	0	Fair	
Memphis, Tenn.			29.96	761.0	58	14.4	63	NW	6	2.7		0	1s			0	0	Clear	
Milwaukee, Wis.			29.91	759.7	41	5.0	73	NW	11	4.9		2k	5ks	N		0.05	1.3	Fair	
Mobile, Ala.			29.96	761.0	70	21.1	90	Calm	0	0		5c	0	SW		0	0	Fair	
Montgomery, Ala.			29.89	759.2	69	20.6	90	W	6	2.7		8cs	Haze	W		0	0	Fair	
Morgantown, W. Va.			29.51	749.5	52	11.1	96	NW	1	0.4			10n			0.39	9.9	Light rain	
Mt. Washington, N. H.	23.39	594.1	29.75	755.6	28	—2.2	100	NW	22	9.8			10n			0.94	23.9	Sleet	
Nashville, Tenn.			29.80	756.9	57	13.9	81	NW	6	2.7		10k	0	NW		1.21	30.7	Cloudy	
New Haven, Conn.			29.64	752.8	54	12.2	79	NW	10	4.5		2k	5s	NW	S	Inap.	Inap.	Cloudy	
New London, Conn.			29.64	752.8	58.5	18.7	79	NE	4	1.8			10s		SE	0	0	Cloudy	
New Orleans, La.			29.97	761.2	68.5	20.3	90	SW	4	1.8		5c	Fog	W		0	0	Fair	
Newport, R. I.			29.65	753.1	59	15.0	82	NE	4	1.8			10s		NE	0	0	Threatening	
New York, N. Y.			29.58	751.3	59	15.0	82	E	16	7.2		8ck	Fog			0	0	Fair	
Norfolk, Va.			29.72	754.9	66	18.9	84	S	12	5.4		2cs	0	SW		0	0	Fair	
North Platte, Neb.	27.28	692.9	29.98	761.5	31	—0.6	100	W	1	0.4		0	0			0	0	Clear	
Omaha, Neb.	29.04	737.6	30.13	765.3	42	5.6	91	NW	8	3.6		0	8s		N	0.19	4.8	Cloudy	
Oswego, N. Y.			29.70	754.4	44.3	6.8	67	N	6	2.7			10s		W	0	0	Threatening	
Peck's Beach, N. J.			29.60	751.8	66	18.9	84	SW	24	10.7		1k	8ks	SW	SW	0	0	Cloudy	
Pembina, Dakota			30.15	765.8	23	—5.0	86	Calm	0	0		0	0			0	0	Clear	
Philadelphia, Penn.			29.58	751.3	57	13.9	81	NE	8	3.6			10s		NE	0.05	1.3	Cloudy	
Pike's Peak, Colorado	17.94	455.7	30.15	765.8	25	—3.9	75	N	32	14.3		0				0	0	Clear	
Pittsburgh, Penn.			29.53	750.0	49	9.4	93	N	4	1.8			10n			0.50	12.7	Light rain	
Port Huron, Mich.			29.74	755.4	45	7.2	53	NE	18	8.0		5c	2s		N	Inap.	Inap.	Cloudy	
Portland, Me.			29.65	753.1	54	12.2	74	SW	6	2.7			10s		W	0.03	0.8	Cloudy	
Portland, Oregon			30.06	763.5	55	12.8	87	Calm	0	0			10s			0	0	Cloudy	
Punta Rassa, Fla.			29.99	761.7	78	25.6	86	E	6	2.7			10ks		SE	0	0	Threatening	
Rochester, N. Y.			29.68	753.9	42	5.6	74	N	7	3.1			10s		N	0	0	Cloudy	
Salt Lake City, Utah	25.69	652.5	30.02	762.5	55	12.8	34	SE	1	0.4		0	0			0	0	Clear	
Sandy Hook, N. J.			29.57	751.1	58	14.4	87	NE	10	4.5			10s		S	Inap.	Inap.	Threatening	
San Diego, Cal.			29.89	759.2	61	16.1	94	Calm	0	0			10s			0	0	Cloudy	
San Francisco, Cal.			30.01	762.2	54	12.2	93	W	20	8.9		0	5s		W	0	0	Fair	
Santa Fe, N. M.	23.36	593.3	29.90	759.4	44	6.7	45	SE	16	7.2		0	Haze			0	0	Clear	
Savannah, Ga.			29.89	759.2	72	22.2	81	SW	10	4.5		8ck	0	SW		0	0	Fair	
Shreveport, La.			30.07	763.8	63	17.2	47	NW	9	4.0		0	0			0	0	Clear	
Smithville, N. C.																			
Springfield, Mass.			29.66	753.4	52	11.1	73	N	4	1.8			10ks		SW	0.02	0.5	Cloudy	
St. Louis, Mo.			29.99	761.7	48	8.9	35	N	12	5.4			10s		N	0.19	4.8	Cloudy	
St. Marks, Fla.			29.95	760.7	70	21.1	95	Calm	0	0		5cs	0	W		Inap.	Inap.	Fair	
St. Paul, Minn.			29.99	761.7	37	2.8	80	NW	4	1.8		0	2s			0.08	2.0	Clear	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			29.51	749.5	66	18.9	94	SW	8	3.6			10s		SW	0	0	Cloudy	
Toledo, Ohio			29.74	755.4	42	5.6	83	NW	12	5.4			10s		NW	0.10	2.5	Cloudy	
Tucson, Arizona																			
Tybee Island, Ga.			29.89	759.2	74	23.3	76	W	8	3.6		8cs	0	SW		0	0	Fair	
Vicksburg, Miss.			30.01	762.2	65	18.3	83	W	4	1.8		0	0			0	0	Clear	
Virginia City, Montana	24.36	618.7	29.84	757.9	42	5.6	65	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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			29.58	751.3	63	17.2	85	S	4	1.8		0	8s		SW	0.11	2.8	Fair	
Wilmington, N. C.			29.83	757.7	72	22.2	71	SW	11	4.9		8cs	0	W		0	0	Fair	
Wood's Hole, Mass.			29.66	753.4	60	15.6	100	S	5	2.2			Fog			0	0	Foggy	
Wytheville, Va.	27.35	694.7	29.42	747.3	56	13.3	93	W	2	0.9		8k	0			0.11	2.8	Cloudy	
Yankton, Dakota	28.89	732.8	30.24	768.1	34	1.1	89	NW	8	3.6		0	0			0.20	5.1	Clear	
Yuma, Arizona																			
Sub-Series																			
Bridgetown, Barbados, W. I.					83	28.3	91	E	5	2.2		2k	5s	W	NE	0	0	Fair	E. Racker.
Pointe-a-Pitre, Guadeloupe, do			29.96	761.0	80	26.7	74	E				0	2k			0.28	7.1	Clear	L. V. Bigard.
Havana, Cuba, W. I.			29.99	761.7	79	26.1	82	Calm	0	0		8c	1k	SW	E	0	0	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W. I.			30.13	765.3	82	27.8	70	Sc	8	3.6		2ck	8s	SE	SE	0	0		James Gall.
St. Thomas, St. T., W. I.			30.20	767.1	81	27.2	74	E	7	3.1		2ck	2kn	W	E	0.33	8.4	Fair	W. S. Cameron.
Santiago de Cuba, W. I.			29.78	756.4	78	25.6	74	NE	2.4	1.1		2ck	0	E				Fair	Robert Mason.
St. Georges, Bermudas			30.16	766.1	79	26.1	84	SW	6	2.7		0	1fk		SW	0	0	Clear	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.			30.06	763.5	31	—0.6	89	NW	6	2.7			10k			0.40	10.2	Cloudy	J. Fortescue.
St. John's, Newfoundland			29.98	761.5	52	11.1	93	SE								0.08	2.0	Cloudy	John Delaney.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Clifton, Jamaica, W. I.	27.26	692.4	30.04	763.0	70	21.1	90	S	1.0	0.4		2c	0	S		0	0	Clear	C. Partridge.
Navassa																			
Medellin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			29.67	753.6	45	7.2	76	NE	6	2.7			10n			0.70	17.8	Clearing	H. M. Redington.

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

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 2, 1875.

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.
2:3[illegible] 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.07	763.8	79.7	26.5	70	NE			1		0			0	0		Charnot.
Algiers			30.05	763.2	78.1	25.6	76	N			1		0			0	0		Peter.
La Calle																			Kuntz.
Tunis			30.11	764.7	80.6	27.0	34	NW			4		4			0	0		Jacques.
Sfax			30.12	765.0	82.4	28.0	32	N			2		2			0	0		Chauvey.
Saida			30.10	764.5	82.4	28.0	27	NNW			1		2			0	0		Grosjean.
Tebessa			30.13	765.2	76.1	24.5		NE			2		6			0	0		Colin.
Geriville			30.11	764.8	73.4	23.0	21	N					2			0.04	1.0		Bernadach.
Laghouat			30.09	764.2	77.0	25	22	N			1		1			0	0		Simon.
Biskra			30.12	765.0	81.0	27.2	34	NE			2		1			0	0		Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.11	764.7	60.1	15.6	88	ESE			2		4			0	0		Prof. Ivan Stosir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.15	765.8	54.5	12.5	71	W			2		10			0	0		I. R. Observatory.
Eperies			30.04	763.1	55.8	13.2	62	NE			1		10			0	0		Julius Mikolik.
Gratz	28.91	734.3	30.11	764.8	57.0	13.9	58	NW			2		2						Andreas Rospini.
Hermannstadt	28.57	725.7	29.98	761.6	56.1	13.4	64	NW			3		6			0	0		Prof. Reissenberger.
Kremsmünster	28.74	730.0	30.08	764.1	53.6	12.0	58	E			3		1			0	0		Prof. C. Wagner.
Lemberg			30.05	763.3	52.9	11.6	80	NE			2		8			0	0		Dr. T. Stanecki.
Nyiregyhaza			30.08	763.9	60.1	15.6	55	N			3		1			0	0		Habzsuda Daniel.
Pola			30.11	764.8	62.2	16.8	42	ENE			3		2ks			0	0		I.R. Hydrographic Of'ce
Szegedin			30.06	763.4	59.4	15.2	45	Calm			0		3			0	0		Karl Stancel.
Trieste			30.11	764.9	59.7	15.4	64	NE			1		0			0	0		Prof. V. Faroli.
Vienna			30.12	765.0	56.3	13.5	57	NE			1		8			0.016	0.4		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.70	755.8	58.3	14.6	73	SSW			2	0?	10			0	0		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.52	749.8	55.0	12.8		SW	15	6.7			2			0.100	2.54	*D. clouds	William Boswell.
Ardrossan			29.59	751.6	66	18.9		W			5		5						Wm. McNeil.
Armagh Observatory			29.70	754.4	52.2	11.1		W	9	4.0			7					Showery	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs.			29.68	753.9	52.9	11.6		W			5		6					*D. clouds	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.78	756.4	56.3	13.5		WSW			1–3		4					*D. clouds	J. Dreyer.
Bradford			29.62	752.3	55.1	12.8		W			1		9					Gloomy	J. McLandsborough.
Bridgetown, (Barbadoes)			29.96	761.0	81.0	27.2		NE			2		10					Overcast	T. H Hunt.
Cambridge Observatory			29.64	752.8	51.0	10.6		NW			2		10					Raining	Sergeant Hunt, A.H.C.
Cape Good Hope Obs.			30.37	771.4	66.2	19.0	60	SSE	28	12.5			1						The Staff, for E. J. Stone.
Cardington			29.72	754.9	57.0	13.9		NW					8					Rainy	John McLaren.
Carlisle			29.63	752.6	58.3	14.6		W					5			0.15	3.8	*D. clouds	T. Bell, for J. Cartmell.
Chatham, School M. E.			29.65	753.1	54.2	12.3		S			1		10					Raining	Major C. W. Martin, R. E.
Dartmoor	28.44	722.4	29.82	757.4	54.0	12.2		NW			6		4					*D. clouds	R. E. Power.
Donaghadee			29.67	753.6	53	11.7		NW			2		8					*D. clouds	J. Mac Gowan, Jr.
Dover			29.59	751.6	56	13.3		SW			3		10					Raining	J. Costello.
Eccles, (near Manchester)			29.68	753.9	51.8	11.0		WSW	2.2	1.0			10					Showery	Thomas Mackereth.
Falmouth Observatory			29.91	759.7	58.0	14.4		WNW	26	11.6			3					*D. clouds	The Staff.
Fort Napier, (Natal)	27.74	704.6	29.97	761.2	62.0	16.7		S			4		10					Gloomy	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	83	28.3		N					8						
Galway, Queen's College																			B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.07	763.8	76.8	24.9		SSW			3		0					Clear	Sergt. E. G. Baker.
Glasgow Observatory			29.57	751.1	51.8	11.0		SW			1		6					Fine	Lewis Stuart.
Great Yarmouth			29.62	752.3	55	12.8		NW			2		8					Rainy	G. T. Watson.
Greenwich Royal Obs.			29.69	754.1	50.6	10.3		NW			6		10					Raining	The Staff, for G. B. Airy.
Guernsey			29.89	759.2	58.5	14.7		WSW			6		5					Gloomy	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.67	753.6	54.0	12.2		WNW					6					*D. clouds	F. J. Page, for L. J. Crossley.
Helston			29.88	758.9	60	15.6		W			5		5					Showery	M. P. Moyle.
Holyhead			29.73	755.1	56	13.3		WSW			3		4					*D. clouds	John Tilston.
Kew Observatory			29.69	754.1	49.5	9.7		NW	18	8.0			9					*D. clouds	The Staff.
Kingstown			29.75	755.6	55	12.8		WNW			4		4					*D. clouds	George Mitchell.
Leicester Museum			29.70	754.4	52.2	11.2		W			1		10					Drizzling	William J. Harrison.
Llandudno			29.72	754.9	58.8	14.9		W					4					*D. clouds	Dr. James Nicol.
Malta, (Mediterranean)			30.07	763.8	76.2	24.6		NW			1		2k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			29.48	748.8	52	11.1		SW			3		5						W. D. Penny.
Nassau, (Bahamas)			30.16	766.1	85.4	29.7		SE			3		5					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.70	754.4	53.5	11.9		NW			1		10d					Overcast	E. J. Lowe.
Oscott, St. Mary's College			29.70	754.4	51.9	11.1		WNW			2		10			Blank	Blank	Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.75	755.6	48	8.9		WNW			1		10					Raining	J. Lucas, for R. Main.
Plymouth			29.86	758.4	60.1	15.6		WNW			4		5					*D. clouds	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.86	758.4	55	12.8		NW			5		8					Cloudy	W. Kennedy.
Saint Ann's Head			29.91	759.7	56	13.3		WNW			4		5					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.90	759.4	61.0	16.1		NW			6		5						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			29.63	752.6	56.0	13.3		W			2		9					Overcast	F. Shaw.
Scutari cemetery, (Turkey)			29.80	756.9	62.4	16.9		NNW			3		8			Blank	Blank	Stormy	Sergt. W. H. Lyne.
Sheffield			29.68	753.9	55	12.8		WSW			1		9					Misty	W. F. Cooper.
Silloth Rectory			29.63	752.6	59.2	15.1		W			3		3			0	0	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			29.66	753.4	52.8	11.6		W			2		10			Blank	Blank	Gloomy	The Staff.
Stornoway, Lews C. (Hebr.)			29.38	746.2	48	8.9		WSW			4		10					Rain & hail	John Smith.
Stratfield Turgiss			29.73	755.1	56.5	13.6		W			1–2		10					Raining	Rev. Charles H. Griffith
Streatley Vicarage			29.74	755.4	50.0	10.0		NW			2		10						Rev. John Slatter.
Thurso			29.40	746.7	55	12.8		SW			5		6					*D. clouds	John Trotter.
Truro, Royal Institution			29.88	758.9	60	15.6		NW			6		10					Raining	W. N[illegible]combe.
Valencia Observatory			29.90	759.4	56.7	13.7		WNW	21	9.4			7					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					55	12.8		SW			1					0	0		
Leith, Restalrig Park			29.59	751.6	57.0	13.9		SW			3					0.10	2.5	Fine	Andrew Gibb.
Monach Lt-house, (Shet. Is)			29.41	747.0	54	12.2		SW			6	5	3	SW		0.4	1.0		J. Youyclause.
North Unst, (Shetland Is)			29.33	745.0	52	11.1		SW			4	2	2	SW					

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.91	759.8	55.8	13.2	83	SSW			4		10						
Fanöe			29.74	755.3	57.2	14.0	77	S			6		9						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.30	744.1	41.0	5.0	98	SE			2		8						
Thorshavn, (Faröe)			29.12	739.7	50.0	10.0	83	NE			2		7						
Vestervig			29.78	753.8	52.7	11.5	95	S			6		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.08	764.0	69.8	16.0	78	SW			2		10k			0.128	3.25	Cloudy	Normal School.
Amiens			29.79	756.6	59.4	15.2	85	SSW			6		10			0	0	Cloudy	Normal School.
Avignon			30.10	764.6	69.0	20.9	53	N			1		0			0	0	Clear	Normal School.
Bar-sur Seine			29.90	759.5	61.5	16.4	60	SW			3		10			0	0	Raining	C. Saillard.
Beaumette, (near Angers)			29.94	760.5	65.5	18.6	62	WSW	5.4	2.4			10		SW	0.024	0.6	Cloudy	Beaumette Observatory
Beauvais			29.80	757.0	56.3	13.5	89	S			6		10		SW	0	0	Cloudy	Normal School.
Besançon			30.03	762.8	62.2	16.8	63	SSW			3		0			0	0	Clear	Normal School.
Bourg en Bresse			30.03	762.8	61.9	16.6	64	N			2		0			0	0	Clear	Normal School.
Bourges			30.03	762.8	62.2	16.8	72	SW			6		10		SW	0	0	Cloudy	Normal School.
Brest			29.94	760.5	63.5	17.5	61	W			3		5k		WNW	0.42	10.75		Naval Observatory.
Caen																			Normal School
Chartres																			Normal School.
Chaumont	28.83	732.3	29.99	761.7	61.9	16.6		S			4		..c		SW	0	0		Normal School.
Commercy			29.97	761.1	59.7	15.4	70	SE			2		5		SE	0	0	Cloudy	Normal School.
Commune de Gréasque*			30.14	765.5	73.4	23.0	31	SE			4		2		SE	0	0		
Le Mans																			Normal School.
Lons-Le Saulnier			30.02	762.6	62.8	17.1	62	S			6		5		S	0	0	Rainy	Normal School.
Mâcon			30.19	766.8	60.3	15.7	73	SSE			2		10			0	0	Cloudy	Normal School.
Mirecourt			29.96	760.0	58.1	14.5	61	SSW			4		2		W	0	0		Normal School.
Orleans			29.85	758.1	60.4	15.8	62	N			2		8		SSW	0	0	Cloudy	Normal School.
Paris Observatory			29.85	758.1	59.5	15.3	88	S			4		10		SSW	0.039	1.0	Raining	National Observatory
Parthenay			30.02	762.6	60.4	15.8	92	SW			4		5		W	0	0	Cloudy	Normal School.
La Roche sur Yon			30.05	763.3	63.7	17.6	78	W			4		5		E	0	0	Cloudy	Normal School.
Rochefort, Observatory			30.05	763.2	64.0	17.8	72	WNW			4				ESE	0	0	Foggy	Naval Observatory.
Rouen			30.03	762.7	56.7	13.7	91	W			8		10		W	0	0	Cloudy	Normal School.
Saint Lo			29.89	759.3	56.1	13.4	91	NW			2		7		NW	0.453	11.5		Normal School.
Villefranche			30.04	762.9	63.0	17.2	73	SE			1		10			0	0	Cloudy	Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchési.
Mont-Louis			30.25	768.4	61.0	16.1	62	SSW	7.4	3.33			6		WNW	0	0		—, Faignère.
Montsouris Observatory			29.85	758.1	59.2	151.	89	S W			6		10kn, u		SSW	0.012	0.3	Heavy rain	Marié Davy.
Perpignan	†30.12	†764.9			69.4	20.8	63	ENE	3.7	1.67			2		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H. P.	21.36	542.5			45.7	7.0	70	WSW			3		9			0	0		M. Baylac.
Pic du Midi, (Plantade) H.P.																			General de Nansouty.
Saint Maur, (near Paris)			29.85	758.2	59.0	15.0	86	SSW			4		10			0	0	Cloudy	E. Renou.
Tours			29.97	761.1	61.0	16.1		W			2		8		W	0	0		C. Marquet.
Versailles, (near Paris)			29.88	759.0	59.4	15.2	91	SW			6		10			0.056	1.41	Raining	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai			30.18	766.5	64.4	18.0	80	ENE	4.0	1.8			9k			{ 0 / 0	0 / 0 }	Cloudy	H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 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. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also.

GERMAN SERIES.

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

Stations.	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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.06	763.4	55.9	13.3	67	S	9	4			2			0	0		Prof. Hoh.
Berlin			30.05	763.3	60.8	16.0	44	S	9	4			0			0	0		Prof. Arndt.
Breslau			30.20	767.0	56.5	13.6	59	SW	4	2			8			0	0		Dr. P. Neugebauer.
Carlsruhe			29.97	761.1	60.4	15.8	63	S	4	2			0			0.079	2.0		A. Senz.
Cassel			29.82	757.4	61.5	16.4	48	SE	18	8			0			0.008	0.2		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.65	727.8	30.10	764.6	51.8	11.0	63	W					4			0.161	4.1	Raining	M. Wilhelm.
Hamburg			29.94	760.4	59.5	15.3	67	SSE	16	7			98	S		0.012	0.3	Clear	Deutsche Seewarte.
Kiel			29.98	761.5	59.0	15.1	69	S	13	6			7			0.012	0.3		Prof. G. Karsten.
Königsberg			30.14	765.5	56.1	13.4	76	E	11	5						0.004	0.09	Clear	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			30.05	763.2	60.6	15.9	51	S	9	4			1			0	0		Prof. Bruhns.
Münster			29.86	758.4	61.7	16.5	57	S	13	6			5			0.126	3.2		Prof. E. Heis.
Posen			30.15	765.7	58.6	14.8	55	S	29	13			2			0	0	Clear	Dr. Magener.
Strassburg, (in Alsace)			30.00	761.9	61.2	16.2	54	SW	13	6			4			0.031	0.8		Dr. Schur.
Stuttgart			29.98	761.5	61.2	16.2	49	SW					2			0	0		Mr. Würth.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.90	759.4	61.3	16.3	52	SW	27	12			5			0.031	0.8		Prof. Flesch.
Wustrow, Naval School			29.99	761.8	59.9	15.5	69	S	13	6			6c8			0	0	Cloudy	E. F. Schütz.

Note.—In the originals the distinction between 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.	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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens			29.80	757.0	73.6	23.1		SW										Half clear	

Note.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.10	764.6	63.3	17.4	54	NW	0.7	0.3			1			0	0		
Mondovi			30.09	764.2	61.5	16.4	49	NW			2		5	NW		0	0		
Genoa			30.11	764.7	69.8	21.0	49	S	4.3	1.9			8	N		0	0		
Pavia			30.11	764.8	64.6	18.1	49	E			1		0			0	0		
Verona			30.12	765.1	71.8	22.1	47	E			4		5			0	0		
Padua			30.11	764.9	60.1	15.6	49	SW	2.5	1.1			6	W		0	0		
Parma																			
Bologna			30.11	764.7	66.4	19.1	66	SE			1		4	N		0	0		
Leghorn			30.10	764.6	68.0	20.0	37	WSW	2.5	1.1			1			0	0		
Urbino			30.12	765.1	56.5	13.6	58	NE			2		2			0	0		
Ancona			30.12	765.1	62.6	17.0	50	SW			2		0			0	0		
Siena			30.08	764.0	64.4	18.0	37	ENE	0.7	0.3			3	NE		0	0		
Rome			30.06	763.5	68.7	20.4	32	N	7.4	3.3			1			0	0		
Naples, O. U.			30.07	763.7	70.5	21.4	32	NNE			4		2			0	0		
Lecce			29.97	761.3	65.3	18.5	52	NW	18.6	8.3			4	N		0	0		
Cosenza			30.03	762.8	65.7	18.7	51	NW			2		5	SE		0	0		
Catania, (Sicily)																			
Riposto			29.91	759.7	73.4	23.0	36	N			6		7	S		0	0		
Palermo			29.98	761.5	69.6	20.9	48	NE	7.4	3.3			6			0	0		
Sub-Series.																			
Naples, S. R.			30.09	764.3	67.8	19.9	42	E			4		0			0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S R., is for twenty-four hours. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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			29.71	754.6	57.4	14.1		S			5								
Groningen			29.71	754.6	58.3	14.6		S			5								
Helder			29.67	753.6	55.6	13.1		S			4								
Utrecht			29.70	758.3	58.3	14.6		SSE			4		10					Overcast	

Note.—The originals give the wind-pressure in kilograms per square meter; the 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			29.50	749.4	52.7	11.6	88	S	15.2	6.8			10			0	0	Raining	
Christiania			29.67	753.7	53.2	11.8	97	S	11.2	5.0			10			0.020	0.5	Raining	
Tromsö			29.68	753.9	38.7	3.7	54	Calm			0		0			0	0		

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.13	765.3	73.6	23.1	46	N	8.7	3.9			3	ENE					The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

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. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity.	Winds. Direction.	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force.	Clouds. Amount. Up'er	Clouds. Amount. Low'r	Clouds. Direction. Upper.	Clouds. Direction. Lower.	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Warsaw			30.14	755.6	51.4	10.8	90	W	7	3			3						Astronomical Obs.
Wilna			30.14	765.6	54.0	12.2	45	Calm	0	0			0						Astronomical Obs.
Dorpat			30.22	767.5	46.4	8.0	55	NW	7	3			0						Physical Cabinet.
St. Petersburg			30.16	766.0	46.0	7.8	60	W	4	2			3						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kieff			29.94	760.4	52.7	11.5	96	NNW	7	3			10					Light fog	Physical Cabinet.
Nikolaiev			29.98	761.4	55.6	13.1	95	N	13	6			10					Raining	Kurdakof.
Kertch			29.91	759.6	76.6	24.8	66	S	2	1			1						Lagorio.
Moscow			30.03	762.8	49.6	9.8	95	NNW	8	3.5			10					Light rain	Meteorological Obs.
Lugan			29.91	759.8	70.7	21.5	42	SE	17	7.5			4						Meteorological Obs.
Archangel			30.13	765.3	38.3	3.5	82	NW	10	4.5			10						Ogorodnikof.
Tiflis	28.71	729.2	30.08	764.1	71.6	22.0	53	SE	13	6			3						Physical Obs.
Astrakhan			30.30	769.7	65.8	18.8	83	ESE	10	4.5			2						Sebastianof.
Kasan			30.23	767.8	61.3	16.3	43	S	7	3			6						Physical Cabinet.
Orenburg			30.43	772.8	66.0	18.9	42	SE	8	3.5			0						Tschernischef.
Ekaterinburg	29.43	747.5	30.43	772.8	59.9	15.5	54	W	4	2			3						Meteorological Obs.
Kasaly			30.15	765.8	61.2	16.2	51	NE	13	6			0						Bobrof.
Tashkend																			Michelson.
Barnaul			30.27	768.8	51.3	10.7	49	Calm	0	0			1						Meteorological Obs.
Yeniseisk			30.17	766.2	51.6	10.9	59	Calm	0	0			0						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.30	769.7	55.4	13.0	52	SW	7	3			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity.	Winds. Direction.	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force.	Clouds. Amount. Up'er	Clouds. Amount. Low'r	Clouds. Direction. Upper.	Clouds. Direction. Lower.	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Madrid			29.97	761.2	83.7	28.7	10	SE	2.9	1.3		3	0	NE		0	0	Light clouds	Royal Observatory.
San Fernando			30.11	764.9	75.0	23.9	89	SW	9.6	4.3		1	2	WSW	W	0	0		The Naval Observatory.

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

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity.	Winds. Direction.	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force.	Clouds. Amount. Up'er	Clouds. Amount. Low'r	Clouds. Direction. Upper.	Clouds. Direction. Lower.	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Haharanda			30.04	762.9	40.6	4.8	78	SW			2		2			0	0		
Umea			30.04	763.0	43.7	6.5	72	SW			6		6			0	0		
Hernosand			29.96	760.9	45.7	7.6	68	S			4		10			0	0		
Stockholm			29.94	760.4	53.6	12.0	49	S			2		3			0	0		
Wisby			30.03	762.7	57.6	14.2	74	SW			6		5						
Sub-Series. Upsala			29.97	761.1	55.0	12.8	55	S	14.1	6.3			1	W	S				Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.63	727.3	30.03	762.7	64.6	18.1	45	SSW			2		8			0	0	Cloudy	The Observatory.
Zurich	28.43	722.1	30.06	763.5	56.5	13.6	66	SE			1		1			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +0.8mm.; Thermometer, +2°.8; Relative Humidity, —23 per cent.

Note.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Beirut, (Syria,) Lee Obs'y			29.91	759.6	76.5	24.7	64	NE			3					0	0		Prof. C. N. A. Van Dyck.
Constantinople			29.83	757.7	61.2	16.2	91	N	20	9			10		SW	0.346	8.8	Thunder-storm	
Fao, (Persian Gulf)			29.95	760.6	95.0	35.0		NW			3		0					Clear	
Salonica					63.1	17.3		N			2		10			Blank	Blank	Cloudy	
Valona			29.85	758.2	65.7	18.7		NW			4		8					Cloudy	
Varna			29.89	759.3	56.3	13.5		NW			6		10			Blank	Blank	Cloudy	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Brockville, Ontario			30.15	765.8	45	7.2		Calm	0	0		0	2s		N	0	0	Fair	
Chatham, N. B.			29.59	751.6	43	6.1	85	SW	4	1.8		8ck	2ks	SW	SW	0.67	17.0	Fair	
Charlottetown, P. E. Island			29.53	750.0	50	10.0	94	NW	11	4.9			10n			0.10	2.5	Light rain	
Fort Garry, Manitoba			29.69	754.1	37	2.8	97	SE	15	6.7		2c	5ks	SE	SE	0.40	10.2	Clearing	
Halifax, N. S.			29.54	750.3	55	12.8	99	SW	16	7.2			8n		SW	0.23	5.8	Cloudy	
Kingston, Ontario			30.10	764.5	37	2.8	82	Calm	0	0		0	0			0	0	Clear	
Montreal, Quebec			29.99	761.7	35	1.7	85	W	14	6.3		0	0			0	0	Clear	
Ottawa, Ontario			30.01	762.2	39	3.9	71	SW	7	3.1		2cs	0			0	0	Clear	
Parry Sound, Ontario			30.03	762.7	38	3.3	92	NW	7	3.1		0	2ks		NW	0.08	2.0	Fair	
Port Dover, Ontario			30.15	765.8	38	3.3	91	W	10	4.5		8k	0	NW		0	0	Fair	
Port Stanley, Ontario			30.13	765.3	40	4.4	86	NW	8	3.6		10k	0	NW		0	0	Cloudy	
Quebec, Quebec			29.89	759.2	41	5.0	87	SW				0	0			0.79	20.1	Clear	
Saugeen, Ontario			30.04	763.0	44	6.7	76	NW	8	3.6		10k	0	N		0.03	0.8	Cloudy	
Stayner, Ontario			30.04	763.0	40	4.4	88	Calm	0	0		10k	0			0.11	2.8	Cloudy	
Sydney, C. B.			29.56	750.8	62	16.7	96	SW	14	6.3			10n		SW	0.05	1.3	Cloudy	
Toronto, Ontario			30.08	764.0	39	3.9	86	W	7	3.1		8ck	2s	W		0	0	Cloudy	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.05	763.3	43	6.1	83	Calm	0	0		8k	Haze	W		0.38	9.7	Cloudy	
Alpena, Mich.			30.06	763.5	36	2.2	90	W	7	3.1		2cs	0			0.01	0.3	Clear	
Atlantic City, N. J.			30.19	766.8	46	7.8	69	W	16	7.2		0	0			0.24	6.1	Clear	
Augusta, Ga.			30.28	769.1	51	10.6	93	NW	2	0.9		0	0			0.16	4.1	Clear	
Baltimore, Md.			30.23	767.8	49	9.4	77	NW	7	3.1		0	0			0	0	Clear	
Barnegat, N. J.			30.16	766.1	47	8.3	69	SW	10	4.5		0	0			0.13	3.3	Clear	
Benton, Montana	26.84	681.7	29.64	752.8	47	8.3	48	SW	8	3.6		5c	0	SW		0	0	Fair	
Bismarck, Dakota	27.81	706.4	29.43	747.5	38	3.3	71	SE	4	1.8		1c	Haze			0	0	Fair	
Boston, Mass.			30.00	762.0	43	6.1	67	W	14	6.3		0	0			0.37	9.4	Clear	
Breckenridge, Minn.			29.69	754.1	41	5.0	63	S	16	7.2		0	2s			0	0	Clear	
Buffalo, N. Y.			30.08	764.0	44	6.7	75	SW	12	5.4		1k	5n	SW	SW	0	0	Light rain	
Burlington, Vt.			30.02	762.5	43	6.1	67	W	10	4.5		2k	0			0.40	10.2	Fair	
Cairo, Ill.			30.33	770.4	47	8.3	85	Calm	0	0			Fog			0	0	Foggy	
Cape Hatteras, N. C.			30.23	767.8	59	15.0	70	NE	18	8.0		8cs	2s		NW	0.13	3.3	Cloudy	
Cape Henry, Va.			30.24	768.1	58	14.4	58	N	18	8.0		5k	0	N		0.24	6.1	Fair	
Cape May, N. J.			30.19	766.8	50	10.0	64	W	14	6.3		0	0			0.28	7.1	Clear	
Charleston, S. C.			30.26	768.6	61	16.1	50	N	12	5.4		8k	0	W		0.06	1.5	Cloudy	
Cheyenne, Wyoming	23.93	607.8	29.87	758.7	47	8.3	37	W	8	3.6		5ck	0	W		0	0	Fair	
Chicago, Ill.			30.19	766.8	40	4.4	73	SW	4	1.8		0	0			0.07	1.8	Clear	
Cincinnati, Ohio			30.25	768.3	45	7.2	84	W	1	0.4		0	Fog			0.02	0.5	Clear	
Cleveland, Ohio			30.19	766.8	42.1	5.6	75	SW	7	3.1		0	2ks			0.55	14.0	Fair	
Colorado Springs, Col.	24.08	611.6	29.95	760.7	48	8.9	63	N	6	2.7		0	0			0	0	Clear	
Corsicana, Tex.			30.23	767.8	50	10.0	71	N	1	0.4		0	0			0	0	Clear	
Davenport, Iowa			30.19	766.8	43	6.1	75	SW	4	1.8		0	Fog			0	0	Clear	
Denison, Tex.			30.21	767.3	50	10.0	77	Calm	0	0		0	0			0	0	Clear	
Denver, Col.	24.71	627.6	29.93	760.2	59	15.0	38	S	4	1.8		5k	0			0	0	Fair	
Detroit, Mich.			30.13	765.3	39	3.9	81	W	9	4.0		5ck,k	0	W		0	0	Fair	
Dodge City, Kan.	27.42	696.5	29.70	754.4	48	8.9	79	S	11	4.9		0	0			0	0	Clear	
Dubuque, Iowa			30.15	765.8	42	5.6	74	Calm	0	0			8ks		W	0	0	Cloudy	
Duluth, Minn.			29.97	761.2	40	4.4	63	NW	14	6.3			10n			Inap.	Inap.	Light rain	
Eastport, Me.			29.74	755.4	44	6.7	67	NW	15	6.7		5k	2s	NW		0.29	7.4	Fair	
Erie, Pa.			30.11	764.8	45	7.2	84	SW	16	7.2		0	5ks		W	Inap.	Inap.	Fair	
Escanaba, Mich.			30.08	764.0	32	0.0	79	W	6	2.7		5cs	0			0.09	2.3	Fair	
Fort Gibson, I. T.			30.21	767.3	48	8.9	70	E	6	2.7		0	0			0	0	Clear	
Fort Sill, I. T.	28.97	735.8	30.09	764.3	51	10.6	79	S	1	0.4		0	Fog			0	0	Clear	
Fort Sully, Dakota	27.95	709.9	29.60	751.8	40	4.4	82	E	6	2.7		0	0			0	0	Clear	
Galveston, Tex.			30.19	766.8	67	19.4	64	E	12	5.4		10c	0	W		0	0	Cloudy	
Grand Haven, Mich.			30.13	765.3	50	10.0	50	NW	16	7.2		5k	0	NW		0.04	1.0	Fair	
Indianapolis, Ind.			30.26	768.6	42	5.6	83	W	4	1.8		Haze	Sm'e			0	0	Smoky	
Indianola, Tex.			30.18	766.6	65	18.3	90	NE			4	10cs	0	SW		0	0	Cloudy	
Jacksonville, Fla.			30.20	767.1	66	18.9	64	N	10	4.5		9k	0	S		0	0	Cloudy	
Keokuk, Iowa			30.16	766.1	45	7.2	78	W	6	2.7		0	0			0	0	Clear	
Key West, Fla.			30.07	763.8	81.4	27.4	78	E	4	1.8		Haze	5ks			0.06	1.5	Cloudy	
Kittyhawk, N. C.			30.24	768.3	55	12.8	62	N	24	10.7		2cs	0			0	0	Clear	
Knoxville, Tenn.			30.32	770.1	43	6.1	91	Calm	0	0			Fog			0.11	2.8	Foggy	
La Crosse, Wis.			30.07	763.8	41	5.0	82	SE	10	4.5			10s		SE	0	0	Cloudy	
Leavenworth, Kan.			30.13	765.3	44	6.7	75	S	4	1.8		0	0			0	0	Clear	
Lexington, Ky.	29.19	741.4	30.34	770.6	43	6.1	91	SW	4	1.8		0	0			0	0	Clear	
Long Branch, N. J.			30.14	765.5	49	9.4	63	W	17	7.6		0	0			0	0	Clear	
Louisville, Ky.			30.30	769.6	44	6.7	84	S	2	0.9			Fog			0	0	Foggy	
Lynchburg, Va.			30.30	769.6	50	10.0	65	W	2	0.9		0	0			0	0	Clear	
Malone, N. Y.			30.00	762.0	42	5.6	65	SW	12	5.4		0	0			0	0	Clear	
Marquette, Mich.			30.06	763.5	37	2.8	71	W	8	3.6		5cs	0	SW		0.12	3.0	Fair	
Memphis, Tenn.			30.32	770.1	46	7.8	84	Calm	0	0			Fog			0	0	Foggy	
Milwaukee, Wis.			30.20	767.1	38	3.3	81	W	5	2.2		2c	Fog			0	0	Fair, frost	
Mobile, Ala.			30.24	768.1	56	13.3	87	N	6	2.7			10s		N	0	0	Cloudy	
Montgomery, Ala.			30.30	769.6	51	10.6	79	N	4	1.8		0	Haze			0	0	Clear	
Morgantown, W. Va.			30.27	768.8	46	7.8	76	S	3	1.3		0	0			0.43	10.9	Clear	
Mt. Washington, N. H.	23.48	596.4	29.84	757.9	16	—8.9	100	NW	50	22.4			Fog			0.65	16.5	Foggy	
Nashville, Tenn.			30.31	769.9	42	5.6	91	Calm	0	0			Fog			0	0	Foggy	
New Haven, Conn.			30.09	764.3	49	9.4	71	NW	4	1.8		Haze	Sm'e			0.31	7.9	Clear	
New London, Conn.			30.07	763.8	48	8.9	63	W	6	2.7		0	0			0.05	1.3	Clear	
New Orleans, La.			30.22	767.6	61	16.1	61	NE	14	6.3		10cs	0	W		0	0	Cloudy	
Newport, R. I.			30.03	763.5	45	7.2	76	W	8	3.6		0	0			0.03	0.8	Clear	
New York, N. Y.			30.14	765.5	46	7.8	68	W	8	3.6		0	0			0.26	6.6	Clear	
Norfolk, Va.			30.28	769.1	52	11.1	60	N	10	4.5		0	0			0.24	6.1	Clear	
North Platte, Neb.	26.92	683.8	29.47	748.5	45	7.2	76	SE	4	1.8		0	0			0	0	Clear	
Omaha, Neb.	28.89	732.8	29.97	761.2	45	7.2	76	S	16	7.2		0	0			0	0	Clear	
Oswego, N. Y.			30.10	764.5	45	7.2	84	SW	5	2.2			8ks		NW	0.06	1.5	Cloudy	
Peck's Beach, N. J.			30.20	767.1	46	7.8	68	NW	16	7.2		0	0			0	0	Clear	
Pembina, Dakota			30.03	763.5	45	7.2	76	W	8	3.6		0	0			0.16	4.1	Fair	
Philadelphia, Penn.			30.58	751.3	41	5.0	91	SE	10	4.5		0	5s			0.01	0.3	Clear	
Pike's Peak, Colorado	17.83	452.9	30.20	767.1	45	7.2	68	W	7	3.1		0	0			0	0	Clear	
Pittsburgh, Penn.			30.04	763.0	26	—3.3	88	SW	42	18.8		0	1s			0.30	7.6	Clear	
Port Huron, Mich.			30.22	767.6	41	5.0	82	W	7	3.1		0	0					Cloudy	
Portland, Me.			30.13	765.3	37	2.8	90	SW	6	2.7		8ck	2s	W		0	0	Clear	
Portland, Oregon			29.94	760.5	45	7.2	68	NW	1	0.4		0	Haze			0.27	6.9	Light rain	
Punta Rassa, Fla.			29.99	761.0	58	14.4	87	Calm	0	0			10n			0.04	1.0	Cloudy	
Rochester, N. Y.			30.11	764.8	78.1	25.6	90	NE	5	2.2		2c	5ks	NE	NE	0	0	Clear	
Salt Lake City, Utah	25.46	646.7	29.79	756.7	62	16.7	16	SE	4	1.8		0	2s			0	0	Clear	
Sandy Hook, N. J.			30.13	765.3	46	7.8	76	W	20	8.9		0	0			0	0	Clear	
San Diego, Cal.			29.85	758.2	64	17.8	94	Calm	0	0			10s			0	0	Cloudy	
San Francisco, Cal.			29.92	760.0	56	13.3	93	W	8	3.6			10s			0	0	Cloudy	
Santa Fe, N. M.	23.29	591.6	29.83	757.7	42	5.6	74	Calm	0	0		0	0			0	0	Clear	
Savannah, Ga.			30.24	768.1	61	16.1	61	NW	8	3.6			10ks		SW	0	0	Cloudy	
Shreveport, La.			30.32	770.1	60	15.6	65	E	1	0.4		0	0			0	0	Clear	
Smithville, N. C.																			
Springfield, Mass.			30.06	763.5	46	7.8	54	NW	4	1.8		0	1s			0.09	2.3	Clear	
St. Louis, Mo.			30.29	769.4	45	7.2	84	SW	4	1.8		0	0			0	0	Clear	
St. Marks, Fla.			30.21	767.3	63	17.2	61	NE	10	4.5			10ks			0.17	4.3	Cloudy	
St. Paul, Minn.			29.93	760.2	41	5.0	87	SE	8	3.6		5ck,cs	2s			0	0	Fair	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			30.10	764.5	44	6.7	75	W	4	1.8		0	Haze			0.20	5.1	Clear	
Toledo, Ohio			30.16	766.1	45	7.2	76	SW	12	5.4		2cs	0			0	0	Clear	
Tucson, Arizona																			
Tybee Island, Ga.			30.23	767.8	63	17.2	73	NE	18	8.0			10ks		SW	0.04	1.0	Cloudy	
Vicksburg, Miss.			30.36	771.1	53	11.7	73	E	7	3.1		0	Haze			0	0	Fair	
Virginia City, Montana	23.98	609.1	29.16	748.3	47	8.3	40	SE	2	0.9		9k	0	W		0	0	Cloudy	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.25	768.6	47	8.3	74	NW	10	4.5		0	0			0	0	Clear	
Wilm ngton, N. C			30.27	768.8	54	12.2	68	NE	10	4.5		5cs	0	W		0.08	2.0	Cloudy	
Wood's Hole, Mass.			30.04	763.0	47	8.3	62	NW	15	6.7		0	0			0	0	Clear	
Wytheville, Va.	27.87	707.9	30.09	764.3	42	5.6	58	NW	5	2.2		0	0			0	0	Clear	
Yankton, Dakota	28.56	725.4	29.85	758.2	45	7.2	72	S	15	6.7		0	0			0	0	Clear	
Yuma, Arizona																			
Sub-Series.																			
Bridgetown, B'b'does, W. I					80	26.7	95	E	10	4.5						1.48	37.6	Light rain	E. Racker.
Pointe-aPitre, G'd'loupe, do			29.99	761.7	82	27.8	74	SE				5c	2k			0	0	Fair	V. Bigard.
Havana, Cuba, W. I.			30.04	763.0	77	25.0	86	Calm	0	0		8c	0	SW		Inap.	Inap.	Fair	Charles Hasselbrink.
Kingston, Jamaica, W.			30.21	767.3	79	26.1	82	Calm	0	0		2c	8s	SE		0	0	Cloudy	James Gall.
St. Thomas, St. T., W. I.			30.23	769.1	81	27.2	70	E	4	1 8		2cs	5kn	E	E	0.20	5.1	Cloudy	W. S. Cameron.
Santiago de Cuba, W. I.			29.85	758.2	80	26.7	74	E	3.6	1.6		4ck	2n	E	E			Fair	Robert Mason.
St. Georges, Bermudas			30.24	768.1	79.5	26.4	82	SW	8.8	3.9		1ck	1fk		SW	0.055	1.40	Clear	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.			29.79	756.7	30	−1.1	100	NW	10	4.5			10n			0	0	Snowing	J. Fortescue.
St. John's, Newfoundland			29.85	758.2	65	18.3	88	S				Sm'e	Sm'e			0.03	0.8	Fair	John Delaney.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Clifton, Jamaica, W. I.	27.25	692.1	30.03	762.7	71	21.7	85	SE	1.5	0.7		2c	2k	SE		0	0	Fair	C. Partridge.
Navassa																			
Meaellin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			30.19	766.8	40	4.4	91	SW	8	3.6			0			0	0	Clear	H. M. Redington.

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

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Virginia City, 5,180 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 3, 1875.

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.
2:19 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.09	764.3	82.0	27.8	59	NNW			1		7			0	0		Charnot.
Algiers			30.08	763.9	79.9	26.6	75	ENE			1		0			Inap.	Inap.	Lightning	Peter.
La Calle																			Kuntz.
Tunis			30.16	766.0	75.9	24.4	49	E			3		2			0	0		Jacques.
Sfax			30.13	765.2	78.8	26.0	48	E			3		2			0	0		Chauvey.
Saida			30.14	765.5	86.0	30.0		NNW			1		2			Inap.	Inap.	Lightning	Grosjean.
Tebessa			30.15	765.8	79.9	25.5		SE			1		1			0	0		Colin.
Geriville			30.16	766.0	75.2	24.0	20	NW			1		7			0	0		Bernadach.
Laghouat			29.15	765.8	77.0	25	16	NW			1		1			0	0		Simon.
Biskra			30.14	765.6	85.5	29.7	38	SE			1		0			0	0		Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.08	763.9	61.3	16.3	52	SW			2		4			0	0		Prof. Ivan Stozir. I. R. Cen. M. I., Hungary
Buda-Pesth																			I. R. Observatory.
Cracow			30.03	762.7	57.2	14.0	60	NE			1		8			0	0		Julius Mikolik.
Eperies			30.01	762.3	55.4	13.0	57	Calm			0		10			0	0		Andreas Rospini.
Gratz	28.86	733.1	30.06	763.4	57.7	14.3	68	SW			2		10						Prof. Reissenberger.
Hermannstadt	28.62	726.9	30.03	762.7	57.9	14.4	49	NW			3		3			0	0		Prof. C. Wagner.
Kremsmünster	28.76	730.5	30.10	764.5	55.4	13.0	57	WNW			3		5			0.091	2.3		Dr. T. Stanecki.
Lemberg			29.97	761.1	53.6	12.0	71	NW			3		4			Blank	Blank		Habzsuda Daniel.
Nyiregyhaza			30.00	763.5	57.9	14.4	61	E			2		4			0	0		I.R. Hydrographic Of'ce
Pola			30.08	764.1	63.3	17.4	57	WNW			3		3cs			0	0		Karl Stancel.
Szegedin			30.11	764.8	59.0	15.0	54	Calm			0		6			0	0		Prof. V. Farolfi.
Trieste			30.10	764.6	62.6	17.0	71	WNW			1		0			0.142	3.6		I. R. Central Institute.
Vienna			30.03	762.8	60.3	15.7	51	W			2		6			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. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.99	761.8	57.4	14.1	76	SSW			3		8			0.179	4.55		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.52	749.8	52.0	11.1		S	14	6.3			5			0	0	*D. clouds	William Boswell.
Ardrossan																			Wm. McNeil.
Armagh Observatory			29.46	748.3	53.0	11.7		S	15	6.7			0						S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			29.64	752.8	53.8	12.1		SSW			2		10					Raining	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.54	750.3	58.0	14.4		WSW			3-4		9					Overcast	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbadoes)			29.96	761.0	82.0	27.8		NE			2		8					*D. clouds	T. H Hunt.
Cambridge Observatory			29.82	757.4	54.0	12.2		SW			2		10					Raining	Sergeant Hunt, A. H. C.
Cape Good Hope Obs.			30.21	767.3	78.7	25.9	35	SE	14	6.3			0						The Staff, for E. J. Stone.
Cardington			29.88	758.9	54.0	12.2		SW					10					Overcast	John McLaren.
Carlisle			29.59	751.6	55.3	12.9		SW					10			0.140	3.56	Threatening	[illegible], for J. Cartmell.
Chatham, School M. E.			29.94	760.5	55.2	12.9		S			1		7					Raining	Major C. W. Martin, R. E.
Dartmoor	28.43	722.1	29.07?	738.4?	50.8	10.4		SW			7		10					Fog & rain	R. E. Power.
Donaghadee			29.47	748.5	53	11.7		WSW			2		9					Overcast	J. Mac Gowan, Jr.
Dover			29.91	759.7	56	13.3		SW			5		10					Raining	J. Costello.
Eccles, (near Manchester)			29.67	753.6	53.0	11.7		SW	5.4	2.4			10					Showery	Thomas Mackereth.
Falmouth Observatory			29.87	758.9	55.4	13.0		WSW	30	13.4			10					Raining	The Staff.
Fort Napier, (Natal)	28.06	712.7	30.26	768.6	57.6	14.2		S			4		9					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	82	27.8		N					7						[illegible]tis.
Galway, Queen's College																			B. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			30.05	763.3	77.4	25.2		NE			2		0					Clear	Sergt. E. G. Baker.
Glasgow Observatory			29.49	749.0	52.3	11.3		S			3		10						Lewis Stuart.
Great Yarmouth			29.82	757.4	54	12.2		SW			4		6					*D. clouds	G. T. Watson.
Greenwich Royal Obs			29.78	758.9	54.1	12.3		SSW			3		10					Raining	The Staff, for G. B. Airy.
Guernsey			29.97	761.2	58.5	14.7		SSW			6		8					Squally	Dr. S. E. Hoskins.
Halifax, Moorside Obs								SSW					10					Overcast	F. J. Page, for L. J. Cross-ley.
Helston			29.86	758.4	55	14.4		SW			6		10					Raining	M. P. Moyle.
Holyhead			29.61	752.8	57	13.9		SW			5		10					Raining	John Tilston.
Kew Observatory			29.88	758.9	53.5	11.9		SSW	15	6.7			7					*D. clouds	The Staff.
Kingstown			29.53	750.0	59	15.0		W			5		9					Overcast	George Mitchell
Leicester Museum			29.78	756.4	52.6	11.4		SW			4		10					Drizzling	William J. Harrison.
Llandudno			29.57	751.6	55.0	12.8		SW					10					Showery	Dr. James Nicol.
Malta, (Mediterranean)			30.19	766.8	72.6	22.6		NE			1		6k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			29.44	747.8	53	11.7		SW			1		10					Showery	W. D. Penny.
Nassau, (Bahamas)			29.24	742.7	85.1	29.5		E			4		5					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.75	755.6	52.6	11.3		S			4		10d		S			Raining	E. J. Lowe.
Oscott, St. Mary's College			29.73	755.1	50.0	10.0		S			4-5		10					Raining	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.79	756.7	55	12.8		S			3		10					Raining	J. Lucas, for R. Main.
Plymouth			29.85	758.2	57.0	13.9		SW			4		10					Raining	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.64	752.8	58	14.4		W			5		10					Misty	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, (Jersey)			29.99	761.7	59.8	15.4		WSW			6		10						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough																			F. Shaw.
Scutari cemetery, (Turkey)			29.98	761.5	60.6	15.9		N			2		10					Drizzling	Sergt. W. H. Lyne.
Sheffield			29.67	753.6	56	13.3		SW			5		9					Overcast	W. F. Cooper.
Sillsworth Rectory			29.56	750.8	55.1	12.8		SW			5		10			0.070	1.78	Gloomy	Rev Francis Redford.
Stonyhurst Observatory			29.64	752.8	51.6	10.9		S			3					Blank	Blank		The Staff.
Stornoway, Lews C. (Hebr.)			29.34	745.2	50	10.0		S			5		10					Rainy	John Smith.
Stratfield Turgiss			29.84	757.9	53.9	12.2		W			1		10					Drizzling	Rev Charles H. Griffith
Streatley Vicarage			29.86	758.4	54.2	12.3		SW?			3		10						Rev. John Slatter.
Thurso			29.44	747.8	57	13.9		S			2		3					Clear	John Trotter.
Truro, Royal Institution			29.82	757.4	58	14.4		SW			4		10					Raining	W Newcombe.
Valencia Observatory			29.65	753.1	58.6	14.8		WSW	32	14.3			10					Threatening	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					56	13.3		SW			1					0.10	2.5		
Leith, Restalrig Park			29.52	749.8	55.0	12.8		SW			2		10k			0.6	1.5	Fine, cloudy	Andrew Gibb.
Monach Lt-house, (Shet. Is)			29.20	741.7	54	12.2		W			7		10			0.3	0.8		J. Youyclause.
North Unst, (Shetland Is)			29.46	748.3	51	10.6		W			4	0	3						

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.72	754.8	54.7	12.6	58	SW			4		9						
Fanöe			29.74	755.5	56.1	13.4	69	WSW			6		6						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.19	741.5	37.4	2.8	96	SE			4		8						
Thorshavn, (Faröe)			29.35	745.4	50.4	10.2	67	SE			2		5						
Vestervig			29.93	752.6	54.6	12.2	74	WNW			4		6					Raining	

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.07	763.6	61.5	16.4	60	W			2		10n,k			0.128	3.25	Cloudy	Normal School.
Amiens			30.02	762.6	57.6	14.2	78	SSW			2		10			0.094	2.4	Cloudy	Normal School.
Avignon			30.08	764.0	77.4	25.2	55	NW			1		1		W	0	0	Clear	Normal School.
Bar-sur Seine			30.14	765.6	56.7	13.7	70	SW			1		10			0.071	1.8	Cloudy	C. Saillard.
Beaumette, (near Angers)			30.07	763.8	63.0	17.2	61	NW	6.3	2.8			10		SW	0	0	Cloudy	Beaumette Observatory
Beauvais			30.07	763.6	53.6	12	68	SW			3		8		SW	0.24	6.	Cloudy	Normal School.
Besançon			30.15	765.9	58.6	14.8	60	S			2		8		SW	0.205	5.2	Cloudy	Normal School.
Bourg en Bresse			30.15	765.8	62.1	16.7	58	W			1		5			0.20	5.	Cloudy	Normal School.
Bourges			30.13	765.2	55.8	13.2	74	SW			2		10		SW	0	0	Cloudy	Normal School.
Brest			30.05	763.3	62.8	17.1	75	SW			3		10		W	0.039	1.00	Misty	Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont	28.96	735.5	30.12	765.0	55.4	13		WSW			2		10		SW	0.098	2.5		Normal School.
Commercy			30.15	765.8	55.4	13	77	W					10		W	0.177	4.5	Cloudy	Normal School.
Commune de Gréasque*			30.10	764.6	72.3	22.4	39	NW			2		2		SW	0	0		
Le Mans																			Normal School.
Lons-Le Saulnier			30.17	766.4	59.2	15.1	64	NNW			2		5		W	0.189	4.80	Cloudy	Normal School.
Mâcon			30.23	767.7	64.9	18.3	79	Calm			0		0			0	0	Clear	Normal School.
Mirecourt			29.12	765.1	56.7	13.7	65	W			2		10		SW	0	0	Cloudy	Normal School.
Orleans			29.78	756.5	62.6	17	59	S			2		5		S	0.215	5.4		Normal School.
Paris Observatory			30.08	764.0	58.5	14.7	68	S			3		8		SW	0.127	3.22	Very cloudy	National Observatory.
Parthenay			30.22	767.6	62.6	17	96	NW			2		0			0	0	Clear	Normal School.
La Roche sur Yon			30.14	765.6	65.5	18.6	46	SW			6		10			0.106	2.7	Cloudy	Normal School.
Rochefort, Observatory			30.15	765.9	68.0	20.0	47	SW			3		8		NE	0.039	1.0	Cloudy	Naval Observatory.
Rouen			30.03	762.7	61.0	16.1	67	SSW			2		5		W	0.295	7.5		Normal School.
Saint Lo			30.04	763.1	56.5	13.6	93	NW			2		10		NW	0.138	3.5		Normal School.
Villefranche			30.00	762.0	64.4	18	60	SE			1		10		E	0	0	Cloudy	Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchési.
Mont-Louis			30.28	769.2	60.4	15.8	67	SSW	18.6	8.33			4		SW	0	0		—. Falguère.
Montsouris Observatory			30.07	763.7	58.1	14.5	71	SW			3	c	6kn,ck			0.102	2.6		Marié Davy.
Perpignan	†30.15	†765.8			70.2	21.2	98	SE	1.9	0.85			10			0	0		Dr. Fines.
Pic du Midi, (Summit) H. P.	21.37	542.8			46.0	7.8	62	SW			3		3			0	0		M. Baylac.
Pic du Midi, (Plantade) H.P.																			General de Nansouty.
Saint Maur, (near Paris)			30.07	763.6	58.1	14.5	70	SW			1		5			0.165	4.2	Cloudy	E. Renou.
Tours			30.11	764.7	62.1	16.7	62	W			2		8		WNW	0.114	2.9		C. Marquet.
Versailles, (near Paris)			30.08	763.9	60.1	15.6	71	SW			1		5			0.126	3.21		Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.26	768.6	64.9	18.3	71	ENE	14.1	6.3			n			0 0	0 0		H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 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. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.01	762.3	57.2	14.0	68	W	13	6			7			0.016	0.4		Prof. Hoh.
Berlin			29.98	761.4	56.5	13.6	60	NW	18	8			8			0.049	1.24		Prof. Arndt.
Breslau			30.10	764.6	53.8	12.1	75	WSW	9	4			10			0.055	1.4	Rainy	Dr. P. Neugebauer.
Carlsruhe			30.10	764.4	57.9	14.4	68	SW	11	5			9			0	0		A. Senz.
Cassel			29.84	758.0	57.0	13.9	64	S	9	4			7			0	0		Dr. H. Möll.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.68	728.4	30.12	765.0	54.6	12.5	65	W					6			0.051	1.3	Light rain	M. Wilhelm.
Hamburg			29.91	759.6	57.0	13.9	72	WSW	18	8			7k	W		0.122	3.1		Deutsche Seewarte.
Kiel			29.93	760.1	56.3	13.5	78	W	22	10			7			0.181	4.6		Prof. G. Karsten.
Königsberg			29.98	761.6	57.7	14.3	61	SE	22	10						0.001	0.03	Clear	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			30.04	763.1	57.7	14.3	49	WSW	13	6			8			0	0		Prof. Bruhns.
Münster			29.98	761.4	57.9	14.4	63	S	13	6			10			0.035	0.9		Prof. E. Heis.
Posen			30.01	762.3	54.5	12.5	78	S	9	4			10			0.110	2.8	Cloudy	Dr. Magener.
Strassburg, (in Alsace)			30.11	764.9	60.8	16.0	56	W	4	2			10			0	0		Dr. Schur.
Stuttgart			29.99	764.3	57.2	14.0	64	N					6			0	0		Mr. Würth.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			30.06	763.5	56.3	13.5	72	SW	27	12			10			0	0		Prof. Flesch.
Wustrow, Naval School			29.84	758.0	55.2	12.9	77	SW	36	16			7k			0	0	Rainy	E. F. Schütz.

Note.—In the originals the distinction between 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 1,355.3 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.	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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens			30.00	762.0	69.1	20.6		NE										Covered	

Note.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.06	763.5	66.3	17.4	58	SW	1.3	0.6			9	W		0	0		
Mondovi			30.06	763.4	59.2	15.1	65	NW			4		10			0	0		
Genoa			30.06	763.5	69.8	21.0	57	SE	8.7	3.9			8	S		0	0		
Pavia			30.07	763.6	65.3	18.7	50	N			1		8	W		0	0		
Verona			30.05	763.2	72.3	22.4	44	E			2		6			0	0		
Padua			30.07	763.8	64.0	18.1	49	SE	1.8	0.8			5	SW		0	0		
Parma																			
Bologna			30.11	764.7	67.7	19.3	59	NW			1		3	WSW		0	0		
Leghorn			30.08	764.1	71.2	21.8	56	SSW	11.9	5.3			7			0	0		
Urbino			30.10	764.6	58.1	14.5	57	SW			2		1			0	0		
Ancona			30.11	764.8	64.4	18.0	56	E			2		0			0	0		
Siena			30.08	764.1	66.7	19.3	48	SE	0	0			9	W		0	0		
Rome			30.11	764.7	70.9	21.6	45	WNW	1.3	0.6			1			0	0		
Naples, O. U.			30.13	765.4	72.0	22.2	43	SW			2		6	NW		0	0		
Lecce			30.11	764.8	67.5	19.7	49	WNW	12.5	5.6			5	N		0	0		
Cosenza			30.13	765.3	66.6	19.2	64	NW			2		0			0	0		
Catania, (Sicily)																			
Riposto			30.04	763.0	73.6	23.1	54	ESE			2		1	SW		0	0		
Palermo			30.07	763.8	71.4	21.9	43	NNE	9.4	4.2			6			0	0		
Sub-Series.																			
Naples, S. R.			30.17	766.3	64.9	18.3	62	W			4		6	SW		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for twenty-four hours. The altitude of Mondovia is 553 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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	761.3	59.0	15.0		SW			4								
Groningen			29.84	757.8	57.0	13.9		WSW			5								
Helder			29.86	758.5	57.6	14.2		SW			4								
Utrecht			29.91	759.6	58.5	14.7		SW			4		8						Very cloudy

Note.—The originals give the wind-pressure in kilograms per square meter; the 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			29.52	749.9	53.6	12.0	72	SSW	5.4	2.4			10			1.280	32.5		
Christiania			29.59	751.6	51.3	10.7	79	SE	11.0	4.9			10			0.650	16.5		
Tromsö			29.55	750.6	47.1	8.4	73	S			1		10			0	0		

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.11	764.9	73.4	23.0	50	NNE	9.8	4.4			7	NNE					The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			30.00	762.1	58.3	14.6	82	ESE	2	1			10						Astronomical Obs.
Wilna			30.08	764.1	50.2	10.1	54	E	4	2			10						Astronomical Obs.
Dorpat			30.27	768.8	47.5	8.6	49	SE	11	5			0						Physical Cabinet.
St. Petersburg			30.34	770.7	47.5	8.6	52	NE	4	2			0						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kieff			29.89	759.1	57.4	14.1	90	W	9	4			8						Physical Cabinet.
Nikolaiev			30.02	762.5	62.4	16.9	69	WNW	8	3.5			6						Kurdakof.
Kertch			29.95	760.6	76.5	24.7	69	SSE	2	1			1					Light rain	Lagorio.
Moscow			30.32	770.2	39.7	4.3	85	NNE	10	4.5			10						Meteorological Obs.
Lugan			29.97	761.1	69.1	20.6	41	SE	20	9			1						Meteorological Obs.
Archangel			30.39	771.9	40.1	4.5	90	WNW	8	3.5			0						Ogorodnikof.
Tiflis	28.75	730.2	30.13	765.2	70.2	21.2	70	SE	4	2			9						Physical Obs.
Astrakhan			30.34	770.7	63.9	17.7	46	SE	13	6			0						Sebastianof.
Kasan			30.28	769.2	55.0	12.8	68	WNW	4	2			8						Physical Cabinet.
Orenburg			30.54	775.8	64.2	17.9	35	Calm	0	0			0						Tschernischof.
Ekaterinburg	28.38	746.1	30.37	771.3	60.1	15.6	58	W	2	1			7						Meteorological Obs.
Kasaly			30.21	767.2	59.4	15.2	48	NNE	13	6			0						Bobrof.
Tashkend																			Michelson.
Barnaul			30.28	769.2	50.2	10.1	44	Calm	0	0			0						Meteorological Obs.
Yeniseisk			30.18	766.6	47.1	8.4	66	Calm	0	0			0						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.40	772.1	55.8	13.2	59	Calm	0	0			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.08	764.0	73.4	23.0	55	NE	2.9	1.3		9	0			0	0	Dense clouds	Royal Observatory.
San Fernando			30.07	763.7	77.9	25.5	64	W	11.4	5.1		7	0	W		0	0		The Naval Observatory.

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

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Haparanda			30.03	762.8	45.0	7.2	89	S			6		10			0	0		
Umea			30.00	761.9	48.9	9.4	78	SE			2		9			0.020	0.5		
Hernosand			29.91	759.6	49.6	9.8	76	S			4		10			0	0		
Stockholm			29.88	759.0	51.8	11.0	65	SSE			6		3			0	0		
Wisby			29.93	760.2	54.7	12.6	62	S			7		7			0	0		
Sub-Series.																			
Upsala			29.88	759.0	54.3	12.4	55	SE	21.0	9.4			5		S				Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.68	728.5	30.08	764.0	64.4	18.0	43	SSW			3		8			0.043	1.1	Cloudy	The Observatory.
Zurich	28.49	723.6	30.11	764.9	57.0	13.9	65	W			1		7			0.118	3.0	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +2.0mm.; Thermometer, +2°.8; Relative Humidity, —26 per cent.

Note.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y			29.91	759.7	58.8	14.9	72	N			3					0	0		Prof. C. N. A. Van Dyck
Constantinople			30.02	762.4	59.0	15.0	93	NNE	20	9			10		NNE	1.488	37.8	Raining	
Fao, (Persian Gulf)			29.90	759.5	87.1	30.6		NW			3		0					Clear	
Salonica					70.2	21.2		NW			2		2						
Valona			29.99	761.8	65.8	18.8		NW			2		2						
Varna			30.08	764.0	59.0	15.0		NW			2		10					Cloudy	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario			30.41	772.4	42	5.6		W	1	0.4			10s		W	0	0	Cloudy	
Chatham, N. B.			30.32	770.1	38	3.3	80	W	6	2.7		0	0			0	0	Clear	
Charlottetown, P. E. Island			30.31	769.9	44	6.7	61	W	17	7.6		0	0			0.05	1.3	Clear	
Fort Garry, Manitoba			30.18	766.6	35	1.7	97	N	13	5.8		5k	2ks	N		0	0	Cloudy	
Halifax, N. S.			30.36	770.9	47	8.3	63	NW	10	4.5		2c	0	NW		0	0	Fair	
Kingston, Ontario			30.39	771.9	49	9.4	87	S	4	1.8		10cs	0			0	0	Cloudy	
Montreal, Quebec			30.37	771.4	40	4.4	82	SW	8	3.6		5k	5ks			Inap.	Inap.	Cloudy	
Ottawa, Ontario			30.37	771.4	37	2.8	76	NE	3	1.3			10s		NE	0	0	Cloudy	
Parry Sound, Ontario			30.18	766.6	45	7.2	76	S	14	6.3		2ck	2ks	W	W	0.05	1.3	Fair	
Port Dover, Ontario			30.35	770.9	53	11.7	73	S	12	5.4		2ck	0	SW		0	0	Fair	
Fort Stanley, Ontario			30.30	769.6	55	12.8	80	SW	25	11.2		0	0			0	0	Clear	
Quebec, Quebec			30.39	771.9	32	0.0	90	Calm	0	0			10n			0	0	Cloudy	
Saugeen, Ontario			30.19	766.8	50	10.0	77	SW	3	1.3		2cs	0			0	0	Clear	
Stayner, Ontario																			
Sydney, C. B.			30.24	768.1	48	8.9	70	W	15	6.7		8k	2n	NW	W	0	0	Fair	
Toronto, Ontario			30.31	769.9	45	7.2	87	NE	1	0.4			10ks			0	0	Cloudy	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.48	774.2	44	6.7	92	S	3	1.3		Haze	0			0.04	1.0	Clear	
Alpena, Mich.			30.03	762.7	48	8.9	70	SW	6	2.7		5cs	5s	W	SW	Inap.	Inap.	Cloudy	
Atlantic City, N. J.			30.56	776.2	52	11.1	79	NW	3	1.3		0	0			0	0	Clear	
Augusta, Ga.			30.48	774.2	53	11.7	73	NE	2	0.9		5cs	0	N		0	0	Fair	
Baltimore, Md.			30.57	776.5	49	9.4	77	Calm	0	0		0	Fog			0	0	Foggy	
Barnegat, N. J.			30.54	775.7	52	11.1	79	NW	2	0.9		0	0			0	0	Clear	
Benton, Montana	27.38	695.4	30.18	766.6	42	5.6	91	Calm	0	0			10s			0	0	Cloudy	
Bismarck, Dakota	28.44	722.4	30.16	766.1	37	2.8	54	NE	5	2.2		Haze	Haze	NE		0	0	Hazy	
Boston, Mass.			30.51	774.9	46	7.8	77	SW	4	1.8		0	Haze			0	0	Clear	
Breckenridge, Minn.			29.88	758.9	44	6.7	92	NE	16	7.2			10s		N	0	0	Cloudy	
Buffalo, N. Y.			30.35	770.9	49.5	9.7	61	SW	12	5.4		2c	5k	W	SW	0	0	Fair	
Burlington, Vt.			30.44	773.2	44	6.7	76	S	6	2.7		2k	5s			0.63	0.8	Cloudy	
Cairo, Ill.			30.32	770.1	49	9.4	77	S	8	3.6		5c	0	SW		0	0	Fair	
Cape Hatteras, N. C.			30.49	774.1	64	17.8	62	NE	23	10.3		0	2ks		NE	0	0	Fair	
Cape Henry, Va.			30.56	776.2	63	17.2	49	SE	8	3.6		2k	0	E		0	0	Fair	
Cape May, N. J.			30.55	776.0	57	13.9	69	Calm	0	0		0	0			0	0	Clear	
Charleston, S. C.			30.42	772.7	61	16.1	77	N	11	4.9		5k	2s	NW		0	0	Fair	
Cheyenne, Wyoming	24.10	612.1	30.04	763.0	46	7.8	42	NW	20	8.9		0	0			0	0	Clear	
Chicago, Ill.			30.07	763.8	50	10.0	58	S	15	6.7		2cs	0			0	0	Fair	
Cincinnati, Ohio			30.33	770.4	47	8.3	77	SE	6	2.7		0	Fog			0	0	Foggy	
Cleveland, Ohio			30.36	771.1	44	6.7	75	SE	10	4.5		0	0			0	0	Clear	
Colorado Springs, Col.	24.14	613.1	30.01	762.2	44	6.7	76	NW	7	3.1		2cs	0	SW		0	0	Fair	
Corsicana, Tex.			30.24	768.1	55	12.8	93	S	2	0.9			10s			0	0	Cloudy	
Davenport, Iowa			29.98	761.5	53	11.7	73	SW	14	6.3		5c	0	W		0	0	Fair	
Denison, Tex.			30.19	766.8	55	12.8	87	S	4	1.8		Haze	5s			0	0	Fair	
Denver, Col.	24.82	630.4	30.04	763.0	49	9.4	57	S	4	1.8		0	0			0	0	Clear	
Detroit, Mich.			30.26	768.6	50	10.0	71	SW	8	3.6		0	0			0	0	Clear	
Dodge City, Kan.	27.36	694.9	29.58	751.3	60	15.6	49	W	7	3.1		5k	0	S		0	0	Fair	
Dubuque, Iowa			29.92	760.0	54	12.2	67	S	8	3.6			10s		NW	0	0	Cloudy	
Duluth, Minn.			29.85	758.2	46	7.8	85	N	4	1.8		5k	2s	NW	NW	0.08	2.0	Fair	
Eastport, Me.			30.42	772.7	43	6.1	67	NW	8	3.6		0	0			0	0	Clear	
Erie, Pa.			30.34	770.6	48	8.9	71	SE	14	6.3		0	0			0.05	1.3	Clear	
Escanaba, Mich.			29.90	759.4	50	10.0	86	S	12	5.4			10s		S	0.07	1.8	Cloudy	
Fort Gibson, I. T.			30.13	765.3	56	13.3	74	SE	8	3.6		8c	0	W		0	0	Fair	
Fort Sill, I. T.	28.90	734.0	30.02	762.5	53	11.7	80	NE	1	0.4		2cs	1s			0	0	Fair	
Fort Sully, Dakota	28.33	719.6	30.00	762.0	45	7.2	84	N	16	7.2			10n			0	0	Light rain	
Galveston, Tex.			30.22	767.6	68	20.0	90	NE	8	3.6			10s		NE	0	0	Cloudy	
Grand Haven, Mich.			30.09	764.3	54	12.2	73	S	17	7.6		5ck	0	W		0	0	Fair	
Indianapolis, Ind.			30.29	769.4	47	8.3	77	S	8	3.6		0	Sm'e			0	0	Clear	
Indianola, Tex.			30.20	767.1	68	20.0	84	NE			4		10s			0	0	Cloudy	
Jacksonville, Fla.			30.30	769.6	75	23.9	85	N	8	3.6		5k	3s	SW	NE	0	0	Fair	
Keokuk, Iowa			29.95	760.7	56	13.3	63	S	14	6.3		8c	0	SW		0	0	Fair	
Key West, Fla.			30.17	766.3	82.2	27.9	74	E	15	6.7		Haze	2ks			0	0	Fair	
Kittyhawk, N. C.			30.54	775.7	67	19.4	56	E	8	3.6		0	0			0	0	Clear	
Knoxville, Tenn.			30.49	774.4	41	5.0	100	NE	4	1.8			Fog			0	0	Foggy	
La Crosse, Wis.			29.84	757.9	55	12.8	68	S	10	4.5			10s		S	0	0	Cloudy	
Leavenworth, Kan.			29.85	758.2	58	14.4	62	S	18	8.0		0	0			0	0	Clear	
Lexington, Ky.	29.28	743.7	30.42	772.7	47	8.3	76	SE	16	7.2		0	0			0	0	Clear	
Long Branch, N. J.			30.55	776.0	55	12.8	68	W	1	0.4		0	Haze			0	0	Foggy	
Louisville, Ky.			30.36	771.1	47	8.3	77	SE	5	2.2			Fog			0	0	Foggy	
Lynchburg, Va.			30.57	776.5	43	6.1	76	S	2	0.9		0	Fog			0.01	0.3	Cloudy	
Malone, N. Y.			30.35	770.9	45	7.2	68	S	11	4.9			10s			0.16	4.1	Cloudy	
Marquette, Mich.			29.87	758.7	48	8.9	85	S	4	1.8			10s			0	0	Fair	
Memphis, Tenn.			30.32	770.1	49	9.4	77	Calm	0	0		8cs	Fog	W		0	0	Fair	
Milwaukee, Wis.			30.03	762.7	50	10.0	64	SW	16	7.2		5c	0	W		0	0	Cloudy	
Mobile, Ala.			30.30	769.6	59	15.0	87	N	5	2.2			10s			0	0	Cloudy	
Montgomery, Ala.			30.38	771.6	52.5	14.7	79	E	5	2.2		10cs	Haze			0	0	Foggy, frost	
Morgantown, W. Va.			30.46	773.7	42	5.6	91	Calm	0	0			Fog			0	0	Fair	
Mt. Washington, N. H.	23.99	609.3	30.35	770.9	21	—6.1	71	NW	14	6.3		2cs	2s	NW	NW	0.25	6.3	Cloudy	
Nashville, Tenn.			30.38	771.6	47	8.3	85	SE	3	1.3		10cs	Fog			0	0	Clear	
New Haven, Conn.			30.54	775.7	47	8.3	85	N	2	0.9		Haze	Sm'e			0	0	Clear	
New London, Conn.			30.55	776.0	50	10.0	72	NW	2	0.9		0	Haze			0	0	Cloudy	
New Orleans, La.			30.26	768.6	64	17.8	78	NE	6	2.7			10s		SW	0	0	Clear	
Newport, R. I.			30.54	775.7	51	10.6	65	W	3	1.3		0	0			0	0	Clear	
New York, N. Y.			30.54	775.7	50	10.0	64	Calm	0	0		0	Fog			0	0	Fair	
Norfolk, Va.			30.57	776.5	53	11.7	73	Calm	0	0		0	Fog			0	0	Cloudy	
North Platte, Neb.	26.94	684.3	29.39	746.5	64	17.8	34	NW	8	3.6			10s		W	0	0	Fair	
Omaha, Neb.	28.63	728.5	29.66	753.9	56	13.3	74	S	12	5.4		8cs	0	W		0	0	Fair	
Oswego, N. Y.			30.39	771.9	47.6	8.7	77	S	4	1.8		8cs	2s	NW		0	0	Clear	
Peck's Beach, N. J.			30.57	776.5	53	11.7	86	NW	4	1.8		0	0			0	0	Cloudy	
Pembina, Dakota			30.22	767.6	35	1.7	89	N	8	3.6		5c	2s	SW		0	0	Clear	
Philadelphia, Penn.			30.56	776.2	50	10.0	78	SW	3	1.3		0	Sm'e			0	0	Fair	
Pike's Peak, Colorado	17.92	455.2	30.13	765.3	25	—3.9	63	W	20	8.9		0	2s			0	0	Foggy	
Pittsburgh, Penn.			30.45	773.4	39	3.9	91	Calm	0	0			Fog			0	0	Clear	
Port Huron, Mich.			30.27	768.8	47	8.3	77	S	12	5.4		0	0			0	0	Clear, frost	
Portland, Me.			30.49	774.4	42	5.6	74	NW	6	2.7		0	0			0	0	Cloudy	
Portland, Oregon			29.96	761.0	57	13.9	87	S	2	0.9			10s			0.08	2.0	Cloudy	
Punta Rassa, Fla.			30.22	767.6	78	25.6	90	NE	10	4.5		8ck	2ks	NE	NE	0.03	0.8	Cloudy	
Rochester, N. Y.			30.36	771.1	46	7.8	61	SW	9	4.0		8c	Haze	S		Inap.	Inap.	Fair	
Salt Lake City, Utah	25.69	652.5	30.02	762.5	53	11.7	30	E	3	1.3		0	0			0	0	Clear	
Sandy Hook, N. J.			30.53	775.4	52	11.1	72	NW	5	2.2		0	Haze			0	0	Clear	
San Diego, Cal.			29.91	759.7	63	17.2	83	NW	4	1.8			10s			0	0	Cloudy	
San Francisco, Cal.			29.99	761.7	57	13.9	94	Calm	0	0			Fog			0	0	Foggy	
Santa Fe, N. M.	23.30	591.8	29.84	757.9	44	6.7	68	E	8	3.6		5c	0	SW		0	0	Fair	
Savannah, Ga.			30.39	771.9	61	16.1	83	N	8	3.6		8k	0	W		0	0	Fair	
Shreveport, La.			30.30	769.6	56	13.3	87	Calm	0	0			10s			0	0	Cloudy	
Smithville, N. C.																			
Springfield, Mass.			30.52	775.2	44	6.7	75	Calm	0	0		0	Fog			0	0	Fair	
St. Louis, Mo.			30.19	766.8	50	10.0	71	S	12	5.4		0	0			0	0	Clear	
St. Marks, Fla.			30.31	769.9	66	18.9	84	E	9	4.0		8ck	2s	SW		0	0	Cloudy	
St. Paul, Minn.			29.76	755.9	50	10.0	78	SE	5	2.2			10s		SW	0	0	Cloudy	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			30.47	773.9	47	8.3	77	W	1	0.4		0	Haze			0	0	Clear	
Toledo, Ohio			30.26	768.6	49	9.4	71	S	12	5.4		0	0			0	0	Clear	
Tucson, Arizona																			
Tybee Island, Ga.			30.38	771.6	65	18.3	83	NE	20	8.9		8cs	0	NW		0	0	Fair	
Vicksburg, Miss.			30.37	771.4	55	12.8	73	SE	10	4.5			10s		SE	0	0	Cloudy	
Virginia City, Montana	24.31	617.5	29.79	756.7	39	3.9	72	SE	4	1.8		9c	0	W		0.08	2.0	Cloudy	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.55	776.0	48	8.9	81	Calm	0	0		0	Fog			0	0	Foggy	
Wilmington, N. C			30.49	774.4	56	13.3	62	NE	11	4.9		2cs	0			0	0	Fair	
Wood's Hole, Mass			30.55	776.0	51	10.6	65	N	3	1.3		0	0			0	0	Clear	
Wytheville, Va	28.10	713.7	30.26	768.6	40	4.4	91	W	1	0.4		0	0			0	0	Clear	
Yankton, Dakota	28.40	721.4	29.65	753.1	52	11.1	86	N	3	1.3			10s			0	0	Cloudy	
Yuma, Arizona																			
Sub-Series.																			
Bridgetown, B'b'does, W. I					80	26.7	95	E	4	1.8		10cs	10s			0.40	10.2	Fair	E. Racker.
Pointe-aPitre, G'd'loupe, do			29.97	761.2	79	26.1	83	NE				0	5k			0.13	3.3	Cloudy	. V. Bigard.
Havana, Cuba, W. I			30.12	765.0	78	25.6	90	Calm	0	0		1c, k	1ks	SW, E	E	0.09	2.3	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W			30.18	766.6	78	25.6	78	Calm	0	0		1c	5s	SE	SE	0	0		James Gall.
St. Thomas, St. T., W. I			30.28	769.1	83	28.3	67	NE	7	3.1		2ck	2k	NE	NE	0.03	0.8	Clear	W. S. Cameron.
Santiago de Cuba, W. I			29.91	759.7	79	26.1	74	N	0.6	4.3		2k	0	E				Fair	Robert Mason.
St. Georges, Bermudas			30.28	769.1	76	24.4	86	NNE	16.3	7.3		10fk	10fk	NNE	NNE	0.110	2.79	Cloudy, gale	C. F. Allen.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.
Cumberland, B. A																			
Ft. Chippewyan, B. A																			
Ft. McPherson, B. A																			
Ft. Simpson, B. A																			
York Factory, B. A			30.00	762.0	24	—4.4	93	NW	16	7.2		0	0			0.03	0.8		J. Fortescue.
St. John's, Newfoundland																			John Delaney.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Clifton, Jamaica, W. I	27.28	692.9	30.05	763.3	71	21.7	85	E	2.0	0.9		2c	8k			0.09	2.3		C. Partridge.
Navassa																			
Meaellin, S. A																			
Paramaribo, S. A																			
Elyria, Ohio			30.36	771.1	47	8.3		SW	4	1.8			0			0	0	Fine	H. M. Redington.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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, 6,957.3 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.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,86[illegible] (?) ft., or 2,091.6 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne. 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 4, 1875.

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.
2:19 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.19	766.7	81.1	27.3	69	Calm			0		1			0	0		Charnot.
Algiers			30.16	766.0	77.7	25.4	87	NNE			2		7			0	0	Cloudy	Peter.
La Calle																			Kuntz.
Tunis			30.19	766.9	79.5	26.4	53	E			3		6			0	0	Cloudy	Jacques.
Sfax			30.19	766.8	80.2	26.8	55	SSE			2		2			Inap.	Inap.	Cloudy	Chauvey.
Saïda			30.19	766.8	82.4	28.0	27	N			1		1			0	0	Lightning	Grosjean.
Tebessa			30.19	766.9	68.2	20.1		NE			2		10			Inap.	Inap.		Colin.
Geriville			30.19	766.8	77.9	25.5	22	NW			1		4					Lightning	Bernadach.
Laghouat			30.19	766.8	77.0	25	28	E			3		3			0	0		Simon.
Biskra			30.19	766.7	86.4	30.2	37	E			2		4			0	0		Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.05	763.2	63.9	17.7	88	SW			2		2			0.094	2.4		Prof. Ivan Stozir.
Buda-Posth																			I. R. Cen. M. I., Hungary
Cracow			30.07	763.8	57.7	14.3	58	W			1		0			0.028	0.7		I. R. Observatory.
Eperies			30.09	764.3	54.3	12.4	72	Calm			0		8		N	0	0		Julius Mikolik.
Gratz	28.86	733.1	30.05	763.2	61.5	16.4	76	SW			2		5						Andreas Rospini.
Hermannstadt	28.68	728.5	30.09	764.2	60.8	16.0	48	ENE			1		4			0	0		Prof. Reissenberger.
Kremsmünster	28.69	728.8	30.02	762.5	57.6	14.2	65	W			2		10			0.717	18.2		Prof. C. Wagner.
Lemberg			30.06	763.4	56.3	13.5	77	SW			2		8			0	0		Dr. T. Staneckl.
Nylregyhaza			30.13	765.4	59.0	15.0	66	N			1		9			0	0		Habzsuda Daniel.
Pola			30.09	764.2	57.6	14.2	98	ESE			2		10n, ks			0.478	12.13		I.R. Hydrographic Of'ce
Szegedin			30.11	764.8	59.0	15.0	66	SE			1		10			0	0		Karl Stancel.
Trieste			30.08	764.1	62.6	17.0	86	SE			1		10			0.134	3.4	Drizzling	Prof. V. Farolfi.
Vienna			30.00	762.1	63.0	17.2	64	SSE			1		4			0.016	0.4		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.81	757.1	60.1	15.6	93	WSW			2		10			0.366	9.30	Raining	Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.52	749.8	56.9	13.8		W	7	3.1			3			0.055	1.40	*D. clouds	William Boswell.
Ardrossan			29.61	752.1	55.2	12.9		SSW			2		8					Rainy	Wm. McNeil.
Armagh Observatory			29.66	753.4	59.2	15.1		SSW	10	4.5			10					Drizzling	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs.			29.71	754.6	60.8	16.0		WSW			5		10					Overcast	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.75	755.6	61.1	16.2		WSW			2-3		10					Overcast	J. Dreyer.
Bradford			29.67	753.6	59.8	15.4		W			1		10					Overcast	J. McLandsborough.
Bridgetown, (Barbadoes)			29.93	760.2	83.0	28.3		SE			2		5					*D. clouds	T. H Hunt.
Cambridge Observatory			29.76	755.9	67.0	19.4		WSW			2		7					*D. clouds	Sergeant Hunt, A. H. C.
Cape Good Hope Obs.			29.95	760.7	99.3	32.4	29	NW	6	2.7			0						The Staff, for E. J. Stone.
Cardington			29.80	756.9	61.0	18.0		SW					10					Overcast	John McLaren.
Carlisle			29.65	753.4	58	14.4		SW					10			0.07	1.8		Bell, for J. Cartmell.
Chatham, School M. E.			29.70	754.4	64.2	17.9		S			1		8					Overcast	Major C. W. Martin, R. E.
Dartmoor	28.54	724.9	29.97	761.2	57.0	13.9		W			4		10					Fog & rain	R. E. Power.
Donaghadee			29.63	752.6	60	15.6		W			1		7					*D. clouds	J. Mac Gowan, Jr.
Dover			29.79	756.7	62	16.7		WSW			4		8						J. Costello.
Eccles, (near Manchester)			29.71	754.6	60.8	16.0		W	4.4	2.0			10					Showery	Thomas Mackereth.
Falmouth Observatory			29.96	761.0	63.0	17.2		WSW	25	11.2			10					Overcast	The Staff.
Fort Napier, (Natal)	28.65	712.5	30.28	769.1	64.0	17.8		NE			2		3					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	85	29.4		N					6						
Galway, Queen's College																			B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.15	765.8	76.8	24.9		NE			3		2					*D. clouds	Sergt. E. G. Baker.
Glasgow Observatory			29.58	751.3	52.9	11.6		SW			2		10						Lewis Stuart.
Great Yarmouth			29.70	754.4	62	16.7		W			3		7					Misty	G. T. Watson.
Greenwich Royal Obs.			29.80	756.9	66.0	18.9		W			4		10					Overcast	The Staff, for G. B. Airy.
Guernsey			29.99	761.7	62	16.7		SW			6		10					Squally	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.72	754.9	59.6	15.3		WNW					10					Drizzling	F. J. Page, for L. J. Cresley.
Helston			29.95	760.7	64	18.0		SW			4		10					Overcast	M. P. Moyle.
Holyhead			29.75	755.6	63	17.2		SW			4		5					*D. clouds	John Tilston.
Kew Observatory			29.80	756.9	65.3	18.5		WSW	18	8.0			9					*D. clouds	The Staff.
Kingstown			29.71	754.6	64	17.8		W			5		8					Squally	George Mitchell.
Leicester Museum			29.77	756.1	64.2	17.9		W			2		10					Threatening	William J. Harrison.
Llandudno			29.73	755.1	65.1	18.4		W					8					*D. clouds	Dr. James Nicol.
Malta, (Mediterranean)			30.26	768.6	73.6	23.1		SW			1		4k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			29.44	747.8	55	13.3		WNW			2		5					Showery	W. D. Penny.
Nassau, (Bahamas)			30.17	766.3	83.4	28.6		NE			5		6					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.74	755.4	60.9	16.1		S			1		10n		SW			Raining	E. J. Lowe.
Oscott, St. Mary's College			29.76	755.9	63.0	17.2		WSW			4		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.78	756.4	65	18.3		WSW			3		9					Overcast	J. Lucas, for R. Main.
Plymouth			29.95	760.7	61.4	16.3		WSW			1		10					Overcast	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.83	757.7	60	15.6		W			4		5					Cloudy	W. Kennedy.
Saint Ann's Head			29.80	756.9	60	15.6		W			5		10					Misty	John C. Walker.
Saint Helier, (Jersey)			30.01	762.2	63.4	17.4		W			6		10						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			29.63	752.6	60.1	15.6		W			2		5					*D. clouds	F. Shaw.
Scutari cemetery, (Turkey)			30.12	765.0	59.0	15.0		N			1		10					Drizzling	Sergt. W. H. Lyne.
Sheffield			29.60	751.8	63.7	17.6		WNW			5		9			0.25	6.3	Gloomy	W. F. Cooper.
Sillsth Rectory			29.64	752.8	59.3	15.2		WSW			4		10			0.060	1.52	Overcast	Rev Francis Redford.
Stonyhurst Observatory			29.68	753.9	58.7	14.8		W			4		10			Blank	Blank	Threatening	The Staff.
Stornoway, Lews C. (Hebr)			29.35	745.5	50	10.0		SSW			4		10					Raining	John Smith.
Stratfield Turgiss			29.82	757.4	63.8	17.7		W			1-2		10			Blank	Blank	Overcast	Rev. Charles H. Griffith
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.39	746.5	55	12.8		W			2		8					Overcast	John Trotter.
Truro, Royal Institution			29.91	759.7	67	19.4		W			6		6					*D. clouds	W. Newcombe.
Valencia Observatory			29.82	757.4	60.7	15.9		SW	29	13.0			3					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					55	12.8		W			4					0.10	2.5		
Leith, Restalrig Park			29.59	751.6	56.2	13.4		W			3		10k			0.04	1.0	Cloudy	Andrew Gibb.
Monach Lt-house, (Shet. Is)			29.38	746.2	54	12.2		SW			4		10			0	0		J. Youyclause.
North Unst, (Shetland Is)			29.31	744.5	52	11.1		SE			6		10						

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.55	750.6	51.3	10.7	92	S			6		10						
Faröe			29.50	749.5	57.0	13.9	70	W			6		3						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.15	740.3	42.1	5.6	77	E			6		8						
Thorshavn, (Faröe)			29.20	741.6	49.5	9.7	76	W			6		5						
Vestervig			29.48	747.8	54.5	12.[illegible]	85	W			4		2						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather	Observer.
Alençon			30.06	763.4	60.8	16.0	43	SW			1		10e			0.024	0.60	Cloudy	Normal School.
Amiens			29.88	758.9	61.2	16.2	90	W			6		10			0.177	4.5	Cloudy	Normal School.
Avignon			30.18	766.6	69.1	20.6	46	N			1		10			0	0	Lightly covered.	Normal School.
Bar-sur Seine‡																0.500	12.7	Raining	C. Saillard.
Beaumette, (near Angers)			30.11	764.8	66.4	19.1	78	SW	8.3	3.7			10		SW	0	0	Cloudy	Beaumette Observatory
Beauvais			29.96	760.9	60.6	15.9	82	W			6		10		W	0.228	5.80	Cloudy	Normal School.
Besançon			30.17	766.4	54.0	12.2	90	S			6		8		SW	0.244	6.2	Cloudy	Normal School.
Bourg en Bresse			30.23	767.9	55.0	12.8	93	S			2		10			0.16	4.	Raining	Normal School.
Bourges			30.15	765.9	56.3	13.5	82	SW			3		10		SW	0.08	2.	Cloudy	Normal School.
Brest			30.04	763.0	63.9	17.7	92	WSW			3		10		W	0.059	1.50	Misty	Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont	28.90	734.1	30.06	763.5	54.7	12.6		SSW			2		10		SSW	0.728	18.5	Raining	Normal School.
Commercy			30.05	763.3	58.1	14.5	89	W			4		10		W	0.610	15.5		Normal School.
Commune de Gréasque*			30.18	766.6	66.9	19.4	36	NW			6		8		NW	0	0		
Le Mans																			Normal School.
Lons-Le Saulnier			30.21	767.4	54.3	12.4	90	S			4		5			0	0	Rainy	Normal School.
Mâcon			30.19	766.9	60.4	15.9	96	S E			2		5		S	0	0	Cloudy	Normal School.
Mirecourt			30.00	762.0	55.6	13.1	93	SSW			4		10		NE	0.291	7.4	Cloudy	Normal School.
Orleans			29.97	761.1	63.0	17.2	70	SW			4		8		NNW	0.529	13.4	Cloudy	Normal School.
Paris Observatory			30.00	762.0	63.5	17.5	89	WSW			4		10		WSW	0.18	4.69	Covered	National Observatory
Parthenay			30.25	768.3	63.1	17.3	78	W			2		10			0	0	Cloudy	Normal School.
La Roche sur Yon			30.16	766.0	64.9	18.3	88	SW			6		10			0	0	Cloudy	Normal School.
Rochefort, Observatory			30.23	767.9	67.1	19.5	66	WSW			4		10		E	0	0	Cloudy	Naval Observatory.
Rouen			29.98	761.4	62.6	17.0	92	WSW			1		10		SW	0.255	6.4	Cloudy	Normal School.
Saint Lo			30.05	763.2	62.1	16.7	98	W			3		10		W	0.402	10.2		Normal School.
Villefranche			30.21	767.4	59.2	15.1	88	ENE			1		10			0	0	Cloudy	Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchési.
Mont-Louis			30.40	772.1	60.1	15.6	43	N	7.4	3.33			4		N	0	0		—. Falguère.
Montsouris Observatory			30.00	761.9	63.9	17.7	89	WSW			3		10kn		WSW	0.177	4.5	Raining	Marié Davy.
Perpignan	†30.22	767.7			74.7	23.6	44	SE	7.4	3.33			10			0	0		Dr. Flues.
Pic du Midi, (Summit) H. P.	21.49	545.8			47.1	8.4	45	N			2		5			0	0		M. Baylac.
Pic du Midi, (Plantade) H.P.																			General de Nansouty.
Saint Maur, (near Paris)			30.01	762.2	61.7	16.5	91	SW			2		10			0.248	6.3	Raining	E. Renou.
Tours			30.16	766.1	64.9	18.3	83	WNW			1		10		W	0	0		C. Marquet.
Versailles, (near Paris)			30.01	762.3	63.3	17.4	84	W			2		10			0.280	7.1	Raining	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.18	766.6	63.1	17.3	71	NE	2.2	1.0			10kn			{ 0 / 0	{ 0 / 0	Cloudy	H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 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. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also. ‡Observation not simultaneous.

GERMAN SERIES.

Furnished by the coöperation of Prof. Geo. Neumayer, Superintendent Royal 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather	Observer.
Bamberg			29.91	759.6	51.8	11.0	90	SW	31	14			10			0.004	2.4	Raining	Prof. Hoh.
Berlin			29.75	755.7	52.9	11.6	89	S	13	6			10			0.124	3.15	Rainy	Prof. Arndt.
Breslau			29.97	761.3	62.4	16.9	42	S	22	10			8			0	0		Dr. P. Neugebauer.
Carlsruhe			29.94	760.4	55.0	12.8	92	SW	67	30			10			0.039	1.0	Rainy	A. Senz.
Cassel			29.67	753.7	56.3	13.5	87	SW	18	8			10			0.248	6.3	Rainy	Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.69	728.7	30.13	765.4	53.6	12.0	76	W					10			0.551	14.0	Raining	M. Wilhelm.
Hamburg			29.64	752.9	55.2	12.9	88	WSW	27	12			10			0.543	13.8	Rainy	Deutsche Seewarte.
Kiel			29.65	753.2	55.2	12.9	86	W	13	6			7			0.350	8.9		Prof. G. Karsten.
Königsberg			29.91	759.6	58.6	14.8	51	SW	11	5						0.008	0.2	Cloudy	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			29.82	757.5	50.4	10.2	96	SSW	18	8			10			0.071	1.8	Rainy	Prof. Bruhns.
Münster			29.76	755.8	56.5	13.6	90	S	9	4			10			0.024	0.6		Prof. E. Reis.
Posen			29.90	759.4	59.7	15.4	57	S	29	13			4			0	0	Nearly clear	Dr. Magener.
Strassburg, (in Alsace)			30.02	762.4	55.2	12.9	92	SW	9	4			10			0.295	7.5	Raining	Dr. Schur.
Stuttgart			29.95	760.7	56.3	13.5	80	W					10			0.091	2.3	Light rain	Mr. Würth.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.84	757.9	58.3	14.6	88	W	36	16			10			0.008	0.2		Prof. Flesch.
Wustrow, Naval School			29.65	753.1	51.4	10.8	91	SSW	22	10			10			0.092	2.34	Raining	E. F. Schütz.

Note.—In the originals the distinction between 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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather	Observer.
Athens			30.16	766.0	67.6	19.8		NE										Almost covered.	

Note.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.10	764.5	65.7	18.7	58	SW	0	0			8	N		0	0		
Mondovi			30.08	764.1	60.0	15.9	62	NNE			1		10			0	0		
Genoa			30.05	763.3	72.1	22.3	44	N	4.9	2.2			0			0	0		
Pavia			30.10	764.4	65.5	18.6	61	E			1		4	E		0	0		
Verona			30.04	763.0	70.3	21.3	58	E			2		0			0	0		
Padua			30.07	763.8	63.7	17.6	65	N	4.9	2.2			8	SE		0	0		
Parma																			
Bologna			30.11	764.8	65.7	18.7	69	NE			1		5	S		0	0		
Leghorn			30.06	763.5	72.3	22.4	54	W	6.3	2.8			4			0	0		
Urbino			30.07	763.8	60.8	16.0	80	SW			2		10			0.142	3.6	Raining	
Ancona			29.08	764.1	61.9	16.6	76	E			2		10			0	0		
Siena			30.08	764.0	61.0	16.1	99	SE	0	0			9	SW		0.224	5.7		
Rome			30.11	764.9	73.2	22.9	60	S	14.3	6.4			9			0	0		
Naples, O. U.			30.18	766.5	72.3	22.4	55	SW			2		7	S		0	0		
Lecce			30.17	766.2	67.5	19.7	51	SSW	6.3	2.8			3	W		0	0		
Cosenza			30.19	766.8	68.5	20.3	50	NW			1		3	SW		0	0		
Catania, (Sicily)																			
Riposto			30.10	764.5	74.8	23.8	58	ESE			2		10	NW		0	0		
Palermo			30.13	765.2	72.9	22.7	50	NNE	3.1	1.4			4			0	0		
Sub-Series.																			
Naples, S. R.			30.22	767.6	68.4	20.2	65	SW			2		..ck	W		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for twenty-four hours. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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			29.79	756.7	61.5	16.4		WNW			4								
Groningen			29.61	752.0	57.0	13.9		W			5								
Helder			29.65	753.1	59.5	15.3		WSW			4								
Utrecht			29.66	753.3	58.1	14.5		WSW			3		10					Overcast	

Note.—The originals give the wind-pressure in kilograms per square meter; the 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			29.38	746.2	59.0	15.0	49	Calm	0	0			5			0	0		
Christiania			29.60	751.8	52.0	11.1	77	E	4.9	2.2			10			0.083	2.1		
Tromsö			29.67	753.6	48.9	9.4	62	Calm			0		5			0	0		

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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. From—	Clouds. Amount. Up'er. From—	Clouds. Amount. Low'r. From—	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.18	766.6	74.5	23.6	50	ESE	4.9	2.2			2						The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

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. From—	Clouds. Amount. Up'er. From—	Clouds. Amount. Low'r. From—	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.97	761.3	58.8	14.9	56	S	13	6			8						Astronomical Obs.
Wilna			29.98	761.6	52.5	11.4	76	SSW	4	2			10						Astronomical Obs.
Dorpat			29.90	799.4	41.4	5.2	89	SW	0	0			8						Physical Cabinet.
St. Petersburg			30.22	767.5	39.4	4.1	95	ESE	2	1			10					Rain & fog.	Central Physical Obs.
Kuopio																			Ch. Forsten.
Kieff			30.13	765.3	58.1	14.5	60	SW	7	3			4						Physical Cabinet.
Nikolaiev			30.20	767.1	61.3	16.3	61	NNE	10	4.5			9						Kurdakof.
Kertch			30.07	763.6	70.2	21.2	71	N	7	3			4						Lagorio.
Moscow			30.11	764.9	51.9	11.0	94	S	10	4.5			10						Meteorological Obs.
Lugan			30.03	762.7	69.3	20.7	50	ESE	18	9			1						Meteorological Obs.
Archangel			30.40	772.1	46.6	8.1	57	SSW	4	2			0						Ogorodnikof.
Tiflis	28.78	731.0	30.16	766.0	69.8	21.0	66	S	8	3.5			10						Physical Obs.
Astrakhan			30.40	772.2	62.8	17.1	45	ESE	17	7.5			0						Sebastianof.
Kasan			29.38	771.6	58.8	14.9	61	S	4	2			7						Physical Cabinet.
Orenburg			30.57	776.4	64.2	17.9	35	Calm	0	0			0						Tschernischef.
Ekaterinburg	29.38	746.3	30.41	772.5	44.1	6.7	49	W	4	2			3						Meteorological Obs.
Kasaly			30.23	767.8	61.7	16.5	42	NE	8	3.5			0						Robrof.
Tashkend																			Michelson.
Barnaul			30.29	769.4	50.0	10.0	37	Calm	0	0			0						Meteorological Obs.
Yeniseisk			30.17	766.2	44.1	6.7	73	NE	2	1			4						Marks.
Irkutsk																			Usolzef.
Oorga	25.86	656.8	30.31	769.9	34.7	1.5	75	Calm	0	0			0						Mossin.
Peking, (China)			30.24	768.0	57.2	14.0	67	SSW	7	3			7						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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. From—	Clouds. Amount. Up'er. From—	Clouds. Amount. Low'r. From—	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.13	765.4	81.1	27.3	41	NE	3.8	1.7		2	0	NE		0	0	Light clouds	Royal Observatory.
San Fernando			30.16	766.0	78.6	25.9	60	WSW	10.3	4.6		0	0			0	0		The Naval Observatory.

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

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. From—	Clouds. Amount. Up'er. From—	Clouds. Amount. Low'r. From—	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Haparanda			30.01	762.2	41.4	5.2	69	SE			2		7			0	0		
Umea			29.88	758.0	42.6	5.9	78	S			1		10			0	0		
Hernosand			29.78	756.5	45.3	7.4	83	SE			4		10			0.075	1.9		
Stockholm			29.67	753.7	52.5	11.4	73	SSW			2		5			0.016	0.4		
Wisby			29.82	757.3	56.1	13.4	69	SW			4		3						Dr. Hildebrandsson.
Sub-Series. Upsala			29.69	754.2	52.5	11.4	81	WSW	6.7	3.0			5						

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.81	731.7	30.23	767.8	55.4	13.0	85	SE			2		10			0	0	Raining	The Observatory.
Zurich	28.50	724.0	30.14	765.6	53.6	12.0	77	W			3		10		W			Raining	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +5.2mm.; Thermometer, —2°.0; Relative Humidity, +16 per cent.

Note.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Beirut, (Syria,) Lee Obs'y			30.02	762.6	78.1	25.6	74	N			2					0	0		Prof. C. N. A. Van Dyck.
Constantinople			30.15	765.7	57.6	14.2	93	NNE	9.8	4.5			10		NNE	0.067	1.7	Raining	
Fao, (Persian Gulf)			30.00	762.0	82.4	28.0		SE			3		0					Clear	
Salonica					73.8	23.2		NW			2		10					Cloudy	
Valona			30.10	764.5	67.6	19.8		W			1		0					Clear	
Varna			30.12	765.0	64.4	18.0		S			2		10					Cloudy	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Brockville, Ontario			30.01	762.2	56	13.3		SW	6	2.7			10s		SW	0	0	Cloudy	
Chatham, N. B.			29.98	761.5	49	9.4	92	SW	9	4.0			10ks		SW	0.01	0.3	Cloudy	
Charlottetown, P. E. Island			30.11	764.8	50	10.0	88	SW	11	4.9			10n			0.090	2.29	Cloudy	
Fort Garry, Manitoba			30.26	768.6	29	— 1.7	98	SW	3	1.3			10n				0	Light snow	
Halifax, N. S.			30.17	766.3	55	12.8	67	SW	20	8.9		2ck	0	W		0	0	Fair	
Kingston, Ontario			30.02	762.5	55	12.8	81	SW	5	2.2		10cs	0	SW		0	0	Fair	
Montreal, Quebec			29.94	760.5	51	10.6	91	SW	11	4.9		Haze	10ks			0.08	2.0	Cloudy	
Ottawa, Ontario			29.92	760.0	52	11.1	87	S	6	2.7			10s		S	0.01	0.3	Threatening	
Parry Sound, Ontario			29.97	761.2	45	7.2	92	NE	20	8.9			10n		NE	0.11	2.8	Light rain	
Port Dover, Ontario			30.02	762.5	56	13.3	87	SW	11	4.9		10k	0	W		0	0	Fair	
Fort Stanley, Ontario			29.98	761.5	59	15.0	87	SW	10	4.5			10n		SW	0	0	Cloudy	
Quebec, Quebec			29.93	760.2	50	10.0	93	S	17	7.6			10n			0.17	4.3	Cloudy	
Saugeen, Ontario			29.94	760.5	53	11.7	90	N	4	1.8			10s			0	0	Cloudy	
Stayner, Ontario			29.94	760.5	54	12.2	90	Calm	0	0			10n		W	0	0	Threatening	
Sydney, C. B.			30.22	767.6	52	11.1	67	SW	15	6.7		8c	0	W		0	0	Fair	
Toronto, Ontario			29.97	761.2	55	12.8	80	SW	4	1.8		5ck	8s	SW		0	0	Cloudy	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.10	764.5	53	11.7	79	S	3	1.3		Haze	5s		S	0	0	Cloudy	
Alpena, Mich.			30.00	762.0	45	7.2	92	N	7	3.1			10s			0.15	3.8	Cloudy	
Atlantic City, N. J.			30.26	768.6	64	17.8	88	S	12	5.4		8cs	0	SW		0	0	Cloudy	
Augusta, Ga.			30.28	769.1	65	18.3	89	N	1	0.4			10s			0	0	Cloudy	
Baltimore, Md.			30.28	769.1	55	12.8	93	SW	1	0.4			10ks			0	0	Cloudy	
Barnegat, N. J.			30.23	767.8	66	18.9	78	S	14	6.3		5ck	0	S		0	0	Fair	
Benton, Montana	27.44	697.0	30.24	768.1	36	2.2	90	W	12	5.4			10s			0.34	8.6	Cloudy	
Bismarck, Dakota	28.28	718.3	29.98	761.5	32	0.0	79	E	4	1.8			10ks		E	0	0	Cloudy	
Boston, Mass.			30.17	766.3	58	14.4	70	SW	18	8.0		8c	Haze			0	0	Fair	
Breckenridge, Minn.			30.17	766.3	28	—2.2	88	Calm	0	0		2c	5s			0	0	Cloudy	
Buffalo, N. Y.			29.97	761.2	56.5	13.6	98	SW	12	5.4		8c	2s	SW		0	0	Cloudy	
Burlington, Vt.			30.03	762.7	53	11.7	73	S	12	5.4		1k	5s			0	0	Cloudy	
Cairo, Ill.			30.14	765.5	57	13.9	93	S	8	3.6		0	0			0	0	Clear	
Cape Hatteras, N. C.			30.28	769.1	68	20.0	81	S	4	1.8		5cs	5ks		SE	0	0	Cloudy	
Cape Henry, Va.			30.29	769.4	66	18.9	84	SE	6	2.7		2c	8s		SW	0	0	Cloudy	
Cape May, N. J.			30.26	768.6	64	17.8	83	S	12	5.4			10s		S	0	0	Cloudy	
Charleston, S. C.			30.27	768.8	69	20.6	85	N	2	0.9			10ks		N	0	0	Cloudy	
Cheyenne, Wyoming	24.07	611.4	30.01	762.2	40	4.4	56	NW	8	3.6		5c	0			0	0	Fair	
Chicago, Ill.			29.94	760.5	53	11.7	80	N	17	7.6			10s			0	0	Cloudy	
Cincinnati, Ohio			30.01	762.2	61	16.1	82	SW	12	5.4		8ck	0	W		0	0	Cloudy	
Cleveland, Ohio			30.00	762.0	56.4	13.6	74	S	2	0.9		8c	2n		SW	0	0	Cloudy	
Colorado Springs, Col.	24.16	613.6	30.03	762.7	40	4.4	82	N	8	3.6		0	0			0	0	Clear	
Corsicana, Tex.			30.17	766.3	63	17.2	94	SE	3	1.3			10s			0	0	Cloudy	
Davenport, Iowa			30.03	762.7	56	13.3	80	N	8	3.6		1ck	5s			0	0	Fair	
Denison, Tex.			30.14	765.5	59	15.0	87	SW	2	0.9		0	2s		SW	0	0	Fair	
Denver, Col.	24.86	631.4	30.08	764.0	43	6.1	67	SE	1	0.4		5cs	0			0	0	Fair	
Detroit, Mich.			29.95	760.7	56	13.3	80	SW	7	3.1			10s		SW	0	0	Cloudy	
Dodge City, Kan.	27.56	700.0	29.84	757.9	54	12.2	74	S	7	3.1		0	0			0	0	Clear	
Dubuque, Iowa			30.03	762.7	54	12.2	80	N	8	3.6			10s		NW	Inap.	Inap.	Cloudy	
Duluth, Minn.			30.16	766.1	39	3.9	81	NE	4	1.8			10s			0	0	Cloudy	
Eastport, Me.			30.06	763.5	54	12.2	79	SW	15	6.7		0	8s		SW	0	0	Fair	
Erie, Pa.			29.98	761.5	57	13.9	69	S	16	7.2		8cs	Haze			0	0	Fair	
Escanaba, Mich.			30.13	765.3	38	3.3	72	N	7	3.1		5k	0	N		0.08	2.0	Fair	
Fort Gibson, I. T.			30.14	765.5	59	15.0	87	SE	5	2.2		0	0			0	0	Clear	
Fort Sill, I. T.	28.92	734.6	30.03	762.7	54	12.2	87	Calm	0	0		0	Fog			0	0	Clear	
Fort Sully, Dakota	28.28	718.3	29.99	761.7	33.5	0.8	84	E	14	6.3		5c	2s	NW	SE	0.12	3.0	Fair	
Galveston, Tex.			30.12	765.0	73	22.8	100	E	4	1.8			10s		E	0.59	15.0	Cloudy	
Grand Haven, Mich.			29.94	760.5	55	12.8	86	NE	12	5.4			10n		NW	0.02	0.5	Light rain	
Indianapolis, Ind.			29.97	761.2	59	15.0	70	S	7	3.1		Haze	2ks			0	0	Fair	
Indianola, Tex.			30.14	765.5	71	21.7	97	NE			2		10s		SW	1.92	48.8	Cloudy	
Jacksonville, Fla.			30.19	766.8	73	22.8	90	NE	4	1.8			10s			2.08	52.8	Cloudy	
Keokuk, Iowa			30.00	762.0	55	12.8	80	NW	4	1.8		0	Haze			0	0	Clear	
Key West, Fla.			30.11	764.8	81.9	27.7	78	E	9	4.0		2cs	2ks			0	0	Fair, hazy	
Kittyhawk, N. C.			30.26	768.6	68	20.0	84	E	4	1.8		0	10s			0	0	Cloudy	
Knoxville, Tenn.			30.28	769.1	54	12.2	93	E	5	2.2		0	Haze			0	0	Cloudy	
La Crosse, Wis.			30.05	763.3	48	8.9	92	NE	2	0.9			10n		NE	0.12	3.0	Light rain	
Leavenworth, Kan.			30.12	765.0	46	7.8	85	NW	1	0.4			10s		W	0	0	Cloudy	
Lexington, Ky.	29.05	737.9	30.15	765.8	56	13.3	93	S	18	8.0		0	2s		W	0	0	Clear	
Long Branch, N. J.			30.24	768.1	64	17.8	78	SW	12	5.4		5ck	0	SW		0	0	Fair	
Louisville, Ky.			30.06	763.5	61	16.1	82	S	12	5.4		0	Fog			0	0	Clear	
Lynchburg, Va.			30.28	769.1	48	8.9	89	Calm	0	0		5cs	5s			0	0	Cloudy	
Malone, N. Y.			29.91	759.7	57	13.9	63	SW	4	1.8			10s		SW	0.01	0.3	Cloudy	
Marquette, Mich.			30.16	766.1	39	3.9	73	N	8	3.6			10s		N	0.04	1.0	Cloudy	
Memphis, Tenn.			30.23	767.8	59	15.0	93	SW	4	1.8		0	2s			0	0	Fair	
Milwaukee, Wis.			30.04	763.0	49	9.4	86	NE	22	9.8			10s		NE	0	0	Cloudy	
Mobile, Ala.			30.22	767.6	69	20.6	90	N	2	0.9			10s			0	0	Cloudy	
Montgomery, Ala.			30.04	763.0	65	18.3	86	Calm	0	0			10n			0	0	Light rain	
Morgantown, W. Va.			30.13	765.3	58	14.4	72	S	6	2.7		8c	0	W		0	0	Fair	
Mt. Washington, N. H.	23.77	603.8	30.13	765.3	33	0.6	100	NW	30	13.4			Fog			0	0	Foggy	
Nashville, Tenn.			30.17	766.3	64	17.8	83	SW	5	2.2		10k	0	SW		0	0	Cloudy	
New Haven, Conn.			30.24	768.1	58	14.4	76	W	4	1.8		5ck	5s	SW	SW	Inap.	Inap.	Fair	
New London, Conn.			30.23	767.8	62	16.7	77	SW	14	6.3		2c	2k		SW	0	0	Fair	
New Orleans, La.			30.18	766.6	70	21.1	85	E	12	5.4			10s			0	0	Cloudy	
Newport, R. I.			30.23	767.8	60	15.6	88	SW	12	5.4			10s		SW	0	0	Cloudy	
New York, N. Y.			30.24	768.1	56	13.3	62	S	8	3.6		2k	Sm'e	W		0	0	Fair	
Norfolk, Va.			30.31	769.9	61	16.1	88	S	4	1.8		10cs	Fog			0	0	Foggy	
North Platte, Neb.	27.14	689.3	29.74	755.4	41	5.0	100	Calm	0	0			10s			0	0	Cloudy	
Omaha, Neb.	29.01	736.8	30.09	764.3	47	8.3	92	NE	4	1.8			10s		NE	0	0	Cloudy	
Oswego, N. Y.			30.01	762.2	57.8	14.3	60	S	9	4.0			10s			0	0	Cloudy	
Peck's Beach, N. J.			30.27	768.8	64	17.8	88	SW	20	8.9			10ks		S	0	0	Cloudy	
Pembina, Dakota			30.25	768.3	30	—1.1	100	NE	4	1.8			10n			0.65	1.3	Light snow	
Philadelphia, Penn.			30.25	768.3	56	13.3	87	SW	8	3.6			10ks			0	0	Cloudy	
Pike's Peak, Colorado	17.98	456.7	30.19	766.8	26	—3.3	88	W	25	11.2		0	2s		W	0	0	Fair	
Pittsburgh, Penn.			30.10	764.5	53	11.7	73	S	8	3.6		0	0			0	0	Clear	
Port Huron, Mich.			29.94	760.5	55	12.8	80	S	8	3.6			10s		SW	0	0	Cloudy	
Portland, Me.			30.13	765.3	53	11.7	73	SW	11	4.9		5c	Haze	NW		0	0	Fair	
Portland, Oregon			30.22	767.6	54	12.2	87	SE	4	1.8			10s			0.32	8.1	Cloudy	
Punta Rassa, Fla.			30.16	766.1	76.3	24.6	95	NE	10	4.5		Haze	5s	NE	NE	0.26	6.6	Cloudy	
Rochester, N. Y.			29.97	761.2	56	13.3	62	SW	11	4.9		5c	2cs	S	S	0	0	Fair	
Salt Lake City, Utah	25.67	652.0	30.00	762.0	60	15.6	40	NE	5	2.2		5c	5s			0	0	Cloudy	
Sandy Hook, N. J.			30.23	767.8	58	14.4	87	SW	15	6.7		2c	5ks	W	SW	0	0	Cloudy	
San Diego, Cal.			29.99	761.7	55	12.8	93	N	4	1.8		0	0			0	0	Clear	
San Francisco, Cal.			30.11	764.8	58	14.4	91	SW	2	0.9			Fog			0	0	Foggy	
Santa Fe, N. M.	23.33	592.6	29.87	758.7	49	9.4	44	E	4	1.8		0	0			0	0	Clear	
Savannah, Ga.			30.26	768.6	69	20.6	90	NW	4	1.8			10s			0	0	Cloudy	
Shreveport, La.			30.24	768.1	63	17.2	94	SE	1	0.4			10s			0.04	1.0	Cloudy	
Smithville, N. C.																			
Springfield, Mass.			30.18	766.6	56	13.3	74	S	8	3.6			10s			0	0	Cloudy	
St. Louis, Mo.			30.07	763.8	58	14.4	69	W	16	7.2		0	0			0	0	Clear	
St. Marks, Fla.			30.19	766.8	72	22.2	90	E	8	3.6			10s		E	0	0	Cloudy	
St. Paul, Minn.			30.09	764.3	42	5.6	79	NE	6	2.7		0	5s			Inap.	Inap.	Fair	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			30.18	766.6	61	16.1	94	SW	8	3.6		2cs	5ks		SW	0	0	Cloudy	
Toledo, Ohio			29.95	760.7	57	13.9	75	S	8	3.6			10s		S	0	0	Cloudy	
Tucson, Arizona																			
Tybee Island, Ga.			30.24	768.1	72	22.2	90	NE	2	0.9			10s		E	Inap.	Inap.	Threatening	
Vicksburg, Miss.			30.20	769.4	63	17.2	94	N	2	0.9			10n		N	0	0	Light rain	
Virginia City, Montana	24.34	618.2	29.82	757.4	39	3.9	56	NE	4	1.8		2k	0	SW		Inap.	Inap.	Fair	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.27	768.8	54.5	12.5	93	Calm	0	0			10s		S	0	0	Cloudy	
Wilmington, N. C.			30.28	769.1	63	17.2	78	E	7	3.1			10s			0	0	Cloudy	
Wood's Hole, Mass.			30.25	768.3	61	16.1	82	SW	16	7.2		8c	0	SW		0	0	Fair	
Wytheville, Va.	27.88	708.1	30.09	764.3	44	6.7	92	Calm	0	0		2c	8s	W		0	0	Cloudy	
Yankton, Dakota	28.81	731.8	30.15	765.8	33	0.6	89	Calm	0	0		0	0			0	0	Clear	
Yuma, Arizona																			
Sub-Series.																			
Bridgetown, B'b'does, W. I.					80	26.7	82	S	5	2.2		5k	5ks	NE	NE	0	0	Fair	E. Racker.
Pointe-aPitre, G'd'loupe, do			29.98	761.5	77	25.0	86	SE				2c	2k			0	0	Clear	L. V. Bigard.
Havana, Cuba, W. I.			30.09	764.3	78	25.6	90	Calm	0	0		3c, k	2ks	SW, E	E	0	0	Foggy	Carlos Hasselbrink.
Kingston, Jamaica, W.			30.13	765.3	78	25.6	82	Calm	0	0		7c	1s	SE	SE	0	0		James Gall.
St. Thomas, St. T., W. I.			30.21	767.3	83	28.3	70	E	4	1.8		2ck	5ks	E	E	0	0	Clear	W. S. Cameron.
Santiago de Cuba, W. I.			29.84	757.9	78	25.6	78	NNW	6.0	2.7		8ck	0					Fair	Robert Mason.
St. Georges, Bermudas			30.22	767.6	75.5	24.2	77	NE	22.2	9.9			10k		NE	0	0	Stormy	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.			30.06	763.5	21	—6.1	93	W	6	2.7			10ks			0	0		J. Fortescue.
St. John's, Newfoundland																			John Delaney.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Clifton, Jamaica, W. I.	27.27	692.6	30.05	763.3	71	21.7	84	E	2.0	0.9		2c	0	E		0	0		C. Partridge.
Navassa																			
Meaellin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			29.89	759.2	53	11.7		S	4	1.8			8ks			0	0	Cloudy	H. M. Redington.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; 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, 6,862.9 (?) ft., or 2,091.6 (?) m.; Virginia City, 5,180 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 5, 1875.

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—	Rainfall in 24 hours. Inches	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.25	768.4	79.0	26.1	65	N			2		1			0	0		Charnot.
Algiers			30.21	767.4	77.7	25.8	78	NNE			2		9			0	0		Peter.
La Calle																			Kuntz.
Tunis			30.19	766.9	81.0	27.2	37	N			4		9			0	0	Cloudy	Jacques.
Sfax			30.20	767.1	70.5	21.4	73	N			4		7			0.276	7.0	Cloudy	Chauvey.
Saïda			30.24	768.0	77.0	25.0	47	NNW			1		1			0	0		Grosjean.
Tebessa			30.21	767.3	69.8	21.0		N			2		7			0	0		Colin.
Geriville			30.22	767.6	76.1	24.5	33	N			1		2			0	0		Bernadach.
Laghouat			30.21	767.4	78.8	26	36	N			2		2			0	0		Simon.
Biskra			30.20	767.1	85.1	29.5	32	NW			2		7			0	0		Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.18	766.5	67.1	19.5	70	SE			2		8			0.075	1.9		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.17	766.3	58.1	14.5	81	W			2		10			0.071	1.8		I. R. Observatory.
Eperies			30.13	765.2	57.6	14.2	65	Calm			0		10			0	0		Julius Mikolik.
Gratz	28.99	736.4	30.18	766.6	60.6	15.9	79	SW			0		10						Andreas Rospini.
Hermannstadt	28.70	729.0	30.10	764.6	63.0	17.2	36	ESE			1		4			0	0		Prof. Reissenberger.
Kremsmünster	28.89	733.8	30.23	767.7	59.0	15.0	89	W			3		10			0.142	3.6		Prof. C. Wagner.
Lemberg			30.11	764.9	61.2	16.2	55	NW			2		4			0	0		Dr. T. Stanecki.
Nyiregyhaza			30.18	766.5	57.9	14.4	76	NE			1		8			Inap.	Inap.		Habzauda Daniel.
Pola			30.21	766.3	65.1	18.4	80	ESE			2		8ks			0.104	4.92		I.R. Hydrographic Office
Szegedin			30.15	765.7	56.1	13.4	98	Calm			0		10			0.138	3.50		Karl Stancel.
Trieste			30.21	767.3	56.9	19.4	82	NW			0		1			0	0		Prof. V. Farolfi.
Vienna			30.14	765.5	64.2	17.9	67	W			2		10			0.240	6.1		I. R. Central Institute.

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

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.10	764.6	62.6	17.0	85	SW			4		10			0.014	0.35		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.47	748.5	57.0	13.9		SW	36	16.1			1			0	0	*D. clouds	William Boswell.
Ardrossan			29.69	754.1	58.8	14.9		W			6		4					Squally	Wm. McNeil.
Armagh Observatory			29.84	757.9	55.0	12.8		WSW	21	9.4			4					Squally	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs.			29.88	758.9	57.2	14.0		WSW			5		9					Overcast	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.95	760.7	57.5	14.2		WSW			3-4		6					*D. clouds	J. Dreyer.
Bradford			29.83	757.7	59.8	15.4		W			2		4					Clear	J. McLandsborough.
Bridgetown, (Barbadoes)			29.98	761.5	82.6	28.1		SE			2		4					*D. clouds	T. H. Hunt.
Cambridge Observatory			29.93	760.2	68.0	20.0		SW			2		10			Blank	Blank	Overcast	Sergeant Hunt, A. H. C.
Cape Good Hope Obs.			29.96	761.0	74.9	23.8	48	WNW	20	8.9			1						The Staff, for E. J. Stone.
Cardington			29.96	761.0	67.4	19.7		SW					7					*D. clouds	John McLaren.
Carlisle			30.76	755.9	57.9	14.4		W					5			0.09	2.3	*D. clouds	Staff, for J. Cartmell.
Chatham, School M. E.			30.03	762.7	65.2	18.4		SW			2		0					Overcast?	Major C. W. Martin, R. E.
Dartmoor	28.66	728.0	30.04	763.0	56.2	13.4		W			3		10					Drizzling	R. E. Power.
Donaghadee			29.78	756.4	55	12.8		W			4		4					*D. clouds	J. Mac Gowan, Jr.
Dover			30.04	763.0	62	16.7		SW			5		7					Drizzling	J. Costello.
Eccles, (near Manchester)			29.88	758.9	58.6	14.8		W	14.0	6.3			10					Gloomy	Thomas Mackereth.
Falmouth Observatory			30.11	764.8	60.3	15.7		WNW	21	9.4			10					Overcast	The Staff.
Fort Napier, (Natal)	28.01	711.4	30.22	767.6	74.0	23.3		E			2		0					Clear	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	83	28.3		W					5						B. G. Clare, for Prof. Curtis.
Galway, Queen's College																			
Gibraltar. (Mediterranean)			30.15	765.8	72.0	72.2		NE			6		0					Clear	Sergt. E. G. Baker.
Glasgow Observatory			29.65	753.1	57.0	13.9		SW			5		9					Squally	Lewis Stuart.
Great Yarmouth			29.92	760.0	66	18.9		WSW			5		4					*D. clouds	G. T. Watson.
Greenwich Royal Obs.			30.00	762.0	65.9	18.8		WSW			4		8			Blank	Blank	*D. clouds	The Staff, for G. B. Airy.
Guernsey			29.14	765.5	62	16.7		SSW			4		10					Misty	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.86	758.4	59.5	15.3		W					7			Blank	Blank	*D. clouds	F. J. Page, for L. J. Cross-ley.
Helston			30.07	763.8	62	16.7		NW			4		10c					Overcast	M. P. Moyle.
Holyhead			29.93	760.2	58	14.4		WSW			5		5					*D. clouds	John Tilston.
Kew Observatory			30.01	762.2	65.5	18.6		SSW	18	8.0			10					Misty	The Staff.
Kingstown			29.92	760.0	58	14.4		W			6		8					Overcast	George Mitchell.
Leicester Museum			29.93	760.2	62.0	16.7		W			5		10					Overcast	William J. Harrison.
Llandudno			29.91	759.7	60.8	16.0		SW					7					*D. clouds	Dr. James Nicol.
Malta, (Mediterranean)			30.23	767.8	77.0	25.0		NW			1		4k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			29.39	746.5	53	11.7		WSW			4		8						W. D. Penny.
Nassau, (Bahamas)			30.09	764.3	76.7	24.8		NE			5		98					Gloomy	Surg.-Maj. Henry.
Nottingham			29.90	759.4	60.8	16.0		WSW			3		10d;n		WSW			Overcast	E. J. Lowe.
Oscott, St. Mary's College			29.94	760.5	58.9	14.9		SW			3		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.96	761.0	66	18.9		WSW			3		8					Overcast	J. Lucas, for R. Main.
Plymouth			30.08	764.0	63.6	17.6		W			3		10					Overcast	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.96	761.0	57	13.9		WNW			6		10					Squally	W. Kennedy.
Saint Ann's Head			30.02	762.5	58	14.4		W			5		10					Misty	John C. Walker.
Saint Helier, (Jersey)			30.16	766.1	64.6	18.1		W			6		10						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			29.81	757.2	60.8	16.0		WNW			4		7					*D. clouds	F. Shaw.
Scutari cemetery, (Turkey)			30.21	767.3	69.0	20.6		NW			1		2					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.82	757.4	63.7	17.6		NW			5		8					Overcast	W. F. Cooper.
Silloth Rectory			29.76	755.9	60.3	15.7		W			6		4			0	0	Squally	Rev. Francis Redford.
Stonyhurst Observatory			29.85	758.2	56.6	13.7		W			5		10			Blank	Blank	Squally	The Staff.
Stornoway, Lews C. (Hebr)			29.28	743.7	51	10.6		WSW			8		8					*D. clouds	John Smith.
Stratfield Turgiss			30.01	762.2	65.6	18.7		W			1-2		6					*D. clouds	Rev. Charles H. Griffith
Streatley Vicarage			30.02	762.5	72.0	22.2		SW?			5		10						Rev. John Slatter.
Thurso			29.28	743.7	55	12.8		SW			6		6					*D. clouds	John Trotter.
Truro, Royal Institution			30.10	764.5	64.4	18.0		NW			5		7					*D. clouds	W. Newcombe.
Valencia Observatory			30.07	763.8	57.5	14.2		WSW	31	13.9			5					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					53	11.7		W			4					0	0		
Leith, Restalrig Park			29.64	752.8	57.5	14.2		W			7		3k			0.24	6.1	Cloudy, gale	Andrew Gibb.
Monach Lt-house, (Shet. Is)			29.32	744.7	54	12.2		W			9	5	5	W		0	0		J. Youyclause.
North Unst, (Shetland Is)			29.02	737.1	52	11.1		SW			7	5	7	W		Blank	Blank		

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.75	755.7	57.0	13.9	96	WSW			2		10					Misty	
Fanöe			29.73	752.2	60.1	15.6	90	WSW			6		10						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.49	749.1	36.0	2.2	75	NE			7		5						
Thorshavn, (Faröe)			28.81	731.8	49.7	9.6	75	W			4		10					Raining	
Vestervig			29.60	751.8	57.6	14.2	98	W			6		6						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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.	Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Lower 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.02	762.5	62.6	17.0	15	SW			1	10c				0	0	Cloudy	Normal School.
Amiens			30.17	766.2	66.6	19.2	79	W			3		n		W	0.055	1.4		Normal School.
Avignon			30.19	766.7	74.1	23.4	59	N			1		0			0	0	Clear	Normal School.
Bar-sur Seine			30.27	768.8	62.8	17.1	87	SW			1		10		W	0.512	13.5	Cloudy	C. Saillard.
Beaumette, (near Angers)			30.26	768.5	66.4	19.1	81	SW	6.3	2.8			10			0.016	0.4	Raining	Beaumette Observatory
Beauvais			30.26	768.7	66.0	18.9	73	SW			3		10		WSW	0.030	0.75	Cloudy	Normal School.
Besançon			30.32	770.1	64.0	17.8	83	S			2		8		SW	0.79	20.	Cloudy	Normal School. *
Bourg en Bresse			30.31	769.9	64.8	18.2	83	W			1		10		E	0.28	7.	Cloudy	Normal School.
Bourges			30.24	768.2	59.4	15.2	70	NE			2		2		NE	0	0		Normal School.
Brest			30.15	765.7	62.4	16.9	92	WSW			3		10		SW	0.108	2.75	Misty	Naval Observatory.
Caen																			Normal School
Chartres																			Normal School.
Chaumont	29.10	739.1	30.24	768.2	64.4	18		SW			4		10kb		SW	0.724	18.4	Cloud	Normal School.
Commercy			30.27	768.8	58.6	14.8	98	W			4		5		W	0.157	4.0	Cloudy	Normal School.
Commune de Gréasque*			30.24	768.0	77.5	25.3	34	NW			1		0			0	0		
Le Mans																			Normal School.
Lons-Le Saulnier			30.29	769.4	64.2	17.9	96	N			1		10		N	1.193	30.30	Cloudy	Normal School.
Mâcon			30.23	767.8	62.2	16.8	75	SSE			2		10			0.59	15.	Cloudy	Normal School.
Mirecourt			30.28	769.0	61.2	16.2	74	SW			2		8		SW	0.32	8.	Cloudy	Normal School.
Orleans			30.25	768.4	63.3	17.4	90	W			3		8		W	0.2[illegible]	6.	Cloudy	Normal School.
Paris Observatory			30.23	767.8	64.8	18.2	78	SW			2		10		WSW	0	0	Covered	National Observatory
Parthenay			30.32	770.0	66.2	19	94	W			2		5		W	0.094	2.4	Cloudy	Normal School.
La Roche sur Yon			30.29	769.4	65.8	18.8	73	SW			2		8		E	0	0	Cloudy	Normal School.
Rochefort, Observatory			30.31	769.8	72.5	22.5	54	WSW			3		5		ENE	0	0	Cloudy	Naval Observatory.
Rouen			30.18	766.6	66.6	19.2	73	WSW			2		10		SW	0.091	2.3	Cloudy	Normal School.
Saint Lo			30.21	767.2	65.7	18.7	98	W			2		10		W	0.020	0.5		Normal School.
Villefranche			30.23	767.9	66.9	19.4	78	NE			1		8			2.36	60.	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchesi.
Mont-Louis			30.42	772.6	63.1	17.3	59	SW	9.3	4.17			0			0	0		—, Faiguère.
Montsouris Observatory			30.22	767.6	64.4	18.0	80	WSW			3		10kn		WSW	0	0	Raining	Marié Davy.
Perpignan	†30.22	†767.6			78.3	25.7	51	E	5.6	2.50			0			0	0		Dr. Fines.
Pic du Midi, (Summit) H. P.	21.56	547.7			52.9	11.6	35	NW			2		1			0	0		M. Baylac.
Pic du Midi, (Plantade) H.P.																			General de Nansouty.
Saint Maur, (near Paris)			30.23	767.8	65.1	18.4	78	SW			1		10			0.016	0.4	Cloudy	E. Renou.
Tours			30.26	768.6	65.8	18.8	78	WNW			1		10		W	0.031	0.8		C. Marquet.
Versailles, (near Paris)			30.22	767.6	66.2	19.0	77	W			2		10			0.007	0.17	Cloudy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.01	762.2	62.8	17.1	86	NE	0	0			10			0 / 0	0 / 0	Misty	H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 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. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also.

GERMAN SERIES.

Furnished by the coöperation of Prof. Geo. Neumayer, Superintendent Royal 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.	Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Lower 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.08	764.1	62.6	17.0	80	W	13	6			9			0.472	12.0		Prof. Hoh.
Berlin			30.05	763.2	56.3	13.5	87	NW	22	10			10			0.244	6.20	Rainy	Prof. Arndt.
Breslau			30.21	767.3	61.0	16.1	60	W	13	6			10			0.075	1.9		Dr. P. Neugebauer.
Carlsruhe			30.23	767.8	64.0	17.8	83	W	11	5			10			0.114	2.9		A. Senz.
Cassel			29.95	760.8	70.3	21.3	67	SSW	9	4			4			0.047	1.2		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.86	733.0	30.30	769.5	59.9	15.5	74	W					10			0	0	Foggy	M. Wilhelm.
Hamburg			29.96	760.9	62.6	17.0	86	W	27	12			10			0.008	0.2	Foggy	Deutsche Seewarte.
Kiel			29.90	759.5	59.5	15.3	96	SW	22	10			10			0.024	0.6		Prof. G. Karsten
Königsberg			30.02	762.4	57.7	14.3	73	SW	22	10						0.010	0.26	Cloudy	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			30.10	764.4	65.8	18.8	74	SW	13	6			8			0.051	1.3		Prof. Bruhns.
Münster			30.07	763.6	62.8	17.1	87	SW	9	4			10			0.075	1.9		Prof. E. Heis.
Posen			30.11	764.8	62.2	16.8	62	W	29	13			10			0	0	Cloudy	Dr. Magener.
Strassburg, (in Alsace)			30.24	768.2	67.3	19.6	71	W	9	4			10			0	0		Dr. Schur.
Stuttgart			30.19	766.9	67.6	19.8	72	W					10			0.043	1.1	Light rain	Mr. Würth.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			30.16	766.1	65.1	18.4	72	SW	31	14			10			0.008	0.2		Prof. Fleisch.
Wustrow, Naval School			29.92	759.9	59.5	15.3	88	SSW	18	8			10			0.030	0.75		E. F. Schütz.

Note.—In the originals the distinction between 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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Lower 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens			30.20	767.0	70.7	21.5		W				c						Clear	

Note.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.15	765.9	70.3	21.3	52	SE	3.1	1.4			1			0	0		
Mondovi			30.14	765.6	69.3	20.7	57	NW			1		1	NE		0	0		
Genoa			30.19	766.7	73.9	23.3	61	S	4.3	1.9			2	SE		0	0		
Pavia			30.16	766.1	70.5	21.5	53	E			1		0			0	0		
Verona			30.16	766.0	73.4	23.0	64	E			2		10			0	0		
Padua			30.19	766.9	67.8	19.9	66	NE	4.3	1.9			10	SE		0	0		
Parma																			
Bologna			30.20	767.0	70.9	21.6	62	NW			1		2	W		0	0		
Leghorn			30.19	766.5	72.3	22.4	61	W	0.7	0.3			2			0	0		
Urbino			30.20	767.6	63.0	17.2	80	E			2		3			0	0		
Ancona			30.18	766.2	66.6	19.2	64	SE			2		0			0	0		
Siena			30.18	766.5	67.8	19.9	95	SE					3	N		0	0		
Rome			30.17	766.2	74.5	23.6	54	S	2.5	1.1			4			0	0		
Naples, O. U.			30.18	766.5	74.8	23.8	66	SW			2		6	N		0	0		
Lecce			30.28	769.2	65.8	18.8	81	ESE	4.9	2.2			10			0.323	8.2		
Cosenza			30.18	766.6	72.9	22.7	52	SW			1		10			0.161	4.0		
Catania, (Sicily)																			
Riposto			30.09	764.3	71.2	21.8	70	N			2		10	SE		0	0		
Palermo			30.09	764.3	72.9	22.7	65	N	6.3	2.8			10			0	0		
Sub-Series.																			
Naples, S. R.			30.20	767.0	72.9	22.7	72	WSW			2		..c	W		0.063	1.6		Prof. F. Brioschi.

NOTE.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for twenty-four hours. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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	764.1	64.0	17.8		W			4								
Groningen			29.89	759.3	60.6	15.9		WSW			5								
Helder			29.94	760.5	63.0	17.2		SW			4								
Utrecht			29.98	761.6	64.4	18.0		W			6		8					Very cloudy	

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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			29.30	744.2	55.4	13.0	72	SW	18.3	8.2			4			0.492	12.5		
Christiania			29.33	744.9	52.0	11.1	96		0.2	0.1			10			0.087	2.2	Foggy	
Tromsö			29.29	744.0	42.4	5.8	67	SW			3		0			0	0		

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.26	768.6	76.3	24.6	41	SW	8.7	3.9			4	ESE					The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			30.10	764.5	57.4	14.1	70	WSW	11	5			3						Astronomical Obs.
Wilna			30.13	765.3	55.4	13.0	74	S	10	4.5			10						Astronomical Obs.
Dorpat			30.01	762.2	52.7	11.5	80	SSE	11	5			9						Physical Cabinet.
St. Petersburg			30.03	762.7	49.3	9.6	82	SSE	11	5			10						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kieff			30.19	766.9	56.5	13.6	63	SE	4	2			3						Physical Cabinet.
Nikolaiev			30.23	767.7	61.2	16.2	73	NNE	13	6			8						Kurdakof.
Kertch			30.12	765.0	60.6	15.9	89	NNW	4	2			10						Lagorio.
Moscow			30.27	768.9	49.8	9.9	69	W	8	3.5			4						Meteorological Obs.
Lugan			30.06	763.5	61.7	16.0	70	E	8	3.5			10						Meteorological Obs.
Archangel			30.09	764.3	43.7	6.5	80	S	17	7.5			10						Ogorodnikof.
Tiflis	28.74	730.1	30.11	764.9	73.2	22.9	50	SE	8	3.5			4						Physical Obs.
Astrakhan			30.34	770.5	63.9	17.7	40	SE	13	6			0						Sebastianof.
Kasan			30.31	769.9	61.0	16.1	45	SW	13	6			4						Physical Cabinet.
Orenburg			30.54	775.7	60.3	15.7	24	Calm	0	0			0						Tschernischef.
Ekaterinburg	29.36	745.6	30.38	771.7	44.8	7.1	68	NW	8	3.5			1						Meteorological Obs.
Kasaly			30.30	769.5	62.4	16.9	63	N	8	3.5			0						Bobrof.
Tashkend																			Michelson.
Barnaul			30.26	768.6	45.9	7.7	47	Calm	0	0			[illegible]						Meteorological Obs.
Yeniseisk			30.03	763.8	45.0	7.2	70	Calm	0	0			10						Marks.
Irkutsk																			Usolzef.
Oorga	25.80	655.4	30.23	767.9	33.4	0.8	95	Calm	0	0			6						Mossin.
Peking, (China)			30.08	764.0	58.6	14.8	70	SSW	4	2			6						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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 4,202.0? ft.

SPANISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.20	767.1	82.9	28.3	40	SE	5.1	2.3		1	0	SE		0	0	Light clouds	Royal Observatory.
San Fernando			30.21	767.2	84.0	28.9	45	ENE	22.6	10.1		0	1		E	0	0		The Naval Observatory.

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

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Haparanda			29.65	753.3	41.0	5.0	93	S			4		10			0	0		
Umea			29.45	747.9	45.1	7.4	100	WSW			2		10			0	0	Raining	
Hernosand			29.34	745.2	46.8	8.2	98	SSW			4		10			0	0		
Stockholm			29.56	750.7	51.3	10.7	91	SSW			6		10			0.024	0.6		
Wisby			29.78	756.3	54.7	12.6	87	SW			7		10						
Sub-Series.																			
Upsala			29.52	749.8	51.1	10.6	93	S	19.5	8.7			10		SW			Raining	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.88	733.4	30.27	768.8	65.5	18.6	76	NNE			1.		3			0.142	3.6		The Observatory.
Zurich	28.66	727.9	30.26	768.6	64.2	17.9	80	SE			1		2			0.539	13.7	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +7.0mm.; Thermometer, +3°.7; Relative Humidity, +7 per cent.

Note.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y			30.10	764.6	78.4	25.8	60	N			1					0	0		Prof. C. N. A. Van Dyck.
Constantinople			30.25	768.3	62.8	17.1	64	NE	7.8	3.5			2		ENE	0	0		
Fao, (Persian Gulf)			30.04	763.0	88.7	31.5		SE			3		0					Clear	
Salonica					75.0	23.9		N			1		0					Clear	
Valona			30.14	765.6	72.5	22.5		SW			1		2						
Varna			30.20	767.0	66.2	19.0		NE			1		0					Clear	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario			30.09	764.3	39	3.9		NE	3	1.3			10s		N	0.22	5.6	Light rain	
Chatham, N. B.			30.01	762.2	38	3.3	95	N	3	1.3			10s		N	0.17	4.3	Light rain	
Charlottetown, P. E. Island			30.06	763.5	49	9.4	93	N	6	2.7			10n			0.169	4.06	Light rain	
Fort Garry, Manitoba			30.26	768.6	32	0.0	95	SW	4	1.8		5k	2ks	SW		0	0	Cloudy	
Halifax, N. S.			30.06	763.5	58	14.4	91	SW	14	6.3			8n		SW	0.018	0.45	Cloudy	
Kingston, Ontario			30.11	764.8	41	5.0	92	NE	2	0.9			10ks		NE	0.28	7.1	Clearing	
Montreal, Quebec			30.11	764.8	37	2.8	90	NE	15	6.7			10n		NE	0.23	5.8	Light rain	
Ottawa, Ontario			30.11	764.8	35	1.7	73	N	10	4.5		2k	8n	E	E	0.03	0.8	Threatening	
Parry Sound, Ontario			30.14	765.5	36	2.2	80	E	13	5.8		2k	8ks	NE	NE	0.04	1.0	Cloudy	
Port Dover, Ontario			30.09	764.3	47	8.3	92	N	4	1.8			Haze			1.01	0.3	Hazy	
Fort Stanley, Ontario			30.05	763.3	51	10.6	94	NW	5	2.2			10n		NW	0	0	Cloudy	
Quebec, Quebec			30.16	766.1	38	3.3	45	N	9	4.0			10n		N	0.03	0.8	Cloudy	
Saugeen, Ontario			30.10	764.5	42	5.6	91	NE	1	0.4		2k	2s			0.06	1.5	Fair	
Stayner, Ontario			30.09	764.3	43	6.1	92	Calm	0	0			10n		SE	0.44	11.2	Light rain	
Sydney, C. B.			30.13	765.3	58	14.4	93	SW	7	3.1			10n		SW	0.04	1.0	Cloudy	
Toronto, Ontario			30.07	763.8	45	7.2	98	NE	4	1.8			10n		E	0.07	1.8	Cloudy	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather	Observer.
Albany, N. Y.			29.96	761.0	56	13.3	87	S	1	0.4			10s			0	0	Cloudy	
Alpena, Mich.			30.14	765.5	42	5.6	65	E	6	2.7			10s		E	0.02	0.5	Cloudy	
Atlantic City, N. J.			30.03	763.5	64	17.8	89	W	6	2.7		1cs	Haze			0	0	Clear	
Augusta, Ga.			30.14	765.5	63	17.2	94	Calm	0	0			Fog			0.02	0.5	Foggy	
Baltimore, Md.			30.03	763.0	57	13.9	93	NW	1	0.4		2k	Fog			0	0	Foggy	
Barnegat, N. J.			30.01	763.0	65	18.3	89	SW	4	1.8		0	0			0	0	Clear	
Benton, Montana	27.29	693.1	30.09	764.3	34	1.1	90	N	2	0.9		10s	0	N		0.04	1.0	Cloudy	
Bismarck, Dakota	28.41	721.6	30.13	765.3	32	0.0	79	NE	2	0.9			10s			0.32	8.1	Cloudy	
Boston, Mass.			30.02	762.5	60	15.6	88	SW	10	4.5		8ck	2s	SW	SW	0	0	Cloudy	
Breckenridge, Minn.			30.20	767.1	34	1.1	90	NE	4	1.8			10s			0.05	1.3	Cloudy	
Buffalo, N. Y.			30.02	762.5	47	8.3	92	NE	8	3.6			Fog			Inap.	Inap.	Foggy	
Burlington, Vt.			30.04	763.5	41	5.0	100	N	7	3.1			10n			0.26	6.6	Light rain	
Cairo, Ill.			30.04	763.0	62	16.7	94	S	4	1.8		2ck	0			0	0	Clear	
Cape Hatteras, N. C.			30.11	764.8	68	20.0	84	W	3	1.3		0	Haze			0	0	Clear	
Cape Henry, Va.			30.08	764.0	70	21.1	75	SW	11	4.9		0	Haze			0	0	Clear	
Cape May, N. J.			30.04	764.5	63	17.2	83	SW	8	3.6		0	0			0	0	Clear	
Charleston, S. C.			30.15	765.8	69	20.6	85	N	1	0.4		2c	Fog	NE		0	0	Fair	
Cheyenne, Wyoming	24.07	611.4	30.01	762.2	41	5.0	91	SE	8	3.6		2c	8s	W		0	0	Cloudy	
Chicago, Ill.			30.02	762.5	52	11.1	86	Calm	0	0			Fog			0	0	Foggy	
Cincinnati, Ohio			30.02	762.5	57	13.9	81	NW	2	0.9		0	Fog			0	0	Foggy	
Cleveland, Ohio			30.03	762.7	56	13.3	93	N	4	1.8			Fog		N	0	0	Foggy	
Colorado Springs, Col.	24.13	612.9	30.00	762.0	53	11.7	54	N	2	0.9		5ck	0	W		0	0	Fair	
Corsicana, Tex.			29.98	761.5	66	18.9	100	SE	4	1.8			Fog			0.02	0.5	Foggy	
Davenport, Iowa			29.97	761.2	55	12.8	89	E	12	5.4			10s			0	0	Cloudy	
Denison, Tex.			29.93	760.2	67	19.4	94	S	3	1.3			10n		S	0.02	0.5	Light rain	
Denver, Col.	24.85	631.2	30.07	763.8	46	7.8	77	N	4	1.8			10ks		W	0.02	0.5	Cloudy	
Detroit, Mich.			30.04	763.0	48	8.9	92	NE	6	2.7			10s			0.21	5.3	Cloudy	
Dodge City, Kan.	27.38	695.4	29.64	752.8	49	9.4	78	N	11	4.9		10k	0	S		0	0	Cloudy	
Dubuque, Iowa			30.01	762.2	51	10.6	86	NE	4	1.8			10n		NE	0.02	0.5	Drizzling	
Duluth, Minn.			30.23	767.8	35	1.7	70	N	12	5.4		5ck	0	N		0.48	12.2	Clear	
Eastport, Me.			29.98	761.5	51	10.6	100	SW	2	0.9			10n			0.26	6.6	Heavy rain	
Erie, Pa.			29.99	761.7	56	13.3	87	SE	4	1.8			10s			0.03	0.8	Cloudy	
Escanaba, Mich.			30.17	766.3	35	1.7	90	N	10	4.5			10n		N	0.16	4.1	Light snow	
Fort Gibson, I. T.			29.93	760.2	67	19.4	84	SE	5	2.2		0	10ks		SW	0	0	Cloudy	
Fort Sill, I. T.	28.72	729.5	29.79	756.7	66	18.9	94	SE	1	0.4			10s			0	0	Cloudy	
Fort Sully, Dakota	28.45	722.6	30.16	766.1	37	2.8	81	N	10	4.5		5c	5s	W	N	0	0	Cloudy	
Galveston, Tex.			30.03	762.7	73	22.8	95	Calm	0	0		2ck	Fog	W		0.14	3.6	Foggy	
Grand Haven, Mich.			30.05	763.3	48	8.9	88	E	12	5.4			10s			0.01	0.3	Cloudy	
Indianapolis, Ind.			30.00	762.0	57	13.9	87	SE	6	2.7		Haze	Haze			0	0	Cloudy	
Indianola, Tex.			30.02	762.5	74	23.3	95	SE			3	2ck	5ks	SW	SW	0.01	0.3	Cloudy	
Jacksonville, Fla.			30.09	764.3	75	23.9	85	NE	4	1.8		8k	2s	NE	NE	0	0	Cloudy	
Keokuk, Iowa			29.99	759.4	54	12.2	87	NE	3	1.3			10s		NE	0.74	18.8	Cloudy	
Key West, Fla.			30.02	762.5	80.8	27.1	74	NE	9	4.0		Haze	2ks			0.01	0.3	Fair	
Kittyhawk, N. C.			30.11	764.8	65	18.3	73	W	8	3.6		0	Haze			0	0	Clear	
Knoxville, Tenn.			30.13	765.3	57	13.9	93	Calm	0	0		0	Fog			0	0	Foggy	
La Crosse, Wis.			30.06	763.5	44	6.7	100	Calm	0	0			10n		E	0.08	2.0	Light rain	
Leavenworth, Kan.			29.88	758.9	62	16.7	88	NW	2	0.9			10s		NW	0	0	Cloudy	
Lexington, Ky.	29.00	736.6	30.10	764.5	58	14.4	100	S	8	3.6		0	0			0	0	Clear	
Long Branch, N. J.			30.03	762.7	64	17.8	89	SW	1	0.4		5k	Haze	SW		0.07	1.8	Fair	
Louisville, Ky.			30.05	763.3	55	12.8	93	Calm	0	0			Fog			0	0	Foggy	
Lynchburg, Va.			30.08	764.0	59	15.0	85	Calm	0	0		0	0			0	0	Clear	
Malone, N. Y.			30.04	763.0	37	2.8	100	NE	6	7.2			10n		NE	0.40	10.2	Light rain	
Marquette, Mich.			30.21	767.3	37	2.8	62	N	8	3.6		5ck	5ks	W	N	0.08	2.0	Cloudy	
Memphis, Tenn.			30.08	764.0	63	17.2	94	Calm	0	0			10s			0	0	Cloudy	
Milwaukee, Wis.			30.07	763.8	47	8.3	85	NE	14	6.3			10n		NE	0	0	Light rain	
Mobile, Ala.			30.09	764.3	69	20.6	95	N	3	1.3			10s		SE	0.69	17.5	Cloudy	
Montgomery, Ala.			30.14	765.5	67	19.4	89	Calm	0	0			10s			Inap.	Inap.	Cloudy	
Morgantown, W. Va.			30.04	763.0	63	17.2	88	Calm	0	0			10s			0.10	2.5	Cloudy	
Mt. Washington, N. H.	23.78	604.0	30.14	765.5	39	8.9	100	W	18	8.0			Fog		W	0.63	16.0	Foggy	
Nashville, Tenn.			30.08	764.0	61	16.1	82	Calm	0	0		0	Fog			0	0	Clear	
New Haven, Conn.			30.04	763.0	62	16.7	100	SW	6	2.7			Fog			0	0	Foggy	
New London, Conn.			30.05	763.3	63	17.2	89	SW	6	2.7		0	8s		SW	0	0	Cloudy	
New Orleans, La.			30.06	763.5	70.5	21.4	92	E	5	2.2			10s			0.24	6.1	Threatening	
Newport, R. I.			30.04	763.0	62	16.7	94	S	4	1.8		0	0			0	0	Clear	
New York, N. Y.			30.04	763.0	58	14.4	100	SE	6	2.7			Fog			0	0	Foggy	
Norfolk, Va.			30.09	764.3	63	17.2	89	SW	9	4.0		0	0			0	0	Clear	
North Platte, Neb.	27.14	689.3	29.72	754.9	45	7.2	92	NE	5	2.2			10s			0	0	Cloudy	
Omaha, Neb.	28.92	734.6	29.98	761.5	50	10.0	93	N	13	5.8			10s		N	0	0	Clear	
Oswego, N. Y.			30.04	763.0	48	8.9	88	NNE	9	4.0			10s			0.01	0.3	Threatening	
Peck's Beach, N. J.			30.07	763.8	64	17.8	88	W	10	4.5		0	Haze			0	0	Hazy	
Pembina, Dakota			30.27	768.8	28	—2.2	94	Calm	0	0		5c	5s			0.09	2.3	Cloudy	
Philadelphia, Penn.			30.06	763.5	58	14.4	93	W	4	1.8			Fog			0	0	Foggy	
Pike's Peak, Colorado	17.83	452.9	30.04	763.0	23	—5.0	86	W	28	12.5		0	5s		W	0.02	0.5	Fair	
Pittsburgh, Penn.			30.00	762.0	60	15.6	88	W	4	1.8			10ks		W	0	0	Cloudy	
Port Huron, Mich.			30.05	763.3	48	8.9	92	NW	4	1.8			10n			0	0	Light rain	
Portland, Me.			30.04	762.0	57	13.9	87	Calm	0	0			10n			0	0	Light rain	
Portland, Oregon			30.22	767.6	55	12.8	93	Calm	0	0			Fog			0	0	Foggy	
Punta Rassa, Fla.			30.07	763.8	77	25.0	86	NE	10	4.5		10k	0	NE		0.36	9.1	Cloudy	
Rochester, N. Y.			30.03	762.7	48	8.9	100	N	5	2.2			Fog			0.02	0.5	Foggy	
Salt Lake City, Utah	25.71	653.0	30.04	763.0	55	12.8	38	NE	6	2.7		2k	0			0	0	Fair	
Sandy Hook, N. J.			30.02	762.5	60	15.6	94	S	6	2.7			Fog			0	0	Foggy	
San Diego, Cal.			29.85	758.2	56	13.3	93	Calm	0	0		0	5s			0	0	Fair	
San Francisco, Cal.			29.98	761.5	57	13.9	87	SW	1	0.4		0	0			0	0	Clear	
Santa Fe, N. M.	23.20	589.3	29.74	755.4	47	8.3	52	NW	4	1.8		0	0			0	0	Clear	
Savannah, Ga.			30.14	765.5	69	20.6	90	N	5	2.2			10s		N	0	0	Cloudy	
Shreveport, La.			30.06	763.5	64	17.8	100	Calm	0	0			10n			0.51	13.0	Light rain	
Smithville, N. C.																			
Springfield, Mass.			30.01	762.2	61	16.1	82	SW	4	1.8		2ck	8ks		SW	0	0	Cloudy	
St. Louis, Mo.			30.09	762.0	62	16.7	77	SW	4	1.8		0	0			0	0	Clear	
St. Marks, Fla.			30.09	764.3	71	21.7	95	NE	6	2.7		5cs	5n		NE	0	0	Light rain	
St. Paul, Minn.			30.10	764.5	38	3.3	85	NE	6	2.7			10n		E	0.14	3.6	Light rain	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			29.98	761.5	60	15.6	100	SW	2	0.9		5cs	0	W		0	0	Fair	
Toledo, Ohio			30.03	762.7	50	10.0	93	NE	6	2.7			10s		NE	Inap.	Inap.	Cloudy	
Tucson, Arizona																			
Tybee Island, Ga.			30.10	764.5	71	21.7	90	NE	3	1.3			10ks		NE	0	0	Cloudy	
Vicksburg, Miss.			30.12	765.0	64	17.8	94	SE	2	0.9			10n		SE	0.25	6.3	Light rain	
Virginia City, Montana	24.35	618.5	29.83	757.7	35	1.7	20	Calm	0	0		8c	0	W		0	0	Cloudy	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.07	763.8	54	12.2	93	Calm	0	0		0	5s			0	0	Foggy	
Wilm ngton, N. C			30.14	765.5	65	18.3	89	S	2	0.9		2ck	0	NW		0	0	Fair	
Wood's Hole, Mass			30.06	763.5	62	16.7	88	S	8	3.6		0	0			0	0	Clear	
Wytheville, Va	27.77	705.4	29.89	759.2	59	15.0	87	W	4	1.8		0	0			0	0	Clear	
Yankton, Dakota	28.80	731.5	30.11	764.8	43	6.1	91	N	8	3.6			10s		NE	0	0	Cloudy	
Yuma, Arizona			29.80	756.9	73	22.8		Calm	0	0		0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'does, W. I					82	27.8	86	S	6	2.7		5k	0	E		0	0	Fair	E Racker.
Pointe-aPitre, G'd'loupe, do			29.92	760.0	77	25.0	82	E				2k	0			0	0	Clear	L. V. Bigard.
Havana, Cuba, W. I			30.04	763.0	78	25.6	86	Calm	0	0		10ck,k	2ks	NW,NE	NE	0.12	3.0	Cloudy	Charles Hasselbrink.
Kingston, Jamaica, W			30.13	765.3	77	25.0	82	Calm	0	0		3c	2s	SE	SE	0	0		James Gall.
St. Thomas, St. T., W. I			30.15	765.8	80	26.7	78	E	3	1.3		2ck	5kn	E	E	0.13	3.3	Cloudy	W. S. Cameron.
Santiago de Cuba, W. I			29.76	755.9	77	25.0	82	Calm	0	0		0	2s		ENE	Blank	Blank	Fair	Robert Mason.
St. Georges, Bermudas			30.10	764.5	76.5	24.7	84	SE	6.6	3.0		10pk	8k		SE	0.140	3.56	Dark, smoky	C. F. Allen.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.
Cumberland, B. A																			
Ft. Chippewyan, B. A																			
Ft. McPherson, B. A																			
Ft. Simpson, B. A																			
York Factory, B. A			30.10	764.5	25.5	−3.6	94	SW	5	2.2			10ks			Blank	Blank		J. Fortescue.
St. John's, Newfoundland																			John Delaney.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Clifton, Jamaica, W. I	27.22	691.4	29.99	761.7	71	21.7	84	SE	1.0	0.4		2c	0	SE		0	0		C. Partridge.
Navassa																			
Meaellin, S. A																			
Paramaribo, S. A																			
Elyria, Ohio			30.04	763.0	55	12.8		N	4	1.8			10n			0	0	Cloudy	H. M. Redington.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; 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.; Virginia City, 5,180 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 6, 1875.

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. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.26	768.7	79.2	26.2	62	NNE			1		2			0	0		Charnot.
Algiers			30.20	767.1	77.0	25.0	83	NNW			2		8			Inap.	Inap.	Cloudy	Peter.
La Calle																			Kuntz.
Tunis			30.14	765.6	69.3	20.7	76	NW			3		10			1.65	42.		Jacques.
Sfax			30.08	764.1	68.7	20.4	72	N			2		3			0.614	15.6	Cloudy	Chauvey.
Saïda			30.24	768.0	73.4	23.0	31	NNW			2		2			0	0		Grosjean.
Tebessa			30.17	766.2	66.0	18.9		NE			5		10			Inap.	Inap		Colin.
Geriville			30.21	767.3	72.5	22.5	22	NNW			3		2			0	0		Bernadach.
Laghouat			29.17	766.2	77.0	25	28	N			4		2			0	0		Simon.
Biskra			30.16	766.0	79.3	26.3	41	NE			1		9			0	0		Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.28	769.1	63.1	17.3	80	SW			1		10			0.201	5.1		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.23	767.7	59.7	15.4	82	W			2		10			0.024	0.6		I. R. Observatory.
Eperies			30.26	768.6	53.8	12.1	88	S			1		10		N	0	0		Julius Mikolik.
Gratz	29.10	739.2	30.30	769.6	61.5	16.4	83	SW			2		8						Andreas Rospini.
Hermannstadt	28.86	732.8	30.26	768.5	64.2	17.9	47	NE			1		0			0	0		Prof. Reissenberger.
Kremsmünster	28.98	736.0	30.32	770.0	57.9	15.4	96	W			1		10			0.147	4.0		Prof. C. Wagner.
Lemberg			30.17	766.3	61.7	16.5	58	NW			3		6			Blank	Blank		Dr. T. Stanecki.
Nyiregyhaza			30.33	770.3	60.8	16.0	77	NW			1		5			0	0		Habzsuda Daniel.
Pola			30.25	768.4	68.0	20.0	80	WNW			1		7ks			0	0		I.R. Hydrographic Of'ce
Szegedin			30.31	769.8	59.4	15.2	84	E			1		10			0.228	5.80		Karl Stancel.
Trieste			30.28	769.0	69.1	20.6	83	W			1		2			0	0		Prof. V. Farolfi.
Vienna			30.24	768.1	60.8	16.0	92	Calm			0		10			0.012	0.3	Foggy	I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 9 p. m., local time. The elevation of Gratz is 313.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.45	773.3	58.1	14.5	60	W			3		4			0.130	3.30		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.00	762.0	57.0	13.9		W	13	5.8			2			0	0	*D. clouds	William Boswell.
Ardrossan			30.20	767.1	53.5	11.9		WNW			6		6					Showery	Wm. McNeil.
Armagh Observatory			30.35	770.9	53.9	12.2		WSW	13	5.8			7					*D. clouds	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			30.41	772 4	55.0	12.8		WSW			6		3					Clear	John Hartnup, Jr.
Birr Castle, (Parsonstown)			30.36	771.1	54.3	12.4		SW			1–2		3					*D. clouds	J. Dreyer.
Bradford			30.25	768.3	55.3	12.9		W			3		6					Fine	J. McLandsborough.
Bridgetown, (Barbadoes)			29.99	761.7	85.0	29.4		SE			2		5					*D. clouds	T. H Hunt.
Cambridge Observatory			30.40	772.1	60.0	15.6		W			3		5					*D. clouds	Sergeant Hunt, A. H. C.
Cape Good Hope Obs.			29.88	758.9	78.0	25.6	49	W	10	4.5			7						The Staff, for E. J. Stone.
Cardington			30.41	772.4	57.0	13.9		W					4					*D. clouds	John McLaren.
Carlisle			30.22	767.6	53.5	11.9		W					6			0.14	3.6	*D. clouds	Bell, for J. Cartmell.
Chatham, School M. E.			30.44	773.2	59.2	15.1		SW			2		6					Fine	Major C. W. Martin, R. E.
Dartmoor	29.09	738.9	30.54	775.7	52.0	11.1		NW			2		8					*D. clouds	R. E. Power.
Donaghadee			30.28	769.1	56	13.3		W			5		3					*D. clouds	J. Mac Gowan, Jr.
Dover			30.47	773.9	58	14.4		WSW			3		0						J. Costello.
Eccles, (near Manchester)			30.33	770.4	56.5	13.6		SW	8.4	3.8			5					Squally	Thomas Mackereth.
Falmouth Observatory			30.57	776.5	58.8	14.9		W	17	7.6			7					Overcast	The Staff.
Fort Napier, (Natal)	27.81	706.4	30.01	762.2	80.0	26.7		NE			2		0					Clear	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	85	29.4		W					6						[tis.
Galway, Queen's College																			B. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			30.13	765.3	73.5	23.1		NE			5		6					Levanter	Sergt. E. G. Baker.
Glasgow Observatory			30.14	765.5	53.8	12.1		SW			2		5					Fine	Lewis Stuart.
Great Yarmouth			30.34	770.6	57	13.9		W			5		2					Clear	G. T. Watson.
Greenwich Royal Obs			30.45	773.4	59.9	15.5		WNW			5		8					*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.56	776.2	60.5	15.8		WNW			2		0					Clear	Dr. S. E. Hoskins. [ley.
Halifax, Moorside Obs			30.32	770.1	54.1	12.3		W					6					Threatening	F. J. Page, for L. J. Cross-
Helston			30.53	775.4	60	15.6		WNW			4		6					*D. clouds	M. P. Moyle.
Holyhead			30.39	771.9	57	13.9		WSW			5		4					*D. clouds	John Tilston.
Kew Observatory			30.46	773.7	58.7	14.8		WSW	16	7.2			5					*D. clouds	The Staff.
Kingstown			30.41	772.4	56	13.3		W			5		5					*D. clouds	George Mitchell.
Leicester Museum			30.41	772.4	58.1	14.5		W			4		2					*D. clouds	William J. Harrison.
Llandudno			30.42	772.7	56.9	13.8		W					5					*D. clouds	Dr. James Nicol.
Malta, (Mediterranean)			30.04	763.0	67.2	19.6		SE			1		4k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			29.97	761.2	54	12.2		WSW			3		8						W. D. Penny.
Nassau, (Bahamas)			30.09	764.3	78.6	25.9		NE			1		6			Blank	Blank	*D. clouds	Surg.-Maj. Henry.
Nottingham			30.37	771.4	60.0	15.6		W			5		3k		W			Clear	E. J. Lowe.
Oscott, St Mary's College			30.39	771.9	57.1	13.9		W			6		6					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			30.41	772.4	58	14.4		W			3		5					*D. clouds	J. Lucas, for R. Main.
Plymouth			30.54	775.7	59.3	15.2		N			3		10					Gloomy	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			30.47	773.9	57	13.9		WNW			4		5					Cloudy	W. Kennedy.
Saint Ann's Head			30.47	773.9	56	13.3		W			4		3						John C. Walker.
Saint Helier, (Jersey)			30.58	776.7	64.2	17.9		NNW			3		2						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			30.21	767.3	56.0	13.3		W			5		7					*D. clouds	F. Shaw.
Scutari cemetery, (Turkey)			30.24	768.1	63.6	17.6		NE			2		8					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.32	770.1	56.4	13.6		NNW			6		4					Clear	W. F. Cooper.
Sill ch Rectory			30.22	767.6	55.7	13.2		W			6		10			0.155	3.94	Raining	Rev Francis Redford.
Stonyhurst Observatory			30.30	769.6	53.7	12.1		W			5		8			Blank	Blank	Threatening	The Staff.
Stornoway, Lews C. (Hebr).			29.84	757.9	51	10.6		WSW			3		10					Overcast	John Smith.
Stratfield Turgiss			30.48	774.2	59.7	15.4		NW			1		4					*D. clouds	Rev. Charles H. Griffith
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.87	758.7	55	12.8		WNW			5		6					*D. clouds	John Trotter.
Truro, Royal Institution			30.50	774.7	63	17.2		NW			6		6					*D. clouds	W. Newcombe.
Valencia Observatory			30.51	774.9	57.7	14.3		WSW	26	11.6			4					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					54	12.2		W			9					0	0		
Leith, Restalrig Park			30.12	765.0	56.9	13.8		W			4		6k			0.05	1.3	Fine, cloudy	Andrew Gibb.
Monach Lt-house, (Shet. Is)			29.85	758.2	52	11.1		W			7	5	5	W		0.3	7.6		J. Youyclause.
North Unst, (Shetland Is)			29.67	753.6	48	8.9		WNW			7	0	3						

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.92	760.0	56.8	13.8	59	WSW			6		4						
Faröe			30.04	763.1	56.8	13.8	67	W			6		6						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.69	754.2	32.7	0.4	92	NE			6		8						
Thorshavn, (Faröe)			29.67	753.5	46.4	8.0	65	SW			2		7						
Vestervig			29.88	758.9	53.8	12.	85	WNW			7		4						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather	Observer.
Alençon			30.54	775.7	64.4	18.0	50	N			2		2n,k			0	0		Normal School.
Amiens			30.50	774.7	61.2	16.2	72	SW			3		0			0	0	Clear	Normal School.
Avignon			30.23	767.7	72.0	22.2	55	N			8		0			0	0	Clear	Normal School.
Bar-sur Seine			30.52	775.2	59.9	15.5	57	NE			2		2		NE	0.13	3.3		C. Saillard.
Beaumette, (near Angers)			30.55	775.9	60.6	15.9	53	NE	4.0	1.8			1		NE	0.01	0.4	Clear	Beaumette Observatory
Beauvais			30.60	777.3	60.8	16	52	NE			3		8		NE	0.010	0.25	Cloudy	Normal School.
Besançon			30.51	775.0	59.0	15	76	E			3		5		NE	0.035	0.9	Cloudy	Normal School.
Bourg en Bresse			30.52	775.1	58.1	14.5	80	NE			4		10		SW	0	0	Cloudy	Normal School.
Bourges			30.45	773.3	66.2	19	45	N			2		2		NW	0	0		Normal School.
Brest			30.54	775.7	62.5	16.9	62	NNW			1		5k		WNW	0.089	2.25		Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont	29.33	744.9	30.48	774.2	57.0	13.9		WNW			3		2c		W	0.116	2.8	Clear	Normal School.
Commercy			30.27	768.8	58.6	14.8	98	W			4		5		W	0.16	4.	Cloudy	Normal School.
Commune de Gréasque*			30.26	768.7	77.0	25.0	41	NE			4		2		NE	0	0		
Le Mans																			Normal School.
Lons-Le Saulnier			30.49	774.4	57.6	14.2	74	NE			6		8		NE	0	0	Rainy	Normal School.
Mâcon			30.45	773.3	62.4	16.9	70	N			6		10			0	0	Cloudy	Normal School.
Mirecourt			30.30	769.5	63.5	17.5	77	NNE			2		10		SW	0	0	Cloudy	Normal School.
Orleans			30.52	775.2	60.4	15.8	61	NNW			3		2		N	0	0		Normal School.
Paris Observatory			30.54	775.7	60.8	16.0	48	WNW			3		5		NW	0.100	0.15	Cloudy	National Observatory
Parthenay			30.54	775.8	64.8	18.2	82	NE			4		0			0	0	Clear	Normal School.
La Roche sur Yon			30.56	776.2	63.0	17.2	59	N			6		0			0.02	0.6	Clear	Normal School.
Rochefort, Observatory			30.54	775.8	67.1	19.5	34	NE			2		0			0	0	Clear	Naval Observatory.
Rouen			30.54	775.7	63.7	17.6	56	WNW			2		5		W	0	0	Cloudy	Normal School.
Saint Lo			30.58	776.7	63.0	17.2	93	NW			2		4		NW	0.207	5.2		Normal School.
Villefranche			30.48	774.2	60.8	16	85	NE			6		5		W	0	0	Cloudy	Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchesi.
Mont-Louis			30.55	775.9	59.5	15.3	55	N	18.6	8.33			0			0	0		—. Faignère.
Montsouris Observatory			30.54	775.6	60.3	15.7	50	NNW			3	c	4k		NNW	0.009	0.2	Misty	Marié Davy.
Perpignan	†30.33	†770.4			74.3	23.5	50	WNW	13.0	5.8			0			0	0		Dr. Fines.
Pic du Midi, (Summit) H. P.	21.60	548.6			49.3	9.6	44	NE			1		1			0	0		M. Baylac.
Pic du Midi, (Plantade) H.P.																			General de Nansouty.
Saint Maur, (near Paris)			30.54	775.7	61.3	16.3	57	NNW			1		3			0.008	0.2	Clear	E. Renou.
Tours			30.54	775.8	62.4	16.9	64	WNW			1		2			0.024	0.6		C. Marquet.
Versailles, (near Paris)			30.15	765.7	61.9	16.6	66	WNW			2		5			0.016	4.1		Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.02	762.4	63.1	17.3	79	NNE	3.4	1.5			10n			0 0	0 0	Misty	H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 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,) 2,306 m., or 7,762.6 feet. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also.

GERMAN SERIES.

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

Bamberg			30.29	769.3	59.9	15.5	69	W	22	10			7			0.020	0.5		Prof. Hoh.
Berlin			30.23	767.9	59.5	15.3	55	SW	18	8			6			0.007	0.19	Rainy	Prof. Arndt.
Breslau			30.31	769.8	52.5	11.4	94	NW	18	8			10			0.106	2.7	Raining	Dr. P. Neugebauer.
Carlsruhe			30.43	773.0	61.9	16.6	59	NW	11	5			5			0.256	6.5		A. Senz.
Cassel			30.21	767.3	59.7	15.4	54	W	22	10			2			0	0		Dr. H. Möll.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.95	735.4	30.40	772.2	63.5	17.5	66	W					6			0.051	1.3	Raining	M. Wilhelm.
Hamburg			30.20	767.1	55.6	13.1	80	WNW	36	16			8kn			0.138	3.5		Deutsche Seewarte.
Kiel			30.19	766.8	55.9	13.3	78	WSW	18	8			5			0.110	2.8		Prof. G. Karsten
Königsberg			29.98	761.6	59.0	15.0	79	W	11	5						0.029	0.73	Cloudy	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			30.30	769.6	60.8	16.0	48	WNW	22	10			6			0.126	3.2		Prof. Bruhns.
Münster			30.34	770.7	58.5	14.7	74	SW	9	4			0			0	0		Prof. E. Heis.
Posen			30.20	767.0	59.5	15.3	67	NW	29	13			10			0.002	0.04	Cloudy	Dr. Magener.
Strassburg, (in Alsace)			30.48	774.1	61.2	16.2	49	Calm	0	0			1			0.012	0.3		Dr. Schur.
Stuttgart			30.42	772.7	60.1	15.6	58	W					2			0	0		Mr. Würth.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			30.43	772.9	59.7	15.4	47	NW	22	10			1			0	0		Prof. Klesch.
Wustrow, Naval School			30.11	764.7	55.9	13.3	76	WSW	22	10			8k			0.044	1.11	Cloudy	E. F. Schütz.

Note.—In the originals the distinction between 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.

Athens			30.21	767.2	70.3	21.3		NE				k						Clear	

Note.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.27	768.9	68.4	20.2	61	E	0	0			4			0	0		
Mondovi			30.28	769.0	64.9	18.3	57	N			1		2			0	0		
Genoa			30.22	767.5	74.8	23.8	47	NW	5.6	2.5			0			0	0		
Pavia			30.28	769.1	66.2	19.0	73	NE			1		10			0	0		
Verona			30.24	768.2	73.4	23.0	61	E			2		0			0	0		
Padua			30.27	768.8	68.7	20.4	63	NW	1.3	0.6			3			0	0		
Parma																			
Bologna			30.31	769.9	68.0	20.0	70	E			1		5	W		0	0		
Leghorn			30.21	767.3	77.0	25.0	42	ENE	7.4	3.3			0			0	0		
Urbino			30.24	768.2	62.8	17.1	82	NNE			2		3			0	0		
Ancona			30.28	769.1	66.9	19.4	77	NW			2		4			0	0		
Siena			30.21	767.3	71.6	22.0	47	E	3.8	1.7			0			0	0		
Rome			30.19	766.8	76.3	24.6	43	N	2.5	1.1			6			0	0		
Naples, O. U.			30.20	767.1	73.9	23.3	35	NE			6		3	NE		0	0		
Lecce			30.23	767.7	68.5	20.3	69	ESE	8.7	3.9			7	S		0	0		
Cosenza			30.21	767.4	64.9	18.3	64	NW			2		10			Blank	Blank		
Catania, (Sicily)																			
Riposto			30.07	763.7	68.5	20.3	65	WNW			2		9	W		1.299	33.0		
Palermo			30.05	763.2	69.6	20.9	66	NE	15.4	6.9			10	NE		0	0		
Sub-Series.																			
Naples, S. R.			30.23	767.7	73.2	22.9	42	W			7		..es			0.024	0.6		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for twenty-four hours. The altitude of Mondovia is 550 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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			30.46	773.7	58.3	14.6		WNW			4								
Groningen			30.19	766.9	56.3	13.5		WNW			6								
Helder			30.28	769.1	57.0	13.9		W			5								
Utrecht			29.33	770.3	59.4	15.2		WSW			4		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the 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			29.60	751.9	49.3	9.6	69	W	25.5	11.4			4			1.181	30.0		
Christiania			29.45	748.0	57.6	14.2	36	WNW	16.3	7.3			3			0.315	8.0		
Tromsö			28.93	734.9	38.8	3.8	95	Calm			0		10			0.492	12.5	Raining	

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.26	768.6	82.4	28.0	32	SE	3.8	1.7			1						The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

RUSSIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			30.09	764.2	63.1	17.3	77	WSW	18	8			10					Raining	Astronomical Obs.
Wilna			29.94	760.4	58.1	14.5	86	S	10	4.5			10						Astronomical Obs.
Dorpat			29.71	754.6	48.6	19.2	89	SSW	9	4			10						Physical Cabinet.
St. Petersburg			29.61	752.0	52.4	11.6	89	SSE	7	3			10					Raining	Central Physical Obs.
Kuopio																			Ch. Forsten.
Kiell			30.21	767.4	63.0	17.2	52	W	7	3			1					Smoke-haze	Physical Cabinet.
Nikolaiev			30.32	770.2	63.9	17.7	45	NE	8	3.5			0						Kurdakof.
Kertch			30.25	768.3	70.0	21.1	70	N	4	2			3						Lagorio.
Moscow			30.15	765.7	58.1	14.5	65	S	10	4.5			6						Meteorological Obs.
Lugan			30.09	764.2	64.9	18.3	62	WSW	4	2			9						Meteorological Obs.
Archangel			29.52	749.9	46.2	7.9	92	S	20	9			10					Raining	Ogorodnikof.
Tiflis	28.75	730.2	30.12	765.0	73.4	23.0	37	N	25	11			0						Physical Obs.
Astrakhan			30.29	769.4	62.1	16.7	69	SE	4	2			10						Sebastianof.
Kasan			30.13	765.3	63.7	17.6	38	SW	2	1			1						Physical Cabinet.
Orenburg			30.32	770.2	65.3	18.5	31	Calm	0	0			2						Tschernischef.
Ekaterinburg	29.32	744.6	30.35	770.8	42.3	5.7	83	E	4	2			10						Meteorological Obs.
Kasaly			30.24	768.1	64.6	18.1	44	WNW	8	3.5			0						Bobrof.
Tashkend																			Michelson.
Barnaul			30.26	768.5	45.1	7.3	42	Calm	0	0			1						Meteorological Obs.
Yeniseisk			30.01	762.2	40.6	4.8	78	NW	4	2			0						Marks.
Irkutsk																			Usolzef.
Oorga	25.80	655.2	30.23	767.9	29.5	— 1.4	80	Calm	0	0			0						Mossin.
Peking (China)			30.13	765.4	55.0	12.8	41	WNW	9	4			3					Rainy	Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.24	768.2	82.2	27.9	30	NE	2.9	1.3		1	0	SE		0	0	Light clouds	Royal Observatory.
San Fernando			30.24	768.2	86.5	30.3	36	ESE	10.6	7.4		1	1	ESE	ESE	0	0		The Naval Observatory.

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

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Haparanda			29.12	739.7	44.6	7.0	94	SW			4		10			0.866	22.0		
Umea			29.11	739.4	48.6	9.2	79	NW			2		7			0.598	15.2		
Hernosand			29.14	740.2	54.3	12.4	57	W			2		5			0.173	4.4		
Stockholm			29.39	746.5	56.1	13.4	58	SSW			6		8			0.169	4.3		
Wisby			29.69	754.2	55.8	13.2	68	WSW			6		7			0.020	0.5		
Sub-Series.																			
Upsala			29.39	746.3	55.4	13.0	59	SW	20.4	9.1			5		WSW				Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.97	735.9	30.37	771.3	64.6	18.1	68	N			4		8			0	0	Cloudy	The Observatory.
Zurich	28.80	731.4	30.41	772.3	62.8	17.0	79	W			1		10		NW	0.012	0.3	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +9.5mm.; Thermometer, +3°.4; Relative Humidity, —1 per cent.

Note.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y			30.06	763.5	77.4	25.2	61	N			2		0			0	0		Prof. C. N. A. Van Dyck.
Constantinople			30.28	769.1	61.2	16.2	69	NNE	10.1	4.5			5		NE	0	0	Cloudy	
Fao, (Persian Gulf)			29.99	761.7	88.9	31.6		NW			4		0					Clear	
Salonica					74.5	23.6		S			1		0					Clear	
Valona			30.14	765.6	72.5	22.5		S			1		2						
Varna			30.30	769.5	62.6	17.0		SE			2		2						

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.
Brockville, Ontario			30.28	769.1	35	1.7		E	10	4.5			10s		E	0.04	1.0	Cloudy
Chatham, N. B.			30.45	770.6	34	1.1	84	NW	4	1.8		0	0			0.59	15.0	Clear
Charlottetown, P. E. Island			30.39	771.9	41	5.0	76	N	14	6.3			8ks		N	0.810	20.57	Light rain
Fort Garry, Manitoba			29.96	770.4	33	0.6	100	SW	9	4.0		5k	2ks	W	W	0.040	1.02	Cloudy
Halifax, N. S.			30.29	769.4	46	7.8	75	N	11	4.9			5ks		N	0.016	0.40	Clearing
Kingston, Ontario			30.21	767.3	37	2.8	91	NE	7	3.1			10s			0.01	0.3	Cloudy
Montreal, Quebec			30.35	770.9	34	1.1	84	NE	13	5.8		Haze	5s	W	N	0.02	0.5	Cloudy
Ottawa, Ontario			30.29	769.4	35	1.7	73	NE	14	6.3		2k	8n	NE	NE	0	0	Light rain
Parry Sound, Ontario			30.10	764.5	35	1.7	90	E	8	3.6			10n		E	0.18	4.6	Heavy rain
Port Dover, Ontario			29.98	761.5	45	7.2	94	NE	14	6.3		10k	0	NE		0.05	1.3	Cloudy
Fort Stanley, Ontario			29.91	759.7	46	7.8	95	E	4	1.8			10n		E	0.26	6.6	Light rain
Quebec, Quebec			29.45	773.4	36	2.2	90	NE	4	1.8		2k	0	SW		0	0	Clear
Saugeen, Ontario			29.93	760.2	39	3.9	91	SE	19	8.5			10ks		SW	0.61	15.5	Light rain
Stayner, Ontario			29.97	761.2	39	3.9	91	E	4	1.8			10n		SE	0.44	11.2	Light rain
Sydney, C. B.			30.32	770.1	44	6.7	84	N	7	3.1			10s		N	0.29	7.4	Cloudy
Toronto, Ontario			30.02	762.5	41	5.0	93	NE	19	8.5			10n		NE	0.13	3.3	Light rain

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.24	768.1	42	5.6	91	Calm	0	0			10s			0	0	Cloudy	
Alpena, Mich.			29.90	759.4	44	6.7	100	E	28	12.5			10n		E	0.55	14.0	Heavy rain	
Atlantic City, N. J.			30.14	765.5	63	17.2	100	E	17	7.6		0	10n			0.01	0.3	Light rain	
Augusta, Ga.			30.04	763.0	65	18.3	94	Calm	0	0			10n		S	0.06	1.5	Light rain	
Baltimore, Md.			30.13	765.3	61	16.1	94	E	3	1.3			10ks			0	0	Cloudy	
Barnegat, N. J.			30.14	765.5	63	17.2	97	E	22	9.8			10n			0	0	Light rain	
Benton, Montana	27.25	692.1	30.05	763.3	34	1.1	90	NE	2	0.9			10s			0	0	Cloudy	
Bismarck, Dakota	28.25	717.5	29.93	760.2	39	3.9	72	S	2	0.9			10s			0	0	Cloudy	
Boston, Mass.			30.35	770.9	44	6.7	84	NE	24	10.7			10s			0	0	Cloudy	
Breckenridge, Minn.			30.10	764.5	33	0.6	90	SW	4	1.8			10s			0	0	Cloudy	
Buffalo, N. Y.			29.93	760.2	47	8.3	85	E	12	5.4		2c	8ks	SW	SW	Inap.	Inap.	Cloudy	
Burlington, Vt.			30.31	769.9	38	3.3	72	N	1	0.4			10s			0.25	6.3	Cloudy	
Cairo, Ill.			29.84	757.9	66	18.9	84	NW	4	1.8			10s		NW	0.25	6.3	Cloudy	
Cape Hatteras, N. C.			30.09	764.3	71	21.7	90	S	2	0.9		2ck	Haze			0	0	Fair	
Cape Henry, Va.			30.09	764.3	73	22.8	76	S	7	3.1		2c	Haze			0	0	Fair	
Cape May, N. J.			30.17	766.3	64	17.8	89	E	10	4.5			10s			0	0	Threatening	
Charleston, S. C.			30.03	762.7	72	22.2	85	NE	3	1.3			10n		SE	0	0	Light rain	
Cheyenne, Wyoming	24.15	613.4	30.09	764.3	32	0.0	89	SW	4	1.8		2cs	0			0	0	Fair	
Chicago, Ill.			29.75	755.6	49	9.4	93	N	20	8.9			10n			1.44	36.6	Light rain	
Cincinnati, Ohio			29.73	755.1	65	18.3	78	SE	12	5.4		10k	0	SE		1.13	28.7	Cloudy	
Cleveland, Ohio			29.77	756.1	60.3	15.7	76	SE	13	5.8		5c	2s	W		Inap.	Inap.	Fair	
Colorado Springs, Col.	24.21	614.9	30.08	764.0	44	6.7	92	Calm	0	0		0	2s			0	0	Fair	
Corsicana, Tex.			29.94	760.5	73	22.8	95	SW	8	3.6		8k	0	SW		0.12	3.0	Cloudy	
Davenport, Iowa			29.93	760.2	44	6.7	92	N	16	7.2			10n			0.76	19.3	Light rain	
Denison, Tex.			29.98	761.5	61	16.1	88	N	12	5.4			10ks		N	Inap.	Inap.	Cloudy	
Denver, Col.	24.93	633.2	30.15	765.8	42	5.6	74	E	1	0.4			Fog			0	0	Foggy	
Detroit, Mich.			29.71	754.6	57	13.9	93	E	7	3.1			10s		S	0.39	7.9	Cloudy	
Dodge City, Kan.	27.58	700.5	29.93	760.2	40	4.4	82	NW	2	0.9		5k	0			Inap.	Inap.	Fair	
Dubuque, Iowa			29.97	761.2	42	5.6	92	W	8	3.6			10n		W	0.85	21.6	Light rain	
Duluth, Minn.			30.12	765.0	36	2.2	80	NW	6	2.7			10s			0.05	1.3	Cloudy	
Eastport, Me.			30.39	771.9	39	3.9	81	NE	18	8.0		5k	8s	NE	NE	0.16	4.1	Cloudy	
Erie, Pa.			29.84	757.9	60	15.6	76	SE	24	10.7		8cs	Sm'e	SW		0	0	Fair	
Escanaba, Mich.			30.01	762.2	38	3.3	72	NE	20	8.9			10s		NE	0.05	1.3	Cloudy	
Fort Gibson, I. T.			30.04	763.0	56	13.3	87	NW	12	5.4			10s			0.90	22.9	Cloudy	
Fort Sill, I. T.	28.88	733.5	30.00	762.0	52	11.1	86	N	9	4.0			10s		N	0	0	Cloudy	
Fort Sully, Dakota	28.35	720.1	30.06	763.5	34	1.1	90	SE	7	3.1		0	0			0	0	Clear	
Galveston, Tex.			29.99	761.7	75	23.9	95	S	2	0.9			10s		S	0	0	Cloudy	
Grand Haven, Mich.			29.72	754.9	45	7.2	96	NE	19	8.5			10n		NE	1.17	29.7	Light rain	
Indianapolis, Ind.			29.63	752.6	64	17.8	89	S	14	6.3			10n			0.99	25.1	Light rain	
Indianola, Tex.			30.09	764.0	75	23.9	95	Calm	0	0		10ck	0	SW		0	0	Cloudy	
Jacksonville, Fla.			30.00	762.0	74	23.3	95	NE	2	0.9			10n			0.11	2.8	Light rain	
Keokuk, Iowa			29.9	759.4	55	12.8	93	N	10	4.5			10n			0.75	19.1	Light rain	
Key West, Fla.			30.00	762.0	81.8	27.7	74	Calm	0	0		2c	2k		E	0.50	12.7	Fair	
Kittyhawk, N. C.			30.11	764.8	68	20.0	89	SW	4	1.8		0	Haze			0	0	Clear	
Knoxville, Tenn.			29.94	760.5	60	15.6	94	E	4	1.8			10n			0.43	10.9	Light rain	
La Crosse, Wis.			30.05	763.3	39	3.9	91	N	9	4.0			10s		N	0.12	3.0	Cloudy	
Leavenworth, Kan.			30.09	764.3	45	7.2	85	N	10	4.5			10s		N	Inap.	Inap.	Cloudy	
Lexington, Ky.	28.75	730.2	29.84	757.9	62	16.7	94	S	20	8.9			10s		S	0.06	1.5	Cloudy	
Long Branch, N. J.			30.18	766.6	59	15.0	94	NE	27	12.1			10s		NE	0	0	Threatening	
Louisville, Ky.			29.76	755.9	65	18.3	89	SE	12	5.4			10s		SE	0.05	1.3	Threatening	
Lynchburg, Va.			30.00	763.5	59	15.0	88	Calm	0	0		10ck	0	W		0	0	Cloudy	
Malone, N. Y.			30.26	768.6	35	1.7	99	NE	4	1.8			10s		NE	0.12	3.0	Cloudy	
Marquette, Mich.			30.05	763.3	42	5.6	74	NE	6	2.7			10s		NE	0.04	1.0	Cloudy	
Memphis, Tenn.			29.89	759.2	68	20.0	94	S	4	1.8			10s			0.47	11.9	Threatening	
Milwaukee, Wis.			29.83	757.7	45	7.2	92	N	22	9.8			10n		N	1.10	27.9	Light rain	
Mobile, Ala.			30.01	762.2	71	21.7	95	Calm	0	0			Fog			0.21	5.3	Foggy	
Montgomery, Ala.			30.00	762.0	69	20.6	92	Calm	0	0			10s			0.38	9.7	Threatening	
Morgantown, W. Va.			29.91	759.7	61	16.1	85	S	4	1.8		10c	Haze	SW		0	0	Cloudy	
Mt. Washington, N. H.	23.98	609.1	30.32	770.1	32	0.0	90	NW	12	5.4		5s	10s	NW	NW	0	0	Cloudy	
Nashville, Tenn.			29.84	757.9	68	20.0	90	S	5	2.2			10ks		S	0.01	0.3	Cloudy	
New Haven, Conn.			30.27	768.8	51	10.6	79	NE	10	4.5		Sm'e	10s			0	0	Cloudy	
New London, Conn.			30.29	769.4	51	10.6	79	NE	11	4.9			10s		NE	0	0	Cloudy	
New Orleans, La.			30.00	762.0	72	22.2	92	Calm	0	0		8k	Fog	W		0.35	8.9	Clearing	
Newport, R. I.			30.30	769.6	51	10.6	93	NE	12	5.4			10s		NE	0	0	Cloudy	
New York, N. Y.			30.21	767.3	54	12.2	100	E	20	8.9			Fog			0	0	Foggy	
Norfolk, Va.			30.11	764.8	66	18.9	89	S	5	2.2		0	Fog			0	0	Fair	
North Platte, Neb.	27.20	690.9	29.86	758.4	34	1.1	100	Calm	0	0		0	0			0	0	Clear	
Omaha, Neb.	29.03	737.4	30.13	765.3	38	3.3	91	NW	7	3.1		0	0			0.35	8.9	Clear	
Oswego, N. Y.			30.12	765.0	49.5	9.7	78	SE	8	3.6			10s			Inap.	Inap.	Cloudy	
Peck's Beach, N. J.			30.15	765.8	64	17.8	94	E	14	6.3			10s			0	0	Cloudy	
Pembina, Dakota			29.97	761.2	36	2.2	90	Calm	0	0		5c	2s	SW	SW	0	0	Cloudy	
Philadelphia, Penn.			30.14	765.5	60	15.6	88	E	16	7.2			10s		E	0	0	Clear	
Pike's Peak, Colorado	17.88	454.1	30.08	764.0	22	—5.6	72	NW	20	8.9		0	1s			0	0	Cloudy	
Pittsburgh, Penn.			29.90	759.4	57	13.9	87	E	4	1.8		10c	0	SW		0	0	Cloudy	
Port Huron, Mich.			29.79	756.7	48	8.9	92	E	9	4.0			10s		E	0.85	21.6	Cloudy	
Portland, Me.			30.41	762.4	41	5.0	65	NE	17	7.6			10ks		NE	Inap.	Inap.	Foggy	
Portland, Oregon			30.08	764.0	51	10.6	93	Calm	0	0			Fog			0	0	Cloudy	
Punta Rassa, Fla.			30.01	762.2	76.7	24.8	90	NE	4	1.8		5cs	2ks	NE		0.13	3.3	Cloudy	
Rochester, N. Y.			30.05	763.3	44	6.7	92	E	9	4.0			10s		E	0.07	1.8	Clear	
Salt Lake City, Utah	25.74	653.8	30.07	763.8	51	10.6	27	S	1	0.4		0	0			0	0	Light rain	
Sandy Hook, N. J.			30.17	766.3	57	13.9	100	NE	30	13.4			10n		NE	0.01	0.3	Clear	
San Diego, Cal.			29.84	757.9	61	16.1	82	Calm	0	0		0	0			0	0	Clear	
San Francisco, Cal.			29.86	758.4	58	14.4	82	Calm	0	0		0	0			0	0	Clear	
Santa Fe, N. M.	25.27	591.0	29.81	757.2	41	5.0	65	SW	8	3.6		0	0			0	0	Light rain	
Savannah, Ga.			30.00	762.0	70	21.1	95	Calm	0	0			10n			0.13	3.3	Cloudy	
Shreveport, La.			29.96	761.0	70	21.1	95	S	2	0.9			10s			1.55	39.4		
Smithville, N. C.																		Cloudy	
Springfield, Mass.			30.30	769.6	49	9.4	71	NE	8	3.6			10s		E	0	0	Cloudy	
St. Louis, Mo.			29.94	760.5	53	11.7	86	N	20	8.9			10s		N	0.51	13.0	Cloudy	
St. Marks, Fla.			30.00	762.0	72	22.2	95	SW	2	0.9		2cs	8ks		SW	0.65	16.5	Cloudy	
St. Paul, Minn.			30.09	764.3	35.5	1.9	85	NW	3	1.3		0	0			0.03	0.8	Clear	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			30.10	764.5	62	16.7	94	E	20	8.9			10s		E	0	0	Cloudy	
Toledo, Ohio			29.67	753.6	59	15.0	94	S	8	3.6			10s		S	0.30	7.6	Cloudy	
Tucson, Arizona																			
Tybee Island, Ga.			29.98	761.5	73	22.8	100	E	10	4.5			10n		S	0	0	Light rain	
Vicksburg, Miss.			30.02	762.5	68.5	20.3	90	Calm	0	0			10s			2.00	50.8	Cloudy	
Virginia City, Montana	24.81	630.0	29.82	757.4	49	15.0	43	SW	4	1.8		10k	0	W		0	0	Cloudy	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.09	764.3	60	15.6	94	E	6	2.7			10s			0	0	Cloudy	
Wilmington, N. C			30.07	763.8	66	18.9	94	E	4	1.8		10k	Sm'e	W	SE	0	0	Cloudy	
Wood's Hole, Mass			30.31	769.9	51	10.6	86	NE	7	3.1			10s			0	0	Cloudy	
Wytheville, Va	27.71	703.8	29.85	758.2	53	11.7	86	SW	2	0.9			10s		S	0	0	Cloudy	
Yankton, Dakota	28.86	733.0	30.19	766.8	36	2.2	90	Calm	0	0		0	0			0	0	Clear	
Yuma, Arizona			29.82	757.4	71	21.7		Calm	0	0		0	0					Clear	
Sub-Series.																			
Bridgetown, B'b'does, W. I					81	27.2	86	SE	5	2.2		10c	5k	E		0	0	Fair	E. Racker.
Pointe-aPitre, G'd'loupe, do			29.96	761.0	80	26.7	82	E				5k	5ks			0.07	1.8	Clear	L. V. Bigard.
Havana, Cuba, W. I			29.98	761.5	76	24.4	90	Calm	0	0		3k, c	1ks	E, NW	NE	0.036	0.91	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W.			30.18	766.6	80	26.7	78	Calm	0	0		1c	1s	SE		0	0		James Gall.
St. Thomas, St. T., W. I			30.23	767.8	82	27.8	74	SW	4	1.8		1c	5k	SW	SW	0.22	5.6	Clear	W. S. Cameron.
Santiago de Cuba, W. I			29.80	756.9	77	25.0	76	NE	1.2	0.5		5c	2ks		SW			Fair	Robert Mason.
St. Georges, Bermudas			30.10	764.5	77.0	25.0	88	E	7.0	3.1		3c	5k		E	0.90	22.9	Fair	C. F. Allen.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.
Cumberland, B. A																			
Ft. Chippewyan, B. A																			
Ft. McPherson, B. A																			
Ft. Simpson, B. A																			
York Factory, B. A			29.86	758.4	28.5	—1.9	100	SE	6	2.7		0	Haze			Blank	Blank		J. Fortescue.
St. John's, Newfoundland																			John Delaney.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Clifton, Jamaica, W. I	27.22	691.4	30.00	762.0	71	21.7	90	E	1.0	0.4		5c	0	E		0.09	2.3		C. Partridge.
Navassa																			
Meaellin, S. A																			
Paramaribo, S. A																			
Elyria, Ohio			29.77	756.1	60	15.6		SE	12	5.4			8ks			0	0	Cloudy	H. M. Redington.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; 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.; Virginia City, 5,180 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 7, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.19	766.9	77.4	25.2	63	N			3		1			0	0		Charnot.
Algiers			30.17	766.2	77.0	25.0	83	NNE			1		7			0.039	1.0		Peter.
La Calle																			Kuntz.
Tunis			30.16	766.1	72.0	22.2	81	NE			3		6			0.504	12.8	Foggy	Jacques.
Sfax			30.01	762.2	75.0	24.0	62	SE			2		2			0.488	12.4	Foggy	Chauvey.
Saïda			30.20	767.1	73.4	23.0	37	NE			2		2			0	0	Foggy	Grosjean.
Tebessa			30.17	766.3	59.4	15.2		N			3		10			0.079	2.0	Cloudy	Colin.
Geriville			30.18	766.5	68.0	20.0	43	NW			2		7			0	0		Bernadach.
Laghouat			30.11	765.6	77.0	25	22	N			4		2			0	0		Simon.
Biskra			30.15	765.7	83.8	28.8	30	E			2		4			0	0	Stormy	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.43	772.8	63.1	17.3	81	NE			2		5			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.34	770.5	56.3	13.5	59	W			3		6			0.004	0.1		I. R. Observatory.
Eperies			30.29	769.4	59.4	15.2	53	Calm			0		2			0.168	4.28		Julius Mikolik.
Gratz	29.18	741.2	30.38	771.7	58.8	14.9	65	SW			2		0						Andreas Rospini.
Hermannstadt	28.84	732.5	30.27	768.9	56.1	13.4	80	NE			1		10			0.012	0.30	Light rain	Prof. Reissenberger.
Kremsmünster	29.05	737.8	30.40	772.2	55.4	13.0	68	NNW			1		0			0	0		Prof. C. Wagner.
Lemberg			30.25	768.3	55.4	13.0	67	NW			2		7			0	0		Dr. T. Stanecki.
Nyiregyhaza			30.32	770.1	60.1	15.6	57	N			2		2			Inap.	Inap.		Habzsuda Daniel.
Pola			30.33	770.4	66.0	18.9	53	E			2		7ks			0	0		I. R. Hydrographic Of'ce
Szegedin			30.32	770.2	58.3	14.6	76	NE			2		10			0.104	2.65		Karl Stancel.
Trieste			30.33	770.4	68.0	20.0	57	NE			1		1			0	0		Prof. V. Farolfi.
Vienna			30.36	771.1	60.1	15.6	53	NW			1		2			0.154	3.9		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 9 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.40	772.1	58.6	14.8	68	W			4		8			0	0		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.04	763.0	55.1	12.8		W	12	5.4			4			0.010	0.25	*D. clouds	William Boswell.
Ardrossan			30.16	766.1	52	11.1		WNW			2		8					Rainy	Wm. McNeil.
Armagh Observatory			30.25	768.3	56.6	13.7		SW	13	5.8			10					Gloomy	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			30.26	768.6	60.0	15.6		WSW			5		7					*D. clouds	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.32	744.7	60.1	15.6		W			1-3		9					*D. clouds	J. Dreyer.
Bradford			30.20	767.1	59.0	15.0		W			2		9					Gloomy	J. McLandsborough.
Bridgetown, (Barbadoes)			29.98	761.5	83.4	28.6		SE			2		4					*D. clouds	T. H Hunt.
Cambridge Observatory			30.34	770.6	62.1	16.7		WSW			1		3					*D. clouds	Sergeant Hunt, A. H. C.
Cape Good Hope Obs			29.98	761.5	65.2	18.4	71	W	21	9.4			9						The Staff, for E. J. Stone.
Cardington			30.34	770.6	63.0	17.2		SW					9					Overcast	John McLaren.
Carlisle			30.17	766.3	52	11.1		Calm					10			0.12	3.0		Bell, for J. Cartmell.
Chatham, School M. E.			30.27	768.8	60.7	15.9		NW			1		8					*D. clouds	Major C. W. Martin, R. E.
Dartmoor	29.00	736.6	30.38	771.6	53.5	11.9		W			3		9					Gloomy	R. E. Power.
Donaghadee			30.19	766.8	59	15.0		W			4		10					Overcast	J. Mac Gowan, Jr.
Dover			30.37	771.4	61	16.1		WNW			3		0						J. Costello.
Eccles, (near Manchester)			30.26	768.6	58.7	14.8		WSW	5.8	2.6			7					Squally	Thomas Mackereth.
Falmouth Observatory			30.47	773.9	59.5	15.3		WSW	15	6.7			10					Overcast	The Staff.
Fort Napier, (Natal)	27.68	703.1	29.89	759.2	82.2	27.9		E			1		0					Clear	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.95	760.7	88	31.1		N					5						[illegible]
Galway, Queen's College																			B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.10	764.5	74.0	23.3		NE			6		6					Gloomy	Sergt. E. G. Baker.
Glasgow Observatory			30.12	765.0	50.0	10.0		W			1		10					Overcast	Lewis Stuart.
Great Yarmouth			30.28	769.1	59	15.0		W			5		3					Clear	G. T. Watson.
Greenwich Royal Obs			30.38	771.6	60.7	15.9		WSW			3		9			Blank	Blank	Cloudy	The Staff, for G. B. Airy.
Guernsey			30.48	774.2	61	16.1		WSW			1		5					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs			30.26	768.6	57.3	14.1		W					10					Threatening	F. J. Page, for L. J. Cross.
Helston			30.46	773.7	62	16.7		SW			4		6					*D. clouds	M. P. Moyle.
Holyhead			30.29	769.4	60	15.6		WSW			3		5					*D. clouds	John Tilston.
Kew Observatory			30.39	771.9	60.1	15.6		WSW	13	5.8			8					*D. clouds	The Staff.
Kingstown			30.29	769.4	58	14.4		W			5		6					*D. clouds	George Mitchell.
Leicester Museum			30.34	770.6	60.6	15.9		W			3		9					Overcast	William J. Harrison.
Llandudno			30.28	769.1	59.6	15.3		W					10					Overcast	Dr. James Nicol.
Malta, (Mediterranean)			30.19	766.8	69.0	20.6		SE			1		6k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			30.00	762.0	55	12.8		W			1		10						W. D. Penny.
Nassau, (Bahamas)			30.07	763.8	82.2	27.9		SW			3		5					*D. clouds	Surg.-Maj. Henry.
Nottingham			30.32	770.1	60.1	15.6		WSW			4		9d,k		W			Overcast	E. J. Lowe.
Oscott, St. Mary's College			30.33	770.4	57.7	14.3		WSW			2		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			30.35	770.6	60	15.6		W			1		8					Overcast	J. Lucas, for R. Main.
Plymouth			30.45	773.4	59.1	15.1		WSW			2		10					Overcast	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			30.40	772.1	60	15.6		W			2		8					Cloudy	W. Kennedy.
Saint Ann's Head			30.41	772.4	59	15.0		W			3		4					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			30.49	774.5	62.6	16.7		NW			2		10						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			30.19	766.8	59.2	15.1		W			2		9					Overcast	F. Shaw.
Scutari cemetery, (Turkey)			30.19	766.8	64.6	18.1		NE			2		8					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.26	768.6	59.0	15.0		W			3		10			Blank	Blank	Overcast	W. F. Cooper.
Silloth Rectory			30.16	766.1	54.0	12.2		W			2		10			0.125	3.18	Drizzling	Rev Francis Redford.
Stonyhurst Observatory			30.23	767.8	66.6	19.2		W			3		10			Blank	Blank	Threatening	The Staff.
Stornoway, Lews C. (Hebr)			29.98	761.5	50	10.0		WSW			1		10					Raining	John Smith.
Stratfield Turgiss			30.42	772.7	59.9	15.5		W			1		9					Overcast	Rev. Charles H. Griffith
Streatley Vicarage			30.39	771.6	65.9	18.8		WNW			4		7						Rev. John Slatter.
Thurso			29.95	760.7	55	12.8		WNW			4		6					*D. clouds	John Trotter.
Truro, Royal Institution			30.50	774.7	63	17.2		NW			4		8					Gloomy	W Newcombe.
Valencia Observatory			30.39	771.9	59.8	15.4		WSW	20	8.9			8					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					54	12.2		W			9					0	0		
Leith, Restalrig Park			30.13	765.3	53.1	11.7		W			3		10k			0.19	4.8	Cloudy	Andrew Gibb.
Monach Lt-house, (Shet. Is)			29.90	759.4	51	10.6		W			7	5	3	SW		0.2	5.1		J. Youyclause.
North Unst, (Shetland Is)			29.79	756.7	47	8.3		W			7	0	4						

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., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. *Detached clouds.

DANISH SERIES.

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

Copenhagen			29.77	756.2	51.4	10.8	83	WNW			7		6						
Fanöe			29.87	758.7	54.1	12.3	69	WSW			8		8						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.66	753.3	34.[illegible]	1.0	79	NE			6		8						
Thorshavn, (Faröe)			29.84	758.0	46.2	7.9	61	Calm			0		3						
Vestervig			29.70	754.4	50.7	10.4	98	WNW			9		8						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.49	774.4	60.8	16.0	52	NE			1		2n, k			0	0		Normal School.
Amiens			30.44	773.1	63.0	17.2	72	W			3		5		W	0	0	Cloudy	Normal School.
Avignon			30.34	770.5	68.7	20.3	53	N			2		0			0	0	Clear	Normal School.
Bar-sur Seine‡																			C. Saillard.
Beaumette, (near Angers)			30.49	774.4	60.1	15.6	56	NNE	8.7	3.9			5		NNE	0	0	Cloudy	Beaumette Observatory
Beauvais			30.55	775.9	60.8	16	64	NW			1		8		NW	0	0	Cloudy	Normal School.
Besançon			30.54	775.7	59.0	15	70	SE			2		0			0.028	0.7	Clear	Normal School.
Bourg en Bresse			30.46	773.6	52.9	11.6	79	NE			1		0			0	0	Clear	Normal School.
Bourges			30.48	774.1	57.2	14	69	NE			2		1		W	0	0		Normal School.
Brest			30.45	773.5	60.0	15.9	75	WSW			1		10		NW	0	0	Cloudy	Naval Observatory.
Caen			30.57	776.5	66.6	19.2	87	W			1		0			0	0	Clear	Normal School
Chartres																			Normal School.
Chaumont	29.30	744.1	30.45	773.5	53.8	12.1		NW			2		2ck		NW	0	0	Clear	Normal School.
Commercy			30.50	774.6	58.1	14.5	52	NW			4		5		NW	0	0	Cloudy	Normal School.
Commune de Gréasque*			30.37	771.5	75.4	24.1	44	SW			2		5		SE	0	0		
Le Mans																			Normal School.
Lons-Le Saulnier			30.45	773.6	56.7	13.7	65	NE			2		0			0	0	Clear	Normal School.
Mâcon			30.26	768.5	59.0	15	96	N			4		0			0	0	Clea	Normal School.
Mirecourt			30.47	773.8	59.7	15.4	48	SE			4		2		W	0	0		Normal School.
Orleans			30.45	773.4	58.3	14.6	63	NNE			3		2		NNE	0	0		Normal School.
Paris Observatory			30.49	774.4	59.9	15.5	49	WNW			2		5		NW	0.028	0.7	Cloudy	National Observatory
Parthenay			30.48	774.3	64.8	18.2	58	SE			4		0			0	0	Clear	Normal School.
La Roche sur Yon			30.47	774.0	61.5	16.4	68	N			2		2		SW	0	0		Normal School.
Rochefort, Observatory			30.60	777.3	65.3	18.5	32	NE			4		0			0	0	Clear	Naval Observatory.
Rouen			30.18	774.1	63.0	17.2	63	WNW			2		5		NW	0	0	Cloudy	Normal School.
Saint Lo			30.50	774.8	60.8	16	89	NW			1		9		NW	0	0		Normal School.
Villefranche			30.60	777.1	51.1	10.6	85	NNE			3		0			0	0	Clear	Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchesi.
Mont-Louis			30.53	775.4	55.8	13.2	63	ESE	14.9	6.66			0			0	0		—. Faiguère.
Montsouris Observatory			30.48	774.3	61.2	16.2	60	W			2		9k,kn		NW	0	0		Marié Davy.
Perpignan	†30.38	771.5			75.2	24.0	48	NW	3.7	1.67			0			0	0		Dr. Fines.
Pic du Midi, (Summit) H. P.	21.54	547.0			46.6	8.1	18	NE			2		8			0	0		M. Baylac.
Pic du Midi, (Plantade) H.P.																			General de Nansouty.
Saint Maur, (near Paris)			30.48	774.2	63.3	17.4	54	W			1		7			0	0	Cloudy	E. Renou.
Tours			30.39	772.0	62.2	16.8		NE			1		5		NE	0	0		C. Marquet.
Versailles, (near Paris)			30.10	764.4	61.2	16.2	59	WNW			1		8			0.005	0.12	Cloudy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.10	764.6	63.0	17.7	82	NE	0.2	0.1			10			0 / 0.008	0 / 0.2	Misty	H. Le Lee, S. J.

Note.—The originals give the wind-force by the scale 0 to 9; 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,050.9 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. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also. ‡Observation not simultaneous.

GERMAN SERIES.

Furnished by the coöperation of Prof. Géo. Neumayer, Superintendent Royal Hydrographic Office, Berlin.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Millimeters.	Temperature. Fahrenheit.	Temperature. Centigrade.	Relative Humidity. Per cent.	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. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Bamberg			30.38	771.6	55.9	13.3	57	W	22	10			3			0	0		Prof. Hoh.
Berlin			30.20	767.0	58.8	14.8	58	NE	4	2			6			0.035	0.90		Prof. Arndt.
Breslau			30.35	770.8	57.9	14.4	49	SW	18	8			3			0	0		Dr. P. Neugebauer.
Carlsruhe			30.44	773.2	57.9	14.4	59	SW	22	10			2			0	0		A. Senz.
Cassel			30.22	767.6	59.7	15.4	53	SW	22	10			4			0	0		Dr. H. Mönl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	29.00	736.6	30.40	773.7	52.7	11.5	76	SW					1			0	0		M. Wilhelm.
Hamburg			30.08	763.9	55.9	13.3	77	SW	40	18			10			0.004	0.1	Stormy	Deutsche Seewarte.
Kiel			30.15	765.9	53.2	11.8	84	SW	22	10			5			0.228	3.8		Prof. G. Karsten.
Königsberg			29.98	761.6	54.1	12.3	71	SW	34	15							0.44	Cloudy	Prof. E. Luther.
Köslin																0.017			Dr. Tägert.
Leipsic			30.29	769.4	57.9	14.4	49	WSW	27	12			5			0	0		Prof. Bruhns.
Münster			30.27	768.8	59.5	15.3	67	SW	9	4			0			0	0		Prof. E. Heis.
Posen			30.24	768.0	58.3	14.6	53	SW	36	16			10			0	0	Cloudy	Dr. Magener.
Strassburg, (in Alsace)			30.48	774.2	58.1	14.5	55	Calm	0	0			3			0	0		Dr. Schur.
Stuttgart			30.44	773.1	57.2	14.0	54	SW					2			0	0		Mr. Würth.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			30.41	772.3	57.2	14.0	68	SW	22	10			8			0	0		Prof. Flesch.
Wustrow, Naval School			30.01	762.3	48.0	9.4	95	WSW	27	12			10			0.594	15.1	Raining	E. F. Schütz.

Note.—In the originals the distinction between 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. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Millimeters.	Temperature. Fahrenheit.	Temperature. 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. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Athens			30.21	767.4	69.8	21.0		NE										Cloudy	

Note.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.31	769.8	69.6	20.9	62	N	0.4	0.3			7	W		0	0		
Mondovi			30.30	769.5	67.5	19.7	60	NW			4		2	NW		0	0		
Genoa			30.28	769.0	75.2	24.0	54	SW	2.5	1.1			0			0	0		
Pavia			30.26	768.7	70.9	21.6	58	NE			1		3	NE		0	0		
Verona			30.27	768.8	73.8	23.2	63	E			2		6			0	0		
Padua			30.34	770.5	65.5	18.6	80	SE	5.6	2.5			10	WNW		0	0		
Parma																			
Bologna			30.33	770.3	69.6	20.9	65	ENE			1		5	NE		0	0		
Leghorn			30.27	768.9	75.6	24.2	45	ENE	7.4	3.3			3			0	0		
Urbino			30.30	769.5	64.4	18.0	72	NE			4		8			0	0		
Ancona			30.31	769.9	67.8	19.9	74	SE			2		0			0	0		
Siena			30.27	768.8	70.3	21.3	52	ENE	9.8	4.4			5	E		0	0		
Rome			30.28	769.0	79.9	26.6	41	NW	2.5	1.1			2			0	0		
Naples, O. U.			30.27	768.9	77.0	25.0	50	NE			2		1			0	0		
Lecce			30.28	769.0	68.7	20.4	69	NNW	18.6	8.3			1			0	0		
Cosenza			30.29	769.3	68.5	20.3	62	NW			2		10			0	0		
Catania, (Sicily)																			
Riposto			30.14	765.6	70.7	21.5	85	NE			4		9	NW		0	0		
Palermo			30.13	765.2	72.9	22.7	62	NE	4.9	2.2			2			0	0		
Sub-Series.																			
Naples, S. R.			30.30	769.6	73.8	23.2	52	E			7		..es			0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for twenty-four hours. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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			30.40	772.2	60.1	15.6		WNW			4								
Groningen			30.12	765.1	51.7	14.3		W			6								
Helder			30.21	767.3	59.2	15.1		WSW			5								
Utrecht			30.26	768.7	60.6	15.9		WSW			5		8						Very cloudy

Note.—The originals give the wind-pressure in kilograms per square meter; the 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			29.58	751.2	47.5	8.6	89	NNW	13.7	6.1			3			0.559	14.2		
Christiania			29.40	746.7	48.4	9.1	57	N	14.3	6.4			10			0	0		
Tromsö			29.23	742.5	39.6	4.2	90	W			6		10			0.039	1.0		

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.21	767.3	76.8	24.9	43	SW	7.4	3.3			0						The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			30.21	767.2	56.7	13.7	56	W	18	8			8						Astronomical Obs.
Wilna			30.08	764.1	53.1	11.7	78	SW	8	3.5			8						Astronomical Obs.
Dorpat			29.82	757.5	53.4	11.9	59	WSW	13	6			5						Physical Cabinet.
St. Petersburg			29.70	754.3	52.5	11.4	65	SW	11	5			7						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kieff			30.17	766.2	66.2	19.0	75	NW	9	4			6						Physical Cabinet.
Nikolaiev			30.21	767.2	67.8	19.9	41	W	4	2			0						Kurdekof.
Kertch			30.14	765.6	65.7	18.7	72	NW	7	3			5						Lagorio.
Moscow			30.05	762.3	53.2	11.8	72	S	10	4.5			8						Meteorological Obs.
Lugan			30.00	762.0	64.6	18.1	65	NNW	10	4.5			9						Meteorological Obs.
Archangel			29.18	748.7	46.2	7.9	89	SW	10	4.5			8						Ogorodnikof.
Tiflis	28.71	729.3	30.10	764.4	69.1	20.6	52	S	8	3.5			6						Physical Obs.
Astrakhan			30.18	766.5	68.2	20.1	51	WSW	4	2			4						Sebastianof.
Kasan			30.02	762.4	60.4	15.8	66	WSW	4	2			8						Physical Cabinet.
Orenburg			30.19	766.9	58.3	14.6	60	Calm	0	0			10					Raining	Tschernischef.
Ekaterinburg	29.22	742.3	30.24	768.8	46.2	7.9	73	SE	4	2			0						Meteorological Obs.
Kasaly			30.21	767.2	64.6	18.1	37	Calm	0	0			0						Bobrof.
Tashkend																			Michelson.
Barnaul			30.18	766.6	50.5	10.3	44	Calm	0	0			0						Meteorological Obs.
Yeniseisk			30.11	764.8	37.2	2.9	76	W	4	2			10						Marks.
Irkutsk																			Usolzef.
Oorga	25.71	653.1	30.11	764.9	31.3	− 0.4	85	Calm	0	0			0						Mossin.
Peking (China)			30.13	765.4	55.8	13.2	50	W	4	2			5						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.19	766.7	77.5	25.3	44	E	2.9	1.3		0	0			0	0	Clear	Royal Observatory.
San Fernando			30.16	766.1	82.2	27.9	45	ESE	31.3	14.0		1	0	ESE		0	0		The Naval Observatory.

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

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Haparanda			29.18	741.7	43.9	6.6	83	SW			2		10			0	0		
Umea			29.30	744.2	47.5	8.6	78	N			2		2			0	0		
Hernosand			29.35	745.4	54.7	12.6	45	WNW			2		4			0	0		
Stockholm			29.41	746.9	48.9	9.4	91	SSW			6		10			0	0		
Wisby			29.62	752.4	51.8	11.0	87	WSW			7		10			0	0		
Sub-Series.																			
Upsala			29.41	747.0	48.0	8.9	94	S	14.1	6.3			10					Raining	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	29.01	736.8	30.43	772.8	57.0	13.9	67	NW			3		7			0	0	Cloudy	The Observatory.
Zurich	28.81	731.8	30.43	773.0	58.8	14.9	69	W			1		4			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +10.5mm.; Thermometer, −0°.6; Relative Humidity, −2 per cent.

Note.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y			30.04	762.9	78.1	25.6	60	W			2		3k, 8			0	0		Prof. C. N. A. Van Dyck
Constantinople			30.24	768.1	62.4	16.9	77	NNE	16.8	7.5			8		NNE	0	0	Cloudy	
Fao, (Persian Gulf)			29.97	761.0	86.0	30.0		NW			3		0					Clear	
Salonica					73.8	23.2		NE			1		0					Clear	
Valona			30.19	766.8	72.0	22.2		W			2		0					Clear	
Varna			30.24	768.2	62.6	17.0		NE			2		0					Clear	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario			30.00	762.0	44	6.7		W	5	2.2		0	5s		W	0.18	4.6	Fair	
Chatham, N. B.			30.37	771.4	43	6.1	85	E	3	1.3			10ks		SE	0	0	Cloudy	
Charlottetown, P. E. Island			30.14	773.2	48	8.9	80	SE	13	5.8			8ks		SE	0	0	Cloudy	
Fort Garry, Manitoba			30.06	763.5	33	0.6	98	NW	5	2.2		5k	2ks	NW		0	0	Cloudy	
Halifax, N. S.			30.34	770.6	50	10.0	79	SE	15	6.7			8n		SE	0	0	Cloudy	
Kingston, Ontario			30.03	762.7	45	7.2	76	W	8	3.6			10ks		W	0.29	7.4	Cloudy	
Montreal, Quebec			29.90	759.4	50	10.0	79	W	17	7.6			10n		W	0.37	9.4	Light rain	
Ottawa, Ontario			29.86	758.4	45	7.2	85	E	20	8.9		2k	5n	E	W	0.10	2.5	Clearing	
Parry Sound, Ontario			30.00	762.0	38	3.3	81	NW	3	1.3		2ck	2ks	W	W	1.07	27.2	Fair	
Port Dover, Ontario			30.14	765.5	41	5.0	83	W	7	3.1		0	0			0.55	14.0	Clear	
Fort Stanley, Ontario			30.10	764.5	40	4.4	81	W	10	4.5		0	0			0.72	18.3	Clear	
Quebec, Quebec			30.01	762.2	41	5.0	100	N	25	11.2			10n		N	0.39	9.9	Heavy rain	
Saugeen, Ontario			30.03	762.7	42	5.6	84	NW	7	3.1			10n		NW	0.71	18.0	Cloudy	
Stayner, Ontario			29.96	761.0	41	5.0	80	NW	3	1.3			10n		NW	0.66	16.8	Cloudy	
Sydney, C. B.			30.57	776.5	44	6.7	84	SE	7	3.1			10n		SE	0	0	Cloudy	
Toronto, Ontario			30.05	763.3	45	7.2	84	W	15	6.7		5ck	5ks	NW		1.08	27.4	Cloudy	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.93	760.2	53	11.7	100	N	2	0.9			Fog			0.35	8.9	Foggy	
Alpena, Mich			30.01	762.2	34	1.1	90	SW	6	2.7			10s		SW	1.76	44.7	Cloudy	
Atlantic City, N. J			29.90	759.4	66	18.9	94	SW	8	3.6			10s		SW	0.53	13.5	Threatening	
Augusta, Ga.			29.97	761.2	67	19.4	89	N	4	1.8		0	0			0.14	3.6	Clear	
Baltimore, Md			30.02	762.5	59	15.0	70	NW	8	3.6		5k	5ks			0.06	1.5	Clearing	
Barnegat, N. J			29.89	759.2	66	13.3	100	S	5	2.2			10s			0.10	2.5	Cloudy	
Benton, Montana	27.32	693.9	30.12	765.0	42	5.6	83	Calm	0	0		0	0			0	0	Clear	
Bismarck, Dakota	28.31	719.1	29.98	761.5	43	6.1	75	N	8	3.6			10ks		N	0	0	Cloudy	
Boston, Mass			29.91	759.7	62	16.7	100	SE	22	9.8			10s			1.05	26.7	Threatening	
Breckenridge, Minn			30.07	763.8	38	3.3	90	Calm	0	0			10s			0	0	Cloudy	
Buffalo, N. Y.			30.07	763.8	43.5	6.4	67	W	12	5.4			10ks			0.71	18.0	Cloudy	
Burlington, Vt			29.93	760.2	54	12.2	100	W	10	4.5			10n			0.21	5.3	Light rain	
Cairo, Ill			30.24	768.1	51	10.6	72	NE	4	1.8			10s		NE	0	0	Cloudy	
Cape Hatteras, N. C			29.88	748.9	71	21.7	90	SE	4	1.8		8ek	0			0.56	14.2	Cloudy	
Cape Henry, Va			29.94	760.5	69	20.6	92	NW	6	2.7			10s		NW	0.10	2.5	Cloudy	
Cape May, N. J			29.92	760.0	60	15.6	88	NW	24	10.7			10s		NW	0.14	3.6	Clearing	
Charleston, S. C			29.97	761.2	69	20.6	90	NW	3	1.3		5k	2s	N	NW	1.24	31.5	Clearing	
Cheyenne, Wyoming	24.22	615.2	30.16	766.1	43	6.1	42	W	12	5.4		0	0			0	0	Clear	
Chicago, Ill			30.14	765.5	43	6.1	75	SW	8	3.6		5es	0			0.05	1.3	Fair	
Cincinnati, Ohio			30.17	766.3	51	10.6	72	NW	7	3.1			10s			0.79	20.1	Cloudy	
Cleveland, Ohio			30.13	765.3	47.9	8.8	59	W	8	3.6		2k	0	NW		0.80	20.3	Fair	
Colorado Springs, Col	24.30	617.2	30.17	766.3	43	6.1	67	N	6	2.7		0	0			0	0	Clear	
Corsicana, Tex			30.19	766.8	52	11.1	86	N	6	2.7		0	0			0	0	Clear	
Davenport, Iowa			30.15	765.8	43	6.1	83	SW	12	5.4		6ek	Fog	W		Inap.	Inap.	Fair	
Denison, Tex			30.20	767.1	50	10.0	86	Calm	0	0		0	0			0	0	Clear	
Denver, Col	25.00	635.0	30.22	767.6	44	6.7	60	S	4	1.8		2e	0			0	0	Clear	
Detroit, Mich			30.11	764.8	42	5.6	91	SW	5	2.2		2k	5ks	W	W	0.91	23.1	Fair	
Dodge City, Kan	27.54	699.5	29.84	757.9	50	10.0	72	NW	6	2.7		0	0			0	0	Clear	
Dubuque, Iowa			30.13	765.3	46	7.8	69	W	8	3.6		5ek	0	N		0.04	1.0	Fair	
Duluth, Minn			30.01	762.2	38	3.3	71	W	12	5.4		0	0			0.05	1.3	Clear	
Eastport, Me			30.21	767.3	49	9.4	83	SE	19	8.5			10s			0	0	Threatening	
Erie, Pa			30.08	764.0	47	8.3	62	W	16	7.2		0	8ks			0.48	12.2	Fair	
Escanaba, Mich			29.97	761.2	38	3.3	81	W	7	3.1			10s		W	0	0	Cloudy	
Fort Gibson, I. T			30.24	765.5	41	5.0	91	Calm	0	0		0	1s			0	0	Clear	
Fort Sill, I. T	28.99	730.3	30.13	765.3	46	7.8	84	Calm	0	0		0	Fog			0	0	Clear	
Fort Sully, Dakota	28.33	720.8	30.06	763.5	42	5.6	79	NW	4	1.8		0	0			0	0	Clear	
Galveston, Tex			30.08	764.0	74	23.3	90	NE	15	6.7			10ks		NE	0	0	Threatening	
Grand Haven, Mich			30.08	764.0	50	10.0	86	W	15	6.7			10s		W	0.66	16.8	Cloudy	
Indianapolis, Ind			30.20	767.1	49	9.4	63	W	4	1.8		5es	2s		W	0.13	3.3	Fair	
Indianola, Tex			30.12	765.0	74	23.3	95	NE			3	2ek	5s	W		0	0	Cloudy	
Jacksonville, Fla			29.99	761.7	72	22.2	85	NW	4	1.8		0	0			0.87	22.1	Clear	
Keokuk, Iowa			30.14	765.5	45	7.2	84	SW	8	3.6		5e	0	SW		0.03	0.8	Fair	
Key West, Fla			30.03	762.7	82	27.8	67	N	12	5.4		5es	2ks	NW		0	0	Fair	
Kittyhawk, N. C			29.91	759.7	69	20.6	100	N	7	3.1		0	10s		N	0	0	Cloudy	
Knoxville, Tenn			30.13	765.3	53	11.7	70	Calm	0	0		5k	0	W		0.80	20.3	Fair	
La Crosse, Wis			30.07	763.8	45	7.2	84	NW	7	3.1		5k	2s	NW	NW	0	0	Cloudy	
Leavenworth, Kan			30.18	766.6	46	7.8	85	S	4	1.8			10s		NW	0	0	Cloudy	
Lexington, Ky	29.08	738.6	30.20	767.1	48	8.9	77	NW	4	1.8			10s			0.41	10.4	Cloudy	
Long Branch, N. J			29.90	759.4	65	18.3	94	SW	8	3.6			10s		SW	0.57	14.5	Cloudy	
Louisville, Ky			30.22	767.6	50	10.0	72	N	8	3.6			10s			0.35	8.9	Cloudy	
Lynchburg, Va			29.99	761.7	60	15.6	55	NW	8	3.6		0				Inap.	Inap.	Clear	
Malone, N. Y.			29.89	759.2	50	10.0	71	SW	16	7.2			10s			0.15	3.8	Cloudy	
Marquette, Mich			29.92	760.0	41	5.0	74	W	8	3.6		5es	5s			0	0	Cloudy	
Memphis, Tenn			30.24	768.1	50	10.0	86	NE	6	2.7		1e	Sm'e			0.03	0.8	Clear	
Milwaukee, Wis			30.09	764.3	42	5.6	74	SW	12	5.4			8ks			0.19	4.8	Fair	
Mobile, Ala			30.09	764.3	69	20.6	90	N	9	4.0			10s		N	0	0	Cloudy	
Montgomery, Ala			30.10	764.5	60.5	15.8	88	N	6	2.7		0	0			0.59	15.0	Clear	
Morgantown, W. Va			30.13	765.3	48	8.9	70	N	4	1.8			10s			0.49	12.4	Cloudy	
Mt. Washington, N. H	23.72	602.5	30.08	764.0	37	2.8	100	S	38	17.0			10n			0.45	11.4	Heavy rain	
Nashville, Tenn			30.17	766.3	54	12.2	73	N	4	1.8		10k	0	N		0.16	4.1	Cloudy	
New Haven, Conn			29.90	759.4	56	13.3	100	NE	6	2.7			10n			0.73	18.5	Light rain	
New London, Conn			29.92	760.0	64	17.8	97	S	10	4.5			10n			1.69	42.9	Light rain	
New Orleans, La			30.08	764.0	71	21.7	95	NE	6	2.7			Fog			0	0	Foggy	
Newport, R. I			29.92	760.0	62	16.7	100	SE	16	7.2			10n		SW	1.20	30.5	Light rain	
New York, N. Y			29.90	759.4	63	17.2	100	S	8	3.6			10n		S	0.71	18.0	Light rain	
Norfolk, Va			30.03	762.7	68	20.0	89	NW	5	2.2		2k	5s			0.04	1.0	Clearing	
North Platte, Neb	27.20	690.9	29.81	757.2	42	5.6	91	SW	4	1.8			10s			0	0	Cloudy	
Omaha, Neb.	28.98	736.1	30.05	763.3	50	10.0	86	S	6	2.7			10s		W	Inap.	Inap.	Cloudy	
Oswego, N. Y			30.04	763.0	47	8.3	71	W	14	6.3			10s		NW	0.28	7.1	Threatening	
Peck's Beach, N. J			29.92	761.0	62	16.7	94	N	20	8.9			10n			0.51	13.0	Light rain	
Pembina, Dakota			30.04	763.0	31	—0.6	89	NW	4	1.8		8ek	0	NW		0	0	Cloudy	
Philadelphia, Penn			29.96	761.0	57	13.9	81	N	24	10.7			10ks			0.09	2.3	Cloudy	
Pike's Peak, Colorado	17.99	456.9	30.20	767.1	25	—3.9	88	E	20	8.9		0	0			0	0	Clear	
Pittsburgh, Penn			30.13	765.3	48	8.9	63	SW	6	2.7			10s		NW	0.44	11.2	Cloudy	
Port Huron, Mich			30.14	765.5	37	2.8	90	NW	7	3.1			10s		W	1.20	30.5	Cloudy	
Portland, Me			30.00	762.0	54	12.2	100	SE	28	12.5			10n			0.70	17.8	Light rain	
Portland, Oregon			30.15	765.8	55	12.8	93	Calm	0	0			Fog			0	0	Foggy	
Punta Rassa, Fla			30.05	763.2	78	25.6	84	N	4	1.8		8es	2ks	SW		0	0	Cloudy	
Rochester, N. Y			30.04	762.7	45	7.2	68	W	12	5.4			10s		W	0.35	8.9	Cloudy	
Salt Lake City, Utah	25.82	655.8	30.15	765.8	56	13.3	20	SE	2	0.9		0	0			0	0	Clear	
Sandy Hook, N. J			29.88	758.9	62	16.7	100	W	20	8.9			10n		NW	0.66	16.8	Heavy rain	
San Diego, Cal			29.87	758.7	70	21.1	56	S	4	1.8		0	8s			0	0	Fair	
San Francisco, Cal			29.94	760.5	55	12.8	87	Calm	0	0		0	0			0	0	Clear	
Santa Fe, N. M	23.40	594.4	29.94	760.5	44	6.7	52	NE	12	5.4		2e	0	SW		0	0	Clear	
Savannah, Ga.			29.97	761.2	67	19.4	94	SW	1	0.4			Fog			2.02	51.3	Foggy	
Shreveport, La			30.22	767.6	58	14.4	88	N	5	2.2		0	0			0.43	10.9	Clear	
Smithville, N. C																			
Springfield, Mass			29.90	759.4	55	12.8	87	N	1	0.4			10n d		N	0.75	19.1	Light rain	
St. Louis, Mo			30.27	768.8	49	9.4	72	NW	4	1.8			10s			0	0	Cloudy	
St Marks, Fla			30.02	762.5	71	21.7	95	W	2	0.9		0	2s		W	0	0	Fair	
St. Paul, Minn			30.05	763.3	41	5.0	83	Calm	0	0			10s		NW	0	0	Cloudy	
S. Paul's Island, Alaska																			
Squa Beach, N. J			29.84	757.9	56	18.9	100	SW	16	7.2			10n		SW	0.47	11.9	Light rain	
Toledo, Ohio			30.12	765.0	67	8.3	85	SW	8	3.6		0	0			0.67	17.0	Clear	
Tucson, Arizona																			
Tybee Island, Ga			29.95	760.7	67	19.4	100	NW	2	0.9			Fog			0.15	3.8	Foggy	
Vicksburg, Miss			30.24	768.1	58	14.4	93	NE	4	1.8		8k	0	N		0	0	Cloudy	
Virginia City, Montana	24.36	618.7	29.84	757.9	43	6.1	58	Calm	0	0		1e	0	W		0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.02	762.5	57	13.9	62	NNW	12	5.4		0.	5s		SW	0.32	8.1	Clearing	
Wilmington, N. C.			29.93	760.2	69	20.6	95	N	6	2.7			8s		N	0.38	9.7	Cloudy	
Wood's Hole, Mass.			29.94	760.5	64	17.8	100	SE	24	10.7			10n			0.36	9.1	Light rain	
Wytheville, Va.	27.72	704.1	29.87	758.7	50	10.0	71	NW	7	3.1		10k		NW		0.21	5.3	Cloudy	
Yankton, Dakota	28.74	730.0	30.03	762.7	49	9.4	92	E	2	0.9		0	5s			0	0	Fair	
Yuma, Arizona			29.90	759.4	71	21.7		Calm	0	0		8ck	2s			0	0	Cloudy	
Sub-Series.																			
Bridgetown, B'b'does, W. I.					82	27.8	86	NE	6	2.7		5ck	5s	E	E	0	0	Fair	E. Racker.
Pointe-aPitre, G'd'loupe, do			29.99	761.7	81	27.2	79	SE				8ks	5k			0	0	Clear	L. V. Bigard.
Havana, Cuba, W. I.			30.02	762.5	80	26.7	82	Calm	0	0		5c	2k	N	NE	0	0	Fair	Charles Hasselbrink.
Kingston, Jamaica, W.			30.21	767.3	80	26.7	78	Calm	0	0		1k	1s	SE	SE	0	0		James Gall.
St. Thomas, St. T., W. I.			30.24	768.1	82	27.8	78	S	7	3.1		2ck	2k	S	S	0	0	Clear	W. S. Cameron.
Santiago de Cuba, W. I.			29.83	757.7	78	25.6	72	Calm	0	0		0	2k		S			Fair	Robert Mason.
St. Georges, Bermudas			30.11	764.8	77.5	25.3	84	SE	6	2.7		5c	5k		SE	0	0	Fair	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.			29.84	757.9	39.5	4.2	100	NE	4	1.8			10n			0	0	Foggy	J. Fortescue.
St. John's, Newfoundland																			John Delaney.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Clifton, Jamaica, W. I.	27.25	692.1	30.03	762.7	68	20.0	84	S	1.0	0.4		0	0			1.71	43.4		C. Partridge.
Navassa																			
Medellin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			30.14	765.5	46	7.8		W	4	1.8			8ks			0	0	Cloudy	H. M. Redington.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; 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.; Virginia City, 5,180 (?) ft., or 1,579.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 8, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.07	763.7	77.0	25.0	66	N			1		0			0	0		Charnot.
Algiers			30.06	763.5	77.7	25.4	71	NNE			2		0			0	0		Peter.
La Calle																			Kuntz.
Tunis			30.15	765.7	75.6	24.2	66	E			3		4			0.248	6.3	Cloudy	Jacques.
Sfax			30.14	765.6	72.0	22.2	79	NE			4		6			0.079	2.0	Cloudy	Chauvey.
Saïda			30.09	764.3	78.8	26.0	30	S			1		1			0	0		Grosjean.
Tebessa			30.15	765.8	65.3	18.5		NW			1		6			0.197?	5.0?	Cloudy	Colin.
Geriville			30.10	764.5	68.0	20.0	51	W			1		3			0	0		Bernadach.
Laghouat			30.10	764.6	73.4	23	44	S			2		2			0	0		Simon.
Biskra			30.13	765.3	83.1	28.4	33	S			2		6			0	0		Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.37	771.3	61.9	16.6	66	NE			2		2			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.32	770.2	55.9	13.3	67	W			3		8			0	0		I. R. Observatory.
Eperies			30.[illegible]6	768.7	65.8	18.8	64	Calm			0		10			0	0		Julius Mikolik.
Gratz	29.13	740.0	30.23	770.4	59.5	15.3	71	SW			2		0			0	0		Andreas Rospini.
Hermannstadt	28.86	733.0	30.20	769.3	57.9	14.4	45	NW			4		0			0	0		Prof. Reissenberger.
Kremsmünster	28.96	735.6	30.31	769.9	55.0	12.8	73	ENE			1		0			0	0		Prof. C. Wagner.
Lemberg			30.19	766.9	52.5	11.4	57	NW			4		7			0	0		Dr. T. Stanecki.
Nyiregyhaza			30.31	769.8	60.1	15.6	62	SW			1		0			0	0		Habzsuda Daniel.
Pola			30.29	769.3	68.4	20.2	57	WNW			0		0			0	0		I. R. Hydrographic Of'ce
Szegedin			30.32	770.1	59.9	15.5	58	E			1		0			0	0		Karl Stancel.
Trieste			30.28	769.0	70.0	21.1	74	W			0		0			0	0		Prof. V. Farolfi.
Vienna			30.31	769.9	62.0	17.0	53	E			1		1			0	0		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 9 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.19	766.9	58.1	14.5	70	SSE			2	2	3	WSW		0	0	Halo	Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.78	756.4	57.0	13.9		S	26	11.6			4			0.010	0.25	*D. clouds	William Boswell.
Ardrossan			29.77	756.1	58	14.4		SSW			5		6					*D. clouds	Wm. McNeil.
Armagh Observatory			29.75	755.6	57.5	14.2		S	20	8.9			9					Squally	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			29.95	760.7	57.2	14.0		S			2		10					Overcast	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.74	755.4	57.3	14.1		S			1		10					Overcast	J. Dreyer.
Bradford			29.93	760.2	58.7	14.8		S			1		9					Gloomy	J. McLandsborough.
Bridgetown, (Barbadoes)			29.94	760.5	84.0	28.9		SE			1		2					*D. clouds	T. H Hunt.
Cambridge Observatory			30.07	763.8	57.0	13.9		S			1		10					Overcast	Sergeant Hunt, A.H.C.
Cape Good Hope Obs			30.11	764.0	61.4	16.3	65	W	17	7.6			6						The Staff, for E. J. Stone.
Cardington			30.09	761.3	58.0	14.4		SW					10					Overcast	John McLaren.
Carlisle			29.94	760.5	61	16.1		S					8			0.16	4.1	*D. clouds	Bell, for J. Cartmell.
Chatham, School M. E.			30.10	764.5	60.2	15.7		SW			2		8					*D. clouds	Major C. W. Martin, R. E.
Dartmoor	28.63	727.2	30.00	762.0	50.2	10.1		S			2		10					Overcast	R. E. Power.
Donaghadee			29.77	756.1	59	15.0		S			4		5					*D. clouds	J. Mac Gowan, Jr.
Dover			30.10	764.5	58	14.4		S			4		3						J. Costello.
Eccles, (near Manchester)			29.97	761.2	58.4	14.7		SSE	18.2	3.7			10					Squally	Thomas Mackereth.
Falmouth Observatory			30.01	762.2	57.6	14.2		SSE	22	9.8			9					Overcast	The Staff.
Fort Napier, (Natal)	27.52	699.0	29.73	755.1	89.8	32.1		S			2		1					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.95	760.7	87	30.6		N					7						
Galway, Queen's College																			B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.06	763.5	73.5	23.1		NE			5		8					Gloomy	Sergt. E. G. Baker.
Glasgow Observatory			29.75	755.6	59.2	15.1		SSW			5		6					Fine	Lewis Stuart.
Great Yarmouth			30.11	764.8	60	15.6		SSW			3		3					Clear	G. T. Watson.
Greenwich Royal Obs			30.10	764.5	60.7	15.9		SSW			2		9					Cloudy	The Staff, for G. B. Airy.
Guernsey			30.05	763.3	60	15.6		SE			2		0					Clear	Dr. S. E. Hoskins.
Halifax, Moorside Obs			29.99	761.7	57.6	14.2		SSW					10					Threatening	F. J. Page, for L. J. Cross.
Heiston			30.00	762.0	60	15.6		SE			4		5					*D. clouds	M. P. Moyle.
Holyhead			29.88	758.9	55	12.8		WSW			6		10					Squally	John Tilston.
Kew Observatory			30.10	764.5	58.2	14.6		S	12	5.4			9					*D. clouds	The Staff.
Kingstown			29.84	757.9	58	14.4		S			4		6					*D. clouds	George Mitchell.
Leicester Museum			30.06	763.5	58.9	15.5		SW			2		10					*D. clouds	William J. Harrison.
Llandudno			29.92	760.0	57.7	14.3		SW					8					Overcast	Dr. James Nicol.
Malta, (Mediterranean)			30.24	768.1	68.4	20.2		SE			2		6			Blank	Blank		Fred Travis, Pvt A.H.C.
Nairn			29.62	752.3	62	16.7		SW			1		5						W. D. Penny.
Nassau, (Bahamas)			30.04	763.0	82.4	28.0		N			3		4					*D. clouds	Surg.-Maj. Henry.
Nottingham			30.03	762.7	59.0	15.0		S			4		10k, d		S			Overcast	E. J. Lowe.
Oscott, St Mary's College			30.01	762.2	54.1	12.3		S			2		10					Raining	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			30.04	763.0	58	14.4		S			2		10					Overcast	J. Lucas, for R. Main.
Plymouth			30.04	763.0	56.8	13.8		S			4		10					Overcast	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.82	757.4	57	13.9		SSW			6		8					Dull	W. Kennedy.
Saint Ann's Head			29.96	761.0	55	12.8		SW			6		10					Threatening	John C. Walker.
Saint Helier, (Jersey)			30.05	763.3	62.0	16.7		SE			2		0						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			30.01	762.2	58.3	14.6		SSW			3		8					Overcast	F. Shaw.
Scutari cemetery, (Turkey)			30.26	765.6	66.0	18.9		NE			2		2					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.00	762.0	58.0	14.4		SW			2		10					Overcast	W. F. Cooper.
Silloth Rectory			29.86	758.4	59.1	15.1		SSW			5		7			0.140	3.56	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			29.94	760.5	57.9	14.4		S			4		10			Blank	Blank	Threatening	The Staff.
Stornoway, Lews C. (Hebr.)																			John Smith.
Strathfield Turgiss			30.10	764.5	59.2	15.1		S			1		8					*D. clouds	Rev. Charles H. Griffith
Streatley Vicarage			30.06	763.5	61.5	16.4		SSW			3		5						Rev. John Slatter.
Thurso			29.57	751.1	61	16.1		SSW			6		8					Overcast	John Trotter.
Truro, Royal Institution			29.94	760.5	62	16.7		SE			4		7					Gloomy	W. Newcombe.
Valencia Observatory			29.81	757.2	48.3	9.1		WNW	12	5.4			10					Raining	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					53	11.7		SW			9					0	0		
Leith, Restalrig Park			29.82	757.4	58.2	14.6		SW			3		10k			0.01	0.3	Cloudy	Andrew Gibb.
Monach Lt-house, (Shet. Is)			29.54	750.3	51	10.6		NW			7		10			0.5	12.7		J. Youyclause.
North Unst, (Shetland Is)			29.59	751.6	54	12.2		S			7	10	2						

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., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			30.21	767.2	53.8	12.1	66	WNW			4		6						
Fanöe			30.19	766.9	59.0	15.0	83	SW			2		8						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.21	741.9	34.2	1.2	87	NE			10		10					Snowing	
Thorshavn, (Faröe)			29.21	742.0	50.5	10.3	74	SW			7		8						
Vestervig			30.19	765.4	55.4	13.0	98	SW			2		4						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.08	763.9	62.6	17.0	56	SW			1		0			0	0	Clear	Normal School.
Amiens			30.21	767.4	61.5	16.4	66	S			3		2		S	0	0		Normal School.
Avignon			30.22	767.5	72.3	22.4	63	SSE			2		..nk		SE	0	0		Normal School.
Bar-sur Seine			30.15	765.9	62.2	16.8	63	W			4		1k			0	0	Clear	C. Saillard.
Beaumette, (near Angers)			30.06	763.4	64.9	18.2	47	S	6.4	2.7			0			0	0	Clear	Beaumette Observatory
Beauvais			30.21	767.2	57.7	14.3	63	SSE			1		2		SSE	0	0		Normal School.
Besançon			30.06	763.4	59.4	15.2	72	ESE			2		0			0	0		Normal School.
Bourg en Bresse			30.21	767.2	65.8	18.8	73	E			1		0			0	0	Clear	Normal School.
Bourges			30.11	764.7	61.7	16.5	64	E			2		0			0	0	Clear	Normal School.
Brest			29.97	761.2	64.6	18.1	50	S			1		0			0	0	Clear	Naval Observatory.
Caen			30.08	763.9	60.3	15.7	64	W			4		0			0	0	Clear	Normal School
Chartres																			Normal School.
Chaumont	29.03	737.3	30.18	766.6	57.9	14.4		S			6		0			0	0	Clear	Normal School.
Commercy			30.25	768.3	54.5	12.5	65	SE			4		1		SE	0	0	Clear	Normal School.
Commune de Gréasque*			30.29	769.4	73.9	23.3	49	SE			4		2		SE	0	0		
Le Mans																			Normal School.
Lons-Le Saulnier			30.21	767.4	57.4	14.1	84	NW			1		0			0	0	Clear	Normal School.
Mâcon			30.19	766.8	59.0	15	87	SE			2		0			0	0	Clear	Normal School.
Mirecourt			30.21	767.3	57.7	14.3	72	N			2		2		N	0	0		Normal School.
Orleans			30.14	765.6	60.8	16	67	SSE			3		2		E	0	0		Normal School.
Paris Observatory			30.14	765.6	59.5	15.3	56	SE			3		3			0	0	Slightly cl'dy	National Observatory
Parthenay			30.12	765.0	68.0	20	72	SE			2		0			0	0	Clear	Normal School.
La Roche sur Yon			30.05	763.2	37.3	19.6	60	S			6		0			0	0	Clear	Normal School.
Rochefort, Observatory			30.04	763.1	69.8	21.0	46	SSE			3		0			0	0	Clear	Naval Observatory.
Rouen			30.14	765.6	61.2	16.2	56	SE			3		0			0	0	Clear	Normal School.
Saint Lo			30.07	763.6	60.3	15.7	73	SE			2		1		W	0	0		Normal School.
Villefranche			30.17	766.2	61.0	16.1	79	SE			2		2		N	0	0		Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchesi.
Mont-Louis			30.37	771.3	59.1	15.2	56	SSW	24.2	10.83			1		SW	0	0		—. Falguère.
Montsouris Observatory			30.13	765.2	61.2	16.2	60	SE			2	3c	0			0	0		Marié Davy.
Perpignan	†30.24	†768.1			72.0	22.2	72	SE	9.3	4.17			1		ESE	0	0		Dr. Fines.
Pic du Midi, (Summit) H. P.	21.41	543.9			49.5	9.7	45	SSW			2		4			0	0		M. Baylac.
Pic du Midi, (Plantade) H.P.																			General de Nansouty.
Saint Maur, (near Paris)			30.13	765.3	60.8	16.0	60	ESE			2	1c	0			0	0	Clear	E. Renou.
Tours			30.05	763.3	61.9	16.6		SE			1		2			0	0		C. Marquet.
Versailles, (near Paris)			30.13	765.2	61.5	16.4	56	SE			3		5			0	0		Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.12	765.1	62.1	16.7	94	NE	1.3	0.6			10kn			0 / 0.004	0 / 0.1	Misty	H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 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. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also.

GERMAN SERIES.

Furnished by the coöperation of Prof. Geo. Neumayer, Superintendent Royal 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.34	770.6	56.3	13.5	69	W	13	6			3			0	0		Prof. Hoh.
Berlin			30.31	769.8	59.5	15.3	60	S	4	2			8			0.027	0.68		Prof. Arndt.
Breslau			30.38	771.6	57.0	13.9	54	W	18	8			7			0	0		Dr. P. Neugebauer.
Carlsruhe			30.23	767.8	61.2	16.2	62	E	11	5			0			0.110	2.8		A. Senz.
Cassel			30.19	766.9	65.1	18.4	55	S	9	4			2			0	0		Dr. H. Möll.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.92	734.5	30.38	771.6	50.9	10.5	74	W					0			0	0	Light fog	M. Wilhelm.
Hamburg			30.30	769.5	58.6	14.8	80	SSW	9	4			4k	W		0	0	Half clear	Deutsche Seewarte.
Kiel			30.35	770.9	59.2	15.1	73	SW	9	4			7			0	0		Prof. G. Karsten.
Königsberg			30.10	764.5	53.2	11.8	61	W	34	15						0.037	0.95	Clear	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			30.35	770.8	58.1	14.5	75	SW	4	2			8			0	0		Prof. Bruhns.
Münster			30.26	768.6	60.6	15.9	94	NW	4	2			0			0	0		Prof. E. Heis.
Posen			30.30	769.6	56.3	13.5	50	NW	29	13						0	0	Clear	Dr. Magener.
Strassburg, (in Alsace)			30.27	768.8	54.9	12.7	74	Calm	0	0			1			0	0		Dr. Schur.
Stuttgart			30.28	769.0	59.7	15.4	58	E					0			0	0		Mr. Würth.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.19	766.9	58.6	14.8	72	SE	9	4			2			0	0		Prof. Flesch.
Wustrow, Naval School			30.31	769.8	55.4	13.0	74	W	9	4			8k			1.189	3.02	Cloudy	E. F. Schütz.

Note.—In the originals the distinction between 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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens			30.20	767.1	72.9	22.7		NE										Clear	

Note.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.29	769.4	64.8	18.2	81	NW	1.3	0.6			9	SE		0.157	4.0		
Mondovi			30.34	770.7	65.5	18.6	70	NNW			4		7			0	0		
Genoa			30.26	768.5	73.0	22.8	70	SW	3.8	1.7			0			0	0		
Pavia			30.30	769.0	69.1	20.6	64	NE			1		8	NE		0	0		
Verona			30.25	768.3	74.3	23.5	53	E			1		6			0	0		
Padua			30.28	769.0	68.2	20.1	58	NW	1.3	0.6			3	W		0	0		
Parma																			
Bologna			30.32	770.1	70.5	21.4	67	E			1		2	N		0	0		
Leghorn			30.26	768.6	72.3	22.4	56	WSW	1.3	0.6			0			0	0		
Urbino			30.30	769.6	62.6	17.0	73	WSW			4		0			0	0		
Ancona			30.27	768.8	68.0	20.0	71						0			0	0		
Siena			30.24	768.1	71.2	21.8	42	SE	0	0			1	E		0	0		
Rome			30.27	768.9	74.1	23.4	57	WSW	2.5	1.1			3			0	0		
Naples, O. U.			30.24	768.2	76.3	24.6	30	SW			1		0			0	0		
Lecce			30.29	769.3	68.7	20.4	69	NNW	9.4	4.2			1	NNW		0	0		
Cosenza			30.33	770.4	68.4	20.2	62	NW			1		2	SE		0	0		
Catania, (Sicily)																			
Riposto			30.19	766.8	71.4	21.9	75	SE			4		9	NW		0	0		
Palermo			30.18	766.5	72.1	22.3	67	E	3.1	1.4			10			0	0		
Sub-Series.																			
Naples, S. R.			30.32	770.0	74.8	23.8	50	NW			7		..es			0	0		Prof. F. Brioschi.

NOTE.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for twenty-four hours. The altitude of Mondovia is 550 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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	767.2	59.9	15.5		S			4								
Groningen			30.18	766.5	57.7	14.3		S			2								
Helder			30.18	766.6	60.6	15.9		SSW			4								
Utrecht			29.18	766.6	61.5	16.4		SSE			2		5					Cloudy	

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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	51.1	10.6	80	S	18.6	8.3			10			0.142	3.6		
Christiania			30.09	764.3	52.9	11.6	51	SSE	3.1	1.4			3			0	0		
Tromsö			29.96	761.0	34.2	1.2	98	NE			2		5			0.098	2.5		

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 1—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.10	764.6	76.5	24.7	46	SW	17.4	7.8			1						The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

RUSSIAN SERIES.

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

Stations.	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	1—10.	Up'er 1—10.	Low'r 1—10.	Upper. From—	Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Warsaw			30.19	766.9	54.7	12.6	55	W	18	8			8						Astronomical Obs.
Wilna			29.85	758.2	49.5	9.7	79	W	17	7.5			10						Astronomical Obs.
Dorpat			29.70	754.3	48.6	9.2	83	N	7	3			9						Physical Cabinet.
St. Petersburg			29.69	754.1	47.7	8.7	86	Calm	0	0			10					Raining	Central Physical Obs.
Kuopio																			Ch. Forsten.
Kieff			30.06	763.4	53.6	12.4	57	NNW	11	5			4						Physical Cabinet.
Nikolaiev			30.23	767.7	61.5	16.4	52	NW	13	6			0						Kurdakof.
Kertch			30.14	765.6	67.1	19.5	68	NW	4	2			2						Lagorio.
Moscow			29.99	761.8	52.5	11.4	63	SSW	10	4.5			8						Meteorological Obs.
Lugan			29.94	760.4	63.9	17.7	61	NNW	13	6			8			Blank	Blank		Meteorological Obs.
Archangel			29.87	758.7	44.4	6.9	86	WSW	8	3.5			10					Raining	Ogorodnikof.
Tiflis	28.66	727.9	30.07	763.7	59.5	15.3	88	Calm	0	0			10			Blank	Blank		Physical Obs.
Astrakhan			30.07	763.7	68.2	20.1	86	WSW	8	3.5			8						Sebastianof.
Kasan			29.96	761.0	61.0	16.1	68	WSW	0	0			8						Physical Cabinet.
Orenburg			30.17	766.4	61.7	16.5	45	Calm	0	0			3						Tschernischef.
Ekaterinburg	29.10	739.1	30.12	765.0	48.7	9.3	60	E	4	2			0						Meteorological Obs.
Kasaly			30.10	764.4	61.5	16.4	51	NW	8	3.5			10						Bobrof.
Tashkend																			Michelson.
Barnaul			30.19	766.8	52.0	11.1	38	NE	8	3.5			1						Meteorological Obs.
Yeniseisk			30.24	768.0	37.4	3.0	74	WNW	2	1			10						Marks.
Irkutsk																			Usolzef.
Oorga	25.72	653.3	30.15	765.7	34.2	1.2	75	N	6	2.5			0						Mossin.
Peking, (China)			30.11	764.9	51.8	11.0	55	Calm	0	0			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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.	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	1—10.	Up'er 1—10.	Low'r 1—10.	Upper. From—	Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Madrid			30.08	763.9	76.8	24.9	51	E	6.7	3.0		2	3	W		0	0	Light clouds	Royal Observatory.
San Fernando			30.07	763.6	82.2	27.9	45	ESE	26.8	12.0		6	1	ESE	ESE	0	0		The Naval Observatory.

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

SWEDISH SERIES.

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

Stations.	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	1—10.	Up'er 1—10.	Low'r 1—10.	Upper. From—	Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Haparanda			29.94	760.5	42.1	5.6	64	N			2		0			0	0		
Umea			29.96	761.0	50.4	10.2	60	S			2		5			0	0		
Hernosand			29.97	761.1	48.9	9.4	54	N			4		2			0	0		
Stockholm			29.95	760.8	48.7	9.3	57	NW			4		3			0.154	3.9		
Wisby			30.00	761.9	50.0	10.0	67	NW			6		0			0.110	2.8		
Sub-Series.																			
Upsala			30.00	762.0	50.0	10.0	55	NNW	13.9	6.2			2		NNW				Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series 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.	Barometers. Corrected for instrumental errors. Inches.	Barometers. Corrected for instrumental errors. Millimeters.	Barometers. Reduced to sea-level. Inches.	Barometers. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.83	732.2	30.24	768.1	59.2	15.1	68	N			1		0			0	0	Clear	The Observatory.
Zurich	28.67	728.2	30.31	769.8	53.6	12.0	79	SW			1		3			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +4.0mm.; Thermometer, +0°.7; Relative Humidity, —1 per cent.

Note.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Station.	Barometers. Corrected for instrumental errors. Inches.	Barometers. Corrected for instrumental errors. Millimeters.	Barometers. Reduced to sea-level. Inches.	Barometers. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y			30.02	762.6	80.1	26.7	52	WSW			2		9k			0	0		Prof. C. N. A. Van Dyck.
Constantinople			30.39	769.6	61.9	16.6	69	NNE	10.1	4.5			5		NE	0	0	Cloudy	
Fao, (Persian Gulf)			30.01	762.3	81.2	29.0		E			3		0					Clear	
Salonica					71.8	22.1		N			1		0					Clear	
Valona			30.22	767.6	73.8	22.8		W			1		0					Clear	
Varna			30.28	769.0	68.0	20.0		S			2		10					Cloudy	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometers. Corrected for instrumental errors. Inches.	Barometers. Corrected for instrumental errors. Millimeters.	Barometers. Reduced to sea-level. Inches.	Barometers. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario			29.97	761.2	45	7.2		SW	1	0.4			10s		W	0	0	Cloudy	
Chatham, N. B.			29.68	753.9	48	8.9	85	W	10	4.5		2k	8ks	W	W	1.23	31.2	Cloudy	
Charlottetown, P. E. Island			29.60	751.8	56	13.3	93	W	10	4.5			10s			0.590	14.99	Cloudy	
Fort Garry, Manitoba			30.34	770.6	24	— 4.4	96	NW	2	0.9		2k	2s	NW	NW	0	0	Fair	
Halifax, N. S.			29.67	753.6	59	15.0	95	W	8	3.6		5c	2ks	SW	W	1.116	29.4	Fair	
Kingston, Ontario			29.96	761.0	45	7.2	84	Calm	0	0			10s			0	0	Cloudy	
Montreal, Quebec			29.93	760.2	30	3.9	91	SE	10	4.5		Haze	5s			0.01	0.3	Cloudy	
Ottawa, Ontario			29.89	759.2	38	3.3	71	Calm	0	0		5k	5s	SW	SW	0	0	Cloudy	
Parry Sound, Ontario			29.87	758.7	41	5.0	96	W	18	8.0			10n			0.16	4.1	Light rain	
Port Dover, Ontario			29.94	760.5	44	6.7	94	NW	6	2.7			10n		NW	0.22	5.6	Light rain	
Port Stanley, Ontario			29.97	761.2	45	7.2	90	W	8	3.6			10n		W	0.12	3.0	Light rain	
Quebec, Quebec			29.91	759.7	38	3.3	81	Calm	0	0		0	0			0.25	6.3	Clear	
Saugeen, Ontario			29.90	759.4	41	5.0	97	N	12	5.4			10n		NW	0.09	2.3	Light rain	
Stayner, Ontario			30.02	762.5	43	6.1	83	W	3	1.3		5cs	0	W		0.04	1.0	Fair	
Sydney, C. B.			29.60	751.8	63	17.2	98	SW	20	8.9			10n		SW	0.09	2.3	Light rain	
Toronto, Ontario			29.92	760.0	44	6.7	94	SW	7	3.1			10ks			0.06	1.5	Cloudy	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 —10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.99	761.7	42	5.6	83	Calm	0	0		0	Fog			0.03	1.3	Clear, frost.	
Alpena, Mich.			29.92	760.0	38	3.3	80	W	12	5.4		0	0			0.03	0.8	Clear.	
Atlantic City, N. J.			30.08	764.0	45	7.2	84	W	6	2.7		0	0			0.02	0.5	Clear	
Augusta, Ga.			30.15	765.8	57	13.9	63	NE	5	2.2		0	0			0	0	Clear	
Baltimore, Md.			30.13	765.3	50	10.0	78	W	3	1.3		0	0			0	0	Clear	
Barnegat, N. J.			30.05	763.3	48	8.9	79	NW	10	4.5		0	0			0.01	0.3	Clear	
Benton, Montana	27.55	699.8	30.35	770.9	42	5.6	83	Calm	0	0		5c	0			0	0	Fair	
Bismarck, Dakota	28.52	724.4	30.24	768.1	35	1.7	90	NE	3	1.3			10ks			0.52	13.2	Cloudy	
Boston, Mass.			29.95	760.7	44	6.7	76	W	7	3.1		0	Haze			1.50	38.1	Clear	
Breckenridge, Minn.			30.30	769.6	33	0.6	89	NW	4	1.8			10s		N	0	0	Cloudy	
Buffalo, N. Y.			29.91	759.7	44.5	6.9	84	NW	4	1.8			10n		NW	0.13	3.3	Light rain	
Burlington, Vt.			29.95	760.7	43	6.1	67	S	3	1.3		k	0	N		0.03	0.8	Fair	
Cairo, Ill.			30.17	766.3	48	8.9	92	S	4	1.8		0	0			0	0	Clear	
Cape Hatteras, N. C.			30.04	763.0	61	16.1	61	NE	20	8.9		0	5s		NE	0.04	1.0	Fair	
Cape Henry, Va.			30.11	764.8	59	15.0	59	N	16	7.2		0	0			0	0	Clear	
Cape May, N. J.			30.08	764.0	50	10.0	64	NW	6	2.7		0	0			0	0	Clear	
Charleston, S. C.			30.08	764.0	60	15.6	76	N	11	4.9		0	0			0	0	Clear	
Cheyenne, Wyoming	24.28	616.7	30.22	767.6	50	10.0	27	NW	16	7.2		0	0			0	0	Clear	
Chicago, Ill.			30.10	764.5	45	7.2	68	NW	7	3.1		2k	5s	N		0.07	1.8	Fair	
Cincinnati, Ohio			30.08	764.0	52	11.1	72	SW	4	1.8		10-k	0	W		0	0	Cloudy	
Cleveland, Ohio			29.98	761.5	49.7	9.8	90	W	10	4.5			10n		W	0.10	2.5	Light rain	
Colorado Springs, Col.	24.32	617.2	30.20	767.1	50	10.0	52	N	12	5.4		0	0			0	0	Clear	
Corsicana, Tex.			30.22	767.6	55	12.8	93	Calm	0	0		0	0			0	0	Clear	
Davenport, Iowa			30.19	766.8	43	6.1	83	N	8	3.6		5c	5s	W	W	0.04	1.0	Fair	
Denison, Tex.			30.18	766.6	57	13.9	81	S	1	0.4		0	0			0	0	Clear	
Denver, Col.	25.01	635.2	30.23	767.8	47	8.3	41	S	7	3.1		0	0			0	0	Clear	
Detroit, Mich.			29.97	761.2	46	7.8	92	W	6	2.7		2k	8ks	W	W	0.05	1.3	Cloudy	
Dodge City, Kan.	27.54	699.5	29.84	757.9	50	10.0	72	SW	7	3.1		2c	0			0	0	Fair	
Dubuque, Iowa			30.19	766.8	43	6.1	75	NW	4	1.8			10s		NW	0.08	2.0	Cloudy	
Duluth, Minn.			30.28	769.1	32	0.0	79	NW	12	5.4		2k	0			0.02	0.5	Clear	
Eastport, Me.			29.80	756.9	47	8.3	77	NW	12	5.4		0	5s			2.10	53.3	Fair	
Erie, Pa.			29.93	760.2	47	8.3	100	NW	12	5.4			10n			0.18	4.6	Light rain	
Escanaba, Mich.			30.09	764.3	33	0.6	80	NW	14	6.3		5k	0	NW		0.09	2.3	Fair	
Fort Gibson, I. T.			30.17	766.3	47	8.3	85	Calm	0	0		0	0			0	0	Clear	
Fort Sill, I. T.	28.90	735.6	30.09	764.3	50	10.0	86	N	1	0.4		0	0			0	0	Clear	
Fort Sully, Dakota	28.41	721.6	30.11	764.8	40	4.4	91	E	20	8.9			10n		E	0.07	1.8	Heavy rain	
Galveston, Tex.			30.18	766.6	68	20.0	75	NE	11	4.9		0	0			0.11	2.8	Clear	
Grand Haven, Mich.			30.08	764.0	44	6.7	60	N	16	7.2		0	0			0	0	Clear	
Indianapolis, Ind.			30.06	763.5	52	11.1	79	SW	3	1.3		2ck	5ks	SW		0	0	Fair	
Indianola, Tex.			30.19	766.8	73	22.8	85	NE			3	0	0			0.02	0.5	Clear	
Jacksonville, Fla.			30.01	762.2	66	18.9	73	NE	4	1.8		4k	4s	W		0	0	Fair	
Keokuk, Iowa			30.14	765.5	47	8.3	85	NW	4	1.8		5c	0	NW		0	0	Fair, hazy	
Key West, Fla.			29.99	761.7	81.2	27.3	67	NE	10	4.5		2c	2cs	NW	NE	0	0	Fair, hazy	
Kittyhawk, N. C.			30.10	764.5	60	15.6	65	N	24	10.7		2k	0			0	0	Fair	
Knoxville, Tenn.			30.21	767.3	42	5.6	91	NE	2	0.9			Fog			0	0	Foggy	
La Crosse, Wis.			30.22	767.6	36	2.2	80	N	5	2.2		2c	0			0	0	Clear	
Leavenworth, Kan.			30.18	766.6	50	10.0	86	N	2	0.9		0	8s		N	0	0	Fair.	
Lexington, Ky.	29.06	738.1	30.20	767.1	43	6.1	91	S	8	3.6		0	0			0	0	Clear	
Long Branch, N. J.			30.05	763.3	49	9.4	78	NW	5	2.2		0	0			0.03	0.8	Clear	
Louisville, Ky.			30.14	765.5	47	8.3	85	SE	5	2.2		0	0			0	0	Clear	
Lynchburg, Va.			30.15	765.8	49	9.4	78	N	1	0.4		0	Fog			0	0	Foggy	
Malone, N. Y.			29.88	758.9	44	6.7	68	SE	6	2.7			10ks			0	0	Cloudy	
Marquette, Mich.			30.11	764.8	38	3.3	81	NW	10	4.5			8n		NW	0.10	2.5	Light rain	
Memphis, Tenn.			30.22	767.6	48	8.9	85	Calm	0	0		0	Sm'e			0	0	Clear	
Milwaukee, Wis.			30.19	766.8	38	3.3	80	N	8	3.6		2c	0			0.01	0.3	Clear	
Mobile, Ala.			30.14	765.5	55	12.8	80	N	7	3.1		0	0			0	0	Clear	
Montgomery, Ala.			30.15	765.8	52	11.1	79	N	5	2.2		0	0			0	0	Clea	
Morgantown, W. Va.			30.11	764.8	50	10.0	71	SW	5	2.2			10s			0	0	Cloudy	
Mt. Washington, N. H.	23.63	600.2	29.99	761.7	26	3.3	75	NW	18	8.0		0	5s			0.84	21.3	Fair	
Nashville, Tenn.			30.19	766.8	44	6.7	92	Calm	0	0			Fog			0	0	Foggy	
New Haven, Conn.			30.03	762.7	48	8.9	71	NW	4	1.8		Haze	0			0.08	2.0	Clear	
New London, Conn.			30.02	762.5	49	9.4	67	NW	3	1.3		0	0			0.36	9.1	Clear	
New Orleans, La.			30.17	766.3	62	16.7	66	NE	10	4.5		0	0			0	0	Clear	
Newport, R. I.			29.98	761.5	48	8.9	70	NW	8	3.6		0	0			0.66	16.8	Clear	
New York, N. Y.			30.05	763.3	46	7.8	69	NW	4	1.8		0	0			0.05	1.3	Clear	
Norfolk, Va.			30.13	765.3	54.5	12.5	77	N	10	4.5		0	2ks			0	0	Fair	
North Platte, Neb.	27.17	690.1	29.76	755.9	44	6.7	84	Calm	0	0		0	5s			0	0	Fair	
Omaha, Neb.	29.08	737.4	30.16	766.1	48	8.9	77	SE	6	2.7		2cs	0	NW		0	0	Fair.	
Oswego, N. Y.			29.93	760.2	49	9.4	77	S	4	1.8			10s		W	Inap.	Inap.	Threatening	
Peck's Beach, N. J.			30.10	764.5	46	7.8	85	NW	4	1.8		0	0			Inap.	Inap.	Clear	
Pembina, Dakota			30.35	770.9	25	−3.9	93	W	4	1.8		2c	2s	NW		0	0	Fair	
Philadelphia, Penn.			30.07	763.8	47	8.3	69	W	4	1.8		0	0			0	0	Clear	
Pike's Peak, Colorado	18.07	459.0	30.28	769.1	27	−2.8	77	E	4	1.8		0	0			0	0	Clear	
Pittsburgh, Penn.			30.04	763.0	48	8.9	77	SW	10	4.5			10s		W	0	0	Cloudy	
Port Huron, Mich.			29.95	760.7	45	7.2	84	W	9	4.0		2c	5s	W	W	0	0	Cloudy.	
Portland, Me.			29.93	760.2	46	7.8	69	NW	4	1.8		0	0			0.86	21.8	Clear	
Portland, Oregon			30.29	769.4	52	11.1	89	Calm	0	0		Haze	Haze			0	0	Hazy	
Punta Rassa, Fla.			30.00	762.0	76.4	24.7	86	N	4	1.8		5cs	2ks	SW	NE	0	0	Cloudy	
Rochester, N. Y.			29.92	760.0	43	7.8	92	SW	4	1.8			10s		SW	0.02	0.5	Cloudy	
Salt Lake City, Utah	25.90	657.8	30.23	767.8	53	11.7	35	Calm	0	0		0	0			0	0	Clear	
Sandy Hook, N. J.			30.04	763.0	46	8.3	69	NW	8	3.6		0	0			0.07	1.8	Clear	
San Diego, Cal.			30.01	763.0	68	20.0	90	Calm	0	0		0	5ks			0	0	Fair	
San Francisco, Cal.			30.02	762.5	62	16.7	80	W	4	1.8		0	0			0	0	Clear	
Santa Fe, N. M.	23.41	594.6	29.95	760.7	48	8.9	56	E	4	1.8		5c	0	SW		0	0	Fair	
Savannah, Ga.			30.06	763.5	61	16.1	83	N	4	1.8		2k	0	NW		0	0	Fair	
Shreveport, La.			30.26	768.6	54	12.2	93	Calm	0	0		0	0			0	0	Clear	
Smithville, N. C.																			
Springfield, Mass.			30.00	762.0	48	8.9	70	Calm	0	0		0	Haze			0.04	1.0	Clear	
St. Louis, Mo.			30.13	765.3	53	11.7	66	NW	12	5.4		2ck	0	NW		0	0	Fair	
St. Marks, Fla.			30.05	763.3	58	14.4	81	N	8	3.6		0	0			0	0	Clear	
St. Paul, Minn.			30.26	768.6	35	1.7	89	N	3	1.3		5c.cs	5s	NW		0.02	0.5	Cloudy	
St. Paul's Island, Alaska																			
Squa Beach, N. J.			30.00	762.0	45	7.2	76	NW	4	1.8		0	Haze			0.03	0.8	Clear	
Toledo, Ohio			29.99	761.7	50	10.0	83	SW	8	3.6			10s		SW	0.11	2.8	Cloudy	
Tucson, Arizona																			
Tybee Island, Ga.			30.04	763.0	63	17.2	78	N	15	6.7		0	2s			0	0	Fair	
Vicksburg, Miss.			30.28	769.1	53	11.7	86	Calm	0	0		0	Haze			0	0	Fair	
Virginia City, Montana	24.61	625.1	30.09	764.3	44	6.7	36	Calm	0	0		1c	0	W		0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.12	765.0	47	8.3	85	Calm	0	0		0	Sm'e			0	0	Clear	
Wilmington, N. C.			30.10	764.5	53	11.7	67	N	10	4.5		0	0			0	0	Clear	
Wood's Hole, Mass.			29.96	761.0	48	8.9	71	NW	11	4.9		0	0			0.58	14.7	Clear	
Wytheville, Va.	27.78	705.6	30.01	762.2	39	3.9	81	NW	1	0.4		0	0			0	0	Clear, frost	
Yankton, Dakota	28.87	733.3	30.19	766.8	43	6.1	91	NE	2	0.9			10s		NW	0	0	Cloudy	
Yuma, Arizona			29.91	759.7	69	20.6		Calm	0	0		5ck	2ks			Inap.	Inap.	Fair	
Sub-Series.																			
Bridgetown, B'b'does, W. I.					83	28.3	87	NE	7	3.1		5c	5ks	E	SE	0	0	Fair	E. Racker.
Pointe-aPitre, G'd'loupe, do			29.96	761.0	79	26.1	83	SE				5cs	5k			0	0	Clear	L. V. Bigard.
Havana, Cuba, W. I.			29.99	761.7	79	26.1	82	Calm	0	0		10c, k	2n	N	N	0.008	0.20	Fair	Charles Hasselbrink.
Kingston, Jamaica, W.			30.18	766.6	77	25.0	76	Calm	0	0		1k	0	SE		0	0		James Gall.
St. Thomas, St. T., W. I.			29.31	744.5	84	28.9	67	NE	4	1.8		2c	5k	NE	NE	0	0	Fair	W. S. Cameron.
Santiago de Cuba, W. I.			29.80	756.2	78	25.6	78	ENE	1.2	0.5		8c	2k	W	SSW			Fair	Robert Mason.
St. Georges, Bermudas			29.98	761.5	78.5	25.8	86	SE	9.3	4.2		10c	2fk	SE	SE	0.080	2.03	Sultry, hazy.	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.			30.24	768.1	25.5	—3.6	100	NW	15	6.7		8cs	0	NW		0.15	3.8		J. Fortescue.
St. John's, Newfoundland																			John Delaney.
St. John's, Porto Rico, W. I.																			Leon M. Acuhe.
Clifton, Jamaica, W. I.	27.22	691.4	30.02	762.5	67	19.4	84	Calm	0	0		0	0			0.29	7.4	Clear	C. Partridge.
Navassa																			
Meaellin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			30.00	762.0	48	8.9		W	12	5.4			10n			0	0	Raining	H. M. Redington.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,86[illegible] (?) ft., or 2,091.6 (?) m.; Virginia City, 5,180 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 9, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			29.96	760.9	79.7	26.5	67	Calm			0		1			0	0	Lightning	Charnot.
Algiers			29.91	759.6	80.2	26.8	57	NNW			4		1			0	0	Cloudy	Peter.
La Calle																			Kuntz.
Tunis			30.02	762.6	73.8	23.2	73	ESE			3		4			0.110	2.7	Cloudy	Jacques.
Sfax			30.08	764.0	77.0	25.0	63	Calm			0		4			0	0		Chauvey.
Saïda			29.96	761.0	77.9	25.5	32	NW			1		2			0	0	Thunder	Grosjean.
Tebessa			30.04	762.9	70.2	21.2		NE			1		1			0	0		Colin.
Geriville			29.98	761.5	68.0	20.0	43	NW			2		9			Inap.	Inap.	Cloudy	Bernadach.
Laghouat			30.03	762.7	75.2	24	33	SW			4		1			0	0		Simon.
Biskra			29.94	762.9	81.9	27.7	26	SW			2		2			0	0		Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.09	764.2	61.0	16.1	61	NE			1		1			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.23	767.7	55.4	13.0	58	NE			1		10			0	0		I. R. Observatory.
Eperies			30.16	766.0	60.8	16.0	55	Calm			0		0			0	0		Julius Mikolik.
Gratz	28.89	733.9	30.09	764.2	58.3	14.6	69	SW			2		0						Andreas Rospini.
Hermannstadt	28.70	729.0	30.11	764.7	60.1	15.6	44	NW			1		2			0	0		Prof. Reissenberger.
Kremsmünster	28.70	729.0	30.04	762.9	55.0	12.8	82	NE			2		0			0	0		Prof. C. Wagner.
Lemberg			30.15	765.9	55.9	11.3	50	NW			3		4			0	0		Dr. T. Stanecki.
Nyiregyhaza			30.15	765.9	60.4	15.8	59	NE			3		0			0	0		Habzsuda Danie'.
Pola			30.12	765.1	65.8	18.8	62	SE			1		7cs			0	0		I.R. Hydrographic Of'ce
Szegedin			30.14	765.5	61.0	16.1	57	E			1		0			0	0		Karl Stancel.
Trieste			30.13	765.2	67.6	19.8	79	NW			0		10			0	0		Prof. V. Farolfi.
Vienna			30.05	763.3	61.2	16.2	50	ESE			2		0			0	0		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 9 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.78	756.4	64.2	17.9	77	S			2	9	7	SSW		0	0		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.74	755.4	47.0	8.3		WNW	4	1.8			10			0.120	30.5	Drizzling	William Boswell.
Ardrossan			29.77	756.1	55.2	12.9		NNW			4		5					*D. clouds	Wm. McNeil.
Armagh Observatory			29.83	757.7	50.9	10.5		NNW	7	3.1			3					*D. clouds	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			29.70	754.4	49.5	9.7		NNW			3		10					Overcast	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.87	758.7	51.6	10.9		NW			1–2		6					*D. clouds	J. Dreyer.
Bradford			29.64	752.8	47.5	8.6		W			1		10					Raining	J. McLandsborough.
Bridgetown, (Barbadoes)			29.93	760.2	82.0	27.8		SE			0		10					Overcast	T. H Hunt.
Cambridge Observatory			29.69	754.1	61.0	16.1		SW			1		10					Overcast	Sergeant Hunt, A. H. C.
Cape Good Hope Obs			30.01	762.2	63.4	17.4	60	NW	24	10.7			7						The Staff, for E. J. Stone.
Cardington			29.65	753.1	54.6	12.6		SE					10					Overcast	John McLaren.
Carlisle			29.74	755.4	48.5	9.2		N					10			0.09	2.3	Raining	Bell, for J. Cartmell.
Chatham, School M. E.			29.69	754.1	60.2	15.7		S			1		4					Overcast?	Major C. W. Martin, R. E.
Dartmoor	28.38	720.8	29.76	755.9	45.3	7.3		NW			2		9					Gloomy	R. E. Power.
Donaghadee			29.78	756.4	53	11.7		NW			2		4					*D. clouds	J. Mac Gowan, Jr.
Dover			29.69	754.1	58	14.4		WSW			5		5						J. Costello.
Eccles, (near Manchester)			29.61	752.1	48.2	9.0		SW	2.2	1.0			10					Raining	Thomas Mackereth.
Falmouth Observatory			29.82	757.4	53.8	12.1		WNW	17	7.6			8					Overcast	The Staff.
Fort Napier, (Natal)	27.73	704.3	29.94	760.5	66.1	18.9		NE			2		8					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	85	29.4		N					7						
Galway, Queen's College																			B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			29.98	761.5	81.0	27.2		WSW			2		8					*D. clouds	Sergt. E. G. Baker.
Glasgow Observatory			29.75	755.6	50.1	10.1		SW			1		8					*D. clouds	Lewis Stuart.
Great Yarmouth			29.66	753.4	59	15.0		SW			2		5					*D. clouds	G. T. Watson.
Greenwich Royal Obs			29.65	753.1	58.7	14.8		SSE			1		10			Blank	Blank	Overcast	The Staff, for G. B. Airy.
Guernsey			29.81	757.2	53	11.7		WNW			4		5					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs			29.69	754.1	46.6	8.1		NNW					10					Raining	F. J. Page, for L. J. Crossley.
Helston			29.78	756.4	57	13.9		NW			4		4					Showery	M. P. Moyle.
Holyhead			29.76	755.9	51	10.6		NNW			5		6			Blank	Blank	Gloomy	John Tilston.
Kew Observatory			29.64	752.8	57.2	13.9		ESE	12	5.4			10					Misty	The Staff.
Kingstown			29.80	756.9	51	10.6		NNW			5		4					*D. clouds	George Mitchell.
Leicester Museum			29.66	753.4	51.9	11.1		Calm			0		10					Overcast	William J. Harrison.
Llandudno			29.73	755.1	51.8	11.0		WSW					10			Blank	Blank	Overcast	Dr. James Nicol.
Malta, (Mediterranean)			30.12	765.0	72.6	22.6		SE			1		6k						Fred Travis, Pvt A. H. C.
Nairn			29.74	755.4	52	11.1		W			1		5						W. D. Penny.
Nassau, (Bahamas)			29.99	761.7	81.1	27.3		N			4		7s						Surg.-Maj. Henry.
Nottingham			29.65	753.1	54.0	12.2		NW			1		10cs		NW			Dense fog	E. J. Lowe.
Oscott, St Mary's College			29.67	753.6	45.3	7.4		NNW			3		10					Raining	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.69	754.1	54	12.2		SSE			1		10					Raining	J. Lucas, for R. Main.
Plymouth			29.79	756.7	54.8	12.7		NW			3		5					*D. clouds	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.85	758.2	52	11.1		NNW			3		2					Fine	W. Kennedy.
Saint Ann's Head			29.79	756.7	52	11.1		NW			2		5					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.82	757.4	55.8	13.2		WNW			6		8						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			29.66	753.4	53.4	11.9		NNW			3		10					Overcast	F. Shaw.
Scutari cemetery, (Turkey)			30.12	765.0	68.2	20.1		N			2		1					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.68	753.9	57.0	13.9		W			3		10					Overcast	W. F. Cooper.
Sillyth Rectory			29.74	755.4	52.2	11.2		NNW			1		10			0	0	Overcast	Rev Francis Redford.
Stonyhurst Observatory			29.69	754.1	47.6	8.7		NW			1		10			Blank	Blank		The Staff.
Stornoway, Lews C. (Hebr)			29.71	754.6	48	8.9		WNW			2		2					Clear	John Smith.
Stratfield Turgiss			29.62	752.3	55.5	13.1		SE			1		10					Showery	Rev Charles H. Griffith
Streatley Vicarage			29.61	752.1	54.5	12.5		S			2		10						Rev. John Slatter.
Thurso			29.70	754.4	49	9.4		SW			1		8					Overcast	John Trotter.
Truro, Royal Institution			29.77	756.1	57	13.9		N			4		8					Gloomy	W Newcombe.
Valencia Observatory			29.94	760.5	50.8	10.4		NNW	11	4.9			10					Showery	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					54	12.4		NNW			4					0	0		
Leith, Restalrig Park			29.76	755.9	48.4	9.1		W			1		10s			0.15	3.8	Overcast	Andrew Gibb.
Monach Lt-house, (Shet. Is)			29.72	754.9	53	11.7		W			4	3	5	W		0.1	2.5		J. Youyclause.
North Unst, (Shetland Is)			29.61	752.1	53	11.7		S			6	10	8	W					

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			30.07	763.7	54.3	12.3	72	SSE			6		0						
Fanöe			29.86	758.4	59.2	15.1	78	SE			6		4						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.35	745.5	24.4	— 4.2	77	SW			6		8						
Thorshavn, (Faröe)			29.57	751.0	44.6	7.0	75	WSW			2								
Vestervig			29.87	758.8	56.1	13.4	87	SE			6		3						

Note.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			29.83	757.7	58.1	14.5	78	W			2		10n,k			0.067	1.7	Cloudy	Normal School.
Amiens			29.76	756.0	57.6	14.2	84	SE			2		5		SE	0	0	Cloudy	Normal School.
Avignon			30.00	762.0	63.0	17.2	98	SE			1		8		SE	2.270	57.8	Rainy	Normal School.
Bar-sur Seine			29.85	758.3	59.9	15.5	87	SW			2		10		S	0.004	0.1	Raining	C. Saillard.
Beaumette, (near Angers)			29.87	758 7	58.6	14.8	72	WSW	15.2	6.8			5		WNW	0.13	3.3	Cloudy	Beaumette Observatory
Beauvais			29.85	758.1	56.8	13.8	89	S			1		10		S	0	0	Cloudy	Normal School.
Besançon			29.95	760.8	68.4	20.2	68	SW			4		8		SW	0	0	Cloudy	Normal School.
Bourg en Bresse			29.89	759.1	68.4	20.2	64	S			2		5		N	0	0	Cloudy	Normal School.
Bourges			29.86	758.4	57.7	14.3	95	WSW			2		10		SW	0	0	Cloudy	Normal School.
Brest			29.84	758.0	55.6	13.1	68	W			3		5		W	0.197	5.00	Squally	Naval Observatory.
Caen			29.80	757.0	55.9	13.3	75	W			1		5		W	0	0	Cloudy	Normal School.
Chartres																			Normal School.
Chaumont	28.71	729.1	29.87	758.8	64.8	18.2		S			6		8kn,c		S	0	0	Cloudy	Normal School.
Commercy			29.88	759.0	63.3	17.4	72	S			4		5		S	0	0	Cloudy	Normal School.
Commune de Gréasque*			30.07	763.8	69.8	21.0	56	SE			6		10		SE	0	0		
Le Mans																			Normal School.
Lons-Le Saulnier			29.89	759.3	66.7	19.3	69	SW			2		0			0	0	Clear	Normal School.
Mâcon			29.90	759.5	65.8	18.8	63	SE			6		5		N	0	0	Cloudy	Normal School.
Mirecourt			29.91	759.6	59.9	15.5	59	SSW			6		10		NE	0	0	Cloudy	Normal School.
Orleans			29.80	756.9	57.9	14.4	93	W			4		8		W	0	0	Cloudy	Normal School.
Paris Observatory			29.80	756.8	57.0	13.9	98	S			2		10		S	0	0	Raining	National Observatory.
Parthenay			30.01	762.2	56.8	13.8	84	W			6		5		NW	0	0	Cloudy	Normal School.
La Roche sur Yon			29.96	761.0	57.0	14.4	55	SW			6		5		E	0.169	4.3	Cloudy	Normal School.
Rochefort, Observatory			29.98	761.5	62.6	17.0	53	WNW			5		5		SE	0.315	8.0		Naval Observatory.
Rouen			29.77	756.1	55.4	13.0	88	SSE			2		10		S	0	0	Cloudy	Normal School.
Saint Lo			29.84	757.8	54.0	12.2	71	W			3		6		W	0	0		Normal School.
Villefranche			30.00	762.1	61.7	16.5	68	NE			2		8			1.42	36.	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchési.
Mont-Louis			30.23	767.9	52.2	11.2	85	WSW	11.2	5.00			10		SSW	0.047	1.2		—. Faiguère.
Montsouris Observatory			29.80	756.8	57.2	14.0	95	S			2		..kn		S	0.157	4.0	Raining	Marié Davy.
Perpignan	†29.96	†760.9			70.9	21.6	64	SW	14.9	6.66			9		SW	0	0		Dr. Fines.
Pic du Midi, (Summit) H. P.	21.17	537.7			33.4	0.8	100	W			2		10			5.87 ?	149. ?	Rain & snow	M. Baylac.
Pic du Midi, (Plantado) H.P.																			General de Nansouty.
Saint Maur, (near Paris)			29.81	757.1	57.6	14.2	95	S			1		10			0	0	Cloudy	E. Renou.
Tours			29.87	758.7	55.6	12.8		W			3		10		W	0	0		C. Marquet.
Versailles, (near Paris)			29.80	756.9	57.9	14.4	98	S			2		10			0.589	14.94	Raining	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.20	767.0	61.2	16.2	68	ENE	2.0	0.9			10k			0 / 0	0 / 0	Misty	H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 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. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Lower 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.01	762.3	58.1	14.5	63	SW	13	6			3			0	0		Prof. Hoh.
Berlin			30.07	763.8	61.3	16.3	59	SE	9	4			2			0	0		Prof. Arndt.
Breslau			30.21	767 2	57.4	14.1	67	SE	22	10			0			0	0		Dr. P. Neugebauer.
Carlsruhe			29.90	759.5	69.4	20.8	65	NE	4	2			5			0	0		A. Senz.
Cassel			29.84	758.0	69.4	20.8	58	SSE	2	1			0			0	0		Dr. H. Möbi.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.56	725.3	30.00	762.1	50.9	10.5	81	W					3			0.169	4.3	Foggy	M. Wilhelm.
Hamburg			29.94	760.4	60.8	16.0	67	SE	22	10			3k	SE		0	0	Clear	Deutsche Seewarte.
Kiel			30.24	768.0	58.6	14.8	78	ESE	18	8			2			0	0		Prof. G. Karsten.
Königsberg			30.20	767.1	53.2	11.8	62	N	11	5						0.001	0.02	Clear	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			30.00	762.0	66.2	19.0	69	SE	9	4			1			0	0		Prof. Bruhns.
Münster			29.84	757.9	64.9	18.3	92	SW	9	4			7			0.043	1.1		Prof. E. Heis.
Posen			30.18	766.5	56.8	13.8	59	SW	9	4						0	0		Dr. Magener.
Strassburg, (in Alsace)			29.92	760 0	65.7	18.7	71	Calm	0	0			9			0.205	5.2		Dr. Schur.
Stuttgart			29.91	759.8	67.1	19.5	56	E					0			0	0		Mr. Würth.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.83	757.7	67.1	19.5	68	SE	27	12			2			0.016	0.4		Prof. Flesch.
Wustrow, Naval School			30.09	764.2	57.4	14.1	69	SE	13	6			3c			0	0	Clear	E. F. Schütz.

Note.—In the originals the distinction between 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.	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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens			30.13	765.4	70.5	21.4		NE										Half clear	

Note.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.08	764.1	64.4	18.0	71	NNW	3.1	1.4			8	SE		0.003	0.7		
Mondovi			30.07	763.6	65.3	18.4	61	NW			2		9	NW		0	0		
Genoa			30.10	764.6	72.7	22.6	60	SW	2.5	1.1			2	E		0	0		
Pavia			30.10	764.5	64.2	17.9	77	N			1		1	SW		0	0		
Verona			30.00	762.0	71.6	22.0	54	E			2		0			0	0		
Padua			30.08	764.1	68.2	20.1	60	SE	1.8	0.8			1			0	0		
Parma																			
Bologna			30.12	765.1	72.3	22.4	64	ESE			1		2	W		0	0		
Leghorn			30.11	764.7	72.5	22.5	55	WSW	1.3	0.6			3			0	0		
Urbino			30.08	763.9	65.5	18.6	55	SSE			2		1			0	0		
Ancona			30.11	764.8	67.6	19.8	60						0			0	0		
Siena			30.08	764.0	71.4	21.9	49	SE					3	S		0	0		
Rome			30.11	764.8	74.8	23.8	58	S	4.9	2.2			4			0	0		
Naples, O. U.			30.13	765.3	75.9	24.4	48	SW			2		0			0	0		
Lecce			30.16	766.0	69.4	20.8	54	\	7.4	3.3			3			0	0		
Cosenza			30.21	767.2	67.6	19.8	65	NW			2		2	SE		0	0		
Catania, (Sicily)																			
Riposto			30.06	763.4	73.0	22.8	74	SE			2		4	SE		0	0		
Palermo			30.04	762.9	73.6	23.1	58	E	1.3	0.6			6			0	0		
Sub-Series.																			
Naples, S. R.			30.16	766.1	73.6	23.1	57	SW			7		..cs			0	0		Prof. F. Brioschi.

NOTE.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for twenty-four hours. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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	756.5	62.6	17.0		SW			4								
Groningen			29.74	755.4	60.8	16.0		S			2								
Helder			29.74	755.3	62.8	17.1		S			5								
Utrecht			29.74	755.4	66.0	18.9		S			4		2					Light clouds.	

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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			29.84	758.0	58.1	14.5	60	S	19.0	8.5			0			0.335	8.5		
Christiania			30.08	764.1	53.6	12.0	84	S	6.7	3.0			8			0.091	2.3		
Tromsö			29.99	761.7	41.7	5.4	52	Calm			0		0			0	0		

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.19	766.7	64.2	17.9	34	N	32.2	14.4			3	NNW		Blank	Blank		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			30.17	766.4	53.2	11.8	47	WNW	11	5			1						Astronomical Obs.
Wilna			30.04	763.0	47.5	8.6	76	NW	10	4.5			10						Astronomical Obs.
Dorpat			30.11	764.7	43.0	6.1	88	NNW	9	4			10						Physical Cabinet.
St. Petersburg			30.01	762.3	46.8	8.2	87	NNE	9	4			10						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kieff			29.95	760.8	45.7	7.6	74	NW	9	4			10					Light rain	Physical Cabinet.
Nikolaiev			30.11	764.8	58.5	14.7	46	WNW	13	6			5						Kurdakof.
Kertch			29.69	754.1	60.3	15.7	63	NW	4	2			6						Lagorio.
Moscow			29.87	758.8	47.7	8.7	84	S	10	4.5			8						Meteorological Obs.
Lugan			29.87	758.6	57.4	14.1	36	SW	10	4.5			5			Blank	Blank		Meteorological Obs.
Archangel			30.24	768.1	39.4	4.1	90	N	4	2			10						Ogorodnikof.
Tiflis	28.65	727.7	30.04	763.0	65.5	18.6	66	N	20	9			4						Physical Obs.
Astrakhan			30.02	762.5	67.1	19.5	39	N	4	2			3			Blank	Blank		Sebastianof.
Kasan			29.90	759.4	54.0	12.2	88	SSW	0	0			10						Physical Cabinet.
Orenburg			29.98	761.4	60.3	15.7	56	Calm	0	0			10						Tschernischef.
Ekaterinburg	29.14	740.1	30.17	766.2	40.3	4.6	65	E	4	2			8						Meteorological Obs.
Kasaly			30.12	765.0	57.4	14.1	83	Calm	0	0			3						Bobrof.
Tashkend																			Michelson.
Barnaul			30.15	765.9	67.5	19.7	39	NE	8	3.5			0						Meteorological Obs.
Yeniseisk			30.20	767.0	37.8	3.2	75	Calm	0	0			0						Marks.
Irkutsk																			Usolzef.
Oorga	25.87	657.1	30.40	772.1	22.3	— 5.4	82	Calm	0	0			0						Mossin.
Peking, (China)			30.19	766.7	56.3	13.5	43	NE	4	2			3						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.97	761.1	62.1	16.7	60	NW	13.4	6.0			10			0.181	9.6	Covered	Royal Observatory.
San Fernando			30.00	763.4	70.0	21.1	62	WNW	15.2	6.8		6	3	NW	NW	0.146	3.7		The Naval Observatory.

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

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Haparanda			30.31	769.8	37.0	2.8	69	NE			2		10			0	0		
Umea			30.25	768.3	43.7	6.5	78	S			2		9			0	0		
Hernosand			30.19	766.9	46.4	8.0	85	S			2		10			0	0		
Stockholm			30.18	766.6	50.0	10.0	52	SE			2		2			0	0		
Wisby			30.21	767.3	51.8	11.0	70	NE			2		0			0	0		
Sub-Series.																			
Upsala			30.22	767.5	52.2	11.2	58	SE	4.9	2.2			1		NW	0	0		Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.56	725.4	29.98	761.4	57.0	13.9	86	NNE			2		10					Foggy	The Observatory.
Zurich	28.37	720.6	30.00	761.9	57.2	14.0	84	NW			1		2			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —0.9mm.; Thermometer, —0°.3; Relative Humidity, +16 per cent.

Note.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y			29.97	761.2	79.2	26.2	60	NW			1		3k			0	0		Prof. C. N. A. Van Dyck.
Constantinople			30.16	766.0	63.0	17.2	65	ENE	9	4			2		ENE	0	0		
Fao, (Persian Gulf)			29.96	761.0	80.6	27.0		SE			3		0					Clear	
Salonica					77.0	25.0		SE			1		0					Clear	
Valona			30.11	764.8	71.2	21.8		NW			1		2						
Varna			30.16	766.0	64.4	18.0		NE			3		10					Cloudy	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.
Brockville, Ontario			30.30	769.6	41	5.0		NW	0	0		2s	0	NW		0	0	Fair
Chatham, N. B.			30.18	766.6	39	3.9	74	NW	1	0.4		5c	0	W		0	0	Fair
Charlottetown, P. E. Island			30.15	765.8	44	6.7	81	NW	4	1.8		2c	0			0	0	Fair
Fort Garry, Manitoba			30.04	763.0	33	0.6	100	N	11	4.9			10n			0.108	2.74	Cloudy
Halifax, N. S.			30.09	764.3	45	7.2	94	NW	3	1.3		5ks	0	W		0	0	Fair
Kingston, Ontario			30.27	768.8	36	2.2	86	NE	2	0.9		8k	0			0.08	2.0	Fair
Montreal, Quebec			30.23	767.8	39	3.3	91	NE	4	1.8		5k	5ks	N		Inap.	Inap.	Cloudy
Ottawa, Ontario			30.26	768.6	34	1.1	69	W	9	4.0		0	2s		W	0.15	3.8	Clear
Parry Sound, Ontario			30.23	767.8	32	0.0	96	E	13	5.8		2ck	5ks	NW	NW	0.10	2.5	Fair
Port Dover, Ontario			30.24	768.1	33	0.6	89	N	5	2.2		5ck	0	SW		0	0	Fair
Port Stanley, Ontario			30.22	767.6	50	10.0	95	NE	1	0.4		2ck	0	E		0.01	0.3	Clear
Quebec, Quebec			30.24	768.1	40	4.4	82	Calm	0	0			10n			0	0	Cloudy
Saugeen, Ontario			30.21	767.3	36	2.2	90	SE	4	1.8		5cs	2ks		W	0.08	2.0	Cloudy
Stayner, Ontario			30.18	766.6	40	4.4	46	alm	0	0		2c	0	S		0.14	3.6	Fair
Sydney, C. B.			30.13	765.3	49	9.4	82	NW	6	2.7		8c	2ks	S	N	0	0	Fair
Toronto, Ontario			30.23	767.8	38	3.3	88	N	2	0.9		2cs	2ks	W	W	0.04	1.0	Fair

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig.-Gen. Albert J. Myer, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.20	767.1	40	4.4	82	Calm	0	0		0	0			0	0	Clear, frost	
Alpena, Mich.			30.14	765.5	31	—0.6	79	W	4	1.8		5cs	Sm'e			0	0	Smoky, frost	
Atlantic City, N. J.			30.20	767.1	46	7.8	76	N	12	5.4		2cs	0	SW		0	0	Fair	
Augusta, Ga.			30.14	765.5	51	10.6	86	NW	2	0.9		0	0			0	0	Clear	
Baltimore, Md.			30.26	768.1	49	9.4	71	N	3	1.3		0	0			0	0	Clear	
Barnegat, N. J.			30.20	767.1	48	8.9	70	N	17	7.6		2cs	0	W		0	0	Fair	
Benton, Montana	27.41	696.2	30.21	767.3	45	7.2	67	Calm	0	0		5c	0			0	0	Fair	
Bismarck, Dakota	28.38	720.8	30.09	764.3	35	1.7	80	NE	10	4.5			10ks			0	0	Cloudy	
Boston, Mass.			30.20	767.1	45	7.2	69	NW	10	4.5		2cs	Haze			0	0	Fair	
Breckenridge, Minn.			29.80	756.9	47	8.3	85	N	12	5.4			10s		N	0.18	4.6	Cloudy	
Buffalo, N. Y.			30.22	767.6	37	2.8	85	E	4	1.8			10ks		W	0.19	4.8	Cloudy	
Burlington, Vt.			30.25	768.3	44	6.7	76	N	3	1.3			10s			0.11	2.8	Cloudy	
Cairo, Ill.			30.15	765.8	50	10.0	78	Calm	0	0		8c	0	SW		0	0	Cloudy	
Cape Hatteras, N. C.			30.05	763.3	64	17.8	67	NE	28	12.5		8cs	2s			0	0	Cloudy	
Cape Henry, Va.			30.14	765.5	64	17.8	78	NE	12	5.4		5c	Haze	W		0	0	Fair	
Cape May, N. J.			30.20	767.1	47	8.3	70	N	10	4.5		2c	0	SW		0	0	Fair	
Charleston, S. C.			30.10	764.5	59	15.0	64	N	9	4.0		5ck	0	W		0	0	Fair	
Cheyenne, Wyoming	24.28	616.7	30.22	767.6	43	6.1	35	W	12	5.4		0	0			0	0	Clear	
Chicago, Ill.			30.11	764.8	43	6.1	67	S	5	2.2		2cs	5s			0	0	Fair	
Cincinnati, Ohio			30.09	764.3	49	9.4	71	E	3	1.3		8c	Fog	SE		0	0	Cloudy	
Cleveland, Ohio			30.19	766.8	38.3	3.5	81	E	8	3.6			10s			0.07	1.8	Cloudy	
Colorado Springs, Col.	24.36	618.7	30.23	767.8	38	3.3	63	N	4	1.8		0	0			0	0	Clear	
Corsicana, Tex.			30.09	764.3	59	15.0	81	N	6	2.7		5k	5s			0.01	0.3	Cloudy	
Davenport, Iowa			30.13	765.3	46	7.8	69	SW	4	1.8			10s			0	0	Cloudy	
Denison, Tex.			30.05	763.3	61	16.1	91	S	2	0.9		0	8ks		N	0	0	Threatening	
Denver, Col.	25.06	636.5	30.28	769.1	43	6.1	51	S	10	4.5		0	0			0	0	Clear	
Detroit, Mich.			30.17	766.3	42	5.6	83	E	2	0.9		0	5ks		S	0	0	Fair	
Dodge City, Kan.	27.52	699.0	29.84	757.9	44	6.7	84	NW	5	2.2		0	0			0	0	Clear	
Dubuque, Iowa			30.06	763.5	42	5.6	74	S	4	1.8			10s		W	0	0	Cloudy	
Duluth, Minn.			29.78	756.4	36	2.2	80	Calm	0	0			10n			0.25	6.3	Sleeting	
Eastport, Me.			30.14	765.5	45	7.2	75	N	9	4.0		5c	5s	W	W	0	0	Fair	
Erie, Pa.			30.18	766.6	41	5.0	83	SE	12	5.4		3c	2cs	S		0.29	7.4	Fair	
Escanaba, Mich.			29.99	761.7	44	6.7	76	SW	16	7.2			10s		SW	0.01	0.3	Cloudy	
Fort Gibson, I. T.			30.07	763.8	58	14.4	93	Calm	0	0			10n		W	0.09	2.3	Light rain	
Fort Sill, I. T.	28.88	733.5	29.99	761.7	57	13.9	87	NW	10	4.5		2k	2s	NW	N	0.04	1.0	Fair	
Fort Sully, Dakota	28.33	719.6	29.97	763.8	52	11.1	66	N	12	5.4		0	8s			0.19	4.8	Cloudy	
Galveston, Tex.			30.10	764.5	69	20.6	84	NE	8	3.6		0	0			0	0	Clear	
Grand Haven, Mich.			30.14	765.5	36	2.2	90	SE	4	1.8			10s			0	0	Cloudy	
Indianapolis, Ind.			30.14	765.5	40	4.4	82	N	4	1.8		0	Sm'e			0	0	Clear	
Indianola, Tex.			30.13	765.3	67	19.4	79	N			3	1c	0	W		0	0	Clear	
Jacksonville, Fla.			30.03	762.7	62	16.7	66	NW	8	3.6		0	0			0	0	Cloudy	
Keokuk, Iowa			30.13	765.3	46	7.8	85	S	4	1.8			10s		S	0.02	0.5	Cloudy	
Key West, Fla.			29.95	760.7	78.8	26.0	70	NW	4	1.8		Haze	5ks		N	0.33	8.4	Fair	
Kittyhawk, N. C.			30.13	765.3	63	17.2	52	NE	24	10.7		2c	5cs			0	0	Fair	
Knoxville, Tenn.			30.15	765.8	45	7.2	92	Calm	0	0			Fog			0	0	Foggy	
La Crosse, Wis.			29.99	761.7	39	3.9	100	Calm	0	0		0	10s			0.02	0.5	Light rain	
Leavenworth, Kan.			30.14	765.5	49	9.4	93	NE	1	0.4			10s			0.09	2.3	Cloudy	
Lexington, Ky.	29.01	736.8	30.13	765.3	48	8.9	85	E	4	1.8		2c	0	SE		0	0	Clear	
Long Branch, N. J.			30.21	767.3	52	11.1	66	NW	10	4.5		0	0			0	0	Fair	
Louisville, Ky.			30.12	765.0	45	7.2	92	NW	4	1.8		5c	0			0	0	Foggy	
Lynchburg, Va.			30.20	767.1	50	10.0	78	Calm	0	0		0	Fog			0	0	Foggy	
Malone, N. Y.			30.23	767.8	38	3.3	90	W	4	1.8			10s		W	0.15	3.8	Cloudy	
Marquette, Mich.			29.99	761.7	38	3.3	81	S	4	1.8			8n			0.04	1.0	Light rain	
Memphis, Tenn.			30.13	765.3	52	11.7	86	NE	4	1.8		5cs	Sm'e			0	0	Fair	
Milwaukee, Wis.			30.11	764.8	38	3.3	81	SW	6	2.7		10k	Fog	SW		0	0	Cloudy, frost	
Mobile, Ala.			30.11	764.8	56	13.3	87	N	7	3.1		0	0			0	0	Clear	
Montgomery, Ala.			30.12	765.0	54.5	12.5	80	N	1	0.4		0	Sm'e			0	0	Clear	
Morgantown, W. Va.			30.17	766.3	44	6.7	75	N	2	0.9		0	Haze			0.01	0.3	Clear, frost	
Mt. Washington, N. H.	23.79	604.3	30.15	765.8	24	—4.4	61	Calm	0	0		0	5s			0.25	6.3	Fair	
Nashville, Tenn.			30.11	764.8	52	11.1	79	NW	1	0.4		0	Fog			0	0	Clear	
New Haven, Conn.			30.21	767.3	45	7.2	76	N	8	3.6		Haze	0			Inap.	Inap.	Clear	
New London, Conn.			30.20	767.1	48	8.9	67	NW	6	2.7		2c	0	SW		0	0	Clear	
New Orleans, La.			30.09	764.3	63	17.2	64	N	8	3.6		5c	0	W		0	0	Fair	
Newport, R. I.			30.19	766.8	47	8.3	77	N	8	3.6		5c	0	SW		0	0	Fair	
New York, N. Y.			30.22	767.6	46	7.8	69	NW	9	4.0		0	Fog			0	0	Clear	
Norfolk, Va.			30.15	765.8	57.5	14.2	81	N	5	2.2		5c	0	SW		0	0	Fair	
North Platte, Neb.																			
Omaha, Neb.	29.03	738.1	30.15	765.8	44	6.7	92	SW	6	2.7			10s			0.13	3.3	Cloudy	
Oswego, N. Y.			30.25	768.3	45	7.2	80	ESE	1	0.4			8s		NW	0.11	2.8	Fair	
Peck's Beach, N. J.			30.21	767.3	47	8.3	69	NE	8	3.6		1c	1s	W		0	0	Fair	
Pembina, Dakota			30.02	762.5	33	0.6	94	N	16	7.2			10s		N	0.24	6.1	Cloudy	
Philadelphia, Penn.			30.23	767.8	47	8.3	62	NE	9	4.0		0	0			Inap.	Inap.	Clear	
Pike's Peak, Colorado	18.05	458.5	30.26	768.6	22	—5.6	72	NE	24	10.7		0	0			0	0	Clear	
Pittsburgh, Penn.			30.20	767.1	36	2.2	90	N	4	1.8			Fog			0.01	0.3	Foggy	
Port Huron, Mich.			30.19	766.8	40	4.4	82	SE	3	1.3		0	2s			0.01	0.3	Fair	
Portland, Me.			30.20	767.1	45	7.2	76	N	6	2.7		1k	0	NW		0	0	Fair, frost	
Portland, Oregon			30.14	765.5	55	12.8	93	N	4	1.8			Fog			0	0	Foggy	
Punta Rassa, Fla.			29.97	761.2	71	21.7	90	N	6	2.7		Haze	2ks			0	0	Fair	
Rochester, N. Y.			30.23	767.8	39	3.9	81	SW	4	1.8		0	2s		SW	0.20	5.1	Fair, frost	
Salt Lake City, Utah	25.89	657.6	30.22	767.6	55	12.8	38	Calm	0	0		0	0			0	0	Clear	
Sandy Hook, N. J.			30.20	767.1	47	8.3	69	N	10	4.5		2c	0	SW		0	0	Clear	
San Diego, Cal.			30.06	762.0	69	20.6	84	SE	4	1.8		0	5ks			0	0	Fair	
San Francisco, Cal.			29.99	761.7	59	15.0	82	Calm	0	0		0	0			0	0	Clear	
Santa Fe, N. M.	23.48	596.4	30.02	762.5	43	6.1	43	E	4	1.8		0	0			0	0	Clear	
Savannah, Ga.			30.08	764.0	54	12.2	73	NW	6	2.7		0	0			0	0	Clear	
Shreveport, La.			30.13	765.3	57	13.9	94	Calm	0	0		10ck.s	0	W		0	0	Cloudy	
Smithville, N. C.																			
Springfield, Mass.			30.21	767.3	45	7.2	68	NW	4	1.8		0	Sm'e			0.03	0.8	Fair	
St. Louis, Mo.			30.17	766.3	47	8.3	61	SE	5	2.2		5k	5s			0	0	Cloudy	
St. Marks, Fla.			30.06	763.5	60	15.6	88	N	4	1.8		0	0			0	0	Clear	
St. Paul, Minn.			29.83	757.7	41	5.0	83	SW	11	4.9			10s			0.25	6.3	Cloudy	
St. Paul's Island, Alaska																			
Squa. Beach, N. J.			30.13	765.3	47	8.3	77	NW	6	2.7		2c	0	N		Inap.	Inap.	Fair	
Toledo, Ohio			30.16	766.1	41	5.0	83	SE	3	1.3		2c	Fog			0	0	Fair	
Tucson, Arizona																			
Tybee Island, Ga.			30.05	763.3	62	16.7	66	N	24	10.7		2cs	0			0	0	Clear	
Vicksburg, Miss.			30.18	766.6	56	13.3	80	Calm	0	0		5cs	Sm'e	N		0	0	Cloudy	
Virginia City, Montana	24.59	624.6	30.07	763.8	42	5.6	42	SE	1	0.4		0	0			0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.23	767.8	48	8.9	74	N	8	3.6		2ck	2s			0	0	Fair	
Wilmington, N. C			30.09	764.3	55	12.8	73	NE	7	3.1		10cs	0	SW		0	0	Cloudy	
Wood's Hole, Mass			30.18	766.6	49	9.4	71	NW	7	3.1		2c	0	W		0	0	Clear	
Wytheville, Va	27.79	705.8	29.99	761.7	43	6.1	91	W	2	0.9		5k	0	W		0	0	Fair	
Yankton, Dakota	28.74	730.0	30.04	763.0	45	7.2	76	SW	16	7.2			8s		NW	Inap.	Inap.	Cloudy	
Yuma, Arizona			29.92	760.0	68	20.0		Calm	0	0		2c	0			0	0	Fair	
Sub-Series.																			
Bridgetown, B'b'does, W. I					80	26.7	95	E	3	1.3		5c	2ks	NE	E	0	0	Fair	E. Racker.
Pointe-aPitre, G'd'loupe, do			29.92	760.0	79	26.1	83	SE				2cs	2k			0.14	3.6	Clear	I. V. Bigard.
Havana, Cuba, W. I			29.93	760.2	76	24.4	81	SSE	0.9	0.4		1c. ck	1k	SW	E	0	0	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W			30.14	765.5	79	26.1	82	Calm	0	0		2c	1s	E	E	0	0		James Gall.
St. Thomas, St. T., W. I			30.18	766.6	81	27.2	78	E	4	1.8		2cs	2k	E	E	0	0	Clear	W. S. Cameron.
Santiago de Cuba, W. I			29.75	755.6	77	25.0	82	NE	1.2	0.5		8ck	8ks	SW	SW			Dull	Robert Mason.
St. Georges, Bermudas			29.84	757.9	74.5	23.6	84	ESE	18.0	8.0		10pk	5k	ESE	ESE	0.035	0.04	Heavy gale	C. F. Allen.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.
Cumberland, B. A																			
Ft. Chippewyan, B. A																			
Ft. McPherson, B. A																			
Ft. Simpson, B. A																			
York Factory, B. A			30.08	764.0	20	—6.7	100	W	15	6.7			10s			0	0		J. Fortescue.
St. John's, Newfoundland																			John Delaney.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Clifton, Jamaica, W. I	27.19	690.6	29.98	761.5	66	18.9	90	SSE	1.0	0.4		5c	0	SSE		1.27	32.3	Fine, clear	C. Partridge.
Navassa																			
Menellin, S. A																			
Paramaribo, S. A																			
Elyria, Ohio			30.17	766.3	43	6.1		S	4	1.8			2s			0	0	Fair	H. M. Redington.

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

Note.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 10, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			29.97	761.2	74.3	23.5	39	NNW			3		7			0.209	5.3	Hazy	Charnot.
Algiers			29.90	759.4	71.6	22.0	84	SW			1		10			0.126	3.2	Cloudy	Peter.
La Calle																			Kuntz.
Tunis			29.96	761.0	79.2	26.2	65	E			2		2			0	0		Jacques.
Sfax			30.02	762.5	78.8	26.0	59	S			3		2			0	0		Chauvey.
Saïda			29.96	760.9	59.0	15.0	78	NNW			1		2			0	0		Grosjean.
Tebessa			29.98	761.5	72.1	22.3		NE			2		4			0	0		Colin.
Geriville			29.97	761.3	62.6	17.0	66	WNW			2		9			0.118	3.0	Thunder	Bernadach.
Laghouat			30.01	762.2	69.8	21	49	SW			2		3			0.039	1.0		Simon.
Biskra			29.98	761.6	82.4	28.0	30	E			3		5			0	0		Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			29.93	760.2	70.5	21.4	78	SW			3		2			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.05	763.3	54.5	12.5	50	NE			3		0			0	0		I. R. Observatory.
Eperies			30.00	762.0	55.8	13.2	61	Calm			0		0			0	0		Julius Mikolik.
Gratz	28.73	729.6	29.91	759.6	61.0	16.1	75	SSW			2		0						Andreas Rospini.
Hermannstadt	28.56	725.3	29.96	760.9	59.7	15.4	46	NNW			1		0			0	0		Prof. Reissenberger.
Kremsmünster	28.61	726.7	29.95	760.6	55.0	12.8	82	NW			1		10			0	0		Prof. C. Wagner.
Lemberg			30.00	762.0	48.9	9.4	54	W			1		0			0	0		Dr. T. Stanecki.
Nyiregyhaza			30.01	762.3	59.7	15.4	66	Calm			0		0			0	0		Habzsuda Daniel.
Pola			29.99	761.7	66.9	19.4	72	SE			2		7ck			0	0		I.R. Hydrographic Of'ce
Szegedin			29.97	761.2	63.3	17.4	82	W			1		10			0	0		Karl Stancel.
Trieste			29.98	761.6	68.0	20.0	82	S			0		6			0	0		Prof. V. Farolfi.
Vienna			29.92	760.0	61.9	16.6	62	ESE			2		2			0	0		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 9 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, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.99	761.7	53.1	11.7	65	WSW			1	0	5			0.104	2.65		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.58	751.3	49.0	9.4		S	15	6.7			1			0.010	0.25	Clear	William Boswell.
Ardrossan																			Wm. McNeil.
Armagh Observatory			29.60	751.8	48.3	9.1		S	15	6.7									S. Call, for Dr. Robinson.
Bidston, Liverpool Obs.			29.76	755.9	53.5	11.9		SW			3		7					*D. clouds	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.62	752.3	52.3	11.5		S			1-2		10					Overcast	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbadoes)			29.95	760.7	83.0	28.3		SE			2		8					Gloomy	T. H Hunt.
Cambridge Observatory			29.89	759.2	54.0	12.2		SW			1		5			Blank	Blank	*D. clouds	Sergeant Hunt, A. H. C.
Cape Good Hope Obs.			29.98	761.5	56.5	13.6	67	WNW	23	10.3			9						The Staff, for E. J. Stone.
Cardington			29.88	758.9	54.2	12.3		SW					3					Clear	John McLaren.
Carlisle			29.70	754.4	52.9	11.6		W					8			0.03	0.8	*D. clouds	Bell, for J. Cartmell.
Chatham, School M. E.			29.94	760.5	50.2	10.1		SW			2		4					*D. clouds	Major C. W. Martin, R. E.
Dartmoor	28.53	724.6	29.92	760.0	48.0	8.9		SW			4		9					*D. clouds	R. E. Power.
Donaghadee			29.62	752.3	52	11.1		S			3		10					Overcast	J. Mac Gowan, Jr.
Dover			29.93	760.2	55	12.8		SW			4		4						J. Costello.
Eccles, (near Manchester)			29.78	756.4	51.7	10.9		SW	2.6	1.2			10					Gloomy	Thomas Mackereth.
Falmouth Observatory			29.89	759.2	54.2	12.3		SSW	18	8.0			10					Overcast	The Staff.
Fort Napier, (Natal)	27.35	694.7	29.56	750.8	85.0	29.4		NW			6		3					*D clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	84	28.9		N					7						
Galway, Queen's College																			B. G. Claro, for Prof. Curtis.
Gibraltar, (Mediterranean)			29.94	760.5	71.5	21.9		SW			6		0					Clear	Sergt. E. G. Baker.
Glasgow Observatory			29.60	751.8	48.2	9.0		SW			2		10					Overcast	Lewis Stuart.
Great Yarmouth			29.88	758.9	53	11.7		W			4		2					Clear	G. T. Watson.
Greenwich Royal Obs.			29.[illegible]	760.0	54.9	12.7		SW			1		7					*D. clouds	The Staff, for G. B. Airy.
Guernsey			29.95	760.7	55	12.8		SW			2		5					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs.																			F. J. Page, for L. J. Cross.
Helston			29.87	758.7	57	13.9		SW			4		10					*D. clouds	M. P. Moyle.
Holyhead			29.69	754.1	51	10.6		SSW			4		10					Drizzling	John Tilston.
Kew Observatory			29.92	760.0	53.9	12.2		SSW	17	7.6			7					*D. clouds	The Staff.
Kingstown			29.71	754.6	50	10.0		SE			1		9					Overcast	George Mitchell.
Leicester Museum			29.85	755.2	51.9	11.1		W			1		6			2.17	55.10	*D. clouds	William J. Harrison.
Llandudno			29.22	742.2	50.6	10.3		WNW					8						Dr. James Nicol.
Malta, (Mediterranean)			29.97	761.2	71.8	22.1		SE			1		6k						Fred Travis, Pvt A.H.C.
Nairn			29.47	748.5	48	8.9		W			1		2						W. D. Penny.
Nassau, (Bahamas)			30.02	762.7	82.2	27.5		NE			2		3					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.82	757.4	53.7	12.1		SSW			5	7ck	..ks	NNW	SW			*D. clouds	E. J. Lowe.
Oscott, St Mary's College			29.83	757.7	51.7	10.9		S			3		9					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.82	757.4	53	11.7		SW			1		7					*D. clouds	J. Lucas, for R. Main.
Plymouth			29.90	759.4	54.4	12.4		SW			2		10					Overcast	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.61	752.1	53	11.7		SW			5		10					Raining	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, (Jersey)			29.96	761.0	56.8	13.8		W			4		2						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough																			F. Shaw.
Scutari cemetery, (Turkey)			30.02	762.7	68.8	20.4		NE			2		1					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.79	756.7	51.0	10.6		WSW			3		5					*D. clouds	W. F. Cooper.
Sillotth Rectory			29.69	751.1	54.1	12.3		WSW			4		5			0.670	17.02	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			29.75	755.6	49.9	9.9		SW			2		6			Blank	Blank	*D. clouds	The Staff.
Stornoway, Lews C. (Hebr.)			29.39	746.5	47	8.3		SSW			6		10					Raining	John Smith.
Stratfield Turgiss			29.91	759.7	53.3	11.8		W			1		10					Showery	Rev Charles H. Griffith
Streatley Vicarage			29.90	759.4	56.5	13.6		SSW			6		4						Rev. John Slatter.
Thurso			29.49	749.0	51	10.6		S			2		1					Clear	John Trotter.
Truro, Royal Institution			29.84	757.9	56	13.3		SS			6		10					Rain & hail	W. Newcombe.
Valencia Observatory			29.63	752.6	56.4	13.6		S					10					Raining	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					53	11.7		SW?			4					0.6	15.2		
Leith, Restalrig Park			29.63	752.6	50.0	10.0		W			2		10k			0.01	0.3	Cloudy	Andrew Gibb.
Monach Lt-house, (Shet. Is)			29.25	742.9	50	10.0		SW			7		10			0.5	12.7		J. Youyclause.
North Unst, (Shetland Is)			29.48	748.8	47	8.3		W			2	0	2						

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., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.93	760.2	54.3	12.4	76	S			6		8						
Fanöe			29.78	756.4	55.0	12.8	66	SSW			6		9						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			28.41	721.7	41.4	5.2	90	SE			7		10					Raining	
Thorshavn, (Faröe)			29.22	742.3	46.4	8.0	81	S			7		10					Raining	
Vestervig			29.74	755.3	52.9	11.6	98	SSE			6		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols: not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.00	762.1	59.0	15.0	62	SW			1		2nk			0	0		Normal School.
Amiens			29.98	761.5	61.5	16.4	69	SW			3		0			0.039	1.0	Clear	Normal School.
Avignon			29.95	760.6	52.0	11.1	95	N			3		10			0.126	3.2	Raining	Normal School.
Bar-sur Seine			29.99	761.8	55.2	12.9	70	WNW			2		8			0.701	17.8	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.98	761.6	56.5	13.6	52	SW	2.7	1.2			5		SSW	0	0	Cloudy	Beaumette Observatory
Beauvais			30.07	763.7	55.6	13.1	64	SSW			2		8		SSW	0.04	1.	Cloudy	Normal School.
Besançon			30.09	764.2	50.9	10.5	84	E			1		8		E	0.94	24.	Cloudy	Normal School.
Bourg en Bresse			30.03	762.7	50.5	10.3	86	N			2		10		S	1.18	30.	Raining	Normal School.
Bourges			30.10	764.4	50.7	10.4	85	SW			2		2		E	0.705	17.9		Normal School.
Brest			29.92	759.9	61.0	16.1	73	SW			2		5		WSW	0.039	1.00	Cloudy	Naval Observatory.
Caen			30.00	762.1	57.4	14.1	69	S			2		2		W	0	0		Normal School.
Chartres																			Normal School.
Chaumont	28.86	733.1	30.02	762.6	54.0	12.2		WNW			2		10kn		W	0.602	15.3	Cloudy	Normal School.
Commercy			30.06	763.4	52.5	11.4	71	SW			4		5		SW	0.567	14.4		Normal School.
Commune de Gréasque*			29.92	760.0	56.1	13.4	93	NW			1		10		NW	1.913	48.6		
Le Mans																			Normal School.
Lons-Le Saulnier			30.03	763.7	50.9	10.5	90	N			1		10			1.173	29.80	Raining	Normal School.
Mâcon			30.02	762.5	52.9	11.6	90	Calm			0		5		N	1.22	31.	Cloudy	Normal School.
Mirecourt			30.05	763.2	54.1	12.3	76	SSE			1		10		S	0.24	6.	Cloudy	Normal School.
Orleans			29.97	761.3	57.9	14.4	52	S			4		2		S	0.3	8.		Normal School.
Paris Observatory			30.02	762.4	54.0	12.2	68	S			2		5		S	0.167	4.23	Cloudy	National Observatory
Parthenay			30.10	764.5	57.2	14	89	SW			2		5		W	0.165	4.2	Cloudy	Normal School.
La Roche sur Yon			30.02	762.5	56.8	13.8	60	SW			1		8		E	0.024	0.6	Cloudy	Normal School.
Rochefort, Observatory			30.06	763.5	62.6	17.0	5	WSW			3		5		NE				Naval Observatory.
Rouen			30.02	762.4	56.1	13.4	55	WSW			2		5		SW	0	0	Cloudy	Normal School.
Saint Lo			29.97	761.3	59.2	15.1	78	NW			1		1		NW	0.12	3.		Normal School.
Villefranche			30.00	761.9	61.2	16.2	68	NE			2		8			1.42	36.	Cloudy	Normal School
Sub-Series.																			
Fort de France, Martinique													8		SSW	0.606	15.4		L'Abbe Marchési.
Mont-Louis			30.31	769.8	41.8	5.5	84	NNW	22.4	10.00			6k		SSW	0.051	1.3		—. Faiguère.
Montsouris Observatory			30.01	762.2	58.3	14.8	60	SSW			2		5		SW	0.58	14.8		Marié Davy.
Perpignan	†30.05	†763.2			60.1	15.6	52	NW	11.2	5.00			10			2.56 ?	65 ?	Rain & snow	Dr. Fines.
Pic du Midi, (Summit) H. P.	21.12	536.3			29.8	— 1.2		W			2								M. Baylac.
Pic du Midi, (Plantade) H.P.																0.311	7.9	Clear	General de Nansouty.
Saint Maur, (near Paris)			30.01	762.3	56.3	13.5	60	SSW			1		2			0.012	0.3		E. Renou.
Tours			29.80	757.0	57.9	14.4		WSW			2		5		SW	0.025	0.63		C. Marquet.
Versailles, (near Paris)			30.00	762.1	57.2	14.0	60	W			1		5			0	0		Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.26	768.6	68.0	16.0	76	NE	1.1	0.5		..ck	..kn			0	0		H. Le Leo, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 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. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also.

GERMAN SERIES.

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

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. Inches.	Millimeters.	Weather.	Observer.
Bamberg			29.98	761.5	54.1	12.3	77	SW	9	4			9			0	0		Prof. Hoh.
Berlin			29.95	760.6	59.7	15.4	59	SE	9	4			10			0	0		Prof. Arndt.
Breslau			30.06	763.4	57.0	14.0	61	Calm	0	0			0			0	0		Dr. P. Neugebauer.
Carlsruhe			30.04	762.9	51.1	10.6	72	WNW	4	2			10			0.272	6.9		A. Senz.
Cassel			29.87	758.6	49.6	9.8	84	S	2	1			10			0.063	1.6		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.57	725.7	30.10?	764.5?	49.1	9.5	74	W					10			0.289	7.1	Fog & rain	M. Wilhelm.
Hamburg			29.97	761.3	54.1	12.3	76	WSW	13	6			10s			0	0	Cloudy	Deutsche Seewarte.
Kiel			29.98	761.5	52.9	11.6	76	SSW	9	4			8			0	0		Prof. G. Karsten.
Königsberg			30.15	765.9	47.8	8.8	70	E	11	5						0.003	0.07	Nearly clear	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			29.98	761.6	56.1	13.4	60	NNW	13	6			9			0	0		Prof. Bruhns.
Münster			29.98	761.6	54.5	12.5	94	SE	9	4			10			0	0		Prof. E. Heis.
Posen			30.04	763.0	56.8	13.8	44	E	29	13						0	0	Clear	Dr. Magener.
Strassburg, (in Alsace)			30.06	763.5	52.0	11.1	75	Calm	0	0			10			0.268	6.8		Dr. Schur.
Stuttgart			30.05	763.2	48.2	9.0	83	N					10			0.118	3.0	Raining	Mr. Würth.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.97	761.2	56.3	13.5	59	SW	22	10			6			0	0		Prof. Flesch.
Wustrow, Naval School			29.99	761.8	54.7	12.6	79	W	9	4			10			0	0	Cloudy	E. F. Schütz.

Note.—In the originals the distinction between 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.	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. Inches.	Millimeters.	Weather.	Observer.
Athens			30.07	763.6	71.1	21.7		S										Clear	

Note.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			29.95	760.6	56.3	13.5	97	NNW	3.1	1.4			10	E		1.098	27.9		
Mondovi			29.93	760.3	53.4	11.9	100	NW			4		10			0.118	3.0		
Genoa			29.89	759.1	62.2	16.8	84	N	3.1	1.4			10	SW		2.358	59.9		
Pavia			29.93	760.2	60.8	16.0	93	NE			4		10			0.157	4.0		
Verona			29.92	759.9	73.0	22.8	45	E			6		3			0	0		
Padua			29.95	760.6	69.1	20.6	63	NE	9.8	4.4			5	SE		0	0		
Parma																			
Bologna			30.00	761.9	69.6	20.9	67	WNW			1		2	N		0	0		
Leghorn			29.95	760.6	71.4	21.9	61	SSW	2.5	1.1			10			0	0		
Urbino			29.97	761.2	67.8	19.9	41	SW			2		2			0	0		
Ancona			29.98	761.1	67.8	19.8	65						1			0	0		
Siena			29.94	760.5	70.5	21.4	43	SSE					6	S		0	0		
Rome			29.91	759.8	74.8	23.8	26	SE	13.0	5.8			2			0	0		
Naples, O. U.			30.04	762.0	74.1	23.4	49	SW			4					0	0		
Lecce			30.05	763.5	70.0	21.1	59	ESE	7.4	3.3			4	S		0	0		
Cosenza			30.08	764.1	69.4	20.8	68	NE			1		2	SE		0	0		
Catania, (Sicily)																			
Riposto			29.97	761.2	72.1	22.3	87	SSE			4		10	SSE		0.815	20.7	Raining	
Palermo			29.94	760.4	73.8	23.2	68	NE	3.8	1.7			10			0	0		
Sub-Series.																			
Naples, S. R.			30.07	763.7	73.8	23.2	52	NW			6		..cs			0	0		Prof. F. Brioschi.

NOTE.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for twenty-four hours. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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			29.99	761.8	54.9	12.7		WNW			4								
Groningen			29.85	758.2				SSW			4								
Helder			29.89	759.1	54.5	12.5		SW			4								
Utrecht			29.90	759.4	57.2	14.0		SSW			4		2					Light cloudy	

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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			29.54	750.3	56.1	13.4	73	SSW	16.6	7.4			5			0.236	6.0		
Christiania			29.90	759.4	45.1	*7.3	90	ENE	1.8	0.8			10			0	0	Raining	
Tromsö			29.78	756.4	45.3	7.4	66	W			2		10			0	0		

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.14	765.6	63.7	17.6	29	N	28.6	12.8			0						The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			30.10	764.4	47.8	8.8	71	NNE	7	3			0						Astronomical Obs.
Wilna			30.10	764.6	46.8	8.2	67	N	8	3.5			9						Astronomical Obs.
Dorpat			30.21	767.2	44.2	6.8	80	NNE	7	3			10						Physical Cabinet.
St. Petersburg			30.17	766.3	41.9	5.5	89	NNE	7	3			10						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kieff			29.92	760.0	47.3	8.5	67	NW	9	4			7						Physical Cabinet.
Nikolaiev			30.05	763.3	53.8	12.1	54	NW	13	6			0						Kurdakof.
Kertch			30.01	762.3	61.3	16.3	56	NNW	4	2			4						Lagorio.
Moscow			29.93	760.1	46.6	8.1	83	N	10	4.5			8						Meteorological Obs.
Lugan			29.82	757.5	51.6	10.9	57	WSW	10	4.5			9						Meteorological Obs.
Archangel			30.32	770.1	41.2	5.1	82	NNE	4	2			10						Ogorodnikof.
Tiflis	28.62	726.9	30.60	761.9	68.2	20.1	48	N	4	2			4						Physical Obs.
Astrakhan			30.02	762.4	63.3	17.4	50	S	8	3.5			10			Blank	Blank		Sebastianof.
Kasan			29.93	760.2	49.1	9.5	62	E	10	4.5			10						Physical Cabinet.
Orenburg			30.04	763.1	49.8	9.9	57	E	4	2			8						Tschernischef.
Ekaterinburg	29.02	737.2	30.04	763.0	44.8	7.1	68	N	8	3.5			8						Meteorological Obs.
Kasaly			30.07	763.7	59.7	15.4	71	Calm	0	0			3						Bobrof.
Tashkend																			Michelson.
Barnaul			30.18	766.5	47.5	8.6	52	Calm	0	0			4						Meteorological Obs.
Yeniseisk			30.21	767.2	40.3	4.6	81	Calm	0	0			0						Marks.
Irkutsk																			Usolzef.
Oorga	26.07	662.1	30.70	779.8	15.3	− 9.3	87	Calm	0	0			0						Mossin.
Peking (China)			30.24	768.1	54.7	12.6	49	SW	4	2			2						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.04	763.1	59.0	15.0	47	NE	12.8	5.7		0	1			0	0	Some clouds	Royal Observatory.
San Fernando			30.04	762.9	67.6	19.8	41	NW	12.1	5.4		1	1	NW	NW	0	0		The Naval Observatory.

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

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Haparanda			30.27	768.8	37.9	3.3	88	S			4		10			0	0		
Umea			30.21	767.4	41.4	5.2	84	S			2		1			0	0		
Hernosand			30.16	766.1	47.8	8.8	68	S			4		4			0	0		
Stockholm			30.13	765.2	46.9	8.3	60	SSE			4		6			0	0		
Wisby			30.21	767.3	49.3	9.6	64	S			6		5			0	0		
Sub-Series.																			
Upsala			30.15	765.7	48.0	8.9	66	SSE	11.4	5.1			1		SSE				Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.60	726.4	30.05	763.2	46.9	8.3	98	NW			1		10			0.098	2.5	Raining	The Observatory.
Zurich	28.39	721.0	30.04	763.0	49.1	9.5	94	NW			2		10			0.059	1.5	Raining	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +0.1mm.; Thermometer, —5°.7; Relative Humidity, +28 per cent.

Note.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Beirut, (Syria,) Lee Obs'y			29.98	761.6	76.8	24.9	62	NNE			2		4k			0	0		Prof. C. N. A. Van Dyck.
Constantinople			30.07	763.8	64.2	17.9	58	ENE	7.8	3.5			0			0	0	Clear	
Fao, (Persian Gulf)			30.04	762.9	81.2	29.0		SE			3		0					Clear	
Salonica																			
Valona			30.02	762.4	71.2	21.8		Calm			0		0					Clear	
Varna			30.07	763.6	64.4	18.0		SE			2		0					Clear	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Brockville, Ontario			29.86	758.4	45	7.2		E	1	0.4			10s		E	0.05	1.3	Light rain	
Chatham, N. B.			30.22	767.6	43	6.1	83	NE	3	1.3		8cs	2ks	NE	NE	0	0	Cloudy	
Charlottetown, P. E. Island			30.22	767.6	45	7.2	81	E	10	4.5			10n			0	0	Light rain	
Fort Garry, Manitoba			30.21	767.3	29	— 1.7	89	N	3	1.3		5k	5ks	N	N	0	0	Cloudy	
Halifax, N. S.			30.09	764.3	45	7.2	97	E	9	4.0			10n		SE	1.177	4.50	Heavy rain	
Kingston, Ontario			29.81	757.1	49	9.4	82	S	11	4.9			10ks		SW	0.02	0.5	Cloudy	
Montreal, Quebec			29.90	759.4	43	6.1	92	SE	12	5.4			10n		SE	0.02	0.5	Light rain	
Ottawa, Ontario			29.80	756.9	42	5.6	87	E	10	4.5			10n		SE	0.03	0.8	Light rain	
Parry Sound, Ontario			29.52	749.3	43	6.1	94	S	8	3.6			10n		SE	0.14	3.6	Light rain	
Port Dover, Ontario			29.76	755.9	47	8.3	94	W	7	3.1			10n		SW	0.47	11.9	Light rain	
Port Stanley, Ontario			29.75	755.6	48	8.9	89	W	20	8.9			10n		W	0.20	5.1	Cloudy	
Quebec, Quebec			29.04	763.0	45	7.2	84	N	16	7.2		8k	0	SW		0	0	Fair	
Saugeen, Ontario			29.64	752.8	44	6.7	92	SW	6	2.7			10n		W	0.15	3.8	Cloudy	
Stayner, Ontario																			
Sydney, C. B.			29.28	768.1	48	8.9	92	E	5	2.2			10n		SE	0.01	0.3	Light rain	
Toronto, Ontario			29.70	754.4	47	8.3	94	S	5	2.2			10n		NW	0.02	0.5	Cloudy	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.95	760.7	45	7.2	85	S	2	0.9		5k	5ks	S	S	0	0	Cloudy	
Alpena, Mich.			29.81	752.1	39	3.9	91	W	15	6.7			10s		W	0.19	4.8	Cloudy	
Atlantic City, N. J.			29.98	761.5	51	10.6	86	NW	3	1.3		2c	0			0	0	Fair	
Augusta, Ga.			30.04	763.0	53	11.7	86	NW	1	0.4		2cs	5s	NW	NW	0	0	Cloudy	
Baltimore, Md.			29.94	761.5	56	13.3	87	Calm	0	0		5k	5ks		NW	0	0	Cloudy	
Barnegat, N. J.			29.96	761.0	51	10.6	86	W	1	0.4		0	0			0	0	Clear	
Benton, Montana	27.35	694.7	30.15	765.8	41	5.0	73	Calm	0	0		0	0			0	0	Clear	
Bismarck, Dakota	28.36	720.3	30.07	763.8	30	—1.1	100	E	8	3.6			10n			0.13	3.3	Light snow	
Boston, Mass.			29.98	761.5	51	10.6	86	NE	3	1.3		8s	Fog	N		0	0	Cloudy	
Breckenridge, Minn.			30.11	765.5	29	—1.7	89	NW	8	3.6			10s		N	0	0	Cloudy	
Buffalo, N. Y.			29.70	754.4	51	10.6	72	SW	16	7.2			10s		SW	0.07	1.8	Cloudy	
Burlington, Vt.			29.94	760.5	44	6.7	76	S	7	3.1			10s			0	0	Cloudy	
Cairo, Ill.			29.97	761.2	53	11.7	93	SW	4	1.8		5c	0			0	0	Fair	
Cape Hatteras, N. C.			29.97	761.2	64	17.8	67	NE	14	6.3		1c	0			0	0	Clear	
Cape Henry, Va.			29.99	761.7	65	18.3	68	Calm	0	0		0	0			0	0	Clear	
Cape May, N. J.			29.97	761.2	52	11.1	79	NE	4	1.8			10s		W	0	0	Cloudy	
Charleston, S. C.			30.01	762.2	59	15.0	81	NW	6	2.7			10ks		SW	0	0	Cloudy	
Cheyenne, Wyoming	24.13	612.9	30.07	763.8	49	9.4	27	NW	12	5.4		0	0			0	0	Clear	
Chicago, Ill.			29.92	760.0	39	3.9	82	NW	5	2.2			10s			0.27	6.9	Cloudy	
Cincinnati, Ohio			29.81	757.2	58	14.4	64	SW	4	1.8			10s		W	Inap.	Inap.	Cloudy	
Cleveland, Ohio			29.76	755.9	49.5	15.3	85	SW	16	7.2			10ks		SW	0.03	0.8	Cloudy	
Colorado Springs, Col.	24.21	614.9	30.03	764.0	51	10.6	34	N	5	2.2		0	0			0	0	Clear	
Corsicana, Tex.			30.04	763.0	53	11.7	93	NW	3	1.3		0	0			0	0	Clear	
Davenport, Iowa			30.01	762.2	45	7.2	68	N	4	1.8			10s			0.05	1.3	Cloudy	
Denison, Tex.			30.03	762.7	54	12.2	93	NW	3	1.3			Fog			0.02	0.5	Foggy	
Denver, Col.	24.88	631.9	30.10	764.5	51	10.6	22	S	8	3.6		0	0			0	0	Clear	
Detroit, Mich.			29.76	755.9	43	6.1	75	W	12	5.4		5k	5ks	W	W	0.19	4.8	Cloudy	
Dodge City, Kan.	27.40	696.0	29.93	753.9	47	8.3	62	NW	8	3.6			10s			0	0	Cloudy	
Dubuque, Iowa			30.04	763.0	40	4.4	65	N	4	1.8			10s		NW	0.19	4.8	Cloudy	
Duluth, Minn.			30.08	764.0	34	1.1	69	NE	8	3.6		8k	0	NE		0.10	2.5	Fair	
Eastport, Me.			30.06	763.5	47	8.3	85	NE	28	12.5			10s		E	0	0	Threatening	
Erie, Pa.			29.72	754.9	50	10.0	86	SE	16	7.2			10ks		S	0.12	3.0	Cloudy	
Escanaba, Mich.			29.86	758.4	32	0.0	90	NW	20	8.9			10n		NW	0.04	1.0	Light snow	
Fort Gibson, I. T.			29.99	761.7	50	10.0	100	Calm	0	0			Fog			0	0	Foggy	
Fort Sill, I. T.	28.84	732.5	29.96	761.0	47	8.3	92	N	1	0.4		0	Fog			0	0	Clear	
Fort Sully, Dakota	28.37	720.6	30.08	764.0	37	2.8	80	E	12	5.4		0	8s		E	0	0	Cloudy	
Galveston, Tex.			30.04	763.0	68	20.0	74	NE	3	1.3		0	0			0	0	Clear	
Grand Haven, Mich.			29.87	758.7	41	5.0	83	N	11	4.9		0	8n			0.50	12.7	Light rain	
Indianapolis, Ind.			29.85	758.2	52	11.1	79	W	5	2.2			10s		W	Inap.	Inap.	Cloudy	
Indianola, Tex.			30.07	763.8	67	19.4	90	N			3	0	0			0	0	Clear	
Jacksonville, Fla.			29.95	760.7	62	16.7	83	NE	4	1.8		6k	0	SW		0	0	Fair	
Keokuk, Iowa			29.94	760.5	43	6.1	75	NE	9	4.0			10s			0	0	Cloudy	
Key West, Fla.			29.92	760.0	78.8	26.0	66	SE	3	1.3		0	5ks		S	0	0	Fair	
Kittyhawk, N. C.			29.98	761.5	63	17.2	78	NE	10	4.5		0	0			0	0	Clear	
Knoxville, Tenn.			30.01	762.2	47	8.3	92	Calm	0	0			Fog			0	0	Foggy	
La Crosse, Wis.			30.03	762.7	33	2.2	80	N	5	2.2		5cs	0	N		0.13	3.3	Fair	
Leavenworth, Kan.			29.92	760.0	47	8.3	85	NE	6	2.7		2c	0			0	0	Clear	
Lexington, Ky.	28.85	732.8	29.91	760.5	55	12.8	80	SW	12	5.4			10s		SW	0	0	Cloudy	
Long Branch, N. J.			29.97	761.2	55	12.8	80	NE	10	4.5		0				0	0	Clear	
Louisville, Ky.			29.88	758.9	57	13.9	81	S	4	1.8			10s			0	0	Cloudy	
Lynchburg, Va.			29.97	761.2	49	9.4	92	E	1	0.4		0	Fog			0	0	Foggy	
Malone, N. Y.			29.81	757.1	47	8.3	62	S	14	6.3			10s			0	0	Cloudy	
Marquette, Mich.			29.90	759.4	34	1.1	79	NW	20	8.9			8ks		NW	0.08	2.0	Cloudy	
Memphis, Tenn.			30.01	762.2	56	13.3	87	NW	1	0.4		5cs	0	W		0.15	3.8	Fair	
Milwaukee, Wis.			29.95	760.7	34	1.1	79	NW	12	5.4		8cs	0	SW		0.25	6.3	Fair, frost	
Mobile, Ala.			30.02	762.5	59	15.0	81	N	6	2.7		2c	5s			0	0	Cloudy	
Montgomery, Ala.			30.04	763.0	55	12.8	87	NE	1	0.4		8c	Haze			0	0	Fair	
Morgantown, W. Va.			29.86	758.4	55	12.8	90	S	7	3.1			10s			0.04	1.0	Threatening	
Mt. Washington, N. H.	23.72	602.5	30.08	764.0	28	—2.2	100	NW	10	4.5			Fog			0	0	Foggy	
Nashville, Tenn.			29.96	761.0	53	11.7	86	Calm	0	0		10k	Fog	SW		0	0	Cloudy	
New Haven, Conn.			30.02	762.5	43	6.1	83	NE	8	3.6		0	5s		NE	0	0	Fair	
New London, Conn.			30.01	762.2	42	5.6	91	N	5	2.2			Fog		N	0	0	Foggy	
New Orleans, La.			30.01	762.2	65	18.3	73	N	6	2.7		0	2s			0	0	Clear	
Newport, R. I.			29.97	761.2	46	7.8	100	N	7	3.1			Fog			0	0	Foggy	
New York, N. Y.			29.99	761.7	46	7.8	92	NE	6	2.7		0	Fog			0	0	Clear	
Norfolk, Va.			30.00	762.0	56	13.3	87	E	2	0.9		0	Fog			0	0	Clear	
North Platte, Neb.	27.00	685.8	29.58	751.3	40	4.4	82	NW	2	0.9			10s			0	0	Cloudy	
Omaha, Neb.	28.90	734.0	29.99	761.7	42	5.6	79	NE	11	4.9		8cs	0	NW		0	0	Fair	
Oswego, N. Y.			29.80	756.9	51	10.6	72	SSE	6	2.7			10s		W	0.03	0.8	Threatening	
Peck's Beach, N. J.			29.98	761.5	51	10.6	86	NE	4	1.8			10s			0	0	Cloudy	
Pembina, Dakota			30.19	766.8	30	—1.1	89	N	4	1.8			10s			0	0	Cloudy	
Philadelphia, Penn.			29.99	761.7	47	8.3	85	E	4	1.8			10ks		SW	0	0	Cloudy	
Pike's Peak, Colorado	18.03	458.0	30.24	768.1	30	—1.1	78	NW	20	8.9		0	0			0	0	Clear	
Pittsburgh, Penn.			29.81	757.2	51	10.6	86	SW	4	1.8			10n			0.04	1.0	Light rain	
Port Huron, Mich.			29.73	755.1	43	6.1	75	W	17	7.6			10s			0.04	1.0	Cloudy	
Portland, Me.			30.04	763.0	50	10.0	86	NE	10	4.5			10s			0	0	Threatening	
Portland, Oregon			30.04	763.0	50	10.0	94	Calm	0	0			Fog			0	0	Foggy	
Punta Rassa, Fla.			29.94	760.5	40.1	4.5	84	E	12	4.5		8cs	1ks	SW	NE	0	0	Threatening	
Rochester, N. Y.			29.73	755.1	51	10.6	78	SE	6	2.7			10s		SE	0.02	0.5	Cloudy	
Salt Lake City, Utah	25.79	655.0	30.12	765.0	57	13.9	30	S	1	0.4		0	0			0	0	Clear	
Sandy Hook, N. J.			29.97	761.2	50	10.0	86	NE	10	4.5		0	5ks		NE	0	0	Fair	
San Diego, Cal.			29.95	760.7	67	19.4	79	NE	4	1.8		0	5s			0	0	Fair	
San Francisco, Cal.			30.01	762.2	57	13.9	90	SW	10	4.5		Haze	2s		SW	0	0	Fair	
Santa Fe, N. M.	23.36	593.3	29.90	759.4	47	8.3	48	NE	8	3.6		0	0			0	0	Clear	
Savannah, Ga.			29.99	761.7	58	14.4	81	NW	4	1.8			10s			0	0	Cloudy	
Shreveport, La.			30.07	763.8	54	12.2	100	Calm	0	0		0	0			0	0	Clear	
Smithville, N. C.																			
Springfield, Mass.			30.02	762.5	43	6.1	75	Calm	0	0		1ck	8ks			0.005	0.13	Cloudy	
St. Louis, Mo.			29.95	760.7	53	11.7	86	W	6	2.7			10s			0	0	Cloudy	
St. Marks, Fla.			29.98	761.5	57	13.9	87	N	4	1.8			10s			0	0	Cloudy	
St. Paul, Minn.			30.05	763.3	33.5	0.8	89	N	4	1.8			10s			0	0	Cloudy	
St. Paul's Island, Alaska																			
Squa Beach, N. J.			29.91	759.7	49	9.4	93	N	1	0.4		2c	0			0	0	Fair	
Toledo, Ohio			29.79	756.7	46	7.8	69	W	4	1.8			10s		NW	0.02	0.5	Cloudy	
Tucson, Arizona																			
Tybee Island, Ga.			29.93	761.5	64	17.8	88	N	16	7.2			10s		SW	0	0	Cloudy	
Vicksburg, Miss.			30.00	762.3	57	13.9	88	E	1	0.4		0	Haze		E	0	0	Clear	
Virginia City, Montana	24.41	620.0	29.89	759.2	43	6.1	35	Calm	0	0		0	0			0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			29.95	760.7	56	13.3	87	S	3	1.3		Haze	2ks		SW	0	0	Fair	
Wilmington, N. C			30.01	762.2	54	12.2	100	NE	4	1.8		2c	Foc	W	NE	0	0	Fair	
Wood's Hole, Mass			29.98	761.5	52	11.1	86		4	1.8		0	2s		S	0	0	Fair	
Wytheville, Va	27.64	702.0	29.82	757.4	42	5.6	91	Calm	0	0			0			0	0	Clear	
Yankton, Dakota	28.77	730.7	30.10	764.5	38	3.3	90	NE	4	1.8			10s		NE	0	0	Cloudy	
Yuma, Arizona			29.94	760.5	70	21.1		E				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'does, W. I					83	28.3	87	E	8	3.6		2k	8ks	E	NE	0	0	Fair.	E Racker.
Pointe-aPitre, G'd'loupe, do			29.96	761.0	80	26.7	79	NE				8ks	2n			0.03	0.8	Raining	I. V. Bigard.
Havana, Cuba, W. I			29.90	759.4	74	23.3	85	Calm	0	0		8c	1k	SW	NE	0	0	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W			30.14	765.5	78	25.6	78	Calm	0	0		3c	2s			0	0		James Gall.
St. Thomas, St. T., W. I			30.30	769.6	85	29.4	70	NE	3	1.3		2ck	5k	NE	NE	0.07	1.8	Clear	W. S. Cameron.
Santiago de Cuba, W. I			29.76	755.9	77	25.0	82	Calm	0	0		8ck	8ks	S	S			Cloudy	Robert Mason.
St. Georges, Bermudas			29.84	757.9	79	26.1	87	SSW	12.0	5.4		0	2pk		SSW	1.79	55.60	Fair, sultry	C. F. Allen.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.
Cumberland, B. A																			
Ft. Chippewyan, B. A																			
Ft. McPherson, B. A																			
Ft. Simpson, B. A																			
York Factory, B. A			30.15	765.8	21.5	−5.8	94	W	10	4.5		5c	10k	W		0	0		J. Fortescue.
St. John's, Newfoundland																			John Delaney.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Clifton, Jamaica, W. I	27.20	690.9	29.99	761.7	68	20.0	84	S	4.0	1.8		8c	0	SE		0	0	Fair	C. Partridge.
Navassa																			
Meaellin, S. A																			
Paramaribo, S. A																			
Elyria, Ohio			29.78	756.4	47	8.3	100	NW	4				10n			0	0	Cloudy	H. M. Redington.

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

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; 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.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 11, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.00	762.1	73.6	23.1	42	NNW			1		1			0	0		Charnot.
Algiers			29.87	758.8	75.2	24.0	60	WNW			4		3			0	0		Kuntz.
La Calle																			
Tunis			29.91	759.7	81.0	27.2	48	NW			3		0			0	0	Cloudy	Jacques.
Sfax			29.99	761.7	79.9	26.6	37	S			3		1			0	0		Chauvey.
Saïda			29.97	761.3	70.7	21.5	46	SW			1		2			0	0	Hazy	Grosjean.
Tebessa			29.95	760.6	71.2	21.8		SE			5		10			0	0	Cloudy	Colin.
Geriville			29.98	761.6	63.5	17.5	57	W			2		5			0.394	10.0	Foggy	Bernadach.
Laghouat			29.99	761.7	73.4	23	37	NW			4		2			0	0		Simon.
Biskra			29.98	761.6	82.4	28.0	46	NW			1		3			0.055	1.4	Stormy	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			29.65	753.2	57.6	14.2	80	NE			1		10			0.035	0.9	Raining	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.75	755.7	58.1	14.5	78	NE			2		10			0	0		I. R. Observatory.
Eperies			29.81	757.2	56.1	13.4	62	S			2		9			0	0		Julius Mikolik.
Gratz	28.46	722.9	29.65	753.0	54.1	12.3	89	W			2		10						Andreas Rospini.
Hermannstadt	28.44	722.3	29.82	757.4	62.8	17.1	45	SE			4		3			0	0		Prof. Reissenberger.
Kremsmünster	28.37	720.6	29.72	754.8	46.8	8.2	81	W			2		10			0.150	3.8		Prof. C. Wagner.
Lemberg			29.85	758.3	50.7	10.4	51	SE			3		3			0	0		Dr. T. Stanecki.
Nyiregyhaza			29.82	757.5	63.7	17.6	52	E			2		5			0.462	11.73		Habzsuda Daniel.
Pola			29.60	751.7	65.1	18.4	91	SSE			6		10ks			0.068	1.74		I.R. Hydrographic Of'ce
Szegedin			29.71	754.7	70.9	21.6	32	W			2		8			0.072	1.83		Karl Stancel.
Trieste			29.58	751.2	67.5	19.7	90	SSE			2		10			0.705	17.9	Raining	Prof. V. Farolfi.
Vienna			29.67	753.7	49.5	9.7	89	SW			2		10			0.102	2.6	Raining	I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 9 p. m., local time. The elevation of Gratz is 313.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.37	746.0	52.3	11.3	92	S			2	0?	10			0.039	1.00	Raining	Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.07	738.4	49.9	9.9		NW	13	5.8			5			0.175	4.45	*D. clouds	William Boswell.
Ardrossan			29.14	740.1	51	10.6		WNW			2		4					Showery	Wm. McNeil.
Armagh Observatory			29.19	741.4	49.0	9.4		W	8	3.6			10					Gloomy	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			29.19	741.4	48.3	9.1		W			4		5					*D. clouds	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.27	743.4	48.6	9.2		WNW			1-2		7					*D. clouds	J. Dreyer.
Bradford			29.15	740.4	50.1	10.1		W			2		7						J. McLandsborough.
Bridgetown, (Barbadoes)			29.97	761.2	82.6	28.1		NE			2		6					*D. clouds	T. H Hunt.
Cambridge Observatory			29.24	742.7	57.0	13.9		W			2		5					*D. clouds	Sergeant Hunt, A. H. C.
Cape Good Hope Obs			30.24	768.1	62.5	16.9	64	WSW	13	5.8			7						The Staff, for E. J. Stone.
Cardington			29.27	743.4	52.0	11.1		W					3					*D. clouds	John McLaren.
Carlisle			29.14	740.1	50.3	10.2		W					4			0.44	11.2	*D. clouds	T. Bell, for J. Cartmell.
Chatham, School M. E.			29.31	744.5	59.7	10.4		SW			2		8					Fine	Major C. W. Martin, R. E.
Dartmoor	27.97	710.4	29.34	745.2	44.0	6.7		NW			4		8					Showery	R. E. Power.
Donaghadee			29.16	740.7	50	10.0		W			4		7					*D. clouds	J. Mac Gowan, Jr.
Dover			29.28	743.7	55	12.8		WSW			3		5						J. Costello.
Eccles, (near Manchester)			29.20	741.7	47.7	8.7		W	3.2	1.4			7					Showery	Thomas Mackereth.
Falmouth Observatory			29.37	746.0	53.8	12.1		W	25	11.2			9					Overcast	The Staff.
Fort Napier, (Natal)	27.63	701.8	29.84	757.9	66.9	19.4		E			2		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	84	28.9		N					6						[tis.
Galway, Queen's College																			B. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			30.00	762.0	70.5	21.4		SW			5		8					*D. clouds	Sergt. E. G. Baker.
Glasgow Observatory			29.11	739.4	46.2	7.9		W			1		4					Fine	Lewis Stuart.
Great Yarmouth			29.26	743.2	54	12.2		W			4		6					*D. clouds	G. T. Watson.
Greenwich Royal Obs			29.30	744.2	53.6	12.0		W			3		6			Blank	Blank	*D. clouds	The Staff, for G. B. Airy.
Guernsey			29.40	746.7	54.5	12.5		WNW			5		5					Squally	Dr. S. E. Hoskins. [ley.
Halifax, Moorside Obs			29.20	741.7	48.5	9.2		WSW					3					Showery	F. J. Page, for L. J. Cross-
Helston			29.44	747.8	53	11.7		NW			6		6					Showery	M. P. Moyle.
Holyhead			29.21	741.9	51	10.6		W			4		5					Showery	John Tilston.
Kew Observatory			29.28	743.7	53.6	12.0		WSW	13	5.8			7					*D. clouds	The Staff.
Kingstown			29.23	742.4	49	9.4		W			5		4					*D. clouds	George Mitchell.
Leicester Museum			29.25	742.9	51.9	11.1		W			2		2					*D. clouds	William J. Harrison.
Llandudno																			Dr. James Nicol.
Malta, (Mediterranean)			30.02	762.5	76.0	24.4		SW			1		6k						Fred Travis, Pvt A.H.C.
Nairn			29.06	738.1	48	8.9		W			1		10						W. D. Penny.
Nassau, (Bahamas)			30.08	764.0	79.2	26.2		SE			2		8s						Surg.-Maj. Henry.
Nottingham			29.24	742.7	51.0	10.6		WSW			4	7cks	..d	W	WNW	Blank	Blank	*D. clouds	E. J. Lowe.
Oscott, St. Mary's College			29.23	742.4	51.1	10.6		WNW			3		5					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.27	743.4	51	10.6		W			1		6					*D. clouds	J. Lucas, for R. Main.
Plymouth			29.36	745.7	52.5	11.4		W			2		4					*D. clouds	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.36	745.7	48	8.9		WNW			5		4					Cl'dy, squally	W. Kennedy.
Saint Ann's Head			29.28	743.7	51	10.6		WNW			4		5					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.40	746.7	58.0	14.4		NW			6		5						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			29.13	739.9	49.9	9.9		WSW			2		8					Overcast	F. Shaw.
Scutari cemetery, (Turkey)			29.98	761.5	67.2	19.6		SW			1		1					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.24	742.7	48.8	9.4		W			3		8					Overcast	W. F. Cooper.
Sillsoth Rectory			29.15	740.4	55.5	13.1		W			3		3			0.020	0.51	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			29.18	741.1	54.3	10.2		W			2		7			Blank	Blank		The Staff.
Stornoway, Lews C. (Hebr)			29.07	738.4	45	7.2		WSW			1		5					*D. clouds	John Smith.
Strathfield Turgiss			29.31	744.5	53.2	11.8		SW			1		4			Blank	Blank	*D. clouds	Rev Charles H. Griffith
Streatley Vicarage			29.30	744.2	55.2	12.9		W			6		6						Rev. John Slatter.
Thurso			29.04	737.6	53	11.7		W			3		6					*D. clouds	John Trotter.
Truro, Royal Institution			29.33	745.0	57	13.9		NW			7		6			Blank	Blank	Gloomy	W. Newcombe.
Valencia Observatory			29.41	747.0	43.5	6.4		WNW					5			Blank	Blank	*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					54	12.2		W			4					0.4	10.2		
Leith, Restalrig Park			29.12	739.6	51.0	10.6		W			2					0.16	4.1	Fine	Andrew Gibb.
Monach Lt-house, (Shet. Is)			29.07	738.4	48	8.9		NW			4		3			0.1	2.5		J. Youyclause.
North Unst, (Shetland Is)			29.04	737.6	47	8.3		W			4		10			Blank	Blank		

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.62	752.4	49.1	9.5	88	SE					10					Raining	
Fanöe			29.50	749.3	53.2	11.8	78	SSE					8						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			28.93	734.7	36.7	2.6	82	NE			9		6						
Thorshavn, (Faröe)			29.02	737.0	43.0	6.1	78	S			2		2						
Vestervig			29.44	747.8	51.8	11.0	70	SSE			6		6						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alengon			29.44	747.8	57.2	14.0	84	W			2		10n,k			0.299	7.6	Cloudy	Normal School.
Amiens			29.40	746.7	57.2	14.0	91	S			6		8		S	0.126	3.2	Cloudy	Normal School.
Avignon			29.78	756.4	59.7	15.4	73	NW			1		5		W	0	0	Cloudy	Normal School.
Bar-sur Seine			29.54	750.3	48.7	9.3	95	S			3		10kn		S	0	0	Squally	C. Saillard.
Beaumette, (near Angers)			29.41	746.9	58.3	14.6	69	WSW	6.5	2.9			10		SW	0.028	0.7	Showery	Beaumette Observatory
Beauvais			29.45	748.1	56.7	13.7	71	WSW			3		8		W	0.205	5.20	Cloudy	Normal School.
Besançon			29.72	754.9	51.4	10.8	85	S			2		8		W	0.335	8.5	Cloudy	Normal School.
Bourg en Bresse			29.66	753.4	55.4	13	66	S			4		8		N	0.031	0.8	Cloudy	Normal School.
Bourges			29.53	750.1	55.6	13.1	88	SSW			4		10		NE	0.169	4.3	Cloudy	Normal School.
Brest			29.43	747.5	55.6	13.1	86	WNW			3		8		NW	0.138	3.50	Squally	Naval Observatory.
Caen			29.41	747.1	54.5	12.5	83	W			2		10		WSW	0.173	4.4	Cloudy	Normal School
Chartres																			Normal School.
Chaumont	28.41	721.7	29.57	751.1	48.9	9.4		S			8		10n		S	0	0	Light rain	Normal School.
Commercy			29.58	751.3	50.9	10.5	84	SSW			6		5		SSW	0	0	Cloudy	Normal School.
Commune de Gréasque*			29.83	757.6	56.5	13.6	60	W			4		5		NW	0.217	5.5		
Le Mans																			Normal School.
Lons-Le Saulnier			29.68	753.8	56.7	13.7	58	SW			6		10			0.457	11.60	Raining	Normal School.
Mâcon			29.71	754.6	55.4	13	77	SE			4		5		E	0	0	Cloudy	Normal School.
Mirecourt			29.59	751.6	52.7	11.5	74	SW			6		8		NE	0	0	Cloudy	Normal School.
Orleans			29.46	748.3	53.6	12	93	S			3		8		S	0	0	Cloudy	Normal School.
Paris Observatory			29.41	747.1	56.5	13.6	86	S			2		10		SW	0.121	3.08	Raining	National Observatory
Parthenay			29.61	752.1	57.2	14	93	W			4		5		W	0.16	4.	Cloudy	Normal School.
La Roche sur Yon			29.54	750.4	60.1	15.6	59	SW			2		5		NE	0.098	2.5	Cloudy	Normal School.
Rochefort, Observatory			29.57	751.1	62.6	17.0	70	WNW			4		10		E	0.079	2.0	Cloudy	Naval Observatory.
Rouen			29.36	745.8	57.0	13.9	69	W			3		8		W	0.248	6.3	Cloudy	Normal School.
Saint Lo			29.39	746.5	59.9	15.5	64	NW			3		4		NW	0.059	1.5		Normal School.
Villefranche			30.07	763.6	57.2	14	78	SE			3		5		S	0.12	3.	Cloudy	Normal School
Sub-Series.																			L'Abbe Marchési.
Fort de France, Martinique													1		W	0	0		—. Faiguère.
Mont-Louis			30.10	764.5	49.1	9.5	78	SSW	13.0	5.83			10		WSW	0.228	5.8		Marié Davy.
Montsouris Observatory			29.42	747.3	56.8	13.8	81	SSW			2		3		SW	0	0		Dr. Eines.
Perpignan	†29.93	†760.2			63.5	17.5	58	E	3.7	1.67			10			0.63	16.	Rain & snow	M. Baylac.
Pic du Midi, (Summit) H. P.	21.08	534.3			28.8	— 1.8		WNW			4								General de Nansouty.
Pic du Midi, (Plantade) H.P.													10			0.039	1.0	Cloudy	E. Renou.
Saint Maur, (near Paris)			29.42	747.3	57.7	14.3	83	S			3		8		WSW	0.094	2.4		C. Marquet.
Tours			29.48	748.7	55.0	12.8	84	SW			3		9			0.270	6.85	Rainy	Dr. A. Bérigny.
Versailles, (near Paris)			29.43	747.5	51.4	10.8	85	W			3					{ 0 / 0	0 / 0 }	Foggy	H. Le Lec, S. J.
Zi-Ka-Wei, (near Shanghai)			30.21	767.4	56.3	13.5	94	Calm	0	0									

Note.—The originals 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. The rain-fall is generally measured at 7 a.m. or 9 a.m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 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. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Lower 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			29.67	753.6	49.1	9.5	87	W	13	6			9			0.630	16.0	Raining	Prof. Hoh.
Berlin			29.60	751.8	48.7	9.3	83	SE	9	4			10			0.212	5.39	Raining	Prof. Arndt.
Breslau			29.69	754.2	54.3	12.4	70	ESE	22	10			10			0	0	Raining	Dr. P. Neugebauer.
Carlsruhe			29.60	751.9	55.0	12.8	59	S	11	5			9			0.315	8.0		A. Senz.
Cassel			29.47	748.4	51.8	11.0	70	SSE	18	8			2			0.024	0.6		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.29	718.5	29.73	755.1	48.2	9.0	67	SW					3			0.488	12.4		M. Wilhelm.
Hamburg			29.57	751.1	50.9	10.5	74	SSE	18	8			9cs,k	S		0.075	1.9	Misty	Deutsche Seewarte.
Kiel			29.67	753.7	50.5	10.3	79	SE	9	4			10			0.094	2.4		Prof. G. Karsten
Königsberg			29.95	760.6	49.6	9.8	62	SE	22	10						0.001	0.03	Cloudy	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			29.65	753.0	44.6	7.0	100	WSW	9	4			10			0.886	22.5		Prof. Bruhns.
Münster			29.47	748.6	52.9	11.6	99	S	9	4			10			0.016	0.4		Prof. E. Heis.
Posen			29.69	754.1	52.3	11.3	50	S	36	16			10			0.197	5.0	Cloudy	Dr. Magener.
Strasburg, (in Alsace)			29.63	752.6	55.6	13.1	60	S	9	4			9			0.390	9.9		Dr. Schur.
Stuttgart			29.63	752.7	54.0	12.2	63	W					6			0.378	9.6	Light rain	Mr. Würth.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.50	749.3	52.3	11.3	72	S	36	16			10			0.358	9.1		Prof. Flesch.
Wustrow, Naval School			29.63	753.3	47.3	8.5	91	SSE	9	4			10			0.151	3.84	Raining	E. F. Schütz.

Note.—In the originals the distinction between 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.	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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens			30.00	762.0	73.4	23.0		SW					k					Clear	

Note.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			29.56	750.7	62.1	16.7	68	WSW	0	0			5	N		0	0		
Mondovi			29.56	750.8	61.5	16.4	67	SW			4		6	E		0.039	1.0		
Genoa			29.63	752.5	67.3	19.7	55	SE	11.9	5.3			8	SE		0	0		
Pavia			29.59	751.5	64.9	18.3	67	SW			1		4	SW		0	0		
Verona			29.57	751.1	66.0	18.9	78	E			4		10			0	0		
Padua			29.52	749.8	68.0	20.0	69	W	9.8	4.4			3			0.043	1.1		
Parma																			
Bologna					70.5	21.4	65	WNW			1		4	W		Blank	Blank		
Leghorn			29.57	751.1	64.4	18.0	55	WSW	1.8	0.8			4			0	0		
Urbino			29.68	753.8	62.6	17.0	59	WSW			4		3			0.591	15.0		
Ancona			29.68	753.9	64.2	17.9	77	E			2		10			0.591	15.0		
Siena			29.68	753.9	63.7	17.6	46	WSW	9.8	4.4			2	W		0	0		
Rome			29.76	756.0	69.8	21.0	58	SW	12.5	5.6			4			0.508	12.9		
Naples, O. U.			29.84	758.0	71.6	22.0	80	SW			6		10	SW		0.472	12.0		
Lecce			29.98	761.4	73.0	22.8	66	SSW	37.1	16.7			6	SSW		0	0		
Cosenza			29.96	760.9	73.2	22.9	55	SSE			2		4			Blank	Blank		
Catania, (Sicily)																			
Riposto			29.87	758.8	72.7	22.6	87	SSE			2		9			0	0		
Palermo			29.84	758.0	82.0	27.8	51	SW	11.2	5.0			10			0	0		
Sub-Series.																			
Naples, S. R.			29.87	758.8	66.6	19.2	96	SW			6		..ck	WNW		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for twenty-four hours. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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			29.33	745.0	53.6	12.0		SSW			5								
Groningen			29.34	745.3	49.1	9.5		S			4								
Helder			29.26	743.3	49.8	9.9		S			5								
Utrecht			29.30	744.3	49.5	9.7		SSE			5		8					Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the 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			29.35	745.6	56.5	13.6	40	S	14.1	6.3			5			0	0		
Christiania			29.72	754.9	44.6	7.0	85	SE	11.2	5.0			10			1.240	31.5	Raining	
Tromsö			29.82	757.5	45.3	7.4	72	Calm			0		0			0	0		

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.09	764.3	63.3	17.4	74	SW	17.4	7.8			8						The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

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	50.0	10.0	63	ESE	16	7			9						Astronomical Obs.
Wilna			30.06	763.4	46.9	8.3	73	Calm	0	0			10						Astronomical Obs.
Dorpat			30.17	766.3	43.0	6.1	83	ENE	9	4			10						Physical Cabinet.
St. Petersburg			30.17	766.3	43.5	6.4	73	ENE	2	1			10						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kiew			30.02	762.6	45.0	7.2	84	NNW	7	3			9						Physical Cabinet.
Nikolaiev			30.08	764.1	53.4	11.9	50	NW	10	4.5			3						Kurdakof.
Kertch			29.97	761.3	51.1	10.6	72	NW	7	3			9						Lagorio.
Moscow			30.01	762.2	48.4	9.1	66	NNW	10	4.5			5						Meteorological Obs.
Lugan			29.86	758.5	51.6	10.9	48	SW	10	4.5			9						Meteorological Obs.
Archangel			30.34	770.6	37.9	3.3	68	NE	4	2			10						Ogorodnikof.
Tiflis	28.62	727.0	30.00	761.9	69.8	21.0	35	SE	10	4.5			2						Physical Obs.
Astrakhan			30.12	765.0	57.4	14.1	57	Calm	0	0			8						Sebastianof.
Kasan			29.90	759.5	50.9	10.5	46	ESE	8	3.5			5						Physical Cabinet.
Orenburg			30.01	762.2	50.9	10.5	87	S	4	2			5						Tschernischef.
Ekaterinburg	29.01	736.9	30.03	762.7	45.1	7.3	68	Calm	0	0			3						Meteorological Obs.
Kasaly			30.06	763.4	59.4	15.2	66	Calm	0	0			0						Bobrof.
Tashkend																			Michelson.
Barnaul			30.08	763.9	55.2	12.9	40	SE	8	3.5			4						Meteorological Obs.
Yeniseisk			29.99	761.7	43.0	6.1	59	Calm	0	0			0						Marks.
Irkutsk																			Usolzef.
Oorga	26.06	662.0	30.58	767.6	26.6	-- 3.0	82	Calm	0	0			0			Blank	Blank		Mossin.
Peking, (China)			30.42	772.6	48.9	9.4	38	NW	4	2			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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			29.94	760.5	63.3	17.4	45	SW	20.8	9.3		0	9			0	0	Nearly covered.	Royal Observatory.
San Fernando			30.06	763.5	68.9	20.5	50	W	12.8	5.7		6	0	W		0	0		The Naval Observatory.

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

SWEDISH SERIES.

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

Haparanda			30.27	768.9	37.0	2.8	89	SSE			4		10			0	0		
Umea			30.20	767.0	40.6	4.8	84	S			2		10			0	0	Raining	
Hernosand			30.10	764.5	44.6	7.0	85	SE			4		10			0.008	0.2		
Stockholm			29.95	760.7	47.1	8.4	65	ESE			4		8			0	0		
Wisby			29.99	761.7	48.9	9.0	73	SE			4		10			0	0		
Sub-Series.																			
Upsala			30.00	762.1	47.1	8.4	60	SE	12.3	5.5			10		SSE				Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.30	718.7	29.52	749.8	55.6	13.1	56	WSW			4		9			1.949	49.5	Cloudy	The Observatory.
Zurich	28.08	713.3	29.73	755.2	50.9	10.5	81	W			2		4		W	0	0		The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —7.5mm.; Thermometer, —0°.6; Relative Humidity, —15 per cent.

Note.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Beirut, (Syria,) Lee Obs'y			29.99	761.8	75.9	24.4	60	NW			1		1k			0	0		Prof. C. N. A. Van Dyck.
Constantinople			30.01	762.3	64.8	18.2	72	SW	9	4			0			0	0	Clear	
Fao, (Persian Gulf)			30.04	762.9	84.6	29.2		SE			3		0					Clear	
Salonica					68.0	20.0		S			1		0					Clear	
Valona			29.90	759.5	75.6	24.2		SW			2		2						
Varna			30.00	762.0	64.4	18.0		E			3		2						

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Brockville, Ontario			29.93	760.2	40	4.4		W	8	3.6			0			0.23	5.8	Clear	
Chatham, N. B.			29.78	756.4	44	6.7	95	S	5	2.2		5cs	2ks	SW	SW	0.09	2.3	Cloudy	
Charlottetown, P. E. Island			29.85	758.2	48	8.9	94	S	5	2.2			10n			2.01	51.1	Cloudy	
Fort Garry, Manitoba			30.50	774.7	24	— 4.4	87	SW	3	1.3			5ks			0	0	Cloudy	
Halifax, N. S.			29.78	756.4	53	11.7	88	SW	8	3.6			5cs		W	4.229	116.48	Fair	
Kingston, Ontario			29.95	760.7	38	3.3	82	W	10	4.5		0	0			0.10	2.5	Clear	
Montreal, Quebec			29.79	756.7	40	4.4	80	SW	21	9.4		0	2ks			0.15	3.8	Clear	
Ottawa, Ontario			29.82	757.4	38	3.3	80	SW	12	5.4		10k	0	W		0.13	3.3	Cloudy	
Parry Sound, Ontario			29.99	761.7	31	— 0.6	79	N	12	5.4		5k	5ks	NW	NW	0.13	3.3	Cloudy	
Port Dover, Ontario			30.04	763.0	33	0.6	89	NW	10	4.5		2ck	0	W		0	0	Fair	
Port Stanley, Ontario			30.04	763.0	32	0.0	89	W	20	8.9		0	0			0	0	Clear	
Quebec, Quebec			29.73	755.1	44	6.7	84	S	8	3.6			10n		S	0.03	0.8	Cloudy	
Saugeen, Ontario			30.01	762.2	37	2.8	87	N	5	2.2			8n		N	0.14	3.6	Cloudy	
Stayner, Ontario			29.98	761.5	30	— 1.1	95	N	8	3.6			10n		N	0	0	Light snow	
Sydney, C. B.			29.86	758.4	56	13.3	88	W	12	5.4			8ks		W	1.14	29.0	Clearing	
Toronto, Ontario			29.99	761.7	35	1.7	88	W	5	2.2		2c	0	SW		0	0	Clear	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.88	758.9	43	6.1	91	Calm	0	0			10s			0.96	24.4	Cloudy	
Alpena, Mich			30.06	763.5	32	0.0	89	W	9	4.0			10s		W	0.02	0.5	Cloudy	
Atlantic City, N. J			29.93	760.2	54	12.2	86	NW	8	3.6			10s		W	0	0	Cloudy	
Augusta, Ga.			29.96	761.0	58	14.4	94	Calm	0	0			10s			0	0	Cloudy	
Baltimore, Md			30.00	762.0	48	8.9	85	N	8	3.6			10n			0.04	1.0	Light [illegible]	
Barnegat, N. J			29.88	758.9	54	12.2	86	NW	15	6.7			10ks		NW	0	0	Cloudy	
Benton, Montana	27.27	692.6	30.07	763.8	37	2.8	80	Calm	0	0		0	0			0	0	Clear	
Bismarck, Dakota	28.57	725.7	30.36	771.1	21	6.1	71	NE	2	0.9		Haze	1s			0.07	1.8	Fair, frost	
Boston, Mass			29.81	757.2	52	11.1	100	W	8	3.6			10n			0.07	1.8	Light rain	
Breckenridge, Minn			30.28	769.1	14	—10.0	83	N	8	3.6		0	0			0	0	Clear	
Buffalo, N. Y			29.98	761.5	36	2.2	70	W	12	5.4		5k	0	NW		0.23	5.8	Fair, frost	
Burlington, Vt			29.84	757.9	46	7.8	77	S	7	3.1		5k	5s	W		0.07	1.8	Cloudy	
Cairo, Ill			30.16	766.1	43	6.1	75	N	8	3.6			10ks		N	0	0	Cloudy	
Cape Hatteras, N. C			29.85	758.2	65	18.3	100	N	4	1.8			10n		S	0.45	11.4	Light rain	
Cape Henry, Va			29.92	760.0	63	17.2	67	S	12	5.4			10s		SW	0	0	Cloudy	
Cape May, N. J			29.94	760.5	55	12.8	80	NW	12	5.4			10s		NW	0	0	Cloudy	
Charleston, S. C			29.96	761.0	64	17.8	73	Calm	0	0		5k	5s	SW	SW	0	0	Cloudy	
Cheyenne, Wyoming	24.17	613.9	30.11	764.8	39	3.9	71	SW	4	1.8		Haze	0			0	0	Clear	
Chicago, Ill			30.18	766.6	34	1.1	62	NW	6	2.7		5k	0	NW		0	0	Fair	
Cincinnati, Ohio			30.09	764.3	40	4.4	63	N	12	5.4		5c	0	NW		0.60	15.2	Fair	
Cleveland, Ohio			30.03	762.7	40.2	4.6	64	SW	14	6.3		8k	2ks	W	W	0	0	Cloudy	
Colorado Springs, Col	24.30	617.2	30.17	766.3	33	0.6	89	N	2	0.9		0	0			0	0	Clear	
Corsicana, Tex			29.99	761.7	55	12.8	93	S	3	1.3		0	0			0	0	Clear	
Davenport, Iowa			30.15	765.8	38	3.3	63	N	4	1.8			10s			0	0	Cloudy	
Denison, Tex			30.01	762.2	52	11.1	86	NE	5	2.2		0	5ks,d		N	0	0	Fair	
Denver, Col	24.96	633.7	30.18	766.6	42	5.6	58	Calm	0	0		0	0			0	0	Clear	
Detroit, Mich			30.08	764.0	35	1.7	70	NW	6	2.7			10s		NW	0	0	Cloudy	
Dodge City, Kan	27.66	702.6	30.03	762.7	39	3.9	81	N	4	1.8			10s			0	0	Cloudy	
Dubuque, Iowa			30.25	768.3	38	3.3	63	Calm	0	0			10s		W	0	0	Cloudy	
Duluth, Minn			30.39	771.9	28	—2.2	77	N	8	3.6		8k	0	N		0	0	Fair	
Eastport, Me			29.82	757.4	50	10.0	86	S	9	4.0			10s			0.01	0.3	Cloudy	
Erie, Pa			29.97	761.2	42	5.6	82	NW	14	6.3		0	8ks		NW	0.20	5.1	Fair	
Escanaba, Mich			30.20	767.1	28	—2.2	77	NW	12	5.4		0	8s		NW	0.02	0.5	Cloudy	
Fort Gibson, I. T			30.11	764.8	49	9.4	77	N	10	4.5			10s		N	0	0	Cloudy	
Fort Sill, I. T	28.88	733.5	30.01	762.2	46	7.8	84	N	20	8.9			10s		N	0	0	Cloudy	
Fort Sully, Dakota	28.66	728.0	30.44	773.2	28	—2.2	77	E	12	5.4		0	5s		E	0	0	Fair	
Galveston, Tex			30.04	763.0	69	20.6	84	SW	4	1.8		0	0			0	0	Clear	
Grand Haven, Mich			30.16	766.1	35	1.7	80	NE	11	4.9		1ck	8n			0.02	0.5	Light snow	
Indianapolis, Ind			30.15	765.8	35	1.7	80	N	3	1.3		2cs	Sm'e			0.20	5.1	Fair, frost	
Indianola, Tex			30.06	763.5	67	19.4	90	W			2	0	0			0	0	Clear	
Jacksonville, Fla			29.97	761.2	67	19.4	99	NW	4	1.8			10n			0.13	3.3	Light rain	
Keokuk, Iowa			30.25	768.3	37	2.8	71	N	3	1.3		8k	0	N		0.14	3.6	Cloudy	
Key West, Fla			29.95	761.0	73.5	24.1	72	N	5	2.2			8ks		N	1.25	31.7	Cloudy	
Kittyhawk, N. C			29.95	760.7	60	15.6	94	NW	6	2.7			10n		NW	0.33	8.4	Light rain	
Knoxville, Tenn			29.94	760.5	54	12.2	79	Calm	0	0			10ks		NW	0	0	Cloudy	
La Crosse, Wis			30.25	768.3	34	1.1	90	NW	12	5.4			10n		NW	0.01	0.3	Light snow	
Leavenworth, Kan			30.30	769.6	38	3.3	80	N	2	0.9		0	0			0	0	Clear	
Lexington, Ky	28.98	736.1	30.12	765.0	37	2.8	100	N	12	5.4			10s		N	0.22	5.6	Cloudy	
Long Branch, N. J			29.93	760.2	51	10.6	86	NW	15	6.7			10s		NW	0.06	1.5	Cloudy	
Louisville, Ky			30.12	765.0	40	4.4	82	NW	12	5.4		2k	0	N		0.22	5.6	Clear	
Lynchburg, Va			29.90	759.4	58	14.4	76	W	1	0.4			10s		W	0		Cloudy	
Malone, N. Y			29.82	757.4	43	6.1	66	SW	8	3.6		5ck	0	SW		0.16	4.1	Fair	
Marquette, Mich			30.22	767.6	32	0.0	79	N	12	5.4			10s		N	0.03	0.8	Cloudy	
Memphis, Tenn			30.08	764.0	51	10.6	78	NE	12	5.4			10s			0	0	Cloudy	
Milwaukee, Wis			30.25	768.3	30	—1.1	78	NW	10	4.5		0	0			0	0	Clear, frost	
Mobile, Ala			30.03	762.7	57	13.9	93	N	4	1.8		0	0			0	0	Clear	
Montgomery, Ala			30.02	762.5	55.5	13.1	94	Calm	0	0			Fog			0	0	Foggy	
Morgantown, W. Va			30.01	763.0	41	5.0	82	S	3	1.3			10s			1.43	36.3	Cloudy	
Mt. Washington, N. H	23.52	597.4	29.88	758.9	26	—3.3	100	NW	23	10.3			10n			0.23	5.8	Light snow	
Nashville, Tenn			30.04	763.0	47	8.3	77	N	8	3.6			10ks		N	0	0	Cloudy	
New Haven, Conn			29.89	759.2	46	7.8	85	N	12	5.4			10n		N	0.33	8.4	Light rain	
New London, Conn			29.88	758.9	52	11.1	79	NW	10	4.5			10s		NW	0.01	0.3	Cloudy	
New Orleans, La			30.02	762.5	66	18.9	76	Calm	0	0		0	Sm'e		W	0	0	Clear	
Newport, R. I			29.83	757.7	58	14.4	82	W	14	6.3			10s			0	0	Cloudy	
New York, N. Y			29.92	760.0	46	7.8	85	NW	15	6.7			10s		W	0.10	2.5	Cloudy	
Norfolk, Va			29.91	759.7	60	15.6	79	S	8	3.6			10s		SW	0	0	Cloudy	
North Platte, Neb	27.35	694.7	30.02	762.5	38	3.3	90	NE	6	2.7			10s			0	0	Cloudy	
Omaha, Neb.	29.22	742.2	30.36	771.1	30	—1.1	83	NW	8	3.6		0	0			0	0	Clear	
Oswego, N. Y			29.93	760.2	42.8	6.0	75	N	12	5.4			8ks		NW	0.29	7.4	Cloudy	
Peck's Bench, N. J			29.94	760.5	54	22.2	86	N	12	5.4			10ks		N	0	0	Cloudy	
Pembina, Dakota			30.45	773.4	26	—3.3	93	Calm	0	0			10s			Inap.	Inap.	Cloudy	
Philadelphia, Penn			29.96	761.0	46	7.8	76	N	16	7.2			10ks		N	0.06	1.5	Cloudy	
Pike's Peak, Colorado	17.99	456.9	30.20	767.1	28	—2.2	77	N	12	5.4		0	0			0	0	Clear	
Pittsburgh, Penn			30.00	762.0	44	5.0	82	NW	5	2.2		2ck	0	NW		0.57	14.5	Fair	
Port Huron, Mich			30.05	763.5	34	1.1	69	W	9	4.0			10s			0	0	Cloudy	
Portland, Me			29.79	756.7	52	11.1	93	Calm	0	0			Fog			0.21	5.3	Light rain	
Portland, Oregon			30.12	765.0	56	13.3	87	N	6	2.7			10s			0	0	Cloudy	
Punta Rassa, Fla			29.97	761.2	71.5	21.9	78	S	4	1.8			10n			0.18	4.6	Light rain	
Rochester, N. Y			29.94	760.2	40	4.4	43	W	11	4.9			10s		W	0.03	0.8	Cloudy	
Salt Lake City, Utah	25.02	635.5	30.05	763.3	56	13.3	34	Calm	0	0		5k	0			0	0	Fair	
Sandy Hook, N. J			29.90	759.4	48	8.9	35	NW	20	8.9			10ks		NW	0.08	2.0	Cloudy	
San Diego, Cal			29.92	760.0	63	17.2	94	Calm	0	0		0	0			0	0	Clear	
San Francisco, Cal			29.93	760.2	60	15.6	82	SW	2	0.9		0	0			0	0	Clear	
Santa Fe, N. M	23.30	591.8	29.81	757.0	46	7.8	43	E	8	3.6		0	0			0	0	Clear	
Savannah, Ga.			29.97	761.2	63	17.2	83	SW	2	0.9			10s			0	0	Cloudy	
Shreveport, La			30.04	763.0	58	14.4	100	Calm	0	0		1k	Fog			0	0	Fair	
Smithville, N. C																			
Springfield, Mass			29.89	759.2	46	7.8	76	NW	4	1.8			10n		SW	0.62	15.7	Light rain	
St. Louis, Mo			30.23	767.8	39	3.9	80	N	3	1.3		0	0			0	0	Clear	
St Marks, Fla			29.95	760.7	63	17.2	83	N	4	1.8			10s			0	0	Cloudy	
St. Paul, Minn			30.14	770.6	27	—2.8	66	NW	8	3.6		0	8ks			0	0	Fair	
St. Paul's Island, Alaska																			
Squa. Beach, N. J			29.86	758.4	50	10.0	78	N	8	3.6			10s		N	0	0	Cloudy	
Toledo, Ohio			30.03	764.3	36	2.2	70	N	6	2.7			10s		N	0	0	Cloudy	
Tucson, Arizona																			
Tybee Island, Ga			29.98	761.5	64	17.8	88	NW	8	3.6			10s			0.02	0.5	Cloudy	
Vicksburg, Miss			30.09	764.3	58	14.4	93	S	4	1.8		0	Haze			0	0	Hazy	
Virginia City, Montana	24.40	619.8	29.88	758.9	42	5.6	34	Calm	0	0		10c	0	NE		0	0	Cloudy	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			29.98	761.5	46	7.8	89	N	9	4.0			10s			0	0	Cloudy	
Wilmington, N. C			29.92	760.0	63	17.2	88	W	1	0.4			10s		W	0.14	3.6	Cloudy	
Wood's Hole, Mass.			29.84	757.9	62	16.7	83	S	23	10.3		0	8s		S	0	0	Fair	
Wytheville, Va.	27.56	700.0	29.70	754.4	50	10.0	86	N	2	0.9			10s			0	0	Cloudy	
Yankton, Dakota	29.10	739.1	30.50	774.7	19.5	—6.9	92	NW	5	2.2		0	0			0	0	Clear	
Yuma, Arizona			29.86	758.4	69	20.6		S				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'does, W. I					83	28.3	91	SE	4	1.8		2k	5ks	N	SW	0.08	2.0		E. Racker.
Pointe-aPitre, G'd'loupe, do			29.98	761.5	78	25.6	91	E					10n			0.20	5.1	Raining	L. V. Bigard.
Havana, Cuba, W. I.			29.98	761.5	76	24.4	81	N	1.2	0.5		8ck	8k	SW	N	0.05	1.3		Charles Hasselbrink.
Kingston, Jamaica, W.			30.17	766.3	81	27.2	78	Calm	0	0		2k	2s	S	S	0	0		James Gall.
St. Thomas, St. T., W. I.			30.23	767.8	82	27.8	70	E	6	2.7		2cs	5k	SE	SE	0	0	Fair	W. S. Cameron.
Santiago de Cuba, W. I.			29.81	757.2	79	26.1	82	Calm	0	0		8c	2k	W	S			Fair	Robert Mason.
St. Georges, Bermudas			29.99	761.7	78.5	25.8	91	SW	2.0	0.9		0	5fk		SW	0.200	5.08	Fair	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.			30.09	764.3	28.5	—1.9	100	SW	6	2.7		8cs	0	S		0	0		J. Fortescue.
St. John's, Newfoundland																			John Delaney.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Clifton, Jamaica, W. I.	27.21	691.1	30.00	762.0	65	18.3	84	S	2.0	0.9		0	0			0	0	Fine, clear	C. Partridge.
Navassa																			
Medellin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			30.06	763.5	43	6.1	43	NW	4	1.8			10n			0	0	Rain & sleet	H. M. Redington.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; 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.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 12, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.00	761.9	79.0	26.1	45	NNE			3		4			0	0		Charnot.
Algiers			29.81	757.2	77.7	25.4	49	W			4		4			0	0	Cloudy	Peter.
La Calle																			Kuntz.
Tunis			29.83	757.6	81.7	27.6	47	W			4		6			0.933	23.7	Heavy rain	Jacques.
Sfax			29.91	759.8	82.8	28.2	43	S			5		1			0	0	Sirocco	Chauvey.
Saïda			29.95	760.6	68.9	20.5	37	W			2		1			0	0	Thunder	Grosjean.
Tebessa			29.88	758.9	74.3	23.5		S			5		4			0	0	Cloudy	Colin.
Geriville			29.94	760.5	62.6	17.0	34	W			4		1			0.039	1.0	Cloudy	Bernadach.
Laghouat			29.95	760.7	77.0	25	28	SW			4		1			0	0		Simon.
Biskra			29.94	760.4	82.6	28.1	39	NW			2		4			0	0		Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			29.59	751.5	64.9	18.3	80	SSW			2		8			0.988	25.1	Raining	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.58	751.3	61.7	16.5	75	NE			3		5			0.417	10.6		I. R. Observatory.
Eperies			29.68	753.8	58.2	11.8	91	S			2		10			0.358	9.10		Julius Mikolik.
Gratz	28.31	719.1	29.48	744.8	59.9	15.5	84	W			2		10						Andreas Rospini.
Hermannstadt	28.30	718.7	29.67	753.7	64.2	17.9	59	SE			3		5			0.226	5.75		Prof. Reissenberger.
Kremsmünster	28.19	716.0	29.53	750.1	44.6	7.0	94	Calm			0		10			0.094	2.4		Prof. C. Wagner.
Lemberg			29.74	755.3	50.0	10.0	67	E			4		8			Blank	Blank		Dr. T. Stanecki.
Nyiregyhaza			29.70	754.4	59.4	15.2	89	SE			1		9			0.025	0.63		Habzsuda Daniel.
Pola			29.50	749.2	61.2	16.2	90	SE			4		108			0.060	1.53		I. R. Hydrographic Of'ce
Szegedin			29.60	751.7	67.6	19.8	61	SE			3		6			0	0		Karl Stancel.
Trieste			29.50	749.3	59.6	15.5	93	NNE			1		10			0.815	20.7	Raining	Prof. V. Farolfi.
Vienna			29.44	747.8	60.1	15.6	73	NE			1		7			0.122	3.1	Foggy	I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 9 p. m., local time. The elevation of Gratz is 313.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.39	746.5	49.6	9.8	86	SW			2	0	9			0.102	2.60		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.31	744.5	48.0	8.9		W	5	2.2			2			0.150	3.81	*D. clouds	William Boswell.
Ardrossan			29.32	744.7	48	8.9		SW			1		4					*D. clouds	Wm. McNeil.
Armagh Observatory			29.35	745.5	47.8	8.8		WNW	4	1.8			3					*D. clouds	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			29.32	744.7	47.2	8.4		W			2		4					*D. clouds	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.39	746.5	50.9	10.5		WNW			1-2		5					*D. clouds	J. Dreyer.
Bradford			29.28	743.7	48.9	9.4		W			1		6					Fine	J. McLandsborough.
Bridgetown, (Barbadoes)			29.93	760.2	84.6	29.2		NE			4		7					*D. clouds	T. H Hunt.
Cambridge Observatory			29.35	745.5	53.5	11.9		W			1		1					*D. clouds	Sergeant Hunt, A. H. C.
Cape Good Hope Obs			29.31	744.5	63.7	17.6	53	SSE	14	6.3			3						The Staff, for E. J. Stone.
Cardington			29.37	746.0	49.0	9.4		W					6					Showery	John McLaren.
Carlisle			29.31	744.5	52.1	6.9		Calm					5			0.08	2.0	*D. clouds	Bell, for J. Cartmell.
Chatham, School M. E			29.36	745.7	52.2	11.2		SW			1		6					Fine	Major C. W. Martin, R. E.
Dartmoor	28.03	711.9	29.41	747.0	41.0	5.0		NW			4		10					Showery	R. E. Power.
Donaghadee			29.31	744.5	47	8.3		W			2		3					*D. clouds	J. Mac Gowan, Jr.
Dover			29.36	745.7	52	11.1		WNW			2		3						J. Costello.
Eccles, (near Manchester)			29.31	744.5	46.2	7.9		W					10					Gloomy	Thomas Mackereth.
Falmouth Observatory			29.46	748.3	51.8	11.0		WNW	17	7.6			7					Overcast	The Staff.
Fort Napier, (Natal)	27.85	707.4	30.06	763.5	62.8	17.1		NE			2		9					Threatening	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	85	29.4		E					6						[illegible]
Galway, Queen's College																			B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.03	762.7	70.0	21.1		W			5		0					Clear	Sergt. E. G. Baker.
Glasgow Observatory			29.31	744.5	46.1	7.8		WNW			1		9					Misty	Lewis Stuart.
Great Yarmouth			29.34	745.2	50	10.0		W			1		2					Clear	G. T. Watson.
Greenwich Royal Obs			29.38	746.2	51.2	10.7		W			1		3					*D. clouds	The Staff, for G. B. Airy.
Guernsey			29.47	748.5	51.5	10.8		NW			2		5					Squally	Dr. S. E. Hoskins.
Halifax, Moorside Obs			29.34	745.2	48.5	9.1		WSW					7					*D. clouds	F. J. Page, for L. J. Crossley.
Helston			29.42	747.3	54	12.2		N			4		6c					Fair	M. P. Moyle.
Holyhead			29.36	745.7	50	10.0		WNW			3		3					Clear	John Tilston.
Kew Observatory			29.37	746.0	49.9	9.9		WNW	6	2.7			4					*D. clouds	The Staff.
Kingstown			29.38	746.2	47	8.3		W			4		4					*D. clouds	George Mitchell.
Leicester Museum			29.36	745.7	51.4	10.8		W			1		2					Clear	William J. Harrison.
Llandudno			29.36	745.7	53.0	11.7		W					5					*D. clouds	Dr. James Nicol.
Malta, (Mediterranean)			29.94	760.5	77.6	25.3		SW			1		6k						Fred Travis, Pvt A.H.C.
Nairn			29.39	746.5	47	8.3		Calm			0		2						W. D. Penny.
Nassau, (Bahamas)			30.12	765.3	78.1	25.6		SW			2		8s						Surg.-Maj. Henry.
Nottingham			29.35	745.5	51.5	10.7		SW			2		4c,d		SW			*D. clouds	E. J. Lowe.
Oscott, St Mary's College			29.34	745.2	49.2	9.6		WNW			2		7					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.36	745.7	48	8.9		WSW			1		8					Overcast	J. Lucas, for R. Main.
Plymouth			29.43	747.5	52.6	11.4		NW			3		1					Clear	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.43	747.5	46	7.8		WNW			4		5					Cloudy	W. Kennedy.
Saint Ann's Head			29.40	746.7	50	10.0		WNW			2		6					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.46	748.3	53.5	11.9		NNW			4		8						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			29.31	744.5	47.8	8.8		WSW			1		3					Clear	F. Shaw.
Scutari cemetery, (Turkey)			29.90	759.4	71.0	21.7		Calm			0		1					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.32	744.7	50.5	10.3		WNW			2		7					Misty	W. F. Cooper.
Silloth Rectory			29.32	744.7	52.9	11.6		NNW			1		2			0	0	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			29.31	744.5	46.4	8.0		SW			1		10			Blank	Blank	Gloomy	The Staff.
Stornoway, Lews C. (Hebr)			29.26	743.2	46	7.8		NW			2		2					Clear	John Smith.
Stratfield Turgiss			29.38	746.2	50.5	10.3		W			1		5					Clear	Rev. Charles H. Griffith
Streatley Vicarage																			Rev. John Slatter.
Thurso			29.30	744.2	53	11.7		SSW			2		7					*D. clouds	John Trotter.
Truro, Royal Institution			29.42	747.3	56	13.3		W			4		10					Raining	W Newcombe.
Valencia Observatory			29.47	748.5	51.5	10.8		WNW	14	6.3			9					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					54	12.2		NW			2					0	0		
Leith, Restalrig Park			29.34	745.2	47.2	8.4		W			1					0	0	Fine	Andrew Gibb.
Monach Lt-house, (Shet. Is)			29.24	742.7	49	9.4		S			3	2	2			0	0		J. Youyclause.
North Unst, (Shetland Is)			29.33	745.0	48	8.9		SE			6		10						

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.54	750.2	51.3	10.7	76	SE			6		10					
Fanöe			29.34	745.3	50.2	10.1	80	SSE			6		9					
Godthaab, (Greenland)																		
Stykkisholm, (Iceland)			29.42	747.3	35.0	2.2	82	NE			6		8					
Thorshavn, (Faröe)			29.35	745.6	48.7	9.3	76	SE			2		5					Raining
Vestervig			29.40	746.7	48.9	9.4	87	SE			6		10					

Note.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols: not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			29.47	748.4	57.2	14.0	59	NW			3		5n,k			0.102	2.6	Cloudy	Normal School.
Amiens			29.39	746.5	54.3	12.4	83	SW			2		5		SW	0.067	1.2	Cloudy	Normal School.
Avignon			29.60	751.7	56.5	13.6	73	S			1		10			0.283	7.2	Cloudy	Normal School.
Bar-sur Seine			29.65	753.1	51.4	10.8	63	S			2		5		W	0.283	7.2	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.45	748.0	55.2	12.9	43	WSW	4.0	1.8			5		SW	0	0	Showery	Beaumette Observatory.
Beauvais			29.46	748.2	52.3	11.3	65	S			2		8		W	0.069	1.75	Cloudy	Normal School.
Besançon			29.54	750.2	52.9	11.6	65	S			3		5		SW	0.240	6.1	Cloudy	Normal School.
Bourg en Bresse			29.48	748.9	55.8	13.2	54	SW			2		5		NE	0.374	9.5	Cloudy	Normal School.
Bourges			29.58	751.4	50.0	10	82	SSW			3		5		NE	0.311	7.9	Cloudy	Normal School.
Brest			29.48	748.9	51.8	11.5	75	W			3		8		NW	0.197	5.00	Squally	Naval Observatory.
Caen			29.48	748.9	54.9	12.7	72	WSW			2		2		W	0.16	4.		Normal School.
Chartres																			Normal School.
Chaumont	28.34	719.7	29.90	759.4	50.5	10.3		WSW			4		10kn		SW	0.20	5.	Cloudy	Normal School.
Commercy			29.51	749.5	50.4	10.2	72	WSW			4		5		WSW	0.252	6.4	Cloudy	Normal School.
Commune de Gréasque*			29.59	751.5	53.6	12.0	74	NW			2		8		SW	0.276	7.0		
Le Mans																			Normal School.
Lons-Le Saulnier			29.54	750.2	52.3	11.3	61	W			2		2		W	0	0	Rainy	Normal School.
Mâcon			29.52	749.7	53.4	11.9	78	S			4		5		SE	0.189	4.8	Cloudy	Normal School.
Mirecourt			29.42	747.3	52.7	11.5	64	SW			6		5		NE	0.217	5.5	Cloudy	Normal School.
Orleans			29.65	753.2	51.1	10.6	75	W			3		2		WSW	0.402	10.2		Normal School.
Paris Observatory			29.44	747.8	51.3	10.7	67	WSW			2		10		WSW	0.441	11.21	Covered	National Observatory
Parthenay			29.79	756.6	53.6	12	83	W			4		5		NW	0.3[illegible]	8.	Cloudy	Normal School.
La Roche sur Yon			29.54	750.4	49.6	9.8	84	W			2		5		N	0.228	5.8	Cloudy	Normal School.
Rochefort, Observatory			29.61	752.1	53.6	12.0	60	SW			2		8		NE	0.433	11.0	Cloudy	Naval Observatory.
Rouen			29.43	747.6	51.6	10.9	65	W			2		2		W	0.079	2.0		Normal School.
Saint Lo			29.44	747.9	43.2	6.2	69	NW			6		4		NW	0.61[illegible]	15.5		Normal School.
Villefranche			29.61	752.0	51.8	11	76	SE			4		8		S	0.16	4.	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchésl.
Mont-Louis			29.94	760.5	45.3	7.4	80	SSW	18.6	8.33			6		W	0.461	11.7		—. Faiguère.
Montsouris Observatory			29.43	747.6	51.1	10.6	74	SW			2		10n			0.54	13.8		Marié Davy.
Perpignan	†29.62	†752.3			53.3	13.5	56	N	16.8	7.50			8		NW	0.165	4.2		Dr. Fines.
Pic du Midi, (Summit) H. P.																			M. Baylac.
Pic du Midi, (Plantade) H.P.																			General de Nansouty.
Saint Maur, (near Paris)			29.44	747.8	53.6	12.0	64	SSW			3		9			0.693	17.6	Showery	E. Renou.
Tours			29.45	748.1	54.0	12.2		W			2		5		WNW	0.118	3.0		C. Marquet.
Versailles, (near Paris)			29.45	748.0	47.5	8.6	86	SW			3		10			0.363	9.22	Raining	Dr. A. Béringy.
Zi-Ka-Wei, (near Shanghai)			30.27	768.9	50.0	10.0	86	NNE	0.9	0.4		5ck	0	NE		0 0	0 0		H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,580.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 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. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also.

GERMAN SERIES.

Furnished by the coöperation of Prof. Geo. Neumayer, Superintendent Royal 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			29.46	748.3	51.8	11.0	82	S	13	6			9			0.039	1.0		Prof. Hoh.
Berlin			29.52	749.7	54.1	12.3	68	SE	18	8			8			0.320	8.14		Prof. Arndt.
Breslau			29.60	751.9	56.5	13.6	87	SE	4	2			10			0.114	2.9	Rainy	Dr. P. Neugebauer.
Carlsruhe			29.50	749.3	52.2	11.2	73	SW	11	5			10			0.465	11.8	Rainy	A. Senz.
Cassel			29.35	745.6	52.3	11.3	64	SSE	9	4			8			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.15	715.0	29.59	751.6	46.4	8.0	86	NW					10			0.154	3.9	Raining	M. Wilhelm.
Hamburg			29.43	747.5	53.4	11.9	79	S	16	7			10kn			0.035	0.9	Cloudy	Deutsche Seewarte.
Kiel			29.67	753.6	51.8	11.0	79	ESE	13	6			10			0	0		Prof. G. Karsten.
Königsberg			29.80	756.9	50.9	10.5	57	SE	22	10						0	0	Cloudy	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			29.52	749.8	51.4	10.8	79	SSE	9	4			10			0	0		Prof. Bruhns.
Münster			29.41	746.9	51.1	10.6	98	S	13	6			7			0.012	0.3		Prof. E. Heis.
Posen			29.60	751.7	53.2	11.8	85	SE	22	10						0.091	2.3	Cloudy	Dr. Magener.
Strasburg, (in Alsace)			29.50	749.5	53.8	12.1	58	W	4	2			10			0.028	0.7		Dr. Schur.
Stuttgart			29.53	750.0	50.9	10.5	71	W					10			0.043	1.1		Mr. Würth.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.44	747.7	50.5	10.3	75	SW	22	10			10			0.031	0.8		Prof. Flesch.
Wustrow, Naval School			29.56	750.8	50.0	10.0	76	ESE	18	8			10			0.129	3.28	Raining	E. F. Schütz.

Note.—In the originals the distinction between 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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens			29.92	760.0	73.8	23.2		SW					0					Clear	

Note.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			29.43	747.4	57.4	14.1	80	ESE	5.6	2.5			9	W		0.055	1.4		
Mondovi			29.41	747.0	55.9	12.8	83	NW			4		10			0	0		
Genoa			29.39	746.6	64.6	18.3	64	S	10.5	4.7			10	S		0	0		
Pavia			29.41	747.0	58.5	14.7	82	NE			4		9	NE		0	0		
Verona			29.40	746.7	59.0	15.0	86	NE			2		10			0.482	12.0		
Padua			29.41	747.0	58.5	14.7	92	NNW	5.6	2.5			10	S		0.094	2.4		
Parma																			
Bologna					69.3	20.7	60	ESE			1		6	NW		0.118	3.0		
Leghorn			29.46	748.2	63.5	17.5	82	WSW	0.7	0.3			10			0.106	2.7		
Urbino			29.50	749.4	63.9	17.7	64	S			2		10			0	0		
Ancona			29.46	748.2	64.8	18.2	73	E			2		10			0.346	8.8		
Siena			29.49	749.0	60.6	15.9	90	SW	3.8	1.7			10	S		0.236	6.0	Raining	
Rome			29.58	751.2	68.7	20.4	80	S	12.5	5.6			10	S		0.579	14.7		
Naples, O. U.			29.68	753.9	74.8	23.8	69	SW			7		7	SW		0.697	17.7		
Lecce			29.79	756.6	74.7	23.7	57	S	18.6	8.3			7	S		0	0		
Cosenza			29.80	756.9	71.6	22.0	60	ESE			1		5			Blank	Blank		
Catania, (Sicily)																			
Riposto			29.69	754.1	76.5	24.6	69	SW			2		9			0	0		
Palermo			29.69	753.8	79.2	26.2	49	WSW	11.2	5.0			8			0	0		
Sub-Series.																			
Naples, S. R.			29.72	754.9	69.8	21.0	82	WSW			4		..ck	SW		0.413	10.5		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for twenty-four hours. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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			29.38	746.3	49.8	9.9		SW			4								
Groningen			29.30	744.1	50.0	10.0		SW			2								
Helder			29.32	744.6	49.3	9.6		SE			2								
Utrecht			29.32	744.8	50.2	10.1		SSW			2		8					Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the 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			29.43	747.5	54.3	12.4	68	E	8.1	3.6			8			0	0		
Christiania			29.71	754.7	46.4	8.0	82	E	12.5	5.6			10			0.571	14.5	Raining	
Tromsö			30.06	763.4	39.9	4.4	65	Calm			0		0			0	0		

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.14	765.6	65.5	18.6	41	NNW	21.0	9.4			5			Blank	Blank		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.72	754.9	46.2	7.9	83	ESE	22	10			10						Astronomical Obs.
Wilna			30.00	762.0	50.4	10.2	62	ESE	4	2			4						Astronomical Obs.
Dorpat			30.18	766.6	46.6	8.1	82	E	7	3			10						Physical Cabinet.
St. Petersburg			30.19	766.9	42.4	5.8	72	ENE	2	1			10						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kiell			30.07	763.6	45.7	7.6	82	ESE	4	2			6						Physical Cabinet.
Nikolaiev			30.11	764.8	54.9	12.7	43	SSE	4	2			4						Kurdakof.
Kertch			29.96	760.9	56.5	13.6	69	NNE	2	1			5						Lagorio.
Moscow			30.04	763.1	42.6	5.9	71	NNW	10	4.5			8						Meteorological Obs.
Lugan			29.94	760.5	50.4	10.2	62	NW	13	6			10						Meteorological Obs.
Archangel			30.32	770.1	40.5	4.7	60	E	4	2			0						Ogorodnikof.
Tiflis	28.58	726.0	29.98	761.5	62.2	16.8	45	NW	13	6			2			Blank	Blank		Physical Obs.
Astrakhan			29.92	759.9	48.2	9.0	71	WNW	17	7.5			8						Sobastianof.
Kasan			29.78	756.4	43.2	6.2	76	E	4	2			9						Physical Cabinet.
Orenburg			29.77	756.1	50.2	10.1	59	NE	4	2			10						Tschernischef.
Ekaterinburg	28.98	736.1	30.02	762.5	37.6	3.1	95	NE	4	2			10						Meteorological Obs.
Kasaly			30.10	764.5	64.8	18.2	69	Calm	0	0			0						Bobrof.
Tashkend																			Michelson.
Barnaul			30.08	764.0	38.7	3.7	55	Calm	0	0			0						Meteorological Obs.
Yeniseisk			29.74	755.3	42.3	5.7	76	ESE	2	1			10						Marks.
Irkutsk																			Usolzef.
Oorga	25.79	655.1	30.24	768.2	27.2	— 2.4	63	Calm	0	0			0						Mossin.
Peking, (China)			30.20	767.0	52.2	11.2	40	SSW	4	2			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.85	758.5	60.1	15.6	45	NW	15.2	6.8		0	7			0	0	Cloudy	Royal Observatory.
San Fernando			30.10	764.6	69.7	19.3	57	WNW	25.7	11.5		4	0	NW		0.036	1.0		The Naval Observatory.

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

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Haparanda			30.34	770.5	34.0	1.1	85	E			2		10			0	0		
Umea			30.24	768.1	39.9	4.4	77	E			2		10			0	0		
Hernosand			30.14	765.6	41.7	5.4	87	ESE			2		10			0.055	1.4		
Stockholm			29.91	759.7	48.6	9.2	66	SE			6		7			0	0		
Wisby			29.87	758.8	49.6	9.8	66	SE			7		7			0	0		
Sub-Series. Upsala			29.96	761.0	48.6	9.2	72	ESE	15.9	7.1			10		SE				Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.12	714.2	29.54	750.2	55.9	13.3	47	S			3		5			0.311	7.9	Cloudy	The Observatory.
Zurich	27.93	709.5	29.60	751.7	47.3	8.5	81	SE			1		10		NW	0.315	8.0	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —12.0mm.; Thermometer, —0°.2; Relative Humidity, —24 per cent.

Note.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Beirut, (Syria,) Lee Obs'y			29.96	760.9	75.2	24.2	63	N			3		1k			0	0		Prof. C. N. A. Van Dyck.
Constantinople			29.94	760.4	67.6	19.8	49	SW	4	2			0			0	0	Clear	
Fao, (Persian Gulf)			30.04	763.0	82.4	28.0		SE			3		0					Clear	
Salonica					69.8	21.0		N			1		10					Cloudy	
Valona			29.77	756.2	75.7	24.3		SE			1		2						
Varna			29.90	759.5	65.3	18.5		SE			3		5					Cloudy	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Brockville, Ontario			30.34	770.6	31	—0.6		Calm	0	0			8s		W	0	0	Cloudy	
Chatham, N. B.			30.02	762.5	40	4.4	86	NW	3	1.3			10s		NW	0.08	2.0	Cloudy	
Charlottetown, P. E. Island			30.02	762.5	44	6.7	93	Calm	0	0			10n			0.305	7.75	Light rain	
Fort Garry, Manitoba			29.97	761.2	34	1.1	71	W	16	7.2		5k	2ks	W	W	0	0	Cloudy	
Halifax, N. S.			29.93	760.2	46	7.8	97	NW	6	2.7			10n		NW	0.226	5.72	Heavy rain	
Kingston, Ontario			30.35	770.9	32	0.0	83	Calm	0	0		5ck	0			0	0	Fair	
Montreal, Quebec			30.23	767.8	35	1.7	73	W	5	2.2		2ck	2ks	W		0.01	0.3	Cloudy	
Ottawa, Ontario			30.28	769.1	31	—0.6	72	W	3	1.3		5ck	0	W		0	0	Fair	
Parry Sound, Ontario			30.38	771.6	26	—3.3	94	N	12	5.4		2ck	2s	NW	NW	0	0	Fair	
Port Dover, Ontario			30.39	771.6	30	—1.1	78	NW	8	3.6		2k	0	NW		0	0	Fair	
Port Stanley, Ontario			30.37	771.4	30	—1.1	93	NW	2	0.9		2k	0	N		0	0	Clear	
Quebec, Quebec			30.14	765.5	34	1.1	79	SW	2	0.9			10n		SW	0	0	Cloudy	
Saugeen, Ontario			30.35	770.9	29	—1.7	100	E	4	1.8			10s			0.03	0.8	Light snow	
Stayner, Ontario			30.37	771.4	31	—0.6	89	Calm	0	0			10n			0.84	21.3	Light snow	
Sydney, C. B.			30.02	762.5	53	11.7	97	S	2	0.9			10n			0	0	Cloudy	
Toronto, Ontario			30.35	770.9	32	0.0	80	NW	5	2.2		0	2ks		NW	0	0	Fair	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.21	767.3	38	3.3	80	Calm	0	0			10ks		W	0	0	Cloudy, frost	
Alpena, Mich.			30.39	771.9	31	—0.6	89	W	8	3.6			10s			Inap.	Inap.	Cloudy	
Atlantic City, N. J.			30.20	767.1	43	6.1	66	NW	14	6.3			10s			0	0	Cloudy	
Augusta, Ga.			30.22	770.1	53	11.7	73	NE	8	3.6			10ks		NE	0.15	3.8	Cloudy	
Baltimore, Md.			30.29	769.4	45	7.2	76	NW	6	2.7		5ck	0	NW		0	0	Fair	
Barnegat, N. J.			30.19	766.8	43	6.1	66	N	21	9.4			10ks		SW	0	0	Cloudy	
Benton, Montana	27.32	693.9	30.12	765.0	38	3.3	80	S	1	0.4		0	0			0	0	Clear	
Bismarck, Dakota	28.24	717.2	29.95	760.7	29	—1.7	78	SE	2	0.9		Haze	1s	S		0	0	Fair	
Boston, Mass.			30.12	765.0	40	4.4	73	NW	12	5.4			10s			0.01	0.3	Cloudy	
Breckenridge, Minn.			30.13	765.3	33	0.6	69	S	10	4.5			10s		S	0	0	Cloudy	
Buffalo, N. Y.			30.34	770.6	33	0.6	79	NW	5	2.2		1c	2ks	W	NW	Inap.	Inap.	Fair, frost	
Burlington, Vt.			30.24	768.1	37	2.8	71	N	7	3.1			10s		N	0	0	Cloudy	
Cairo, Ill.			30.16	773.7	35	1.7	80	NE	4	1.8		0	0			0	0	Clear	
Cape Hatteras, N. C.			30.04	763.0	55	12.8	80	NE	24	10.7			10n		NE	0.35	8.9	Misty	
Cape Henry, Va.			30.21	767.3	50	10.0	65	N	25	11.2			10n		N	0.07	1.8	Light rain	
Cape May, N. J.			30.20	767.1	45	7.2	60	NW	16	7.2			10s		SW	0	0	Cloudy	
Charleston, S. C.			30.18	766.6	53	11.7	73	N	14	6.3			10s		NW	0	0	Cloudy	
Cheyenne, Wyoming	24.22	615.2	30.16	766.1	41	5.0	42	NW	8	3.6		0	0			0	0	Clear	
Chicago, Ill.			30.45	773.4	36	2.2	55	NW	6	2.7			10s		N	0	0	Cloudy	
Cincinnati, Ohio			30.40	772.1	37	2.8	71	NE	5	2.2		0	Sm'e			0	0	Clear	
Cleveland, Ohio			30.40	772.1	38.5	3.6	63	W	16	7.2			10ks		W	0.14	3.6	Clearing	
Colorado Springs, Col.	24.26	616.2	30.12	765.0	49	9.4	67	N	8	3.6		2c	Sm'e	W		0	0	Fair	
Corsicana, Tex.			30.28	769.1	53	11.7	86	NE	6	2.7		0	2s			0	0	Clear	
Davenport, Iowa			30.17	773.9	35	1.7	70	E	4	1.8		6c	Fog			0	0	Fair	
Denison, Tex.			30.32	770.1	47	8.3	77	NE	2	0.9		5c	2s	NW	NE	0	0	Fair	
Denver, Col.	25.01	635.2	30.23	767.8	44	6.7	40	S	4	1.8		2c	Fog			0	0	Fair	
Detroit, Mich.			30.44	773.2	29	—1.7	78	NW	8	3.6		0	Sm'e		NW	0	0	Clear	
Dodge City, Kan.	27.66	702.6	30.01	763.0	37	2.8	90	SW	2	0.9		2c	2s	W		0	0	Fair	
Dubuque, Iowa			30.43	772.9	31	—0.6	89	Calm	0	0			Fog			Inap.	Inap.	Foggy	
Duluth, Minn.			30.30	769.6	31	—0.6	60	SW	4	1.8		5c	2s	W	W	0	0	Cloudy	
Eastport, Me.			30.02	762.5	43	6.1	91	NW	9	4.0			10s			0.15	3.8	Cloudy	
Erie, Pa.			30.33	770.4	39	3.9	56	NW	10	4.5			10ks		NW	0.46	11.7	Cloudy	
Escanaba, Mich.			30.41	772.4	26	—3.3	75	W	4	1.8		0	0			0.05	1.3	Clear	
Fort Gibson, I. T.			30.37	771.4	39	3.9	72	NE	7	3.1		0	0			0	0	Clear	
Fort Sill, I. T.	29.08	738.6	30.23	767.8	43	6.1	83	S	1	0.4			10s		S	0	0	Cloudy	
Fort Sully, Dakota	28.32	719.3	30.03	762.7	36	2.2	80	E	4	1.8		0	0			0	0	Clear	
Galveston, Tex.			30.20	767.1	71	21.7	90	NE	8	3.6			10s		E	0	0	Cloudy	
Grand Haven, Mich.			30.46	773.7	33	0.6	79	S	5	2.2			10s		W	Inap.	Inap.	Cloudy	
Indianapolis, Ind.			30.46	773.7	32	0.0	79	N	4	1.8		Haze	Sm'e			0	0	Hazy, frost	
Indianola, Tex.			30.21	767.3	71	21.7	90	NW			3	0	0			0	0	Clear	
Jacksonville, Fla.			30.11	764.8	63	17.2	88	W	4	1.8		4k	0	S		0.23	5.8	Fair	
Keokuk, Iowa			30.42	772.7	32	0.0	79	SE	1	0.4		10s	0	SE		0	0	Fair	
Key West, Fla.			30.06	763.5	79.5	26.4	62	N	4	1.8		5ck	2ks	SW	N	0	0	Fair	
Kittyhawk, N. C.			30.16	766.1	53	11.7	86	NE	41	19.7		0	10ks		NE	0.52	13.2	Light rain	
Knoxville, Tenn.			30.38	771.6	35	1.7	70	NE	2	0.9		0	0			0.03	0.8	Clear	
La Crosse, Wis.			30.44	773.2	34	1.1	90	S	4	1.8		0	0			0.04	1.0	Clear, frost	
Leavenworth, Kan.			30.39	771.9	36	2.2	90	Calm	0	0			10s		NW	0	0	Cloudy	
Lexington, Ky.	29.29	743.9	30.47	773.9	31	—0.6	89	N	4	1.8		0	0			0	0	Clear	
Long Branch, N. J.			30.20	767.1	47	8.3	62	NW	16	7.2			10s		NW	0	0	Cloudy	
Louisville, Ky.			30.45	773.4	33	0.6	89	NW	6	2.7		0	0			0	0	Clear	
Lynchburg, Va.			30.30	769.6	45	7.2	55	NW	3	1.3		0	0			0.26	6.6	Clear	
Malone, N. Y.			30.24	768.1	34	1.1	79	W	3	1.3			8s		W	0	0	Cloudy	
Marquette, Mich.			30.38	771.6	29	—1.7	66	SW	12	5.4		5ck	0			0.07	1.8	Fair	
Memphis, Tenn.			30.44	773.2	37	2.8	71	NE	4	1.8		0	Sm'e			0	0	Clear, frost	
Milwaukee, Wis.			30.49	774.4	28	—2.2	77	NW	4	1.8		2c	Sm'e	NW		0	0	Clear, frost	
Mobile, Ala.			30.26	768.6	50	10.0	71	N	16	7.2		0	0			0	0	Clear	
Montgomery, Ala.			30.30	769.6	45	7.2	72	N	6	2.7		0	0			0	0	Clear, frost	
Morgantown, W. Va.			30.37	771.4	39	3.9	76	W	4	1.8			10s			0	0	Cloudy, frost	
Mt. Washington, N. H.	23.69	601.7	30.05	763.3	17	—8.3	100	N	6	2.7		10s	10s	N	N	0.10	2.0	Cloudy	
Nashville, Tenn.			30.40	772.1	40	4.4	73	N	4	1.8		0	Fog			0	0	Clear, frost	
New Haven, Conn.			30.16	766.1	43	6.1	75	N	12	5.4			10s			0.06	1.5	Cloudy	
New London, Conn.			30.14	765.5	44	6.7	60	NW	8	3.6			10s		W	0.05	1.3	Cloudy	
New Orleans, La.			30.25	768.3	60	15.6	63	N	12	5.4		0	2s		N	0	0	Clear	
Newport, R. I.			30.10	764.5	44	6.7	68	N	12	5.4			10s		N	0.26	6.6	Cloudy	
New York, N. Y.			30.20	767.1	42	5.6	66	NW	8	3.6		8ck	Fog	W		0	0	Fair	
Norfolk, Va.			30.21	767.3	46	7.8	92	N	15	6.7			10s		N	0.25	6.3	Light rain	
North Platte, Neb.	27.21	691.1	29.87	758.7	33	0.6	89	S	4	1.8		0	0			0	0	Clear	
Omaha, Neb.	29.19	741.4	30.31	769.9	37	2.8	80	S	8	3.6			10s		W	0	0	Cloudy	
Oswego, N. Y.			30.30	769.6	40	4.4	60	N	10	4.5			8ks		NW	0.04	1.0	Cloudy	
Peck's Beach, N. J.			30.22	767.6	43	6.1	67	N	20	8.9		0	8s			0	0	Cloudy	
Pembina, Dakota			29.97	761.2	34	1.1	79	S	12	5.4		5c	2s		N	0	0	Cloudy	
Philadelphia, Penn.			30.26	768.6	41	5.0	65	NW	16	7.2		5k	0	W		0	0	Fair	
Pike's Peak, Colorado	18.01	457.4	30.22	767.6	27	—2.8	77	N	24	10.7		0	5s		NW	0	0	Fair	
Pittsburgh, Penn.			30.35	770.9	38	3.3	80	NW	6	2.7			10ks		NW	0	0	Cloudy	
Port Huron, Mich.			30.43	772.9	29	—1.7	67	W	10	4.5		5k	2s	NE		0	0	Cloudy	
Portland, Me.			30.11	764.8	42	5.6	66	N	8	3.6			10s			0.07	1.8	Cloudy	
Portland, Oregon			30.07	763.8	54	12.2	93	N	4	1.8			Fog			0	0	Fogg	
Punta Rassa, Fla.			30.11	764.8	67.7	19.8	90	N	12	5.4		8cs	1s	SW		0.20	5.6	Cloudy	
Rochester, N. Y.			30.30	769.6	38	3.3	71	W	5	2.2			10s		W	0	0	Cloudy, frost	
Salt Lake City, Utah	25.09	652.5	30.02	762.5	57	13.9	20	Calm	0	0		0	0			0	0	Clear	
Sandy Hook, N. J.			30.19	766.8	44	6.7	60	N	18	8.0		0	8s		SW	Inap.	Inap.	Cloudy	
San Diego, Cal.			29.98	761.5	64	17.8	100	Calm	0	0			Fog			0	0	Foggy	
San Francisco, Cal.			29.98	761.5	55	12.8	87	SW	4	1.8		Haze	0			0	0	Clear	
Santa Fe, N. M.	23.34	592.8	29.88	758.9	41.5	5.3	45	E	3	1.3		0	0			0	0	Clear	
Savannah, Ga.			30.15	765.8	56	13.3	81	N	16	7.2			10s			0	0	Threatening	
Shreveport, La.			30.36	771.1	52	11.1	66	NE	9	4.0		8ck	5s	W		0	0	Cloudy	
Smithville, N. C.																			
Springfield, Mass.			30.17	766.3	42	5.6	58	N	8	3.6		0	8s			0.09	2.3	Cloudy	
St. Louis, Mo.			30.52	775.2	35	1.7	61	E	2	0.9		0	0			0	0	Clear	
St. Marks, Fla.			30.15	765.8	61	16.1	82	NW	7	3.1			10s		NW	0	0	Cloudy	
St. Paul, Minn.			30.33	770.4	29.5	—1.4	73	SE	4	1.8		5c	5s			0	0	Cloudy	
St. Paul's Island, Alaska																			
Squa Beach, N. J.			30.11	764.8	42	5.6	65	NW	10	4.5		2cs	5s		NW	0	0	Cloudy	
Toledo, Ohio			30.41	773.2	28	—2.2	77	N	12	5.4		0	Haze			0	0	Clear	
Tucson, Arizona																			
Tybee Island, Ga.			30.16	766.1	56	13.3	73	NE	20	8.9			10s		NE	0	0	Threatening	
Vicksburg, Miss.			30.12	762.7	45	7.2	76	NE	2	0.9		0	0			0	0	Clear	
Virginia City, Montana	24.47	621.5	29.95	760.7	39	3.9	46	Calm	0	0		0	0			0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.29	769.4	41.5	5.3	75	NW	2	0.9		0	0			0	0	Clear	
Wilmington, N. C			30.18	766.6	47	8.3	92	N	14	6.3			10n		NE	0.02	0.5	Light rain	
Wood's Hole, Mass			30.07	763.8	45	7.2	84	N	5	2.2			10s			0.70	17.8	Cloudy	
Wytheville, Va	27.90	708.6	30.18	766.6	31	—0.6	68	N	5	2.2		0	0			0.05	1.3	Clear	
Yankton, Dakota	28.92	734.6	30.26	768.6	40	4.4	56	S	13	5.8			10s		SW	0	0	Cloudy	
Yuma, Arizona			29.94	760.5	69	20.6		Calm	0	0		2c	0			0	0	Fair	
Sub-Series.																			
Bridgetown, B'b'does, W. I					83	28.3	95	SE	6	2.7		2k	5k	NE	N	0	0	Fair	E. Racker.
Pointe-aPitre, G'd'loupe, do			29.97	761.2	78	25.6	86	SE				2cs	2ks			0.03	0.8	Clear	L. V. Bigard.
Havana, Cuba, W. I			30.03	762.7	77	25.0	76	Calm	0	0		8ck	1k	SW	ENE	0.60	15.2	Fair	Charles Hasselbrink.
Kingston, Jamaica, W			30.20	767.1	80	26.7	78	Calm	0	0		2k	1s	S	S	0	0		James Gall.
St. Thomas, St. T., W. I			30.24	768.1	82	27.8	74	E	4	1.8		2ck	5kn	E	E	0.01	0.3	Cloudy	W. S. Cameron.
Santiago de Cuba, W. I			29.84	757.9	77	25.0	76	NE	1.2	0.5		8c	0					Fair	Robert Mason.
St. Georges, Bermudas			30.05	763.3	78.5	25.8	86	SW	8.0	3.6			10fk		SW	0.040	1.02	Fair	C. F. Allen.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.
Cumberland, B. A																			
Ft. Chippewyan, B. A																			
Ft. McPherson, B. A																			
Ft. Simpson, B. A																			
York Factory, B. A			29.64	752.8	30	—1.1	100	W	6	2.7			10n			0	0	Snowing	J. Fortescue.
St. John's, Newfoundland																			John Delaney.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Clifton, Jamaica, W. I	27.24	691.9	30.02	762.5	68	20.0	90	SE	1.5	0.7		0	0			0	0	Clear	C. Partridge.
Navassa																			
Medellin, S. A																			
Paramaribo, S. A																			
Elyria, Ohio			30.40	772.1	35	1.7	70	NW	4	1.8			2ks			0.43	10.9	Fair	H. M. Redington.

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

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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, 6,957.3 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.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Virginia City, 5,180 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 13, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			29.85	758.2	74.5	23.6	52	NW			3		4			0	0		Charnot.
Algiers			29.57	751.0	75.2	24.0	55	WNW			3		4			0.035	0.9	Cloudy	Peter.
La Calle																			Kuntz.
Tunis			29.61	752.0	75.2	24.0	46	NW			4		7			0.039	1.0	Cloudy	Jacques.
Sfax			29.70	754.3	80.4	26.9	32	N			1		2			0	0		Chauvey.
Saida			29.80	756.8	66.2	19.0	54	WNW			2		1			0	0		Grosjean.
Tebessa			29.73	755.1	67.3	19.6		SE			3		2			0	0		Colin.
Gerlville			29.76	755.9	59.9	15.5	45	NNW			2		4			0	0		Bernadach.
Laghouat			29.91	759.8	68.0	20	47	SW			4		1			0	0		Simon.
Biskra			29.87	758.8	76.8	24.9	36	NW			4		3			0	0		Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			29.27	743.5	51.1	10.6	76	NE			1		6			0.331	8.4	Raining	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.41	746.8	50.9	10.5	97	NE			5		10			0.087	2.2		I. R. Observatory.
Eperies			29.24	742.6	55.0	12.8	96	Calm			0		10			0.101	5.56		Julius Mikolik.
Gratz	28.06	712.7	29.24	742.7	50.2	10.1	67	NW			5		5						Andreas Rospini.
Hermannstadt	27.92	709.2	29.28	743.8	62.6	17.0	61	SSE			4		10			0.207	5.25		Prof. Reissenberger.
Kremsmünster	28.02	711.6	29.36	745.8	42.1	5.6	93	W			3		10			0.717	18.2		Prof. C. Wagner.
Lemberg			29.32	744.7	54.7	12.6	87	SW			4		8			0.665	16.9		Dr. T. Stanecki.
Nyiregyhaza			29.26	743.3	57.9	14.4	96	SE			3		10			3.551	90.2		Habzsuda Daniel.
Pola			29.29	743.9	58.1	14.5	72	W			4		4ks			1.214	30.84		I.R. Hydrographic Of'ce
Szegedin			29.22	742.2	58.8	14.9	81	SW			3		8			0.212	5.38		Karl Stancel.
Trieste			29.28	743.6	53.4	11.9	85	ENE			2		10			0.256	6.5	Raining	Prof. V. Farolfi.
Vienna			29.19	741.3	45.3	7.4	72	W			6		10			2.161	54.8		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 9 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.27	743.5	49.6	9.8	75	SE			2	0	8			0.024	0.60		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.38	746.2	48.0	8.9		ENE	14	6.3			9			0.075	1.91	Gloomy	William Boswell.
Ardrossan			29.32	744.7	49.2	9.6		NE			2		1					Foggy	Wm. McNeil.
Armagh Observatory			29.32	744.7	46.3	7.9		SSW			3		10					Gloomy	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			29.25	742.9	49.5	9.7		ESE			2		3					*D. clouds	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.32	744.7	49.2	9.6		WNW			1		7					*D. clouds	J. Dreyer.
Bradford			29.25	742.9	45.4	7.4		N			1		0					Clear	J. McLandsborough.
Bridgetown, (Barbadoes)			29.92	760.0	84.0	28.9		NE			2		6					*D. clouds	T. H Hunt.
Cambridge Observatory			29.22	742.2	52.0	11.1		ENE			1		7			Blank	Blank	*D. clouds	Sergeant Hunt, A. H. C.
Cape Good Hope Obs			30.07	763.8	68.0	20.0	46	SSE	16	7.2			1						The Staff, for E. J. Stone.
Cardington			29.22	742.2	50.0	10.0		E					7					Overcast	John McLaren.
Carlisle			29.28	743.7	49.8	9.9		Calm					3			0.01	0.3	*D. clouds	Bell, for J. Cartmell.
Chatham, School M. E.			29.20	741.7	53.2	11.8		SE			1		10					Fine	Major C. W. Martin, R. E.
Dartmoor	27.78	705.6	29.14	740.1	43.5	6.4		NE			3		10					Overcast	R. E. Power.
Donaghadee			29.30	744.2	46	7.8		E			2		5					*D. clouds	J. Mac Gowan, Jr.
Dover			29.18	741.1	51	10.6		ESE			3		4						J. Costello.
Eccles, (near Manchester)			29.26	743.2	50.3	10.2		E	1.0	0.4			5					Hazy	Thomas Mackereth.
Falmouth Observatory			29.18	741.1	53.2	10.1		WNW	20	8.9			9					Overcast	The Staff.
Fort Napier, (Natal)	27.67	702.8	29.88	758.9	74.5	23.6		N			3		5					*D. clouds	Pvt G. Salmon, A. H. C.
Free Town, (Sierra Leone			29.96	761.0	82	27.8		W					6						
Galway, Queen's College																			B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.02	762.5	65.5	18.6		WSW			5		8					Threatening	Sergt. E. G. Baker.
Glasgow Observatory			29.32	744.7	47.1	8.4		NE			2		2					Fine	Lewis Stuart.
Great Yarmouth			29.25	742.9	52	11.1		SE			3		4					*D. clouds	G. T. Watson.
Greenwich Royal Obs			29.20	741.7	53.4	11.9		E			1		9					Overcast	The Staff, for G. B. Airy.
Guernsey			29.01	736.8	46.5	8.1		ENE			6		8					Squally	Dr. S. E. Hoskins.
Halifax, Moorside Obs			29.30	744.2	46.1	7.8		NE					3					Foggy	F. J. Page, for L. J. Cropley.
Helston			29.14	740.1	58	14.4		NW			4		6k					Showery	M. P. Moyle.
Holyhead			29.26	743.2	50	10.0		E			2		5					Misty	John Tilston.
Kew Observatory			29.18	741.1	52.1	11.2		E	16	7.2			7					Misty	The Staff.
Kingstown			29.28	743.7	47	8.3		WNW			4		10			Blank	Blank	Overcast	George Mitchell.
Leicester Museum			29.25	745.5	51.1	10.6		E			1		5					*D. clouds	William J. Harrison.
Llandudno			29.25	745.5	50.9	10.5		W					8					Overcast	Dr. James Nicol.
Malta, (Mediterranean)			29.89	759.2	73.8	23.2		SE			1		4k						Fred Travis, Pvt A. H. C.
Nairn			29.38	746.2	48	8.9		ESE			4		5						W. D. Penny.
Nassau, (Bahamas)			30.13	739.9	72.4	22.4		S			2		10a			Blank	Blank		Surg.-Maj. Henry.
Nottingham			29.27	743.4	48.7	9.3		NNE			3		3c, k, ks		SSE			Clear	E. J. Lowe.
Oscott, St. Mary's College			29.22	742.2	48.2	9.0		E			2		9					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.19	741.4	49	9.4		ENE			1		9					Overcast	J. Lucas, for R. Main.
Plymouth			29.13	739.9	50.5	10.3		NE			4		10					Overcast	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.28	743.7	48	8.9		NNE			4		5					Cloudy	W. Kennedy.
Saint Ann's Head			29.21	741.9	50	10.0		N			3		7					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.94	760.5	45.8	7.7		NE			6		10					Raining	A. P. Amy.
Sandwick Manse (Orkneys																			
Scarborough			29.30	744.2	47.8	8.8		NNE			1		8					Overcast	F. Shaw.
Scutari cemetery, (Turkey)			29.61	752.1	73.0	22.8		S			1		2					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.34	745.2	44.3	6.8		NNE			1		6					Misty	W. F. Cooper.
Silloth Rectory			29.30	744.2	51.1	10.6		NE			2		2			0.030	0.76	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			29.25	742.9	46.7	8.2		NE			1		6			Blank	Blank	Hazy	The Staff.
Stornoway, Lews C. (Hebr)			29.38	746.2	45	7.2		ESE			1		2					Clear	John Smith.
Strathfield Turgiss			29.18	741.1	50.2	10.1		E			1		5					*D. clouds	Rev Charles H. Griffith.
Streatley Vicarage			29.32	744.7	54.0	12.2		NNE			2		5						Rev. John Slatter.
Thurso			29.42	747.3	50	10.0		ESE			2		6					*D. clouds	John Trotter.
Truro, Royal Institution			29.18	741.1	54	12.2		W			6		7					Gloomy	W. Newcombe.
Valencia Observatory			29.36	745.7	52.4	11.3		NW	16	7.2			4					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					50	10.0		E			2					0.108	2.5		
Leith, Restalrig Park			29.37	746.0	46.8	8.2		SE			1		8k			0	0	Cloudy	Andrew Gibb.
Monach Lt-house, (Shet. Is)			29.38	746.2	51	10.6		SE			4					0	0		J. Youyclause.
North Unst, (Shetland Is)			29.57	751.1	49	9.4		SE			6	10	8						

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., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.45	747.9	49.6	9.8	86	ESE			9		10						
Fanöe			29.35	745.5	50.4	10.2	95	E			4		10					Raining	
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.61	752.1	37.0	3.2	83	E			4		3						
Thorshavn, (Faröe)			29.55	749.5	51.0	10.9	77	SSE			2		1						
Vestervig			29.46	748.3	48.2	9.0	92	E			6		10					Raining	

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols: not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.20	767.0	53.6	12.0	91	E			4		10m,k			1.126	28.6	Cloudy	Normal School.
Amiens			29.15	740.4	55.8	13.2	65	WSW			6		5		WSW	0.055	1.4	Cloudy	Normal School.
Avignon			29.31	744.4	49.3	9.6	97	SE			1		8		S	0.20	5.5	Raining	Normal School.
Bar-sur Seine			29.18	741.1	49.5	9.7	89	S			6		10kn		S	0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)			28.77	730.7	55.2	12.9	93	SW	3.1	1.4			10		SW	0.488	12.4	Showery	Beaumette Observatory
Beauvais			29.17	740.9	48.0	8.9	78	SE			3		10		SE	0	0	Cloudy	Normal School.
Besançon			29.26	743.1	52.9	11.6	57	SW			3		8		SW	0.213	5.4	Cloudy	Normal School.
Bourg en Bresse			29.29	743.9	43.7	6.5	82	SSW			4		10		N	0.209	5.3	Raining	Normal School.
Bourges			29.39	746.6	47.1	8.4	88	SSE			6		10		NNW	0.36	9.2	Cloudy	Normal School.
Brest			28.96	735.6	50.5	10.3	84	N			6		10		N	0.669	17.00	Raining	Naval Observatory.
Caen			29.07	738.3	45.3	7.4	97	ESE			6		10			0.165	4.2	Cloudy	Normal School
Chartres																			Normal School.
Chaumont	28.06	712.7	29.22	742.3	47.5	8.6		SSE			8		10m		SSE	0	0	Raining	Normal School.
Commercy			29.29	744.0	47.5	8.6	83	ESE			6		5		ESE	0	0	Cloudy	Normal School.
Commune de Gréasque*			29.42	747.3	48.2	9.0	74	E			2		10		SE	0	0	Raining	
Le Mans																			Normal School.
Lons-Le Saulnier			29.25	743.0	50.9	10.5	62	S			4		10		SW	0.520	13.20	Raining	Normal School.
Mâcon			29.11	739.3	45.1	7.3	94	SSE			6		5		N	0.067	1.7	Cloudy	Normal School.
Mirecourt			29.02	737.1	52.3	11.3	64	SSE			6		5		N	0	0	Cloudy	Normal School.
Orleans			29.03	737.3	45.0	7.2	94	SE			4		8		SE	0	0	Cloudy	Normal School.
Paris Observatory			29.09	738.8	44.6	7.0	88	SE			4		10		SE	0.045	1.15	Raining	National Observatory
Parthenay			29.02	737.1	55.6	13.2	93	SW			4		5		W	0.287	7.3	Cloudy	Normal School.
La Roche sur Yon			29.65	753.1	56.5	13.6	88	SW			4		5		NE	0.630	16.0	Cloudy	Normal School.
Rochefort, Observatory			28.96	735.3	59.0	15.0	70	SW			10?		10		NE	1.260	32.0	Raining	Naval Observatory.
Rouen			29.07	738.3	45.9	7.7	75	SSW			2		10			0	0	Cloudy	Normal School.
Saint Lo			28.95	735.3	54.3	12.4	100	SE			6		8		SE	0.413	10.5		Normal School.
Villefranche			29.71	754.5	43.2	6.2	98	SE			6		10		S	0.08	2.	Cloudy	Normal School
Sul-Series.																			
Fort de France, Martinique																			L'Abbe Marchésl.
Mont-Louis			29.85	758.2	40.1	4.5	92	SSW	29.8	13.33			10		SSW	0.020	0.5		—. Faiguère.
Montsouris, Paris			29.10	739.0	44.4	6.9	94	SE			3		10		SE	0.138	3.5	Raining	Montsouris Observ'tory.
Perpignan	†29.30	†744.2			64.4	18.0	57	E	3.3	1.67			10		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H. P.																			M. Baylac.
Pic du Midi, (Plantade) H.P.																			General de Nansouty.
Saint Maur, (near Paris)			29.09	738.8	44.1	6.7	94	SE			3		10			0.015	0.3	Raining	E. Renou.
Tours			28.96	735.5	57.4	14.1		S			3		10		WSW	0.524	13.3		C. Marquet.
Versailles, (near Paris)			29.07	738.4	44.2	6.8	85	SE			6		10			0.290	7.3	Raining	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.28	769.2	55.8	13.2	73	NE	3.8	1.7		1cks	0			0 / 0	0 / 0		H. Le Lee, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 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. The rain-fall at ZiKa-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			29.33	744.9	48.7	9.3	62	SW	13	6			8			0.024	0.6		Prof. Hoh.
Berlin			29.22	742.3	50.0	10.0	98	E	9	4			10			1.097	27.86	Raining	Prof. Arndt.
Breslau			29.22	742.1	52.5	11.4	91	E	27	12			10			0.496	12.6	Raining	Dr. P. Neugebauer.
Carlsruhe			29.29	744.0	52.2	11.2	63	SE	4	2			2			0	0		A. Senz.
Cassel			29.19	741.4	52.3	11.3	72	E	9	4			8			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	27.93	709.5	29.36	745.7	47.3	8.5	54	SE					3			0	0		M. Wilhelm.
Hamburg			29.33	745.0	47.8	8.8	93	NW	7	3			10			0.264	6.7	Raining	Deutsche Seewarte.
Kiel			29.68	753.9	49.8	9.9	91	ESE	9	4			10			0.591	15.0		Prof. G. Karsten.
Königsberg			29.61	752.1	53.2	11.8	48	E	34	15						0	0	Clear	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			29.24	742.6	43.9	6.6	100	WNW	13	6			10			0.831	21.1		Prof. Bruhns.
Münster			29.34	745.1	51.4	10.8	74	NE	9	4			3			0.138	3.5		Prof. E. Heis.
Posen			29.31	744.5	50.0	10.0	81	E	45	20						0.433	11.0	Cloudy	Dr. Magener.
Strasburg, (in Alsace)			29.29	744.0	52.7	11.5	54	S	4	2			5			0.240	6.1		Dr. Schur.
Stuttgart			29.34	745.2	50.0	10.0	60	SW					4			0	0	Light rain	Mr. Würth.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.25	742.8	48.7	9.3	65	SE	13	6			2			0	0		Prof. Clesch.
Wustrow, Naval School			29.38	746.3	50.2	10.1	89	NE	18	8			10			0.058	1.47		E. F. Schütz.

Note.—In the originals the distinction between 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.	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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens			29.75	755.7	72.0	22.2		SW										Raining	

Note.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			29.27	743.4	58.3	14.6	44	SE	8.1	3.6			9	W		0.020	0.5		
Mondovi			29.26	743.1	57.2	14.0	47	SE			4		10			0	0		
Genoa			29.30	744.1	65.5	18.6	31	SE	8.7	3.9			10	SW		0	0		
Pavia			29.28	743.7	60.8	16.0	39	SW			4		1	SW		0	0		
Verona			29.26	743.3	63.5	17.5	52	E			2		0			0	0		
Padua			29.25	743.0	60.6	15.9	59	SW	8.1	3.6			2			0	0		
Parma																			
Bologna					65.7	18.7	70	WSW			2		3	SW		Blank	Blank		
Leghorn			29.41	747.0	61.2	16.2	59	W	19.2	8.6			4			0	0		
Urbino			29.37	746.1	52.9	11.6	65	SW			6		7			0.748	19.0		
Ancona			29.38	746.3	61.0	16.1	61	WNW			4		2			0.512	13.0		
Siena			29.39	746.6	57.2	14.0	54	SW	8.1	3.6			4	W		0	0		
Rome			29.52	749.7	58.5	14.7	67	ENE	7.4	3.3			4	SW		0.102	2.6		
Naples, O. U.			29.57	751.1	67.3	19.6	41	W			7		8	SW		0.626	15.9		
Lecce			29.54	750.2	71.1	21.7	50	WSW	21.7	9.7			7	SSW		0	0		
Cosenza			29.62	752.4	67.3	19.6	55	W			2		9			0.161	4.1		
Catania, (Sicily)																			
Riposto			29.58	751.2	73.9	23.3	50	W			2		9			0	0		
Palermo			29.62	752.3	73.4	23.0	40	WSW	11.2	5.0			6			0	0		
Sub-Series.																			
Naples, S. R.			29.60	751.9	61.3	16.3	55	W			2		10ck	W		0.500	12.7	Thunder-storm	Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S R., is for twenty-four hours. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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			29.29	743.9	50.5	10.3		SSE			4								
Groningen			29.26	743.3	48.9	9.4		ESE			2								
Helder			29.30	744.2	48.7	9.3		ESE			1								
Utrecht			29.26	743.2	51.3	10.7		SE			2		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the 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			29.58	751.4	54.0	12.2	76	E	27.7	12.4			8			0	0		
Christiania			29.89	759.2	48.0	8.9	57	E	13.9	6.2			10			0.059	1.5		
Tromsö			30.15	765.8	37.2	2.9	74	Calm			0		0			0	0		

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.00	762.1	64.9	18.3	86	WSW	28.6	12.8			0			Blank	Blank		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.44	747.8	47.8	8.8	80	E	29	13			10						Astronomical Obs.
Wilna			29.79	756.7	47.7	8.7	59	E	8	3.5			10						Astronomical Obs.
Dorpat			30.11	764.7	40.6	4.8	56	ENE	9	4			0						Physical Cabinet.
St. Petersburg			30.16	766.1	41.2	5.1	54	NE	7	3			3						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kieff			29.74	755.5	42.8	6.0	90	ESE	9	4			10					Rain & fog	Physical Cabinet.
Nikolaiev			29.73	755.2	57.6	14.2	47	SE	10	4.5			9						Kurdakof.
Kertch			29.82	757.3	58.5	14.7	64	S	7	3			8						Lagorio.
Moscow			30.04	763.1	35.8	2.1	91	NNE	10	4.5			10					Light rain	Meteorological Obs.
Lugan			29.83	757.6	53.2	11.9	58	Calm	0	0			9						Meteorological Obs.
Archangel			29.33	770.4	29.8	− 1.2	92	E	4	2			9						Ogorodnikof.
Tiflis	28.63	727.2	30.04	763.0	59.0	15.0	61	SW	4	2			9						Physical Obs.
Astrakhan			30.01	762.2	54.5	12.5	49	WNW	8	3.5			9						Sebastianof.
Kasan			29.63	752.6	41.2	5.1	82	ENE	9	4			10					Raining	Physical Cabinet.
Orenburg			29.44	747.8	41.5	5.3	83	Calm	0	0			10						Tschernischef.
Ekaterinburg	28.65	727.6	29.66	753.4	39.6	4.2	93	N	20	9			10					Raining.	Meteorological Obs.
Kasaly			30.11	764.7	50.9	10.5	81	S	20	9			3						Bebrof.
Tashkend																			Michelson.
Barnaul			30.14	765.5	40.1	4.5	71	Calm	0	0			2						Meteorological Obs.
Yeniseisk			29.86	758.5	36.3	2.4	82	SW	2	1			3						Marks.
Irkutsk																			Usolzef.
Oorga	25.83	656.1	30.28	769.0	29.5	− 1.4	80	Calm	0	0			0						Mossin.
Peking, (China)			30.19	766.7	55.4	13.0	42	SW	7	3			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.08	764.0	58.1	14.5	76	SW	46.3	20.7			10			0	0	Covered	Royal Observatory.
San Fernando			30.11	764.9	67.3	19.6	64	W	18.6	8.3			10		W	0.055	1.4		The Naval Observatory.

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

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Haparanda			30.29	769.4	31.6	− 0.2	96	N			2		10			0	0		
Umea			30.28	769.1	38.1	3.4?	80	NE			2		10			0	0		
Hernosand			30.24	768.0	37.4	3.0	79	ENE			2		10			0	0		
Stockholm			29.95	760.7	44.4	6.9	70	N			6		10			0	0		
Wisby			30.86	758.4	48.6	9.2	68	ESE			6		3			0	0		
Sub-Series.																			
Upsala			30.03	762.7	43.2	6.2	66	ENE	13.0	5.8			10						Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	27.88	708.0	29.32	744.6	49.3	9.6	60	SSW			4		10			0.217	5.5	Cloudy	The Observatory.
Zurich	27.72	704.0	29.38	746.2	49.5	9.7	63	SE			1		5			0.043	1.1	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —18.2mm.; Thermometer, —3°.7; Relative Humidity, —11 per cent.

Note.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Beirut, (Syria,) Lee Obs'y			29.87	758.7	73.9	23.3	65	N			2		0			0	0		Prof. C. N. A. Van Dyck
Constantinople			29.64	752.8	73.0	22.8	76	SW	7.8	3.5			2		SW	0	0		
Fao, (Persian Gulf)			29.95	760.7	81.2	29.0		SE			3		0					Clear	
Salonica					72.0	22.2		S			1		5					Cloudy	
Valona			29.55	759.5	61.1	20.6		S			3		5					Cloudy	
Varna			29.65	753.0	73.4	23.0		E			3		5					Cloudy	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Brockville, Ontario			30.49	774.4	30	—1.1		Calm	0	0			10s		NW	0	0	Cloudy	
Chatham, N. B.			30.15	765.8	37	2.8	66	W	11	4.6		5k	0	W		0	0	Fair	
Charlottetown, P. E. Island			30.14	765.5	39	3.9	69	W	14	6.3		0	0			0.580	14.73	Clear	
Fort Garry, Manitoba			29.75	755.6	39	3.9	86	SE	9	4.0		5k	2ks	W		0	0	Cloudy	
Halifax, N. S.			30.14	765.5	40	4.4	73	NW	18	8.0		0	5n		NW	1.040	26.42	Fair	
Kingston, Ontario			30.49	774.4	34	1.1	69	SW	6	3.6		10cs	0			0	0	Cloudy	
Montreal, Quebec			30.40	772.1	29	—1.7	88	SW	4	1.8		Haze	5ks	W	W	0	0	Cloudy	
Ottawa, Ontario			30.37	771.4	32	0.0	64	S	6	2.7			10ks		W	Inap.	Inap.	Cloudy	
Parry Sound, Ontario			30.31	769.9	41	5.0	65	SW	14	6.3		2k	8ks	W	W	0	0	Cloudy	
Port Dover, Ontario			30.45	773.4	41	5.0	74	S	7	3.1		10k	0	NW		0	0	Fair	
Port Stanley, Ontario			30.43	772.9	29	—1.7	91	N	2	0.9		2k	0	W		0	0	Clear	
Quebec, Quebec			30.35	770.9	30	—1.1	78	W	2	0.9			10n		W	0	0	Cloudy	
Saugeen, Ontario			30.34	770.6	41	5.0	76	SW	14	6.3			10ks		W	0.11	2.8	Cloudy	
Stayner, Ontario			30.39	771.9	34	1.1	79	S	5	2.2			10n		NW	Inap.	Inap.	Cloudy	
Sydney, C. B.			30.04	763.0	45	7.2	78	W	10	4.5		5k	5ks	W	NW	0.35	8.9	Fair	
Toronto, Ontario			30.45	773.4	32	0.0	88	W	2	0.9		8ck	0	W		0	0	Cloudy	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.16	773.7	34	1.1	79	Calm	0	0		5k	Haze	W		0	0	Hazy, frost	
Alpena, Mich.			30.27	768.8	33	0.6	79	W	10	4.5		0	0			0	0	Clear	
Atlantic City, N. J.			30.50	771.7	39	3.9	63	N	10	4.5		10ks	0	SW		0	0	Cloudy	
Augusta, Ga.			30.38	771.4	46	7.8	69	N	3	1.3		0	0			0	0	Clear	
Baltimore, Md.			30.54	775.7	42	5.6	58	NE	4	1.8		2e	5ks		W	0	0	Fair	
Barnegat, N. J.			30.47	773.9	39	3.9	63	N	9	4.0		10e	0	NW		0	0	Cloudy	
Benton, Montana	27.30	693.4	30.10	764.5	52	11.1	53	N	8	3.6			10s			0	0	Cloudy	
Bismarck, Dakota	27.95	709.9	29.56	750.8	45	7.2	69	SW	4	1.8			10s			0	0	Cloudy	
Boston, Mass.			30.13	774.2	34	1.1	69	W	7	3.1		0	Sm'e			0	0	Clear	
Breckenridge, Minn.			29.87	758.7	32	0.0	89	S	12	5.4		0	5s		S	0	0	Fair	
Buffalo, N. Y.			30.45	773.4	34	1.1	69	SE	4	1.8		8k	Sm'e	W		0	0	Fair	
Burlington, Vt.			30.38	771.6	36	2.2	70	N	6	2.7		2e	0			0	0	Fair	
Cairo, Ill.			30.39	771.9	44	6.7	75	Calm	0	0		2e	0			0	0	Fair	
Cape Hatteras, N. C.			30.27	768.8	58	14.4	63	NE	29	13.0		2ek	2s	SW		0.01	1.0	Fair, hazy	
Cape Henry, Va.			30.46	773.7	50.5	10.3	62	N	20	8.9		8k	0	SE		0.01	0.3	Fair	
Cape May, N. J.			30.51	774.9	40	4.4	56	N	6	2.7		5es	0	W		0	0	Fair	
Charleston, S. C.			30.31	769.9	51	10.6	64	N	17	7.6		5k	0	NW		0	0	Fair	
Cheyenne, Wyoming	24.14	613.1	30.08	764.0	50	10.0	23	W	12	5.4		8e	Fog	W		0	0	Cloudy	
Chicago, Ill.			30.36	771.1	37	2.8	62	S	10	4.5		0	Sm'e			0	0	Clear	
Cincinnati, Ohio			30.37	771.4	40	4.4	64	SE	1	0.4		0	Sm'e			0	0	Cloudy	
Cleveland, Ohio			30.45	773.4	32.3	0.2	79	SE	5	2.2		0	Sm'e		SE	0	0	Smoky	
Colorado Springs, Col.	24.28	616.7	30.11	765.5	41	5.0	74	N	4	1.8		0	0			0	0	Clear	
Corsicana, Tex.			30.25	768.3	55	12.8	80	E	5	2.2			10s			0	0	Cloudy	
Davenport, Iowa			30.33	770.4	37	2.8	71	S	4	1.8		0	Sm'e			0	0	Clear	
Denison, Tex.			30.28	769.1	46	7.8	77	E	1	0.4		0	0			0	0	Clear	
Denver, Col.	24.92	633.0	30.14	765.5	49	9.4	24	S	8	3.6		10k	0	NW		0	0	Cloudy	
Detroit, Mich.			30.14	773.2	30	—1.1	100	W	2	0.9		0	Fog			0	0	Clear, frost	
Dodge City, Kan.	27.54	699.5	29.88	758.9	41	5.0	83	Calm	0	0		0	0			0	0	Clear	
Dubuque, Iowa			30.28	769.1	37	2.8	71	SW	10	4.5		0	0			0	0	Clear	
Duluth, Minn.			30.04	763.0	39	3.9	72	SW	4	1.8		8e	0	SW		0	0	Fair	
Eastport, Me.			30.31	769.6	36	2.2	61	NW	12	5.4		0	0			0	0	Clear	
Erie, Pa.			30.43	772.9	36	2.2	80	SE	12	5.4		0	2s			0	0	Fair	
Escanaba, Mich.			30.19	766.8	35	1.7	70	SW	10	4.5		0	5s		SW	0	0	Fair	
Fort Gibson, I. T.			30.28	769.1	39	3.9	72	Calm	0	0		0	0			0	0	Clear	
Fort Sill, I. T.	29.03	737.4	30.17	766.3	45	7.2	84	S	3	1.3		0	Fog			0	0	Clear	
Fort Sully, Dakota	28.18	715.7	29.83	757.7	46	7.8	68	SE	8	3.6		2e	0	W		0	0	Fair	
Galveston, Tex.			30.23	767.8	70	21.1	90	E	9	4.0		0	5s		E	0	0	Fair	
Grand Haven, Mich.			30.35	770.9	43	6.1	66	S	7	3.1		0	8ks		SW	0	0	Cloudy	
Indianapolis, Ind.			30.41	772.4	31	—0.6	89	NE	2	0.9		Haze	Sm'e			0	0	Hazy, frost	
Indianola, Tex.			30.24	768.1	72	22.2	85	Calm	0	0		2k	0			0	0	Fair	
Jacksonville, Fla.			30.20	767.1	55	12.8	79	NW	3	1.3		4k	0	NE		0	0	Fair	
Keokuk, Iowa			30.30	769.6	40	4.4	73	S	3	1.3		8k	0	S		0	0	Fair	
Key West, Fla.			30.10	764.5	77.2	25.1	69	N	17	7.6			10ks		NE	0	0	Cloudy	
Kittyhawk, N. C.			30.41	772.4	55	12.8	56	NE	26	11.6		2k	0	NE		0.15	3.8	Clear	
Knoxville, Tenn.			30.41	772.4	34	1.1	91	Calm	0	0			Fog			0	0	Foggy	
La Crosse, Wis.			30.23	767.8	39	3.9	72	S	9	4.0		0	0			0	0	Clear, frost	
Leavenworth, Kan.			30.22	767.6	39	3.9	71	S	6	2.7		0	0			0	0	Clear	
Lexington, Ky.	29.27	743.4	30.44	773.2	34	1.1	79	NE	4	1.8		2e	0	N		0	0	Clear	
Long Branch, N. J.			30.51	774.9	41	5.0	65	NW	10	4.5		10es	2ks	W	NW	0	0	Cloudy	
Louisville, Ky.			30.40	772.1	36	2.2	80	NW	4	1.8		2k	Haze			0	0	Fair	
Lynchburg, Va.			30.53	775.4	38	3.3	81	N	2	0.9		5es	0	NW		0	0	Fair	
Malone, N. Y.			30.32	770.1	34	1.1	69	SW	8	3.6		2ek	2s	NW	SW	0	0	Fair, frost	
Marquette, Mich.			30.10	764.5	40	4.4	64	SW	20	8.9			8s		SW	0	0	Cloudy	
Memphis, Tenn.			30.37	771.4	41	5.0	73	NE	3	1.3		2k	1s	NW		0	0	Fair	
Milwaukee, Wis.			30.36	771.1	31	—0.6	83	SW	8	3.6			Fog			0	0	Foggy, frost	
Mobile, Ala.			30.30	769.6	47	8.3	92	N	5	2.2		0	0			0	0	Clear	
Montgomery, Ala.			30.35	770.9	47	8.3	85	N	3	1.3		0	Sm'e		N	0	0	Clear	
Morgantown, W. Va.			30.48	774.2	36	2.2	85	Calm	0	0		2e	Fog			0	0	Foggy, frost	
Mt. Washington, N. H.	23.84	605.5	30.20	767.1	10	—12.2	58	NW	20	8.9		1s	1s	NW		0	0	Fair	
Nashville, Tenn.			30.36	771.1	37	2.8	90	NW	1	0.4		2k	Fog	W		0	0	Fair, frost	
New Haven, Conn.			30.52	775.2	40	4.4	73	NW	4	1.8		5es	Fog	NW		0	0	Fair	
New London, Conn.			30.52	775.2	40	4.4	56	NW	2	0.9		5e	0			0	0	Fair, frost	
New Orleans, La.			30.28	769.1	58	14.4	58	NE	6	2.7		5ek	0	NW		0	0	Fair	
Newport, R. I.			30.50	774.7	40	4.4	56	NW	4	1.8		0	0			0	0	Clear	
New York, N. Y.			30.52	775.2	38	3.3	63	NW	4	1.8		5e	Fog	N		0	0	Fair	
Norfolk, Va.			30.46	773.7	49.5	9.7	54	NE	7	3.1		8k	0	NE		0.02	0.5	Fair	
North Platte, Neb.	27.12	688.8	29.76	755.9	37	2.8	71	Calm	0	0		0	0			0	0	Clear	
Omaha, Neb.	29.02	737.1	30.12	765.0	40	4.4	77	S	7	3.1		2e	0	NW		0	0	Fair	
Oswego, N. Y.			30.47	773.9	42	5.0	65	SW	2	0.9			10ks		NW	0	0	Cloudy	
Peck's Beach, N. J.			30.54	775.7	36	2.2	80	N	8	3.6		4e	1s	W		0	0	Fair	
Pembina, Dakota			29.74	755.4	33	0.6	89	SE	8	3.6		2e	2s			Inap.	Inap.	Fair	
Philadelphia, Penn.			30.54	775.7	37	2.8	70	N	6	2.7		8es	Haze	W		0	0	Fair	
Pike's Peak, Colorado	17.98	456.7	30.19	766.8	26	—3.3	88	W	32	14.3		0	2s		NW	0	0	Fair	
Pittsburgh, Penn.			30.48	774.2	33	0.6	89	NE	2	0.9			Fog			0	0	Foggy, frost	
Port Huron, Mich.			30.45	773.4	31	—0.6	79	SW	8	3.6		0	0			0	0	Clear	
Portland, Me.			30.44	773.2	38	3.3	45	W	1	0.4		0	Haze			0	0	Clear, frost	
Portland, Oregon			30.23	767.8	49	9.4	92	Calm	0	0			Fog			0	0	Foggy	
Punta Rassa, Fla.			30.14	765.5	68.5	20.3	90	NE	12	5.4		8es	Haze	SW		0	0	Cloudy	
Rochester, N. Y.			30.16	773.7	36	2.2	62	SW	4	1.8		0	2s		SW	0	0	Clear, frost	
Salt Lake City, Utah	25.85	656.6	30.18	766.6	55	12.8	38	Calm	0	0		0	0			0	0	Clear	
Sandy Hook, N. J.			30.50	774.7	40	4.4	56	N	5	2.2		10e	0	W		0	0	Cloudy	
San Diego, Cal.			30.05	763.3	65	18.3	89	Calm	0	0			10s			0	0	Cloudy	
San Francisco, Cal.			30.04	763.0	55	12.8	91	SW	8	3.6			Fog			0	0	Foggy	
Santa Fe, N. M.	23.40	594.4	29.94	760.5	46.5	8.1	30	E	4	1.8		0	0			0	0	Clear	
Savannah, Ga.			30.28	769.1	50	10.0	71	N	10	4.5		2ek	0	SE		0	0	Clear	
Shreveport, La.			30.31	770.6	49	9.4	93	NE	2	0.9		0	0			0	0	Clear	
Smithville, N. C.																			
Springfield, Mass.			30.50	774.7	36	2.2	70	S	4	1.8		8es	Fog			0	0	Fair, frost	
St. Louis, Mo.			30.37	771.4	42	5.6	74	S	8	3.6		8k	0			0	0	Fair	
St. Marks, Fla.			30.26	768.6	52	11.1	86	N	9	4.0		5k	0	S		0	0	Fair	
St. Paul, Minn.			30.08	764.0	35	1.7	80	SE	9	4.0		10e,es	0	W		0	0	Cloudy	
St. Paul's Island, Alaska																			
Squa Beach, N. J.			30.42	772.7	38	3.3	54	NW	2	0.9		8es	2ks	NW		0	0	Cloudy	
Toledo, Ohio			30.12	772.7	32	0.0	79	Calm	0	0		0	0			0	0	Clear	
Tucson, Arizona																			
Tybee Island, Ga.			30.27	768.8	53	11.7	86	N	28	12.5		2e	0	SW		0	0	Fair	
Vicksburg, Miss.			30.38	771.6	54	12.2	55	E	2	0.9			0		N	0	0	Cloudy	
Virginia City, Montana	24.43	620.5	29.91	759.7	43	7.8	38	Calm	0	0		10k	0			0	0	Cloudy	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.54	775.7	38.5	3.6	67	NE	4	1.8		8c	2s	W	W	0	0	Cloudy	
Wilmington, N. C.			30.35	770.9	44	6.7	67	NE	10	4.5		0	2s		SW	0.03	0.8	Fair	
Wood's Hole, Mass.			30.48	774.2	39	3.9	55	NW	8	3.6		0	0			0	0	Clear	
Wytheville, Va.	28.02	711.7	30.32	770.1	30	—1.1	89	Calm	0	0		0	0			0	0	Clear	
Yankton, Dakota	28.76	730.5	30.09	764.3	34	1.1	89	SE	1	0.4		0	0			0	0	Clear	
Yuma, Arizona			29.98	761.5	70	21.1		Calm	0	0		5c	5s			0	0	Cloudy	
Sub-Series.																			
Bridgetown, B'b'does, W. I.					80	26.7	86	E	3	1.3		2c	5s	E	NE	0.38	9.7	Fair	E. Racker.
Pointe-aPitre, G'd'loupe, do			29.96	761.0	81	27.2	79	SE				0	2k			0	0	Clear	L. V. Bigard.
Havana, Cuba, W. I.			30.05	763.3	75	23.9	85	Calm	0	0		8c	2k	W	E	0	0	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W.			30.15	765.8	79	26.1	82	Calm	0	0		1c	2s		E	0	0		James Gall.
St. Thomas, St. T., W. I.			30.22	767.6	82	27.8	67	SE	3	1.3		2cs	5kn	SE	SE	0.06	1.5	Cloudy	W. S. Cameron.
Santiago de Cuba, W. I.			29.81	757.2	79	26.1	78	N	4.8	2.1		2c	2s	NW	SW			Fair	Robert Mason.
St. Georges, Bermudas			30.07	763.8	76	24.4	88	NE	4.2	1.8		10pk	8kn	NE	NE	1.110	28.19	Raining	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.			29.99	761.7	12	—11.1	90	W	12	5.4		0	0			0.15	3.8		J. Fortescue.
St. John's, Newfoundland																			John Delaney.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Clifton, Jamaica, W. I.	27.23	691.6	30.01	762.2	70	21.1	90	SE	3.0	1.3		0	8k			0	0	Fine, dull	C. Partridge.
Navassa																			
Meaellin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			30.45	773.4	29	—1.7	88	SE	4	1.8			0			0	0	Fine	H. M. Redington.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne. 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 14, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			29.69	754.0	70.3	21.3	63	NW			5		10			0	0		Charnot.
Aiglers			29.31	744.4	58.6	14.8	89	WNW			1		10			0.728	18.5	Thunder	Peter.
La Calle																			Kuntz.
Tanis			29.42	747.2	77.0	25.0	39	WSW			3		8			0.031?	0.8?	Cloudy	Jacques.
Sfax			29.53	750.0	77.0	25.0	36	SW			6		2			Inap.	Inap.	Cloudy	Chauvey.
Saida			29.69	751.8	54.5	12.5	95	WNW			4		7			1.732	44.0	Heavy rain	Grosjean.
Tebessa			29.53	750.0	66.4	19.1		S			4		7					Cloudy	Colin.
Geriville			29.76	755.8	57.2	14.0	57	NW			5		9			0	0	Stormy	Bernadach.
Laghouat			29.76	755.9	66.2	19	38	SW			4		6			0.591	15.0	Cloudy	Simon.
Biskra			29.65	753.0	68.7	20.4	65	NW			2		10			0.024	0.6	Stormy	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			29.02	737.2	55.0	12.8	88	NE			1		10			0.157	4.0	Raining	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.48	748.8	55.9	13.3	65	NE			2		7			0.035	0.9		I. R. Observatory.
Eperies			29.34	745.2	55.0	12.8	73	S			2		5			0.346	8.8		Julius Mikolik.
Gratz	27.95	709.5	29.13	740.0	43.8	6.3	86	NW			2		10						Andreas Rospini.
Hermannstadt	27.99	711.0	29.35	745.5	64.0	17.9	45	SE			3		4			0	0		Prof. Reissenberger.
Kremsmünster	28.71	703.8	29.04	737.5	46.4	8.0	92	W			2		10			0.039	1.0		Prof. C. Wagner.
Lemberg			29.36	745.7	54.3	12.4	68	SW			1		4			0	0		Dr. T. Stanecki.
Nyiregyhaza			29.36	745.8	62.9	16.6	55	E			2		5			0.018	0.45		Habzsuda Daniel.
Pola			29.06	738.2	63.5	17.5	84	SW			2		9ks			0.320	8.14		I.R. Hydrographic Office
Szegedin			29.25	742.9	59.9	15.5	69	S			3		10			0.122	3.09		Karl Stancel.
Trieste			29.08	738.5	59.0	15.0	89	NW			1		10			0.110	2.8		Prof. V. Faroli.
Vienna			29.12	739.7	48.6	9.2	83	ESE			2		10			0.091	2.3		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 9 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.03	737.4	45.0	7.2	96	SSE			1	02	10			0.232	5.90		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.70	754.4	49.2	9.6		E	46	20.6			10			0.550	13.97	Squally	William Boswell.
Ardrossan			29.25	750.6	52	11.1		ENE			3		8					Raining	Wm. McNeil.
Armagh Observatory			29.58	751.3	49.9	9.9		NNE	8	3.6			6					*D. clouds	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			29.40	746.7	49.2	9.6		NNW			3		10					Raining	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.60	751.8	49.6	9.4		NNW			1		2					Clear	J. Dreyer.
Bradford			29.34	745.2	49.1	9.5		NE			1		10					Raining	J. McLandsborough.
Bridgetown, (Barbadoes)			29.90	759.4	78.0	25.6		NE			2		8					Overcast	T. H. Hunt.
Cambridge Observatory			29.19	741.4	47.0	8.3		N			2		10					Raining	Sergeant Hunt, A. H. C.
Cape Good Hope Obs			30.06	763.5	61.0	16.1	76	S	10	4.5			7						The Staff, for E. J. Stone.
Cardington			29.22	742.2	46.6	8.1		NE					10					Raining	John McLaren.
Carlisle			29.48	748.8	49.5	9.7		NE					10			0.03	0.8		T. Bell, for J. Cartmell.
Chatham, School M. E.			29.16	740.7	46.2	7.9		SW			1		10					Raining	Major C. W. Martin, R. E.
Dartmoor	28.02	714.2	29.40	746.7	46.0	7.8		N			5		0					Clear	R. E. Power.
Donaghadee			29.52	749.8	50	10.0		NNE			4		8					*D. clouds	J. Mac Gowan, Jr.
Dover			29.10	739.1	47	8.3		NW			4		7					Rainy	J. Costello.
Eccles, (near Manchester)			29.38	746.2	46.1	7.8		N	3.8	1.7			10					Raining	Thomas Mackereth.
Falmouth Observatory			29.44	747.8	51.9	11.1		NNW	26	11.6			5					Foggy	The Staff.
Fort Napier, (Natal)	27.50	698.5	29.70	754.4	61.0	16.1		Calm			0		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	82	27.8		W					7						[tis.
Galway, Queen's College																			B. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			29.71	754.6	66.5	19.2		W			6		10					Overcast	Sergt. E. G. Baker.
Glasgow Observatory			29.68	751.3	50.1	10.1		ENE			2		10					Overcast	Lewis Stuart.
Great Yarmouth			29.15	740.4	51	10.6		ENE			6		8					Raining	G. T. Watson.
Greenwich Royal Obs			29.20	741.7	46.6	8.1		NNW			5		10					Raining	The Staff, for G. B. Airy.
Guernsey			29.37	746.0	54	12.2		NNW			4		6					*D. clouds	Dr. S. E. Hoskins. [ley.
Halifax, Moorside Obs			29.39	746.5	48.7	9.3		NE					10					Rain & fog	F. J. Page, for L. J. Cross-
Helston			29.44	747.8	54	12.2		N			4		4k			Blank	Blank	Fair	M. P. Moyle.
Holyhead			29.45	748.0	52	11.1		N			6		10					Overcast	John Tilston.
Kew Observatory			29.22	742.2	47.3	8.5		NW	15	6.7			10					Misty	The Staff.
Kingstown			29.53	750.0	49	9.4		NW			5		4					*D. clouds	George Mitchell.
Leicester Museum			29.29	744.9	46.1	7.8		N			6		10					Raining	William J. Harrison.
Llandudno			29.43	747.5	50.9	10.5		N					10					Overcast	Dr. James Nicol.
Malta, (Mediterranean)			29.50	749.3	72.0	22.2		NW			1		6k						Fred Travis, Pvt A.H.C.
Nairn			29.72	754.9	49	9.4		ESE			1		10						W. D. Penny.
Nassau, (Bahamas)			30.08	763.0	80.1	26.7		W			1		4					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.31	744.5	47.2	10.4		N			4		10n		N			Raining	E. J. Lowe.
Oscott, St. Mary's College			29.32	744.7	43.9	6.6		NNW			5		10					Raining	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.26	743.2	48	8.9		NNW			6		10					Drizzling	J. Lucas, for R. Main.
Plymouth			29.40	746.7	52.5	11.4		N			3		0						John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.56	750.8	50	10.0		N			4		2					Fine	W. Kennedy.
Saint Ann's Head			29.45	748.0	51	10.6		NNE			4		6					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.32	744.7	55.2	12.9		N			4		5						A. P. Amy.
Sandwick Manse (Orkneys																			
Scarborough			29.40	746.7	48.7	9.3		ENE			7		10					Raining	F. Shaw.
Scutari cemetery, (Turkey)			29.63	752.6	72.6	22.6		SW			2		7					Hazy	Sergt. W. H. Lyne.
Sheffield			29.32	744.7	48.2	9.0		N			3		10					Raining	W. F. Cooper.
Sillioth Rectory			29.48	748.8	50.4	10.2		ENE			4		10			0.555	14.10	Overcast	Rev Francis Redford.
Stonyhurst Observatory			29.37	746.0	46.7	8.2		N			1		10			Blank	Blank	Threatening	The Staff.
Stornoway, Lews C. (Hebr)			29.65	753.1	50	10.0		E			4		5					*D. clouds	John Smith.
Stratfield Turgiss			29.28	743.7	49.2	9.6		NW			1-2		10					Showery	Rev. Charles H. Griffith
Streatley Vicarage			29.27	743.4	49.0	9.4		NNE			6		10						Rev. John Slatter.
Thurso			29.77	756.1	49	9.4		E			5		7					Showery	John Trotter.
Truro, Royal Institution			29.40	746.7	54	12.2		NE			6		6					*D. clouds	W. Newcombe.
Valencia Observatory			29.64	752.8	54.0	12.2		N	20	8.9			6					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					52	11.1		NE			4					0	0		
Leith, Restalrig Park			29.62	752.3	49.0	9.4		E			4		10n			0.20	5.1	Raining	Andrew Gibb.
Monach Lt-house, (Shet. Is)			29.66	753.4	50	10.0		E			4	2	3	SE		0	0		J. Youyclause.
North Unst, (Shetland Is)			29.91	759.7	50.5	19.3		E			3	0	5						

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., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.54	750.4	43.9	6.6	80	E			9		10						
Fanöe			29.47	748.6	45.0	7.2	83	ENE			9		10						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.75	755.6	40.3	4.6	94	Calm			0		5						
Thorshavn, (Faröe)			29.52	749.9	50.5	10.3	82	ESE			2		10						
Vestervig			29.64	752.8	46.8	8.4	57	E			9		6						

Note.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols: not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			29.37	746.1	52.7	11.5	86	N			4		10nk			0	0	Cloudy	Normal School.
Amiens			29.10	739.2	52.9	11.6	76	SE			2		8		E	0	0	Cloudy	Normal School.
Avignon			29.08	738.6	51.0	12.2	61	WNW			1		10			0	0	Cloudy	Normal School.
Bar-sur Seine			29.09	738.9	47.3	8.5	81	N			3		10kn		N	0.646	16.4	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.25	742.9	52.9	11.6	61	N	5.4	2.4			10		N	0.283	7.2	Cloudy	Beaumette Observatory
Beauvais			29.19	741.4	52.2	11.2	61	N			4		3		NNW	0.094	2.40	Cloudy	Normal School.
Besançon			29.07	738.3	49.5	9.7	79	SW			2		8		SW	0.398	10.1	Cloudy	Normal School.
Bourg en Bresse			29.06	738.0	46.0	7.8	86	S			1		10		N	0.67	17.	Raining	Normal School.
Bourges			29.18	741.1	64.4	18	82	NNE			2		10		S	1.18	30.	Cloudy	Normal School.
Brest			29.12	739.6	50.5	10.3	81	N			6		10		N	0.669	17.00	Raining	Naval Observatory.
Caen			29.28	743.8	52.7	11.5	73	N			4		10		W	0.323	8.2	Cloudy	Normal School
Chartres																			Normal School.
Chaumont	27.97	710.4	29.14	740.1	43.5	6.4		NW			2		10kn		NW	0.567	14.4	Cloudy	Normal School.
Commercy			29.13	739.8	45.7	7.6	83	NE			4		5		NE	0.12	3.	Cloudy	Normal School.
Commune de Gréasque*			29.08	738.5	47.5	8.6	67	NW			4		10		NW	0.244	6.2		
Le Mans																			Normal School.
Lons-Le Saulnier			29.09	738.8	49.1	9.5	88	SW			2		8		SW	0.157	4.10	Cloudy	Normal School.
Mâcon			29.06	738.1	48.0	8.9	89	SSW			1		10			0.575	14.6	Cloudy	Normal School.
Mirecourt			29.01	736.9	49.8	9.9	76	NE			4		10		SW	0.43	11.	Cloudy	Normal School.
Orleans			29.18	741.1	50.7	10.4	72	N			4		8		N	0.646	16.4	Cloudy	Normal School.
Paris Observatory			29.14	740.2	52.9	11.6	56	NNW			2		10		NW	0.357	9.07	Cloudy	National Observatory
Parthenay			29.41	746.9	49.3	9.6	89	NW			6		5		NW	0.83	21.	Cloudy	Normal School.
La Roche sur Yon			29.32	744.6	54.5	12.5	59	NE			4		8		SE	0.32	8.	Cloudy	Normal School.
Rochefort, Observatory			29.35	745.4	59.0	15.0	52	NNW			5		8		SE	0.354	9.0	Cloudy	Naval Observatory.
Rouen			29.18	741.1	54.9	12.7	81	NW			2		5		N	0.220	5.6	Cloudy	Normal School.
Saint Lo			29.30	744.3	50.9	10.5	76	N			1				NW	0.63	16.		Normal School.
Villefranche			29.43	747.6	47.7	8.7	81	SE			3		10		SW	0.55	14.	Cloudy	Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchési.
Mont-Louis			29.70	754.3	31.7	1.5	83	SW	3.7	1.67			10			0.138	3.5		—. Faiguère.
Montsouris, Paris			29.14	740.2	52.3	11.3	58	NW			3		10ck		NW	0.504	12.8		Montsouris Observ'tory.
Perpignan	†29.15	†740.3			53.8	12.1	66	W	14.9	6.66			10		W	0.1[illegible]	3.2		Dr. Fines.
Pic du Midi, (Summit) H. P.																			M. Baylac.
Pic du Midi, (Plantado) H.P.																			General de Nansouty.
Saint Maur, (near Paris)			29.14	740.1	51.8	11.0	59	NW			3		10			0.545	13.6	Cloudy	E. Renou.
Tours			29.27	743.4	52.2	11.2		WNW			3		10		WNW	0.933	23.7		C. Marquet.
Versailles, (near Paris)			29.15	740.3	52.9	11.6	61	NW			4		10			0.768	19.51	Cloudy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.33	770.3	53.1	11.7	81	ENE	1.6	0.7		1cks	0			{ 0 / 0	0 / 0 }		H. Le Lee, S. J.

NOTE.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 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. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also.

GERMAN SERIES.

Furnished by the coöperation of Prof. Geo. Neumayer, Superintendent Royal 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			29.04	737.6	50.9	10.5	64	E	13	6			8			0	0		Prof. Hoh.
Berlin			29.30	744.1	43.9	6.6	96	E	13	6			10			0.648	16.46	Rainy	Prof. Arndt.
Breslau			29.31	744.5	51.1	10.5	71	ESE	9	4			10			0	0	Rainy	Dr. P. Neugebauer.
Carlsruhe			29.04	737.5	48.9	9.4	78	NE	7	3			10			0.047	1.2	Light rain	A. Senz.
Cassel			28.95	735.4	51.8	11.0	64	E	9	4			4			0.339	8.6		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	27.68	703.1	29.10	739.2	45.5	7.5	79	NE					10			0.016	0.4	Light rain	M. Wilhelm.
Hamburg			29.39	744.2	45.1	7.3	86	ESE	31	14			10n	E		0.618	15.7	Rainy	Deutsche Seewarte.
Kiel			29.39	746.6	45.3	7.4	89	E	27	12			10			0.591	15.0		Prof. G. Karsten.
Königsberg			29.65	753.1	41.9	5.5	56	E	34	15						0	0	Cloudy	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			29.19	741.4	48.7	9.3	67	ENE	22	10			10			0.610	15.5		Prof. Bruhns.
Münster			29.12	739.7	55.2	10.1	85	E	9	4			3			0	0		Prof. E. Heis.
Posen			29.37	746.0	41.2	5.1	88	E	36	16						0.248	6.3	Cloudy	Dr. Magener.
Strasburg, (in Alsace)			29.06	738.1	47.3	8.5	83	E	4	2			10			0.012	0.3		Dr. Schur.
Stuttgart			29.02	737.2	50.9	10.5	71	N					10			0.021	0.6	Raining	Mr. Würth.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.01	736.8	47.8	8.8	77	E	4	2			3			0	0		Prof. Flesch.
Wustrow, Naval School			29.43	747.4	43.5	6.4	81	ENE	34	16			10			0.019	1.24	Raining	E. F[illegible]chütz.

NOTE.—In the originals the distinction between 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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens			29.63	752.7	75.2	24.0		SW										Almost clear	

NOTE.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			29.03	737.3	48.7	9.3	91	NW	0.7	0.3			10	E		0.465	11.8		
Mondovi			29.02	737.1	48.2	9.0	75	N			2		10			0	0		
Genoa			29.02	737.1	63.7	17.6	49	SE	9.8	4.4			6	S		Blank	Blank		
Pavia			29.02	737.1	55.4	13.0	80	SW			2		9	SW		0.374	9.5		
Verona			29.01	736.8	60.8	16.0	68	E			2		5			0.091	2.3		
Padua			29.03	737.4	58.5	14.7	76	NE	3.1	1.4			10	S		0	0		
Parma																			
Bologna					59.9	15.5	75	ENE			6		6	N		Blank	Blank		
Leghorn			29.05	737.9	62.1	16.7	72	WSW	9.8	4.4			10			0.177	4.5		
Urbino			29.12	739.6	58.5	14.7	69	WSW			4		10			0.551	14.0		
Ancona			29.10	739.2	63.3	17.4	59	W			2		10			0.157	4.0		
Siena			29.08	738.6	53.6	12.0	97	NW	1.3	0.6			10	SW		0.205	5.2	Raining	
Rome			29.15	740.3	65.8	18.8	71	SW	4.9	2.2			10	S-E		Blank	Blank		
Naples, O. U.			29.22	742.2	69.1	20.6	80	SW			7		10	SW		0.413	10.5		
Lecce			29.43	747.5	71.1	21.7	63	SSE	40.5	18.1			10			0	0		
Cosenza			29.45	748.0	71.2	21.8	50	ESE			4		4	NE		0	0		
Catania, (Sicily)																			
Riposto			29.34	745.1	72.1	22.3	75												
Palermo			29.27	743.4	77.2	25.1	40	SW	23.0	10.3			9			0	0		
Sub-Series.																			
Naples, S. R.			29.28	743.7	64.4	18.0	93	WSW			2		..k	SW		0.346	8.8		Prof. F. Brioschj.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for twenty-four hours. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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			29.06	738.2	50.0	10.0		ENE			3								
Grouingen			29.13	739.8	47.7	8.7		E			6								
Helder			29.14	740.2	49.8	9.9		ENE			5								
Utrecht			29.04	737.5	46.8	8.2		ENE			4		10					Overcast	

Note.—The originals give the wind-pressure in kilograms per square meter; the 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			29.83	757.6	51.8	11.0	87	E	18.1	8.1			3			0	0		
Christiania			30.08	764.0	44.2	6.8	50	NE	16.6	7.4			3			0	0		
Tromsö			30.21	767.3	35.1	2.3	77	Calm			0		0			0	0		

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather	Observer.
Lisbon			29.83	757.6	64.2	17.9	52	NW	26.2	11.7			6			Blank	Blank		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather	Observer.
Warsaw			29.45	748.0	37.9	3.3	90	E	25	11			10						Astronomical Obs.
Wilna			29.74	755.4	41.4	5.2	58	E	10	4.5			10						Astronomical Obs.
Dorpat			30.03	763.8	36.9	2.7	74	SE	7	3			3						Physical Cabinet.
St. Petersburg			30.10	764.4	40.1	4.5	74	NNE	4	2			3						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kieff			29.44	747.8	43.5	6.4	100	E	2	1			10						Physical Cabinet.
Nikolaiev			29.55	750.6	66.0	18.9	52	SW	10	4.5			3						Kurdakof.
Kertch			29.65	753.2	71.1	21.7	72	SW	9	4			6						Lagorio.
Moscow			30.02	762.4	37.4	3.0	74	SW	13	6			10					Light snow.	Meteorological Obs.
Lugan			29.61	752.2	45.0	7.2	90	E	20	9			10					Raining	Meteorological Obs.
Archangel			30.17	766.3	33.1	0.6	92	Calm	0	0			10						Ogorodnikof.
Tiflis	28.46	723.0	29.82	757.7	70.5	21.4	34	SW	4	2			0						Physical Obs.
Astrakhan			29.97	761.3	58.5	14.7	69	SE	8	3.5			8						Sebastianof.
Kasan			29.78	756.4	38.5	3.6	85	NE	7	3			10						Physical Cabinet.
Orenburg			29.82	757.4	37.8	3.2	87	W	17	7.5			10						Tschernischef.
Ekaterinburg	28.65	727.7	29.68	753.8	33.4	0.8	94	N	10	4.5			10						Meteorological Obs.
Kasaly			29.96	760.9	55.0	13.1	73	SW	8	3.5			4						Bobrof.
Tashkend																			Michelson.
Barnaul			29.80	757.0	49.1	9.5	74	SW	8	3.5			10						Meteorological Obs.
Yeniseisk			29.80	756.9	36.3	2.4	91	SW	2	1			10						Marks.
Irkutsk																			Usolzef.
Oorga	25.74	653.7	30.14	765.5	30.4	— 6.9	77	Calm	0	0			0						Messin.
Peking, (China)			30.14	765.6	53.4	11.9	65	Calm	0	0			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather	Observer.
Madrid			29.49	749.0	57.4	14.1	47	NW	10.5	4.7		0	9			0	0	Cloudy	Royal Observatory.
San Fernando			29.77	756.1	60.1	15.6	96	WNW	35.6	15.9		2	8	SW	NW	0.150	3.8	Raining	The Naval Observatory.

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

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather	Observer.
Haparanda			30.35	771.0	26.2	3.2	96	NE			2		10			0	0		
Umea			30.27	768.9	32.0	0.0	85	N			2		10			0	0		
Hernosand			30.25	768.4	35.8	2.1	77	NNE			4		10			0	0		
Stockholm			30.02	762.5	43.0	6.2	59	ENE			6		8			0	0		
Wisby			29.92	759.9	45.7	7.6	77	ESE			7		3			0	0		
Sub-Series.																			
Upsala			30.10	764.5	41.4	5.2	77	ENE	11.4	5.1			10		E				Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	27.65	702.3	29.09	738.8	50.7	10.4	59	SW			4		9			0.480	12.2	Cloudy	The Observatory.
Zurich	27.45	697.3	29.10	739.1	51.8	11.0	73	NE			1		9			0	0	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —23.8mm.; Thermometer, —2°.7; Relative Humidity, —13 per cent.

Note.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y			29.96	760.9	76.5	24.7	66	N			1		1k			0	0		Prof. C. V. A. Van Dyck.
Constantinople			29.67	753.5	74.5	23.6	54	WSW	11.2	5.			8		SW	0	0	Cloudy	
Fao, (Persian Gulf)			29.98	761.6	84.2	29.0		SE			4		0					Clear	
Salonica					75.6	24.2		S			1		2						
Valona			29.48*	748.8	72.3	22.4		S			6		2						
Varna			29.61	752.0	69.8	21.0		S			2		10					Cloudy	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario			30.29	769.4	40	4.4		Calm	0	0		0	0			0	0	Clear	
Chatham, N. B.			30.36	771.1	35	1.7	84	W	2	0.9		8cs		W		0	0	Fair	
Charlottetown, P. E. Island			30.39	771.9	39	3.9	78	W	7	3.1		2c	0			0	0	Fair	
Fort Garry, Manitoba			30.02	762.5	27	— 2.8	100	NW	20	8.9		0	2ks		NW	0.020	5.08	Fair	
Halifax, N. S.			30.37	771.4	41	5.0	83	W	4	1.8		0	0			0	0	Clear	
Kingston, Ontario			30.26	768.6	43	6.1	75	S	12	5.4		0	0			0	0	Clear	
Montreal, Quebec			30.28	769.1	37	2.8	81	SW	14	6.3		0	Sm'e			0	0	Clear	
Ottawa, Ontario			30.22	767.6	32	0.0	66	E	3	1.3		0	Fog		E	0	0	Clear	
Parry Sound, Ontario			30 07	763.8	37	2.8	90	SE	13	5.8		0	0			0	0	Clear	
Port Dover, Ontario			30.17	766.3	48	8.9	70	S	11	4.9		0	0			0	0	Clear	
Port Stanley, Ontario			30.10	764.5	49	9.4	72	S	18	8.0		2k	0	SW		0	0	Clear	
Quebec, Quebec			30.32	770.1	40	4.4	82	Calm	0	0		0	0			0	0	Clear	
Saugeen, Ontario			30.04	763.0	38	3.3	75	S	8	3.6		10ks	0			0	0	Cloudy	
Stayner, Ontario			30.08	764.0	35	1.7	70	SE	5	2.2		0	0			0	0	Clear	
Sydney, C. B.			30.39	771.6	46	7.8	78	W	5	2.2		5c	2s			0.04	1.0	Clear	
Toronto, Ontario			30.14	765.5	38	3.3	95	SE	3	1.3		0	Fog			0	0	Clear	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.34	770.6	29	—1.7	100	Calm	0	0			Fog			0	0	Foggy, frost	
Alpena, Mich.			29.87	758.7	41	5.0	64	S	15	6.7		10cs	0	SW		0	0	Cloudy	
Atlantic City, N. J.			30.30	769.6	54	12.2	73	E	16	7.2			10s		SE	0	0	Cloudy	
Augusta, Ga.			30.18	766.6	50	10.0	72	N	4	1.8		0	5s			0	0	Fair	
Baltimore, Md.			30.35	770.9	38	3.3	71	N	5	2.2		2c	5s	N	N	0	0	Fair, frost	
Barnegat, N. J.			30.33	770.4	51	10.6	72	E	8	3.6			10s		S	0	0	Cloudy	
Benton, Montana	27.52	699.0	30.32	770.1	34	1.1	79	Calm	0	0		2c	0			0	0	Fair	
Bismarck, Dakota	28.37	720.6	30.08	764.0	32	0.0	79	NW	8	3.6			10s		NW	0.04	1.0	Cloudy	
Boston, Mass.			30.40	772.1	37	2.8	80	W	8	3.6		8c	Sm'e	SW		0	0	Smoky, frost	
Breckenridge, Minn.			29.90	759.4	34	1.1	79	N	20	8.9			10s		N	0	0	Cloudy	
Buffalo, N. Y.			30.16	766.1	38	3.3	63	SE	4	1.8		0	Sm'e			0	0	Clear, frost	
Burlington, Vt.			30.34	770.6	36	2.2	70	S	4	1.8		0	0			0	0	Clear	
Cairo, Ill.			30.08	764.0	47	8.3	77	S	8	3.6		0	0			0	0	Clear	
Cape Hatteras, N. C.			29.97	761.2	62	16.7	94	NE	28	12.5			10n			1.22	31.0	Light rain	
Cape Henry, Va.			30.17	766.3	61	16.1	82	NE	32	14.3		2k	8s	E	E	0	0	Threatening	
Cape May, N. J.			30.27	768.8	44	6.7	83	NE	10	4.5			10s		E	0	0	Cloudy	
Charleston, S. C.			30.09	764.3	55	12.8	93	N	13	5.8		2k	5s	NE	NE	2.01	51.1	Clearing	
Cheyenne, Wyoming	24.26	616.2	30.20	767.1	33	0.6	79	W	8	3.6		2c	0	W		0	0	Fair	
Chicago, Ill.			29.85	758.2	44	6.7	60	S	15	6.7		2c	2s	W		0	0	Fair	
Cincinnati, Ohio			30.22	767.6	41	5.0	74	SE	3	1.3		0	0			0	0	Clear	
Cleveland, Ohio			30.10	764.5	37.9	3.3	63	SE	12	5.4		0	0			0	0	Clear	
Colorado Springs, Col.	24.33	618.0	30.20	767.1	38	3.3	90	NW	2	0.9		Haze	2s			0	0	Fair	
Corsicana, Tex.			30.01	762.2	66	18.9	90	S	14	6.3		8k	0	S		0	0	Cloudy	
Davenport, Iowa			29.75	755.6	48	8.9	62	SW	12	5.4		5k	5s		SW	0	0	Cloudy	
Denison, Tex.			29.91	759.7	63	17.2	88	SW	12	5.4		0	8s,d		SW	0	0	Cloudy	
Denver, Col.	25.00	636.3	30.28	767.1	43	6.1	51	SE	4	1.8		8k	0	N		0	0	Fair	
Detroit, Mich.			30.04	763.0	40	4.4	82	S	4	1.8		2c	0			0	0	Clear	
Dodge City, Kan.	27.52	699.0	29.81	757.2	51	10.6	72	W	16	7.2			10n		W	0	0	Light rain	
Dubuque, Iowa			29.78	756.4	47	8.3	85	SW	6	2.7			10n		SW	0.03	0.8	Light rain	
Duluth, Minn.			29.54	750.3	49	9.4	77	NW	16	7.2			10s		NW	0.05	1.3	Cloudy	
Eastport, Me.			29.41	747.0	39	3.9	72	Calm	0	0		0	0			0	0	Clear	
Erie, Pa.			30.14	765.5	39	3.9	56	SE	24	10.7		0	Sm'e			0	0	Clear, frost	
Escanaba, Mich.			29.65	753.1	47	8.3	77	S	20	8.9		2k	5s	S	S	0	0	Cloudy	
Fort Gibson, I. T.			29.96	761.0	56	13.3	74	NW	10	4.5			10n			0	0	Heavy rain	
Fort Sill, I. T.	28.79	731.2	29.88	758.9	58	14.4	88	NW	1	0.4		5ks	2s	W		0	0	Cloudy	
Fort Sully, Dakota	28.46	722.9	30.17	766.3	39	3.9	63	NW	24	10.7		0	5s		NW	0	0	Fair	
Galveston, Tex.			30.10	764.5	73	22.8	85	S	4	1.8		2k	0	SW		0	0	Fair	
Grand Haven, Mich.			29.86	758.4	42	5.6	74	SE	9	4.0		2c	8s	SW	SW	0	0	Cloudy	
Indianapolis, Ind.			30.04	763.0	40	4.4	80	SE	6	2.7		1cs	Haze			0	0	Clear, frost	
Indianola, Tex.			30.09	764.3	74	23.3	90	S			3	0	2ks			0	0	Fair	
Jacksonville, Fla.			30.12	765.0	56	13.3	73	NW	4	1.8		4k	0	NW		0	0	Fair	
Keokuk, Iowa			29.79	756.7	51	10.6	59	S	6	2.7			10s		S	0	0	Cloudy	
Key West, Fla.			30.04	763.0	77.4	25.2	69	NE	6	2.7		8ck	2ks	SW		0	0	Cloudy	
Kittyhawk, N. C.			30.08	764.0	64	17.8	89	[illegible]	22	9.8		0	10n			0.05	1.3	Heavy rain	
Knoxville, Tenn.			30.25	768.3	35	1.7	90	Calm	0	0			Fog			0	0	Foggy	
La Crosse, Wis.			29.67	753.6	49	9.4	93	S	7	3.1			10n			0.09	2.3	Light rain	
Leavenworth, Kan.			29.88	758.9	57	13.9	57	NW	16	7.2			10s		NW	0	0	Threatening	
Lexington, Ky.	29.05	737.9	30.18	766.6	41	5.0	83	SE	8	3.6		0	0			0	0	Clear	
Long Branch, N. J.			30.35	770.9	50	10.0	72	E	15	6.7			10ks		E	0	0	Cloudy	
Louisville, Ky.			30.14	765.5	40	4.4	82	SE	2	0.9		0	Fog			0	0	Clear	
Lynchburg, Va.			30.30	769.6	38	3.3	81	NE	2	0.9			10s			0	0	Cloudy	
Malone, N. Y.			30.23	767.8	38	3.3	63	NE	10	4.5		0	0			0	0	Clear, frost	
Marquette, Mich.			29.59	751.6	45	7.2	76	S	8	3.6			8n		S	0.05	1.3	Light rain	
Memphis, Tenn.			30.12	765.0	46	7.8	85	SE	2	0.9		0	Haze			0	0	Clear	
Milwaukee, Wis.			29.78	756.4	44	6.7	60	S	18	8.0			10s		W	0	0	Cloudy	
Mobile, Ala.			30.19	766.8	48	8.9	92	NE	3	1.3		0	0			0	0	Clear	
Montgomery, Ala.			30.22	767.6	45	7.2	80	Calm	0	0		0	Sm'e			0	0	Clear	
Morgantown, W. Va.			30.22	767.6	36	2.2	90	SW	2	0.9			Fog			0	0	Foggy, frost	
Mt. Washington, N. H.	23.93	607.8	30.29	769.4	26	—3.3	88	NW	8	3.6		0	0			0	0	Clear	
Nashville, Tenn.			30.16	766.1	40	4.4	91	E	2	0.9		0	Fog			0	0	Foggy	
New Haven, Conn.			30.41	772.4	37	2.8	80	N	2	0.9			10s			0	0	Cloudy	
New London, Conn.			30.42	772.7	36	2.2	80	N	5	2.2			10ks		S	0	0	Cloudy, frost	
New Orleans, La.			30.16	766.1	59	15.0	82	NE	2	0.9		0	Fog			0	0	Clear	
Newport, R. I.			30.40	772.1	44	6.7	76	NE	4	1.8		0	5ks		NE	0	0	Fair	
New York, N. Y.			30.36	771.1	41	6.7	84	NE	12	5.4		0	Fog			0	0	Fair	
Norfolk, Va.			30.18	766.6	58	14.4	88	NE	8	3.6			10n		NE	0	0	Light rain	
North Platte, Neb.	27.21	691.1	29.84	757.9	40	4.4	82	W	8	3.6		0	0			0	0	Clear	
Omaha, Neb.	28.86	733.0	29.93	760.2	40	9.4	64	NW	16	7.2		5cs	0	SW		0	0	Fair	
Oswego, N. Y.			30.26	768.6	40.1	4.5	70	SSE	8	3.6		Haze	Haze			0	0	Clear	
Peck's Beach, N. J.			30.31	769.9	46	7.8	85	NE	8	3.6			10ks		E	0	0	Cloudy	
Pembina, Dakota			29.98	761.5	28	—2.2	88	NW	20	8.9		0	Haze			Inap.	Inap.	Clear	
Philadelphia, Penn.			30.36	771.1	39	3.9	72	NE	8	3.6		10k	0	S		0	0	Cloudy, frost	
Pike's Peak, Colorado	17.90	453.6	30.11	764.8	18	—7.8	70	N	25	11.2		0	5s			0	0	Fair	
Pittsburgh, Penn.			30.22	767.6	32	0.0	89	E	4	1.8			Fog			0	0	Foggy, frost	
Port Huron, Mich.			30.06	763.5	40	4.4	82	S	9	4.0		0	0			0	0	Clear	
Portland, Me.			30.40	772.1	38	3.3	63	NW	2	0.9		0	Haze			0	0	Clear, frost	
Portland, Oregon			30.15	765.8	55	12.8	87	N	6	2.7		Haze	Haze			0	0	Hazy	
Punta Rassa, Fla.			30.09	764.3	66.5	19.2	84	N	10	4.5			8s		N	0	0	Cloudy	
Rochester, N. Y.			30.20	767.1	36	2.2	70	S	4	1.8		0	Haze			0	0	Clear, frost	
Salt Lake City, Utah	25.85	656.6	30.18	766.6	57	13.9	21	S				5c	0			0	0	Fair	
Sandy Hook, N. J.			30.33	770.4	47	8.3	77	NE	12	5.4		2c	5ks		SE	0	0	Cloudy	
San Diego, Cal.			30.02	762.5	65	18.3	78	Calm	0	0		5k	0	N		0	0	Fair	
San Francisco, Cal.			30.04	763.0	55	12.8	93	SW	6	2.7			Fog			0	0	Foggy	
Santa Fe, N. M.	23.31	592.1	29.85	758.2	45	7.2	17	E	8	3.6		0	Haze			0	0	Clear	
Savannah, Ga.			30.11	764.8	54	12.2	86	NW	12	5.4			10s		NW	0.11	2.8	Cloudy	
Shreveport, La.			30.11	764.8	59	15.0	88	S	3	1.3		2c	5ks	W	S	0	0	Cloudy	
Smithville, N. C.																			
Springfield, Mass.			30.40	772.1	33	0.6	69	N	4	1.8		3ck cs	Fog	SW		0	0	Fair, frost	
St. Louis, Mo.			29.96	761.0	46	7.8	68	S	16	7.2		2c	2cs			0	0	Fair	
St. Marks, Fla.			30.16	766.1	49	9.4	85	N	4	1.8		0	0			0	0	Clear	
St. Paul, Minn.			29.61	752.1	49	9.4	71	NW	8	3.6			10s		SW	0.08	2.0	Cloudy	
St. Paul's Island, Alaska																			
Squa. Beach, N. J.			30.26	768.6	51	10.6	72	NE	5	2.2		2cs	8ks		S	0	0	Cloudy	
Toledo, Ohio			30.04	763.0	41	5.0	73	S	9	4.0		0	Sm'e			0	0	Clear	
Tucson, Arizona																			
Tybee Island, Ga.			30.10	764.5	56	13.3	93	N	14	6.3			10s		NE	0.35	8.9	Cloudy	
Vicksburg, Miss.			30.21	767.3	50	10.0	78	SE	7	3.1		5k	0	NW		0	0	Fair	
Virginia City, Montana	24.56	623.8	30.04	763.0	35	1.7	61	Calm	0	0		1c	0	NE		0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From -	Clouds. Direction. Lower. From —	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.31	769.9	34.5	1.4	90	N	3	1.3		5c	2s			0	0	Fair	
Wilmington, N. C			30.13	765.3	51	10.6	93	N	9	4.0			10n			0.71	18.0	Light rain	
Wood's Hole, Mass			30.42	772.7	45	7.2	75	NE	2	0.9		5c	0	W		0	0	Clear	
Wytheville, Va	27.84	707.1	30.10	764.5	32	0.0	89	NE	1	0.4			10s			0	0	Cloudy	
Yankton, Dakota	28.71	729.2	30.01	762.2	44	6.7	60	NW	24	10.7			10s		NW	0.05	1.3	Cloudy	
Yuma, Arizona			29.95	760.7	67	19.4		SW				5c	5s			0	0	Cloudy	
Sub-Series.																			
Bridgetown, B'b'does, W. I					81	27.2	90	E	4	1.8		2c	5s	W	NE	0	0	Fair	E Racker.
Pointe-aPitre, G'd'loupe, do			29.94	760.5	80	26.7	75	E				2c	2k			0	0	Clear	L V. Bigard.
Havana, Cuba, W. I			30.02	762.5	75	23.9	85	Calm	0	0		8ck	2k	SW	ENE	0.04	1.0	Cloudy	Charles Hasselbrink.
Kingston, Jamaica, W			30.18	766.6	79	26.1	82	Calm	0	0		1c	2s	SE	SE	0	0		James Gall.
St. Thomas, St. T., W. I			30.22	767.6	82	27.8	74	E	3	1.3		2ck	5k	E	E	0.10	2.5	Cloudy	W. S. Cameron.
Santiago de Cuba, W. I			29.81	757.2	78	25.6	82	Calm	0	0		8ck	2n	E	S	Blank	Blank	Cloudy	Robert Mason.
St. Georges, Bermudas			30.08	764.0	73.5	23.1	83	ENE	12.5	5.6			10pk		ENE	0.900	22.86	Lowering	C. F. Allen.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.
Cumberland, B. A																			
Ft. Chippewyan, B. A																			
Ft. McPherson, B. A																			
Ft. Simpson, B. A																			
York Factory, B. A			29.95	760.7	16.5	—8.6	92	W	6	2.7			10s			0	0		J. Fortescue.
St. John's, Newfoundland																			John Delaney.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Clifton, Jamaica, W. I	27.23	691.6	30.01	762.2	69	20.6	90	SE	2.0	0.9		2c	2k	SE		0.45	11.4	Dull	C. Partridge.
Navassa																			
Medellin, S. A																			
Paramaribo, S. A																			
Elyria, Ohio			30.14	765.5	35.5	1.9	90	SE	4	1.8		0	0			0	0	Fine	H. M. Redington.

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

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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, 6,957.3 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.; 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.; Virginia City, 5,180 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne. 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 15, 1875.

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.	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			29.82	757.3	68.0	20.0	50	NNW			4		6			0.126	3.2	Cloudy	Charnot.
Algiers			29.54	750.4	59.0	15.0	89	Calm			0		9			1.260	32.0	Thunder	Peter.
La Calle																			Kuntz.
Tunis			29.60	751.9	67.0	19.4	45	WSW			4		9			0.248	6.3	Rainy	Jacques.
Sfax			29.67	753.7	64.4	18.0	47	SW			4		6			0.039	1.0	Cloudy	Chauvey.
Saïda			29.73	755.1	52.7	11.5	71	WNW			4		6			0.157	4.0		Grosjean.
Tebessa			29.66	753.4	54.3	12.4		SW			4		10			0.118	3.0	Cloudy	Colin.
Geriville			29.78	756.5	42.8	6.0	85	NW			4		9			0.630	16.0	Stormy	Bernadach.
Laghouat			29.78	756.5	53.6	12	65	NW			4		3			0	0	Cloudy	Simon.
Biskra			29.64	752.8	52.8	14.8	97	NW			4		10			0	0	Cloudy	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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.	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			29.24	742.8	60.4	15.8	98	NE			3		10			1.091	27.7	Raining	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.47	748.5	58.6	14.8	85	NE			4		10			0.126	3.2		I. R. Observatory.
Eperies			29.47	748.5	63.0	17.2	65	S			2		8		N	0.033	0.83		Julius Mikolik.
Gratz	28.10	713.7	29.27	743.5	52.3	11.3	95	NW			2		10						Andreas Rospini.
Hermannstadt	28.17	715.5	29.54	750.0	68.5	20.3	44	SE			4		6			0	0		Prof. Reissenberger.
Kremsmünster	28.07	713.0	29.41	747.0	44.2	6.8	91	SSW			1		10			0.425	10.8		Prof. C. Wagner.
Lemberg			29.60	751.9	55.8	13.2	70	NE			2		3			0	0		Dr. T. Stanecki.
Nyiregyhaza			29.48	748.7	69.8	21.0	60	E			3		3			Blank	Blank		Habzsuda Daniel.
Pola			29.08	738.7	61.2	16.2	94	SE			4		10n, s			0.860	21.84		I.R. Hydrographic Of'ce
Szegedin			29.37	745.9	67.6	19.8	39	S			4		10			0.010	0.25		Karl Stancel.
Trieste			29.13	739.9	58.6	14.8	83	ENE			3		10			0.028	0.7		Prof. V. Farolfi.
Vienna			29.33	745.0	50.9	10.5	98	Calm			0		10			0.524	13.3		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 9 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper.	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.19	749.0	46.2	7.9	88	ENE			1	0?	10			0.043	0.10		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit	Temperature of the Air. Centigrade.	Relative Humidity. Per cent	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.87	733.3	47.7	8.7		E	40	17.9			9			0.150	3.81	Squally.	William Boswell.
Ardrossan			29.80	756.9	49	9.4		ENE			3		6					*D. clouds	Wm. McNeil.
Armagh Observatory			29.76	755.9	49.9	9.9		ENE	5	2.2			10					Gloomy	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs.			29.67	753.6	50.3	10.2		NE			2		10					Overcast	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.73	755.1	57.8	14.3		NW			1		9					*D. clouds	J. Dreyer.
Bradford			29.63	752.6	49.1	9.5		NE			2		9					Showery	J. McLandsborough.
Bridgetown, (Barbadoes)			29.98	761.5	78.0	25.6		NE			2		10					Showery	T. H. Hunt.
Cambridge Observatory			29.54	750.3	55.9	13.3		NNE			1		5			Blank	Blank	*D. clouds	Sergeant Hunt, A. H. C.
Cape Good Hope Obs.			30.05	763.3	71.1	21.7	46	S	18	8.0			5						The Staff, for E. J. Stone.
Cardington			29.56	750.8	53.4	11.9		NE					5					*D. clouds	John McLaren.
Carlisle			29.73	755.1	50.9	10.5		NE					8					*D. clouds	T. Bell, for J. Cartmell.
Chatham, School M. E.			29.53	750.0	51.2	10.7		NW			2		8			0.05	1.3	*D. clouds	Major C. W. Martin, R. E.
Dartmoor	28.20	716.3	29.57	751.1	49.0	9.4		NE			1		10					Threatening	R. E. Power.
Donaghadee			29.75	755.6	52	11.1		ENE			5		6					Overcast	J. Mac Gowan, Jr.
Dover			29.48	748.8	52	11.1		NNE			4		7					*D. clouds	J. Costello.
Eccles, (near Manchester)			29.64	752.8	50.0	10.5		NE	1.4	0.6			8					Rainy	Thomas Mackereth.
Falmouth Observatory			29.63	752.6	54.4	12.4		N	17	7.6			10					*D. clouds	The Staff.
Fort Napier, (Natal)	27.80	706.1	30.01	762.2	60.8	16.0		SE			1		10					Overcast	Pvt G. Sahnon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	84.0	28.9		N					9					*D. clouds	[tis.
Galway, Queen's College																			B. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			29.85	758.2	65.5	18.6		WNW			3		6					Clear	Sergt. E. G. Baker.
Glasgow Observatory			29.80	756.9	49.0	9.3		ENE			1		7					Fine	Lewis Stuart.
Great Yarmouth			29.52	749.8	53	11.7		NE			4		4					*D. clouds	G. T. Watson.
Greenwich Royal Obs.			29.54	750.3	54.2	12.3		NNE			3		9			Blank	Blank	Cloudy	The Staff, for G. B. Airy.
Guernsey			29.55	750.6	56	13.3		NNE			2		6					*D. clouds	Dr. S. E. Hoskins. [ley.
Halifax, Moorside Obs.			29.68	753.9	48.8	9.3		NE					6					Showery	F. J. Page, for L. J. Cross-
Helston			29.57	751.1	55	13.3		NE			2		8k8			Blank	Blank	Fair	M. P. Moyle.
Holyhead			29.69	754.1	53	11.7		ENE			3		5					*D. clouds	John Tilston.
Kew Observatory			29.54	750.3	52.7	11.5		N	11	4.9			9					*D. clouds	The Staff.
Kingstown			29.71	754.6	53	11.7		ENE			4		9					Overcast	George Mitchell.
Leicester Museum			29.69	754.1	46.0	7.8		NE			1		10					Overcast	William J. Harrison.
Llandudno			29.69	754.1	51.8	11.0		ENE					10					Overcast	Dr. James Nicol.
Malta, (Mediterranean)			29.59	751.6	71.2	21.8		SW			1		6k						Fred Travis, Pvt A.H.C.
Nairn			29.88	758.9	46	7.8		ESE			1		10						W. D. Penny.
Nassau, (Bahamas)			30.05	763.3	79.4	26.3		NE			3		8s						Surg.-Maj. Henry.
Nottingham			29.60	742.8	50.9	10.5		N			4		9k,ks,c		NNE			*D. clouds	E. J. Lowe.
Oscott, St Mary's College			29.63	752.6	49.6	9.8		NE			3		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.55	750.6	53	11.7		NE			1		10					Overcast	J. Lucas, for R. Main.
Plymouth			29.60	751.8	54.6	12.2		NNE			3		10						John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.70	754.4	54	12.2		N			3		8					Cloudy	W. Kennedy.
Saint Ann's Head			29.63	752.6	54	12.2		NE			1		7					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.54	750.5	57.1	13.9		NNE			5		5						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			29.67	753.6	48.5	9.2		ENE			6		10					Overcast	F. Shaw.
Scutari cemetery, (Turkey)			29.85	758.2	82.8	28.2		SSE			1		1					Clear	Sergt. W. H. Lyne.
Sheffield			29.62	752.3	51.0	10.6		NE			3		9					Showery	W. F. Cooper.
Silloth Rectory			29.74	755.4	52.3	11.3		E			4		5			0	0	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			29.67	753.6	48.8	9.3		NE			1		10					Threatening	The Staff.
Stornoway, Lews C. (Hebr.)			29.63	752.6	51	10.6		ESE			4		2					Clear	John Smith.
Strattield Turgiss			29.55	750.6	51.8	11.0		N			1		5					*D. clouds	Rev Charles H. Griffith
Streatley Vicarage			29.56	750.8	53.2	11.8		NE			3		9						Rev. John Slatter.
Thurso			29.91	759.7	49	9.4		ESE			3		7					*D. clouds	John Trotter.
Truro, Royal Institution			29.59	751.6	57	13.9		E			5		5					*D. clouds	W. Newcombe.
Valencia Observatory			29.72	754.9	54.0	12.2		NNW	7	3.1			6					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)					52	11.1		E			2					0	0		
Leith, Restalrig Park			29.82	757.4	49.4	9.7		E			3		8k			0.25	6.3	Cloudy	Andrew Gibb.
Monach Lt-house, (Shet. Is)			29.80	756.9	51	10.6		SE			4	3	3	SE		0	0		J. Youyclause.
North Unst, (Shetland Is)			30.00	762.0	49	9.4		E			2	0	0						

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. *Detached clouds.

DANISH SERIES.

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

Copenhagen			29.69	754.0	46.4	8.0	78	ESE			9		10					Raining	
Faröe			29.61	752.2	45.3	7.5	83	ENE			7		10						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.55	750.6	46.5	8.0	83	SE			9		8						
Thorshavn, (Faröe)			29.97	761.3	49.3	9.6	60	SE			4		1						
Vestervig			29.77	756.1	41.0	5.0	89	ENE			9		10					Raining	

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			29.39	746.4	51.8	11.0	74	NE			4		10n,k			0	0	Cloudy	Normal School.
Amiens			29.46	748.2	51.8	11.0	83	N			2		10			0.299	7.6	Cloudy	Normal School.
Avignon			29.10	746.8	55.8	13.2	57	NNW			4		0			0	0	Clear	Normal School.
Barsur Seine			29.47	748.4	53.1	11.7	63	W			2		5			0.256	6.5	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.48	748.8	56.5	13.6	64	N	5.8	2.6			5		N	0.020	0.5	Cloudy	Beaumette Observatory
Beauvais			29.52	749.8	50.0	10	32	ENE			2		10		ENE	0.108	2.75	Cloudy	Normal School.
Besançon			29.47	748.5	48.6	9.2	86	S			2		8		SW	0.024	0.6	Cloudy	Normal School.
Bourg en Bresse			29.47	748.5	48.9	9.4	81	S			1		10		S	0.16	4.	Cloudy	Normal School.
Bourges			29.47	748.5	46.0	7.8	97	SSE			3		10		ENE	0	0	Cloudy	Normal School.
Brest			29.54	750.4	55.6	13.1	68	NNE			3		8		N	0.030	0.75	Cloudy	Naval Observatory.
Caen			29.52	749.8	53.8	12.1	76	N			2		10		E	0.492	12.5	Cloudy	Normal School
Chartres																			Normal School.
Chaumont	28.32	719.2	29.48	748.7	50.4	10.2		WSW			2		2k		WSW	0.150	3.8		Normal School.
Commercy			29.49	749.0	49.3	9.6	81	N			4		10		N	0.047	1.2	Cloudy	Normal School.
Commune de Gréasque*			29.35	745.5	54.3	12.4	50	NW			4		2		NW	0	0		
Le Mans																			Normal School.
Lons-Le Saulnier			29.47	748.6	52.0	11.1	80	E			1		5			0	0	Cloudy	Normal School.
Mâcon			29.47	748.5	50.4	10.2	82	WNW			1		5		WNW	0.110	2.8	Cloudy	Normal School.
Mirecourt			29.43	747.5	49.6	9.8	81	NNE			2		10		S-W	0	0	Cloudy	Normal School.
Orleans			29.41	747.1	47.8	8.8	94	SSE			2		10		SE	0	0	Cloudy	Normal School.
Paris Observatory			29.47	748.6	48.2	9.0	86	SSE			1		10		SE	0.049	1.25	Misty	National Observatory
Parthenay			29.57	751.1	53.2	11.8	90	N			4		8		N	0.059	1.5	Cloudy	Normal School.
La Roche sur Yon			29.89	759.2	56.5	13.6	70	W			2		8		S	0.55	14.	Cloudy	Normal School.
Rochefort, Observatory			29.50	749.4	58.1	14.5	66	NW			3		8		ESE	0.315	8.0	Cloudy	Naval Observatory.
Rouen			29.46	748.2	51.4	10.8	75	WNW			2		10		E	0.122	3.1	Cloudy	Normal School.
Saint Lo			29.50	749.3	55.4	13	96	N			1		10		NE	0.846	21.5		Normal School.
Villefranche			29.32	744.8	50.7	10.4	95	NE			2		5			0.51	13.	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchésl.
Mont-Louis			29.88	758.9	40.8	4.9	71	N	7.4	3.32			8		NW	0.024	0.6		—. Falguère.
Montsouris, Paris			29.48	748.7	47.5	8.6	83	ESE			1		10			0.055	1.4	Misty	Montsouris Osberv'tory.
Perpignan	†29.44	†747.8			60.1	15.6	42	W	19.8	8.83			4		W	0	0		Dr. Fines.
Pic du Midi, (Summit) H. P.																			M. Baylac.
Pic du Midi, (Plantade) H.P.																			General de Nansouty.
Saint Maur, (near Paris)			29.47	748.6	47.1	8.4	88	ESE			1		10			0.079	2.0	Cloudy	E. Renou.
Tours			29.46	748.3	50.5	10.3		N			1		10		NW	0.020	0.5		C. Marquet.
Versailles, (near Paris)			29.47	748.6	48.6	9.2	89	E			1		10			0.111	2.81	Foggy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.22	767.6	53.8	12.1	86	ENE	1.3	0.6						0 0	0 0	Foggy	H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 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. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			29.41	746.9	45.5	7.5	86	NW	13	6			10			0.079	2.0		Prof. Hoh.
Berlin			29.55	750.5	44.8	7.1	84	E	22	10			10			0.244	6.20	Raining	Prof. Arndt.
Breslau			29.52	749.7	52.5	11.4	91	E	9	4			10			0	0	Raining	Dr. P. Neugebauer.
Carlsruhe			29.45	748.1	53.2	11.8	61	E	4	2			10			0	0		A. Senz.
Cassel			29.36	745.8	51.6	10.9	70	E	9	4			9			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.03	712.0	29.47	748.4	46.4	8.0	86	NE					10			1.000	25.4	Heavy rain	M. Wilhelm.
Hamburg			29.55	750.5	43.3	6.3	92	ESE	18	8			10			0.193	4.9	Raining	Deutsche Seewarte.
Kiel			29.52	749.7	41.2	6.8	87	E	22	10			10			0.390	9.9		Prof. G. Karsten.
Königsberg			29.85	758.3	42.6	5.9	66	E	22	10						0	0	Cloudy	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			29.51	749.5	47.1	8.4	77	SW	4	2			10			0.146	3.7		Prof. Bruhns.
Münster			29.48	748.7	53.4	11.9	69	N	9	4			10			0	0		Prof. E. Heis.
Posen			29.58	751.2	40.6	4.8	100	E	36	16						0.362	9.2	Cloudy	Dr. Magener.
Strasburg, (in Alsace)			29.48	748.9	53.2	11.8	66	Calm	0	0			10			0	0		Dr. Schur.
Stuttgart			29.45	747.9	52.2	11.2	78	NE					10			0.051	1.3	Raining	Mr. Würth.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.44	746.9	52.5	11.4	69	NW	13	6			2			0	0		Prof. Flesch.
Wustrow, Naval School			29.65	753.0	43.5	6.4	94	E	27	12			10			0.123	3.13	Raining	E. F. Schütz.

Note.—In the originals the distinction between 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.	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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens			29.80	757.0	78.1	25.6		SW			Very str'ng							Clear	

Note.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			29.24	742.7	58.1	14.5	65	SW	1.3	0.6			0			0	0		
Mondovi			29.24	742.7	55.0	12.8	49	NW			2		1			0.453	11.5		
Genoa			29.19	741.3	61.2	16.2	56	NE	8.7	3.9			4	N		Blank	Blank		
Pavia			29.22	742.2	56.7	13.7	86	W			4		9	W		0.307	7.8		
Verona			29.12	739.7	59.4	15.2	70	NW			2					0.079	2.0		
Padua			29.13	739.8	54.1	12.3	94	N	11.9	5.3			1	N		0.303	7.7		
Parma																			
Bologna			29.23	742.4	58.6	14.8	83	W			6		10			0	0	Raining	
Leghorn			29.19	741.5	58.6	14.8	72	NNE	1.3	0.6			10			0	0		
Urbino			29.27	743.5	53.6	12.0	95	SSW			2		10			0.748	19.0		
Ancona			29.22	742.2	60.8	16.0	76	NW			4		10			0.154	3.8		
Siena			29.17	741.0	52.7	11.5	97	N	1.3	0.6			10	SW	SW	0.240	6.1		
Rome			29.25	742.9	56.1	13.4	93	SSE	3.8	1.7			10			0.386	9.8		
Naples, O. U.			29.34	745.2	64.4	18.0	62	SW			6		7	WSW		3.142	79.8		
Lecce			29.48	748.7	67.1	19.5	70	SSW	28.0	12.5			10	S		0.205	5.2		
Cosenza			29.41	747.1	64.8	18.2	66	ESE			2		9			0.465	11.8	Raining	
Catania, (Sicily)																			
Riposto																			
Palermo			29.37	746.0	66.7	19.3	61	WSW	19.9	8.9			10			0.020	0.5		
Sub-Series.																			
Naples, S. R.			29.40	746.8	59.7	15.4	75	W			2		..ck	SW		2.232	56.7	Thunder-storm	Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S R., is for twenty-four hours. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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			29.52	749.7	48.9	9.4		NE			2								
Groningen			29.44	747.8	44.1	6.7		E			2								
Helder			29.47	748.6	46.8	8.2		ENE			2								
Utrecht			29.44	747.7	46.4	8.0		NE			3		8					Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the 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			29.98	761.5	48.9	9.4	42	N	1.3	0.6			3			0	0		
Christiania			30.19	766.9	37.8	3.2	76	NE	10.1	4.5			9			0	0		
Tromsö			30.25	768.3	36.1	2.3	74	Calm			0		0			0	0		

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			29.95	760.6	64.0	17.8	44	NW	8.7	3.9			5						The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds.

RUSSIAN SERIES.

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

Warsaw			29.70	754.3	39.9	4.4	96	E	22	10			10						Astronomical Obs.
Wilna			30.12	765.1	42.6	5.9	63	E	10	4.5			4						Astronomical Obs.
Dorpat			30.22	767.6	36.9	2.7	67	E	9	4			6						Physical Cabinet.
St. Petersburg			30.20	767.0	37.2	2.9	82	Calm	0	0			9						Central Physical Obs
Kuopio																			Ch. Forsten.
Kieff			29.91	759.8	40.3	4.6	92	NE	9	4			10						Physical Cabinet.
Nikolaiev			29.82	757.5	66.2	19.9	78	S	8	3.5			0						Kurdakof.
Kertch			29.89	759.1	70.7	21.5	75	S	9	4			6						Lagorio.
Moscow			30.06	763.5	37.2	2.9	78	NNW	13	6			2						Meteorological Obs.
Lugan			29.78	756.3	65.3	18.5	61	SW	8	3.5			8						Meteorological Obs.
Archangel			30.12	765.1	34.9	1.6	82	N	13	6			8						Ogorodnikof.
Tiflis	28.64	727.5	30.00	761.9	77.7	25.4	24	N	20	9			0						Physical Obs.
Astrakhan			30.05	763.3	64.6	18.1	76	SSW	8	3.5			10			Blank	Blank		Sebastianof.
Kasan			29.84	758.0	36.0	2.2	94	NNE	0	0			10					Raining	Physical Cabinet.
Orenburg			29.98	761.5	40.8	4.9	70	SE	8	3.5			10					Raining	Tschernischef.
Ekaterinburg	28.96	735.5	30.00	762.0	30.9	− 0.6	92	Calm	0	0			10						Meteorological Obs.
Kasaly			29.94	760.5	52.9	11.6	69	SW	8	3.5			0						Bobrof.
Tashkend																			Michelson.
Barnaul			29.67	753.6	40.8	4.9	90	SSW	8	3.5			4						Meteorological Obs.
Yeniseisk			29.47	748.6	43.5	6.3	78	SSW	4	2			8						Marks.
Irkutsk																			Usolzef.
Oorga	25.77	654.6	30.23	767.8	27.3	− 2.6	65	Calm	0	0			0						Mossin.
Peking, (China)			29.95	760.8	59.5	15.3	43	SW	4	2			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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			29.78	756.3	54.5	12.5	46	NW	25.3	11.3		7	1	NW		0	0	Cloudy	Royal Observatory.
San Fernando			29.90	759.4	62.8	17.1	62	WNW	14.5	6.5		0	1		WNW	0	0		The Naval Observatory.

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

SWEDISH SERIES.

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

Haparanda			30.42	772.6	31.6	− 0.2	96	NE			2		10			0	0		
Umea			30.35	771.0	35.6	+ 2.0	78	ENE			2		10			0	0	Snowing	
Hernosand			30.33	770.3	36.0	2.2	85	NE			2		10			0	0		
Stockholm			30.13	765.3	38.8	3.8	73	NE			4		10			0	0		
Wisby			30.02	762.5	42.1	5.6	75	ESE			4		10			0	0		
Sub-Series.																			
Upsala			30.23	767.8	37.0	2.8	74	ENE	8.1	3.6			10		ENE				Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.04	712.3	29.48	748.9	49.5	9.7	77	NW			1		9			0.051	1.3	Cloudy	The Observatory.
Zurich	27.84	707.1	29.50	749.2	48.7	9.3	79	NW			1		10		SW	0	0	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —13.9mm.; Thermometer, —3°.3; Relative Humidity, +5 per cent.

Note.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Beirut, (Syria,) Lee Obs'y			30.08	764.1	78.1	25.6	71	NE			2		1c			0	0		Prof. C. V. A. Van Dyck.
Constantinople			29.88	759.0	77.9	25.5	41	SSW	3.4	1.5			2		SW	0	0		
Fao, (Persian Gulf)			30.16	766.0	84.2	29.0		NW			1		0					Clear	
Salonica					74.8	23.8		S			6		10					Cloudy	
Valona			29.46	748.2	78.1	25.6		S			10		10					Stormy	
Varna			29.72	755.0	62.6	17.0		NW			1		0					Clear	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Brockville, Ontario			29.84	757.9	51	10.6		S	1	0.4		2c	0	S		0	0	Fair	
Chatham, N. B.			30.15	765.8	39	3.9	93	SW	3	1.3		5k	5ks	S	S	0	0	Fair	
Charlottetown, P. E. Island			30.21	767.3	46	7.8	80	SE	11	4.9		2k	0			0	0	Fair	
Fort Garry, Manitoba			30.08	764.0	31	— 0.6	89	SW	2	0.9		5k	2s	NW		0	0	Cloudy	
Halifax, N. S.			30.31	765.3	49	9.4	78	SE	8	3.6		5ck	2n	S	S	0	0	Cloudy	
Kingston, Ontario			29.78	756.7	48	8.9	86	S	10	4.5		8k	0	SW		0	0	Fair	
Montreal, Quebec			29.86	758.4	45	7.2	82	SW	18	8.0		0	8m'c			0	0	Clear	
Ottawa, Ontario			29.80	756.9	38	3.3	72	E	4	1.8		8ck	0	E		0	0	Fair	
Parry Sound, Ontario			29.62	752.3	44	6.7	96	S	11	4.9			10n		SE	0.25	6.3	Light rain	
Port Dover, Ontario			29.66	753.4	51	10.6	72	S	15	6.7			10n		S	0	0	Light rain	
Port Stanley, Ontario			29.64	752.8	50	10.0	94	SE	20	8.9			10n		SE	0.25	6.3	Heavy rain	
Quebec, Quebec			29.96	761.0	42	5.6	66	Calm	0	0		0	0			0	0	Clear	
Saugeen, Ontario			29.60	751.8	47	8.3	96	Calm	0	0			10ks		S	0.27	6.9	Light rain	
Stayner, Ontario			29.61	752.1	43	6.1	96	Calm	0	0			10n			0.07	1.8	Light rain	
Sydney, C. B.			30.30	769.6	45	7.2	87	SE	4	1.8			10s			0	0	Cloudy	
Toronto, Ontario			29.64	752.8	48	8.9	89	SE	4	1.8		8cs	2s	SW	SW	0	0	Cloudy	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.87	758.7	43	6.1	91	N	1	0.4			10s		N	0	0	Cloudy	
Alpena, Mich.			29.56	750.8	40	4.4	91	NW	9	4.0			10s		NW	0.12	3.0	Cloudy	
Atlantic City, N. J.			29.70	754.4	57	13.9	94	N	20	8.9			10s			0.01	0.3	Cloudy	
Augusta, Ga.			29.97	761.2	41	5.0	91	Calm	0	0			10s			0	0	Cloudy	
Baltimore, Md.			29.44	747.9	57	14.7	93	N	5	2.2			10s			0	0	Cloudy	
Barnegat, N. J.			29.72	754.9	53	11.7	87	NE	25	11.2			10s			0	0	Cloudy	
Benton, Montana	27.39	695.7	30.19	766.8	38	3.3	80	Calm	0	0		0	0			0	0	Clear	
Bismarck, Dakota	28.27	718.0	29.95	760.7	40	4.4	64	NW	5	2.2		0	0			0	0	Clear	
Boston, Mass.			29.91	759.7	49	9.4	100	NE	16	7.2			10n			0.01	0.3	Light rain	
Breckenridge, Minn.			30.06	763.5	32	0.0	69	N	2	0.9		8zs	0			0	0	Cloudy	
Buffalo, N. Y.			29.61	752.1	51	10.6	63	S	12	5.4		8k	0	SW		0	0	Fair	
Burlington, Vt.			29.83	758.9	46	7.8	69	S	5	2.2		2c	2s			0	0	Fair	
Cairo, Ill.			29.92	760.2	46	7.8	84	NW	4	1.8		0	5s			0.37	9.4	Fair	
Cape Hatteras, N. C.			29.78	756.4	56	13.3	93	W	15	6.7			10s			4.32	109.7	Cloudy	
Cape Henry, Va.			29.81	757.2	58	14.4	74	NW	20	8.9			10n			2.32	57.1	Light rain	
Cape May, N. J.			29.73	755.1	57	13.9	93	N	14	6.3			10s		E	0.30	7.6	Cloudy	
Charleston, S. C.			29.98	761.5	52	11.1	83	W	1	0.4		0	Fog			0	0	Clear	
Cheyenne, Wyoming	24.23	615.4	30.17	766.3	46	7.8	42	NW	16	7.2		0	0			0	0	Clear	
Chicago, Ill.			29.73	755.1	41	5.0	74	NW	9	4.0			10s			0.29	7.4	Cloudy	
Cincinnati, Ohio			29.68	753.9	49	9.4	78	W	12	5.4			10s		NW	0.35	8.9	Light rain	
Cleveland, Ohio			29.62	752.3	47.1	8.4	85	S	9	4.0			10n		W	0.10	2.5	Light rain	
Colorado Springs, Col.	24.32	617.9	30.19	766.8	38	3.3	63	N	8	3.6		0	0			0	0	Clear	
Corsicana, Tex.			30.16	766.1	45	7.2	84	NW	6	2.7		0	0			0	0	Clear	
Davenport, Iowa			29.88	758.9	36	2.2	70	NW	8	3.6		5k	0			Inap.	Inap.	Fair	
Denison, Tex.			30.14	765.5	43	6.1	75	NW	6	2.7		0	0			0.11	2.8	Clear	
Denver, Col.	25.91	636.0	30.26	768.6	40	4.4	31	S	8	3.6		0	0			0	0	Clear	
Detroit, Mich.			29.58	751.3	48	8.9	100	SW	7	3.1			10n		SW	0.36	9.1	Light rain	
Dodge City, Kan.	27.56	700.0	29.93	760.2	37	2.8	80	SW	8	3.6		0	0			0	0	Clear	
Dubuque, Iowa			29.92	760.0	36	2.2	70	NW	12	5.4			10s		W	0.05	1.3	Cloudy	
Duluth, Minn.			29.98	761.5	28	−2.2	77	N	4	1.8		0	0			0	0	Clear	
Eastport, Me.			30.10	764.5	46	7.8	85	SE	11	4.9		5c	2s	SW	SE	0	0	Cloudy	
Erie, Pa.			29.60	751.8	49	9.4	71	SE	16	7.2			10ks		S	0	0	Cloudy	
Escanaba, Mich.			29.72	754.9	34	1.1	79	NW	16	7.2			10s		NW	0.82	20.8	Cloudy	
Fort Gibson, I. T.			30.10	764.5	40	4.4	82	N	2	0.9		0	0			0.20	5.1	Clear	
Fort Sill, I. T.	28.96	735.6	30.11	764.8	44	6.7	92	N	2	0.9		0	0			0	0	Clear	
Fort Sully, Dakota	28.32	719.3	29.98	761.5	49	9.4	51	W	12	5.4		0	0			0	0	Clear	
Galveston, Tex.			30.08	764.0	61	16.1	77	N	30	13.4		0	0			0.64	16.3	Clear	
Grand Haven, Mich.			29.67	753.6	41	5.0	82	N	14	6.3			10s			0.51	13.0	Cloudy	
Indianapolis, Ind.			29.73	755.1	43	6.1	83	W	6	2.7			10s		W	0.08	2.0	Cloudy	
Indianola, Tex.			30.16	766.1	62	16.7	61	N			4	0	0			0.30	7.6	Clear	
Jacksonville, Fla.			29.67	761.2	53	11.7	93	Calm	0	0			Fog			0	0	Foggy	
Keokuk, Iowa			29.80	759.2	35	1.7	63	NW	5	2.2		0	0			0	0	Clear	
Key West, Fla.			29.99	761.7	76.7	24.8	77	E	6	2.7		5ck	5ks	NE	SE	0	0	Cloudy	
Kittyhawk, N. C.			29.82	757.4	55	12.8	100	NW	16	7.2		0	10n		N	3.35	85.1	Light rain	
Knoxville, Tenn.			29.81	757.2	46	7.8	85	Calm	0	0			10s		SW	0.01	0.3	Threatening	
La Crosse, Wis.			29.90	759.4	34	1.1	69	NW	20	8.9			10s		NE	0.04	1.0	Cloudy	
Leavenworth, Kan.			30.03	763.5	36	2.2	71	NW	1	0.4		0	0			0	0	Clear, frost	
Lexington, Ky.	29.65	727.7	29.74	755.4	48	8.9	100	SW	6	2.7			10n			0.36	9.1	Light rain	
Long Branch, N. J.			29.78	756.4	54	12.2	100	NE	30	13.4			10s			0.02	0.5	Foggy	
Louisville, Ky.			29.88	758.9	46	7.8	84	W	10	4.5			10s		SW	0.24	6.1	Cloudy	
Lynchburg, Va.			29.86	758.4	50	10.0	86	NW	1	0.4		10k	0	S		0	0	Cloudy	
Malone, N. Y.			29.78	756.4	46	7.8	61	SE	12	5.4		2cs	0	SW		0	0	Fair	
Marquette, Mich.			29.80	756.9	33	0.6	89	NW	12	5.4			10n		NW	0.36	9.1	Light snow	
Memphis, Tenn.			29.96	761.0	48	8.9	85	NW	12	5.4		5k	0	NW		0.63	16.0	Fair	
Milwaukee, Wis.			29.78	756.4	38	3.3	83	NW	13	5.8			10s		NW	0.28	7.1	Cloudy	
Mobile, Ala.			29.93	760.2	62	16.7	94	Calm	0	0			10s			0	0	Cloudy	
Montgomery, Ala.			29.90	759.4	54.5	12.5	87	S	4	1.8			10n			0.18	4.6	Light rain	
Morgantown, W. Va.			29.71	754.6	47	8.3	81	W	1	0.4		0	2s			0	0	Fair, frost	
Mt. Washington, N. H.	23.68	601.5	30.04	763.0	29	−1.7	89	S	48	21.5		8s	8s	S	S	0	0	Fair	
Nashville, Tenn.			29.82	757.4	51	10.6	78	NW	8	3.6			10ks		NW	0.24	6.1	Cloudy	
New Haven, Conn.			29.81	757.2	48	8.9	100	N	16	7.2			10n			0.04	1.0	Light rain	
New London, Conn.			29.81	757.2	53	11.7	90	NE	12	5.4			10s		E	0.13	2.8	Threatening	
New Orleans, La.			29.93	760.2	63.5	17.5	86	W	7	3.1			10ks		W	0.34	8.6	Threatening	
Newport, R. I.			29.82	757.4	53	11.7	93	NE	10	4.5			10s		NE	0.02	0.5	Cloudy	
New York, N. Y.			29.79	756.7	50	10.0	100	NE	12	5.4			10n			0.01	0.3	Light rain	
Norfolk, Va.			29.84	757.9	54	12.2	97	NW	14	6.3			10s		NW	1.73	43.9	Cloudy	
North Platte, Neb.	27.19	690.6	29.85	758.2	34	1.1	89	W	3	1.3		0	2s			0	0	Fair	
Omaha, Neb.	28.96	735.6	30.06	763.5	38	3.3	71	NW	6	2.7			10s		NW	0	0	Cloudy	
Oswego, N. Y.			29.76	755.9	48.5	9.2	74	SSE	12	5.4		10cs	1s			0	0	Cloudy	
Peck's Beach, N. J.			29.73	755.1	56	13.3	100	N	16	7.2			10n		E	0.10	2.5	Light rain	
Pembina, Dakota			30.06	763.5	33	0.6	89	Calm	0	0		5c	2n	NW		0	0	Cloudy	
Philadelphia, Penn.			29.80	756.9	52	11.1	93	NE	13	5.8			10s		NW	0	0	Cloudy	
Pike's Peak, Colorado	17.98	456.7	30.19	766.8	22	−5.6	85	E	20	8.9		0	0			0	0	Clear	
Pittsburgh, Penn.			29.67	753.6	49	9.4	71	S	10	4.5			10ks		S	0	0	Cloudy	
Port Huron, Mich.			29.55	750.6	48	8.9	92	S	4	1.8			10n		SW	0.29	7.4	Light rain	
Portland, Me.			29.99	761.7	47	8.3	92	NW	6	2.7			10s		SE	0	0	Cloudy	
Portland, Oregon			30.08	764.0	52	11.1	89	Calm	0	0			Fog			0	0	Foggy	
Punta Rassa, Fla.			30.02	762.5	68.5	20.3	69	N	6	2.7		2cs	Haze			0	0	Clear	
Rochester, N. Y.			29.68	753.9	51	10.6	72	SE	8	3.6		2s	Haze	SE		0	0	Fair	
Salt Lake City, Utah	25.91	658.1	30.24	768.1	59	15.0	23	SE	4	1.8		0	0			0	0	Clear	
Sandy Hook, N. J.			29.76	755.9	53	11.7	93	NE	25	11.2			10n		NE	0	0	Light rain	
San Diego, Cal.			30.10	764.5	62	16.7	77	N	4	1.8		2k	0			0	0	Fair	
San Francisco, Cal.			30.06	763.5	54	12.2	93	SW	6	2.7			Fog			0	0	Foggy	
Santa Fe, N. M.	23.51	597.1	30.05	763.3	39	3.9	55	E	4	1.8		0	0			0	0	Clear	
Savannah, Ga.			29.98	761.5	49	9.4	100	SE	2	0.9			Fog			0	0	Foggy	
Shreveport, La.			30.10	764.5	52	11.1	93	NW	4	1.8		0	0			0.92	23.4	Clear	
Smithville, N. C.			29.97	761.2	51	10.6	93	W	5	2.2			10ks		W			Cloudy	
Springfield, Mass.			29.88	758.9	45	7.8	85	N	8	3.6			10n			0.05	1.3	Light rain	
St. Louis, Mo.			29.95	760.7	38	3.3	71	NW	15	6.7		0	0			0.01	0.3	Clear	
St. Marks, Fla.			29.97	761.2	51	10.6	96	Calm	0	0		0	0			0	0	Clear	
St. Paul, Minn.			29.98	761.5	26	−3.3	77	NW	7	3.1		0	Haze			0	0	Clear	
St. Paul's Island, Alaska																			
Squa Beach, N. J.			29.67	753.6	55	12.8	100	NE	40	17.9			Fog			0	0	Foggy	
Toledo, Ohio			29.59	751.3	50	10.0	86	W	8	3.6			10n		W	0.30	7.6	Light rain	
Tucson, Arizona																			
Tybee Island, Ga.			30.00	762.0	57	13.9	76	SE	6	2.7		0	0			0	0	Clear	
Vicksburg, Miss.			30.04	763.0	57.5	14.2	77	N	8	3.6			10ks		NW	0.75	19.1	Cloudy	
Virginia City, Montana	24.54	623.3	30.02	762.5	42	5.6	42	Calm	0	0		0	0			0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			29.84	757.9	50	10.0	93	NNW	6	2.7			10s			0	0	Cloudy	
Wilmington, N. C			29.95	760.7	51	10.6	93	W	7	3.1			10s			0.39	9.9	Cloudy	
Wood's Hole, Mass			29.81	757.2	55	12.8	87	E	11	4.9			10s			0	0	Cloudy	
Wytheville, Va	27.48	698.0	29.64	752.8	41	5.0	82	NE	2	0.9		2k	0			0	0	Cloudy	
Yankton, Dakota	28.78	731.0	30.10	764.5	41	5.0	74	Calm	0	0			10s			0	0	Cloudy	
Yuma, Arizona			29.97	761.2	67	19.4		Calm	0	0		0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'does, W. I					80	26.7	90	E	2	0.9		2c	5s	E	E	0	0	Fair	E. Racker.
Pointe-aPitre, G'd'loupe, do			29.89	759.2	77	25.0	83	NE				5cs	2n			0.26	6.6	Hazy	L. V. Bigard.
Havana, Cuba, W. I			29.96	761.0	75	23.9	81	Calm	0	0		5cs, ck	1k	SW	NE	0	0	Fair	Charles Hasselbrink.
Kingston, Jamaica, W			30.16	766.1	80	26.7	74	Calm	0	0		2c	2s	SE	SE	0	0		James Gall.
St. Thomas, St. T., W. I			30.17	766.3	82	27.8	70	E	7	3.1		2cs	2k	E	E	0	0	Clear	W. S. Cameron.
Santiago de Cuba, W. I			29.78	756.4	79	26.1	78	S	2.4	1.1		4ck	8k	S	SE			Cloudy	Robert Mason.
St. Georges, Bermudas			29.97	761.2	76	24.4	91	SW	6.3	2.8			10pk		SW	0.555	14.00	Cloudy	C. F. Allen.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.
Cumberland, B. A																			
Ft. Chippewyan, B. A																			
Ft. McPherson, B. A																			
Ft. Simpson, B. A																			
York Factory, B. A			30.03	762.7	12.5	—10.8	90	W	8	3.6		5ck	0	N		0	0		J. Fortescue.
St. John's, Newfoundland																			John Delaney.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Clifton, Jamaica, W. I	27.21	691.1	29.99	761.7	61	16.1	90	E	4.0	1.8		0	2k			1.20	30.5	Fine, clear	C. Partridge.
Navassa																			
Meaellin, S. A																			
Paramaribo, S. A																			
Elyria, Ohio			29.63	752.6	47	8.3	100	S	4	1.8			10n					Raining	H. M. Redington.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Hibernian, N. 37° 24′, W. 74° 48′.	ENE	8.5	29.61	752.1	58	14.4		NW			6		Haze			Rough.		Overcast	

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in. The barometer of the Hibernian has an error of —0.18, as determined from the isobarometric charts of the Signal Service.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 16, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			29.95	760.8	72.3	22.4	45	Calm			0		7			0	0		Charnot.
Algiers			29.90	759.4	68.0	20.0	64	WNW			2		5			0.658	16.7	Cloudy	Peter.
La Calle																			Kuntz.
Tunis			29.92	759.9	67.6	19.8	50	W			5		3			0.047	1.2		Jacques.
Sfax			29.96	761.0	72.3	22.4	34	NW			2		1			0	0		Chauvey.
Sajda			29.92	759.9	60.8	16.0	59	WNW			1		1			0	0		Grosjean.
Tebessa			29.92	760.0	56.3	13.5		SW			3		4			0.197	5.0	Cloudy	Colin.
Geriville			29.97	761.1	52.7	11.5	37	NW			2		3			0.030	1.0		Bernadach.
Laghouat			29.98	761.5	62.6	17	52	SW			3		2			0	0		Simon.
Biskra			29.94	760.4	68.9	20.5	80	NW			4		1			0	0		Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			29.48	748.7	62.2	16.8	85	NE			1		9			0.126	3.2		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.56	750.9	64.0	17.8	65	NE			2		6			0	0		I. R. Observatory.
Zperles			29.55	750.6	64.4	18.0	66	Calm			0		10			0.126	3.20		Julius Mikolik.
Gratz	28.35	720.0	29.52	749.8	58.3	14.6	78	NW			2		8						Andreas Rospini.
Hermannstadt	28.19	715.9	29.53	750.1	72.0	22.2	54	SE			3		10			0.075	1.90		Prof. Reissenberger.
Kremsmünster	28.35	720.1	29.70	754.3	46.6	8.1	79	W			3		10			0.063	1.6		Prof. C. Wagner.
Lemberg			29.69	754.1	58.6	14.8	85	N			1		8			0.051	1.3		Dr. T. Stanecki.
Nyiregyhaza			29.60	751.8	61.0	17.8	82	S			3		10			0.409	10.38		Habzsuda Daniel.
Pola			29.51	749.6	61.7	16.5	80	ESE			1		9cks			0.909	23.08		I. R. Hydrographic Of'ce
Szegedin			29.52	749.7	57.2	14.0	94	Calm			0		10			0.408	10.35		Karl Stancel.
Trieste			29.52	749.7	62.0	17.2	88	SE			1		10			1.961	49.8	Raining	Prof. V. Farolfi.
Vienna			29.59	751.5	50.5	10.3	68	W			5		7			0.287	7.3		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 9 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.65	753.2	53.2	11.8	86	SW			2		9			0	0		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.80	756.9	48.0	8.9		E	28	12.5			9			0.150	3.81	Squally	William Boswell.
Ardrossan			29.73	755.1	51.5	10.8		E			3		7					Light fog	Wm. McNeil.
Armagh Observatory			29.70	754.4	50.9	10.5		SE	9	4.0			10					Gloomy	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			29.71	754.6	50.7	10.3		NNW			1		1					Clear	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.64	752.8	53.3	10.8		SE			1		10					Overcast	J. Dreyer.
Bradford			29.66	753.4	51.9	11.1		N			1		5					Fine	J. McLandsborough.
Bridgetown. (Barbadoes)			29.95	760.7	76.1	24.9		NE			1		10					Gloomy	T. H. Hunt.
Cambridge Observatory			29.70	754.4	54.0	12.2		NW			1		5					*D. clouds	Sergeant Hunt, A. H. C.
Cape Good Hope Obs.			29.90	759.4	67.7	19.7	69	WNW	14	6.3			10						The Staff, for E. J. Stone.
Cardington			29.72	754.9	52.0	11.1		NW					4					*D. clouds	John McLaren.
Carlisle			29.71	754.6	51.2	10.7		NE					7			0	0	*D. clouds	T. Bell, for J. Cartmell.
Chatham, School M. E.			29.71	754.6	50.2	10.1		NW			1		0					Overcast?	Capt. J. Fellowes, R. E.
Dartmoor	28.34	719.8	29.72	754.9	49.7	9.4		N			1		10					Overcast	R. E. Power.
Donaghadee			29.71	754.6	51	10.6		E			2		3					*D. clouds	J. Mac Gowan, Jr.
Dover			29.69	754.1	51	10.6		NW			3		7					Gloomy	J. Costello.
Eccles, (near Manchester)			29.69	754.1	50.0	10.0		NE					8					Misty	Thomas Mackereth.
Falmouth Observatory			29.72	754.9	55.4	13.1		S	14	6.3			7					Overcast	The Staff.
Fort Napier, (Natal)	27.76	705.1	29.97	761.2	66.5	19.2		NE			2		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	84	28.9		N					6						B. G. Clare, for Prof. Curtis.
Galway, Queen's College																			
Gibraltar. (Mediterranean)			29.95	760.7	69.0	20.6		SW			4		3					*D. clouds	Sergt. E. G. Baker.
Glasgow Observatory			29.73	755.1	49.2	9.6		E			2		8					Fine	Lewis Stuart.
Great Yarmouth			29.65	753.1	52	11.1		NNE			2		4					*D clouds	G. T. Watson.
Greenwich Royal Obs			29.71	754.6	52.7	11.5		WNW			1		10					Misty	The Staff, for G. B. Airy.
Guernsey			29.77	756.1	56	13.3		ENE			1		3					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs			29.71	754.6	50.0	10.0		NNW					9					*D. clouds	F. J. Page, for L. J. Crossley.
Helston			29.69	754.1	59	15.0		S			2		4			0.01	0.3	*D. clouds	M. P. Moyle.
Holyhead			29.70	754.4	53	11.7		SE			1		5					*D. clouds	John Tilston.
Kew Observatory			29.72	754.9	50.5	10.3		WSW	8	3.6			4					*D. clouds	The Staff.
Kingstown			29.70	754.4	53	11.7		SE			4		10					Overcast	George Mitchell.
Leicester Museum			29.72	754.9	52.5	11.4		Calm			0		4					*D. clouds	William J. Harrison.
Llandudno			29.71	754.6	53.1	11.7		N					2					Clear	Dr. James Nicol.
Malta, (Mediterranean)			29.81	757.2	71.0	21.7		NW			1		8k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			29.81	757.2	47	8.3		SE			1		10						W. D. Penny.
Nassau, (Bahamas)			30.03	762.7	80.2	26.8		SW			4		5s						Surg.-Maj. Henry.
Nottingham			29.71	754.6	55.0	12.8		WSW			1		8k,d		WNW	0	0	*D. clouds	E. J. Lowe.
Oscott, St Mary's College			29.71	754.6	52.1	11.2		NW			2		0			Blank	Blank	Hazy	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.71	754.6	50	10.0		W			1		3					Clear	J. Lucas, for R. Main.
Plymouth			29.73	755.1	53.3	11.8		S			1		10						John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.60	751.8	53	11.7		S			4		10					Overcast	W. Kennedy.
Saint Ann's Head			29.69	754.1	52	11.1		SE			3		8					Overcast	John C. Walker.
Saint Helier, (Jersey)			29.75	755.6	58.0	14.4		S			3		8						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			29.66	753.4	51.9	11.1		NNE			2		7					*D. clouds	F. Shaw.
Scutari cemetery, (Turkey)			29.82	757.4	81.0	27.2		SE			1		10					Threatening	Sergt. W. H. Lyne.
Sheffield			29.69	754.1	52.0	11.1		NNE			2		7					Overcast	W. F. Cooper.
Silloth Rectory			29.71	754.6	52.9	11.6		Calm			0		7			0.040	1.02	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			29.69	754.1	50.7	10.4		W			1		7			Blank	Blank		The Staff.
Stornoway, Lews C. (Hebr)			29.77	756.1	50	10.0		ESE			2		5					*D. clouds	John Smith.
Stratfield Turgiss			29.74	755.4	51.8	11.0		NW			0–1		8					*D. clouds	Rev. Charles H. Griffith
Streatley Vicarage			29.73	755.1	53.3	11.8		NNE			2		5						Rev. John Slatter.
Thurso			29.84	757.9	48	8.9		ESE			3		8					Gloomy	John Trotter.
Truro, Royal Institution			29.67	753.6	60	15.6		SW			6		4					*D. clouds	W Newcombe.
Valencia Observatory			29.56	750.8	49.2	9.6		SSE	14	6.3			10					Raining	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					51	10.6		SE			2		3			0	0		
Leith, Restalrig Park			29.76	755.9	50.0	10.0		E			2		10k			0.35	8.9	Showery	Andrew Gibb.
Monach Lt-house, (Shet. Is)			29.80	756.9	50	10.0		SE			4	2	3	SE		0	0		J. Youyclause.
North Unst, (Shetland Is)			29.97	761.2	45	7.2		SE			4	10	5						

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., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.67	753.5	45.3	7.4	89	ESE			7		10						
Fanöe			29.63	752.6	47.1	8.4	97	E			6		10					Raining	
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.97	761.3	46.8	8.2	70	SE			4		5						
Thorshavn, (Faröe)			29.96	761.0	48.7	9.3	71	E			4		7						
Vestervig			29.80	756.9	41.2	5.1	95	ENE			7		10					Raining	

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			29.79	755.6	55.4	13.0	63	SW			1		8uk			0	0	Cloudy	Normal School.
Amiens			29.74	755.4	55.4	13.0	75	W			6		0			0	0	Clear	Normal School.
Avignon			29.69	754.2	57.2	14	67	N			4		0			0	0	Clear	Normal School.
Bar-sur Seine			29.73	755.2	50.9	10.5	79	W			2		1ukn			0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.76	756.0	57.4	14.1	62	SW	2.7	1.2			5		W	0	0	Cloudy	Beaumette Observatory
Beauvais			29.78	756.5	52.7	11.5		WNW			2		8		WNW	0	0	Cloudy	Normal School.
Besançon			29.79	756.6	52.5	11.4	75	S			2		8		WSW	0	0	Cloudy	Normal School.
Bourg en Bresse			29.78	756.3	49.8	9.9	79	NNE			2		2		S	0	0		Normal School.
Bourges			29.80	756.8	52.5	11.4	90	SSW			3		8		ESE	0.043	1.1	Cloudy	Normal School.
Brest			29.69	754.0	57.0	13.9	75	SSW			2		2		SSW	0	0		Naval Observatory.
Caen			29.78	756.4	55.2	12.9	75	WNW			1		5		W	0.097	2.4	Cloudy	Normal School
Chartres																			Normal School.
Chaumont	28.61	726.7	29.78	756.3	47.3	8.5		SW			3		10u			0	0	Cloudy	Normal School.
Commercy			29.79	756.6	46.8	8.2	86	WNW			4		5		WNW	0	0	Cloudy	Normal School.
Commune de Gréasque*			29.67	753.7	56.8	13.8	50	NW			2		0			0	0		
Le Mans																			Normal School.
Lons-Le-Saulnier			29.82	757.4	50.4	10.2	92	W			2		5		E	0	0	Cloudy	Normal School.
Mâcon			29.79	756.6	51.6	10.9	90	Calm			0		5		WNW	0	0		Normal School.
Mirecourt			29.72	754.8	49.1	9.5	61	W			4		10		E	0	0	Cloudy	Normal School.
Orleans			29.75	755.6	53.2	11.8	89	W			2		2		W	0	0		Normal School.
Paris Observatory			29.75	755.7	54.3	12.4	71	WSW			1		5		WNW	0	0	Cloudy	National Observatory
Parthenay			29.80	756.8	55.8	13.2	84	W			2		10			0	0	Cloudy	Normal School.
La Roche sur Yon			29.77	756.2	59.4	15.2	64	SW			2		8		NE	0	0	Cloudy	Normal School.
Rochefort, Observatory			29.82	757.3	61.0	16.1	59	NW			2		8		ESE	0.031	0.8	Cloudy	Naval Observatory.
Rouen			29.77	756.2	56.1	13.4	53	WNW			2		5		W	0	0	Cloudy	Normal School.
Saint Lo			29.77	756.2	57.2	14	77	N			1		6		NW	0.28	7.		Normal School.
Villefranche			29.80	757.0	51.8	11	72	NE			1		5		W	0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchégi.
Mont-Louis			30.10	764.4	45.7	7.6	57	W	13.0	5.83			2		W	0.028	0.7		—. Falguère.
Montsouris, Paris			29.75	755.7	55.4	13.0	66	W			2		5k		W	0	0		Montsouris Osbery'tory.
Perpignan	†29.79	†756.6			60.3	15.7	44	NW	13.0	5.83			7		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H. P.																			M. Baylac.
Pic du Midi, (Plantade) H.P.																			General de Nansouty.
Saint Maur, (near Paris)			29.75	755.6	54.5	12.5	72	W			1		3			0.004	0.1		E. Renou.
Tours			29.78	756.4	56.8	13.8	67	W			1		8		WNW	0	0		C. Marquet.
Versailles, (near Paris)			29.76	755.8	55.4	13.0	79	W			1		8			0	0	Cloudy	Dr. A. Béringy.
Zi-Ka-Wei, (near Shanghai)			30.13	765.3	57.7	14.3	88	W	0	0		5ek	0			0 0	0 0		H. Le Lee, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,050.9 ft.; Commune de Gréasque, 322 m., or 1,055.4 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. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also.

GERMAN SERIES.

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

Stations.	Corrected for instrumental errors. Inches.	Corrected for instrumental errors. Millimeters.	Reduced to sea-level. Inches.	Reduced to sea-level. Millimeters.	Fahrenheit.	Centigrade.	Relative Humidity.	Direction.	Miles per hour.	Meters per second.	Force.	Amount. Up'er	Amount. Low'r	Upper.	Lower.	Inches.	Millimeters.	Weather.	Observer.
Bamberg			29.60	751.7	46.4	8.0	75	NW	13	6			10			0.158	4.0	Raining	Prof. Hoh.
Berlin			29.53	750.1	46.9	8.3	97	NW	9	4			10			0.404	10.26		Prof. Arndt.
Breslau			29.61	752.0	52.0	11.1	70	S	18	8			8			0.575	14.6		Dr. P. Neugebauer.
Carlsruhe			29.69	754.1	54.3	12.2	63	SW	4	2			10			0	0		A. Senz.
Cassel			29.52	749.8	46.6	8.1	76	W	13	6			10			Inap.	Inap.		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Cassel																			Prof. Prestel.
Emden																			Physical Society
Frankfort on the Main																			M. Wilhelm.
Friedrichshafen	28.31	719.1	29.77	756.1	47.3	8.5	73	W					10			Blank	Blank		Deutsche Seewarte.
Hamburg			29.59	751.6	46.0	7.8	88	NNW	7	3			10n			0.043	1.1	Fog & rain	Prof. G. Karsten
Kiel			29.64	752.8	47.8	8.8	90	ENE	9	4			10			0.126	3.2		Prof. E. Luther.
Königsberg			29.79	755.7	40.8	4.9	90	E	22	10			0			0.785	19.95	Cloudy	Dr. Tägert.
Köslin																			Prof. Bruhns.
Leipsic			29.60	751.8	42.4	5.8	100	WNW	9	4			10			0.551	14.0	Raining	Prof. E. Heis.
Münster			29.61	752.2	48.7	9.3	77	N	9	4			10			0.028	0.7		Dr. Magener.
Posen			29.51	749.6	56.8	13.8	73	S	36	16			10			0.051	1.3	Cloudy	Dr. Schur.
Strassburg, (in Alsace)			29.74	755.5	52.0	11.1	66	W	13	6			8			0	0		Mr. Würth.
Stuttgart			29.70	754.4	65.3	18.5	68	W					10			0.094	2.4		Dr. Hasenbalg.
Thorn																			Prof. Flesch.
Treves, (Trier)			29.68	753.8	47.3	8.5	83	W	9	4			10			0.028	0.7		E. F. Schütz.
Wustrow, Naval School			29.61	752.0	45.7	7.6	90	E	18	8			10			0.103	2.62	Cloudy	

Note.—In the originals the distinction between 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.	Corrected for instrumental errors. Inches.	Corrected for instrumental errors. Millimeters.	Reduced to sea-level. Inches.	Reduced to sea-level. Millimeters.	Fahrenheit.	Centigrade.	Relative Humidity.	Direction.	Miles per hour.	Meters per second.	Force.	Amount. Up'er	Amount. Low'r	Upper.	Lower.	Inches.	Millimeters.	Weather.	Observer.
Athens			29.75	755.6	79.5	26.4		SW			Very sur'ng							Covered	

Note.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			29.57	751.1	59.5	15.3	67	S	0.7	6.3			1	E		0	0		
Mondovi			29.56	750.8	59.4	15.2	40	N			2		4	N		0.012	0.3		
Genoa			29.58	751.3	65.7	18.7	51	SE	5.6	2.5			4	N		0	0		
Pavia			29.56	750.9	60.3	15.7	64	E			1		3	NE		0	0		
Verona			29.60	751.7	59.5	15.3	49	E			2					0	0		
Padua			29.52	749.9	58.5	14.7	74	NW			7		9	W		0	0		
Parma																			
Bologna			29.57	751.1	62.1	16.7	66	W			1		4	E		Blank	Blank		
Leghorn			29.57	751.0	63.0	17.2	47	WNW	0	0			10			0	0		
Urbino			29.64	752.9	55.9	13.3	75	NE			4		4			0	0		
Ancona			29.60	751.8	61.9	16.6	73	NW			2		8			0.244	6.2		
Siena			29.58	751.4	58.3	14.6	67	NNW	3.1	1.4			5	N		0	0		
Rome			29.62	752.4	64.4	18.0	58	SSW	13.7	6.1			8	S		0	0		
Naples, O. U.			29.68	753.9	64.6	18.1	56	W			4		8	W		1.000	25.4		
Lecce			29.64	752.8	67.3	19.6	63	WSW	18.6	8.3			4	SW		0.063	1.6	Raining	
Cosenza			29.76	756.0	63.1	17.3	72	SW			2		7			0	0		
Catania, (Sicily)																			
Riposto																			
Palermo			29.68	753.9	70.3	21.3	48	WSW	9.4	4.2			9			0	0		
Sub-Series.																			
Naples, S. R.			29.72	754.9	60.3	15.7	74	SW			6		..ck	WSW		1.071	27.2		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for twenty-four hours. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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			29.68	753.9	54.3	12.4		NW			4								
Groningen			29.59	751.5	47.3	8.5		NW			1								
Helder			29.63	752.6	48.7	9.3		NE			1								
Utrecht			29.59	751.6	50.5	10.3		ESE			1		10					Overcast	

Note.—The originals give the wind-pressure in kilograms per square meter; the 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			29.97	761.3	46.4	8.0	89	E	17.7	7.9			10			0	0		
Christiania			30.20	767.1	38.5	3.6	55	N	14.8	6.6			10			0	0		
Tromsö			30.35	770.9	36.0	2.2	61	S			6		0			0	0		

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			29.96	761.0	65.5	18.6	76	SW	15.4	6.9			10			0	0		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.65	753.2	51.4	10.8	91	E	11	5			10						Astronomical Obs.
Wilna			29.94	760.4	38.7	3.7	92	E	10	4.5			10					Raining	Astronomical Obs.
Dorpat			30.29	769.3	37.0	2.8	59	E	9	4			9						Physical Cabinet.
St. Petersburg			30.32	770.0	37.0	2.8	82	NNE	7	3			9						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kiell			29.89	759.3	44.1	6.7	91	ESE	11	5			10						Physical Cabinet.
Nikolaiev			29.86	758.5	71.8	22.1	61	SW	13	6			7						Kurdakof.
Kertch			29.97	761.3	69.3	20.7	81	SSW	18	8			4						Lagorio.
Moscow			29.87	758.8	36.3	2.4	63	NNE	8	3.5			10						Meteorological Obs.
Lugan			30.02	762.4	48.2	9.0	88	E	13	6			10						Meteorological Obs.
Archangel			30.48	774.2	34.9	1.6	73	NE	8	3.5			0						Ogorodnikof.
Tiflis	28.74	729.9	30.09	764.2	80.2	26.8	24	N	13	6			2						Physical Obs.
Astrakhan			30.11	764.7	54.0	12.7	86	NNE	8	3.5			10			Blank	Blank		Sebastianof.
Kasan			29.97	761.2	32.4	0.2	81	N	4	2			10						Physical Cabinet.
Orenburg			29.93	760.3	36.9	2.7	67	NW	4	2			10						Tschernischef.
Ekaterinburg	28.71	729.3	29.76	755.9	27.1	— 2.7	94	NE	10	4.5			10					Snowing	Meteorological Obs.
Kasaly			29.91	759.7	64.2	17.9	66	SW	13	6			3						Bobrof.
Tashkend																			Michelson.
Barnaul			30.10	764.4	36.9	2.7	72	SW	8	3.5			4						Meteorological Obs.
Yeniseisk			29.90	759.5	31.5	— 0.3	90	W	9	4			10						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.23	767.8	49.8	9.9	55	Calm	0	0			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.86	758.5	64.9	18.3	46	SW	8.9	4.0		1	2	NW		0	0	Light clouds.	Royal Observatory.
San Fernando			30.00	762.1	65.1	18.4	71	WNW	5.8	2.6		6	2	WSW	WNW	0	0		The Naval Observatory.

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

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Haparanda			30.55	775.9	35.6	2.0	71	NE			2		10			0	0		
Umea			30.50	774.7	33.8	1.0	96	NE			2		10			0	0		
Hernosand			30.45	773.5	36.3	2.4	72	E			2		10			0.158	4.0		
Stockholm			30.14	765.6	39.9	4.4	60	NE			6		10			0.043	1.1		
Wisby			30.03	762.7	39.9	4.4	74	E			7		10			0	0		
Sub-Series. Upsala			30.25	768.4	34.3	1.3	81	ENE	11.1	4.9			9		ENE			Raining.	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 1—10	Clouds. Amount. Low'r 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.34	719.8	29.77	756.2	52.3	11.3	56	NNW			4		9			0	0	Cloudy	The Observatory.
Zurich	28.12	714.2	29.78	756.4	48.7	9.3	81	W			1		9		SW	0.665	16.9	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, −6.3mm.; Thermometer, −°1.5; Relative Humidity, −16 per cent.

Note.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 1—10	Clouds. Amount. Low'r 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y			30.03	762.8	81.0	28.9	48	NE			1		0			0	0		Prof. C. V. A. Van Dyck.
Constantinople			29.88	759.0	80.1	26.7	37	SE	7.8	3.5			10		SW	0	0	Cloudy	
Fao, (Persian Gulf)			29.98	761.6	83.7	28.7		NW			3		0					Clear	
Salonica					72.3	22.4		SE			6		10			Blank	Blank	Cloudy	
Valona			29.68	753.8	68.4	20.2		SW			3		2						
Varna			29.84	758.9	69.4	20.8		SE			3		10					Cloudy	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 1—10	Clouds. Amount. Low'r 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario			29.68	753.9	47	8.3		SW	0	0			10s		SW	0.01	0.3	Cloudy	
Chatham, N. B.			29.52	749.8	49	9.4	96	W	7	3.1		2k	8ks	W	W	2.13	54.1	Cloudy	
Charlottetown, P. E. Island			29.50	749.3	58	14.4	91	SW	4	1.8			10n			0.626	15.90	Cloudy	
Fort Garry, Manitoba			29.69	754.1	38	3.3	81	SW	17	7.6		2k	2ks	NW	NW	0	0	Fair	
Halifax, N. S.			29.57	751.1	54	12.2	98	S	9	4.0			10n			1.363	34.62	Light rain	
Kingston, Ontario			29.63	752.6	52	11.1	92	Calm	0	0			10n			0.11	2.8	Light rain	
Montreal, Quebec			29.60	751.8	49	9.4	93	S	9	4.0		5k	5s	S	S	0.02	0.5	Cloudy	
Ottawa, Ontario			29.61	752.1	41	5.0	78	W	10	4.5			10n		W	0.03	0.8	Threatening	
Parry Sound, Ontario			29.78	756.4	30	−1.1	95	N	17	7.6			10n		NE	0.52	13.2	Light snow	
Port Dover, Ontario			29.75	755.6	37	2.8	81	NW	13	5.8		10k	0	NW		0.31	7.9	Fair	
Port Stanley, Ontario			29.76	755.9	36	2.2	77	NW	5	2.2		10k	0	NW		0.40	10.2	Cloudy	
Quebec, Quebec			29.61	752.1	44	6.7	92	N	7	3.1			10n		N	0.01	0.3	Light rain	
Saugeen, Ontario			29.80	756.9	33	0.6	80	N	5	2.2			10n		N	0.51	13.0	Cloudy	
Stayner, Ontario			29.73	755.1	33	0.6	89	N	9	4.0			10n		NW	0.24	6.1	Cloudy	
Sydney, C. B.			29.67	753.6	57	13.9	100	S	15	6.7			10n			0.33	8.4	Cloudy	
Toronto, Ontario			29.68	753.9	37	2.8	91	NW	10	4.5			10n		NW	0.18	4.6	Cloudy	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.78	751.3	52	11.1	100	Calm	0	0			10n			0.26	6.6	Light rain	
Alpena, Mich.			29.39	759.2	28	—2.2	77	NW	12	5.4			10s		NW	0.14	3.6	Cloudy	
Atlantic City, N. J.			29.61	752.1	56	13.3	100	E	4	1.8			10n			0.03	0.8	Light rain	
Augusta, Ga.			29.93	758.4	45	7.2	68	W	8	3.6		0	0			0.18	4.6	Clear	
Baltimore, Md.			29.58	751.3	54	12.2	86	N	5	2.2			10n			0.31	7.9	Light rain	
Barnegat, N. J.			29.59	751.6	55	12.8	100	SE	1	0.4			10s		S	0	0	Cloudy	
Benton, Montana	27.34	694.4	30.14	765.5	59	10.4	44	SW	4	1.8		Haze	Haze			0	0	Hazy	
Bismarck, Dakota	28.04	712.2	29.67	753.6	44	6.7	81	NW	4	1.8		8ck	0	N		0	0	Cloudy	
Boston, Mass.			29.70	754.4	50	10.6	100	SE	4	1.8			Fog			0.28	7.1	Foggy	
Breckenridge, Minn.			29.82	757.4	36	2.2	71	S	22	9.8			10ks			0	0	Cloudy	
Buffalo, N. Y.			29.63	752.6	40	4.4	82	NW	12	5.4			10ks		NW	0.16	4.1	Cloudy	
Burlington, Vt.			29.60	751.8	55	12.8	80	S	3	1.3			10s		S	0	0	Cloudy	
Cairo, Ill.			30.07	763.8	35	1.7	69	NW	4	1.8		0	0			0	0	Clear	
Cape Hatteras, N. C.			29.57	751.1	65	18.3	83	SW	26	11.6		8k	2s	SW		0.31	7.9	Threatening	
Cape Henry, Va.			29.55	750.6	59	15.0	91	SE	15	6.7		5c	5s		SE	0.54	13.7	Cloudy	
Cape May, N. J.			29.60	751.8	56	13.3	94	SW	2	0.4			10n		SW	0.17	4.3	Light rain	
Charleston, S. C.			29.83	757.7	52	11.1	67	SW	16	7.2		0	0			0.27	6.9	Clear	
Cheyenne, Wyoming	24.18	614.2	30.12	765.0	43	6.1	48	NW	8	3.6		0	0			0	0	Clear	
Chicago, Ill.			29.98	761.5	34	1.1	71	NW	6	2.7		0	8ks		NW	0.17	4.3	Fair	
Cincinnati, Ohio			29.85	758.2	40	4.4	56	NW	6	2.7			10ks		W	0.01	0.3	Cloudy	
Cleveland, Ohio			29.74	755.4	40.1	4.5	82	NW	16	7.2			10n		N	0.70	17.8	Light rain	
Colorado Springs, Col.	24.24	615.7	30.11	764.8	42	5.6	58	N	8	3.6		Haze	0			0	0	Clear	
Corsicana, Tex.			30.10	764.5	49	9.4	71	S	3	1.3		0	0			0	0	Clear	
Davenport, Iowa			30.09	764.3	31	—0.6	68	N	8	3.6		1c	Smoke	NW		Inap.	Inap.	Clear, frost	
Denison, Tex.			30.08	764.0	48	8.9	77	Calm	0	0		0	0			0	0	Clear	
Denver, Col.	24.93	633.2	30.15	765.8	45	7.2	39	S	8	3.6		0	0			0	0	Clear	
Detroit, Mich.			29.81	757.2	33	0.6	89	NW	11	4.9			10s		N	0.21	5.3	Cloudy	
Dodge City, Kan.	27.50	698.5	29.83	757.7	43	6.1	83	SW	5	2.2		0	0			0	0	Clear	
Dubuque, Iowa			30.07	763.8	32	0.0	69	N	4	1.8		0	0			0	0	Clear	
Duluth, Minn.			30.00	762.0	31	—0.6	68	SW	6	2.7		2ck	2s	W	W	0	0	Fair	
Eastport, Me.			29.64	752.8	51	10.6	93	Calm	0	0			10s			1.51	38.4	Cloudy	
Erie, Pa.			29.66	753.4	41	5.0	83	NW	12	5.4			10ks		NW	0.23	5.8	Threatening	
Escanaba, Mich.			30.01	762.2	29	—1.7	77	N	14	6.3			10s		N	0.03	0.8	Cloudy	
Fort Gibson, I. T.			30.12	765.0	37	2.8	100	Calm	0	0		0	Fog			0	0	Fair	
Fort Sill, I. T.	28.86	732.9	29.98	761.5	45	7.2	92	Calm	0	0		0	0			0	0	Clear	
Fort Sully, Dakota	28.14	714.7	29.78	756.4	47	8.3	70	W	2	0.9		0	2s		W	0	0	Fair	
Galveston, Tex.			30.13	765.3	61	16.1	77	N	4	1.8		0	0			0	0	Clear	
Grand Haven, Mich.			29.97	761.3	32	0.0	70	N	15	6.7			10s		N	0.02	0.5	Cloudy	
Indianapolis, Ind.			29.93	760.2	37	2.8	80	N	6	2.7			10s		NW	Inap.	Inap.	Cloudy	
Indianola, Tex.			30.18	766.6	57	13.9	75	NW			3	0	0			0	0	Clear	
Jacksonville, Fla.			29.94	760.5	56	13.3	81	NW	4	1.8		0	0			0.07	1.8	Clear	
Keokuk, Iowa			30.01	762.2	34	1.1	71	Calm	0	0		0	Haze			0	0	Clear	
Key West, Fla.			29.94	760.5	78.4	25.8	69	W	12	5.4		5ck	2ks	SW	W	0	0	Fair	
Kittyhawk, N. C.			29.56	750.8	62	16.7	94	Calm	0	0		0	10ks			0.37	9.4	Cloudy	
Knoxville, Tenn.			29.88	758.9	40	4.4	84	W	4	1.8			10ks		W	0.34	8.6	Cloudy	
La Crosse, Wis.			30.08	764.0	29	—1.7	77	Calm	0	0		0	0			0	0	Clear, frost	
Leavenworth, Kan.			30.09	764.3	35	1.7	90	NW	1	0.4			Fog			0	0	Foggy	
Lexington, Ky.	28.80	731.5	29.93	760.2	36	2.2	80	NW	12	5.4			10s			0.05	1.3	Cloudy	
Long Branch, N. J.			29.59	751.6	57	13.9	87	SW	2	0.9			10ks		SW	0.77	19.6	Clear	
Louisville, Ky.			29.92	760.0	40	4.4	82	W	10	4.5			10s			0	0	Cloudy	
Lynchburg, Va.			29.61	752.1	47	8.3	77	W	6	2.7			10s		W	0.55	14.0	Cloudy	
Malone, N. Y.			29.56	750.8	50	10.0	86	Calm	0	0			10s			0.01	0.3	Cloudy	
Marquette, Mich.			30.02	762.5	32	0.0	69	N	8	3.6			8s		N	0.04	1.0	Cloudy	
Memphis, Tenn.			30.12	765.0	40	4.4	73	NW	4	1.8		0	0			0	0	Clear, frost	
Milwaukee, Wis.			30.01	762.2	31	—0.6	60	NW	12	5.4			10ks		NW	0	0	Cloudy	
Mobile, Ala.			30.08	764.0	48	8.9	85	NW	2	0.9		0	0			0	0	Clear	
Montgomery, Ala.			30.07	763.8	45	7.2	80	Calm	0	0		0	0			0.05	1.3	Clear	
Morgantown, W. Va.			29.69	754.1	43	6.1	91	W	9	4.0			10n			0.36	9.1	Light rain	
Mt. Washington, N. H.	23.48	596.4	29.84	757.9	38	3.3	100	S	20	8.9			Fog			0	0	Foggy	
Nashville, Tenn.			29.98	761.5	39	3.9	81	W	5	2.2		5k	Fog	NW		0	0	Fair	
New Haven, Conn.			29.63	752.6	58	14.4	93	SE	12	5.4		5k	5s	SE		0.30	7.6	Cloudy, fog'y	
New London, Conn.			29.65	753.1	57	13.9	90	SE	12	5.4		2cs	5s	SW	SW	0.07	1.8	Fair	
New Orleans, La.			30.08	764.0	54	12.2	80	W	7	3.1		0	0			0.01	0.3	Clear	
Newport, R. I.			29.70	754.4	56	13.3	93	SE	4	1.8			10s		SW	0.69	17.5	Cloudy	
New York, N. Y.			29.60	751.8	56	13.3	93	S	6	2.7			10s		S	0.31	7.9	Cloudy	
Norfolk, Va.			29.55	750.6	57.5	14.2	94	SE	5	2.2			10n		SE	0.55	14.0	Light rain	
North Platte, Neb.	27.06	687.3	29.66	753.4	41	5.0	82	NW	1	0.4		0	5s			0	0	Fair	
Omaha, Neb.	28.89	733.8	29.97	761.2	43	6.1	83	S	6	2.7		5cs	0	NW		0	0	Fair	
Oswego, N. Y.			29.61	752.1	51	10.6	86	S	2	0.9			10s		SW	0.07	1.8	Threatening	
Peck's Beach, N. J.			29.64	752.8	55	12.8	100	Calm	0	0			10n			0.08	2.0	Light rain	
Pembina, Dakota			29.67	753.6	38	3.3	90	S	12	5.4		0	Haze			0	0	Clear	
Philadelphia, Penn.			29.59	751.6	54	12.2	93	SW	4	1.8			10n			0.13	3.3	Light rain	
Pike's Peak, Colorado	18.00	457.2	30.21	767.3	25	—3.9	49	N	20	8.9		0	0			0	0	Clear	
Pittsburgh, Penn.			29.65	753.1	43	6.1	84	NW	8	3.6			10s		NW	0.06	1.5	Cloudy	
Port Huron, Mich.			29.79	756.7	33	0.6	89	NW	15	6.7			10s		NW	0.61	15.5	Cloudy	
Portland, Me.			29.69	754.1	51	10.6	86	SW	2	0.9			10s		SW	0.32	8.1	Cloudy	
Portland, Oregon			30.08	764.0	53	11.7	93	Calm	0	0			Fog			0	0	Foggy	
Punta Rassa, Fla.			29.94	760.5	76.8	24.9	77	SW	8	3.6		2cs	5ks	SW	SW	0	0	Cloudy	
Rochester, N. Y.			29.60	751.8	46	7.8	85	W	7	3.1			10s		W	0.02	0.5	Cloudy	
Salt Lake City, Utah	25.83	656.1	30.16	766.1	54	12.2	37	S	2	0.9		0	0			0	0	Clear	
Sandy Hook, N. J.			29.58	751.3	56	13.3	93	S	2	0.9			10n		S	0.61	15.5	Light rain	
San Diego, Cal.			29.98	761.5	65	18.3	90	Calm	0	0		2k	0			0	0	Fair	
San Francisco, Cal.			30.04	763.0	54	12.2	93	SW	6	2.7			Fog			0	0	Foggy	
Santa Fe, N. M.	23.43	595.1	29.97	761.2	43	6.1	51	E	4	1.8		0	Haze			0	0	Hazy	
Savannah, Ga.			29.88	758.9	51	10.6	64	SW	12	5.4		0	0			0.33	8.4	Clear	
Shreveport, La.			30.16	766.1	48	8.9	92	Calm	0	0		0	0			0	0	Clear	
Smithville, N. C.			29.73	755.1	57	13.9	81	W	16	7.2		1k	0	W		0.14	3.6	Fair	
Springfield, Mass.			29.65	753.1	53	11.7	86	SE	4	1.8			10ks			0.16	4.1	Cloudy	
St. Louis, Mo.			30.08	764.0	35	1.7	61	NW	4	1.8		0	0			0	0	Clear	
St. Marks, Fla.			30.01	762.2	49	9.4	85	NW	3	1.3		0	0			0.14	3.6	Clear	
St. Paul, Minn.			29.99	761.7	32.5	0.3	84	E	9	4.0		10cs	0	NW		0	0	Cloudy	
St. Paul's Island, Alaska																			
Squa. Beach, N. J.			29.54	750.3	56	13.3	93	S	2	0.9			10n			0.42	10.7	Light rain	
Toledo, Ohio			29.84	757.9	34	1.1	79	NW	12	5.4			10s		NW	0.21	5.3	Cloudy	
Tucson, Arizona																			
Tybee Island, Ga.			29.84	757.9	51	10.6	79	W	16	7.2		Haze	0			0.05	1.3	Clear	
Vicksburg, Miss.			30.18	766.6	45	7.2	86	NE	2	0.9		0	0			0	0	Clear	
Virginia City, Montana	24.47	621.5	29.95	760.7	45	7.2	37	SE	1	0.4		10c	0	N		0	0	Cloudy	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			29.57	751.1	46	7.8	92	NW	20	8.9			10n			0.39	9.9	Light rain	
Wilmington, N. C.			29.70	754.4	58	14.4	76	W	20	8.9		0	5ks		W	0.09	2.3	Fair	
Wood's Hole, Mass.			29.72	754.9	56	13.9	93	S	8	3.6			10s			0.11	2.8	Cloudy	
Wytheville, Va.	27.34	694.4	29.50	749.3	38	3.3	71	W	5	2.2		8k	0	W		0.27	6.9	Cloudy	
Yankton, Dakota	28.63	727.2	29.93	760.2	40	4.4	82	Calm	0	0			10s		N	Inap.	Inap.	Cloudy	
Yuma, Arizona			29.97	761.2	70	21.1		Calm	0	0		0	0			0	0	Clear	
Sub-Series																			
Bridgetown, B'b'does, W. I.					79	26.1	95	E	3	1.3			10n			0.10	2.5	Heavy rain	E. Racker.
Pointe-aPitre, G'd'loupe, do			29.96	761.0	79	26.1	79	SE				0	5k			0	0	Clear	L. V. Bigard.
Havana, Cuba, W. I.			29.97	761.2	78	25.6	65	NW	1.2	0.5		5ck, cs	2k	SW	N	0	0	Fair	Charles Hasselbrink.
Kingston, Jamaica, W.			30.20	767.1	78	25.6	74	Calm	0	0		1k	1s	S	S	0	0		James Gall.
St. Thomas, St. T., W. I.			30.19	766.8	82	27.8	74	E	6	2.7		2ck	5k	E	E	0.20	5.1	Cloudy	W. S. Cameron.
Santiago de Cuba, W. I.			29.81	757.2	79	26.1	82	E	3.6	1.6		4c	2k	NE		Blank	Blank	Fair	Robert Mason.
St. Georges, Bermudas			29.91	759.7	76.5	24.7	91	SW	4.0	1.8		10pk	5ck	SW		0.600	15.24	Showery	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.			29.65	753.1	18.5	—7.5	100	E	10	4.5			10n			0	0	Heavy snow	J. Fortescue.
St. John's, Newfoundland																			John Delaney.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Clifton, Jamaica, W. I.	27.21	691.1	30.00	762.0	69	20.6	90	E	1.5	0.7		5c	0	E		0.09	2.3	Clear	C. Partridge.
Navassa																			
Meaellin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			29.97	761.2	36	2.2	90	NW	12	5.4		10n	10n			*1.20	30.5	Raining	H. M. Redington.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Hibernian, N. 39° 01′, W. 70° 24′.	ENE	11	29.60	751.8	66	18.9		SE			5		..k		SE	Smooth		Cloudy	

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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, 6,957.3 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.; 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.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne. 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak. 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

* The barometer of the Hibernian has an error of —0.18, as determined from the isobarometric charts of the Signal Service. *Rain-fall from early a. m. 15th to 10 a. m. 16th.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 17, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			29.93	760.3	72.0	22.2	66	NE			2		0			0	0		Charnot.
Algiers			29.99	761.8	71.6	22.0	58	Calm			0		2			0	0		Peter.
La Calle																			Kuntz.
Tunis			30.02	762.6	74.1	23.4	49	ESE			3		5			0	0		Jacques.
Sfax			30.06	763.5	73.4	23.0	50	SSE			3		1			0	0		Chauvey.
Saïda			29.94	760.5	73.4	23.0	52	SSW			1		0			0	0		Grosjean.
Tebessa			30.01	762.3	52.3	11.3		SE			3		4			0	0		Colin.
Geriville			29.97	761.1	67.1	19.5	38	S			2		1			0	0		Bernadach.
Laghouat			30.00	762.0	64.4	18	53	SW			1		1			0	0		Simon.
Biskra			30.02	762.5	74.7	23.7	34	E			1		2			0	0		Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			29.84	758.0	57.6	14.2	74	NE			2		7			0.071	1.8		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.75	755.5	43.7	6.5	97	WNW			3		10			0.102	2.6		I. R. Observatory.
Eperies			29.68	753.9	49.5	9.7	83	NW			1		10			0.189	4.80		Julius Mikolik.
Gratz	28.07	728.1	29.86	758.4	54.9	12.7	70	SW			2		5						Andreas Rospini.
Hermannstadt	28.30	718.9	29.70	754.4	57.2	14.0	79	NW			4		5			0	0		Prof. Reissenberger.
Kremsmünster	28.54	725.0	29.89	759.2	51.1	10.6	63	WSW			2		8			0	0		Prof. C. Wagner.
Lemberg			29.58	751.4	46.4	8.0	83	NW			4		9			Blank	Blank		Dr. T. Stanecki.
Nyiregyhaza			29.72	754.9	52.2	11.2	80	N			2		10			0	0		Habzsuda Daniel.
Pola			29.84	758.0	57.7	14.3	92	ESE			1		5ks			0.148	3.77		I.R. Hydrographic Of'ce
Szegedin			29.80	757.0	56.3	13.5	60	N			2		4			0	0		Karl Stancel.
Trieste			29.85	758.2	61.0	16.1	85	W			0		3			0.020	0.5		Prof. V. Farolfi.
Vienna			29.81	757.1	54.0	12.2	52	W			5		7			0	0		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 9 p. m., local time. The elevation of Gratz is 313.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.88	759.0	52.2	11.2	75	SW			1		4			0.016	0.40		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.90	75.94	50.0	10.0		SE	24	10.7			6			0.356	8.89	Squally.	William Boswell.
Ardrossan																			Wm. McNeil.
Armagh Observatory			29.73	755.1	51.0	10.6		SSE	4	1.8									S. Call, for Dr. Robinson.
Bidston, Liverpool Obs.			29.74	755.4	49.5	9.7		ESE			2		10					Misty	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.67	753.6	54.3	12.4		SE			1		3					*D. clouds	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbadoes)			29.95	760.7	78.6	25.9		NE			2		6					*D. clouds	T. H. Hunt.
Cambridge Observatory			29.84	757.9	57.0	13.9		SSE			1		10					Overcast	Sergeant Hunt, A. H. C.
Cape Good Hope Obs.			30.03	762.7	65.0	19.3	81	WNW	7	3.1			10						The Staff, for E. J. Stone.
Cardington			29.82	757.4	54.4	12.4		SE					6					Solar halo	John McLaren.
Carlisle			29.80	756.9	51.1	10.6		SE					10			0	0	Overcast	T. Bell, for J. Cartmell.
Chatham, School M. E.			29.82	757.4	50.7	10.4		N			1		8					Fine	Capt. J. Fellowes, R. E.
Dartmoor	28.29	718.6	29.66	753.4	52.8	11.6		S			0		10					Overcast	R. E. Power.
Donaghadee			29.70	754.4	53	11.7		SSE			3		8					*D. clouds	J. Mac Gowan, Jr.
Dover			29.81	757.9	55	12.8		SSE			3		5						J. Costello.
Eccles, (near Manchester)			29.77	756.1	54.7	12.6		SE	2.6	1.2			5					Misty	Thomas Mackereth.
Falmouth Observatory			29.69	754.1	54.7	12.7		S	6	2.7			3					*D. clouds	The Staff.
Fort Napier, (Natal)	27.38	695.4	29.59	751.6	81.1	27.3		S			3		1					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.98	761.5	82	27.8		N					5						[tis.
Galway, Queen's College																			B. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			29.92	760.0	68.5	20.3		SW			4		2					*D. clouds	Sergt. E. G. Baker.
Glasgow Observatory			29.79	756.7	49.5	9.7		E			1		10					Gloomy	Lewis Stuart.
Great Yarmouth			29.87	758.9	53	11.7		E			1		0					Hazy	G. T. Watson.
Greenwich Royal Obs.			29.82	757.4	59.7	15.4		SE			2		3					*D. clouds	The Staff, for G. B. Airy.
Guernsey			29.79	754.4	56	13.3		SSW			5		8			Blank	Blank	*D. clouds	Dr. S. E. Hoskins. [ley.
Halifax, Moorside Obs.			29.83	757.7	54.5	10.3		E					9					Misty	F. J. Page, for L. J. Cross-
Helston			29.66	753.9	58	14.4		SW			2		2			0.32	8.1	*D. clouds	M. P. Moyle.
Holyhead			29.71	754.6	55	12.8		SE			2		10					Overcast	John Tilston.
Kew Observatory			29.81	757.2	55.9	13.3		SE	15	6.7			7					*D. clouds	The Staff.
Kingstown			29.70	754.4	50	10.0		ESE			3		5					*D. clouds	George Mitchell.
Leicester Museum			29.82	757.4	54.1	12.3		Calm			0		9					*D. clouds	William J. Harrison.
Llandudno			29.72	754.9	52.3	11.3		S					10			Blank	Blank	Overcast	Dr. James Nicol.
Malta, (Mediterranean)			30.04	763.0	70.4	21.3		NW			1		6k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			29.84	757.9	51	10.6		SE			2		8						W. D. Penny.
Nassau, (Bahamas)			30.10	764.5	78.4	25.8		NE			3		8					Hy th'nd'rstorm	Surg.-Maj. Henry.
Nottingham			29.83	757.7	55.0	12.8		SE			4		9k		SSE	0	0	Overcast	E. J. Lowe.
Oscott, St Mary's College			29.79	756.7	53.2	11.8		E			2		10					Dull	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.77	756.1	56	13.3		SE			1		10					Misty	J. Lucas, for R. Main.
Plymouth			29.66	753.4	57.5	14.2		S			1		5					*D. clouds	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.64	752.8	54	12.2		SSE			4		5					Cloudy	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, (Jersey)			29.71	754.6	56.6	13.7		S			6		10						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough																			F. Shaw.
Scutari cemetery, (Turkey)			29.76	755.9	63.6	20.3		WSW			3		10					Raining	Sergt. W. H. Lyne.
Sheffield			29.81	757.2	54	12.2		ESE			1		8		SW			Overcast	W. F. Cooper.
Silloth Rectory			29.77	756.1	50.6	10.3		E			2		10			0.665	1.65	Gloomy	Rev. Francis Redford.
Stonyhurst Observatory			29.78	756.4	50.9	10.5		E			1		10					Drizzling	The Staff.
Stornoway, Lews C. (Hebr.)			29.78	756.4	52	11.1		E			4		10					Overcast	John Smith.
Stratfield Turgiss			29.79	756.7	57.7	14.3		SE			1		9					*D. clouds	Rev. Charles H. Griffith
Streatley Vicarage			29.79	756.7	59.1	15.1		SSE			4		9						Rev. John Slatter.
Thurso			29.90	759.4	49	9.4		ENE			5		8					Showery	John Trotter.
Truro, Royal Institution			29.65	753.1	62	16.1		W			4		5					*D. clouds	W. Newcombe.
Valencia Observatory			29.56	750.8	49.6	9.8		SSE	30	13.4			10					Raining	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					52	11.1		SSE			7		10			0.30	1.6		
Leith, Restalrig Park			29.84	757.9	51.4	10.8		SE			2		10k			0.06	1.5	Cloudy	Andrew Gibb.
Monach Lt-house, (Shet. Is)			29.78	756.4	50	10.0		SE			4	10	2	SE		0	0		J. Youyclause.
North Unst, (Shetland Is)			30.13	765.3	45	7.2		SSE			6		10						

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error not applied. *Detached clouds.

DANISH SERIES.

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

Copenhagen			30.02	762.2	43.0	6.1	66	E			6		9						
Fanöe			29.96	760.9	44.2	6.8	80	E			6		10						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			30.08	764.1	36.0	2.2	85	Calm			0		5						
Thorshavn, (Faröe)			30.07	763.9	46.4	8.0	86	SE			4		10					Raining	
Vestervig			30.11	764.7	42.1	5.6	86	ENE			6		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			29.82	757.3	54.5	12.5	57	S			1		8ck			0.134	3.4	Cloudy	Normal School.
Amiens			29.89	759.1	51.1	10.6	84	N			2		0			0	0	Clear	Normal School.
Avignon			29.91	759.6	58.1	14.5	63	NNE			0					0	0	Misty	Normal School.
Bar-sur-Seine			29.89	759.3	59.1	9.5	63	SW			1		5			0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.76	755.9	58.1	14.5	74	NE	0	0			10		SW	0	0	Cloudy	Beaumette Observatory
Beauvais			29.92	760.0	52.7	11.5	83	SSE			1		5		S	0	0	Cloudy	Normal School.
Besançon			29.92	759.9	53.2	11.8	71	E			2		0			0	0	Clear	Normal School.
Bourg en Bresse			29.90	759.4	67.1	19.5	67	N			1		0			0	0		Normal School.
Bourges			29.89	759.2	53.6	12	79	SSE			2		2			0	0		Normal School.
Brest			29.68	753.9	59.2	15.1	80	SW			1		2		S	0.197	5.00		Naval Observatory.
Caen			29.84	757.9	56.7	13.7	78	ESE			4		5			0	0	Cloudy	Normal School.
Chartres																			Normal School.
Chaumont	28.74	730.0	29.90	759.5	57.0	13.9		S			3		7k,n		SE	0	0		Normal School.
Commercy			29.79	756.6	46.8	8.2	86	WNW			4		5		WNW	0	0	Cloudy	Normal School.
Commune de Gréasque*			29.92	759.9	57.9	14.4	53	NW			2		5		SW	0	0		
Le Mans																			Normal School.
Lons-Le-Saulnier			29.85	758.3	50.2	10.1	91	N			2		0			0	0	Clear	Normal School.
Mâcon			29.91	759.6	50.9	10.5	86	Calm			0		10			0	0	Cloudy	Normal School.
Mirecourt			29.87	758.7	52.7	11.5	65	W			2		5		S	0	0	Cloudy	Normal School.
Orleans			29.88	759.0	57.2	14	60	SE			3		2		SE	0	0		Normal School.
Paris Observatory			29.87	758.7	57.9	14.4	70	SSW			2		7		SSE	Inap.	Inap.	Very cloudy	National Observatory
Parthenay			29.82	757.4	58.1	14.5	75	SE			2		5		S	0	0	Cloudy	Normal School.
La Roche sur Yon			29.81	757.1	53.6	12	90	SE			4		8		NE	0	0	Cloudy	Normal School.
Rochefort, Observatory			29.78	756.5	59.4	15.2	63	SE			3		10			0	0	Cloudy	Naval Observatory.
Rouen			29.82	757.5	58.8	14.9	64	WNW			2		0			0	0	Clear	Normal School.
Saint Lo			29.79	756.6	60.1	15.6	89	NE			1		6		E	0	0		Normal School.
Villefranche			29.89	759.2	61.2	16.2	69	SE			1		5			0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchesi.
Mont-Louis			30.15	765.8	51.1	10.6	73	SSW	24.2	10.83			5		SSW	0.024	0.6		—. Falguère.
Montsouris, Paris			29.87	758.6	59.4	15.2	71	SSE			3		8ck,kn		S	0	0		Montsouris Observatory.
Perpignan	†29.89	†759.3			63.9	17.7	71	E	3.7	1.67			4		E	0	0		Dr. Fines.
Pic du Midi, (Summit) H. P.																			M. Baylac.
Pic du Midi, (Plantade) H. P.																			General de Nansouty.
Saint Maur, (near Paris)			29.87	758.8	58.3	14.6	73	SSE			1		7			0	0	Cloudy	E. Renou.
Tours			29.83	757.7	57.0	13.9	54	ESE			1		10		W	0	0		C. Marquet.
Versailles, (near Paris)			29.87	758.7	58.3	14.6	70	S			1		8			0.006	0.15		Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.20	767.0	50.9	10.5	94	NE	1.6	0.7		0e				0 / 0	0 / 0	Foggy	H. Le Loc, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 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. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			29.79	756.6	50.9	10.5	76	W	13	6			9			0	0		Prof. Hoh.
Berlin			29.82	757.3	44.6	7.0	87	NE	9	4			10			0.361	9.17		Prof. Arndt.
Breslau			29.82	757.3	44.8	7.1	93	NW	18	8			10			0.098	2.5	Raining	Dr. P. Neugebauer.
Carlsruhe			29.91	759.8	53.6	12.0	64	NW	4	2			2			0	0		A. Senz.
Cassel			29.73	755.1	50.4	10.2	92	NW	2	1			10			0.209	5.3		Dr. H. Möhn.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society
Friedrichshafen	28.52	724.3	29.97	761.1	50.0	10.0	62	N					4			0	0		M. Wilhelm.
Hamburg			29.95	760.6	46.2	7.8	84	E	18	8			10s,n	E		0.094	2.4	Cloudy, foggy	Deutsche Seewarte.
Kiel			29.95	760.7	46.9	8.3	90	NE	18	8			10			0.146	3.7		Prof. G. Karsten.
Königsberg			29.85	758.2	37.2	2.9	81	E	22	10						0.026	0.65	Cloudy	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			29.82	757.5	46.2	7.9	96	WSW	4	2			10			0.108	2.8	Raining	Prof. Bruhns.
Münster			29.11	764.8	51.1	10.6	95	SE	9	4			10			0.008	0.2		Prof. E. Heis.
Posen			29.79	756.7	40.3	4.6	82	E	16	7			10			0.051	1.3	Cloudy	Dr. Magnaer.
Strassburg, (in Alsace)			29.93	760.3	53.8	12.1	65	Calm	0	0			5			0	0		Dr. Schur.
Stuttgart			29.91	759.7	51.8	11.0	70	N					5			0	0		Mr. Würth.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.88	758.9	51.4	10.8	72	SW	9	4			2			0	0	Foggy	Prof. Friesen.
Wustrow, Naval School			29.97	761.3	45.1	7.3	84	NE	27	12			10			0.045	1.15	Cloudy	E. F. Schütz.

Note.—In the originals the distinction between 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.	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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens			29.82	757.5	72.5	22.5		SW				0e						Clear	

Note.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			29.85	758.1	59.4	15.2	65	SE	0	0			1	SE		0	0		
Mondovi			29.83	757.7	57.6	14.2	51	NNW			2		1	NW		0	0		
Genoa			29.87	758.6	65.5	18.6	57	SE	6.9	3.1			4	SE		0	0		
Pavia			29.84	757.8	60.4	15.8	73	SW			1		1	SW		0	0		
Verona			29.76	755.9	60.3	15.7	47	E			2		0			0	0		
Padua			29.81	757.2	60.8	16.0	68	SSW	0.7	0.3			3	WSW		0	0		
Parma																			
Bologna			29.87	758.7	65.7	18.7	62	W			6		2	ESE		0	0		
Leghorn			29.89	759.1	63.3	17.4	84	W	0.7	0.3			10			0.217	5.5		
Urbino			29.88	759.0	60.1	15.6	68	SSW			4		3			0.118	3.0		
Ancona			29.90	759.4	63.7	17.6	60	W			2		0			0.276	7.0		
Siena			29.88	759.0	59.7	15.4	74	NW	2.5	1.1			5	W		Blank	Blank		
Rome			29.91	759.7	66.0	18.9	53	SE	1.3	0.6			2			0	0		
Naples, O. U.			29.93	760.1	65.8	18.8	73	SE			2		6	NW		0.295	7.5		
Lecce			29.87	758.7	65.5	18.6	49	NNW	7.4	3.3			4	S		0	0		
Cosenza			29.98	761.6	62.6	17.0	70	SE			2		10			0.024	0.6	Rainy	
Catania, (Sicily)																			
Riposto																			
Palermo			29.93	760.6	69.6	20.9	47	W	5.2	2.3			5			0	0		
Sub-Series.																			
Naples, S. R.			29.97	761.1	64.9	18.3	77	SW			4		[illegible]	SW		0.394	10.0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for twenty-four hours. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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	759.9	54.9	12.7		W			2								
Groningen			29.85	758.1	50.4	10.2		E			2								
Helder			29.89	759.2	55.4	13.0		NE			1								
Utrecht			29.85	758.2	57.2	14.0		ESE			1		8					Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the 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	766.6	48.6	9.2	84	Calm	0	0			0			0	0		
Christiania			30.37	771.3	39.4	4.1	52	NE	8.1	3.6			10			0	0		
Tromsö			30.37	771.4	34.2	1.2	75	SE			2		3			0	0		

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			29.87	758.6	66.0	18.9	82	SSW	19.9	8.9			10			0.008	0.2	Light rain	The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.70	754.3	31.5	1.4	96	N	16	7			10					Rain & snow	Astronomical Obs.
Wilna			29.74	755.5	33.4	0.8	89	E	10	4.5			10					Snowing	Astronomical Obs.
Dorpat			30.24	768.0	36.0	2.2	58	E	16	7			2						Physical Cabinet.
St. Petersburg			30.37	771.3	31.8	— 0.1	89	E NE	4	2			10						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kiev			29.51	749.5	56.3	13.5	88	Calm	0	0			7					Solar corona	Physical Cabinet.
Nikolaiev			29.67	753.5	69.6	20.9	61	S W	20	9			7						Kurdakof.
Kertch			29.74	755.5	73.6	23.1	68	S	7	3			3						Lagorio.
Moscow			30.29	769.3	33.8	1.0	67	SE	10	4.5			10						Meteorological Obs.
Lugan			29.80	756.8	45.5	7.5	91	E	25	11			10					Misty	Meteorological Obs.
Archangel			30.48	774.2	32.7	0.4	85	W	4	2			8						Ogorodnikof.
Tiflis	28.09	728.8	30.05	763.2	77.2	25.1	41	E	4	2			0						Physical Obs.
Astrakhan			30.22	767.6	45.5	7.5	85	N E	10	4.5			10						Sebastianof.
Kasan			30.27	768.9	31.6	— 0.2	74	N NE	2	1			10						Physical Cabinet.
Orenburg			30.23	767.9	30.7	0.7	98	SW	8	3.5			10						Tschernischef.
Ekaterinburg	29.05	737.8	30.11	764.8	23.0	— 5.0	79	NW	8	3.5			10						Meteorological Obs.
Kasaly			30.02	762.4	41.7	5.4	80	W	8	3.5			3						Bobrof.
Tashkend																			Michelson.
Barnaul			29.34	745.3	43.7	6.5	94	SW	13	6			5					Raining	Meteorological Obs.
Yeniseisk			29.43	747.6	26.2	3.2	100	NE	7	3			10					Snowing	Marks.
Irkutsk																			Usolzef.
Oorga																			Messin.
Peking, (China)			29.96	760.9	53.1	11.7	56	Calm	0	0			5						Physical Observatory.
Nertchinsk																			Meteorological Obs
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.85	758.1	64.6	18.1	58	SW	17.9	8.0		0	8			0	0	Nearly covered.	Royal Observatory.
San Fernando			29.97	761.2	69.4	20.8	69	SW	6.3	2.8		3	1	W	NE	0	0		The Naval Observatory.

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

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Haparanda			30.48	774.3	34.5	7.4	93	W			2		10			0	0		
Umea			30.50	774.6	36.0	2.2	72	SSE			2		10			0	0		
Hernosand			30.47	773.8	36.3	2.4	57	NE			2		10			0	0		
Stockholm			30.23	767.7	37.9	3.3	75	NE			6		10			0.055	1.4		
Wisby			30.11	764.8	39.6	4.2	62	ENE			6		10			0	0		
SUB-SERIES.																			
Upsala			30.33	770.4	39.0	3.9	58	NE	11.4	5.1			10		ENE				Dr. Hildebrandsson.

NOTE.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.49	723.6	29.92	759.9	53.4	11.9	52	NNW			2		1			0	0	Clear	The Observatory.
Zurich	28.30	718.8	29.94	760.5	53.1	11.7	60	E			1		2			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, −2.5mm.; Thermometer, −0°.7; Relative Humidity, −20 per cent.

Note.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Beirut, (Syria,) Lee Obs'y			29.87	758.8	86.4	30.2	30	N			1		0			0	0		Prof. C. V. A. Van Dyck.
Constantinople			29.77	756.2	69.4	20.8	61	NW	20.1	9.0			10		SW	0	0	Cloudy	
Fao, (Persian Gulf)			30.03	762.8	87.8	31.0		NW			3		0					Clear	
Salonica					72.3	22.4		SE			1		10					Cloudy	
Valona			29.82	757.5	67.6	19.8		SW			2		2			Blank	Blank		
Varna			29.84	758.0	60.8	16.0		NW			3		10					Raining	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Brockville, Ontario			29.85	758.2	33	0.6		W	5	2.2			10s		W	0.36	9.1	Cloudy	
Chatham, N. B.			29.37	746.0	53	11.7	98	SE	7	1.3		2k	8ks	SE	SE	0.83	21.1	Cloudy	
Charlottetown, P. E. Island			29.50	749.3	59	15.0	94	S	15	6.7			10s			0.05	1.3	Cloudy	
Fort Garry, Manitoba			30.21	767.3	30	− 1.1	67	N	20	8.9		5k	5ks	N	N	0	0	Cloudy	
Halifax, N. S.			29.53	750.0	56	13.3	91	SW	20	8.9			10n		SW	0.514	13.05	Cloudy	
Kingston, Ontario			29.85	758.2	32	0.0	66	W	8	3.6		8k	0	W		0.20	5.1	Cloudy	
Montreal, Quebec			29.57	751.1	35	1.7	86	N	31	13.9			10n			1.42	36.1	Light rain	
Ottawa, Ontario			29.69	751.1	34	1.1	66	W	26	11.6		10k	0	W		Inap.	Inap.	Cloudy	
Parry Sound, Ontario			29.79	756.7	29	− 1.7	77	E	8	3.6		5k	5ks	NE	NE	0.01	0.3	Cloudy	
Port Dover, Ontario			29.86	758.4	36	2.2	71	W	3	1.3			10n		SW	0	0	Threatening	
Port Stanley, Ontario			30.82	757.4	43	6.1	76	SW	25	11.2			10n		S	0	0	Light rain	
Quebec, Quebec			29.27	743.4	42	5.6	91	S	7	3.1			10n			0.21	5.3	Light rain	
Saugeen, Ontario			29.74	755.4	33	0.6	89	SE	8	3.6			10n			0.11	2.8	Cloudy	
Stayner, Ontario																			
Sydney, C. B.			29.68	753.9	60	15.6	100	SE	12	5.4			10n			0	0	Threatening	
Toronto, Ontario			29.84	757.9	34	1.1	88	SW	2	0.9			10s		NW	0.01	0.3	Cloudy	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Byt. Brig. Gen. Albert J. Myer, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.78	756.4	39	3.9	81	NW	22	9.8			10ks		W	1.28	32.5	Cloudy	
Alpena, Mich.			29.59	751.6	34	1.1	79	S	4	1.8			10n			0.05	1.3	Light snow	
Atlantic City, N. J.			30.00	762.0	43	6.1	52	W	8	3.6			10s		W	0.16	4.1	Cloudy	
Augusta, Ga.			30.23	767.8	57	2.8	90	Calm	0	0			Fog			0	0	Foggy, frost	
Baltimore, Md.			30.09	764.3	42	5.6	58	W	8	3.6		0	0			0.20	5.1	Clear	
Barnegat, N. J.			29.98	761.5	44	6.7	52	W	20	8.9		2cs	0	NW		0	0	Fair	
Benton, Montana	27.37	695.2	30.17	766.3	38	3.3	71	Calm	0	0			10s			0	0	Cloudy	
Bismarck, Dakota	28.44	722.4	30.17	766.3	31	0.6	68	NE	4	1.8		0	5s			0	0	Fair	
Boston, Mass.			29.62	752.3	42	5.6	65	W	24	10.7		0	8s		W	0	0	Fair	
Breckenridge, Minn.			30.17	766.8	34	1.1	61	N	28	12.5			10s		N	0	0	Cloudy	
Buffalo, N. Y.			29.82	757.4	33.5	0.8	79	SW	3	1.3			10n			0	0	Light snow	
Burlington, Vt.			29.65	753.1	38	3.3	72	N	4	1.8		5k	5s			0.52	13.2	Cloudy	
Cairo, Ill.			30.11	764.8	42	5.6	75	S	5	2.2		0	0			0	0	Clear	
Cape Hatteras, N. C.			30.10	764.5	47	8.3	70	NW	12	5.4		0	2s			0	0	Fair	
Cape Henry, Va.			30.11	764.8	47	8.3	77	W	10	4.5		0	0			0	0	Clear, frost	
Cape May, N. J.			30.04	763.0	44	6.7	44	NW	24	10.7		8k	0	NW		0.20	5.1	Fair	
Charleston, S. C.			30.24	768.1	47	8.3	37	N	8	3.6		0	0			0	0	Clear	
Cheyenne, Wyoming	24.27	616.4	30.21	767.3	36	2.2	71	NW	8	3.6		Haze	0			0	0	Clear	
Chicago, Ill.			29.63	752.6	48	8.9	63	SW	14	6.3		1k	Haze	SW		0	0	Clear	
Cincinnati, Ohio			29.98	761.5	41	5.0	56	SE	3	1.3		2ck	Fog	NE		0	0	Fair	
Cleveland, Ohio			29.84	757.9	36.3	2.4	70	S	16	7.2			10n			0.03	0.8	Light rain	
Colorado Springs, Col.	24.35	618.5	30.22	767.6	41	5.0	57	SE	6	2.7		0	0			0	0	Clear	
Corsicana, Tex.			30.06	763.5	54	12.2	79	SE	6	2.7		0	8k		NW	0	0	Cloudy	
Davenport, Iowa			29.74	755.4	51	10.6	64	W	8	3.6		0	0			0	0	Clear, frost	
Denison, Tex.			30.01	762.2	53	11.7	86	SE	1	0.4		0	0			0	0	Clear	
Denver, Col.	25.05	636.3	30.27	768.8	38	3.3	45	S	4	1.8			Fog			0	0	Foggy	
Detroit, Mich.			29.70	754.4	38	3.3	90	SW	12	5.4		2k	5n	SW		0.03	0.8	Light rain	
Dodge City, Kan.	27.53	699.3	29.84	757.9	48	8.9	70	W	4	1.8		0	Sm'e		N	0	0	Clear	
Dubuque, Iowa			29.80	756.9	44	6.7	68	NW	14	6.3		0	5s		NW	0	0	Fair	
Duluth, Minn.			29.81	757.2	36	2.2	45	NW	12	5.4		8k	0	NW		0	0	Fair	
Eastport, Me.			29.49	746.7	50	10.0	78	S	25	11.2			10n		SW	1.26	32.0	Light rain	
Erie, Pa.			29.84	757.9	37	2.8	71	S	18	8.0			10s		SW	0	0	Cloudy	
Escanaba, Mich.			29.49	749.0	36	2.2	80	NW	6	2.7			10s		NW	0.01	0.3	Cloudy	
Fort Gibson, I. T.			30.01	762.2	48	8.9	85	E	3	1.3		0	0			0	0	Clear	
Fort Sill, I. T.	28.82	732.0	29.94	760.5	48	8.9	85	NE	5	2.2		0	Fog			0	0	Clear	
Fort Sully, Dakota	28.51	724.1	30.22	767.6	42	5.6	58	W	11	4.9		0	1s		W	0	0	Fair	
Galveston, Tex.			30.15	765.8	65	18.3	83	SW	4	1.8		0	0			0	0	Clear	
Grand Haven, Mich.			29.56	750.8	48	8.9	81	SW	22	9.8		0	0			0.31	7.9	Clear	
Indianapolis, Ind.			29.89	759.2	42	5.6	65	S	12	5.4		2ck	5k			Inap.	Inap.	Fair	
Indianola, Tex.			30.16	766.1	64	17.8	89	NW			3	0	0			0	0	Clear	
Jacksonville, Fla.			30.19	766.8	48	8.9	64	NW	4	1.8		0	0			0	0	Clear	
Keokuk, Iowa			29.79	756.7	50	10.0	72	W	12	5.4		0	0			0	0	Clear	
Key West, Fla.			30.07	763.8	75.4	23.6	72	NE	13	5.8		Haze	2ks		N	0	0	Fair	
Kittyhawk, N. C.			30.15	765.8	44	6.7	69	NE	10	4.5		0	0			0	0	Clear	
Knoxville, Tenn.			30.24	768.1	29	— 1.7	100	Calm	0	0			Fog			0.02	0.5	Foggy	
La Crosse, Wis.			29.67	753.6	50	10.0	58	W	11	4.9		0	0			0	0	Clear	
Leavenworth, Kan.			29.94	760.5	50	10.0	71	SW	1	0.4		5c	0			0	0	Fair	
Lexington, Ky.	23.96	735.6	30.11	764.8	34	1.1	79	S	16	7.2		0	0			0	0	Clear	
Long Branch, N. J.			29.93	760.2	43	6.1	59	NW	35	15.6		0	5ks		NW	0.53	13.5	Fair	
Louisville, Ky.			30.05	763.3	39	3.9	82	SE	8	3.6		0	Fog			0	0	Clear	
Lynchburg, Va.			30.12	765.0	41	5.0	57	S	2	0.9		0	0			0	0	Clear	
Malone, N. Y.			29.67	753.6	35	1.7	70	W	12	5.4			10s			1.11	28.2	Threatening	
Marquette, Mich.			29.48	748.8	40	4.4	91	Calm	0	0			10s		NW	0.26	6.6	Light rain	
Memphis, Tenn.			30.17	766.3	42	5.6	85	S	4	1.8		0	Haze			0	0	Clear	
Milwaukee, Wis.			29.57	751.1	46	7.8	76	W	14	6.3		0	0			Inap.	Inap.	Clear	
Mobile, Ala.			30.23	767.8	45	7.2	76	NW	4	1.8		0	0			0	0	Clear, frost	
Montgomery, Ala.			30.26	768.6	41.5	5.3	83	Calm	0	0		0	Sm'e			0	0	Clear	
Morgantown, W. Va.			30.07	763.8	38	3.3	63	SW	11	4.9		0	0			0.05	1.3	Clear	
Mt. Washington, N. H.	23.09	586.5	29.45	748.0	17	— 8.3	100	NW	50	22.4			10n		NW	1.09	27.7	Light snow	
Nashville, Tenn.			30.15	765.8	35	1.7	90	NW	1	0.4		0	Fog			0	0	Clear	
New Haven, Conn.			29.86	758.4	46	7.8	69	W	16	7.2		5k	0	W		0.03	0.8	Fair	
New London, Conn.			29.80	756.9	44	6.7	56	W	13	5.8		2k	0	W		0.09	2.3	Fair	
New Orleans, La.			30.20	767.1	56	13.3	66	NE	4	1.8		0	0			0	0	Clear	
Newport, R. I.			29.76	755.9	44	6.7	84	SW	26	11.6		5cs	0	SW		0.07	1.8	Fair	
New York, N. Y.			29.94	760.5	41	5.0	42	W	25	11.2		0	0			0.54	13.7	Clear	
Norfolk, Va.			30.14	765.5	41	5.0	65	NW	6	2.7		0	Sm'e			0.03	0.8	Clear	
North Platte, Neb.	27.26	692.4	29.89	759.2	40	4.4	82	W	4	1.8		0	0			0	0	Clear	
Omaha, Neb.	28.90	734.0	29.98	761.5	47	8.3	62	NW	20	8.9		0	0			0	0	Cloudy	
Oswego, N. Y.			29.84	757.9	38	3.3	60	WNW	13	5.8			10ks		W	0.30	7.6	Cloudy	
Peck's Beach, N. J.			30.05	763.3	44	6.7	52	W	20	8.9		8ck	2s	W		0.22	5.6	Fair	
Pembina, Dakota			30.18	766.6	30	— 1.1	83	NW	20	8.9		2	2s	NW		0	0	Fair	
Philadelphia, Penn.			29.99	761.7	42	5.6	49	W	18	8.0		5k	0			0.12	3.0	Clear	
Pike's Peak, Colorado	18.02	457.7	30.23	767.8	27	— 2.8	77	NE	12	5.4		0	0			0	0	Cloudy	
Pittsburgh, Penn.			30.01	762.2	34	1.1	79	SW	12	5.4		10k	0	SW		0.01	0.3	Light rain	
Port Huron, Mich.			29.72	754.9	38	3.3	81	S	16	7.2			10n			0.09	2.3	Cloudy	
Portland, Me.			29.40	746.7	47	8.3	62	W	20	8.9			10s		NW	0.10	2.5	Foggy	
Portland, Oregon			30.15	765.8	51	10.6	93	Calm	0	0			Fog			0	0	Clear	
Punta Rassa, Fla.			30.12	765.0	59	15.0	64	NE	14	6.3		1ck	2s	SW		0	0	Fair	
Rochester, N. Y.			29.82	757.4	34	1.1	69	W	10	4.5		0	2s		W	0	0	Clear	
Salt Lake City, Utah	25.82	655.8	30.15	765.8	55	12.8	38	E	4	1.8		0	0			0	0	Fair	
Sandy Hook, N. J.			29.90	759.4	43	6.1	51	W	43	19.2		0	5ks		NW	0.64	16.3	Foggy	
San Diego, Cal.			30.04	763.0	64	17.8	100	Calm	0	0			Fog			0	0	Fair	
San Francisco, Cal.			30.07	763.8	56	13.3	90	Calm	0	0		5c	0			0	0	Clear	
Santa Fe, N. M.	23.43	595.1	29.97	761.2	55	12.8	47	E	8	3.6		0	Haze			0	0	Clear	
Savannah, Ga.			30.21	767.3	45	7.2	75	NW	4	1.8		0	0			0	0	Fair	
Shreveport, La.			30.17	766.3	59.5	10.3	79	S	2	0.9		2ck	0	NW		0	0	Clear	
Smithville, N. C.			30.20	767.1	41	5.0	56	N	8	3.6		0	0			0	0	Cloudy	
Springfield, Mass.			29.76	755.9	44	6.7	52	W	16	7.2		1ck	5ks	W	W	0.11	2.8	Clear	
St. Louis, Mo.			29.98	761.5	48	8.9	56	SW	10	4.5		0	0			0	0	Clear	
St. Marks, Fla.			30.21	767.3	41	6.7	92	N	4	1.8		0	0			Inap.	Inap.	Cloudy	
St. Paul, Minn.			29.82	757.4	39	3.9	55	NW	15	6.7		10cs	0						
St. Paul's Island, Alaska																			
Squa Beach, N. J.			29.87	758.7	42	5.6	49	W	18	8.0		0	8ks		W	0.33	8.4	Cloudy	
Toledo, Ohio			29.95	760.7	39	3.9	72	SW	16	7.2			10s		SW	0	0	Cloudy	
Tucson, Arizona																			
Tybee Island, Ga.			30.22	767.6	49	9.4	71	NW	8	3.6		Haze	0			0	0	Clear	
Vicksburg, Miss.			30.28	769.1	48	8.9	71	SE	6	2.7		5cs	0	W		0	0	Fair	
Virginia City, Montana	21.48	621.8	29.76	755.9	44	6.7	30	Calm	0	0		1c	Haze	W		0	0	Hazy	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.10	764.5	41	5.0	63	W	6	2.7		0	0			0.48	12.2	Clear	
Wilmington, N. C			30.19	766.8	40	4.4	64	NW	5	2.2		0	0			0	0	Clear	
Wood's Hole, Mass			29.75	755.6	48	8.9	62	NW	23	10.3		0	2s		NW	0.30	7.6	Fair	
Wytheville, Va	27.72	704.1	29.95	760.7	34	1.1	79	W	6	2.7		0	0			0	0	Clear	
Yankton, Dakota	28.80	731.5	30.11	764.8	41	5.0	82	NW	10	4.5		0	0			0	0	Clear	
Yuma, Arizona			29.91	759.7	61	16.1		Calm	0	0		0	0						
Sub-Series																			
Bridgetown, B'b'does, W. I					80	26.7	95	NE	3	1.3			10ks			1.00	25.4	Cloudy	E Racker.
Pointe-aPitre, G'd'loupe, do			29.99	761.8	78	25.6	83	E				5c	2k			0.26	6.6	Clear	L. V. Bigard.
Havana, Cuba, W. I			30.05	763.3	76	24.4	72	Calm	0	0		6ck, k	2ks, s	SW, NW	SW	0	0	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W			30.18	766.6	80	26.7	78	Calm	0	0		2c	1s		SE	0	0		James Gall.
St. Thomas, St. T., W. I			30.21	767.3	84	28.9	67	NE	8	3.6		2ck	2kn	E	E	0	0		W. S. Cameron.
Santiago de Cuba, W. I			29.81	757.2	79	26.1	82	E	3.6	1.6		4c	2k	NE		Blank	Blank	Fair	Robert Mason.
St. Georges, Bermudas			30.09	764.3	77.5	25.6	88	SW	8.4	3.8		10c	2fk	SW	SW	0.110	2.79	Hazy	C. F. Allen.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.
Cumberland, B. A																			
Ft. Chippewyan, B. A																			
Ft. McPherson, B. A																			
Ft. Simpson, B. A																			
York Factory, B. A			30.18	766.6	8	—13.3	78	W	5	2.2		0	0			0.35	8.9		J. Fortescue.
St. John's, Newfoundland																			John Delaney.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Clifton, Jamaica, W. I	27.20	690.9	29.98	761.5	67	19.4	90	E	2.0	0.9		5c	2k	E		0.09	2.3	Clear	C. Partridge.
Navassa																			
Meaellin, S. A																			
Paramaribo, S. A																			
Elyria, Ohio			29.80	756.9	35	1.7		S	12	5.4			10n			0	0	Cloudy	H. M. Redington.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Leipzig, N. 37° 1′, W. 75° 14′.	EbyN		30.12	765.0	54.5	15.5		NW			4		..k		NW	Smooth		Detached clouds.	
Steamer Hibernian, N. 41° 33′, W. 65° 42′.	ENE	11½	29.62	752.3	54	12.2		SW			6		0			Rough		Clear	

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; 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, 6,86[illegible] (?) ft., or 2,091.6 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in. The barometer of the Hibernian has an error of —0.18, as determined from the isobarometric charts of the Signal Service.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 18, 1875.

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—	Rainfall in 24 hours. Inches	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			29.86	758.5	70.9	21.6	67	Calm			0		10			0	0		Charnot.
Algiers			29.92	759.9	73.4	23.0	71	N			1		2			0	0		Peter.
La Calle																			Kuntz.
Tunis			29.98	761.5	75.6	24.2	41	ESE			2		0			0	0		Jacques.
Sfax			30.02	762.5	75.2	24.0	34	S			4		1			0	0		Chauvey.
Galda			29.90	759.4	77.0	25.0	28	SW			2		2			0	0		Grosjean.
Tebessa			29.98	761.4	60.1	15.6		SE			1		0			0	0		Colin.
Geriville			29.93	760.3	69.8	21.0	45	SW			2		6			0	0		Bernadach.
Laghouat			29.98	761.5	77.0	25	40	SW			1		1			0	0	Cloudy	Simon.
Biskra			29.97	761.2	75.9	24.4	25	E			2		1			0	0		Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			29.92	759.9	55.9	13.3	70	SSE			1		8			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.04	762.9	36.1	2.3	59	W			2		10			0.114	2.9		I. R. Observatory.
Eperies			29.93	760.2	39.2	4.0	73	N			4		10		S	0.047	1.20		Julius Mikolik.
Gratz	28.72	729.4	29.91	759.8	54.5	12.5	60	SE			2		0						Andreas Rospini.
Hermannstadt	28.45	722.5	29.87	758.7	51.8	11.0	55	WNW			5		10			0	0		Prof. Reissenberger.
Kremsmünster	28.59	726.2	29.94	760.4	50.7	10.4	74	NE			3		3			0	0		Prof. C. Wagner.
Lemberg			29.84	757.8	34.9	1.6	71	NW			6		7			Blank	Blank		Dr. T. Stanecki.
Nyiregyhaza			29.93	760.2	42.4	5.8	82	NE			4		10			0	0		Habzsuda Daniel.
Pola			29.92	759.9	61.7	16.5	83	SSW			1		3ks			0	0		I.R. Hydrographic Office
Szegedin			29.92	759.9	56.5	13.6	64	NW			1		7			0	0		Karl Stancel.
Trieste			29.91	759.7	64.4	18.0	85	WSW			1		6			0	0		Prof. V. Farolfi.
Vienna			30.00	761.9	41.2	5.1	90	NE			2		10			0.031	0.8		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 9 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.88	758.9	53.4	11.9	78	ENE			3	5	2	W		0	0		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.10	764.5	48.0	8.9		SE	38	17.0			10			0.450	11.43	Squally	William Boswell.
Ardrossan			29.91	759.7	54	12.2		ESE			5		8					Overcast	Wm. McNeil.
Armagh Observatory			29.77	756.4	50.0	10.0		E	15	6.7			10					Raining	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			29.78	756.4	53.8	12.1		E			4		9					Misty	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.59	751.6	52.7	11.5		ESE			1		10					Drizzling	J. Dreyer.
Bradford			29.85	758.2	49.9	9.9		E			2		10					Raining	J. McLandsborough.
Bridgetown, (Barbadoes)			29.98	761.5	82.0	27.8		NE			3		4					*D. clouds	T. H. Hunt.
Cambridge Observatory			29.84	757.9	54.0	12.2		E			2		10					Overcast	Sergeant Hunt, A. H. C.
Cape Good Hope Obs.			29.92	760.0	71.2	21.8	62	S	7	3.1			9						The Staff, for E. J. Stone.
Cardington			29.84	759.2	54.4	12.4		SE					10					Overcast	John McLaren.
Carlisle			29.91	759.7	52.5	11.3		SE					10			0	0	Threatening	T. Bell, for J. Cartmell.
Chatham, School M. E.			29.85	758.2	55.2	12.9		NE			4		2					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	28.22	716.8	29.59	751.6	48	8.9		E			7		10					Rain & fog	R. E. Power.
Donaghadee			29.80	756.9	53	11.7		ESE			6		10					Overcast	J. Mac Gowan, Jr.
Dover			29.84	757.9	54	12.2		E			5		4						J. Costello.
Eccles, (near Manchester)			29.82	757.4	54.9	12.7		SE	5.4	2.4			10					Gloomy	Thomas Mackereth.
Falmouth Observatory			29.54	750.3	55.9	13.3		ESE	29	13.0			10					Overcast	The Staff.
Fort Napier, (Natal)	27.90	708.6	29.91	759.7	66.0	18.9		E			3		9					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	86	30.0		E					6						[tis.
Galway, Queen's College																			B. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			29.87	758.7	66.5	19.2		SW			3		8					Gloomy	Sergt. E. G. Baker.
Glasgow Observatory			29.93	760.2	51.8	11.0		ESE			3		10					Overcast	Lewis Stuart.
Great Yarmouth			29.91	759.7	51	10.6		E			5		7					*D. clouds	G. T. Watson.
Greenwich Royal Obs			29.83	757.7	54.7	12.6		E			4		9					Cloudy	The Staff, for G. B. Airy.
Guernsey			29.62	752.3	56	13.3		SE			5		10					Misty	Dr. S. E. Hoskins.
Halifax, Moorside Obs			29.90	759.4	49.3	9.6		ESE					10					Squally	F. J. Page, for L. J. Cross.
Helston			29.53	750.0	58	14.4		SE			4		10			0.06	1.5	Misty	M. P. Moyle.
Holyhead			29.71	754.6	53	11.7		ESE			4		10					Overcast	John Tilston.
Kew Observatory			29.82	757.2	55.2	12.9		ENE	23	10.3			10					Overcast	The Staff.
Kingstown			29.69	754.1	54	12.2		E			6		10			Blank	Blank	Overcast	George Mitchell.
Leicester Museum			29.86	758.4	53.4	11.9		E			4		10					Overcast	William J. Harrison.
Llandudno			29.77	756.4	53.8	12.1		ENE					10					Overcast	Dr. James Nicol.
Malta, (Mediterranean)			30.02	762.0	73.6	23.1		SE			1		8k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			30.01	762.2	52	11.1		SE			2		8						W. D. Penny.
Nassau, (Bahamas)			30.08	764.0	77.6	25.3		NE			5		8n						Surg.-Maj. Henry.
Nottingham			29.87	758.7	53.0	11.7		ESE			3		10d		ESE	0	0	Overcast	E. J. Lowe.
Oscott, St Mary's College			29.81	757.2	53.3	11.8		E			3		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.77	756.1	55	12.8		E			1		10					Overcast	J. Lucas, for R. Main.
Plymouth			29.59	751.6	53.5	11.9		ESE			3		10					Overcast	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.46	748.3	56	13.3		SE			6		10					Gloomy	W. Kennedy.
Saint Ann's Head			29.56	750.8	54	12.2		ESE			6		10					Raining	John C. Walker.
Saint Helier, (Jersey)			29.61	752.1	53.2	14.6		ESE			3		8						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			29.97	761.2	48.8	9.3		SE			7		10					Overcast	F. Shaw.
Scutari cemetery, (Turkey)			29.93	760.2	67.0	19.4		WSW			1		3					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.88	758.9	51.3	10.7		ESE			3		10					Showery	W. F. Cooper.
Silloth Rectory			29.88	758.9	51.4	12.4		E			5		10			0.050	1.27	Overcast	Rev Francis Redford.
Stonyhurst Observatory			29.85	758.2	50.2	10.1		E			3		10					Threatening	The Staff.
Stornoway, Lews C. (Hebr)			29.95	760.7	51	10.6		E			3		10					Overcast	John Smith.
Strathfield Turgiss			29.79	756.7	55.2	12.9		SE			1-2		10					Overcast	Rev. Charles H. Griffith
Streatley Vicarage			29.80	756.9	57.5	14.2		S			1		9			0.435	11.05		Rev. John Slatter.
Thurso			30.07	763.8	49	9.4		ESE			5		9					Raining	John Trotter.
Truro, Royal Institution			29.51	749.5	57	13.9		E			7		10					Raining	W Newcombe.
Valencia Observatory			29.37	746.0	56.8	13.8		E	27	12.1			9					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					52	11.1		SSE			7		10			0.20	5.1		
Leith, Restalrig Park			30.01	762.2	51.5	10.8		SE			3		10k			0	0	Cloudy	Andrew Gibb.
Monach Lt-house, (Shet. Is)			29.88	758.7	50	10.0		SE			4		10			0	0		J. Youyclause.
North Unst, (Shetland Is)			30.28	769.1	46	7.8		SE			6	7	5	S					

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., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error —.102 uncertain. * Detached clouds.

DANISH SERIES.

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

Copenhagen			30.20	767.9	40.6	4.8	62	ENE			4		10						
Fanöe			30.19	766.7	42.8	6.0	59	ENE			2		6						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.99	761.8	41.4	5.2	90	Calm			0		8						
Thorshavn, (Faröe)			30.13	765.3	49.1	9.5	91	SE			6		10					Raining	
Vestervig			30.28	769.0	38.8	3.8	67	NE			4		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols: not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			29.69	754.1	54.5	12.5	75	S			2		8u			0.213	5.4	Cloudy.	Normal School.
Amiens			29.80	756.9	52.9	11.6	78	S			6		5		S	0	0	Cloudy	Normal School.
Avignon			29.81	757.1	61.4	18	74	SE			2		8		S	0	0	Cloudy	Normal School.
Bar-sur-Seine			29.81	757.0	60.1	15.6	62	E			2		5ck			0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.63	752.6	63.3	17.4	70	SE	3.6	1.6			10		S	0.283	7.2	Cloudy	Beaumette Observatory
Beauvais			29.85	758.2	53.6	12	72	ESE			2		10		SW	0	0	Cloudy	Normal School.
Besançon			29.87	758.6	57.2	14	69	E			2		0			0	0	Clear	Normal School.
Bourg en Bresse			29.84	757.8	62.1	16.7	64	S			4	..e				0	0		Normal School.
Bourges			29.74	755.3	60.3	15.7	91	E			3		5			0	0	Cloudy	Normal School.
Brest			29.46	748.3	58.8	14.9	91	S			3		10		S	0.010	0.25	Raining	Naval Observatory.
Caen			29.68	753.9	56.3	13.5	82	S			4		10			0.047	1.2	Cloudy	Normal School.
Chartres																			Normal School.
Chaumont	28.69	728.6	29.85	758.3	55.2	12.9		SSE			2		..c8			0	0		Normal School.
Commercy			29.80	759.1	51.8	11	75	E			4		2		E	0	0		Normal School.
Commune de Gréasque*			29.94	760.4	63.7	17.6	72	SE			4		8		SE	0	0		
Le Mans																			Normal School.
Lons-Le-Saulnier			29.86	758.4	61.5	16.4	73	S			6		2			0	0		Normal School.
Mâcon			29.83	757.7	55.2	12.9	81	Calm			0		0			0	0	Clear	Normal School.
Mirecourt			29.83	757.6	53.6	12	67	W			2		2		S	0	0		Normal School.
Orleans			29.72	754.9	56.8	13.8	80	ESE			3		5		SE	0	0	Cloudy	Normal School.
Paris Observatory			29.80	756.8	54.0	12.2	70	ESE			1		10		WSW	0	0	Covered	National Observatory
Parthenay			29.71	754.7	57.2	14	64	SE			2		5		SW	0.04	1.	Cloudy	Normal School.
La Roche sur Yon			29.66	753.8	65.7	17.6	76	SE			6		5		NE	0.362	9.2	Cloudy	Normal School.
Rochefort, Observatory			29.65	753.1	66.0	18.9	56	S			3		5		NE	0.039	1.0		Naval Observatory.
Rouen			29.76	756.0	54.7	12.6	86	WSW			2		5		S	0	0	Cloudy	Normal School.
Saint Lo			29.38	746.2	64.4	18	81	SE			2		3		SW	0.16	4.		Normal School.
Villefranche			29.92	760.0	55.9	13.3	83	SE			1		5			0	0	Cloudy	Normal School
Sub-Series.																			
Fort de France, Martinique																0.941	23.9		L'Abbe Marchésl.
Mont-Louis			30.13	765.4	50.2	10.1	79	SW	24.2	10.83			8		SW				—. Falguère
Montsouris, Paris			29.79	756.6	54.3	12.4	72	E			2		10k, ku		SSW	0	0	Raining	Montsouris Observatory.
Perpignan	†29.82	†757.3			64.9	13.3	72	E	3.7	1.67			7		SW	0	0		H. Fines.
Pic du Midi, (Summit) H. P.																			M. Baylac.
Pic du Midi, (Plantade) H.P.																			General de Nansouty.
Saint'Maur, (near Paris)			29.79	756.6	54.5	12.5	71	E			1		10			0	0	Cloudy	E. Renou.
Tours			29.72	754.9	55.4	13.0	80	E			1		10		WSW	0.051	1.3		C. Marquet.
Versailles, (near Paris)			29.78	756.5	54.0	12.2	76	SE			1		10			0	0	Cloudy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.09	764.3	55.6	13.1	90	S	4.5	2.0		..ck	..8			0 / 0	0 / 0	Lunar corona	H. Le Lec, S. J.

NOTE.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,580.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,050.9 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. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Lower 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			29.97	761.3	44.6	7.0	72	N	9	4			10			0	0		Prof. Hoh.
Berlin			30.11	764.9	44.0	7.0	71	N	9	4			4			0.122	3.09	Rainy	Prof. Arndt.
Breslau			30.11	764.7	38.8	3.8	81	NW	9	4			10			0	0		Dr. P. Neugebauer.
Carlsruhe			29.90	759.5	55.8	13.2	64	E	11	5			10			0	0		A. Senz.
Cassel			29.94	760.5	43.9	6.6	60	E	9	4			8			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society
Friedrichshafen	28.52	724.3	29.97	761.2	47.3	8.5	66	W					8			0	0		M. Wilhelm.
Hamburg			30.16	766.1	47.1	8.4	61	NE	13	6			6ku			0.004	0.1	Cloudy	Deutsche Seewarte.
Kiel			30.18	766.5	44.4	6.9	62	NE	13	6			5			0.039	1.0		Prof. G. Karsten.
Königsberg			29.97	761.3	31.8	— 0.1	86	NE	11	5						0.040	1.02	Snowing	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			30.11	764.9	43.7	6.5	70		9	4			7			0.043	1.1		Prof. Bruhns.
Münster			30.04	763.1	47.3	8.5	83	NE	9	4			10			0	0		Prof. E. Heis.
Posen			30.08	763.7	41.2	5.1	73	NW	29	13			0			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.91	759.8	51.6	10.9	81	Calm	0	0			10			0	0		Dr. Schur.
Stuttgart			29.92	759.9	54.0	12.2	52	N					8			0	0		Mr. Würth.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.87	758.6	52.5	11.4	67	E	22	10			10			0	0	Heavy fog	Prof. Flesch.
Wustrow, Naval School			29.20	767.1	42.1	5.6	75	ENE	13	6			8ks			0.080	2.03	Cloudy	E. F. Schütz.

NOTE.—In the originals the distinction between 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.	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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens			29.95	760.8	72.5	22.5		W										Clear	

NOTE.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			29.93	760.2	58.8	14.9	75	WSW	0	0			6	E		0	0		
Mondovi			29.93	760.3	55.6	13.1	70	NW			2					0	0		
Genoa			29.92	759.3	62.6	17.0	82	Calm	0	0			10	S		0	0		
Pavia			29.94	760.4	58.8	14.0	75	NE			1		10			0	0		
Verona			29.89	759.1	65.3	18.5	81	S			1		4			0	0		
Padua			29.90	759.4	61.2	16.2	73	NW	0.7	0.3			7	W		0	0		
Parma																			
Bologna			29.94	760.5	62.1	16.7	61	SW			1		4	N		0	0		
Leghorn			29.95	760.8	58.8	14.9	89	ENE	1.3	0.6			10			0.142	3.6		
Urbino			29.98	761.5	56.8	13.8	85	SSW			2		10			0	0		
Ancona			29.95	760.7	63.7	17.6	67	SE			2		8			0	0		
Siena			29.97	761.1	57.6	14.2	82	NW	0	0			10	W		0	0		
Rome			29.98	761.5	68.7	20.4	61	SSW	4.3	1.9			4			0	0		
Naples, O. U.			30.02	762.5	68.9	20.5	67	S			2		8	NW		0.134	3.4		
Lecce			30.02	762.4	67.1	19.5	62	ENE	6.3	2.8			7	SW		0	0		
Cosenza			30.03	762.8	63.7	17.6	67	NE			1		7			0	0		
Catania, (Sicily)																			
Riposto																			
Palermo			29.94	760.4	71.2	21.8	48	NE	2.5	1.1			10			0	0		
Sub-Series.																			
Naples, S. R.			30.05	763.3	63.7	17.6	83	SW			2		ck	W		0.150	3.8		Prof. F. Brioschi.

NOTE.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S R., is for twenty-four hours. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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	760.6	50.9	10.5		E			4								
Groningen			30.04	762.9	46.6	8.1		E			4								
Helder			30.02	762.6	47.7	8.7		ENE			5								
Utrecht			29.96	761.0	47.3	8.5		E			4		8						Very cloudy

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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			30.34	770.5	44.7	5.4	82	Calm	0	0			3			0	0		
Christiania			30.41	772.5	34.7	1.5	61	ENE	1.6	0.7			10			0	0		
Tromsö			30.34	770.7	33.4	0.8	85	SE			2		10			0	0		

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			29.75	755.7	64.0	17.8	74	SW	18.6	8.3			6			0.441	11.2		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.95	760.8	33.8	1.0	72	NNW	11	5			10						Astronomical Obs.
Wilna			29.82	757.4	32.4	0.2	96	E	8	3.5			10						Astronomical Obs.
Dorpat			30.16	766.0	31.8	— 0.1	71	NE	13	6			10						Physical Cabinet.
St. Petersburg			30.25	768.4	30.0	— 1.1	78	E	7	3			10						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kieff			29.63	753.8	39.7	4.3	71	NW	13	6			10						Physical Cabinet.
Nikolaiev			29.78	756.3	50.5	10.3	73	NW	20	9			10					Raining	Kurdakof.
Kertch			29.92	760.0	62.8	17.1	76	W	7	3			7						Lagorio.
Moscow			30.11	764.7	31.3	— 0.4	83	NNE	17	7.5			10					Light snow	Meteorological Obs.
Lugan			29.54	750.4	54.0	12.2	94	ESE	20	9			10						Meteorological Obs.
Archangel			30.26	771.1	32.7	0.4	96	W	13	6			10						Ogorodnikof.
Tiflis	28.49	723.7	29.84	758.0	82.0	24.8	33	SE	8	3.5			0						Physical Obs.
Astrakhan			30.86	758.4	57.4	14.1	67	E	17	7.5			4						Sebastianof.
Kasan			30.36	771.2	30.6	— 0.8	68	SE	3	1.5			10						Physical Cabinet.
Orenburg			30.29	769.4	33.6	0.9	90	NE	13	6			10						Tschernischef.
Ekaterinburg	29.29	744.0	30.37	771.4	21.9	— 5.6	75	W	13	6			10						Meteorological Obs.
Kasaly			30.06	763.4	39.6	4.2	80	NE	13	6			3						Bobrof.
Tashkend																			Michelson.
Barnaul			29.89	759.2	26.4	— 3.1	82	SW	18	8			4					Snowing	Meteorological Obs.
Yeniseisk			29.14	740.2	30.7	— 0.7	100	NE	2	1			9						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			29.98	761.6	54.0	12.2	54	Calm	0	0			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.73	755.1	66.9	19.4	62	S	34.2	15.3		0	8			0	0	Nearly covered	Royal Observatory.
San Fernando			29.88	759.0	67.8	19.9	85	S	20.1	9.0			10		SW	0.165	4.2		The Naval Observatory.

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

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Haparanda			30.42	772.7	27.9	— 2.3	100	NE			2		10			0	0		
Umea			30.43	772.8	30.6	— 0.8	85	N			2		7			0	0		
Hernosand			30.42	772.7	35.6	2.0	59	NW			2		4			0	0		
Stockholm			30.26	768.6	33.8	1.0	58	NNE			4		10			0.004	0.1		
Wisby			30.22	767.6	39.6	4.2	58	NE			7		7			0	0		
Sub-Series.																			
Upsala			30.33	770.4	35.6	2.0	65	NNE	9.4	4.2			10		NE				Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.48	723.4	29.91	759.6	53.6	12.0	65	NNW			2		5			0	0	Misty	The Observatory.
Zurich	28.29	718.6	29.94	760.4	51.3	10.7	76	NW			1		8			0	0	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —2.8mm.; Thermometer, —0°.4; Relative Humidity, —7 per cent.

Note.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Beirut, (Syria,) Lee Obs'y			29.93	760.3	81.0	27.2	66	W			2		7cs			0	0		Prof. C. V. A. Van Dyck
Constantinople			29.95	760.8	64.4	18.0	70	WNW	4.5	2.0			5		SW	0	0	Cloudy	
Fao, (Persian Gulf)			30.07	763.7	86.0	30.0		NW			1		0					Clear	
Salonica					74.8	23.8		N			1		2						
Valona			29.95	760.7	66.9	19.4		W			2		2						
Varna			29.92	760.0	57.2	14.0		W			3		10					Cloudy	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Brockville, Ontario			29.97	761.2	33	0.6		Calm	0	0			10s			0.03	0.8	Light rain	
Chatham, N. B.			29.91	759.7	37	2.8	80	SW	9	4.0		0	0			0.02	0.5	Clear	
Charlottetown, P. E. Island			29.95	760.7	43	6.4	51	SW	9	4.0		0	0			0	0	Clear	
Fort Garry, Manitoba			30.14	765.5	32	0.0	89	SW	11	4.9		2k	2ks	N		0	0	Fair	
Halifax, N. S.			30.01	762.2	47	8.3	78	W	7	3.1		0	0			Inap.	Inap.	Clear	
Kingston, Ontario			29.90	759.4	37	2.8	96	NE	8	3.6			10n		NE	0.12	3.0	Light rain	
Montreal, Quebec			29.96	76 .0	36	2.2	79	SE	10	4.5			10n			0.01	0.3	Light rain	
Ottawa, Ontario			29.91	759.7	33	0.6	75	N	12	5.4			10n		N	0.03	0.8	Light snow	
Parry Sound, Ontario			30.05	763.3	28	— 2.2	96	N	19	8.5			10n		NE	0.37	9.4	Light snow	
Port Dover, Ontario			29.93	760.2	38	3.3	91	NW	8	3.6		8k	0	NW		0.20	5.0	Fair	
Port Stanley, Ontario			29.91	760.5	37	2.8	89	W	6	2.7		10k	0	W		0.04	1.0	Cloudy	
Quebec, Quebec			30.00	762.0	45	7.2	92	Calm	0	0		0	0			0	0	Clear	
Saugeen, Ontario			30.03	762.7	31	— 0.6	89	N	4	1.8			10n		N	0.75	19.1	Cloudy	
Stayner, Ontario			29.99	761.7	30	— 1.1	100	N	8	3.6			10n			0.14	3.6	Light snow	
Sydney, C. B.			29.94	760.5	49	9.4	73	SW	17	7.6		0	0			0.28	7.1	Clear	
Toronto, Ontario			29.91	759.7	37	2.8	90	N	10	4.5			10n			0.41	10.4	Cloudy	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 1—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.90	759.4	47	8.3	77	S	1	0.4		2k	8ks	S	SW	Inap.	Inap.	Cloudy	
Alpena, Mich.			30.13	765.3	29	−1.7	77	N	13	5.8			10s		N	0.4	11.9	Cloudy	
Atlantic City, N. J.			29.98	761.5	56	13.3	56	S	20	8.9		0	0			0	0	Clear	
Augusta, Ga.			30.11	764.8	41	5.0	82	Calm	0	0		0	0			0	0	Clear	
Baltimore, Md.			29.99	761.7	46	7.8	76	S	3	1.3		5ck	Sm'e			0	0	Fair	
Barnegat, N. J.			29.99	761.7	55	12.8	68	S	15	6.7		2c	0			0	0	Clear	
Benton, Montana	27.29	693.2	30.09	761.3	36	2.2	80	SW	4	1.8		0	0			0	0	Clear	
Bismarck, Dakota	28.41	721.6	30.13	765.3	31	−0.6	79	NE	4	1.8		0	5s			0	0	Fair	
Boston, Mass.			30.03	762.7	49	9.4	63	S	11	4.9		8cs	Haze	SW		0	0	Fair	
Breckenridge, Minn.			30.40	772.1	16	−8.9	83	S	2	0.9		0	1s			0	0	Clear	
Buffalo, N. Y.			29.87	758.7	43	6.1	75	W	4	1.8			10ks		W	0.25	6.3	Cloudy	
Burlington, Vt.			29.93	760.2	45	7.2	76	S	5	2.2		2k	5s			0	0	Cloudy	
Cairo, Ill.			30.25	768.3	41	5.0	65	N	16	7.2		0	0			0	0	Clear	
Cape Hatteras, N. C.			30.03	762.7	54	12.2	68	W	2	0.9		0	0			0	0	Clear	
Cape Henry, Va.			30.05	763.3	52	11.1	60	S	14	6.3		0	0			0	0	Clear	
Cape May, N. J.			29.98	761.5	54	12.2	68	S	20	8.9		0	0			0	0	Clear	
Charleston, S. C.			30.13	765.3	52	11.1	78	SW	3	1.3		0	Fog			0	0	Clear	
Cheyenne, Wyoming	24.26	616.2	30.20	767.1	37	2.8	71	W	8	3.6		5k	Haze			0	0	Fair	
Chicago, Ill.			30.20	767.1	36	2.2	80	NW	12	5.4			10n			0.02	0.5	Light snow	
Cincinnati, Ohio			30.01	762.2	42	5.6	57	NW	9	4.0		5c	0	N		0	0	Fair	
Cleveland, Ohio			29.94	760.5	43.6	6.4	75	NW	21	9.4			10n		NW	0.39	9.9	Light rain	
Colorado Springs, Col.	24.34	618.2	30.22	767.6	40	4.4	56	N	6	2.7		2cs	Haze			0	0	Fair	
Corsicana, Tex.			30.24	768.1	53	11.7	79	N	8	3.6		0	0			0	0	Clear	
Davenport, Iowa			30.36	771.1	31	−0.6	79	N	12	5.4		0	Sm'e			0	0	Clear, frost	
Denison, Tex.			30.28	769.1	46	7.8	67	NW	7	3.1		0	0			0	0	Clear	
Denver, Col.	25.04	636.0	30.26	768.6	39	3.9	46	S	1	0.4		Haze	Haze			0	0	Hazy	
Detroit, Mich.			30.02	762.5	38	3.3	80	N	13	5.8		2ck	5k	N	NE	0.01	0.3	Fair	
Dodge City, Kan.	27.75	704.8	30.14	765.5	38	3.3	63	N	2	0.9		0	Sm'e			0	0	Fair	
Dubuque, Iowa			30.32	770.1	33	0.6	70	NW	4	1.8		0	0			0	0	Clear	
Duluth, Minn.			30.34	770.6	28	−2.2	77	SW	4	1.8		0	0			0	0	Clear	
Eastport, Me.			30.03	762.7	41	5.0	75	Calm	0	0		5c	0	W		0.02	0.5	Fair	
Erie, Pa.			29.87	758.7	43	6.1	83	S	6	2.7			10n		W	0.41	10.4	Light rain	
Escanaba, Mich.			30.26	768.6	32	0.0	69	NW	10	4.5			10s		N	0.15	3.8	Cloudy	
Fort Gibson, I. T.			30.32	770.1	37	2.8	80	NW	8	3.6		0	0			0	0	Clear, frost	
Fort Sill, I. T.	29.11	739.4	30.24	768.1	56	13.3	69	NE	1	0.4		0	Fog			0	0	Clear	
Fort Sully, Dakota	28.54	724.9	30.27	768.8	34	1.1	61	SE	7	3.1		0	0			0	0	Clear	
Galveston, Tex.			30.17	766.3	67	19.4	90	NW	7	3.1		0	0			0	0	Clear	
Grand Haven, Mich.			30.20	767.1	34	1.1	79	N	10	4.5		0	8ks		NE	0.06	1.5	Cloudy	
Indianapolis, Ind.			30.10	764.5	38	3.3	80	NW	8	3.6		0	5ks		NW	0	0	Fair	
Indianola, Tex.			30.22	767.6	63	17.2	88	NW			2	0	0			0	0	Clear	
Jacksonville, Fla.			30.16	766.1	49	9.4	85	NW	2	0.9		0	0			0	0	Clear	
Keokuk, Iowa			30.35	770.9	33	0.6	70	N	8	3.6		0	0			0	0	Clear	
Key West, Fla.			30.07	763.8	76.1	24.5	82	E	5	2.2		0	2ks		SW	0	0	Smoky, fair	
Kittyhawk, N. C.			30.07	763.8	50	10.0	72	SW	10	4.5		0	0			0	0	Clear	
Knoxville, Tenn.			30.04	763.0	46	7.8	69	SW	4	1.8			8ks		SW	0	0	Cloudy	
La Crosse, Wis.			30.39	771.9	32	0.0	69	Calm	0	0		0	0			0	0	Clear	
Leavenworth, Kan.			30.38	771.6	38	3.3	17	N	4	1.8		0	0			0	0	Clear	
Lexington, Ky.	28.95	735.3	30.08	764.0	41	5.0	73	NW	4	1.8		2k	0	NW		0	0	Clear	
Long Branch, N. J.			29.98	761.5	55	12.8	68	SW	14	6.3		5ck	0	SW		0	0	Fair	
Louisville, Ky.			30.10	764.5	43	6.1	58	W	12	5.4		0	0			0	0	Clear	
Lynchburg, Va.			29.98	761.5	44	6.7	79	Calm	0	0		10k	0	W		0	0	Cloudy	
Malone, N. Y.			29.88	758.9	39	3.9	91	Calm	0	0			10n			0.03	0.8	Light rain	
Marquette, Mich.			30.29	769.4	33	0.6	70	NW	8	3.6			10s		NW	0.29	7.4	Cloudy	
Memphis, Tenn.			30.23	767.8	47	8.3	62	NW	7	3.1		0	Haze			0	0	Clear	
Milwaukee, Wis.			30.28	769.1	34	1.1	61	N	16	7.2		0	5ks		N	0	0	Fair	
Mobile, Ala.			30.18	766.6	56	13.3	87	Calm	0	0		10ck	Sm'e			0	0	Cloudy	
Montgomery, Ala.			30.16	766.1	47	8.3	89	Calm	0	0		0	Sm'e			0	0	Clear	
Morgantown, W. Va.			29.91	759.7	50	10.0	64	N	3	1.3			10s			0	0	Threatening	
Mt. Washington, N. H.	23.68	601.5	30.04	763.0	30	−1.1	100	NW	30	13.4		10s	5s	NW		0.12	3.0	Cloudy	
Nashville, Tenn.			30.10	764.5	45	7.2	68	NW	6	2.7		5c	0	W		0	0	Fair	
New Haven, Conn.			30.00	762.0	50	10.0	86	SW	4	1.8		5k	Fog			0	0	Foggy	
New London, Conn.			30.03	762.7	49	9.4	78	N	3	1.3		2c	2k	W	SW	0	0	Fair	
New Orleans, La.			30.18	766.6	61	16.1	82	SW	3	1.3		8k	0	NW		0	0	Fair	
Newport, R. I.			30.03	762.7	54	12.2	80	S	4	1.8		0	5ks		SW	0	0	Fair	
New York, N. Y.			30.00	762.0	49	9.4	71	SW	6	2.7		2ck	0			0	0	Clear	
Norfolk, Va.			30.05	763.3	46	7.8	77	S	12	5.4		Haze	0			0	0	Clear	
North Platte, Neb.	27.47	596.0	30.09	764.3	35	1.7	90	Calm	0	0		0	0			0	0	Clear	
Omaha, Neb.	29.29	744.0	30.43	772.9	32	0.0	100	N	2	0.9		2c	Sm'e	N		0	0	Fair	
Oswego, N. Y.			29.89	759.2	46	7.8	88	SSE	6	2.7			10n		SW	0.18	4.6	Light rain	
Peck's Beach, N. J.			30.00	762.0	55	12.8	68	SW	20	8.9		0	0			0	0	Clear	
Pembina, Dakota			30.19	766.8	29	−1.7	94	S	8	3.6		0	Haze			0	0	Clear	
Philadelphia, Penn.			29.98	761.5	47	8.3	77	SW	7	3.1		0	0			0	0	Clear	
Pike's Peak, Colorado	18.05	458.4	30.26	768.6	25	−3.9	75	NW	13	5.8		2c	0	W		0	0	Cloudy	
Pittsburgh, Penn.			29.91	759.7	46	7.8	61	NW	10	4.5			10ks		NW	0.29	7.4	Light rain	
Port Huron, Mich.			30.04	763.0	35	1.7	90	NW	19	8.5			10n		N	0	0	Cloudy	
Portland, Me.			30.04	763.0	44	6.7	68	SW	3	1.3		5c	2s			0.08	2.0	Foggy	
Portland, Oregon			30.23	767.8	58	14.4	93	Calm	0	0			Fog			0	0	Cloudy	
Punta Rassa, Fla.			30.12	765.0	66.9	19.1	90	NE	10	4.5			8ks		SW	0.13	3.3	Cloudy	
Rochester, N. Y.			29.86	758.4	47	8.3	85	W	6	2.7			10s		W	0	0	Clear	
Salt Lake City, Utah	25.84	656.3	30.17	766.3	55	12.8	33	N	4	2.8		0	0			0	0	Fair	
Sandy Hook, N. J.			29.97	761.2	51	10.6	72	S	14	6.3		5ck	0	W		0	0	Foggy	
San Diego, Cal.			30.08	764.0	59	15.0	100	NE	4	1.8			Fog			0	0	Clear	
San Francisco, Cal.			30.12	765.0	59	15.0	85	SW	2	0.9		0	0			0	0	Hazy	
Santa Fe, N. M.	23.52	597.4	30.06	763.5	47	8.3	34	N	4	1.8		0	Haze			0	0	Clear	
Savannah, Ga.			30.14	765.5	50	10.0	64	SW	6	2.7		0	Sm'e			0	0	Clear	
Shreveport, La.			30.21	767.3	58	14.4	88	N	6	2.7		0	0			0	0	Fair	
Smithville, N. C.			30.11	765.8	53	11.7	79	NW	4	1.8		0	1ks			0.02	0.5	Smoky	
Springfield, Mass.			30.00	762.0	44	6.7	67	Calm	0	0		5cs	Sm'e	S		0	0	Clear	
St. Louis, Mo.			30.32	770.1	36	2.2	61	N	12	5.4		0	0			0	0	Clear	
St. Marks, Fla.			30.17	766.3	46	7.8	96	Calm	0	0		0	0			0	0	Clear	
St. Paul, Minn.			30.37	771.4	27	−2.8	88	Calm	0	0		0	Haze						
St. Paul's Island, Alaska																			
Squa Beach, N. J.			29.92	760.0	53	11.7	73	S	7	3.1		5cs	0	SW		0	0	Fair	
Toledo, Ohio			30.01	762.2	39	3.9	81	S	10	4.5			10s		N	0.05	1.3	Cloudy	
Tucson, Arizona																			
Tybee Island, Ga.			30.13	765.3	49	9.4	85	Calm	0	0		0	0			0	0	Clear	
Vicksburg, Miss.			30.21	767.3	58	14.4	93	SW	1	0.4		2k	0	NW		0	0	Fair	
Virginia City, Montana	24.43	620.5	29.91	759.7	43	6.1	35	SE	1	0.4		3c	0	W		0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			29.96	761.0	46.5	8.1	85	S	2	0.9		0	5s			0	0	Fair	
Wilmington, N. C			30.10	764.5	51	10.6	78	SW	6	2.7		0	2s			0	0	Clear	
Wood's Hole, Mass			30.05	763.3	55	12.8	86	SW	17	7.6		0	0			0	0	Clear	
Wytheville, Va	27.62	701.5	29.78	756.4	46	7.8	61	W	8	3.6		0	0			0	0	Clear	
Yankton, Dakota	29.09	738.9	30.48	774.2	23	—5.0	86	Calm	0	0		0	0			0	0	Clear	
Yuma, Arizona			30.05	763.3	63	17.2		Calm				0	0			0	0	Clear	
Sub-Series																			
Bridgetown, B'b'does, W. I					80	26.7	95	E	3	1.3		8ck	10s	E		0	0	Fair	E Racker.
Pointe-aPitre, G'd'loupe, do			29.96	761.0	74	23.3	90	E				5c	8n			0.37	9.4	Raining.	L. V. Bigard.
Havana, Cuba, W. I			30.08	764.0	80	26.7	82	NNW	2.4	1.1		1ck	8k	SW	N	0.08	2.0	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W			30.18	766.6	79	26.1	78	Calm	0	0		2c	1s			0	0		James Gall.
St. Thomas, St. T., W. I			30.20	767.1	83	28.3	70	E	4	1.8		2ck	2k	E		0	0	Fair	W. S. Cameron.
Santiago de Cuba, W. I			29.83	757.7	78	25.6	78	Calm	0	0		8c	0	E		0	0	Fair	Robert Mason.
St. Georges, Bermudas			30.13	765.3	78	25.6	89	SE	6	2.7		0	1fk		SW	0.060	1.52	Clear	C. F. Allen.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.
Cumberland, B. A																			
Ft. Chippewyan, B. A																			
Ft. McPherson, B. A																			
Ft. Simpson, B. A																			
York Factory, B. A			30.02	762.5	28	—2.2	88	N	4	1.8			10s			0.20	5.1		J. Fortescue.
St. John's, Newfoundland																			John Delaney.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Clifton, Jamaica, W. I	27.20	690.9	30.00	762.0	67	19.4	84	E	2.0	0.9		2c	0	E		0.12	3.0	Clear	C. Partridge.
Navassa																			
Medellin, S. A																			
Paramaribo, S. A																			
Elyria, Ohio			29.94	760.5	40	4.4		NW	8	3.6			10n			0	0	Raining	H. M. Redington.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Leipzig, N. 38° 33′, W. 170° 18′.	ENE		30.08	764.0	59.7	15.4		SE			1		0			Tranq'l		Clear	

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; 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, 6,86[illegible] (?) ft., or 2,091.6 (?) m.; Virginia City, 5,180 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 19, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			29.87	758.7	71.2	21.8	70	N			1		10			Inap.	Inap.		Charnot.
Algiers			29.89	759.3	75.2	24.0	75	N			1		6			Inap.	Inap.	Sirocco	Peter.
La Calle																			Kuntz.
Tunis			29.95	760.8	77.0	25.0	46	NE			3		3			0	0		Jacques.
Sfax			30.00	761.0	75.2	24.0	39	SE			2		1			0	0		Chauvey.
Salda			29.86	758.5	77.0	25.0	16	SW			3		6			0	0		Grosjean.
Tebessa			29.96	760.9	78.3	25.7		SE			1		2			0	0		Colin.
Geriville			29.89	759.2	70.7	21.5	27	S			4		4			Inap.	Inap.		Bernadach.
Laghouat			29.95	760.8	77.0	25	26	S			3		1			0	0		Simon.
Biskra					81.9	27.7	21	E			2		1			0	0		Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.27	768.9	49.1	9.5	74	NE			2		10			0.012	0.3		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.08	764.1	35.2	1.8	87	WNW			3		10			0.043	1.1		I. R. Observatory.
Sperles			29.98	761.5	38.8	3.8	77				3		10			0	0		Julius Mikolik.
Gratz	28.86	733.0	30.10	764.4	41.5	5.3	79	ESE			2		10						Andreas Rospini.
Hermannstadt	28.48	723.5	29.94	760.4	43.5	6.4	93	NW			1		10			0.154	3.90		Prof. Reissenberger.
Kremsmünster	28.67	728.3	30.06	763.4	40.3	4.6	71	ENE			3		10			0	0		Prof. C. Wagner.
Lemberg			29.92	759.9	34.2	1.2	75	NW			3		8			0	0		Dr. T. Stanecki.
Nyiregyhaza			30.02	762.4	43.9	6.6	71	W			2		9			0	0		Habzsuda Daniel.
Pola			29.97	761.2	61.0	16.1	89	NNE			1		10ks			0.017	0.43		I.R. Hydrographic Of'ce
Szegedin			30.00	762.1	46.2	7.9	71	N			2		10			0.061	1.55		Karl Stancel.
Trieste			29.97	761.1	60.1	15.1	93	ESE			1		10			0.311	7.9	Light rain	Prof. V. Farolfi.
Vienna			30.05	763.3	44.1	6.7	53	NE			1		4			0	0		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 9 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.83	757.7	50.5	10.3	76	ESE			4	8		SW		0	0		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.04	763.0	47.5	8.6		SE	39	17.4			10			0.020	0.51	Squally.	William Boswell.
Ardrossan			29.83	757.7	45	7.2		ESE			5		10					Raining	Wm. McNeil.
Armagh Observatory			29.68	753.9	49.7	9.8		E	12	5.4			10					Gloomy	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			29.71	754.6	47.9	8.8		E			5		10					Misty	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.54	750.3	59.8	15.4		SE			1		7					*D. clouds	J. Dreyer.
Bradford			29.75	755.6	45.9	7.7		E			1		10					Raining	J. McLandsborough.
Bridgetown, (Barbadoes)			29.90	759.4	83.0	28.3		NE			4		6					*D. clouds	T. H. Hunt.
Cambridge Observatory			29.77	756.1	50.0	10.0		ESE			2		10			0.300	7.62	Raining	Sergeant Hunt, A. H. C.
Cape Good Hope Obs.			29.95	760.7	68.3	20.2	67	W	16	7.2			7						The Staff, for E. J. Stone.
Cardington			29.76	755.9	50.4	10.2		SE					10					Overcast	John McLaren.
Carlisle			29.83	757.7	45.8	7.7		SE					10			0	0	Raining	T. Bell, for J. Cartmell.
Chatham, School M. E.			29.75	755.6	50.2	10.1		E			2		0					Threatening	Capt. J. Fellowes, R. E.
Dartmoor	28.24	717.3	29.61	752.1	57	13.9		E			4		7					*D. clouds	R. E. Power.
Donaghadee			29.71	754.6	49	9.4		ESE			7		10					Raining	J. Mac Gowan, Jr.
Dover			29.75	755.6	51	10.6		ESE			5		7						J. Costello.
Eccles, (near Manchester)			29.75	755.6	47.7	8.7		SE	0.8	0.4			10					Raining	Thomas Mackereth.
Falmouth Observatory			29.56	750.8	57.9	14.4		SE	20	8.9			5					*D. clouds	The Staff.
Fort Napier, (Natal)	27.58	700.5	29.79	756.7	64.0	17.8		N			3		10					Overcast	Pvt G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	83	28.3		N					5						B. G. Clare, for Prof. Curtis.
Galway, Queen's College																			
Gibraltar, (Mediterranean)			29.88	758.9	62.5	16.9		SW			1		10					Gloomy	Sergt. E. G. Baker.
Glasgow Observatory			29.86	758.4	44.6	7.0		E			3		10						Lewis Stuart.
Great Yarmouth			29.85	758.2	48	8.9		E			7		7					*D. clouds	G. T. Watson.
Greenwich Royal Obs			29.74	755.4	49.6	9.8		ENE			4		10			0.559	14.20	Overcast	The Staff, for G. B. Airy.
Guernsey			29.60	751.8	69.5	15.8		ESE			1		6					*D. clouds	Dr. S. E. Hoskins, Jersey.
Halifax, Moorside Obs			29.85	758.2	45.6	7.6		E					10					Raining	F. J. Page, for L. J. Cross.
Helston			29.52	749.8	62	16.7		SE			4		4cs			0.25	6.3	*D. clouds	M. P. Moyle.
Holyhead			29.64	752.8	53	11.7		E			4		6					*D. clouds	John Tilston.
Kew Observatory			29.73	755.1	49.5	9.7		E	21	9.4			10					Raining	The Staff.
Kingstown			29.61	752.1	54	12.2		ESE			6		10					Overcast	George Mitchell.
Leicester Museum			29.78	756.4	47.9	8.8		E			1		10					Raining	William J. Harrison.
Llandudno			29.71	754.6	49.6	9.8		SE					10			Blank	Blank	Overcast	Dr. James Nicol.
Malta, (Mediterranean)			29.99	761.7	71.8	22.1		SE			1		4k					*D. clouds	Fred Travis, Pvt A. H. C.
Nairn			29.98	761.5	47	8.3		SE			2		10						W. D. Penny.
Nassau, (Bahamas)			30.07	763.8	76.4	24.7		NE			5		10n					Squally	Surg.-Maj. Henry.
Nottingham			29.80	756.9	47.5	8.6		SE			3		10n		SE	0.99	25.1	Raining	E. J. Lowe.
Oscott, St Mary's College			29.75	755.6	47.0	8.3		ENE			1		10			Blank	Blank	Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.69	754.1	51	10.6		E			1		10					Misty	J. Lucas, for R. Main.
Plymouth			29.58	751.3	60.2	15.7		ESE			3		4					*D. clouds	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.47	748.5	58	14.4		SSE			5		5			Blank	Blank	Lightning	W. Kennedy.
Saint Ann's Head			29.56	750.8	58	14.4		ESE			4		7					Misty	John C. Walker.
Saint Helier, (Jersey)			29.59	751.6	62.0	16.7		SE			3		10						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			29.91	759.7	46.9	8.3		SE			8		10					Overcast	F. Shaw.
Scutari cemetery, (Turkey)			29.97	761.2	69.8	21.0		SW			1		2					Clear	Sergt. W. H. Lyne.
Sheffield			29.82	757.4	46.8	8.2		ESE			1		10			1.30	33.0	Raining	W. F. Cooper.
Silloth Rectory			29.80	756.9	45.8	7.7		SE			6		10			0.585	14.86	Raining	Rev Francis Redford.
Stonyhurst Observatory			29.74	755.4	46.1	7.8		NE			1		10					Raining	The Staff.
Stornoway, Lewis C. (Hebr)			29.87	758.7	49	9.4		E			5		10					Overcast	John Smith.
Stratfield Turgiss			29.71	754.6	49.8	9.9		SE			2		10					Raining	Rev Charles H. Griffith
Streatley Vicarage			29.72	754.9	52.0	11.1		E			4		10			1.410	35.81		Rev. John Slatter.
Thurso			30.03	762.7	46	7.8		ESE			5		8					Gloomy	John Trotter.
Truro, Royal Institution			29.51	749.5	64	17.8		SE			4		6					*D. clouds	W. Newcombe.
Valencia Observatory			29.41	747.0	57.7	14.3		SE	28	12.5			7					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					51	10.6		ESE			8		10			0.090	2.29	Raining	
Leith, Restalrig Park			29.92	760.0	46.0	7.8		SE			4		10ks			0.08	2.0	Overcast	Andrew Gibb.
Monach Lt-house, (Shet. Is)			29.76	755.9	50	10.0		SE			4		10			0	0		J. Youyclause.
North Unst, (Shetland Is)			29.23	742.4	47	8.3		SE			6	6	5	SSE					

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., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters: Fort Napier, 2,200 ft., or 670.6 m., instrumental error —.102 uncertain. * Detached clouds.

DANISH SERIES.

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

Copenhagen			30.21	767.2	40.6	4.8	62	ENE			4		10						
Fanöe			30.21	767.2	38.8	3.8	73	ENE			2		10						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.92	759.9	36.9	2.6	85	Calm			0		0						
Thorshavn, (Faröe)			30.13	765.4	46.0	7.8	86	SE			6		10					Raining	
Vestervig			30.27	768.9	36.7	2.6	62	ENE			4		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			29.66	753.4	59.0	15.0	72	S			2		5nk			0.827	21.0	Cloudy	Normal School.
Amiens			29.78	756.3	56.1	13.4	82	SE			3		8		S	0	0	Cloudy	Normal School.
Avignon			29.86	758.4	66.9	19.4	68	SE			3		10			0	0	Cloudy	C. Saillard.
Bar-sur-Seine			29.74	755.4	66.7	19.5	64	NW			2	8c				0	0	Cloudy	Beaumette Observatory
Beaumette, (near Augers)			29.61	752.1	67.5	19.7	68	SSE	7.6	3.4			10		S	0.008	0.2	Cloudy	Normal School.
Beauvais			29.79	756.7	57.7	14.3	80	E			1		8		W	0.020	0.50	Cloudy	Normal School.
Besançon			29.84	757.7	62.1	16.7	76	NE			2		5		SW	0	0	Cloudy	Normal School.
Bourg en Bresse			29.81	757.1	66.4	19.1	63	S			2		..ck		N	0	0		Normal School.
Bourges			29.72	754.8	63.7	17.4	78	NNE			2		8		ENE	0	0	Cloudy	Normal School.
Brest			29.50	749.2	67.1	19.5	89	SSE			1		10		SE	0.158	4.00	Raining	Naval Observatory.
Caen			29.66	753.3	63.7	17.4	84	ESE			6		5		S	0.12	3.	Cloudy	Normal School.
Chartres																			Normal School.
Chaumont	28.65	727.6	29.80	757.0	62.8	17.1		SSE			3		5cs		SSE	0	0		Normal School.
Commercy			29.86	758.5	53.6	12	78	ESE			4		1		ESE	0	0	Clear	Normal School.
Commune de Gréasque*			29.95	760.6	66.6	19.2	61	SE			4		8		SE	0	0		
Le Mans																			Normal School.
Louis-Le-Saulnier			29.78	756.5	66.0	18.9	72	S			4		2			0.057	1.4	Rainy	Normal School.
Mâcon			29.81	757.2	61.2	16.2	82	S			4		10			0	0	Cloudy	Normal School.
Mirecourt			29.78	756.4	57.7	14.3	84	W			2		2		S	0	0		Normal School.
Orleans			29.65	753.2	63.7	17.6	80	E			3		5		SE	0	0	Cloudy	Normal School.
Paris Observatory			29.73	755.2	60.[illegible]	15.8	76	SE			1		5		SW	0.01[illegible]	0.40	Cloudy	National Observatory
Parthenay			29.62	752.3	65.1	18.4	88	SE			2		5		S	0	0	Cloudy	Normal School.
La Roche sur Yon			29.60	751.7	66.2	19	75	[illegible]			4		2		N	0	0		Normal School.
Rochefort, Observatory			29.62	752.3	68.2	20.1	63	SE			3		5		N	0	0		Naval Observatory.
Rouen			29.69	754.2	62.1	16.7	73	WNW			2		2		S	0.057	1.4		Normal School.
Saint Lo			29.65	753.2	59.0	15	80	S			1		2		E	0.04	1.		Normal School.
Villefranche			29.80	756.9	64.6	18.1	72	SE			3		2		S	0	0		Normal School.
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchési.
Mont-Louis			30.05	763.3	54.3	12.4	79	SSW	22.4	10.00			8		SSW	0.024	0.6		—. Faivre
Montsouris, Paris			29.73	755.2	62.4	16.9	76	SE			2	..c	9ck, k		S	0.020	0.5	Misty	Montsouris Observ'tory.
Perpignan	†29.76	†756.0			73.9	23.3	53	ESE	14.9	6.66			5		SW	0.409	10.4		Dr. Fines
Pic du Midi, (Summit) H. P.																			M. Baylac.
Pic du Midi, (Plantade) H. P.																			General de Nansouty
Saint Maur, (near Paris)			29.74	755.3	62.1	16.7	79	SE			1		8			0.004	0.1	Cloudy	E. Renou.
Tours			29.68	753.8	64.4	17.8	89	ESE			1		10		SW	0.008	0.2		C. Marquet.
Versailles, (near Paris)			29.73	755.2	61.2	16.2	87	SE			1		8			0.026	0.65		Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.14	765.5	59.0	15.0	92	SE	5.8	2.6		0	0			{0 / 0}	{0 / 0}	Clear	H. Le Lee, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 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. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.01	762.2	45.5	7.5	48	E	13	6			3			0	0		Prof. Hoh.
Berlin			30.15	765.8	44.2	6.8	67	N	4	2			6			0.011	0.28		Prof. Arndt.
Breslau			30.15	765.7	36.7	2.6	8[illegible]	NW	13	6			10			0	0		Dr. P. Neugebauer.
Carlsruhe			29.93	760.1	47.1	8.4	80	NE	11	5			10			0	0		A. Senz.
Cassel			29.97	761.3	41.9	5.5	60	E	9	4			0			0	0		Dr. H. Möll.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.50	723.8	29.93	760.3	54.5	12.5	65	NE					4			0.213	5.4		M. Wilhelm.
Hamburg			30.19	766.8	44.2	6.8	69	E	13	6			7ks	E		0	0	Cloudy	Deutsche Seewarte.
Kiel			30.19	76[illegible].8	42.[illegible]	5.9	55	ENE	13	6			7			0	0		Prof. G. Karsten.
Königsberg			30.05	763.2	33.8	1.0	81	NE	11	5						0.139	3.54	Snowing	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			30.17	766.3	36.6	2.2	85	E E	4	2			10			0	0		Prof. Bruhns.
Münster			30.04	763.1	46.9	8.3	62	SE	9	4			0			0	0		Prof. E. Heis.
Posen			30.11	764.9	42.8	6.0	71	NNW	22	10			10			0	0	Cloudy	Dr. Magener.
Strassburg, (in Alsace)			29.94	760.4	48.4	9.1	80	NE	9	4			10			0	0		Dr. Schur.
Stuttgart			29.97	761.0	49.5	9.7	77	NE					10			0.043	1.1		Mr. Würth.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.86	758.5	47.8	8.8	68	NE	27	12			10			0	0		Prof. Closch.
Wustrow, Naval School			30.23	767.9	43.3	6.3	71	E	13	6			6ks			0.018	0.47	Cloudy	E. F. [illegible].

Note.—In the originals the distinction between 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.	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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens			29.99	761.8	72.5	22.5		SW					..k					Clear	

Note.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			28.20	716.2	58.6	14.8	78	ENE	0	0			6	W		0	0		
Mondovi			30.01	762.2	57.6	14.2	63	NE			2		7	WNW		0	0		
Genoa			29.95	760.7	64.2	17.9	81	SE	4.9	2.2			1	S		0	0		
Pavia																			
Verona			29.92	759.9	65.5	18.6	69	E			2		10			0	0		
Padua			29.94	760.4	59.9	15.5	83	S	0.7	0.3			10	SW		0	0		
Parma																			
Bologna			29.99	761.8	65.7	18.7	62	W			1		5	W		0	0		
Leghorn			29.96	760.9	68.4	20.2	64	SSE	1.3	0.6			4			0	0		
Urbino			30.00	761.9	62.4	16.9	64	WNW			6		7			0	0		
Ancona			29.96	760.9	65.1	18.4	61	SE			2		4			0	0		
Siena			29.97	761.1	64.8	18.2	70	S	0.7	0.3			7	S		0	0		
Rome			30.02	762.5	67.6	19.8	75	SSE	9.8	4.4			9	SSE		0	0		
Naples, O. U.			30.05	763.2	70.9	21.6	65	SW			2		4	W		0	0		
Lecce			30.03	762.7	70.0	21.1	55	SW	6.3	2.8			6	SW		0	0		
Cosenza			30.03	762.8	65.5	18.6	55	SE			1		2			0	0		
Catania, (Sicily)																			
Riposto																			
Palermo			29.95	760.7	71.2	21.8	57	ENE	7.4	3.3			6			0	0		
Sub-Series.																			
Naples, S. R.			30.09	764.0	63.9	17.7	83	SW			2		..ck	SW		0.020	0.5		Prof. F. Brioschi.

NOTE.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for twenty-four hours. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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			29.88	758.9	47.7	8.7		E			5								
Groningen			30.05	763.2	41.9	5.5		E			6								
Helder			30.01	762.2	43.2	6.2		E			5								
Utrecht			29.92	760.0	45.9	7.7		E			5		5					Cloudy.	

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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			30.32	770.2	42.1	5.6	73	Calm	0	0			0			0	0		
Christiania			30.36	771.1	37.0	2.8	55	NE	6.0	2.7			0			0	0		
Tromsö			30.34	770.5	37.8	3.2	68	SE			6		10			0	0		

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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. From—	Clouds. Amount. Up'er From—	Clouds. Amount. Low'r From—	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			29.68	753.9	63.4	17.2	53	SSW	22.4	10.0			4			0.192	4.9		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon.

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. From—	Clouds. Amount. Up'er From—	Clouds. Amount. Low'r From—	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			30.00	762.0	33.1	0.6	92	NNW	11	5			10						Astronomical Obs.
Wilna			29.89	759.2	31.1	— 0.5	92	NE	8	3.5			10						Astronomical Obs.
Dorpat			30.17	766.3	29.5	— 1.4	86	NE	11	5			10						Physical Cabinet.
St. Petersburg			30.21	767.2	28.8	— 1.8	84	E	7	3			10						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kiell			29.82	757.5	37.2	2.9	61		7	3			10						Physical Cabinet.
Nikolaiev			29.96	761.0	42.3	5.7	90	Calm	0	0			9						Kurdakof.
Kertch			29.95	760.6	67.1	19.5	63	SW	7	3			5						Lagorio.
Moscow			29.92	759.9	28.0	— 1.7	98	N	13	6			10					Snowing	Meteorological Obs.
Lugan			29.84	758.0	59.4	10.2	52	WSW	13	6			3						Meteorological Obs.
Archangel			30.33	770.3	34.2	1.2	85	Calm	0	0			10						Ogorodnikof.
Tiflis	28.62	727.0	30.00	762.0	69.1	20.6	42	NW	10	4.5			2						Physical Obs.
Astrakhan			30.06	763.4	59.5	15.3	59	WNW	4	2			9						Sebastianof.
Kasan			30.02	762.4	30.0	— 1.1	98	E	8	3.5			10					Snowing	Physical Cabinet.
Orenburg			30.07	763.6	32.5	0.3	80	SE	17	7.5			10						Tscheranschel.
Ekaterinburg	29.26	743.2	30.34	770.6	20.5	— 6.4	79	Calm	0	0			10						Meteorological Obs.
Kasaly			30.22	767.4	43.9	6.6	78	NE	8	3.5			5						Bobrof.
Tashkend																			Michelson.
Barnaul			30.41	772.5	23.5	— 4.7	77	SW	8	3.5			4						Meteorological Obs.
Yeniseisk			29.93	760.1	21.7	— 5.7	96	SW	9	4			10					Snowing	Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking (China)			30.11	764.8	55.4	13.0	52	Calm	0	0			1						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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. Archangel barometer, as given, should be reduced by a correction of —3.5 mm. from January to July, and by a correction of —2.0 mm. from July to October 19, 1875.

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. From—	Clouds. Amount. Up'er From—	Clouds. Amount. Low'r From—	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.71	754.7	58.1	14.5	18	SW	3.8	1.7			10			0.047	1.2	Covered	Royal Observatory.
San Fernando			29.79	756.7	60.1	15.6	93	E	4.7	2.1			10		SW	0.933	23.7	Raining	The Naval Observatory.

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

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. From—	Clouds. Amount. Up'er From—	Clouds. Amount. Low'r From—	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Haparanda			30.44	773.2	24.1	— 4.4	95	NW			2		10			0	0		
Umea			30.42	772.7	30.9	— 0.6	85	ENE			2		10			0	0		
Hernosand			30.43	772.8	32.0	0.0	90	NW			2		10			0	0		
Stockholm			30.26	768.7	33.6	0.9	70	NE			4		10			0	0		
Wisby			30.25	767.9	38.8	3.8	73	ENE			6		10			0	0		
Sub-Series.																			
Upsala			30.32	770.2	34.7	1.5	83	NE	9.4	4.2			10						Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.46	729.9	29.88	759.0	56.3	13.5	77	N			1		7			0	0	Cloudy	The Observatory.
Zurich	28.28	718.3	29.91	759.7	55.9	13.3	77	NE			1		3			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +3.9mm.; Thermometer, +1°.2; Relative Humidity, +5 per cent.

Note.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y			30.00	762.1	79.0	26.1	53	W			2		10			0	0		Prof. C. V. A. Van Dyck.
Constantinople			30.01	762.2	64.6	18.1	78	SSW	4.5	2.0			2		SW	0.413	10.5		
Fao, (Persian Gulf)			30.12	765.0	84.2	29.0		NW			1		0					Clear	
Salonica					74.8	23.8		S			1		0					Clear	
Valona			29.97	761.3	66.0	18.9		NW			1		10					Cloudy	
Varna			29.00	762.0	62.6	17.0		NE			2		0					Clear	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario			30.39	771.9	33	0.6		Calm	0	0		0	0			0	0	Clear	
Chatham, N. B.			30.08	764.0	42	5.6	91	SW	1	0.4		0	0			0	0	Clear	
Charlottetown, P. E. Island			30.09	764.3	49	9.4	82	W	8	3.6			8ks		W	0	0	Cloudy	
Fort Garry, Manitoba			29.77	756.1	42	5.6	66	SW	13	5.8		0	8m'e			0	0	Smoky	
Halifax, N. S.			30.08	764.0	48	8.9	99	W	1	0.4		5ck	2s	SW		0	0	Fair	
Kingston, Ontario			30.36	771.1	31	— 0.6	82	NE	2	0.9		0	2s			0.02	0.5	Clear	
Montreal, Quebec			30.26	768.6	36	2.2	90	E	3	1.3			10s			0.06	1.5	Cloudy	
Ottawa, Ontario			30.31	769.9	30	— 1.1	57	W	8	3.6		0	0			0.01	0.3	Clear	
Parry Sound, Ontario			30.30	769.6	26	— 3.3	88	E	6	2.7		2ck	2ks	W	W	0	0	Fair	
Port Dover, Ontario			30.38	771.6	51	— 0.6	79	Calm	0	0		10k	0	NW		0	0	Fair	
Port Stanley, Ontario			30.35	770.9	33	0.6	81	W	3	1.3			10ks			0	0	Cloudy	
Quebec, Quebec			30.21	767.3	37	2.8	81	SW	1	0.4		0	0			0	0	Clear	
Saugeen, Ontario			30.29	769.4	36	2.2	90	Calm	0	0			10n			0	0	Cloudy	
Stayner, Ontario			30.32	770.1	37	2.8	53	Calm	0	0			10s			Inap.	Inap.	Cloudy	
Sydney, C. B.			30.09	764.3	47	8.3	95	SW	7	3.1		5k	2s	W	W	0	0	Fair	
Toronto, Ontario			30.36	771.1	32	0.0	88	W	3	1.3		5cs	0	NW		0	0	Fair	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	30.20	767.1	40	4.4	91	NW	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Alpena, Mich	.....	.....	30.25	768.3	31	—0.6	79	W	3	1.3	.....	2cs	0	.....	.....	0	0	Clear	
Atlantic City, N. J	.....	.....	30.19	764.5	48	8.9	86	N	8	3.6	.....	.....	10s	.....	NE	0	0	Cloudy	
Augusta, Ga.	.....	.....	30.20	767.1	47	8.3	77	Calm	0	0	.....	0	0	.....	.....	0.08	2.0	Clear	
Baltimore, Md	.....	.....	30.22	767.6	47	8.3	69	NW	9	4.0	.....	5ck	2s	NW	.....	Inap.	Inap.	Fair	
Barnegat, N. J	.....	.....	30.19	764.5	50	10.0	78	N	19	8.5	.....	8c	0	SW	.....	0	0	Fair	
Benton, Montana	27.25	692.1	30.05	763.3	59	15.0	32	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Bismarck, Dakota	28.18	715.8	29.84	757.9	39	3.9	63	S	2	0.9	.....	0	Haze	.....	.....	0	0	Hazy	
Boston, Mass	.....	.....	30.13	765.3	47	8.3	92	N	8	3.6	.....	.....	Fog	.....	.....	0	0	Foggy	
Breckenridge, Minn	.....	.....	29.97	761.2	32	0.0	69	S	4	1.8	.....	0	2s	.....	.....	0	0	Clear	
Buffalo, N. Y	.....	.....	30.34	770.6	34	1.1	69	W	8	3.6	.....	.....	10ks	.....	NW	0	0	Cloudy, frost	
Burlington, Vt	.....	.....	30.27	768.8	38	3.3	72	NW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Cairo, Ill	.....	.....	30.43	772.9	40	4.4	73	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Cape Hatteras, N. C	.....	.....	30.00	762.0	58	14.4	87	NE	18	8.0	.....	5k	Haze	N	.....	0	0	Fair	
Cape Henry, Va	.....	.....	30.14	765.5	54.5	12.5	74	N	23	10.3	.....	10k	0	NW	.....	0	0	Cloudy	
Cape May, N. J	.....	.....	30.12	765.0	48	8.9	77	NW	16	7.2	.....	8k	0	W	.....	0	0	Fair	
Charleston, S. C	.....	.....	30.14	765.5	50	10.0	71	N	11	4.9	.....	1k	0	N	.....	0.07	1.8	Clear	
Cheyenne, Wyoming	24.23	615.4	30.17	766.3	44	6.7	24	NW	12	5.4	.....	2c	0	.....	.....	0	0	Fair	
Chicago, Ill	.....	.....	30.36	771.1	36	2.2	70	SW	7	3.1	.....	5ck	Sm'e	W	.....	0.05	1.3	Fair, frost	
Cincinnati, Ohio	.....	.....	30.36	771.1	40	4.4	61	NE	5	2.2	.....	0	Sm'e	.....	.....	0	0	Clear	
Cleveland, Ohio	.....	.....	30.37	771.4	38.2	3.4	63	N	3	1.3	.....	.....	10ks	.....	NW	0.03	0.8	Clearing	
Colorado Springs, Col	24.20	617.0	30.16	766.1	45	7.2	24	NW	8	3.6	.....	1ck	0	W	.....	0	0	Clear	
Corsicana, Tex	.....	.....	30.36	771.1	44	6.7	75	N	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Davenport, Iowa	.....	.....	30.37	771.4	36	2.2	70	SW	8	3.6	.....	1ck	Sm'e	.....	.....	0	0	Clear, fair	
Denison, Tex	.....	.....	30.38	771.6	52	11.1	53	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Denver, Col	25.00	635.0	30.22	767.6	46	7.8	26	S	4	1.8	.....	5c	Haze	W	.....	0	0	Fair	
Detroit, Mich	.....	.....	30.19	771.9	28	—2.2	77	NW	3	1.3	.....	0	Sm'e	.....	.....	0	0	Clear	
Dodge City, Kan	27.59	700.8	29.92	760.0	46	7.8	61	SW	7	3.1	.....	0	Sm'e	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	30.33	770.4	39	3.9	55	W	4	1.8	.....	0	Haze	.....	.....	0	0	Clear	
Duluth, Minn	.....	.....	30.01	763.0	38	3.3	63	SW	4	1.8	.....	2ck	0	SW	.....	0	0	Fair	
Eastport, Me	.....	.....	30.11	764.8	48	8.9	92	NW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Erie, Pa	.....	.....	30.33	770.4	35	1.7	80	NW	8	3.6	.....	.....	10ks	.....	NW	0.17	4.3	Cloudy	
Escanaba, Mich	.....	.....	30.18	766.6	37	2.8	71	SW	8	3.6	.....	5c	0	S	.....	0	0	Fair	
Fort Gibson, I. T	.....	.....	30.36	771.1	34	1.1	79	Calm	0	0	.....	0	0	.....	.....	0	0	Clear, frost	
Fort Sill, I. T	28.09	738.9	30.25	768.3	41	5.0	65	S	1	0.4	.....	0	Haze	.....	.....	0	0	Clear	
Fort Sully, Dakota	28.28	718.3	29.96	761.0	42	5.6	66	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex	.....	.....	30.28	769.1	61	16.1	49	E	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Grand Haven, Mich	.....	.....	30.33	770.4	37	2.8	80	SE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Indianapolis, Ind	.....	.....	30.40	772.1	31	—0.6	89	NW	1	0.4	.....	Haze	Sm'e	.....	.....	0	0	Smoky, frost	
Indianola, Tex	.....	.....	30.28	769.1	60	15.6	49	NE	.....	.....	3	0	0	.....	.....	0	0	Clear	
Jacksonville, Fla	.....	.....	30.12	765.0	55	12.8	68	NW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Keokuk, Iowa	.....	.....	30.36	771.0	37	2.8	71	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Key West, Fla	.....	.....	30.04	763.0	76.8	24.9	77	E	11	4.9	.....	5cs	2ks	W	NE	0	0	Fair	
Kittyhawk, N. C	.....	.....	30.11	764.8	56	13.3	75	NE	30	13.4	.....	2k	5ks	W	.....	0	0	Fair	
Knoxville, Tenn	.....	.....	30.31	769.9	42	5.6	65	NE	8	3.6	.....	.....	10ks	.....	NE	0.01	0.3	Cloudy	
La Crosse, Wis	.....	.....	30.29	769.4	35	6.7	89	S	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Leavenworth, Kan	.....	.....	30.33	770.4	37	2.8	62	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Lexington, Ky	29.25	742.9	30.42	772.7	32	0.0	79	N	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Long Branch, N. J	.....	.....	30.13	765.3	51	10.6	72	NW	18	8.0	.....	10cs	0	NW	.....	0	0	Cloudy	
Louisville, Ky	.....	.....	30.42	772.7	35	1.7	80	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Lynchburg, Va	.....	.....	30.23	768.3	45	7.2	64	N	2	0.9	.....	10k	0	NW	.....	0	0	Cloudy	
Malone, N. Y	.....	.....	30.26	768.6	36	2.2	90	Calm	0	0	.....	.....	10ks	.....	NW	0.14	3.6	Light snow	
Marquette, Mich	.....	.....	30.12	765.0	39	3.9	73	SE	4	1.8	.....	5ck	0	SW	.....	0	0	Fair	
Memphis, Tenn	.....	.....	30.40	772.1	40	4.4	73	SE	4	1.8	.....	0	Haze	.....	.....	0	0	Clear, frost	
Milwaukee, Wis	.....	.....	30.34	770.6	36	2.2	90	SW	7	3.1	.....	5ck	0	W	.....	0	0	Fair	
Mobile, Ala	.....	.....	30.26	768.6	46	7.8	69	N	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Montgomery, Ala	.....	.....	30.27	768.8	43.5	6.4	67	N	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Morgantown, W. Va	.....	.....	30.34	770.6	37	2.8	86	NW	4	1.8	.....	.....	10s	.....	.....	0.06	1.5	Cloudy, frost	
Mt. Washington, N. H	23.84	605.5	30.20	767.1	32	0.0	100	W	8	3.6	.....	.....	Fog	.....	W	0	0	Foggy	
Nashville, Tenn	.....	.....	30.34	770.6	42	5.6	65	N	4	1.8	.....	0	Haze	.....	.....	0	0	Clear	
New Haven, Conn	.....	.....	30.13	765.3	50	10.0	71	N	12	5.4	.....	0	5ck	.....	W	0	0	Fair	
New London, Conn	.....	.....	30.11	764.8	50	10.0	79	N	4	1.8	.....	5ck	0	SW	.....	0	0	Fair	
New Orleans, La	.....	.....	30.26	768.6	52	11.1	50	NE	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Newport, R. I	.....	.....	30.10	764.5	50	10.0	93	NW	5	2.2	.....	2ck	2s	SW	N	0	0	Fair	
New York, N. Y	.....	.....	30.14	765.5	49	9.4	64	N	12	5.4	.....	2ck	Fog	N	.....	0	0	Fair	
Norfolk, Va	.....	.....	30.17	766.3	48	8.9	73	N	14	6.3	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
North Platte, Neb	27.15	689.6	29.77	756.1	38	3.3	72	Calm	0	0	.....	0	Fog	.....	.....	0	0	Fair	
Omaha, Neb	29.10	739.1	30.20	767.1	41	5.0	56	S	12	5.4	.....	2cs	0	.....	.....	0	0	Clear	
Oswego, N. Y	.....	.....	30.32	770.1	38.5	3.6	75	N	7	3.1	.....	.....	10ks	.....	N	Inap.	Inap.	Cloudy	
Peck's Beach, N. J	.....	.....	30.13	765.3	47	8.3	85	N	16	7.2	.....	1c	8s	W	W	0	0	Cloudy	
Pembina, Dakota	.....	.....	29.78	756.4	41	5.0	73	S	12	5.4	.....	2c	Haze	SE	.....	0	0	Fair	
Philadelphia, Penn	.....	.....	30.17	766.3	46	7.8	69	N	18	8.0	.....	8ck	2s	W	W	0	0	Cloudy	
Pike's Peak, Colorado	18.04	458.2	30.24	768.1	24	—4.4	74	NW	20	8.9	.....	2cs	0	NW	.....	0	0	Fair	
Pittsburgh, Penn	.....	.....	30.33	770.4	38	3.3	63	N	6	2.7	.....	.....	10ks	.....	.....	0.01	0.3	Cloudy	
Port Huron, Mich	.....	.....	30.39	771.9	29	—1.7	78	SW	6	2.7	.....	0	0	.....	.....	0.07	1.8	Clear	
Portland, Me	.....	.....	30.13	765.5	47	8.3	77	N	10	4.5	.....	8k	Haze	NW	.....	0	0	Cloudy	
Portland, Oregon	.....	.....	30.08	764.0	61	16.1	88	S	9	4.0	.....	.....	10s	.....	.....	0	0	Cloudy	
Punta Rassa, Fla	.....	.....	30.09	764.3	65.0	18.3	68	N	8	3.6	.....	0	2s	.....	.....	0	0	Clear	
Rochester, N. Y	.....	.....	30.31	769.9	35	1.7	89	W	10	4.5	.....	.....	10s	.....	W	0.10	2.5	Cloudy	
Salt Lake City, Utah	25.86	656.8	30.19	766.8	52	11.1	41	NE	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J	.....	.....	30.10	764.5	50	10.0	64	N	22	9.8	.....	8ck	Haze	SW	.....	0	0	Cloudy	
San Diego, Cal	.....	.....	30.02	762.5	63	17.2	88	Calm	0	0	.....	.....	10ks	.....	.....	0	0	Cloudy	
San Francisco, Cal	.....	.....	30.08	764.0	54	12.2	80	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Santa Fe, N. M	23.47	596.1	30.01	762.2	47	8.3	38	NE	4	1.8	.....	2c	Haze	SW	.....	0	0	Fair	
Savannah, Ga.	.....	.....	30.15	765.8	52	11.1	73	N	16	7.2	.....	5k	0	NE	.....	0	0	Fair	
Shreveport, La	.....	.....	30.40	772.1	45	7.2	84	NE	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Smithville, N. C	.....	.....	30.11	764.8	48	8.9	85	N	9	4.0	.....	2k	5ks	W	SW	0.03	0.8	Clearing	
Springfield, Mass	.....	.....	30.15	765.8	48	8.9	36	N	12	5.4	.....	2ck	1s	N	.....	0	0	Fair	
St. Louis, Mo	.....	.....	30.45	773.1	38	3.3	71	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla	.....	.....	30.11	765.5	49	9.4	64	N	11	4.9	.....	0	0	.....	.....	0	0	Clear	
St. Paul, Minn	.....	.....	30.11	764.8	34	1.1	79	E	9	4.0	.....	5c	0	.....	.....	0	0	Fair	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Squa Beach, N. J	.....	.....	30.06	763.5	51	10.6	72	N	6	2.7	.....	2cs	8s	.....	N	0	0	Cloudy	
Toledo, Ohio	.....	.....	30.38	771.6	30	—1.1	78	W	3	1.3	.....	0	Haze	.....	.....	0	0	Clear	
Tucson, Arizona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Tybee Island, Ga	.....	.....	30.12	765.0	52	11.1	86	N	16	7.2	.....	Haze	0	.....	.....	0	0	Clear	
Vicksburg, Miss	.....	.....	30.43	772.9	43	6.1	75	NE	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Virginia City, Montana	24.47	621.5	29.95	760.7	39	3.9	39	Calm	0	0	.....	3c	0	W	.....	0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.23	767.8	41.5	5.3	75	NW	9	4.0		1c	0			0	0	Clear	
Wilmington, N. C			30.12	765.0	48	8.9	77	N	12	5.4		5k	2s	SW	SW	0	0	Fair	
Wood's Hole, Mass.			30.10	764.5	53	11.7	79	N	4	1.8		0	5s		N	0	0	Fair	
Wytheville, Va.	27.83	706.9	30.08	764.0	36	2.2	70	N	7	3.1			10s			0	0	Cloudy	
Yankton, Dakota	28.78	731.0	30.08	764.0	46	7.8	47	SW	6	2.7		0	Sm'c			0	0	Smoky	
Yuma, Arizona			29.97	761.2	70	21.1		Calm				2ck	2ks			0	0	Fair	
Sub-Series																			
Bridgetown, B'b'does, W. I					79	26.1	82	NE	3	1.3		2k	5ks	W	NE	0	0	Fair	E Racker.
Pointe-aPitre, G'd'loupe, do			29.93	760.2	74	23.3	82	E				8c	0			0	0	Clear	L. V. Bigard.
Havana, Cuba, W. I.			30.02	762.5	79	26.1	69	N	2.4	1.1		6c, ck	2k	SW	NE	0	0	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W.			30.13	765.3	79	26.1	58	Calm	0	0		8c	2s		SE	0.23	5.8		James Gall.
St. Thomas, St. T., W. I.			30.18	766.6	79	26.1	78	S				2cs	5kn	E	E	0.86	21.8	Cloudy	W. S. Cameron.
Santiago de Cuba, W. I.			29.78	756.4	79	26.1	78	NE	1.2	0.5		0	4ks					Fair	Robert Mason.
St. Georges, Bermudas			30.08	764.0	76.5	24.7	84	SSE	4.3	1.9		0	5pc		SSE	0.570	14.48	Clear	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.			29.57	751.1	29	—1.7	100	SE	4	1.8			10s			0	0		J. Fortescue.
St. John's, Newfoundland																			John Delaney.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Clifton, Jamaica, W. I.	27.19	690.6	29.98	761.5	65	18.3	90	SE	2.0	0.9		0	2k			0.21	5.3	Fine	C. Partridge.
Navassa																			
Meaellin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			30.38	771.6	35	1.7		NW	4	1.8			10ks			0	0	Cloudy	H. M. Redington.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Leipzig, N. 40° 18′, W. 65° 30′.	ENE		30.01	763.0	66.2	19.4		E			3		..k		E	Smooth		Cloudy	

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; 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, 6,86[illegible] (?) ft., or 2,091.6 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 20, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			29.88	759.0	73.2	22.9	49	NE			1		0			Inap.	Inap.		Charnot.
Aiglers			29.90	759.4	69.8	21.0	85	N			2		7			0	0		Peter.
La Calle																			Kuntz.
Tunis			29.93	760.2	80.6	27.0	42	NE			3		5			0	0		Jacques.
Sfax			29.98	761.5	78.1	25.6	71	S			2		1			0	0		Chauvey.
Safda			29.85	758.2	67.1	19.5	43	SW			1		2			0	0		Grosjean.
Tebessa			29.93	760.3	77.7	25.4		SE			4		1			0	0		Colin.
Geriville			29.87	758.8	68.0	20.0	32	W			1		1			0	0		Bernadach.
Laghouat			29.92	759.9	77.0	25	28	SE			1		1			0	0		Simon.
Biskra			29.92	760.0	85.1	29.5	17	E			3		1			0	0	Sirocco	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			30.04	763.0	44.5	7.0	86	NW			1		10			0.134	3.4	Raining	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.11	764.7	37.9	3.3	88	WNW			1		10			0.028	0.7		I. R. Observatory.
Eperies			30.03	762.8	43.7	6.5	61	Calm			0		10			0	0		Julius Mikolik.
Gratz	28.81	731.8	30.05	763.2	42.1	5.6	76	SSE			2		10						Andreas Rospini.
Hermannstadt	28.57	725.6	30.02	762.5	43.5	6.4	67	NW			1		10			0	0		Prof. Reissenberger.
Kremsmünster	28.58	725.8	29.95	760.8	39.6	4.2	74	E			6		10			0	0		Prof. C. Wagner.
Lemberg			30.03	762.7	33.1	0.6	83	NE			1		9			0	0		Dr. T. Stanecki.
Nyiregyhaza			30.12	765.0	41.4	5.2	90	NE			2		9			0	0		Habasuda Daniel.
Pola			29.95	760.8	65.1	18.4	84	SSE			2		9 kts			0.011	0.27		I.R. Hydrographic Office
Szegedin			30.05	763.2	45.0	7.2	63	N			1		10			0.038	0.96		Karl Stancel.
Trieste			29.94	760.5	63.7	17.6	89	NNW			0		10			0.693	17.6	Light rain	Prof. V. Farolfi.
Vienna			30.03	762.8	41.9	5.5	66	SE			1		4			0	0		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 9 p. m., local time. The elevation of Gratz is 313.5 meters, or 1,126.9 feet; Hermannstadt, 4[illegible]7.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.56	750.9	50.2	10.1	87	ESE			4		10			0.016	0.40		Royal Observatory

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.87	758.7	48.5	9.2		SE	42	18.8			9			0	0	Squally	William Boswell.
Ardrossan			29.64	752.8	47	8.3		E			4		8					Overcast	Wm. McNeil.
Armagh Observatory			29.49	749.0	56.2	10.1		E	23	10.3			10					Raining	S. Cali, for Dr. Robinson.
Bidston, Liverpool Obs			29.50	749.3	47.2	8.4		E			3		10					Raining	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.40	746.7	57.3	14.1		ESE			1		9					*D. clouds	J. Dreyer.
Bradford			29.54	750.3	45.3	7.4		E			2		10					Raining	J. McLandsborough.
Bridgetown, (Barbadoes)			29.93	760.2	82.4	28.0		NE			2		5					*D. clouds	T. H. Hunt.
Cambridge Observatory			29.49	749.0	49.0	9.4		ESE			2		10			0.701	17.81	Overcast	Sergeant Hunt, A.H.C.
Cape Good Hope Obs.			30.04	763.0	68.2	20.1	68	WNW	16	7.2			5						The Staff, for E. J. Stone.
Cardington			29.48	748.8	49.2	9.6		E					10					Raining	John McLaren.
Carlisle			29.63	752.6	47.2	8.4		SE					10			0.23	5.8		T. Bell, for J. Cartmell.
Chatham, School M. E.			29.44	747.8	51.2	10.7		E			1		0					Threatening?	Capt. J. Fellowes, R. E.
Dartmoor	28.07	713.0	29.44	747.8	56.2	13.4		E			1		5					*D. clouds.	R. E. Power.
Donaghadee			29.54	750.3	49	9.4		SE			6		10					Raining	J. Mac Gowan, Jr.
Dover			29.45	748.0	55	12.8		SE			4		10					Raining	J. Costello.
Eccles, (near Manchester)			29.51	749.5	47.9	8.8		E	4.0	1.8			10					Raining	Thomas Mackereth.
Falmouth Observatory			29.40	746.7	58.9	14.9		S	16	7.2			4					*D. clouds	The Staff.
Fort Napier, (Natal)	27.52	699.0	29.73	755.1	67.0	19.4		E			2		9					Overcast	Pvt G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.97	761.2	82	27.8		N					8					*D. clouds	
Galway, Queen's College																			B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			29.87	758.7	59.5	15.3		NNE			2		10					Raining	Sergt. E. G. Baker.
Glasgow Observatory			29.68	753.9	46.9	8.3		ESE			2		10					Overcast	Lewis Stuart.
Great Yarmouth			29.54	750.3	48	8.9		E			8		8					Raining	G. T. Watson.
Greenwich Royal Obs			29.44	747.8	50.7	10.4		ENE			3		10					Drizzling	The Staff, for G. B. Airy.
Guernsey			29.45	748.0	59.5	15.3		SW			1		7					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs			29.58	751.3	45.0	7.2		E					10					Raining	F. J. Page, for L. J. Crossley.
Helston			29.38	746.2	61	16.1		S			4		4			0.04	1.0	*D. clouds	M. P. Moyle.
Holyhead			29.45	748.0	50	10.0		E			4		10					Raining	John Tilston.
Kew Observatory			29.43	747.5	50.8	10.4		ENE	16	10.3			10					Raining	The Staff.
Kingstown			29.46	748.3	53	11.7		E			4		10					Raining	George Mitchell.
Leicester Museum			29.50	749.3	47.0	8.3		E			1		10					Raining	William J. Harrison.
Llandudno			29.50	749.3	47.1	8.4		E					10			Blank	Blank	Overcast	Dr. James Nicol.
Malta, (Mediterranean)			30.00	762.0	75.6	24.2		SE			1		6k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			29.81	757.2	49	9.4		SE			2		8						W. D. Penny.
Nassau, (Bahamas)			30.08	764.0	78.2	25.7		N			6		7					Squally	Surg.-Maj. Henry.
Nottingham			29.53	750.0	46.5	8.1		ESE			3		10n		E	1.15	29.2	Raining	E. J. Lowe.
Oscott, St Mary's College			29.49	749.0	46.0	7.8		ENE			1		10					Raining	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.41	747.8	50	10.0		ENE			1		10					Overcast	J. Lucas, for R. Main.
Plymouth			29.42	747.3	58.9	14.9		SE			1		1					Clear	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.34	745.2	57	13.9		SE			5		5					Cloudy	W. Kennedy.
Saint Ann's Head			29.40	746.7	56	13.3		E			4		8					Overcast	John C. Walker.
Saint Helier, (Jersey)			29.43	747.5	60.4	15.8		W			2		10						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			29.67	753.6	48.3	9.1		ESE			8		10					Overcast	F. Shaw.
Scutari cemetery, (Turkey)			30.01	762.2	68.6	20.3		SW			1		1					Clear	Sergt. W. H. Lyne.
Sheffield			29.54	750.3	47.0	8.3		E			2		10			1.56	39.6	Raining	W. F. Cooper.
Silloth Rectory			29.60	751.8	47.7	8.7		ESE			5		10			0.530	13.46	Raining	Rev Francis Redford.
Stonyhurst Observatory			29.50	749.3	45.1	7.8		E			4		10					Raining	The Staff.
Stornoway, Lewis C. (Hebr)			29.70	754.4	49	9.4		ESE			6		10					Showery	John Smith.
Stratfield Turgiss			29.45	748.0	50.2	10.1		E			1		10					Raining	Rev. Charles H. Griffith
Streatley Vicarage			29.46	748.3	50.8	10.4		SE			4		10			0.350	8.89		Rev. John Slatter.
Thurso			29.86	758.4	47	8.3		ESE			6		8					Gloomy	John Trotter.
Truro, Royal Institution			29.36	745.7	64	17.8		SE			6		5					*D. clouds	W Newcombe.
Valencia Observatory			29.26	743.2	56.9	13.8		ESE	16	7.2			7					Showery	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					51	10.6		ESE			8		10			0.95	24.1	Raining	
Leith, Restalrig Park			29.76	755.9	48.0	8.9		SE			6		10ks			0.08	2.0	Threatening	Andrew Gibb.
Monach Lt-house, (Shet. Is)			29.68	753.9	51	10.6		SE			6		10			0.3	0.8		J. Youyclause.
North Unst, (Shetland Is)			30.13	765.3	44	6.7		SE			6	7	5	SE					

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., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m., instrumental error —.102 uncertain. * Detached clouds.

DANISH SERIES.

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

Copenhagen			30.17	766.3	39.7	4.3	63	E			6		2						
Fanöe			30.10	764.1	42.4	5.8	73	E			6		5						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.60	751.7	42.8	6.0	91	SE			6		10						
Thorshavn, (Faröe)			29.98	761.6	46.1	8.2	70	SE			6		10						
Vestervig			30.17	766.4	39.4	4.2	58	ENE			6		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols: not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			29.69	754.1	57.2	14.0	93	S			2		10kn			0.008	0.2	Cloudy	Normal School.
Amiens			29.47	748.4	55.8	13.2	84	SE			3		10			0.165	4.2	Cloudy	Normal School.
Avignon			29.69	754.2	67.3	19.6	77	SSE			4		8		S	1.161	29.5	Cloudy	Normal School.
Bar-sur-Seine			29.53	750.1	58.6	14.8	77	SSW			6		8cks		SW	0.071	1.7	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.52	749.9	58.8	14.9	86	NW	3.6	1.6			10		SW	0.382	9.7	Cloudy	Beaumette Observatory
Beauvais			29.51	749.6	58.6	14.8	91	SSE			1		10		SW	0.502	12.75	Cloudy	Normal School.
Besançon			29.91	759.7	58.1	14.5	81	S			3		8		S	0.016	0.4	Cloudy	Normal School.
Bourg en Bresse			29.85	758.1	62.4	16.9	68	S			2		10			0.48	12.2	Cloudy	Normal School.
Bourges			29.60	751.9	58.3	14.6	84	WSW			3		8		ENE	0.228	5.8	Cloudy	Normal School.
Brest			29.37	746.1	61.0	16.1	71	S			3		8		S	0.118	3.00	Stormy	Naval Observatory.
Caen			29.60	751.9	57.0	13.9	95	S			1		10		SW	0.087	2.2	Cloudy	Normal School
Chartres																			Normal School.
Chaumont	28.46	723.0	29.62	752.4	57.6	14.2		S			6		10n,s		SSW	0.041	1.05	Cloudy	Normal School.
Commercy			29.79	756.6	48.9	9.4	92	E			4		5		SW	0.085	2.1	Cloudy	Normal School.
Commune de Gréasque*			29.78	756.5	62.6	17.0	87	SE			4		8		SE	0.270	7.0		Normal School.
Le Mans																			Normal School.
Lons-Le-Saulnier			29.73	755.2	54.5	12.5	92	W			2		5		W	0.54	13.8	Rainy	Normal School.
Mâcon			29.69	754.2	53.6	12	87	W			4		5		NW	0.024	0.6	Cloudy	Normal School.
Mirecourt			29.64	752.9	53.6	12	60	NW			2		10		SE	0.08	2.	Cloudy	Normal School.
Orleans			29.59	751.6	55.0	12.8	93	W			3		8		W	0.24	6.	Cloudy	Normal School.
Paris Observatory			29.49	749.0	56.7	13.7	98	S			2		10		SW	0.183	4.66	Raining	National Observatory.
Parthenay			29.58	751.4	57.9	14.4	91	SW			2		10			0.67	17.	Cloudy	Normal School.
La Roche sur Yon			29.55	750.5	61.5	16.4	83	SW			4		2		NE	0	0		Normal School.
Rochefort, Observatory			29.58	751.2	61.7	16.5	73	WSW			2		10		ENE	0.433	11.0	Thunder	Naval Observatory.
Rouen			29.53	750.0	58.8	14.9	87	NW			2		10			0.236	6.0	Cloudy	Normal School.
Saint Lo			29.40	746.7	59.9	15.5	78	E			2		7		SE	0.91	23.		Normal School.
Villefranche			29.70	754.3	53.6	12	95	SE			2		8		S	0	0	Cloudy	Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchésí.
Mont-Louis			30.09	764.3	43.5	6.4	91	SSW	24.1	11.67			10		SSW	0.941	23.9		—. Falgnere.
Montsouris, Paris			29.48	748.9	56.7	13.7	97	N			3		10n			0.461	11.7	Heavy rain	Montsouris Osberv'tory.
Perpignan	†29.60	†751.9			71.1	21.7	54	NW	1.9	0.83			2			0.409	10.4		Dr. Imes.
Pic du Midi, (Summit) H. P.																			M. Baylac.
Pic du Midi, (Plantade) H.P.																			General de Nansouty.
Saint Maur, (near Paris)			29.49	749.0	57.0	13.9	98	S			1		10			0	0	Raining	E. Renou.
Tours			29.57	751.0	56.8	13.8		SE			1		10		WSW	0.626	15.9		C. Marquet.
Versailles, (near Paris)			29.49	749.1	57.9	14.4	95	W			3		10			0.661	16.77	Raining	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.22	767.6	62.8	17.1	97	ESE	7.6	3.4		0	5			0 / 0	0 / 5	Misty	H. Le Lec, S. J.

NOTE.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 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. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also.

GERMAN SERIES.

Furnished by the coöperation of Prof. Geo. Neumayer, Superintendent Royal 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			29.89	759.1	47.3	8.5	49	E	18	8			3			0	0		Prof. Hoh.
Berlin			30.11	764.8	42.4	5.8	85	SE	9	4			8			0	0		Prof. Arndt.
Breslau			30.15	765.8	36.7	2.6	83	NNE	22	10			10			0	0		Dr. P. Neugebauer.
Carlsruhe			29.74	755.3	53.2	11.8	69	E	11	5			10			0	0		A. Senz.
Cassel			29.67	753.5	47.8	8.8	49	E	22	10			2			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Preste'.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.32	719.3	29.76	756.0	48.2	9.0	73	NE					6			0	0		M. Wilhelm.
Hamburg			30.07	763.7	44.2	6.8	69	SE	18	8			5ks	SE		0	0	Cloudy	Deutsche Seewarte.
Kiel			30.18	766.5	44.4	6.9	69	ESE	22	10			7			0.013	0.3		Prof. G. Karsten.
Königsberg			30.17	766.4	31.5	− 0.3	77	NE	11	5						0.001	0.02	Cloudy	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			29.99	761.7	42.1	5.6	73	ENE	13	6			6			0	0		Prof. Bruhns.
Münster			29.82	757.3	46.9	8.3	57	E	18	8			3			0.488	12.4		Prof. F. Heis.
Posen			30.17	766.3	36.1	2.3	69	N	22	10			10			0	0	Cloudy	Dr. Magener.
Strasburg, (in Alsace)			29.80	757.0	51.6	10.9	71	NW	9	4			10			0.323	8.2		Dr. Schur.
Stuttgart			29.76	755.9	51.4	10.8	67	E					9			0	0		Mr. Würth.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.70	754.4	47.5	8.6	78	E	9	4			10			0.079	2.0		Prof. Flesch.
Wustrow, Naval School			30.19	766.7	43.0	6.1	78	ENE	13	6			7ks			0.050	1.26		E. F. Schütz.

NOTE.—In the originals the distinction between 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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens			30.04	763.0	72.3	22.4		SW										Clear	

NOTE.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			29.89	759.3	54.1	12.3	96	WNW	0.7	0.3			10	E		0.441	11.2		
Mondovi			29.64	752.9	51.6	10.9	99	NW			2		10			0.169	4.3		
Genoa			29.83	757.6	65.5	18.6	83	SE	15.0	6.7			10	SE		1.016	25.8		
Pavia			29.86	758.5	56.5	13.6	97	E			4		10			0.386	9.8	Raining	
Verona			29.89	759.3	63.5	17.5	82	E					10			0.047	1.2		
Padua			29.91	759.6	61.0	16.1	84	NE	5.6	2.5			10	SW		0	0		
Parma																			
Bologna			29.75	760.8	63.9	17.7	67	NW			1		6	N		0	0		
Leghorn			29.90	759.4	66.7	19.3	75	SSE	4.3	1.9			10			0	0		
Urbino			29.98	761.5	62.6	17.0	68	SSW			4		8			0	0		
Ancona			29.95	760.7	65.3	18.5	59	SE			2		8			0	0		
Siena			29.93	760.2	62.8	17.1	79	SSE	1.3	0.6			10	SW		0	0		
Rome			29.99	761.7	69.3	20.7	61	SSE	15.0	6.7			8	WSW		0	0		
Naples, O. U.			30.05	763.2	72.5	22.5	42	SW			2		0			0	0		
Lecce			30.04	763.0	70.3	21.3	27	SSW	9.4	4.2			6	S		0	0		
Cosenza			30.05	763.2	67.6	19.8	57	NE			1		2	SW		0	0		
Catania, (Sicily)																			
Riposto																			
Palermo			29.94	760.4	75.6	24.2	53	NE	1.3	0.6			2			0	0		
Sub-Series.																			
Naples, S. R.			30.00	762.1	68.7	20.4	55	SW			2			NW		0	0		Prof. F. Brioschi.

NOTE.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for twenty-four hours. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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			29.59	751.5	49.6	9.8		ESE			5								
Groningen			29.83	757.7	42.1	5.6		E			6								
Helder			29.74	755.4	43.2	6.2		E			5								
Utrecht			29.68	753.9	43.0	6.1		E			4		10					Overcast	

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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			30.24	768.0	42.4	5.8	73	Calm	0	0			3			0	0		
Christiania			30.39	771.8	32.4	0.2	67		2.2	1.0			10			0	0		
Tromsö			30.32	770.1	37.0	3.3	78	S			2		9			6	0		

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			29.78	756.3	63.3	17.4	73	SW	8.7	3.9			4			0.693	17.6		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			30.12	765.0	30.7	— 0.7	90	N	4	2			10						Astronomical Obs.
Wilna			30.10	764.4	28.0	— 2.2	75	N	4	2			10						Astronomical Obs.
Dorpat			30.23	767.9	32.0	0.0	78	NE	7	3			5						Physical Cabinet.
St. Petersburg			30.26	768.6	29.8	— 1.2	74	ENE	7	3			1						Central Physical Obs.
Kuopio			30.04	763.0	32.4	0.2	87	NNW	9	4			10						Ch. Forsten.
Kiell			30.06	763.5	40.3	4.6	67	W	20	9			9						Physical Cabinet.
Nikolaiev			29.98	761.6	50.9	10.5	67	NW	9	4			6						Kurdakof.
Kertch			30.03	762.8	28.6	— 1.9	92	NW	10	4.5			10						Lagorio.
Moscow			29.78	756.3	41.9	5.5	68	W	10	4.5			10					Raining	Meteorological Obs.
Lugan			30.37	771.2	31.6	— 0.2	92	WNW	13	6			10						Meteorological Obs.
Archangel	28.62	726.8	29.99	761.8	68.2	20.1	56	SE	8	3.5			3						Ogorodnikof.
Tiflis			30.09	764.3	57.7	14.3	71	SSE	8	3.5			8						Physical Obs.
Astrakhan			30.11	764.7	35.2	2.8	81	NE	8	3.5			10						Sebastianof.
Kasan			29.99	761.7	36.9	2.7	98	Calm	0	0			10						Physical Cabinet.
Orenburg	29.21	741.9	30.29	769.4	19.0	— 7.2	81	Calm	0	0			0						Tschernischef.
Ekaterinburg			29.91	759.6	55.4	13.0	70	W	8	3.5			3						Meteorological Obs.
Kasaly																			Bobrof.
Tashkend			30.28	769.0	24.8	— 4.0	95	Calm	0	0			4						Michelson.
Barnaul			30.01	762.3	25.5	— 3.6	91	SSW	4	2			10					Snowing	Meteorological Obs.
Yeniseisk																			Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.19	766.8	58.3	14.6	85	Calm	0	0			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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. Archangel barometer, as given, should be reduced by a correction of −3.5 mm. from January to July, and by a correction of −2.0 mm. from July to October 19, 1875.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.80	757.0	57.2	14.0	65	SW	16.3	7.3		0	7			0.028	0.7	Cloudy	Royal Observatory.
San Fernando			29.85	758.3	60.1	15.6	98	SE	12.8	5.7			10	W		1.602	40.7	Raining	The Naval Observatory.

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

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Haparanda			30.47	773.8	28.0	— 2.2	100	N			2		10			0	0		
Umea			30.44	773.1	26.1	— 3.3	87	Calm			0		10			0	0		
Hernosand			30.47	774.0	29.1	— 1.6	88	N			2		10			0	0		
Stockholm			30.27	768.8	33.4	0.8	71	NE			4		10			0	0		
Wisby			30.24	768.2	37.4	3.0	69	ENE			4		10			0	0		
SUB-SERIES.																			
Upsala			30.32	770.2	33.8	1.0	77	NNE	8.3	3.7			10		NE			Snowing	Dr. Hildebrandsson.

NOTE.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series 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. —Ft.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.33	719.6	29.74	755.9	52.9	11.6	100	N			0		10			0.043	1.1	Raining	The Observatory.
Zurich	28.16	715.2	29.81	757.1	50.4	10.2	79	NW			1		8			0	0	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —6.5mm.; Thermometer, —0°.5; Relative Humidity, +28 per cent.

Note.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Beirut, (Syria,) Lee Obs'y			29.99	761.8	77.0	25.0	56	W			2		6ck		W	0	0		Prof. C. V. A. Van Dyck.
Constantinople			30.04	763.1	65.8	18.8	73	SW	6.7	3.0		1	2		SW	0	0		
Fao, (Persian Gulf)			30.12	765.0	84.6	29.2		SE				1	0					Clear	
Salonica					72.1	22.3		S				1	0					Clear	
Valona			30.00	762.9	69.4	20.8		W				1	0					Clear	
Varna			30.08	764.0	53.6	12.0		W				3	10					Cloudy	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Brockville, Ontario			30.17	766.3	44	6.7		SW	8	3.6		0	2s		SW	0	0	Fair	
Chatham, N. B.			29.92	760.0	34	1.1	84	SW	3	1.3		0	0			0	0	Clear	
Charlottetown, P. E. Island			29.98	761.5	45	7.2	94	S	3	1.3		0	0			0	0	Clear	
Fort Garry, Manitoba			29.81	757.2	39	3.9	84	SW	4	1.8		0	2s			0	0	Fair	
Halifax, N.S.			29.95	760.7	49	9.4	96	S	3	1.3			Fog			0	0	Foggy	
Kingston, Ontario			30.16	766.1	45	7.2	82	W	12	5.4		2c	0	W		0	0	Clear	
Montreal, Quebec			30.06	763.5	40	4.4	82	S	18	8.0		2cs	0	SW		0.07	1.8	Clear	
Ottawa, Ontario			30.06	763.5	35	1.7	65	S	8	3.6		2k	0	S		0	0	Clear	
Parry Sound, Ontario			30.06	763.5	44	6.7	86	SW	10	4.5		2cs	2ks	SW	SW	0	0	Fair	
Port Dover, Ontario			30.25	768.4	42	5.0	83	SW	4	1.8		0	0			0	0	Clear	
Port Stanley, Ontario			30.23	767.8	43	6.1	72	W	6	2.7		0	0			0	0	Clear	
Quebec, Quebec			30.00	762.0	36	2.2	90	SW	17	7.6			10n		SW	0	0	Cloudy	
Saugeen, Ontario			30.09	764.3	43	6.1	95	SW	10	4.5		5ks	0			0	0	Fair	
Stayner, Ontario			30.04	763.0	52	11.1	55	W	8	3.6		5c	0	NW		0	0	Fair	
Sydney, C. B.			30.04	763.0	43	6.1	96	Calm	0	0			10s		W	0	0	Cloudy	
Toronto, Ontario			30.17	766.3	40	4.4	80	SW	6	2.7		2c	0	W		0	0	Clear	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.19	766.8	37	2.8	80	Calm	0	0		5k	Haze	N		0	0	Fair, frost	
Alpena, Mich.			30.00	762.0	42	5.6	66	SW	6	2.7		5c	0	W		0	0	Fair	
Atlantic City, N. J.			30.19	766.8	39	3.9	82	NW	12	5.4		0	0			0.22	5.6	Clear	
Augusta, Ga.			30.35	770.9	42	5.6	83	N	2	0.9		0	0			0	0	Clear, frost.	
Baltimore, Md.			30.30	7 9.6	42	5.6	65	NW	3	1.3		0	0			0	0	Clear	
Barnegat, N. J.			30.17	766.3	42	5.6	75	NW	14	6.3		0	0			0.01	0.3	Clear	
Benton, Montana	27.24	691.9	30.04	763.0	45	7.2	76	Calm	0	0		0	0			0	0	Clear	
Bismarck, Dakota	28.17	715.5	29.83	757.7	41	5.0	57	W	6	2.7		Haze	Haze			0	0	Hazy	
Boston, Mass.			30.10	764.5	39	3.9	72	NW	13	5.8		5c	5s	NW		0	0	Cloudy	
Breckenridge, Minn.			29.84	757.9	34	1.1	90	S	4	1.8		0	2s			0	0	Fair	
Buffalo, N. Y.			30.20	767.1	43	6.1	75	SW	12	5.4		5k	0	SW		0	0	Fair	
Burlington, Vt.			30.14	765.5	38	3.3	63	S	2	0.9		2k	0			0	0	Fair	
Cairo, Ill.			30.35	770.9	42	5.6	91	Calm	0	0		0	Fog			0	0	Foggy	
Cape Hatteras, N. C.			30.17	766.3	49	9.4	77	N	16	7.2		0	2s			0	0	Fair, haz	
Cape Henry, Va.			30.26	768.6	47	8.3	77	NW	22	9.8		8k	0	N		0.02	0.5	Fair	
Cape May, N. J.			30.20	767.1	42	5.6	75	NW	16	7.2		0	0			0	0	Clear	
Charleston, S. C.			30.31	769.9	46	7.8	76	N	10	4.5		0	0			0	0	Clear	
Cheyenne, Wyoming	24.23	615.4	30.17	766.3	37	2.8	45	NW	8	3.6		0	0			0	0	Clear	
Chicago, Ill.			30.17	766.3	44	6.7	60	SW	11	4.9		2c	Haze	N		0	0	Fair	
Cincinnati, Ohio			30.33	770.4	38	3.3	81	SE	3	1.3		0	Sm'e			0	0	Clear	
Cleveland, Ohio			30.29	769.4	38.4	3.6	63	S	8	3.6		0	Sm'e		S	0	0	Smoky	
Colorado Springs, Col.	24.29	617.0	30.16	766.1	43	6.1	33	N	6	2.7		0	0			0	0	Clear	
Corsicana, Tex.			30.30	769.6	41	5.0	74	Calm	0	0		0	0			0	0	Clear, frost.	
Davenport, Iowa			30.14	765.5	47	8.3	55	SW	4	1.8		5ck	Sm'e			0	0	Fair	
Denison, Tex.			30.26	768.6	47	8.3	71	S	3	1.3		0	0			0	0	Clear	
Denver, Col.	25.98	634.5	30.20	767.1	42	5.0	27	S	8	3.6		0	Haze			0	0	Hazy	
Detroit, Mich.			30.21	767.3	39	3.9	72	SW	10	4.5		0	Sm'e			0	0	Clear	
Dodge City, Kan.	27.51	698.7	29.84	757.9	42	5.6	83	S	4	1.8		2c	Sm'e			0	0	Fair, frost	
Dubuque, Iowa			30.13	765.3	45	7.2	61	S	6	2.7		0	Fog			0	0	Foggy	
Duluth, Minn.			29.92	760.0	43	6.1	67	SW	4	1.8		Haze	Haze			0	0	Hazy	
Eastport, Me.			30.00	762.0	42	5.6	74	N	10	4.5		8c	0	SW		0	0	Fair	
Erie, Pa.			30.23	767.8	40	4.4	73	S	12	5.4		0	Sm'e			0	0	Clear	
Escanaba, Mich.			29.98	761.5	42	5.6	83	SW	6	2.7			10s		S	0	0	Cloudy	
Fort Gibson, I. T.			30.24	768.1	40	4.4	72	S	4	1.8		1ck	0	W		0	0	Clear	
Fort Sill, I. T.	29.00	736.6	30.15	765.8	43	6.1	75	Calm	0	0		0	Fog			0	0	Clear	
Fort Sully, Dakota	28.28	718.3	29.94	760.5	46	7.8	54	E	6	2.7		0	2s			0	0	Fair	
Galveston, Tex.			30.25	768.3	57	13.9	74	NE	16	7.2		0	0			0	0	Clear	
Grand Haven, Mich.			30.14	765.5	50	10.0	64	S	16	7.2		5cs	0	NE		0	0	Fair	
Indianapolis, Ind.			30.32	770.1	37	2.8	80	SW	2	0.9		Haze	Sm'e			0	0	Smoky	
Indianola, Tex.			30.27	768.8	59	15.0	81	E	15	6.7		0	0			0	0	Clear	
Jacksonville, Fla.			30.22	767.6	54	12.2	79	N	4	1.8		0	0			0	0	Clear	
Keokuk, Iowa			30.14	765.5	50	10.0	45	SW	7	3.1		0	0			0	0	Clear	
Key West, Fla.			30.04	763.0	75.3	24.1	72	NE	16	7.2			10s		E	0	0	Cloudy	
Kittyhawk, N. C.			30.26	768.6	44	6.7	76	N	16	7.2		8k	0	NE		0	0	Fair	
Knoxville, Tenn.			30.37	771.4	34	1.1	79	NE	4	1.8		0	Fog			0	0	Foggy	
La Crosse, Wis.			30.04	763.0	45	7.2	60	SE	9	4.0		5c	Haze	E		0	0	Hazy	
Leavenworth, Kan.			30.10	764.5	50	10.0	64	S	4	1.8		10k	0	N		0	0	Cloudy	
Lexington, Ky.	29.25	742.9	30.42	772.7	35	1.7	70	S	4	1.8		0	0			0	0	Clear	
Long Branch, N. J.			30.18	766.6	46	7.8	62	NW	12	5.4		0	0			Inap.	Inap.	Clear	
Louisville, Ky.			30.37	771.4	37	2.8	100	Calm	0	0			Fog			0	0	Foggy	
Lynchburg, Va.			30.37	771.4	37	2.8	71	Calm	0	0		0	0			0	0	Clear	
Malone, N. Y.			30.05	763.3	43	6.1	67	SW	10	4.5		2ck	0	NW		0	0	Fair	
Marquette, Mich.			29.88	758.9	49	9.4	50	SW	16	7.2		2cs	Haze	N		0	0	Fair	
Memphis, Tenn.			30.36	771.1	41	5.0	65	Calm	0	0		1cs	Sm'e			0	0	Fair, frost	
Milwaukee, Wis.			30.14	765.5	42	5.6	74	SW	10	4.5		5c	Fog	SE		0	0	Fair	
Mobile, Ala.			30.27	768.8	44	6.7	91	N	4	1.8		0	0			0	0	Clear	
Montgomery, Ala.			30.32	770.1	43	6.1	71	N	2	0.9		0	Sm'e			0	0	Clear	
Morgantown, W. Va.			30.39	771.9	35	1.7	79	Calm	0	0		0	Haze			0	0	Clear, frost	
Mt. Washington, N. H.	23.77	603.8	30.13	765.3	27	—2.8	76	NW	20	8.9		2s	5s	NW	NW	0	0	Fair	
Nashville, Tenn.			30.34	770.6	37	2.8	80	N	2	0.9		0	Fog			0	0	Clear, frost	
New Haven, Conn.			30.14	765.5	41	5.0	74	N	12	5.4		Haze	5s		NW	0	0	Cloudy	
New London, Conn.			30.11	764.8	45	7.2	61	NW	8	3.6		2ck	2s	N		0	0	Fair	
New Orleans, La.			30.24	768.1	52	11.1	69	NE	8	3.6		0	Sm'e			0	0	Clear	
Newport, R. I.			30.06	763.5	46	7.8	69	NW	12	5.4			10s		NW	0	0	Cloudy	
New York, N. Y.			30.19	766.8	39	3.9	72	NW	10	4.5		0	Fog			0	0	Clear	
Norfolk, Va.			30.28	769.1	40	4.4	78	N	10	4.5		Haze	0			Inap.	Inap.	Clear	
North Platte, Neb.	27.18	690.4	29.83	757.7	35	1.7	90	W	2	0.9		0	0			0	0	Clear	
Omaha, Neb.	28.94	735.1	30.03	762.7	42	5.6	75	S	4	1.8		5c	Sm'e			0	0	Smoky	
Oswego, N. Y.			30.21	767.3	39.5	4.2	81	S	6	2.7		Haze	1s			0	0	Fair	
Peck's Beach, N. J.			30.21	767.3	40	4.4	73	NW	18	8.0		0	0			0.01	0.3	Clear	
Pembina, Dakota			29.79	756.7	39	3.9	86	S	8	3.6		2c	Haze			0	0	Fair	
Philadelphia, Penn.			30.23	767.8	40	4.4	64	NW	12	5.4		0	0			Inap.	Inap.	Clear	
Pike's Peak, Colorado	18.03	458.0	30.24	768.1	24	—4.4	61	NW	12	5.4		0	0			0	0	Clear	
Pittsburgh, Penn.			30.34	770.6	34	1.1	79	SW	4	1.8		0	0			0	0	Clear, frost	
Port Huron, Mich.			30.20	767.1	40	4.4	73	SW	12	5.4		0	0			0	0	Clear	
Portland, Me.			30.09	764.3	42	5.6	66	N	4	1.8		5c	Haze	NW		0	0	Fair	
Portland, Oregon			29.98	761.5	60	15.6	93	C	0	0			10s			0.06	1.5	Cloudy	
Punta Rassa, Fla.			30.11	764.8	66.0	18.9	73	NE	16	7.2			8s		SW	0	0	Cloudy	
Rochester, N. Y.			30.17	766.3	38	3.3	81	S	8	3.6		0	Haze			0	0	Clear, frost	
Salt Lake City, Utah	25.88	657.3	30.11	764.8	54	12.2	57	S	2	0.9		0	0			0	0	Clear	
Sandy Hook, N. J.			30.17	766.3	41	5.0	73	N	13	5.8		1c	0	NW		0	0	Clear	
San Diego, Cal.			29.98	761.5	59	15.0	76	Calm	0	0		0	0			0	0	Clear	
San Francisco, Cal.			30.04	763.0	58	14.4	94	SW	2	0.9			Fog			0	0	Foggy	
Santa Fe, N. M.	23.41	595.4	29.98	761.5	49	9.4	24		4	1.8		5c	Haze	SW		0	0	Fair	
Savannah, Ga.			30.29	769.4	47	8.3	77	N	8	3.6		0	0			0	0	Clear	
Shreveport, La.			30.36	771.1	43	6.1	92	Calm	0	0		0	0			0	0	Clear	
Smithville, N. C.			30.31	769.9	40	4.4	91	N	6	2.7		0	0			0	0	Clear	
Springfield, Mass.			30.14	765.5	39	3.9	72	NW	4	1.8		5ck	Haze			0	0	Fair	
St. Louis, Mo.			30.29	769.4	47	8.3	48	S	6	2.7		0	5s			0	0	Fair	
St Marks, Fla.			30.23	767.8	46	7.8	85	N	6	2.7		0	0			0	0	Clear	
St. Paul, Minn.			29.95	760.7	40	4.4	69	SE	6	2.7		5c	Haze			0	0	Fair	
St. Paul's Island, Alaska																			
Squa Beach, N. J.			30.10	764.5	40	4.4	73	NW	8	3.6		2c	Haze	NE		0.06	1.5	Fair	
Toledo, Ohio			30.24	768.1	40	4.4	64	SW	8	3.6		0	Sm'e			0	0	Clear	
Tucson, Arizona																			
Tybee Island, Ga.			30.28	769.1	51	10.6	71	N	20	8.9		Haze	0			0	0	Clear	
Vicksburg, Miss.			30.40	772.1	41.5	5.3	87	NE	1	0.4		0	Fog			0	0	Fair, frost	
Virginia City, Montana	24.40	619.8	29.88	758.9	43	6.1	35	SE	5	2.2		0	0			0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.30	769.6	38	3.3	71	NW	8	3.6		0	Sm'e			0	0	Clear	
Wilmington, N. C			30.31	769.9	40	4.4	73	N	8	3.6		0	0			0	0	Clear	
Wood's Hole, Mass			30.02	762.5	47	8.3	76	N	11	4.9			10s			0	0	Cloudy	
Wytheville, Va	27.92	709.2	30.20	767.1	30	−1.1	78	NW	3	1.3		0	0			0	0	Clear	
Yankton, Dakota	28.74	730.0	30.07	763.8	36	2.2	90	Calm	0	0		0	Haze			0	0	Hazy	
Yuma, Arizona			29.93	760.2	62	16.7		Calm				2ck	2ks	W		0	0	Fair	
Sub-Stations																			
Bridgetown, Barbados, W. I					82	27.8	91	S	5	2.2		2c	8s	W	NE	0	0	Fair	E Racker.
Pointe-à-Pitre, Guadeloupe, do			29.92	760.0	79	26.1	82	SE				10c	0			0.66	16.8	Cloudy	L V. Bigard.
Havana, Cuba, W. I			29.99	761.7	78	25.6	78	E	2.4	1.1		10ck	2k	SW	ENE	1.19	30.2	Cloudy	Charles Hasselbrink.
Kingston, Jamaica, W			30.11	764.8	77	25.0	83	Calm	0	0		5ck	2s			0	0		James Gall.
St. Thomas, St. T., W. I			30.15	765.8	76	24.4	72	SE	3	1.3		2cs	5k	E	E	0.70	17.8	Fair	W. S. Cameron.
Santiago de Cuba, W. I			29.74	755.4	76	24.4	76	NW	2.4	1.1		4c	2cs					Fair	Robert Mason.
St. Georges, Bermudas			29.95	760.7	77	25.0	91	SSE	4.0	1.8		8c	2ks	SSE	SSE	Inap.	Inap.	Fair	C. F. Allen.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.
Cumberland, B. A																			
Ft. Chippewyan, B. A																			
Ft. McPherson, B. A																			
Ft. Simpson, B. A																			
York Factory, B. A			29.72	754.9	32	0.0	100	E	2	0.9			10s			0	0		J. Fortescue.
St. John's, Newfoundland																			John Delaney.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Clifton, Jamaica, W. I	27.17	690.1	29.98	761.5	64	17.8	88	N	1	0.4		2c	0			0.11	2.8	Fine, clear	C. Partridge.
Navassa																			
Medellin, S. A																			
Paramaribo, S. A																			
Elyria, Ohio			30.30	769.6	35	1.7		S	8	3.6			0			0	0	Fine	H. M. Redington.

Marine Series.	True course towards.	Hourly rate in knots.	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—	State of ocean.	Direction of swell from—	Weather.	Observer.
Steamer Leipzig, N. 41° 52′, W. 61° 13′.	ENE		29.90	759.4	56.8	13.8		E			4					Rough		Drizzling	
Steamer Hibernian, N. 45° 19′, W. 59° 10′.	E	9½	29.91	759.7	46	7.8		SSE			3		...ks		W	Smooth		Hazy	

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; 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, 6,867.2 (?) ft., or 2,091.6 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 0.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in. The barometer of the Hibernian has an error of —0.18, as determined from the isobarometric charts of the Signal Service.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 21, 1875.

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'Endeville, Commandant Supérieur du Génie in Algeria.

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			29.93	760.3	73.0	22.8	64	WNW			1		8			0.083	2.1		Charnot.
Algiers			29.91	759.6	71.6	22.0	74	Calm			0		7			0	0	Lightning	Peter.
La Calle																			Kuntz.
Tunis			29.88	759.0	81.7	27.6	47	SE			3		0			0	0		Jacques.
Sfax			29.94	760.4	78.8	26.0	62	SSE			3		3			0	0	Cloudy	Chauvey.
Salda			29.89	759.3	68.9	20.5	37	WNW			2		2			0.236	6.0		Grosjean.
Tebessa			29.89	759.1	76.6	24.8		SE			3		7			0	0		Colin.
Geriville			29.90	759.4	68.0	20.0	28	SW			3		4			0	0		Bernadach.
Laghouat			29.91	759.6	75.2	24	20	SE			1		1			0	0		Simon.
Biskra			29.99	759.4	81.3	27.4	26	E			3		9			0	0		Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			29.93	760.2	53.2	11.8	87	SE			1		10			0.020	0.5	Raining	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.04	762.9	39.2	4.0	82	NE			2		10			0	0		I. R. Observatory.
Eperies			30.00	761.9	41.7	5.4	68	Calm			0		10			0	0		Julius Mikolik.
Gratz	28.74	730.0	29.96	760.9	47.7	8.7	78	SW			2		10						Andreas Rospini.
Hermannstadt	28.56	725.3	29.98	761.4	53.6	12.0	73	ESE			1		6			0.034	0.85		Prof. Reissenberger.
Kremsmünster	28.57	725.6	29.92	760.0	46.8	8.2	83	ENE			1		2			0.055	1.4		Prof. C. Wagner.
Lemberg			30.04	762.9	37.0	2.8	60	E			2		9			Blank	Blank		Dr. T. Stanecki.
Nylregyhaza			30.02	762.5	39.2	4.0	100	Calm			0		10			0.171	4.35		Habzsuda Daniel.
Pola			29.93	760.3	64.6	18.1	89	S			2		10ks			0.662	16.81		I. R. Hydrographic Of'ce
Szegedin			29.97	761.2	53.1	11.7	81	N			1		6			0	0		Karl Stancel.
Trieste			29.92	759.9	64.6	18.1	90	SE			0		10			0.165	4.2	Light rain	Prof. V. Farolfi.
Vienna			29.95	760.8	42.6	5.9	96	SE			1		2			0.138	3.5		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 9 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.71	754.5	58.3	14.6	79	SW			2		5			0.059	1.50		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.56	750.8	48.7	9.3		SE	47	21.0			10			0.490	12.45	Squally	William Boswell.
Ardrossan			29.45	748.0	54.8	12.7		ESE			5		4					*D. clouds	Wm. McNeil.
Armagh Observatory			29.32	744.7	56.8	13.8		SE	20	8.9			7					Squally	S. Cal., for Dr. Robinson
Bidston, Liverpool Obs			29.44	747.8	57.0	13.9		ESE			3		6					*D. clouds	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.24	74[illegible].7	58.0	14.4		SSE			1		7					*D. clouds	J. Dreyer.
Bra ford			29.48	748.8	54.3	12.4		SE			1		0					Clear	J. McLandsborough.
Bri lgetown, (Barbadoes)			29.94	760.5	76.4	24.7		NE			2		10					Raining	T. H. Hunt.
Cambridge Observatory			29.56	750.8	60.2	15.7		SSE			2		7			0.150	3.81	*D. clouds	Sergeant Hunt, A. H. C.
Cape Good Hope Obs.			30.07	763.8	68.4	20.3	65	WNW	16	7.2			4						The Staff, for E. J. Stone
Cardington			29.55	750.6	54.5	14.7		S			1		7			Blank	Blank	*D. clouds	John McLaren.
Carlisle			29.48	748.8	56.9	13.8		SE			1		3			1.00	25.4	*D. clouds	T. Bell, for J. Cartmell.
Chatham, School M. E.			29.61	752.1	60.2	15.7		SE			3		9					*D. clouds	Capt. [illegible] Fellowes, R. E.
Dartmoor	28.06	712.7	29.43	747.5	46	7.8		S			6		10					Rain & fog	R. E. Power.
Donaghadee			29.37	746.0	53	11.7		SE			4		8					*D. clouds	J. Mac Gowan, Jr.
Dover			29.61	751.8	57	13.9		SW			5		5						J. Costello
Eccles, (near Manchester)			29.47	748.5	57.5	14.2		SE	5.8	2.6			6					*D. clouds	Thomas Mackereth.
Falmouth Observatory			29.40	746.7	54.1	12.3		SSW	20	8.9			6					Overcast	The Staff.
Fort Napier, (Natal)	27.66	702.6	29.90	759.4	66.2	19.0		E			1		8					*D. clouds	Pvt G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	84	28.3		NE					6						
Galway, Queen's College																			B. G. Clare, for Prof. Carr
Gibraltar. (Mediterranean)			29.89	759.2	65.0	18.3		NE			1		9					Gloomy	Sergt. E. G. Baker.
Glasgow Observatory			29.46	748.3	51.5	10.8		E			1		9					*D. clouds	Lewis Stuart.
Great Yarmouth			29.60	751.8	57	13.3		SSE			3		4					*D. clouds	G. T. Watson.
Greenwich Royal Obs			29.58	751.[illegible]	58.8	14.9		SSE			2		9					Cloudy	The Staff, for G. B. Airy.
Guernsey			29.52	749.8	58	14.4		SSW			5		3					Squally	Dr. S. E. Hoskins, [illegible]ley.
Halifax, Moorside Obs			29.53	750.0	55.6	13.1		SE			1		7					*D. clouds	F. J. Page, for L. J. Cro[illegible]
Helston			29.39	746.5	57	13.9		SW			4		8					*D. clouds	M. P. Moyle.
Holyhead			29.38	746.2	51	10.6		SSE			3		6			0	0	*D. clouds	John Tilston.
Kew Observatory			29.56	750.8	59.0	15.0		S	17	7.6			9					Misty	The Staff.
Kingstown			29.33	745.0	56	13.3		SSE			3		9					Overcast	George Mitchell
Leicester Museum			29.54	750.3	57.9	14.4		S			1		8					*D. clouds	William J. Harrison.
Llandudno			29.40	746.7	58.0	14.4		S			1		10					Overcast	Dr. James Nicol.
Malta, (Mediterranean)			29.97	761.2	77.4	25.2		SE			2		8k					D. clouds	Fred Travis, Pvt A. H. C.
Nairn			29.50	749.3	49	9.4		S			3		8						W. D. Penny.
Nassau, (Bahamas)			30.07	763.8	77.4	25.2		NE			3		7n					Squa'ly	Surg.-Maj. Henry.
Nottingham			29.54	750.3	58.5	14.7		S-E			3		5k, k8		SSE	0.53	13.5	*D. clouds	E. J. Lowe
Oscott, St Mary's College			29.49	749.0	57.2	14.0		SS			3		9					D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.50	749.3	58	14.4		SSE			1		10					Mi ty	J. Lucas, for R. Main
Plymouth			29.42	747.4	53.8	12.1		SSW			4		4					Squally	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.24	742.7	56	13.3		SSW			5		8					Showery	W. Kennedy.
Saint Ann's Head			29.36	745.7	54	12.2		S			5		10					Showery	John C. Walker.
Saint Helier, (Jersey)			29.53	750.0	58.8	14.9		SW			6		2						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			29.57	751.1	54.9	12.2		SSE			1		9					Overcast	F. Shaw.
Scutari cemetery, (Turkey)			30.05	763.3	70.0	21.1		NE			1		1					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.51	749.5	57.6	14.2		[illegible]			1		7			1.33	33.8	Overcast	W. F. Cooper.
Silloth Rectory			29.47	748.5	58.9	14.9		SSE			3		4			0.160	4.06	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			29.47	748.5	55.1	12.8		SE			2		9			Blank	Blank	Hazy	The Staff.
Stornoway, Lewis C. (Hebr)			29.48	748.8	48	8.9		ESE			7		10					Drizzling	John Smith.
Stratfield Turgiss			29.55	750.6	57.4	14.1		S			1		10					Raining	Rev Charles H. Griffith
Streatley Vicarage																0.413	10.49		Rev. John Slatter.
Thurso			29.64	752.8	46	7.		E			6		9					Raining	John Trotter.
Truro, Royal Institution			29.37	746.0	57	13.9		SW			7		10					Gloomy	W Newcombe.
Valencia Observatory			29.20	741.7	54.8	12.7		SSW	18	8.0			9					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					55	12.8		SE			4		10			1.10	27.9		
Leith, Restalrig Park			29.52	749.8	53.0	11.7		SE			2		8k			0.14	3.6	Cloudy	Andrew Gibb.
Monach Lt-house, (Shet. Is)			29.45	748.0	51	10.6		SE			6	10	0			0.2	5.1		J. Youyclause.
North Unst, (Shetland Is)			29.95	760.7	44	6.7		SE			7		10						

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,371 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			30.04	763.0	40.1	4.5	82	E			6		9						
Fanöe			29.97	761.2	41.[illegible]	5.2	69	SE			6		9						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.69	754.1	43.9	6.6	88	SE			4		5						
Thorshavn, (Faröe)			29.61	752.0	46.0	7.8	76	ESE			6		10					Raining	
Vestervig			30.04	763.0	39.0	4.2	80	E			6		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			29.68	753.8	58.1	14.5	88	S			2		10n,k			0.142	3.6	Cloudy	Normal School.
Amiens			29.69	754.1	62.6	17.0	63	SSW			3		5		SW	0.091	2.3	Cloudy	Normal School.
Avignon			29.87	758.8	65.7	18.7	67	SE			1		2	WSW	SE	0	0		Normal School.
Bar-sur-Seine			29.74	755.3	62.0	17.0	56	SW			2		5k, n		W	0.016	0.4	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.67	753.6	56.8	13.8	88	SW	2.7	1.2			10		SW	0.122	3.1	Showery	Beaumette Observatory
Beauvais			29.75	755.6	59.9	15.5	76	S			2		8		S	0.345	8.77	Cloudy	Normal School.
Besançon			29.86	758.4	59.0	15	75	S			2		0			0.919	23.1	Clear	Normal School.
Bourg en Bresse			29.71	754.7	53.6	12	90	W			1		1		N	0.409	10.4	Clear	Normal School.
Bourges			29.75	755.6	61.2	16.2	75	S			3		5		ENE	0.102	2.6	Cloudy	Normal School.
Brest			29.48	748.8	58.8	14.9	74	W-W			4		10		SW	0	0	Stormy	Naval Observatory.
Caen			29.64	752.8	57.9	14.5	84	S			2		10		S	0	0	Cloudy	Normal School
Chartres																			Normal School.
Chaumont	28.67	728.1	29.82	757.4	59.7	15.4		S			3		..kn		S-W	0.063	1.6		Normal School.
Commercy			29.83	757.7	57.2	14	69	SW			6		2		SW	0.12	3.		Normal School.
Commune de Gréasque*			29.89	759.2	66.9	19.4	57	S-E			4		8		SE	0.559	14.2		
Le Mans																			Normal School.
Lons-Le-Saulnier			29.84	758.0	55.0	12.8	76	NW			1		0			0	0	Clear	Normal School.
Mâcon			29.78	756.3	56.7	13.7	95	Calm			0		0			0.98	25.	Clear	Normal School.
Mirecourt			29.95	760.8	58.6	14.8	72	SSW			2		2		W	0	0		Normal School.
Orleans			29.65	753.2	61.5	16.4	67	SW			3		5		S	0.488	12.4	Cloudy	Normal School.
Paris Observatory			29.72	754.9	60.6	15.9	72	S			2		8			0.362	8.19	Very cloudy	National Observatory
Parthenay			29.69	754.0	59.0	15	70	SW			2		8		S	0.16	4.	Cloudy	Normal School.
La Roche sur Yon			29.70	754.4	57.9	14.4	89	S			2		5		N	0.008	0.2	Cloudy	Normal School.
Rochefort, Observatory			29.72	755.0	66.2	19.0	53	SW			4		5		NE	0.004	0.1		Naval Observatory.
Rouen			29.85	758.2	60.8	16.0	75	NW			2		2		S	0.417	10.6		Normal School.
Saint Lo			29.52	749.8	59.9	15.5	74	NW			4		7		NW	0.04	1.		Normal School.
Villefranche			29.72	754.9	58.8	14.9	80	NW			3		5		SE	0.049	1.25	Cloudy	Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbé Marchési.
Mont-Louis			30.14	765.6	48.2	9.0	75	SW	14.9	6.60			8		SSW	0.008	0.2		—. Faïguère
Montsouris, Paris			29.72	754.8	62.1	16.3	73	S			1	..c	9k.kn		SSW	0.150	3.8	Misty	Montsouris Observatory.
Perpignan	†29.63	†752.7			64.0	17.8	74	NE	5.6	2.50			6		SE	0	0		Dr. Fines.
Pic du Midi, (Summit) H. P.																			M. Baylac.
Pic du Midi, (Plantade) H.P.																			General de Nansouty
Saint Maur, (near Paris)			29.72	754.9	61.3	16.3	71	S			2		7			0.331	8.4	Cloudy	E. Renou.
Tours			29.72	754.8	61.8	18.2		SSW			3		5		SSW	0.720	18.3		C. Marquet.
Versailles, (near Paris)			29.71	754.7	61.9	16.6	73	SW			3		8			0.143	36.3	Cloudy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.11	765.6	67.6	18.1	89	ESE	6.3	2.8			10kn			{Inap. Inap.	Inap. Inap.}		H. Le Lec, S. J.

NOTE.—The originals 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. The rain-fall is generally measured at 7 a. m or 9 a. m., local time The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 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. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also.

GERMAN SERIES.

Furnished by the coöperation of Prof. Geo. Neumayer, Superintendent Royal 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			29.84	757.9	46.4	8.0	86	SE	9	4			10			0.110	2.8		Prof. Hoh.
Berlin			29.95	760.8	34.7	1.5	95	E	13	6			10			0.104	2.65	Raining	Prof. Arndt.
Breslau			30.00	762.0	37.4	3.0	93	SE	22	10			10			0.138	3.5		Dr. P. Neugebauer.
Carlsruhe			29.82	757.5	60.1	15.6	71	S	13	6			3			0.589	14.9		A. Senz.
Cassel			29.70	754.3	47.3	8.5	84	S	11	5			10			0.445	11.3		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.46	722.8	29.89	759.1	53.6	13.5	61	W					2			0	0		M. Wilhelm.
Hamburg			29.95	760.6	34.3	1.3	90	SE	16	7			10			0.091	2.3	Snowing	Deutsche Seewarte.
Kiel			30.02	762.6	38.3	3.5	75	E	18	8			10			0	0		Prof. G. Karsten.
Königsberg			30.15	765.7	32.7	0.4	81	E	11	5						0	0	Cloudy	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			29.90	759.4	41.5	5.3	91	SE	4	2			10			0	0	Raining	Prof. Bruhns.
Münster			29.76	755.8	48.0	8.9	98	SE	4	2			10			0	0		Prof. E. Heis.
Posen			30.07	763.6	36.1	2.3	85	E	29	13			10			0.039	1.0	Cloudy	Dr. Magener.
Strasburg, (in Alsace)			29.85	758.3	60.6	15.9	66	SW	9	4			5			0	0		Dr. Schur.
Stuttgart			29.83	757.7	60.3	15.7	69	N					6			0.134	3.4	Raining	Mr. Würth.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.77	756.2	58.6	14.8	78	S	9	4			4			0	0	Foggy	Prof. Flesch.
Wustrow, Naval School			30.04	763.1	38.8	3.8	71	ENE	9	4			6ks			0	0	Cloudy	E. F. Schütz.

NOTE.—In the originals the distinction between 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 1,355.3 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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens			30.07	763.6	73.4	23.0		SW					..k					Clear	

NOTE.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			29.92	760.0	59.9	15.5	81	ESE	1.8	0.8			8	NE		0	0		
Mondovi			29.94	760.5	55.4	13.0	69	NW			4		6	WSW		0	0		
Genoa			29.91	759.7	66.7	19.3	68	S	4.3	1.9			10	SE		0	0		
Pavia			29.93	760.1	59.4	15.2	85	E			1		10			0.313	2.32		
Verona			29.85	758.3	64.6	18.1	74	E			2		0			0	0		
Padua			29.89	759.2	62.4	16.9	85	W	0	0			10			0	0		
Parma																			
Bologna			29.89	759.2	58.3	14.6	71	NNW			1		7	NW		0	0		
Leghorn			29.91	759.6	64.4	18.0	82	NE	0	0			10			0	0		
Urbino																			
Ancona			29.96	761.0	61.9	16.6	81	SE			2		10			0.709	18.0	Rain & hail...	
Siena			29.93	760.2	62.8	17.1	92	SSE	0	0			10	SW.		0.055	1.4	Raining	
Rome			29.97	761.1	71.2	21.8	70	SSE	19.2	8.6			7	SSE		0.016	0.4		
Naples, O. U.			30.00	762.0	75.6	24.2	45	SW			1		10			0	0		
Lecce			30.04	763.0	72.1	22.3	71	SW	12.5	5.6			6	S		0	0		
Cosenza			29.98	761.[illegible]	71.2	21.8	73	SE			2		4	NE		0	0		
Catania, (Sicily)																			
Riposto			30.02	762.6	69.8	21.0	86	NE			2		0	W		0	0		
Palermo			29.91	759.6	75.0	23.9	55	NE	0	0			4			0	0		
Sub-Se ies.																			
Naples, S. R.			30.08	763.9	71.6	22.0	58	SW			1		..k	W		0	0		Prof. F. Brioschi.

NOTE.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S R., is for twenty-four hours. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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			29.72	755.0	57.2	14.0		SSW			4								
Groningen			29.76	756.0				ESE			4								
Helder			30.73	755.2	44.2	6.8		E			4								
Utrecht			29.68	753.8	57.4	14.1		SE			2		5					Cloudy	

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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			30.19	764.6	39.6	4.2	80	Calm	0	0			2			0	0		
Christiania			30.30	769.7	32.4	0.2	69	NNE	4.7	2.1			10			0	0	Snowing	
Tromsö			30.25	768.1	33.1	0.6	83	SW			2		0			0	0		

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			29.88	759.0	63.7	17.6	68	SW	11.2	5.0			7			0	0		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			30.09	764.3	32.9	0.5	94	E	7	3			10						Astronomical Obs.
Wilna			30.19	766.9	31.5	— 0.3	82	Calm	0	0			10						Astronomical Obs.
Dorpat			30.24	768.0	34.3	1.3	76	ENE	4	2			0						Physical Cabinet.
St. Petersburg			30.34	770.6	31.8	— 0.1	72	ENE	2	1			1						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kieff			30.15	765.9	32.9	0.5	78	Calm	0	0			10						Physical Cabinet.
Nikolaiev			30.24	768.0	38.8	3.8	67	NW	4	2			9						Kurdakof.
Kerich			30.17	766.4	51.1	10.6	62	NW	7	3			4						Lagorio.
Moscow			30.14	765.6	25.3	— 3.7	82	NNW	10	4.5			10						Meteorological Obs.
Lugan			30.05	760.6	38.8	3.8	62	WSW	20	9			10			Blank	Blank		Meteorological Obs.
Archangel			29.24	768.0	28.9	— 1.8	92	W	17	7.5			10						Ogorodnikof.
Tiflis	28.39	721.1	30.02	762.5	64.8	18.2	57	NNE	13	6			9						Physical Obs.
Astrakhan			30.17	766.2	51.6	10.9	62	NNW	4	2			9					Raining	Sebastianof.
Kasan			30.09	764.2	30.4	— 0.9	88	E	9	4.5			10						Physical Cabinet.
Orenburg			30.21	767.3	38.1	3.4	93	SE	4	2			10						Tschernischef.
Ekaterinburg	29.20	741.5	30.29	769.3	19.4	— 7.0	83	W	4	2			0						Meteorological Obs.
Kasaly			30.05	763.3	46.2	7.9	81	NNW	8	3.5			0						Bobrof.
Tashkend																			Michelson.
Barnaul			30.19	766.8	20.3	— 6.5	84	NW	8	3.5			1						Meteorological Obs.
Yeniseisk			29.78	756.5	25.0	— 3.9	93	S	2	1			4					Snowing	Marks.
Irkutsk																			Usolzef.
Gorga																			Messin.
Peking, (China)			30.31	769.8	45.3	7.9	39	Calm	0	0			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. The elevation of Tiflis is 403. meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, m 494.2?, or 1,621.3? ft.; Irkutsk, 392. m., or 1,286. ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Gorga, 1,281.0? m., or 4,202.6? ft. Archangel barometer, as given, should be reduced by a correction of —3.5 mm. from January to July, and by a correction of —2.0 mm. from July to October 19, 1875.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.81	757.1	58.6	14.8	80	NE	2.2	1.0		0	9			0.094	2.4	Cloudy	Royal Observatory.
San Fernando			29.92	759.9	63.9	17.7	83	W	11.0	4.9		1	7	W	NNW	0.402	10.2		The Naval Observatory.

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

SWEDISH SERIES.

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

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Haparanda			30.44	773.1	21.9	— 5.6	96	W			2		10			0	0		
Umea			30.42	772.7	25.6	— 3.4	87	NW			2		10			0	0		
Hernosand			30.40	772.1	30.2	— 1.0	96	NNE			2		10			0	0		
Stockholm			30.23	767.9	36.1	2.3	62	ESE			2		10			0	0		
Wisby			30.23	767.9	35.6	2.0	82	SE			2		10			0	0		
Sub-Series.																			
Upsala			30.29	766.3	33.3	0.7	84	NNE	4	2			10		ENE				Dr. Hildebrandsson.

NOTE.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.44	722.4	29.82	758.2	59.9	15.5	62	NNE			1		3			0.729	18.3	Misty	The Observatory.
Zurich	28.27	718.1	29.80	759.3	58.5	14.7	71	NW			1		0			0.441	11.2	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —3.7m.m.; Thermometer, +3°.7; Relative Humidity, —11 per cent.

Note.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y			29.98	761.5	74.8	23.8	60	NW			2		9n		E	0	0		Prof. C. V. A. Van Dyck
Constantinople			30.09	764.3	67.2	19.0	66	NE	4.5	2.0			2		NE	0	0		
Fao, (Persian Gulf)			30.13	765.3	86.0	30.0		SW			3		0					Clear	
Salonica					74.1	23.4		N			1		0					Clear	
Valona			30.02	762.5	72.1	22.3		SW			1		0					Clear	
Varna			30.16	766.0	59.0	15.0		NE			2		10					Cloudy	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario			29.87	758.7	46	7.8		SW	4	1.8			8s		SW	0	0	Cloudy	
Chatham, N. B.			29.49	749.0	44	6.7	93	Calm	0	0		2k	8ks	W	W	0.11	2.8	Cloudy	
Charlottetown, P. E. Island			29.50	749.3	45	7.2	78	NW	7	3.1			10s			0	0	Cloudy	
Fort Garry, Manitoba			29.86	758.4	41	5.0	87	SW	3	1.3		0	2s		SW	0	0	Fair	
Halifax, N. S.			29.48	748.8	45	7.2	80	NW	8	3.6			10n		NW	0	0	Light rain	
Kingston, Ontario			29.85	758.2	48	8.9	79	W	5	2.2		10c	0	W		0	0	Fair	
Montreal, Quebec			29.73	755.1	47	8.3	79	W	20	8.9		5s	5n	W	W	0	0	Light rain	
Ottawa, Ontario			29.79	756.7	44	6.7	74	W	8	3.6		4k	5s	W	W	0	0	Cloudy	
Parry Sound, Ontario			29.85	758.2	39	3.9	95	Calm	0	0		2cs	2s	W	W	0	0	Fair	
Port Dover, Ontario			29.97	761.2	51	10.6	65	SW	5	2.2		5ck	0	NW		0.01	0.3	Fair	
Port Stanley, Ontario			29.97	761.2	49	9.4	72	W	10	4.5		Haze	0			0	0	Clear	
Quebec, Quebec			29.63	752.6	44	6.7	92	SW	6	2.7			10n		SW	0	0	Cloudy	
Saugeen, Ontario			29.84	757.9	50	10.0	96	W	7	3.1		5s	0			0	0	Clear	
Stayner, Ontario			29.86	758.8	53	11.7	61	W	8	3.6		0	0			0	0	Clear	
Sydney, C. B.			29.43	747.5	45	7.2	92	SW	5	2.2		10cs	5s	W	W	0	0	Cloud	
Toronto, Ontario			29.89	759.2	46	7.8	83	SW	8	3.6		8cs	Haze	NW		0	0	Cloudy	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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. 1—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.81	757.2	53	11.7	60	NW	1	0.4		8k	Haze	W		0	0	Cloudy	
Alpena, Mich			29.89	756.9	50	10.0	63	W	6	2.7		0	0			0	0	Clear	
Atlantic City, N. J.			30.02	762.2	48	8.9	77	W	10	4.5		0	0			0	0	Clear	
Augusta, Ga.			30.26	768.6	41	5.0	82	N	2	0.9		0	0			0	0	Clear	
Baltimore, Md.			30.10	764.5	50	10.0	64	W	3	1.3		0	0			0	0	Clear	
Barnegat, N. J.			29.97	761.2	49	9.4	71	W	13	5.8		Haze	Haze			0	0	Hazy	
Benton, Montana	27.13	689.1	29.93	760.2	37	2.8	80	Calm	0	0		0	0			0	0	Clear	
Bismarck, Dakota	28.10	713.7	29.76	755.9	39	3.9	81	S	2	0.9		0	5s			0	0	Fair	
Boston, Mass			29.78	756.4	51	10.6	53	SW	9	4.0			10s			0	0	Cloudy	
Breckenridge, Minn			29.86	758.4	39	3.9	71	Calm	0	0		Haze	0			0	0	Clear	
Buffalo, N. Y.			29.99	759.4	55.5	11.4	69	SW	12	5.4		0	Haze			0	0	Clear	
Burlington, Vt.			29.78	756.4	53	11.7	73	W	5	2.			10s			0	0	Cloudy	
Cairo, Ill.			30.24	768.1	44	6.7	84	S	4	1.8		0	0			0	0	Clear	
Cape Hatteras, N. C.			30.13	765.5	53	11.7	80	NW	4	1.8		0	Haze			0	0	Clear, fair	
Cape Henry, Va.			30.15	765.8	57	13.9	50	W	14	6.3		0	0			0	0	Clear	
Cape May, N. J.			30.06	763.5	52	11.1	73	SW	12	5.4		0	0			0	0	Clear	
Charleston, S. C.			30.26	768.6	49	9.4	77	NW	4	1.8		1k	Sm'e	NW		0	0	Fair	
Cheyenne, Wyoming	24.14	613.4	30.08	764.0	36	2.2	52	NW	8	3.6		0	0			0	0	Clear	
Chicago, Ill.			29.99	761.7	49	9.4	64	SW	13	5.8		0	Sm'e			0	0	Clear	
Cincinnati, Ohio			30.16	766.1	44	6.7	75	SE	5	2.2		0	Fog			0	0	Foggy	
Cleveland, Ohio			30.01	762.2	51.6	10.9	47	SW	17	7.6		0	Sm'e		SW	0	0	Smoky	
Colorado Springs, Col.	24.19	614.4	30.16	765.5	38	8.9	49	N	8	3.6		0	0			0	0	Clear	
Corsicana, Tex.			30.19	766.8	46	7.8	85	SE	1	0.4		0	0			0	0	Clear	
Davenport, Iowa			30.04	763.0	48	8.9	62	SW	4	1.8		0	Sm'e			0	0	Clear	
Denison, Tex.			30.16	766.1	50	10.0	77	S	1	0.4		2ck	Haze	W	S	0	0	Fair, smoky	
Denver, Col.	24.91	632.7	30.13	765.3	42	5.6	34	S	7	3.1		0	Haze			0	0	Hazy	
Detroit, Mich.			29.95	760.7	47	8.3	69	SW	8	3.6		0	Haze			0	0	Clear	
Dodge City, Kan.	27.45	697.2	29.74	755.6	48	8.9	62	S	2	0.9		0	0			0	0	Clear	
Dubuque, Iowa			30.01	762.2	46	7.8	54	S	4	1.8		0	Sm'e			0	0	Smoky	
Duluth, Minn.			29.84	757.9	50	10.0	71	NW	4	1.8		2s	Haze			0	0	Hazy	
Eastport, Me.			29.59	751.6	46	7.8	85	SW	6	2.7			10s		w	0.05	1.3	Threatening	
Erie, Pa.			29.95	760.7	50	10.0	57	S	17	7.6		2c	Sm'e			0	0	Fair	
Escanaba, Mich.			29.83	757.7	45	7.2	68	Calm	0	0		0	0			0	0	Clear	
Fort Gibson, I. T.			30.16	766.1	44	9.7	75	S	2	0.9		2c	Haze	SE		0	0	Fair	
Fort Sill, I. T.	28.90	734.0	30.02	762.5	48	8.9	79	Calm	0	0		0	8ks		S	0	0	Cloudy	
Fort Sully, Dakota	28.22	716.8	29.89	759.2	41	5.0	65	Calm	0	0		0	Haze			0	0	Fair	
Galveston, Tex.			30.16	766.1	64	17.8	73	NE	8	3.6		0	0			0	0	Clear	
Grand Haven, Mich.			29.94	760.5	53	11.7	73	SW	11	4.9		1c	Haze	N		0	0	Fair	
Indianapolis, Ind.			30.14	765.5	47	8.3	62	S	5	2.2		Haze	Sm'e			0	0	Smoky	
Indianola, Tex.			30.18	766.6	63	17.2	83	E	12	5.4		1c	0	W		0	0	Clear	
Jacksonville, Fla.			30.20	767.1	54	12.2	86	NW	4	1.8		6ck	0	SW		0	0	Fair	
Keokuk, Iowa			30.03	762.7	52	11.1	53	SW	7	3.1		0	Haze			0	0	Clear	
Key West, Fla.			30.03	762.7	72	22.2	85	NE	11	4.9			10n		E	0.05	1.3	Light rain	
Kittyhawk, N. C.			30.15	765.8	51	10.6	72	W	6	2.7		0	0			0	0	Clear	
Knoxville, Tenn.			30.10	764.6	35	1.7	90	NE	2	0.9			Fog			0	0	Foggy	
La Crosse, Wis.			29.92	760.0	47	8.3	77	S	10	4.5		Haze	Haze			0	0	Solar halo	
Leavenworth, Kan.			30.04	763.0	49	9.4	57	S	3	1.3		0	0			0	0	Clear	
Lexington, Ky.	29.11	739.4	30.25	768.3	44	6.7	67	S	8	3.6		0	0			0	0	Clear	
Long Branch, N. J.			29.95	761.0	53	11.7	54	SW	10	4.5		Haze	Haze			0	0	Hazy	
Louisville, Ky.			30.20	767.1	45	7.2	70	Calm	0	0			Fog			0	0	Foggy	
Lynchburg, Va.			30.16	766.1	47	8.3	68	Calm	0	0		0	0			0	0	Clear	
Malone, N. Y.			29.76	756.1	51	10.6	64	W	5	2.2			10ks		NW	0	0	Cloudy	
Marquette, Mich.			29.82	757.4	55	12.8	62	W	8	3.6		0	Haze			0	0	Hazy	
Memphis, Tenn.			30.27	768.8	41	5.0	78	Calm	0	0		0	Sm'e			0	0	Smoky, frost	
Milwaukee, Wis.			29.98	761.5	52	11.1	60	W	10	4.5		Haze	Haze			0	0	Hazy	
Mobile, Ala.			30.22	767.6	45	7.2	84	N	4	1.8		0	Sm'e			0	0	Clear	
Montgomery, Ala.			30.28	769.1	43.5	6.4	84	NE	2	0.9		0	Sm'e			0	0	Clear	
Morgantown, W. Va.			30.17	766.3	48	8.9	66	Calm	0	0		0	0			0	0	Clear, frost	
Mt. Washington, N. H.	23.38	593.8	29.75	755.6	26	−3.3	100	NW	70	31.3			Fog			0	0	Foggy	
Nashville, Tenn.			30.25	768.3	41	5.0	83	E	1	0.4		0	Fog			0	0	Clear	
New Haven, Conn.			29.90	759.4	53	11.7	67	W	12	5.4		8ks	Haze			0	0	Cloudy	
New London, Conn.			29.88	758.9	52	12.2	53	W	6	2.7		5ck	5s	W	W	0	0	Cloudy	
New Orleans, La.			30.18	766.6	56.5	13.6	69	SE	4	1.8		2k	0	W		0	0	Clear	
Newport, R. I.			29.84	757.9	53	11.7	54	SW	12	5.4			10s		SW	0	0	Cloudy	
New York, N. Y.			29.94	760.5	50	10.0	52	SW	14	6.3		0	Fog			0	0	Clear	
Norfolk, Va.			30.16	766.1	47	8.3	74	SW	3	1.3		0	Haze			0	0	Clear	
North Platte, Neb.	29.08	687.8	29.68	753.9	40	4.4	64	Calm	0	0		0	Sm'e			0	0	Smoky	
Omaha, Neb.	28.89	732.8	29.96	761.0	35	7.2	84	S	4	1.8		0	Sm'e			0	0	Smoky	
Oswego, N. Y.			29.87	758.7	52	11.1	73	W	15	6.7			10s		W	0	0	Cloudy	
Peck's Beach, N. J.			30.06	763.5	51	10.6	72	W	12	5.4		Haze	0			0	0	Clear	
Pembina, Dakota			29.84	757.7	37	2.8	90	SE	1	0.4		Haze	Haze			0	0	Hazy	
Philadelphia, Penn.			30.02	762.5	47	8.3	62	W	12	5.4		0	Sm'e			0	0	Clear	
Pike's Peak, Colorado	18.00	457.2	30.22	767.6	25	−3.9	62	NE	4	1.8		0	0			0	0	Clear	
Pittsburgh, Penn.			30.10	764.5	46	7.8	54	S	6	2.7		0	0			0	0	Clear	
Port Huron, Mich.			29.92	760.0	45	7.2	68	SW	12	5.4		Haze	5s			0	0	Fair	
Portland, Me.			29.72	754.9	51	10.6	52	W	7	3.1		2ck	8s	NW		0	0	Cloudy	
Portland, Oregon			30.04	763.0	57	13.9	87	S	2	0.9			10s			0.82	20.8	Cloudy	
Punta Rassa, Fla.			30.10	764.5	69.1	20.6	79	N	9	4.0			10k		SW	0	0	Cloudy	
Rochester, N. Y.			29.86	758.4	54	12.2	61	W	17	7.6			10s			0	0	Cloudy	
Salt Lake City, Utah	25.70	652.8	30.03	762.7	55	12.8	33	SE	4	1.8		0	0			0	0	Clear	
Sandy Hook, N. J.			29.94	760.5	50	10.0	58	W	24	10.7		2cs	Haze			0	0	Clear	
San Diego, Cal.			30.00	762.0	60	15.6	88	NE	4	1.8			10s			0	0	Cloudy	
San Francisco, Cal.			30.05	763.5	59	15.0	98	W	4	1.8			Fog			0	0	Foggy	
Santa Fe, N. M.	23.37	593.6	29.94	759.7	42	5.6	2	NE	8	3.6		5c	Haze			0	0	Fair	
Savannah, Ga.			30.24	768.1	48	8.9	77	NW	6	2.7		0	Sm'e			0	0	Clear	
Shreveport, La.			30.16	768.6	44	6.7	100	Calm	0	0			Fog			0	0	Foggy	
Smithville, N. C.			30.24	768.1	46	7.8	77	NW	5	2.2		1c	0	NW		0	0	Clear	
Springfield, Mass.			29.84	757.9	54	12.2	49	SW	8	3.6			10s			0	0	Cloudy	
St. Louis, Mo.			30.17	766.3	52	11.1	53	SW	6	2.7		0	0			0	0	Clear	
St. Marks, Fla.			30.22	767.6	49	9.4	85	Calm	0	0		0	0			0	0	Clear	
St. Paul, Minn.			29.85	758.2	45	7.2	89	Calm	0	0		2cs	m'e			0	0	Clear	
St. Paul's Island, Alaska																			
Squan Beach, N. J.			29.93	760.2	47	8.3	62	W	8	3.6		0	Haze			0	0	Clear	
Toledo, Ohio			29.98	761.5	49	9.4	63	NW	12	5.4		Haze	0			0	0	Clear	
Tucson, Arizona																			
Tybee Island, Ga.			30.23	767.8	53	11.7	93	N	8	3.6		Haze	1s			0	0	Hazy	
Vicksburg, Miss.			30.30	769.6	49	9.4	64	E	4	1.8		0	Sm'e		E	0	0	Clear	
Virginia City, Montana	24.25	615.9	29.73	755.1	40	4.4	32	Calm	0	0		0	0			0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C			30.11	764.8	42	5.6	91	Calm	0	0		Haze	Haze			0	0	Hazy	
Wilmington, N. C			30.24	768.1	43	6.1	83	N	2	0.9		0	Sm'e			0	0	Smoky	
Wood's Hole, Mass			29.83	757.7	55	12.8	68	W	13	5.8			10s			0	0	Cloudy	
Wytheville, Va	27.85	707.1	30.08	764.0	40	4.4	73	W	2	0.9		0	0			0	0	Clear	
Yankton, Dakota	28.65	727.7	29.94	760.5	45	7.2	76	NE	2	0.9		0	Haze			0	0	Hazy	
Yuma, Arizona			29.94	760.5	62	16.7		Calm				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'does, W. I					80	26.7	90	SE	6	2.7		5ck	2s	NE	N	0	0	Fair	E. Racker.
Pointe-aPitre, G'd'loupe, do			29.98	761.5	79	26.1	82	E				8ck	0			0.03	0.8	Clear	L. V. Bigard.
Havana, Cuba, W. I			29.99	761.7	74	23.3	85	Calm	0	0		10ck,k	2n	NE, SW	S	0.01	2.5	Cloudy	Charles Hasselbrink.
Kingston, Jamaica, W			30.14	765.5	78	25.6	78	Calm	0	0		8c	5ks			0	0		James Gall.
St. Thomas, St. T., W. I			30.19	766.8	78	25.6	78	E	1	0.9		2cs	2k	E	E	0.04	1.0	Clear	W. S. Cameron.
Santiago de Cuba, W. I			29.76	755.9	77	25.0	76	NE	1.2	0.5		4c	2ks	SW	SW			Fair	Robert Mason.
St. Georges, Bermudas			29.98	761.5	72.0	22.2	73	NNW	6.6	3.0		10c	5fk	NW	NNW	0	0	Cloudy	C. F. Allen.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.
Cumberland, B. A																			
Ft. Chippewyan, B. A																			
Ft. McPherson, B. A																			
Ft. Simpson, B. A																			
York Factory, B. A			29.87	758.7	32	0.0	100	E	1	0.4			10s			0	0		J. Fortescue.
St. John's, Newfoundland																			John Delaney.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Clifton, Jamaica, W. I	27.17	690.1	29.98	761.5	62	16.7	83	Calm	0	0		8c	0			0	0	Fine	C. Partridge.
Navassa																			
Meaellin, S. A																			
Paramaribo, S. A																			
Elyria, Ohio			30.12	765.0	51.5	10.8		SW	12	5.4			2c			0	0	Fine	H. M. Redington.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	Weather.
Steamer Leipzig, N. 43° 20′, W. 56° 04′	ENE		Rough.		Overcast
Steamer Hibernian, at St. Johns, N. F.			Smooth		Raining

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,86[illegible] (?) ft., or 2,091.6 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 1.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in. The barometer of the Hibernian has an error of —0.18, as determined from the isobarometric charts of the Signal Service.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 22, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.07	763.8	72.1	22.3	59	Calm			0		2			0.350	8.9	Heavy rain	Charnot.
Algiers			29.97	761.3	70.2	21.2	65	WNW			3		4			0.079	2.0	Cloudy	Peter.
La Calle																			Kuntz.
Tunis			29.93	760.2	77.7	25.4	52	NW			3		7			0.130	3.3	Cloudy	Jacques.
Sfax			29.94	760.4	82.0	27.8	41	SW			4		5			0	0	Sirocco	Chauvey.
Saida			30.05	763.3	59.9	15.5	75	NW			2		2			0	0		Grosjean.
Tebessa			29.91	759.8	72.1	22.3		SE			4		7			0	0		Colin.
Geriville			30.04	762.9	58.1	14.5	63	NW			2		7			0.118	3.0	Fair	Bernadach.
Laghouat			29.98	761.6	68.0	20	32	SE			1		2			0	0	Cloudy	Simon.
Biskra			29.98	761.6	81.0	27.2	45	NW			4		2			0	0	Sirocco	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			29.84	758.0	53.6	12.0	82	NE			1		10			0.598	15.2	Raining	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.94	760.5	52.7	11.5	91	NE			1		5			0	0		I. R. Observatory.
Eperies			30.01	762.2	44.2	6.8	78	Calm			0		10			0	0		Julius Mikolik.
Gratz	28.69	728.6	29.90	759.4	47.3	8.5	87	SW			2		10						Andreas Rospini.
Hermannstadt	28.55	725.2	29.95	760.7	60.8	16.0	64	SE			1		8			0.000	0.15		Prof. Reissenberger.
Kremsmünster	28.47	723.1	29.84	757.8	41.9	5.5	96	E			4		10			0	0		Prof. C. Wagner.
Lemberg			29.95	760.7	50.4	10.2	70	S			1		2			0	0		Dr. T. Stanecki.
Nylregyhaza			30.03	762.7	45.0	7.2	98	NE			2		10			0	0		Habzsuda Daniel.
Pola			29.76	755.8	65.1	18.4	92	SSE			4		108		S	0.037	0.93		I.R. Hydrographic Of'ce
Szegedin			29.92	759.9	61.0	16.1	71	NE			2		8			0	0	Solar corona	Karl Stancel.
Trieste			29.77	756.1	61.3	16.3	94	ENE			1		10			0.539	39.1	Light rain	Prof. V. Farolfi.
Vienna			29.88	759.0	42.4	5.8	100	ESE			2		10			0.055	1.4	Fog and rain	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 9 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer: Corrected for instrumental errors. Inches.	Barometer: Corrected for instrumental errors. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.65	753.1	57.7	14.3	87	S			1		3			0.002	0.05		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.63	752.6	49.2	9.6		SE	42	18.8			10			0.440	11.43	Squally	William Boswell.
Ardrossan			29.44	747.8	56	13.3		ESE			4		5					*D. clouds	Wm. McNeil.
Armagh Observatory			29.33	745.0	50.5	10.2		S	6	2.7			10					Raining	S. Cole, for Dr. Robinson.
Bidston, Liverpool Obs.			29.39	746.5	50.4	10.2		SE			3		10					Raining	John Hartnup, Jr.
Barr Castle, (Parsonstown)			29.30	744.2	53.2	11.7		S			1		5					*D. clouds	J. Dreyer.
Bradford			29.45	748.0	51.3	10.7		E			2		10					Overcast	J. McLandsborough.
Bridgetown, (Barbadoes)			29.97	761.2	78.0	26.0		SE			2		10					*D. clouds	T. H. Hunt.
Cambridge Observatory			29.53	750.0	55.9	13.3		S			2		10					Overcast	Sergeant Hunt, A. H. C.
Cape Good Hope Obs.			30.16	766.1	68.5	20.3	62	WNW	19	8.5			6						Th. Staff, for E. J. Stone
Cardington			29.50	749.3	54.4	12.4		SE			2		10					Raining	John McLaren.
Carlisle			29.45	748.0	53.7	12.1		E			2		9			0.20	5.1	*D. clouds	T. Bell, for J. Cartmell.
Chatham, School M. E.			29.57	751.1	56.7	13.7		SE			2		10					Overcast	Capt. , Fellowes, R. E.
Dartmoor	28.05	712.5	29.43	747.5	49.2	9.6		SW			4		7					*D. clouds	R. E. Power.
Donaghadee			29.35	745.5	53	11.7		SSE			4		8					*D. clouds	J. Mac Gowan, Jr.
Dover			29.57	751.1	57	13.9		SSW			5		6						J. Costello
Eccles, (near Manchester)			29.42	747.3	52.8	11.6		SE	4.8	2.1			10					Raining	Thomas Mackereth
Falmouth Observatory			29.41	747.0	55.0	12.8		SSW	18	8.0			7					Overcast	The Staff.
Fort Napier, (Natal)	27.69	703.3	29.92	760.0	75.5	24.2		SE			2		1					*D. clouds	Pvt. G. Sabnon, A. H. C.
Free Town, (Sierra Leone			29.96	761.0	86	30.0		S					3						Lieut. B. G. Clare, for Prof. Curr
Galway, Queen's College																			
Gibraltar, (Mediterranean)			30.07	763.8	67.0	19.4		SW			4		4					*D. clouds	Sergt. E. G. Baker.
Glasgow Observatory			29.47	748.5	53.8	12.1					2		7					Fine	Lewis Stuart.
Great Yarmouth			29.60	751.8	55	12.8		SSE			2		4					*D. clouds	G. T. Watson.
Greenwich Royal Obs.			29.54	750.3	54.9	12.7		SE			3		10					Drizzling	The Staff, for G. B. Airy.
Guernsey			29.50	749.3	56	13.3		SW			2		7					Hazy	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			29.50	749.3	50.7	10.4		E			2		10					Raining	F. J. Page, for L. J. Cro[illegible]
Helston			29.41	747.0	58	14.4		S			4		4			0.22	5.6	*D. clouds	M. P. Moyle.
Holyhead			29.36	771.1	54	12.2		SSW			2		5					*D. clouds	John Tilston.
Kew Observatory			29.52	749.8	54.6	12.6		SSE	12	5.4			10					Raining	The Staff.
Kingstown			29.34	745.0	55	12.8		S			3		7					*D. clouds	George Mitchell
Leicester Museum			29.47	748.5	53.6	12.0		E			1		10			Blank	Blank	Threatening	William J. Harrison.
Llandudno			29.38	746.2	51.0	10.6		S			1		10					Overcast	Dr. James Nicol.
Malta, (Mediterranean)			29.90	759.4	79.8	26.6		SW			1		6k					*D. clouds	Fred Travis, Pvt. A. H. C.
Nairn			29.55	750.6	53	11.7		SE			3		8						W. D. Penny.
Nassau, (Bahamas)			30.03	762.7	77.2	25.1		E			1		9n			Blank	Blank		Surg.-Maj. Henry.
Nottingham			29.47	748.5	53.3	11.8		SSW			5		10d		SSW	0.12	3.0	Raining	E. J. Lowe
Oscott, St. Mary's College			29.44	747.8	48.9	9.4		Calm			0		10					Rain & fog	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.45	748.3	53	11.7		S			5		10					Raining.	J. Lucas, for R. Snow.
Plymouth			29.43	747.5	56.1	13.4		SSW			2		1					Clear	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.28	743.7	51	10.6		SW			3		8					Showery	W. Kennedy.
Saint Ann's Head			29.36	745.7	55	12.8		SSW			2		5					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.50	749.3	57.5	14.2		W			6		8						A. P. Amy.
Sandwick Manse (Orkneys																			
Scarborough			29.56	750.8	52.2	11.2		SE			4		7					*D. clouds	F. Shaw.
Scutari cemetery, (Turkey)			30.04	763.0	68.4	20.2		SW			1		1					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.47	748.5	55.2	12.9		ESE			1		10			0.25	6.3	Raining	W. F. Cooper.
Silloth Rectory			29.44	747.8	53.1	11.7		E			4		10			0.305	7.75	Overcast	Rev. Francis Redford.
Stonyhurst Observatory			29.42	747.3	51.6	10.9		E			2		10					Gloomy	The Staff.
Stornoway, Lews C. (Heb.)			29.50	749.3	51	10.6		E			7		10					Overcast	John Smith.
Stratfield Turgiss			29.50	749.3	51.7	10.9		S			0–1		10					Raining	Rev. Charles H. Griffith
Streatley Vicarage			29.50	749.3	55.2	12.9		S			5		10			0.810	20.32		Rev. John Slater.
Thurso			29.66	753.4	47	8.3		ESE			6		9					Raining	John Trotter.
Truro, Royal Institution			29.37	746.0	59	15.0		SSW			5		10					Raining	W. Newcombe
Valencia Observatory			29.24	742.7	50.9	10.5		SSW	22	9.8			9					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					53	11.7		SE			6		10			0.20	5.1		
Leith, Restalrig Park			29.54	751.3	53.0	11.7		SE			2		8k			0.01	0.3	Fine, cloudy	Andrew Gibb.
Monach Lt-house, (Shet. Is.)			29.47	748.5	51	12.2		SE			6	10	0	SE		0	0		J. Youyclause.
North Unst, (Shetland Is.)			29.96	761.0	43	6.1		SE			7	5	5	SE					

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., and at Nottingham at 6 p. m., local time. The altitude of Darlington is 1,371 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			30.03	762.8	40.6	4.8	84	E			4		7						
Fanöe			29.92	759.9	40.8	4.9	73	SE			6		10						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.80	756.9	40.3	4.6	94	SE			4		0						
Thorshavn, (Faröe)			29.89	759.[illegible]	47.1	8.4	84	ESE			6		10					Raining	
Vestervig			29.98	761.6	40.3	4.6	87	E			4		10						

Note.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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. 1—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 1—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			29.59	751.6	56.5	13.5	89	SW			1		10ck			0.354	9.0	Cloudy	Normal School.
Amiens			29.68	753.9	50.4	10.2	77	S			6		0			0.185	4.7	Clear	Normal School.
Avignon			29.72	755.0	61.5	16.3	77	NNW			1		2o		N W	1.827	46.4		Normal School.
Bar-sur-Seine			29.68	753.8	59.7	15.4	73	S			2		8			0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.60	751.7	58.1	14.5	80	SSW	4.5	2.0			10		S o	0.071	1.8	Raining	Beaumette Observatory
Beauvais			29.68	753.9	57.7	14.3	76	S			2		2		S	0.187	4.75		Normal School.
Besançon			29.77	756.1	55.8	13.2	88	S			2		8		SW	0.087	2.2	Cloudy	Normal School.
Bourg en Bresse			29.76	756.0	55.8	13.2	84	S			2		10m		N	0.12	3.	Cloudy	Normal School.
Bourges			29.69	754.8	59.7	15.4	76	SSE			1		5		NE	0	0	Cloudy	Normal School.
Brest			29.44	747.8	57.7	14.3	71	SW			3		5		SW	0.256	6.50	Cloudy	Naval Observatory.
Caen			29.59	751.5	54.5	12.5	95	S			6		5		S	0	0	Cloudy	Normal School
Chartres																			Normal School.
Chaumont	28.52	724.4	29.68	753.8	58.1	14.5		S			2		10ck, n		SSW	0	0	Cloudy	Normal School.
Commercy			29.75	755.6	53.6	12	83	SE			2		5		SE	0	0	Cloudy	Normal School.
Commune de Gréasque*			29.76	755.8	55.8	13.2	86	SW			4		10		SSW	0.276	7.0		
Le Mans																			Normal School.
Lons-Le-Saulnier			29.75	755.1	54.7	12.6	92	W			2		10			0.161	4.10	Raining	Normal School.
Mâcon			29.74	755.4	56.5	13.6	91	Calm			0		5		NE	0.008	0.2	Cloudy	Normal School.
Mirecourt			29.74	755.3	55.4	13.1	92	SSW			2		10		N	0	0	Cloudy	Normal School.
Orleans			29.63	752.5	61.2	16.2	69	SSW			3		2		S	0	0		Normal School.
Paris Observatory			29.63	752.7	60.8	16.0	69	SSE			3		5		SSW	0.077	1.96	Cloudy	National Observatory
Parthenay			29.60	751.9	57.2	14	75	SW			6		8		S	0.04	1.	Cloudy	Normal School.
La Roche sur Yon			29.64	752.9	58.3	14.6	89	SE			6		8		SW	0.283	7.2	Cloudy	Normal School.
Rochefort, Observatory			29.69	754.2	59.0	15.0	65	SW			6		10		E	0.004	0.1	Cloudy	Naval Observatory.
Rouen			29.58	751.3	60.4	15.8	73	NW			2		2		W	0	0		Normal School.
Saint Lo			29.35	745.4	54.5	12.5	100	W			2		8		SE	0.02	0.5		Normal School.
Villefranche			29.76	755.9	58.1	14.5	80	SSE			2		2			0.91	23.		Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchesi.
Mont-Louis			30.09	764.2	48.2	9.0	84	SW	14.9	6.66			2		SW	0.29	7.5		—. Faïguère
Montsouris, Paris			29.6	754.8	62.6	17.0	68	S			2	2e	2k		S	0.059	1.5		Montsouris Osberv'tory.
Perpignan	†29.77	†756.1			68.2	20.1	64	E	3.7	1.67			1			0.264	6.7		Dr. Fines.
Pic du Midi, (Summit) H. P.																			M. Baylac.
Pic du Midi, (Plantade) H. P.																			General de Nansouty
Saint Maur. (near Paris)			29.64	752.9	61.7	16.5	79	S			2		0			0.146	3.7		E. Renou.
Tours			29.63	752.6	57.9	14.4		SW			1		10		S	0.071	1.8		C. Marquet.
Versailles (near Paris)			29.63	752.7	63.7	17.6	62	SW			3		5			0.230	5.85		Dr. A. Périgny.
Zi-Ka-Wei. (near Shanghai)			30.14	765.5	62.1	16.7	95	NNW	4.7	2.1			10kn			0.098 / 0.114	2.5 / 2.9	Misty	H. Le Lee, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time The altitude of Mont-Louis is 1,586.40 meters, or 5,201.8 feet; Chaumont, 332 m., or 1,060.9 ft.; Commune de Gréasque, 322 m., or 1,055.4 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. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also.

GERMAN SERIES.

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

Stations.	Corrected for instrumental errors. Inches.	Corrected for instrumental errors. Millimeters.	Reduced to sea-level. Inches.	Reduced to sea-level. Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	Force. 1—10.	Amount. Up'er 1—10.	Amount. Low'r 1—10.	Direction. Upper From—	Direction. Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Bamberg			29.84	757.9	48.7	9.3	89	SE	9	4			8			0.016	0.4		Prof. Hoh.
Berlin			29.98	761.5	37.0	2.8	87	E	9	4			10			0.120	3.04		Prof. Arndt.
Breslau			30.00	761.9	47.5	8.6	86	NNW	9	4			10			0	0		Dr. P. Neugebauer.
Carlsruhe			29.71	754.5	55.6	13.1	76	NE	7	3			10			0	0		A. Senz.
Cassel			29.67	753.6	60.6	15.9	73	SE	9	4			2			0	0		Dr. H. Möhn.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.30	718.8	29.74	755.4	49.1	9.5	74	SW					9			0.071	1.8	Foggy	M. Wilhelm.
Hamburg			29.95	760.6	37.9	3.3	85	ESE	20	9			10			0.028	0.7	Cloudy, foggy	Deutsche Seewarte.
Kiel			29.97	761.1	40.3	4.6	69	ESE	31	14			10			0	0		Prof. G. Karsten.
Königsberg			30.07	763.6	34.3	1.3	77	E	11	5						0.017	0.43	Snowing	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			29.91	759.6	44.2	6.8	98	E	4	2			10			0.161	4.1	Foggy	Prof. Bruhns.
Münster			29.74	755.3	57.7	14.3	84	NE	4	2			3			0.075	1.9		Prof. E. Heis.
Posen			30.02	762.4	37.6	3.1	90	N	22	10			10			0	0	Cloudy	Dr. Magener.
Strasburg, (in Alsace)			29.74	755.4	54.7	10.4	84	NE	4	2			10			0.031	0.8		Dr. Schur.
Stuttgart			29.74	755.4	52.7	11.5	76	NE					5			0.126	3.2	Rainy	Mr. Würth.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.67	753.7	57.0	13.9	78	SE	4	2			10			0.122	3.1	Heavy fog	Prof. Clesch.
Wustrow, Naval School			30.03	762.8	39.4	4.1	75	ENE	13	6			10			0	0	Cloudy	E. F. Schütz.

Note.—In the originals the distinction between 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 1,355.3 feet.

GREEK SERIES.

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

Stations.	Corrected for instrumental errors. Inches.	Corrected for instrumental errors. Millimeters.	Reduced to sea-level. Inches.	Reduced to sea-level. Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	Force. 1—10.	Amount. Up'er 1—10.	Amount. Low'r 1—10.	Direction. Upper From—	Direction. Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Athens			30.07	763.7	72.5	22.5		SW										Half clear	

Note.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			29.75	755.6	52.3	11.3	97	NW	1.3	0.6			10	E		0.512	13.0		
Mondovi			29.77	756.1	51.6	10.9	97	WNW			2		10			0.224	5.7		
Genoa			29.70	754.4	60.6	15.9	86	N	1.8	0.8			10	W		0.465	62.6	Heavy rain	
Pavia			29.73	755.1	55.9	13.3	97	SW			1		10			0	0		
Verona			29.73	755.2	66.2	19.0	91	E			6		10			0	0		
Padua			29.75	755.6	60.1	15.9	83	NE	13.7	6.1			10			0.075	1.9		
Parma																			
Bologna			29.74	755.5	61.5	16.4	69	SE			1		5	NE		0	0	Rainy	
Leghorn			29.74	755.3	63.7	17.6	80	NE	2.5	1.1			10			0	0		
Urbino																			
Ancona			29.73	755.2	63.5	17.5	82	SE			2		10			0.866	22.0		
Siena			29.75	755.7	61.2	16.2	83	ESE	0	0			8	S		0.008	0.2		
Rome			30.80	757.0	61.0	16.1	93	SSE	17.4	7.8			10	S		0.173	4.4	Raining	
Naples, O. U.			29.85	758.3	71.8	22.1	67	SW			4		10	S		0	0		
Lecce			29.94	760.5	69.6	20.9	64	SSW	37.4	16.7			10	W		0	0		
Cosenza			29.94	760.4	72.3	22.4	70	S			2		6	SE		0	0		
Catania, (Sicily)																			
Riposto			29.93	760.1	75.2	24.0	85	SE			2		10			0	0		
Palermo			30.96	756.0	82.8	28.2	36	WSW	13.7	6.1			7			0	0		
Sub-Series.																			
Naples, S. R.			29.71	759.6	67.6	19.8	77	SW			2		..ck	SW		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for twenty-four hours. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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			29.67	753.7	58.3	14.6		SE			3								
Groningen			29.72	745.8	42.3	5.7		ESE			4								
Helder			29.70	751.3	50.5	10.2		ESE			2								
Utrecht			29.73	755.2	59.4	15.2		SE			2		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the 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			30.11	764.8	40.6	4.8	48	Calm	0	0			2			0	0		
Christiania			30.22	767.5	36.3	2.4	75	NE	4.9	2.2			10			0	0		
Tromsö			30.12	765.0	32.4	0.2	83	Calm			0		0			0	0		

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			29.99	761.7	65.3	18.5	79	SW	15.0	6.7			4	WNW		0.039	1.0		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.95	760.7	36.7	2.6	100	ESE	7	3			10					Raining	Astronomical Obs.
Wilna			30.15	765.8	33.1	0.6	80	Calm	0	0			10						Astronomical Obs.
Dorpat			30.28	769.1	32.0	0.0	78	E	4	2			10						Physical Cabinet.
St. Petersburg			30.28	769.0	29.7	— 1.3	82	Calm	0	0			10						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kiev			30.13	765.2	34.9	1.6	85	S	4	2			10						Physical Cabinet.
Nikolaiev			30.13	765.3	43.0	6.1	96	ESE	4	2			10					Raining	Kurdakof.
Kertch			30.16	766.1	52.2	11.2	78	S	4	2			9					Raining	Lagorio.
Moscow			30.24	768.0	22.5	— 5.3	88	N	8	3.5			10						Meteorological Obs.
Lugan			30.12	765.0	39.0	3.9	70	WSW	8	3.5			10			Blank	Blank		Meteorological Obs.
Archangel			30.21	767.4	25.2	— 3.8	95	W	8	3.5			10						Ogorodnikof.
Tiflis	28.72	729.5	30.11	764.8	66.9	19.4	40	S	4	2			5						Physical Obs.
Astrakhan			30.27	768.9	41.7	5.4	63	WNW	8	3.5			10						Sebastianof.
Kasan			29.98	761.5	34.5	1.4	67	NE	7	3			10						Physical Cabinet.
Orenburg			30.02	762.6	39.4	4.1	82	SE	10	4.5			10						Tschernischef.
Ekaterinburg	29.06	738.0	30.12	765.0	23.7	— 4.6	90	SW	4	2			10						Meteorological Obs.
Kusaly			30.07	763.7	54.0	12.2	62	NE	8	3.5			3						Bobrof.
Tashkend																			Michelson.
Barnaul			30.23	767.7	22.1	— 5.5	80	SW	3	1.5			4						Meteorological Obs.
Yeniseisk			29.63	752.7	24.6	— 4.1	95	SW	9	4			10					Snowing	Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.13	765.2	48.2	9.0	58	Calm	0	0			7						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. The elevation of Tiflis is 403. 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. Archangel barometer, as given, should be reduced by a correction of —3.5 mm. from January 1 to July 1, and by a correction of —2.0 mm. from July to October 19, 1875.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.91	759.6	59.2	15.1	68	SW	20.1	9.0		3	4	W		0	0	Cloudy	Royal Observatory.
San Fernando			30.07	763.6	67.8	19.9	84	SSW	7.2	3.2		2	4	SSW	SW	0.515	13.1		The Naval Observatory.

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

SWEDISH SERIES.

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

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Haparanda			30.32	770.1	23.4	— 4.8	90	SE			4		10			0	0		
Umea			30.32	770.1	29.8	— 1.2	61	NW			2		10			0	0		
Hernosand			30.33	770.3	33.4	0.8	71	WNW			2		10			0	0		
Stockholm			30.16	766.1	37.2	2.9	54	NNE			4		10			0	0		
Wisby			30.18	766.6	37.8	3.2	66	E			4		10			0.067	1.7		
SUB-SERIES. Upsala			30.24	768.2	35.6	2.0	74	ENE	8.3	3.7			10						Dr. Hildebrandsson.

NOTE.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.37	720.6	29.77	756.2	49.1	9.5	100	WSW			2		10			0	0	Raining	The Observatory.
Zurich	28.12	714.3	29.78	756.3	49.1	9.5	89	W			1		10			0	0	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —5.6mm.; Thermometer, —2°.0; Relative Humidity, +27 per cent.

Note.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y			30.00	761.9	74.5	23.6	62	N			2		1k		N	0	0		Prof. C. V. A. Van Dyck
Constantinople			30.08	764.0	67.5	19.7	58	ESE	6.7	3.0			0			0	0	Clear	
Fao, (Persian Gulf)			30.12	765.0	84.2	29.0		SE			3		0					Clear	
Salonica					74.1	23.4		S			1		2			Blank	Blank		
Valona			29.91	759.8	73.4	23.0		W			1		5					Cloudy	
Varna			30.08	764.0	71.6	22.0		S			2		0					Clear	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario			30.09	764.3	37	2.8		Calm	0	0		0	0			0	0	Clear	
Chatham, N. B.			29.90	759.4	25	— 3.3	75	W	7	3.1		0	0			0.01	0.3	Clear	
Charlottetown, P. E. Island			29.85	758.2	33	0.6	59	NW	12	5.4			8k8			0.05	1.3	Cloudy	
Fort Garry, Manitoba			29.59	751.6	43	6.1	87	NW	8	3.6		0	Sm'e			0	0	Clear	
Halifax, N. S.			29.85	758.2	35	1.7	72	NW	9	4.0		0	0			0.058	1.17	Clear	
Kingston, Ontario			30.07	763.8	41	5.0	90	NE	1	0.4		0	0			0	0	Clear	
Montreal, Quebec			30.06	763.5	37	2.8	84	NE	6	2.7		0	Sm'e			0	0	Clear	
Ottawa, Ontario			30.07	763.8	36	2.2	68	N	4	1.8		0	0			0	0	Clear	
Parry Sound, Ontario			30.00	762.0	35	1.7	95	SE	6	2.7		0	0			0	0	Clear	
Port Dover, Ontario			30.05	763.3	40	4.4	92	Calm	0	0		Haze	Haze			0	0	Hazy	
Port Stanley, Ontario			30.02	762.5	38	3.3	91	N	1	0.4		Haze	0			0	0	Hazy	
Quebec, Quebec			30.02	762.5	31	— 0.6	68	SW	10	4.5		0	0			0	0	Clear	
Saugeen, Ontario			29.97	761.2	41	5.0	92	SE	6	1.7		0	Haze			0.20	5.1	Hazy	
Stayner, Ontario			30.00	762.0	39	3.9	91	Calm	0	0		0	Haze			0	0	Fair	
Sydney, C. B.			29.77	755.1	33	0.6	70	NW	10	4.5			10ks		NW	0.06	1.5	Cloudy	
Toronto, Ontario			30.02	762.5	43	6.1	78	N	2	0.9		0	0			0	0	Clear	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.00	762.0	42	5.6	91	Calm	0	0		Haze	Fog			0	0	Foggy, frost	
Alpena, Mich.			29.89	759.2	36	2.2	90	Calm	0	0		0	0			0	0	Clear	
Atlantic City, N. J.			30.06	763.5	58	14.4	78	NW	4	1.8		0	Haze			0	0	Clear	
Augusta, Ga.			30.16	766.1	48	8.9	85	Calm	0	0		2cs	2s			0	0	Fair	
Baltimore, Md.			30.12	765.0	54	12.2	73	Calm	0	0		0	Sm'e	W		0	0	Smoky	
Barnegat, N. J.			30.05	763.3	55	12.8	68	W	6	2.7		0	Sm'e			0	0	Clear	
Benton, Montana	27.14	689.6	29.94	760.5	49	9.4	100	Calm	0	0			10n			0.10	2.5	Light rain	
Bismarck, Dakota	28.00	711.2	29.64	752.8	49	9.4	58	NW	9	4.0			10s			0	0	Cloudy	
Boston, Mass.			30.01	762.2	47	8.3	85	SW	2	0.9		0	Sm'e			0	0	Smoky	
Breckenridge, Minn.			29.66	753.4	37	2.8	71	SW	2	0.9		0	Sm'e			0	0	Clear	
Buffalo, N. Y.			30.00	762.0	51	10.6	72	SW	4	1.8		0	Haze			0	0	Hazy	
Burlington, Vt.			30.06	763.5	41	5.6	65	N	3	1.3		0	2s			0	0	Fair	
Cairo, Ill.			30.16	766.1	46	7.8	85	Calm	0	0		5c	Fog			0	0	Foggy	
Cape Hatteras, N. C.			30.05	763.3	59	15.0	76	W	5	2.2		5c	Haze			0	0	Fair	
Cape Henry, Va.			30.11	764.8	66	18.9	54	W	4	1.8		0	Haze	NW.		0	0	Clear	
Cape May, N. J.			30.07	763.8	56	13.3	80	W	5	2.2		0	0			0	0	Clear	
Charleston, S. C.			30.14	765.5	55	12.8	80	NW	4	1.8			10s		NW	0	0	Cloudy	
Cheyenne, Wyoming	24.04	610.9	29.98	761.1	39	3.9	37	NW	4	1.8		0	0			0	0	Clear	
Chicago, Ill.			29.97	761.2	52	11.1	66	SW	8	3.6		0	Haze			0	0	Clear	
Cincinnati, Ohio			30.11	764.8	49	9.4	77	SW	3	1.3		0	Fog			0	0	Clear	
Cleveland, Ohio			30.02	765.2	53.5	11.9	54	S	7	3.1		0	Haze			0	0	Hazy	
Colorado Springs, Col.	24.11	612.4	29.98	761.5	47	8.3	34	NW	4	1.8		0	0			0	0	Clear	
Corsicana, Tex.			30.07	763.8	48	8.9	85	SE	1	0.4		2c	Haze			0	0	Fair	
Davenport, Iowa			29.98	761.5	53	11.7	60	SW	4	1.8		0	Haze			0	0	Clear	
Denison, Tex.			30.03	762.7	51	10.6	79	SW	3	1.3		5cs	Haze			0	0	Smoky	
Denver, Col.	24.75	629.6	30.01	762.2	42	5.6	42	S	7	3.1		5k	0	SW		0	0	Fair	
Detroit, Mich.			29.97	761.2	49	9.4	77	SW	6	2.7		0	Sm'e	NW		0	0	Clear	
Dodge City, Kan.	27.38	695.1	29.65	753.1	50	10.0	71	SE	2	0.9		0	0			0	0	Clear	
Dubuque, Iowa			29.92	760.0	55	12.8	62	SW	6	2.7		0	Sm'e			0	0	Smoky	
Duluth, Minn.			29.95	753.1	43	6.1	83	Calm	0	0		Haze	Haze			0	0	Hazy	
Eastport, Me.			29.97	761.2	35	1.7	70	NW	7	3.1		0	0			0.05	1.3	Clear	
Erie, Pa.			30.00	762.0	51	10.6	72	SE	12	5.4		0	Sm'e			0	0	Smoky	
Escanaba, Mich.			29.81	757.2	39	3.9	82	Calm	0	0			Fog			0	0	Foggy	
Fort Gibson, I. T.			30.04	763.0	41	5.0	83	Calm	0	0		1c	0			0	0	Clear	
Fort Sill, I. T.	28.78	729.0	29.89	759.2	48	8.9	78	Calm	0	0		2k	5s			0	0	Cloudy	
Fort Sully, Dakota	28.12	714.2	29.76	755.6	49	9.4	41	W	6	2.7		0	Haze			0	0	Clear	
Galveston, Tex.			30.07	763.8	62	16.7	77	NE	8	3.6		5ck	0			0	0	Fair	
Grand Haven, Mich.			29.92	760.0	55	12.8	80	S	10	4.4		0	Haze			0	0	Clear	
Indianapolis, Ind.			30.08	764.0	51	10.6	65	S	5	2.2		Haze	Sm'e			0	0	Hazy	
Indianola, Tex.			30.07	763.8	66	18.9	78	E	14	6.3		1cs	1s			0	0	Fair	
Jacksonville, Fla.			30.08	764.0	63	17.2	83	N	8	3.6			10s			0	0	Cloudy	
Keokuk, Iowa			29.98	761.5	54	12.2	61	SW	6	2.7		0	0			0	0	Clear	
Key West, Fla.			29.93	760.2	73.8	23.2	85	W	13	5.8		2ck	5ks	W	W	0.52	13.2	Clearing	
Kittyhawk, N. C.			30.11	764.8	57	13.9	75	W	10	4.5		2c	Haze			*0	0	Fair	
Knoxville, Tenn.			30.20	767.1	39	3.9	91	Calm	0	0		2cs	Fog	SW		0	0	Foggy	
La Crosse, Wis.			29.83	757.7	51	10.6	72	S	13	5.8		Haze	Haze			0	0	Hazy	
Leavenworth, Kan.			30.03	762.0	47	8.3	70	S	2	0.9		0	0			0	0	Clear	
Lexington, Ky.	29.06	738.1	30.18	766.6	49	9.4	64	S	8	3.6		Haze	Haze			0	0	Fair	
Long Branch, N. J.			30.05	763.3	56	13.3	69	Calm	0	0		Haze	Haze			0	0	Hazy	
Louisville, Ky.			30.12	765.0	48	8.9	70	Calm	0	0		0	Fog			0	0	Clear	
Lynchburg, Va.			30.13	765.3	51	10.6	72	Calm	0	0		0	Haze			0	0	Clear	
Malone, N. Y.			30.02	762.5	40	4.4	81	Calm	0	0		0	0			Inap.	Inap.	Clear	
Marquette, Mich.			29.72	754.9	50	10.0	79	E	8	3.6		0	Haze			0	0	Hazy	
Memphis, Tenn.			30.15	765.8	43	6.1	83	Calm	9	0		2c	5s			0	0	Fair	
Milwaukee, Wis.			29.92	760.0	53	11.7	66	SW	5	2.2		Haze	Haze			0	0	Hazy	
Mobile, Ala.			30.09	764.3	51	12.2	86	N	5	2.2		0	8s			0	0	Cloudy	
Montgomery, Ala.			30.15	765.8	47.5	8.6	81	E	1	0.4		10cs	Sm'e			0	0	Cloudy	
Morgantown, W. Va.			30.13	765.3	48	8.9	69	S	1	0.4		0	Sm'e			0	0	Clear	
Mt. Washington, N. H.	23.62	599.9	29.98	761.5	25	—3.9	100	NW	50	22.4			Fog			0	0	Foggy	
Nashville, Tenn.			30.15	765.8	41	5.0	91	Calm	0	0		0	Fog			0	0	Foggy	
New Haven, Conn.			30.04	763.0	49	9.4	85	N	1	0.4		Haze	Sm'e			0	0	Clear	
New London, Conn.			30.05	763.8	50	10.0	75	N	4	1.8		0	Haze			0	0	Clear	
New Orleans, La.			30.07	763.8	59.5	15.3	73	NE	4	1.8		5c	0	SW		0	0	Fair	
Newport, R. I.			30.02	762.5	51	10.6	79	Calm	0	0		0	Haze			0	0	Clear	
New York, N. Y.			30.05	763.3	54	12.2	61	NE	3	1.3		0	Fog			0	0	Clear	
Norfolk, Va.			30.11	764.8	53	11.7	83	SW	1	0.4		2c	Sm'e		SW	0	0	Fair	
North Platte, Neb.	26.97	685.0	29.54	750.3	42	5.6	66	Calm	0	0		0	0			0	0	Clear	
Omaha, Neb.	28.81	731.8	29.86	758.4	52	11.1	66	S	7	3.1		0	Sm'e			0	0	Clear	
Oswego, N. Y.			30.05	763.3	43.8	6.6	88	S	3	1.3		Haze	Haze			0	0	Fair	
Peck's Beach, N. J.			30.07	763.8	54	12.2	73	NW	4	1.8			Haze			0	0	Hazy	
Pembina, Dakota			29.55	750.6	46	7.8	84	W	8	3.6		0	Haze			0	0	Hazy	
Philadelphia, Penn.			30.08	764.0	56	13.3	56	NW	5	2.2		0	Sm'e			0	0	Clear	
Pike's Peak, Colorado	17.86	453.6	30.08	764.0	24	—4.4	75	N	4	1.8		0	2s			0	0	Fair	
Pittsburgh, Penn.			30.09	764.3	47	8.3	76	S	1	0.4			Fog			0	0	Foggy	
Port Huron, Mich.			29.97	761.2	50	10.0	78	S	8	3.6		0	0			0	0	Clear	
Portland, Me.			30.04	763.0	44	6.7	68	N	1	0.4		0	Haze			0	0	Hazy	
Portland, Oregon			29.94	760.5	59	15.6	87	SW	12	5.4			10n		NW	0.50	12.7	Heavy rain	
Punta Rassa, Fla.			29.96	761.0	68.0	20.0	94	N	16	7.2			10s			0.31	7.9	Threatening	
Rochester, N. Y.			30.01	762.2	47	8.3	77	SW	6	2.7		Haze	Haze			0	0	Hazy	
Salt Lake City, Utah	25.08	652.5	30.02	762.5	54	12.2	43	SE	1	0.4			10s			0	0	Cloudy	
Sandy Hook, N. J.			30.01	763.0	52	11.1	79	W	6	2.7		0	Haze			0	0	Clear	
San Diego, Cal.			30.02	762.5	65	18.3	83	N	4	1.8			10s			0	0	Cloudy	
San Francisco, Cal.			30.10	764.5	57	13.9	94	W	10	4.5		2ck	0	W		0	0	Clear	
Santa Fe, N. M.	23.27	691.0	29.81	757.2	44	6.7	23	NE	4	1.8		0	0			0	0	Clear	
Savannah, Ga.			30.14	765.5	54	12.2	73	NW	4	1.8		10cs	Sm'e			0	0	Cloudy	
Shreveport, La.			30.14	765.5	47	8.3	92	Calm	0	0		8cs	0	SW		0	0	Fair	
Smithville, N. C.			30.16	766.1	54	12.2	73	NW	2	0.9		10cs	0	W		0	0	Cloudy	
Springfield, Mass.			30.04	763.0	47	8.3	69	W	4	1.8		0	Fog			0	0	Foggy	
St. Louis, Mo.			30.09	764.3	52	11.1	59	SW	8	3.6		0	0			0	0	Clear	
St. Marks, Fla.			30.08	764.0	57	13.9	81	NE	2	0.9			10s			0	0	Cloudy	
St. Paul, Minn.			29.67	753.6	49	9.4	77	E	6	2.7		2cs	Haze			0	0	Fair	
St. Paul's Island, Alaska																			
Squa. Beach, N. J.			29.99	761.7	49	9.4	77	W	4	1.8		0	Haze			0	0	Clear	
Toledo, Ohio			29.99	761.7	54	12.2	61	SW	8	3.6		0	Sm'e			0	0	Clear	
Tucson, Arizona																			
Tybee Island, Ga.			30.12	765.0	58	14.4	81	N	6	2.7		5cs	5ks	SW		0	0	Cloudy	
Vicksburg, Miss.			30.20	767.1	50	10.0	78	E	3	1.3		5c	0	S		0	0	Fair	
Virginia City, Montana	24.20	641.7	29.68	753.9	49	9.4	30	SW	4	1.8			10n		W	0	0	Light rain	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.11	764.8	49.7	9.7	85	Calm	0	0		Haze	Sm'e			0	0	Hazy	
Wilmington, N. C.			30.14	765.5	52	11.1	72	SW	1	0.4		10cs	H'ze	W		0	0	Cloudy	
Wood's Hole, Mass.			30.03	762.7	53	11.7	86	Calm	0	0		0	Sm'e			0	0	Smoky	
Wytheville, Va.	27.82	706.6	30.04	763.0	41	5.0	73	Calm	0	0		0	0			0	0	Clear	
Yankton, Dakota	28.51	724.1	29.78	756.4	48	8.9	63	E	2	0.9		0	Sm'e			0	0	Smoky	
Yuma, Arizona			29.89	759.2	63	17.2		Calm				0	0			0	0	Clear	
Sub-Series																			
Bridgetown, B'b'does, W. I.					80	26.7	86	E	6	2.7		2k	5ks	E	NE	1.60	40.6	Fair	E. Racker.
Pointe-aPitre, G'd'loupe, do			30.00	762.0	80	26.7	87	SE				2cs	5ks			0.21	5.3	Foggy	L. V. Bigard.
Havana, Cuba, W. I.			29.98	761.5	70	21.1	99	Calm	0	0		1ck	1k	SW	E	0.41	10.4	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W.			30.15	765.8	78	25.6	90	Calm	0	0			10n			2.03	51.6		James Gall.
St. Thomas, St. T., W. I.			30.20	767.1	81	27.2	78	E	6	2.7		2cs	2k	E	E	0	0	Clear	W. S. Cameron.
Santiago de Cuba, W. I.			29.77	756.1	77	25.0	82	Calm	0	0			8n		SE			Cloudy	Robert Mason.
St. Georges, Bermudas			30.11	764.8	71	21.7	67	NW	5	2.2		10c	0	NW		0	0	Clear	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.			29.81	757.2	31.5	−0.3	95	E	2	0.9			10s			0	0		J. Fortescue.
St. John's, Newfoundland.																			John Delaney.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Clifton, Jamaica, W. I.	27.19	690.6	29.98	761.5	67	19.4	90	SE	2.0	0.9			10k			1.22	31.0	Raining	C. Partridge.
Navassa																			
Meaellin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			30.01	762.2	50	10.0		SW	12	5.4			0			0	0	Fine	H. M. Redington.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from —		
Steamer Leipzig, N. 46° 51′, W. 51° 07′.	ENE		29.35	745.5	37.6	3.1		NNW			6		..k		NW	H'y sea		Snow & hail.	
Steamer Hibernian, N. 48° 21′, W. 49° 54′.	SE	9½	29.12	739.6	36	2.2		NNW			7		..n		SW	S'rt sea		Hail	

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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, 6,957.3 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.; 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, 14,159.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,86[illegible] (?) ft., or 2,091.6 (?) m.; Virginia City, 5,180 (?) ft., or 1,679.3 (?) m.; Wytheville, 2,204.8 ft., or 671.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.13 in. The barometer of the Hibernian has an error of —0.18, as determined from the isobarometric charts of the Signal Service.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 23, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.09	764.3	75.6	24.2	48	Calm			0		2			0	0		Charnot.
Algiers			29.97	761.2	73.4	23.0	56	NW			2		6			0	0		Peter.
La Galle																			Kuntz.
Tunis			29.94	760.2	75.6	24.2	49	WSW			3		6			0	0		Jacques.
Sfax			29.95	760.6	78.1	25.6	87	S			1		2			0	0		Chauvey.
Sada			30.10	764.5	67.1	19.5	51	W			2		2			0	0		Grosjean.
Telessa			29.95	760.8	68.4	20.2		SE			1		2			0	0		Colin.
Geriville			30.12	765.1	59.9	15.5	58	NW			2		3			0	0		Bernadach.
Laghouat			30.07	763.7	69.8	21	41	S			3		1			0	0		Simon.
Biskra			30.05	763.3	73.0	22.8	36	NW			4		3			0	0		Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			29.56	750.7	59.0	15.0	81	SW			2		6			0.169	4.3	Raining	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.52	749.7	54.5	12.5	86	NE			1		10			0.130	3.3		I. R. Observatory.
Eperies			29.59	751.5	53.1	11.7	89	Calm			0		10		N	Blank	Blank		Julius Mikolik.
Gratz	28.38	720.8	29.57	751.0	50.9	10.5	79	Calm			0		10						Andreas Rospini.
Hermannstadt	28.23	717.1	29.60	751.8	63.7	17.6	64	SE			3		10			0.035	0.90		Prof. Reissenberger.
Kremsmünster	28.23	717.1	29.56	750.8	50.4	10.2	90	Calm			0		10			0.406	10.3		Prof. C. Wagner.
Lemberg			29.69	754.2	44.8	7.1	84	SE			5		9			0.193	4.9		Dr. T. Stanecki.
Nylregyhaza			29.59	751.6	5[illegible].0	12.8	100	S			1		10			0.355	9.02		Habzsuda Daniel.
Pola			29.60	751.9	64.4	18.1	77	SW			2		7ks			0.030	0.77		I.R. Hydrographic Of'ce
Szegedin			29.60	751.8	58.1	14.5	88	S			4		10			0.224	5.70	Thunder-storm	Karl Stancel.
Trieste			29.50	751.6	63.9	17.7	90	WSW			1		10			0.461	11.7	Light rain	Prof. V. Farolfi.
Vienna			29.53	750.1	50.9	10.3	85	WSW			2		8			0.205	5.2		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 9 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 f..

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.45	747.9	54.3	12.4	89	SSE			2		10			0.079	2.00		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.79	756.7	47.7	8.7		ESE	20	8.9			10			0.070	1.78	Squally.	William Boswell.
Ardrossan			29.63	752.6	54	12.2		E			3		8					Overcast	Wm. McNeil.
Armagh Observatory			29.63	752.6	52.2	11.2		NNE	6	2.7			7					*D. clouds	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			29.49	749.0	54.1	12.3		NE			2		10					Misty	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.63	752.6	53.3	11.8		NNE			1		7					*D. clouds	J. Dreyer.
Bradford			29.49	749.0	52.1	11.2		NE			1		10			Blank	Blank	Overcast	J. McLandsborough.
Bridgetown, (Barbadoes)			29.94	760.5	81.0	27.2		NE			2		10					Overcast	T. H. Hunt.
Cambridge Observatory			29.42	747.3	56.0	13.3		ENE			1		10			Blank	Blank	Overcast	Sergeant Hunt, A. H. C.
Cape Good Hope Obs.			30.24	768.1	71.9	22.2	35	S	11	4.9			1						Th Staff, for E. J. Stone.
Cardington			29.43	747.5	55.0	12.8		E			1		8					Overcast	John McLaren.
Carlisle			29.58	751.3	51.7	10.9		NE			2		10			0.56	14.2	Raining	T Bell, for J. Cartmell.
Chatham, School M. E.			29.39	746.5	49.2	9.6		SE			1		10					Drizzling	Capt. T. Fellowes, R. E.
Dartmoor	28.03	737.4	29.41	747.0	47	8.3		N W			2		10					Overcast	R. E. Power.
Donaghadee			29.60	751.8	52	11.1		ENE			4		10					Overcast	J. Mac Gowan, Jr.
Dover			29.39	746.5	50	10.0		WSW			3		8					Raining	J. Costello.
Eccles, (near Manchester)			29.48	748.8	54.7	12.6		ENE	4.2	1.9			10					Misty	Thomas Mackereth.
Falmouth Observatory			29.43	747.5	53.0	11.7		W NW	16	7.2			4					*D. clouds	The Staff.
Fort Napier, (Natal)	27.70	703.6	29.94	760.5	72.5	22.5		SE			2		8					*D. clouds	Pvt G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.94	760.5	88	31.1		N					5						
Galway, Queen's College																			B. G. Clare, for Prof. Carr.
Gibraltar, (Mediterranean)			30.08	764.0	65.5	18.6		SW			5		9					Gloomy	Sergt. E. G. Baker.
Glasgow Observatory			29.05	752.8	50.5	10.3		ENE			2		10					Drizzling	Lewis Stuart.
Great Yarmouth			29.46	748.3	53	11.7		ESE			4		7					Rainy	G. T. Watson.
Greenwich Royal Obs			29.42	747.3	48.7	9.3		NW			1		10					Raining	The Staff, for G. B. Airy.
Guernsey			29.41	747.0	49	9.4		SSW			1		10					Raining	Dr. S. E. Hoskins, Gov.
Halifax, Moorside Obs			29.53	750.0	52.4	11.3		ENE			2		10			Blank	Blank	Overcast	F. J. Page, for L. J. Crossley.
Helston			29.40	746.7	57	13.3		NW			4		6			0.32	8.1	*D. clouds	M. P. Moyle.
Holyhead			29.54	750.3	54	12.2		NNE			3		3					Clear	John Tilston.
Kew Observatory			29.41	747.0	48.9	9.4		SW	4	1.8			10					Raining	The Staff.
Kingstown			29.57	751.1	53	11.7		N			5		9					Overcast	George Mitchell
Leicester Museum			29.47	748.5	54.9	12.7		E			1		4					*D. clouds	William J. Harrison.
Llandudno			29.51	749.5	53.5	11.9		ENE			1		8					*D. clouds	Dr. James Nicol.
Malta, (Mediterranean)			29.94	760.5	74.0	23.3		N W			1		4					*D. clouds	Fred Travis, Pvt A. H. C.
Nairn			29.77	756.1	50	10.0		ESE			2		5						W. D. Penny.
Nassau, (Bahamas)			30.05	763.5	74.6	23.7		SE			0		9					Raining	Surg.-Maj. Henry.
Nottingham			29.51	749.5	57.3	14.1		NE			3		5ck		N	0.06	1.5	*D. clouds	E. J. Lowe.
Oscott, St Mary's College			29.46	748.3	51.1	10.6		NNE			2		8					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.41	747.0	49	9.4		Calm			0		10					Raining	J. Lucas, for R. Main.
Plymouth			29.49	746.7	52.7	11.5		N NW			1		10					Overcast	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.55	750.6	52	11.1		NNE			5		5					Cloudy	W. Kennedy.
Saint Ann's Head			29.46	748.3	52	11.1		NNE			2		4					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.40	746.7	50.0	10.0		NE			4		10					Raining	A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			29.57	751.1	50.0	10.0		ESE			6		10					Raining	F. Shaw.
Scutari cemetery, (Turkey)			29.87	758.7	72.6	22.6		SSW			1		9					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.51	749.5	56.2	13.4		NE			1		8			0.28	7.1	Gloomy	W. F. Cooper.
Silloth Rectory			29.59	751.6	51.9	11.1		ENE			3		10			0	0	Raining	Rev Francis Redford.
Stonyhurst Observatory			29.52	749.8	52.3	11.3		NE			2		10			Blank	Blank	Threatening	The Staff.
Stornoway, Lews C. (Hebr)			29.71	754.6	52	11.1		E			4		5					*D. clouds	John Smith.
Stratfield Turgiss			29.36	745.7	48.5	9.2		W			1		10					Raining	Rev Charles H. Griffith
Streatley Vicarage			29.43	747.5	53.2	10.1		E			1		10			0.267	6.78		Rev. John Slatter.
Thurso			29.42	757.4	48	8.9		ENE			4		9					Overcast	John Trotter.
Truro, Royal Institution			29.41	747.0	57	13.9		N			6		4					*D. clouds	W Newcombe.
Valencia Observatory			29.54	752.8	53.8	12.1		NNE	14	6.3			1					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					55	12.8		S			2		10			0.75	19.1		
Leith, Restalrig Park			29.70	754.4	50.1	10.1		E			3		108			0.12	3.0	Overcast	Andrew Gibb.
Monach Lt-house, (Shet Is)			29.70	754.4	55	12.8		SE			4	10	5	SE		0	0		J. Youyclause.
North Unst, (Shetland Is)			30.06	753.5	42	5.6		SE			6		10						

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12. the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.86	758.4	39.6	4.2	70	ENE			6		10						
Fanöe			29.84	757.9	42.3	5.7	80	E			4		9						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.89	759.1	42.1	5.6	91	SE			4		8						
Thorshavn, (Faröe)			30.00	762.0	46.9	8.3	75	E			4		9						
Vestervig			29.91	759.8	37.8	3.2	90	E			6		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols: not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			29.45	748.0	57.2	14.0	69	SW			2		5kn			0.087	2.2	Cloudy	Normal School.
Amiens			29.47	748.6	54.0	12.2	86	S			2		10			0.362	9.2	Cloudy	Normal School.
Avignon			29.61	752.0	61.7	16.5	79	NNE			1					0	0	Misty	Normal School.
Bar-sur-Seine			29.48	748.9	55.2	12.9	82	S			2	8c		W		0.067	1.7	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.50	749.2	57.9	14.4	69	SW	3.6	1.6			10		SW	0.043	1.1	Raining	Beaumette Observatory
Beauvais			29.52	749.7	54.5	12.5	68	SW			2		8		WSW	0.089	2.25	Cloudy	Normal School.
Besançon			29.37	751.1	53.6	12	90	SSW			2		8		S	0.04	1.	Cloudy	Normal School.
Bourg en Bresse			29.58	751.2	57.2	14	82	S			4		10		E	0.098	2.5	Cloudy	Normal School.
Bourges			29.51	749.5	55.9	13.3	75	WSW			3		5		ENE	0.283	7.2	Cloudy	Normal School.
Brest			29.31	744.4	55.2	12.9	83	NW			3		10		NW	0.177	4.50	Raining	Naval Observatory.
Caen			29.46	748.2	55.4	13	69	WSW			2		5		SW	0.421	10.7	Cloudy	Normal School
Chartres																			Normal School.
Chaumont	28.34	719.9	29.50	749.4	53.2	11.8		S			2		10kn		S	0.010	0.25	Cloudy	Normal School.
Commercy			29.54	750.4	52.5	11.4	90	SSW			2		10		SSW	0.028	0.7	Cloudy	Normal School.
Commune de Gréasque*			29.03	752.6	64.8	18.2	51	W			2		5		W	0	0		
Le Mans																			Normal School.
Lons-Le-Saulnier			29.54	750.1	56.1	13.4	84	S			2		5		SW	1.004	25.5	Cloudy	Normal School.
Mâcon			29.59	751.5	54.3	12.4	82	W			8		5		NE	0.098	2.5	Cloudy	Normal School.
Mirecourt			29.51	749.3	51.1	10.6	86	SSW			2		8		NE	0.299	7.6	Cloudy	Normal School.
Orleans			29.48	748.7	55.6	13.1	68	W			3		2		W	0.181	4.6		Normal School.
Paris Observatory			29.47	748.5	54.1	12.3	65	S			2		5		SW	0.140	3.55	Cloudy	National Observatory
Parthenay			29.48	748.7	55.8	13.2	88	SW			2		5		SW	0.32	8.	Cloudy	Normal School.
La Roche sur Yon			29.52	749.7	58.3	14.6	78	SW			2		5		E	0.276	7.0	Cloudy	Normal School.
Rochefort, Observatory			29.49	749.0	56.3	13.5	77	SSW			3		10		E	0.354	9.0	Raining	Naval Observatory.
Rouen			29.44	747.7	56.7	13.7	93	W			2		2		E	0.402	10.2		Normal School.
Saint Lo			29.43	747.4	54.5	12.5	100	W			1		5		E	0.098	2.5		Normal School.
Villefranche			29.56	750.9	56.5	13.6	83	SSE			2		10		W	0.08	2.	Cloudy	Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchesi.
Mont-Louis			29.98	761.5	45.0	7.2	84	S W	28.0	12.50			1		SW	0	0		—. Falguère.
Montsouris, Paris			29.47	748.4	54.7	12.6	65	WSW			2	8c	8c&k, kn		SW	0.154	3.9		Montsouris Observ'tory.
Perpignan	†29.55	†750.6			66.2	19.0	65	E	3.7	1.67			8		W	0	0		Dr. Fines.
Pic du Midi, (Summit) H. P.																			M. Baylac.
Pic du Midi, (Plantade) H.P.																			General de Nansouty
Saint Maur, (near Paris)			29.47	748.6	54.7	12.6	68	SSW			2		2			0.264	6.7		E. Renou.
Tours			29.68	753.9	56.5	13.6	66	SW			1		8		WSW	0.433	11.0		C. Marquet.
Versailles, (near Paris)			29.47	748.5	57.2	14.0	57	W			2		7			0.292	7.42		Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.20	767.1	66.0	18.9	90	E	10.3	4.6			10kn		E	0 0	0 0		H. Le Lec, S. J.

NOTE.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time The altitude of Mont-Louis is 1,586.40 meters, or 5,201.8 feet; Chaumont, 332 m., or 1,060.9 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. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Lower 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			29.59	751.6	49.1	9.5	87	SW	13	6			9			0.094	2.4		Prof. Hoh.
Berlin			29.67	753.7	37.2	2.9	98	NE	9	4			10			0.17	4.38	Rainy	Prof. Arndt.
Breslau			29.59	751.5	44.4	6.6	96	NE	4	2			10			0.750	19.2	Raining	Dr. P. Neugebauer.
Carlsruhe			29.54	750.2	54.3	12.4	86	SW	4	2			10			0.087	2.2		A. Senz.
Cassel			29.50	749.4	46.6	8.1	78	E	2	1			10			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.17	715.5	29.60	75.18	50.9	10.5	69	W					3			0.024	0.6	Foggy	M. Wilhelm.
Hamburg			29.75	755.7	41.0	5.0	67	ESE	18	8			9kn	SE		0	0	Foggy	Deutsche Seewarte.
Kiel			29.83	757.7	43.3	6.3	70	E	13	6			10			0	0		Prof. G. Karsten.
Königsberg			29.80	756.9	36.3	2.4	93	E	11	5						0.014	0.36	Snowing	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			29.66	753.3	36.3	2.4	98	NNE	9	4			10			0.409	10.4	Light rain	Prof. Bruhns.
Münster			29.61	752.2	49.3	9.6	84	NE	4	2			3			0	0		Prof. E. Heis.
Posen			29.03	752.6	38.3	3.6	100	N	18	7			10			0.717	18.2	Cloudy	Dr. Magener.
Strasburg, (in Alsace)			29.55	750.5	55.2	12.9	79	Calm	0	0			10			0.248	6.3		Dr. Schur.
Stuttgart			29.55	750.9	55.0	12.8	80	N					9			0.051	1.3	Rainy	Mr. Würth.
Thorn																			Dr. Hasenbalg.
Trèves, (Trier)			29.48	748.8	54.1	12.3	82	S	9	4			10			0.118	3.0	Heavy fog	Prof. Flesch.
Wustrow, Naval School			29.85	758.1	41.9	5.5	75	NE	31	14			10			0	0	Cloudy	E. F. Schütz.

NOTE.—In the originals the distinction between 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.	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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens			29.91	759.8	73.8	23.2		S										Almost clear	

NOTE.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			29.59	751.5	53.4	11.9	88	SSW	1.8	0.8			9	E		0	0		
Mondovi			29.59	751.6	50.0	10.0	91	NNW			2		10			0.173	4.4		
Genoa			29.56	750.8	66.9	19.4	61	SE	6.9	3.1			6	N		0	0		
Pavia			29.57	751.1	59.0	15.0	77	S			1		9	SE		0.598	15.2		
Verona			29.54	750.3	65.1	18.4	75	W			2		10			0	0		
Padua			29.56	750.7	62.4	16.0	77	S	6.9	3.1			6			0	0		
Parma																			
Bologna			29.62	752.3	62.1	16.7	69	SSW			6		5	W		Blank	Blank		
Leghorn			29.63	752.7	66.0	18.9	76	SW	8.1	3.6			8			0	0		
Urbino																			
Ancona			29.65	753.1	62.8	17.1	74	ESE			2		9			0.177	4.5		
Siena			29.64	752.9	62.4	16.9	73	SW	3.1	1.4			6	SW		0	0		
Rome			29.73	755.2	68.4	20.2	67	SSW	10.5	4.7			9	SW		0.016	0.4	Raining	
Naples, O. U.			29.03	757.1	71.1	21.7	60	SW			4		8	W		0.248	6.3		
Lecce			29.80	757.0	71.2	21.8	62	W	15.0	6.7			7	W		0	0		
Cosenza			29.91	759.8	67.8	19.9	67	SW			2		10			0.685	17.4	Raining	
Catania, (Sicily)																			
Riposto			29.86	758.5	72.5	22.5	74	NE			2		5	SW		0	0		
Palermo			29.84	757.8	73.4	23.0	52	WSW	7.4	3.3			8			0	0		
Sub-Series.																			
Naples, S. R.			29.84	757.0	66.7	19.3	71	WSW			2		..ck	WSW		0.118	3.0		Prof. F. Brioschi.

NOTE.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for twenty-four hours. The altitude of Mondovia is 555 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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			29.48	748.7	55.4	13.0		SE			4								
Groningen			29.61	752.0	39.[illegible]	4.2		E			5								
Helder			29.58	75[illegible].3	43.9	6.6		E			4								
Utrecht			29.49	749.1	51.3	10.7		E			2		10					Overcast	

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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			30.03	762.8	40.6	4.8	56	Calm	0	0			4			0	0		
Christiania			30.12	765.0	34.2	1.2	65	ENE	1.1	0.5			10			0	0		
Tromsö			30.04	763.1	35.8	2.1	80	S			2		10			0	0		

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			29.98	761.5	67.3	19.6	87	WSW	22.4	10.0			10			0.417	10.6		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.65	753.3	43.0	6.1	99	E	18	8			10						Astronomical Obs.
Wilna			29.97	761.1	36.5	2.5	87	E	4	2			10						Astronomical Obs.
Dorpat			30.15	765.9	27.9	— 2.3	85	ESE	9	4			10					Snowing	Physical Cabinet.
St. Petersburg			30.16	766.0	26.1	— 3.4	91	SE	4	2			10						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kieff			30.06	763.5	28.4	— 1.7	82	SE	9	4			10						Physical Cabinet.
Nikolaiev			30.07	763.7	44.8	7.1	81	ENE	13	6			7						Kurdakof.
Kertch			30.00	762.0	61.7	16.5	84	NE	2	1			10					Raining	Lagorio.
Moscow			30.28	769.0	19.2	— 7.1	90	N	8	3.5			10						Meteorological Obs.
Lugan			30.06	764.4	38.1	3.4	83	NE	10	4.5			10			Blank	Blank		Meteorological Obs.
Archangel			30.01	762.2	24.8	— 4.0	87	WNW	10	4.5			10						Ogorodnikof.
Tiflis	28.67	728.1	30.06	763.5	64.0	17.8	62	S	4	2			1						Physical Obs.
Astrakhan			30.21	767.4	44.2	6.8	68	Calm	0	0			10					Light rain	Sebastianof.
Kasan			30.05	763.2	34.5	1.4	76	NE	2	1			3						Physical Cabinet.
Orenburg			30.01	763.2	35.4	1.9	88	SE	13	6			10					Raining	Tschernischef.
Ekaterinburg	28.88	733.6	29.93	760.3	27.1	— 2.7	87	Calm	0	0			10						Meteorological Obs.
Kasaly			30.00	762.0	44.1	6.7	78	SSW	8	3.5			3						Bobrof.
Tashkend																			Michelson.
Barnaul			29.92	760.0	36.1	2.3	94	Calm	0	0			4						Meteorological Obs.
Yeniseisk			29.58	751.4	38.8	3.8	98	SSW	4	2			10					Snowing	Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.30	769.7	47.5	8.6	51	Calm	0	0			3						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. The elevation of Tiflis is 409. meters, or 1,311.8 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.82	757.3	54.5	12.5	93	SW	23.9	10.7			10			0.114	2.9	Rainy	Royal Observatory.
San Fernando			29.12	765.0	69.6	20.9	87	SSW	13.0	5.8		7	2	SW	NW	0.031	0.8		The Naval Observatory.

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

SWEDISH SERIES.

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

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Haparanda			30.17	766.2	17.6	— 8.0	94	N			4		10			0	0		
Umea			30.15	765.8	31.5	— 0.3	81	NE			2		8			0	0		
Hernosand			30.11	764.8	38.7	3.7	58	SW			2		1			0	0		
Stockholm			30.04	763.0	36.1	2.3	58	NE			4		10			0.039	1.0		
Wisby			30.02	762.5	35.6	2.0	68	ENE			6		10			0.008	0.2		
SUB-SERIES.																			
Upsala			30.09	764.3	34.9	1.6	69	NE	7.6	3.4			10						Dr. Hildebrandsson.

NOTE.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.17	705.5	29.59	751.6	56.5	13.6	84	NNE	.....	.....	0	.....	8	.....	.....	1.130	28.7	Cloudy	The Observatory.
Zurich	27.98	710.6	29.61	752.2	53.8	12.1	76	W	.....	.....	1	.....	4	.....	.....	0.213	5.4	Clear	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, —10.6m.m.; Thermometer, +2°.3; Relative Humidity, +11 per cent.

NOTE.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y	.....	.....	29.95	760.7	75.2	24.0	76	N	.....	.....	3	.....	2k	.....	N	0	0	.....	Prof. C. V. A. Van Dyck.
Constantinople	.....	.....	29.92	760.0	70.2	21.2	59	ESE	4.5	2.0	.....	.....	5	.....	SW	0	0	Cloudy	
Fao, (Persian Gulf)	.....	.....	30.02	762.5	87.8	31.0	.....	SE	.....	.....	1	.....	0	.....	.....	.....	.....	Clear	
Salonica	.....	.....	.....	.....	74.1	23.4	.....	S	.....	.....	1	.....	10	.....	.....	.....	.....	Cloudy	
Valona	.....	.....	29.79	756.7	70.7	21.5	.....	SW	.....	.....	2	.....	10	.....	.....	Blank	Blank	Cloudy	
Varna	.....	.....	29.88	759.0	71.6	22.0	.....	NE	.....	.....	3	.....	10	.....	.....	.....	.....	Cloudy	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario	.....	.....	29.88	758.9	55	12.8	.....	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Chatham, N. B.	.....	.....	29.98	761.5	28	— 2.2	82	NW	1	0.4	.....	5ck	0	W	.....	0	0	Fair	
Charlottetown, P. E. Island	.....	.....	29.96	761.0	33	0.6	70	NW	6	2.7	.....	0	5ks	.....	.....	0	0	Fair	
Fort Garry, Manitoba	.....	.....	29.91	759.4	30	— 1.1	97	NW	4	1.8	.....	0	Sm'e	NW	.....	0	0	Fair	
Halifax, N. S.	.....	.....	29.96	761.0	35	1.7	66	N	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Kingston, Ontario	.....	.....	29.85	758.2	52	11.1	91	SW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Montreal, Quebec	.....	.....	29.85	758.2	37	2.8	85	NE	8	3.6	.....	0	Sm'e	.....	.....	0	0	Clear	
Ottawa, Ontario	.....	.....	29.82	757.4	36	2.2	69	NE	6	2.7	.....	0	2s	.....	NE	0	0	Clear	
Parry Sound, Ontario	.....	.....	29.79	756.7	44	6.7	92	SE	5	2.2	.....	2cs	Haze	SW	Sm	0	0	Fair	
Port Dover, Ontario	.....	.....	29.93	760.2	40	10.0	93	SW	4	1.8	.....	10ck	0	SW	.....	0	0	Fair	
Port Stanley, Ontario	.....	.....	29.92	760.0	47	8.3	96	SW	3	1.3	.....	5ck	0	SW	.....	0	0	Fair	
Quebec, Quebec	.....	.....	29.97	761.2	34	1.1	89	S	24	10.7	.....	.....	10m	.....	N	0	0	Cloudy	
Saugeen, Ontario	.....	.....	29.76	755.9	59	15.9	82	SW	7	3.1	.....	8ks	0	.....	.....	0	0	Cloudy	
Stayner, Ontario	.....	.....	29.77	756.1	60	15.6	49	W	5	2.2	.....	0	Haze	.....	.....	0	0	Fai	
Sydney, C. B.	.....	.....	29.82	757.4	36	2.2	67	W	12	5.4	.....	0	5ks	.....	NW	0	0	Fair	
Toronto, Ontario	.....	.....	29.84	757.9	50	10.0	85	SW	6	2.7	.....	2c	0	W	.....	0	0	Clear	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.92	760.0	42	5.6	91	Calm	0	0		2cs	Fog	W		0	0	Foggy	
Alpena, Mich			29.70	754.4	56	13.3	55	SW	4	1.8		5c	Sm'e	W		0	0	Fair	
Atlantic City, N. J			30.02	762.5	57	13.9	81	SW	4	1.8		0	Haze			0	0	Clear	
Augusta, Ga.			30.01	762.2	49	9.4	85	NW	4	1.8			10ks		NW	0	0	Cloudy	
Baltimore, Md.			30.04	763.0	54	12.2	79	Calm	0	0		Haze	Sm'e			0	0	Smoky	
Barnegat, N. J.			30.01	762.2	54	12.2	93	SW	6	2.7		Haze	Haze			0	0	Hazy	
Benton, Montana	27.02	686.3	29.82	757.4	48	8.9	85	NW	4	1.8			10s			0.05	1.3	Cloudy	
Bismarck, Dakota	28.13	714.5	29.78	756.4	43	6.1	91	NW	4	1.8			10s		NW	0.32	8.1	Cloudy	
Boston, Mass			30.00	762.0	47	8.3	92	NE	1	0.4		Fog	Fog			0	0	Foggy	
Breckenridge, Minn			29.78	756.4	75	23.9	85	NE	8	3.6			10s		N	Inap.	Inap.	Cloudy	
Buffalo, N. Y.			29.87	758.7	57	13.9	57	SW	7	3.1		8c	Sm'e	SW		0	0	Fair	
Burlington, Vt.			29.87	758.7	50	10.0	65	SW	3	1.3		0	Sm'e			0	0	Smoky	
Cairo, Ill.			30.01	762.2	51	10.6	85	Calm	0	0		10c	Sm'e	SW		0	0	Cloudy	
Cape Hatteras, N. C.			29.97	761.2	65	18.3	83	NE	5	2.2		8cs	2ks	SE	SE	0	0	Cloudy	
Cape Henry, Va.			30.03	762.7	58.5	14.7	88	Calm	0	0		10c	0	SW		0	0	Cloudy	
Cape May, N. J.			30.03	762.7	58	11.4	81	S	4	1.8		Haze	0			0	0	Fair	
Charleston, S. C.			29.98	761.5	63	17.2	77	[illegible]	7	3.1			10s		N	0	0	Cloudy	
Cheyenne, Wyoming	24.03	610.4	29.97	761.2	37	2.[illegible]	56	NW	8	3.6		2c	0			0	0	Fair	
Chicago, Ill.			29.86	758.4	49	9.4	71	SW	9	4.0		2c	Haze	W		0	0	Fair	
Cincinnati, Ohio			29.96	761.0	56	13.3	62	S	1	0.4		8c	Sm'e			0	0	Cloudy	
Cleveland, Ohio			29.94	760.5	51.3	10.7	65	SE	6	2.7			8ks		SE	0	0	Fair	
Colorado Springs, Col.	24.09	611.9	29.95	761.0	43	6.1	51	NW	6	2.7		0	2s			0	0	Fair	
Corsicana, Tex.			30.00	762.0	54	12.2	86	SE	6	2.7		10k	0	S		0.02	0.5	Cloudy	
Davenport, Iowa			29.86	758.4	50	10.0	58	SW	4	1.8		1cs	Sm'e			0	0	Clear	
Denison, Tex.			29.94	760.5	59	15.0	70	S	6	2.7			10s		SW	0	0	Cloudy	
Denver, Col.	24.80	629.9	30.02	762.5	45	7.2	31	S	4	1.8		2k	Haze			0	0	Fair	
Detroit, Mich			29.88	758.9	49	9.4	63	SW	6	2.7		5c	0	SW		0	0	Fair	
Dodge City, Kan.	27.31	693.7	29.57	751.1	50	10.0	64	S	4	1.8		0	0			0	0	Clear	
Dubuque, Iowa			29.80	756.9	57	13.9	58	Calm	0	0		0	Haze			0	0	Clear	
Duluth, Minn			29.73	755.1	50	10.0	77	Calm	0	0		2c	2s			0	0	Fair	
Eastport, Me.			30.03	762.7	40	4.4	48	N	7	3.1		5c	8cs	NW	NW	0	0	Cloudy	
Erie, Pa.			29.89	759.2	57	13.9	52	SE	12	5.4		8k	Sm'e			0	0	Fair	
Escanaba, Mich			29.71	754.6	45	7.2	84	SW	3	1.3		2c	Haze	W		0	0	Hazy	
Fort Gibson, I. T.			29.95	760.7	44	6.7	84	S	2	0.9		0	0			0	0	Clear	
Fort Sill, I. T.	28.74	730.0	29.85	758.2	48	8.9	85	Calm	0	0		2cs	0			0	0	Clear	
Fort Sully, Dakota	28.22	716.8	29.88	758.9	45	7.2	68	NW	4	1.8		0	0			0	0	Clear	
Galveston, Tex.			29.99	761.7	67	19.4	79	E	8	3.6		0	0			0	0	Clear	
Grand Haven, Mich			29.83	757.7	54	12.2	67	SW	14	6.3		0	Haze			0	0	Clear	
Indianapolis, Ind.			29.97	761.2	48	8.9	47	Calm	0	0		5cs	Sm'e			0	0	Smoky	
Indianola, Tex.			29.99	761.7	67	19.4	94	[illegible]	14	6.3		0	2ks		S	0	0	Fair	
Jacksonville, Fla.			29.96	761.0	65	18.3	83	NW	6	2.7			10s		NE	0.03	0.8	Cloudy	
Keokuk, Iowa			29.87	758.7	50	10.0	65	SW	3	1.3		2c	0	SW		0	0	Clear	
Key West, Fla.			29.98	761.5	77	25.0	73	NW	4	1.8		0	2ks			0	0	Fair, smoky.	
Kittyhawk, N. C.			30.04	763.0	58	14.4	94	Calm	0	0		Haze	10s			0	0	Cloudy	
Knoxville, Tenn			30.04	763.0	48	8.9	92	Calm	0	0			10ks			0	0	Cloudy	
La Crosse, Wis.			29.72	754.9	55	12.8	61	S	9	4.0		Haze	Haze			0	0	Hazy	
Leavenworth, Kan			29.94	760.5	50	10.0	38	S	4	1.8		0	0			0	0	Clear	
Lexington, Ky.	28.93	734.8	30.12	762.5	54	12.2	60	SE	4	1.8			10s			0	0	Cloudy	
Long Branch, N. J.			30.00	762.0	54	12.2	80	W	5	2.2		Haze	Haze			0	0	Hazy	
Louisville, Ky.			30.00	762.0	50	10.0	72	E	1	0.4			Sm'e			0	0	Smoky	
Lynchburg, Va.			30.02	762.5	50	10.0	86	S	2	0.9		10ck	Sm'e	S	S	0	0	Cloudy	
Malone, N. Y.			29.76	756.1	57	13.9	63	S	8	3.6		0	0			0	0	Hazy	
Marquette, Mich			29.70	754.4	49	9.4	78	Calm	0	0		0	Haze			0	0	Fair	
Memphis, Tenn			30.02	762.5	53	11.7	79	Calm	0	0			10s			0	0	Cloudy	
Milwaukee, Wis.			29.81	757.2	52	11.1	53	SW	12	5.4		2ck	Haze	NW		0	0	Fair	
Mobile, Ala.			30.03	762.7	55	12.8	87	N	4	1.8		0	Sm'e			0	0	Clear	
Montgomery, Ala.			30.05	763.3	52.5	11.4	83	Calm	0	0		2cs	Sm'e			0	0	Fair	
Morgantown, W. Va.			30.02	762.5	47	8.3	76	Calm	0	0		8c	Haze	SW		0	0	Fair	
Mt. Washington, N. H.	23.73	602.7	30.09	764.3	37	2.8	90	NW	20	8.9		0	Haze			0	0	Clear	
Nashville, Tenn.			30.00	762.0	50	10.0	86	Calm	0	0			10s			0	0	Cloudy	
New Haven, Conn			29.99	761.7	51	10.6	86	W	3	1.3		2ck	Fog			0	0	Fair	
New London, Conn.			29.97	761.2	51	10.6	83	N	1	0.4		2c	Fog	W		0	0	Fair	
New Orleans, La.			30.00	762.0	63	17.2	83	Calm	0	0		5c	0	W		0	0	Fair	
Newport, R. I.			29.97	761.2	57	13.9	87	S	8	3.6		2cs	Haze	SW		0	0	Fair	
New York, N. Y.			29.98	761.5	53	11.7	72	SW	8	3.6		0	Fog			0	0	Clear	
Norfolk, Va.			30.03	762.7	56.5	13.9	84	SE	3	1.3		10k	Fog			0	0	Cloudy	
North Platte, Neb.	26.95	684.5	29.49	749.0	47	8.3	62	NW	2	0.9		0	Fog			0	0	Fair	
Omaha, Neb.	28.69	728.7	29.70	754.4	54	12.2	64	S	8	3.6		2c	Sm'e	SW		0	0	Fair	
Oswego, N. Y.			29.87	758.7	56	13.3	68	S	5	2.2		5cs	Haze			0	0	Hazy	
Peck's Beach, N. J.			30.03	762.7	54	12.2	93	SW	6	2.7		Haze	Haze			0	0	Hazy	
Pembina, Dakota			29.88	758.9	30	−1.1	89	Calm	0	0		0	Haze			0	0	Hazy	
Philadelphia, Penn.			30.02	762.5	56	13.3	74	W	3	1.3		Haze	Sm'e			0	0	Smoke, hazy	
Pike's Peak, Colorado	17.82	452.6	30.03	762.7	20	−6.7	70	W	16	7.2		0	2s			0.02	0.5	Fair	
Pittsburgh, Penn.			29.98	761.5	48	8.9	85	Calm	0	0			Fog			0	0	Foggy	
Port Huron, Mich			29.85	758.2	51	11.6	72	S	12	5.4		5c	0	W		0	0	Fair	
Portland, Me.			30.03	762.7	49	9.4	64	SE	8	3.6		0	Haze			0	0	Hazy	
Portland, Oregon			29.89	759.2	58	14.4	84	SW	7	3.1			10s			1.24	31.5	Cloudy	
Punta Rassa, Fla.			29.99	761.7	69	20.6	90	N	4	1.8			10ks		W	0.71	18.0	Cloudy	
Rochester, N. Y.			29.84	757.9	56	13.3	56	SW	11	4.9		2c	Haze			0	0	Fair	
Salt Lake City, Utah	25.95	651.5	29.98	761.5	52	11.1	43	SE	3	4.3		0	10s			0	0	Cloudy	
Sandy Hook, N. J.			29.97	761.2	54	12.2	79	SW	2	0.9		2c	Haze	W		0	0	Clear	
San Diego, Cal.			29.98	761.5	62	16.7	71	NE	4	1.8			Fog			0	0	Foggy	
San Francisco, Cal.			30.10	764.5	59	15.0	94	W	12	5.4		8ks	0	W		0	0	Fair	
Santa Fe, N. M	23.26	590.8	29.80	756.9	42	5.6	27	NE	3	1.3		0	0			0	0	Clear	
Savannah, Ga.			29.97	761.2	61	16.1	76	NW	7	3.1			10s			0	0	Cloudy	
Shreveport, La.			30.05	763.3	47	8.3	100	Calm	0	0			Fog			0	0	Foggy	
Smithville, N. C.			30.01	762.2	63	17.2	83	NE	8	3.6			10s		NE	0	0	Threatening	
Springfield, Mass.			29.97	761.2	45	7.[illegible]	84	Calm	0	0		2cs	Fog			0	0	Foggy	
St. Louis, Mo.			29.97	761.2	53	11.7	54	SW	6	2.7		2c	8s			0	0	Cloudy	
St. Marks, Fla			30.00	762.0	53	11.7	86	Calm	0	0		2cs	0			0	0	Fair	
St. Paul, Minn.			29.64	752.8	47.5	8.6	77	Calm	0	0		2ck	Haze	W		0	0	Fair	
St. Paul's Island, Alaska																			
Squa. Beach, N. J.			29.94	760.5	51	10.6	93	SW	2	0.9		Haze	Haze			0	0	Hazy	
Toledo, Ohio			29.91	759.7	53	11.7	60	SW	6	2.7		8cs	2s	SW		0	0	Cloudy	
Tucson, Arizona																			
Tybee Island, Ga.			29.95	760.7	63	17.2	83	NW	8	3.6			10ks		NW	0	0	Cloudy	
Vicksburg, Miss.			30.08	764.0	55	12.8	87	Calm	0	0		10ck	0	S		0	0	Cloudy	
Virginia City, Montana	24.18	614.2	29.96	753.4	44	6.7	67	NW	4	1.8			10ks		NW	0.01	0.3	Cloudy	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.02	762.5	51.5	10.8	89	Calm	0	0			10s			0	0	Cloudy, smoky	
Wilmington, N. C			30.01	762.2	62	16.7	57	NE	5	2.2			10s		NE	Inap.	Inap.	Cloudy	
Wood's Hole, Mass			29.97	761.2	57	13.9	87	S	11	4.9		0	Sm'e			0	0	moky	
Wytheville, Va	27.69	703.3	29.85	758.2	48	8.9	77	Calm	0	0		10ck	0			0	0	Cloudy	
Yankton, Dakota	28.48	723.4	29.74	755.4	49	9.4	57	NW	12	5.4			Sm'e			0	0	Smoky	
Yuma, Arizona			29.91	759.7	61	16.1		Calm				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'does, W. I					80	26.7	95	N	5	2.2		5c	5s	NE	N	0.45	11.4	Fair	E. Racker.
Pointe-aPitre, G'd'loupe, do			30.02	762.5	81	27.2	82	E				2cs	2ks			0	0	Clear	L. V. Bigard.
Havana, Cuba, W. I			29.98	761.5	76	24.4	81	Calm	0	0		1c,k	1s	NE,N	SW	0	0	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W			30.18	766.6	78	25.6	86	Calm	0	0		1c	8n		W	1.86	47.2		James Gall.
St. Thomas, St. T., W. I			30.23	767.8	82	27.8	74	E	8	3.6		2kn	5ck	E	E	0	0	Cloudy	W. S. Cameron.
Santiago de Cuba, W. I			29.80	756.9	77	25.0	86	Calm	0	0			8n		S	Blank	Blank	Cloudy	Robert Mason.
St. Georges, Bermudas			30.15	765.8	72.5	22.5	72	NW	2	1.2		10c, ck	5f'k	NW		0	0	Cloudy	C. F. Allen.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.
Cumberland, B. A																			
Ft. Chippewyan, B. A																			
Ft. McPherson, B. A																			
Ft. Simpson, B. A																			
York Factory, B. A			29.92	760.0	26	−3.3	94	E	6	2.7		3c	5s	E		0	0		J. Fortescue.
St. John's, Newfoundland																			John Delaney.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Clifton, Jamaica, W. I	27.24	691.9	30.02	762.5	67	19.4	90	SE	2.0	0.9			10k			3.12	53.8	Dull	C. Partridge.
Navassa																			
Meaellin, S. A																			
Paramaribo, S. A																			
Elyria, Ohio			29.94	760.5	50	10.0		S	4	1.8			8cs			0	0	Cloudy	H. M. Redington.

Marine Series.	True course towards.	Hourly rate in knots.	Barometer. Inches.	Barometer. Millimeters.	Temperature. Fahrenheit.	Temperature. Centigrade.	Wind. Force. 0—10	Weather.	State of ocean.	Direction of swell from —
Steamer Leipzig, N. 47° 58′, W. 44° 43′.	ENE		29.14	740.1	41.0	5.0	6	Snowing	H'y sea	
Steamer Hibernian, N. 49° 26′, W. 43° 30′.	EbyS	10½	29.93	760.2	42	5.6	7	Hail squalls	L'g sea.	

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.3 (?) ft., or 2,091.6 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 1.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in. The barometer of the Hibernian has an error of —0.18, as determined from the isobarometric charts of the Signal Service.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 24, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.08	764.1	74.3	23.5	66	NW			1		4			0	0		Charnot.
Algiers			29.98	761.5	73.4	23.0	74	W			4		0			0	0		Peter.
La Calle																			Kuntz.
Tunis			29.89	759.1	70.7	21.5	71	NW			4		8			0	0	Cloudy	Jacques.
Sfax			29.95	760.7	77.0	25.0	54	S			4		4			0	0	Cloudy	Chauvey.
Saida			30.07	763.7	64.4	18.0	71	WNW			2		6			0	0		Grosjean.
Tebessa			29.98	761.5	67.5	19.7		SE			4		10			0	0		Colin.
Geriville			30.10	764.5	61.7	16.5	56	NW			2		6			0	0		Bernadach.
Laghouat			30.08	763.9	66.2	19	46	SW			2		1			0	0		Simon.
Biskra			30.04	763.0	77.5	25.3	42	NW			2		5			0	0		Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			29.39	746.4	52.9	11.6	82	NW			3		10			2.391	58.2	Raining	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.73	755.1	50.0	10.0	81	W			1		10			0.031	0.8		I. R. Observatory.
Eperies			29.58	751.4	55.4	13.0	83	Calm			0		9			0.037	0.95		Julius Mikolik.
Gratz	28.30	718.9	29.49	749.1	60.2	10.1	92	NE			2		10						Andreas Rospini.
Hermannstadt	28.15	715.0	29.51	749.6	66.6	19.2	47	SE			2		4			0.031	0.80		Prof. Reissenberger.
Kremsmünster	28.30	718.9	29.65	753.1	45.7	7.6	89	Calm			0		10			0.228	5.8		Prof. C. Wagner.
Lemberg			29.59	751.5	54.0	12.2	80	NE			1		6			0	0		Dr. T. Stanecki.
Nyiregyhaza			29.56	750.9	61.5	16.4	79	NE			1		5			0.178	4.51		Habzsuda Daniel.
Pola			29.25	742.9	56.8	13.8	87	N			5		10n,s			0.448	11.37		I.R. Hydrographic Of'ce
Szegedin			29.49	749.0	60.4	15.8	76	S			2		10			0.321	8.15		Karl Stancel.
Trieste			29.33	745.0	56.1	13.4	89	E			2		10			1.445	36.7	Light rain	Prof. V. Farolfi.
Vienna			29.58	751.2	48.6	9.2	83	N			2		10			0.008	0.2		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 9 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.95	760.8	45.1	7.3	68	NNE			2		10			0.114	2.90		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.09	764.3	47.2	8.4		S	11	4.9			9			0.220	5.59	Gloomy	William Boswell.
Ardrossan			30.10	764.5	52	11.1		SSE			3		6					D. clouds	Wm. McNeil.
Armagh Observatory			29.99	761.7	53.6	12.6		SE	12	5.4									Call. for Dr. Robinson.
Bidston, Liverpool Obs.			30.06	763.5	51.8	11.0		ESE			2		1					Clear	John Hartnup, Jr.
Birr Castle, (Parsonstown)			30.00	762.0	52.7	11.5		Calm			0		10					Overcast	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbadoes)			29.92	760.0	83.0	28.3		NE			2		6					*Overcast	T. H. Hunt.
Cambridge Observatory			30.04	763.0	51.5	10.8		N			1		7					*D. clouds	Sergeant Hunt, A. H. C.
Cape Good Hope Obs.			30.14	765.5	68.9	20.5	46	S	10	4.5			0						Th Staff, for E. J. Stone.
Cardington			30.07	763.8	49.4	9.7		N			1		10					Overcast	John McLaren.
Carlisle			30.08	764.0	51.9	11.1		E			1		8			0.15	3.8	*D. clouds	T. Bell, for J. Cartmell.
Chatham, School M. E.			30.01	762.2	50.7	10.4		SE			2		8					Fine	Capt. T. Fellowes, R. E.
Dartmoor	28.60	726.4	30.08	764.0	45.5	7.5		E			2		6					*D. clouds	R. E. Power.
Donaghadee			30.03	762.7	53	11.7		SSE			3		10					Overcast	J. Mac Gowan, Jr.
Dover			30.00	762.0	51	10.6		ENE			4		7						J. Costello.
Eccles, (near Manchester)			30.07	763.8	51.3	10.7		ENE	1.0	0.4			7					Gloomy	Thomas Mackereth.
Falmouth Observatory			30.05	763.3	54.0	12.2		ESE	16	7.2			9					Overcast	The Staff.
Fort Napier, (Natal)	27.76	705.1	29.10	739.5	66.6	19.2		SE			2		4					*D. clouds	Pvt G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	86	30.0		N					6						
Galway, Queen's College																			B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.05	763.5	66.5	19.2		SW			4		9					Gloomy	Sergt. E. G. Baker.
Glasgow Observatory			30.07	763.8	49.1	9.5		ESE			1		10					Overcast	Lewis Stuart.
Great Yarmouth			30.02	762.5	49	9.4		NE			4		5					*D clouds	G. T. Watson.
Greenwich Royal Obs.			30.05	763.3	52.3	11.3		NNE			1		10					Overcast	The Staff, for G. B. Airy.
Guernsey			30.01	762.2	54	12.2		NE			1		3					* clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs.								E			1		5			Blank	Blank	Foggy	F. J. Page, for L. J. Cro[illegible]
Helston			30.00	762.0	58	14.4		E			4		4			0.02	0.5	*D. clouds	M. P. Moyle.
Holyhead			30.04	763.0	54	12.2		SSW			2		3					Clear	John Tilston.
Kew Observatory			30.05	763.3	49.9	9.9		N	7	3.1			7					Misty	The Staff.
Kingstown			29.92	762.5	54	12.2		SSE			3		8					Overcast	George Mitchell
Leicester Museum			30.10	764.5	49.7	9.8		E			1		10					Overcast	William J. Harrison.
Llandudno			30.08	764.0	57.0	13.9		SE			1		3					Clear	Dr. James Nicol.
Malta, (Mediterranean)			29.79	756.7	75.8	24.3		NW			1		6k					*D. clouds	Fred Travis, Pvt A. H. C.
Nairn			30.01	762.2	54	12.2		Calm			0		8						W. D. Penny.
Nassau, (Bahamas)			30.10	764.5	83.1	28.4		SW			3		7					*D. clouds	Surg.-Maj. Henry.
Nottingham			30.09	764.3	51.1	10.7		N			4		10k		ENE	0	0	Overcast	E. J. Lowe.
Oscott, St Mary's College			30.06	763.5	50.2	10.1		NE			2		9					Overcast	Rev. Stephen Whitty
Oxford, Radcliffe Obs.			30.04	763.0	51	10.6		E			1		10					Gloom	J. Lucas, for R. Main.
Plymouth			30.03	762.7	53.1	11.7		ENE			3		7					*D. clouds	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.96	761.0	51	10.6		NNW			2		5					Fine	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, (Jersey)			29.97	761.2	57.0	13.9		N			3		2						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough																			F. Shaw.
Scutari cemetery, (Turkey)			29.77	756.1	70.4	21.3		SSW			1		8			Blank	Blank	*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.07	763.8	53.2	11.8		ESE			1		9			0.10	2.5	Overcast	W. F. Cooper.
Silloth Rectory			30.07	763.0	52.7	11.5		E			1		7			0	0	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			30.08	764.0	50.6	10.3		[illegible]			1		6			Blank	Blank	*D. clouds	The Staff.
Stornoway, Lewis C. (Heb.)			29.97	761.2	51	10.6		SSW			1		10					Gloom	John Smith.
Stratfield Turgiss			30.05	763.3	50.5	10.3		[illegible]			1		1					Clear	Rev Charles H. Griffith
Streatley Vicarage			30.08	764.0	52.0	11.1		ENE			1		10						Rev. John Slatter.
Thurso			30.01	762.2	49	9.4		ESE			2		8					Overcast	John Trotter.
Truro, Royal Institution			29.98	761.5	57	13.9					6		6					*clouds	W. Newcombe.
Valencia Observatory			29.94	760.5	53.5	11.9		SE	18	8.0			10					Misty	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					52	11.1		SE			1		10			0	0		
Leith, Restalrig Park			30.10	764.5	51.8	11.0		SW			1		10k			0.01	0.3	Cloudy	Andrew Gibb
Monach Lt-house, (Shet. Is)			29.9[illegible]	760.5	53	11.7		[illegible]			4	5	5	SSW		0	0		J. Youyclause.
North Unst, (Shetland Is)			30.10	764.8	45.5	7		NE			2		0						

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,171 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.70	754.8	36.9	2.7	93	N			7		10					Raining	
Faröe			29.98	761.6	36.7	2.6	72	NNE			4		10						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.84	758.0	42.1	5.6	88	SE			2								
Thorshavn, (Faröe)			30.04	763.1	48.4	9.4	78	SSE			2		10						
Westervig			29.98	761.6	37.9	3.3	88	NE			6		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			29.97	761.2	56.3	13.5	75	NE			1		8s			0	0	Cloudy	Normal School.
Amiens			29.91	759.8	50.4	10.2	76	S			2		5		S	0.142	3.6	Cloudy	Normal School.
Avignon			29.78	756.5	58.8	14.9	44	NNW			4		0			0	0	Clear	Normal School.
Bar-sur-Seine			29.90	759.5	45.7	7.6	93	N			2		10k,n			0.331	8.4	Foggy	C. Saillard.
Beaumette, (near Angers)			29.98	761.5	56.5	13.6	66	N	8.3	3.7			5		N	0.224	5.7	Cloudy	Beaumette Observatory
Beauvais			30.05	763.2	43.0	6.1	79	NNE			2		10		NNE	0	0	Cloudy	Normal School.
Besançon			29.89	759.3	50.1	10	80	WNW			3		8		NW	0.563	14.8	Cloudy	Normal School.
Bourg en Bresse			29.85	758.1	50.7	10.4	84	E			2		8		SE	0.91	23.	Cloudy	Normal School.
Bourges			29.93	760.1	52.9	11.6	82	W			3		10		SE	0.701	17.8	Cloudy	Normal School.
Brest			29.96	760.9	60.3	15.7	68	NE			2		5		NE	0.108	2.75	Cloudy	Naval Observatory.
Caen																			Normal School.
Chartres																			Normal School.
Chaumont	28.74	729.9	29.90	759.5	43.5	6.4		NNW			1		10n			0.206	6.75	Cloudy	Normal School.
Commercy			29.89	759.3	45.3	7.4	94	NW			6		10		NW	0.32	8.	Cloudy	Normal School.
Commune de Gréasque*			29.69	754.0	54.3	12.4	54	NW			8		2		NW	0	0		
Le Mans																			Normal School.
Lons-Le-Saulnier			29.88	758.9	51.3	10.7	81	NW			2		5		N	0.07	2.00	Rainy	Normal School.
Mâcon			29.85	758.1	52.3	11.3	86	N			8		5		NE	[illegible]	18.	Cloudy	Normal School.
Mirecourt			29.75	755.6	47.8	8.8	61	NW			2		10		SE	0	0	Cloudy	Normal School.
Orleans			29.90	759.5	48.6	9.2	84	N			3		5		N	0	0	Cloudy	Normal School.
Paris Observatory			29.99	761.7	41.4	5.2	88	N			4		10			0	0	Covered	National Observatory.
Parthenay			29.93	760.2	54.0	12.2	87	SW			2		0			0	0	Clear	Normal School.
La Roche sur Yon			29.58	751.2	55.0	12.8	83	SW			4		10			0	0	Cloudy	Normal School.
Rochefort, Observatory			30.02	762.5	58.8	14.9	65	NW			2		8		SE	0.358	9.1	Cloudy	Naval Observatory.
Rouen			30.00	762.1	50.7	10.4	76	WNW			2		10			0	0	Cloudy	Normal School.
Saint Lo			30.02	762.4	54.5	12.5	92	NE			1		10		W	0.12	3.		Normal School.
Villefranche			29.90	759.5	53.2	11.8	73	NW			3		5		N	0.35	9.	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchésl.
Mont-Louis			30.19	766.8	46.6	8.1	58	NNW	9.3	4.17			1		NW	0.030	1.0		—. Falguère.
Montsouris, Paris			29.97	761.1	42.6	5.9	92	N			4		10			0	0	Misty	Montsouris Observatory.
Perpignan	†29.90	†759.4			61.9	16.6	49	NW	13.0	5.83			6		W	0	0		Dr. Fines.
Pic du Midi, (Summit) H. P.																			M. Baylac.
Pic du Midi, (Plantade) H.P.																			General de Nansouty
Saint Maur, (near Paris)			29.97	761.3	43.3	6.3	91	NNW			3		10			0	0	Cloudy	E. Renou.
Tours			29.74	755.3	47.1	8.4		NNE			1		5		N	0.429	10.9		C. Marquet.
Versailles, (near Paris)			29.98	761.5	44.2	6.8	88	N			2		10			0.008	0.20	Foggy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.11	764.7	65.7	18.7	96	SW	2.2	1.0			10			{6.815 / 7.685}	{173.1 / 195.2}		H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 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. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			29.69	754.1	45.5	7.5	72	E	13	6			10			0	0		Prof. Hoh.
Berlin			29.66	753.4	42.4	5.8	81	NW	9	4			10			0.433	10.99	Raining	Prof. Arndt.
Breslau			29.72	755.0	42.6	5.9	69	W	27	12			10			0	0		Dr. P. Neugebauer.
Carlsruhe			29.82	757.5	42.3	6.2	82	NW	7	3			10			0.059	1.5		A. Senz.
Cassel			29.71	754.7	41.7	5.4	77	NW	9	4			9			Inap.	Inap.		Dr. H. Möll.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.31	719.0	29.75	755.6	40.1	9.5	74	N					10			0.236	6.0	Rain & hail	M. Wilhelm.
Hamburg																			Deutsche Seewarte.
Kiel			29.78	756.3	39.4	4.1	85	N	18	8			10			0.205	5.2		Prof. G. Karsten.
Königsberg			29.60	751.8	40.1	4.5	96	SE	11	5						0.351	8.91	Cloudy	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			29.76	756.0	38.8	3.8	90	WSW	13	6			10			0.024	0.6		Prof. Bruhns.
Münster			29.90	759.4	43.2	6.2	79	NE	4	2			3			0	0		Prof. E. Heis.
Posen			29.62	752.3	42.1	5.6	85	SW	22	10			10			0.059	1.5	Cloudy	Dr. Magener.
Strassburg, (in Alsace)			29.84	757.9	43.9	6.6	91	NE	4	2			10			0.158	4.0	Raining	Dr. Schur.
Stuttgart			29.78	756.4	44.6	7.0	85	N					10			0.150	3.8	Light rain	Mr. Würth.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.84	757.8	43.7	6.5	71	NE	18	8			10			0.001	0.02	Heavy fog	Prof. Clesch.
Wustrow, Naval School			29.71	754.6	38.3	3.5	100	N	31	14			10			0.179	4.54	Raining	E. F. Schütz.

Note.—In the originals the distinction between 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.	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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens			29.64	752.8	69.8	21.0		S										Covered	

Note.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			29.45	748.1	58.3	14.6	95	NW	1.3	0.6			8	NE		0.138	3.5		
Mondovi			29.51	749.6	55.8	13.2	65	NNW			4		4	WSW		0.386	9.8		
Genoa			29.4	746.7	59.0	15.0	58	NW	6.3	2.8			10	N		0.031	0.8		
Pavia			29.39	746.5	57.4	14.1	81	SW			6		9			0	0		
Verona			29.33	745.0	57.9	14.4	84	E			2		10			0.417	10.6	Raining	
Padua			29.31	744.5	53.6	12.0	81	NE	22.4	10.0			10	NE		0.44[illegible]	11.2	Raining	
Parma																			
Bologna			29.32	744.7	54.9	12.7	77	NNW			6		10	N		0.811	20.6	Raining	
Leghorn			29.33	745.0	61.3	16.3	57	WNW	3.8	1.7			10			0	0		
Urbino																			
Ancona			29.34	745.3	60.4	15.8	62	N			1		4			0.535	13.6		
Siena			29.32	744.8	53.8	12.1	87	WSW	3.8	1.7			10	W		0.130	3.3		
Rome			29.44	746.9	64.2	17.9	64	SW	17.4	7.8			9	W		Blank	Blank		
Naples, O. U.			29.56	750.9	68.0	20.0	47	SW			6		8	W		3.051	77.5		
Lecce			29.60	751.7	70.5	21.4	70	SSW	34.9	15.6			9	SW		Blank	Blank		
Cosenza			29.69	754.1	66.0	18.9	75	SW			6		6			0.512	13.0		
Catania, (Sicily)																			
Riposto			29.6[illegible]	[illegible]	77.0	25.0	61	NNW			2		3	SW		0	0		
Palermo			29.67	753.5	68.0	20.0	75	WNW	8.7	3.9			7	WSW		0	0		
Sub-Series.																			
Naples, S. R.			29.57	751.0	64.4	18.0	74	WSW			7		[illegible]c	W		1.012	25.7		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for twenty-four hours. The altitude of Mondovia is 55[illegible] meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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			30.01	762.2	49.5	9.7		NE			4								
Groningen			29.89	759.1	41.2	5.1		N			4								
Helder			29.97	761.3	45.0	7.2		NNE			4								
Utrecht			29.94	760.4	42.8	6.0		NNE			2		8					Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the 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			30.08	763.9	41.0	5.0	48	Calm	0	0			3			0	0		
Christiania			30.11	764.7	33.1	0.6	61	NNE	8.1	3.6			10			0	0		
Tromsö			30.12	765.0	34.7	2.6	65	S			2		3			0	0		

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 1—10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.12	765.0	67.5	19.7	92	SW	7.4	3.3			8	WSW		0.102	2.6		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon.

RUSSIAN SERIES.

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

Stations	Corrected for instrumental errors. Inches.	Corrected for instrumental errors. Millimeters.	Reduced to sea-level. Inches.	Reduced to sea-level. Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	1—10.	Up'er 1—10.	Low'r 1—10.	Upper. From—	Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Warsaw			29.63	752.7	43.7	6.5	96	SW	16	7			10						Astronomical Obs.
Wilna			29.78	756.4	35.4	1.9	93	E	4	2			10						Astronomical Obs.
Dorpat			30.05	763.2	28.4	— 2.0	82	ENE	7	3			10						Physical Cabinet.
St. Petersburg			30.11	764.9	27.0	—2 .8	83	E	2	1			10					Light fog	Central Physical Obs.
Kuopio																			Ch. Forsten.
Kiel			29.77	756.1	39.2	4.0	98	SE	16	7			10					Raining	Physical Cabinet.
Nikolaiev			29.78	756.5	52.7	11.5	97	SE	13	6			10						Kurdakof.
Kertch			29.84	758.0	59.7	15.4	84	SE	13	6			6						Lagorio.
Moscow			30.22	767.5	25.3	— 3.7	95	SSE	8	3.5			10						Meteorological Obs.
Lugan			30.03	762.7	42.8	6.0	79	ESE	25	11			10						Meteorological Obs.
Archangel			30.04	763.0	33.3	0.7	92	NW	8	3.5			10						Ogorodnikof.
Tiflis	28.61	726.6	29.98	761.5	69.6	20.9	45	E	4	2			0						Physical Obs.
Astrakhan			30.30	769.6	42.4	5.8	58	NE	8	3.5			9						Sebastianof.
Kasan			30.12	765.0	21.9	— 5.7	93	W	8	3.5			10						Physical Cabinet.
Orenburg			30.19	766.9	35.4	1.9	64	Calm	0	0			10						Tschernischef.
Ekaterinburg	28.89	733.7	29.93	760.1	24.8	— 4.0	82	W	13	6			10						Meteorological Obs.
Kasaly			30.08	763.9	41.9	5.5	85	W	8	3.5			10						Bobrof.
Tashkend																			Michelson.
Barnaul			29.85	758.1	28.1	— 2.3	96	Calm	0	0			4						Meteorological Obs.
Teniseisk			29.56	750.7	26.4	— 3.1	91	SSW	9	4			10						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking (China)			30.22	767.6	46.4	8.0	86	Calm	0	0			10					Raining	Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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	Corrected for instrumental errors. Inches.	Corrected for instrumental errors. Millimeters.	Reduced to sea-level. Inches.	Reduced to sea-level. Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	1—10.	Up'er 1—10.	Low'r 1—10.	Upper. From—	Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Madrid			29.98	761.4	64.2	17.9	53	NW	21.0	9.4		0	2			0	0	Cloudy	Royal Observatory.
San Fernando			30.15	765.7	70.2	21.2	83	WSW	13.4	6.0			10		W	0	0		The Naval Observatory.

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

SWEDISH SERIES.

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

Stations	Corrected for instrumental errors. Inches.	Corrected for instrumental errors. Millimeters.	Reduced to sea-level. Inches.	Reduced to sea-level. Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	1—10.	Up'er 1—10.	Low'r 1—10.	Upper. From—	Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Haparanda			30.26	768.5	26.8	— 2.9	91	N			2		10			0	0		
Umea			30.20	767.1	36.8	— 0.1	78	NE			2		10			0	0		
Hernosand			30.22	767.5	27.7	— 2.4	87	N			4		10			0	0		
Stockholm			29.94	760.5	32.9	0.5	80	NE			6		10			0	0		
Wisby			29.81	757.9	36.0	2.2	96	E			6		10			0	0		
Sub-Series.																			
Upsala			30.05	763.3	31.3	— 0.4	79	NE	13.4	6.0			10		NE				Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series 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. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.35	722.2	29.87	758.8	49.6	9.8	79	SSW			1		10			1.036	26.3	Cloudy	The Observatory.
Zurich	28.15	714.9	29.81	757.1	46.6	8.1	92	W			1		10			0	0	Raining	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —3.9mm.; Thermometer, + 1°.3; Relative Humidity, +5 per cent.

Note.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the 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. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y			29.99	761.7	75.0	23.9	74	N			2		8k		NW	0	0		Prof. C. V. A. Van Dyck
Constantinople			29.82	757.3	70.2	21.2	67	SW	8.9	4.0			2		SW	0	0		
Fao, (Persian Gulf)			30.01	762.2	87.8	31.0		SE			1		0					Clear	
Salonica					71.2	21.8		S			1		10					Cloudy	
Valona			29.64	752.8	68.0	20.0		S			3		10			Blank	Blank	Cloudy	
Varna			29.80	757.0	68.0	20.0		N			2		0					Clear	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario			29.80	756.9	51	10.6		SW	1	0.4			10s		SW	0	0	Cloudy	
Chatham, N. B.			29.90	759.4	38	3.3	76	Calm	0	0			10ks			0	0	Cloudy	
Charlottetown, P. E. Island			29.94	760.5	40	4.4	82	E	3	1.3			10s			0	0	Cloudy	
Fort Garry, Manitoba			29.92	760.0	30	1.1	93	E	9	4.0		5k	2ks	E		0	0	Cloudy	
Halifax, N. S.			29.87	758.7	44	6.7	71	E	5	2.2			10n		SE	0	0	Threatening	
Kingston, Ontario			29.76	755.9	51	10.6	87	Calm	0	0		10c	0			0	0	Cloudy	
Montreal, Quebec			29.77	756.1	36	2.2	89	NE	6	2.7		5c	5	W		0	0	Fair	
Ottawa, Ontario			29.73	755.1	36	2.2	67	E	8	3.6			10n		E	0	0	Threatening	
Parry Sound, Ontario			29.72	754.9	37	2.8	95	E	4	1.8		2cs	1ks	SW	SW	0	0	Fair	
Port Dover, Ontario			29.80	756.9	50	10.0	93	Calm	0	0		10ck	0	W		0	0	Fair	
Port Stanley, Ontario			29.80	756.9	40	4.4	93	Calm	0	0		2k	0			0	0	Fair	
Quebec, Quebec			29.79	756.7	35	1.7	80	N	18	8.0		5c	0	N		0	0	Fair	
Saugeen, Ontario			29.70	754.4	49	9.4	92	Calm	0	0			10s			0	0	Cloudy	
Stayner, Ontario																			
Sydney, C. B.			29.94	760.5	41	5.0	74	SE	1	0.4		0	8m'c		W	0	0	Cloudy	
Toronto, Ontario			29.75	755.6	47	8.3	87	SW	1	0.4		8cs	2s	SW		0	0	Cloudy	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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. C'p'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.79	755.9	51	10.6	93	Calm	0	0		8k	Fog	S		Inap.	Inap.	Cloudy	
Alpena, Mich.			29.93	752.6	44	6.7	84	NW	2	0.9		9cs	Haze	NW		0	0	Cloudy	
Atlantic City, N. J.			29.81	757.2	55	12.8	93	W	4	1.8		10cs	Haze	SW		0	0	Cloudy	
Augusta, Ga.			29.98	761.5	49	9.4	85	Calm	0	0		0	0			0	0	Clear	
Baltimore, Md.			29.85	758.2	55	12.8	80	Calm	0	0		5cs	Sm'e			0	0	Fair	
Barnegat, N. J.			29.82	757.4	53	11.7	100	W	3	1.3			10ks		SW	0	0	Cloudy	
Benton, Montana	27.17	690.1	29.97	761.2	34	1.1	100	W	24	10.7			10u			0.03	0.8	Light snow	
Bismarck, Dakota	27.92	709.2	29.55	750.6	40	4.4	100	E	4	1.8			10u			0.08	2.0	Light rain	
Boston, Mass.			29.83	757.7	47	8.3	100	NE	1	0.4			Fog			0	0	Foggy	
Breckenridge, Minn.			29.76	755.9	40	4.4	91	SE	1	1.8			10n			0.04	1.0	Light rain	
Buffalo, N. Y.			29.74	755.4	56	13.3	62	SW	8	3.6		8cs	Haze			0	0	Fair	
Burlington, Vt.			29.75	755.6	55	12.8	68	S	4	1.8		2c	5s			0	0	Cloudy	
Cairo, Ill.			29.91	759.7	49	9.4	93	S	2	0.9		0	0			0	0	Clear	
Cape Hatteras, N. C.			29.81	757.2	61	16.1	100	NW	12	5.4			Fog			0.51	13.0	Foggy	
Cape Henry, Va.			29.86	758.4	65	18.3	73	W	7	3.1		0	0			0.01	0.3	Clear	
Cape May, N. J.			29.82	757.4	67	13.9	87	S	5	2.2		5c	2s	SW		0	0	Fair	
Charleston, S. C.			29.98	761.5	60	15.6	76	SW	5	2.2		0	Sm'e			0	0	Clear	
Cheyenne, Wyoming	23.86	606.0	29.80	756.9	43	6.1	48	W	8	3.6		2c	2s	W		0	0	Fair	
Chicago, Ill.			29.67	753.6	50	10.0	72	SW	11	4.9		Haze	Haze			0	0	Fair	
Cincinnati, Ohio			29.82	757.4	50	10.0	78	SE	6	2.7		8c	Fog			0	0	Foggy	
Cleveland, Ohio			29.77	756.1	51.2	10.7	65	SE	7	3.1		8c	Sm'e	W	SE	0	0	Fair	
Colorado Springs, Col.	23.07	608.8	29.84	757.9	47	8.3	48	W	4	1.8		0	2s			0	0	Clear	
Corsicana, Tex.			29.71	759.7	54	12.2	95	E	4	1.8		0	0			0	0	Clear	
Davenport, Iowa			29.77	756.1	47	8.3	77	W	4	1.8		5cs	Sm'e			0	0	Fair	
Denison, Tex.			29.86	758.4	53	11.7	86	S	4	1.8		0	0			0	0	Clear	
Denver, Col.	24.64	625.8	29.86	758.4	48	8.9	36	S	3	1.3		2c	0			0	0	Clear	
Detroit, Mich.			29.72	754.9	49	9.4	71	SW	5	2.2		8c	0	W		0	0	Fair	
Dodge City, Kan.	27.16	689.8	29.38	746.2	53	11.7	79	NNE	4	1.8			10s			0	0	Cloudy	
Dubuque, Iowa			29.75	755.6	47	8.3	98	NW	2	0.9		5cs	0	NW		0	0	Fair	
Duluth, Minn.			29.83	757.7	39	3.9	72	NE	8	3.6		0	2s			0	0	Clear	
Eastport, Me.			29.84	757.9	48	8.9	70	NE	9	4.0			10s			0	0	Cloudy	
Erie, Pa.			29.76	755.9	56	13.3	56	SE	10	4.5		8cs	Haze	SE		0	0	Fair	
Escanaba, Mich.			29.71	754.6	43	6.1	75	N	20	8.9		8k	0	N		0	0	Fair	
Fort Gibson, I. T.			29.86	758.4	53	11.7	86	SE	3	1.3		8ck	0	NW		0	0	Fair	
Fort Sill, I. T.	28.65	727.7	29.73	755.1	53	11.7	93	S	6	2.7			Fog			0	0	Foggy	
Fort Sully, Dakota	27.94	709.7	29.56	750.8	45	7.2	68	E	5	2.2		0	Sm'e			0	0	Smoky	
Galveston, Tex.			29.98	761.5	67	19.4	97	SW	2	0.9		0	0			0	0	Clear	
Grand Haven, Mich.			29.64	752.8	54	12.2	73	NW	15	6.7		Haze	Haze			0	0	Fair	
Indianapolis, Ind.			29.78	756.4	53	11.7	75	S	4	1.8		5c	2ks			0	0	Fair	
Indianola, Tex.			29.98	761.5	68	20.0	94	S	8	3.6		0	0			0	0	Clear	
Jacksonville, Fla.			30.02	762.5	64	17.8	88	SW	4	1.8		4c	0	SW		0	0	Fair	
Keokuk, Iowa			29.77	756.1	48	8.9	77	Calm	0	0		0	Haze			0	0	Clear	
Key West, Fla.			30.33	762.7	70.1	21.5	72	N	12	5.4		8ck,k	2ks	SW		0	0	Cloudy	
Kittyhawk, N. C.			29.86	758.4	62	16.7	88	N	10	4.5		0	2ks			0.36	9.1	Clear	
Knoxville, Tenn.			30.00	762.0	45	7.2	92	Calm	0	0		2cs	Fog	SW		0	0	Foggy	
La Crosse, Wis.			29.74	755.4	42	5.6	74	NE	7	3.1		Haze	Haze			0	0	Hazy	
Leavenworth, Kan.			29.73	755.1	54	12.2	73	Calm	0	0			10s		W	0	0	Threatening	
Lexington, Ky.	28.82	732.0	29.91	759.7	53	11.7	66	S	8	3.6			10ks			0	0	Cloudy	
Long Branch, N. J.			29.80	756.9	54	12.2	87	SW	1	0.4		10ck	Haze	SW		0	0	Cloudy	
Louisville, Ky.			29.83	758.4	53	11.7	67	SE	2	0.9			10s			0	0	Cloudy	
Lynchburg, Va.			29.87	758.7	51	10.6	75	Calm	0	0		10k	0	W		0	0	Cloudy	
Malone, N. Y.			29.68	753.9	55	12.8	53	S	3	1.3			10s			0	0	Cloudy	
Marquette, Mich.			29.77	756.1	43	6.1	83	NW	8	3.6			10s		NW	0	0	Cloudy	
Memphis, Tenn.			29.97	761.2	52	11.1	86	SW	3	1.3		0	Haze			0	0	Clear	
Milwaukee, Wis.			29.69	754.4	47	8.3	85	W	8	3.6			Fog			0	0	Foggy	
Mobile, Ala.			30.03	762.7	59	15.0	94	Calm	0	0		0	Sm'e			0	0	Clear	
Montgomery, Ala.			30.06	763.5	59	15.0	89	Calm	0	0		0	Sm'e			0	0	Clear	
Morgantown, W. Va.			29.88	758.9	49	9.4	77	S	1	0.4		5c	Sm'e	W		0	0	Fair	
Mt. Washington, N. H.	23.66	601.0	30.02	762.5	42	5.6	74	NW.	12	5.4		5c	5s			0	0	Fair	
Nashville, Tenn.			29.94	760.5	49	9.4	77	Calm	0	0		0	Fog			0	0	Clear	
New Haven, Conn.			29.77	756.1	56	13.3	81	W	4	1.8		8ck	Haze	SW		0	0	Fair, foggy	
New London, Conn.			29.81	757.2	55	12.8	87	Calm	0	0			10s		SW	0	0	Cloudy	
New Orleans, La.			30.03	762.7	61	16.1	94	SE	3	1.3			Fog			0	0	Foggy	
Newport, R. I.			29.82	757.4	49	9.4	93	NW	3	1.3			Fog			0	0	Foggy	
New York, N. Y.			29.79	756.7	55	12.8	80	W	4	1.8		2c	Fog			0	0	Fair	
Norfolk, Va.			29.87	758.7	57	13.9	87	NW	1	0.4		0	Fog			0	0	Fair	
North Platte, Neb.	26.82	681.2	29.35	770.9	45	7.2	100	Calm	0	0		0	Fog			0	0	Foggy	
Omaha, Neb.	28.67	728.2	29.73	755.1	44	6.7	84	NW	2	0.9		2ck	Sm'e			0	0	Smoky	
Oswego, N. Y.			29.76	755.9	53	11.7	76	S	3	1.3			10s			0	0	Cloudy	
Peck's Beach, N. J.			29.81	757.2	55	12.8	93	W	4	1.8		8c	2s			0	0	Fair	
Pembina, Dakota			29.89	759.2	22	— 5.6	92	Calm	0	0		2s	Haze			0	0	Fair	
Philadelphia, Penn.			29.83	757.4	56	13.3	80	W	4	1.8		5ck	Sm'e	W		0	0	Fair	
Pike's Peak, Colorado	17.68	449.1	29.88	758.9	19	— 7.2	84	W	24	10.7		0	2s		W	0	0	Fair	
Pittsburgh, Penn.			29.85	758.2	47	8.3	85	Calm	0	0		2c	Fog			0	0	Fair	
Port Huron, Mich.			29.72	754.9	50	10.0	71	S	8	3.6		2c	5s			0	0	Cloudy	
Portland, Me.			29.84	757.9	50	10.0	86	Calm	0	0			Fog			0	0	Foggy	
Portland, Oregon			30.27	768.8	51	10.6	86	S	4	1.8			10s			0.22	5.6	Cloudy	
Punta Rassa, Fla.			30.06	763.5	68	20.0	79	N	6	2.7		5cs	2s	SE	SE	0	0	Cloudy	
Rochester, N. Y.			29.73	755.1	56	13.3	57	SW	8	3.6		2c	5s			0	0	Fair	
Salt Lake City, Utah	25.67	652.0	30.00	762.0	50	10.0	32	NE	14	6.3			10s		NW	0	0	Cloudy	
Sandy Hook, N. J.			29.79	756.7	55	12.8	87	W	8	3.6		8ck	Haze	W		0	0	Cloudy	
San Diego, Cal.			29.96	761.0	61	16.1	100	N	4	1.8			10s			0	0	Cloudy	
San Francisco, Cal.			30.07	763.8	58	14.4	88	Calm	0	0			Fog			0	0	Foggy	
Santa Fe, N. M.	23.22	589.8	29.76	755.9	45	7.2	24	S	5	2.2		1k	Haze	NW		0	0	Clear	
Savannah, Ga.			29.99	761.7	62	16.7	78	SW	4	1.8		0	Fog			0	0	Clear	
Shreveport, La.			30.00	762.0	59	15.0	91	Calm	0	0		5k	0	SW		Inap.	ap	Fair	
Smithville, N. C.			29.95	760.7	58	14.4	100	NW	2	0.9			Fog			0.91	23.1	Foggy	
Springfield, Mass.			29.80	756.9	48	8.9	85	Calm	0	0		8ks	Fog	S		0	0	Fair	
St. Louis, Mo.			29.85	758.2	54	12.2	67	W	6	2.7		2c	2s			0	0	Fair	
St. Marks, Fla.			30.03	762.7	58	14.4	93	W	4	1.8		0	0			0	0	Clear	
St. Paul, Minn.			29.76	755.9	38	3.3	90	NW	6	2.7		10cs	Haze	W		Inap.	Inap.	Cloudy	
St. Paul's Island, Alaska																			
Squa. Beach, N. J.			29.76	755.9	52	11.1	93	SW	1	0.4		8cs	Fog			Inap.	Inap.	Cloudy	
Toledo, Ohio			29.74	755.4	54	12.2	61	SW	3	1.3		8c	0	SW		0	0	Fair	
Tucson, Arizona																			
Tybee Island, Ga.			29.98	761.5	62	16.7	83	W	3	1.3		2k	0			0	0	Clear	
Vicksburg, Miss.			30.08	764.0	59	15.0	94	S	3	1.3		0	8s		S	0.38	9.7	Cloudy	
Virginia City, Montana	24.15	613.4	29.83	752.6	33	0.6	69	SW	13	5.8		0	3s		NW	0.40	10.2	Fair	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From —	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From —	Clouds. Direction. Lower. From —	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			29.84	757.9	51	10.6	93	W	3	1.3		5c	Sm'e	W		0	0	Fair	
Wilmington, N. C.			29.94	760.5	57	13.9	100	W	5	2.2			Fog			0	0	Foggy	
Wood's Hole, Mass.			29.82	757.4	51	10.6	93	NE	2	0.9			10s			0	0	Cloudy	
Wytheville, Va.	27.59	700.8	29.74	754.9	52	11.1	66	W	2	0.9		5k	0	W		0	0	Fair	
Yankton, Dakota	28.46	722.9	29.75	755.6	39	3.9	86	E	3	1.3		Haze	Sm'e			0	0	Smoky	
Yuma, Arizona			29.84	757.9	63	17.2		Calm				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'does, W. I.					81	27.2	86	NE	5	2.2		5k	2ks	NE	NE	0	0	Fair	E. Racker.
Pointe-aPitre, G'd'loupe, do			29.98	761.5	79	26.1	86	E				10cs	2s			0.11	2.8	Clear	L. V. Bigard.
Havana, Cuba, W. I.			30.00	762.0	79	26.1	82	Calm	0	0		5c,k	1ks	NE		0	0	Fair	Charles Hasselbrink.
Kingston, Jamaica, W.			30.16	766.1	79	26.1	86	Calm	0	0		3c	2s		E	0	0		James Gall.
St. Thomas, St. T., W. I.			30.24	768.1	81	27.2	74	NE	8	3.6		2ck	5k	E	E	0	0	Cloudy	W. S. Cameron.
Santiago de Cuba, W. I.			29.81	757.2	78	25.6	82	Calm	0	0		8c	0					Fair	Robert Mason.
St. Georges, Bermudas			29.99	761.7	75.0	23.9	68	S	8.7	3.9		5c	8f'k	S	S	0.020	0.51	Clear, fair	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.			30.12	765.0	29.5	—1.4	100	W	4	1.8			10s			0	0		J. Fortescue.
St. John's, Newfoundland																			John Delaney.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Clifton, Jamaica, W. I.	27.19	690.6	30.00	762.0	64	17.8	88	NW	1.0	0.4		8c	0			0.12	3.0	Fine, clear	C. Partridge.
Navassa																			
Medellin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			29.77	756.1	53	11.7	73	Calm	0	0			0			0	0	Fine	H. M. Redington.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Leipzig, N. 48° 56′, W. 38° 13′.	ENE		28.93	734.8	50.0	10.0		NNW			2		k		NW	Leswell		Clearing	
Steamer Hibernian, N. 5° 24′, W. 37° 28′.	SE	9½	28.76	730.5	56	13.3		Var'ble.			2		k		SW	Rough.		Damp	

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; 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.; Virginia City, 5,180 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in. The barometer of the Hibernian has an error of —0.18, as determined from the isobarometric charts of the Signal Service.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 25, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.08	764.1	75.0	23.9	69	Calm			0		1			0	0		Charnot.
Algiers			30.07	763.6	70.9	21.6	78	WNW			2		4			0	0		Peter.
La Calle																			Kuntz.
Tunis			29.99	761.7	71.2	21.8	44	NW			6		3			0	0	Cloudy	Jacques.
Sfax			30.01	763.0	75.2	24.0	44	Calm			0		4			0	0	Cloudy	Chauvey.
Saida			30.09	764.3	68.0	20.0	64	N			1		2			0	0	Foggy	Grosjean.
Tebessa			30.06	763.5	62.6	17.0		SE			2		4			0	0		Colin.
Geriville			30.11	764.8	41.0	5.0	68	NW			3		9					Foggy	Bernadach.
Laghouat			30.12	765.0	71.6	22	36	W			3		2			0	0		Simon.
Biskra			30.10	764.5	79.2	26.2	29	NW			2		2			0	0		Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			29.82	757.4	46.8	8.2	87	NE			2		10			0.091	2.3	Raining.	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.86	758.4	36.0	2.8	91	W			3		10			0.575	14.6		I. R. Observatory.
Eperies			29.71	754.5	41.4	5.2	77	N			4		10			0.480	12.20		Julius Mikolik.
Gratz	28.58	725.8	29.78	756.4	48.7	9.3	63	ENE			5		10						Andreas Rospini.
Hermannstadt	28.14	714.7	29.52	749.8	59.7	15.4	70	ESE			1		7			0.48	12.20		Prof. Reissenberger.
Kremsmünster	28.66	728.0	30.05	763.2	37.8	3.2	87	NW			3		10			0	0		Prof. C. Wagner.
Lemberg			29.63	752.6	42.8	6.	91	NE			2		10			0.213	5.4		Dr. T. Stanecki.
Nyiregyhaza			29.62	752.4	44.6	7.0	85	N			4		10			0.267	6.77		Habzsuda Daniel.
Pola			29.78	756.3	51.3	10.7	74	E			3		9ks			0.280	7.10		I.R. Hydrographic Of'ce
Szegedin			29.63	752.1	43.9	6.6	85	NW			3		10			0	0		Karl Stancel.
Trieste			29.77	756.1	55.8	13.2	63	ENE			1		10			0	0	Drizzling	Prof. V. Farolfi.
Vienna			29.91	759.6	37.2	2.9	90	NW			3		10			0.400	10.3	Raining	I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 9 p. m., local time. The elevation of Gratz is 313.5 meters, or 1,126.9 feet; Hermannstadt, 4[illegible]7.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.20	767.0	46.9	8.3	65	N			2		4			0.004	0.10		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.11	764.8	50.0	10.0		S	5	2.2			0			0	0	Clear	William Boswell.
Ardrossan																			Wm. McNeil.
Armagh Observatory			29.99	761.7	54.7	12.1		SSE	22	9.8			10					Squally	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs.			30.14	765.5	9.2	9.6		SE			3		2					Clear	John Hartnup, Jr.
Birr Castle, (Parsonstown).			29.90	759.4	55.5	12.9		SSE			3		9					D. clouds	J. Dreyer.
Bradford			30.12	765.0	49.6	9.8		SE			1		0					Clear	J. McLandsborough.
Bridgetown, (Barbadoes)			29.90	759.4	82.6	28.1		NE			4		4					Overcast ?	T. H. Hunt.
Cambridge Observatory			30.22	767.6	54.0	12.2		S			1		1					Clear	Sergeant Hunt, A.H.C.
Cape Good Hope Obs.			30.00	762.0	63.1	17.3	78	W	20	8.9			8						The Staff, for E. J. Stone.
Cardington			30.20	767.1	49.0	9.4		NE			1		3					Clear	John McLaren.
Carlisle			30.13	765.3	53.6	12.0		S			2		1			0	0	Clear	T. Bell, for J. Cartmell.
Chatham, School M. E.			30.22	767.6	52.7	11.5		SE			1		5					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	28.70	729.0	30.18	766.6	48	8.9		SE			6		9					*D. clouds	R. E. Power.
Donaghadee			30.04	763.0	52	11.1		S			4		9					Overcast	J. Mac Gowan, Jr.
Dover			30.21	767.3	54	10.0		NE			2		7						J. Costello.
Eccles, (near Manchester)			30.16	766.1	52.5	11.4		SSE	5.5	2.5			5					Hazy	Thomas Mackereth.
Falmouth Observatory			30.08	764.0	53.2	11.8		SE	38	17.0			10					Squally	The Staff.
Fort Napier, (Natal)	27.46	697.5	29.70	754.4	75.0	23.9		E			2		3					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.94	760.5	83	28.3		N					7						
Galway, Queen's College																			B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.09	764.3	72.5	22.5		SW			3		2					*D. clouds	Sergt. E. G. Baker.
Glasgow Observatory			30.10	764.5	50.3	10.2		S			1		6					Fine	Lewis Stuart.
Great Yarmouth			30.21	767.3	49	9.4		Calm			0		1					Clear	G. T. Watson.
Greenwich Royal Obs.			30.22	767.6	53.1	11.7		E			1		7					*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.15	765.8	51	10.6		SE			3		4					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			30.19	766.8	51.0	10.6		S			1		5			Blank	Blank	Foggy	F. J. Page, for L. J. Crossley.
Helston			30.04	763.0	57	13.9		E			6		0			0	0	Overcast ?	M. P. Moyle.
Holyhead			30.14	765.0	54	12.2		SSE			4		4					Misty	John Tilston.
Kew Observatory			30.21	767.3	52.5	11.4		SE	9	4.0			3					*D. clouds	The Staff.
Kingstown			30.00	762.0	55	12.8		SSE			5		10					Overcast	George Mitchell
Leicester Museum			30.17	767.3	51.0	10.6		SE			2		3					*D. clouds	William J. Harrison.
Llandudno			30.12	765.0	54.2	12.8		SSE			1		9					Overcast	Dr. James Nicol.
Malta, (Mediterranean)			29.86	758.4	71.2	21.8		SW			1		6k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			30.16	765.5	52	11.1		Calm			0		5						W. D. Penny.
Nassau, (Bahamas)			30.11	764.8	81.1	27.3		E			2		6					D. clouds	Surg.-Maj. Henry.
Nottingham			30.19	766.8	51.6	11.4		SSE			3		3c		SSE	0	0	Clear	E. J. Lowe.
Oscott, St Mary's College			30.18	766.6	51.0	10.6		SE			2		10c8					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			30.18	766.5	49	9.4		SE			2		3					Clear	J. Lucas, for R. Main
Plymouth			30.12	765.0	54.8	12.1		S			3		10					Overcast	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.88	758.9	56	13.3		S			6		10					Raining	W. Kennedy.
Saint Ann's Head			30.04	763.0	55	12.8		SSE			6		10					Overcast	John C. Walker.
Saint Helier, (Jersey)			30.18	766.6	52.5	11.4		SSE			5		5						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			30.18	766.6	48.2	9.0		SSW			2		2					Clear	F. Shaw.
Scutari cemetery, (Turkey)			29.74	755.4	73.8	23.2		SW			1		4			Blank	Blank	*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.17	766.3	49.0	9.0		S			2		3					Clear	W. F. Cooper.
Silloth Rectory			30.12	765.0	54.5	12.5		Calm			0		0			0	0	Clear	Rev. Francis Redford.
Stonyhurst Observatory			30.15	765.8	48.8	9.3		S			2		5					Hazy	The Staff.
Stornoway, Lewis C. (Hebr.)			30.01	762.2	54	12.2		SE			4		2					Clear	John Smith.
Strathfield Turgiss			30.19	767.3	52	11.1					0—1		0					Clear	Rev. Charles H. Griffith
Streatley Vicarage			30.16	766.1	51.5	12.0		NW			1		0						Rev. John Slatter.
Thurso			30.08	764	52	11.1		SSE			2		2					Clear	John Trotter.
Truro, Royal Institution			30.01	762.2	56	13.3		SE			8		10					Gloomy	W. Newcombe.
Valencia Observatory			29.74	755.4	55.8	13.2		SE	30	13.4			10					Heavy rain	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					50	10.0		S			4		10			0	0		
Leith, Restalrig Park			30.13	765.3	51.6	10.9		SE			1					0	0	Fine	Andrew Gibb.
Monach Lt-house, (Shet. Is)			29.90	756.4	54	12.2		S			6		10			0	0		J. Youyclause.
North Unst, (Shetland Is)			30.19	766.8	45	7.2		SE			2		0						

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			29.96	760.9	37.6	3.1	83	NNE			6		10						
Fanöe			30.12	765.0	39.6	4.2	74	N			4		10						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.65	753.0	34.7	5.4	87	SE			6								
Thorshavn, (Faröe)			30.06	763.7	50.4	10.2	94	S			4		10					Foggy	
Vestervig			30.14	765.6	37.8	3.2	90	NE			4		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.17	766.4	59.0	15.0	61	SE			1		2s			0	0		Normal School.
Amiens			30.21	767.3	50.4	10.2	79	SW			2		5		SW	0	0	Cloudy	Normal School.
Avignon			29.97	761.3	53.1	11.7	56	NNW			4		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.19	766.8	43.5	6.4	75	E			2		8		NE	0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)			30.17	766.2	45.1	7.3	71	NE	3.8	1.7			5		E	0	0	Cloudy	Beaumette Observatory.
Beauvais			30.27	768.9	49.8	9.9	69	NE			1		10		NE	0	0	Cloudy	Normal School.
Besançon			30.21	767.4	43.2	6.2	76	NE			3		8		E	0.035	0.9	Cloudy	Normal School.
Bourg en Bresse			30.15	765.7	43.0	6.1	70	E			4		8n		SW	0	0		Normal School.
Bourges			30.21	767.2	42.8	6	82	NE			3		10		SW	0	0	Cloudy	Normal School.
Brest			30.02	762.6	52.7	11.5	73	SSE			2		10		SW	0	0	Misty	Naval Observatory.
Caen			30.23	767.7	40.5	9.7	84	ESE			2		2		NNW	0	0		Normal School.
Chartres																			Normal School.
Chaumont	28.98	736.2	30.15	765.9	39.7	4.3		NNE			3		10n		NNE	0	0	Cloudy	Normal School.
Commercy			30.21	768.0	42.1	5.6	63	N			2		10		N	0.024	0.6	Cloudy	Normal School.
Commune de Gréasque*			29.89	759.1	53.6	12.0	56	NW			6		2		NW	0	0		
Le Mans																			Normal School.
Lons-Le-Saulnier			30.17	766.2	44.8	7.1	70	N			2		5		SW		0	Cloudy	Normal School.
Mâcon			30.15	765.7	42.8	6	70	N			4		10			0.08	2.	Cloudy	Normal School.
Mirecourt			30.17	766.4	42.1	5.6	73	N			4		10		S	0	0	Cloudy	Normal School.
Orleans			30.18	766.5	45.7	7.6	72	ENE			3		2		ENE	0	0		Normal School.
Paris Observatory			30.23	767.8	47.7	8.7	63	NW			1		6			0	0	Cloudy	National Observatory
Parthenay			30.19	766.8	46.0	7.8	76	NE			4		10			0	0	Cloudy	Normal School.
La Roche sur Yon			29.98	761.5	49.3	9.6	76	NE			4		5		S	0	0	Cloudy	Normal School.
Rochefort, Observatory			30.17	766.2	55.9	13.3	45	E			3		2		SE	0	0		Naval Observatory.
Rouen			30.21	767.2	51.1	10.6	65	WNW			2		2		W	0	0		Normal School.
Saint Lo			30.19	766.8	51.8	11	94	SE			8		3		W	0	0		Normal School.
Villefranche			30.19	766.9	43.7	6.5	76	NW			1		10			0.16	4.	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchésl.
Mont-Louis			30.28	769.1	50.9	10.5	35	NW	14.9	6.66			0			0.316	8.8		—. Faiguère.
Montsouris, Paris			30.22	767.5	49.1	9.5	64	E			2		7k,kn		NE	0	0	Light Mist	Montsouris Osberv'tory.
Perpignan	†30.02	†762.4			65.7	18.7	42	NW	13.0	5.83			0			0	0		Dr. Fines.
Pic du Midi, (Summit) H. P.	21.28	540.4			34.7	1.5		N			1		1			0	0	Clear	M. Baylac.
Pic du Midi, (Plantade) H.P.																			General de Nansouty
Saint Maur, (near Paris)			30.22	767.5	48.4	9.1	69	N			1		6			0	0	Cloudy	E. Renou.
Tours			29.72	755.0	46.8	8.2		NE					8		ESE	0	0		C. Marquet.
Versailles, (near Paris)			30.21	767.3	48.9	9.4	58	E			1		8			0	0	Misty	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.23	767.9	59.0	15.0	91	NE	1.3	0.6		0	1kn		E	0.158 / 0.185	4.0 / 4.7		H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m or 9 a. m., local time The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 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. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.06	763.5	41.0	5.0	70	N	18	8			10			0	0		Prof. Hoh.
Berlin			30.13	765.2	40.3	4.6	86	W	9	4			10			0.129	0.73	Rainy	Prof. Arndt.
Breslau			29.95	760.6	38.3	3.5	81	NW	27	12			10			0	0		Dr. P. Neugebauer.
Carlsruhe			30.17	766.4	42.1	5.6	74	SW	11	5			10			0	0		A. Senz.
Cassel			29.98	761.5	41.5	5.3	77	NW	9	4			10			Inap.	Inap.		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.70	729.1	30.19	766.8	40.1	4.5	76	NW					10			0	0		M. Wilhelm.
Hamburg			30.08	763.9	37.9	3.3	87	NNW	18	8			10			0.122	3.1	Rainy	Deutsche Seewarte.
Kiel			29.93	760.2	34.6	4.2	94	NW	18	8			10			0.398	10.1		Prof. G. Karsten.
Königsberg			29.8	758.3	44.6	7.0	75	SE	11	5						0.041	1.03	Cloud	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			30.04	762.9	37.9	3.3	80	NW	18	8			10			0	0		Prof. Bruhns.
Münster			30.13	765.3	45.3	7.4	60	NE	4	2			10			0	0		Prof. E. Heis.
Posen			29.90	759.4	41.2	5.1	73	W	9	4			10			0	0	Cloudy	Dr. Magener.
Strassburg, (in Alsace)			30.22	767.5	43.6	5.9	54	NW	9	4			10			0	0		Dr. Schur.
Stuttgart			30.19	766.9	38.5	3.6	82	NW					10			0.028	0.7		Mr. Würth.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			30.13	765.4	43.6	7.0	65	NW	13	6			10			0		Foggy	Prof. Flesch.
Wustrow, Naval School			29.97	761.1	39.9	4.4	90	NNW	27	12			10			0.108	2.75	Cloudy	E. F. Schütz.

Note.—In the originals the distinction between upper and lower clouds is not made; it is not always certain that the remarks in the weather column refer to the moment of observation. The elevation of Friedrichshafen is 413.1 meters, or 1,356.3 feet.

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.	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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens			29.77	756.1	75.4	24.1		SW					4k					Clear	

Note.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			29.81	757.1	58.3	14.6	48	ESE	3.1	1.4			0			0	0		
Mondovi			29.82	757.5	58.3	14.6	30	NW			1		0			0	0		
Genoa			29.76	756.0	67.6	19.8	18	NW	4.9	2.2			0			0	0		
Pavia			29.76	755.8	64.2	17.9	16	N			2		0			0	0		
Verona			29.70	754.4	62.6	17.0	58	S			1		3			0	0		
Padua			29.75	755.6	57.6	14.2	65	SE	9.8	4.4			3	WSW		0	0		
Parma																			
Bologna			29.76	755.9	60.4	15.8	69	W			1		2	W		0	0		
Leghorn			29.74	755.3	62.1	16.7	52	W	0.7	0.3			1			0	0		
Urbino																			
Ancona			29.82	757.5	57.6	14.2	75	NE			4		8			0.807	20.5		
Siena			29.74	755.4	60.1	15.6	50	NE	0	0			3	NW		0	0		
Rome			29.77	756.1	64.0	17.8	54	NW	2.5	1.1			4	SW		0	0		
Naples, O. U.			29.78	756.4	66.2	19.0	68	S			2		9	NW		0.079	2.0		
Lecce			29.74	755.5	64.2	17.9	58	NW	11.2	5.0			9			0	0		
Cosenza			29.79	756.6	63.0	17.2	72	WNW			2		8			0.520	13.2		
Catania, (Sicily)																			
Riposto			29.76	[illegible]	71.4	21.9	65	NE			2		3	SE		0	0		
Palermo			29.75	755.7	66.0	18.9	53	W	11.9	5.3			6	W		0	0		
Sub-Series.																			
Naples, S. R.			29.82	757.3	62.4	16.9	65	SW			4		..k	SW		0.150	3.8		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for twenty-four hours. The altitude of Mondovia is 554 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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			30.26	768.5	59.0	10.0		WNW			2								
Groningen			30.11	764.7	44.	6.9		N			4								
Helder			30.19	766.9	48.2	9.0		NNW			2								
Utrecht			29.16	766.[illegible]	49.3	9.6		NNW			2		5					Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; the 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	765.3	39.6	4.2	55	Calm	0	0			0			0	0		
Christiania			30.23	767.7	32.0	0.0	65	NNE	6.5	2.9			10			0	0		
Tromsö			30.10	764.5	36.3	2.4	58	SE			6		10			0	0		

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.15	765.8	68.2	20.1	89	SW	11.2	5.0			8			0.012	0.3		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.82	757.5	39.6	4.2	97	N	9	4			10					Raining	Astronomical Obs.
Wilna			29.92	760.0	37.2	2.9	91	E	4	2			10						Astronomical Obs.
Dorpat			30.14	765.6	28.8	— 1.8	88	ESE	9	4			10						Physical Cabinet.
St. Petersburg			30.26	768.5	24.3	— 4.3	84	ESE	9	4			10						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kieff			29.76	755.8	43.7	6.7	100	NE	7	3			10					Foggy	Physical Cabinet.
Nikolaiev			29.75	755.7	65.7	18.7	79	S	8	3.5			4						Kurdakof.
Kertch			29.85	758.3	64.6	18.1	84	SSW	7	3			7						Lagorio.
Moscow			30.23	767.7	28.9	— 1.7	88	S	8	3.5			10					Light snow	Meteorological Obs.
Lugan			29.80	757.0	56.9	13.3	88	S	10	4.5			10			Blank	Blank		Meteorological Obs.
Archangel			30.29	769.4	31.6	0.2	89	W	4	2			10						Ogorodnikof.
Tiflis	28.68	728.5	30.07	763.6	68.4	20.2	50	E	8	3.5			5						Physical Obs.
Astrakhan			30.25	768.4	48.7	9.3	75	E	8	3.5			10						Sebastianof.
Kasan			30.24	768.1	21.6	— 5.8	90	N	3	1.5			10					Snowing	Physical Cabinet.
Orenburg			30.29	769.3	30.0	— 1.1	86	W	13	6			10						Tschernischef.
Ekaterinburg	29.03	737.3	30.10	764.5	21.2	— 6.0	79	W	20	9			10						Meteorological Obs.
Kasaly			30.26	768.7	42.3	5.7	82	W	8	3.5			5						Bobrof.
Tashkend																			Michelson.
Barnaul			29.80	756.9	29.7	— 1.3	98	NW	13	6			4						Meteorological Obs.
Yeniseisk			29.68	753.8	26.6	— 3.0	96	NW	2	1			10						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.19	766.7	48.4	9.1	95	Calm	0	0			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.08	764.0	65.5	18.6	82	SE	6.0	2.7		0	7			0	0	Nearly covered	Royal Observatory.
San Fernando			30.15	765.8	68.0	20.0	91	WNW	7.6	3.4		2	4	N	WNW	0	0		The Naval Observatory.

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

SWEDISH SERIES.

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

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Haparanda			30.35	771.0	28.8	— 1.8	96	SW			2		10			0	0		
Umea			30.29	769.4	27.7	— 2.4	87	E			2		10			0	0		
Hernosand			30.28	769.0	30.2	— 1.0	96	NE			4		10			0.012	0.3		
Stockholm			30.07	763.6	33.1	0.6	89	NNE			4		10			0	0		
Wisby			29.95	760.7	34.9	1.6	93	ENE			2		10			0.886	22.5		
Sub-Series. Upsala			30.14	765.6	32.2	0.1	81	NE	7.8	3.5			10		ENE				Dr. Hildebrandsson.

NOTE.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.67	728.1	30.11	764.7	49.1	9.5	65	NE	.....	.....	3	.....	7	.....	.....	0.012	0.3	Cloudy	The Observatory.
Zurich	28.50	723.9	30.19	766.7	39.9	4.4	70	N	.....	.....	1	.....	10	.....	.....	0.504	12.8	Cloudy	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +1.9mm.; Thermometer, —1°.5; Relative Humidity, —9 per cent.

NOTE.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria, Lee Obs'y	.....	.....	29.99	761.8	76.6	24.8	71	NNE	.....	.....	3	.....	0	.....	.....	0	0	.....	Prof. C. V. A. Van Dyck.
Constantinople	.....	.....	29.78	756.3	73.4	23.0	54	SSW	8.9	4.0	.....	.....	5	.....	SW	0.35	9.	Cloudy	
Fao, (Persian Gulf)	.....	.....	30.04	763.0	87.8	31.0	.....	NW	.....	.....	3	.....	0	.....	.....	.....	.....	Clear	
Salonica	.....	.....	.....	.....	74.5	23.6	.....	Calm	.....	.....	0	.....	0	.....	.....	.....	.....	Clear	
Valona	.....	.....	29.68	753.8	60.1	15.6	.....	SW	.....	.....	3	.....	10	.....	.....	.....	.....	Cloudy	
Varna	.....	.....	29.72	755.0	69.8	21.0	.....	NE	.....	.....	3	.....	10	.....	.....	.....	.....	Cloudy	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario	.....	.....	29.91	759.7	43	6.1	.....	N	5	2.2	.....	.....	10s	.....	NE	0	0	Cloudy	
Chatham, N. B.	.....	.....	29.68	753.9	42	5.6	86	Calm	0	0	.....	8c	Haze	.....	.....	0	0	Fair	
Charlottetown, P. E. Island	.....	.....	29.67	753.6	46	7.8	73	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Fort Garry, Manitoba	.....	.....	29.98	761.5	30	−1.1	98	N	12	5.4	.....	.....	10n	.....	.....	0.130	3.30	Heavy snow	
Halifax, N. S.	.....	.....	29.61	752.1	46	7.8	92	N	5	2.2	.....	.....	10n	.....	.....	0.05	0.13	Cloudy	
Kingston, Ontario	.....	.....	29.90	759.4	45	7.2	84	NE	5	2.2	.....	10s	0	.....	.....	0	0	Cloudy	
Montreal, Quebec	.....	.....	29.84	757.9	40	4.4	88	NE	12	5.4	.....	Haze	5s	.....	.....	0	0	Cloudy	
Ottawa, Ontario	.....	.....	29.89	759.2	42	5.6	74	NW	11	4.9	.....	.....	10s	.....	NW	0	0	Threatening	
Parry Sound, Ontario	.....	.....	29.96	761.0	38	3.3	72	NE	19	8.5	.....	2ck	5ks	NE	NE	0	0	Fair	
Port Dover, Ontario	.....	.....	29.96	761.0	46	7.8	86	NW	10	4.5	.....	Haze	Haze	.....	.....	0	0	Hazy	
Port Stanley, Ontario	.....	.....	29.95	760.7	46	7.8	87	W	12	5.4	.....	.....	10n	.....	W	0	0	Cloudy	
Quebec, Quebec	.....	.....	30.79	756.7	37	2.8	81	Calm	0	0	.....	.....	10n	.....	.....	0	0	Cloudy	
Saugeen, Ontario	.....	.....	29.96	761.0	41	5.0	95	N	3	1.8	.....	.....	10n	.....	.....	0	0	Cloudy	
Stayner, Ontario	.....	.....	29.94	760.5	43	6.1	79	N	1	0.4	.....	.....	10n	.....	N	0	0	Cloudy	
Sydney, C. B.	.....	.....	29.71	754.6	44	6.7	92	S	2	0.9	.....	.....	10n	.....	.....	0	0	Cloudy	
Toronto, Ontario	.....	.....	29.92	760.0	45	7.2	76	NW	10	4.5	.....	.....	10n	.....	.....	0	0	Cloudy	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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. 1—10.	Clouds. Amount. Up'er. 1—10.	Clouds. Amount. Low'r. 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.78	756.4	46	7.8	85	S	1	0.4		0	Fog			0	0	Clear	
Alpena, Mich.			29.88	761.5	40	4.4	73	NE	6	2.7		10s		NE		0	0	Cloudy	
Atlantic City, N. J.			29.88	758.9	55	12.8	74	W	5	2.2		1cs	Haze			0	0	Clear	
Augusta, Ga.			30.02	764.0	53	11.7	85	Calm	0	0		0	Haze			0	0	Clear	
Baltimore, Md.			29.92	760.0	55	12.8	73	Calm	0	0		0	Sm'e			0	0	Smoky	
Barnegat, N. J.			29.86	758.4	59	15.0	64	W	5	2.2		0	0			0	0	Clear	
Benton, Montana	27.46	697.5	30.06	768.6	32	0.0	89	SW	4	1.8			10s			0.08	2.0	Cloudy	
Bismarck, Dakota	28.10	713.7	29.78	756.4	33	0.6	89		16	7.2			10ks		N	0.73	18.5	Cloudy	
Boston, Mass.			29.76	755.9	47	8.3	92	W	6	2.7		0	Fog			0	0	Foggy	
Breckenridge, Minn.			29.67	753.4	39	3.9	80	N	8	3.6			10s		N	0.05	1.3	Threatening	
Buffalo, N. Y.			29.90	759.4	47	8.3	85	NW	8	3.6			10s		NW	0	0	Cloudy	
Burlington, Vt.			29.80	756.9	45	7.2	68	N	2	0.9		2c	5s			0	0	Cloudy	
Cairo, Ill.			29.90	759.4	56	13.3	87	SE	4	1.8		5c	0	SW		0	0	Fair	
Cape Hatteras, N. C.			29.92	760.0	64	17.8	83	W	6	2.7		0	Haze			0	0	Clear	
Cape Henry, Va.			29.94	760.5	67	19.4	55	W	9	4.0		0	0			0	0	Clear	
Cape May, N. J.			29.89	759.2	57	13.9	87	W	4	1.8		2ck	0	W		0	0	Fair	
Charleston, S. C.			30.07	763.8	61	16.1	66	W	10	4.5		0	Sm'e			0	0	Clear	
Cheyenne, Wyoming	24.01	609.8	29.95	760.7	31	—0.6	69	NW	16	7.2		0	5s			0	0	Fair	
Chicago, Ill.			29.80	756.9	50	10.0	65	S	14	6.3		5c	Haze			0	0	Fair	
Cincinnati, Ohio			29.93	760.2	55	12.8	73	S	3	1.3		0	Fog			0	0	Foggy	
Cleveland, Ohio			29.94	760.5	49	9.4	92	NW	7	3.1			10s				0	Cloudy	
Colorado Springs, Col.	24.10	612.1	29.97	761.2	30	—1.1	89	E	3	1.3		0	2s			0.04	1.0	Fair	
Corsicana, Tex.			29.78	756.4	69	20.6	84	S	20	8.9		5k	0	S		0	0	Fair	
Davenport, Iowa			29.77	755.1	51	10.6	78	E	5	2.2		1cs	Fog	E		0	0	Foggy	
Denison, Tex.			29.63	752.6	68	20.0	85	S	18	8.0		0	2ks,d		S	0	0	Fair	
Denver, Col.	24.82	630.4	30.04	763.0	37	2.8	39	NW	8	3.6		5k	0	W		0.06	1.5	Fair	
Detroit, Mich.			29.93	760.2	49	9.4	85	NE	3	1.3			10ks			0	0	Cloudy	
Dodge City, Kan.	27.37	695.2	29.67	753.4	42	5.6	83	N	20	8.9			10s			0	0	Threatening	
Dubuque, Iowa			29.75	755.6	46	7.8	84	NE	6	2.7			10s		SE	0	0	Threatening	
Duluth, Minn.			29.84	757.9	41	5.6	83	NE	28	12.5			10n			0.15	3.8	Light rain	
Eastport, Me.			29.70	754.4	47	8.3	92	N	8	3.6			10s			0	0	Cloudy	
Erie, Pa.			29.90	759.4	49	9.4	93	W	12	5.4			10s			0	0	Cloudy	
Escanaba, Mich.			29.95	760.7	40	4.4	82	E	10	4.5			10s			0	0	Cloudy	
Fort Gibson, I. T.			29.59	751.6	66	18.9	78	SE	9	4.0		9cs	1s	W		0	0	Cloudy	
Fort Sill, I. T.	28.40	723.0	29.56	750.8	57	13.9	69	N	21	9.4			10s		N	0	0	Cloudy	
Fort Sully, Dakota	28.13	714.5	29.84	758.2	37	2.8	80	W	26	11.6			10n		W	0	0	Light rain	
Galveston, Tex.			29.94	760.5	72	22.2	90	SW	5	2.2		2k	0	SW		0	0	Fair	
Grand Haven, Mich.			29.87	758.7	48	8.9	85	SE	16	7.2			10s			0	0	Cloudy	
Indianapolis, Ind.			29.89	759.2	53	11.7	79	S	5	2.2		10c	Sm'e			0	0	Cloudy	
Indianola, Tex.			29.95	760.7	73	22.8	95	SW	20	8.9		0	0			0	0	Clear	
Jacksonville, Fla.			30.10	764.5	59	15.0	87	Calm	0	0		0	0			0	0	Clear	
Keokuk, Iowa			29.67	753.6	56	13.3	69	SE	4	1.8			10s		SE	0	0	Cloudy	
Key West, Fla.			30.05	763.3	76.8	24.9	82	NE	12	5.4		8ck,k	2s	SE	SE	0	0	Cloudy, hazy	
Kittyhawk, N. C.			29.95	760.7	60	15.6	82	W	13	5.8		0	0			0	0	Clear	
Knoxville, Tenn.			30.08	764.0	44	6.7	92	Calm	0	0		0	Fog			0	0	Clear	
La Crosse, Wis.			29.80	756.9	52	11.1	93	SW	6	2.7		10cs	Haze			0	0	Threatening	
Leavenworth, Kan.			29.64	752.8	54	12.2	73	N	12	5.4			10n			0.09	2.3	Light rain	
Lexington, Ky.	28.90	734.0	30.00	762.0	52	11.1	72	S	8	3.6		0	Haze			0	0	Clear	
Long Branch, N. J.			29.84	757.9	58	14.4	76	SW	8	3.6		0	Haze			0	0	Clear	
Louisville, Ky.			29.96	761.0	54	12.2	67	SE	3	1.3		Haze	Sm'e			0	0	Smoky	
Lynchburg, Va.			29.98	761.5	50	10.0	79	Calm	0	0		0	Sm'e			0	0	Clear	
Malone, N. Y.			29.81	757.2	42	5.6	91	NW	1	0.4			Fog			Inap.	Inap.	Threatening	
Marquette, Mich.			29.96	761.0	40	4.4	82	E	24	10.7			10s		E	0	0	Cloudy	
Memphis, Tenn.			29.92	760.0	59	15.0	87	S	7	3.1		8k	Haze	S		0	0	Fair	
Milwaukee, Wis.			29.85	758.2	47	8.3	92	SE	12	5.4			10s			0	0	Cloudy	
Mobile, Ala.			30.06	763.5	56	13.3	93	S	1	0.4		0	5s		NW	Inap.	Inap.	Fair	
Montgomery, Ala.			30.08	764.0	59.5	15.3	88	Calm	0	0		10k	Sm'e	SW		0	0	Cloudy	
Morgantown, W. Va.			29.97	761.2	52	11.1	72	Calm	0	0		5c	Sm'e	W		0	0	Fair	
Mt. Washington, N. H.	23.58	598.9	29.94	760.5	35	1.7	80	NW	18	8.0		2c	5s	NW		0	0	Fair	
Nashville, Tenn.			29.98	761.5	51	10.6	78	Calm	0	0		0	Fog			0	0	Clear	
New Haven, Conn.			29.82	757.4	47	8.3	70	Calm	0	0		Haze	Fog			Inap.	Inap.	Foggy	
New London, Conn.			29.82	757.4	51	10.6	86	Calm	0	0		0	Fog			0	0	Fair	
New Orleans, La.			30.03	762.7	64	17.8	89	S	4	1.8		0	Fog			0	0	Clear, smoky	
Newport, R. I.			29.79	756.7	51	10.6	93	SW	4	1.8		0	Haze			Inap.	Inap.	Clear	
New York, N. Y.			29.85	758.2	56	13.3	62	W	4	1.8		0	Fog			0	0	Clear	
Norfolk, Va.			29.95	760.7	56	13.3	81	SW	2	0.9		Haze	Sm'e			0	0	Clear	
North Platte, Neb.	27.10	686.0	29.81	752.1	38	3.3	81	NW	12	5.4		0	5s			0	0	Fair	
Omaha, Neb.	28.73	729.7	29.78	756.4	48	8.9	92	Calm	0	0			10n			0.35	8.9	Light rain	
Oswego, N. Y.			29.84	757.7	50.5	10.3	86	WNW	8	3.6			10s		SW	0	0	Threatening	
Peck's Beach, N. J.			29.89	759.2	55	12.8	82	W	4	1.8		1c	Haze			0	0	Fair	
Pembina, Dakota			29.89	759.2	32	0.0	100	NE	12	5.4			10n			0.30	7.6	Heavy snow	
Philadelphia, Penn.			29.87	758.7	55	12.8	74	W	2	0.9		Haze	Sm'e			0	0	Smoky	
Pike's Peak, Colorado	17.55	444.6	29.71	755.9	—1	—18.3	70	W	26	11.6		0	2s			0.17	4.3	Fair	
Pittsburgh, Penn.			29.92	760.0	50	10.0	86	Calm	0	0		5ck	Fog	W		0	0	Fair	
Port Huron, Mich.			29.96	761.0	45	7.2	84	N	13	5.8			10s		N	0	0	Cloudy	
Portland, Me.			29.75	755.6	47	8.3	92	W	1	0.4			Fog			Inap.	Inap.	Foggy	
Portland, Oregon			30.08	764.0	50	10.0	78	NW	1	0.4		5k	2ks			0	0	Fair	
Punta Rassa, Fla.			30.10	764.5	69	20.6	90	NE	8	3.6		5cs	Haze	NE		0	0	Fair	
Rochester, N. Y.			29.84	757.7	49	9.4	77	W	15	6.7			10s		W	0	0	Cloudy	
Salt Lake City, Utah	25.85	656.6	30.18	766.0	38	3.3	37	E	4	1.8		0	0			0	0	Clear	
Sandy Hook, N. J.			29.82	757.4	54	12.2	79	W	10	4.5		0	Haze			0	0	Clear	
San Diego, Cal.			29.98	761.5	58	14.4	93	NE	4	1.8			10s			0	0	Cloudy	
San Francisco, Cal.			30.06	763.5	54	12.2	87	SW	4	1.8		0	0			0	0	Clear	
Santa Fe, N. M.	23.2	589.3	29.74	755.4	42	5.6	6	NW	16	7.2		0	0			0	0	Clear	
Savannah, Ga.			30.09	764.3	61	16.1	66	SW	6	2.7		0	Sm'e			0	0	Clear	
Shreveport, La.			29.88	758.9	66	18.9	97	S	5	2.2			10s			0.30	7.6	Cloudy	
Smithville, N. C.			30.03	762.7	61	16.1	84	W	4	1.8		0	Haze			0	0	Fair	
Springfield, Mass.			29.81	757.2	46	7.8	85	Calm	0	0			Fog			0.15	0.4	Foggy	
St. Louis, Mo.			29.78	756.4	56	13.3	74	S	12	5.4		2c	8s			0	0	Cloudy	
St. Marks, Fla.			30.10	764.5	56	13.3	100	Calm	0	0			Fog			0	0	Foggy	
St. Paul, Minn.			29.70	754.4	45	7.2	80	SW	5	2.2			1s			0.13	3.3	Cloudy	
St. Paul's Island, Alaska																			
Squa. Beach, N. J.			29.84	756.9	52	11.1	86	NW	5	2.2		0	Haze			0	0	Clear	
Toledo, Ohio			29.97	760.2	50	10.0	86	S	4	1.8			10s			0	0	Cloudy	
Tucson, Arizona																			
Tybee Island, Ga.			30.0	763.5	60	15.6	81	SW	4	1.8		0	0			0	0	Clear	
Vicksburg, Miss.			30.04	763.0	62	16.7	94	S	11	4.9		0	Fog			0	0	Fair	
Virginia City, Montana	24.2	614.2	29.96	761.2	25	—3.9	42	N	4	1.8		0	0			0.05	1.3	Clear	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
ashington, D. C.	.....	.....	29.92	760.0	51.5	10.8	86	Calm	0	0	.....	Haze	Fog	.....	.....	0	0	Foggy	
Wilmington, N. C	.....	.....	30.02	762.5	60	15.6	76	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Wood's Hole, Mass	.....	.....	29.80	756.9	53	11.7	100	N	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy	
Wytheville, Va.	27.70	703.6	29.85	758.4	48	8.9	77	W	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Yankton, Dakota	28.56	725.4	29.85	758.2	44	6.7	60	W	9	4.0	.....	.....	10s	.....	S	0	0	Cloudy	
Yuma, Arizona	.....	.....	29.97	761.2	74	23.3	.....	NW	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'does, W. I	.....	.....	.....	.....	80	26.7	90	E	2	0.9	.....	5c	5s	W	N	0	0	Fair.	E Racker.
Pointe-aPitre, G'd'loupe, do	.....	.....	29.96	76[illegible].0	80	26.7	74	E	.....	.....	.....	0	10ks	.....	.....	0.07	1.8	Clear	L. V. Bigard.
Havana, Cuba, W. I.	.....	.....	30.03	762.5	76	24.4	86	Calm	0	0	.....	10p, ck	9k, ks	SW	NNE	0.1	2.5	Fair	Charles Hasselbrink.
Kingston, Jamaica, W.	.....	.....	30.14	765.5	76	24.4	72	C lm	0	0	.....	8c	1s	.....	.....	0	0	Fine	James Gall.
St. Thomas, St. T., W. I.	.....	.....	30.24	768.1	81	27.2	78	E	4	1 8	.....	2ck	5kn	E	E	0	0	Cloudy	W. S. Cameron.
Santiago de Cuba, W. I.	.....	.....	29.79	756.7	77	25.0	82	NE	2.4	1.1	.....	0	2s	.....	.....	Blank	Blank	Fair	Robert Mason.
St. Georges, Bermudas	.....	.....	29.95	760.7	75	23.9	79	NW	11.0	4.9	.....	10k	6fk	NW	NW	0.030	0.76	Cloudy	C. F. Allen.
Honolulu, Oahu, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. P. Church.
Makawao, Maui, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. L. Clarke.
Cumberland, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ft. Chippewyan, B. A	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ft. McPherson, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ft. Simpson, B. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
York Factory, B. A.	.....	.....	30.21	767.3	24	−4.4	10[illegible]	NW	2	0.9	.....	.....	10s	.....	.....	0	0	.....	J. Fortescue.
St. John's, Newfoundland	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	John Delaney.
St. John's, Porto Rico, W. I	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Clifton, Jamaica, W. I.	27.20	690.9	29.98	761.5	67	19.4	90	Calm	0	0	.....	5c	0	.....	.....	0.15	3.8	Dull	C. Partridge.
Navassa	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Medellin, S. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Paramaribo, S. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Elyria, Ohio	.....	.....	29.94	760.5	49.5	9.7	96	W	4	1.8	.....	.....	Hze	.....	.....	0	0	Fair	H. M. Redington.

Marine Series.	True course towards.	Hourly rate in knots.	Barometer. Inches.	Barometer. Millimeters.	Temperature. Fahrenheit.	Temperature. Centigrade.	Relative Humidity.	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—	State of ocean.	Direction of swell from—	Weather.	Observer.
Steamer Leipzig, N. 49° 32′, W. 31° 53′.	E	.....	28.98	736.1	54.5	12.5	.....	NW	.....	.....	4	.....	.....	.....	WNW	L. swell	.....	Raining	
Steamer Hibernian, N. 51° 00′, W. 31° 13′.	ESE	9¾	28.80	731.5	53	11.7	.....	NE	.....	.....	2	.....	..c	.....	SE	Rough	.....	Cloudy	

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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 1,077 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; 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.; 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, 14,159.7 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.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in. The barometer of the Hibernian has an error of —0.18, as determined from the isobarometric charts of the Signal Service.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 26, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.07	763.8	71.3	23.5	65	Calm			0		0			0	0		Charnot.
Algiers			30.05	763.4	70.5	21.4	65	N			2		1			0	0		Peter.
La Calle																			Kuntz.
Tunis			30.07	763.6	72.0	22.2	44	NW			5		5			0	0	Cloudy	Jacques.
Sfax			30.10	764.5	76.0	24.8	28	SW			2		1			0	0		Chauvey.
Saïda			30.09	764.2	73.4	23.0	41	SW			1		0			0	0	Foggy	Grosjean.
Tebessa			30.10	764.4	66.6	19.2		SE			1		1			0	0		Colin.
Geriville			30.11	764.9	65.3	18.5	50	NW			1		2			0	0		Bernadach.
Laghouat			30.15	765.7	69.8	21	41	SE			1		1			0	0		Simon
Biskra			30.15	765.7	77.2	25.1	33	NW			2		0			0	0		Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			29.97	761.2	47.7	8.7	74	SSW			2		5			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.93	760.1	38.3	3.5	91	W			2		10			0.165	4.2		I. R. Observatory.
Eperies			29.83	757.7	43.2	6.2	67	N			2		10			0	0		Julius Mikolik.
Gratz	28.77	730.7	29.98	761.6	48.2	9.0	51	NNW			5		8						Andreas Rospini.
Hermannstadt	28.37	720.6	29.32	757.4	40.3	4.6	78	NW			4		10			0.051	1.30		Prof. Reissenberger.
Kremsmünster	28.75	730.3	30.14	765.6	38.1	3.4	80	E			3		10			0.067	1.7		Prof. C. Wagner.
Lemberg			29.77	759.1	39.6	4.2	84	NW			2		10			0	0		Dr. T. Stanecki.
Nyiregyhaza			29.88	759.0	41.0	5.0	94	N			2		10			0.089	2.26		Habzsuda Daniel.
Pola			29.97	761.1	53.6	12.0	47	E			2		2ks			0	0		I.R. Hydrographic Of'ce
Szegedin			29.91	759.6	40.6	4.8	87	NW			3		10			*0.457	*11.60		Karl Stancel.
Trieste			29.98	761.5	53.6	12.0	64	NW			0		0			0	0		Prof. V. Farolfi.
Vienna			30.00	762.1	38.3	3.5	88	W			4		10			0.504	12.8	Raining	I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 9 p. m., local time. The elevation of Gratz is 313.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 f.. * Total rain-fall for 25th and 26th.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.98	761.4	46.9	8.3	73	ESE			1		10			0	0		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.00	762.0	50.5	10.3		SSE	23	10.3			6			0	0	*D. clouds	William Boswell.
Ardrossan			29.92	760.0	49	9.4		ESE			3		8					Raining	Wm. McNeil.
Armagh Observatory			29.80	756.9	50.4	10.2		SE	18	8.0			10					Raining	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			29.94	760.5	48.0	8.9		ESE			4		10					Overcast	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.70	754.4	54.0	12.2		SSE			1		10					Overcast	J. Dreyer.
Bradford			29.99	761.7	48.1	8.9		E			1		8					Raining	J. McLandsborough.
Bridgetown, (Barbadoes)			29.93	760.2	84.2	29.0		NE			2		6					*D clouds	T. H. Hunt.
Cambridge Observatory			30.10	764.5	48.9	9.4		S			1		7					*D clouds	Sergeant Hunt, A. H. C.
Cape Good Hope Obs			30.17	766.3	60.5	15.8	53	SSW	15	6.7			6						The Staff, for E. J. Stone.
Cardington			30.08	764.0	48.4	9.1		SE			1		6					*D. clouds	John McLaren.
Carlisle			29.94	760.5	50.3	10.2		S			3		10			0	0	Overcast	T. Bell, for J. Cartmell.
Chatham, School M. E.			30.11	764.8	51.1	10.6		SE			2		6					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	28.46	722.9	29.84	757.9	42	5.6		E			7		10					Overcast	R. E. Power.
Donaghadee			29.85	758.2	49	9.4		S			5		10					Overcast	J. Mac Gowan, Jr.
Dover			30.12	765.0	49	9.4		SSE			4		5						J. Costello.
Eccles, (near Manchester)			29.99	761.7	49.9	9.9		SSE	6.2	2.8			10					Gloomy	Thomas Mackereth.
Falmouth Observatory			29.82	757.4	49.6	9.8		SE	34	15.2			10					Rain & fog	The Staff.
Fort Napier, (Natal)	27.43	696.7	29.67	753.6	68.5	20.3		E			2		8					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.36	745.7	87	30.6		N					6						
Galway, Queen's College																			B. G. Clare, for Prof. Curtis.
Gibraltar, (Mediterranean)			30.04	763.0	72.0	22.2		SW			4		3					*D. clouds	Sergt. E. G. Baker.
Glasgow Observatory			29.93	760.2	48.6	9.2		E			1		10						Lewis Stuart.
Great Yarmouth			30.16	766.1	49	9.4		S			3		4					*D. clouds	G. T. Watson.
Greenwich Royal Obs			30.10	764.5	49.7	9.8		SSE			4		9					Cloudy	The Staff, for G. B. Airy.
Guernsey			29.92	760.0	48	8.9		ESE			5		8			Blank	Blank	Squally	Dr. S. E. Hoskins.
Halifax, Moorside Obs			30.05	763.3	48.6	9.2		SE			2		10					Overcast	F. J. Page, for L. J. Cross.
Helston			29.78	756.4	52	11.1		SE			6		10			0.45	11.4	Raining	M. P. Moyle.
Holyhead			29.87	758.7	48	8.9		SE			2		10					Raining	John Tilston.
Kew Observatory			30.09	764.3	50.3	10.2		SE	18	8.0			9					*D. clouds	The Staff.
Kingstown			29.80	756.9	50	10.0		SSE			6		10			Blank	Blank	*Overcast	George Mitchell
Leicester Museum			30.07	763.8	48.0	8.9		SE			1		10					Overcast	William J. Harrison.
Llandudno			29.87	758.7	47.6	8.7		S			1		10					Raining	Dr. James Nicol.
Malta, (Mediterranean)			29.97	761.2	70.6	21.4		SW			1		4k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			29.88	758.9	52	11.1		Calm			0		2						W. D. Penny.
Nassau, (Bahamas)			30.14	765.5	81.4	27.4		NE			2		7					*D. clouds	Surg.-Maj. Henry.
Nottingham			30.07	763.8	48.1	8.9		SSE			5		10k,cs		SSE	0	0	Overcast	E. J. Lowe.
Oscott, St Mary's College			30.01	762.2	41.9	5.		SSE			6		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			30.02	762.5	49	9.4		SE			3		10					Overcast	J. Lucas, for R. Main.
Plymouth			29.88	758.9	47.5	8.6		SE			6		10					Raining	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.66	753.4	55	12.8		S			6		10					Raining	W. Kennedy.
Saint Ann's Head			29.81	757.2	50	10.0		SE			6		10					Overcast	John C. Walker.
Saint Helier, (Jersey)			29.95	760.7	48.5	9.3		SSE			6		10						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			30.08	764.0	48.6	9.2		S			3		9					Overcast	F. Shaw.
Scutari cemetery, (Turkey)			29.80	756.9	62.4	16.9		S			2		10					Raining	Sergt. W. H. Lyne.
Sheffield			30.04	763.0	49.0	9.4		S			4		7						W. F. Cooper.
Silloth Rectory			29.94	760.5	50.9	10.5		SE			4		10			0.0.0	5.08	Overcast	Rev Francis Redford.
Stonyhurst Observatory			29.98	761.5	47.9	8.8		SE			4		10					Gloomy	The Staff.
Stornoway, Lews C. (Hebr.)			29.81	757.2	51	10.6		ESE			1		10					Drizzling	John Smith.
Stratfield Turgiss			30.08	764.0	48.3	9.		SE			1-2		8					D. clouds	Rev Charles H. Griffith
Streatley Vicarage			30.03	764.0	49.5	9.7		S			7		10						Rev. John Slatter.
Thurso			29.90	759.4	51	10		SSE			5		7					Misty	John Trotter.
Truro, Royal Institution			29.74	755.4	50	10.		SE			7		10					Raining	W Newcombe.
Valencia Observatory			29.51	752.1	55.2	13.		SSE	20	8.9			10					Overcast	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					48	8.9		S			6		10			0.20	5.1		
Leith, Restalrig Park			29.97	761.2	50.9	10.		SE			1		10s			0	0	Overcast	Andrew Gibb.
Monach Lt-house, (Shet. Is)			29.72	754.9	54	12.2		S			7		10			0.3	7.6		J. Youyclause.
North Unst, (Shetland Is)			30.12	765.0	45	7.2		S			6		10						

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			30.10	764.5	37.4	3.0	85	NNE			4		10						
Faröe			30.23	767.7	39.2	4.0	73	N			2		10						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.48	748.7	47.1	8.4	92	SE			6		8					Raining	
Thorshavn, (Faröe)			30.00	761.9	47.7	8.7	78	SE			6		10						
Vestervig			30.22	767.5	37.4	3.0	90	NE			4		10						

Note.—The originals give the wind-force by the scale 0 to 6; occasionally weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.06	763.5	53.	11.8	59	NE			2		2c			0.614	15.6		Normal School.
Amiens			30.16	766.1	41.4	5.2	84	WNW			2		0			0	0	Clear	Normal School.
Avignon			29.99	761.8	51.1	10.6	58	N			3		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.3	765.2	47.7	8.7	51	E			3		5kn			0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.98	761.6	48.2	9.0	66	E	10.7	4.8			10		WSW	0	0	Cloudy	Beaumette Observatory.
Beauvais			30.19	766.7	45.1	7.3	64	E			2		8		ESE	0	0	Cloudy	Normal School.
Besançon			30.13	765.2	46.8	8.2	61	SE			3		2		SW	0	0		Normal School.
Bourg en Bresse			30.08	7.3 9	45.1	7.3	69	SW			2		..k		S	0	0		Normal School.
Bourges			30.09	764.3	44.2	6.8	71	SSE			6		2		S	0	0		Normal School.
Brest			29.76	756.0	45.5	7.5	91	SE			3		10		SE	0.213	5.50	Raining	Naval Observatory.
Caen			30.03	762.7	48.0	8.9	67	ESE			6		10			0	0	Cloudy	Normal School.
Chartres																			Normal School.
Chaumont	28.93	734.9	30.10	764.6	44.2	6.8		E			3		1cs		SE	0	0	Clear	Normal School.
Commercy			30.20	767.1	41.0	5.	69	E			4		2		E	0	0		Normal School.
Commune de Gréasque*			29.58	751.2	55.8	13.2	52	NW			2		2		NW	0	0		
Le Mans																			Normal School.
Lons-Le-Saulnier			30.10	764.6	43.9	6.6	75	NW			1		5			0	0	Cloudy	Normal School.
Mâcon			30.0	764 1	43.8	6.2	82	Calm			0		0			0	0	Clear	Normal School.
Mirecourt			30.10	764.5	42.4	5.8	73	NNE			2		2		W	0	0		Normal School.
Orleans			30.07	763.8	47.1	8.4	55	ESE			3		2			0	0		Normal School.
Paris Observatory			30.13	765.3	46.8	8.2	57	S			3		5			0	0	Cloudy	National Observatory
Parthenay			30.01	762.2	39.0	4.2	83	NNE			4		10			0	0	Cloudy	Normal School.
La Roche sur Yon			29.98	761.5	50.0	10.0	72	E			2		8		N	0	0	Cloudy	Normal School.
Rochefort, Observatory			29.96	760.9	54.9	12.7	63	E			3		10		NW	0	0	Cloudy	Naval Observatory.
Rouen			30.08	764.1	48.0	9.2	60	SE			2		10			0	0	Cloudy	Normal School.
Saint Lo			30.10	762.1	47.3	8.5	86	SE			8		8		E	0	0		Normal School.
Villefranche			30.11	764.8	47.5	8.6	66	NW			2		5			0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchésl.
Mont-Louis			30.19	766.7	57.	14.5	63	SE	3.7	1.6			1		NW	0.071	1.8		—. Falguère.
Montsouris, Paris			30.12	765.1	46.1	8.3	61	ESE			3	..c	..ck,k	NW		0	0		Montsouris Observ'tory.
Perpignan	†30.02	†762.4			63.9	17.7	69	E	1.1	0.8			2			0	0		Dr. Fines.
Pic du Midi, (Summit) H. P.	21.26	540.0			39.0	4.2		NW			1		4			0	0	Clear	M. Baylac.
Pic du Midi, (Plantade) H.P.																			General de Nansouty
Saint Maur, (near Paris)			30.12	765.1	47.3	8.	57	ESE			2		7			0	0	Cloudy	E. Renou.
Tours			29.80	757.0	46.4	8.0		ESE			2		2		N	0	0		C. Marquet.
Versailles, (near Paris)			30.11	764.7	47.5	8.0	65	SE			2		7			0	0		Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.26	768.7	62.3	16.8	86	E	3.1	1.4			10			0 / 0	0 / 0	Misty	H. Le Lec, S. J.

NOTE.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 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. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also.

GERMAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Millimeters.	Temperature. Fahrenheit.	Temperature. Centigrade.	Relative Humidity.	Winds. Direction.	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force.	Clouds. Amount. Upper	Clouds. Amount. Lower	Clouds. Direction. Upper	Clouds. Direction. Lower	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Bamberg			30.12	765.0	41.0	5.0	70	NW	13	6			10			0.032	0.8		Prof. Hoh.
Berlin			30.11	764.7	41.9	5.5	81	NW	13	6			10			0.167	4.24	Rainy	Prof. Arndt.
Breslau			30.02	762.6	39.9	4.4	96	NW	13	6			10			0.236	6.0	Raining	Dr. P. Neugebauer.
Carlsruhe			30.18	766.6	41.7	5.4	72	NE	2	1			10			0	0		A. Senz.
Cassel			30.07	763.7	42.6	5.9	72	NW	9	4			10			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.70	729.0	30.17	766.4	43.7	6.5	50	NE					3			0	0		M. Wilhelm.
Hamburg			30.16	766.1	41.7	5.4	75	NNW	13	6			9ks			0.020	0.5	Cloudy	Deutsche Seewarte.
Kiel			30.06	763.4	40.5	4.7	76	NW	9	4			10			0.154	3.9		Prof. G. Karsten.
Königsberg			29.93	760.3	37.6	3.1	88	NE	11	5						0.024	0.6	Cloudy	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			30.12	765.0	37.9	3.3	82	NW	9	4			10			0.028	0.7		Prof. Bruhns.
Münster			29.21	767.2	43.9	6.6	93	NE	4	2			10			0	0		Prof. E. Heis.
Posen			29.99	761.8	42.1	5.6	90	NW	22	10			10			0.181	4.6	Cloudy	Dr. Magener.
Strassburg, (in Alsace)			30.19	766.9	43.7	6.5	64	NE	13	6			10			0	0		Dr. Schur.
Stuttgart			30.19	766.8	39.9	4.4	84	N					10			0.024	0.6		Mr. Würth.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			30.14	765.3	45.5	7.5	58	NE	22	10			10			0	0	Foggy	Prof. Flesch.
Wustrow, Naval School			30.13	765.4	38.8	3.8	79	NW	13	6			10			0.004	0.11	Cloudy	E. F. Schütz.

NOTE.—In the originals the distinction between 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. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Millimeters.	Temperature. Fahrenheit.	Temperature. Centigrade.	Relative Humidity.	Winds. Direction.	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force.	Clouds. Amount. Upper	Clouds. Amount. Lower	Clouds. Direction. Upper	Clouds. Direction. Lower	Rain-fall. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Athens			29.85	758.2	70.3	21.3		NW					c					Clear	

NOTE.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			29.99	761.7	51.6	10.9	76	ESE	1.3	0.6			8	E		0	0		
Mondovi			29.98	761.5	45.0	7.2	59	NW			6		10			0	0		
Genoa			29.92	759.9	66.2	19.0	57	NW	1.3	0.6			0			0	0		
Pavia			29.98	761.4	52.7	11.5	54	S			1		3	SE		0	0		
Verona			29.95	760.6	61.2	16.2	45	W			1		0			0	0		
Padua			29.96	761.0	55.6	13.1	66	SE	3.8	1.7			2	NW		0	0		
Parma																			
Bologna			30.0[illegible]	761.9	58.[illegible]	14.8	66	ESE			1		3	NE		0	0		
Leghorn			29.91	759.7	61.0	16.1	48	W	1.3	2.8			0			0	0		
Urbino																			
Ancona			29.98	761.5	54.0	12.2	84	E			2		4			0.079	2.0		
Siena			29.92	759.9	56.3	13.5	77	SSW	0	0			2	W		0	0		
Rome			29.97	761.1	63.0	17.2	35	N	6.3	0.6			1			Blank	Blank		
Naples, O. U.			29.96	761.0	63.7	17.6	84	S			2		8	WSW		0.079	2.0		
Lecce			29.94	760.4	41.7	15.4	84	W	15.0	6.7			4	WNW		Blank	Blank		
Cosenza			29.96	760.9	62.6	17.0	53	NW			1		5			0	0		
Catania, (Sicily)																			
Riposto			29.85	758.1	68.4	20.[illegible]	64	E			2		2	SE		0	0		
Palermo			29.87	758.6	70.2	21.2	57	W	12.5	5.6			5			0	0		
Sub-Series.																			
Naples, S. R.			30.00	761.9	60.6	15.9	63	E			4		[illegible]	SE		0.185	4.7		Prof. F. Brioschi.

NOTE.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for twenty-four hours. The altitude of Mondovi is 551 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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	767.3	50.0	10.0		SSE			2								
Groningen			30.15	765.8	41.1	6.7		ENE			2								
Helder			30.18	766.5	51.1	10.6		SSW			1								
Utrecht			30.16	766.1	49.5	9.7		NNW			2		5					Cloudy	

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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	38.1	3.4	73	Calm	0	0			0			0	0		
Christiania			30.28	769.2	32.4	0.2	64	N	9.6	4.3			10			0	0		
Tromsö			30.17	766.3	38.8	3.8	83	S			6		10			0.374	9.5		

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Stations	Barometer. Corrected for instrumental errors. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Temperature of the Air. Fahrenheit.	Centigrade.	Relative Humidity. Per cent.	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 in 24 hours. Inches.	Millimeters.	Weather.	Observer.
Lisbon			30.06	763.4	67.5	19.7	83	SSW	10.1	7.2			10			0.051	1.3		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon.

RUSSIAN SERIES.

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

Stations	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	Force.	Up'er	Low'r	Upper. From—	Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Warsaw			29.81	757.9	37.9	3.3	95	N	9	4			10					Raining	Astronomical Obs.
Wilna			29.90	759.5	31.0	1.1	92	E	8	3.5			10					Snow & rain.	Astronomical Obs.
Dorpat			30.19	766.8	29.1	— 1.6	80	E	7	3			10						Physical Cabinet.
St. Petersburg			30.30	769.5	22.6	— 5.2	90	ESE	7	3			10						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kief			29.74	755.3	47.3	8.5	94	SW	4	2			10						Physical Cabinet.
Nikolaiev			29.77	756.1	59.[illegible]	15.3	92	SSE	8	3.5			10						Kurdakof.
Kertch			29.82	757.5	66.7	19.3	78	S	13	6			3						Lagorio.
Moscow			30.35	770.9	21.7	— 5.7	85	S	10	4.5			10						Meteorological Obs.
Lugan			29.82	757.5	67.6	19.8	65	S	8	3.5			8			Blank	Blank		Meteorological Obs.
Archangel			30.28	769.2	27.0	— 2.8	92	WNW	13	6			10						Ogorodnikof.
Tiflis	28.63	727.3	30.00	761.9	74.5	23.6	39	Calm	0	0			0						Physical Obs.
Astrakhan			30.25	768.4	57.7	14.3	76	E	4	2			5						Sebastianof.
Kasan			30.51	774.9	27.5	— 2.5	60	E	3	1.5			0						Physical Cabinet.
Orenburg			30.52	775.3	27.5	— 2.5	74	E	10	4.5			10						Tschernischef.
Ekaterinburg	29.29	744.0	30.37	771.4	21.6	— 6.1	64	W	10	4.5			0						Meteorological Obs.
Kasaly			30.21	767.4	38.5	3.6	85	NW	8	3.5			10						Bobrof.
Tashkend																			Michelson.
Barnaul			29.93	760.1	26.8	— 2.9	91	SW	8	3.5			4						Meteorological Obs.
Yeniseisk			29.72	754.8	24.1	— 4.4	98	SSW	4	2			6						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.19	766.8	51.4	10.8	95	Calm	0	0			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	Force.	Up'er	Low'r	Upper. From—	Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Madrid			30.07	763.7	60.4	15.8	87	W	7.4	3.3			10			0.016	0.4	Covered	Royal Observatory.
San Fernando			30.08	764.0	68.2	20.1	92	SW	8.1	3.6		4	2	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, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	Force.	Up'er	Low'r	Upper. From—	Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Haparanda			30.35	770.8	28.4	— 2.0	96	E			2		10			0	0		
Umea			30.33	770.4	27.0	— 2.0	96	NNW			2		10			0	0		
Hernosand			30.34	770.7	28.0	— 2.2	87	N			4		10			0.047	1.2		
Stockholm			30.08	764.1	33.4	0.8	92	NNE			4		10			0.268	6.7	Snowing	
Wisby			30.04	763.1	39.2	4.0	93	E			4		10			0.114	2.9		
Sub-Series.																			
Upsala			30.17	766.4	32.2	0.1	98	NNE	7.0	3.4			10					Threatening	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.67	728.1	30.13	765.2	43.3	6.3	64	NE	.....	.....	4	.....	7	.....	.....	0	0	Cloudy	The Observatory.
Zurich	28.48	723.5	30.16	766.0	43.7	6.5	60	E	.....	.....	1	.....	2	.....	.....	0	0	Clear	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +2.0mm.; Thermometer, —4°.5; Relative Humidity, —10 per cent.

NOTE.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Beirut, (Syria,) Lee Obs'y	.....	.....	29.91	760.5	82.2	27.9	50	ESE	.....	.....	1	.....	0	.....	.....	0	0	.....	Prof. C. V. A. Van Dyck
Constantinople	.....	.....	29.83	757.7	62.2	16.8	89	WSW	7.8	3.5	.....	.....	10	.....	.....	1.394	35.4	.....	
Fao, (Persian Gulf)	.....	.....	30.06	763.5	84.2	29.0	.....	NW	.....	.....	3	.....	0	.....	.....	.....	.....	.....	
Salonica	.....	.....	.....	.....	57.4	14.1	.....	N	.....	.....	1	.....	5	.....	.....	.....	.....	Clear	
Valona	.....	.....	29.83	757.7	62.6	17.0	.....	W	.....	.....	2	.....	5	.....	.....	.....	.....	Cloudy	
Varna	.....	.....	29.92	760.0	69.8	21.0	.....	N	.....	.....	6	.....	10	.....	.....	Blank	Blank	Cloudy	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Brockville, Ontario	.....	.....	30.06	763.5	34	1.1	.....	E	5	2.2	.....	.....	10s	.....	N	0.02	0.5	Cloudy	
Chatham, N. B.	.....	.....	29.97	761.2	53	6.6	69	NW	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Charlottetown, P. E. Island	.....	.....	29.99	759.4	36	2.2	60	NW	14	6.3	.....	.....	10n	.....	.....	0	0	Threatening	
Fort Garry, Manitoba	.....	.....	29.86	758.4	23	— 5.9	97	N	14	6.3	.....	0	2ks	.....	N	0.450	11.43	Fair	
Halifax, N. S.	.....	.....	29.89	759.2	38	3.3	54	NW	17	7.6	.....	0	5ks	.....	NW	Inap.	Inap.	Clearing	
Kingston, Ontario	.....	.....	29.95	760.7	38	3.3	87	NE	3	1.3	.....	10.8	0	NE	.....	0	0	Cloudy	
Montreal, Quebec	.....	.....	30.13	765.3	32	0.0	74	E	13	5.8	.....	Haze	5s	.....	.....	0	0	Cloudy	
Ottawa, Ontario	.....	.....	30.04	763.0	32	0.0	69	E	20	8.9	.....	.....	10n	.....	.....	0	0	Hailing	
Parry Sound, Ontario	.....	.....	29.9	759.6	35	1.7	90	E	35	15.6	.....	.....	10n	.....	SE	0.058	14.7	Light rain	
Port Dover, Ontario	.....	.....	29.69	754.1	43	7.8	94	NE	6	2.7	.....	.....	10n	.....	NW	0.04	1.0	Light rain	
Port Stanley, Ontario	.....	.....	29.4	752.1	54	12.2	86	E	18	8.0	.....	.....	10n	.....	W	0.06	1.5	Cloudy	
Quebec, Quebec	.....	.....	30.12	765.0	35	1.7	63	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Saugeen, Ontario	.....	.....	29.54	75[illegible]	45	7.2	99	SE	12	5.4	.....	.....	10s	.....	SE	0.33	8.4	Light rain	
Stayner, Ontario	.....	.....	29.7	75[illegible]	39	3.9	95	SE	13	5.8	.....	.....	10n	.....	SE	0.33	8.4	Light rain	
Sydney, C. B.	.....	.....	29.77	75[illegible]	39	3.9	82	[illegible]	9	4.0	.....	.....	10ks	.....	NW	0	0	Clearing	
Toronto, Ontario	.....	.....	29.4	755.4	44	6.7	90	E	17	[illegible]	.....	.....	10n	...	E	0.07	1.8	Cloudy	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the cloudiness by the scale 0 to 10.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 1—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.04	763.0	40	4.4	82	NW	3	1.3		2k	5s	W		0	0	Cloudy	
Alpena, Mich.			29.42	747.3	48	8.9	85	S	15	6.7		0	5ks		SW	0.83	21.1	Fair	
Atlantic City, N. J.			30.03	762.7	57	13.9	87	E	20	8.9		0	Haze			0	0	Clear	
Augusta, Ga.			30.06	763.5	58	14.4	88	SE	2	0.9		0	Haz			0	0	Clear	
Baltimore, Md.			30.02	762.5	53	11.7	79	NE	4	1.8			10ks			0	0	Cloudy	
Barnegat, N. J.			30.03	762.7	57	13.9	80	E	19	8.5		2ck	2k	SW	E	0	0	Fair	
Benton, Montana	27.03	686.5	29.83	757.7	46	7.8	54	SW	12	5.4			10s			0	0	Cloudy	
Bismarck, Dakota	28.16	715.2	29.86	758.4	27	—2.8	88	N	15	6.7			10ks		N	0.12	3.0	Cloudy	
Boston, Mass.			30.14	765.5	44	6.7	60	NE	10	4.5		2k	2s	NE		0	0	Fair	
Breckenridge, Minn.			29.65	753.1	28	—2.2	88	N	22	9.8			10s		N	0.05	1.3	Threatening	
Buffalo, N. Y.			29.62	752.3	57.5	14.2	61	S	8	3.6		10k	Haze	SW		Inap.	Inap.	Cloudy	
Burlington, Vt.			30.14	765.5	37	2.8	71	NE	1	0.4			10s			0	0	Cloudy	
Cairo, Ill.			30.02	762.5	46	7.8	76	W	12	5.4		0	0			0.38	9.7	Clear	
Cape Hatteras, N. C.			30.01	762.2	65	18.3	83	SW	4	1.8		0	Haze			0	0	Clear	
Cape Henry, Va.			30.01	762.2	67.5	19.7	56	SW	11	4.9		0	Haze			0	0	Clear	
Cape May, N. J.			30.01	762.2	60	15.6	82	SE	12	5.4		0	Haze			0	0	Hazy	
Charleston, S. C.			30.10	764.5	64	17.8	83	SW	4	1.8		0	Sm'e			0	0	Clear	
Cheyenne, Wyoming	24.00	609.6	29.94	760.5	35	1.7	61	W	12	5.4		0	2s			0	0	Fair	
Chicago, Ill.			29.58	751.3	45	7.2	68	SW	20	8.9			10s		SW	0.12	3.0	Threatening	
Cincinnati, Ohio			29.78	756.4	52	11.1	72	W	12	5.4			10s		W	0.05	1.3	Cloudy	
Cleveland, Ohio			29.58	751.3	62.3	16.8	66	S	16	7.2			10n		SW	0.02	0.5	Light rain	
Colorado Springs, Col.	24.12	612.6	29.99	761.7	28	—2.2	77	N	4	1.8		5cs	0	W		0	0	Fair	
Corsicana, Tex.			30.22	767.6	45	7.2	67	NW	4	1.8		0	0			0	0	Clear	
Davenport, Iowa			29.98	753.9	39	3.9	63	W	24	10.7			10s		W	0.61	15.5	Cloudy	
Denison, Tex.			30.19	766.8	48	8.9	48	SW	4	1.8		0	0			0	0	Clear	
Denver, Col.	24.81	630.2	30.03	762.7	32	0.0	40	S	7	3.1		5k	0			0	0	Fair	
Detroit, Mich.			29.60	751.8	49	9.4	77	W	13	5.8			10s			0.02	0.5	Cloudy	
Dodge City, Kan.	27.48	698.0	29.86	758.4	31	—0.6	79	W	4	1.8		0	0			0.05	1.3	Clear, frost	
Dubuque, Iowa			29.51	750.3	35	1.7	80	W	8	3.6			10n			0.47	11.9	Light snow	
Duluth, Minn.			29.31	744.5	29	—1.7	89	NW	22	9.8			10n		NW	1.30	33.0	Light snow	
Eastport, Me.			30.06	763.5	36	2.2	61	N	17	7.6		0	0			0	0	Clear	
Erie, Pa.			29.58	751.3	60	15.6	59	SE	28	12.5			10ks		SW	0.02	0.5	Threatening	
Escanaba, Mich.			29.4	742.7	43	6.1	83	SW	27	12.1			10s			2.02	51.3	Cloudy	
Fort Gibson, I. T.			30.15	765.8	32	0.0	79	N	2	0.9		0	Haze			0	0	Clear, frost	
Fort Sill, I. T.	28.94	735.1	30.09	764.3	39	3.9	81	NW	4	1.8		0	0			0	0	Clear	
Fort Sully, Dakota	28.27	718.0	29.99	761.7	28	—2.2	77	NW	24	10.7			10s		NW	Inap.	Inap.	Cloudy	
Galveston, Tex.			30.14	765.5	63	17.2	57	N	28	12.5			10s		N	0.27	6.9	Cloudy	
Grand Haven, Mich.			29.53	750.0	50	10.0	71	SW	24	10.7			10ks		W	0.30	7.6	Cloudy	
Indianapolis, Ind.			29.78	756.4	47	8.3	69	W	12	5.4		0	5s			0.17	4.3	Fair	
Indianola, Tex.			30.18	766.6	65	18.3	58	NE	26	11.6		2ck	5s	SW	SW	0	0	Cloudy	
Jacksonville, Fla.			30.13	765.3	60	15.6	88	Calm	0	0		4c	0			0	0	Fair	
Keokuk, Iowa			29.75	755.6	40	4.4	64	W	20	8.9			10s		W	0.56	14.2	Cloudy	
Key West, Fla.			30.06	763.5	78	25.6	86	E	6	2.7		5ck	2ks	S		0	0	Fair, foggy	
Kittyhawk, N. C.			30.05	763.3	60	15.6	88	W	9	4.0		0	0			0	0	Clear	
Knoxville, Tenn.			29.87	758.7	65	18.3	73	SW	8	3.6		1cs	5s	SW	SW	0.01	0.3	Clearing	
La Crosse, Wis.			29.41	747.0	38	3.3	100	W	8	3.6			10n		W	0.41	35.5	Light rain	
Leavenworth, Kan.			30.0	763.5	40	4.4	56	NW	11	4.9		10c	0			0	0	Clear	
Lexington, Ky.	28.77	730.7	29.86	758.4	50	10.0	93	W	16	7.2			10n		W	0.32	8.1	Light rain	
Long Branch, N. J.			30.07	763.8	53	11.7	86	E	18	8.0		5ck	5ks	W	E	0	0	Cloudy	
Louisville, Ky.			29.88	758.9	50	10.0	72	SW	8	3.6			10s		SW	0.18	4.6	Cloudy	
Lynchburg, Va.			29.96	761.0	50	10.0	79	Calm	0	0		0	0			0	0	Clear	
Malone, N. Y.			30.05	763.3	37	2.8	70	Calm	0	0			10s			0.03	0.8	Cloudy	
Marquette, Mich.			29.16	740.6	40	4.4	82	SE	16	7.2		2cs	5s		SE	0.84	21.3	Fair	
Memphis, Tenn.			30.12	765.0	49	9.4	85	SW	8	3.6		0	1s			0.62	15.7	Clear	
Milwaukee, Wis.			29.49	749.0	42	5.6	74	SW	26	11.6			10ks		SW	0.45	11.4	Threatening	
Mobile, Ala.			30.09	764.3	64	17.8	94	Calm	0	0		0	Sm'e			0	0	Clear	
Montgomery, Ala.			30.06	763.5	66	18.9	95	S	5	2.2			10s		W	0	0	Cloudy	
Morgantown, W. Va.			29.76	755.9	69	20.6	50	S	11	4.9			10s			0	0	Cloudy	
Mt. Washington, N. H.	23.77	603.8	30.13	765.3	31	—0.6	89	N	6	2.7		8s	0			0	0	Fair	
Nashville, Tenn.			29.98	761.5	53	11.7	79	SW	6	2.7			10s		SW	0.23	5.8	Cloudy	
New Haven, Conn.			30.11	764.8	44	6.7	67	NE	12	5.4		Haze	0			0	0	Clear	
New London, Conn.			30.13	765.3	47	8.3	66	NE	4	1.8		5ck	0	W		0	0	Fair	
New Orleans, La.			30.09	764.3	67	19.4	89	SW	4	1.8		2c	Fog	W		0	0	Clear	
Newport, R. I.			30.11	764.8	45	7.8	69	NE	4	1.8		5cs	Haze	W		0	0	Fair	
New York, N. Y.			30.09	764.3	50	10.0	78	E	15	6.7		5ck	Fog			0	0	Fair	
Norfolk, Va.			30.02	762.5	57	13.9	81	S	4	1.8		Haze	Sm'e			0	0	Clear	
North Platte, Neb.	27.06	687.3	29.75	755.6	25	—3.9	87	SW	4	1.8		0	0			0	0	Clear	
Omaha, Neb.	24.79	731.2	29.88	758.9	36	2.2	62	NW	24	10.7			10s			0.22	5.6	Cloudy	
Oswego, N. Y.			29.87	758.7	44.5	1.9	81	SSE	16	7.2			10s			Inap.	Inap.	Threatening	
Peck's Beach, N. J.			30.04	763.0	58	14.4	87	SE	18	8.0		Haze	Haze			0	0	Hazy	
Pembina, Dakota			29.92	760.0	24	—4.4	100	NW	16	7.2		5c	2n	NW		0.37	9.4	Clearing	
Philadelphia, Penn.			30.04	763.0	48	8.9	85	E	11	4.9		2ck	Sm'e	NW		0	0	Fair	
Pike's Peak, Colorado	17.69	449.3	29.90	759.4	6	—14.4	75	N	6	2.7		0	0			0	0	Clear	
Pittsburgh, Penn.			29.72	754.9	64	17.8	47	S	8	3.6		5c	0	W		Inap.	Inap.	Fair	
Port Huron, Mich.			29.55	750.6	51	10.6	86	W	18	8.0			10s		SW	0.13	3.3	Cloudy	
Portland, Me.			30.16	766.1	42	5.6	58	N	8	3.6		5c	Haze			0	0	Fair	
Portland, Oregon			29.79	756.7	51	10.6	93	NE	3	1.3			10n			0.45	11.4	Heavy rain	
Punta Rassa, Fla.			30.0	764.5	70.0	15.9	90	NE	6	2.7		8cs	Sm'e	SW	NE	0	0	Cloudy	
Rochester, N. Y.			29.76	751.1	44	6.7	92	E	13	5.8			10s		SE	0.06	1.5	Cloudy	
Salt Lake City, Utah	25.76	654.3	30.08	764.0	38	3.3	46	N	4	1.8		2c	0	NW		0	0	Fair	
Sandy Hook, N. J.			30.06	763.5	58	11.7	79	E	18	8.0		8k	Haze	N		0	0	Cloudy	
San Diego, Cal.			30.00	762.0	57	13.9	100	Calm	0	0		0	Fog			0	0	Fair	
San Francisco, Cal.			30.08	764.0	59	15.0	94	SW	2	0.9			Fog			0	0	Foggy	
Santa Fe, N. M.	23.38	593.8	29.92	760.0	30	—1.1	25	N	2	0.9		1cs	Haze	N		0	0	Clear	
Savannah, Ga.			30.11	764.8	63	17.2	78	SW	6	2.7		0	Sm'e			0	0	Clear	
Shreveport, La.			30.21	767.3	53	11.7	100	Calm	0	0			Fog			0	0	Foggy	
Smithville, N. C.			30.09	764.3	65	18.3	92	SW	4	1.8		0	0			0	0	Clear	
Springfield, Mass.			30.10	764.5	43	6.1	58	NE	8	3.9		5ck	5s	NW		Inap.	Inap.	Threatening	
St. Louis, Mo.			29.94	760.5	43	6.1	58	W	16	7.2		0	2s			0.19	4.8	Clear	
St. Marks, Fla.			30.11	764.8	60	15.6	100	Calm	0	0			Fog			0	0	Foggy	
St. Paul, Minn.			29.41	747.0	31.5	—0.3	99	NW	10	4.5			10n		NW	0.68	17.3	Light snow	
St. Paul's Island, Alaska																			
Squa. Beach, N. J.			29.90	761.7	56	13.3	30	E	12	5.4		0	8ks		E	0	0	Cloudy	
Toledo, Ohio			29.83	752.6	51	10.6	72	SW	22	9.8			10s		SW	0	0	Cloudy	
Tucson, Arizona																			
Tybee Island, Ga.			30.08	764.0	62	16.7	88	SW	2	0.9		0	0			0		Clear	
Vicksburg, Miss.			30.23	767.8	56	13.3	80	N	5	2.2		0	5ks		SW	0.05	1.3	Cloudy	
Virginia City, Montana	24.18	614.2	29.66	753.4	36	2.2	45	SE	5	2.2			8ks		W	0	0	Cloudy	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			29.97	761.2	53	11.7	86	E	10	4.5		5ck	Haze	W		0	0	Fair	
Wilmington, N. C.			30.07	763.8	61	16.1	82	S	7	3.1		0	0			0	0	Clear	
Wood's Hole, Mass.			30.11	764.8	49	9.4	71	N	4	1.8		2c	0			0	0	Clear	
Wytheville, Va.	27.60	701.0	29.77	756.1	43	6.1	75	W	2	0.9		0	Sm'e			0	0	Clear	
Yankton, Dakota	28.58	725.9	29.90	759.4	31	−0.6	73	SE	5	2.2			10s		NW	0.01	0.3	Cloudy	
Yuma, Arizona			30.[illegible]4	763.0	62	16.7		N				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'does, W. I.					80	26.7	90	E	3	1.3		2c	5s	W	NE	0	0	Fair	E. Recker.
Pointe-aPitre, G'd'loupe, do			29.98	761.5	78	25.6	82	E				0	2k			0.05	1.3	Clear	L. V. Bigard.
Havana, Cuba, W. I.			30.05	763.3	77	25.0	86	Calm	0	0		1ck	1k	SW	NE	0.2	5.1	Fogg	Charles Hasselbrink.
Kingston, Jamaica, W.			30.15	765.8	78	25.6	78	Calm	0	0		3c	1s			0	0		James Gall.
St. Thomas, St. T., W. I.			30.22	767.6	81	27.2	78	E	7	3.1		2ck	5kn	E		0.09	2.3	Cloudy	W. S. Cameron.
Santiago de Cuba, W. I.			29.80	756.9	78	25.6	82	W	2.4	1.1		8c	0	NW		Blank	Blank	Fair	Robert Mason.
St. Georges, Bermudas			30.09	764.3	73.5	23.1	68	NW	7.2	3.2		0	3fk			0	0	Clear	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.			30.16	766.1	10	−12.2	100	W	2	0.9			10s			0	0		J. Fortescue.
St. John's, Newfoundland																			John Delaney.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Clifton, Jamaica, W. I.	27.20	690.9	29.98	761.5	70	21.1	90	SE	2.0	0.9		2c	0	SE		0	0	Clear	C. Partridge.
Navassa																			
Medellin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			29.60	751.8	61	16.1	82	SW	4	1.8			10n			0.02	0.5	Raining	H. M. Redington.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Leipzig, N. 49° 40′, W. 25° 30′.	E		29.40	746.7	53.4	11.9		NW			6		..k		WNW	H'y sea		Overcast	
Steamer Hibernian, N. 51° 23′, W. 21° 37′.	ESE	10	28.73	729.7	50	10.0		Variable.			4		..k		NW	Smooth		Showery	

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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 1,077 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Colorado Springs, 6,032.4 ft., or 1,838.7 m.; Denver, 5,135 ft., or 1,565.4 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Benton, 2,674.4 (?) 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.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,86[illegible] (?) ft., or 2,091.6 (?) m.; Virginia City, 5,18[illegible] (?) ft., or 1,67[illegible].3 (?) m.; Wytheville, 2,2[illegible]4.8 ft., or 6[illegible].4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in. The barometer of the Hibernian has an error of —0.18, as determined from the isobarometric charts of the Signal Service.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 27, 1875.

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 —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.08	764.0	75.7	24.3	59	WNW			1		1			0	0		Charnot.
Algiers			30.06	763.4	75.2	24.0	60	NW			2		4			0	0		Peter.
La Calle																			Kuntz.
Tunis			30.04	762.9	74.3	23.5	45	E			3		3			0	0		Jacques.
Sfax			30.05	763.3	75.4	24.1	47	S			4		1			0	0		Chauvey.
Saida			30.10	764.4	70.7	21.5	54	WNW			1		2			0	0		Grosjean.
Tebessa			30.07	763.6	72.1	22.3		SE			1		0			0	0		Colin.
Gerlville			30.12	765.0	85.1	29.5	51	NW			1		3			0	0		Bernadach.
Laghouat			30.13	765.2	77.0	25	34	NW			2		1			0	0		Simon.
Biskra			30.11	764.7	79.0	26.1	26	E			2		2			0	0		Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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 —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			29.93	760.1	53.2	11.8	51	NW			2		3			0	0		Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.93	760.3	38.3	3.5	91	W			3		10			0.173	4.4		I. R. Observatory.
Eperies			29.89	759.2	43.2	6.2	87	Calm			0		10			0.102	2.58		Julius Mikolik.
Gratz	28.70	728.9	29.91	759.7	46.8	8.2	83	E			2		2						Andreas Rospini.
Hermannstadt	28.47	723.1	29.92	760.0	41.9	5.5	77	NW			3		10			0	0		Prof. Reissenberger.
Kremsmünster	28.60	726.5	29.98	761.4	40.6	4.8	68	E			2		6			0	0		Prof. C. Wagner.
Lemberg			29.79	756.7	40.3	4.6	81	NW			2		9			0.303	7.7		Dr. T. Stanecki.
Nyiregyhaza			29.54	750.4	43.9	6.6	94	SW			2		10			0.240	6.09		Habszuda Daniel.
Pola			29.98	761.6	55.4	13.0	62	S			2		10cks			0	0		I.R. Hydrographic Of'ce
Szegedin			29.95	760.7	48.2	9.0	74	NW			2		8			0	0		Karl Stancel.
Trieste			29.97	761.2	55.0	12.8	67	NW			1		7			0.071	1.8	Drizzling	Prof. V. Farolfi.
Vienna			29.95	760.8	40.6	4.8	70	NW			1		10			0.098	2.5		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 9 p. m., local time. The elevation of Gratz is 313.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft. * Total rain-fall for 25th and 26th.

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 —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.79	756.7	42.3	5.7	79	SE			3		10			0	0		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.02	762.5	46.0	7.8		SE	31	13.9			4			0.080	2.03	Squally.	William Roswell.
Ardrossan			29.85	758.3	49	9.4		ESE			4		8					Overcast	Wm. McNeil.
Armagh Observatory			29.74	755.4	45.7	7.6		E	12	5.4			10					Raining	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			29.74	755.1	42.5	5.8		E			5		10					Raining	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.66	753.4	47.4	8.6		E			1		10					Raining	J. Dreyer.
Bradford			29.79	756.7	45.1	7.3		E			2		10					Overcast	J. McLandsborough.
Bridgetown, (Barbados)			29.92	760.0	83.6	28.7		NE			4		5					*D. clouds	Sergt. G. H. Hunt.
Cambridge Observatory			29.78	756.4	43.0	6.1		ESE			1		10					Raining	H. Todd.
Cape Good Hope Obs			30.16	766.1	72.3	22.4	72	SSE	12	5.4			8						The Staff, for E. J. Stone.
Cardington			29.77	756.1	42.0	5.6		E			2		10					Overcast	John McLaren.
Carlisle			29.85	758.2	47.2	8.4		SE			2		10			0.04	1.02	Threatening	T. Bell, for J. Cartmell.
Chatham, School M. E.			29.76	755.9	44.2	6.8		SE			2		0					Overcast?	Capt. C. Fellowes, R. E.
Dartmoor	28.11	714.7	29.51	749.5	50	10.0		SW			2		10					Rain & fog	R. E. Power.
Donaghadee			29.75	755.6	48	8.9		SE			6		10					Raining	J. Mac Gowan, Jr.
Dover			29.73	755.1	44	6.7		SE			5		7					Gloomy	J. Costello.
Eccles, (near Manchester)			29.77	756.1	43.7	6.5		ESE	4.2	1.9			10					Raining	Thomas Mackereth.
Falmouth Observatory			29.48	748.8	54.6	12.6		WSW	24	10.7			9					Overcast	The Staff.
Fort Napier, (Natal)	27.77	705.4	30.01	762.2	65.0	18.3		E			1		9					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.36	745.7	86	30.0		N					5						[tis.
Galway, Queen's College																			B. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			30.15	765.8	70.0	21.1		W			3		9					*D. clouds	Sergt. E. G. Baker.
Glasgow Observatory			29.87	758.7	48.6	9.2		E			3		10					Gloomy	Lewis Stuart.
Great Yarmouth			29.84	756.9	45	7.2		ESE			6		7					*D. clouds	G. T. Watson.
Greenwich Royal Obs			29.71	754.6	43.7	6.5		ESE			3		10					Overcast	The Staff, for G. B. Airy.
Guernsey			29.59	751.6	57	13.9		SW			3		5					*D. clouds	Dr. S. E. Hoskins.
Halifax, Moorside Obs			29.85	758.2	43.7	6.5		ESE			2		10					Raining	F. J. Page, for L. J. Cross.
Helston			29.44	747.8	56	13.3		SW			4		10			0.120	32.0	Raining	M. P. Moyle.
Holyhead			29.66	753.4	45	7.2		E			6		10					Raining	John Tilston.
Kew Observatory			29.71	754.6	43.8	6.6		E	23	10.3			10					Drizzling	The Staff.
Kingstown			29.66	753.4	48	8.9		SE			4		10					Raining	George Mitchell
Leicester Museum			29.81	757.2	42.1	5.6		E			2		10					Raining	William J. Harrison.
Llandudno			29.71	754.6	42.3	5.7		E			4		10					Raining	Dr. James Nicol.
Malta, (Mediterranean)			30.06	763.5	70.8	21.6		NW			1		0k					*D. clouds	Fred Travis, Pvt. A. H. C.
Nairn			29.94	760.5	49	9.4		ESE			3		5						W. D. Penny.
Nassau, (Bahamas)			30.16	766.1	82.0	27.8		E			2		6					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.82	757.4	43.0	6.1		ENE			3		10n		ENE	0.34	8.6	Raining	E. J. Lowe, F. R. S
Oscott, St Mary's College			29.75	755.6	40.2	4.6		ENE			6		10					Raining	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.67	753.5	45	7.2		E			2		10					Overcast	J. Lucas, for R. Main.
Plymouth			29.45	748.0	54.4	12.4		SSW			2		10					Heavy rain	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.59	751.6	51	10.6		NE			3		10					Raining	W. Kennedy.
Saint Ann's Head			29.48	748.8	48	8.9		ESE			7		10					Mist	John C. Walker.
Saint Helier, (Jersey)			29.61	752.1	56.8	11.0		W			6		5						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			29.89	759.2	46.1	7.8		ESE			6		10					Overcast	F. Shaw.
Scutari cemetery, (Turkey)			29.92	760.0	51.4	10.8		NNE			3		9					Raining	Sergt. W. H. Lyne.
Sheffield			29.81	757.2	46.0	7.8		SE			2		10			0.13	3.3	Raining	W. F. Cooper.
Silloth Rectory			29.84	757.9	47.2	8.4		ESE			5		7			0	0	D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			29.79	756.7	44.5	7.1		E			4		10			Blank	Blank	Gloomy	The Staff.
Stornoway, Lewis C. (Hebr.)			29.89	759.2	51	10.6		E			1		8					D. clouds	John Smith.
Stratfield Turgiss			29.70	754.4	44.0	6.7		SE			0—1		10					Raining	Rev. Charles H. Griffith
Streatley Vicarage			29.71	754.6	44.2	6.8		ESE			4		10						Rev. John Slatter.
Thurso			30.00	762.0	47	8.3		SE			5		7					*D. clouds	John Trotter.
Truro, Royal Institution			29.42	747.3	55	12.8		S			2		10					Raining	W. Newcombe
Valencia Observatory			29.65	753.1	53.3	11.8		NNW	11	4.9			1					Misty	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					45	7.2		SE			8		10			1.10	27.9	Raining	
Leith, Restalrig Park			29.94	760.5	47.1	8.4		E			4		10k			0	0	Showery	Andrew Gibb
Monach Lt-house, (Shet. Is)			29.88	759.9	52	11.1		S			4		10			0	0		J. Youyclause.
North Unst, (Shetland Is)			30.19	766.8	45	7.2		SE			6		0						

Note.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,371 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m. *Detached clouds.

DANISH SERIES.

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

Copenhagen			30.03	762.8	39.2	4.0	85	NE			4		10						
Fanoe			30.06	763.5	40.3	4.6	78	ENE			4		10						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.78	756.4	46.9	8.3	88	SE			4		8					Raining.	
Thorshavn, (Faröe)			30.04	763.1	50.4	10.2	83	SSE			6		7						
Vestervig			30.11	764.7	37.8	3.2	87	ENE			4		10						

Note.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Agen			29.65	753.0	50.9	10.5	97	SW			1		10			0.197	5.0	Cloudy	Normal School.
Amiens			29.76	755.9	43.5	6.4	82	SE			2		10			0	0	Cloudy	Normal School.
Avignon			29.94	760.5	50.0	10	97	N			1		10			0.386	9.8	Raining	Normal School.
Bar-sur-Seine			29.77	756.1	45.0	7.2	96	S			2		10c			0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.70	754.3	56.5	13.6	86	SW	7.2	3.2			10		W	0.717	18.2	Raining	Beaumette Observatory.
Beauvais			29.76	755.9	41.2	5.1	94	E			2		10		E	0.018	0.45	Cloudy	Normal School.
Besançon			29.90	759.5	44.2	6.8	91	E			2		8		SW	0	0	Cloudy	Normal School.
Bourg en Bresse			30.07	763.7	48.0	8.9	89	SE			2		n			0.28	7.	Raining	Normal School.
Bourges			29.77	756.2	53.2	11.8	87	SW			3		10		ENE	0.150	3.8	Cloudy	Normal School.
Brest			29.60	751.9	57.0	13.9	84	W			3		8		W	0.413	10.50	Cloudy	Naval Observatory.
Caen			29.67	753.7	50.5	10.3	89	SW			3		10		WSW	0.685	17.4	Cloudy	Normal School
Chartres																			Normal School.
Chaumont	28.63	727.1	29.80	756.8	41.7	5.4		S			2		10n			0	0	Raining	Normal School.
Commercy			29.86	758.5	42.1	5.6	84	E			2		5		E	0	0	Cloudy	Normal School.
Commune de Gréasque*			29.88	759.0	49.8	9.9	98	SE			4		10		SE	0	0		
Le Mans																			Normal School.
Lons-Le-Saulnier			29.87	758.8	49.1	9.5	96	SE			6		8		NE	0.307	7.80	Raining	Normal School.
Mâcon			29.88	759.0	46.0	7.8	97	N			2		0			0	0	Clear	Normal School.
Mirecourt			29.80	756.8	43.7	6.5	85	E			3		2		N	0	0		Normal School.
Orleans			29.70	754.3	53.2	11.8	93	SSW			2		8		S	0	0	Cloudy	Normal School.
Paris Observatory			29.72	754.9	42.6	5.9	97	SE			2		10			0.099	2.52	Raining	National Observatory
Parthenay			29.72	754.9	57.2	14	84	NE			4		10			0	0	Cloudy	Normal School.
La Roche sur Yon			29.79	756.6	55.8	13.2	56	SW			8		8		E	0.252	6.4	Cloudy	Normal School.
Rochefort, Observatory			29.82	757.5	57.6	14.2	71	W			6		10		E	0.158	4.0	Cloudy	Naval Observatory.
Rouen			29.69	754.1	42.3	5.7	91	SE			2		10			0.303	7.7	Cloudy	Normal School.
Saint Lo			29.67	753.5	54.3	12.4	98	W			3		10		E	0.59	15.		Normal School.
Villefranche			29.89	759.2	49.8	9.9	74	SW			6		8			0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchésl.
Mont-Louis			30.23	767.8	44.1	6.7	82	NNW	13.0	5.83			6		W	0.346	8.8		—, Fournière
Montsouris, Paris			29.71	754.7	42.6	5.9	100	SE			2		10			0.164	4.2	Light rain	Montsouris Observ'tory.
Perpignan	†29.94	†760.6			56.3	13.5	91	Calm	0	0			9		WSW	0.122	3.1		Dr. Fines
Pic du Midi, (Summit) H. P.																			M. Baylac.
Pic du Midi, (Plantade) H.P.																			General de Nansouty
Saint Maur. (near Paris)			29.71	754.7	43.5	6.4	94	SE			1		10			0	0	Raining	E. Renou
Tours			29.71	754.5	58.6	14.8	82	W			1		10		WSW	0.217	5.5		C. Marquet.
Versailles (near Paris)			29.71	754.5	43.2	6.2	97	SE			1		10			0.240	6.10	Rain & fog	Dr. A. Bérenny.
Zi-Ka-Wei (near Shanghai			30.01	762.9	64.8	18.2	92	SE	6.3	2.8			10			{ 0 / 0	0 / 0 }	Misty	H. Le Lec, S. J.

NOTE.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,886.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 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. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also.

GERMAN SERIES.

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

Stations.	Corrected for instrumental errors. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Temperature of the Air. Fahrenheit.	Centigrade.	Relative Humidity. Per cent.	Winds. Direction.	Velocity. Miles per hour.	Meters per second.	Force.	Clouds. Amount. Up'er	Low'r	Direction. Upper.	Lower.	Rain-fall. Inches.	Millimeters.	Weather.	Observer.
Bamberg			29.98	761.6	41.5	5.3	67	NW	13	6			10			0	0		Prof. Hoh.
Berlin			30.00	762.1	41.9	5.5	88	NW	4	2			10			0.086	2.18	Rainy	Prof. Arndt.
Breslau			29.99	761.8	37.8	3.2	89	W	9	4			10			0	0	Raining	Dr. P. Neugebauer.
Carlsruhe			29.89	759.2	44.2	6.8	68	E	11	5			10			0	0		A. Senz.
Cassel			29.87	758.6	41.0	5.0	60	NW	9	4			10			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society
Friedrichshafen	28.50	724.0	29.08	761.5	39.2	4.0	67	N					9			1.169	29.7		M. Wilhelm.
Hamburg			30.04	763.1	44.2	5.1	75	ENE	9	4			7ks			0	0	Fair	Deutsche Seewarte.
Kiel			30.00	761.9	41.5	5.3	76	NE	9	4			10			0.043	1.1		Prof. G. Karsten.
Königsberg			29.89	759.1	32.0	0.0	91	NE	11	5						0.151	3.83	Cloudy	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			30.03	762.8	38.3	3.5	69	NNE	4	2			10			0	0		Prof. Bruhns.
Münster			29.96	761.0	43.3	6.3	79	E	4	2			10			0	0		Prof. E. Heis.
Posen			29.92	760.0	40.3	4.6	94	NW	29	13			10			0.051	1.3	Cloudy	Dr. Magener.
Strasburg, (in Alsace)			30.92	759.9	41.4	5.2	81	Calm	0	0			10			0.669	17.0		Dr. Schur.
Stuttgart			29.93	760.1	42.8	6.0	70	SE					10			0	0		Mr. Würth.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.81	757.1	45.1	7.3	64	E	18	8			10			0.150	3.8	Foggy	Prof. Hesel.
Wustrow, Naval School			30.06	763.4	41.2	5.1	81	NE	9	4			8k			0.070	1.79	Cloudy	F. Feschütz.

NOTE.—In the originals the distinction between 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.	Corrected for instrumental errors. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Temperature of the Air. Fahrenheit.	Centigrade.	Relative Humidity. Per cent.	Winds. Direction.	Velocity. Miles per hour.	Meters per second.	Force.	Clouds. Amount. Up'er	Low'r	Direction. Upper.	Lower.	Rain-fall. Inches.	Millimeters.	Weather.	Observer.
Athens			29.96	760.9	68.2	20.1		NW										Clear	

NOTE.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			30.00	762.0	49.3	9.6	84	ESE	0.7	0.3			9	W		0.402	10.2		
Mondovi			29.95	760.6	45.7	7.6	77	NW			2		10			0	0		
Genoa			30.96	761.0	59.7	15.4	35	SE	3.8	1.7			10	S		0	0		
Pavia			29.98	761.6	48.2	9.0	84	W			1		10			1.032	26.2	Raining	
Verona			29.91	759.7	60.1	15.6	81	W			1		10			0	0		
Padua			29.95	760.6	54.3	12.4	53	SSW	5.6	2.5			10			0	0		
Parma																			
Bologna			29.98	761.4	55.2	12.9	64	SW			1		5	W		0	0		
Leghorn			29.98	761.4	55.9	13.3	57	ENE	9.4	4.2			10			0	0		
Urbino																			
Ancona			29.99	761.7	54.5	12.5	57	SE			2		8			0	0		
Siena			29.97	761.3	55.8	13.2	58	SE	0	0			10	W		0	0		
Rome			30.02	762.5	64.0	18.1	60	S	9.4	4.2			5			0	0		
Naples, O. U.			30.05	763.3	65.5	18.6	59	SW			1		6	NW		0	0		
Lecce			30.08	764.0	59.0	15.0	65	N	6.9	3.1			5	NW		0	0		
Cosenza			30.04	762.9	63.0	17.2	63	SW			1		5			0	0		
Catania, (Sicily)																			
Riposto			30.06	763.4	67.5	19.7	77	SE			2		7	S		0	0		
Palermo			30.00	761.9	68.0	20.0	56	NE	6.9	3.1			4			0	0		
Sub-Series.																			
Naples, S. R.			30.09	764.3	60.3	15.7	76	SW			2		10	SE		0	0		Prof. F. Brioschi.

NOTE.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for twenty-four hours. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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			29.84	757.8	43.9	6.6		ESE			5								
Groningen			29.94	760.5	39.9	4.0		E			3								
Helder			29.93	760.3	39.9	4.0		E			4								
Utrecht			29.87	758.6	40.5	4.7		E			4		8					Very cloudy	

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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			30.22	767.5	37.8	3.2	66	Calm	0	0			0			0	0		
Christiania			30.27	768.9	33.8	1.0	63	NNE	7.2	3.2			9			0	0		
Tromsö			30.12	765.0	34.8	3.8	90	S			6		10			0.457	11.6	Raining	

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.21	768.2	65.1	18.4	52	NW	9.8	4.4			10	NNW		0.161	4.1	Solar halo	The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon.

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. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.82	757.4	35.8	2.1	94	NW	4	2			10						Astronomical Obs.
Wilna			29.91	759.6	31.8	— 0.1	92	E	4	2			10						Astronomical Obs.
Dorpat			30.07	763.6	25.5	— 3.6	91	NE	9	4			10					Light snow	Physical Cabinet.
St. Petersburg			30.09	764.2	20.4	— 3.1	91	NE	4	2			10						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kieff			29.74	755.5	41.7	5.4	92	NW	7	3			10					Light rain	Physical Cabinet.
Nikolaiev			29.84	758.0	51.6	10.9	84	SW	17	7.5			9						Kurdakof.
Kertch			29.86	758.5	65.3	18.5	77	N	4	2			8						Lagorio.
Moscow			29.98	761.6	31.6	— 0.2	94	N	10	4.5			10					Raining	Meteorological Obs.
Lugan			29.78	756.4	62.6	17.0	82	S	4	2			6			Blank	Blank		Meteorological Obs.
Archangel			30.07	763.7	37.[illegible]	3.2	91	W	13	6			10						Ogorodnikof.
Tiflis	28.70	729.1	30.10	764.5	65.5	18.6	61	SE	8	3.5			6						Physical Obs.
Astrakhan			30.23	767.8	56.8	13.8	63	SE	10	4.5			3						Sebastianof.
Kasan			30.28	769.0	25.2	— 3.8	91	S	8	3.5			10						Physical Cabinet.
Orenburg			30.59	777.0	38.1	3.4	58	SE	4	2			7						Tschernischef.
Ekaterinburg	29.32	744.7	30.39	772.0	22.[illegible]	— 5.2	63	W	10	4.5			1						Meteorological Obs.
Kasaly			30.47	773.8	42.1	5.6	83	ENE	8	3.5			3						Bobrof.
Tashkend																			Michelson.
Barnaul			30.26	768.6	11.3	—11.5	85	W	8	3.5			2						Meteorological Obs.
Yeniseisk			29.73	755.2	17.1	— 8.3	88	SW	2	1			4						Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking (China)			29.98	761.6	53.2	11.8	91	Calm	0	0			8						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 300.4? m., or 1,005.2? ft.; Tashkend, m. 494.2?, or 1,621.3? ft.; Irkutsk, 392. m., or 1,286. ft.; Nertchinsk, 592.0? m, or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.10	764.5	58.5	14.7	46	NW	22.4	10.0		0	4			0.071	1.8		Royal Observatory.
San Fernando			30.19	766.7	67.6	19.8	73	WNW	15.2	6.8		7	1	WNW	WNW	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, for Madrid for 8 hours preceding; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Haparanda			30.25	768.4	25.9	— 3.4	91	E			2		7			0	0		
Umea			30.30	769.6	28.4	— 2.0	88	NW			2		9			0	0		
Hernosand			30.32	770.1	24.1	— 4.4	97	N			2		10			0	0		
Stockholm			30.10	764.4	33.1	0.6	83	NNE			4		10			0.055	1.4	Snowing	
Wisby			30.07	763.7	35.6	2.0	78	E			6		5			0.035	0.9		
Sub-Series. Upsala			30.17	766.4	33.4	0.8	89	NNE	12.8	5.7			10					Snowing	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.51	724.2	29.98	761.4	41.7	5.4	97	N			0		10			0	0	Raining	The Observatory.
Zurich	28.30	718.9	29.98	761.5	42.6	5.9	76	W			1		7		SW	0	0	Rain and fog	The Observatory

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —1.9mm.; Thermometer, —°5.2; Relative Humidity, +23 per cent.

Note.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Beirut, (Syria,) Lee Obs'y			29.94	760.4	81.5	27.5	72	SW			2		1c			0	0		Prof. C. V. A. Van Dyck.
Constantinople			29.95	760.6	49.8	9.9	92	N	13.4	6.0			10		N	0.35	9.	Cloudy	
Fao, (Persian Gulf)			30.12	765.0	84.0	28.9		NW			3		0					Clear	
Salonica					59.4	15.2		NW			2		0					Clear	
Valona			29.96	761.0	59.4	15.2		W			1		0					Clear	
Varna			29.92	760.0	50.0	10.0		NW			6		2						

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Brockville, Ontario			29.63	752.6	39	3.9		SW	1	0.4			10s		SW	0.76	19.3	Cloudy	
Chatham, N. B.			29.78	756.4	36	2.2	80	E	13	5.8		8cs	2ks	SE	SE	0	0	Cloudy	
Charlottetown, P. E. Island			29.81	757.2	39	3.9	74	SE	25	11.2			10ks		SE	0	0	Cloudy	
Fort Garry, Manitoba			29.94	760.5	14	—10.0	96	S	1	0.4		0	2s			0	0	Fair	
Halifax, N. S.			29.85	758.2	45	7.2	74	SE	24	10.7			10n		S	0	0	Threatening	
Kingston, Ontario			29.59	751.6	41	5.0	75	W	16	7.2			10s			0.85	21.6	Cloudy	
Montreal, Quebec			29.49	749.0	43	6.1	79	SW	16	7.2		5k	5ks	SW		0.71	18.0	Cloudy	
Ottawa, Ontario			29.47	748.5	39	3.9	70	S	14	6.3			10n		S	0.25	6.3	Threatening	
Parry Sound, Ontario			29.51	749.5	36	2.2	90	W	15	6.7			10n		SW	0.32	8.1	Light snow	
Port Dover, Ontario			29.70	754.4	37	2.8	71	W	18	8.0		10k	0	W		0.26	6.6	Fair	
Port Stanley, Ontario			29.70	754.4	36	2.2	79	W	27	12.1			10n		W	0.05	1.3	Cloudy	
Quebec, Quebec			29.54	750.3	32	0.0	100	N	5	2.2			10n		N	0.20	5.1	Light snow	
Saugeen, Ontario			29.50	749.3	38	3.3	96	SW	23	10.3			10n		SW	0.15	3.8	Light rain	
Stayner, Ontario			29.56	750.8	36	2.2	80	W	5	2.2			10n		W	0.09	2.3	Cloudy	
Sydney, C. B.			30.05	763.3	41	5.0	80	S	3	1.		8c	2			0	0	Fair	
Toronto, Ontario			29.60	751.8	38	3.3	67	SW	16	7.2			10ks		W	0.19	4.8	Cloudy	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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. —lb.	Clouds. Amount. Up'er —lo.	Clouds. Amount. Low'r —lo.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	29.59	751.6	48	8.9	77	Calm	0	0	.....	1k	5s	S	SW	0.85	21.6	Cloudy	
Alpena, Mich	.....	.....	29.51	749.5	34	1.1	80	W	16	7.2	.....	0	1s	.....	W	0.06	1.5	Clear	
Atlantic City, N. J.	.....	.....	29.80	756.9	49	9.4	64	W	8	3.6	.....	0	0	.....	.....	0.22	5.6	Clear	
Augusta, Ga.	.....	.....	30.13	765.3	50	10.0	79	Calm	0	0	.....	0	0	.....	.....	0.14	3.6	Clear	
Baltimore, Md	.....	.....	29.83	757.7	49	9.4	71	SW	5	2.2	.....	0	0	.....	.....	0.46	11.7	Clear	
Barnegat, N. J	.....	.....	29.80	756.9	51	10.6	66	W	16	7.2	.....	0	0	.....	.....	0.38	9.7	Clear	
Benton, Montana	26.66	677.2	29.46	748.3	50	10.0	38	SW	32	14.3	.....	0	5s	.....	N	0.07	1.8	Fair	
Bismarck, Dakota	27.93	709.2	29.59	751.6	32	0.0	79	S	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Boston, Mass	.....	.....	29.61	752.1	49	9.4	71	W	10	4.5	.....	2k	0	W	.....	0.28	7.1	Fair	
Breckenridge, Minn	.....	.....	29.85	758.2	26	— 3.3	77	S	8	3.6	.....	0	Fog	.....	.....	0	0	Foggy	
Buffalo, N. Y.	.....	.....	29.61	752.1	39	4.2	52	W	28	12.5	.....	.....	10s	.....	W	0.52	13.2	Cloudy	
Burlington, Vt.	.....	.....	29.55	75[illegible].6	45	7.2	76	S	2	0.9	.....	.....	10s	.....	W	0.68	17.3	Cloudy	
Cairo, Ill.	.....	.....	30.10	764.5	45	7.2	84	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Smoky	
Cape Hatteras, N. C.	.....	.....	29.94	760.5	60	15.6	49	N	16	7.2	.....	1c	0	SW	.....	Inap.	Inap.	Clear	
Cape Henry, Va	.....	.....	30.02	762.5	61	16.1	55	SW	13	5.8	.....	0	0	.....	.....	0.04	1.0	Clear	
Cape May, N. J.	.....	.....	29.83	757.7	53	11.7	65	S	10	4.5	.....	0	0	.....	.....	0.35	8.9	Clear	
Charleston, S. C.	.....	.....	30.13	765.3	56	13.3	52	W	11	4.9	.....	5c	0	SW	.....	0	0	Fair	
Cheyenne, Wyoming	23.76	603.5	29.70	754.4	54	12.2	8	W	16	7.2	.....	5c	5s	.....	W	0	0	Cloudy	
Chicago, Ill.	.....	.....	29.91	759.7	38	3.3	54	NW	8	3.6	.....	0	8ks	.....	W	0.10	2.5	Fair	
Cincinnati, Ohio	.....	.....	29.97	761.2	43	6.1	58	W	8	3.6	.....	8c	Sm'e	W	.....	0	0	Cloudy	
Cleveland, Ohio	.....	.....	29.79	756.7	38.3	3.5	54	SW	24	10.7	.....	.....	10n	.....	W	0.04	1.0	Sleet	
Colorado Springs, Col.	23.93	607.8	29.89	756.9	38	3.3	41	N	7	3.1	.....	2c	0	W	.....	0	0	Fair	
Corsicana, Tex.	.....	.....	30.12	765.0	50	10.0	64	S	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Davenport, Iowa	.....	.....	30.0[illegible]	762.0	35	1.7	70	W	10	4.5	.....	8k	2ks	NW	.....	0.01	0.3	Cloudy, frost	
Denison, Tex.	.....	.....	30.03	762.7	48	8.9	54	S	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Denver, Col.	24.56	623.8	29.78	756.4	47	8.3	21	S	4	1.8	.....	.....	10ks	.....	.....	0	0	Cloudy	
Detroit, Mich	.....	.....	29.75	755.6	36	2.2	70	W	10	4.5	.....	.....	10n	.....	.....	0.05	1.3	Sleet	
Dodge City, Kan	27.17	690.1	29.45	748.0	41	5.0	83	NE	4	1.8	.....	0	2s	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	29.91	759.7	33	0.6	70	W	8	3.6	.....	0	5s	.....	NW	0.19	4.8	Clearing	
Duluth, Minn	.....	.....	29.93	760.2	28	—2.2	88	NE	6	2.7	.....	.....	10s	.....	.....	0.07	1.8	Cloudy	
Eastport, Me	.....	.....	29.56	750.8	45	7.8	92	SE	34	15.2	.....	.....	10n	.....	SE	0.20	5.1	Heavy rain	
Erie, Pa	.....	.....	29.69	755.4	38	3.3	84	SW	20	8.9	.....	.....	10n	.....	SW	0.94	23.9	Hazing	
Escanaba, Mich	.....	.....	29.73	754.1	31	—0.6	68	NW	14	6.3	.....	2k	0	N	.....	0.08	2.0	Fair	
Fort Gibson, I. T.	.....	.....	29.97	761.2	49	9.4	37	SE	7	3.1	.....	1c	0	NW	.....	0	0	Clear	
Fort Sill, I. T.	28.73	729.7	29.87	758.7	41	5.0	75	NW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Fort Sully, Dakota	27.96	710.2	29.64	752.8	31	—0.6	89	SE	20	8.9	.....	0	8s	.....	SE	0	0	Cloudy	
Galveston, Tex	.....	.....	30.17	766.3	65	18.3	73	E	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Grand Haven, Mich	.....	.....	29.83	757.7	38	3.3	63	NW	28	12.5	.....	.....	10s	.....	NW	0.13	3.3	Cloudy	
Indianapolis, Ind	.....	.....	29.98	761.5	38	3.3	71	SW	6	2.7	.....	5ck	2ks	SW	.....	0	0	Fair	
Indianola, Tex	.....	.....	30.18	766.0	67	19.4	84	NE	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Jacksonville, Fla	.....	.....	30.19	766.8	61	16.1	8	N	6	2.7	.....	4c	0	NW	.....	0	0	Fair	
Keokuk, Iowa	.....	.....	29.[illegible]	760.7	38	3.3	81	SW	4	1.8	.....	8k	0	W	.....	0	0	Fair	
Key West, Fla	.....	.....	30.10	764.5	77	25.0	77	NE	5	2.2	.....	8ck	2ks	SW	.....	0.17	4.3	Cloudy, hazy	
Kittyhawk, N. C.	.....	.....	29.98	761.5	56	13.3	57	NW	12	5.4	.....	0	0	.....	.....	0.12	3.0	Clear	
Knoxville, Tenn	.....	.....	30.14	765.5	44	6.7	67	SW	3	1.3	.....	1cs	Fog	SW	.....	0.21	5.3	Clear	
La Crosse, Wis	.....	.....	29.91	759.7	35	1.7	80	N	7	3.1	.....	.....	10s	.....	N	0.06	1.5	Cloudy	
Leavenworth, Kan	.....	.....	29.87	758.7	37	2.8	80	SE	1	0.4	.....	2c	0	NW	.....	0	0	Clear	
Lexington, Ky.	28.94	735.1	30.08	764.0	38	3.3	71	SW	8	3.6	.....	2c	0	SW	.....	0.03	0.8	Clear	
Long Branch, N. J.	.....	.....	29.76	756.1	52	11.1	73	SW	15	6.7	.....	0	0	.....	.....	0.40	10.2	Clear	
Louisville, Ky	.....	.....	30.05	763.3	43	6.1	59	S	4	1.8	.....	2c	0	S	.....	0	0	Clear	
Lynchburg, Va	.....	.....	29.89	759.2	54	12.2	34	NW	3	1.3	.....	0	0	.....	.....	0.21	5.3	Clear	
Malone, N. Y.	.....	.....	29.18	740.8	44	6.7	84	SW	6	2.7	.....	.....	10ks	.....	SW	0.46	11.7	Cloudy	
Marquette, Mich	.....	.....	29.74	755.4	31	— 0.6	79	NW	16	7.2	.....	.....	10s	.....	NW	0.38	9.7	Cloudy	
Memphis, Tenn	.....	.....	30.14	765.5	48	8.9	77	SW	3	1.3	.....	0	Haze	.....	.....	0	0	Cloudy	
Milwaukee, Wis	.....	.....	29.91	759.7	32	0.0	69	NW	20	8.9	.....	.....	1ks	.....	NW	0.09	2.3	Cloudy	
Mobile, Ala	.....	.....	30.23	767.8	49	9.4	85	N	2	0.9	.....	5c	0	N	.....	0	0	Fair	
Montgomery, Ala	.....	.....	30.24	768.1	46.5	8.1	88	Calm	0	0	.....	8c	Fog	W	.....	Inap.	Inap.	Fair	
Morgantown, W. Va	.....	.....	29.89	759.2	45	7.2	53	W	27	12.1	.....	.....	10s	.....	.....	0.22	5.6	Cloudy	
Mt. Washington, N. H	23.23	590.0	29.59	751.6	22	— 5.6	100	NW	51	22.4	.....	.....	10n	.....	NW	0.10	2.5	Light snow.	
Nashville, Tenn	.....	.....	30.10	764.5	46	7.8	68	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Clear	
New Haven, Conn	.....	.....	29.69	754.1	50	10.0	71	SW	8	3.6	.....	Haze	0	.....	.....	0.38	9.7	Clear	
New London, Conn	.....	.....	29.69	754.1	52	11.1	73	SW	5	2.2	.....	0	0	.....	.....	0.17	4.3	Clear	
New Orleans, La	.....	.....	30.21	767.3	59	15.0	65	NE	6	2.7	.....	2c	0	W	.....	0	0	Clear	
Newport, R. I.	.....	.....	29.68	753.9	51	10.6	72	SW	18	8.0	.....	0	0	.....	.....	0.06	1.5	Clear	
New York, N. Y.	.....	.....	29.74	755.4	41	9.4	71	SW	16	7.2	.....	0	0	.....	.....	0.32	8.1	Clear	
Norfolk, Va	.....	.....	29.94	760.5	54	12.2	61	SW	10	4.5	.....	Haze	Haze	.....	.....	0.01	0.3	Clear	
North Platte, Neb	26.97	685.0	29.36	745.7	32	0.0	79	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Omaha, Neb.	28.75	730.2	29.83	757.7	36	2.2	80	SE	7	3.1	.....	2c	0	W	.....	0	0	Cloudy	
Oswego, N. Y.	.....	.....	29.61	752.1	43.3	6.3	71	WSW	7	3.1	.....	.....	10s	.....	W	0.83	21.1	Cloudy	
Peck's Beach, N. J	.....	.....	29.81	757.2	50	10.0	64	W	8	3.6	.....	0	0	.....	.....	0.23	5.8	Clear	
Pembina, Dakota	.....	.....	29.92	760.0	9	—12.8	100	Calm	0	0	.....	2cs	0	.....	.....	0	0	Clear	
Philadelphia, Penn	.....	.....	29.78	756.4	48	9.9	63	SW	12	5.4	.....	0	0	.....	.....	0.46	11.7	Clear	
Pike's Peak, Colorado	17.65	448.3	29.86	758.4	20	—6.7	41	W	51	24.1	.....	2c	0	W	.....	0	0	Fair	
Pittsburgh, Penn	.....	.....	29.80	756.9	43	6.1	50	W	20	8.9	.....	.....	10ks	.....	W	0.27	6.9	Cloudy	
Port Huron, Mich	.....	.....	29.68	753.9	36	2.2	70	W	16	7.2	.....	.....	10s	.....	W	0.01	0.3	Cloudy	
Portland, Me	.....	.....	29.55	750.6	45	7.2	84	SW	7	3.1	.....	.....	10s	.....	.....	0.05	1.3	Cloudy	
Portland, Oregon	.....	.....	29.91	759.7	51	10.6	79	SW	6	2.7	.....	.....	10s	.....	.....	0.77	19.6	Cloudy	
Punta Rassa, Fla	.....	.....	30.13	765.3	72.1	22.3	90	NE	22	5.4	.....	.....	10ks	.....	.....	0	0	Cloudy	
Rochester, N. Y	.....	.....	29.61	752.1	39	3.9	81	SW	6	2.7	.....	.....	10s	.....	SW	0.94	23.9	Cloudy	
Salt Lake City, Utah	25.45	646.4	29.78	756.4	57	13.9	20	S	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Sandy Hook, N. J	.....	.....	29.74	755.4	52	11.1	72	SW	19	8.5	.....	0	1s	.....	.....	0.53	13.5	Clear	
San Diego, Cal	.....	.....	30.0	762.0	57	13.9	81	.....	4	1.8	.....	0	0	.....	.....	0	0	Clear	
San Francisco, Cal	.....	.....	30.01	762.5	60	15.6	94	SW	8	3.6	.....	0	Fog	.....	.....	Inap.	Inap.	Fair	
Santa Fe, N. M	23.28	591.3	29.81	757.2	31	—0.6	26	E	4	1.8	.....	2k	0	.....	.....	0	0	Fair	
Savannah, Ga.	.....	.....	30.17	766.3	58	14.4	53	W	4	1.8	.....	8c	0	SW	.....	0	0	Fair	
Shreveport, La	.....	.....	30.18	766.0	47	8.3	85	N	14	6.3	.....	0	0	.....	.....	0.30	7.6	Clear	
Smithville, N. C.	.....	.....	30.10	764.5	55	12.8	68	NW	6	2.7	.....	1cs	0	W	.....	0	0	Fair	
Springfield, Mass	.....	.....	29.65	753.1	51	10.6	65	SW	12	5.4	.....	0	2s	.....	.....	0.61	15.5	Clear	
St. Louis, Mo	.....	.....	30.06	763.5	42	5.6	57	SW	6	2.7	.....	2c	Sm'e	.....	.....	0	0	Fair	
St. Marks, Fla	.....	.....	30.20	767.1	54	12.2	85	Calm	0	0	.....	5c	2s	W	.....	0	0	Fair	
St. Paul, Minn	.....	.....	29.88	758.9	31	—0.6	79	NW	4	1.8	.....	.....	10s	.....	NW	0.23	5.8	Cloudy	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Squa. Beach, N. J	.....	.....	29.73	755.1	48	8.9	77	SW	10	5.4	.....	0	Haze	.....	.....	0.42	10.7	Clear	
Toledo, Ohio	.....	.....	29.81	757.2	39	3.9	72	W	20	8.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Tucson, Arizona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Tybee Island, Ga	.....	.....	30.16	766.1	58	14.4	57	NW	12	5.4	.....	10cs	0	W	.....	0	0	Cloudy	
Vicksburg, Miss	.....	.....	30.27	768.8	50	10.0	71	S	6	2.7	.....	2ck	0	SW	.....	0	0	Fair	
Virginia City, Montana	23.94	608.1	29.42	747.3	37	2.8	71	W	9	4.0	.....	.....	9s	.....	W	0.18	4.6	Cloudy	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.	.....	.....	29.82	757.4	49	9.4	64	SW	9	4.0	.....	0	0	.....	.....	0.23	5.8	Clear	
Wilmington, N. C	.....	.....	30.08	764.0	55	12.8	68	W	7	3.1	.....	0	2cs	.....	W	0	0	Clear	
Wood's Hole, Mass	.....	.....	29.68	753.9	54	12.2	67	NW	16	7.2	.....	0	5s	.....	NW	0.14	3.6	Fair	
Wytheville, Va	27.60	701.0	29.76	755.9	46	7.8	75	NW	16	7.2	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Yankton, Dakota	28.53	724.6	29.85	758.2	31	−0.6	73	SE	5	2.2	.....	0	5s	.....	NW	0	0	Fair	
Yuma, Arizona	.....	.....	29.98	761.5	60	15.6	.....	E	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'does, W. I	.....	.....	.....	.....	81	27.2	90	E	2	0.9	.....	2c	5s	S	NE	0	0	Fair	E. Racker.
Pointe-aPitre, G'd'loupe, do	.....	.....	29.95	760.7	80	26.7	82	E	.....	.....	.....	0	5ks	.....	.....	0.20	5.1	Clear	L. V. Bigard.
Havana, Cuba, W. I	.....	.....	30.07	763.8	74	23.3	85	Calm	0	0	.....	8ck	1k	SW	E	1.17	29.7	air	Charles Hasselbrink.
Kingston, Jamaica, W. I	.....	.....	30.20	767.1	79	26.1	82	Calm	0	0	.....	5c	1s	.....	.....	0	0	.....	James Gall.
St. Thomas, St. T., W. I	.....	.....	30.22	767.6	82	27.8	74	E	9	4.0	.....	4k	8kn	E	.....	0.08	2.0	Fair	W. S. Cameron.
Santiago de Cuba, W. I	.....	.....	29.84	757.9	79	26.1	78	SW	2.4	1.1	.....	0	2s	.....	SW	.....	.....	Fair	Robert Mason.
St. Georges, Bermudas	.....	.....	30.11	764.8	72.0	22.2	74	SW	5.3	2.4	.....	2c	0	.....	.....	0	0	Clear	C. F. Allen.
Honolulu, Oahu, H. I	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. P. Church.
Makawao, Maui, H. I	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. L. Clarke.
Cumberland, B. A	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ft. Chippewyan, B. A	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ft. McPherson, B. A	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Ft. Simpson, B. A	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
York Factory, B. A	.....	.....	30.02	762.5	18	−7.8	100	W	4	1.8	.....	.....	8k	.....	.....	0.01	0.3	.....	J. Fortescue.
St. John's, Newfoundland	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	John Delaney.
St. John's, Porto Rico, W. I	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon M. Acuña.
Clifton, Jamaica, W. I	27.25	692.1	30.03	762.7	70	21.1	84	N	2.0	0.9	.....	5c	0	NE	.....	0	0	Fine	C. Partridge.
Navassa	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Medellin, S. A	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Paramaribo, S. A	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Elyria, Ohio	.....	.....	29.83	757.7	37	2.8	80	W	12	5.4	.....	.....	10n	.....	.....	0	0	Cloudy	H. M. Redington.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		
Steamer Leipzig, N. 49° 26′, W. 18° 24′.	.....	ESE	.....	29.88	758.9	55.6	13.1	.....	W	.....	.....	3	.....	..k	.....	W	L. swell	.....	*D. clouds
Steamer Hibernian, N. 51° 32′, W. 17° 20′.	.....	ESE	10¾	29.64	752.8	59	15.0	.....	WNW	.....	.....	5	.....	..k	.....	SE	L. swell	.....	Showery

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Virginia City, 5,180 (?) ft., or 1,679.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in. The barometer of the Hibernian has an error of —0.18, as determined from the isobarometric charts of the Signal Service.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 28, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.09	764.3	74.5	23.6	43	NNW			1		1			0	0		Charnot.
Algiers			30.07	763.7	70.2	21.2	63	NNW			2		4			0	0		Peter.
La Calle																			Kuntz.
Tunis			29.97	761.2	69.8	21.0	67	NW			3		5			0.043	1.1	Cloudy	Jacques.
Sfax			29.99	761.6	73.6	23.1	50	N			4		5			0	0		Chauvey.
Saida			30.10	764.4	68.0	20.0	55	NW			2		2			0	0		Grosjean.
Tebessa			30.02	762.5	72.9	22.7		SE			2		4			0	0		Colin.
Geriville			30.11	764.8	62.6	17.0	47	NW			2		3			0	0		Bernadach.
Laghouat			30.12	765.0	71.6	22	43	SE			1		1			0	0		Simon.
Biskra			30.04	764.0	76.5	24.7	33	NW			4		0			0	0	Sirocco	Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			29.84	758.0	44.2	6.8	79	NE			2		10			0.331	8.4	Raining	Prof. Ivan Stosir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			29.99	761.8	37.4	3.0	96	W			2		10			0.012	0.3		I. R. Observatory.
Eperies			29.90	759.4	43.3	6.3	81	Calm			0		10			0	0		Julius Mikolik.
Gratz	28.67	728.2	29.90	759.4	40.8	4.9	88	WSW			2		10						Andreas Rospini.
Hermannstadt	28.46	722.8	29.89	759.1	50.4	10.2	53	NE			1		5			0	0		Prof. Reissenberger.
Kremsmünster	28.53	724.6	29.91	759.7	37.4	3.0	83	ENE			3		10			0.047	1.2		Prof. C. Wagner.
Lemberg			29.88	758.9	38.5	3.6	75	NW			2		9			Blank	Blank		Dr. T. Stanecki.
Nyiregyhaza			29.91	759.8	46.0	7.8	81	NW			1		9			0	0		Habsuda Daniel.
Pola			29.64	752.8	54.3	12.4	100	NW			3		10n, ks			0.248	6.29		I.R. Hydrographic Of'ce
Szegedin			29.87	758.6	49.1	9.5	79	W			2		10			0	0		Karl Stancel.
Trieste			29.67	753.5	50.9	10.5	63	ESE			3		10			0.102	2.6	Drizzling	Prof. V. Faroifi.
Vienna			29.90	759.4	41.9	5.5	77	ESE			1		10			0	0		I. R. Central Institute.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 9 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.68	753.9	44.2	6.8	83	E			2		10			0.030	0.75		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.17	766.3	45.7	7.6		ESE	24	10.7			6			0.200	5.08	Squally	William Boswell.
Ardrossan			30.06	763.5	48	8.9		ESE			3		7					*D. clouds.	Wm. McNeil.
Armagh Observatory			30.00	762.0	44.5	6.9		ENE	10	4.5			10					Raining	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs.			29.96	761.0	45.0	7.2		E			3		10					Foggy	John Hartnup, Jr.
Birr Castle, (Parsonstown).			29.91	759.7	47.0	8.3		Calm			0		10					Overcast	J. Dreyer.
Bradford			29.97	761.2	46.1	7.8		E			2		10					Drizzling	J. McLandsborough.
Bridgetown, (Barbados)			29.95	760.7	81.0	27.2		NE			2		7					*D clouds	Sergt. G. H. Hunt.
Cambridge Observatory			29.92	760.0	47.0	8.3		E			1		10					Overcast	H. Todd.
Cape Good Hope Obs.			29.84	757.9	88.8	31.6	26	WNW	8	3.6			0						The Staff, for E. J. Stone.
Cardington			29.94	760.5	47.0	8.3		NE			1		10					Overcast	John McLaren.
Carlisle			30.03	762.7	47.6	8.7		SE			2		7			0	0	*D. clouds	T. Bell, for J. Cartmell.
Chatham, School M. E.			29.91	759.7	47.0	8.3		SE			1		0					Threatening?	Capt. J. Fellowes, R. E.
Dartmoor	28.47	723.1	29.84	757.9	45	7.2		NW			1		6					*D. clouds	R. E. Power.
Donaghadee			30.00	762.0	48	8.9		ESE			4		10					Overcast	J. Mac Gowan, Jr.
Dover			29.87	758.7	48	8.9		ENE			5		7					Gloomy	J. Costello.
Eccles, (near Manchester)			29.96	761.0	46.1	7.8		E	4.2	1.9			10					Misty	Thomas Mackereth
Falmouth Observatory			29.92	760.0	53.6	12.0		NW	10	4.5			8					Overcast	The Staff.
Fort Napier, (Natal)	27.79	705.8	30.03	762.7	71.5	21.9		E			2		1					*D. clouds	Pvt G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.33	745.0	86	30.0		N					6						
Galway, Queen's College																			B. G. Clare, for Prof. Carr.
Gibraltar, (Mediterranean)			30.11	764.8	68.5	20.3		SW			3		2					*D. clouds	Sergt. E. G. Baker.
Glasgow Observatory			30.06	763.5	46.8	8.2		E			2		9					*D. clouds	Lewis Stuart.
Great Yarmouth			29.96	761.0	46	7.8		E			6		6					*D. clouds	G. T. Watson.
Greenwich Royal Obs.			29.91	759.7	47.2	8.4		ENE			2		10			Blank	Blank	Overcast	The Staff, for G. B. Airy.
Guernsey			29.85	757.9	55	12.8		NE			1		8					Rainy	Dr. S. E. Hoskins.
Halifax, Moorside Obs.			30.02	762.5	45.5	7.5		E			2		10					Overcast	F. J. Page, for L. J. Cross.
Helston			29.87	758.7	59	15.0		NW			4		6			0.27	6.9	*D. clouds	M. P. Moyle.
Holyhead			29.94	760.5	44	6.7		E			5		10					Raining	John Tilston.
Kew Observatory			29.91	759.7	45.0	7.2		ENE	10	4.5			10					Misty	The Staff.
Kingstown			29.94	760.5	49	9.4		ESE			3		10					Overcast	George Mitchell
Leicester Museum			29.98	761.5	45.5	7.5		E			1		10					Overcast	William J. Harrison.
Llandudno			29.96	761.0	43.6	6.4		ESE			1		10					Overcast	Dr. James Nicol.
Malta, (Mediterranean)			29.85	758.2	73.8	23.2		SW			1		4k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			30.13	765.3	47	8.3		Calm			0		5						W. D. Penny.
Nassau, (Bahamas)			30.21	767.3	80.2	26.8		NE			3		6					Showery	Surg.-Maj. Henry.
Nottingham			29.98	761.5	46.2	7.9		ENE			5		10k, d		E	0.06	1.5	Overcast	E. J. Lowe, F. R. S
Oscott, St Mary's College			29.96	761.0	43.5	6.4		ENE			2		10					Drizzling	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.90	759.4	47	8.3		NE			1		10					Overcast	J. Lucas, for R. Main
Plymouth			29.89	759.2	52.7	11.5		NE			2		4					*D. clouds	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.90	759.4	52	11.1		WSW			2		5			Blank	Blank	Cloudy	W. Kennedy.
Saint Ann's Head			29.89	759.2	50	10.0		E			1		10					Overcast	John C. Walker.
Saint Helier, (Jersey)			29.84	757.9	56.5	13.6		N			2		10						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			30.04	763.0	46.8	8.2		ESE			5		8					Overcast	F. Shaw.
Scutari cemetery, (Turkey)			29.99	761.7	61.0	16.1		SW			2		2					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.99	761.7	47.8	8.8		E			2		10					Overcast	W. F. Cooper.
Silloth Rectory			30.02	762.5	48.1	8.9		E			2		4			0	0	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			29.98	761.5	45.8	7.7		E			2		10			Blank	Blank	Gloomy	The Staff.
Stornoway, Lewis C. (Hebr.)																			John Smith.
Stratfield Turgiss			29.91	759.7	46.9	8.3		NE			1		10					Overcast	Rev. Charles H. Griffith
Streatley Vicarage			29.93	760.2	49.2	9.6		ENE			1		10						Rev. John Slatter.
Thurso			30.17	766.3	48	8.9		SE			3		7					*D. clouds	John Trotter.
Truro, Royal Institution			29.86	758.4	55	12.8		N			4		8					Gloomy	W. Newcombe.
Valencia Observatory			29.91	759.7	53.7	12.1		NW	11	4.9			4					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					48	8.9		SE			6		10			0.50	12.7		
Leith, Restalrig Park			30.11	764.8	46.2	7.9		E			2		5k			0.02	0.5	Cloudy	Andrew Gibb.
Monach Lt-house, (Shet. Is.)			30.04	763.0	48	8.9		SE			4	10	0	SE		0	0		J. Youyclause.
North Unst, (Shetland Is.)			30.29	769.4	46	7.8		SE			4	4	5	SE					

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., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			30.17	766.3	39.7	4.3	73	E			4		10						
Fanöe			30.19	766.7	39.2	4.0	87	ENE			4		10						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.73	755.1	47.5	8.6	89	S			4		10					Raining	
Thorshavn, (Faröe)			30.24	768.0	47.7	8.7	72	SSE			4		7						
Vestervig			30.25	768.3	34.0	1.1	87	NE			2		10						

Note.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols: not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alengon			29.68	753.8	52.7	11.5	93	S			1		10			0	0	Cloudy	Normal School.
Amiens			30.08	764.0	48.6	9.2	84	SE			2		10			0.165	4.2	Cloudy	Normal School.
Avignon			29.86	758.4	58.6	14.8	72	NNW			1		5n		NW	0	0	Cloudy	Normal School.
Bar-sur-Seine			29.83	757.7	54.7	12.6	80	W			1		8		SW	0.283	7.2	Light rain	C. Saillard.
Beaumette, (near Angers)			29.80	756.8	52.5	11.4	93	NNW	5.4	2.4			10		N	0.181	4.6	Cloudy	Beaumette Observatory.
Beauvais			29.89	759.3	52.0	11.1	85	E			1		8		E	0.16	4.	Cloudy	Normal School.
Besançon			29.88	759.0	53.2	11.8	87	S			2		8		NW	0.839	21.3	Cloudy	Normal School.
Bourg en Bresse			29.85	758.2	53.4	11.9	83	NW			1		..kn		NE	0.08	2.		Normal School.
Bourges			29.83	757.6	51.4	10.8	92	SSW			3		8		NE	0.110	2.8	Cloudy	Normal School.
Brest			29.88	758.9	54.1	12.3	80	N			3		5k		NNW	0.439	11.75		Naval Observatory.
Caen			29.83	757.7	54.5	12.5	87	ENE			2		5		ENE	0.04	1.	Cloudy	Normal School.
Chartres																			Normal School.
Chaumont	28.66	727.9	29.83	757.6	55.2	11.9		SW			1		..kn		SW	0.402	10.2		Normal School.
Commercy			29.89	759.2	43.0	6.6	93	E			2		10		E	0.52	13.	Cloudy	Normal School.
Commune de Gréasque*			29.85	758.1	56.1	13.4	55	NW			6		2		NW	1.26	32.0		
Le Mans																			Normal School.
Lons-Le-Saulnier			29.87	758.8	52.9	11.6	93	S			2		8			0	0	Cloudy	Normal School.
Mâcon			29.84	757.8	54.9	12.7	83	Calm			0		5		NE	0.283	7.2	Cloudy	Normal School.
Mirecourt			29.84	757.8	46.8	8.2	67	W			2		10		E	0.55	14.	Cloudy	Normal School.
Orleans			29.76	756.0	52.9	11.6	86	WSW			2		8		W	0.204	5.2	Cloudy	Normal School.
Paris Observatory			29.83	757.6	51.8	11.0	94	ESE			1		10			0.058	1.47	Foggy	National Observatory
Parthenay			29.80	757.0	50.0	10	86	NE			4		10			0.08	2.	Cloudy	Normal School.
La Roche sur Yon			29.88	759.0	55.4	13	77	SW			4		10		E	0.441	11.2	Cloudy	Normal School.
Rochefort, Observatory			29.90	759.4	55.9	13.3	71	NW			6		10		SE	0.276	7.0	Cloudy	Naval Observatory.
Rouen			29.83	757.6	55.2	12.9	77	NE			2		10			0.063	1.6	Cloudy	Normal School.
Saint Lo			29.84	757.8	54.5	12.5	93	E			3		8		NE	0.098	2.5		Normal School.
Villefranche			29.86	758.5	50.0	10	93	NNW			2		10		W	0.016	4.	Cloudy	Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchési.
Mont-Louis			30.28	769.0	42.4	5.8	76	W	14.9	6.66			8		W	0.071	1.8		—. Falguère.
Montsouris, Paris			29.82	757.5	52.0	11.1	95	E			1		10kn		ESE	0.016	0.4	Drizzling	Montsouris Observ'tory.
Perpignan	†29.96	†761.0			59.2	15.1	50	W	14.9	6.66			8		W	0	0		Dr. Fines.
Pic du Midi, (Summit) H. P.																			M. Baylac.
Pic du Midi, (Plantade) H.P.																			General de Nansouty
Saint Maur. (near Paris)			29.82	757.4	52.7	11.5	89	E			1		10			0.205	5.2	Cloudy	E. Renou.
Tours			29.79	756.7	52.2	11.2	81	WSW			1		10		SW	0.087	2.2		C. Marquet.
Versailles. (near Paris)			29.82	757.4	51.8	11.0	95	SE			1		10			0.009	0.22	Foggy	Dr. A. Bérigny.
Zi-Ka-Wei. (near Shanghai)			30.10	764.4	59.2	15.1	96	W	0	0		..cs				0 / 0	0 / 0	Misty	H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time Zi-Ka-Wei in meters per second. Generally, the distinction between upper and lower clouds is not made. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 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. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also.

GERMAN SERIES.

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

Stations.	Corrected for instrumental errors. Inches.	Corrected for instrumental errors. Millimeters.	Reduced to sea-level. Inches.	Reduced to sea-level. Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	From—	From—	Inches.	Millimeters.	Weather.	Observer.
Bamberg			29.90	759.0	40.1	4.5	55	NE	18	8			6			0	0		Prof. Hoh.
Berlin			30.06	763.4	42.5	5.3	65	NE	9	4			9			0.009	0.23		Prof. Arndt.
Breslau			30.05	763.2	38.5	3.6	80	NE	9	4			10			0	0		Dr. P. Neugebauer.
Carlsruhe			29.88	759.0	41.2	5.1	89	NE	11	5			10			0.319	8.1	Raining	A. Senz.
Cassel			29.85	758.2	46.4	8.0	64	ENE	2	1			5			0	0		Dr. H. Möll.
Cologne																			Dr. Garthe.
Emden																			Prof. Preste
Frankfort on the Main																			Physical Society
Friedrichshafen	28.38	720.8	29.84	757.8	43.7	6.5	86	NW					10			0.598	15.2	Rain & snow	M. Wilhelm.
Hamburg			30.09	764.3	43.3	6.3	80	NE	22	10			10ks			0.008	0.2	Light fog	Deutsche Seewarte.
Kiel			30.07	763.8	42.3	5.7	78	NE	18	8			5			0.028	0.7		Prof. G. Karsten.
Königsberg			30.07	763.8	31.3	— 0.4	88	NE	11	5						0.039	0.98	Snowing	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			30.03	762.8	38.7	3.7	95	E	4	2			10			0	0		Prof. Bruhns.
Münster			30.06	763.4	44.6	7.0	80	SE	4	2			6			0	0		Prof. E. Heis.
Posen			30.07	763.8	35.8	2.1	82	N	9	4			10			0	0	Cloudy	Dr. Mageuer.
Strasburg, (in Alsace)			29.90	759.4	39.6	4.2	95	NE	4	2			10			0.24	6.2		Dr. Schur.
Stuttgart			29.87	758.6	40.3	4.6	86	N					10			0.319	8.1		Mr. Wurth.
Thorn																			Dr. Hasenbalg
Treves, (Trier)			29.85	758.1	42.8	6.0	78	E	22	10			10			0.092	0.04	Foggy	Prof. [illegible]
Wusterow, Naval School			30.14	765.5	42.6	5.9	83	ENE	13	6			10			0.048	1.22	Cloudy	E. F[illegible]

Note.—In the originals the distinction between 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.	Corrected for instrumental errors. Inches.	Corrected for instrumental errors. Millimeters.	Reduced to sea-level. Inches.	Reduced to sea-level. Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	From—	From—	Inches.	Millimeters.	Weather.	Observer.
Athens			29.99	761.8	67.1	19.5		W										Clear	

Note.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			29.74	755.3	50.2	10.1	75	SSW	1.3	0.6			9	SE		0.343	8.7		
Mondovi			29.76	755.9	47.3	8.5	72	W			2		9			0.807	20.5		
Genoa			29.71	754.6	54.9	12.7	59	NE	0.7	0.3			10	S		0	0		
Pavia			29.73	755.1	49.6	9.8	85	SW			1		10			0	0		
Verona			29.67	753.5	51.1	10.6	85	W			2		10			0.413	10.5	Raining	
Padua			29.63	752.6	49.3	9.6	84	NNE	26.2	11.7			10	NE		0.311	7.9	Raining	
Parma																			
Bologna			29.69	754.2	48.2	9.0	64	NNW			1		10			0.906	23.0	Raining	
Leghorn			29.68	753.9	55.9	13.3	57	NW	9.8	4.4			10			0	0		
Urbino																			
Ancona			29.68	753.9	56.3	13.5	77	NNE			4		10			0.177	4.5		
Siena			29.68	753.8	50.7	10.4	89	SE	3.1	1.4			10	W		0.008	0.2		
Rome			29.71	754.7	64.6	18.1	66	SW	9.4	4.2			5			0	0		
Naples, O. U.			29.80	756.9	68.0	20.0	57	SW			4		7	W		0.591	15.0		
Lecce			29.84	757.8	65.5	18.6	72	S	21.7	9.7			10	S		0	0		
Cosenza			29.87	758.6	61.3	16.3	76	SE			2		10	S		0.276	7.0	Raining	
Catania, (Sicily)																			
Riposto			29.85	758.2	66.2	19.0	83						9			0.004	0.1		
Palermo			29.84	757.8	68.0	20.0	60	W	4.3	1.9			10			0	0		
Sub-Series.																			
Naples, S. R.			29.84	757.9	62.4	16.9	73	W			6		..ck	SW		0.453	11.5		Prof. F. Brioschi.

NOTE.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for twenty-four hours. The altitude of Mondovia is 555 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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	760.4	46.0	7.8		E			4								
Groningen			30.01	762.3	42.4	5.8		E			4								
Helder			30.01	762.2	41.7	5.4		E			4								
Utrecht			29.93	760.1	44.1	6.7		E			4		5					Cloudy	

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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			30.20	767.0	41.0	5.0	51	Calm	0	0			1			0	0		
Christiania			30.30	770.8	36.7	2.6	55	Calm	0	0			0			0	0	Hazy	
Tromsö			30.19	766.9	36.3	2.4	85	S			6		10			0.217	5.5		

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

PORTUGUESE SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.27	768.9	62.8	17.1	77	SW	8.7	3.9			5			0	0		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon.

RUSSIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			29.97	761.3	43.9	1.6	89	N	9	4			10						Astronomical Obs.
Wilna			29.95	760.8	28.2	— 2.1	87	N	8	3.5			10						Astronomical Obs.
Dorpat			30.17	766.2	31.3	— 0.4	79	NNE	7	3			0						Physical Cabinet.
St. Petersburg			30.15	765.8	34.2	1.2	90	NE	2	1			10						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kieff			29.75	755.7	36.5	2.5	91	NW	9	4			10					Light rain	Physical Cabinet.
Nikolaiev			29.91	759.7	49.5	9.7	60	W	13	6			5						Kurdakof.
Kertch			29.89	759.3	54.9	12.7	74	WNW	7	3			7						Lagorio.
Moscow			29.77	756.2	30.7	— 0.7	100	N	10	4.5			10						Meteorological Obs.
Lugan			29.63	752.4	63.9	17.7	73	SW	20	9			7					Thunder-storm.	Meteorological Obs.
Archangel			30.00	761.9	28.0	— 2.2	87	N	17	7.5			4						Ogorodnikof.
Tiflis	28.46	722.9	29.84	757.8	66.6	19.2	57	SE	8	3.5			8						Physical Obs.
Astrakhan			29.90	759.5	57.0	18.9	69	SE	8	3.5			10						Sebastianof.
Kasan			29.71	754.6	36.0	2.2	96	SSW	0	0			10					Heavy fog	Physical Cabinet.
Orenburg			30.19	766.9	44.8	7.1	68	SE	8	3.5			10						Tschernischef.
Ekaterinburg	28.72	729.5	29.76	755.8	32.0	0.0	89	W	4	2			10					Snowing	Meteorological Obs.
Kasaly			30.34	770.7	42.6	5.7	85	E	8	3.5			0						Bobrof.
Tashkend																			Michelson.
Barnaul			30.49	774.5	18.3	— 7.6	78	W	13	6			4						Meteorological Obs.
Yeniseisk			29.97	761.2	18.0	— 7.8	92	S	11	5			10					Snowing	Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.07	763.7	52.2	11.2	71	Calm	0	0			1						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. The elevation of Tiflis is 409. meters, or 1,341.8 feet; Ekaterinburg, 306.47 m., or 1,005.27 ft.; Tashkend, m 494.27, or 1,621.37 ft.; Irkutsk, 392. m., or 1,286. ft.; Nertchinsk, 592.07 m., or 1,942.27 ft.; Oorga, 1,281.07 m., or 4,202.67 ft.

SPANISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			30.12	765.0	61.2	16.2	51	NW	8.3	3.7		2	1	NW		0	0		Royal Observatory.
San Fernando			30.20	767.1	66.6	19.2	50	NNW	13.2	5.9		1	2	N	NNW	0	0		The Naval Observatory.

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

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Haparanda			30.35	770.9	30.9	— 1.6	96	N			2		10			0	0		
Umea			30.34	770.7	34.7	1.5	83	NW			2		2			0	0		
Hernosand			30.37	771.4	33.8	1.0	72	NNE			2		1			0	0		
Stockholm			30.23	767.7	35.4	1.9	71	NNE			2		3			0.012	0.3		
Wisby			30.23	767.8	37.0	2.8	82	E			4		7			0.055	1.4		
Sub-Series.																			
Upsala			30.29	769.4	36.0	2.2	80	NNE	8.9	4.0			2	ENE	NE				Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.45	722.6	29.92	759.9	53.8	12.1	73	SSW			2		8			0.520	13.2	Cloudy	The Observatory.
Zurich	28.20	716.3	29.87	758.6	46.2	7.9	96	SE			1		10			0.945	24.0	Raining	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —3.5mm.; Thermometer, +°1.6; Relative Humidity, —1 per cent.

Note.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y			30.00	762.0	77.0	25.0	59	WSW			2		4k		SW	0	0		Prof. C. V. A. Van Dyck
Constantinople			30.00	762.0	57.6	14.2	71	SW	7.8	3.5			2		NW	0	0		
Fao, (Persian Gulf)			30.08	764.0	82.9	28.3		SE			3		0					Clear	
Salonica					63.1	17.3		NW			2		2			Blank	Blank		
Valona			29.78	756.4	65.7	18.7		S			3		10					Cloudy	
Varna			29.96	761.0	60.8	16.0		E			2		0					Clear	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario			30.20	767.1	33	0.6		Calm	0	0			8s		N	0	0	Cloudy	
Chatham, N. B.			29.59	751.6	39	3.9	88	SW	3	1.3		2k	8ks	SW	SW	0.31	7.9	Cloudy	
Charlottetown, P. E. Island			29.61	752.1	40	4.4	84	SW	5	2.2			10s			0.255	6.48	Cloudy	
Fort Garry, Manitoba			29.59	751.6	31	— 0.6	95	SE	9	4.0			10n			0.020	0.51	Cloudy	
Halifax, N. S.			29.63	752.6	40	4.4	86	W	10	4.5		8ck	1ks	NW	W	0.448	11.38	Fair	
Kingston, Ontario			30.19	766.8	31	— 0.6	73	Calm	0	0		8c	0			0	0	Fair	
Montreal, Quebec			30.05	766.3	33	0.6	71	NW	20	8.9		2ck	5ks			0	0	Fair	
Ottawa, Ontario			30.12	765.0	33	0.6	65	W	11	4.9		10k	0	W		Inap.	Inap.	Cloudy	
Parry Sound, Ontario			30.12	765.0	29	— 1.7	81	NE	11	4.9		5k	5ks	NE		0.06	1.5	Cloudy	
Port Dover, Ontario			30.13	765.3	37	2.8	71	NE	2	0.9		10k	0			0	0	Cloudy	
Port Stanley, Ontario			30.07	763.8	39	3.9	88	E	18	8.0			10n		E	0	0	Cloudy	
Quebec, Quebec			29.89	759.2	33	0.6	71	S	23	10.3			10n		SW	0.05	1.3	Cloudy	
Saugeen, Ontario			30.11	764.8	33	0.6	94	SE	5	2.2			10s			0.12	3.0	Light rain	
Stayner, Ontario			30.12	765.0	31	— 0.6	85	SE	5	2.2			10n		SE	0.02	0.5	Threatening	
Sydney, C. B.			29.60	751.8	47	8.3	83	SW	3	1.3		2c	2s		SW	0.034	8.6	Clear	
Toronto, Ontario			30.14	765.5	34	1.1	87	Calm	0	0			10n		W	Inap.	Inap.	Cloudy	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 —lb.	Clouds. Amount. Up'er —lb.	Clouds. Amount. Low'r —lb.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.07	763.8	42	5.6	83	NW	9	4.0		5k	2ks	W	W	0.05	1.3	Cloudy	
Alpena, Mich.			29.96	761.0	35	1.7	90	SE	16	7.2			10n		SE	0.09	2.3	Light snow	
Atlantic City, N. J.			30.20	767.1	42	5.6	66	W	8	3.6		2cs	0	W		0	0	Clear	
Augusta, Ga.			30.24	768.1	45	7.2	84	Calm	0	0		0	Haze			0	0	Clear	
Baltimore, Md.			30.25	768.3	44	6.7	67	NW	2	0.9		2c	Sm'e			0	0	Fair	
Barnegat, N. J.			30.19	766.8	45	7.2	60	W	13	5.8		0	0			0	0	Clear	
Benton, Montana	26.97	685.0	29.77	756.1	32	0.0	79	SW	2	0.9		5ck	0			0	0	Fair	
Bismarck, Dakota	27.94	709.7	29.60	751.8	33	0.6	79	NW	8	3.6			10s			0	0	Cloudy	
Boston, Mass.			30.00	762.0	43	6.1	67	W	16	7.2		0	2ks		SW	Inap.	Inap.	Fair	
Breckenridge, Minn.			29.67	753.6	27	—2.8	77	S	4	1.8		5c	2s	S	NW	0	0	Cloudy	
Buffalo, N. Y.			30.13	765.3	36	2.2	72	Calm	0	0		Haze	5s	SW	SW	0	0	Cloudy	
Burlington, Vt.			30.08	764.0	37	2.8	71	NW	6	2.7		2k	5s	NW		0	0	Cloudy	
Cairo, Ill.			29.90	759.4	57	13.9	52	S	12	5.4		5c	0	NW		0	0	Fair	
Cape Hatteras, N. C.			30.17	766.3	60	15.6	70	N	4	1.8		2c	Haze	N	N	0	0	Fair	
Cape Henry, Va.			30.24	768.1	57	13.9	58	N	8	3.6		2c	0			0	0	Clear	
Cape May, N. J.			30.23	767.8	47	8.3	55	W	12	5.4		0	0			0	0	Clear	
Charleston, S. C.			30.24	768.1	57	13.9	57	W	2	0.9		0	Sm'e			0	0	Clear	
Cheyenne, Wyoming	23.81	604.8	29.75	755.6	37	2.8	63	NW	8	3.6			10s		NW	0	0	Cloudy	
Chicago, Ill.			29.69	754.1	51	10.6	59	S	12	5.4			10s			0	0	Cloudy	
Cincinnati, Ohio			29.92	760.0	49	9.4	85	SE	7	3.1		8cs	0	E		0	0	Fair	
Cleveland, Ohio			30.02	762.5	40	4.4	68	SE	10	4.5			10ks		SE	0.02	0.5	Cloudy	
Colorado Springs, Col.	23.83	605.3	29.70	754.4	38	3.9	55	S	4	1.8		0	0			0	0	Clear	
Corsicana, Tex.			29.92	760.0	70	21.1	75	S	16	7.2		2k	0	S		0	0	Fair	
Davenport, Iowa			29.62	752.3	53	11.7	54	S	8	3.6		10s	Fog			0	0	Cloudy	
Denison, Tex.			29.79	756.7	69	20.6	79	SW	20	8.9			10d, ks		SW	0	0	Cloudy	
Denver, Col.	24.58	624.3	29.80	756.9	35	1.7	63	S	4	1.8		2k	0	NW		0	0	Clear	
Detroit, Mich.			29.94	760.5	40	4.4	73	E	6	2.7			10s			0	0	Cloudy	
Dodge City, Kan.	27.02	686.3	29.25	742.9	45	7.2	60	S	4	1.8		2c	0			0	0	Fair	
Dubuque, Iowa			29.63	752.6	45	7.2	76	S	4	1.8			10s			0	0	Cloudy	
Duluth, Minn.			29.77	756.1	36	2.2	70	SE	8	3.6			10s			0	0	Cloudy	
Eastport, Me.			29.77	755.9	42	5.6	66	NW	15	6.7		0	5s			0.24	6.1	Fair	
Erie, Pa.			30.06	763.5	40	4.4	73	SE	10	4.5		Haze	Haze			0.06	1.5	Hazy	
Escanaba, Mich.			29.84	757.5	36	2.2	90	E	16	7.2			10s		E	0.09	2.3	Cloudy	
Fort Gibson, I. T.			29.70	754.4	68	20.0	90	S	16	7.2		0	8s		SW	0	0	Fair	
Fort Sill, I. T.	28.55	725.2	29.61	752.1	62	16.7	88	Calm	0	0		0	0			0	0	Clear	
Fort Sully, Dakota	28.04	712.2	29.69	754.1	41	5.0	64	NW	11	4.9		0	8s			0	0	Cloudy	
Galveston, Tex.			30.06	763.5	71	21.7	95	SE	5	2.2		2ck	0	SW		0	0	Fair	
Grand Haven, Mich.			29.80	756.9	39	3.9	77	SE	10	4.5			10s			0	0	Cloudy	
Indianapolis, Ind.			29.85	758.2	48	8.9	62	SE	10	4.5		5cs	Sm'e	W		0	0	Fair	
Indianola, Tex.			30.05	763.3	70	21.1	100	S	8	3.6		1c	2s	SW	SW	0.01	0.3	Fair	
Jacksonville, Fla.			30.25	768.3	48	8.9	85	E	2	0.9		0	Fog			0	0	Fair, frost	
Keokuk, Iowa			30.57	751.1	56	13.3	51	S	4	1.8		10k	0	S		0	0	Cloudy	
Key West, Fla.			30.14	765.5	78.6	25.9	82	E	11	4.9		0	5ks			0.06	1.5	Fair, hazy	
Kittyhawk, N. C.			30.25	768.3	57	13.9	69	E	4	1.8		2c	0			0	0	Clear	
Knoxville, Tenn.			30.20	767.1	38	3.3	80	E	1	0.4		1cs	Fog	W		0	0	Foggy	
La Crosse, Wis.			29.67	753.6	37	2.8	71	N	8	3.6			10s			0	0	Cloudy	
Leavenworth, Kan.			29.33	745.0	60	15.6	70	S	5	2.2			10s			0	0	Cloudy	
Lexington, Ky.	28.95	735.3	30.06	763.5	48	8.9	56	S	16	7.2		8cs	0	SW		0	0	Cloudy	
Long Branch, N. J.			30.17	766.3	45	7.2	68	W	12	5.4		0	5ks		W	0	0	Fair	
Louisville, Ky.			29.96	761.0	51	10.7	59	SE	10	4.5		2cs	Sm'e			0	0	Fair	
Lynchburg, Va.			30.23	767.8	43	6.1	75	W	1	0.4		0	0			0	0	Clear	
Malone, N. Y.			30.06	763.5	33	0.6	69	W	8	3.6			5s		NW	0.05	1.3	Cloudy	
Marquette, Mich.			29.85	758.2	36	2.2	90	E	8	3.6			10n		NE	0.07	1.8	Light snow	
Memphis, Tenn.			30.02	762.5	59	15.0	64	S	10	4.5		8k	0	SW		0	0	Cloudy	
Milwaukee, Wis.			29.73	755.1	46	7.8	92	E	9	4.0			Fog			0	0	Foggy	
Mobile, Ala.			30.20	767.1	49	9.4	85	N	3	1.3		0	Sm'e			0	0	Clear	
Montgomery, Ala.			30.24	768.1	45.5	7.5	84	Calm	0	0		0	Sm'e			0	0	Clear	
Morgantown, W. Va.			30.14	765.5	39	3.9	81	Calm	0	0		10c	Haze	SW		0	0	Cloudy, frost	
Mt. Washington, N. H.	23.37	593.6	29.73	755.1	8	—13.3	100	NW	96	42.9			Fog			1.02	25.9	Foggy	
Nashville, Tenn.			30.05	763.3	55	12.8	59	SE	4	1.8		2cs	0			0	0	Clear	
New Haven, Conn.			30.10	764.5	45	7.2	60	W	12	5.4		Haze	5cs			Inap.	Inap.	Fair	
New London, Conn.			30.10	764.5	45	7.2	57	W	11	4.9		0	0			0	0	Clear	
New Orleans, La.			30.14	765.3	60	15.6	82	SE	5	2.2		8c	Sm'e	W		0	0	Fair, foggy	
Newport, R. I.			30.07	763.8	43	6.1	75	W	20	8.9		0	0			0	0	Clear	
New York, N. Y.			30.17	766.3	42	5.6	59	W	6	2.7		5k	0	W		0	0	Fair	
Norfolk, Va.			30.25	768.3	51.5	10.8	73	SE	1	0.4		2c	Sm'e			0	0	Fair	
North Platte, Neb.	26.77	680.0	29.31	769.9	42	5.6	58	Calm	0	0		0	5s			0	0	Fair	
Omaha, Neb.	28.50	723.9	29.56	750.8	39	3.9	91	N	12	5.4		10cs	0	W		0	0	Cloudy	
Oswego, N. Y.			30.15	765.8	40	4.4	64	N	4	1.8			10s		NW	0.05	1.3	Cloudy	
Peck's Beach, N. J.			30.23	767.8	39	3.9	71	NW	8	3.6		0	0			0	0	Clear	
Pembina, Dakota			29.59	751.6	34	1.1	94	SW	12	5.4			10s			0.05	1.3	Cloudy	
Philadelphia, Penn.			30.20	767.1	42	5.6	58	NW	16	7.2		2c	Sm'e			0	0	Fair	
Pike's Peak, Colorado	17.54	445.5	29.75	755.6	16	—8.9	48	W	36	16.1		2c	0	W		0	0	Fair	
Pittsburgh, Penn.			30.13	765.3	37	2.8	80	E	3	1.3			10s			0	0	Cloudy	
Port Huron, Mich.			29.91	759.7	36	2.2	70	SE	5	2.2			10s		W	0	0	Cloudy	
Portland, Me.			29.94	760.5	43	6.1	51	W	11	4.9		5k	0	NW		0	0	Fair	
Portland, Oregon			30.00	762.0	47	8.3	85	Calm	0	0			10s			0.38	9.7	Cloudy	
Punta Rassa, Fla.			30.18	766.6	71.2	21.8	85	NE	10	4.5		5ck	2s	NE		0	0	Cloudy	
Rochester, N. Y.			30.15	765.8	38	3.3	81	W	4	1.8			10s		W	0	0	Cloudy	
Salt Lake City, Utah	25.46	646.7	29.79	756.7	40	4.4	92	NW	1	0.4			10s			0.27	6.9	Cloudy	
Sandy Hook, N. J.			30.15	765.8	46	7.8	61	NW	22	9.8		8k	0	NW		0	0	Cloudy	
San Diego, Cal.			29.94	760.5	63	17.2	88	Calm	0	0		0	0			0	0	Clear	
San Francisco, Cal.			30.03	762.7	55	12.8	80	SW	4	1.8		0	0			0.22	5.6	Clear	
Santa Fe, N. M.	23.13	587.5	29.67	753.6	49	9.4	56	N	2	0.9		5cs	Haze			0	0	Fair	
Savannah, Ga.			30.26	768.6	53	11.7	59	Calm	0	0		0	Sm'e			0	0	Clear	
Shreveport, La.			30.05	763.3	67	19.4	92	S	15	6.7		10k	0	SW		0	0	Cloudy	
Smithville, N. C.			30.25	768.3	55	12.8	57	N	6	2.7		1c	0			0	0	Fair	
Springfield, Mass.			30.07	763.8	45	7.2	53	W	12	5.4		5cs	5s	NW	W	0.03	0.8	Fair	
St. Louis, Mo.			29.74	755.4	57	13.9	40	S	10	4.5		2c	0			0	0	Clear	
St. Marks, Fla.			30.22	767.6	42	5.6	91	Calm	0	0		2cs	0			0	0	Fair	
St. Paul, Minn.			29.66	753.4	33.5	0.8	84	Calm	0	0		2ck	2s	W		0	0	Fair	
St. Paul's Island, Alaska															W				
Squa Beach, N. J.			30.13	765.3	40	4.4	63	W	4	1.8		0	8ks			0	0	Cloudy	
Toledo, Ohio			29.93	760.2	41	5.0	65	E	5	2.2			10s			0	0	Cloudy	
Tucson, Arizona																			
Tybee Island, Ga.			30.24	768.1	54	12.2	79	W	2	0.9		0	Haze			0	0	Hazy	
Vicksburg, Miss.			30.16	766.1	56	13.3	80	SE	6	2.7		2c	0	SW		0	0	Fair	
Virginia City, Montana	24.02	610.1	29.50	749.3	23	—5.0	73	Calm	0	0		2k	0	W		0	0	Fair, frost	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.25	768.3	38	3.3	90	Calm	0	0		2ck	Fog	W		0	0	Fair	
Wilmington, N. C			30.23	767.8	54	12.2	54	N	4	1.8		5cs	Sm'e	NW		0	0	Fair	
Wood's Hole, Mass.			30.06	763.5	46	6.7	60	NW	20	8.9		0	0			0	0	Clear	
Wytheville, Va.	27.82	706.6	30.06	763.5	37	2.8	71	Calm	0	0		0	0			0	0	Clear	
Yankton, Dakota	28.39	721.1	29.69	754.1	35	1.7	74	NW	2	0.9		8cs	5s	SW	SW	0	0	Cloudy	
Yuma, Arizona			29.82	757.4	59	15.0		Calm				2c	0			0	0	Fair	
Sub-Series.																			
Bridgetown, B'b'does, W. I					80	26.7	90	SE	8	3.6		2c	5s	W	NE	0	0	Fair.	E. Racker.
Pointe-aPitre, G'd'loupe, do			29.99	761.7	78	25.6	83	E				0	2ks			0.46	11.7	Clear	L. V. Bigard.
Havana, Cuba, W. I.			30.11	764.8	76	24.4	90	Calm	0	0		1c	1k	SW	E	0	0	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W.			30.24	768.1	79	26.1	78	Calm	0	0		5c	1s		NE	0	0		James Gall.
St. Thomas, St. T., W. I.			30.24	768.1	81	27.2	70	E	7	3.1		2c	2k	E	E	0.01	0.3	Clear	W. S. Cameron.
Santiago de Cuba, W. I.			29.87	758.9	80	26.7	78	NNE	7.2	3.2		5k	0	NE				Fine	Robert Mason.
St. Georges, Bermudas			30.10	764.5	72.5	22.5	61	NW	10.6	4.7		0	8k		NW	0.070	1.78	Clear	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.			30.05	763.3	18	—7.8	100	Calm	0	0		6k	0	E		0	0		J. Fortescue.
St. John's, Newfoundland																			John Delaney.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Clifton, Jamaica, W. I.	27.27	692.6	30.06	763.5	69	20.6	84	NNE	1.2	0.5		8c	2k			0	0	Fine	C. Partridge.
Navassa																			
Medellin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			30.11	764.8	39	3.9	32	SE	8	3.6			10n			0	0	Cloudy	H. M. Redington.

Marine Series.	True course towards.	Hourly rate in knots.	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—	State of ocean.	Direction of swell from—	Weather.	Observer.
Steamer Leipzig, N. 49° 46′, W. 12° 13′.	E		29.97	761.2	55.6	13.1		NE					..s		NE	L. swell		Clearing	
Steamer Hibernian, N. 51° 25′, W. 11° 12′.	SE	10	29.81	757.2	55	12.8		N			3		..c		SW	Smooth		Clear	

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,862.4 (?) ft., or 2,091.6 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in. The barometer of the Hibernian has an error of —0.18, as determined from the isobarometric charts of the Signal Service.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 29, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.04	763.0	71.6	22.0	45	Calm			0		1			0	0		Charnot.
Algiers			30.03	762.7	69.8	21.0	67	W			3		1			0	0		Peter.
La Calle																			Kuntz.
Tunis			29.90	759.5	68.2	20.1	54	NW			5		3			0.055	1.4	Cloudy	Jacques.
Sfax			29.94	760.5	73.0	22.8	37	NW			4		2			0	0	Cloudy	Chauvey.
Saïda			30.06	763.5	66.2	19.0	42	WNW			1		0			0	0		Grosjean.
Tebessa			29.98	761.6	72.8	22.4		NW			4		3			0	0		Colin.
Geriville			30.08	764.1	59.0	15.0	39	N			2		1			0	0		Bernadach.
Laghouat			30.09	764.3	66.2	19	30	NW			2		0			0	0		Simon.
Biskra			30.07	763.6	73.0	22.8	32	NW			4		0			0	0		Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			29.94	760.5	43.2	6.2	81	NE			2		8			0.094	2.4	Raining	Prof. Ivan Stosir.
Buda-Pesth																			I. R. Cen. M. I., Hungary
Cracow			30.15	765.9	32.9	0.5	90	W			3		10			0.012	0.3		I. R. Observatory.
Eperies			30.03	762.8	35.6	2.0	78	N			2		10			0	0		Julius Mikolik.
Gratz	28.73	729.8	29.97	761.1	40.6	4.8	93	WSW			2		10						Andreas Rospini.
Hermannstadt	28.46	722.8	29.91	759.6	43.9	6.6	87	ESE			1		10			0.079	2.00		Prof. Reissenberger.
Kremsmünster	28.64	727.5	30.03	762.8	36.5	2.5	84	E			5		8			0.138	3.5		Prof. C. Wagner.
Lemberg			30.13	765.2	30.6	− 0.8	86	E			2		9			0	0		Dr. T. Stanecki.
Nyiregyhaza			29.97	761.2	43.2	6.2	74	N			2		8			0	0		Habzsuda Daniel.
Pola			29.84	758.0	53.2	11.8	58	NE			3		9ks			0.100	2.53		I.R. Hydrogr., Inc Office
Szegedin			29.91	759.6	44.2	6.8	84	NW			2		10			0.110	2.80		Karl Stancel.
Trieste			29.83	757.6	49.1	9.5	66	ENE			4		10			0	0		Prof. V. Farolfi.
Vienna			30.01	762.3	40.3	4.6	78	N			1		10			0.028	0.7		I. R. Central Institute

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 9 p. m., local time. The elevation of Gratz is 313.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			30.01	763.3	44.1	6.7	72	E			4		10			0	0		Royal Observatory

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

BRITISH SERIES.

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

Stations	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.23	767.8	47.2	8.4		SE	16	8.5			6			0.080	2.03	Showery	William Boswell.
Ardrossan			30.13	765.3	49	9.4		ESE			4		7					*D. clouds	Wm. McNeil.
Armagh Observatory			30.05	763.3	47.4	8.6		SSE	6	2.7			10					Gloomy	S. Cali, for Dr. Robinson.
Bidston, Liverpool Obs.			30.09	764.4	47.0	8.3		ESE			2		10					Overcast	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.94	760.5	49.8	9.9		SE			2		10					Overcast	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbados)			29.94	760.5	84.0	28.9		SE			1		5					*D. clouds	Sergt. G. H. Hunt.
Cambridge Observatory			30.09	764.3	48.8	9.3		E			2		10					Overcast	H. Todd.
Cape Good Hope Obs.			30.11	764.8	67.8	19.9	76	WNW	10	4.5			10						The Staff, for E. J. Stone.
Cardington			30.10	764.5	47.0	8.3		NE			1		9					Overcast	John McLaren.
Carlisle			30.14	765.5	47.1	8.4		S			1		10			0	0	Overcast	T. Bell, for J. Cartmell.
Chatham, School M. E.			30.10	764.5	47.0	8.3		E			2		10						Capt. C. Fellowes, R.E.
Dartmoor	28.58	725.9	29.95	760.7	42.5	5.8		E			2		10					Overcast	R. E. Power.
Donaghadee			30.08	764.7	49	9.4		SSE			4		5					*D. clouds	J. Mac Gowan, Jr.
Dover			30.05	763.3	47	8.3		ENE			4		7						J. Costello.
Eccles, (near Manchester)			30.10	764.5	48.1	8.9		E	4.4	2.0			9					Gloomy	Thomas Mackereth.
Falmouth Observatory			30.09	762.0	50.5	10.3		ESE	19	8.5			8					Overcast	The Staff.
Fort Napier, (Natal)	27.59	700.8	29.82	757.4	89.6	32.1		NE			2		0					Clear	Pvt. G. Salmon, A. H. C. Corps.
Free Town, (Sierra Leone)			29.93	760.2	86	30.0		Calm					6						
Galway, Queen's College																			B. G. Clare, for Prof. Carey.
Gibraltar, (Mediterranean)			30.09	764.3	69.0	20.6		W			1		0					Clear	Sergt. E. G. Baker.
Glasgow Observatory			30.14	765.5	48.0	8.9		E			1		10					Overcast	Lewis Stuart.
Great Yarmouth			30.11	764.8	46	7.8		E			4		7					*D. clouds	G. T. Watson.
Greenwich Royal Obs.			30.08	764.0	47.6	8.7		E			2		10					Overcast	The Staff, for G. B. Airy.
Guernsey			29.98	761.5	53	11.7		ENE			2		7					*D. clouds	Dr. S. E. Hoskins, Dep.
Halifax, Moorside Obs.			30.14	765.5	46.1	7.8		ESE			2		10					Overcast	F. J. Page, for L. J. Cross.
Helston			29.96	761.0	56	13.3		E			3		4			0.06	1.5	*D. clouds	M. P. Moyle.
Holyhead			30.04	763.0	48	8.9		ESE			3		3					Clear	John Tilston.
Kew Observatory			30.07	763.8	47.7	8.7		E	20	8.9			9					Misty	The Staff.
Kingstown			30.02	762.5	50	10.0		ESE			4		10					Overcast	George Mitchell.
Leicester Museum			30.12	765.0	47.0	8.3		Calm			0		10					Ove cast	William J. Harrison.
Llandudno																		Very fine	Dr. James Nicol.
Malta, (Mediterranean)			29.82	757.4	69.8	21.0		NW			1		4k					*D. clouds	Fred Travis, Pvt. A.H.C.
Nairn			30.18	766.6	47	8.3		Calm			0		0						W. D. Penny.
Nassau, (Bahamas)			30.21	777.3	81.2	27.3		NE			4		6					Showery	Surg.-Maj. Henry.
Nottingham			30.12	765.0	48.0	8.9		ENE			3		9kd		ESE	0	0	Overcast	E. J. Lowe, F. R. S.
Oscott, St Mary's College			30.08	764.0	45.6	7.6		ESE			1		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			30.06	763.5	47	8.3		E			1		10					Overcast	J. Lucas, for R. Main.
Plymouth			30.01	762.2	50.0	10.0		ESE			3		10					Overcast	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.88	758.9	54	12.2		SE			5		10					Gloomy	W. Kennedy.
Saint Ann's Head			29.97	761.2	49	9.4		ESE			3		10					Overcast	John C. Walker.
Saint Helier, (Jersey)			29.89	761.7	55	12.9		E			3		8						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough			30.16	766.1	46.3	7.9		ESE			5		10					Overcast	F. Shaw.
Scutari cemetery, (Turkey)			29.83	757.7	67.4	19.7		SSE			1		5					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.12	765.0	50.2	10.1		E			1		10			0	0	Overcast	W. F. Cooper.
Silloth Rectory			30.12	765.0	50.0	10.0		E			3		5					*D. clouds	Rev. Francis Redford.
Stonyhurst Observatory			30.10	764.5	47.2	8.4		E			2		5			Blank	Blank		The Staff.
Stornoway, Lews C. (Hebr.)			30.13	765.3	48	8.9		SE			4		0					Clear	John Smith.
Stratfield Turgiss			30.07	763.8	46.4	8.0		NE			1		10					Overcast	Rev. Charles H. Griffith.
Streatley Vicarage			30.08	764.0	48.5	9.2		ENE			3		10						Rev. John Slatter.
Thurso			30.22	767.6	46	7.8		SE			3		7					*D. clouds	John Trotter.
Truro, Royal Institution			29.82	757.4	54	12.2		SE			4		8					Gloomy	W. Newcombe.
Valencia Observatory			29.78	756.4	53.4	11.9		SE	38	17.0			10					Overcast	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					48	8.9		SE			6		10			0	0		
Leith, Restalrig Park			30.18	766.6	49.7	9.8		E			1		8k			0	0	Cloudy	Andrew Gibb.
Monach Lt-house, (Shet. Is)			30.05	763.3	47	8.3		SE			4	10	0	SE		0	0		J. Youyclause.
North Unst, (Shetland Is)			30.32	770.1	46	7.8		SSE			6		0						

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,376 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			30.32	770.2	42.3	5.7	80	E			4		1						
Fanöe			30.33	770.3	40.1	4.5	76	E			4		4						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			29.97	761.1	45.4	8.0	92	SE			2		8						
Thorshavn, (Faröe)			30.19	766.9	47.3	8.5	83	SSE			4		5						
Vestervig			30.35	771.0	34.5	1.4	89	E			2		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols: not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			29.99	761.8	51.8	11.0	82	NE			1		10			0	0	Cloudy	Normal School.
Amiens			29.99	761.8	45.7	7.6	76	SE			6		10			0.102	2.6	Cloudy	Normal School.
Avignon			29.84	758.0	59.4	15.2	64	N			2		2		NNW	Inap.	Inap.	Clear	Normal School.
Bar-sur-Seine			29.97	761.1	47.3	8.5	83	E			1		10kn			0.098	2.5	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.96	760.9	53.6	12.0	83	N	2.0	0.9			10		NNW	0.028	0.7	Cloudy	Beaumette Observ[illegible]
Beauvais			30.07	763.6	42.1	5.6	85	ENE			1		10		ENE	0	0	Cloudy	Normal School.
Besançon			29.94	760.4	50.0	10	82	NE			3		8		NE	0.063	1.6	Cloudy	Normal School.
Bourg en Bresse			29.88	758.9	49.6	9.8	84	NW			2		..n		SE	0.283	7.2	Raining	Normal School.
Bourges			29.94	760.5	50.4	10.2	90	NNW			2		10		S	0.051	1.3	Cloudy	Normal School.
Brest			29.93	760.2	55.2	12.9	76	SE			2		10		N	0	0	Cloudy	Naval Observatory.
Caen			30.01	762.2	49.5	9.7	89	S			1		10		E	0	0	Cloudy	Normal School
Chartres																			Normal School.
Chaumont	28.78	730.9	29.95	760.6	44.6	7.0		ENE			2		10n		E	0	0	Cloudy	Normal School.
Commercy			30.01	762.2	42.1	5.6	84	ESE			2		10		ESE	0.055	1.4	Cloudy	Normal School.
Commune de Gréasque*			29.82	757.3	55.0	12.8	68	NW			4		2		NW	0	0		
Le Mans																			Normal School.
Louis-Le-Saulnier			29.89	759.2	51.4	10.8	86	N			2		2		N	0	0		Normal School.
Mâcon			29.90	759.4	50.2	10.1	92	Calm			0		5		S	0.094	2.4	Cloudy	Normal School.
Mirecourt			29.96	761.0	42.8	6.	85	N			2		10		S	0.04	1.	Cloudy	Normal School.
Orleans			29.97	761.2	48.9	9.4	89	N			2		8		N	0.110	3.8	Cloudy	Normal School.
Paris Observatory			30.01	762.3	44.4	6.9	87	NE			2		10			0.005	0.14	Foggy	National Observa[illegible]
Parthenay			29.95	760.6	53.6	12.	86	NE			2		8		SW	0.16	4.	Cloudy	Normal School.
La Roche sur Yon			29.99	761.8	55.8	13.2	73	W			2		5		SE	0	0	Cloudy	Normal School.
Rochefort, Observatory			29.99	761.8	57.9	14.4	57	NNE			1		8		SSE	0.087	2.2	Cloudy	Naval Observatory
Rouen			29.99	761.8	46.2	7.9	86	NNE			2		0			0	0	Clear	Normal School.
Saint Lo			30.02	762.4	52.7	11.5	85	E			1		9		W	0.04	1.		Normal School.
Villefranche			29.91	759.8	51.1	10.6	89	NE			2		10		W	0.12	3.	Cloudy	Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchésl.
Mont-Louis			30.23	767.7	46.2	7.9	75	SW	7.4	3.33			10		W	0.047	1.2		—. Faiguère.
Montsouris, Paris			30.00	761.9	44.1	6.7	93	NNE			2		10			0	0	Drizzling	Montsouris Observ[illegible]
Perpignan	†29.96	†760.9			57.2	14.0	83	W	2.7	1.07			10		NW	0	0		Dr. Fines.
Pic du Midi, (Summit) H. P.																			M. Baylac.
Pic du Midi, (Plantade) H.P.																			General de Nansou.
Saint Maur, (near Paris)			30.00	762.1	44.6	7.0	91	NE			1		10			0.004	0.1	Cloudy	E. Renou.
Tours			29.9[illegible]	761.2	53.6	12.0	80	NE			1		10		N	0.280	7.1		C. Marquet.
Versailles, (near Paris)			30.00	761.9	44.6	7.0	94	E			2		10			0	0	Rain & fog	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.07	763.8	61.0	16.1	91	ESE	6.5	2.9		0	1s			{ 0 / 0	0 / 0 }		H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 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. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also.

GERMAN SERIES.

Furnished by the coöperation of Prof. Geo. Neumayer, Superintendent Royal 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.02	762.6	39.2	4.0	70	NE	13	6			10			0	0		Prof. Hoh.
Berlin			30.24	768.1	35.6	2.0	78	E	18	8			8			0.020	0.73		Prof. Arndt.
Breslau			30.21	767.4	33.8	1.0	80	E	13	6			10			0.028	0.7		Dr. P. Neugebauer.
Carlsruhe			30.00	762.1	43.5	6.4	70	NE	11	5			10			0.008	0.2		A. Sonz.
Cassel			30.09	764.2	39.2	4.0	74	E	9	4			10			0.039	1.0		Dr. H. Möll.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society
Friedrichshafen	28.54	724.8	30.01	762.0	40.1	4.5	68	NE					10			0	0		M. Wilhelm.
Hamburg			29.24	768.0	43.3	6.3	63	ENE	22	10			0			0.059	1.5	Clear	Deutsche Seewarte.
Kiel			30.19	766.9	43.7	6.5	65	NE	13	6			5			0.059	1.5		Prof. G. Karst[illegible]
Königsberg			30.33	770.3	37.3	— 2.6	87	NE	11	5						0	0	Cloudy	Prof. E. Lu[illegible]
Köslin																			Dr. Tägert.
Leipsic			30.18	766.5	34.0	1.1	94	E	9	4			10			0.028	0.7	Graupeln	Prof. Bruhns.
Münster			30.15	765.9	43.3	6.3	74	NE	18	8			10			0	0		Prof. [illegible] Heis.
Posen			30.[illegible]6	768.5	32.0	0.0	100	ESE	29	13			10			0	0	Cloudy	Dr. Magener.
Strassburg, (in Alsace)			30.01	762.2	44.1	6.7	74	NE	4	2			10			0	0		Dr. Schur.
Stuttgart			30.02	762.6	41.7	5.4	74	E					10			0	0		Mr. Würth.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.98	761.6	43.5	6.4	65	E	22	10			10			0	0	Foggy	Prof. [illegible]esch.
Wustrow, Naval School			30.32	770.0	43.5	6.4	65	ENE	13	6			4k			0.059	0.15	Clear	E. F. [illegible]chütz.

Note.—In the originals the distinction between 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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens			29.79	756.6	65.7	18.7		SW										Covered	

Note.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			29.85	758.2	49.8	9.9	83	N	0	0			9	E		0	0		
Mondovi			29.85	758.1	43.7	6.5	87	NW			4		10			0	0		
Genoa			29.80	756.9	55.8	13.2	64	N	1.8	0.8			10			0	0		
Pavia			29.84	757.9	50.5	10.3	78	NE			1		9			0	0		
Verona			30.83	757.7	53.6	12.0	67	E			2		10			0.126	3.2	Raining	
Padua			29.84	757.9	51.6	10.9	60	ENE	10.5	4.7			10			0	0		
Parma																			
Bologna			29.84	757.8	53.4	11.9	59	WNW			1		6	W		0	0		
Leghorn					59.4	15.2	60	E	5.6	2.5			10			0	0		
Urbino																			
Ancona			29.80	756.8	54.7	12.6	76	NNE			4		10			0.256	6.5	Raining	
Siena			29.78	756.4	56.1	13.4	72	NE	0	0			9	W		Blank	Blank		
Rome			29.76	755.8	61.0	16.1	55	NNW	6.9	3.1			1			Blank	Blank		
Naples, O. U.			29.76	756.0	64.0	17.8	54	SW			4		6	W		0.315	8.0		
Lecce			29.73	755.2	66.0	18.9	50	W	7.4	3.3			7	S		0	0		
Cosenza			29.84	757.8	63.0	17.2	68	SE			1		10			0.024	0.6	Raining	
Catania, (Sicily)																			
Riposto			29.76	755.8	67.8	19.9	69	SE			2		4	E		0.004	0.1		
Palermo			29.69	754.0	70.2	21.2	46	W	11.9	5.3			8	W		0	0		
Sub-Series.																			
Naples, S. R.			29.79	756.6	62.4	16.9	70	W			2		..os	W		0.276	7.0		Prof. F. Brioschi.

NOTE.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for twenty-four hours. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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	765.1	44.1	6.7		E			4								
Groningen			29.16	766.0	40.6	4.8		E			4								
Helder			30.17	766.2	40.8	4.9		E			4								
Utrecht			30.10	764.4	40.8	4.9		ENE			4		10					Overcast	

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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			30.37	771.5	42.8	6.0	70	Calm	0	0			0			0	0		
Christiania			30.42	772.7	27.7	−2.4	96	S	0.7	0.3			10			0	0	Foggy	
Tromsö			29.93	760.2	42.8	6.0	82	S			6		10			0.898	22.8	Raining	

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.18	766.6	63.9	17.7	73	SW	11.2	5.0			8	W		0	0		The Observatory.

Note.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon.

RUSSIAN SERIES.

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

Stations.	Corrected for instrumental errors. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	From—	From—	Inches.	Millimeters.	Weather.	Observer.
Warsaw			30.21	767.3	31.1	— 0.5	98	NE	16	7			9						Astronomical Obs.
Wilna			30.30	769.6	30.7	— 1.7	61	NE	4	2			4						Astronomical Obs.
Dorpat			30.42	772.7	31.5	— 0.3	70	Calm	0	0			0						Physical Cabinet.
St. Petersburg			30.34	770.5	30.6	— 0.8	71	WNW	2	1			1						Central Physical Obs.
Kuopio																			Ch. Forsten.
Kiev			30.09	764.2	27.7	— 2.4	92	NE	11	5			10						Physical Cabinet.
Nikolaiev			30.05	763.3	44.4	6.9	65	N	17	7.5			4						Kurdakof.
Kertch			29.95	760.7	55.6	13.1	72	NNW	2	1			8						Lagorio.
Moscow			30.19	766.9	23.5	— 4.7	86	NW	10	4.5			6						Meteorological Obs.
Lugan			29.81	757.2	40.5	4.7	67	WNW	20	9			10						Meteorological Obs.
Archangel			30.00	761.9	27.0	— 2.8	87	W	10	4.5			10						Ogorodnikof.
Tiflis	28.52	724.3	29.89	759.3	66.6	19.2	35	N	10	4.5			2						Physical Obs.
Astrakhan			29.97	761.1	52.7	11.5	48	WNW	10	4.5			6			Blank	Blank		Sebastianof.
Kasan			29.78	756.5	21.9	— 5.6	85	NE	13	6			10						Physical Cabinet.
Orenburg			29.57	751.1	43.7	6.5	93	SE	10	4.5			7						Tchernischef.
Ekaterinburg	29.67	728.2	29.73	755.2	18.3	— 7.6	89	N	13	6			10					Snowing	Meteorological Obs.
Kasaly			29.95	760.7	49.1	9.5	70	WSW	8	3.5			3						Bobrof.
Tashkend																			Michelson.
Barnaul			30.12	765.1	30.7	— 0.7	60	SW	34	15			4						Meteorological Obs.
Yeniseisk			29.43	747.5	39.0	3.9	100	SSW	11	5			10					Snowing	Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.26	768.5	53.6	12.0	22	NNW	13	6			8						Physical Observatory
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

Note.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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.	Corrected for instrumental errors. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	From—	From—	Inches.	Millimeters.	Weather.	Observer.
Madrid			30.06	763.5	63.3	17.4	57	SW	14.1	6.3		8	0	W		0	0	Cloudy	Royal Observatory
San Fernando			30.13	765.3	70.0	21.1	49	NNW	11.0	4.9		4	0	N		0	0		The Naval Observatory

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

SWEDISH SERIES.

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

Stations.	Corrected for instrumental errors. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	From—	From—	Inches.	Millimeters.	Weather.	Observer.
Haparanda			30.11	764.7	28.8	— 1.8	96	SW			2		2			0	0		
Umea			30.22	767.6	31.6	— 0.2	85	Calm			0		1			0	0		
Hernosand			30.26	768.6	30.6	— 0.8	96	Calm			0		0			0	0		
Stockholm			30.23	767.7	36.7	2.6	82	W			2		10			0	0		
Wisby			30.39	771.9	37.0	2.8	89	SE			2		10			0	0		
Sub-Series.																			
Upsala			30.38	771.7	31.3	— 0.4	98	SW	10.3	4.6			10					Foggy	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.47	723.1	29.91	759.8	49.3	9.6	84	NW			1		8			0.008	0.2	Cloudy	The Observatory.
Zurich	28.33	719.5	30.02	769.4	39.0	3.9	87	NE			1		10			0	0	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —3.0mm.; Thermometer, —°0.7; Relative Humidity, +10 per cent.

Note.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Beirut, (Syria,) Lee Obs'y			29.97	761.2	74.1	23.4	52	NW			2		4n		SW	0	0		Prof. C. V. A. Van Dyck.
Constantinople			29.86	758.4	61.5	16.4	56	ESE	7.8	3.5			5		SW	0	0	Cloudy	
Fao, (Persian Gulf)			30.04	763.0	82.4	28.0		SE			3		0					Clear	
Salonica					60.1	15.6		N			1		10					Cloudy	
Valona			29.69	754.2	65.7	18.7		W			1		2						
Varna			29.88	759.0	59.0	15.0		NE			2		10					Cloudy	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Brockville, Ontario			30.08	764.0	32	0.0		NE	8	3.6			10s		NE	0	0	Cloudy	
Chatham, N. B.			30.00	762.0	28	— 2.2	84	NW	6	2.7		2k	2ks	NW	NW	0	0	Cloudy	
Charlottetown, P. E. Island			29.91	759.7	33	0.6	89	W	15	6.7			10s			0	0	Cloudy	
Fort Garry, Manitoba			29.99	761.7	25	— 3.9	94	NW	6	2.7		5k	5n	NW	NW	0.050	1.27	Cloudy	
Halifax, N. S.			29.91	759.7	34	1.1	71	NW	14	6.3			10ks		NW	0	0	Cloudy	
Kingston, Ontario			30.02	762.5	36	1.7	75	NE	9	4.0		10cs	0			0	0	Cloudy	
Montreal, Quebec			30.14	765.5	28	— 2.2	77	E	16	7.2		Haze	5ks	W		0	0	Cloudy	
Ottawa, Ontario			30.07	763.8	31	— 0.6	70	NE	12	5.4		8cs	0			0	0	Fair	
Parry Sound, Ontario			29.97	761.2	33	0.6	80	E	13	5.8		2k	8n	W	W	0.10	2.5	Cloudy	
Port Dover, Ontario			29.90	759.4	42	5.6	82	NE	6	2.7			10n		W	0	0	Light rain	
Port Stanley, Ontario			29.88	758.9	44	6.7	98	N	6	2.7			10n		N	0.32	8.1	Heavy rain	
Quebec, Quebec			30.16	766.1	28	— 2.2	94	Calm	0	0		0	0			0	0	Clear	
Saugeen, Ontario			29.86	758.4	38	3.3	96	SE	6	2.7			10n			0.03	0.8	Cloudy	
Stayner, Ontario			29.93	760.2	35	1.7	85	SE	6	2.7			10n		SE	0.12	3.0	Threatening	
Sydney, C. B.			29.76	754.9	40	4.4	78	W	11	4.9		8k	5ks	N	NW	0.02	0.5	Cloudy	
Toronto, Ontario			29.94	760.5	38	3.3	90	NE	6	2.7			10ks		SW	0	0	Cloudy	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.00	762.0	37	2.8	90	NW	3	1.3			8s			0	0	Cloudy	
Alpena, Mich.			29.82	757.4	41	5.0	82	E	14	6.3			10s		E	Inap.	Inap.	Cloudy	
Atlantic City, N. J.			29.98	761.5	56	13.3	68	SW	10	4.5		0	Haze			0	0	Clear	
Augusta, Ga.			30.20	767.1	51	10.6	79	Calm	0	0		5k	5s	W		0	0	Cloudy	
Baltimore, Md.			30.03	762.7	51	10.6	86	Calm	0	0		0	Fog			0	0	Foggy	
Barnegat, N. J.			29.98	761.5	56	13.3	74	W	5	2.2		0	Haze			0	0	Clear	
Benton, Montana	27.27	692.6	30.07	763.8	32	0.0	89	Calm	0	0			10s			0	0	Cloudy	
Bismarck, Dakota	28.26	717.8	29.95	760.7	27	—2.8	77	N	4	1.8			10s			0.01	0.3	Cloudy	
Boston, Mass.			30.08	764.0	43	6.1	75	NE	8	3.6			10s		SW	0.01	0.3	Cloudy	
Breckenridge, Minn.			29.98	761.5	28	—2.2	88	N	8	3.6			10s		N	0	0	Cloudy	
Buffalo, N. Y.			29.86	758.4	43	6.1	83	E	7	3.1			Haze			Inap.	Inap.	Cloudy	
Burlington, Vt.			30.09	764.3	35	1.7	70	N	3	1.3			10s			0	0	Cloudy	
Cairo, Ill.			29.86	758.4	67	19.4	84	S	8	3.6		2ck	8s	SW	SW	0	0	Cloudy	
Cape Hatteras, N. C.			30.10	764.5	64	17.8	73	W	8	3.6		5ck	0	W		0	0	Fair	
Cape Henry, Va.			30.08	764.0	65	18.3	58	SW	15	6.7		5c	Haze	W		0	0	Fair	
Cape May, N. J.			30.00	762.0	57	13.9	56	SW	12	5.4		0	0			0	0	Clear	
Charleston, S. C.			30.22	767.1	61	16.1	88	S	4	1.8		8ck	Sm'e			0	0	Fair	
Cheyenne, Wyoming	23.90	607.0	29.84	757.9	27	—2.8	88	N	12	5.4			10n			0.58	14.7	Light snow	
Chicago, Ill.			29.67	753.6	49	9.4	85	N	10	4.5			10s			0	0	Cloudy	
Cincinnati, Ohio			29.84	757.9	62	16.7	56	SE	4	1.8		2cs	0	SW		0	0	Clear	
Cleveland, Ohio			29.78	756.4	60.8	16.0	50	SE	16	7.2		2ck	5ks	SW	SW	0	0	Fa ning	
Colorado Springs, Col.	23.91	607.3	29.78	756.4	32	0.0	79	N	8	3.6		0	2s		SE	0.09	2.3	Cloudy	
Corsicana, Tex.			29.80	756.9	72	22.2	85	S	12	5.4		8k	0	S		0	0	Cloudy	
Davenport, Iowa			29.68	753.9	45	7.2	84	NE	8	3.6			10s			0.01	0.3	Cloudy	
Denison, Tex.			29.71	754.6	72	22.2	75	SE	18	8.0		0	8ks,d		SW	0	0	Cloudy	
Denver, Col.	24.68	626.9	29.90	759.4	37	2.8	81	Calm	6	0		2k	0			0.14	3.6	Clear, frost	
Detroit, Mich.			29.74	755.4	55	12.8	100	SE	4	1.8			10n			0.48	12.2	Rain, hail	
Dodge City, Kan.	27.13	689.1	29.40	746.7	41	5.0	73	NW	12	5.4			10s			0	0	Cloudy	
Dubuque, Iowa			29.72	754.9	44	6.7	76	N	8	3.6			10s			0.09	2.3	Threatening	
Duluth, Minn.			29.90	759.4	35	1.7	70	NE	8	3.6			10s		N	0	0	Cloudy	
Eastport, Me.			30.04	763.0	30	—1.1	67	N	13	5.8		5k	0	N		0	0	Fair	
Erie, Pa.			29.79	756.7	54	12.2	73	SE	8	3.6		9cs	Sm'e	SW		0	0	Cloudy	
Escanaba, Mich.			29.85	758.2	36	2.2	90	N	20	8.9			10s		N	0	0	Threatening	
Fort Gibson, I. T.			29.66	753.4	73	22.8	71	S	12	5.4			10ks			0	0	Cloudy	
Fort Sill, I. T.	28.49	723.6	29.55	750.6	65	18.3	90	S	10	4.6		2ck	0	S		0	0	Clear	
Fort Sully, Dakota	28.32	719.3	30.04	763.0	31	—0.6	69	N	5	2.2			10s			0	0	Cloudy	
Galveston, Tex.			29.98	761.5	74	23.3	90	S	7	3.1		0	2s			Inap.	Inap.	Fair	
Grand Haven, Mich.			29.68	753.9	48	8.9	96	NE	8	3.6			10n		W	0.27	6.9	Light rain	
Indianapolis, Ind.			29.76	755.9	63	17.2	72	S	8	3.6		0	10s			0	0	Cloudy	
Indianola, Tex.			29.97	761.2	74	23.3	95	S	10	4.5		0	8s		S	0	0	Cloudy	
Jacksonville, Fla.			30.24	768.1	58	14.4	87	Calm	0	0		4c	0			0	0	Fair	
Keokuk, Iowa			29.50	749.3	53	11.7	86	N	4	1.8			10s		N	0	0	Cloudy	
Key West, Fla.			30.14	765.5	78.6	25.9	82	NE	12	5.4		0	2ks		E	0	0	Fair, hazy	
Kittyhawk, N. C.			30.14	765.5	60	15.6	76	W	16	7.2		2c	0			0	0	Fair	
Knoxville, Tenn.			30.13	765.3	50	10.0	71	Calm	0	0		6cs	Fog	W		0	0	Cloudy	
La Crosse, Wis.			29.79	756.7	37	2.8	80	N	16	7.2			10s		N	0	0	Cloudy	
Leavenworth, Kan.			29.55	750.6	45	7.2	84	NE	4	1.8			10s			0	0	Cloudy	
Lexington, Ky.	28.89	732.8	29.96	761.0	61	16.1	50	S	16	7.2			10s			0	0	Cloudy	
Long Branch, N. J.			29.98	761.5	57	13.9	81	SW	4	1.8		2c	Haze	SW		0	0	Fair	
Louisville, Ky.			29.91	759.7	43	6.1	75	SW	18	8.0		10k	0	W		0.78	19.8	Cloudy	
Lynchburg, Va.			30.05	763.3	52	11.1	68	Calm	0	0		10cs	0	W		0	0	Cloudy	
Malone, N. Y.			30.04	763.0	33	0.6	74	NE	7	3.1		5k	5s	NW		0	0	Cloudy	
Marquette, Mich.			29.88	758.9	39	3.9	91	Calm	0	0			Fog			0.01	0.3	Foggy	
Memphis, Tenn.			29.95	760.7	69	20.6	84	S	10	4.5		8k	0	SW		0	0	Cloudy	
Milwaukee, Wis.			29.74	755.4	44	6.7	92	N	5	2.2			10ks		N	0.11	2.8	Threatening	
Mobile, Ala.			30.12	765.0	70	21.1	100	S	5	2.2			10s		S	0	0	Cloudy	
Montgomery, Ala.			30.17	766.3	60	15.6	94	E	1	0.4			10n		E	0.01	0.3	Light rain	
Morgantown, W. Va.			29.93	760.2	63	17.2	46	S	7	3.1		0	8s			0	0	Fair	
Mt. Washington, N. H.	23.68	601.5	30.04	763.0	26	—3.3	100	NW	20	8.9		10s	2s	NW	NW	0	0	Cloudy	
Nashville, Tenn.			29.98	761.5	65	18.3	73	S	6	2.7			10s		S	0	0	Cloudy	
New Haven, Conn.			30.00	762.0	45	7.2	75	NE	10	4.5		Haze	10s			0	0	Cloudy	
New London, Conn.			30.02	762.5	48	8.9	78	N	5	2.2			10s		SW	0	0	Cloudy	
New Orleans, La.			30.06	763.5	73.5	23.1	93	S	8	3.6			10s		S	0.01	0.3	Light rain	
Newport, R. I.			30.04	763.0	49	9.4	78	E	4	1.8			10s		E	0	0	Cloudy	
New York, N. Y.			29.97	761.2	52	11.1	79	NW	1	0.4		0	Fog			0	0	Clear	
Norfolk, Va.			30.08	764.0	58	14.4	70	S	10	4.5		5c	0	NW		0	0	Fair	
North Platte, Neb.	26.93	684.0	29.53	750.0	35	1.7	100	NE	14	6.3			10s			0.03	0.8	Cloudy	
Omaha, Neb.	28.63	727.2	29.70	754.4	38	3.3	80	N	21	9.4		8c	2s		NE	0	0	Cloudy	
Oswego, N. Y.			29.94	760.5	47	8.3	74	ESE	4	1.8			10s		NW	0	0	Threatening	
Peck's Beach, N. J.			29.98	761.5	56	13.3	74	W	16	7.2		0	Haze			0	0	Clear	
Pembina, Dakota			30.03	762.7	25	—3.9	100	NW	4	1.8		8c	0	NW		0	0	Cloudy	
Philadelphia, Penn.			29.99	761.7	51	10.6	86	NW	2	0.9		0	Fog			0	0	Clear	
Pike's Peak, Colorado	17.42	442.5	29.64	752.8	0	—17.8	70	W	34	15.2		0	8s		W	0.17	4.3	Cloudy	
Pittsburgh, Penn.			29.86	758.4	62	16.7	41	S	8	3.6		2k	5ks	W	W	0	0	Fair	
Port Huron, Mich.			29.76	755.9	47	8.3	92	SE	7	3.1			10s		W	0.54	13.7	Cloudy	
Portland, Me.			30.13	765.3	39	3.9	55	N	2	0.9			10s		W	0	0	Cloudy	
Portland, Oregon			30.13	765.3	40	4.4	100	Calm	0	0			Fog			0	0	Foggy	
Punta Rassa, Fla.			30.20	767.1	73	22.8	85	N	10	4.5		0	8			0	0	Clear	
Rochester, N. Y.			29.89	759.2	44	6.7	81	NE	4	1.8			Fog			Inap.	Inap.	Foggy	
Salt Lake City, Utah	25.72	653.3	30.05	763.3	35	1.7	69	S	1	0.4			10s			1.09	27.7	Cloudy	
Sandy Hook, N. J.			29.95	760.7	53	11.7	93	W	3	1.3		5s	Haze	W		0	0	Fair	
San Diego, Cal.			30.05	763.3	60	15.6	82	Calm	0	0		0	0			0	0	Clear	
San Francisco, Cal.			30.11	764.8	52	11.1	86	Calm	0	0		0	0			0.02	0.5	Clear	
Santa Fe, N. M.	23.13	587.5	29.67	753.6	52	11.1	11	NW	8	3.6		0	2ks		NW	0.06	1.5	Fair	
Savannah, Ga.			30.23	767.8	57	13.9	87	Calm	0	0		8ks	Fog	SW		0	0	Cloudy	
Shreveport, La.			29.95	760.7	71	21.7	90	S	5	2.2		10k	0	S		0	0	Cloudy	
Smithville, N. C.			30.21	767.3	58	14.4	87	W	3	1.3		0	0			0	0	Clear	
Springfield, Mass.			30.03	762.7	43	6.1	65	Calm	0	0			10ks		S	0	0	Cloudy	
St. Louis, Mo.			29.71	754.6	67	19.4	78	SW	24	10.7		0	5ks		W	0	0	Fair	
St. Marks, Fla.			30.19	766.8	60	15.6	94	Calm	0	0		5ck	2s	W		0	0	Fair	
St. Paul, Minn.			29.85	758.2	35	1.7	81	N	2	0.9			10s			0	0	Cloudy	
St. Paul's Island, Alaska																			
Sand Beach, N. J.			29.91	759.5	54	12.2	86	S	5	2.2		2c	Haze	SW		0	0	Fair	
Toledo, Ohio			29.72	754.9	61	16.1	82	SW	12	5.4			10s			0.05	1.3	Cloudy	
Tucson, Arizona																			
Tybee Island, Ga.			30.22	767.6	65	15.6	100	S	4	1.8			Fog		SW	0	0	Foggy	
Vicksburg, Miss.			30.19	766.8	71	21.7	90	SE	6	2.7			10s		S	0	0	Cloudy	
Virginia City, Montana	24.24	615.7	29.72	754.9	19	—7.2	60	E	1	0.4		1c	0	NW		0.07	1.8	Clear	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			30.01	764.8	47	8.3	88	W	4	1.8		0	Sm'c			0	0	Smoky	
Wilmington, N. C			30.19	766.8	56	13.3	80	SW	7	3.1		2c	0	NW		0	0	Fair	
Wood's Hole, Mass.			30.05	763.3	50	10.0	71	E	8	3.6			10s			0	0	Cloudy	
Wytheville, Va.	27.75	704.8	29.90	759.4	52	11.1	41	W	5	2.2		5cs	0	W		0	0	Fair	
Yankton, Dakota	28.62	726.9	29.94	760.5	31	−0.6	89	N	16	7.2			10n			0.05	1.3	Light snow	
Yuma, Arizona			30.06	763.5	55	12.8		Calm				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'does, W. I					80	26.7	90	SE	5	2.2		8ck	5s	NE	N	0	0	Fair	E. Racker.
Pointe-aPitre, G'd'loupe, do			30.00	762.0	79	26.1	82	E				0	5ks			0	0	Clear	L. V. Bigard.
Havana, Cuba, W. I.			30.13	765.3	77	25.0	90	Calm	0	0		2k	1ks	E	E	0	0	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W.			30.24	768.1	79	26.1	86	Calm	0	0		0	8n			0.05	1.3	Light rain	James Gall.
St. Thomas, St. T., W. I.			30.22	767.6	82	27.8	74	NE	6	2.7		2ck	5k	NE	NE	0.07	1.8	Fair	W. S. Cameron.
Santiago de Cuba, W. I.			29.87	758.7	79	26.1	74	NNW	10.8	4.8		2k	0	N		Blank	Blank	Fine	Robert Mason.
St. Georges, Bermudas			30.21	767.3	69.0	20.6	54	N	7.8	3.5		5s	5fk	N	N	0	0	Fair	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.			30.28	769.1	18	−7.8	100	E	6	2.7			10s			Inap.	Inap.		J. Fortescue.
St. John's, Newfoundland																			John Delaney.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Clifton, Jamaica, W. I.	27.26	692.4	30.05	763.3	68	20.0	84	NE	4.0	1.8		0	2k			0.46	11.7	Clear	C. Partridge.
Navassa																			
Medellin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			29.78	756.4	57.5	14.2	72	SE	4	1.8			5s			0	0	Fair	H. M. Redington.

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

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; 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, 6,862.3 (?) ft., or 2,091.6 (?) m.: Virginia City, 5,180 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.18 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 30, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer
Nèmours			30.02	762.5	78.1	25.6	26	Calm			0		0			0	0		Charnot.
Algiers			29.96	760.9	71.6	22.0	68	NW			2		2			0	0		Peter.
La Calle																			Kunts.
Tunis			29.82	759.2	68.0	20.0	47	NW			5		5			0.043	1.1	Cloudy	Jacques.
Sfax			29.93	760.2	76.6	24.8	35	W			4		2			0	0		Chauvey.
Saïda			30.04	762.9	72.5	22.5	34	WNW			1		0			0	0		Grosjean.
Tebessa			29.95	760.8	60.8	16.0		N			3		10			0	0	Cloudy	Colin.
Geriville			30.07	763.6	67.1	19.5	21	NW			3		1			0	0		Bernadach.
Laghouat			30.07	763.6	68.0	20	32	NW			2		0			0	0		Simon.
Biskra			30.00	762.0	70.1	24.5	31	NW			3		1			0	0		Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer
Agram			29.98	761.4	40.3	4.6	70	NE			1		8			0.126	3.2	Raining	Prof. Ivan Stozir.
Buda-Pesth																			I. R. Cen. M. I., Hun
Cracow			30.19	766.8	32.0	0.0	98	NNE			3		10			0	0		I. R. Observatory.
Eperies			30.07	763.7	37.0	2.8	75	N			3		10			0	0		Julius Mikolik.
Gratz	28.77	730.8	30.01	762.2	40.8	4.9	88	SW			2		10			0	0		Andreas Rospini.
Hermannstadt	28.52	724.4	29.97	761.3	43.3	6.3	69	ENE			1		10			0	0		Prof. Reissenberger.
Kremsmünster	28.68	728.4	30.07	763.8	35.6	2.0	75	ENE			4		10			0	0		Prof. C. Wagner.
Lemberg			30.16	766.1	31.6	—0.2	79	NE			2		10			Blank	Blank		Dr. T. Stanecki.
Nylregyhaza			30.03	762.7	42.4	5.8	70	NE			4		9			0	0		Habzsuda Danie
Pola			29.83	757.7	51.4	10.8	53	NE			3		9ks			0.011	0.27		I.R. Hydrograph
Szegedin			29.95	760.8	45.0	7.2	84	N			2		10			0	0		Karl Stancel.
Trieste			29.87	758.6	47.7	8.7	64	ENE			4		8			0	0		Prof. V. Farolfi.
Vienna			30.07	763.6	36.1	2.3	78	NNE			1		10			0	0		I. R. Central Institute

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 9 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer
Brussels			30.00	761.9	42.6	5.9	78	ESE			2		10			0	0		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.09	764.3	47.4	8.6		SSE	17	7.6			9			0.620	0.51	Gloomy	William Boswell.
Ardrossan			29.99	761.7	46	7.8		SE			4		8					Overcast	Wm. McNeil.
Armagh Observatory			29.87	758.7	45.7	7.6		ESE	9	4.0			10					Raining	S. Call, for Dr. Robinson.
Bidston, Liverpool Obs			29.94	760.5	43.4	6.3		ESE			4		10					Overcast	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.71	754.6	51.0	10.6		SE			3		9					*D. clouds	J. Dreyer.
Bradford			29.96	761.0	44.1	6.7		SE			1		10					Drizzling	J. McLandsborough.
Bridgetown, (Barbados)			29.93	760.2	84.4	29.1		SE			2		6					*D. clouds	Sergt. G. H Hunt.
Cambridge Observatory			29.99	761.7	43.0	6.1		E			1		10					Overcast	H. Todd.
Cape Good Hope Obs.			30.32	770.1	68.0	20.0	50	SSE	25	11.2			0						The Staff, for E. J. Stone
Cardington			29.98	761.5	44.0	6.7		E			1		10					Overcast	John McLaren.
Carlisle			30.01	762.2	44.5	6.9		SE			1		10			0	0	Overcast	T. Bell, for J. Cartmell.
Chatham, School M. E.			30.01	762.2	42.9	6.1		SE			1		0					Overcast?	Capt. J. Fellowes, R. E.
Dartmoor	28.41	721.6	29.78	756.4	45.2	7.3		E			5		10					Drizzling	R. E. Power.
Donaghadee			29.90	759.4	46	7.8		S			4		10					Overcast	J. Mac Gowan, Jr.
Dover			29.97	761.2	44	6.7		ESE			3		9						J. Costello.
Eccles, (near Manchester)			29.97	761.2	44.7	7.1		SE	6.8	3.0			10					Misty	Thomas Mackereth
Falmouth Observatory			29.77	756.1	51.1	10.6		SE	27	12.1			10					Drizzling	The Staff.
Fort Napier, (Natal)	27.66	702.6	29.96	759.4	70.4	21.3		E			3		10					Overcast	Pvt G. Salmon, A. H. C. Us.
Free Town, (Sierra Leone)			29.91	760.5	85	29.4		N					7						
Galway, Queen's College																			B. G. Clare, for Prof. Cur.
Gibraltar, (Mediterranean)			30.05	763.3	70.5	21.4		SW			5		0					Clear	Sergt. E. G. Baker.
Glasgow Observatory			29.99	761.7	45.7	7.6		E			3		10					Gloomy	Lewis Stuart.
Great Yarmouth			30.02	762.5	45	7.2		SE			4		6					*D. clouds	G. T. Watson.
Greenwich Royal Obs			29.97	761.2	42.2	5.7		SE			1		10					Overcast	The Staff, for G. B. Airy.
Guernsey			29.82	757.4	51	10.6		ESE			2		10					Raining	Dr. S. E. Hoskins.
Halifax, Moorside Obs			30.02	762.5	43.5	6.4		ESE			2		10					Overcast	F. J. Page, for L. J. Cresley.
Helston			29.75	755.6	54	12.2		SE			6		10			0.43	11.9	Misty	M. P. Moyle.
Holyhead			29.87	758.7	44	6.7		ESE			3		10					Misty	John Tilston.
Kew Observatory			29.98	761.5	43.7	6.5		SE	9	4.0			10					Misty	The Staff.
Kingstown			29.82	757.4	48	8.9		SE			6		10					Overcast	George Mitchell
Leicester Museum			30.01	762.2	43.7	6.5		E			1		10					Overcast	William J. Harrison.
Llandudno			29.92	760.0	44.2	6.8		E			1		10					Overcast	Dr. James Nicol.
Malta, (Mediterranean)			29.80	756.9	68.4	20.2		NW			1		4k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			30.03	762.7	47	8.3		S			1		2						W. D. Penny.
Nassau, (Bahamas)			30.17	766.3	80.2	26.8		NE			2		6					*D. clouds	Surg.-Maj. Henry.
Nottingham			30.00	762.0	45.0	7.1		ESE			2		10k, d		ESE	0	0	Overcast	E. J. Lowe, F. R. S
Oscott, St Mary's College			29.99	761.7	42.0	5.6		E			2		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs			29.95	760.7	43	6.1		Calm			0		10					Misty	J. Lucas, for R. Main
Plymouth			29.80	756.9	51.5	10.8		E			4		10					Overcast	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.65	753.1	55	12.8		SSE			6		10					Raining	W. Kennedy.
Saint Ann's Head			29.77	756.1	48	8.9		ESE			6		10					Misty	John C. Walker.
Saint Helier, (Jersey)			29.82	757.4	52.0	11.1		SSE			3		8						A. P. Amy.
Sandwick Manse(Orkneys)																			
Scarborough			30.03	762.7	46.1	7.8		SE			4		10					Overcast	F. Shaw.
Scutari cemetery,(Turkey)			29.69	754.1	58.6	14.8		ENE			1		10					Raining	Sergt. W. H. Lyne.
Sheffield			30.04	763.0	47.0	8.3		ESE			1		10					Overcast	W. F. Cooper.
Silloth Rectory			29.98	761.5	47.0	8.3		SSE			4		8			0	0	*D. clouds	Rev Francis Redford.
Stonyhurst Observatory			29.98	761.5	43.9	6.6		SE			2		10			Blank	Blank	Gloomy	The Staff.
Stornoway, Lews C. (Hebr)			29.96	761.0	48	8.9		ESE			3		2					Clear	John Smith.
Strathfield Turgiss			29.96	761.0	41.9	5.5		E			1		10					Overcast	Rev Charles H. Griffith
Streatley Vicarage			29.96	761.0	43.9	6.6		ESE			4		10						Rev. John Slatter.
Thurso			30.05	763.3	50	10.0		SSE			4		2					Clear	John Trotter.
Truro, Royal Institution			29.74	755.4	53	11.7					6		10					Raining	W. Newcombe
Valencia Observatory			29.59	751.6	55.9	13.3		SSE	12	5.4			10					Raining	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					45	7.2		SSE			7		10			0	0		
Leith, Restalrig Park			30.05	763.3	45.4	7.4		E			2		10k			0.01	0.3	Cloudy	Andrew Gibb.
Monach Lt-house,(Shet. Is)			29.93	760.2	45	7.8		S			6		10			0	0		J. Youyclause.
North Unst, (Shetland Is)			30.10	766.8	45	7.8		S			4	0	5						

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., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds.

DANISH SERIES.

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

Copenhagen			30.24	768.2	39.9	4.4	77	ESE			4		9						
Fanöe			30.22	767.6	39.6	4.2	80	E			4		10						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			30.12	765.1	40.3	4.6	94	E			4		8					Foggy	
Thorshavn, (Faröe)			30.11	764.7	48.9	9.4	87	SE			4		5						
Vestervig			30.21	767.4	35.2	1.8	93	ENE			2		10						

Note.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer
Alençon			29.87	758.6	52.3	11.3	83	SE			1		10			0.260	6.6	Cloudy	Normal School.
Amiens			30.47	772.4	47.5	8.6	78	SSE			6		10			0	0	Cloudy	Normal School.
Avignon			29.90	759.4	53.6	12	74	N			1		10			0	0	Cloudy	Normal School.
Bar-sur-Seine			29.90	759.4	47.3	8.5	74	N			2		8			0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.83	757.6	49.6	9.8	100	E	2.7	1.2			10		SE	0.134	3.4	Raining	Beaumette Observ
Beauvais			30.00	762.0	43.2	6.2	80	ESE			1		8		SSE	0	0	Cloudy	Normal School.
Besançon			29.95	760.8	48.6	9.2	76	ENE			2		2		SW	0	0		Normal School.
Bourg en Bresse			29.87	759.2	46.2	7.9	91	NW			2		n			0.008	0.2		Normal School.
Bourges			29.92	759.9	49.6	9.8	82	ENE			2		10		NW	0.012	0.3	Cloudy	Normal School.
Brest			29.71	754.7	56.7	13.7	88	S			1		10		SW	0.108	2.75	Cloudy	Naval Observatory
Caen			29.93	760.1	49.1	9.5	76	WSW			4		10		WSW	0	0	Cloudy	Normal School.
Chartres																			Normal School.
Chaumont	28.76	730.6	29.90	759.4	42.3	5.7		SE			2		10kn		SE	0.010	0.25	Cloudy	Normal School.
Commercy			30.02	762.5	41.0	5	84	ENE			4		10		ENE	0.008	0.2	Cloudy	Normal School.
Commune de Gréasque*			29.84	758.0	51.8	11.0	68	NW			2		10		NW	0	0		
Le Mans																			Normal School.
Lons-Le-Saulnier			29.93	760.2	49.6	9.8	92	NW			1		5		SW	0	0	Cloudy	Normal School.
Mâcon			29.93	760.2	47.5	8.6	92	NNE			2		5			0.24	6.	Cloudy	Normal School.
Mirecourt			29.95	760.8	10.8	4.9	79	N			2		10		SW	0	0	Cloudy	Normal School.
Orleans			29.93	760.1	48.2	9	86	ESE			2		5		SE	0	0	Cloudy	Normal School.
Paris Observatory			29.94	760.5	46.2	7.9	66	ESE			2		8		ESE	0.008	0.20	Cloudy	National Observ
Parthenay			29.82	757.4	57.2	14	78	SW			6		8		SW	0	0	Cloudy	Normal School.
La Roche sur Yon			29.81	757.1	52.2	11.2	93	E			1		10			0.181	4.6	Cloudy	Normal School.
Rochefort, Observatory			29.85	758.4	57.2	14.0	77	SSE			2		10			0.345	8.0	Cloudy	Naval Observatory
Rouen			29.91	759.8	47.5	8.6	65	SE			2		10			0	0	Cloudy	Normal School.
Saint Lo			29.87	758.8	49.1	9.5	100	SE			2		10		S	0	0		Normal School
Villefranche			29.95	760.6	50.2	10.1	80	E			1		10			0.12	3.	Cloudy	Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchesi.
Mont-Louis			30.21	767.4	45.5	7.5	94	NE	1.9	0.85			10		W	0.018	1.2		—. Fargère
Montsouris, Paris			29.93	760.2	48.4	9.1	70	SE			1		8kn		ENE	0.008	0.2	Light mist	Montsouris Observ
Perpignan	‡29.95	‡760.8			55.8	13.2	72	E	3.7	1.67			10			0.010	0.4		Dr. Floc-
Pic du Midi, (Summit) H. P.																			M. Baylac.
Pic du Midi, (Plantade) H.P.																			General de Nans
Saint Maur, (near Paris)			29.93	760.3	47.7	8.7	69	SE			1		10			0	0	Cloudy	E. Lemon.
Tours			29.92	760.0	51.4	10.8	83	ESE			1		10			0	0	Misty	C. Marquet.
Versailles, (near Paris)			29.92	759.9	47.5	8.6		E			2		8			0.007	0.17	Cloudy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.19	766.7	58.8	14.9	99	NNE	15.0	6.7			10n			0.110 / 0.165	2.8 / 4.2	Raining	H. L. Lee, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m. or 9 a. m., local time. The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,090.9 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. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. *Near Marseilles. ‡Appears to be reduced to sea-level also.

GERMAN SERIES.

Furnished by the coöperation of Prof. Geo. Neumayer, Superintendent Royal 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer
Bamberg			30.3	762.8	42.8	6.0	65	N	3	6			10			0	0		Prof. Hob.
Berlin			30.23	767.8	33.1	0.6	76	SE	9	4			10			0	0		Prof. Arndt
Breslau			30.24	768.0	31.3	— 0.4	85	E	9	4			10			0	0		Dr. P. Neugebau
Carlsruhe			29.99	761.8	43.9	6.6	72	NE	11	5			10			0	0		A. Senz.
Cassel			30.09	764.3	39.9	4.4	70	E	4	2			10			0	0		Dr. H. Möll
Cologne																			Dr. Goetze.
Emden																			Prof. Prestel
Frankfort on the Main																			Physical Soc
Friedrichshafen	28.52	724.4	29.98	761.6	43.7	6.5	64	NE					4			0	0		M. Wilhelm
Hamburg			30.22	767.6	34.3	1.3	77	ESE	18	8			10			0	0	Cloudy	Deutsche Seewarte
Kiel			30.17	766.4	37.4	3.0	71	SE	9	4			4			0.012	0.3		Prof. G. Karst
Königsberg			30.33	770.4	28.2	— 2.1	80	NE	11	5						0	0	Cloudy	Prof. F. Lu
Köslin																			Dr. Jäger.
Leipsic			30.18	766.5	32.9	0.5	87	NE	9	4			10			0	0		Prof. Brühn
Munster			30.09	764.2	43.5	6.4	97	NE	4	2			3			0	0		Prof. L. Weis.
Posen			30.28	769.1	30.2	— 1.0	69	SE	22	10			10			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.00	761.9	45.5	7.5	69	NE	9	4			10			0	0		Dr. Schur.
Stuttgart			30.01	762.3	41.9	5.5	66	E					10			0	0		Mr. Würth.
Thorn																			Dr. Hasenbalg
Treves, (Trier)			29.96	761.0	43.5	6.4	71	E	22	10			10			0	0	Foggy	Prof. lesch.
Wustrow, Naval School			30.29	769.3	35.6	2.0	84	SE	13	6			10			0	0	Cloudy	E. F. chütz.

Note.—In the originals the distinction between 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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer
Athens			29.72	755.0	69.1	20.6		SW										Covered	

Note.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			29.90	759.5	52.0	11.1	68	SSE	3.8	1.7			2	E		0	0		
Mondovi			29.89	759.1	48.9	9.4	66	W			4		6	NW		0	0		
Genoa			29.85	758.2	59.0	15.0	46	NW	0.9	1.4			0			0	0		
Pavia			29.90	759.4	52.7	11.5	61	NE			1		0			0	0		
Verona			29.88	758.9	51.8	11.0	60	E			1		10			0	0		
Padua			29.88	759.0	50.7	10.4	62	NNE	7.8	3.6			10	NNE		0	0		
Parma																			
Bologna			29.89	759.1	51.4	10.8	66	W			1		6	N		0	0		
Leghorn			29.85	758.1	57.7	14.3	47	NE	6.9	3.1			1			0	0		
Urbino																			
Ancona			29.84	757.8	52.9	11.6	78	NNW			6		10			0.213	5.4		
Siena			29.83	757.6	52.3	11.3	63	N	0	0			9	W		0	0		
Rome			29.78	756.4	61.5	16.4	50	NNE	5.6	2.5			1			0	0		
Naples, O. U			29.77	756.2	64.4	18.0	41	N			2		3	NW		0.012	0.3		
Lecce			29.72	755.0	60.1	15.6	71	NNE	11.2	5.0			7	NW		Blank	Blank		
Cosenza			29.78	756.4	59.4	15.2	76	NE			1		9			Blank	Blank		
Catania, (Sicily)																			
Riposto			29.68	753.9	64.9	18.3	72						9	SW		0	0		
Palermo			29.72	755.0	59.9	15.5	81	WNW	9.4	4.2			9	W		0	0		
Sub-Series.																			
Naples, S. R.			29.81	757.2	60.6	15.9	52	NE			4		..c	N		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S R., is for twenty-four hours. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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			30.05	766.3	42.3	5.7		E			3								
Groningen			30.09	764.3	35.8	2.1		E			4								
Helder			30.09	764.3	36.1	2.4		E			4								
Utrecht			30.04	762.9	40.5	4.7		E			2		8						Very cloudy

Note.—The originals give the wind-pressure in kilograms per square meter; the 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			30.26	768.7	39.9	4.4	80	Calm	0	0			2			0	0		
Christiania			30.29	769.4	25.9	— 3.4	95		0.9	0.4			10			0	0	Foggy	
Tromsö			29.80	757.0	40.6	4.8	84	Calm			0		10			0.850	21.6	Foggy	

Note.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.13	765.4	67.6	19.8	66	NNW	12.5	5.6			5	WSW		0.091	2.3		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Warsaw			30.28	769.1	28.4	— 2.0	92	E	9	4			10						Astronomical Obs.
Wilna			30.37	771.3	27.1	— 2.7	71	E	4	2			3						Astronomical Obs.
Dorpat			30.21	767.3	34.0	1.1	79	W	9	4			9						Physical Cabinet.
St. Petersburg			30.02	762.4	34.3	1.3	85	NW	7	3			8						Central Physical Obs
Kuopio																			Ch. Forsten.
Kieff			30.30	769.5	28.6	— 1.9	74	NNE	9	4			6						Physical Cabinet.
Nikolaiev			30.18	766.6	31.3	— 0.4	85	NE	20	9			10						Kurdakof.
Kertch			30.01	762.3	43.9	6.6	85	ENE	13	6			10						Lagorio.
Moscow			30.28	769.0	19.9	— 6.7	89	SSW	10	4.5			9						Meteorological Obs
Lugan			30.15	765.8	27.1	— 2.7	72	NE	13	6			10						Meteorological Ob
Archangel			29.84	757.8	24.4	— 4.2	81	N	10	4.5			0						Ogorodnikof.
Tiflis	28.54	724.9	29.93	760.1	64.4	18.0	54	S	8	3.5			4						Physical Obs.
Astrakhan			30.21	767.2	35.6	2.0	64	N	8	3.5			8						Sebastianof.
Kasan			30.07	763.7	20.8	— 6.2	82	W	8	3.5			10						Physical Cabinet.
Orenburg			30.01	762.3	25.2	— 3.8	98	NE	13	6			2						Tschernischef.
Ekaterinburg	28.85	732.8	29.94	760.5	55.0	12.8	76	W	4	2			1						Meteorological Ob
Kasalv			29.80	756.8	48.6	9.2	65	SW	20	9			5						Bobrof.
Tashkend																			Michelson.
Barnaul			29.56	750.7	36.9	2.7	79	SW	8	3.5			3						Meteorological Ob
Yeniseisk			29.43	747.5	24.1	— 4.1	100	SE	2	1			10					Snowing	Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking (China)			30.24	768.1	44.2	6.8	50	SSW	9	4			0						Physical Observat
Nertchinsk																			Meteorological Ob
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Madrid			29.98	761.4	65.5	18.8	64	NW	8.9	4.0		0	9			0.008	0.2	Nearly covered.	Royal Observatory
San Fernando			30.12	765.1	67.8	19.9	66	WNW	12.8	5.7		1	0	NW		0	0		The Naval Observat

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

SWEDISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Haparanda			29.96	761.8	34.5	1.4	89	NE				2	10			0	0		
Umea			30.07	763.6	41.4	5.2	69	NNW					1			0	0		
Hernosand			30.15	765.8	45.0	7.2	50	Calm				0	1			0	0		
Stockholm			30.19	766.7	31.1	— 0.5	86	NW				2	10			0	0		
Wisby			30.32	770.0	36.3	2.4	85	W				2	10			0	0		
SUB-SERIES.																			
Upsala			30.22	767.6	32.7	0.4	79	SW	6.3	2.8			0						Dr. Hildebrandsson.

NOTE.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer
Geneva	28.50	723.8	29.94	760.5	48.0	8.9	69	NE			1		6			0	0	Cloudy	The Observatory.
Zurich	28.32	719.3	30.00	761.9	42.8	6.0	84	NE			1		10			2.508	63.7	Cloudy	The Observatory.

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, —2.3mm.; Thermometer, —1.2; Relative Humidity, —5 per cent.

NOTE.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer
Beirut, (Syria) Lee Obs'y			29.85	758.2	73.0	22.8	55	NE			2		8cs			0	0		Prof. C. V. A. Van Dyck.
Constantinople			29.71	754.7	57.6	14.2	91	ENE	2.2	1.0			10		N	0.053	1.6	Cloudy	
Fao, (Persian Gulf)			30.04	763.0	82.9	28.3		N			1		0					Clear	
Salonica					62.6	17.0		E			1		5			Blank	Blank	Cloudy	
Valona			29.65	753.2	62.6	17.0		NW			1		10					Cloudy	
Varna			29.88	759.0	44.6	7.0		E			8		10					Raining	

NOTE.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer
Brockville, Ontario			29.68	753.9	39	3.9		E	5	2.2			10s		W	0	0	Cloudy	
Chatham, N. B.			30.16	766.1	31	— 0.6	89	N	4	1.8		8c	2ks	N	N	0	0	Fair	
Charlottetown, P. E. Island			30.09	764.3	38	3.3	77	N	14	6.3			8ks		N	0.130	3.30	Cloudy	
Fort Garry, Manitoba			30.29	769.4	28	— 2.2	95	N	18	8.0		5k	5ks	N	N	0	0	Cloudy	
Halifax, N. S.			30.04	763.0	37	2.8	86	N	13	5.8		0	2ks			0	0	Fair	
Kingston, Ontario			29.56	750.8	52	11.1	83	SE	15	6.7		10ks	0	SE		0	0	Cloudy	
Montreal, Quebec			29.82	757.4	35	1.7	80	E	12	5.4		Haze	5s			Inap.	Inap.	Cloudy	
Ottawa, Ontario			29.68	753.9	35	1.7	72	E	19	8.5			10n		E	0	0	Threatening	
Parry Sound, Ontario			29.29	744.0	49	9.4	93	SE	26	11.6			10n		SE	0.58	14.7	Heavy rain	
Port Dover, Ontario			29.38	746.2	56	13.3	87	S	12	5.4			10n		SW	0.55	14.0	Threatening	
Port Stanley, Ontario			29.35	745.5	56	13.3	91	SW	15	6.7			10n		SW	0.35	8.9	Cloudy	
Quebec, Quebec			30.05	763.3	33	0.6	95	NE	30	13.4			10n		NE	0	0	Cloudy	
Saugeen, Ontario			29.20	741.7	57	13.9	93	S	5	2.2			10n		S	0.42	10.7	Cloudy	
Stayner, Ontario			29.30	744.2	49	9.4	96	SE	5	2.2			10n		SW	0.23	5.8	Light rain	
Sydney, C. B.			29.95	760.7	40	4.4	75	NW	16	7.2		5k	5ks	N	N	0.08	2.0	Cloudy	
Toronto, Ontario			29.35	744.5	55	12.8	87	SE	7	3.1			10n		S	0.14	3.6	Threatening	

NOTE.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.89	759.2	45	7.2	76	SE	20	8.9		8k	2s	S		0.02	0.5	Cloudy	
Alpena, Mich.			29.11	739.4	41	5.0	91	W	16	7.2			10s			2.03	51.6	Cloudy	
Atlantic City, N. J.			29.84	757.7	58	14.4	94	SE	12	5.4		5cs	Haze			0	0	Fair	
Augusta, Ga.			29.90	759.4	70	21.1	90	SW	8	3.6			10ks		SW	0.02	0.5	Cloudy	
Baltimore, Md.			29.80	756.9	55	12.8	93	E	5	2.2		5ck	5s	SE		0	0	Cloudy	
Barnegat, N. J.			29.86	758.4	58	14.4	93	SE	15	6.7			10s		SE	0	0	Cloudy	
Benton, Montana	27.19	690.6	29.99	761.7	32	0.0	79	E	8	3.6			10s			0	0	Cloudy	
Bismarck, Dakota	28.30	723.9	30.27	768.8	22	—5.6	72	N	4	1.8			10ks			0.03	0.8	Cloudy	
Boston, Mass.			30.07	763.8	45	7.2	67	E	13	5.8			10s		SE	0	0	Cloudy	
Breckenridge, Minn.			30.19	766.8	26	—3.3	88	N	20	8.9			10s		N	Inap.	Inap.	Cloudy	
Buffalo, N. Y.			29.32	744.7	66	18.9	61	S	20	8.9			10ks		SW	0.24	6.1	Cloudy	
Burlington, Vt.			29.88	758.9	45	7.2	76	S	6	2.7			10s			0	0	Cloudy	
Cairo, Ill.			30.12	765.0	44	6.7	67	W	12	5.4		0	8ks		W	0.76	19.3	Cloudy	
Cape Hatteras, N. C.			29.91	759.7	68	20.0	90	SW	21	9.4			10n		SW	0	0	Light rain	
Cape Henry, Va.			29.86	758.4	67	19.4	84	SW	9	4.0			10s			0	0	Cloudy	
Cape May, N. J.			29.82	757.4	61	16.1	82	S	10	4.5		2c	0	W		0	0	Fair	
Charleston, S. C.			29.98	761.5	68	20.0	90	S	10	4.5			10s			0.05	1.3	Cloudy	
Cheyenne, Wyoming	24.17	613.9	30.11	764.8	12	—11.1	79	SW	4	1.8		0	0			0.02	0.5	Clear	
Chicago, Ill.			29.77	756.1	38	3.3	72	W	22	9.8			10s		SW	1.22	31.0	Cloudy	
Cincinnati, Ohio			29.73	755.1	46	7.8	61	W	16	7.2			10s		W	0.66	16.8	Threatening	
Cleveland, Ohio			29.38	746.2	61	16.1	77	W	20	8.9			10s		SW	0.38	9.7	Threatening	
Colorado Springs, Col.	24.24	615.9	30.11	764.8	20	—6.7	85	NW	4	1.8		0	0			0	0	Clear	
Corsicana, Tex.			30.38	771.6	44	6.7	75	N	6	2.7		0	Haze			0	0	Smoky	
Davenport, Iowa			30.00	762.0	33	0.6	79	NW	24	10.7			10s			0.15	3.8	Cloudy	
Denison, Tex.			30.41	772.4	39	3.9	71	NW	3	1.3		0	Sm'e		NW	0	0	Clear	
Denver, Col.	24.94	633.5	30.16	766.1	30	—1.1	67	S	4	1.8		0	0			Inap.	Inap.	Clear, frost	
Detroit, Mich.			29.33	745.0	50	10.0	78	W	22	9.4			10ks		W	0.40	10.2	Cloudy	
Dodge City, Kan.	27.69	703.3	30.12	765.0	28	—2.2	88	N	8	3.6		0	0			0.01	0.3	Clear, frost	
Dubuque, Iowa			29.92	760.0	31	—0.6	68	NW	20	8.9			10s		NW	0.70	17.8	Cloudy	
Duluth, Minn.			29.92	760.0	29	—1.7	67	NW	12	5.4		2k	Haze	NW		0	0	Fair	
Eastport, Me.			30.14	765.5	34	1.1	79	NE	14	6.3		0	5s		E	0	0	Fair	
Erie, Pa.			29.32	744.7	64	17.8	78	SE	28	12.5			10s		SW	0.66	16.8	Light rain	
Escanaba, Mich.			29.40	746.7	33	0.6	89	NW	28	12.5			10s		NW	0.75	19.1	Cloudy	
Fort Gibson, I. T.			30.34	770.6	37	2.3	71	NW	3	1.3		0	0			0	0	Clear, frost	
Fort Sill, I. T.	29.18	741.2	30.36	771.1	36	2.2	90	Calm	0	0		0	Sm'e			0	0	Clear	
Fort Sully, Dakota	28.56	725.4	30.32	770.1	29	—1.7	67	N	4	1.8		0	10s			0	0	Cloudy	
Galveston, Tex.			30.24	768.1	64	17.8	52	N	28	12.5		0	Haze			0.04	1.0	Clear	
Grand Haven, Mich.			29.52	749.8	41	5.0	84	NW	36	16.1			10n		NW	2.07	52.6	Light rain	
Indianapolis, Ind.			29.81	757.2	41	5.0	82	W	19	8.5			10n		W	0.86	21.8	Light rain	
Indianola, Tex.			30.25	768.3	63	17.2	67	N	36	16.1		2ck	Haze	N		0	0	Fair	
Jacksonville, Fla.			30.05	763.5	70	21.1	84	SW	8	3.6		8k	0	SW		0	0	Fair	
Keokuk, Iowa			30.07	763.8	33	0.6	80	NW	20	8.9		8k	0	NW		0.44	11.2	Fair	
Key West, Fla.			30.11	764.8	79.5	26.3	82	E	6	2.7		Haze	1k			0	0	Clear	
Kittyhawk, N. C.			29.91	759.7	65	18.3	84	SW	16	7.2			10s		SW	0	0	Cloudy	
Knoxville, Tenn.			29.77	756.1	60	15.6	82	W	8	3.6			10n		W	0.40	10.2	Light rain	
La Crosse, Wis.			29.93	760.2	34	—0.6	79	W	25	11.2			10s		W	0.65	16.5	Cloudy	
Leavenworth, Kan.			30.25	768.3	30	—1.1	78	NW	4	1.8		0	0			0	0	Clear	
Lexington, Ky.	28.79	731.2	29.90	759.4	44	6.7	67	W	32	14.3			8ks		W	0.86	21.8	Cloudy	
Long Branch, N. J.			29.89	759.2	55	12.8	93	SE	28	12.5			10ks		SE	0	0	Cloudy	
Louisville, Ky.			29.91	759.7	43	6.1	75	SW	18	8.0		10k	0	W		0.78	19.8	Cloudy	
Lynchburg, Va.			29.74	755.4	63	17.2	88	S	4	1.8			10s			0	0	Threatening	
Malone, N. Y.			29.61	752.1	47	8.3	77	S	22	9.8		5ck	5s	SW	SW	0	0	Cloudy	
Marquette, Mich.			29.46	748.3	33	0.6	89	NW	24	10.7			10n		NW	0.96	24.4	Heavy snow	
Memphis, Tenn.			30.22	767.6	45	7.2	68	NW	8	3.6		0	1s			0.60	15.2	Clear	
Milwaukee, Wis.			29.69	754.1	35	1.7	70	NW	27	12.1			10ks		NW	0.38	9.7	Cloudy	
Mobile, Ala.			30.12	765.0	64	17.8	62	N	10	4.5			10s		N	1.42	36.1	Cloudy	
Montgomery, Ala.			30.04	763.0	63	17.2	59	NW	18	8.0		5c	0	SW		0.47	11.9	Fair	
Morgantown, W. Va.			29.56	750.8	62	16.7	82	SE	8	3.6			10n			0.15	3.8	Light rain	
Mt. Washington, N. H.	23.72	602.5	30.08	764.0	35	1.7	100	S	10	4.5			Fog			0	0	Foggy	
Nashville, Tenn.			30.02	762.5	49	9.4	57	NW	14	6.3		10k	0	NW		0.38	9.7	Cloudy	
New Haven, Conn.			30.00	762.0	46	7.8	77	NE	12	5.4			10s			Inap.	Inap.	Clear	
New London, Conn.			30.03	762.7	47.5	8.6	70	NE	8	3.6			10s		E	Inap.	Inap.	Threatening	
New Orleans, La.			30.16	766.1	62.5	16.9	69	N	12	5.4		9k	0	W		1.14	29.0	Clearing	
Newport, R. I.			30.04	763.0	48	8.9	70	E	10	4.5			10s		E	0	0	Threatening	
New York, N. Y.			29.91	759.7	52	11.1	93	E	16	7.2			10s			0	0	Cloudy	
Norfolk, Va.			29.86	758.4	63.5	17.5	83	SW	13	5.8			10s		SW	Inap.	Inap.	Cloudy	
North Platte, Neb.	27.32	693.9	30.03	762.7	28	—2.2	100	Calm	0	0		0	0			0.11	2.8	Clear	
Omaha, Neb.	29.14	740.1	30.28	769.1	25	—3.9	88	NW	13	5.8			10s		NW	0.11	2.8	Cloudy	
Oswego, N. Y.			29.59	751.6	52	11.1	73	SSE	19	8.5			10s		SW	Inap.	Inap.	Cloudy	
Peck's Beach, N. J.			29.83	757.7	58	14.4	93	SE	16	7.2		1c	1s	W		0	0	Fair	
Pembina, Dakota			30.21	768.1	22	—5.6	100	NW	16	7.2			10s		NW	0	0	Cloudy	
Philadelphia, Penn.			29.83	757.7	55	12.8	93	E	11	4.9			10s		E	0	0	Cloudy	
Pike's Peak, Colorado	17.74	450.6	29.95	761.7	13	—10.6	44	NW	38	17.0		0	0			0	0	Clear	
Pittsburgh, Penn.			29.34	745.2	65	18.3	83	SW	10	4.5			10s		W	0.13	3.3	Light rain	
Port Huron, Mich.			29.28	743.7	52	11.1	79	SW	23	10.3			10n			0.26	6.6	Light rain	
Portland, Me.			30.16	766.1	35	1.7	70	NE	10	4.5			10n			0	0	Light rain	
Portland, Oregon			29.66	753.4	51	10.6	93	NW	2	0.9			10n			0.90	22.9	Light rain	
Punta Rassa, Fla.			30.13	765.3	75.5	24.3	85	E	3	1.3		0	2s			0	0	Clear	
Rochester, N. Y.			29.45	748.0	58	14.4	69	SE	12	5.4		2k	8s	SW		0.13	3.3	Cloudy	
Salt Lake City, Utah	25.82	655.8	30.15	765.8	42	5.6	42	Calm	0	0			10s			0	0	Cloudy	
Sandy Hook, N. J.			29.87	758.7	55	12.8	87	SE	20	8.9			10ks		SE	0	0	Threatening	
San Diego, Cal.			30.15	765.8	54	12.2	79	N	4	1.8		0	0			0	0	Clear	
San Francisco, Cal.			30.18	766.6	53	11.7	80	SW	2	0.9		0	0			0	0	Clear	
Santa Fe, N. M.	23.48	596.4	30.02	762.5	29	—1.7	46	N	11	4.9		0	0			0	0	Clear	
Savannah, Ga.			29.99	761.7	68	20.0	90	SW	6	2.7			10ks		SW	0.02	0.5	Cloudy	
Shreveport, La.			30.33	770.4	48	8.9	78	N	5	2.2		0	0			0.35	8.9	Clear	
Smithville, N. C.			29.98	761.5	68	20.0	94	SW	12	5.4			10s		SW	0	0	Threatening	
Springfield, Mass.			30.04	763.0	44	6.7	67	NE	8	3.6			10ks		S	0.05	1.3	Cloudy	
St. Louis, Mo.			30.14	765.5	36	2.2	52	NW	24	10.7			10s		NW	0.45	11.4	Cloudy	
St. Marks, Fla.			30.01	762.0	74	23.3	95	S	6	2.7		5cs	5s	W	W	0.01	0.3	Cloudy	
St. Paul, Minn.			29.89	761.7	28	—2.2	88	NW	16	7.2			10s			Inap.	Inap.	Cloudy	
St. Paul's Island, Alaska																			
Squa Beach, N. J.			29.8	757.2	57	13.9	93	E	20	13.9			10s		E	0	0	Cloudy	
Toledo, Ohio			29.43	747.5	40	9.4	71	SW	30	13.			10s		W	0.45	11.4	Cloudy	
Tucson, Arizona																			
Tybee Island, Ga.			29.98	761.5	67	19.	94	SW	8	3.6			10ks		SW	0.06	1.5	Cloudy	
Vicksburg, Miss.			30.21	769.1	52	11.1	72	N	12	5.4		2c	0	W		0.33	8.4	Fair	
Virginia City, Montana	24.23	615.	29.71	754.	27	—2.	77	Calm	0				10s		W	0	0	Threatening	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			29.77	756.4	53.5	11.9	86	E	4	1.8			10s		SW	0	0	Cloudy	
Wilmington, N. C			29.95	760.7	70	21.1	84	SW	17	7.6			10s		SW	0	0	Cloudy	
Wood's Hole, Mass.			30.06	763.5	48	8.9	70	E	11	4.9			10s			0	0	Cloudy	
Wytheville, Va.	27.44	697.0	29.54	750.3	54	12.2	93	SW	2	0.9			10s			0.07	1.8	Threatening	
Yankton, Dakota	28.99	736.3	30.38	771.6	5	−3.3	75	NW	18	8.0			10s		NW	0.03	0.8	Cloudy	
Yuma, Arizona			30.20	767.1	59	15.0		Calm				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, B'b'does, W. I					81	27.2	86	NE	6	2.7		2c	8ks	N	NE	0	0	Fair	E Racker.
Pointe-aPitre, G'd'loupe, do			29.97	761.2	77	25.0	82	E				5cs	5ks			0.34	8.6	Clear	L. V. Bigard.
Havana, Cuba, W. I.			30.11	764.8	77	25.0	86	Calm	0	0		1c	1k	SW		0	0	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W.			30.20	767.1	78	25.6	78	Calm	0	0		1c	s			0	0		James Gall.
St. Thomas, St. T., W. I.			30.21	767.3	80	26.7	74	E	1	0.4		2cs	2k	E	E	0.15	3.8	Clear	W. S. Cameron.
Santiago de Cuba, W. I.			29.84	757.9	78	25.6	69	NNW	3.6	1.6		0	0					Clear	Robert Mason.
St. Georges, Bermudas			30.13	765.3	69.0	20.6	73	NNW	3.6	1.6		5c, fk	5fk	N	NW	Inap.	Inap.	Clear	C. F. Allen.
Honolulu, Oahu, H. I.																			E. P. Church.
Makawao, Maui, H. I.																			F. L. Clarke.
Cumberland, B. A.																			
Ft. Chippewyan, B. A.																			
Ft. McPherson, B. A.																			
Ft. Simpson, B. A.																			
York Factory, B. A.			30.45	773.4	10	−12.2	100	N	12	5.4		5k	2s	W		Inap.	Inap.		J. Fortescue.
St. John's, Newfoundland																			John Delaney.
St. John's, Porto Rico, W. I.																			Leon M. Acuña.
Clifton, Jamaica, W. I.	27.23	691.6	30.01	762.2	68	20.0	90	NE	1.0	0.4		0	0			0	0	Fine, clear	C. Partridge.
Navassa																			
Medellin, S. A.																			
Paramaribo, S. A.																			
Elyria, Ohio			29.42	747.3	52	11.1	86	SW	28	12.5			10n			0.50	12.7	Raining	H. M. Redington.
Marine Series.	True course towards.	Hourly rate in knots.														State of ocean.	Direction of swell from—		

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,86[illegible] (?) ft., or 2,091.6 (?) m.; Virginia City, 5,18[illegible] (?) ft., or 1,676.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.74 in.; Virginia City, 5.48 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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

BULLETIN

OF INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON OCTOBER 31, 1875.

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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Nemours					73.4	23.0	56	NNW			1		0			0	0		Charnot.
Algiers					70.2	21.2	83	NW			3		7			0	0	Cloudy	Peter.
La Calle																			Kunts.
Tunis					67.6	19.8	60	NW			4		9			0.362	9.2	Rainy	Jacques.
Sfax					75.2	24.0	54	S			4		2			0	0	Rainy	Chauvey.
Saida					62.6	17.0	70	NW			2		2			0	0		Grosjean.
Tebessa					54.1	12.3		NNW			3		10			0	0	Cloudy	Colin.
Geriville					62.6	17.0	49	NW			3		6			0	0		Bernadach.
Laghouat					69.8	21	20	NW			2		2			0	0		Simon.
Biskra					76.3	24.6	30	NW			3		3			Inap.	Inap.		Coulon.

NOTE.—In the originals the distinction between upper and lower clouds is 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—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Agram			29.87	758.7	39.6	4.2	87	NE			2		10			0.102	2.6	Raining	Prof. Ivan Stozi
Buda-Pesth																			I. R. Cen. M. I., Budapest
Cracow			30.11	764.7	32.9	0.5	90	NNE			3		10			0	0		I. R. Observatory.
Speries			29.99	761.7	38.8	3.8	73	N			2		10			0	0		Julius Mikolik.
Gratz	28.74	730.0	29.97	761.3	42.1	5.6	90	W			2		10						Andreas Rospim.
Hermannstadt	28.45	722.7	29.91	759.8	40.3	4.6	69	ESE			2		9			0.041	1.05		Prof. Reissenberger
Kremsmünster	28.59	726.1	29.98	761.4	35.6	2.0	82	Calm			0		10			0	0		Prof. C. Wagner.
Lemberg			30.10	764.5	32.0	0.0	79	E			2		3			0	0		Dr. T. Stanecki.
Nyiregyhaza			29.95	760.6	46.0	7.8	81	N			2		3			0	0		Habzsuda Dani
Pola			29.79	756.7	52.5	11.4	56	NNE			3		4k8			0	0		I.R. Hydrographer
Szegedin			29.92	760.0	42.4	5.8	91	N			2		10			0.055	1.40		Karl Stancel.
Trieste			29.81	757.2	48.7	9.3	65	ENE			4		3			0	0		Prof. V. Faroli
Vienna			29.95	760.8	41.5	5.3	81	SE			1		10			0	0		I. R. Central Institute

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 9 p. m., local time. The elevation of Gratz is 313.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 m., or 1,337.9 ft.; Kremsmunster, 383.6 m., or 1,258.5 ft.

BELGIAN SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rainfall in 24 hours. Inches.	Rainfall in 24 hours. Millimeters.	Weather.	Observer.
Brussels			29.99	759.1	45.1	7.3	79	E			1		10			0	0		Royal Observatory.

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

BRITISH SERIES.

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

Stations.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.02	762.5	46.0	7.8		SE	19	8.5			6			0.210	5.33	*D. clouds	William Boswell.
Ardrossan																			Wm. McNeil.
Armagh Observatory			29.84	757.9	48.0	8.9		E	11	4.9									S. Call, for Dr. Robinson.
Bidston, Liverpool Obs.			29.88	758.9	44.4	6.9		ESE			0		10					Overcast	John Hartnup, Jr.
Birr Castle, (Parsonstown)			29.72	754.9	51.3	10.7		SE			1		10					Overcast	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbados)			29.95	760.7	84.0	28.9		NE			4		4					*D. clouds	Sergt. G. H. Hunt.
Cambridge Observatory			29.91	759.7	44.0	6.7		E			1		10					Overcast	H. Todd.
Cape Good Hope Obs.			30.16	766.1	80.6	27.0	39	S	8	3.6			5						The Staff, for E. J. Stone.
Cardington			29.92	760.0	45.4	7.4		E			1		10						John McLaren.
Carlisle			29.94	760.5	45	7.2		SE			1		10			0	0	Overcast	T. Bell, for J. Cartmell.
Chatham, School M. E.			29.88	758.9	44.2	6.8		SE			1		8					*D. clouds	Capt. J. Fellowes, R. E.
Dartmoor	28.40	721.4	29.78	756.4	47.2	8.4		E			4		10					Drizzling	R. E. Power.
Donaghadee			29.86	758.4	47	8.3		ESE			3		10					*D. clouds	J. Mac Gowan, Jr.
Dover			29.88	758.9	46	7.8		ESE			3		8						J. Costello.
Eccles, (near Manchester)			29.90	759.4	44.9	7.2		E-E	2.6	1.2			7					Misty	Thomas Mackereth
Falmouth Observatory			29.77	756.1	54.4	12.4		SE	13	5.8			10					Raining	The Staff.
Fort Napier, (Natal)	27.94	709.7	30.18	766.6	64.0	17.8		SE			3		10					Showery	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	84.0	28.9		SE					7						[tis.
Galway, Queen's College																			B. G. Clare, for Prof. Cur-
Gibraltar, (Mediterranean)			30.04	763.0	70.0	21.1		W			4		0					Clear	Sergt. E. G. Baker.
Glasgow Observatory			29.92	760.0	46.4	8.0		E			1		10					*D. clouds	Lewis Stuart.
Great Yarmouth			29.93	760.2	45	7.2		ESE			4		8					Gloomy	G. T. Watson.
Greenwich Royal Obs.			29.93	759.4	42.3	5.7		E			1		9					Cloudy	The Staff, for G. B. Airy.
Guernsey			29.81	757.2	51.5	10.8		ESE			1		8					*D. clouds	Dr. S. E. Hoskins. [ley.
Halifax, Moorside Obs.			29.95	760.7	42.4	5.8		E			1		10					*D. clouds	F. J. Page, for L. J. Cross-
Helston			29.72	754.9	58	14.4		S			4		10			0	0	Overcast	M. P. Moyle.
Holyhead			29.81	757.2	49	9.4		E			1		10					Misty	John Tilston.
Kew Observatory			29.90	759.4	46.3	7.9		E	11	4.9			8					Misty	The Staff.
Kingstown			29.80	756.9	49	9.4		SE			4		10			Blank	Blank	Overcast	George Mitchell
Leicester Museum			29.94	760.5	44.8	7.1		Calm			0		10					Ove cast	William J. Harrison.
Llandudno			29.83	757.7	48.7	9.3		SE			2		3					Clear	Dr. James Nicol.
Malta, (Mediterranean)			29.81	757.2	67.6	19.8		NW			1		4k					*D. clouds	Fred Travis, Pvt A.H.C.
Nairn			29.98	761.5	45	7.2		SE			1		10						W. D. Penny.
Nassau, (Bahamas)			30.12	765.0	78.6	25.9		SW			3		7					*D. clouds	Surg.-Maj. Henry.
Nottingham			29.94	760.5	45.7	7.6		SE			3		10k		SE	0	0	Overcast	E. J. Lowe, F. R. S
Oscott, St. Mary's College			29.91	759.7	43.7	6.5		E			2		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs.			29.87	758.7	47	8.3		Calm			0		10					Overcast	J. Lucas, for R. Main.
Plymouth			29.79	756.7	51.7	10.9		SE			2		10					Drizzling	John Merrifield.
Prospect, (Bermuda)																			
Roche's Point			29.67	753.6	55	12.8		SW			2		10					Raining	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, (Jersey)			29.80	756.9	52.6	11.4		E			1		10						A. P. Amy.
Sandwick Manse (Orkneys)																			
Scarborough																			F. Shaw.
Scutari cemetery, (Turkey)			29.70	751.4	48.4	9.1		NNW			5		10			Blank	Blank	Misty	Sergt. W. H. Lyne.
Sheffield			29.93	760.2	45.8	7.7		SE			1		10					Overcast	W. F. Cooper.
Silloth Rectory			29.92	760.0	45.2	7.3		E			4		10			0	0	Overcast	Rev Francis Redford.
Stonyhurst Observatory			29.90	759.4	44.0	6.7		E			2		10					Gloomy	The Staff.
Stornoway, Lews C. (Hebr)			29.95	760.7	46	7.8		E			2		3					*D. clouds	John Smith.
Stratfield Turgiss			29.89	759.2	46.6	8.1		E			0-1		10					Overcast	Rev Charles H. Griffith
Streatley Vicarage			29.89	759.2	48.7	9.3		E			3		8			*	*		Rev. John Slatter.
Thurso			30.00	762.0	47	8.3		Calm			0		6					*D. clouds	John Trotter.
Truro, Royal Institution			29.74	755.4	54	12.2		E			2		10					Raining	W. Newcombe.
Valencia Observatory			29.65	753.1	55.3	12.9		SW	13	5.8			10					Threatening	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					46	7.8		ESE			7		10			0	0		
Leith, Restalrig Park			29.97	761.2	46.2	7.9		E			2		10ks			0.01	0.3	Cloudy	Andrew Gibb.
Monach Lt-house, (Shet. Is)			29.92	760.0	46	7.8		SE			4	10	0	SE		0	0		J. Youyclause.
North Unst, (Shetland Is)			30.14	765.5	44	6.7					4	4	5	E					

NOTE.—The originals generally omit the relative humidity and rain-fall. Except in a few cases and the Sub-series they give the wind-force by the scale 0 to 12, the wind direction to 32 points, and the weather by the Beaufort notation. The cloudiness at Stornoway by the scale 0 to 4. Generally, the distinction between upper and lower clouds is not made. The rain-fall is measured at Aberdeen at 10 a. m., and at Nottingham at 6 p. m., local time. The altitude of Dartmoor is 1,374 feet, or 418.8 meters; Fort Napier, 2,200 ft., or 670.6 m. * Detached clouds. * Total rain-fall for October 6.4 in., or 162.6 mm.

DANISH SERIES.

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

Copenhagen			30.15	765.9	36.3	2.4	75	SE			2		10						
Fanöe			30.12	765.1	34.9	1.6	80	ESE			4		10						
Godthaab, (Greenland)																			
Stykkisholm, (Iceland)			30.07	763.8	38.3	3.6	97	Calm			0		8						
Thorshavn, (Faröe)			30.11	764.7	47.1	8.4	78	ENE			2		10						
Vestervig			30.11	764.9	36.0	2.2	89	SE			2		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols: not any distinction between 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Alençon			29.82	757.5	50.0	10.0	94	SE			2		10			0	0	Cloudy	Normal School.
Amiens			29.87	758.8	45.0	7.2	80	S			3		0			0	0	Clear	Normal School.
Avignon			29.85	758.1	55.4	13	81	N			1		..n		W	0.055	1.4		Normal School.
Bar-sur-Seine			29.85	758.2	48.7	9.3	63	NE			2		8kn			0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.70	756.7	59.2	15.1	74	SW	9.8	4.4			5		WSW	0.260	6.6	Cloudy	Beaumette Observatory.
Beauvais			29.92	759.9	44.2	6.8	81	ESE			1		10		ESE	0.020	0.50	Cloudy	Normal School.
Besançon			29.79	756.6	49.6	9.8	76	NNE			2		10			0	0	Cloudy	Normal School.
Bourg en Bresse			29.86	758.4	50.9	10 5	90	SW			1		..n			0	0		Normal School.
Bourges			29.81	757.1	48.2	9	95	ENE			2		10		N	0.043	1.1	Cloudy	Normal School.
Brest			29.76	756.0	57.0	13.9	93	W			2		10		W	0.039	1.00	Raining	Naval Observatory.
Caen			29.84	758.0	48.0	8.9	89	ESE			1		10		ESE	0.098	2.5	Cloudy	Normal School.
Chartres																			Normal School.
Chaumont	28.66	728.0	29.84	757.8	47.8	8.8		SE			1		10s,n		SE	0	0	Cloudy	Normal School.
Commercy			29.91	759.8	43.2	6.2	79	E			2		2		E	0	0		Normal School.
Commune de Gréasque*			29.84	757.9	52.5	11.4	83	N			1		10		NW	0.031	0.8		
Le Mans																			Normal School.
Lons-Le-Saulnier			29.84	757.8	51.4	10.8	77	N			2		2		N	0	0		Normal School.
Mâcon			29.93	760.3	48.0	8.9	95	N			2		10			0	0	Cloudy	Normal School.
Mirecourt			29.83	757.6	45.7	7.6	69	N			2		2		S	0	0	Cloudy	Normal School.
Orleans			30.19	766.9	51.4	10.8	73	SE			2		8		SSE	0.087	2.2	Cloudy	Normal School.
Paris Observatory			29.86	758.4	47.5	8.6	78	E			1		10			0	0	Foggy	National Observatory
Parthenay			29.83	757.6	49.1	9.5	86	SW			2		10			0	0	Cloudy	Normal School.
La Roche sur Yon			29.74	755.4	59.0	15.0	93	SW			4		8		E	0.402	10.2	Cloudy	Normal School.
Rochefort, Observatory			29.88	758.8	61.2	16.2	72	W			3		10		E	0.335	8.5	Cloudy	Naval Observatory.
Rouen			29.78	756.5	47.1	8.4	86	ENE			2		10		W	0.079	2.0	Cloudy	Normal School.
Saint Lo			29.80	757.0	50.5	10.3	94	SE			1		8		SE	0.059	1.5		Normal School.
Villefranche			29.63	752.7	46.0	7.8	70	NW			1		10			0	0	Cloudy	Normal School
Sub-Series.																			
Fort de France, Martinique																			L'Abbe Marchesi.
Mont-Louis			30.23	767.9	45.5	7.5	71	SSW	9.3	4.17			8		W	0.035	0.9		—. Faïguère.
Montsouris, Paris			29.85	758.1	48.2	9.0	82	ENE			1		10			0.008	0.2	Cloudy	Montsouris Observ'tory.
Perpignan	†29.94	†760.5			62.6	17.0	53	W	13.0	5.83			5		W	0.303	7.7		Dr. Flues.
Pic du Midi, (Summit) H. P.																			M. Baylac.
Pic du Midi, (Plantade) H.P.																			General de Nansouty
Saint Maur, (near Paris)			29.85	758.1	48.7	9.3	81	NNE			1		10			0.012	0.3	Light rain	E. Renou.
Tours			29.82	757.4	53.4	11.9	93	SSE			1		10			0.375	9.5	Misty	C. Marquet.
Versailles, (near Paris)			29.85	758.2	46.8	8.2	86	SE			1		10			0	0	Foggy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.28	769.0	48.6	9.2	93	N	3.8	1.7		2ks	0			{0.063 / 0.114}	{1.6 / 2.9}		H. Le Lec, S. J.

Note.—The originals 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. The rain-fall is generally measured at 7 a. m or 9 a. m., local time The altitude of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Chaumont, 332 m., or 1,060.9 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. The rain-fall at Zi-Ka-Wei is given as recorded by two different gauges. *Near Marseilles. †Appears to be reduced to sea-level also.

GERMAN SERIES.

Furnished by the coöperation of Prof. Geo. Neumayer, Superintendent Royal 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Bamberg			29.99	761.8	37.9	3.3	68	N	13	6			10			0	0		Prof. Hoh.
Berlin			30.13	765.2	32.7	0.4	76	SE	9	4			10			0	0		Prof. Arndt.
Breslau			30.13	765.4	33.6	0.9	81	E	9	4			10			0	0		Dr. P. Neugebauer.
Carlsruhe			29.89	759.3	44.2	6.8	70	NE	11	5			10			0	0		A. Senz.
Cassel			29.91	759.6	36.1	2.3	78	ESE	2	1			10			0	0		Dr. H. Möhl.
Cologne																			Dr. Garthe.
Emden																			Prof. Prestel.
Frankfort on the Main																			Physical Society.
Friedrichshafen	28.49	723.6	29.95	760.8	42.8	6.0	63	W					3			0	0		M. Wilhelm.
Hamburg			30.12	765.0	31.1	− 0.5		ESE	11	5			10			0	0	Foggy	Deutsche Seewarte.
Kiel			30.10	764.5	31.8	− 0.1	70	E	13	6			10			0	0		Prof. G. Karsten.
Königsberg			30.24	768.2	28.8	− 1.8	80	E	11	5						0	0	Clear	Prof. E. Luther.
Köslin																			Dr. Tägert.
Leipsic			30.08	763.9	32.2	0.1	89	NE	9	4			10			0	0		Prof. Bruhns.
Münster			29.95	760.7	40.3	4.6	80	NE	4	2			10			0	0		Prof. E. Heis.
Posen			30.19	766.9	31.1	− 0.5	90	SE	22	10			10			0	0	Cloudy	Dr. Magener.
Strassburg, (in Alsace)			29.91	759.6	45.9	7.7	69	NE	9	4			10			0	0		Dr. Schur.
Stuttgart			29.93	760.1	42.3	5.7	64	E					10			0	0		Mr. Würth.
Thorn																			Dr. Hasenbalg
Treves, (Trier)			29.85	758.3	43.7	6.5	68	E	18	8			10			0	0	Foggy	Prof. Flesch.
Wustrow, Naval School			30.28	769.2	41.0	5.0	84	E	9	4			10			0	0	Cloudy	E. F. Schütz.

Note.—In the originals the distinction between 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.	Winds. Direction. From—	Winds. Velocity. Miles per hour.	Winds. Velocity. Meters per second.	Winds. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Athens			29.69	754.1	67.5	19.7		SW					..k					Clear	

Note.—The originals give 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Moncalieri			29.88	759.0	47.5	8.6	79	NNW	2.5	1.1			9	SW		0	0		
Mondovi			29.87	758.7	45.7	7.6	71	NW			2		10	NW		0	0		
Genoa			29.83	757.8	58.3	14.6	45	N	1.3	0.6			0			0	0		
Pavia			29.88	758.9	54.0	10.6	74	SE			1		8	SE		0	0		
Verona			29.85	758.1	52.2	11.2	70	E			1		10			0	0		
Padua			29.84	757.8	51.6	10.9	59	NNW	7.4	3.3			8	NE		0	0		
Parma																			
Bologna			29.85	758.2	51.6	10.9	61	NW			1		7	W		0	0		
Leghorn			29.84	757.8	55.6	13.1	45	NE	4.9	2.2			3			0	0		
Urbino																			
Ancona			29.80	757.0	49.6	9.8	84	NNW			6		10			0.181	4.6		
Siena			29.80	757.0	51.4	10.8	57	NE	11.2	5.0			7	N		0	0		
Rome			29.78	756.3	53.4	11.9	52	NNW	4.9	2.2			4	NW		0	0		
Naples, O. U.			29.76	756.0	63.9	17.7	46	WSW			6		4	W		0	0		
Lecce			29.74	755.4	58.5	14.7	56	WNW	11.2	5.0			6	W		0	0		
Cosenza			29.80	757.0	59.4	15.2	68	NW			1		6			Blank	Blank		
Catania, (Sicily)																			
Riposto			29.72	755.0	65.3	18.5	70	E			2		9	NW		0.016	0.4		
Palermo			29.75	755.6	64.4	18.0	62	WNW	9.4	4.2			10	WNW		0	0		
Sub-Series.																			
Naples, S. R.			29.80	756.9	59.0	15.0	56	SW			4		..c	NW		0.035	0.9		Prof. F. Brioschi.

NOTE.—The originals give the wind-force by the scale 0 to 4, and in some cases the velocity in kilometers per hour; generally, no distinction is made between upper and lower clouds; the weather in various general terms. The rain-fall for Naples, S. R., is for twenty-four hours. The altitude of Mondovia is 556 meters, or 1,824.2 feet; Urbino, 451 m., or 1,479.7 feet; Siena, 348.5 m., or 1,143.3 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	44.2	6.8		E			3								
Groningen			29.99	761.8	33.8	1.0		E			2								
Helder			29.99	761.7	37.6	3.1		ENE			2								
Utrecht			29.94	760.4	40.8	4.9		E			2		8					Very cloudy	

NOTE.—The originals give the wind-pressure in kilograms per square meter; the 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			30.17	766.4	38.8	3.8	83	Calm	0	0			0			0	0		
Christiania			30.19	766.9	26.8	— 2.9	85	SW	0	0			0			0	0		
Tromsö			29.61	752.1	35.2	1.8	88	SW			2		10			0.315	8.0		

NOTE.—The originals give the wind-velocity in meters per second or its force by the scale 0 to 6; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The cloudiness and weather at Bergen refer to 2h. p. m., local time.

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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Lisbon			30.19	766.7	66.6	19.2	61	NNW	9.8	4.4			8			0	0		The Observatory.

NOTE.—The originals give the wind-velocity in kilometers per hour; the weather by the Vienna symbols; the cloudiness without distinguishing between upper and lower clouds. The rain-fall at Lisbon is measured at noon.

RUSSIAN SERIES.

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

Stations	Corrected for instrumental errors. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Warsaw			30.19	766.9	28.2	— 2.1	92	SE	9	4			10						Astronomical Obs.
Wilna			30.31	769.9	25.7	— 3.5	72	Calm	0	0			3						Astronomical Obs.
Dorpat			30.18	766.6	31.3	— 0.4	96	WSW	7	3			10						Physical Cabinet.
St. Petersburg			30.02	762.6	34.9	1.6	91	WSW	9	4			10					Rain & snow	Central Physical Obs.
Kuopio																			Ch. Forsten.
Kieff			30.20	767.1	30.6	— 0.8	73	NNE	9	4			1						Physical Cabinet.
Nikolaiev			30.03	762.8	34.5	1.4	72	NNE	25	1.1			10						Kurdakof.
Kertch			29.81	757.1	46.8	8.2	88	E	18	8			10						Lagorio.
Moscow			30.23	767.8	28.2	— 3.1	92	S	8	3.5			10						Meteorological Obs.
Lugan			30.08	764.1	34.9	2.6	50	ENE	16	7.5			5						Meteorological Obs.
Archangel			29.69	754.2	25.2	— 3.8	91	SW	20	9			10					Snowing	Ogorodnikof.
Tiflis	28.58	725.8	29.97	761.3	62.6	17.0	57	SE	4	2			10						Physical Obs.
Astrakhan			30.27	768.8	38.5	3.6	62	NE	10	4.5			8						Sebastianof.
Kasan			30.12	765.0	23.4	— 4.8	86	NNE	4	2			8						Physical Cabinet.
Orenburg			30.20	767.0	29.5	— 1.4	57	NW	8	3.5			7					Snowing	Tschernischef.
Ekaterinburg	28.84	732.5	29.91	759.8	15.4	— 9.2	84	W	4	2			10						Meteorological Obs.
Kasalv			30.07	763.8	46.2	7.9	72	W	8	3.5			3						Bobrof.
Tashkend																			Michelson.
Barnaul			29.96	761.0	18.9	— 7.3	75	SW	34	15			4						Meteorological Obs.
Yeniseisk			29.78	741.2	34.3	1.3	94	SW	4	2			10					Light snow.	Marks.
Irkutsk																			Usolzef.
Oorga																			Mossin.
Peking, (China)			30.36	771.1	46.0	7.8	48	Calm	0	0			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the wind velocity in meters per second, except Kuopio by an unknown scale; the cloudiness by the scale 0 to 10, except Kuopio 0 to 4, without distinguishing between upper and lower clouds; the weather by the Vienna symbols, except Kuopio in general terms. 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	Corrected for instrumental errors. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Madrid			30.03	762.8	64.9	18.3	50	W	16.3	7.3		0	2			0	0		Royal Observatory.
San Fernando			30.13	765.4	66.2	19.0	80	WNW	16.1	7.2		1	0	WNW		0	0		The Naval Observatory.

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

SWEDISH SERIES.

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

Stations	Corrected for instrumental errors. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.	Weather.	Observer.
Haparanda			29.70	754.3	35.2	1.8	85	SW			2		7			0	0		
Umea			29.89	759.1	41.2	5.1	71	NW					9			0	0		
Hernosand			29.97	761.3	45.0	7.2	55	NNW			4		7			0	0		
Stockholm			30.10	764.5	29.8	— 1.2	92	W			2		10			0	0	Foggy	
Wisby			30.22	767.5	36.0	2.2	79	W			2		10			0	0		
SUB-SERIES.																			
Upsala			29.14	765.5	23.5	— 4.7	98	SSW	7.6	3.4			10						Dr. Hildebrandsson.

NOTE.—The originals give the wind-force by the scale 0 to 6; Upsala also velocity in meters per second, and the weather by Vienna symbols. The distinction between upper and lower clouds is not made. In the official series the rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

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

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.43	722.2	29.87	758.8	48.9	9.4	69	NNE			1		9			0	0	Cloudy	The Observatory.
Zurich	28.26	717.7	29.91	759.7	43.3	6.3	95	NW			1		6			0	0	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —4.0mm.; Thermometer, —°0.5; Relative Humidity, —5 per cent.

Note.—The originals give the wind-force by the scale 0 to 10; the cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The altitude of Geneva is 408 meters, or 1,339 feet, and that of Zurich is 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Beirut, (Syria,) Lee Obs'y			29.76	756.0	80.4	26.9	52	SW			1		0			0	0		Prof. C. V. A. Van Dyck
Constantinople			29.72	754.9	48.2	9.0	89	NW	5.4	12.0			10		NW	0	0	Cloudy	
Fao, (Persian Gulf)			30.08	764.0	82.8	28.2		NW			1		0					Clear	
Salonica					58.5	14.7		E			1		10					Raining	
Valona			29.66	753.3	60.3	15.7		W			2		10					Raining	
Varna			29.80	757.0	30.2	—1.0		NW			10		10					Raining	

Note.—The originals give the wind-force by the scale 0 to 7. Constantinople gives also velocity in meters per second. The weather and cloudiness (except Beirut, by the scale 0 to 12, and by Lind's anemometer when strong) are given in general terms, and it is assumed that the barometer is reduced to sea-level. The distinction between upper and lower clouds is not made.

CANADIAN SERIES.

Furnished by the coöperation of Prof. G. T. Kingston, Director of the Magnetic Observatory at Toronto and Superintendent of the Meteorological Office of the Dominion of Canada, and telegraphed daily, except Brockville, Charlottetown and Stayner, to the Office of the Chief Signal Officer, U. S. Army.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. —10.	Clouds. Amount. Up'er 1—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Brockville, Ontario			29.61	752.1	32	0.0		SW	4	1.8		0	2s		W	0.30	9.1	Fair	
Chatham, N. B.			29.75	755.6	38	3.3	95	E	10	4.5			10ks		E	0.08	2.0	Cloudy	
Charlottetown, P. E. Island			29.82	757.4	40	4.4	88	SE	16	7.2			10s			0.010	0.25	Cloudy	
Fort Garry, Manitoba			30.25	768.3	18	— 7.8	95	S	2	0.9			10n			0	0	Cloudy	
Halifax, N. S.			29.70	754.4	44	6.7	80	SE	22	9.8			10n		SE	0	0	Threatening	
Kingston, Ontario			29.62	752.3	33	0.6	88	NW	7	3.1		2k	0	W		0.47	11.9	Clear	
Montreal, Quebec			29.45	748.0	33	0.6	95	W	13	5.8			10n		W	1.49	37.8	Light snow	
Ottawa, Ontario			29.51	749.5	33	0.6	75	W	12	5.4		8k	0	W		0.28	7.1	Clearing	
Parry Sound, Ontario			29.60	751.8	27	— 2.8	72	NW	30	13.4		2k	5n	W	W	0.34	8.6	Light snow.	
Port Dover, Ontario			29.78	756.4	31	— 0.6	89	W	13	5.8		10ck	0	W		0.12	3.0	Fair	
Port Stanley, Ontario			29.79	756.7	32	0.0	93	W	25	11.2			10n		W	0.04	1.0	Cloudy	
Quebec, Quebec			29.45	748.0	32	0.0	90	N	20	8.9			10n		N	1.30	33.0	Heavy snow	
Saugeen, Ontario			29.67	753.6	31	— 0.6	89	NW	22	9.8			10n		W	0.17	4.3	Light snow.	
Stayner, Ontario																			
Sydney, C. B.			29.94	760.5	38	3.3	96	Calm	0	0		10cs	Sm'e	SE		0	0	Cloudy	
Toronto, Ontario			29.67	753.6	34	1.1	71	W	16	7.2		2cs	5ks	NW	NW	0.21	5.3	Fair	

Note.—The originals give the cloudiness by the scale 0 to 4.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, 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 in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.53	750.0	39	3.9	81	NW	23	10.3		2k	5ks	W	W	0.24	6.1	Cloudy	
Alpena, Mich.			29.72	754.9	28	—2.2	88	NW	12	5.4			10n			0.02	0.5	Light snow	
Atlantic City, N. J.			29.75	755.6	40	4.4	56	W	21	9.4		1cs	0			0.63	16.1	Clear	
Augusta, Ga.			30.17	766.3	47	8.3	62	NW	4	1.8		0	0			0.10	2.5	Clear	
Baltimore, Md.			29.81	754.9	41	5.0	56	NW	16	7.2		0	0			0.20	7.4	Clear	
Barnegat, N. J.			29.71	754.6	41	5.0	57	W	22	9.8		2k	0	W		0.97	24.6	Fair	
Benton, Montana	27.06	687.3	29.86	758.4	35	1.7	90		8	3.6			10s			0	0	Cloudy	
Bismarck, Dakota	28.19	716.0	29.91	759.7	25	—3.1	75	S	17	7.6			10ks		S	0	0	Threatening	
Boston, Mass.			29.35	745.5	42	5.6	65	W	22	9.8		0	1s		W	1.38	35.1	Clear	
Breckenridge, Minn.			30.20	767.1	24	—4.4	88	Calm	0	0		10cs	0			0	13.1	Cloudy	
Buffalo, N. Y.			29.66	753.4	33	0.6	79	W	24	10.7		5cs	2ks	W		0.51	22.4	Fair	
Burlington, Vt.			29.46	748.3	38	3.3	81	N	2	0.9			10s		W	0.88	0	Cloudy	
Cairo, Ill.			30.33	770.4	34	1.1	79	NW	12	5.4		0	0			0	0	Clear	
Cape Hatteras, N. C.			29.80	759.2	52	11.1	60	NW	18	8.0		0	2s			Inap.	Inap.	Fair	
Cape Henry, Va.			29.91	759.7	49	9.4	50	NW	19	8.5		2c	2s	W	NW	0.01	0.3	Fair	
Cape May, N. J.			29.79	756.7	41	5.0	48	W	28	12.5		2k	0	W		0.59	15.0	Fair	
Charleston, S. C.			30.14	765.5	50	10.0	51	W	10	4.5		0	0			0.20	5.1	Clear	
Cheyenne, Wyoming	24.10	612.1	30.04	763.0	33	0.6	61	W	8	3.6		8c	2s			0	0	Cloudy	
Chicago, Ill.			30.13	765.3	31	—0.6	68	NW	8	3.6			10s			0	0	Cloudy	
Cincinnati, Ohio			30.10	764.5	35	1.7	70	NW	9	4.0			10s		NW	Inap.	Inap.	Cloudy	
Cleveland, Ohio			29.85	758.2	36.3	2.4	62	W	26	11.6			10ks		W	0.23	5.8	Cloudy	
Colorado Springs, Col.	24.25	615.9	30.12	765.0	36	2.2	46	N	4	1.8		2c	0	NW		0	0	Fair	
Corsicana, Tex.			30.38	771.6	39	3.9	71	W	1	0.4		0	0			0	0	Clear	
Davenport, Iowa			30.24	768.1	29	—1.7	89	NW	6	2.7		5k	0			0	0	Fair	
Denison, Tex.			30.31	769.9	45	7.2	60	SW	5	2.2		0	0			0	0	Clear	
Denver, Col.	24.90	632.4	30.12	765.0	38	3.3	45	S	4	1.8		0	0			0	0	Clear, frost	
Detroit, Mich.			29.87	758.7	32	0.0	79	W	14	6.3		0	8ks		NW	0.04	1.0	Fair	
Dodge City, Kan.	27.52	699.0	29.87	758.7	40	4.4	64	SE	2	0.9		0	0			0	0	Clear	
Dubuque, Iowa			30.21	767.3	31	—0.6	68	W	10	4.5		0	5s		W	Inap.	Inap.	Fair	
Duluth, Minn.			30.18	766.6	36	—3.3	88	NW	4	1.8			8s		NE	0	0	Cloudy	
Eastport, Me.			29.44	747.8	44	6.7	92	E	18	8.0			10n		E	0.30	7.6	Light rain	
Erie, Pa.			29.74	755.4	36	2.2	54	W	32	14.3			10ks		W	0.62	15.7	Cloudy	
Escanaba, Mich.			29.94	760.5	26	—3.3	88	NW	18	8.0			10s		NW	0.04	1.0	Cloudy	
Fort Gibson, I. T.			30.27	768.8	35	1.7	80	S	4	1.8		1c	Haze			0	0	Clear	
Fort Sill, I. T.	29.04	737.6	30.20	767.1	38	3.3	80	Calm	0	0		2cs	Sm'e	W		0	0	Clear	
Fort Sully, Dakota	28.28	718.3	30.01	762.2	27	—2.8	77	S	13	5.8		0	8s			0	0	Cloudy	
Galveston, Tex.			30.37	771.4	60	15.6	54	NE	8	3.6		0	0			0	0	Clear	
Grand Haven, Mich.			29.99	761.7	35	1.7	70	NW	20	8.9			10s		NW	0.08	2.0	Cloudy	
Indianapolis, Ind.			30.16	766.1	32	0.0	69	W	10	4.5			10s		W	0	0	Cloudy	
Indianola, Tex.			30.36	771.1	63	17.2	62	E	18	8.0		0	0			0	0	Clear	
Jacksonville, Fla.			30.23	767.8	50	10.0	64	NW	4	1.8		0	0			0.97	24.6	Clear	
Keokuk, Iowa			30.23	767.8	29	—1.7	77	W	5	2.2		0	8s		W	0.03	0.8	Cloudy	
Key West, Fla.			30.11	764.8	76.2	24.0	81	N	20	8.9		5k	2s,d		N	0	0	Cloudy, hazy	
Kittyhawk, N. C.			29.92	760.0	49	9.4	44	NW	24	10.7		2c	0	NW		0	0	Fair	
Knoxville, Tenn.			30.18	766.6	36	2.2	62	SW	2	0.9		0	0	NW		0.01	0.3	Clear	
La Crosse, Wis.			30.19	766.8	30	—1.1	68	SW	8	3.6			10s		SW	0	0	Cloudy	
Leavenworth, Kan.			30.26	768.6	28	—2.2	77	SW	1	0.4		0	0			0	0	Clear	
Lexington, Ky.	29.06	738.1	30.22	767.6	33	0.6	60	W	16	7.2			10ks		W	0	0	Cloudy	
Long Branch, N. J.			29.60	753.4	42	5.6	74	W	19	8.5		0	0			0.93	23.6	Clear	
Louisville, Ky.			30.21	767.3	34	1.1	62	SW	8	3.6			10s			0	0	Cloudy	
Lynchburg, Va.			29.95	760.7	43	6.1	36	NW	12	5.4		2k	0	W		0.13	3.3	Clear	
Malone, N. Y.			29.43	747.5	34	1.1	90	W	8	3.6			10ks			0.80	20.3	Cloudy	
Marquette, Mich.			29.94	760.5	26	—3.3	88	W	16	7.2			10n		W	0.42	10.7	Light snow	
Memphis, Tenn.			30.35	770.9	42	5.6	74	NW	3	1.3		0	Haze		NW	0	0	Clear, frost	
Milwaukee, Wis.			30.12	765.0	28	—2.2	77	NW	20	8.9		2k	5ks	N	NW	0	0	Cloudy	
Mobile, Ala.			30.34	770.6	48	8.9	62	N	3	1.8		0	Sm'e			0	0	Clear	
Montgomery, Ala.			30.31	769.9	45	7.2	84	SW	2	0.9		0	Sm'e			0	0	Clear	
Morgantown, W. Va.			29.94	760.5	35	1.7	74	SW	19	8.5			10n			0.01	0.3	Light snow	
Mt. Washington, N. H.	23.08	586.2	29.43	747.5	19	—7.2	100	NW	20	8.9			10n			0.22	5.6	Light snow	
Nashville, Tenn.			30.26	768.6	38	3.3	63	W	4	1.8		0	0			0	0	Clear	
New Haven, Conn.			29.56	750.8	44	6.7	75	NW	16	7.2		5cs	0	W		0.92	23.4	Fair	
New London, Conn.			29.53	750.0	44	6.7	76	W	12	5.4		2k	5ks	W	W	1.35	34.3	Threatening	
New Orleans, La.			30.33	770.4	57	13.9	58	N	8	3.6		0	0			0	0	Clear	
Newport, R. I.			29.48	748.8	44	6.7	76	W	26	11.6		2ck	0	NW		1.36	34.5	Fair	
New York, N. Y.			29.64	752.8	40	4.4	56	W	18	8.0		0	0			0.83	21.1	Clear	
Norfolk, Va.			29.93	760.2	44	6.7	63	W	9	4.0		0	0			0.15	3.8	Clear	
North Platte, Neb.	27.10	688.3	29.76	756.1	32	0.0	90	Calm	0	0		0	0			0	0	Clear	
Omaha, Neb.	29.12	739.6	30.06	763.0	24	6.7	93	Calm	0	0		2c	Sm'e	W		0	0	Fair	
Oswego, N. Y.			29.59	751.6	38.8	3.6	56	NW	22	9.8			10ks		NW	0.72	18.3	Cloudy	
Peck's Ranch, N. J.			29.76	756.1	40	4.4	63	W	24	10.7		1k	0			0.77	19.6	Fair	
Pembina, Dakota			30.20	767.1	23	—5.0	100	NE	4	1.8		10c	0			0	0	Cloudy	
Philadelphia, Penn.			29.73	755.1	40	4.4	48	W	16	7.2		2ck	0	W		0.55	14.0	Fair	
Pike's Peak, Colorado	17.93	455.4	30.14	765.5	23	—5.0	86	W	24	10.7		2c	0	NW		0	0	Fair	
Pittsburgh, Penn.			29.86	758.4	33	0.6	79	W	16	7.2			10n			0.13	3.3	Light snow	
Port Huron, Mich.			29.42	757.4	32	0.0	69	W	20	8.9			10s		NW	0.12	3.0	Cloudy	
Portland, Me.			29.42	739.0	50	10.0	86	S	6	2.7			Fog			0.97	24.6	Foggy	
Portland, Oregon			29.95	761.5	51	10.6	86	S	8	3.6			10s			0.85	21.6	Cloudy	
Punta Rassa, Fla.			30.19	766.6	61	16.1	71	N	16	7.2		2ck	Sm'e	NE		0	0	Clear	
Rochester, N. Y.			29.61	752.1	35	1.7	70	W	14	6.3		2k	5ks	W	W	0.35	8.9	Fair	
Salt Lake City, Utah	25.68	652.3	30.01	762.2	50	10.0	43	SE	5	2.2		0	0			0	0	Clear	
Sandy Hook, N. J.			29.62	752.3	43	6.1	66	W	36	16.1		0	2s			0.88	22.4	Clear	
San Diego, Cal.			30.08	764.0	57	13.9	53	E	4	1.8		0	0			0	0	Clear	
San Francisco, Cal.			30.05	763.3	57	13.9	87	SW	10	4.5		0	0			0	0	Clear	
Santa Fe, N. M.	23.46	595.9	30.04	762.0	37	2.8	29	NE	11	4.9		0	0			0	0	Clear	
Savannah, Ga.			30.18	766.5	50	10.0	42	NW	10	4.5		0	0			0.26	6.6	Clear	
Shreveport, La.			30.40	772.4	42	5.6	100	Calm	0	0			Fog			0	0	Foggy	
Smithville, N. C.			30.05	763.5	48	8.9	48	W	8	3.6		0	0			0.14	3.6	Clear	
Springfield, Mass.			29.49	749.0	43	6.1	58	W	12	5.4		5ck	8ks			1.64	41.7	Cloudy	
St. Louis, Mo.			30.43	770.4	30	—1.1	77	W	12	5.4		8ck	0			0	0	Cloudy	
St. Marks, Fla.			30.27	768.5	45	7.2	84	Calm	0	0		0	0			0.58	14.7	Clear	
St. Paul, Minn.			30.19	766.8	21.5	—4.2	80	NW	4	1.8		0	0			0	0	Clear	
St. Paul's Island, Alaska																			
Squa Beach, N. J.			29.53	750.0	41	5.6	48	W	27	12.1		0	Haze			1.09	27.7	Clear	
Toledo, Ohio			29.91	759.4	35	1.7	8	W	20	8.9			10s		W	0	0	Light snow	
Tucson, Arizona	27.06	687.6	30.01	762.2	54	12.2		Calm	0	0		0	0			0	0	Clear	
Tybee Island, Ga.			30.13	765.1	51	10.6	83	NW	20	8.9		Haze	0			0.39	9.9	Clear	
Vicksburg, Miss.			30.24	768.2	47	8.3	77	N	1	0.4		0	0			0	0	Clear	
Virginia City, Montana	27.21	691.0	29.39	746.4	39	3.9	71	Calm	0	0		3c	0	W		0.02	0.5	Fair	

UNITED STATES SERIES.—CONTINUED.

Station.	Barometer. Corrected for instrumental errors. Inches.	Barometer. Corrected for instrumental errors. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall in 24 hours. Inches.	Rain-fall in 24 hours. Millimeters.	Weather.	Observer.
Washington, D. C.			29.87	758.7	40.5	4.7	48	NW	18	8.0		1ck	0	W		0.33	8.4	Clear	
Wilmington, N. C			30.04	763.0	49	9.4	43	W	12	5.4		0	0			0	0	Clear	
Wood's Hole, Mass			29.48	748.8	46	7.8	68	NW	22	9.8		0	0			0.83	21.1	Cloudy	
Wytheville, Va	27.61	701.3	29.82	757.4	34	1.1	61	W	10	4.5		8k	0	NW		0.02	0.5	Cloudy	
Yankton, Dakota	28.87	733.3	30.25	768.3	23	—5.0	67	SE	4	1.8		2cs	0	NW		0	0	Fair	
Yuma, Arizona			30.07	763.8	59	15.0		E				0	0			0	0	Clear	
Sub-Series.																			
Bridgetown, Barbadoes, W. I					80	26.7	86	E	7	3.1		0	2s		S	0	0	Fair	E Racker.
Pointe-a-Pitre, Guadeloupe, do			29.98	761.5	78	25.6	83	E				2k	2ks			0.01	0.3	Clear	L. V. Bigard.
Havana, Cuba, W. I			30.09	764.3	78	25.6	82	Calm	0	0		5c	1k	SW	NE	0	0	Foggy	Charles Hasselbrink.
Kingston, Jamaica, W.			30.17	766.3	76	24.4	76	Calm	0	0		1c	1s			0	0		James Gall.
St. Thomas, St. T., W. I			30.22	767.6	84	28.9	70	E	6	2.7		2ck	2k	E	E	Inap.	Inap.	Clear	W. S. Cameron.
Santiago de Cuba, W. I			29.83	757.7	78	25.6	72	N	7.2	3.2		0	0					Fine	Robert Mason.
St. Georges, Bermudas			29.90	759.4	72.5	22.5	72	SSW	9.3	4.2		8c	5fk	W	SSW	0	0	Clear	C. F. Allen.
Honolulu, Oahu, H. I																			E. P. Church.
Makawao, Maui, H. I																			F. L. Clarke.
Cumberland, B. A																			
Ft. Chippewyan, B. A																			
Ft. McPherson, B. A																			
Ft. Simpson, B. A																			
York Factory, B. A			30.24	768.1	14	-10.0	100	NW	15?	6.7?			10n			0	0	Snowing	J. Fortescue.
St. John's, Newfoundland																			John Delaney.
St. John's, Porto Rico, W. I																			Leon M. Acuña.
Clifton, Jamaica, W. I	27.23	691.6	30.00	762.0	68	20.0	90	N	4.0	1.8		8c	0	NE		0	0	Dull	C. Partridge.
Navassa																			
Medellin, S. A																			
Paramaribo, S. A																			
Elyria, Ohio			29.79	756.7	31.5	—0.3	96	W	16	7.2			10n			0.30	7.6	Light snow.	H. M. Redington.

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

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory. Elyria records all the clouds as lower. 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.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,816 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,268.8 ft., or 1,301.1 m.; Santa Fé, 6,86[illegible].3 (?) ft., or 2,091.6 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Wytheville, 2,294.8 ft., or 699.4 m.; Yankton, 1,278 ft., or 389.5 m. The following constants are used in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Colorado Springs, 5.87 in.; Denver, 5.22 in.; Benton, 2.80 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Virginia City, 5.48 in. Tucson, 2533.1 feet, or 772.1? mm., uses a constant of 2.59 in.

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 distinction between the upper and lower strata of clouds is rarely reported. The kinds of clouds, viz: Cirrus, Cumulus, Stratus, Nimbus and Scud are indicated, respectively, by the letters C., K., S., N. and D., generally published, with the amount, in the lower cloud column. In the United States and Canadian Series, the distinction between upper and lower strata is carefully made, and the types are indicated by the above letters in the proper columns.

Albert J. Myer

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