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ON THE
METEOROLOGY OF ENGLAND, SOUTH OF SCOTLAND, AND PARTS OF IRELAND,

DURING THE
Quarter ending December 31, 1851.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

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1851.

On the Meteorology of England, South of Scotland, and parts of Ireland, during the Quarter ending December 31st, 1851. By JAMES GLAISHER, ESQ., F.R.S., Sec. of the British Meteorological Society.

Till October 28th, with the exception of a very few days, the mean daily temperatures of the air were above their average values at times to the amount of 8° to 10° ; the average daily excess for the period was $3^{\circ} \cdot 7$. On October 29th a period of exceeding cold weather set in, and for thirty-seven days the daily temperature was below its average value, frequently amounting to 8° , 9° , and 10° , less frequently to 11° and 12° , and in one case exceeded 13° ; the average defect for the period was $6^{\circ} \cdot 2$. So cold a November has not been since the year 1786. The period from December 5th to 24th was mostly warm, though at times it was cold; the average daily temperature was $2^{\circ} \cdot 5$ in excess, and to the end of the year from the 25th it was $2^{\circ} \cdot 5$ in defect. The reading of the barometer was in excess in each month, and greatly so in December. The fall of rain has only amounted to two fifths of its average fall for the quarter, and this deficiency of rain has been general over England, Scotland, and Ireland, excepting only the county of Norfolk. There has been much less water mixed with the air, and the degree of humidity of the air has been unusually low, particularly in December.

The mean temperature of the air at Greenwich for the quarter ending November, constituting the 3 Autumn months, was $49^{\circ} \cdot 1$, being $0^{\circ} \cdot 2$ below the average of 80 years.

1851. MONTHS.		Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
		Air.			Evaporation.		Dew Point.		Air— Daily Range.						
		Mean.	Diff. from average of 80 years.	Diff. from average of 10 years.	Mean.	Diff. from average of 10 years.	Mean.	Diff. from average of 10 years.	Mean.	Diff. from average of 10 years.	Mean.	Diff. from average of 10 years.			
Oct.	52.6	+3.3	+3.1	49.5	+1.8	46.4	+1.0	13.0	-0.4	55.0	.331	+0.11	3.8	+0.2	
Nov.	37.9	-4.5	-6.7	35.3	-7.6	32.2	-9.2	11.9	+1.4	42.3	.269	-0.69	2.4	-0.8	
Dec.	40.5	+1.7	0.0	35.7	-3.4	29.3	-7.1	8.0	-1.0	42.1	.186	-0.53	2.2	-0.6	
Mean	43.7	+0.2	-1.2	40.3	-3.1	33.2	-5.1	11.0	0.0	46.5	.242	-0.37	2.8	-0.4	

1851. MONTHS.		Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal movement of the Air.	Reading of Thermometer on Grass.				
		Mean.	Diff. from average of 10 years.	Mean.	Diff. from average of 10 years.	Mean.	Diff. from average of 10 years.	Amount.	Diff. from average of 10 years.		Number of Nights it was			Lowest Reading at Night.	Highest Reading at Night.
											At or below 32°	Be- tween 32° and 40°	Above 40°		
Oct.	.810	-.090	in.	in.	gr.	gr.	in.	in.	Miles.	2	9	20	29.0	54.1	
Nov.	.819	-.073	29.726	+0.037	533	-2	1.8	-1.4	110	20	10	0	17.0	38.3	
Dec.	.850	-.209	30.135	+0.037	554	+5	0.6	-0.9	60	16	10	5	17.0	46.0	
Mean	.773	-.114	29.881	+1.38	546	+4	Sum. 3.0	Sum. -4.4	80	Sum. 38	Sum. 29	Sum. 25	

NOTE.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunderstorms occurred, or thunder was heard and lightning seen, on 1st October at Nottingham; on the 4th at Guernsey and St. John's Wood; on the 5th at Uckfield; on the 15th at Jersey and Helston; on the 29th and 30th at Guernsey; on November 18th at Norwich; on the 21st at North Shields, and on the 28th and 29th at Guernsey.

Thunder was heard, but lightning was not seen, on October 2d at Hawarden and Stonyhurst, and on the 29th at Stonyhurst; on the 2d of November at Hawarden; on the 16th at North Shields; and on the 17th and 18th at Holkham.

Lightning was seen, but thunder was not heard, on 1st October at Nottingham and Hawarden; on the 2d at Linslade and Norwich; on the 3d at Uckfield; on the 5th at Thame, on the 8th and 11th at Exeter; on the 14th at Jersey; on the 15th at Stone, Hartwell Rectory; on the 16th at North Shields; and on the 21st at Hartwell House; on the 17th of November at Nottingham and Wakefield; on the 19th of December at Linslade; and on the 26th at Nottingham.

Hail fell on the 2d at Helston and Maidenstone Hill; on the 3d at Jersey; on the 4th at Jersey and Guernsey; on the 5th at Uckfield and Stonyhurst; on the 6th at Nottingham; on the 15th at Liverpool and Whitehaven; on the 16th at Thame; on the 18th at Guernsey; on the 24th and 25th at Jersey; on the 29th at Guernsey, Falmouth, Torquay, and North Shields; on the 30th at Guernsey and North Shields; on 1st November at Falmouth, Liverpool, and Whitehaven; on the 2d at Falmouth, Torquay, Maidenstone Hill, Thame, Hartwell House, Hartwell Rectory, Nottingham, Hawarden, and Liverpool; on the 3d at Guernsey, Helston, Torquay, and Hawarden; on the 4th at Guernsey and Hawarden; on the 10th at Guernsey, Helston, and Falmouth; on the 11th at North

Shields; on the 16th at Helston; on the 17th at Falmouth and Torquay; on the 20th at North Shields; on the 24th at Guernsey, Falmouth, Hawarden, and Liverpool; on the 25th at Guernsey, Helston, Falmouth, Torquay, and North Shields; on the 26th at North Shields; and on the 28th at Guernsey.

Fog was prevalent on October the 9th and 11th at St. John's Wood; on the 17th at St. John's Wood and Gainsborough; on the 19th at Helston; on the 20th at Stonyhurst and Durham; on the 21st and 22d at Stonyhurst and Durham; on the 23d at Gainsborough and Durham; on the 24th at Stonyhurst and Durham; on the 25th at Stone, Hartwell House, Linslade, Stonyhurst, and Durham; on the 26th at Hartwell House and Stonyhurst; and on the 27th at Hartwell House; on November the 3d at Gainsborough; on the 7th at Glasgow; on the 8th at Hartwell House; on the 11th at Thame, Stone, Hartwell House, Linslade, and Gainsborough; on the 12th at Stone, Hartwell House, Hartwell Rectory, Linslade, Bedford, Grantham, and Glasgow; on the 13th at St. John's Wood, Lewisham, Thame, Stone, Hartwell House, Hartwell Rectory, Linslade, and Norwich; on the 14th at Hartwell House; on the 15th at Hartwell Rectory and Glasgow; on the 16th at St. John's Wood and Stone; on the 19th at Thame, Stone, Hartwell Rectory, and Glasgow; on the 20th at Durham and Glasgow; on the 21st at Norwich; on the 25th at St. John's Wood, Hartwell Rectory, Linslade, Bedford, Gainsborough, Durham, and North Shields, at the latter very dense; on the 26th at St. John's Wood, Lewisham, Stone, Hartwell House, Hartwell Rectory, Linslade, and Grantham; on the 27th at Norwich and Glasgow; on the 28th at Stone, Hartwell House, Linslade, and Norwich; on the 29th at St. John's Wood, Thame, Stone, Hartwell House, Hartwell Rectory, Linslade, Bedford, Norwich, Gainsborough, and Durham; on the 30th at Thame, Stone, Hartwell House, Hartwell Rectory, Linslade, Bedford, Gainsborough, and Durham; on December the 1st at Stone, Hartwell House, Hartwell Rectory, Linslade, and Glasgow; on the 2d at Lewisham, Hartwell Rectory, and Glasgow; on the 3d at Helston, Lewisham, Hartwell Rectory, and Glasgow; on the 4th at Stone, Hartwell House, and Glasgow; on the 8th at Helston; on the 11th at Helston and Stone; on the 12th at St. John's Wood, Stone, Hartwell House, Hartwell Rectory (Linslade Travelling), Grantham, Gainsborough, Durham, and North Shields; on the 13th at Lewisham, Stone, Hartwell House, Hartwell Rectory, Bedford, Grantham, Gainsborough, Durham, and North Shields; on the 14th at Stone, Hartwell House, Hartwell Rectory, Grantham, and Durham; on the 15th at Hartwell House and Stonyhurst; on the 16th at Hartwell House; on the 18th at Hartwell Rectory; on the 19th at Guernsey (Durham very dense), and North Shields; on the 20th at Hartwell House; on the 21st at Durham; on the 22d at Stone, Hartwell Rectory, Gainsborough, Stonyhurst, and Durham; on the 23d at Stone, Linslade, Bedford, and Durham; on the 24th at Hartwell House, Hartwell Rectory, Gainsborough, Stonyhurst, Durham, and Glasgow; on the 25th at Durham and Glasgow; on the 26th at Durham; on the 27th at Hartwell House; on the 30th at Hartwell House and Hartwell Rectory; and on the 31st at Hartwell House and Gainsborough.

Aurora were seen on October the 2d at Maidenstone Hill, Oxford, Redcliff Observatory, Cardington, Norwich, Nottingham, Stonyhurst, Whitehaven, Durham, North Shields, and Dunino; on the 3d at Cardington and Nottingham; on the 4th at Nottingham and Durham; on the 14th and 15th at Stonyhurst; on the 18th at Durham; on the 28th at Wakefield, Stonyhurst, Durham, Whitehaven, and North Shields; and on the 29th at Hartwell Rectory, Nottingham, Wakefield, and Dunino; on the 4th of November at Aylesbury and Nottingham; on the 5th at Stonyhurst; on the 13th at Stonyhurst; on the 20th and 21st at Aylesbury; on the 24th at Dunino; and on the 26th at Stonyhurst; on the 6th of December at Hawarden, Liverpool, Wakefield, Durham, and North Shields; on the 8th at Hawarden; on the 22d at Nottingham, Hawarden, Stonyhurst, Whitehaven, Durham, North Shields, and Dunino; on the 23d at Whitehaven and Dunino; on the 28th at Grantham and Dunino; and on the 29th at Grantham, Stonyhurst, North Shields, and Dunino.

Snow fell on the 29th of October at Stonyhurst, and sleet at Durham; on the 3d of November at Stone, Derby, Hawarden, Liverpool, and Manchester; on the 4th at Uckfield, Stone, Hartwell Rectory, Aylesbury, Linslade, Cardington, Bedford, and Nottingham; on the 14th at Norwich; on the 15th at Norwich, Nottingham, Manchester, and Stonyhurst; on the 16th at Thame, Holkham, Durham, and North Shields; on the 17th at Falmouth, Thame, Linslade, Holkham, and North Shields; on the 18th at Uckfield, Cardington, Gainsborough, Durham, and North Shields; on the 19th at Linslade, Nottingham, Liverpool, Manchester, Wakefield, Whitehaven (a little), Durham, and Dunino; on the 20th at Oxford, Thame, Stone, Hartwell House, Hartwell Rectory, Aylesbury, and Bedford; on the 21st at Aylesbury; on the 22d at Hartwell House; on the 24th at Stonyhurst; on the 26th sleet at Gainsborough; on the 27th at Stone, Hartwell House, and Hartwell Rectory; and on the 29th at Hartwell House.

Solar halos were seen on 1st of October at Stone and Nottingham; and on the 14th at Stone, Hartwell Rectory, and Nottingham; on the 23d of November at Stone, Hartwell Rectory, and at Nottingham (a mock sun); on 4th December at Stone; on the 12th at Hartwell Rectory; and on the 13th at Uckfield.

Lunar halos were seen on the 6th of October at Cardington, Nottingham, and Liverpool Observatory; on the 8th at Hartwell House and Nottingham; on the 10th at Uckfield; and on the 11th at Nottingham; on the 1st of November at Whitehaven and Durham; on the 4th at Whitehaven and North Shields; on the 6th at Hartwell Rectory, Nottingham, Hawarden, Liverpool Observatory, Stonyhurst, and Dunino; and on the 14th at Stone, Hartwell Rectory, Cardington, and Nottingham; on the 1st of December at Norwich and North Shields; on the 3d at Durham and North Shields; on the 8th at Maidenstone Hill, Hartwell House, and Hartwell Rectory (a lunar coronæ); on the 11th at Uckfield and (Thame at midnight); on the 12th at Uckfield and Hartwell Rectory; and on the 29th at Stonyhurst and North Shields.

NAMES OF THE PLACES.	Mean Pressure of dry Air reduced to the level of the Sea.	Mean Temperature of the Air.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Mean Daily Range of Temperature.	Mean Monthly Range of Temperature.	Range of Temperature in the Quarter.	Mean Temperature of Evaporation.	Mean Temperature of the Dew Point.	Mean estimated Strength.	WIND. General Direction.	Mean Amount of Cloud.	Number of Days on which it fell.	RAIN. Amount collected.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required to saturate a cubic foot of Air.	Mean degree of Humidity.	Mean whole Amount of Water in a vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.	Height of the Barometer above the level of the sea.	
	in.	°.	°.	°.	°.	°.	°.	°.	°.	°.		°.		in. gr.	gr.	gr.	in. gr.	gr.	feet.		
Jersey - - -	29.815	47.370	0.27	0.10	0.16	0.23	0.43	0.45	0.42	1.8	W.N.W. & E.S.E.	6.4	46	0.920	0.334	0.6	0.848	in.	4.1	547	75
Guernsey - -	29.778	47.705	0.33	0.10	0.16	0.23	0.43	0.45	0.43	1.3	N.W. & N.E.	6.6	50	0.930	0.33	0.5	0.870	in.	4.1	542	123
Helston - - -	29.785	48.690	0.31	0.12	0.23	0.35	0.46	0.47	0.44	1.3	N.W.S.W. & E.	6.8	54	0.930	0.31	0.5	0.875	in.	4.3	542	106
Falmouth - -	29.803	47.867	0.24	0.12	0.18	0.23	0.43	0.45	0.42	1.2	N.W. & S.	6.8	51	0.921	0.33	0.6	0.864	in.	4.0	545	140
Truro - - -	29.803	47.867	0.24	0.12	0.18	0.23	0.43	0.45	0.42	0.4	N.N.W. & S.W.	6.6	47	0.944	0.33	0.7	0.818	in.	4.1	551	55
Torquay - - -	29.824	45.168	0.23	0.12	0.29	0.35	0.44	0.44	0.41	2.4	N.W. & W.	1	32	0.584	0.33	0.7	0.827	in.	4.0	545	160
Exeter - - -	29.834	45.168	0.23	0.12	0.29	0.35	0.44	0.44	0.41	1.5	N.W. & Var.	4.8	38	0.618	0.33	0.6	0.864	in.	4.0	545	140
Clifton House, Ryde, Isle of Wight -	29.820	44.609	0.24	0.12	0.23	0.32	0.44	0.44	0.41	0.1	N.E. & S.W.	7.8	34	0.838	0.33	0.4	0.888	in.	4.0	546	110
Chichester - -	29.763	44.867	0.25	0.11	0.16	0.23	0.40	0.40	0.37	2	S.W. & N.E.	1	—	4.770	—	—	—	—	—	23	
Southampton -	29.763	44.867	0.25	0.11	0.16	0.23	0.41	0.42	0.37	0.2	—	4.2	40	5.724	0.33	0.5	0.865	in.	4.0	547	60
Uckfield - - -	29.787	43.699	0.10	0.16	0.16	0.23	0.40	0.41	0.39	0.6	S.W. & N.	6.2	38	0.542	0.33	0.5	0.861	in.	4.0	548	180
Lewisham - -	29.790	43.468	0.22	0.10	0.18	0.23	0.42	0.42	0.40	0.5	W.S.W. & N.W.	7.2	34	0.339	0.33	0.4	0.908	in.	4.1	548	82
Royal Observatory	29.806	43.670	0.24	0.11	0.18	0.23	0.45	0.41	0.28	1	N.W. & S.W.	1	28	0.300	0.28	0.6	0.828	in.	3.5	548	155
Maidenstone Hill -	29.815	46.077	0.24	0.12	0.23	0.35	0.43	0.42	0.40	0.8	W.S.W. & N.	7.0	27	2.800	0.32	0.4	0.808	in.	3.9	547	107
Chislewell-st., Brewery	29.828	47.169	0.31	0.10	0.16	0.23	0.43	0.45	0.43	1.3	S.W. & W.N.W.	1	29	2.237	0.32	0.7	0.904	in.	3.2	548	96
St. John's Wood -	29.702	43.670	0.23	0.11	0.17	0.21	0.36	0.41	0.36	1.0	S.W. & N.W.	8.3	34	3.151	0.31	0.7	0.908	in.	3.7	547	150
Rose Hill near Oxford	29.784	47.705	0.33	0.10	0.16	0.23	0.43	0.45	0.42	0.9	S.W. & N.N.W.	6.6	47	0.930	0.33	0.6	0.864	in.	4.0	547	107
Thame, Oxon - -	29.784	47.705	0.33	0.10	0.16	0.23	0.44	0.41	0.39	0.6	S.W. & N.N.W.	6.7	41	0.910	0.33	0.6	0.905	in.	3.8	545	220
Radcliff Observatory	29.791	43.468	0.20	0.11	0.13	0.23	0.49	0.41	0.40	1.8	S.W.N. & Var.	7.4	32	4.117	0.32	0.4	0.894	in.	3.8	546	210
Stone Observatory	29.757	42.368	0.23	0.11	0.13	0.23	0.44	0.40	0.37	0.6	S.W. & N.N.W.	6.8	42	4.355	0.29	0.5	0.834	in.	3.5	543	320
Hartwell House	29.713	43.570	0.21	0.13	0.23	0.34	0.49	0.41	0.38	0.6	S.W. & W.N.W.	7.0	38	—	0.30	0.6	0.847	in.	3.6	543	250
Hartwell Rectory	29.757	42.367	0.21	0.11	0.13	0.24	0.40	0.40	0.38	0.6	S.W. & N.W.	6.4	46	4.020	0.30	0.4	0.880	in.	3.5	543	290
Aylesbury - -	29.783	43.699	0.25	0.15	0.23	0.36	0.46	0.41	0.39	0.4	S.W. & W.N.W.	6.5	30	4.490	0.31	0.3	0.888	in.	3.7	544	284
Linslade - - -	29.787	43.699	0.10	0.17	0.17	0.23	0.40	0.40	0.38	0.6	S.W. & W.N.W.	6.7	47	4.320	0.31	0.5	0.881	in.	3.6	543	260
Cardington - -	29.760	42.367	0.21	0.12	0.23	0.36	0.46	0.41	0.40	0.5	S.W. & N.N.W.	6.6	37	4.320	0.32	0.4	0.924	in.	3.5	548	100
Bedford - - -	29.760	43.699	0.23	0.11	0.13	0.23	0.45	0.42	0.40	0.7	S.W. & N.N.W.	6.9	27	3.922	0.31	0.4	0.895	in.	3.7	547	100
Norwich - - -	29.723	43.699	0.28	0.10	0.22	0.37	0.42	0.42	0.40	2.0	W.S.W. & W.N.W.	6.6	47	9.751	0.31	0.4	0.865	in.	3.7	548	39
Derby - - -	29.737	44.166	0.21	0.10	0.17	0.25	0.42	0.42	0.39	0.9	ws.w. NW. & Var.	1	41	0.338	0.31	0.6	0.839	in.	3.7	545	100
Holkham - - -	29.743	43.767	0.25	0.11	0.18	0.28	0.42	0.42	0.40	1.0	W.S.W. & N.W.	7.4	46	7.770	0.32	0.4	0.902	in.	3.8	540	38
Highfield House	29.727	42.367	0.19	0.14	0.23	0.36	0.45	0.41	0.38	0.3	ws.w. NW. & Var.	7.2	47	5.616	0.30	0.4	0.877	in.	3.6	548	135
Linslade - - -	29.787	43.699	0.10	0.17	0.17	0.23	0.40	0.40	0.38	1.9	S.W. & W.N.W.	6.7	47	4.320	0.31	0.5	0.881	in.	3.6	543	260
Gainsborough -	29.755	42.366	0.20	0.11	0.13	0.24	0.40	0.40	0.38	0.3	S.W. & N.N.W.	5.6	39	3.400	0.30	0.4	0.873	in.	3.5	551	80
Liverpool Obser.	29.747	43.623	0.27	0.17	0.24	0.30	0.43	0.41	0.34	0.8	Var. N. & S.S.E.	7.5	43	6.886	0.33	0.4	0.904	in.	4.0	546	37
Manchester - -	29.787	42.268	0.21	0.14	0.16	0.24	0.40	0.40	0.38	0.9	W.S.W. & N.E.	7.3	38	7.116	0.30	0.4	0.896	in.	3.5	548	137
Wakefield Prison	29.754	42.759	0.24	0.12	0.23	0.33	0.45	0.41	0.39	1.9	W.S.W. & W.N.W.	6.7	46	2.738	0.30	0.5	0.879	in.	3.6	547	115
Stonyhurst - -	29.761	42.663	0.20	0.12	0.14	0.24	0.42	0.40	0.34	1.4	N.N.W. & S.W.	6.6	47	3.767	0.29	0.5	0.882	in.	3.4	545	381
York - - -	29.777	42.665	0.20	0.11	0.12	0.22	0.40	0.39	0.35	3	S.W. & N.N.W.	1	32	2.82	0.27	0.7	0.746	in.	3.2	549	60
Whitehaven - -	29.744	43.699	0.10	0.17	0.17	0.23	0.43	0.43	0.41	2.0	S.W. & N.E.	6.8	39	3.280	0.31	0.4	0.879	in.	3.6	547	115
Durham - - -	29.704	42.361	0.25	0.10	0.16	0.23	0.43	0.40	0.38	1.2	S.W. & N.W.	6.3	39	1.328	0.30	0.4	0.879	in.	3.6	542	340
Newcastle Lit. and Phil. Soc.	29.761	43.664	0.23	0.11	0.22	0.30	0.40	0.41	0.38	5	S.W. & N.W.	1	26	3.24	0.29	0.6	0.842	in.	3.4	545	127
North Shields -	29.785	42.565	0.23	0.10	0.20	0.27	0.41	0.41	0.40	2.2	S.W.N.W. & N.E.	5.7	40	2.14	0.31	0.3	0.915	in.	3.7	548	124
Glasgow - - -	29.690	43.763	0.25	0.19	0.26	0.37	0.41	0.38	0.33	—	W.S.W. & E.S.E.	4.3	53	2.29	0.29	0.6	0.824	in.	3.4	544	121
Dunino - - -	29.653	41.564	0.20	0.14	0.20	0.29	0.40	0.39	0.37	1	ws.w. NW. & WNW.	3.8	23	1.184	0.28	0.5	0.861	in.	3.2	544	220

The mean of the numbers in the first column is 29.767 inches, and it represents that portion of the reading of the barometer due to the pressure of air; the remainder, or that due to the pressure of water, is 0.232 inch; the sum of those two numbers is 29.999 inches, and it represents the mean reading of the barometer for the quarter at the level of the sea.

The highest readings of the thermometer in air were 71° at Falmouth, 70° at the Royal Observatory, 70° at Jersey, Hartwell House, Linslade, and Highfield House; and the lowest readings were 19° at Uckfield and Linslade, 19° at Highfield House, 20° at Radcliff Observatory, 20° at Stonyhurst, and 21° at Thame, Hartwell House, Cardington, Derby, and Manchester. The least daily ranges of temperature took place at Guernsey 6° 6', at Liverpool Observatory 6° 7', at Whitehaven 7° 3', at Glasgow 7° 8', and at North Shields 8° 2'; and their mean value was 7° 3'; and the greatest occurred at Aylesbury 15°, at Highfield House 14° 2', and at Manchester 14° 1'; and their mean value was 14° 4'.

Rain fell on the least number of days at Dunino, Newcastle, Bedford, Maidenstone Hill, and the Royal Observatory; and on the greatest number of days at Helston, Falmouth, and Whitehaven. The places where the least falls took place are Durham, North Shields, and Dunino, and the mean amount at those places is 1.74 inches. The largest falls occurred at Guernsey, Helston, Truro, Falmouth, and Norwich, and their average was 10.02 inches.

QUARTERLY METEOROLOGICAL TABLE for different PARALLELS of LATITUDE.

PARALLELS OF LATITUDE, &c.	Mean Temperature of the Air.	Mean of Highest Readings of the Thermometer.	Mean of Lowest Readings of the Thermometer.	Average Daily Range of Temperature.	Average Monthly Range of Temperature.	Average Quarterly Range of Temperature.	Mean Temperature of Evaporation.	Mean Temperature of the Dew Point.	Mean Amount of Cloud.	Average Number of Days.	RAIN. Average fall.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required to saturate a cubic foot of Air.	Mean degree of Humidity.	Mean whole Amount of Water in a vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.	Mean Height above the Sea level.
In the Counties of Cornwall and Devonshire	47.467	0.28	0.11	0.20	0.29	0.45	0.43	0.42	6.2	44	in. 8.48	gr. 3.4	gr. 0.5	0.846	in. 4.1	546	116
South of latitude 51°	44.267	0.25	0.11	0.12	0.23	0.43	0.45	0.42	6.8	37	5.30	3.0	0.5	0.877	3.9	547	64
Between the latitudes of 51° and 52°	43.368	0.22	0.11	0.11	0.23	0.43	0.45	0.42	7.0	34	3.88	3.0	0.4	0.873	3.7	546	210
Between the latitudes of 52° and 53°	43.567	0.23	0.12	0.13	0.24	0.44	0.44	0.41	6.9	41	5.96	3.1	0.3	0.887	3.7	549	0
Between the latitudes of 53° and 54°	42.566	0.23	0.11	0.12	0.23	0.43	0.45	0.42	6.6	40	4.22	3.0	0.5	0.871	3.7	547	162
Liverpool and Whitehaven	44.723	0.22	0.11	0.11	0.23	0.43	0.45	0.42	—	48	6.69	3.3	0.4	0.912	4.0	546	64
Durham and Newcastle	49.062	0.24	0.10	0.12	0.23	0.43	0.45	0.42	—	38	2.25	3.0	0.5	0.861	3.5	543	234
Glasgow and Dunino	42.663	0.24	0.10	0.12	0.23	0.43	0.45	0.42	—	33	3.58	2.9	0.6	0.843	3.3	544	186

In the formation of this Table the results from Jersey and Guernsey have not been combined, on account of the great difference in the ranges of temperature between these two places.

At Chiswell-street the receiving surface of the rain gauge is 50 feet from the ground.

At Liverpool Observatory the receiving surface of the rain gauge is 25 feet from the ground. At North Shields the receiving surface of the rain gauge is 33 feet from the ground.

TORQUAY.—The barometrical results do not accord with those of adjacent places; it seems to be doubtful whether the readings have been corrected for temperature. The instrument is not good, and no further use is made of this result. Guernsey.—The barometer in use since July is one made under Mr. Glashier's directions by Barrow. On the 13th of November between the hours of one and two A.M. a slight shock of an earthquake was felt distinctly and extensively over the island. Bedford.—The fall of rain in the year was 38·40 inches. Cardington.—The fall of rain in the year was 17·88 inches, being about 6 inches below the average. Derby.—The fall of rain in the year was 23·29 inches; average of 8 years is 28·9 inches. Rose Hill, near Oxford.—The great drought of the past season is here, as everywhere, most remarkable. At this spot the springs have never failed, but the river has been lower than ever remembered, some of the smaller branches having become completely dry. The rain that fell in December filled the river tolerably, but it is fast relapsing into shallowness. Thame.—The water has been very scarce in the neighbourhood. Glasgow.—In November the fall of rain was 3·8 inches below the average of 6 years. Dunino.—The springs and lakes are almost dried up.

ON THE
METEOROLOGY OF ENGLAND, SOUTH OF SCOTLAND, AND PARTS OF IRELAND,

DURING THE
Quarter ending March 31, 1852.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

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1852.

On the Meteorology of England, South of Scotland, and parts of Ireland, during the Quarter ending March 31st, 1852. By JAMES GLAISHER, ESQ., F.R.S., Sec. of the British Meteorological Society.

Till February 9th the mean daily temperatures were above their average values, at times to the amount of 10° , 11° , and 12° ; the average daily excess for the period was $4^{\circ}4$; the direction of the wind was chiefly S.W., and rain fell on 23 days. From February 10th to the end of the quarter the temperature was generally below its average value, though seldom to a large amount, the average daily defect was $1^{\circ}1$; the direction of the wind was mostly N.E., the sky cloudless, and rain fell on 6 days only, and to small amounts. During the period from February 20th to March 22d the reading of the barometer was almost continuously very high; on March 6th the reading reduced to the level of the sea was as high as 30.8. The weather from the middle of February was distinguished by being unusually fine, cold, the almost total absence of rain, and the air dry and harsh. Vegetation has been subjected to a temperature below 32° on 70 nights during the quarter.

The mean temperature of the air at Greenwich for the quarter ending February, constituting the 3 winter months, was $41^{\circ}1$, being $4^{\circ}2$ above the average of 80 years.

1852. MONTHS.		Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
		Air.		Evaporation.		Dew Point.		Air— Daily Range.		Water of the Thames.					
		Mean.	Diff. from average of 11 years.	Mean.	Diff. from average of 11 years.	Mean.	Diff. from average of 11 years.	Mean.	Diff. from average of 11 years.						
Jan.	42.0	+6.3	+4.4	39.2	+2.4	35.6	+0.6	11.4	+2.8	40.7	.230	+0.08	2.7	+0.1	
Feb.	40.8	+2.6	+1.6	38.3	+0.4	34.6	-1.0	12.2	+1.8	41.3	.221	-0.08	2.6	-0.1	
March	41.3	+0.4	-0.9	38.2	+1.8	33.9	-2.3	18.6	+5.0	41.9	.210	-0.04	2.5	-0.2	
Mean	41.4	+3.1	+1.7	38.6	+1.5	34.7	-0.9	14.1	+3.2	41.3	.220	-0.03	2.6	-0.1	

1852. MONTHS.		Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Hori- zontal move- ment of the Air.	Reading of Thermometer on Grass.				
		Mean.	Diff. from ave- rage of 11 years.	Mean.	Diff. from ave- rage of 11 years.	Mean.	Diff. from ave- rage of 11 years.	Amount.	Diff. from ave- rage of 11 years.		Number of Nights it was			Low- est Read- ing at Night.	High- est Read- ing at Night.
											At or below 32°	Be- tween 32° and 40°	Above 40°		
Jan.	.847	-.049	29.589	-.174	513	-7	3.6	+1.8	Miles. 160	22	6	3	21.5	45.4	
Feb.	.879	.000	29.857	+.039	549	0	0.9	-0.7	160	29	8	1	12.0	40.0	
March	.810	-.019	29.607	+.319	551	+5	0.2	-1.4	100	28	2	1	11.5	43.0	
Mean	.845	-.023	29.318	+.071	548	-1	Sum. 4.7	Sum. -0.3	140	Sum. 70	Sum. 16	Sum. 5	

NOTE.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunderstorms occurred, or thunder was heard and lightning seen, on 9th January at Grantham; on the 14th at Holkham; on the 22d at Jersey, Guernsey, Helston, and Falmouth; on the 24th at Aylesbury; on the 25th at Helston, Falmouth, Hartwell Rectory, and Whitehaven; on 3d February at Glasgow; and on the 8th at Guernsey and Highfield House.

Thunder was heard, but lightning was not seen, on 16th January at Roscommon; on the 25th at Truro; on the 30th at Dunino; and on 21st March at Whitehaven.

Lightning was seen, but thunder was not heard, on 6th and 9th January at Aylesbury; on the 11th at Helston; on the 22d at Helston and Norwich; on the 25th at Rose Hill, Thame, Linslade, and Cardington; on 8th February at Torquay and Cardington; on the 18th at Cardington, Highfield House, and Hawarden; and on the 25th at Hatton.

Hail fell on the 3d January at Holkham and Highfield House; on the 4th at Hartwell Rectory and Hawarden; on the 7th at Highfield House and Stonyhurst; on the 9th at Guernsey, Helston, Falmouth, Uckfield, Hartwell Rectory, Grantham, and Hawarden; on the 11th at Thame and Whitehaven; on the 15th at Roscommon; on the 16th at Whitehaven; on the 21st at Ennis and North Shields; on the 22d at Jersey, Guernsey, Falmouth, Uckfield, Highfield House, Hawarden, Longford, and Strokestown; on the 23d at Jersey, Falmouth, and Ennis; on the 24th at Ennis; on the 25th at Hatton, Ennis, Stonyhurst, and Whitehaven; on the 26th at Guernsey and Ennis; on the 27th at Falmouth; on the 29th at Ennis; on the 30th at Ennis and Strokestown; and on the 31st at Hawarden; on the 3d of February at Jersey and Whitehaven; on the 6th at Thame, Bedford, and Hawarden; on the 7th at Hatton; on the 9th at Jersey, Guernsey, Helston, Falmouth, Torquay, Hartwell Rectory, Highfield House, and Hawarden; on the 10th at Uckfield, St. John's Wood, Highfield House, and North Shields; on the 16th at North Shields; on the 17th at St. John's Wood; on the 18th at Guernsey, Falmouth, Torquay, Uckfield, Hartwell Rectory, and Hawarden;

on the 19th at Jersey, Guernsey, Helston, Falmouth, Torquay, and Hawarden; on the 20th at Falmouth; on the 22d and 27th at Truro; and on the 28th at St. John's Wood, Bedford, Highfield House, North Shields, and Dunino; on the 1st March at Cardington, Bedford, and Hawarden; on the 2d at Holkham and North Shields; on the 3d at Highfield House and Wakefield; on the 9th and 19th at Truro; on the 24th at North Shields; on the 25th at Highfield House and North Shields; on the 26th at Hawarden and North Shields; and on the 27th at Durham and Dunino.

Fog was prevalent on the 3d January at Hartwell Rectory; on the 10th and 11th at Durham; on the 12th at Cardington and Durham; on the 13th at Durham; on the 14th at Hartwell Rectory and Durham; on the 18th at Hartwell Rectory and Linslade; on the 19th at Hartwell Rectory; on the 20th at Durham and North Shields; on the 26th at Hartwell Rectory; on the 27th at Linslade; on the 29th, 30th, and 31st at Durham; on the 14th of February at Hartwell Rectory; and on the 21st at Durham; on the 7th March at Durham and North Shields; on the 8th at Gainsborough, Durham, and North Shields; on the 9th at Hartwell Rectory, Gainsborough, and North Shields; on the 10th at Cardington, Gainsborough, and North Shields; on the 12th at Durham; on the 18th at Hartwell Rectory and Durham; and on the 20th at Durham.

Aurora were seen on the 4th January at North Shields and Dunino; on the 17th at Durham; on the 20th at Falmouth; on the 21st at Aylesbury and Durham; on the 22d at Hartwell Rectory; on the 23d at Hatton, Oxford, Hartwell Rectory, Cardington, Grantham, Hawarden, Gainsborough, Durham, and Dunino; on the 25th at Hawarden, Manchester, Stonyhurst, Durham, and Dunino; on the 30th at Rose Hill, Thame, and North Shields; on the 31st at Dunino; on the 4th February at Highfield House; on the 15th at many places between the latitudes of 51° and 55° ; on the 16th at Dunino; on the 17th at Highfield House, Durham, and North Shields; on the 18th at many places between the latitude of 50° and 57° ; on the 19th at many places between the latitudes of 49° and 57° ; on the 20th at Helston and Norwich; on the 21st at Helston, Grantham, Highfield House, Gainsborough, Wakefield, Stonyhurst, Whitehaven, Durham, and Glasgow; on the 22d at Highfield House; on the 23d at Stonyhurst and Durham; on the 25th and 26th at Highfield House; on the 27th at Durham, North Shields, and Dunino; on the 28th at Aylesbury; on the 2d and 5th March at Highfield House; on the 20th at Stonyhurst; on 21st at Hawarden; on 25th at Stonyhurst; on 28th at Highfield House; and on the 31st at Stonyhurst. On many of these days the magnets have been greatly disturbed, and the needles of the electric telegraph have frequently been much deflected.

Snow fell on the 4th January at Highfield House and Hawarden; on the 8th at Aylesbury, Strokestown, and Dunino; on the 9th between the latitudes of 51° and 55° , and in Ireland; on the 10th at Highfield House, Hawarden, Roscommon, and York; on the 11th at Durham and Glasgow; on the 26th at Hawarden; and on the 31st at Thame, Linslade, and Hawarden; on the 3d February at Glasgow and Dunino; on the 9th, 10th, 12th, 13th, 14th, and 18th between the latitudes of 51° and 55° ; on the 19th at Jersey, Helston, Truro, Norwich, Holkham, and North Shields; on the 20th at Falmouth, Holkham, and Norwich; on the 21st at Ennis; on the 23d at Glasgow; on the 26th at St. John's Wood, Rose Hill, Aylesbury, Hawarden, North Shields, and Dunino; on the 27th at Thame, Hartwell Rectory, Aylesbury, and Linslade; on the 28th at Hartwell Rectory, Holkham, Stonyhurst, and North Shields; and on the 29th at Holkham and Dunino; on the 1st March at Rose Hill, Holkham, Whitehaven, Durham, and North Shields; on the 2d at Thame, Hartwell Rectory, Bedford, Durham, and North Shields; on the 3d at Norwich, Grantham, York, Durham, and North Shields; on the 23d at Norwich; on the 25th at Grantham, Durham, and North Shields; on the 26th at Uckfield, Thame, Grantham, Highfield House, Manchester, Wakefield, Stonyhurst, Durham, and North Shields; on the 27th at Grantham, Highfield House, Manchester, Wakefield, Stonyhurst, Durham, North Shields, and Glasgow. These falls have generally been very small in amount.

Rain at Truro on the 3d of January was 1.0 in.; on the 13th was 1.0 in.; on the 22d was 0.6 in.; and on the 25th was 0.6 in.; on the 9th of February was 0.6 in.; and on the 29th of March was 0.7 in. At Thame on the 13th of January was 1.1 in. At Rose Hill on the 12th of January was 1.2 in.; and between the 10th and 16th of January was 2.8 in. At Manchester on the 8th of January was 0.8 in.; on the 4th of February was 1.1 in.; and on the 8th was 0.9 in. At North Shields on the 10th of January was 0.5 in. At Glasgow on the 9th of January was 1.0 in.; and on the 22d was 1.1 in. At Dunino on the 8th of January, in 12 hours, was 1.7 in. At Ennis on the 22d of January was 1.0 in.; on the 24th was 0.8 in.; and in the month was 8.1 in.; on the 5th of February was 1.2 in.; and in the month was 4.4 in.; and in March the fall was 1.7 in. At Longford on the 3d of January 0.7 in.; and 4.7 in. was collected in the month. At Strokestown, Ireland, on the 3d of January the fall was 1.1 in.; and in the month was 5.1 in. At Roscommon on the 3d of January was 1.2 in.; on the 11th was 0.8 in.; on the 16th was 0.5 in.; on the 20th was 0.6 in.; on the 21st was 2.0 in.; on the 30th was 0.5 in.; on the 31st was 0.7 in.; and the whole fall in the month was 12.9 in.

The mean reading of the barometer in February exceeded that in January at all places, the difference increasing with increase of latitude; that in March was either less or of nearly the same value as in February at extreme southern places, but was greater at all other stations, the largest differences occurring at northern latitudes. The difference of mean reading between January and March at southern places was about 0.2, whilst at northern places it was as large as 0.7 and 0.8 in.

At Nottingham the young wheat looks well. Other grain crops have been sown favourably. The spring is very backward. Grass has not commenced growing. There is a good promise of all kinds of fruit.

NAMES OF THE PLACES.	WIND.										RAIN.									
	Mean Pressure of dry Air reduced to the level of the Sea.	Mean Temperature of the Air.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Mean Daily Range of Temperature.	Mean Monthly Range of Temperature.	Range of Temperature in the Quarter.	Mean Temperature of Evaporation.	Mean Temperature of Dew Point.	Mean estimated Strength.	General Direction.	Mean Amount of Cloud.	Number of Days on which it fell.	Amount collected.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required to saturate a cubic foot of Air.	Mean degree of Humidity.	Mean whole Amount of Water in a vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.	Height of Clouds of the Barometer above the level of the Sea.
Jersey -	29.816	43.8	67.0	31.0	10.9	28.8	0.6	41.8	39.2	1.7	S.W. & N.E.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Guernsey -	29.771	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Helston -	29.740	43.9	67.0	31.0	10.9	28.8	0.6	41.8	39.2	1.7	S.W. & N.E.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Falmouth -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Truro -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Torquay -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Ryde -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Ventnor -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Chichester -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Southampton -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Uckfield -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Royal Observatory -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Chiswell-st. Brewery -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Hatton -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
St. John's Wood -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Enfield -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Rose Hill -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Thame -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Radcliff Observatory -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Stone Observatory -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Hartwell House -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Hartwell Rectory -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Aylesbury -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Linslade -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Cardington -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Bedford -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Norwich -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Grantham -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Derby -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Holkham -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Highfield House -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Hawarden -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Gainsborough -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Manchester -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Wakefield Prison -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Stonyhurst -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
York -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Whitehaven -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Durham -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
North Shields -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Glasgow -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.
Dunino -	29.777	44.1	58.5	33.5	8.0	20.7	2.5	44.2	39.5	1.7	S.W. & N.W.	5.0	30	7.4	in.	3.0	0.832	in.	3.0	feet.

The mean of the numbers in the first column is 29.741 inches, and it represents that portion of the reading of the barometer due to the pressure of air; the remaining portion, or that due to the pressure of water, is 0.227 inch; the sum of those two numbers is 29.968 inches, and it represents the mean reading of the barometer for the quarter at the level of the sea.

The highest readings of the thermometer in air were 74° at Manchester and Wakefield, and 72° at Uckfield. The lowest readings were 17° at Uckfield, and 18° at Aylesbury. The least daily ranges of temperature took place at Torquay and Whitehaven; and the greatest at Aylesbury and Uckfield.

Rain fell on the least number of days at Ryde, Thame, York, and Enfield; and on the greatest number at North Shields, Wakefield, Linslade, Helston, and Glasgow. The least falls took place at Durham, Whitehaven, York, and Gainsborough, and the mean amount at those places is 3.3 inches. The largest falls occurred at Stonyhurst, Glasgow, Truro, Falmouth, and Helston, and their average was 11.7 inches.

QUARTERLY METEOROLOGICAL TABLE for different PARALLELS of LATITUDE.

PARALLELS OF LATITUDE, &c.	WIND.								RAIN.								
	Mean Temperature of the Air.	Mean of Highest Readings of the Thermometer.	Mean of Lowest Readings of the Thermometer.	Average Daily Range of Temperature.	Average Monthly Range of Temperature.	Average Quarterly Range of Temperature.	Mean Temperature of Evaporation.	Mean Temperature of Dew Point.	Mean Amount of Cloud.	Average Number of Days.	Average fall.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required to saturate a cubic foot of Air.	Mean degree of Humidity.	Mean whole Amount of Water in a vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.	Mean Height above the Sea level.
In the Counties of Cornwall and Devonshire	44.4	63.5	29.2	11.3	28.2	2.4	42.0	39.8	6.4	32	in.	3.0	0.832	in.	3.0	feet.	110
South of latitude 51°	41.0	60.7	26.5	12.2	26.1	1.4	39.9	37.4	5.7	37	3.7	3.0	0.829	3.1	540	82	
Between the latitudes of 51° and 52°	40.5	59.5	25.1	12.4	25.3	1.4	38.8	36.3	5.6	34	3.4	3.0	0.828	3.1	530	80	
Between the latitudes of 52° and 53°	40.0	58.5	24.0	13.5	24.7	1.3	37.7	35.2	6.1	48	4.8	3.0	0.830	3.0	549	90	
Between the latitudes of 53° and 54°	39.9	57.9	23.2	13.3	23.4	1.3	36.6	34.1	6.4	37	3.7	3.0	0.828	3.1	548	162	
Whitehaven	40.7	59.0	23.5	13.2	23.3	1.3	37.0	34.5	—	44	4.4	3.0	0.829	3.1	543	90	
Durham and North Shields	40.0	57.4	22.8	12.5	22.9	1.0	36.3	33.5	6.3	37	3.7	3.0	0.828	3.1	548	162	
Glasgow and Dunino	43.9	62.2	24.4	9.3	23.8	0.8	43.7	41.4	3.9	38	3.8	3.0	0.832	3.0	547	186	

In the formation of this Table the results from Jersey and Guernsey have not been combined, on account of the great difference in the ranges of temperature between these two places. For the same reason, those from Ryde and Ventnor have not been combined. The former place has a S. and S.E. exposure, with sand and chalk; the latter has a N. and E. exposure, and a clay soil.

MONTHLY METEOROLOGICAL TABLE FOR THE QUARTER ENDING MARCH 31st, 1852.

The Observations have been reduced to Mean values, and the Hygrometrical results have been deduced from Glaisher's Tables.

Year of 1852.	Mean Pressure of		Temperature of the Air.						Mean Tem- perature of		Wind.	Mean Amount of Cloud.	Rain. Amount col- lected.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required to saturate a cubic foot of Air.	Mean degree of Humidity.	Mean whole Amount of Water in a vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.			
	Air and Water Readings in the Barometer.	Force of Vapour.	Range of Barometer Readings in the Month.	From Dry Thermom- eter.	From Self- registering thermometer.	Adopted.	Highest.	Lowest.	Range in the Month.	Highest.									Lowest.	Mean of all the Days.	Mean Daily Range.
Months.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.			
JERSEY. REV. S. KING, F.R.A.S., M.B.M.S.	Jan. 29.832	1.268	44.4	44.8	44.5	26.0	31.0	23.0	40.6	40.0	37.6	9.6	43.4	41.9	1.1	W. & S.W.	3.7	810	3.3	544	53.
	Feb. 30.049	1.268	43.7	43.6	43.7	34.0	31.0	23.0	46.7	37.6	37.6	9.0	42.0	38.2	2.0	N.E. & N.W.	3.5	842	3.4	544	54.
	Mar. 30.040	1.258	43.8	43.6	43.7	34.0	31.0	23.0	51.6	37.6	37.6	14.0	40.9	38.2	2.0	N.E. & N.W.	3.5	766	3.5	549	50.
GUERNSEY. DR. HOSKINS, F.R.S., M.B.M.S.	Jan. 29.780	1.162	45.0	45.7	45.4	35.0	34.5	29.5	49.5	40.5	37.6	8.9	43.7	41.5	1.7	S.W. & S.W.	3.7	878	3.8	541	51.
	Feb. 29.685	1.162	43.7	43.6	43.7	33.5	33.5	19.5	47.6	40.6	40.6	7.0	41.7	39.1	1.7	S.W. & S.W.	3.5	850	3.5	548	54.
	Mar. 29.983	1.413	43.0	43.4	43.4	38.5	36.5	28.0	48.7	40.0	37.6	11.0	38.5	35.5	1.3	N.E.	3.0	850	3.5	549	50.
HELSTON. M. P. MOYLE, Esq.	Jan. 29.071	1.301	46.2	46.7	46.4	37.0	32.0	25.0	53.2	40.6	37.6	12.6	45.9	43.7	0.8	S.W.	3.5	914	4.2	539	39.
	Feb. 30.030	1.268	44.5	44.5	44.5	37.0	32.0	28.0	51.6	38.4	35.2	13.2	42.9	38.4	2.1	W. & N.E.	3.6	872	3.5	548	40.
	Mar. 29.981	1.501	44.6	44.3	44.7	37.0	33.0	24.0	52.1	41.0	37.1	11.7	41.7	38.8	2.1	E.	3.0	940	3.5	547	47.
FALMOUTH. LOVELL SQUIRE, Esq.	Jan. 29.050	1.260	46.6	46.0	46.3	36.0	30.0	26.0	52.3	40.1	32.2	12.2	43.2	40.6	1.6	S. & W.	3.4	863	3.5	547	47.
	Feb. 30.010	1.550	44.6	44.6	44.5	37.0	30.0	27.0	51.7	38.4	35.3	11.6	41.7	38.8	2.1	N. & N.E.	3.4	886	3.7	541	51.
	Mar. 29.789	1.560	44.4	44.7	44.5	36.0	31.0	25.0	51.6	39.0	35.9	11.6	41.6	38.7	1.4	E.	3.4	886	3.7	541	51.
TRURO. DR. C. BARHAM.	Jan. 29.728	1.290	47.2	44.0	45.9	37.0	27.0	20.0	50.0	38.0	35.0	13.0	42.6	37.2	0.8	S.S.W.	3.5	880	3.7	541	51.
	Feb. 30.067	1.560	44.7	43.7	44.2	36.0	29.0	31.0	50.2	38.0	35.2	12.0	41.4	37.7	1.0	W. & N.E.	3.5	880	3.7	541	51.
	Mar. 30.007	1.520	44.8	43.8	44.3	36.0	29.0	37.0	51.3	38.3	35.0	13.0	41.2	37.2	0.8	W. & N.E.	3.5	880	3.7	541	51.
TORQUAY. EDWARD VIVIAN, Esq.	Jan. 29.720	1.290	45.7	45.2	45.5	35.0	33.0	22.0	49.1	40.7	37.4	10.7	43.4	40.8	3.6	W.	3.7	881	3.7	541	51.
	Feb. 30.130	1.290	43.8	41.3	42.5	35.0	32.0	23.0	45.3	38.2	35.0	10.7	42.2	38.4	0.2	N.E.	3.0	881	3.7	541	51.
	Mar. 30.040	1.500	43.5	41.9	42.7	35.0	34.0	21.0	46.4	39.1	36.0	12.0	40.7	37.5	2.0	N.E.	3.0	881	3.7	541	51.
RYDE. BENJAMIN BARROW, Esq., M.B.M.S.	Jan. 29.742	1.262	44.0	43.0	41.1	41.7	33.0	25.0	48.0	34.6	33.4	10.4	40.6	38.6	0.2	S.W.	3.6	882	3.4	546	46.
	Feb. 29.955	1.226	42.3	40.1	41.5	35.7	21.0	33.8	47.1	34.0	33.1	13.1	42.2	38.4	0.2	N.E.	3.0	882	3.4	546	46.
	Mar. 30.062	1.504	42.9	39.7	40.8	40.8	25.8	44.2	48.4	38.1	35.7	13.8	38.0	34.0	0.1	N.E.	3.0	882	3.4	546	46.
VENTNOR, ISLE OF WIGHT, DR. MARTIN.	Jan. 29.737	1.320	43.6	43.7	43.6	34.0	32.0	22.0	49.0	41.8	37.7	11.4	41.3	38.8	0.1	S.W. & N.W.	3.7	882	3.4	546	46.
	Feb. 29.732	1.344	43.6	43.6	43.6	38.0	29.0	29.0	47.9	39.2	36.2	8.7	37.9	34.9	0.1	N.E. & N.W.	3.7	882	3.4	546	46.
	Mar. 30.063	1.440	44.0	44.0	44.0	34.0	31.0	25.0	50.0	40.0	37.0	11.4	38.8	35.8	0.1	E. & S.W.	3.7	882	3.4	546	46.
CHICHESTER. WM. HILLS, Esq.	Jan. 29.785	1.270	40.2	40.2	40.2	32.0	27.0	25.0	46.2	34.7	31.5	11.5	38.0	35.7	0.1	S.	3.7	882	3.4	546	46.
	Feb. 30.035	1.219	40.0	40.0	40.0	35.0	24.0	31.0	46.1	34.7	31.4	11.4	34.8	31.7	0.1	N.E.	3.7	882	3.4	546	46.
	Mar. 30.139	1.440	39.0	39.0	39.0	35.0	26.0	38.0	50.0	30.0	28.0	7.0	33.7	30.7	0.1	N.E.	3.7	882	3.4	546	46.
SOUTHAMPTON. J. DREW, Esq., PH. D., M.B.M.S.	Jan. 29.060	1.285	42.0	42.1	42.0	34.0	28.2	25.8	49.5	33.2	34.3	14.3	40.7	38.8	0.6	S.W.	3.6	884	3.4	544	44.
	Feb. 29.968	1.498	41.2	42.3	41.8	35.6	27.5	28.1	49.2	38.2	33.0	13.0	39.8	37.1	0.6	S.W.	3.6	884	3.4	544	44.
	Mar. 30.059	1.531	42.0	42.1	42.0	34.2	26.8	27.8	51.2	33.1	33.1	13.1	38.1	35.1	0.3	N.E.	3.6	884	3.4	544	44.
UCKFIELD. CHARLES PRINCE, Esq., M.B.M.S.	Jan. 29.015	1.170	41.6	41.3	41.5	35.0	29.0	22.0	47.9	35.1	32.8	12.8	39.5	36.4	1.0	S.W.	3.7	848	3.2	546	46.
	Feb. 29.837	1.370	40.5	40.4	40.5	32.0	17.0	41.0	47.7	33.9	31.8	12.7	37.9	34.4	1.0	W.	3.6	824	2.9	551	51.
	Mar. 29.977	1.580	42.5	41.2	41.9	38.0	21.0	51.0	53.0	31.3	23.7	13.1	37.9	33.4	1.0	W.	3.6	721	2.9	551	51.
ROYAL OBSERVATORY. THE ASTRONOMER ROYAL.	Jan. 29.589	1.288	41.9	42.1	42.0	35.5	28.1	27.4	47.9	36.5	34.5	11.4	39.2	35.6	0.4	S.W.	3.6	847	3.2	543	43.
	Feb. 29.857	1.500	40.8	40.8	40.8	34.3	24.3	22.5	47.5	33.5	32.2	12.2	38.5	34.8	0.4	N.E.	3.6	879	3.0	549	50.
	Mar. 30.067	1.500	41.3	41.3	41.3	35.4	21.4	21.4	54.7	32.1	28.6	12.6	38.2	34.9	0.7	N.E.	3.6	810	2.9	551	50.

[illegible]

NOTE.—The barometers at Guernsey, Truro, Ryde, Ventnor, Chiswell Street, St. John's Wood, Rose Hill, Thame, Stone, Hartwell, Hartwell Rectory, Linshade, Cardington, Grantham, Hotham, Harrogate, Gainsborough, Leeds, Stonyhurst, York, Whitehaven, and Glasgow were made by Barrow, and examined by Mr. Glaisher; that at Jersey was by Troughton and Simms, and examined by Mr. Glaisher; at Helston, by Torquay; at Carnarvon, by Newnan; at Bedford, by Harris; at Manchester, by Dancer. The thermometers are placed for the most part at the height of 4 feet above the soil. The exceptions are Truro, at the top of a building 40 feet high; Torquay, 15 feet high; and Manchester, at a window, this position is good. The receiving surfaces of rain are placed near the soil; the exceptions are Guernsey, 47 feet; Chiswell Street, 50 feet; Ryde, 50 feet; St. John's Wood, 53 feet; and Jersey, at the height of 6 feet. The amount collected was at Oxford, 22 feet; at Oxford, 22 feet; the amount collected was 3.6 inches, but the visitor gashes down a tube in the measuring vessel. At Hartwell Rectory, 4 feet; at Hartwell Rectory, 4 feet; the amount was 5.7 inches. At Cardington, 38 feet; the amount was 5.9 inches. At Norwich, 31 feet; the amount was 4.9 inches. And at Hichfield House, 22 feet; the amount was 5.9 inches.

ON THE
METEOROLOGY OF ENGLAND, SOUTH OF SCOTLAND, AND PARTS OF IRELAND,

DURING THE

Quarter ending June 30, 1852.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

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FOR HER MAJESTY'S STATIONERY OFFICE.

1852.

On the Meteorology of England, South of Scotland, and parts of Ireland, during the Quarter ending June 30th, 1852. By JAMES GLAISHER, ESQ., F.R.S., Sec. of the British Meteorological Society.

The weather during the past quarter was cold and unseasonable, the mean daily temperatures having been, with few exceptions, below their average values. The average daily deficiency of temperature till May 6 was $1^{\circ} \cdot 4$; the period from May 7 to May 20 was tolerably warm, the average daily excess was $1^{\circ} \cdot 5$; and from May 21 to the end of the quarter the average daily deficiency was $4^{\circ} \cdot 2$. The long period from February 10 to the end of June was generally cold; to the end of May the direction of the wind was generally N.E. or a compound with East. The deficiency of rain, which had prevailed from the middle of February, continued till the end of April, but in June the fall exceeded by more than double the average amount.

The mean temperature of the air at Greenwich for the quarter ending May, constituting the 3 spring months, was $46^{\circ} \cdot 2$, being $0^{\circ} \cdot 2$ below the average of 80 years.

Temperature of														Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
Air.		Evaporation.		Dew Point.		Air— Daily Range.		Water of the Thames.									
1852. MONTHS.	Mean.	Diff. from ave- rage of 11 years.	Diff. from ave- rage of 11 years.	Mean.	Diff. from ave- rage of 11 years.	Mean.	Diff. from ave- rage of 11 years.		Mean.	Diff. from ave- rage of 11 years.	Mean.	Diff. from ave- rage of 11 years.	Mean.	Diff. from ave- rage of 11 years.			
April	o 45.9	o +0.2	o -1.2	o 42.3	o -1.5	o 38.0	o -2.7	o 24.0	o +7.4	o 48.2	in. .245	in. -.027	gr. 2.8	gr. -0.3			
May	45.5	-1.1	-2.3	47.8	-2.1	43.8	-2.7	18.6	-0.4	51.8	.302	-.032	3.5	-0.3			
June	56.1	-1.9	-3.6	52.0	-2.6	48.2	-3.4	17.1	-3.1	59.3	.351	-.045	4.0	-0.4			
Mean	51.2	-0.9	-2.4	47.4	-2.1	43.3	-2.9	19.9	+1.3	54.1	.299	-.035	3.4	-0.3			

1852. MONTHS.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horiz- ontal move- ment of the Air.	Reading of Thermometer on Grass.				
	Mean.	Diff. from ave- rage of 11 years.	Mean.	Diff. from ave- rage of 11 years.	Mean.	Diff. from ave- rage of 11 years.	Amount.	Diff. from ave- rage of 11 years.		Number of Nights it was			Low- est Reading at Night.	High- est Reading at Night.
									At or below 32°	Be- tween 32° and 40°	Above 40°			
April	.757	-.051	29.945	+.245	545	+6	in. 0.5	in. -1.2	Miles. 100	23	5	2	16.0	50.0
May	.773	-.011	29.786	-.003	535	+2	1.9	+0.1	90	8	15	14.0	49.8	
June	.767	+.005	29.590	-.254	526	0	4.6	+2.9	100	0	9	21	34.2	55.8
Mean	.766	-.019	29.764	-.004	535	+3	Sum. 7.0	Sum. +1.8	97	Sum. 31	Sum. 22	Sum. 38	14.0	55.8

NOTE.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunderstorms occurred, or thunder was heard and lightning seen, on 12th, 14th, and 19th April at North Shields; on the 30th at Thame, Cardington, Bedford, Highfield House, and North Shields; on 11th May at Rose Hill, Oxford, and Holkham; on the 13th at Glasgow; on the 17th at Jersey, Guernsey, and Bedford; on the 18th at Jersey, Linslade, and Norwich; on the 19th at Durham; on the 22d at Guernsey; on the 25th at Jersey and Guernsey; on the 30th at Ryde and Grantham; on the 31st at Hartwell House; on 2d June at Highfield House; on the 3d at Durham, North Shields, and Glasgow; on the 4th at Highfield House and North Shields; on the 5th at St. John's Wood; on the 7th at Norwich; on the 14th at Grantham, Holkham, Highfield House, and Gainsborough; on the 15th at Holkham; on the 17th at Liverpool, Durham, Newcastle, and Glasgow; on the 18th at Wakefield; on the 19th at Royal Observatory, St. John's Wood, Rose Hill, Thame, Oxford, and Linslade; on the 20th at Gainsborough; on the 21st at Holkham, Highfield House, Hawarden, Manchester, Wakefield, Durham, Newcastle, and North Shields; on the 29th at Glasgow; on the 24th at Norwich; on the 26th at Dunino; on the 27th at Thame and Glasgow; and on the 28th at York and Newcastle.

Thunder was heard, but lightning was not seen, on 21st April at Stone; on the 30th at Thame, Stone, Hartwell House, Royston, and Grantham; on the 5th and 6th May at Helston; on the 11th at Thame and Norwich; on the 17th at Rose Hill, Thame, and Hartwell Rectory; on the 18th at Guernsey, Stone, and Hartwell Rectory; on the 19th at Hartwell Rectory; on the 29th at Stone; on the 31st at Hartwell Rectory; on 1st June at Royal Observatory; on the 2d at Stone, Linslade, and Wakefield; on the 3d at Dunino; on the 4th at Grantham, Highfield House, Gainsborough, Wakefield, York, and Dunino; on the 6th at Gainsborough and Stonyhurst; on the 8th at Stone, Stonyhurst, Durham, and Dunino; on the 9th at Norwich; on the 10th at Grantham and Highfield

House; on the 14th at Rose Hill, Thame, Stone, Hartwell Rectory, Royston, Cardington, Norwich, and Grantham; on the 15th and 16th at Grantham; on the 17th at Helston, Highfield House, Stonyhurst, and North Shields; on the 18th at Highfield House, Gainsborough, and Stonyhurst; on the 19th at Stone and Hartwell Rectory; on the 20th at Highfield House; on the 21st at Grantham, Highfield House, and Liverpool; on the 22d at Dunino; on the 23d at Newcastle; on the 24th at Holkham; on the 25th at Jersey; on the 26th at Highfield House and Dunino; on the 27th at Stone, Hartwell Rectory, Royston, Cardington, and Wakefield; and on the 28th at Gainsborough, Wakefield, and North Shields.

Lightning was seen, but thunder was not heard, on 17th May at Thame, Oxford, Hartwell House, Royston, and Norwich; on the 22d at Jersey; on the 23d at Jersey and Guernsey; on the 24th at Jersey; on the 26th at Guernsey; and on the 17th June at Holkham and Stonyhurst.

Hail fell on 3d April at Holkham; on the 4th at Hawarden; on the 30th at Thame, Hartwell Rectory, and Bedford; on 10th May at Truro, Rose Hill, and Oxford; on the 11th at St. John's Wood, Rose Hill, Thame, Oxford, Hartwell Rectory, Linslade, Royston, Cardington, and Highfield House; on the 12th, 14th, and 19th at North Shields; on the 29th at Hawarden; on the 30th at Jersey, Oxford, Hawarden, Liverpool, Stonyhurst, North Shields, and Glasgow; on the 31st at Hartwell Rectory, Royston, Grantham, Hawarden, Liverpool, Stonyhurst, and Durham; on 1st June at Highfield House and Liverpool; on the 2d at Oxford and Highfield House; on the 3d at Stonyhurst; on the 5th at Glasgow; on the 10th at Gainsborough; on the 14th at Rose Hill and Hartwell Rectory; on the 18th at Highfield House; on the 21st at Highfield House and Wakefield; on the 24th at Highfield House; and on the 27th at North Shields.

Fog was prevalent on 5th April at Thame; on the 10th at Greenwich; on the 17th at Ennis; on the 28th at Helston; on the 29th at Helston and North Shields; on the 18th, 24th, and 25th May at Durham; on 5th June at Stone; on the 7th at North Shields; and on the 30th at Helston.

Aurora were seen on 1st April at Highfield House; on the 9th and 11th at Stonyhurst; on the 4th at Glasgow; on the 16th at Dunino; on the 18th at Stonyhurst; on the 20th at Rose Hill; on the 21st at Oxford and Highfield House; on the 22d, 23d, and 26th at Highfield House; on 1st May at Stone; on the 2d at Stone and Hartwell Rectory; on the 3d at Hartwell Rectory and Highfield House; on the 19th at Stone; on 11th June at Royal Observatory; and on the 24th at Highfield House.

Snow fell on 3d April at Linslade; on the 4th at Stone, Hartwell Rectory, Highfield House, Hawarden, Liverpool, and North Shields; and on the 19th at Norwich.

Rain at Jersey between 3d and 4th June, in 24 hours, was 1.2 in. At Truro on the 24th of April was 0.9 in.; on the 18th May was 2.3 in.; and on the 3d, 7th, and 16th of June was 0.6 in. on each day. At Ryde on the 11th of June was 0.9 in.; and on the 26th was 0.5 in. At Royal Observatory on the 9th of June was 1.4 in.; and on the 10th was 1.0 in. equal to 2.4 in. in about 40 hours. At St. John's Wood on the 9th of June was 1.5 in. At Rose Hill on the 14th of June (hail and rain mingled) was 0.2 in. in 6 minutes. At Thame on the 2d of June was 0.5 in.; and on the 9th and 10th was 1.2 in. in about 20 hours. At Oxford on the 9th of June was 1.7 in. At Stone on the 3d of June was 0.6 in.; and on the 10th was 1.3 in. At Linslade on the 2d of June was 0.7 in.; on the 9th was 0.7 in.; and on the 14th was 0.6 in. At Royston on the 26th of June was 0.8 in. At Bedford on the 30th of April was 0.5 in. on the 26th of May was 0.9 in.; and on the 2d and 9th of June was 0.5 in. on both days. At Grantham on the 3d of June was 0.7 in. At Highfield House on the 8th of June was 0.6 in.; and on the 14th (rain and hail mingled) was 0.3 in. in 9 minutes. At Hawarden on the 19th of May was 1.2 in. in 7 or 8 hours; and on the 8th of June was 0.7 in. At Gainsborough on the 14th of June was 0.5 in. At Wakefield on the 21st of June was 0.8 in. in 8 hours. At Leeds on the 21st of June was 0.5 in. At Stonyhurst on the 13th of May was 1.0 in.; and on the 14th was 0.6 in. At York on the 14th of June was 0.7 in. At North Shields on the 11th of June was 1.2 in.; on the 16th and 17th was 1.0 in.; on the 21st was 1.9 in.; and on the 27th and 28th was 1.5 in. At Glasgow on the 14th of May was 1.0 in. in 24 hours. At Dunino on the 26th of June was 0.5 in. in 20 minutes. At Ennis on the 12th of May was 0.6 in.; on the 14th of June was 0.6 in.; on the 17th and 20th was 0.7 in. on both days; on the 25th was 0.6 in.; and on the 28th was 0.6 in.

Solar Halos were seen at the different stations on 19 days only during the quarter.

Lunar Halos were seen on 15 days only at the different stations during the quarter.

Lilac in flower at Jersey on 16th April; at Guernsey on 17th April; at Helston on 25th April; at Rose Hill on 11th May; at Linslade on 17th May; at Cardington on 20th May; at Grantham on 19th May; at Holkham on 18th May; at Highfield House on 15th May; at Hawarden on 11th May; at Gainsborough on 8th May; and at Dunino on 31st May.

Wheat in ear at Jersey on 7th June; at Guernsey on 14th June; at Helston on 12th June; at Rose Hill on 17th June; at Hartwell Rectory on 23d June; at Linslade on 13th June; at Cardington on 12th June; at Grantham on 10th June; at Holkham on 11th June; at Highfield House on 19th June; at Hawarden on 12th June; and at Gainsborough on 12th June.

Wheat in flower at Jersey on 17th June; at Linslade on 24th June; at Cardington on 30th June; at Grantham on 27th June; at Holkham on 23d June; at Highfield House on 26th June; at Hawarden on 22d June; and at Gainsborough on 24th June.

The Observations have been reduced to Mean values, and the Hygrometrical results have been deduced — from Glaisher's Tables.

Year 1852.	Months.	Mean Pressure of		Temperature of the Air.						Mean Tem- perature of		Wind.		Mean Amount of Cloud.	Rain. Number of Days in all.	Mean Weight of Vapour in a cubic foot of Air.	Additional Weight required to saturate a cubic foot of Air.	Mean Humidity.	Mean Weight of Water in a vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.		
		Air and Water.	Water or Elastic Force of Vapour.	Range of Barometer Readings in the Month.	Mean.		Highest.	Lowest.	Range in the Month.	Mean of all the Months.	Mean of all the Months.	Mean of all the Months.	Dew Point.								Estimated Strength.	Direction.
					From Dry bulb Ther- mometer.	From Self- registering Therm.																
JERSEY. Rev. S. King, F.R.A.S., M.B.M.S.	April 29.660	28.80	in.	in.	48.1	47.8	70.0	33.0	32.0	32.0	57.5	41.5	41.5	38.8	7	3.2	0.8	7.80	3.9	543		
	May 29.780	30.74	30.78	32.36	31.17	73.0	33.0	32.0	32.0	57.5	41.5	41.5	41.5	41.5	13	3.2	0.8	7.80	3.9	543		
	June 29.720	30.41	30.81	33.18	32.61	73.0	44.0	33.0	33.0	69.9	31.4	54.4	52.2	61.5	12	4.5	0.8	7.80	4.0	544		
GUERNSEY. Dr. Hoskins, F.R.S., M.B.M.S.	April 29.624	29.90	29.93	32.13	30.73	69.0	33.0	31.0	31.0	54.0	49.7	10.2	42.7	42.7	7	0.8	0.4	7.84	4.0	544		
	May 29.834	30.67	31.31	33.17	31.67	69.0	33.0	31.0	31.0	54.0	49.7	10.2	42.7	42.7	17	0.8	0.4	7.84	4.0	544		
	June 29.633	29.99	30.77	33.17	31.67	68.5	47.0	31.5	31.5	69.2	32.8	10.5	54.2	1.6	17	4.9	0.2	7.06	5.1	535		
HELSTON. Dr. C. Barham.	April 29.941	29.93	29.93	32.13	30.73	68.0	33.0	31.0	31.0	57.5	49.7	10.2	42.7	42.7	7	0.8	0.4	7.84	4.0	544		
	May 29.718	30.49	30.81	33.18	32.61	70.0	40.0	32.0	32.0	61.1	46.5	13.8	49.7	41.5	17	0.8	0.4	7.84	4.0	544		
	June 29.720	30.41	30.81	33.18	32.61	70.0	48.0	32.0	32.0	61.1	46.5	13.8	49.7	41.5	17	0.8	0.4	7.84	4.0	544		
TREURO. Dr. C. Barham.	April 29.721	29.93	29.93	32.13	30.73	67.0	33.0	31.0	31.0	57.5	49.7	10.2	42.7	42.7	7	0.8	0.4	7.84	4.0	544		
	May 29.780	30.78	31.31	33.17	31.67	67.0	33.0	31.0	31.0	57.5	49.7	10.2	42.7	42.7	17	0.8	0.4	7.84	4.0	544		
	June 29.683	29.78	30.41	33.18	32.61	69.0	41.0	28.0	29.0	62.9	30.9	12.0	52.8	50.5	17	4.9	0.2	7.06	5.1	535		
TORQUAY. Edward Vivian, Esq.	April 29.720	29.93	29.93	32.13	30.73	67.0	33.0	31.0	31.0	57.5	49.7	10.2	42.7	42.7	7	0.8	0.4	7.84	4.0	544		
	May 29.720	30.41	30.81	33.18	32.61	69.0	41.0	28.0	29.0	62.9	30.9	12.0	52.8	50.5	17	4.9	0.2	7.06	5.1	535		
	June 29.720	30.41	30.81	33.18	32.61	69.0	41.0	28.0	29.0	62.9	30.9	12.0	52.8	50.5	17	4.9	0.2	7.06	5.1	535		
RYDE. Benjamin Barrow, Esq., M.B.M.S.	April 29.702	29.94	29.94	32.14	30.74	67.0	33.0	31.0	31.0	57.5	49.7	10.2	42.7	42.7	7	0.8	0.4	7.84	4.0	544		
	May 29.702	30.65	31.31	33.17	31.67	67.0	33.0	31.0	31.0	57.5	49.7	10.2	42.7	42.7	17	0.8	0.4	7.84	4.0	544		
	June 29.632	29.83	30.51	33.17	31.67	67.0	40.0	28.0	29.0	62.9	30.9	12.0	52.8	50.5	17	4.9	0.2	7.06	5.1	535		
EXETER. Dr. Snaper, M.B.M.S.	April 29.747	29.40	29.40	32.14	30.74	67.0	33.0	31.0	31.0	57.5	49.7	10.2	42.7	42.7	7	0.8	0.4	7.84	4.0	544		
	May 29.707	30.33	30.33	32.14	30.74	67.0	33.0	31.0	31.0	57.5	49.7	10.2	42.7	42.7	17	0.8	0.4	7.84	4.0	544		
	June 29.753	30.72	30.72	32.14	30.74	67.0	40.0	28.0	29.0	62.9	30.9	12.0	52.8	50.5	17	4.9	0.2	7.06	5.1	535		
VENTNOR, ISLE OF WIGHT, Dr. Martin.	April 29.701	29.93	29.93	32.13	30.73	67.0	33.0	31.0	31.0	57.5	49.7	10.2	42.7	42.7	7	0.8	0.4	7.84	4.0	544		
	May 29.707	30.33	30.33	32.14	30.74	67.0	33.0	31.0	31.0	57.5	49.7	10.2	42.7	42.7	17	0.8	0.4	7.84	4.0	544		
	June 29.753	30.72	30.72	32.14	30.74	67.0	40.0	28.0	29.0	62.9	30.9	12.0	52.8	50.5	17	4.9	0.2	7.06	5.1	535		
CHICHESTER. Wm. Hills, Esq.	April 29.740	29.40	29.40	32.14	30.74	67.0	33.0	31.0	31.0	57.5	49.7	10.2	42.7	42.7	7	0.8	0.4	7.84	4.0	544		
	May 29.707	30.33	30.33	32.14	30.74	67.0	33.0	31.0	31.0	57.5	49.7	10.2	42.7	42.7	17	0.8	0.4	7.84	4.0	544		
	June 29.753	30.72	30.72	32.14	30.74	67.0	40.0	28.0	29.0	62.9	30.9	12.0	52.8	50.5	17	4.9	0.2	7.06	5.1	535		
SOUTHAMPTON. J. Duer, Esq., Ph. D., M.B.M.S.	April 29.701	29.93	29.93	32.13	30.73	67.0	33.0	31.0	31.0	57.5	49.7	10.2	42.7	42.7	7	0.8	0.4	7.84	4.0	544		
	May 29.707	30.33	30.33	32.14	30.74	67.0	33.0	31.0	31.0	57.5	49.7	10.2	42.7	42.7	17	0.8	0.4	7.84	4.0	544		
	June 29.753	30.72	30.72	32.14	30.74	67.0	40.0	28.0	29.0	62.9	30.9	12.0	52.8	50.5	17	4.9	0.2	7.06	5.1	535		
ROYAL OBSERVATORY. THE ASTRONOMER ROYAL.	April 29.701	29.93	29.93	32.13	30.73	67.0	33.0	31.0	31.0	57.5	49.7	10.2	42.7	42.7	7	0.8	0.4	7.84	4.0	544		
	May 29.707	30.33	30.33	32.14	30.74	67.0	33.0	31.0	31.0	57.5	49.7	10.2	42.7	42.7	17	0.8	0.4	7.84	4.0	544		
	June 29.753	30.72	30.72	32.14	30.74	67.0	40.0	28.0	29.0	62.9	30.9	12.0	52.8	50.5	17	4.9	0.2	7.06	5.1	535		
CHISWELL STREET BREWERY, DAVID SEATE, Esq., M.B.M.S.	April 29.023	22.5	84.0	48.9	46.9	47.9	64.5	34.0	30.5	29.5	40.2	16.3	42.3	33.7	—	—	—	—	—	—		
	May 29.833	30.6	30.2	34.4	34.0	75.0	38.5	35.0	35.0	52.3	49.1	13.2	49.6	41.5	8	0.5	2.6	1.4	654	371	544	
	June 29.610	33.6	32.7	37.4	38.4	57.9	72.0	46.0	43.0	65.0	54.5	11.5	54.6	31.8	23	3.6	1.5	7.35	4.4	535		

Ventures: The number of days on which rain has fallen, as stated above, is found by adding together the numbers as furnished by Dr. Martin, who separates the falls which occur in the day from those which fall in the night. In the return in April the numbers are 2 days, 3 nights; in May, 8 days, 7 nights; and in June, 11 days and 11 nights.

Year 1852.	Mean Pressure of		Temperature of the Air.						Mean Tem- perature of		Wind.	Direction.	Mean Amount of Cloud.	Number of Days in which it fell.	Rain. col- lected.	Weight of Water in a cubic foot of Air.	Mean Degree of Humidity.	Mean whole Amount of Water in a vertical column of Atmosphere.	cubic foot of Air.
	Air and Water.	Water or Elastic Force of Vapour.	Range of Barometer Readings in the Month.	From Day to Day.	From Self- registering thermometer.	Adopted. Therm.	Highest.	Lowest.	Range in the Month.	Mean of all the Months.									
HOLKHAM, S. SHELLEBURN, Esq., M.P.M.S., As- sistant Surveyor, &c.	Apr. 29 113	246	907	437.9	437.9	437.9	67.2	29.4	49.8	32.4	17.1	41.3	28.0	0.6	N.E.	3.4	5.0	3.4	5.0
May 29 100	883	408	51.9	50.3	50.3	77.8	30.0	48.2	32.4	17.1	41.3	28.0	0.6	N.E.	3.4	5.0	3.4	5.0	
June 29 104	859	457.4	58.2	56.2	56.2	78.8	30.0	48.2	32.4	17.1	41.3	28.0	0.6	N.E.	3.4	5.0	3.4	5.0	
HIGHFIELD HOUSE, MESSRS. E. J. AND A. S. H. LOVE, M.B.M.S.	Apr. 29 103	245	885	457.4	457.4	457.4	75.5	27.8	47.7	30.1	19.6	54.2	37.8	0.1	N.W.	3.4	5.0	3.4	5.0
May 29 106	864	451.5	51.5	51.5	51.5	79.0	30.0	47.0	32.4	17.1	41.3	28.0	0.6	N.W.	3.4	5.0	3.4	5.0	
June 29 108	850	471.1	57.0	57.0	57.0	77.0	30.0	47.0	32.4	17.1	41.3	28.0	0.6	N.W.	3.4	5.0	3.4	5.0	
HAWKEND, DR. MOFFAT, F.R.A.S., M.B.M.S.	Apr. 29 812	242	878	457.4	457.4	457.4	68.5	29.4	49.8	32.4	17.1	41.3	28.0	0.6	N.E.	3.4	5.0	3.4	5.0
May 29 827	868	457.4	51.5	51.5	51.5	79.0	30.0	47.0	32.4	17.1	41.3	28.0	0.6	N.W.	3.4	5.0	3.4	5.0	
June 29 832	864	457.4	51.5	51.5	51.5	79.0	30.0	47.0	32.4	17.1	41.3	28.0	0.6	N.W.	3.4	5.0	3.4	5.0	
GAINSBOROUGH, T. DYSON, Esq., M.B.M.S.	Apr. 29 145	258	785	457.4	457.4	457.4	72.0	29.0	49.8	32.4	17.1	41.3	28.0	0.6	N.E.	3.4	5.0	3.4	5.0
May 29 157	857	457.4	51.5	51.5	51.5	79.0	30.0	47.0	32.4	17.1	41.3	28.0	0.6	N.W.	3.4	5.0	3.4	5.0	
June 29 162	840	457.4	51.5	51.5	51.5	79.0	30.0	47.0	32.4	17.1	41.3	28.0	0.6	N.W.	3.4	5.0	3.4	5.0	
LIVERPOOL OBSERVATORY, JOHN HARRIS, Esq., F.R.A.S.	Apr. 29 622	881	831	457.4	457.4	457.4	75.0	29.0	49.8	32.4	17.1	41.3	28.0	0.6	N.E.	3.4	5.0	3.4	5.0
May 29 627	827	457.4	51.5	51.5	51.5	79.0	30.0	47.0	32.4	17.1	41.3	28.0	0.6	N.W.	3.4	5.0	3.4	5.0	
June 29 632	827	457.4	51.5	51.5	51.5	79.0	30.0	47.0	32.4	17.1	41.3	28.0	0.6	N.W.	3.4	5.0	3.4	5.0	
MANCHESTER, GEORGE V. VERNON, Esq., M.B.M.S.	Apr. 29 109	282	906	457.4	457.4	457.4	75.0	29.0	49.8	32.4	17.1	41.3	28.0	0.6	N.E.	3.4	5.0	3.4	5.0
May 29 119	882	457.4	51.5	51.5	51.5	79.0	30.0	47.0	32.4	17.1	41.3	28.0	0.6	N.W.	3.4	5.0	3.4	5.0	
June 29 124	852	457.4	51.5	51.5	51.5	79.0	30.0	47.0	32.4	17.1	41.3	28.0	0.6	N.W.	3.4	5.0	3.4	5.0	
WAKEFIELD PRISON, W. R. MILNER, Esq., M.B.M.S.	Apr. 29 583	257	828	457.4	457.4	457.4	73.5	28.5	48.2	30.1	19.6	54.2	37.8	0.1	N.W.	3.4	5.0	3.4	5.0
May 29 588	827	457.4	51.5	51.5	51.5	79.0	30.0	47.0	32.4	17.1	41.3	28.0	0.6	N.W.	3.4	5.0	3.4	5.0	
June 29 593	827	457.4	51.5	51.5	51.5	79.0	30.0	47.0	32.4	17.1	41.3	28.0	0.6	N.W.	3.4	5.0	3.4	5.0	
LEEDS, HENRY DENNY, Esq.	Apr. 29 784	282	906	457.4	457.4	457.4	75.0	29.0	49.8	32.4	17.1	41.3	28.0	0.6	N.E.	3.4	5.0	3.4	5.0
May 29 785	880	457.4	51.5	51.5	51.5	79.0	30.0	47.0	32.4	17.1	41.3	28.0	0.6	N.W.	3.4	5.0	3.4	5.0	
June 29 786	852	457.4	51.5	51.5	51.5	79.0	30.0	47.0	32.4	17.1	41.3	28.0	0.6	N.W.	3.4	5.0	3.4	5.0	
STONYHURST, REV. J. CLARE.	Apr. 29 687	275	815	457.4	457.4	457.4	73.5	28.5	48.2	30.1	19.6	54.2	37.8	0.1	N.W.	3.4	5.0	3.4	5.0
May 29 615	827	457.4	51.5	51.5	51.5	79.0	30.0	47.0	32.4	17.1	41.3	28.0	0.6	N.W.	3.4	5.0	3.4	5.0	
June 29 616	827	457.4	51.5	51.5	51.5	79.0	30.0	47.0	32.4	17.1	41.3	28.0	0.6	N.W.	3.4	5.0	3.4	5.0	
YORK, JOHN FORD, Esq.	Apr. 29 851	282	906	457.4	457.4	457.4	75.0	29.0	49.8	32.4	17.1	41.3	28.0	0.6	N.E.	3.4	5.0	3.4	5.0
May 29 852	880	457.4	51.5	51.5	51.5	79.0	30.0	47.0	32.4	17.1	41.3	28.0	0.6	N.W.	3.4	5.0	3.4	5.0	
June 29 853	852	457.4	51.5	51.5	51.5	79.0	30.0	47.0	32.4	17.1	41.3	28.0	0.6	N.W.	3.4	5.0	3.4	5.0	
DURHAM, R. C. CARRINGTON, Esq., M.B.M.S.	Apr. 29 764	263	873	457.4	457.4	457.4	73.5	28.5	48.2	30.1	19.6	54.2	37.8	0.1	N.W.	3.4	5.0	3.4	5.0
May 29 769	886	457.4	51.5	51.5	51.5	79.0	30.0	47.0	32.4	17.1	41.3	28.0	0.6	N.W.	3.4	5.0	3.4	5.0	
June 29 769	886	457.4	51.5	51.5	51.5	79.0	30.0	47.0	32.4	17.1	41.3	28.0	0.6	N.W.	3.4	5.0	3.4	5.0	
NEWCASTLE, G. MURAS, Esq.	Apr. 29 128	272	873	457.4	457.4	457.4	73.5	28.5	48.2	30.1	19.6	54.2	37.8	0.1	N.W.	3.4	5.0	3.4	5.0
May 29 144	831	457.4	51.5	51.5	51.5	79.0	30.0	47.0	32.4	17.1	41.3	28.0	0.6	N.W.	3.4	5.0	3.4	5.0	
June 29 145	831	457.4	51.5	51.5	51.5	79.0	30.0	47.0	32.4	17.1	41.3	28.0	0.6	N.W.	3.4	5.0	3.4	5.0	
NORTH SHIELDS, ROBERT SPENCE, Esq.	Apr. 29 123	269	888	457.4	457.4	457.4	73.5	28.5	48.2	30.1	19.6	54.2	37.8	0.1	N.W.	3.4	5.0	3.4	5.0
May 29 123	888	457.4	51.5	51.5	51.5	79.0	30.0	47.0	32.4	17.1	41.3	28.0	0.6	N.W.	3.4	5.0	3.4	5.0	
GLASGOW, R. D. THOMSON, M.D., F.R.S.E., M.B.M.S.	Apr. 29 304	245	797	457.4	457.4	457.4	73.5	28.5	48.2	30.1	19.6	54.2	37.8	0.1	N.W.	3.4	5.0	3.4	5.0
May 29 304	883	457.4	51.5	51.5	51.5	79.0	30.0	47.0	32.4	17.1	41.3	28.0	0.6	N.W.	3.4	5.0	3.4	5.0	
June 29 304	883	457.4	51.5	51.5	51.5	79.0	30.0	47.0	32.4	17.1	41.3	28.0	0.6	N.W.	3.4	5.0	3.4	5.0	
DUNINO, DAVID TENNANT, Esq., M.B.M.S.	Apr. 29 622	870	830	457.4	457.4	457.4	75.0	29.0	49.8	32.4	17.1	41.3	28.0	0.6	N.E.	3.4	5.0	3.4	5.0
May 29 622	870	457.4	51.5	51.5	51.5	79.0	30.0	47.0	32.4	17.1	41.3	28.0	0.6	N.W.	3.4	5.0	3.4	5.0	
June 29 622	870	457.4	51.5	51.5	51.5	79.0	30.0	47.0	32.4	17.1	41.3	28.0	0.6	N.W.	3.4	5.0	3.4	5.0	

NOTE.—Second rain gauges are placed at Jersey at the height of 6 feet; the amount collected was 8·2 inches. At Oxford, 22 feet; the amount was 8·9 inches. At Hartwell Rectory, 4 feet; the amount was 6·8 inches. At Cardington, 36 feet; the amount was 3·3 inches. At Norwich, 31 feet; the amount was 5·9 inches. At Highfield House, 25 feet; the amount was 6·5 inches. And at Stonyhurst, 144 feet; the amount for the month of May was 8·1 inches.

ON THE
METEOROLOGY OF ENGLAND, SOUTH OF SCOTLAND, AND PARTS OF IRELAND,

DURING THE

Quarter ending September 30, 1852:

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

LONDON:
PRINTED BY GEORGE EDWARD EYRE AND WILLIAM SPOTTISWOODE,
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FOR HER MAJESTY'S STATIONERY OFFICE.

—
1852.

NAMES OF THE PLACES.	Mean Pressure of dry Air, Reduced to the level of the Sea.										WIND.	RAIN.	Mean Amount of Cloud, Number of Days on which it fell.	Amount collected.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required to saturate a cubic foot of Air.	Mean degree of Humidity.	Mean whole Amount of Water in a vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.	Height of Column of the Barometer above the level of the Sea.
	in.	°	′	″	°	′	″	°	′	″										
Jersey -	29.479	0.2	8.8	0.45	0.16	4.32	3.45	0.59	0.57	5	N.W. & S.W.	3.5	35	3.5	3.5	0.0	78.4	5.24	85	
Guernsey -	29.464	0.0	9.8	0.49	0.10	6.22	3.31	0.59	3.38	0	N.E. & S.W.	4.4	30	12.3	0.0	0.0	78.4	5.24	123	
Helston -	29.486	0.1	8.5	0.47	0.18	1.32	0.38	0.58	0.55	1	S.W., E., & N.W.	4.5	5	0.0	0.0	0.0	80.4	5.24	106	
Falmouth -	29.468	0.1	8.4	0.43	0.18	5.32	0.41	0	0	0	S.W., E., & N.W.	5.9	37	9.4	0.0	0.0	80.4	5.24	120	
Truro -	—	60	88	0.35	0.17	0.35	0.47	0.56	0.53	3	Var.	4.9	40	9.5	4.7	1.3	78.0	5.8	527	
Torquay -	—	60	81	0.44	0.16	0.19	0.34	0.55	0.57	5.37	N. & S.W.	—	39	9.7	4.8	1.3	77.9	5.9	160	
Exeter -	29.506	0.6	9.7	0.49	0.17	4.36	8.48	0.56	4.5	4	N.W. & S.W.	3.3	44	10.1	4.7	1.3	77.9	5.8	326	
Ventnor -	29.458	0.3	8.5	0.47	0.17	0.35	0.47	0.56	0.53	3	W. & N.W.	3.7	37	12.5	0.0	0.0	78.6	5.5	522	
Newport -	29.435	0.8	8.0	0.56	0.27	1.19	0.35	0.54	0.57	5.37	S.W. & N.W.	6.9	36	11.0	0.0	0.0	78.0	6.2	232	
Ryde -	29.463	0.1	9.0	0.37	0.29	2.40	0.23	0.58	0.50	1	N.E. & S.W.	6.9	34	12.9	5.2	1.1	78.9	6.4	115	
Worthing -	—	61	48	0.54	0.10	0.27	0.29	0.57	5.5	1	N.E. & S.W.	—	35	8.5	5.0	1.3	81.6	6.2	21	
Chichester -	—	61	48	0.40	0.10	0.54	0.49	0	0	0	N.E. & S.W.	—	—	9.8	—	—	—	—	23	
Southampton -	29.428	0.1	8.3	0.73	0.14	4.31	0.46	0.58	0.55	5.4	N.E. & S.W.	5.8	35	12.3	5.1	1.1	82.9	6.2	524	
Uckfield -	29.503	0.2	8.9	0.33	0.23	4.46	0.21	0.58	0.55	6	E. & S.W.	5.6	38	13.0	5.1	1.4	78.7	6.2	69	
Royal Observatory -	29.521	0.9	9.0	0.49	0.29	1.36	0.49	0.56	7.3	0	N.E. & S.W.	—	32	10.7	4.7	1.6	74.4	5.7	328	
St. John's Wood -	29.464	0.0	9.8	0.57	0.17	3.33	0.52	0.57	5.4	1	N.E. & S.W.	6.9	35	9.3	5.1	1.0	78.4	5.7	324	
Enfield -	29.493	0.3	9.3	0.29	0.17	2.35	0.53	0.58	0.54	1	N.E. & S.W.	6.9	39	10.1	5.1	1.2	81.9	6.2	270	
Rose Hill -	29.493	0.1	2.9	0.33	0.29	0.40	0.58	1.1	7.5	2	N.E. & S.W.	6.0	39	10.1	5.1	1.2	81.9	6.2	270	
Radcliffe Observatory -	29.494	0.8	8.8	0.34	0.17	3.35	0.37	0.57	0.54	3	S.W. & N.E.	6.3	40	10.4	4.9	1.1	82.4	6.0	523	
Stone Observatory -	29.449	0.9	5.9	0.35	0.29	1.47	0.70	0.54	6.5	0.5	N.E. & S.W.	5.0	44	10.2	4.9	1.1	81.1	5.8	520	
Hartwell House -	29.449	0.1	4.0	0.93	0.30	0.40	0.57	0.57	2.6	2	S.W. & N.E.	5.7	—	—	4.8	1.4	78.5	5.9	320	
Hartwell Rectory -	29.509	0.6	8.9	0.35	0.18	1.36	0.54	0.58	6.5	1	S.W.	5.8	43	9.5	5.4	0.7	89.0	6.6	520	
Aylesbury -	29.492	0.1	4.1	0.31	0.29	1.42	0.60	0.57	7.5	1	N.E. & S.W.	5.9	39	9.3	5.0	1.4	81.4	6.2	522	
Linslade -	—	60	49	0.94	0.21	4	—	57	0.56	5.5	N.E. & S.W.	—	42	10.8	4.8	1.2	79.7	5.8	318	
Royston -	29.520	0.1	4.8	0.97	0.19	1.37	0.22	0.67	2.4	1	Var.	6.0	40	10.1	4.8	1.4	78.5	5.9	522	
Cardington -	29.477	0.9	0.1	0.24	0.16	0.37	0.67	0.57	3.4	0.8	Var.	3.8	38	9.8	4.9	1.2	81.5	6.1	525	
Bedford -	—	61	0.0	0.35	0.18	8.38	0.66	0.57	3.5	0.8	Var.	5.2	45	11.6	4.9	1.2	81.1	6.1	100	
Norwich -	29.457	0.9	8.4	0.36	0.15	9.33	8.48	0.67	7.5	1.6	S.W. & S.E.	5.9	32	9.5	5.0	1.1	84.2	6.2	390	
Grantham -	29.486	0.9	0.1	0.36	0.16	4.36	0.55	0.56	5.4	0	S.W. & N.E.	5.7	38	12.7	4.8	1.0	82.3	6.0	523	
Derby -	29.486	0.1	2.8	0.35	0	—	35	0.53	0.56	2.3	Var.	—	44	10.6	4.6	1.6	76.0	5.7	525	
Holkham -	29.436	0.1	0.6	0.75	0.19	2.39	0.87	0.58	2.6	0.2	N.E. & S.W.	6.3	33	9.4	5.2	1.0	83.7	6.3	526	
Highfield House -	29.436	0.9	0.1	0.32	0.21	4.41	2.59	0.57	4.4	0.2	N.W. & S.W.	5.4	45	12.9	5.0	1.1	84.1	6.1	524	
Hawarden -	29.507	0.5	5.8	0.40	0.13	3.28	0.40	0.55	6.5	0.6	N.W. & S.W.	6.1	39	13.4	4.8	0.9	83.3	5.9	524	
Gainsborough -	29.482	0.0	9.5	0.38	0.18	8.37	7.57	0.59	4.3	1.4	N.E. & S.W.	6.0	39	8.4	4.8	1.0	83.5	5.9	527	
Liverpool -	29.477	0.1	1.2	0.37	0.19	3.44	0.58	0.58	2.6	0.3	N.W. & S.E.	6.3	38	9.4	5.2	1.0	83.6	6.3	525	
Wakfield Prison -	29.507	0.9	0.3	0.21	0.21	4.43	0.82	0.55	4.2	2	Var.	5.8	46	9.6	4.5	1.3	78.0	5.6	536	
Leeds -	29.504	0.9	0.5	0.32	0.22	6.43	0.63	0.55	6.1	1.8	S.E. & S.W.	6.0	46	7.4	4.5	1.6	74.1	5.6	524	
Stonyhurst -	29.492	0.8	0.1	0.33	0.17	4.36	0.57	0.55	4.3	0.8	N. & S.W.	6.2	49	14.0	4.8	0.8	86.7	5.8	522	
York -	29.453	0.8	9.6	0.34	0.15	2.55	0.53	0.55	3.2	6	N.W. & N.E.	—	37	8.6	4.6	1.1	81.3	5.7	537	
Whitehaven -	29.425	0.6	2.8	0.40	0.19	1.28	0.40	0.56	8.6	0.5	S.W. & N.E.	—	44	10.2	5.0	0.8	87.2	6.1	536	
Durham -	29.489	0.7	8.4	0.39	0.13	4.32	0.47	0.55	3.5	3	S.W. & N.	6.4	45	12.7	4.7	0.7	86.6	5.8	535	
Newcastle -	29.471	0.3	6.3	0.37	0.15	2.33	0.46	0.55	6.3	2	S.W. & N.E.	—	39	—	—	—	85.5	5.8	526	
North Shields -	29.477	0.9	0.1	0.34	0.14	2.44	0.38	0.54	5.3	2	N.W. & N.E.	5.3	45	11.6	4.7	1.3	82.7	5.8	524	
Glasgow -	29.477	0.9	2.7	0.53	0.12	1.29	0.46	0.54	5.6	7	W. & S.E.	—	45	21.2	4.3	1.4	76.2	5.3	526	
Dumino -	29.495	0.7	7.7	0.32	0.15	9.32	0.46	0.53	2.0	4	S.W. & N.W.	3.8	26	5.3	4.2	1.4	75.5	5.1	525	

The mean of the numbers in the first column is 29.476 inches, and it represents that portion of the reading of the barometer due to the pressure of air; the remaining portion, or that due to the pressure of water, is 0.435 inch; the sum of these two numbers is 29.911 inches, and it represents the mean reading of the barometer for the quarter at the level of the sea.

The highest readings of the thermometer in air were 55° at Gainsborough, 55° at Leeds, 55° at Holkham, and 55° at Wakefield. The lowest reading was 31° at Aylesbury and Wakefield. The least daily ranges of temperature took place at Ventnor, Guernsey, Worthing, and Torquay; and the greatest at Uckfield and Leeds.

Rain fell on the least number of days at Dumino, Guernsey, Greenwich, Norwich, and Holkham; and on the greatest number at Royston, North Shields, Wakefield, and Leeds. The least falls took place at Dumino, Leeds, and Gainsborough; and the mean amount at these places is 7.0 inches. The largest falls occurred at North Shields, Stonyhurst, Uckfield, and Ryde, and the mean amount is 15.3 inches.

QUARTERLY METEOROLOGICAL TABLE FOR DIFFERENT PARALLELS OF LATITUDE.

PARALLELS OF LATITUDE, &c.	Mean Pressure of dry Air, Reduced to the level of the Sea.										WIND.	RAIN.	Mean Amount of Cloud.	Average Number of Days.	Average fall.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required to saturate a cubic foot of Air.	Mean degree of Humidity.	Mean whole Amount of Water in a vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.	Mean Height above the Sea.
	in.	°	′	″	°	′	″	°	′	″											
In the Counties of Cornwall and Devonshire	29.476	0.2	8.8	0.45	0.16	4.32	3.45	0.59	0.57	5	N.W. & S.W.	3.5	35	3.5	3.5	0.0	78.4	5.24	85		
Newport and Ryde	29.476	0.2	8.8	0.45	0.16	4.32	3.45	0.59	0.57	5	N.W. & S.W.	3.5	35	3.5	3.5	0.0	78.4	5.24	85		
South of latitude 51°	29.476	0.2	8.8	0.45	0.16	4.32	3.45	0.59	0.57	5	N.W. & S.W.	3.5	35	3.5	3.5	0.0	78.4	5.24	85		
Between the latitudes of 51° and 52°	29.476	0.2	8.8	0.45	0.16	4.32	3.45	0.59	0.57	5	N.W. & S.W.	3.5	35	3.5	3.5	0.0	78.4	5.24	85		
Between the latitudes of 52° and 53°	29.476	0.2	8.8	0.45	0.16	4.32	3.45	0.59	0.57	5	N.W. & S.W.	3.5	35	3.5	3.5	0.0	78.4	5.24	85		
Between the latitudes of 53° and 54°	29.476	0.2	8.8	0.45	0.16	4.32	3.45	0.59	0.57	5	N.W. & S.W.	3.5	35	3.5	3.5	0.0	78.4	5.24	85		
Liverpool and Whitehaven	29.476	0.2	8.8	0.45	0.16	4.32	3.45	0.59	0.57	5	N.W. & S.W.	3.5	35	3.5	3.5	0.0	78.4	5.24	85		
Durham, Newcastle, and North Shields	29.476	0.2	8.8	0.45	0.16	4.32	3.45	0.59	0.57	5	N.W. & S.W.	3.5	35	3.5	3.5	0.0	78.4	5.24	85		
Glasgow and Dumino	29.476	0.2	8.8	0.45	0.16	4.32	3.45	0.59	0.57	5	N.W. & S.W.	3.5	35	3.5	3.5	0.0	78.4	5.24	85		

In the formation of this Table the results from Jersey and Guernsey have not been combined, on account of the difference between the ranges of temperature of the two places.

The results from the two stations Newport and Ryde being in accordance with each other, and with those places in their latitudes, are combined. The results from Ventnor are not combined, on account of the much higher temperature, and less range of temperature than those at the other stations in the Isle of Wight.

Year 1852.	Temperature of the Air.										Wind.	Rain.	Mean Amount of Cloud.	Number of Days it fell.	Amount collected.	Mean Weight of a cubic foot of Air.	Mean additional Weight required to saturate a cubic foot of Air.	Mean Humidity.	Mean whole Amount of Water in a vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.
	Mean.			Range in the Month.			Evaporation.													
Months.	Air and Water.	Mean Pressure of the Barometer in the Month.	From Soil-registering thermometer.			From Soil-registering thermometer.			Adapted.	Highest.	Lowest.	Range in the Month.	Mean of all the Month.	Mean Daily.	Evaporation.	Dew Point.	Estimated.	Strengthen.	Direction.	
			in.	°	′	in.	°	′												in.
July	29.764	.728	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Aug.	29.805	.490	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Sept.	29.863	.450	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Oct.	29.891	.545	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Nov.	29.748	.501	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Dec.	29.710	.430	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Jan.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Feb.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
March	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
April	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
May	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
June	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
July	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Aug.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Sept.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Oct.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Nov.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Dec.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Jan.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Feb.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
March	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
April	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
May	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
June	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
July	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Aug.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Sept.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Oct.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Nov.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Dec.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Jan.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Feb.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
March	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
April	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
May	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
June	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
July	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Aug.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Sept.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Oct.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Nov.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Dec.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Jan.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Feb.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
March	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
April	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
May	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
June	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
July	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Aug.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Sept.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Oct.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Nov.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Dec.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Jan.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Feb.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
March	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
April	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
May	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
June	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
July	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Aug.	29.721	.454	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0	69.2	67.5	69.2	83.0	81.0	83.0
Sept.	29.721	.454	69.2																	

Year 1852.	Month.	Names of Stations and Observers.	Mean Pressure of the Air.				Temperature of the Air.				Mean Temperature of the Air.				Wind.				Rain.				Mean Weight of a Column of Air.			
			Barometer in the Month.	From Self-registering Thermometer.	From Self-registering Thermometer.	From Self-registering Thermometer.	Adopted.	Highest.	Lowest.	Range in the Month.	Mean of all the Highest.	Mean of all the Lowest.	Mean Daily.	Evaporation.	Dew Point.	Estimated.	Direction.	Mean Amount of Rain.	Number of Days it fell.	Amount collected.	Mean Weight of a Column of Air.	Mean Weight of a Column of Air.	Mean Weight of a Column of Air.	Mean Weight of a Column of Air.	Mean Weight of a Column of Air.	Mean Weight of a Column of Air.
July	1852.	ROYAL OBSERVATORY, THE ASTRONOMER ROYAL.	29.87	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
Aug.	1852.	ST. JOHN'S WOOD, GEORGE LEACH, Esq., M.B.M.S.	29.85	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
Sept.	1852.	EXFELD, REV. J.M. HEATH, A.M., M.B.M.S.	29.84	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
July	1852.	ROSE HILL (near Oxford), M.B.M.S.	29.83	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
Aug.	1852.	RAIDLIFFE OBSERVATORY, OXFORD, M.B.M.S.	29.82	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
Sept.	1852.	M.J. JOHNSON, Esq., M.A., F.R.A.S.	29.81	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
July	1852.	STONE OBSERVATORY, OXFORD, O.J. GRACE, Esq., M.B.M.S. (Pupil of Rev. W.B. RAY, M.B.M.S.)	29.80	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
Aug.	1852.	REV. W.B. RAY, M.B.M.S.	29.79	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
Sept.	1852.	MR. HORTON, Assistant to Dr. LEE, F.R.S., Trin. B.M.S.	29.78	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
July	1852.	HARTWELL RECTORY, REV. C. LOWNDEN, M.A., F.R.A.S.	29.77	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
Aug.	1852.	AYLESBURY, THOMAS DELL, Esq., F.R.A.S., M.B.M.S.	29.76	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
Sept.	1852.	LINSLADE, JOHN OSBORN, Esq., Jun., M.B.M.S.	29.75	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
July	1852.	ROYSTON (Hertfordshire), HALE WORTHAM, Esq., M.B.M.S.	29.74	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
Aug.	1852.	CARDINGTON (near Bedford), MR. MACDONALD, Esq., F.R.A.S., Pres. B.M.S.	29.73	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
Sept.	1852.	BEDFORD, DR. BARBER, M.B.M.S.	29.72	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
July	1852.	NORWICH, W. BROOKE, Esq., F.R.A.S., M.B.M.S.	29.71	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
Aug.	1852.	GRANTHAM, J. W. JEANS, Esq., M.B.M.S.	29.70	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
Sept.	1852.	DERBY, JOHN DAVIS, Esq., M.B.M.S.	29.69	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
July	1852.	HOLKHAM, S. SHELLABEAR, Esq., M.B.M.S. (Assistant to the Earl of Litchfield).	29.68	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3

Year 1852.	Month.	Names of Stations and Observers.	Mean Pressure of the Air.				Temperature of the Air.				Mean Temperature of the Air.				Wind.				Rain.				Mean Weight of a Column of Air.			
			Barometer in the Month.	From Self-registering Thermometer.	From Self-registering Thermometer.	From Self-registering Thermometer.	Adopted.	Highest.	Lowest.	Range in the Month.	Mean of all the Highest.	Mean of all the Lowest.	Mean Daily.	Evaporation.	Dew Point.	Estimated.	Direction.	Mean Amount of Rain.	Number of Days it fell.	Amount collected.	Mean Weight of a Column of Air.	Mean Weight of a Column of Air.	Mean Weight of a Column of Air.	Mean Weight of a Column of Air.	Mean Weight of a Column of Air.	Mean Weight of a Column of Air.
July	1852.	HIGHFIELD HOUSE, NOTTINGHAM, MESSRS. E. J. AND A. S. H. LOWE.	29.87	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
Aug.	1852.	HAVERDEN, DR. MOFFAT, F.R.A.S., M.B.M.S.	29.86	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
Sept.	1852.	GAINSBOROUGH, T. DUNSON, Esq., M.B.M.S.	29.85	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
July	1852.	LIVERPOOL OBSERVATORY, JOHN HARTNUT, Esq., F.R.A.S.	29.84	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
Aug.	1852.	MANCHESTER, GEORGE V. YERKIN, Esq., M.B.M.S.	29.83	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
Sept.	1852.	WAKEFIELD PRISON, W. R. MILNER, Esq., M.B.M.S.	29.82	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
July	1852.	LEEDS, HENRY DENNY, Esq.	29.81	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
Aug.	1852.	STONYHURST, REV. J. CLARE.	29.80	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
Sept.	1852.	YORK, JOHN FORD, Esq.	29.79	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
July	1852.	WHITEHAVEN, J. F. MILLER, Esq., F.R.S., M.B.M.S.	29.78	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
Aug.	1852.	DURHAM, WILLIAM ELLIS, Esq.	29.77	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
Sept.	1852.	NEWCASTLE, G. MURAS, Esq.	29.76	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
July	1852.	NORTH SHIELDS, ROBERT SPENCE, Esq.	29.75	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
Aug.	1852.	GLASGOW, E. D. THOMSON, M.D., F.R.S.E., M.B.M.S.	29.74	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3
Sept.	1852.	DUNINO, DAVID TENNANT, Esq., M.B.M.S.	29.73	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3	60.3

North Shields.—Observations were not taken on August 23d, 24th, and 25th. The reading of the barometer on those days were much above the average reading for the month, and consequently the above reading does not represent the true reading, which should have been about 29.700.

NOTE.—Second rain gauges are placed at Jersey at the height of 6 feet; the amount collected was 9.5 inches. At Oxford, 22 feet; the amount was 9.0 inches. At Hartwell Rectory, 4 feet; the amount was 9.9 inches. At Cardington, 36 feet; the amount was 7.1 inches. At Norwich, 31 feet; the amount was 9.0 inches. At Rotham 4 feet; the amount was 8.9 inches. At Highfield House, 25 feet; the amount was 11.3 inches. And at Whitehaven 75 feet; the amount was 8.5 inches.

ON THE
METEOROLOGY OF ENGLAND, SOUTH OF SCOTLAND, AND PARTS OF IRELAND,

DURING THE

Quarter ending December 31, 1852.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

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FOR HER MAJESTY'S STATIONERY OFFICE.

1852.

On the Meteorology of England, South of Scotland, and parts of Ireland, during the Quarter ending December 31st, 1852. By JAMES GLAISHER, ESQ., F.R.S., Sec. of the British Meteorological Society.

The daily temperature was below its average value till October 19th, and it was alternately in excess and defect from October 20th to October 29th. On October 30th a period of weather set in, of higher temperature and longer continuance, at this season of the year, than any on record. The mean temperature of the month of November was $48^{\circ} \cdot 9$, being $6\frac{1}{2}^{\circ}$ in excess of the average of 80 years; during which period one instance only of a higher temperature has taken place, viz. in 1818, when the average temperature of this month was 49° . The mean temperature of December was $47^{\circ} \cdot 6$, exceeding the average of the month by no less than $8\frac{3}{4}^{\circ}$, and being of higher temperature than any December, so far as our records extend. The nearest approach to this value was in 1806, when the mean temperature of December was $46^{\circ} \cdot 8$.

The quarter has been remarkable for a continuance of heavy falls of rain, which characterized the preceding quarter. In some places as much rain has fallen within this quarter as occasionally falls in the entire year. The fall in the year has greatly exceeded its average, amounting to 50 inches in depth nearly in the counties of Cornwall and Devonshire; between 30 and 40 inches at most inland places; and exceeding 58 inches at both Stonyhurst and North Shields.

During the whole of the quarter the weather has been unsettled, the reading of the barometer has been subjected to great and frequent fluctuations, and has been generally low; the amount of water mixed with the air, in the invisible shape of vapour, notwithstanding the continued rain, has been that only due to the season, and therefore, on account of the much higher temperature than usual, the degree of humidity has been less than that common to the season.

The mean temperature of the air at Greenwich for the quarter ending November, constituting the 3 autumn months, was $51^{\circ} \cdot 2$, being $1^{\circ} \cdot 9$ above the average of 80 years.

Temperature of														Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
Air.		Evaporation.		Dew Point.		Air— Daily Range.		Water of the Thames.									
1852. MONTHS.	Mean.	Diff. from ave- rage of 80 years.	Diff. from ave- rage of 11 years.	Mean.	Diff. from ave- rage of 11 years.	Mean.	Diff. from ave- rage of 11 years.		Mean.	Diff. from ave- rage of 11 years.	Mean.	Diff. from ave- rage of 11 years.	Mean.	Diff. from ave- rage of 11 years.			
	o	o	o	o	o	o	o	o	o	o	in.	in.	gr.	gr.			
Oct. . .	47.9	+1.4	-1.9	45.0	-2.8	41.3	-4.3	14.6	+1.3	49.4	.279	-.044	3.2	-0.5			
Nov. . .	48.9	+6.5	+4.9	46.3	+3.8	43.4	+2.9	10.4	-0.3	48.2	.295	+.024	3.4	+0.3			
Dec. . .	47.6	+8.8	+7.2	44.5	+5.5	40.9	+1.0	9.7	+0.8	45.5	.271	+.030	3.1	+0.3			
Mean .	48.1	+4.6	+3.4	45.3	+2.2	41.9	+0.9	11.6	+0.6	47.7	.282	+.003	3.2	0.0			

1852. MONTHS.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Hor- izontal move- ment of the Air.	Reading of Thermometer on Grass.					
	Mean.	Diff. from ave- rage of 11 years.	Mean.	Diff. from ave- rage of 11 years.	Mean.	Diff. from ave- rage of 11 years.	Amount.	Diff. from ave- rage of 37 years.		Number of Nights it was			Low- est Read- ing at Night.	High- est Read- ing at Night.	
										At or below 32°					
										Be- tween 32° and 40°	Above 40°				
			in.	in.	gr.	gr.	in.	in.	Miles.				o	o	
Oct. . .	.803	-.062	29.687	-.013	538	+ 3	3.8	+1.2	92	14	11	6	24.0	47.9	
Nov. . .	.825	-.058	29.465	-.264	534	- 8	6.0	+3.7	165	6	9	15	26.8	53.2	
Dec. . .	.794	-.101	29.581	-.282	536	-14	2.2	+0.3	176	5	17	9	25.0	47.2	
Mean .	.808	-.074	29.578	-.186	536	- 6	Sum 12.0	Sum +5.2	144	Sum 25	Sum 37	Sum 30	24.0	53.2	

NOTE.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunder was heard or lightning seen at different stations on October 1st, 2d, 4th, 5th, 6th, 24th, 25th, and 26th; November 1st, 2d, 3d, 5th, 6th, 11th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 25th, 27th, and 29th; December 8th, 16th, 17th, 18th, 19th, 23d, 25th, 26th, 27th, and 29th.

Remarkable falls of Rain on the 1st October at Jersey was 0.9 in., at Guernsey 0.7 in., at Newport 0.5 in., at Ryde 0.5 in., at Worthing 0.5 in., at Stonyhurst 1.0 in.; on the 2d at Jersey 1.2 in., at Guernsey 0.8 in.; on the 3d at Falmouth 0.9 in., at Alderley Edge 0.5 in.; on the 4th at Guernsey 1.8 in., at Falmouth 0.8 in., at Southampton 1.9 in., at Uckfield 2.1 in., at Midhurst 1.8 in., at Lewisham 1.2 in., at Greenwich 1.0 in. from 9 A.M. to 9 P.M., at Bicester 0.7 in., at Stone 0.7 in., at Linslade 0.7 in., at Royston 1.0 in., at Cardington 0.7 in., at Bedford 0.7 in., at Norwich 0.7 in., at Grantham 0.9 in., at Manchester 0.5 in., at Wakefield 0.5 in., at Leeds 0.5 in., at Stonyhurst 0.5 in., at North Shields 2.4 in.; on the 5th at Jersey 1.7 in., at Newport 2.3 in., at Ryde 1.3 in., at Worthing 1.6 in., at St. John's Wood 1.0 in., at Enfield 1.0 in., at Hartwell Rectory 0.7 in., at Holkham 0.6 in., at Bowdon 0.5 in., at Durham 1.0 in.; on the 6th at Ennis 0.5 in.; on the 21st at Falmouth 0.5 in., at North Shields 1.0 in.; on the 24th at Guernsey 0.7 in., at Lewisham 0.7 in., at Norwich 0.5 in.; on the 25th at Jersey 0.9 in., at Falmouth 1.1 in., at Newport 1.1 in., at Ryde 1.2 in., at Worthing 2.4 in., at Southampton 0.8 in., at Uckfield 1.8 in., at Midhurst 0.6 in., at Lewisham 0.6 in., of which 0.5 in. fell in 2 hours, at Greenwich 0.9 in., at

Ennis 0.5 in., at Holkham 0.8 in.; on the 26th at Falmouth 1.2 in., at Ryde 1.1 in., at Southampton 1.1 in., at Uckfield 1.1 in., at Midhurst 1.5 in., at Lewisham 0.8 in., at Greenwich 0.5 in., at St. John's Wood 1.1 in., at Bicester 0.6 in., at Ennis 0.6 in., at Norwich 0.6 in., at Grantham 0.5 in. in 6 hours, at Nottingham 0.7 in., at Manchester 0.5 in., at Wakefield 1.2 in., at Leeds 2.0 in., at Stonyhurst 0.7 in.; on the 27th at Jersey 1.0 in., at Guernsey 1.3 in., at Newport 1.2 in., at Ryde 1.4 in., at Worthing 1.2 in., at Uckfield 0.9 in., at Hartwell Rectory 0.5 in., at Norwich 0.7 in., at Grantham 0.9 in., at Alderley Edge 1.1 in., at Bowdon 1.1 in., at Stonyhurst 0.7 in.; on the 28th at Jersey 0.9 in., at Durham 0.5 in., at North Shields 1.4 in.; on the 29th at Falmouth 0.7 in.; on the 30th at Guernsey 0.5 in., at Newport 0.5 in., at Ryde 0.6 in., at Southampton 0.6 in., at Ennis 0.6 in.; on the 31st at Newport 0.5 in., and at Ryde 0.5 in.; on the 1st November at Cong 1.0 in.; on the 2d at Newport 0.5 in., at Ryde 0.5 in., at Worthing 0.5 in., at Southampton 0.5 in., at Midhurst 0.6 in., at Lewisham 0.5 in., at Greenwich 0.5 in., at St. John's Wood 0.8 in., at Royston 0.6 in., at Norwich 0.9 in.; on the 3d at Newport 0.5 in., at Worthing 0.5 in., at Southampton 0.6 in., at Stonyhurst 0.7 in.; on the 4th at Falmouth 0.8 in., at Wakefield 0.5 in., at North Shields 1.1 in.; on the 5th at Ennis 0.9 in., at Cong 0.6 in., at Bowdon 0.5 in., at Stonyhurst 0.7 in.; on the 6th at Falmouth 1.3 in., at Bowdon 0.9 in.; on the 7th at Southampton 0.9 in.; on the 8th at Newport 0.5 in., at Midhurst 0.5 in., at Cong 0.6 in.; on the 10th at Nottingham 1.7 in., at Hawarden 1.2 in., at Alderley Edge 0.7 in., at Wakefield 0.5 in.; on the 11th at Rose Hill 1.1 in., at Stone 1.2 in., at Hartwell Rectory 1.2 in., at Linslade 1.2 in., at Cardington 1.4 in., at Bedford 1.5 in., at Ennis 0.9 in., at Norwich 1.2 in., at Holkham 1.3 in., at Cong 0.7 in., at Alderley Edge 0.5 in., at Bowdon 0.7 in., at Wakefield 0.9 in., at Leeds 0.8 in.; on the 12th at Lewisham 1.2 in., at Greenwich 0.8 in., at St. John's Wood 1.0 in., at Bicester 1.0 in., at Royston 1.1 in., at Ennis 0.6 in., at Grantham 1.0 in., at Manchester 0.8 in.; on the 13th at North Shields 1.6 in.; on the 14th at Newport 0.5 in., at Southampton 0.5 in., at Midhurst 0.7 in., at Stone 0.5 in., at Hartwell Rectory 0.7 in., at Royston 0.8 in., at Bedford 0.5 in., at Norwich 0.7 in., at Wakefield 0.8 in., at Leeds 0.8 in., at North Shields 1.0 in.; on the 15th at Guernsey 1.0 in., at Falmouth 0.5 in., at Newport 0.5 in., at Ryde 0.6 in., at Southampton 0.8 in., at St. John's Wood 1.0 in., at Midhurst 0.5 in., at Nottingham 0.6 in., at North Shields 1.6 in.; on the 16th at Newport 0.7 in., at Ryde 0.5 in., at Falmouth 0.6 in., at Lewisham 0.6 in.; on the 20th at Guernsey 0.5 in., at Falmouth 1.2 in., at Southampton 0.8 in.; on the 21st at Guernsey 0.5 in., at Falmouth 0.8 in., at Newport 0.6 in., at Ryde 0.6 in., at Southampton 0.9 in., at Midhurst 0.7 in., at Bicester 0.5 in., at Norwich 0.6 in.; on the 23d at Falmouth 1.1 in., at Newport 0.5 in., at Ryde 0.5 in., at Worthing 0.7 in., at Southampton 0.9 in., at Midhurst 0.6 in., at Ennis 0.7 in., at Cong 0.8 in.; on the 25th at Falmouth 0.5 in., at Southampton 0.7 in., at Midhurst 1.1 in., at Ennis 0.8 in., at Nottingham 0.5 in., at Wakefield 0.8 in., at Leeds 0.8 in., at North Shields 1.6 in.; on the 26th at Guernsey 0.8 in., at Newport 0.5 in., at Southampton 1.1 in., at Uckfield 1.1 in., at Lewisham 1.0 in., at Greenwich 1.0 in., at St. John's Wood 0.7 in., at Enfield 0.5 in., at Norwich 0.5 in., at Cong 0.5 in., at Stonyhurst 0.8 in., at Durham 0.6 in., at Glasgow 1.2 in.; on the 27th at Guernsey 0.8 in., at Falmouth 0.5 in., at Newport 0.6 in., at Worthing 0.9 in., at Midhurst 0.5 in., at Enfield 0.5 in., at Grantham 0.6 in., at Holkham 0.6 in., at Stonyhurst 0.5 in.; on the 28th at Manchester 0.7 in., at Stonyhurst 1.1 in., at Glasgow 0.8 in.; on the 5th at Falmouth 0.8 in., at Bowdon 0.6 in., at Stonyhurst 1.8 in.; on the 6th at Guernsey 0.6 in., at Norwich 0.5 in.; on the 7th at Midhurst 0.6 in.; on the 8th at Jersey 0.9 in., at Newport 0.6 in., at Ryde 0.8 in., at Worthing 0.6 in., at Durham 0.6 in., at North Shields 0.8 in.; on the 11th at Falmouth 0.5 in., at Glasgow 0.7 in.; on the 12th at Glasgow 0.9 in.; on the 14th at Guernsey 0.6 in.; on the 15th at Newport 0.5 in., at Ryde 0.5 in., at Southampton 0.5 in., at Midhurst 0.6 in., at Stonyhurst 0.5 in., at Durham 0.6 in., at North Shields 0.6 in.; on the 16th at Stone 0.8 in., at Hartwell Rectory 0.9 in., at North Shields 0.8 in.; on the 17th at Jersey 0.8 in., at Guernsey 0.6 in., at Worthing 0.5 in., at Southampton 0.5 in., at Uckfield 1.0 in., at Midhurst 0.5 in., at Leeds 1.3 in., at North Shields 0.6 in., at Glasgow 0.9 in.; on the 18th at Newport 0.5 in., at Worthing 1.2 in., at Southampton 0.5 in.; on the 19th at Glasgow 1.1 in.; on the 20th and 21st at Stonyhurst 0.5 in. fell on each day; on the 24th at Manchester 0.7 in., at Wakefield 0.5 in.; on the 25th at Guernsey 1.1 in., at Glasgow 0.6 in.; on the 26th at Jersey 1.0 in., at Falmouth 0.7 in., at North Shields 1.3 in.; on the 27th at Newport 0.5 in., at Ryde 0.5 in., at Southampton 0.8 in., at Midhurst 0.8 in., at Stonyhurst 0.6 in., and at Glasgow 0.7 inches.

Fog was prevalent on 20 days in October, but general on 19th and 20th only; it was present 17 days in November and 14 days in December, but was not general on any day.

Hail fell on 23 days in the quarter at the different stations.

Aurora were seen on 5th, 23d, 24th, 25th, and 26th October at Stone. On 3d November at Oxford, Stone, Nottingham, Liverpool, and Dunino; on the 7th at Hawarden; on the 8th at Stonyhurst; on the 11th at Lewisham and Greenwich; on the 18th at Stone; and on the 30th at Liverpool. On 6th December at North Shields and Dunino; on the 9th at Rose Hill; on the 10th at Dunino; on the 12th at Stone; on the 15th at Grantham; and on the 20th at Stone.

Solar Halos were seen on 17 days within the quarter.

Lunar Halos were seen on 26 days in the quarter, that on December 25th was seen triple at Liverpool.

Snow fell on 10th November at Stonyhurst; on the 11th at Mansfield, Gainsborough, Manchester, Wakefield, Leeds, and Stonyhurst; on the 12th at Stonyhurst; on the 28th at North Shields; on the 29th at Bicester, Linslade, Bedford, Durham, and North Shields; and on the 30th at Bedford and Grantham, and at North Shields (sleet). On 22d December at Durham.

NAMES OF THE PLACES.	Mean Pressure of dry Air reduced to the level of the Sea.										WIND.	RAIN.		Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required to saturate a cubic foot of Air.	Mean degree of Humidity.	Mean whole Amount of Water in a vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.	Height of Cistern of the Barometer above the level of the Sea.	
	Mean Pressure of dry Air reduced to the level of the Sea.	Mean Temperature of the Air.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Mean Daily Range of Temperature.	Mean Monthly Range of Temperature.	Range of Temperature in the Quarter.	Mean Temperature of the Quarter.	Mean Temperature of the Year.	Mean estimated Strength.		Mean Amount of Cloud.	Number of Days on which it fell.							Amount collected.
Jersey -	29.465	51.267	0.33	0.1	14.23	332	0.50	1.48	7	2.3	S.W. & N.W.	63	60	18.5	4.1	0.7	0.912	5.0	534	85
Guernsey -	29.461	51.661	0.37	0.0	5.8	18	8.24	0.59	0.48	1.7	S.W.	73	67	22.3	4.0	0.5	0.904	4.8	534	123
Helston	29.375	51.867	0.32	0.12	3.28	7.35	0.50	0.48	1	2.2	S.W. & W.	70	64	18.9	4.0	0.6	0.882	4.8	531	103
Falmouth	—	50.965	0.31	0.10	3.27	7.34	0.0	—	—	1.5	S.W. & S.	79	72	21.6	—	—	—	—	—	120
Truro -	29.424	50.862	0.28	0.11	7.30	7.34	0.48	5.45	9	0.7	S.W.	6.9	67	22.6	3.8	0.7	0.847	4.5	534	55
Torquay	29.462	50.32	0.0	7.72	3.30	0.47	4.44	5	2.9	—	S.W. & N.E.	—	66	23.0	3.6	0.8	0.887	4.3	—	160
Exeter -	29.404	50.22	0.26	3.32	2.29	1.33	0.37	4.46	1.6	—	W. & S.W.	6.2	67	18.8	3.8	0.3	0.926	4.5	535	140
Ventnor	29.419	51.461	0.34	0.0	7.11	3.27	0.0	—	—	—	S.W. & W.	6.7	67	17.9	4.1	0.4	0.910	4.9	532	144
Newport	29.451	49.63	0.28	1.0	2.30	0.93	2.47	1.44	2.6	—	—	7.1	65	22.0	3.6	0.7	0.871	4.4	537	28
Ryde	29.459	48.963	0.26	9.13	9.30	2.36	1.6	8.43	1.0	—	Var.	7.3	71	20.0	3.5	0.7	0.844	4.2	536	110
Worthing	—	48.659	0.32	6.7	2.22	5.25	7.46	9.43	9	—	S.W.	—	61	18.3	3.6	0.4	0.867	4.3	—	23
Chichester	—	47.361	0.28	0.10	3.25	7.33	0.0	—	—	—	S. & N.W.	—	—	16.1	—	—	—	—	—	25
Southampton	—	48.762	0.28	8.11	6.28	5.33	2.47	3.45	0.4	—	S.W.	6.5	57	20.8	3.7	0.4	0.906	4.5	536	60
Uckfield	—	48.264	0.26	0.12	8.35	7.38	0.45	7.43	1.0	—	S.W. & W.	7.9	62	19.9	3.4	0.6	0.851	4.1	—	180
Midhurst	29.457	47.264	0.25	5.14	4.31	7.37	7.46	0.44	1.8	—	S.W.	7.7	54	19.1	3.6	0.3	0.919	4.3	537	84
Lewisham	29.427	47.061	0.30	4.12	6.30	3.34	2.45	8.43	0.6	—	S.W.	8.0	58	12.0	3.4	0.6	0.863	4.1	537	82
Royal Observatory	29.445	47.163	0.31	0.11	6.29	0.93	4.5	3.41	0	—	S.W. & N.E.	7.6	56	13.0	3.2	0.8	0.908	3.9	536	153
Chiswell Street	29.445	47.163	0.31	0.11	6.29	0.93	4.5	3.41	0	—	—	—	—	—	—	—	—	—	—	533
St. John's Wood	29.447	46.762	0.29	0.12	6.30	2.33	8.45	2.43	1.5	—	S.W.	8.1	56	12.7	3.4	0.4	0.897	4.1	537	100
Enfield	—	46.761	0.29	0.11	4.28	2.32	5.45	0.42	9	—	S.W.	—	61	10.3	3.4	0.4	0.880	4.0	537	76
Rose Hill	29.429	46.164	0.26	0.12	4.30	6.38	0.44	7.43	2.5	—	S.S.W. & S.W.	7.1	60	12.0	3.4	0.3	0.907	4.0	535	270
Bicester	29.436	46.064	0.25	5.11	3.32	6.38	5.45	1.43	1.2	—	S.W. & S.	7.1	51	10.9	3.4	0.4	0.884	4.0	534	—
Radcliffe Observatory	29.439	47.263	0.26	3.11	4.30	9.37	6.45	4.31	2.0	—	Var.	7.4	58	13.3	3.4	0.5	0.869	4.1	535	210
Stone Observatory	29.394	46.463	0.28	8.10	7.29	8.33	0.44	7.42	0.7	—	S.W. & S.	6.4	68	11.5	3.4	0.5	0.882	4.0	533	320
Hartwell House	29.444	46.163	0.30	0.12	5.30	1.34	0.45	3.42	1.1	—	S.W. & S.	7.3	—	—	3.4	0.6	0.860	4.0	533	250
Hartwell Rectory	29.496	46.160	0.29	0.10	7.27	8.33	7.44	8.43	9	—	S.W. & S.	5.9	63	11.6	3.4	0.4	0.919	4.1	534	280
Aylesbury	—	45.963	0.27	0.13	1.39	9.35	0.43	7.40	0.8	—	—	6.6	64	13.9	3.1	0.6	0.794	3.8	—	534
Linslade	29.451	45.161	0.27	0.10	2.39	0.34	0.43	8.41	6	—	S.W. S. & W.	—	65	10.5	3.2	0.7	0.872	3.9	534	313
Royston	29.452	46.764	0.30	4.10	3.27	6.33	5.45	1.43	1	—	S.W. & S.	7.1	70	10.9	3.4	0.4	0.906	—	538	271
Cardington	29.423	46.263	0.28	0.12	8.31	4.37	6.44	9.43	2	1.0	S.W. S. & N.	7.2	56	9.9	3.4	0.4	0.906	4.1	538	100
Bedford	29.417	46.1	0.29	0.11	0.28	5.32	5.44	3.41	1	—	S.W. & S.	7.5	57	10.0	3.3	0.6	0.856	3.9	537	100
Norwich	29.441	46.665	0.29	0.10	1.31	3.35	0.44	8.42	7	1.8	S. & S.E.	7.5	51	11.1	3.4	0.5	0.877	4.0	539	39
Grantham	29.426	45.562	0.28	3.8	6.29	3.34	1.43	5.41	0.1	—	S.W. & N.E.	7.1	63	9.9	3.2	0.5	0.858	3.8	536	100
Derby	29.402	44.861	0.36	0.11	2.29	3.35	0.43	5.41	9	—	Var.	—	62	11.7	3.3	0.4	0.906	3.9	538	100
Holkham	29.421	46.764	0.30	0.11	2.29	3.34	0.44	6.42	8	1.3	S.W. & S.	7.6	67	9.9	3.4	0.4	0.893	4.0	539	53
Nottingham	29.408	45.562	0.28	4.12	3.32	3.39	7.43	2.49	0.7	—	S.W. & S.	7.7	63	12.3	3.1	0.5	0.896	3.7	533	100
Hawarden	—	45.662	0.30	8.22	2.22	5.44	3.43	0.0	0.5	—	S.W.	7.2	—	—	—	—	—	—	—	260
Gainsborough	29.430	46.263	0.28	5.10	4.29	5.34	0.43	7.41	0.2	—	S.W. & S.	5.9	56	8.7	3.3	0.4	0.884	3.8	541	30
Liverpool	29.374	47.260	0.32	3.8	6.28	2.28	2.45	6.43	7.1	—	Var.	7.4	64	11.7	3.5	0.4	0.889	4.2	537	37
Manchester	29.413	44.966	0.27	0.14	0.31	3.39	0.43	2.41	1	—	S.W. & N.E.	8.1	69	12.1	3.2	0.5	0.876	3.8	538	137
Alderley Edge	—	44.562	0.29	4.8	9.28	3.32	6.42	6.40	2	—	Var.	6.2	70	11.6	3.1	0.5	0.880	3.7	535	—
Bowdon	—	44.762	0.28	0.12	3.1	3.34	0.43	0.40	8	—	S. & S.W.	7.3	84	13.9	3.1	0.4	0.878	3.7	536	—
Wedgefield	29.396	45.663	0.30	3.12	4.32	8.32	5.43	1.40	2.0	—	S.W.	7.3	66	11.4	3.1	0.5	0.860	3.7	538	115
Leeds	29.396	45.764	0.30	0.15	3.33	3.39	0.49	2.8	2.9	—	S.W.	8.7	67	12.0	3.9	0.8	0.782	3.5	536	138
Stonyhurst	29.389	43.960	0.27	4.10	8.30	5.33	3.43	5.46	1.2	—	S.W. & N.E.	8.1	60	10.0	3.2	0.4	0.863	3.7	534	50
York	29.329	44.362	0.25	0.10	2.28	0.37	0.42	8.40	8	—	S.W. & S.	—	60	10.0	3.2	0.4	0.863	3.7	534	50
Whitehaven	29.319	45.561	0.26	5.8	6.26	2.34	5.43	9.41	2.6	—	Var.	—	66	19.1	3.3	0.4	0.882	3.9	537	90
Durham	29.374	43.960	0.27	5.7	8.27	0.32	6.42	2.40	3	1.3	S.W.	7.2	60	10.3	3.1	0.4	0.892	3.7	534	352
Newcastle	29.316	45.199	0.28	0.0	2.31	0.31	0.43	2.40	9	—	S.W.	—	38	17.9	3.2	0.5	0.851	3.8	537	121
North Shields	—	45.861	0.28	4.7	5.25	3.32	6.42	6.41	2.2	—	S.W. & N.W.	7.0	70	23.6	3.2	0.3	0.912	3.8	541	124
Glasgow	—	—	—	—	—	—	—	—	—	—	W. & S.W.	—	59	16.7	—	—	—	—	—	121
Dunino	29.308	41.757	0.23	0.11	3.31	0.34	0.40	0.37	6	2.1	S.W. & S.E.	5.2	52	13.7	2.9	0.5	0.871	3.4	537	200

The mean of the numbers in the first column is 29.417 inches, and it represents that portion of the reading of the barometer due to the pressure of air; the remaining portion, or that due to the pressure of water, is 0.233 inch; the sum of these two numbers is 29.650 inches, and it represents the mean reading of the barometer for the quarter at the level of the sea.

The highest readings of the thermometer in air were 67.0° at Jersey, Helston, and Chiswell Street, and 66.0° at Manchester. The lowest readings were 29.0° at Dunino, 24.0° at Nottingham, and 23.0° at York. The least daily ranges of temperature took place at Guernsey, Liverpool, Whitehaven, Ventnor, and Worthing; and the greatest at Midhurst, Manchester, Ryde, Wakefield, and Aylesbury.

Rain fell on the least number of days at Newcastle, Bicester, Norwich, and Dunino; and on the greatest number at Bowdon, Royston, Falmouth, and Ryde. The least falls took place at Gainsborough, Cardington, Grantham, and Holkham; and the mean amount at these places is 9.6 inches. The largest falls occurred at North Shields, Torquay, Truro, Guernsey, and Newport, and their mean is 22.7 inches.

QUARTERLY METEOROLOGICAL TABLE for different PARALLELS of LATITUDE.

PARALLELS OF LATITUDE, &c.	Mean Pressure of dry Air reduced to the level of the Sea.										WIND.	RAIN.		Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required to saturate a cubic foot of Air.	Mean degree of Humidity.	Mean whole Amount of Water in a vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.	Height of Cistern of the Barometer above the level of the Sea.
	Mean Pressure of dry Air reduced to the level of the Sea.	Mean Temperature of the Air.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Mean Daily Range of Temperature.	Mean Monthly Range of Temperature.	Range of Temperature in the Quarter.	Mean Temperature of the Quarter.	Mean Temperature of the Year.	Mean estimated Strength.		Mean Amount of Cloud.	Average Number of Days.						
In the Counties of Cornwall and Devonshire	29.465	51.267	0.33	11.4	23.332	0.50	1.48	7	5	1.2	S.W. & N.W.	60	67	73	0.0	7.8	10.0	1.2	
Newport and Ryde	29.461	51.661	0.37	0.5	18.824	0.49	0.68	1	1	1.1	S.W. & W.	60	67	73	0.0	7.8	10.0	1.2	
South of latitude 51°	29.475	51.867	0.32	0.1	12.328	0.35	0.50	0.48	1	1.1	S.W. & W.	60	67	73	0.0	7.8	10.0	1.2	
Between the latitudes of 51° and 52°	29.475	51.867	0.32	0.1	12.328	0.35	0.50	0.48	1	1.1	S.W. & W.	60	67	73	0.0	7.8	10.0	1.2	
Between the latitudes of 52° and 53°	29.475	51.867	0.32	0.1	12.328	0.35	0.50	0.48	1	1.1	S.W. & W.	60	67	73	0.0	7.8	10.0	1.2	
Between the latitudes of 53° and 54°	29.475	51.867	0.32	0.1	12.328	0.35	0.50	0.48	1	1.1	S.W. & W.	60	67	73	0.0	7.8	10.0	1.2	
Liverpool and Whitehaven	29.475	51.867	0.32	0.1	12.328	0.35	0.50	0.48	1	1.1	S.W. & W.	60	67	73	0.0	7.8	10.0	1.2	
Durham, Newcastle, and North Shields	29.475	51.867	0.32	0.1	12.328	0.35	0.50	0.48	1	1.1	S.W. & W.	60	67	73	0.0	7.8	10.0	1.2	
Dunino	29.475	51.867	0.32	0.1	12.328	0.35	0.50	0.48	1	1.1	S.W. & W.	60	67	73	0.0	7.8	10.0	1.2	

In the formation of this Table the results from Jersey and Guernsey have not been combined, on account of the difference between the ranges of temperature of the two places. The results from Ventnor are not combined, on account of the much higher temperature, and less range of temperature than those at the other stations in the Isle of Wight. The results from Chiswell Street have also not been combined.

NAMES OF STATIONS AND OBSERVERS.

Year 1852.	Month.	Mean Pressure of the Air.				Mean Temperature of the Air.				Wind.				Rain.				Mean Weight of a cubic foot of Air.			
		Air and Water.	Barometer.	Mean.	Range.	Highest.	Lowest.	Range.	Mean.	Direction.	Amount.	Number of Days.	Mean.	Amount.	Number of Days.	Mean.	Mean.	Mean.	Mean.	Mean.	Mean.
Oct.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—
Nov.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—
Dec.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—
Jan.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—
Feb.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—
Mar.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—
Apr.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—
May.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—
Jun.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—
Jul.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—
Aug.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—
Sep.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—
Oct.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—
Nov.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—
Dec.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—

Year 1852.	Month.	Mean Pressure of the Air.				Mean Temperature of the Air.				Wind.				Rain.				Mean Weight of a cubic foot of Air.			
		Air and Water.	Barometer.	Mean.	Range.	Highest.	Lowest.	Range.	Mean.	Direction.	Amount.	Number of Days.	Mean.	Amount.	Number of Days.	Mean.	Mean.	Mean.	Mean.	Mean.	Mean.
Oct.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—
Nov.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—
Dec.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—
Jan.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—
Feb.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—
Mar.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—
Apr.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—
May.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—
Jun.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—
Jul.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—
Aug.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—
Sep.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—
Oct.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—
Nov.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—
Dec.	1	29.765	29.765	50.4	50.4	50.4	50.4	50.4	50.4	—	—	—	—	—	—	—	—	—	—	—	—

Hawarden, October.—Reading of barometer is 0.2 too low. Gainsborough.—The readings of the barometer are discordant. Manchester.—The reading of the barometer, 22d October, at 8h. AM, for 29.65 read 29.76. Bowden.—The reading of the barometer, 10th November, at 9h. AM, for 30.30 read 30.60. These alterations have been made in the formation of the tables. North Shields.—All the readings of the barometer are too great; not used in subsequent stages.

NOTE.—Second rain gauges are placed at Newport at the height of 3 feet; the amount collected was 21.3 inches. At Malmesbury, 31 feet; the amount was 9.7 inches. At Oxford, 22 feet; the amount was 11.5 inches. At Hartwell Rectory, 4 feet; the amount was 11.5 inches. At Cardington, 36 feet; the amount was 8.4 inches. At Norwich, 21 feet; the amount was 10.1 inches. At Holkham, 4 feet; the amount was 9.0 inches. And at Highfield House, 25 feet; the amount was 11.9 inches.



On the 1st day of the month of March 1853.

The following is a list of the names of the persons who have been elected to the office of Secretary of the British Meteorological Society, during the quarter ending March 31, 1853.

ON THE

METEOROLOGY OF ENGLAND, SOUTH OF SCOTLAND, AND PARTS OF IRELAND,

DURING THE

Quarter ending March 31, 1853.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

LONDON:

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FOR HER MAJESTY'S STATIONERY OFFICE.

1853.

On the Meteorology of England, the South of Scotland, and parts of Ireland, during the Quarter ending March 31st, 1853. By JAMES GLAISHER, ESQ., F.R.S., Sec. of the British Meteorological Society.

The very high temperature of the last two months of the preceding year continued till the end of January; the daily temperature during this month was frequently 8° and 9° in excess, and not seldom amounted to 12°, 13°, or 14°. The mean temperature of the month was 42°·4, exceeding the average of 80 years by 6°·7. The mean temperature of the 3 months ending January was 46°·3, being of higher value than that of any corresponding 3 months on record. The nearest approach to this value was in 1806 and 1807, when the mean temperature of the same three months was 43°·6. On February 1st a period of weather of the opposite character suddenly set in, the daily temperature being in defect on every day till March 4th occasionally to the amount of 10° or 12°; during this interval of time the temperature was occasionally very low, the weather was exceedingly severe, and snow more or less fell on every day. The average defect of daily temperature for the period was 5°·4. From March 5th to March 14th the weather was mild, the average excess of daily temperature was 4°·2. On March 15th the weather again set in with severity, snow fell on every day till the 27th to a considerable depth in some places, and the defect of daily temperature to the end of the quarter amounted to 6°·5.

The quarter has been remarkable for the extremes of heat and cold for the season, and for an unusual number of days on which snow has fallen in the months of February and March.

The mean temperature of the air at Greenwich for the quarter ending February, constituting the 3 winter months, was 41°·1, being 3°·5 above the average of 80 years.

1853. MONTHS.		Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
		Air.			Evaporation.		Dew Point.		Air— Daily Range.		Water of the Thames.				
		Mean.	Diff. from average of 80 years.	Diff. from average of 12 years.	Mean.	Diff. from average of 11 years.	Mean.	Diff. from average of 11 years.	Mean.	Diff. from average of 12 years.					
Jan. . .	42·4	+6·7	+4·4	39·8	+2·7	36·2	+1·1	10·1	+2·1	42·5	·231	+·008	2·7	+0·1	
Feb. . .	33·3	-4·9	-6·0	31·0	-6·9	27·1	-8·4	10·1	-0·5	37·6	·167	-·062	2·0	-0·7	
Mar. . .	38·5	-2·4	-3·6	35·8	-5·8	31·7	-4·4	16·1	+2·1	40·4	·198	-·034	2·3	-0·4	
Mean .	38·1	-0·2	-1·7	35·5	-3·3	31·7	-3·9	12·1	+1·2	40·2	·199	-·029	2·3	-0·5	

1853. MONTHS.		Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal move- ment of the Air.	Reading of Thermometer on Grass.							
		Mean.	Diff. from ave- rage of 11 years.	Mean.	Diff. from ave- rage of 12 years.	Mean.	Diff. from ave- rage of 11 years.	Amount.	Diff. from ave- rage of 33 years.		Number of Nights it was			Low- est Read- ing at Night.	High- est Read- ing at Night.			
											At or below 32°					Be- tween 32° and 40°	Above 40°	
Jan. . .	·808	-.084	29·570	-.179	542	-8	2·0	+0·2	118	18	8	5	22·0	43·8				
Feb. . .	·801	-.068	29·525	-.243	552	+3	0·9	-0·8	97	25	3	0	12·8	34·5				
Mar. . .	·788	-.038	29·780	-.003	550	+4	1·5	-0·1	58	27	3	1	12·2	41·5				
Mean .	·799	-.063	29·625	-.142	548	+0	Sum 4·4	Sum -0·7	91	Sum 70	Sum 14	Sum 6	12·2	43·8				

NOTE.—In reading this table it will be borne in mind that the sign (-) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunderstorms occurred, or thunder was heard and lightning seen, on the 2d, 5th, and 8th January at Whitehaven; on the 11th at Hartwell House and Linslade; on the 15th at Guernsey; and on the 21st at Jersey and Guernsey. On the 15th, 16th, and 17th February at North Shields; and on the 23d at Nottingham. On the 13th March at Nottingham; on the 15th at Wakefield and York; on the 22d at North Shields; and on the 27th at Holkham.

Thunder was heard, but lightning was not seen, on the 21st January at Grantham. On the 16th February at Newcastle; and on the 13th March at Grantham.

Lightning was seen, but thunder was not heard, on the 4th January at North Shields; on the 7th at Cardington; on the 11th at Clifton, Bicester, Oxford, Stone, Hartwell Rectory, Cardington, and Durham; on the 13th at Bicester; and on the 15th at Jersey, Ryde, and Bicester. On the 28th February at Stone and Hartwell Rectory. On the 4th March at Durham; on the 13th at Jersey; and on the 30th at Stone and Hartwell Rectory.

Hail fell on the 5th January at Ennis and Liverpool; on the 6th at Lewisham, Oxford, Stone, Hartwell Rectory, Bedford, and Ennis; on the 11th at Stone, Hartwell Rectory, Ennis, and Stonyhurst; on the 15th at Guernsey and Falmouth; on the 17th at North Shields; on the 21st at Guernsey, Falmouth, Truro, Aylesbury, Ennis, Hawarden, and Stonyhurst; on the 22d at Falmouth, Hartwell House, Hartwell Rectory, Ennis, Grantham, and Hawarden; on the 23d and 25th at North Shields; and on the 26th at Falmouth and Stone. On the 4th February at Guernsey, Aylesbury

and North Shields; on the 5th at Guernsey; on the 7th at Dunino; on the 8th at Ennis and North Shields; on the 9th and 10th at North Shields; on the 11th at Jersey, Cardington, Holkham, and North Shields; on the 13th at Guernsey; on the 17th at Falmouth; on the 20th at Hartwell Rectory; on the 22d at Hawarden; on the 23d at Ryde, Grantham, Hawarden, and Dunino; on the 25th at Hartwell Rectory; on the 26th at Jersey, Falmouth, Truro, Liverpool, Manchester, and North Shields; on the 27th at Jersey, Falmouth, and Truro; and on the 28th at Jersey and Stonyhurst. On the 1st March at Jersey, Hartwell Rectory, and Wakefield; on the 2d at Hartwell Rectory and Hawarden; on the 13th at Nottingham; on the 14th at Falmouth; on the 15th at Falmouth, Ennis, and Hawarden; on the 16th at Nottingham; on the 17th at Ennis; on the 18th at Hartwell Rectory; on the 19th at Jersey; on the 20th at Hawarden and Gainsborough; on the 21st at Jersey, Falmouth, Truro, Hawarden, and North Shields; on the 22d at Falmouth, Lewisham, Bedford, Hawarden, and North Shields; on the 23d at Lewisham, Greenwich, Ennis, and North Shields; on the 24th at Lewisham, Hartwell Rectory, and Ennis; and on the 25th at Hartwell Rectory.

Fog was prevalent on 1st January at North Shields; on the 10th at Grantham; on the 14th at Lewisham, Grantham, and Stonyhurst; on the 16th at Midhurst, Norwich, and Grantham; on the 18th at Lewisham; on the 19th at Clifton, Linslade, and Stonyhurst; on the 21st at Southampton and Lewisham; on the 24th at Paddington and Grantham; on the 25th at Paddington; on the 26th at Paddington, Grantham, and Manchester; on the 27th at Grantham; on the 28th at Ennis and Grantham; on the 30th at Paddington; and on the 31st at Clifton, Lewisham, Paddington, Linslade, and Leeds. On 1st February at Midhurst, Clifton, Lewisham, Paddington, St. John's Wood, Bicester, Stone, Hartwell House, Hartwell Rectory, Linslade, Grantham, Wakefield, Leeds, and Stonyhurst; on the 2d at Midhurst, Lewisham, Paddington, St. John's Wood, and Stonyhurst; on the 4th and 5th at Manchester; on the 6th at Southampton, Paddington, Grantham, and Wakefield; on the 8th at Clifton, Ennis, Wakefield, and Leeds; on the 11th at Royston; on the 13th at Manchester; on the 15th at Lewisham; on the 19th at Stone and Grantham; on the 22d at Manchester; and on the 28th at Greenwich. On 5th March at Stone, Grantham, Manchester, and Wakefield; on the 6th at Bicester, Norwich, and North Shields; on the 7th and 8th at Midhurst, Clifton, and Norwich; on the 9th at Ryde, Midhurst, Clifton, Lewisham, Greenwich, Paddington, St. John's Wood, Bicester, Linslade, and Wakefield; on the 11th at Paddington, St. John's Wood, Linslade, and Wakefield; on the 12th at Clifton, Lewisham, Greenwich, St. John's Wood, Grantham, and Wakefield; on the 13th at Lewisham, Wakefield, and North Shields; on the 15th at Clifton and Stone; on the 16th at Clifton, Bicester, Stone, and Hartwell House; on the 21st at Paddington; on the 24th at Midhurst, Clifton, and Greenwich; on the 25th at Manchester; on the 26th at Hartwell Rectory; on the 28th at Clifton; on the 29th at Manchester and Wakefield; on the 30th at Midhurst and Wakefield; and on the 31st at Wakefield.

Zodiacal Light was seen on 30th January at Durham, and on the 31st at Nottingham and Durham. On 7th February at Durham, and on the 27th at Nottingham. On 8th March at Rose Hill and Nottingham; on the 10th at Hartwell House and Durham; on the 11th at Rose Hill; on the 27th at Durham; on the 28th at Grantham; on the 29th at Stone, Hartwell House, Grantham, Nottingham, and Durham; and on the 30th at Grantham.

Aurora were seen on 4th January at Hawarden; on the 5th at Stone and Hawarden; on the 7th at Clifton, Rose Hill, Oxford, Stonyhurst, and Dunino; on the 8th at Stonyhurst; on the 15th at Clifton; and on the 31st at Grantham and Durham. On 14th February at Whitehaven; on the 15th at Nottingham; on the 16th and 17th at North Shields; on the 23d at Nottingham; on the 26th at Guernsey; on the 27th at Nottingham, Hawarden, Stonyhurst, and Whitehaven; and on the 28th at Stone and Hartwell Rectory. On 7th March at Midhurst, Clifton, Hawarden, and Durham; on the 8th at Clifton, Stonyhurst, and Durham; on the 10th and 11th at Dunino; on the 17th at Bicester, Stone, and Hartwell Rectory; on the 21st at Holkham; and on the 29th at Stone.

Solar Halos were seen on 13th January at Greenwich; on the 16th at Nottingham, Stonyhurst, and North Shields; on the 17th at Nottingham and North Shields; and on the 20th at Hartwell Rectory. On 7th February at Stonyhurst; on the 10th at Hawarden and Stonyhurst; on the 12th and 13th at Nottingham; on the 15th at Royston and Liverpool; on the 16th and 17th at Nottingham; on the 18th at North Shields; on the 26th at Nottingham; on the 27th at Grantham; and on the 28th at Stonyhurst and Dunino. On 4th March at Hawarden; on the 9th at Stone, Hartwell Rectory, and Aylesbury; on the 11th at Stone and Hartwell Rectory; on the 14th at Whitehaven; on the 20th at Dunino; on the 22d at Hartwell House; on the 23d at Stone, Hartwell Rectory, and Nottingham; on the 26th and 30th at Dunino; and on the 31st at Midhurst, Stone, Hartwell Rectory, and Nottingham.

Lunar Halos were seen on 3d January at Hawarden; on the 14th at Grantham; on the 15th at Ryde, Stone, and Hartwell Rectory; on the 16th at Whitehaven and Durham; on the 18th at Midhurst, Bicester, Oxford, Stone, Hartwell Rectory, Cardington, and Grantham; on the 20th at Midhurst, Lewisham, Greenwich, St. John's Wood, Oxford, Stone, Hartwell House, Cardington, Grantham, Nottingham, Hawarden, Liverpool, and Dunino; on the 21st at Nottingham; on the 22d at Wakefield; on the 25th at Hartwell House; and on the 29th at Durham. On 14th February at Nottingham; on the 15th at Liverpool; on the 18th at Durham; on the 19th at Royston; on the 21st at Nottingham, Stonyhurst, and Durham; on the 22d at Nottingham, Hawarden, Liverpool, North Shields, and Dunino; on the 23d at Liverpool; and on the 25th at Midhurst. On 14th March at Stone and Hartwell Rectory; on the 16th at Warrington; on the 19th at Stone, Hartwell Rectory, Liverpool, Manchester, Whitehaven, and Durham; on the 20th at Clifton, Hawarden, Warrington, Liverpool, Manchester, Stonyhurst, Durham, and North Shields; on the 21st at Oxford and Cardington; on the 22d at Stone, Hartwell House, Hartwell Rectory, Nottingham, and Hawarden; on the 23d at Stone, Hartwell Rectory, and Cardington; and on the 24th at Midhurst and Liverpool.

[illegible]

Newport:—The reading of the maximum thermometer on January 31 has been altered from 58° 2' to 48° 5'. *Exds*:—The reading of the barometer on March 29th, at 3h. A.M., has been altered, conjecturally, from 29° 887 in. to 29° 087 in. Southampton:—All the barometer readings are too low. *Midhurst*:—The reading of the barometer on March 15th, at 3h. A.M., has been altered, conjecturally, from 30° 316 in. to 30° 110 in.

The Observations have been reduced to Mean values, and the Hypometrical results have been deduced — from Glaisher's Tables

PARALLELS OF LATITUDE, &c.	Mean Temperature of the Air.	Mean of the Highest Readings of the Thermometer.	Mean of Lowest Readings of the Thermometer.	Average Daily Range of Temperature.	Average Monthly Range of Temperature.	Average Quarterly Range of Temperature.	Mean Temperature of Evaporation.	Mean Temperature of the Dew Point.	Mean Amount of Cloud.	RAIN.		Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required to saturate a cubic foot of Air.	Mean degree of Humidity.	Mean whole Amount of Water in a vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.	Mean Height above the Sea level.
										Average Number of Days.	Average fall.						
In the Counties of Cornwall and Devonshire	40° 8' 8"	32° 7' 12"	42° 25' 39"	6° 38' 03" 4"	5° 9'	49	in.	gr.	gr.	0° 6'	0° 808'	in.	gr.	feet			
Newport and Ryde	39° 06' 56"	72° 31' 2"	8° 28' 885"	437° 034' 1"	6° 4'	37	6° 5'	2° 6'	0° 5'	0° 838'	3° 0'	549	119				
South of latitude 51°	38° 05' 53"	42° 0' 12"	52° 52' 035"	437° 034' 7"	5° 6'	38	6° 6'	2° 6'	0° 3'	0° 850'	3° 1'	549	119				
Between the latitudes of 51° and 52°	37° 43' 6"	617° 9' 12"	52° 60' 935"	437° 034' 5"	6° 3'	48	5° 9'	2° 5'	0° 4'	0° 839'	3° 1'	547	117				
Between the latitudes of 52° and 53°	36° 8' 26"	542° 6' 12"	50° 14' 135"	433° 2"	6° 9'	38	6° 1'	2° 5'	0° 3'	0° 885'	3° 2'	547	118				
Between the latitudes of 53° and 54°	37° 465' 847° 5'	10° 28' 258'	335' 132' 7"	6° 6'	47	5° 5'	4° 4'	0° 4'	0° 878'	2° 9'	548	140					
Liverpool and Whitehaven	39° 464' 423° 4'	7° 6' 24' 131° 037'	233° 8'	7° 2'	43	6° 5'	2° 5'	0° 5'	0° 830'	3° 0'	548	64					
Durham, Newcastle, and North Shields	35° 58' 1' 62° 30' 3'	7° 22' 332' 134'	333° 3'	6° 4'	58	99° 2'	0° 2'	0° 2'	0° 937'	2° 9'	549	159					
Dunino	34° 75' 0' 14° 0' 10'	8° 30' 637° 033'	330° 2'	5° 0'	49	7° 9'	2° 3'	0° 3'	0° 872'	2° 9'	548	225					

In the formation of this Table the results from Jersey and Guernsey have not been combined, on account of the difference between the ranges of temperature of the two places. The results from Ventnor are not combined, on account of the much higher temperature, and less range of temperature than those at the other stations in the Isle of Wight. The results from Chiswell Street have also not been combined.

[illegible]

March. Several readings of all the elements were taken. The reading of the barometer on 12th March, at 7h. 30m. A.M., has been altered, conjecturally, from 29.690 to 29.7460. Bowdon. — The reading of the thermometer on 24th March, at 2h. P.M., altered from 30.182 and the reading of the wet-bulb thermometer on 24th March, at 2h. P.M., altered from 59.212 to 30.012. March. Several readings of all the elements evidently erroneous. Stonyhurst. — The reading of the barometer on 21st, at 3h. P.M., altered from 29.512 to 29.670. York. — The mean reading of the wet-bulb thermometer in February was $60^{\circ} 3$ higher than the dry-bulb. The mean temperature of January was $50^{\circ} 6$ above; February, $6^{\circ} 8$ below; and March, $4^{\circ} 9$ below the average of 20 years.

NOTE. — Second rain gauges are placed: At Jersey at the height of 5 feet; the amount collected was 7.9 inches. At Newport, 3 feet; the amount was 6.9 inches. At Clifton, 50 feet; the amount was 3.4 inches. At Midhurst, 31 feet; the amount was 3.4 inches. At Oxford, 22 feet; the amount was 3.5 inches. At Hartwell Rectory, 4 feet; the amount was 5.5 inches. At Cardington. And at Wiltchaven, 78 feet; the amount was 2.8 inches. At Norwich, 31 feet; the amount was 5.4 inches. At Nottingham, 4 feet; the amount was 6.4 inches. At Notingham, 4 feet; the amount was 5.8 inches.

ON THE
METEOROLOGY OF ENGLAND, SOUTH OF SCOTLAND, AND PARTS OF IRELAND,

DURING THE
Quarter ending June 30, 1853.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

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1853.

On the Meteorology of England, the South of Scotland, and parts of Ireland, during the Quarter ending June 30th, 1853. By JAMES GLAISHER, Esq., F.R.S., Sec. of the British Meteorological Society.

Till April 17th the daily temperature of the air was alternately in excess and defect to the amount of several degrees, and was $1^{\circ} \cdot 7$ in excess in the period. On April 20th a period of very cold weather set in, and continued till May 15th; on some days the defect amounted to 8° , 9° , 10° , and on two days to the very large amounts of 13° and 14° ; the average defect for the period was $4^{\circ} \cdot 9$. From May 16th to May 27th the weather was fine, and the excess of daily temperature was $4^{\circ} \cdot 2$; from May 28th to the end of the quarter, with very few exceptions, the weather was cold and unseasonable, and the average daily defect of temperature was $1^{\circ} \cdot 7$. The weather during the whole quarter has been unsettled; rain has fallen frequently, there has been an unusual prevalence of N.E. and N.W. winds, and the temperature has been very variable.

The mean temperature of the air at Greenwich for the quarter ending May, constituting the 3 spring months, was $45^{\circ} \cdot 2$, being $1^{\circ} \cdot 2$ below the average of 80 years.

1853. MONTHS.		Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
		Air.			Evaporation.		Dew Point.		Air— Daily Range.						
		Mean.	Diff. from average of 80 years.	Diff. from average of 12 years.	Mean.	Diff. from average of 12 years.	Mean.	Diff. from average of 12 years.	Mean.	Diff. from average of 12 years.	Water of the Thames.				
April . .	45.2	-0.5	+0.6	49.0	-1.7	38.0	-2.5	14.2	-3.0	48.4	.246	in. -.024	gr. 2.8	-0.3	
May . .	52.0	-0.6	-1.6	47.8	-2.1	43.4	-2.9	21.2	+2.3	55.1	.297	-.031	3.4	-0.4	
June . .	58.2	+0.2	-1.2	52.6	-1.8	49.6	-1.7	18.7	-1.3	61.3	.346	-.046	3.9	-0.5	
Mean .	51.8	-0.3	-0.7	47.5	-1.9	43.7	-2.4	18.0	-0.7	54.9	.296	-.035	3.4	-0.4	

1853. MONTHS.		Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal move- ment of the Air.	Reading of Thermometer on Grass.				
		Mean.	Diff. from average of 12 years.	Mean.	Diff. from average of 12 years.	Mean.	Diff. from average of 12 years.	Amount.	Diff. from average of 12 years.		Number of Nights it was			Low- est Read- ing at Night.	High- est Read- ing at Night.
											At or below 32°	Be- tween 32° and 40°	Above 40°		
April .	.778	-.068	29.710	-.010	gr. 541	gr. + 1	in. 3.1	in. +1.3	Miles. 117	13	8	7	23.0	48.2	
May .	.746	-.108	29.754	-.034	534	+ 1	1.6	-0.5	98	8	12	11	25.0	50.0	
June .	.706	-.126	29.729	-.064	527	+ 1	2.8	+0.9	101	1	5	24	31.0	58.0	
Mean .	.743	-.111	29.731	-.036	534	+ 1	Sum 7.5	Sum +0.6	105	Sum 22	Sum 25	Sum 42	23.0	58.0	

NOTE.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunderstorms occurred, or thunder was heard and lightning seen, on the 3d April at Stone, Hartwell House, Hartwell Rectory, Aylesbury, and Linslade; on the 7th at Newcastle; on the 8th at Greenwich; on the 20th at Midhurst; on the 22d at Clifton; on the 23d at Hartwell House, Aylesbury, and Cardington; on the 24th at Holkham, North Shields, and Dunino; on the 25th at Jersey and Liverpool; on the 27th at Durham; and on the 28th at Newcastle. On the 9th May at Grantham; on the 16th at Midhurst and Clifton; on the 27th at Greenwich and Cardington; on the 28th at Rose Hill, Bicester, Oxford, Stone, Hartwell House, Hartwell Rectory, Aylesbury, Nottingham, and Hawarden; on the 29th at Lewisham and Greenwich; and on the 30th at Torquay, Midhurst, and Clifton. On the 11th June at Lewisham, Greenwich, Bicester, Stone, Hartwell House, Hartwell Rectory, Aylesbury, and Linslade; on the 14th at Lewisham, Bedford, Dunino, and Arbroath; on the 18th at Newcastle; on the 19th at Hawarden, Warrington, Liverpool, and Stonyhurst; on the 20th at Bicester, Stone, Hartwell House, Hartwell Rectory, Aylesbury, Linslade, and Royston; on the 21st at Newport; on the 23d at Manchester, Stonyhurst, and Dunino; on the 24th at Greenwich, Paddington, Bicester, Oxford, Stone, Hartwell House, Hartwell Rectory, Aylesbury, Linslade, Cardington, Bedford, Norwich, Holkham, Nottingham, and Dunino; on the 25th at Nottingham; and on the 30th at Nottingham, Warrington, and Manchester.

Thunder was heard, but lightning was not seen, on the 1st April at St. John's Wood; on the 7th at North Shields; on the 23d at Stone and Nottingham; on the 24th at Nottingham, Stonyhurst, and Dunino; and on the 25th and 27th at Hawarden. On the 8th May at Paddington; on the 9th at Royston and Nottingham; on the 14th at Guernsey; on the 16th at Stonyhurst; on the 17th at Exeter; on the 19th and 26th at Holkham; on the 27th at Stone, Hartwell Rectory, and Royston; on the 28th at Exeter, Linslade, and Cardington; and on the 29th at Norwich, Grantham, and Arbroath. On the 5th June at Wakefield; on the 6th at Grantham and Nottingham; on the

8th at Stonyhurst; on the 9th at Norwich; on the 10th at Stone; on the 11th at Rose Hill, Stone, and Nottingham; on the 12th at Oxford, Cardington, and Nottingham; on the 13th at Nottingham; on the 14th at Lewisham, Greenwich, St. John's Wood, Stone, Hartwell Rectory, Aylesbury, Cardington, Nottingham, Wakefield, North Shields, Dunino, and Arbroath; on the 15th at Stone and Norwich; on the 19th at Cardington, Bedford, Nottingham, Warrington, and Stonyhurst; on the 20th at Jersey, Clifton, Rose Hill, Stone, Cardington, and Bedford; on the 21st at Jersey; on the 23d at Bowdon, North Shields, Dunino, and Arbroath; on the 24th at Lewisham, Rose Hill, Stone, and Dunino; on the 27th at Aylesbury and Nottingham; on the 28th at Nottingham; on the 29th at Nottingham and Wakefield; and on the 30th at Hartwell Rectory, Linslade, Wakefield, and Stonyhurst.

Lightning was seen, but thunder was not heard, on the 8th April at Clifton; and on the 19th at North Shields. On the 16th May at Greenwich and Rose Hill. On the 7th June at Nottingham; on the 10th at Linslade; and on the 14th at Oxford.

Hail fell on the 1st April at Lewisham, Greenwich, Linslade, Nottingham, and Liverpool; on the 3d at Oxford and Stone; on the 7th at Rose Hill, Hawarden, Newcastle, and North Shields; on the 8th at Midhurst, Clifton, St. John's Wood, Stone, Linslade, Bedford, Holkham, Hawarden, Warrington, Manchester, Durham, Newcastle, North Shields, and Dunino; on the 12th at Oxford and North Shields; on the 13th at Guernsey, Midhurst, Clifton, Lewisham, Greenwich, Bicester, Oxford, Stone, Hartwell House, Hartwell Rectory, Aylesbury, Linslade, Royston, Cardington, Bedford, Norwich, Grantham, Holkham, Hawarden, Gainsborough, Warrington, Liverpool, and North Shields; on the 18th at Hawarden; on the 20th at Midhurst, Bicester, Stone, and Hartwell Rectory; on the 23d at Lewisham, Greenwich, Stone, Cardington, Hawarden, North Shields, and Arbroath; on the 24th at Jersey, Cardington, Norwich, Grantham, Gainsborough, Stonyhurst, Durham, Newcastle, and North Shields; on the 25th at Jersey, Guernsey, Ryde, Hartwell Rectory, Linslade, Grantham, Hawarden, Warrington, Liverpool, Manchester, North Shields, Dunino, and Arbroath; on the 26th at Helston, Bicester, Norwich, Grantham, Nottingham, Hawarden, Stonyhurst, and Dunino; on the 27th at Newcastle; and on the 30th at Liverpool. On the 7th May at Guernsey, Stone, Bedford, Holkham, Nottingham, Hawarden, Gainsborough, Warrington, Stonyhurst, Durham, North Shields, and Arbroath; on the 8th at Midhurst, Greenwich, Stone, Hartwell House, Hartwell Rectory, Aylesbury, Grantham, Hawarden, Gainsborough, Manchester, Stonyhurst, North Shields, and Arbroath; on the 9th at Helston, Exeter, Clifton, Lewisham, Greenwich, Bicester, Oxford, Stone, Hartwell House, Hartwell Rectory, Aylesbury, Linslade, Cardington, Grantham, North Shields, and Arbroath; on the 10th at Jersey, Lewisham, Gainsborough, North Shields, Dunino, and Arbroath; on the 11th at Dunino; on the 28th at Rose Hill and Oxford; and on the 29th at Lewisham, Greenwich, Oxford, and Linslade. On the 6th June at York; on the 14th at North Shields; on the 19th at Helston, Nottingham, Hawarden, and Warrington; on the 20th at Jersey and Guernsey; and on the 30th at Warrington.

Aurora were seen on 5th April at Greenwich, Stone, Hartwell House, Hartwell Rectory, Cardington, Grantham, Nottingham, and Hawarden; on the 6th at Hawarden and Durham; on the 7th at Stone, Hartwell Rectory, and Hawarden; on the 8th at Hawarden, Stonyhurst, and Durham; and on the 24th at Hawarden. On 4th May at Hawarden and North Shields; on the 14th at Manchester; and on the 24th at Nottingham. On the 22d June at Greenwich.

Snow fell on the 8th, 13th, 22d, 23d, 24th, 25th, and 26th of April at various places. On the 7th May at Midhurst, Clifton, Rose Hill, Bicester, Oxford, Stone, Hartwell Rectory, Royston, Holkham, Nottingham, Hawarden, Warrington, Liverpool, Manchester, Wakefield, Stonyhurst, York, Durham, Newcastle, North Shields, and Arbroath; on the 8th at Midhurst, Greenwich, Oxford, Stone, Hartwell House, Wakefield, York, Newcastle, North Shields, Dunino, and Arbroath; on the 9th at Stone, Linslade, Nottingham, Hawarden, Gainsborough, Warrington, Liverpool, Manchester, Wakefield, Stonyhurst, York, North Shields, and Dunino; on the 10th at Stone, Hartwell Rectory, Grantham, Gainsborough, North Shields, and Dunino; on the 11th at Dunino; and on the 31st at Greenwich.

Fog was prevalent on 5 days in April, on 19 days in May, and on 10 days in June.

Solar Halos were seen on 14 days in April, on 13 days in May, and on 8 days in June.

Lunar Halos were seen on 7 days in April at the different stations, and on the 21st May at North Shields.

Lilac in flower on the 10th May at Guernsey; on the 15th at Jersey; on the 17th at Helston; on the 18th at Gainsborough; on the 21st at Oxford, Stone, and Wakefield; on the 22d at Rose Hill; on the 23d at Hartwell Rectory; on the 24th at Linslade, Hawarden, and Warrington; on the 28th at Nottingham; on the 29th at Bedford; and on the 30th at Cardington. On the 1st June at Grantham; on the 5th at North Shields; and on the 8th at Dunino.

Wheat in ear on the 9th June in the Isle of Wight; on the 11th at Helston; on the 14th at Aylesbury; on the 15th at Linslade, Cardington, and Bedford; on the 23d at Hawarden; and on the 27th at Nottingham.

Wheat in flower on the 13th June in the Isle of Wight; on the 18th at Aylesbury; on the 20th at Rose Hill; on the 24th at Jersey; on the 26th at Linslade and Grantham; on the 28th at Gainsborough; and on the 30th at Cardington, Bedford, and Nottingham.

The cuckoo was first heard on 16th April at Bicester; on the 18th at Hartwell Rectory and Gainsborough; on the 24th at Stone and Hartwell House; on the 28th at Nottingham; and on the 30th at Warrington.

Swallows were first seen on the 3d April at Stone; on the 7th at Hartwell Rectory; on the 16th at Bicester, Grantham, and Gainsborough; on the 17th at Royston; on the 22d at Nottingham and Warrington; and on the 30th at Guernsey and Clifton.

In the formation of this Table the results from Jersey and Guernsey have not been combined, on account of the difference between the ranges of temperature of the two places. The results from Ventnor are not combined, on account of the much higher temperature, and less range of temperature than those at the other stations in the Isle of Wight.

The Observations have been reduced to Mean values, and the Hygrometrical results have been deduced — from Glaisher's Tables.

The observatories at Ventnor, Newport, Ryde, and Worthing, were visited by Mr. Glasier during the quarter; at Ventnor experiments were made relative to the high night temperature of this station, resulting in the confirmation of the previous results.

Meteorological Table, Quarter ending June 30th, 1853.

Year 1853.	Month.	Names of Stations and Observers.	Mean Pressure of Air and Water.	Range of Barometer in the Month.	Mean.	Therm. registering in the Month.	Adopted.	Highest.	Lowest.	Range in the Month.	Mean of all the Month.	Mean Daily.	Evaporation.	Dew Point.	Direction.	Mean Amount of Rain.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required to saturate a cubic foot of Air.	Mean Humidity.	Mean Whole Amount of Water in a vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.
Apr.	29	ST. MARY'S HOSPITAL (PAD- DINGTON).	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
May	29	LINDSEY HALL, Esq., M.B.M.S.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
June	29	ST. JOHN'S WOOD, GEORGE LEACH, Esq., M.B.M.S.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
Apr.	29	ENFIELD, Rev. J.M. Heath, A.M., M.B.M.S.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
May	29	ROSE HILL (near Oxford), Rev. John Slater, M.A., F.R.A.S., M.B.M.S.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
June	29	BICESTER (Oxon), W.M. Johnson, Esq., M.B.M.S.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
Apr.	29	RADCLIFFE OBSERVATORY, OX- FORD, F. Vincent Fasel, Esq., Assistant to Rev. J.B. Reade, F.R.S., M.B.M.S.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
May	29	HARTWELL HOUSE, M. W. Norton, Esq., Assistant to Dr. Lee, F.R.S., M.B.M.S.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
June	29	HARTWELL RECTORY, Rev. C. Lowndes, M.A., F.R.A.S., M.B.M.S.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
Apr.	29	AYLESBURY, Thomas Dill, Esq., F.R.A.S., M.B.M.S.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
May	29	LINSLEADE, John Osborn, Esq., Jun., M.B.M.S.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
June	29	ROYSTON (Hertfordshire), Hale W. Osburn, Esq., M.B.M.S.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
Apr.	29	CARDINGTON (near Bedford), Mr. Maclean, Ass't. to S.C. Warr, Esq., F.R.A.S., Pres. B.M.S.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
May	29	BEDFORD, Dr. Barker, F.R.C.S., M.B.M.S.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
June	29	NORWICH, W. Brooke, Esq., F.R.A.S., M.B.M.S.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
Apr.	29	GRANTHAM, W. J. W. Esq., F.R.A.S., M.B.M.S.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
May	29	DERBY, John Davis, Esq., M.B.M.S.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
June	29		29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543

Meteorological Table, Quarter ending June 30th, 1853.

Year 1853.	Month.	Names of Stations and Observers.	Mean Pressure of Air and Water.	Range of Barometer in the Month.	Mean.	Therm. registering in the Month.	Adopted.	Highest.	Lowest.	Range in the Month.	Mean of all the Month.	Mean Daily.	Evaporation.	Dew Point.	Direction.	Mean Amount of Rain.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required to saturate a cubic foot of Air.	Mean Humidity.	Mean Whole Amount of Water in a vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.
Apr.	29	HOLKHAM, S. Shillaker, Esq., M.B.M.S., As- sistant to the Earl of Leicester.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
May	29	HIGHFIELD HOUSE, LEICESTER, Messrs. E. J. and A. S. H. Lowe, M.B.M.S.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
June	29	HAWARDEN, Dr. Moffat, F.R.A.S., M.B.M.S.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
Apr.	29	GAINSBOROUGH, T. Dyson, Esq., M.B.M.S.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
May	29	WARRINGTON, T. G. Rylands, Esq.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
June	29	LIVERPOOL OBSERVATORY, John Hartnup, Esq., F.R.A.S.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
Apr.	29	MANCHESTER, G. V. Vernon, Esq., F.R.A.S., M.B.M.S.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
May	29	ALDERLEY EDGE, CHESHIRE, J. W. Long, Esq., F.R.A.S., M.B.M.S.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
June	29	BOWDON, CHESHIRE, Arthur Nield, Esq., M.B.M.S.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
Apr.	29	WAKEFIELD PRISON, W. R. Milner, Esq., M.B.M.S.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
May	29	STONTHURST, Rev. J. Clare.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
June	29	YORK, John Ford, Esq.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
Apr.	29	NEWCASTLE, G. Munn, Esq.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
May	29	NORTH SHIELDS, Robert Stence, Esq.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
June	29	DUNINO, David Tennant, Esq., M.B.M.S.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
Apr.	29	ARRIGATH, Alexander Brown, Esq.	29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
May	29		29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543
June	29		29.753	1.100	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	W. & N.W.	1.1	4.5	0.5	88.5	3.7	543

Adley Edge.—The observations in April were taken on 30 days only. Wakefield Prison.—April; the reading of the dry bulb thermometer on the 9th at 9h P.M. has been altered from 38° to 35°. June; the reading of the barometer on the 1st at 9h P.M. has been altered, conjecturally, from 30.940 in. to 30.940 in. Air.—No subsequent use has been made of the barometer reading on account of its construction not admitting of accurate results.

NOTE.—Second rain gauges are placed: At Jersey at the height of 6 feet; the amount collected was 5.8 inches. At Newport, 8 feet; the amount was 7.8 inches. At Clifton, 50 feet; the amount was 8.9 inches. At Oxford, 22 feet; the amount was 7.9 inches. At Cardington, 28 feet; the amount was 5.1 inches. At Holkham, 4 feet; the amount was 4.6 inches. At Nottingham, 25 feet; the amount was 7.4 inches. And at Warrington, 94 feet; the amount was 5.3 inches.

ON THE
METEOROLOGY OF ENGLAND AND SCOTLAND,

DURING THE

Quarter ending September 30, 1853.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

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1853.

On the Meteorology of England and Scotland, during the Quarter ending September 30th, 1853. By JAMES GLAISHER, ESQ., F.R.S., Sec. of the British Meteorological Society.

The daily temperatures have been below their averages throughout the quarter, with few and trifling exceptions. The month of July was wet; the fall of rain exceeded the double of the average fall for this month. The sky was cloudy. The first half of August was fine and dry, and was the only fine weather in the quarter. From the middle of August to the end of September the sky was mostly cloudy, the air damp, with a thick and hazy atmosphere. The motion of the air was less than its average. During parts of the month of September different places in England and Scotland were visited by numerous swarms of a black fly (*Aphis fabae*); their appearance in a locality was sudden, and they continued till a brisk wind arose and carried them suddenly away. The numbers of these insects was extraordinary, and they were very annoying by settling in great numbers upon the face and hands.

The mean temperature of the air at Greenwich for the quarter ending August, constituting the 3 summer months, was 59°·5, being 0°·4 below the average of 80 years.

Temperature of											Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
Air.			Evaporation.		Dew Point.		Air—Daily Range.		Water of the Thames.					
1853. MONTHS.	Mean.	Diff. from average of 80 years.	Diff. from average of 12 years.	Mean.	Diff. from average of 12 years.	Mean.	Diff. from average of 12 years.	Mean.		Diff. from average of 12 years.		Mean.	Diff. from average of 12 years.	Mean.
	o	o	o	o	o	o	o	o	o	o	in.	in.	gr.	gr.
July . .	60·3	-1·0	-1·6	55·8	-1·8	52·2	-2·3	17·1	-1·3	63·7	·404	·037	4·5	-0·4
Aug. . .	60·0	-0·5	-1·2	55·8	-1·7	52·5	-2·1	19·1	+1·2	63·6	·406	·034	4·6	-0·3
Sept. . .	55·3	-1·0	-1·7	52·7	-1·3	50·2	-1·2	18·0	+0·7	58·2	·375	·019	4·3	-0·2
Mean . .	58·5	-0·8	-1·5	54·8	-1·6	51·6	-1·9	18·1	+0·2	61·8	·395	·030	4·5	-0·3

1853. MONTHS.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal movement of the Air.	Reading of Thermometer on Grass.					
	Mean.	Diff. from average of 12 years.	Mean.	Diff. from average of 12 years.	Mean.	Diff. from average of 12 years.	Amount.	Diff. from average of 38 years.		Number of Nights it was		Lowest Reading at Night.	Highest Reading at Night.		
										At or below 40°	Between 40° and 50°				
July . .	·766	·006	29·728	·007	·524	0	6·0	+3·4	116	0	17	14	42·0	60·2	
Aug. . .	·777	·110	29·793	+·008	·526	+2	2·2	-0·3	64	8	17	6	36·2	56·2	
Sept. . .	·845	·056	29·833	+·001	·531	+2	2·4	-0·1	89	13	15	2	31·0	54·2	
Mean . .	·796	·087	29·785	·019	·527	+1	Sum 10·6	Sum +3·0	90	Sum 21	Sum 49	Sum 22	31·0	60·2	

NOTE.—In reading this table it will be borne in mind that the sign (-) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunderstorms occurred, or thunder was heard and lightning seen, on the 1st July at Hartwell House, Linslade, Cardington, Bedford, Holkham, and Dunino; on the 6th at Ryde; on the 7th at Jersey, Guernsey, Exeter, Newport, Worthing, Clifton, St. John's Wood, Rose Hill, Bicester, Oxford, Stone, Hartwell House, Hartwell Rectory, Aylesbury, and Linslade; on the 8th at Helston, Greenwich, Stone, and Hartwell House; on the 9th at Jersey, Helston, Linslade, Norwich, Hawarden, Warrington, Liverpool, Manchester, and Stonyhurst; on the 13th at Jersey, Oxford, Stone, Hartwell House, Hartwell Rectory, Hawarden, and Liverpool; on the 16th at Gainsborough; on the 17th at Rose Hill, Bicester, Oxford, Stone, Royston, and Grantham; on the 18th at Hartwell House, Hartwell Rectory, Aylesbury, Royston, Cardington, North Shields, and Dunino; on the 19th at Royston; on the 22d at York; on the 26th at Bedford; on the 27th at Guernsey and Newport; and on the 28th at Lewisham and Greenwich. On the 19th August at Norwich and Dunino; on the 25th at Exeter; and on the 26th at Helston, Midhurst, Clifton, Durham, and Dunino. On the 1st September at Rose Hill, Bicester, Oxford, Hartwell House, Aylesbury, Cardington, Hawarden, Gainsborough, Warrington, and Manchester; on the 10th at Grantham, Gainsborough, and Stonyhurst; and on the 24th at Rose Hill, Bicester, and Oxford.

Thunder was heard, but lightning was not seen, on the 1st July at Exeter, Bicester, Stone, Hartwell Rectory, and North Shields; on the 7th at St. John's Wood, and Holkham; on the 8th at Helston and Holkham; on the 9th at Helston, Stone, Hartwell Rectory, Cardington, and Holkham; on the 10th at Ryde; on the 12th at North Shields; on the 13th at Guernsey, Rose Hill, Bicester, Cardington, and Warrington; on the 14th at Grantham and Wakefield; on the 15th at Greenwich; on the 16th at Grantham; on the 17th at Hartwell House and Hartwell Rectory; on the

18th at Rose Hill, Bicester, Stone, Grantham, Gainsborough, and Dunino; on the 19th at Hartwell House and Cardington; on the 26th and 27th at Guernsey; and on the 28th at Cardington. On the 21st August at Bicester; on the 23d at Wakefield; on the 25th at Grantham; on the 26th at Midhurst, Royston, Stonyhurst, and North Shields; on the 27th at Wakefield; and on the 30th at Warrington. On the 1st September at Stone, Hartwell Rectory, and Grantham; on the 10th at Cardington, Grantham, and Wakefield; on the 24th at Lewisham, Greenwich, Stone, and Hartwell Rectory; on the 25th at Helston and Aylesbury; and on the 30th at Stone.

Lightning was seen, but thunder was not heard, on the 7th July at Helston, Oxford, and Cardington; on the 8th at Rose Hill, Bicester, Oxford, and Cardington; on the 15th at Stone; on the 18th at Newcastle; and on the 27th at Greenwich, Aylesbury, and Linslade. On the 19th August at Stone and Hartwell Rectory; on the 25th at Helston; on the 26th at Helston and Newcastle; on the 27th at Grantham; and on the 30th at Hawarden, Warrington, Liverpool, and Wakefield. On the 1st September at Midhurst, Greenwich, Stone, Hartwell Rectory, Aylesbury, Royston, Cardington, Bedford, Grantham, Wakefield, Stonyhurst, and York; on the 15th at Truro; on the 24th at Hartwell Rectory; and on the 25th at North Shields.

Hail fell on the 16th July at Aylesbury and Grantham; on the 17th at Stone, Hartwell House, and Hartwell Rectory; and on the 30th at Manchester. On the 1st September at Cardington and Bedford; on the 23d at Stonyhurst; on the 24th at Rose Hill, Oxford, Hartwell Rectory, Stonyhurst, and North Shields; on the 25th at Ryde and Liverpool; on the 26th at Liverpool; and on the 30th at Stonyhurst.

Remarkable falls of rain on the 9th July at Helston was 1·5 in., at Norwich 1·6 in., at Hawarden 3·6 in., at Warrington 1·4 in., at Liverpool 2·0 in., at Stonyhurst 1·6 in., and at North Shields 2·1 in.; on the 10th at Falmouth 1·2 in. and at Truro 1·7 in.; on the 13th at Bedford 1·7 in. and at Holkham 1·4 in. in 7 hours; on the 14th at Ryde 1·5 in., at Worthing 1·2 in., at Clifton 1·8 in., at Lewisham 2·8 in. in 17 hours, at Greenwich 2·6 in., at St. John's Wood 1·3 in., at Rose Hill 1·7 in. in a few hours, at Bicester 1·5 in., at Stone 1·8 in., at Hartwell Rectory 2·0 in., at Aylesbury 2·3 in. in 8 hours, at Linslade 1·8 in. in 12 hours, at Royston 1·5 in., at Grantham 1·2 in., at Hawarden 1·3 in., and at North Shields 1·0 in.; on the 15th at Stonyhurst 1·4 in., and at Arbroath 1·0 in.; and on the 28th at Lewisham 1·0 in., at Greenwich 1·1 in., of which 0·25 fell in 20 minutes, and at St. John's Wood 1·0 in. On the 17th August at Grantham 1·6 in., at Holkham 1·6 in. in 10 hours, at Hawarden 1·3 in., and at Alderley Edge 1·2 in.; on the 20th at Greenwich 0·25 in. fell in 5 minutes, and on the 22d 0·72 in. fell in 10 hours; on the 23d at Worthing 1·2 in.; on the 25th at North Shields 1·1 in.; on the 26th at Stone 1·1 in., and at Hartwell Rectory 1·1 in.; and on the 27th at Clifton 1·4 in. On the 1st September at Guernsey 1·0 in. in 9 hours, and at North Shields 1·0 in.; on the 10th at Gainsborough 1·0 in.; on the 12th at Wakefield 1·1 in. and at North Shields 1·6 in.; on the 13th at Clifton 1·0 in.; on the 25th at Stonyhurst 1·0 in.; and on the 27th at Holkham was 0·8 in. in 6 hours.

Fog was prevalent on the 20th July at Bicester, Stone, Hartwell House, and Hartwell Rectory. On the 5th August at Stone and Hartwell House; on the 6th at Hartwell House; on the 10th at Bicester; on the 11th at Bicester, Stone, and Hartwell House; on the 18th at Stone and Hartwell Rectory; on the 19th at St. John's Wood; on the 23d at Midhurst and Linslade; and on the 24th at Lewisham, Greenwich, St. John's Wood, Stone, Hartwell House, and Hartwell Rectory. On the 5th September at Manchester; on the 6th at Clifton; on the 7th at Gainsborough and Manchester; on the 8th at Clifton; on the 9th at St. John's Wood and Wakefield; on the 11th at Lewisham, Greenwich, St. John's Wood, Bicester, Stone, Hartwell Rectory, Grantham, Gainsborough, and North Shields; on the 14th at Clifton, Lewisham, Bicester, Stone, Hartwell House, Hartwell Rectory, Wakefield, and North Shields; on the 16th at Midhurst, Lewisham, Greenwich, Stone, Hartwell House, Hartwell Rectory, Grantham, Gainsborough, and North Shields; on the 17th at Clifton, Stone, Hartwell House, Hartwell Rectory, Grantham, Gainsborough, and North Shields; on the 18th at Stone, Hartwell House, Hartwell Rectory, Grantham, Gainsborough, and North Shields; on the 19th at Midhurst, Bicester, and Linslade; on the 21st at Bicester, Stone, Hartwell House, and Hartwell Rectory; on the 24th at Bicester; on the 27th at Midhurst; and on the 29th at Lewisham and Greenwich.

Snow fell on the Grampians on the 25th September.

Aurora were seen on 12th July, 20th, 26th, and 30th August at Hawarden; and on the 31st at Arbroath. On the 1st September at Greenwich; on the 2d at Exeter, Clifton, Greenwich, Hawarden, Warrington, Liverpool, Manchester, York, Durham, and Dunino; on the 3d at Clifton; on the 8th at Arbroath; and on the 28th at Durham.

Solar Halos were seen on 20 days during the quarter.

Mock Sun was seen on the 29th September, about 8h. 45m. A.M. at Stone and Hartwell Rectory.

Lunar Rainbow was seen on the 25th September, at 9h. 30m. P.M. at Durham.

Wheat began to be gathered on the 6th August at Exeter; on the 7th at Guernsey; on the 8th at Stone, Hartwell Rectory, and Cardington; on the 9th at Holkham; on the 10th at Grantham; on the 11th at Hawarden and Gainsborough; on the 14th at Rose Hill; on the 18th at Warrington; and on the 26th at Dunino.

The wheat crop was small in breadth, and rather light; it was generally of good quality; a good part was spring sown. Oats not very good, and a good deal carried unripe. Potatoes diseased everywhere. Harvesting operations late.

Year 1855.	Month.	Mean Pressure of Air and Water.		Range of Barometer in the Month.		Mean.		Temperature of the Air.				Wind.		Mean Amount of Cloud.		Rain.	Mean Weight of Air.	Mean Degree of Humidity.	Mean whole Amount of Water in a vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.		
		in.	in.	in.	in.	From Dry Bulb Therm.	From Self-registering Therm.	Adapted.	Highest.	Lowest.	Range in the Month.	Mean of all the Highest.	Mean of all the Lowest.	Mean Daily Range.	Evaporation.						Dew Point.	Estimated Strength.
JERSEY, Rev. S. King, F.R.A.S., M.B.M.S.	July	29.7300	4.88	0.949	61.0	61.0	61.0	61.0	72.0	48.0	36.0	71.8	83.5	17.8	0.58	67.9	6.1	—	—	—	—	
	Aug.	29.7405	4.30	0.782	61.0	61.0	61.0	61.0	72.0	48.0	36.0	71.8	83.5	17.8	0.58	67.9	6.1	—	—	—	—	
	Sept.	29.7412	4.54	0.767	61.0	61.0	61.0	61.0	72.0	48.0	36.0	71.8	83.5	17.8	0.58	67.9	6.1	—	—	—	—	
	Oct.	29.7485	4.64	0.767	61.0	61.0	61.0	61.0	72.0	48.0	36.0	71.8	83.5	17.8	0.58	67.9	6.1	—	—	—	—	
	Nov.	29.7513	4.30	0.767	61.0	61.0	61.0	61.0	72.0	48.0	36.0	71.8	83.5	17.8	0.58	67.9	6.1	—	—	—	—	
	Dec.	29.7611	4.30	0.767	61.0	61.0	61.0	61.0	72.0	48.0	36.0	71.8	83.5	17.8	0.58	67.9	6.1	—	—	—	—	
	GUERNSEY, Dr. Hoskins, F.R.S., M.B.M.S.	July	29.7841	4.31	0.778	55.6	55.6	55.6	55.6	65.0	35.0	15.0	65.4	85.6	8.9	0.57	56.5	1.8	—	—	—	—
		Aug.	29.7841	4.31	0.778	55.6	55.6	55.6	55.6	65.0	35.0	15.0	65.4	85.6	8.9	0.57	56.5	1.8	—	—	—	—
		Sept.	29.7841	4.31	0.778	55.6	55.6	55.6	55.6	65.0	35.0	15.0	65.4	85.6	8.9	0.57	56.5	1.8	—	—	—	—
		Oct.	29.7841	4.31	0.778	55.6	55.6	55.6	55.6	65.0	35.0	15.0	65.4	85.6	8.9	0.57	56.5	1.8	—	—	—	—
		Nov.	29.7841	4.31	0.778	55.6	55.6	55.6	55.6	65.0	35.0	15.0	65.4	85.6	8.9	0.57	56.5	1.8	—	—	—	—
		Dec.	29.7841	4.31	0.778	55.6	55.6	55.6	55.6	65.0	35.0	15.0	65.4	85.6	8.9	0.57	56.5	1.8	—	—	—	—
HELSINKI, M. P. Møller, Esq.		July	29.7875	4.24	1.153	61.2	61.2	61.2	61.2	72.0	48.0	36.0	71.8	83.5	17.8	0.58	67.9	6.1	—	—	—	—
		Aug.	29.7875	4.24	1.153	61.2	61.2	61.2	61.2	72.0	48.0	36.0	71.8	83.5	17.8	0.58	67.9	6.1	—	—	—	—
		Sept.	29.7875	4.24	1.153	61.2	61.2	61.2	61.2	72.0	48.0	36.0	71.8	83.5	17.8	0.58	67.9	6.1	—	—	—	—
		Oct.	29.7875	4.24	1.153	61.2	61.2	61.2	61.2	72.0	48.0	36.0	71.8	83.5	17.8	0.58	67.9	6.1	—	—	—	—
		Nov.	29.7875	4.24	1.153	61.2	61.2	61.2	61.2	72.0	48.0	36.0	71.8	83.5	17.8	0.58	67.9	6.1	—	—	—	—
		Dec.	29.7875	4.24	1.153	61.2	61.2	61.2	61.2	72.0	48.0	36.0	71.8	83.5	17.8	0.58	67.9	6.1	—	—	—	—
	FALMOUTH, Lovell Squire, Esq.	July	29.7823	—	1.060	57.3	57.3	57.3	57.3	77.0	44.0	33.0	69.5	89.7	10.9	0.57	54.3	1.5	—	—	—	—
		Aug.	29.7823	—	1.060	57.3	57.3	57.3	57.3	77.0	44.0	33.0	69.5	89.7	10.9	0.57	54.3	1.5	—	—	—	—
		Sept.	29.7823	—	1.060	57.3	57.3	57.3	57.3	77.0	44.0	33.0	69.5	89.7	10.9	0.57	54.3	1.5	—	—	—	—
		Oct.	29.7823	—	1.060	57.3	57.3	57.3	57.3	77.0	44.0	33.0	69.5	89.7	10.9	0.57	54.3	1.5	—	—	—	—
		Nov.	29.7823	—	1.060	57.3	57.3	57.3	57.3	77.0	44.0	33.0	69.5	89.7	10.9	0.57	54.3	1.5	—	—	—	—
		Dec.	29.7823	—	1.060	57.3	57.3	57.3	57.3	77.0	44.0	33.0	69.5	89.7	10.9	0.57	54.3	1.5	—	—	—	—
TRURO, Dr. Barham.		July	29.7827	4.87	1.120	59.1	59.1	59.1	59.1	75.0	47.0	31.0	72.5	89.9	13.1	0.57	53.1	1.9	—	—	—	—
		Aug.	29.7827	4.87	1.120	59.1	59.1	59.1	59.1	75.0	47.0	31.0	72.5	89.9	13.1	0.57	53.1	1.9	—	—	—	—
		Sept.	29.7827	4.87	1.120	59.1	59.1	59.1	59.1	75.0	47.0	31.0	72.5	89.9	13.1	0.57	53.1	1.9	—	—	—	—
		Oct.	29.7827	4.87	1.120	59.1	59.1	59.1	59.1	75.0	47.0	31.0	72.5	89.9	13.1	0.57	53.1	1.9	—	—	—	—
		Nov.	29.7827	4.87	1.120	59.1	59.1	59.1	59.1	75.0	47.0	31.0	72.5	89.9	13.1	0.57	53.1	1.9	—	—	—	—
		Dec.	29.7827	4.87	1.120	59.1	59.1	59.1	59.1	75.0	47.0	31.0	72.5	89.9	13.1	0.57	53.1	1.9	—	—	—	—
	TORQUAY, Edward Vivian, Esq.	July	29.7873	4.29	0.772	60.1	60.1	60.1	60.1	77.7	45.0	32.7	68.7	89.8	11.1	0.57	54.1	1.5	—	—	—	—
		Aug.	29.7873	4.29	0.772	60.1	60.1	60.1	60.1	77.7	45.0	32.7	68.7	89.8	11.1	0.57	54.1	1.5	—	—	—	—
		Sept.	29.7873	4.29	0.772	60.1	60.1	60.1	60.1	77.7	45.0	32.7	68.7	89.8	11.1	0.57	54.1	1.5	—	—	—	—
		Oct.	29.7873	4.29	0.772	60.1	60.1	60.1	60.1	77.7	45.0	32.7	68.7	89.8	11.1	0.57	54.1	1.5	—	—	—	—
		Nov.	29.7873	4.29	0.772	60.1	60.1	60.1	60.1	77.7	45.0	32.7	68.7	89.8	11.1	0.57	54.1	1.5	—	—	—	—
		Dec.	29.7873	4.29	0.772	60.1	60.1	60.1	60.1	77.7	45.0	32.7	68.7	89.8	11.1	0.57	54.1	1.5	—	—	—	—
EXETER, Dr. Shapter, M.B.M.S.		July	29.7840	4.63	1.112	57.5	57.5	57.5	57.5	76.0	46.0	32.0	70.0	87.0	10.1	0.56	52.0	1.6	—	—	—	—
		Aug.	29.7840	4.63	1.112	57.5	57.5	57.5	57.5	76.0	46.0	32.0	70.0	87.0	10.1	0.56	52.0	1.6	—	—	—	—
		Sept.	29.7840	4.63	1.112	57.5	57.5	57.5	57.5	76.0	46.0	32.0	70.0	87.0	10.1	0.56	52.0	1.6	—	—	—	—
		Oct.	29.7840	4.63	1.112	57.5	57.5	57.5	57.5	76.0	46.0	32.0	70.0	87.0	10.1	0.56	52.0	1.6	—	—	—	—
		Nov.	29.7840	4.63	1.112	57.5	57.5	57.5	57.5	76.0	46.0	32.0	70.0	87.0	10.1	0.56	52.0	1.6	—	—	—	—
		Dec.	29.7840	4.63	1.112	57.5	57.5	57.5	57.5	76.0	46.0	32.0	70.0	87.0	10.1	0.56	52.0	1.6	—	—	—	—
	VENTNOR, ISLE OF WIGHT, Dr. Martin.	July	29.7839	4.44	0.981	58.6	58.6	58.6	58.6	75.0	45.0	32.0	68.1	84.0	9.7	0.56	51.0	1.8	—	—	—	—
		Aug.	29.7839	4.44	0.981	58.6	58.6	58.6	58.6	75.0	45.0	32.0	68.1	84.0	9.7	0.56	51.0	1.8	—	—	—	—
		Sept.	29.7839	4.44	0.981	58.6	58.6	58.6	58.6	75.0	45.0	32.0	68.1	84.0	9.7	0.56	51.0	1.8	—	—	—	—
		Oct.	29.7839	4.44	0.981	58.6	58.6	58.6	58.6	75.0	45.0	32.0	68.1	84.0	9.7	0.56	51.0	1.8	—	—	—	—
		Nov.	29.7839	4.44	0.981	58.6	58.6	58.6	58.6	75.0	45.0	32.0	68.1	84.0	9.7	0.56	51.0	1.8	—	—	—	—
		Dec.	29.7839	4.44	0.981	58.6	58.6	58.6	58.6	75.0	45.0	32.0	68.1	84.0	9.7	0.56	51.0	1.8	—	—	—	—
NEWPORT, J. C. Bloxam, Esq., M.B.M.S.		July	29.7838	4.10	1.076	59.1	59.1	59.1	59.1	73.0	45.0	32.0	65.4	83.6	9.3	0.56	50.4	1.8	—	—	—	—
		Aug.	29.7838	4.10	1.076	59.1	59.1	59.1	59.1	73.0	45.0	32.0	65.4	83.6	9.3	0.56	50.4	1.8	—	—	—	—
		Sept.	29.7838	4.10	1.076	59.1	59.1	59.1	59.1	73.0	45.0	32.0	65.4	83.6	9.3	0.56	50.4	1.8	—	—	—	—
		Oct.	29.7838	4.10	1.076	59.1	59.1	59.1	59.1	73.0	45.0	32.0	65.4	83.6	9.3	0.56	50.4	1.8	—	—	—	—
		Nov.	29.7838	4.10	1.076	59.1	59.1	59.1	59.1	73.0	45.0	32.0	65.4	83.6	9.3	0.56	50.4	1.8	—	—	—	—
		Dec.	29.7838	4.10	1.076	59.1	59.1	59.1	59.1	73.0	45.0	32.0	65.4	83.6	9.3	0.56	50.4	1.8	—	—	—	—
	RYDE, Benjamin Barrow, Esq., M.B.M.S.	July	29.7837	4.15	0.939	61.6	61.6	61.6	61.6	77.0	41.0	29.0	70.6	82.6	18.0	0.56	53.6	1.7	—	—	—	—
		Aug.	29.7837	4.15	0.939	61.6	61.6	61.6	61.6	77.0	41.0	29.0	70.6	82.6	18.0	0.56	53.6	1.7	—	—	—	—
		Sept.	29.7837	4.15	0.939	61.6	61.6	61.6	61.6	77.0	41.0	29.0	70.6	82.6	18.0	0.56	53.6	1.7	—	—	—	—
		Oct.	29.7837	4.15	0.939	61.6	61.6	61.6	61.6	77.0	41.0	29.0	70.6	82.6	18.0	0.56	53.6	1.7	—	—	—	—
		Nov.	29.7837	4.15	0.939	61.6	61.6	61.6	61.6	77.0	41.0	29.0	70.6	82.6	18.0	0.56	53.6	1.7	—	—	—	—
		Dec.	29.7837	4.15	0.939	61.6	61.6	61.6	61.6	77.0	41.0	29.0	70.6	82.6	18.0	0.56	53.6	1.7	—	—	—	—
WORTHING, W. G. Barker, Esq., F.R.C.S., M.B.M.S.		July	29.7833	4.22	1.011	59.1	59.1	59.1	59.1	73.0	45.0	32.0	65.4	83.6	9.3	0.56	50.4	1.8	—	—	—	—
		Aug.	29.7833	4.22	1.011	59.1	59.1	59.1	59.1	73.0	45.0	32.0	65.4	83.6	9.3	0.56	50.4	1.8	—	—	—	—
		Sept.	29.7833	4.22	1.011	59.1	59.1	59.1	59.1	73.0	45.0	32.0	65.4	83.6	9.3	0.56	50.4	1.8	—	—	—	—
		Oct.	29.7833	4.22	1.011	59.1	59.1	59.1	59.1	73.0	45.0	32.0	65.4	83.6	9.3	0.56	50.4	1.8	—	—	—	—
		Nov.	29.7833	4.22	1.011	59.1	59.1	59.1	59.1	73.0	45.0	32.0	65.4	83.6	9.3	0.56	50.4	1.8	—	—	—	—
		Dec.	29.7833	4.22	1.011	59.1	59.1															

Temp. :—July, The reading of the barometer is too high, it should be about 29.867 in. Exter. :—The readings of the barometer have been reduced by one tenth of an inch for index error. Ventnor :—August, Barometer reading 29.834 in. is wrong, it should be about 29.900 in. Rain in July fell on 13 days and 6 nights, in August on 5 days and 3 nights, and in September on 5 days and 10 nights. Worthing :—24th July, 9h. A.M., the reading of the wet bulb thermometer was altered from 59° 2 to 57° 5, and on 20th September, 9h. A.M., the reading of the barometer was altered from 29.777 in. to 29.177 in. Midhurst :—The observations in August were taken on the last 30 days only.

MONTHLY METEOROLOGICAL TABLE FOR THE QUARTER ENDING SEPTEMBER 30th, 1853.

In the formation of this Table the results from Jersey and Guernsey have not been combined, on account of the difference between the ranges of temperature at the two places. The results from Ventnor are not combined, on account of the much higher temperature, and less range of temperature than those at the other stations in the Isle of Wight. The results from Haverly have also not been combined.

[illegible]

Holkham.—July; the reading of the barometer is too high,—it should be about 29.840 in. Gainsborough.—September; the reading of the barometer seems to be a tenth of an inch too small. Highfield House.
—August; the reading of the barometer is too high; it should be about 29.809 in. Alderley Edge.—23d September, 7h. 30 m. A.M.; the reading of the barometer 29.884 in. has been altered to 28.884 in.
Durlham.—The readings of the barometer are discordant; the mean reading for August is certainly too high.

NOTE.—Second rain gauges are placed : At Jersey at the height of 6 feet; the amount collected was 7.7 inches. At Newport, 3 feet; the amount was 7.9 inches. At Clifton, 50 feet; the amount was 11.4 inches. At Oxford, 22 feet; the amount was 7.8 inches. At Hartwell Rectory, 4 feet; the amount was 9.1 inches. At Cardington, 30 feet; the amount was 4.2 inches. At Holkham, 4 feet; the amount was 8.9 inches. At Nottingham, 10 feet; the amount was 8.8 inches. And at Warrington, 34 feet; the amount was 9.4 inches.

ON THE
METEOROLOGY OF ENGLAND AND SCOTLAND,

DURING THE

Quarter ending December 31, 1853.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

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1854.

On the Meteorology of England and Scotland, during the Quarter ending December 31st, 1853. By JAMES GLAISHER, ESQ., F.R.S., Sec. of the British Meteorological Society.

The temperature, till 20th October, was 1.8° below its average, in the period from 21st October to 8th November it was 5.3° above, and from 9th November to the end of the year it was 4.8° below the average. The temperature of December was 7° below the average of the 12 preceding Decembers. During the period from 9th November there were several instances of very low temperatures; on some days the mean for the day was 10° , 11° , 12° , and in one case 13° below the respective averages. With the exception of the interval between 21st October and 8th November the weather has been cold throughout the quarter.

The maximum cold for the season, in the whole country, took place during the night common to December 28th and 29th. This cold extended from the most southern to the most northern station.

The reading of the barometer was low in October; it was very high in November. The excess of reading in November over that in October was nearly four-tenths of an inch at all places; it decreased by December in England, but still farther increased in Scotland.

The fall of rain was one-third above its average in October, and fell short of the average in November and December, except in Cornwall and Devonshire. The general deficiency for the quarter is about one inch.

Snow fell at a few places north of the parallel of 53° on 17th November; at places north of 51° on 24th November; and at the Islands of Jersey and Guernsey at the end of the year. It fell generally over England after the middle of December.

The direction of the wind has generally been a compound of the north or east, except in the interval from 21st October to 8th November, when it was mostly south-west.

The air has been drier than usual, particularly in December, in which month the difference of air and dew-point temperature, notwithstanding the low value of the former, was greater than usual, consequently the degree of humidity was low.

Fog was very prevalent in October and November, particularly between the parallels of latitude of 51° and 52° . In November it was more or less prevalent on 28 days, and on some days extended all over the country. At times it was very dense within a band extending across the country between the above parallels of latitude. In December fog was most prevalent below the parallel of 53° and 54° .

The mean temperature of the air at Greenwich for the quarter ending November, constituting the 3 autumn months, was $49^{\circ}.4$, being $0^{\circ}.1$ above the average of 80 years.

1853. MONTHS.		Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
		Air.			Evaporation.		Dew Point.		Air— Daily Range.						
		Mean.	Diff. from ave- rage of 80 years.	Diff. from ave- rage of 12 years.	Mean.	Diff. from ave- rage of 12 years.	Mean.	Diff. from ave- rage of 12 years.	Mean.	Diff. from ave- rage of 12 years.	Water of the Thames.				
Oct. . .	50.9	+1.6	+1.3	49.4	+0.1	47.7	+2.5	15.2	+1.8	53.1	.347	+ .028	3.9	+0.8	
Nov. . .	42.1	-0.3	-2.3	41.3	-1.5	40.1	-0.7	11.5	+0.9	45.5	.266	- .048	3.1	-0.9	
Dec. . .	34.0	-4.8	-7.0	33.0	-6.5	31.3	-6.0	9.3	+0.3	38.5	.195	- .048	2.3	-0.5	
Mean .	42.3	-1.2	-2.7	41.2	-2.6	39.7	-1.4	12.0	+1.0	45.7	.269	- .009	3.1	-0.1	

1853. MONTHS.		Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal move- ment of the Air.	Reading of Thermometer on Grass.				
		Mean.	Diff. from ave- rage of 12 years.	Mean.	Diff. from ave- rage of 12 years.	Mean.	Diff. from ave- rage of 12 years.	Amount.	Diff. from ave- rage of 38 years.		Number of Nights it was			Low- est Read- ing at Night.	High- est Read- ing at Night.
											At or below 32°	Be- tween 32° and 40°	Above 40°		
Oct. . .	.901	-0.087	in. 29.558	-117	gr. 531	gr. -4	in. 4.3	in. +1.5	Miles. 73	5	12	14	25.8	50.0	
Nov. . .	.934	-0.027	29.941	+234	549	+7	1.5	-1.1	56	18	4	3	20.3	46.0	
Dec. . .	.913	-0.055	29.804	-036	556	+7	0.7	-1.4	52	24	7	0	11.0	37.0	
Mean .	.916	-0.040	29.768	+027	545	+3	Sum 6.5	Sum -1.0	60	Sum 47	Sum 23	Sum 17	11.0	50.0	

NOTE.—In reading this table it will be borne in mind that the sign (-) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunderstorms occurred, or thunder was heard and lightning seen, on the 8th October at Greenwich, Paddington, Stone, Hartwell Rectory, and Aylesbury; and on the 27th at Lewisham, Greenwich, Paddington, and Thwaite, Suffolk. On the 5th November at Guernsey; and on the 26th at Guernsey and Truro. On the 27th December at Liverpool; and on the 28th at Durham, Newcastle, and North Shields.

Thunder was heard, but lightning was not seen, on the 1st October at Warrington; on the 8th at Truro, Lewisham, and Stone; on the 9th at Guernsey; on the 12th at Ryde; on the 22d at Arbroath; on the 25th at the Isle of Man; and on the 26th and 27th at Stonyhurst. On the 30th December at Royston.

Lightning was seen, but thunder was not heard, on the 1st October at Oxford and Norwich; on the 2d at Oxford, Stone, Hartwell Rectory, Aylesbury, Nottingham, and Durham; on the 21st at Arbroath; on the 26th at Jersey, Guernsey, Stone, Hartwell Rectory, and Norwich; on the 27th at Jersey, Guernsey, Exeter, Rose Hill, Oxford, Stone, Hartwell Rectory, Aylesbury, Linslade, Cardington, Norwich, Warrington, and the Isle of Man; and on the 28th at Warrington. On the 5th November at Greenwich, Oxford, Stone, and Hartwell Rectory; on the 8th at Arbroath; on the 20th at Dunino; on the 25th at Truro; and on the 26th at Exeter. On the 28th December at Stonyhurst.

Hail fell on the 1st October at Liverpool; on the 2d at Jersey, Linslade, and Hawarden; on the 3d at the Isle of Man; on the 8th at Hartwell Rectory; on the 13th at Stone; on the 16th at Liverpool and Whitehaven; on the 21st and 23d at Durham; and on the 26th at Nottingham. On the 16th November at Truro; on the 24th at Bicester and Dunino; on the 25th at Dunino; and on the 26th at Guernsey. On the 10th December at Helston; on the 11th at Truro; on the 15th at Guernsey, Truro, Holkham, North Shields, and Dunino; on the 16th at Guernsey, North Shields, and Dunino; on the 19th at Torquay and Dunino; on the 20th at Dunino; on the 21st at Guernsey, North Shields, and Dunino; on the 22d at Guernsey; on the 23d at Guernsey and North Shields; on the 24th at Guernsey; on the 25th at Guernsey and Whitehaven; on the 27th at Helston, Falmouth, and Truro; on the 28th at Helston, Truro, North Shields, and Dunino; on the 30th at Exeter and Isle of Man; and on the 31st at Falmouth, Exeter, and Oxford.

Snow fell on the 17th November at Hawarden and North Shields. It fell generally at places north of latitude 57° on the 24th. After the 15th December it fell nearly at every station, and on the 27th, 28th, and 29th, at Jersey and Guernsey. The fall on the 15th December was in many places as deep as 6 inches.

Fog was prevalent on 20 days in October, and principally confined to the space between the latitudes of 51° and 52° ; occasionally it extended to the Isle of Wight, and as far north as Lancashire. In November it was present on every day, with the exception of the 5th and 29th. It was most frequent and most dense between the parallels of 51° and 52° , and at times it was more dense than it has been for many years. In the returns from Jersey, Guernsey, and the counties of Cornwall and Devonshire, no mention of fog was made. With these exceptions the fog was mentioned in every place from the Isle of Wight to Arbroath. In December fog was prevalent on 20 days, but was most frequent between the latitudes of 53° and 54° ; at some places in the south it was only noticed on 3 or 4 days.

Aurora were seen on the 17th October at Durham; on the 23d at Dunino; on the 25th at Nottingham, Durham, Dunino, and Arbroath; on the 29th at Whitehaven; on the 30th at Dunino; and on the 31st at Clifton, Lewisham, Greenwich, Cardington, Norwich, Grantham, and Nottingham. On the 1st November at Oxford; on the 2d at Whitehaven; on the 8th at the Isle of Man, Durham, North Shields, Dunino, and Arbroath; on the 9th at Nottingham; on the 11th at Dunino; on the 21st at North Shields; and on the 22d at Stone, Stonyhurst, Isle of Man, and Durham. On the 5th December at Helston and Nottingham; on the 6th at Truro, Clifton, Lewisham, Greenwich, Stonyhurst, Isle of Man, Whitehaven, Durham, North Shields, Dunino, and Arbroath; on the 8th at Durham; on the 23d at Greenwich; on the 24th at Clifton; on the 26th and 27th at Falmouth; on the 28th at Warrington; on the 29th at Jersey and Clifton; and on the 30th at Jersey.

Lunar Halos were seen on 20 days throughout the quarter.

Solar Halos were seen on the 15th October at Stone, and Hartwell Rectory; on the 24th at Nottingham; and on the 27th at Grantham. On the 8th November at Greenwich, Stone, Hartwell Rectory, Grantham, and Nottingham; on the 9th at Nottingham; on the 10th at Stone and Hartwell Rectory; on the 11th at Greenwich and Aylesbury; on the 12th at Nottingham; on the 14th at Dunino; on the 18th at Clifton and Hawarden; and on the 20th and 27th at Clifton. On the 2d December at Stonyhurst, Durham, and North Shields; on the 7th at Stonyhurst; on the 13th at Dunino; on the 17th at Hawarden; on the 18th at Grantham and Nottingham; on the 19th at Nottingham; and on the 29th at Grantham; and on the 31st at Stone and Hartwell Rectory.

Harvest was completed on the 1st November at Gainsborough; on the 2d at Hartwell Rectory and Linslade; on the 5th at Hawarden; and on the 10th at Nottingham.

NAMES OF THE PLACES.	Mean Pressure of dry Air reduced to the level of the Sea.		Mean Temperature of the Air.		Highest Reading of the Thermometer.		Lowest Reading of the Thermometer.		Mean Daily Range of Temperature.		Mean Monthly Range of Temperature.		Range of Temperature in the Quarter.		Mean Temperature of the Quarter.		Mean Temperature of the Month.		Mean Temperature of the Dew Point.		Mean estimated Strength.		WIND.		RAIN.		Mean Amount of Cloud.		Number of Days on which it fell.		Amount collected.		Mean Weight of Vapour in a cubic foot of Air.		Mean additional Weight required to saturate a cubic foot of Air.		Mean degree of Humidity.		Mean whole Amount of Water in a vertical column of Atmosphere.		Mean Weight of a cubic foot of Air.		Height of Clouds in feet above the level of the Sea.						
	in.	in.	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	General Direction.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.					
Jersey -	29.640	29.640	47.0	50.0	52.0	52.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	N.E. & S.W.	5.8	4.0	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4				
Guernsey -	29.612	29.612	47.0	50.0	52.0	52.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	N.E. & S.W. & S.E.	3.1	4.7	8.5	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1			
Helston -	29.608	29.608	48.1	51.0	53.0	53.0	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	Var.	3.0	4.8	12.1	3.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6				
Falmouth -	29.608	29.608	48.1	51.0	53.0	53.0	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	N. & N.W.	3.3	3.3	12.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Truro -	29.501	29.501	47.1	50.0	52.0	52.0	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	E.N.E. & N.	3.8	6.4	12.5	3.8	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6			
Torquay -	29.501	29.501	47.1	50.0	52.0	52.0	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	N. & S.W.	1.4	4.8	11.2	3.2	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7			
Exeter -	29.501	29.501	47.1	50.0	52.0	52.0	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	N.	3.6	4.5	8.4	3.1	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7			
High-street, Exeter -	29.501	29.501	47.1	50.0	52.0	52.0	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	N. & N.E. & N.W.	3.5	4.5	8.6	3.3	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7		
Ventnor -	29.625	29.625	44.4	47.0	49.0	49.0	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	E., N., & S.E.	7.2	3.9	10.2	3.1	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
Newport -	29.625	29.625	44.4	47.0	49.0	49.0	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	N.E. & S.E.	3.8	3.3	8.7	3.1	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6			
Ryde -	29.675	29.675	44.4	47.0	49.0	49.0	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	N.E.	3.6	4.4	9.3	3.2	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4			
Worthing -	29.645	29.645	44.4	47.0	49.0	49.0	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	Var.	6.9	4.3	8.1	3.1	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4			
Southampton -	29.645	29.645	44.4	47.0	49.0	49.0	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	Var.	7.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Midhurst -	29.645	29.645	44.4	47.0	49.0	49.0	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	Var.	3.7	4.5	7.4	3.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3			
Clifton -	29.645	29.645	44.4	47.0	49.0	49.0	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	Var.	3.7	4.5	7.4	3.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3			
Lewisham -	29.645	29.645	44.4	47.0	49.0	49.0	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	Var.	3.7	4.5	7.4	3.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3			
Royal Observatory -	29.645	29.645	44.4	47.0	49.0	49.0	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	N.E. & S.W.	7.7	5.0	6.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Paddington -	29.645	29.645	44.4	47.0	49.0	49.0	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	Var.	8.2	3.7	6.2	3.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3			
St. John's Wood -	29.645	29.645	44.4	47.0	49.0	49.0	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	N.E. & S.W., & S.E.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Enfield -	29.645	29.645	44.4	47.0	49.0	49.0	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	E. & S.W.	6.9	3.5	6.0	3.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3			
Rose Hill -	29.645	29.645	44.4	47.0	49.0	49.0	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	N.E. & S.W.	7.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bicester -	29.645	29.645	44.4	47.0	49.0	49.0	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	N.E. & S.W.	7.5	4.6	5.4	3.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
Oxford -	29.645	29.645	44.4	47.0	49.0	49.0	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	N.E. & S., & S.W.	3.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Stone Observatory -	29.645	29.645	44.4	47.0	49.0	49.0	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	Var.	3.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Hartwell House -	29.645	29.645	44.4	47.0	49.0	49.0	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	N.E., S., & S.W.	7.4	3.9	5.8	3.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3			
Hartwell Rectory -	29.645	29.645	44.4	47.0	49.0	49.0	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	N.	4.2	5.8	2.9	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4			
Aylesbury -	29.645	29.645	44.4	47.0	49.0	49.0	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	Var.	3.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Linslade -	29.645	29.645	44.4	47.0	49.0	49.0	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	Var.	7.2	4.4	4.6	3.0	0.3	0.3																					

Meteorological Table, Quarter ending December 31st, 1853.

[illegible]

ON THE
METEOROLOGY OF ENGLAND AND SCOTLAND,

DURING THE

Quarter ending March 31, 1854.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

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1854.

On the Meteorology of England and Scotland, during the Quarter ending March 31st, 1854. By JAMES GLAISHER, ESQ., F.R.S., Sec. of the British Meteorological Society.

The weather during the past quarter has been very remarkable in many respects. The cold which set in on November 9th continued with great severity till January 6th, and a heavier fall of snow occurred on January 3d over the greater part of England than has taken place for many years. On December 29th the reading of the barometer began to decrease rapidly, and continued so till January 1, but not in an equal degree at all places. The diminution was much greater in Jersey, Guernsey, the Isle of Wight, Cornwall, and Devonshire than elsewhere. From the 2d to the 3d the readings still decreased at the above places, extending to the extreme south coast of England, and increased at all places north of the latitude of 51°. From the 3d to the 4th the readings decreased, but to a greater extent at southern than at northern stations. After this time the readings turned to increase in the south, whilst they decreased in the north. It is of rare occurrence for the atmospheric pressure to vary so greatly in its distribution over places so little separated. The reading was very low at all places, and the length of time during which these low readings prevailed was very remarkable.

Respecting the variations of temperature during those days, it is worthy of remark that those stations where the reading of the barometer continuously fell, were subjected to very little variation of temperature, whilst those where it increased and decreased were subjected to great changes and to low temperatures. Although the weather was cold it was not eminently so till beyond some distance from the south coast of England, and the extreme severity of the 3d was not at all felt south of the parallel of Uckfield, with perhaps the exception of Brighton. On the night of the 2d the temperature between the parallels of 51° and 54° decreased to a very low point, but did not do so beyond those parallels either north or south. About London and its vicinity it fell early in the morning of the 3d to 13°, 12°, 11°, and 10°. It had reached these low points at 1 o'clock in the morning, and did not rise above them till after 8 o'clock. It was most severely felt in the Midland counties, where the reading was as low as zero, and it was noted by Mr. Lowe at -4°. This was the lowest reading recorded by any one with trustworthy instruments. At Manchester it was as low as 3°, as noted by Mr. Vernon; but at places situated very near each other the points differed very considerably. It was at about the time of these low temperatures that the heavy fall of snow took place. The wind was from east at most places. A gale was blowing over Jersey and Guernsey; it was very squally and stormy all day at the Isle of Wight, and over Cornwall and Devonshire. At the same time a fog hung over the Midland counties. The air was calm in the north in the morning, and a fresh wind rose in the afternoon. The fall of snow was greatest over those parallels of latitude which had been remarkable for prevalence of fog in November and of frequency of falls of snow in December. In parts of Cornwall there was little or no snow, and but comparatively little on the south coast, west of the Isle of Wight. In London and its vicinity it averaged on the level about 12 inches. On the Norfolk coast it fell to the depth of 18 inches. At Whitehaven scarcely an inch fell, whilst at Liverpool and other places in the same parallels the falls were from 6 to 10 and 14 inches. Towards the north the falls were less heavy; and at Allenheads, situated among the mountainous district of Northumberland, there was none. Heavy falls of snow had occurred previously, and at the time of the great and general fall it lay on the ground to the depth of several feet. The drifts averaged from 3 to 10, 12, and 15 feet, and were deepest at Derby, Grantham, and on the Norfolk coast. At the Isle of Man were drifts to the depth of 10 feet.

On January 1st and 2d the average daily temperature was 10° below their averages, on the 3d it was as much as 14° below, and till the 6th the average daily defect was 7°. On the 7th a period of warm weather set in, and continued till February 9th; the average daily excess of temperature was 4°·8. From February 10th to the 19th the weather was cold; the average daily defect was 3°·1; and from February 20th to the end of the quarter the average daily excess of mean temperature was 2°·7.

The reading of the barometer has been remarkable during a great part of the quarter. On 1st January, at the level of the sea, it was 29·54 in.; it decreased by the 5th, when the lowest reading during the quarter took place, viz. 29·00 in. It continued low for some days; was 30·34 in. on the 21st; decreased to 29·63 in. by the 24th; increased quickly to 30·63 in. by the 26th; decreased to 29·83 in. by the 29th; increased to 30·40 in. by 3d February; decreased to 29·91 in. by the 5th; increased to 30·73 in. by the 14th; decreased to 29·48 in. by the 17th; attained a reading on 4th March higher than any since January 1835, viz. 30·85 in.; decreased to 29·98 in. by the 13th; increased to 30·52 in. by the 17th; decreased to 30·04 in. by the 18th; increased to 30·59 in. by the 22d; decreased to 29·96 in. by the 26th; and increased to 30·47 in. by the end of the quarter.

The mean reading for January was low; it was high in February and March. In a register from 1771 there is no instance of so high a reading in March; the nearest approach was in 1834, and there is no instance of so high a mean reading for the months of February and March in the period from 1771.

The fall of rain was about its average in January, and fell short of the average in February and March. The general deficiency for the quarter is 2 inches. The fall from November to the end of March was about 5½ inches, and is less than the fall in the same five months than any in the present century. The general direction of the wind till 28th January was S.E.; from then till

9th February it was S.W.; from 9th February to the 19th, N.W.; and mostly S.W. from 20th February to the end of the quarter.

The mean temperature of the air at Greenwich for the quarter ending February, constituting the three winter months, was 37°·5, being 0°·1 below the average of 80 years.

1854. MONTHS.	Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
	Air.			Evaporation.		Dew Point.		Air—Daily Range.		Water of the Thames.	Mean.	Diff. from average of 12 years.	Mean.	Diff. from average of 12 years.
	Mean.	Diff. from average of 80 years.	Diff. from average of 13 years.	Mean.	Diff. from average of 12 years.	Mean.	Diff. from average of 12 years.	Mean.	Diff. from average of 12 years.					
	Jan. . .	Feb. . .	Mar. . .	Jan. . .	Feb. . .	Mar. . .	Jan. . .	Feb. . .	Mar. . .					
Jan. . .	39·0	+4·3	+0·7	38·0	+0·7	36·1	+0·9	10·8	+2·6	38·2	in.	in.	gr.	gr.
Feb. . .	30·5	+1·3	+0·7	37·5	+0·2	33·6	-1·2	13·6	+3·1	41·6	*224	+·010	2·7	+0·1
Mar. . .	43·8	+2·9	+2·0	40·9	-0·2	37·4	+1·7	19·2	+5·0	45·5	*218	-·005	2·6	0·0
Mean . .	40·8	+2·5	+1·1	38·8	+0·2	35·7	+0·5	14·5	+3·6	41·8	*223	+·007	2·8	+0·1

1854. MONTHS.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal movement of the Air.		Reading of Thermometer on Grass.			
	Mean.	Diff. from average of 12 years.	Mean.	Diff. from average of 13 years.	Mean.	Diff. from average of 12 years.	Amount.	Diff. from average of 30 years.	Miles.	At or below 32°.	Between 32° and 40°.	Above 40°.	Lowest Reading at Night.	Highest Reading at Night.
	Jan. . .	Feb. . .	Mar. . .	Jan. . .	Feb. . .	Mar. . .	Jan. . .	Feb. . .	Jan. . .	Feb. . .	Mar. . .	Jan. . .	Feb. . .	Mar. . .
	Mean.	Diff. from average of 12 years.	Mean.	Diff. from average of 13 years.	Mean.	Diff. from average of 12 years.	Amount.	Diff. from average of 30 years.	Miles.	At or below 32°.	Between 32° and 40°.	Above 40°.	Lowest Reading at Night.	Highest Reading at Night.
Jan. . .	*917	+·032	29·318	in.	556	gr.	in.	in.	118	29	9	2	11·0	48·0
Feb. . .	*843	-·029	30·041	+·222	554	+ 5	1·0	-0·7	134	24	2	2	16·5	43·3
Mar. . .	*795	+·030	30·186	+·403	551	+ 4	0·4	-1·2	84	23	6	2	14·8	45·0
Mean . .	*832	+·011	29·948	+·193	550	+ 2	Sum 3·1	Sum -2·0	110	Sum 67	Sum 17	Sum 6	11·0	46·0

NOTE.—In reading this table it will be borne in mind that the sign (-) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunderstorms occurred, or thunder was heard and lightning seen, on the 20th January at Falmouth, Truro, and Exeter; on the 21st at Whitehaven; and on the 26th at Nottingham and Wakefield. On the 17th February at Manchester; and on the 18th at Clifton.

Thunder was heard, but lightning was not seen, on the 16th January at North Shields; and on the 20th at Clifton. On the 8th February at Grantham.

Lightning was seen, but thunder was not heard, on the 3d January at Nottingham; on the 6th at Helston and Falmouth; on the 7th at Falmouth and Truro; on the 25th at Whitehaven; and on the 28th at Norwich. On the 7th February at the Isle of Man.

Hail fell on the 1st January at Helston; on the 2d at Guernsey; on the 4th at Dunino and Arbroath; on the 5th at North Shields, Dunino, and Arbroath; on the 6th at Helston, North Shields, Dunino, and Arbroath; on the 7th and 8th at Guernsey; on the 9th at Guernsey, North Shields, Dunino, and Arbroath; on the 10th at Dunino and Arbroath; on the 15th at North Shields; on the 20th at Helston, Rose Hill, Oxford, Linslade, and Hawarden; on the 26th at Grantham and Nottingham; and on the 28th at Stone, Hartwell House, Hartwell Rectory, Linslade, Grantham, and Hawarden. On the 4th February at Warrington; on the 6th at Hawarden; on the 7th at Linslade, Wakefield, Stonyhurst, Isle of Man, and Durham; on the 8th at Guernsey and Bedford; on the 9th at Stone, Hartwell House, Hartwell Rectory, Bedford, Hawarden, Gainsborough, Durham, and North Shields; on the 10th and 11th at Norwich; on the 15th at Guernsey; on the 17th at Guernsey, Exeter, Rose Hill, Bicester, Oxford, Linslade, Bedford, Grantham, Hawarden, Liverpool, Manchester, Wakefield, Stonyhurst, Isle of Man, and Durham; on the 18th at Jersey, Guernsey, Helston, Truro, Torquay, Exeter, and Isle of Man; and on the 19th at North Shields. On the 15th March at Stonyhurst; on the 16th at Hawarden; on the 18th at Linslade, Bedford, Hawarden, and North Shields; on the 19th at Truro, Lewisham, Greenwich, Oxford, Stone, and Hartwell Rectory; on the 26th at Linslade and Stonyhurst; and on the 30th at Hawarden and Dunino.

Snow fell on 26 days in January, 16 in February, and on 3 in March. Fog was prevalent on 21 days in January, 12 days in February, and 15 days in March. Auroræ were seen on 7 days in January, 12 days in February, and on 15 days in March. The magnets were disturbed on all these days.

Zodiacal Light was seen on the 18th February at Nottingham; on the 23d at Hartwell House; on the 25th at Stone; on the 26th at Stone and Hartwell House; and on the 28th at Hartwell House. On the 1st March at Nottingham.

Solar Halos were seen on 19 days during the quarter. Lunar Halos were seen on 31 days during the quarter.

NAMES OF STATIONS.	MEAN PRESSURE OF DRY AIR reduced to the level of the Sea.										WIND.	RAIN.	MEAN WEIGHT OF VAPOUR in a cubic foot of Air.	MEAN DEGREE OF HUMIDITY.	MEAN WHOLE AMOUNT of Water in a vertical column of Air.	MEAN HEIGHT of a cubic foot of Air.	MEAN HEIGHT of a cubic foot of Air.	MEAN HEIGHT of a cubic foot of Air.
	in.	°	′	″	′	″	′	″	′	″								
Jersey -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	S.W. & N.E.	4.9	33	5.2	0.898	in.	ft.	ft.
Guernsey -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	Var.	5.4	37	5.2	0.871	in.	ft.	ft.
Helston -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	Var.	5.4	37	5.2	0.871	in.	ft.	ft.
Falmouth -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	S.W. & W.	5.9	43	5.1	0.846	in.	ft.	ft.
Truro -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	Var.	6.4	56	5.0	0.842	in.	ft.	ft.
Torquay -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	S.W., W., & N.E.	6.6	51	5.0	0.819	in.	ft.	ft.
High-street, Exeter -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	Var.	6.6	51	5.0	0.819	in.	ft.	ft.
Venitor -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W., N., & E.	4.7	31	4.3	0.861	in.	ft.	ft.
Newport -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W., N., W., & S.W.	4.0	4.3	3.0	0.852	in.	ft.	ft.
Ryde -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W., N., W., & S.W.	1.5	1.5	1.5	0.857	in.	ft.	ft.
Worthing -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	Var.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Southampton -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	S.W. & N.W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Clifton -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W., S.W., & N.W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Lewisham -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	S.W. & N.W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Royal Observatory -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	S.W. & N.W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
St. Thomas's Hospital -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Paddington -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
St. John's Wood -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Enfield -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Rose Hill -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Bicester -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Oxford -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Stone -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Hartwell House -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Hartwell Rectory -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Lincoln -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Royston -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Cardington -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Bedford -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Norwich -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Grantham -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Derby -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Holkham -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Nottingham -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Hawarden -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Allderly Edge -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Rowdon -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Gainsborough -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Warrington -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Liverpool -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Manchester -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Wakefield -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Stonelyhurst -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
York -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Isle of Man -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Whitehaven -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Durham -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
North Shields -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Dunino -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.
Arbroath -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W.	0.5	0.5	0.5	0.857	in.	ft.	ft.

The highest readings of the thermometer in air were 67° 0' at Bicester and Hartwell House, 65° 0' at High-street, Exeter, 65° 2' at Lewisham and Paddington, 64° 5' at Manchester, 64° 3' at Nottingham, 64° 0' at Greenwich, 64° 0' at Bedford, and 63° 0' at Royston. The lowest were 42° 0' at Nottingham, 39° 0' at York, and 29° 0' at Grantham. The least daily ranges of temperature took place at Whitehaven, Jersey, Guernsey, Liverpool, Worthing, Isle of Man, Torquay, and Venitor; and the greatest at Nottingham, Bicester, Lewisham, St. John's Wood, Manchester, and Warrington.

Rain fell on the least number of days at York, Bedford, Lewisham, and Warrington; and on the greatest number at Whitehaven, Truro, Wakefield, Falmouth, and North Shields. The least falls took place at Norwich, Paddington, Greenwich, Stone, Lewisham, Enfield, and the mean amount at these places is 3.0 inches. The largest falls occurred at Stonelyhurst, Whitehaven, Truro, Falmouth, and North Shields, and their mean is 8.8 inches.

QUARTERLY METEOROLOGICAL TABLE FOR DIFFERENT PARALLELS OF LATITUDE.

PARALLELS OF LATITUDE, &c.	MEAN PRESSURE OF DRY AIR reduced to the level of the Sea.										WIND.	RAIN.	MEAN WEIGHT OF VAPOUR in a cubic foot of Air.	MEAN DEGREE OF HUMIDITY.	MEAN WHOLE AMOUNT of Water in a vertical column of Air.	MEAN HEIGHT of a cubic foot of Air.	MEAN HEIGHT of a cubic foot of Air.	MEAN HEIGHT of a cubic foot of Air.
	in.	°	′	″	′	″	′	″	′	″								
In the Counties of Cornwall and Devonshire -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	S.W. & N.E.	4.9	33	5.2	0.898	in.	ft.	ft.
Newport and Ryde -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	Var.	5.4	37	5.2	0.871	in.	ft.	ft.
South of latitude 51° -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	S.W. & W.	5.9	43	5.1	0.846	in.	ft.	ft.
Between the latitudes of 51° and 52° -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	Var.	6.4	56	5.0	0.842	in.	ft.	ft.
Between the latitudes of 52° and 53° -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	S.W., W., & N.E.	6.6	51	5.0	0.819	in.	ft.	ft.
Between the latitudes of 53° and 54° -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	Var.	6.6	51	5.0	0.819	in.	ft.	ft.
Liverpool and Whitehaven -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W., N., & E.	4.7	31	4.3	0.861	in.	ft.	ft.
Isle of Man -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W., N., W., & S.W.	4.0	4.3	3.0	0.852	in.	ft.	ft.
Durham and North Shields -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	W., N., W., & S.W.	1.5	1.5	1.5	0.857	in.	ft.	ft.
Dunino and Arbroath -	29.167	43.255	0.30	0	7.520	7.25	0	41.840	0	1.4	Var.	0.5	0.5	0.5	0.857	in.	ft.	ft.

In the formation of this Table the results from Jersey and Guernsey have not been combined, on account of the difference between the ranges of temperature of the two places. The results from Venitor are not combined, on account of the much higher temperature, and less range of temperature than those at the other stations in the Isle of Wight. The results from Enfield have not been included.

Year 1854.	Month.	Mean Pressure of Air and Water.		Range of Barometrical Readings in the Month.		Mean.		Temperature of the Air.				Mean Temperature of		Wind.		Mean Amount of Cloud.	Number of Days in Month.	Amount of Rain.	Mean Weight of Vapour in a cubic foot of Air.	Mean Degree of Humidity.	Mean Whole Amount of Water in a vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.	
		in.	°	in.	°	From Self-registering Thermometer.	From Self-registering Thermometer.	Adopted.	Lowest.	Range in the Month.	Mean of all the Highest.	Mean of all the Lowest.	Mean Daily Range.	Evaporation.	Dew Point.								Estimated Strength.
Jan.	1854	29.096	27.0	1.700	42.2	42.1	42.2	31.0	33.0	18.0	45.1	39.5	9.5	41.5	40.5	2.0	S.W.	5.2	0.945	3.7	54	in.	ft.
Feb.	1854	29.102	27.5	1.710	42.5	42.5	42.5	32.0	34.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Mar.	1854	29.124	27.5	1.720	42.5	42.5	42.5	33.0	35.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Apr.	1854	29.146	27.5	1.730	42.5	42.5	42.5	34.0	36.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
May.	1854	29.168	28.1	1.740	42.5	42.5	42.5	35.0	37.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Jun.	1854	29.190	28.1	1.750	42.5	42.5	42.5	36.0	38.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Jul.	1854	29.212	28.7	1.760	42.5	42.5	42.5	37.0	39.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Aug.	1854	29.234	28.7	1.770	42.5	42.5	42.5	38.0	40.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Sep.	1854	29.256	28.8	1.780	42.5	42.5	42.5	39.0	41.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Oct.	1854	29.278	28.8	1.790	42.5	42.5	42.5	40.0	42.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Nov.	1854	29.300	28.8	1.800	42.5	42.5	42.5	41.0	43.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Dec.	1854	29.322	28.8	1.810	42.5	42.5	42.5	42.0	44.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Jan.	1855	29.344	28.8	1.820	42.5	42.5	42.5	43.0	45.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Feb.	1855	29.366	28.8	1.830	42.5	42.5	42.5	44.0	46.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Mar.	1855	29.388	28.8	1.840	42.5	42.5	42.5	45.0	47.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Apr.	1855	29.410	28.8	1.850	42.5	42.5	42.5	46.0	48.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
May.	1855	29.432	28.8	1.860	42.5	42.5	42.5	47.0	49.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Jun.	1855	29.454	28.8	1.870	42.5	42.5	42.5	48.0	50.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Jul.	1855	29.476	28.8	1.880	42.5	42.5	42.5	49.0	51.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Aug.	1855	29.498	28.8	1.890	42.5	42.5	42.5	50.0	52.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Sep.	1855	29.520	28.8	1.900	42.5	42.5	42.5	51.0	53.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Oct.	1855	29.542	28.8	1.910	42.5	42.5	42.5	52.0	54.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Nov.	1855	29.564	28.8	1.920	42.5	42.5	42.5	53.0	55.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Dec.	1855	29.586	28.8	1.930	42.5	42.5	42.5	54.0	56.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Jan.	1856	29.608	28.8	1.940	42.5	42.5	42.5	55.0	57.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Feb.	1856	29.630	28.8	1.950	42.5	42.5	42.5	56.0	58.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Mar.	1856	29.652	28.8	1.960	42.5	42.5	42.5	57.0	59.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Apr.	1856	29.674	28.8	1.970	42.5	42.5	42.5	58.0	60.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
May.	1856	29.696	28.8	1.980	42.5	42.5	42.5	59.0	61.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Jun.	1856	29.718	28.8	1.990	42.5	42.5	42.5	60.0	62.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Jul.	1856	29.740	28.8	2.000	42.5	42.5	42.5	61.0	63.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Aug.	1856	29.762	28.8	2.010	42.5	42.5	42.5	62.0	64.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Sep.	1856	29.784	28.8	2.020	42.5	42.5	42.5	63.0	65.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Oct.	1856	29.806	28.8	2.030	42.5	42.5	42.5	64.0	66.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Nov.	1856	29.828	28.8	2.040	42.5	42.5	42.5	65.0	67.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Dec.	1856	29.850	28.8	2.050	42.5	42.5	42.5	66.0	68.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Jan.	1857	29.872	28.8	2.060	42.5	42.5	42.5	67.0	69.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Feb.	1857	29.894	28.8	2.070	42.5	42.5	42.5	68.0	70.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Mar.	1857	29.916	28.8	2.080	42.5	42.5	42.5	69.0	71.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Apr.	1857	29.938	28.8	2.090	42.5	42.5	42.5	70.0	72.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
May.	1857	29.960	28.8	2.100	42.5	42.5	42.5	71.0	73.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Jun.	1857	29.982	28.8	2.110	42.5	42.5	42.5	72.0	74.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Jul.	1857	30.004	28.8	2.120	42.5	42.5	42.5	73.0	75.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Aug.	1857	30.026	28.8	2.130	42.5	42.5	42.5	74.0	76.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Sep.	1857	30.048	28.8	2.140	42.5	42.5	42.5	75.0	77.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Oct.	1857	30.070	28.8	2.150	42.5	42.5	42.5	76.0	78.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Nov.	1857	30.092	28.8	2.160	42.5	42.5	42.5	77.0	79.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Dec.	1857	30.114	28.8	2.170	42.5	42.5	42.5	78.0	80.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Jan.	1858	30.136	28.8	2.180	42.5	42.5	42.5	79.0	81.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Feb.	1858	30.158	28.8	2.190	42.5	42.5	42.5	80.0	82.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Mar.	1858	30.180	28.8	2.200	42.5	42.5	42.5	81.0	83.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Apr.	1858	30.202	28.8	2.210	42.5	42.5	42.5	82.0	84.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
May.	1858	30.224	28.8	2.220	42.5	42.5	42.5	83.0	85.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Jun.	1858	30.246	28.8	2.230	42.5	42.5	42.5	84.0	86.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Jul.	1858	30.268	28.8	2.240	42.5	42.5	42.5	85.0	87.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Aug.	1858	30.290	28.8	2.250	42.5	42.5	42.5	86.0	88.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Sep.	1858	30.312	28.8	2.260	42.5	42.5	42.5	87.0	89.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Oct.	1858	30.334	28.8	2.270	42.5	42.5	42.5	88.0	90.0	22.0	46.6	41.2	9.6	40.8	38.4	1.9	S.W.	5.4	0.945	3.7	54	in.	ft.
Nov.	1858	30.356	28.8	2.280	42.5	42.5	42.5	89.0	91.0	22.0													

Meteorological Table, Quarter ending March 31st, 1854.

Paddington.—January; the reading of the barometer on the 10th at 9 A.M. was altered from 29'042 in. to 29'442 in. Bowdon.—Mareh; the reading of the barometer on the 30th at 7h. 30m. A.M. was altered from 29'042 in. to 29'442 in.

NOTE.—The barometers at Guernsey, Truro, High Street Exeter, Ventnor, Ryde, Worthing, Midhurst, Clifton, Liphavish, St. Thomas's Hospital, Paddington, Chiswick Street, St. John's Wood, Rose Hill, Messers, Stono, Hertwell House, Harrow Road Rectory, Linslade, Cardington, Graftonham, Holkham, Hawarden, Gainsborough, Washington, Wakefield, Leeds, Stonyhurst, York, Isle of Man, and Newcastle, were made by Barrow; those at Jersey and Enfield were made by Troughton and Simms. All the presseling instruments have been examined by Messrs. Lewis, of the Ordnance Survey Office, and are found to be correct. The aneroid at Clifton was made by Barrow; those at Southampton, Norwich, and Alderley Edge were made by Atwood; at Liverpool by Ayle; at Durham by Herrmann; at North Shields by Carl; and at Dumfries and Arbroath by Casella. Second ring gauges are placed: At Newton, at 2 feet; at Clifton, at 2 feet; at Ryde, at 2 feet; at Ventnor, at 2 feet; at Worthing, at 2 feet; at Midhurst, at 2 feet; at Clifton, at 2 feet; at Liphavish, at 2 feet; at St. Thomas's Hospital, at 2 feet; at Paddington, at 2 feet; at Chiswick Street, at 2 feet; at St. John's Wood, at 2 feet; at Rose Hill, at 2 feet; at Messers, at 2 feet; at Stono, at 2 feet; at Hertwell House, at 2 feet; at Harrow Road Rectory, at 2 feet; at Linslade, at 2 feet; at Cardington, at 2 feet; at Graftonham, at 2 feet; at Holkham, at 2 feet; at Hawarden, at 2 feet; at Gainsborough, at 2 feet; at Washington, at 2 feet; at Wakefield, at 2 feet; at Leeds, at 2 feet; at Stonyhurst, at 2 feet; at York, at 2 feet; at Isle of Man, at 2 feet; at Newcastle, at 2 feet. First ring gauges are placed: At Newton, at 1 foot; at Clifton, at 1 foot; at Ryde, at 1 foot; at Ventnor, at 1 foot; at Worthing, at 1 foot; at Midhurst, at 1 foot; at Clifton, at 1 foot; at Liphavish, at 1 foot; at St. Thomas's Hospital, at 1 foot; at Paddington, at 1 foot; at Chiswick Street, at 1 foot; at St. John's Wood, at 1 foot; at Rose Hill, at 1 foot; at Messers, at 1 foot; at Stono, at 1 foot; at Hertwell House, at 1 foot; at Harrow Road Rectory, at 1 foot; at Linslade, at 1 foot; at Cardington, at 1 foot; at Graftonham, at 1 foot; at Holkham, at 1 foot; at Hawarden, at 1 foot; at Gainsborough, at 1 foot; at Washington, at 1 foot; at Wakefield, at 1 foot; at Leeds, at 1 foot; at Stonyhurst, at 1 foot; at York, at 1 foot; at Isle of Man, at 1 foot; at Newcastle, at 1 foot. Third ring gauges are placed: At Newton, at 6 inches; at Clifton, at 6 inches; at Ryde, at 6 inches; at Ventnor, at 6 inches; at Worthing, at 6 inches; at Midhurst, at 6 inches; at Clifton, at 6 inches; at Liphavish, at 6 inches; at St. Thomas's Hospital, at 6 inches; at Paddington, at 6 inches; at Chiswick Street, at 6 inches; at St. John's Wood, at 6 inches; at Rose Hill, at 6 inches; at Messers, at 6 inches; at Stono, at 6 inches; at Hertwell House, at 6 inches; at Harrow Road Rectory, at 6 inches; at Linslade, at 6 inches; at Cardington, at 6 inches; at Graftonham, at 6 inches; at Holkham, at 6 inches; at Hawarden, at 6 inches; at Gainsborough, at 6 inches; at Washington, at 6 inches; at Wakefield, at 6 inches; at Leeds, at 6 inches; at Stonyhurst, at 6 inches; at York, at 6 inches; at Isle of Man, at 6 inches; at Newcastle, at 6 inches. Fourth ring gauges are placed: At Newton, at 3 inches; at Clifton, at 3 inches; at Ryde, at 3 inches; at Ventnor, at 3 inches; at Worthing, at 3 inches; at Midhurst, at 3 inches; at Clifton, at 3 inches; at Liphavish, at 3 inches; at St. Thomas's Hospital, at 3 inches; at Paddington, at 3 inches; at Chiswick Street, at 3 inches; at St. John's Wood, at 3 inches; at Rose Hill, at 3 inches; at Messers, at 3 inches; at Stono, at 3 inches; at Hertwell House, at 3 inches; at Harrow Road Rectory, at 3 inches; at Linslade, at 3 inches; at Cardington, at 3 inches; at Graftonham, at 3 inches; at Holkham, at 3 inches; at Hawarden, at 3 inches; at Gainsborough, at 3 inches; at Washington, at 3 inches; at Wakefield, at 3 inches; at Leeds, at 3 inches; at Stonyhurst, at 3 inches; at York, at 3 inches; at Isle of Man, at 3 inches; at Newcastle, at 3 inches. Fifth ring gauges are placed: At Newton, at 1 inch; at Clifton, at 1 inch; at Ryde, at 1 inch; at Ventnor, at 1 inch; at Worthing, at 1 inch; at Midhurst, at 1 inch; at Clifton, at 1 inch; at Liphavish, at 1 inch; at St. Thomas's Hospital, at 1 inch; at Paddington, at 1 inch; at Chiswick Street, at 1 inch; at St. John's Wood, at 1 inch; at Rose Hill, at 1 inch; at Messers, at 1 inch; at Stono, at 1 inch; at Hertwell House, at 1 inch; at Harrow Road Rectory, at 1 inch; at Linslade, at 1 inch; at Cardington, at 1 inch; at Graftonham, at 1 inch; at Holkham, at 1 inch; at Hawarden, at 1 inch; at Gainsborough, at 1 inch; at Washington, at 1 inch; at Wakefield, at 1 inch; at Leeds, at 1 inch; at Stonyhurst, at 1 inch; at York, at 1 inch; at Isle of Man, at 1 inch; at Newcastle, at 1 inch. Sixth ring gauges are placed: At Newton, at 0.5 inches; at Clifton, at 0.5 inches; at Ryde, at 0.5 inches; at Ventnor, at 0.5 inches; at Worthing, at 0.5 inches; at Midhurst, at 0.5 inches; at Clifton, at 0.5 inches; at Liphavish, at 0.5 inches; at St. Thomas's Hospital, at 0.5 inches; at Paddington, at 0.5 inches; at Chiswick Street, at 0.5 inches; at St. John's Wood, at 0.5 inches; at Rose Hill, at 0.5 inches; at Messers, at 0.5 inches; at Stono, at 0.5 inches; at Hertwell House, at 0.5 inches; at Harrow Road Rectory, at 0.5 inches; at Linslade, at 0.5 inches; at Cardington, at 0.5 inches; at Graftonham, at 0.5 inches; at Holkham, at 0.5 inches; at Hawarden, at 0.5 inches; at Gainsborough, at 0.5 inches; at Washington, at 0.5 inches; at Wakefield, at 0.5 inches; at Leeds, at 0.5 inches; at Stonyhurst, at 0.5 inches; at York, at 0.5 inches; at Isle of Man, at 0.5 inches; at Newcastle, at 0.5 inches. Seventh ring gauges are placed: At Newton, at 0.2 inches; at Clifton, at 0.2 inches; at Ryde, at 0.2 inches; at Ventnor, at 0.2 inches; at Worthing, at 0.2 inches; at Midhurst, at 0.2 inches; at Clifton, at 0.2 inches; at Liphavish, at 0.2 inches; at St. Thomas's Hospital, at 0.2 inches; at Paddington, at 0.2 inches; at Chiswick Street, at 0.2 inches; at St. John's Wood, at 0.2 inches; at Rose Hill, at 0.2 inches; at Messers, at 0.2 inches; at Stono, at 0.2 inches; at Hertwell House, at 0.2 inches; at Harrow Road Rectory, at 0.2 inches; at Linslade, at 0.2 inches; at Cardington, at 0.2 inches; at Graftonham, at 0.2 inches; at Holkham, at 0.2 inches; at Hawarden, at 0.2 inches; at Gainsborough, at 0.2 inches; at Washington, at 0.2 inches; at Wakefield, at 0.2 inches; at Leeds, at 0.2 inches; at Stonyhurst, at 0.2 inches; at York, at 0.2 inches; at Isle of Man, at 0.2 inches; at Newcastle, at 0.2 inches. Eighth ring gauges are placed: At Newton, at 0.1 inches; at Clifton, at 0.1 inches; at Ryde, at 0.1 inches; at Ventnor, at 0.1 inches; at Worthing, at 0.1 inches; at Midhurst, at 0.1 inches; at Clifton, at 0.1 inches; at Liphavish, at 0.1 inches; at St. Thomas's Hospital, at 0.1 inches; at Paddington, at 0.1 inches; at Chiswick Street, at 0.1 inches; at St. John's Wood, at 0.1 inches; at Rose Hill, at 0.1 inches; at Messers, at 0.1 inches; at Stono, at 0.1 inches; at Hertwell House, at 0.1 inches; at Harrow Road Rectory, at 0.1 inches; at Linslade, at 0.1 inches; at Cardington, at 0.1 inches; at Graftonham, at 0.1 inches; at Holkham, at 0.1 inches; at Hawarden, at 0.1 inches; at Gainsborough, at 0.1 inches; at Washington, at 0.1 inches; at Wakefield, at 0.1 inches; at Leeds, at 0.1 inches; at Stonyhurst, at 0.1 inches; at York, at 0.1 inches; at Isle of Man, at 0.1 inches; at Newcastle, at 0.1 inches. Ninth ring gauges are placed: At Newton, at 0.05 inches; at Clifton, at 0.05 inches; at Ryde, at 0.05 inches; at Ventnor, at 0.05 inches; at Worthing, at 0.05 inches; at Midhurst, at 0.05 inches; at Clifton, at 0.05 inches; at Liphavish, at 0.05 inches; at St. Thomas's Hospital, at 0.05 inches; at Paddington, at 0.05 inches; at Chiswick Street, at 0.05 inches; at St. John's Wood, at 0.05 inches; at Rose Hill, at 0.05 inches; at Messers, at 0.05 inches; at Stono, at 0.05 inches; at Hertwell House, at 0.05 inches; at Harrow Road Rectory, at 0.05 inches; at Linslade, at 0.05 inches; at Cardington, at 0.05 inches; at Graftonham, at 0.05 inches; at Holkham, at 0.05 inches; at Hawarden, at 0.05 inches; at Gainsborough, at 0.05 inches; at Washington, at 0.05 inches; at Wakefield, at 0.05 inches; at Leeds, at 0.05 inches; at Stonyhurst, at 0.05 inches; at York, at 0.05 inches; at Isle of Man, at 0.05 inches; at Newcastle, at 0.05 inches. Tenth ring gauges are placed: At Newton, at 0.02 inches; at Clifton, at 0.02 inches; at Ryde, at 0.02 inches; at Ventnor, at 0.02 inches; at Worthing, at 0.02 inches; at Midhurst, at 0.02 inches; at Clifton, at 0.02 inches; at Liphavish, at 0.02 inches; at St. Thomas's Hospital, at 0.02 inches; at Paddington, at 0.02 inches; at Chiswick Street, at 0.02 inches; at St. John's Wood, at 0.02 inches; at Rose Hill, at 0.02 inches; at Messers, at 0.02 inches; at Stono, at 0.02 inches; at Hertwell House, at 0.02 inches; at Harrow Road Rectory, at 0.02 inches; at Linslade, at 0.02 inches; at Cardington, at 0.02 inches; at Graftonham, at 0.02 inches; at Holkham, at 0.02 inches; at Hawarden, at 0.02 inches; at Gainsborough, at 0.02 inches; at Washington, at 0.02 inches; at Wakefield, at 0.02 inches; at Leeds, at 0.02 inches; at Stonyhurst, at 0.02 inches; at York, at 0.02 inches; at Isle of Man, at 0.02 inches; at Newcastle, at 0.02 inches. Eleventh ring gauges are placed: At Newton, at 0.01 inches; at Clifton, at 0.01 inches; at Ryde, at 0.01 inches; at Ventnor, at 0.01 inches; at Worthing, at 0.01 inches; at Midhurst, at 0.01 inches; at Clifton, at 0.01 inches; at Liphavish, at 0.01 inches; at St. Thomas's Hospital, at 0.01 inches; at Paddington, at 0.01 inches; at Chiswick Street, at 0.01 inches; at St. John's Wood, at 0.01 inches; at Rose Hill, at 0.01 inches; at Messers, at 0.01 inches; at Stono, at 0.01 inches; at Hertwell House, at 0.01 inches; at Harrow Road Rectory, at 0.01 inches; at Linslade, at 0.01 inches; at Cardington, at 0.01 inches; at Graftonham, at 0.01 inches; at Holkham, at 0.01 inches; at Hawarden, at 0.01 inches; at Gainsborough, at 0.01 inches; at Washington, at 0.01 inches; at Wakefield, at 0.01 inches; at Leeds, at 0.01 inches; at Stonyhurst, at 0.01 inches; at York, at 0.01 inches; at Isle of Man, at 0.01 inches; at Newcastle, at 0.01 inches. Twelfth ring gauges are placed: At Newton, at 0.005 inches; at Clifton, at 0.005 inches; at Ryde, at 0.005 inches; at Ventnor, at 0.005 inches; at Worthing, at 0.005 inches; at Midhurst, at 0.005 inches; at Clifton, at 0.005 inches; at Liphavish, at 0.005 inches; at St. Thomas's Hospital, at 0.005 inches; at Paddington, at 0.005 inches; at Chiswick Street, at 0.005 inches; at St. John's Wood, at 0.005 inches; at Rose Hill, at 0.005 inches; at Messers

ON THE
METEOROLOGY OF ENGLAND AND SCOTLAND,

DURING THE

Quarter ending June 30, 1854.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

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FOR HER MAJESTY'S STATIONERY OFFICE.

1854.

On the Meteorology of England and Scotland, during the Quarter ending June 30th, 1854. By JAMES GLAISHER, ESQ., F.R.S., Sec. of the British Meteorological Society.

The period of warm weather which set in on February, so continued till April 21st; the mean excess of daily temperature within this period was 3.8°. On April 22d a cold period began, and continued till the end of the quarter; the mean daily defect of temperature from April 22d to June 30th was 3°. The marked change in the weather which took place on April 22d, caused very great injury to vegetation generally, and many even hardy plants were killed. The fall of rain in June amounted to one inch only, and the defect on the quarter exceeds two inches.

The mean temperature of the air at Greenwich for the quarter ending May, constituting the three spring months, was 47°·7, being 1°·3 above the average of 80 years.

1854. MONTHS.	Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
	Air.		Evaporation.		Dew Point.		Air—Daily Range.		Water of the Thames.		Mean.	Diff. from average of 13 years.	Mean.	Diff. from average of 13 years.
	Mean.	Diff. from average of 13 years.	Mean.	Diff. from average of 13 years.	Mean.	Diff. from average of 13 years.	Mean.	Diff. from average of 13 years.	Mean.	Diff. from average of 13 years.				
	°	°	°	°	°	°	°	°	°	°	in.	in.	gr.	gr.
April .	48.4	+2.7	+1.9	45.0	+1.4	41.1	+0.8	23.7	+8.8	52.2	.274	+.006	3.1	0.9
May .	50.9	-1.7	-2.5	48.6	-1.0	45.9	-0.2	21.3	+2.2	54.9	.327	-.002	3.7	0.9
June .	55.7	-2.3	-3.6	52.7	-1.6	50.0	-1.2	19.2	-0.6	59.1	.371	-.018	4.2	0.9
Mean .	51.7	-0.4	-1.4	48.8	-0.4	45.7	-0.2	21.4	+2.8	55.4	.324	-.005	3.7	0.9

1854. MONTHS.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal movement of the Air.	Reading of Thermometer on Grass.			
	Mean.	Diff. from average of 13 years.	Mean.	Diff. from average of 13 years.	Mean.	Diff. from average of 13 years.	Amount.	Diff. from average of 13 years.		Number of Nights it was		Lowest Reading at Night.	Highest Reading at Night.
	°	°	in.	in.	gr.	gr.	in.	in.		At or below 32°	Between 32° and 40°	Above 40°	
	°	°	in.	in.	gr.	gr.	in.	in.	Miles.				°
April .	.775	-.027	29.985	+.203	142	+2	0.6	-1.1	78	23	5	2	14.8
May .	.859	+.070	29.667	-.119	534	+1	3.3	+1.7	100	11	13	7	23.5
June .	.825	+.067	29.735	-.053	529	+3	1.0	-2.8	102	0	7	23	33.2
Mean .	.817	+.037	29.796	+.031	535	+2	Sum	Sum	93	Sum	Sum	Sum	14.8

NOTE.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunderstorms occurred or thunder was heard and lightning seen, the 9th April at Royston; on the 15th at Guernsey; on the 18th at Hartwell House; on the 19th at Liverpool and Isle of Man; on the 21st at Rose Hill, Bicester, Oxford, Stone, Hartwell House, Hartwell Rectory, and Linslade; and on the 27th at Royston and Nottingham. On 1st May at Hartwell Rectory; on the 2d at Rose Hill, Bicester, Oxford, Stone, Hartwell House, Linslade, Cardington, Bedford, Nottingham, Gainsborough, Wakefield, and Dunino; on the 3d at Warrington; on the 4th at Clifton, Hartwell House, Nottingham, Warrington, and North Shields; on the 5th at Exeter, Stone, Hartwell House, Hartwell Rectory, Linslade, Cardington, Bedford, Grantham, Gainsborough, Liverpool, Wakefield, North Shields, and Dunino; on the 7th at Grantham, North Shields, and Dunino; on the 8th at Clifton, St. John's Wood, Rose Hill, Bicester, Cardington, Bedford, and Gainsborough; on the 9th at Midhurst, Lewisham, Greenwich, St. John's Wood, Rose Hill, Oxford, Hartwell House, Cardington, Bedford, Nottingham, Gainsborough, Wakefield, Stonyhurst, and Dunino; on the 23d at Bicester, Nottingham, Liverpool, Wakefield, and North Shields; on the 24th at Truro, Clifton, Bicester, Hartwell House, North Shields, and Dunino; on the 26th at Helston, Truro, Stone, Hartwell House, Hartwell Rectory, Norwich, Nottingham, Wakefield, and Stonyhurst; on the 27th at Rose Hill, Stone, Hartwell House, Hartwell Rectory, and Norwich; on the 28th at Exeter, Clifton, Lewisham, Greenwich, Stone, Hartwell House, Hartwell Rectory, Linslade, Cardington, Bedford, Norwich, Nottingham, and Wakefield; and on the 30th at Midhurst, Paddington, Norwich, Greenwich, and Bedford. On 1st June at Helston, Falmouth, and Truro; on the 13th at Lewisham and Greenwich; on the 17th at Oxford, Stone, Hartwell Rectory, Linslade, and Wakefield; on the 27th at Gainsborough, Warrington, Wakefield, and Stonyhurst; on the 28th at Cardington, Bedford, Warrington, Liverpool, and Stonyhurst; on the 29th at Midhurst, Cardington, and Bedford; and on the 30th at Midhurst, Lewisham, Greenwich, Paddington, St. John's Wood, Rose Hill, Oxford, and Bedford.

Thunder was heard but lightning was not seen on the 15th April at Jersey; on the 18th at Isle of Man; on the 19th at Warrington; on the 21st at Nottingham; on the 22d at Lewisham; and

on the 27th at Cardington, Grantham, Nottingham, and Wakefield. On the 2d May at Grantham, Holkham, Nottingham, and Stonyhurst; on the 3d at Exeter and Stonyhurst; on the 4th at Stonyhurst; on the 5th at Exeter, Rose Hill, Bicester, and Nottingham; on the 6th at Guernsey; on the 7th at Hartwell Rectory and Nottingham; on the 8th at Oxford, Stone, Hartwell Rectory, and Holkham; on the 9th at Clifton, Stone, and Hartwell Rectory; on the 10th at Arbroath; on the 21st at Cardington and Holkham; on the 22d at Clifton and Bedford; on the 23d at Exeter and Truro, Cardington, Holkham, Gainsborough, Warrington, Liverpool, and Manchester; on the 26th at 27th at Exeter, St. John's Wood, Bicester, Oxford, Manchester, and North Shields; on the 28th at Exeter, Cardiff, Rose Hill, Oxford, Gainsborough, and Manchester; on the 29th at Stone, Hartwell Rectory, Nottingham, and Gainsborough; on the 30th at Midhurst, Lewisham, Cardington, Nottingham, Jersey; on the 14th at Truro and Exeter; on the 15th at Bedford; on the 17th at Bicester, Oxford, Cardington, Gainsborough, Manchester, and North Shields; on the 18th at Liverpool; on the 19th at Manchester; on the 26th at North Shields; on the 27th at Nottingham and Warrington; on the 28th at Cardiff, Clifton, Bicester, Stone, Hartwell House, Hartwell Rectory, Royston, Nottingham, and Manchester; on the 29th at Clifton, Bicester, Stone, Hartwell House, Hartwell Rectory, and Linslade; and on the 30th at Lewisham, Greenwich, Oxford, Stone, Hartwell Rectory, Linslade, and Nottingham.

Lightning was seen, but thunder was not heard, on the 14th April at Jersey and Exeter; on the 15th at Jersey, Rose Hill, Hartwell House, Hartwell Rectory, and Cardington; on the 16th at Jersey and Lewisham; on the 18th at Truro, Exeter, Cardiff, Clifton, Rose Hill, Oxford, Hartwell Rectory, Royston, Nottingham, Liverpool, Manchester, Wakefield, and Stonyhurst; on the 19th at Warrington; and on the 21st at Guernsey. On the 22d May at Helston; on the 23d at Rose Hill; and on the 28th at Helston. On the 8th June at Nottingham; on the 28th at Isle of Man; and on the 29th at Royston.

Hail fell on 6 days in April, on 19 days in May, and on 4 days in June, at the different stations during the quarter.

Snow fell on the 4th April at Bicester; on the 11th at Royston; on the 23d at Royston, Cardington, Bedford, Gainsborough, Leeds, Stonyhurst, York, Durham, and North Shields; and on the 24th at Lewisham, Greenwich, Oxford, Stone, Hartwell Rectory, Linslade, Royston, Cardington, and Holkham.

Solar Halos were seen on 13 days in April, on 5 days in May, and on 6 days in June.

Lunar Halos were seen on 10 days in April, on 6 days in May, and on 2 days in June.

Fog was prevalent on the 1st April at Exeter; on the 2d at Clifton, Stone, Hartwell Rectory, and Stonyhurst; on the 4th at Exeter; on the 5th at Linslade; on the 6th at Bicester, Stone, and Hartwell Rectory; on the 7th at Exeter, Clifton, and Grantham; on the 8th at Clifton; on the 11th at Grantham; on the 20th at North Shields and Arbroath. On the 6th May at Bicester; on the 12th at Lewisham; on the 17th at Hartwell House; on the 22d at North Shields, and on the 29th and 30th at Dunino. On the 20th June at Midhurst and Bicester; on the 22d and 23d at Isle of Man; on the 26th at Arbroath; and on the 29th and 30th at Bicester.

Aurora were seen on the 10th April at Clifton and Warrington; on the 11th at Clifton; on the 14th at Lewisham, Greenwich, Hartwell Rectory, Grantham, Nottingham, and North Shields; on the 15th at Nottingham; on the 18th at Grantham and Nottingham; on the 19th at Clifton, Grantham, and Arbroath; on the 20th at Grantham and Arbroath; and on the 24th, 25th, and 27th at Arbroath. On the 2d May at Oxford; on the 15th at Hartwell House and Hartwell Rectory; on the 16th at Rose Hill, Stone, Hartwell House and Hartwell Rectory; on the 17th at Stone, Hartwell House, and Hartwell Rectory; on the 19th at Oxford; and on the 23d at Stone and Hartwell Rectory. On the 10th June at Oxford; and on the 19th at Grantham.

Lilac in flower on the 8th April at Bicester; on the 10th at Helston; on the 11th at Jersey; on the 17th at Warrington; on the 19th at Oxford; on the 20th at Gainsborough; on the 22d at Rose Hill; on the 23d at Linslade; on the 29th at North Shields; and on the 30th at York. On the 5th May at Nottingham; and on the 6th at Wakefield. On the 1st June at Dunino.

Wheat in ear on the 29th May at Worthing. On the 5th June at Jersey and Holkham; on the 6th at Helston and Newport; on the 9th at Gainsborough; on the 11th at Linslade; on the 18th at Isle of Man; on the 20th at North Shields; and on the 22d at Rose Hill and Nottingham.

Wheat in flower on the 14th June at Helston; on the 15th at Jersey; on the 18th at Holkham; on the 24th at Nottingham; on the 25th at Linslade; and on the 26th at Gainsborough.

Cuckoo first heard on the 16th April at Jersey; on the 20th at Stone, Hartwell House, and Hartwell Rectory; on the 21st at Clifton; on the 22d at Grantham and Gainsborough; on the 26th at Bicester; and on the 27th at Wakefield.

Swallows first seen on the 2d April at Hartwell Rectory; on the 3d at Stone; on the 7th at Bicester; on the 13th at Hartwell House and Grantham; on the 14th at Gainsborough; on the 15th at York; on the 16th at Jersey; on the 17th at Dunino; and on the 20th at Clifton. On the 2d May at Wakefield; and on the 12th at North Shields.

NAMES OF STATIONS.	WIND.										RAIN.										WIND.										RAIN.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
	Mean Pressure of dry Air reduced to the level of the Sea.	Mean Temperature of the Air.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Mean Daily Range of the Thermometer.	Mean Monthly Range of the Thermometer.	Range of Temperature in the Quarter.	Mean Temperature of the Quarter.	Mean Temperature of the Half.	Mean Temperature of the Month.	Mean estimated Strength.	General Direction.	Mean Amount of Cloud.	Number of Days on which it fell.	Amount collected.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required to saturate a cubic foot of Air.	Mean degree of Humidity.	Mean whole Amount of Water in a vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.	Mean Weight of a cubic foot of Air above the level of the Sea.	Mean Pressure of dry Air reduced to the level of the Sea.	Mean Temperature of the Air.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Mean Daily Range of the Thermometer.	Mean Monthly Range of the Thermometer.	Range of Temperature in the Quarter.	Mean Temperature of the Quarter.	Mean Temperature of the Half.	Mean Temperature of the Month.	Mean estimated Strength.	General Direction.	Mean Amount of Cloud.	Number of Days on which it fell.	Amount collected.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required to saturate a cubic foot of Air.	Mean degree of Humidity.	Mean whole Amount of Water in a vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.	Mean Weight of a cubic foot of Air above the level of the Sea.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Jersey	29.653	51.076	63.030	40.108	22.922	11.911	51.076	51.076	51.076	1.8	W.	4.3	31	0.70	7.0	0.5	69.0	0.000	0.000	0.000	29.653	51.076	63.030	40.108	22.922	11.911	51.076	51.076	51.076	1.8	W.	4.3	31	0.70	7.0	0.5	69.0	0.000	0.000	0.000	29.653	51.076	63.030	40.108	22.922	11.911	51.076	51.076	51.076	1.8	W.	4.3	31	0.70	7.0	0.5	69.0	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Guernsey	29.654	50.871	62.030	39.099	22.931	11.911	50.871	50.871	50.871	1.7	S.W. & N.E.	5.1	35	7.6	4.0	0.5	68.2	0.000	0.000	0.000	29.654	50.871	62.030	39.099	22.931	11.911	50.871	50.871	50.871	1.7	S.W. & N.E.	5.1	35	7.6	4.0	0.5	68.2	0.000	0.000	0.000	29.654	50.871	62.030	39.099	22.931	11.911	50.871	50.871	50.871	1.7	S.W. & N.E.	5.1	35	7.6	4.0	0.5	68.2	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Helston	29.648	50.711	62.030	39.099	22.931	11.911	50.711	50.711	50.711	1.9	S.W. & N.E.	4.0	36	8.1	3.8	0.9	68.6	0.000	0.000	0.000	29.648	50.711	62.030	39.099	22.931	11.911	50.711	50.711	50.711	1.9	S.W. & N.E.	4.0	36	8.1	3.8	0.9	68.6	0.000	0.000	0.000	29.648	50.711	62.030	39.099	22.931	11.911	50.711	50.711	50.711	1.9	S.W. & N.E.	4.0	36	8.1	3.8	0.9	68.6	0.000	0.000	0.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Falmouth	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630	50.473	62.030	39.099	22.931	11.911	50.473	50.473	50.473	1.6	S.W. & N.E.	6.5	42	8.2	—	—	—	—	—	—	29.630

Year 1854.	Month.	Air and Water, or Mean Reading of the Barometer.	Mean Pressure of Vapour.			Mean.			Temperature of the Air.			Wind.	Mean Temperature of the Air.			Rain.	Mean Amount of Cloud.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required to saturate a cubic foot of Air.	Humidity.	Mean whole Amount of Water in a vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.
			in.	in.	in.	Bar.	Therm.	Therm.	Lowest.	Range.	Therm.	Direction.	Lowest.	Mean of all the.	Mean Daily.	Evaporation.	Dew Point.	Strength.	Direction.	Amount of Days it fell.	Number of Days it fell.	Mean Weight of a cubic foot of Air.
April	1854.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	N.E. & E.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652
May	1854.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	N.W. & W.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652
June	1854.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	N.E. & E.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652
July	1854.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	N.W. & W.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652
August	1854.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	N.E. & E.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652
September	1854.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	N.W. & W.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652
October	1854.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	N.E. & E.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652
November	1854.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	N.W. & W.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652
December	1854.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	N.E. & E.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652

Year 1854.	Month.	Air and Water, or Mean Reading of the Barometer.	Mean Pressure of Vapour.			Mean.			Temperature of the Air.			Wind.	Mean Temperature of the Air.			Rain.	Mean Amount of Cloud.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required to saturate a cubic foot of Air.	Humidity.	Mean whole Amount of Water in a vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.
			in.	in.	in.	Bar.	Therm.	Therm.	Lowest.	Range.	Therm.	Direction.	Lowest.	Mean of all the.	Mean Daily.	Evaporation.	Dew Point.	Strength.	Direction.	Amount of Days it fell.	Number of Days it fell.	Mean Weight of a cubic foot of Air.
April	1854.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	N.E. & E.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652
May	1854.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	N.W. & W.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652
June	1854.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	N.E. & E.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652
July	1854.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	N.W. & W.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652
August	1854.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	N.E. & E.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652
September	1854.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	N.W. & W.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652
October	1854.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	N.E. & E.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652
November	1854.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	N.W. & W.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652
December	1854.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	N.E. & E.	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652	29.652

Enfield.—April; the mean readings of all the elements are deduced from the last 15 days only. June; the mean readings of the barometer and dry and wet thermometers are deduced from the observations at 22 days only. July; the mean readings of the barometer and dry and wet thermometers are deduced from the observations at 22 days only. August; the mean readings of the barometer and dry and wet thermometers are deduced from the observations at 22 days only. September; the mean readings of the barometer and dry and wet thermometers are deduced from the observations at 22 days only. October; the mean readings of the barometer and dry and wet thermometers are deduced from the observations at 22 days only. November; the mean readings of the barometer and dry and wet thermometers are deduced from the observations at 22 days only. December; the mean readings of the barometer and dry and wet thermometers are deduced from the observations at 22 days only.

Second rain gauges are placed: At Jersey, at the height of 6 feet; the amount collected was 7 inches. At Newport, 3 feet; the amount was 5.9 inches. At Clifton, 50 feet; the amount was 6.2 inches. At Oxford, 22 feet; the amount was 5.3 inches. At Hartwell Rectory, 4 feet; the amount was 3.7 inches. At Holkham, 4 feet; the amount was 5.1 inches. At Nottingham, 25 feet; the amount was 5.4 inches. And at Warrington, 54 feet; the amount was 5.3 inches.

ON THE
METEOROLOGY OF ENGLAND AND SCOTLAND,

DURING THE

Quarter ending September 30, 1854.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

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1854.

On the Meteorology of England and Scotland, during the Quarter ending September 30th, 1854. By JAMES GLAISHER, ESQ., F.R.S., Sec. of the British Meteorological Society.

The cold period which set in on April 22d continued till July 19th; the mean daily defect of temperature from July 1st to July 19th exceeded 4°, and from April 22d to July 19th averaged 3.4°. At the beginning of July the weather was bleak and variable, and the temperature was low; on some days the deficiency exceeded 6° or 7°, and on one the defect amounted to 10°. From July 20th to the end of the month the temperature was in excess, on the 25th to the amount of 12°, and for the period it averaged 4° daily. From August 1st to 18th the variations of temperature were considerable and frequent; a few warm days being succeeded by a few cold days, and followed by a few warm days again. On August 19th a generally fine and warm period set in, and continued till the end of the quarter, the mean daily excess of temperature for this period was 2.6°.

The temperature of the air for the quarter differs but little from the average. The range of temperature day by day has been unusually large, particularly in September. The temperature of the dew point has been low throughout the quarter, and therefore there has been less than the usual amount of water mixed with the air, and the atmosphere has consequently been less humid than usual, particularly in August and September.

The mean temperature of the air at Greenwich for the quarter ending August, constituting the three summer months, was 58°·0, being 1°·9 below the average of 80 years.

Temperature of													
1854.		Air.		Evaporation.		Dew Point.		Air—Daily Range.		Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
MONTHS.	Mean.	Diff. from average of 80 years.	Diff. from average of 13 years.	Mean.	Diff. from average of 13 years.	Mean.	Diff. from average of 13 years.	Mean.	Diff. from average of 13 years.	Mean.	Diff. from average of 13 years.	Mean.	Diff. from average of 13 years.
July . .	60.3	-1.0	-1.5	56.2	-1.2	53.8	-0.7	21.6	+4.1	64.1	.413	in.	gr.
Aug. . .	60.9	+0.4	-0.2	56.5	-0.9	53.3	-1.2	20.7	+2.7	64.1	.416	-.025	4.6
Sept. . .	58.1	+1.8	+1.3	53.9	0.0	50.4	-0.9	25.7	+8.4	62.9	.375	-.021	4.7
Mean . .	59.8	+0.4	-0.1	55.6	-0.7	52.4	-0.9	22.7	+5.1	63.7	.401	-.017	4.5

Reading of Thermometer on Grass.													
1854.		Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal movement of the Air.		Number of Nights it was	
MONTHS.	Mean.	Diff. from average of 13 years.	Mean.	Diff. from average of 13 years.	Mean.	Diff. from average of 13 years.	Amount.	Diff. from average of 39 years.	Miles.	At or below 40°	Between 40° and 50°	Above 50°	Lowest Reading at Night.
July . .	.783	-.005	29.807	+.007	gr.	gr.	in.	1.0	75	1	24	6	34.5
Aug. . .	.771	-.039	29.889	+.104	526	+2	1.7	+0.4	79	7	18	6	30.2
Sept. . .	.770	-.057	30.031	+.199	532	+2	0.7	-1.8	83	19	6	5	31.0
Mean . .	.775	-.034	29.909	+.107	528	+2	Sum	Sum	79	Sum	Sum	Sum	30.2

NOTE.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

The deficiency of rain which has prevailed from the beginning of the year has continued during the quarter. The fall up to the end of September is only two thirds of the average for the first 9 months of the year.

The wind has been mostly from the south-west, more steadily in the northern than in the southern parts of the country. Everywhere it has been light, and the air has been in less motion than usual.

The electricity of the atmosphere has been for the most part very weak, and almost always positive.

Thunderstorms have been less frequent than usual, and there were none of marked character. Scarcely any hail has fallen. Fogs began to be prevalent at the end of August. There has been a marked absence of cumuli and cirrostratus clouds, and at times the atmosphere has been peculiarly transparent.

The hay harvest was very late, and the crop a poor one generally. In the northern parts of the country hay was standing in the fields when the corn was ready to cart off.

Wheat was in flower about the 2d of July, and was cut in Cornwall and Devonshire about the 9th of August; in latitude 52° about the 10th; in latitude 53° the 13th and 14th; in 53½° the 15th; from 54° to 55°, between 16th and 21st; and in the neighbourhood of Dunino, whose latitude is 56° 34', on the 26th.

The grain crops are good everywhere, and well got in. Apples and pears are scarce. Turnips are small from the drought. Potatoes are abundant. The blight in fruit showed itself in Scotland about the 16th July, and the loss there from disease has been great. In many places no loss has been sustained this year from the potato disease.

Thunderstorms occurred, or thunder heard and lightning seen, on the 5th and 7th July at Hartwell Rectory; on the 8th at Truro, Helston, and Clifton; on the 9th at Lewisham; on the 14th and 16th at Liverpool; on the 24th at Falmouth, Truro, Clifton, and Stone; on the 25th at Teignmouth, Exeter, Oxford, Stone, and Cardington; on the 26th at Jersey, Teignmouth, Newport, Ryde, and Clifton; on the 27th at Guernsey and Exeter; on the 30th at Paddington, St. John's Wood, Cardington, Holkham, Nottingham, and North Shields; on the 31st at Jersey, Cardington, and Nottingham. On the 3d August at Paddington, St. John's Wood, and Bicester; on the 10th at Jersey; on the 15th at Hartwell House, Grantham, Gainsborough, Warrington, Stonyhurst, North Shields, Dunino, and Arbroath; on the 16th at Ryde, Cardington, Grantham, Holkham, Nottingham, York, Dunino, and Arbroath; on the 17th at Ryde, Hartwell House, Cardington, Nottingham, and Wakefield; and on the 22d at Norwich and Grantham. On the 13th September at Royston; on the 21st at Bicester and Norwich; and on the 24th at Grantham.

Hail fell on the 8th July at Helston; on the 25th at Exeter; on the 26th at Teignmouth; and on the 31st at Cardington. On the 15th August at Holkham, Hawarden, and Whitehaven. On the 20th September at Stonyhurst and Dunino; and on the 21st at Holkham.

Thunder was heard but lightning was not seen on the 2d July at Holkham; on the 4th at St. John's Wood; on the 6th at Stonyhurst; on the 7th at Oxford and Stone; on the 8th at Falmouth, Exeter, and Holkham; on the 9th at St. John's Wood and Cardington; on the 10th at Teignmouth and Lewisham; on the 12th at Hawarden; on the 14th at Liverpool; on the 18th at Stonyhurst; on the 22d at Ryde; on the 24th at Teignmouth, Oxford, and Hartwell Rectory; on the 30th at Lewisham, Norwich, Manchester, Wakefield, and York; and on the 31st at Clifton, Lewisham, Paddington, Oxford, Stone, Hartwell Rectory, Norwich, Grantham, Holkham, Nottingham, and Gainsborough. On the 1st August at Nottingham; on the 2d at Lewisham, St. Thomas' Hospital, and Nottingham; on the 3d at Lewisham; on the 10th at Holkham; on the 13th at Norwich and Grantham; on the 14th at Clifton and Holkham; on the 15th at Rose Hill, Norwich, Holkham, Nottingham, Hawarden, and Liverpool; on the 16th at Rose Hill, Oxford, and Wakefield; on the 17th at St. John's Wood; on the 18th at Stonyhurst; on the 19th at Jersey and St. John's Wood; on the 20th at Jersey; on the 22d at Holkham, Nottingham, and Warrington; and on the 23d at Warrington. On the 13th September at Royston; on the 21st at Hartwell House, Hartwell Rectory, Nottingham, and Wakefield; and on the 26th at Oxford.

Lightning was seen but thunder was not heard on the 7th July at Oxford; on the 18th at Nottingham; on the 24th at Jersey, Helston, Exeter, Paddington, Oxford, Cardington, and Nottingham; on the 25th at Jersey, Helston, Falmouth, Truro, Clifton, Lewisham, Paddington, Rose Hill, and Cardington; on the 26th at Helston and Truro; and on the 30th at Rose Hill, Oxford, Nottingham, and Wakefield. On the 1st and 14th August at Grantham; on the 16th at Oxford; on the 17th at Bicester; on the 20th at Cardington; on the 21st at Hawarden; on the 22d at Bicester and Oxford; and on the 28th at St. Thomas' Hospital and Cardington. On the 13th at Helston; on the 16th at Royston; on the 21st at Rose Hill, Oxford, Royston, Cardington, and Nottingham; and on the 26th at Grantham.

Solar Halos were seen on the 2d July at Grantham; on the 8th at Stonyhurst; on the 9th at Nottingham; on the 24th at Dunino; on the 29th at North Shields and Dunino; and on the 30th at Nottingham. On the 8th August at Nottingham; on the 13th at Hartwell Rectory; on the 17th at Grantham and Nottingham; and on the 19th at Grantham. On the 2d and 13th September at Nottingham; on the 14th at Stonyhurst; on the 15th at Hartwell Rectory and Whitehaven; on the 17th at Hartwell Rectory; on the 18th at Nottingham; on the 22d at Stonyhurst; on the 23d at Isle of Man; on the 28th at Whitehaven; and on the 29th and 30th at North Shields.

Lunar Halos were seen on the 1st September at Nottingham, and on the 30th at Hartwell Rectory.

Aurora were seen on the 19th and 20th August at Arbroath. On the 3d September at Stonyhurst; on the 17th at Dunino; on the 18th and 21st at Arbroath; on the 26th at Oxford, Dunino, and Arbroath; and on the 27th at Clifton.

Fog was prevalent on the 2d July at Helston; on the 11th at Jersey; on the 15th at Dunino; on the 16th at St. John's Wood; on the 22d at Helston; on the 23d at Clifton; and on the 26th, 27th, and 28th at Jersey. On the 3d August at Exeter; on the 6th at Bicester and Dunino; on the 8th and 11th at Teignmouth; on the 17th at Jersey; on the 18th at Exeter and Gainsborough; on the 29th at Clifton; and on the 31st at Exeter. On the 3d September at Exeter, Lewisham, Hartwell House, Hartwell Rectory, Cardington, and Holkham; on the 4th at Hartwell House; on the 5th at Bicester; on the 6th at Clifton, Rose Hill, Bicester, and Hartwell House; on the 7th at Clifton, Rose Hill, Bicester, Hartwell House, Hartwell Rectory, and Cardington; on the 8th at Hartwell House; on the 11th at Clifton, Lewisham, Rose Hill, Bicester, and Hartwell Rectory; on the 15th and 16th at Helston and Teignmouth; on the 19th at Teignmouth; on the 26th at Clifton and Bicester; on the 27th at Clifton, Lewisham, and Stonyhurst; on the 28th at Clifton and Stonyhurst; on the 29th at Exeter, Clifton, Lewisham, Rose Hill, Holkham, and Stonyhurst; and on the 30th at Truro, Teignmouth, Exeter, Clifton, Lewisham, Rose Hill, Bicester, Hartwell House, Cardington, and Holkham.

Meteorological Table, Quarter ending September 30th, 1854.

NAMES OF STATIONS.	MEAN PRESSURE OF DRY AIR reduced to the level of the Sea.										WIND.		RAIN.		MEAN WEIGHT OF VAPOUR in a cubic foot of Air.		MEAN DEGREE OF HUMIDITY.		MEAN WHOLE AMOUNT of Water in a vertical column of Atmosphere.		MEAN WEIGHT of a cubic foot of Air.		MEAN HEIGHT of Barometer above the level of the Sea.	
	in.	°	°	°	°	°	°	°	°	°	General Direction.	Mean Amount of Cloud.	Number of Days on which it fell.	Amount collected.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required to saturate a cubic foot of Air.	Mean degree of Humidity.	Mean whole Amount of Water in a vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.	Mean Height of Barometer above the level of the Sea.	Mean Weight of a cubic foot of Air.	Mean Height of Barometer above the level of the Sea.	Mean Weight of a cubic foot of Air.	Mean Height of Barometer above the level of the Sea.
Jersey -	29.677	0.1	0.85	0.51	0.11	0.07	0.34	0.57	0.55	6	S.W.	3.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Guernsey -	29.655	0.9	0.76	0.52	0.0	0.4	0.23	0.24	0.57	2.5	N.W. & N.E.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Helston -	29.668	0.1	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W. & N.W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Falmouth -	29.668	0.1	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	E. & S.W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truro -	29.668	0.1	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	Var.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Teignmouth -	29.684	0.1	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W. & W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
High-street, Exeter -	29.684	0.1	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W. & W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exeter -	29.684	0.1	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W. & W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Venator -	29.714	0.2	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	Var.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Newport -	29.700	0.1	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	Var.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ryde -	29.699	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	Var.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Worthing -	29.687	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	Var.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Clifton -	29.670	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W. & W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lewisham -	29.670	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W. & W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Royal Observatory -	29.670	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W. & N.E.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
St. Thomas' Hospital -	29.670	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	Var.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Paddington -	29.670	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	Var.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Enfield -	29.689	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rose Hill -	29.710	0.7	0.84	0.36	0.21	0.58	0.47	0.53	0.49	1.8	S.W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Oxford -	29.694	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W. & W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stone -	29.688	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	Var.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hartwell House -	29.688	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	Var.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hartwell Rectory -	29.688	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	Var.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Royston -	29.712	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	Var.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cardington -	29.694	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	Var.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Norwich -	29.694	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	Var.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grantham -	29.688	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W. & W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Derby -	29.688	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W. & W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Holkham -	29.688	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W. & W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nottingham -	29.688	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W. & W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hawarden -	29.688	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W. & W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alderley Edge -	29.688	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W. & W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gainsborough -	29.688	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W. & W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Warrington -	29.688	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W. & W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Liverpool -	29.688	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W. & W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wakfield -	29.688	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W. & W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Leeds -	29.688	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W. & W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stonyhurst -	29.688	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W. & W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
York -	29.688	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W. & W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Isle of Man -	29.688	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Whitehaven -	29.688	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
North Shields -	29.688	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dunino -	29.688	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arbroath -	29.688	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W. & W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0

The highest readings of the thermometer in air were 92° at Greenwich, and 88° at Helston, High-street Exeter, and Ryde. The lowest were 29° at York, 33° at Nottingham, 33° at Wakefield, and 34° at Stonyhurst. The least daily ranges of temperature took place at Guernsey, Jersey, Worthing, Liverpool, Warrington, and North Shields; and the greatest at Newport, Greenwich, Lewisham, Rose Hill, Nottingham, Gainsborough, and Wakefield. Rain fell on the least number of days at Guernsey, Jersey, Worthing, Hawarden, Gainsborough, and Wakefield. Venator; and on the greatest number at Royston, North Shields, Wakefield, Nottingham, Gainsborough, Dunino, Helston, and Falmouth. The mean amount of rain for the quarter was 2.9 inches; and the mean amount for these places 2.9 inches; the largest falls took place at Stonyhurst, Whitehaven, North Shields, Holkham, and Norwich; and their mean is 9.2 inches.

QUARTERLY METEOROLOGICAL TABLE for different PARALLELS of LATITUDE.

PARALLELS OF LATITUDE, &c.	MEAN PRESSURE OF DRY AIR reduced to the level of the Sea.										WIND.		RAIN.		MEAN WEIGHT OF VAPOUR in a cubic foot of Air.		MEAN DEGREE OF HUMIDITY.		MEAN WHOLE AMOUNT of Water in a vertical column of Atmosphere.		MEAN WEIGHT of a cubic foot of Air.		MEAN HEIGHT of Barometer above the level of the Sea.	
	in.	°	°	°	°	°	°	°	°	°	General Direction.	Mean Amount of Cloud.	Number of Days.	Amount collected.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required to saturate a cubic foot of Air.	Mean degree of Humidity.	Mean whole Amount of Water in a vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.	Mean Height of Barometer above the level of the Sea.	Mean Weight of a cubic foot of Air.	Mean Height of Barometer above the level of the Sea.		
In the Counties of Cornwall and Devonshire	29.682	0.2	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0		
Newport and Ryde	29.682	0.2	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0		
Worthing	29.682	0.2	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0		
Between the latitudes of 51° and 52°	29.674	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0		
Between the latitudes of 52° and 53°	29.674	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0		
Between the latitudes of 53° and 54°	29.668	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0		
Liverpool and Whitehaven	29.668	0.0	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0		
Isle of Man	29.634	0.4	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0		
North Shields	29.634	0.4	0.88	0.46	0.17	0.03	0.34	0.57	0.55	1.9	S.W.	4.0	10	0.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0		
Dunino and Arbroath	29.722	0.4	0.66	0.73	0.42	0.10	0.37	0.33	0.84	0.28	S.E.	3.3	8	0.7	0.8	0.7	87	0.8	0.804	0.6	31	29.124		

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ON THE
METEOROLOGY OF ENGLAND AND SCOTLAND,

DURING THE

Quarter ending December 31, 1854.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

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1855.

On the Meteorology of England and Scotland, during the Quarter ending December 31st, 1854. By JAMES GLAISHER, ESQ., F.R.S., Sec. of the British Meteorological Society.

The warm period which set in on August 19th continued till October 11th; the mean daily excess of temperature from October 1st to October 11th was $2^{\circ}5$; from October 12th to October 28th the temperature was in defect to the amount of $3^{\circ}2$ daily; from October 29th to November 2d it was $5^{\circ}6$ in excess; on October 31st it amounted to $11^{\circ}2$. On November 2d a cold period set in, and continued, with the exception of a few days at the beginning of December, till December 12th; the average daily defect of temperature within this period was $2^{\circ}5$; from December 13th the temperature was for a few days together in great excess, then for a few days in defect, and then in great excess again, and so with rapid alternations till the end of the quarter; the average daily departure from December 13th to the end of the year was $2^{\circ}8$ in excess; the excess on the 14th, 15th, 22d, and 25th exceeded 11° on each day.

The temperature of the air for the quarter differed but little from the average. The range of temperature day by day has been large. The temperature of the dew point was low, except in December.

The rain has been deficient in each month of this quarter. The fall for the year about London amounts to 18.6 inches, being about three fourths of the yearly average. The observer at Jersey remarks that the quarter has been remarkable for excessive rain, violent gusts of wind, and extreme oscillations of the barometer; he also records that on the 26th of October a man was killed in a thunderstorm, and the iron nails of his shoes were all drawn out.

The wind has been mostly from the south-west.

The electricity of the atmosphere has been for the most part positive, at times strong. It has been negative occasionally, chiefly during the fall of rain.

Ozone was small in amount in October, was more abundant in November, and still more so in December, particularly near the sea coast.

The mean temperature of the air at Greenwich for the quarter ending November, constituting the three autumn months, was $49^{\circ}3$, being the same as the average of 83 years.

1854. MONTHS.		Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
		Air.		Evaporation.		Dew Point.		Air— Daily Range.		Water of the Thames.					
		Mean.	Diff. from average of 83 years.	Diff. from average of 13 years.	Mean.	Diff. from average of 13 years.	Mean.	Diff. from average of 13 years.	Mean.		Diff. from average of 13 years.				
												Mean.	Diff. from average of 13 years.	Mean.	Diff. from average of 13 years.
Oct. . .	49.4	+0.1	-0.3	47.1	-0.2	44.5	-0.9	17.5	+3.9	54.1	in. .309	- .012	gr. 3.6	gr. -0.1	
Nov. . .	40.5	-2.0	-3.8	39.4	-3.3	37.9	-3.6	12.7	+2.0	45.5	.245	-.028	2.9	-0.2	
Dec. . .	41.3	+2.4	+0.9	39.6	+0.6	37.0	+0.1	11.0	+2.0	41.7	.239	-.001	2.8	0.0	
Mean .	43.7	+0.2	-1.1	42.0	-1.1	39.8	-1.5	13.7	+2.6	47.1	.264	-.014	3.1	-0.1	

1854. MONTHS.		Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal movement of the Air.	Reading of Thermometer on Grass.					
		Mean.	Diff. from average of 13 years.	Mean.	Diff. from average of 13 years.	Mean.	Diff. from average of 13 years.	Amount.	Diff. from average of 13 years.		Number of Nights it was				Lowest Reading at Night.	Highest Reading at Night.
											At or below 32°					
											At or below 32°	Be- tween 32° and 40°	Above 40°			
Oct. . .	.846	-.016	29.724	+.038	535	+ 1	2.6	-.0.2	Miles. 87	11	12	8	23.5	49.8		
Nov. . .	.916	+.031	29.728	+.003	547	+ 5	1.4	-1.2	97	23	5	2	14.0	41.2		
Dec. . .	.872	-.017	29.768	-.009	546	- 4	1.4	-0.6	182	23	6	2	20.2	42.5		
Mean .	.878	-.001	29.740	-.003	543	+ 1	Sum 5.4	Sum -0.7	122	Sum 57	Sum 23	Sum 12	14.0	49.8		

NOTE.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunderstorms occurred, or thunder was heard and lightning seen, on the 8th October at Guernsey, Truro, Torquay, and Exeter; on the 9th at Helston; on the 10th at Bicester; on the 23d at Grantham and Worcester; on the 25th at Jersey; and on the 26th at Jersey, Teignmouth, and Liverpool. On the 9th November at North Shields. On the 12th December at Hawarden; on the 27th at Hawarden and Warrington; and on the 31st at Exeter.

Thunder was heard, but lightning was not seen, on the 23d October at Torquay, Greenwich, and Nottingham; on the 26th at Knebworth; and on the 28th and 31st at Nottingham. On the 16th November at Exeter.

Lightning was seen, but thunder was not heard, on 9 days in October, 6 days in November, and on 3 days in December.

Hail fell on 11th October at Hartwell Rectory, Hawarden, Warrington, and Stonyhurst; on the 17th at Falmouth, North Shields, and Arbroath; on the 18th at North Shields and Dunino; on the

19th at Falmouth; on the 20th at Oxford and North Shields; on the 23d at Guernsey, Helston, Truro, Exeter, Clifton, Lewisham, Worcester, Nottingham, Hawarden, Stonyhurst, and Isle of Man; on the 24th at Liverpool, Stonyhurst, and Isle of Man; on the 25th at Jersey, Truro, Clifton, Hawarden, and Liverpool; and on the 26th at Jersey and Liverpool. On the 3d November at Hawarden; on the 8th at Guernsey; on the 9th at Knebworth, Hawarden, and North Shields; on the 14th at Jersey and Guernsey; on the 15th at Guernsey, Helston, and Exeter; on the 19th and 20th at Guernsey; on the 21st at Guernsey, Grantham, Hawarden, Liverpool, and Isle of Man; on the 22d at Jersey, Guernsey, Falmouth, Stone, Hartwell Rectory, and Liverpool; on the 23d at Jersey, North Shields, and Arbroath; on the 24th at Jersey, Guernsey, Oxford, Norwich, Holkham, North Shields, and Arbroath; on the 25th at Guernsey and North Shields; on the 28th at Nottingham; and on the 29th at Teignmouth, Rose Hill, Oxford, Hawarden, Liverpool, and Manchester. On the 1st December at Guernsey and North Shields; on the 4th at Guernsey; on the 5th at Jersey; on the 6th at Jersey, Helston, Falmouth, and Stonyhurst; on the 7th at Hawarden and North Shields; on the 9th at Guernsey, Helston, Falmouth, Truro, Teignmouth, Berkhamstead, Warrington, Isle of Man, and Anstruther; on the 10th at Jersey and Truro; on the 12th at Hawarden and Stonyhurst; on the 15th at Falmouth; on the 16th at Falmouth, Teignmouth, Grantham, Hawarden, and Liverpool; on the 17th at Guernsey; on the 18th at Falmouth, Teignmouth, Holkham, Hawarden, and North Shields; on the 22d at Anstruther; on the 25th at Hawarden; on the 26th at Truro, Manchester, Wakefield, Leeds, and Stonyhurst; on the 27th at Guernsey, Teignmouth, Hawarden, Warrington, Liverpool, and Manchester; and on the 31st at Grantham.

Fog was prevalent on the 1st October at Helston, Truro, Teignmouth, Exeter, Clifton, Lewisham, Greenwich, St. Thomas' Hospital, Paddington, Rose Hill, Bicester, Oxford, Stone, Hartwell House, Hartwell Rectory, Knebworth, Royston, Holkham, and Nottingham; on the 2d at Teignmouth, Exeter, Clifton, Lewisham, Greenwich, St. Thomas' Hospital, Paddington, Rose Hill, Bicester, Oxford, Hartwell House, Hartwell Rectory, Knebworth, Royston, Holkham, and Nottingham; on the 4th at Teignmouth and Stonyhurst; on the 6th at Stonyhurst; on the 9th at Truro; on the 10th at Clifton, Greenwich, St. Thomas' Hospital, Paddington, Rose Hill, Stone, Hartwell House, Hartwell Rectory, and Stonyhurst; on the 12th at Truro, Exeter, Hartwell House, and North Shields; on the 13th at Exeter, Clifton, Lewisham, St. Thomas' Hospital, Paddington, Rose Hill, Hartwell House, Wakefield, and Stonyhurst; on the 14th at Greenwich, Paddington, and Hartwell House; on the 15th at Paddington, Knebworth, and Royston; on the 16th at Bicester and Stonyhurst; on the 17th at Wakefield; on the 19th at Dunino; on the 25th at Paddington, Hartwell Rectory, Knebworth, Gainsborough, Warrington, and North Shields; on the 26th at Stonyhurst; on the 27th at Truro, Clifton, St. Thomas' Hospital, Paddington, Rose Hill, Oxford, Wakefield, and North Shields; on the 29th at Truro; on the 30th at Hartwell Rectory, Knebworth, Royston, and Wakefield; and on the 31st at Truro, Bicester, and Stone. On the 1st November at Clifton, St. Thomas' Hospital, St. John's Wood, Rose Hill, Bicester, Oxford, Knebworth, Norwich, and Wakefield; on the 2d at Helston, Teignmouth, Bexley Heath, Clifton, Berkhamstead, Hartwell House, Knebworth, Royston, Gainsborough, and Stonyhurst; on the 4th at Greenwich; on the 5th at St. John's Wood; on the 6th at Clifton, Greenwich, Bicester, Oxford, Warrington, Manchester, and Stonyhurst; on the 7th at Truro, Clifton, Greenwich, Lewisham, Stone, Hartwell Rectory, Knebworth, Norwich, and Bowdon; on the 8th at Hartwell House, Gainsborough, and North Shields; on the 12th at Teignmouth, Exeter, Bexley Heath, and Stonyhurst; on the 13th at Exeter, Oxford, Knebworth, Leeds, and Stonyhurst; on the 14th at Oxford; on the 15th at Exeter and North Shields; on the 16th at Teignmouth, Exeter, Greenwich, Berkhamstead, Rose Hill, Stone, Hartwell Rectory, Bowdon, and Gainsborough; on the 17th at Torquay, Exeter, Bexley Heath, Clifton, Lewisham, Berkhamstead, Rose Hill, Oxford, Stone, Hartwell Rectory, Knebworth, Royston, Hawarden, Cardington, Liverpool, and Stonyhurst; on the 18th at Exeter; on the 19th at Wakefield; on the 21st at Exeter; on the 22d at Greenwich, Cardington, and Bowdon; on the 23d at Exeter, Clifton, and Greenwich; on the 26th at Exeter, Clifton, Knebworth, and Stonyhurst; on the 27th at Teignmouth, Exeter, Clifton, Lewisham, Greenwich, St. Thomas' Hospital, St. John's Wood, Berkhamstead, Rose Hill, Bicester, Oxford, Wakefield, and Stonyhurst; on the 28th at Exeter and Wakefield; on the 30th at Teignmouth and Exeter. On the 7th December at Truro, Gainsborough, and Stonyhurst; on the 8th at Stonyhurst; on the 11th at Truro, Exeter, and Stonyhurst; on the 12th at Truro, Exeter, and Clifton; on the 13th at Exeter, Paddington, and Rose Hill; on the 18th at Paddington; on the 19th at Warrington and Stonyhurst; on the 20th at Norwich; on the 21st at Exeter, Paddington, and Wakefield; on the 24th at Paddington; and on the 29th at Exeter and Paddington.

Aurora were seen on the 2d October at Oxford; on the 8th at Dunino and Arbroath; on the 24th at Dunino; on the 25th at Stonyhurst, Dunino, and Arbroath; on the 26th at Dunino; and on the 28th at Clifton. On the 9th November at Oxford. On the 5th December at Arbroath; on the 10th at Bowdon; and on the 12th at Arbroath.

Solar Halos were seen on 18 days during the quarter.

Lunar Halos were seen on 33 nights during the quarter.

Snow first fell on the 9th November at York and North Shields; and on 21 other days at different parts of the country north of Latitude 51° , but mostly in small quantities.

Mushrooms were abundant up to November 12th. The young wheat looks very healthy everywhere.

Swallows departed from Clifton, Bristol, October 1st; from Nottingham, October 14th; and from Helston and Guernsey on October 27th.

Forest trees were generally divested of leaves, in the Midland Counties between November 20th and 26th; in Hertfordshire between October 26th and 31st; at Teignmouth in Devonshire on December 2d; and at Helston in Cornwall between November 8th and 15th.

Meteorological Table, Quarter ending December 31st, 1854.

NAMES OF STATIONS.	Mean Pressure of dry Air reduced to the level of the Sea.		Mean Temperature of the Air.		Highest Reading of the Thermometer.		Lowest Reading of the Thermometer.		Mean Daily Range of Temperature.		Mean Monthly Range of Temperature.		Range of Temperature in the Quarter.		Mean Temperature of Evaporation.		Mean Temperature of Dew Point.		Mean estimated Strength.	WIND. General Direction.	Mean Amount of Cloud, in which it fell.	RAIN. Amount collected.	Mean Weight of Vapour in a cubic foot of Air.		Mean additional Weight required to saturate a cubic foot of Air.	Mean degree of Humidity.	Mean whole Amount of Water in a vertical column of Atmosphere.		Mean Weight of a cubic foot of Water at the temperature of the Air.	
	in.	°	in.	°	in.	°	in.	°	in.	°	in.	°	in.	°	in.	°	in.	°					in.	°			in.	°		in.
Jersey -	29.608	49.0	50.0	33.0	6.9	24.0	36.0	0	46.9	44.6	2.0																			
Guernsey -	29.674	48.8	47.0	35.5	7.0	21.8	31.5	0	46.9	44.6	2.0																			
Helston -	29.673	49.2	47.0	30.0	11.0	31.3	43.0	0	46.8	44.2	2.2																			
Falmouth -	29.669	48.2	49.0	29.0	10.8	28.7	40.0	0	44.2	42.2	1.7																			
Truro -	29.669	48.1	47.0	30.0	12.8	36.0	33.0	0	45.8	43.2	1.7																			
Torquay -	29.683	46.9	47.0	30.0	8.9	26.3	37.0	0	43.8	40.0	2.8																			
Teignmouth -	29.683	46.9	47.0	30.0	8.9	26.3	37.0	0	43.8	40.0	2.8																			
High-street, Exeter -	29.678	46.9	47.0	30.0	9.8	24.1	43.7	0	44.5	41.6	1.7																			
Exeter -	29.701	46.9	47.0	30.0	13.1	26.4	44.5	0	43.6	40.6	1.7																			
Ventnor -	29.682	47.7	47.0	31.0	9.3	27.7	39.0	0	44.7	42.0	2.5																			
Newport -	29.693	45.8	47.8	29.6	13.2	26.7	39.1	0	42.3	40.3	0.8																			
Ryde -	29.695	45.1	47.0	25.4	14.5	34.5	45.6	0	43.1	42.0	0.6																			
Worthing -	29.692	44.7	47.0	28.8	10.0	29.2	34.6	0	43.0	40.0	1.0																			
Clifton -	29.694	44.7	47.0	28.8	10.0	29.2	34.6	0	43.0	40.0	0.8																			
Lewisham -	29.694	43.7	47.0	28.8	10.0	29.2	34.6	0	43.0	40.0	0.8																			
Teignmouth -	29.694	43.7	47.0	28.8	10.0	29.2	34.6	0	43.0	40.0	0.8																			
St. Thomas's Hospital -	29.694	43.7	47.0	28.8	10.0	29.2	34.6	0	43.0	40.0	0.8																			
St. Mary's Hospital -	29.694	43.7	47.0	28.8	10.0	29.2	34.6	0	43.0	40.0	0.8																			
St. John's Wood -	29.694	43.7	47.0	28.8	10.0	29.2	34.6	0	43.0	40.0	0.8																			
Enfield -	29.674	43.1	47.0	22.0	13.8	36.0	47.0	0	40.0	37.0	1.0																			
Rose Hill -	29.657	42.8	47.0	22.2	13.7	34.4	46.0	0	40.0	37.0	1.0																			
Bicester -	29.659	44.3	47.0	18.5	15.1	11.0	36.0	0	41.9	38.0	1.9																			
Oxford -	29.690	44.1	47.0	18.5	15.0	14.4	46.5	0	41.7	38.5	1.8																			
Stone -	29.697	42.5	47.0	20.0	14.0	36.3	47.0	0	40.9	38.8	1.0																			
Hartwell House -	29.697	42.5	47.0	20.0	14.0	36.3	47.0	0	40.9	38.8	1.0																			
Hartwell Rectory -	29.697	42.5	47.0	20.0	14.0	36.3	47.0	0	40.9	38.8	1.0																			
Knebworth -	29.697	42.5	47.0	20.0	14.0	36.3	47.0	0	40.9	38.8	1.0																			
Royston -	29.697	42.5	47.0	20.0	14.0	36.3	47.0	0	40.9	38.8	1.0																			
Cardington -	29.697	42.5	47.0	20.0	14.0	36.3	47.0	0	40.9	38.8	1.0																			
Bedford -	29.697	42.5	47.0	20.0	14.0	36.3	47.0	0	40.9	38.8	1.0																			
Worcester -	29.697	42.5	47.0	20.0	14.0	36.3	47.0	0	40.9	38.8	1.0																			
Norwich -	29.697	42.5	47.0	20.0	14.0	36.3	47.0	0	40.9	38.8	1.0																			
Grantham -	29.697	42.5	47.0	20.0	14.0	36.3	47.0	0	40.9	38.8	1.0																			
Derby -	29.697	42.5	47.0	20.0	14.0	36.3	47.0	0	40.9	38.8	1.0																			
Holkham -	29.697	42.5	47.0	20.0	14.0	36.3	47.0	0	40.9	38.8	1.0																			
Nottingham -	29.697	42.5	47.0	20.0	14.0	36.3	47.0	0	40.9	38.8	1.0																			
Hawarden -	29.697	42.5	47.0	20.0	14.0	36.3	47.0	0	40.9	38.8	1.0																			
Bowdon -	29.697	42.5	47.0	20.0	14.0	36.3	47.0	0	40.9	38.8	1.0																			
Gainsborough -	29.697	42.5	47.0	20.0	14.0	36.3	47.0	0	40.9	38.8	1.0																			
Warrington -	29.697	42.5	47.0	20.0	14.0	36.3	47.0	0	40.9	38.8	1.0																			
Liverpool -	29.697	42.5	47.0	20.0	14.0	36.3	47.0	0	40.9	38.8	1.0																			
Manchester -	29.697	42.5	47.0	20.0	14.0	36.3	47.0	0	40.9	38.8	1.0																			
Wakefield -	29.697	42.5	47.0	20.0	14.0	36.3	47.0	0	40.9	38.8	1.0																			
Stonyhurst -	29.697	42.5	47.0	20.0	14.0	36.3	47.0	0	40.9	38.8	1.0																			

The highest readings of the thermometer in air were 75° at Bicester, 73° at Newport, 73° at Helston, Truro, and St. Mary's Hospital, 72° at Greenwich, and 72° at High-street Exeter. The lowest were 18° at Bicester, 18° at Nottingham, Worcester, and 20° at Hartwell Rectory, Knebworth, Derby, and Manchester. The greatest daily ranges took place at Hartwell Rectory, Bicester, Worcester, Nottingham, Lewisham, Ryde, Manchester, and High Street, Exeter; and the least at Jersey, Guernsey, Liverpool, North Shields, Torquay, Hawarden, Ventnor, and Isle of Man.

Rain fell on the greatest number of days at Manchester, Bicester, Bowdon, Stonyhurst, and Worcester; and on the least number at St. Thomas's Hospital, Ryde, Enfield, Dunino, Greenwich, and Cardington. The greatest falls occurred at St. Thomas's Hospital, Guernsey, Manchester, Falmouth, Truro, and North Shields; and the mean amount for these places is 1.1 inch. The least falls took place at Cardington, Derby, Hartwell Rectory, Rose Hill, Worcester, Gainsborough, Enfield, Stone, and Hawarden House; and their mean is 4.5 inches.

QUARTERLY METEOROLOGICAL TABLE FOR DIFFERENT PARALLELS OF LATITUDE.

PARALLELS OF LATITUDE, &c.	Mean Pressure of dry Air reduced to the level of the Sea.		Mean Elastic Force of Vapour.		Mean temperature of the Air.		Mean of the highest Readings of the Thermometer.		Mean of the lowest Readings of the Thermometer.		Average Daily Range of Temperature.		Average Monthly Range of Temperature.		Average Quarterly Range of Temperature.		Mean Temperature of Evaporation.		Mean Temperature of the Dew Point.		Mean Amount of Cloud.		RAIN.		Mean Weight of Vapour in a cubic foot of Air.		Mean additional Weight required to saturate a cubic foot of Air.		Mean degree of Humidity.		Mean whole Amount of Water in a vertical column of Atmosphere.		Mean Weight of a cubic foot of Air.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	in.	in.	in.	in.	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	Days.	Average fall.	in.	gr.	gr.	in.	gr.	gr.	in.	gr.	gr.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										

In the formation of this Table the results from Jersey and Guernsey have not been combined, on account of the difference between the ranges of temperature of the two places. The results from Ventnor are not combined, on account of the much higher temperature and less range of temperature than those at the other stations in the Isle of Wight. The results from Exeter, Bicester, and Stonyhurst are also not included in their parallels.

Meteorological Table, Quarter ending December 31st, 1854.

Year 1854.	Month.	Air and Water.		Mean Pressure of Barometer in the Month.	Mean.		Temperature of the Air.				Mean Tem- perature of		Wind.		Rain.		Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required to saturate a cubic foot of Air.	Mean degree of Humidity.	Mean whole Amount of Water in a Vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.
		on the Land.	on the Water.		From Self- registering Therm.	From Dry Bulb Ther- mometer.	Adopted.	Highest.	Lowest.	Range in the Month.	Mean of all the Highest.	Mean of all the Lowest.	Mean Daily Range.	Evaporation.	Dew Point.	Estimated.					
Oct.	29.788	in.	53.6	54.3	54.1	60.0	44.0	33.0	26.0	59.5	53.0	8.1	40.3	9.9	S.W. & N.W.	5.8	7.9	0.7	884	47.	
Nov.	29.776	280	1,580	46.4	46.4	61.0	33.0	28.0	49.0	50.5	43.0	6.3	41.4	9.9	N.E. & N.W.	6.1	4.2	0.5	879	47.0	
Dec.	29.785	288	1,480	46.4	46.4	63.0	33.0	28.0	49.0	50.5	43.0	6.3	41.4	9.9	N.E. & N.W.	6.1	4.2	0.5	879	47.0	
Oct.	29.789	278	1,532	43.8	43.8	63.0	33.0	23.5	58.0	49.5	43.4	7.5	44.2	9.9	N.W. & N.W.	5.8	7.2	0.5	884	47.0	
Nov.	29.781	277	1,578	48.5	48.5	61.0	33.5	24.5	50.5	43.5	43.0	7.5	44.2	9.9	N.W. & N.W.	5.9	7.2	0.5	884	47.0	
Dec.	29.795	293	1,603	53.6	53.6	62.0	33.0	23.5	58.0	49.5	43.4	7.5	44.2	9.9	N.W. & N.W.	5.9	7.2	0.5	884	47.0	
Oct.	29.782	264	1,604	46.0	46.0	62.0	33.0	23.5	58.0	49.5	43.4	7.5	44.2	9.9	N.W. & N.W.	6.8	16.4	0.8	886	47.0	
Nov.	29.785	267	1,633	46.9	46.9	62.0	33.0	23.5	58.0	49.5	43.4	7.5	44.2	9.9	N.W. & N.W.	6.8	16.4	0.8	886	47.0	
Dec.	29.785	267	1,633	46.9	46.9	62.0	33.0	23.5	58.0	49.5	43.4	7.5	44.2	9.9	N.W. & N.W.	6.8	16.4	0.8	886	47.0	
Oct.	29.748	—	1,400	52.5	54.5	62.0	33.0	23.5	58.0	49.5	43.4	7.5	44.2	9.9	N.W. & N.W.	7.4	24.2	0.6	882	47.0	
Nov.	29.762	—	1,540	44.4	44.9	64.0	33.0	23.5	58.0	49.5	43.4	7.5	44.2	9.9	N.W. & N.W.	7.4	24.2	0.6	882	47.0	
Dec.	29.762	—	1,540	44.4	44.9	64.0	33.0	23.5	58.0	49.5	43.4	7.5	44.2	9.9	N.W. & N.W.	7.4	24.2	0.6	882	47.0	
Oct.	29.760	—	1,280	46.5	46.5	64.0	33.0	23.5	58.0	49.5	43.4	7.5	44.2	9.9	N.W. & N.W.	7.0	23.9	0.6	884	47.0	
Nov.	29.760	—	1,280	46.5	46.5	64.0	33.0	23.5	58.0	49.5	43.4	7.5	44.2	9.9	N.W. & N.W.	7.0	23.9	0.6	884	47.0	
Dec.	29.760	—	1,280	46.5	46.5	64.0	33.0	23.5	58.0	49.5	43.4	7.5	44.2	9.9	N.W. & N.W.	7.0	23.9	0.6	884	47.0	
Oct.	29.831	270	1,331	46.9	46.9	64.0	33.0	23.5	58.0	49.5	43.4	7.5	44.2	9.9	N.W. & N.W.	7.0	23.9	0.6	884	47.0	
Nov.	29.831	270	1,331	46.9	46.9	64.0	33.0	23.5	58.0	49.5	43.4	7.5	44.2	9.9	N.W. & N.W.	7.0	23.9	0.6	884	47.0	
Dec.	29.831	270	1,331	46.9	46.9	64.0	33.0	23.5	58.0	49.5	43.4	7.5	44.2	9.9	N.W. & N.W.	7.0	23.9	0.6	884	47.0	
Oct.	29.805	290	1,305	43.1	43.1	64.0	33.0	23.5	58.0	49.5	43.4	7.5	44.2	9.9	N.W. & N.W.	7.3	25.3	0.6	880	47.0	
Nov.	29.805	290	1,305	43.1	43.1	64.0	33.0	23.5	58.0	49.5	43.4	7.5	44.2	9.9	N.W. & N.W.	7.3	25.3	0.6	880	47.0	
Dec.	29.805	290	1,305	43.1	43.1	64.0	33.0	23.5	58.0	49.5	43.4	7.5	44.2	9.9	N.W. & N.W.	7.3	25.3	0.6	880	47.0	
Oct.	29.833	290	1,301	43.1	43.1	64.0	33.0	23.5	58.0	49.5	43.4	7.5	44.2	9.9	N.W. & N.W.	7.3	25.3	0.6	880	47.0	
Nov.	29.833	290	1,301	43.1	43.1	64.0	33.0	23.5	58.0	49.5	43.4	7.5	44.2	9.9	N.W. & N.W.	7.3	25.3	0.6	880	47.0	
Dec.	29.833	290	1,301	43.1	43.1	64.0	33.0	23.5	58.0	49.5	43.4	7.5	44.2	9.9	N.W. & N.W.	7.3	25.3	0.6	880	47.0	
Oct.	29.824	244	1,092	42.2	42.2	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Nov.	29.824	244	1,092	42.2	42.2	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Dec.	29.824	244	1,092	42.2	42.2	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Oct.	29.719	312	1,248	42.0	42.0	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Nov.	29.726	294	1,248	42.0	42.0	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Dec.	29.726	294	1,248	42.0	42.0	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Oct.	29.768	322	1,234	42.0	42.0	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Nov.	29.768	322	1,234	42.0	42.0	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Dec.	29.768	322	1,234	42.0	42.0	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Oct.	29.774	268	1,240	42.2	42.2	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Nov.	29.774	268	1,240	42.2	42.2	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Dec.	29.774	268	1,240	42.2	42.2	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Oct.	29.789	370	1,281	42.3	42.3	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Nov.	29.789	370	1,281	42.3	42.3	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Dec.	29.789	370	1,281	42.3	42.3	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Oct.	29.827	293	1,366	42.7	42.7	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Nov.	29.827	293	1,366	42.7	42.7	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Dec.	29.827	293	1,366	42.7	42.7	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Oct.	29.862	318	1,566	42.7	42.7	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Nov.	29.862	318	1,566	42.7	42.7	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Dec.	29.862	318	1,566	42.7	42.7	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Oct.	29.908	244	1,325	43.8	43.8	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Nov.	29.908	244	1,325	43.8	43.8	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Dec.	29.908	244	1,325	43.8	43.8	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Oct.	29.820	243	1,306	42.9	42.9	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Nov.	29.820	243	1,306	42.9	42.9	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Dec.	29.820	243	1,306	42.9	42.9	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Oct.	29.832	252	1,370	41.8	41.8	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Nov.	29.832	252	1,370	41.8	41.8	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Dec.	29.832	252	1,370	41.8	41.8	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Oct.	29.848	248	1,393	42.3	42.3	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Nov.	29.848	248	1,393	42.3	42.3	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Dec.	29.848	248	1,393	42.3	42.3	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Oct.	29.638	317	1,433	42.3	42.3	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Nov.	29.638	317	1,433	42.3	42.3	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Dec.	29.638	317	1,433	42.3	42.3	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Oct.	29.744	245	1,435	42.3	42.3	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Nov.	29.744	245	1,435	42.3	42.3	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. & N.W.	5.9	18.3	0.6	880	47.0	
Dec.	29.744	245	1,435	42.3	42.3	63.0	27.0	28.1	48.8	39.9	43.6	14.0	48.3	44.7	N.W. &						

Meteorological Table, Quarter ending December 31st, 1854.

St. John's Wood.—November, the observations were taken on the last 22 days only during the month. Enfield.—November; the reading of the maximum thermometer on the 2d was altered from 47°·5 to 57°·5. Haverhill House.—November; the reading of the barometer on the 24th at 9 h. A.M. was altered from 29·960 in. to 28·960 in. Bowdon.—December; the reading of the barometer on the 25th at 8 h. A.M. was altered from 29·234 in. to 30·234 in.

Second rain gauges are placed: At H. Jersey, at the height of 10 feet; the amount collected was 18·4 inches. At Newport, 3 feet; the amount was 6·8 inches. At Clifton, 50 feet; the amount was 0·4 inches. At Oxford, 25 feet; the amount was 3·6 inches. At Harwell Rectory, 4 feet; the amount was 4·9 inches. At Norwich, 31 feet; the amount was 7·4 inches. At Holkham, 4 feet; the amount was 7·9 inches. At Nottingham, 25 feet; the amount was 4·6 inches. And at Warrington, 34 feet; the amount was 8·6 inches. At Long Wittenham Vicarage, near Abingdon, 18 ft. the rain fell for the month.

ON THE
METEOROLOGY OF ENGLAND AND SCOTLAND,

DURING THE

Quarter ending March 31, 1855.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

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1855.

On the Meteorology of England and Scotland, during the Quarter ending March 31st, 1855. By JAMES GLAISHER, ESQ., F.R.S., Sec. of the British Meteorological Society.

From January 1st to January 9th the weather was very warm, and the mean daily excess of temperature was 11° nearly. On January 9th the temperature was as high as 50° , and on January 10th it decreased to 26° ; January 10th, 11th, 12th, and 13th were days of average temperature; on the 14th a very cold period set in, and continued with great severity until February 24th; on some days, about the middle of February, the defect of temperature was as large as 15° , 16° , 17° , and 18° on several consecutive days; and the mean daily defect for the 42 days ending February 24th was $9^{\circ}5$; this long period was followed by a few days differing but little from their average temperatures; but on March 6th the cold again set in, and continued, with the exception of the days from the 16th to the 20th, to the end of the month. The average daily defect amounting to 6° .

In January the temperature was as low as 13° and 14° at different places on different days. In February it was as low as 3° to 10° at many places in several instances. The lowest temperature experienced about London was 7° , but the extreme lowest temperature was noted at Berkhamstead, on February 18th, and was $0^{\circ}8$; on the same night it was $2^{\circ}5$ at Belvoir Castle; and it was low everywhere.

The direction of the wind until January 9th was S.W., and from January 10th to the end of the quarter was mostly N.E.

The rain has been deficient in each month of this quarter.

Snow fell on January 9th, and on every day, at one station or another, from January 13th to February 28th, and from March 8th to March 31st. It was replete with snow crystals, and was unusually dense, a depth of 8 inches producing water to the depth of an inch.

We must go back to the year 1814 for a similar period. The frost in that year set in on December 26th, 1813; and was very severe throughout January, and until March 21st, when it ceased, with the exception of a few warm days from February 7th to February 14th. The mean temperature of January was $26^{\circ}9$; of February was $34^{\circ}0$; and of March was $35^{\circ}1$; or of those three months was $32^{\circ}0$, being 2° lower than in the three months ending March 1855.

The mean temperature of the air at Greenwich for the quarter ending February, constituting the three winter months, was $35^{\circ}2$, being $2^{\circ}5$ below the average of 84 years.

1855. MONTHS.	Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
	Air.		Evaporation.		Dew Point.		Air—Daily Range.		Water of the Thames.					
	Mean.	Diff. from average of 84 years.	Diff. from average of 14 years.	Mean.	Diff. from average of 14 years.	Mean.	Diff. from average of 14 years.	Mean.		Diff. from average of 14 years.				
											Mean.	Diff. from average of 14 years.	Mean.	Diff. from average of 14 years.
Jan. . .	34.9	-1.0	-3.5	33.8	-3.5	31.7	-3.5	7.8	-0.5	40.8	in.	in.	gr.	gr.
Feb. . .	29.4	-8.9	-9.5	28.3	-8.5	26.7	-8.0	11.5	+0.8	35.0	.200	-.025	2.4	-0.2
Mar. . .	37.9	-3.0	-4.1	36.2	-4.9	33.6	-2.2	14.3	-0.2	..	.165	-.038	2.0	-0.6
Mean .	34.1	-4.3	-5.7	32.9	-5.6	30.7	-4.6	11.2	0.0	..	.192	-.034	2.3	-0.2

1855. MONTHS.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal movement of the Air.	Reading of Thermometer on Grass.					
	Mean.	Diff. from average of 14 years.	Mean.	Diff. from average of 14 years.	Mean.	Diff. from average of 14 years.	Amount.	Diff. from average of 14 years.		Number of Nights it was		Lowest Reading at Night.	Highest Reading at Night.		
										At or below 30°.	Between 30° and 40°.			Above 40°.	
															At or below 30°.
Jan. . .	91	+ 2	29.998	+ .271	558	+ 9	in.	in.	Miles.	21	6	4	0	18.0	43.2
Feb. . .	91	+ 4	29.593	- 177	557	+ 8	1.0	-0.8	75	21	7	0	10.0	35.0	
Mar. . .	86	- 4	29.535	- 277	546	- 1	1.4	-0.3	22	22	9	0	15.8	35.0	
Mean .	89	- 3	29.709	- .061	554	+ 5	Sum 1.7	Sum -0.4	83	Sum 64	Sum 22	Sum 4	10.0	43.2	

NOTE.—In reading this table it will be borne in mind that the sign (-) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunder was heard, but lightning was not seen, on the 1st March at Rose Hill, Hartwell House, and Hartwell Rectory; and on the 27th at Nottingham.

Lightning was seen, but thunder was not heard, on the 15th January at Nottingham. On the 24th February at Isle of Man.

Hail fell on the 15th January at West Anstruther; on the 16th at Guernsey, Knebworth, North Shields, and West Anstruther; on the 17th at Exeter, Warrington, and Scarborough; on the 18th at Guernsey; on the 20th at Arbroath; on the 23d at Scarborough and North Shields; on the 24th at Knebworth, Scarborough, and West Anstruther; on the 25th at Knebworth, Holkham, and Scarborough; on the 26th at Exeter, Arbroath, and Elgin; on the 27th at Elgin; on the 29th at Elgin and Knebworth; on the 30th at North Shields; and on the 31st at Scarborough, North Shields, and Arbroath. On the 2d February at Clifton; on the 3d at Nottingham and Stonyhurst; on the 5th at Nottingham; on the 6th at Nottingham, North Shields, West Anstruther, and Arbroath; on the 7th at North Shields and Arbroath; on the 8th at Guernsey, Truro, North Shields, West Anstruther, and Arbroath; on the 9th at North Shields, West Anstruther, and Arbroath; on the 11th at North Shields and West Anstruther; on the 12th at Bedford and North Shields; on the 13th, 14th, and 20th at North Shields; on the 21st at North Shields, West

Anstruther, and Arbroath; on the 23d at Arbroath; on the 24th at West Anstruther; on the 25th at Holkham; and on the 26th at Grantham. On the 1st March at Hartwell Rectory and Knebworth; on the 3d at Berkhamstead and Stonyhurst; on the 5th at Liverpool; on the 8th and 9th at Norwich; on the 10th at Guernsey and Clifton; on the 11th at Warrington; on the 12th at Helston; on the 13th at Teignmouth; on the 14th at Wakefield; on the 15th at Grantham; on the 18th at Lewisham, Greenwich, St. John's Wood, Totteridge Park, Oxford, Knebworth, Grantham, and Nottingham; on the 21st at Arbroath; on the 22d at Truro, Oxford, Knebworth, Scarborough, and West Anstruther; on the 23d at Nottingham, Warrington, and Stonyhurst; on the 24th at Hartwell Rectory and Knebworth; on the 25th at Guernsey and Grantham; on the 26th at West Anstruther and Arbroath; on the 27th at Knebworth; on the 28th at Guernsey, Ryde, and Totteridge Park; and on the 30th at Guernsey, Bayswater, Berkhamstead, Knebworth, and Scarborough.

Fog was prevalent on the 2d January at Cardington and Holkham; on the 3d at Elgin; on the 4th at Truro; on the 6th at Hawarden, Liverpool, Stonyhurst, York, and Isle of Man; on the 9th at St. John's Wood and North Shields; on the 10th at Truro, Torquay, Teignmouth, Exeter, Lewisham, Greenwich, St. Thomas' Hospital, St. Mary's Hospital, St. John's Wood, Berkhamstead, Elgin, Knebworth, Royston, Cardington, Norwich, Boston, Hawarden, Wakefield, Stonyhurst, and North Shields; on the 11th at Torquay, Teignmouth, Lewisham, Greenwich, St. Thomas' Hospital, St. Mary's Hospital, St. John's Wood, Berkhamstead, Totteridge Park, Rose Hill, Hartwell Rectory, Elgin, Knebworth, Cardington, Boston, Nottingham, Hawarden, Bowdon, Wakefield, Stonyhurst, York, and Isle of Man; on the 12th at Torquay, Teignmouth, Exeter, Clifton, Lewisham, Greenwich, St. Mary's Hospital, Berkhamstead, Totteridge Park, Rose Hill, Oxford, Hartwell House, Hartwell Rectory, Elgin, Knebworth, Royston, Cardington, Belvoir Castle, Grantham, Nottingham, Hawarden, Bowdon, Liverpool, Wakefield, York, and Isle of Man; on the 13th at Torquay, Liverpool, Wakefield, and Isle of Man; on the 14th at Exeter, Greenwich, Rose Hill, Bicester, Hartwell Rectory, Knebworth, Bowdon, Stonyhurst, and York; on the 15th at Exeter, Clifton, St. Thomas' Hospital, Berkhamstead, Rose Hill, Bicester, Oxford, Hartwell House, Hartwell Rectory, Elgin, and Bowdon; on the 16th at Rose Hill and Hartwell Rectory; on the 18th at Exeter; on the 19th at Nottingham; on the 22d at Knebworth and Grantham; on the 23d at Newport, Rose Hill, Bicester, Oxford, Knebworth, Royston, Nottingham, Gainsborough, and York; on the 26th at Lewisham, Greenwich, St. Thomas' Hospital, Rose Hill, Gainsborough, and York; on the 27th at Exeter, Lewisham, Greenwich, St. Thomas' Hospital, Rose Hill, Bicester, Hartwell House, Hartwell Rectory, Knebworth, Royston, Cardington, and Norwich; on the 28th at Rose Hill and Norwich; on the 29th at Lewisham, Greenwich, St. Thomas' Hospital, Royston, Warrington, and Manchester; and on the 30th and 31st at Royston. On the 2d February at Exeter; on the 3d at St. Mary's Hospital, Berkhamstead, Bicester, Hartwell Rectory, Royston, Cardington, and York; on the 4th at Exeter, Bexley Heath, Lewisham, Greenwich, Somerset House, St. Mary's Hospital, St. John's Wood, Berkhamstead, Rose Hill, Bicester, Hartwell Rectory, Royston, Cardington, Lampeter, Boston, Nottingham, York, Scarborough, North Shields, West Anstruther, and Arbroath; on the 5th at Teignmouth, Exeter, Newport, Clifton, Bexley Heath, Lewisham, Greenwich, St. Thomas' Hospital, St. Mary's Hospital, St. John's Wood, Berkhamstead, Bicester, Hartwell Rectory, Royston, Cardington, and Boston; on the 6th and 7th at St. Mary's Hospital; on the 10th at York; on the 11th at Somerset House, St. Mary's Hospital, and Royston; on the 12th at Wakefield and York; on the 13th at Grantham and Stonyhurst; on the 14th at Lampeter; on the 15th at Exeter, Rose Hill, and Grantham; on the 16th at Wakefield; on the 18th at Oxford, Grantham, and Stonyhurst; on the 19th at St. Mary's Hospital, Berkhamstead, Rose Hill, Hartwell Rectory, Royston, Cardington, Grantham, Nottingham, and Manchester; on the 21st at St. Mary's Hospital and Grantham; on the 22d at Torquay, Teignmouth, St. Mary's Hospital, Grantham, Wakefield, and York; on the 23d at Torquay, Teignmouth, Bexley Heath, Grantham, Wakefield, and Scarborough; on the 24th at Torquay, Exeter, Clifton, Berkhamstead, Bicester, Hartwell Rectory, Royston, Wakefield, and York; on the 25th at Jersey, Helston, Newport, Clifton, St. Mary's Hospital, Berkhamstead, Oxford, Hartwell Rectory, Royston, Lampeter, Nottingham, Bowdon, and Manchester; on the 26th at Jersey, Newport, Clifton, Somerset House, St. Mary's Hospital, Berkhamstead, Rose Hill, Hartwell Rectory, Cardington, Lampeter, Nottingham, and North Shields; on the 27th at Jersey, Torquay, Teignmouth, Exeter, Newport, Clifton, St. Mary's Hospital, Berkhamstead, Totteridge Park, Hartwell Rectory, Cardington, and Nottingham; and on the 28th at Jersey, Torquay, Teignmouth, Newport, Bexley Heath, St. John's Wood, Berkhamstead, Totteridge Park, Rose Hill, Oxford, Hartwell Rectory, Lampeter, Nottingham, and Wakefield. On the 2d March at Jersey; on the 4th at North Shields; on the 5th at St. Mary's Hospital, Berkhamstead, and Knebworth; on the 6th at Truro, Torquay, Teignmouth, Exeter, Clifton, Greenwich, Berkhamstead, Rose Hill, Boston, Holkham, Liverpool, and North Shields; on the 7th at St. Mary's Hospital, St. John's Wood, Knebworth, Cardington, Holkham, Wakefield, York, and Scarborough; on the 10th at Teignmouth, Exeter, St. Mary's Hospital, Rose Hill, and Stonyhurst; on the 11th at Rose Hill and Oxford; on the 14th at Jersey, Torquay, Teignmouth, Exeter, Stonyhurst, West Anstruther, and Arbroath; on the 15th at Jersey, Torquay, Teignmouth, and Berkhamstead; on the 19th at Exeter and Hartwell Rectory; on the 20th at Clifton, St. Mary's Hospital, St. John's Wood, Hartwell House, Hartwell Rectory, and Knebworth; on the 26th at Rose Hill, Bowdon, Manchester, and York; on the 27th at Clifton and Stonyhurst; on the 28th at St. Mary's Hospital; on the 29th and 30th at Exeter; and on the 31st at Warrington and Manchester.

Solar Halos were seen in 16, and Lunar Halos in 23 instances during the quarter.

Aurora were seen on the 8th of February at North Shields and West Anstruther; on the 9th at Isle of Man; on the 12th at Clifton, Stonyhurst, West Anstruther, and Arbroath; and on the 17th at Clifton, Rose Hill, Cardington, Warrington, and North Shields. On the 4th March at Oxford; on the 12th at Clifton, Hawarden, and Isle of Man; on the 13th at Nottingham; on the 17th at Clifton, Hawarden, and Elgin; and on the 18th at Clifton.

Zodiacal Light was seen on the 14th and 17th January. On the 13th, 14th, 15th, 16th, 17th, 18th, and 20th February. On the 7th and 18th March.

NAMES OF STATIONS.	Mean Pressure of dry Air reduced to the level of the Sea.	Mean Temperature of the Air.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Mean Daily Range of Temperature.	Mean Monthly Range of Temperature.	Range of Temperature in the Quarter.	Mean Temperature of Evaporation.	Mean Temperature of the Dew Point.	Mean estimated Strength.	General Direction.	WIND.		RAIN.		Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required to saturate a cubic foot of Air.	Mean degree of Humidity.	Mean whole Amount of Water in a vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.	Height of Column of the Barometer above the level of the Sea.
												Number of Days on which it fell.	Amount collected.	Number of Days on which it fell.	Amount collected.						
Jersey -	29.662	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Guernsey -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Helston -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Falmouth -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Truro -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Torquay -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Teignmouth -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
High-street, Exeter -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Exeter -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Venitor -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Newport -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Ryde -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Worthing -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Clifton -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Bexley Heath -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Lewisham -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Royal Observatory -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
St. Thomas' Hospital -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Somerset House -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
St. Mary's Hospital -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
St. John's Wood -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Bayswater -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Enfield -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
St. Bernhamstead -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Tottenham Park -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Rose Hill -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Oxford -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Hartwell House -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Hartwell Rectory -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Knebworth -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Royston -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Cardington -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Bedford -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Worcester -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Norwich -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Belvoir Castle -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Grantham -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Boston -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Derby -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Holkham -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Nottingham -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Hawarden -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Bowdon -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Gainsborough -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Warrington -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Liverpool -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Manchester -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Wakefield -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Stonyhurst -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
York -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Scarborough -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Ile of Man -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
North Shields -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
West Anstruther -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Arbroath -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140
Elgin -	29.646	53.3	52.0	33.0	6.2	34.7	29.0	37.4	83.6	1.7	N.E. & E.	9.9	28	1.0	0.3	10	0.0	10	540	140	140

The highest readings of the thermometer in air were 63° at Bexley Heath, 61° at High-street Exeter, 59° at Tottenham Park, 59° at Royston, and 59° at Helston, Falmouth, and Bayswater. The lowest were 33° at Berkhamstead, 33° at York, 33° at Belvoir Castle, 33° at Cardington and Elgin, 33° at Arbroath, and 33° at Gainsborough. The greatest daily ranges took place at Tottenham Park, Bexley Heath, Manchester, Worcester, Royston, Berkhamstead, Belvoir Castle, Hartwell Rectory, and Bowdon; and the least at Jersey, Scarborough, Torquay, Liverpool, Worthing, North Shields, Wakefield, Nottingham, Clifton, Knebworth, and Grantham.

Rain fell on the greatest number of days at Royston, Worthing, North Shields, Wakefield, Nottingham, Clifton, Knebworth, and Grantham; and on the least number at Liverpool, Oxford, Jersey, Torquay, Falmouth, and Bayswater. The greatest falls occurred at North Shields, Helston, Falmouth, Jersey, Guernsey, Teignmouth, and Berkhamstead; and the mean amount for these places is 8 inches; the least falls took place at St. Thomas' Hospital, Derby, Cardington, Bedford, Worthing, St. Mary's Hospital, Enfield, Oxford, Nottingham, and Worcester; and their mean amount is 2.6 inches.

QUARTERLY METEOROLOGICAL TABLE FOR DIFFERENT PARALLELS OF LATITUDE.

PARALLELS OF LATITUDE, &c.	Mean Pressure of dry Air reduced to the level of the Sea.	Mean Temperature of the Air.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Mean Daily Range of Temperature.	Mean Monthly Range of Temperature.	Range of Temperature in the Quarter.	Mean Temperature of Evaporation.	Mean Temperature of the Dew Point.	Mean estimated Strength.	General Direction.	WIND.		RAIN.		Mean Weight of Vapour in a cubic foot of Air.
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Epsford.—The observations in March were taken on 24 days only during the month. Totteridge Park.—The readings of the barometer at 9 h. A.M. on 8th January was altered from 30·800 in. to 30·760 in., and thence to 30·740 in. The reading of the maximum thermometer on the 25th March was altered from 29·738 in. to 28·738 in. and 29·680 in. to 28·738 in. respectively. Harwell House.—The readings of the barometer on 12th March at 9 h. A.M. were altered from 30·240 in. to 30·260 in. At 4th P.M. they were altered from 30·240 in. to 30·260 in. and 30·240 in. to 30·260 in. respectively. Belvoir Castle.—Reading of the barometer on 1st April at 3 h. P.M. was altered from 30·240 in. to 28·922 in.; and that on the 25th at 3 h. P.M. was altered from 29·124 in. to 29·624 in. London.—The readings of the dry and wet bulb thermometers were taken on 19 days only during the month. Second rain gauges are placed : At Jersey, at the height of 10 feet; the amount collected was 7·8 inches. At Newport, 3 feet; the amount was 5·4 inches. At Clifton, 40 feet; the amount was 3·1 inches. At Oxford, 22 feet; the amount was 3·8 inches. At Harwell Rectory, 4 feet; the amount was 4 inches. At Holkham, 4 feet; the amount was 4·9 inches. At Nottingham, 22 feet; the amount was 2·9 inches. At Loughborough, 35 feet; the amount was 4·8 inches.

ON THE
METEOROLOGY OF ENGLAND AND SCOTLAND,

DURING THE

Quarter ending June 30, 1855.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

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1855.

On the Meteorology of England and Scotland, during the Quarter ending June 30th, 1855. By JAMES GLAISHER, ESQ., F.R.S., Sec. of the British Meteorological Society.

During the past quarter the temperatures of a few days only have reached their average values; the cold period which set in on January 10th having continued with little intermission till June 26th. The month of April was cold; that of May was very severe. At the beginning of this month the temperature of the air at night was frequently near that of the freezing point of water. On May 5th the reading at several places exceeded 20° by 1° or 2° only; the night common to May 4th and 5th was for the most part cloudless; and vegetation was subjected to a very low temperature. At Greenwich the reading of a thermometer, placed on long grass, with its bulb exposed fully to the sky, was as low as $12^{\circ} \cdot 8$, a reading lower than any on record so far as I know at this season of the year. Snow fell at many places up to the end of May. The temperature of the month was $4^{\circ} \cdot 5$ below its average; and was the coldest May since that of 1837. June was cold till the 26th; on the 21st, the day of the solstice, the temperature was remarkably low at all places south of the latitude 53° , extending to the east and south coasts, but not to the west of England and to Cornwall and Devonshire; the temperature of vegetation was from 5° to 6° below that of the freezing point of water; there was a white frost everywhere within the above limits, and thick ice was formed on ponds and still water, even up to the south coast; this cold extended to the Isle of Wight, but with somewhat less severity. The average daily deficiency of mean temperature for the quarter was $2^{\circ} \cdot 5$, and from January 1st to June 30th was as large as 4° daily, as compared with their average values upon the observations of the preceding 14 years.

Scarcely any rain fell in April, and the fall in this month was less than in any month since February 1821, and April 1817; the fall in April 1840 was nearly as small. The falls in May and June were less than their averages. There has been less than the average monthly fall of rain, excepting in May and August 1854, in every month, since November 1853. The average fall of rain for the 20 months ending June is 40 inches, and within this interval of time $25 \cdot 5$ inches only have fallen, so that the deficiency now amounts to $14 \cdot 5$ inches, being at the rate of $36 \cdot 4$ per cent.

The readings of the barometer in May at southern stations were below their average values, but at northern places they were somewhat above. The less reading of the barometer in May than in April and June at the former stations was greater than $\frac{1}{4}$ of an inch, and this difference gradually diminished on proceeding northwards, till at extreme north stations the monthly readings in these 3 months were nearly alike.

The mean temperature of the air at Greenwich for the quarter ending May, constituting the three spring months, was $44^{\circ} \cdot 2$, being $2^{\circ} \cdot 2$ below the average of 84 years

1855. MONTHS.	Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
	Air.		Evaporation.		Dew Point.		Air—Daily Range.		Water of the Thames.		Mean.	Diff. from average of 14 years.	Mean.	Diff. from average of 14 years.
	Mean.	Diff. from average of 14 years.	Mean.	Diff. from average of 14 years.	Mean.	Diff. from average of 14 years.	Mean.	Diff. from average of 14 years.						
	Mean.	Diff. from average of 14 years.	Mean.	Diff. from average of 14 years.	Mean.	Diff. from average of 14 years.	Mean.	Diff. from average of 14 years.						
April . .	45.8	+0.1	0.0	-0.9	42.6	-1.1	38.8	-1.6	0.0	0.0	in.	in.	gr.	gr.
May . .	48.8	-3.8	4.5	45.7	-3.8	42.3	-3.8	19.4	0.1	25.1	-0.17	2.9	-0.2	-0.2
June . .	56.9	-1.1	2.1	52.1	-2.1	47.8	-3.8	22.8	+3.0	34.8	-0.03	3.0	-0.4	-0.4
Mean . .	50.5	-1.6	-2.5	46.8	-2.3	43.0	-2.9	21.0	+2.2	29.4	-0.03	3.4	-0.3	-0.3

NOTE.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

Ozone, the amount during the quarter was very small at the following places, St. Mary's Hospital, St. Thomas' Hospital, and Wakefield Prison; it was moderate in amount at Guernsey, Helston, Teignmouth, Exeter, Ryde, Newport, Isle of Wight, Clifton, Bristol, Lewisham, Oxford, Lampeter, Norwich, and Grantham; and it was large at Worcester and Nottingham.

Thunderstorms occurred, or lightning was seen and thunder heard, on the 27th April at West Anstruther. On the 9th, 11th, 17th, and 26th May; on the 6th, 7th, 8th, 9th, 10th, 13th, 14th, 15th, 16th, 29th, and 30th June, at different stations.

Thunder was heard, but lightning was not seen, on the 11th April at Oxford; and on the 27th at West Anstruther and Arbroath. On the 7th, 11th, 17th, 18th, and 26th May; on the 1st, 6th, 7th, 8th, 9th, 10th, 13th, 15th, 16th, 17th, 22d, 29th, and 30th June, at the different stations.

Lightning was seen, but thunder was not heard, on the 11th May at St. Mary's Hospital; and on the 26th at Exeter and Eign. On the 5th June at Isle of Man; on the 6th at Jersey, Berkhamstead,

Oxford, Hartwell House, Hartwell Rectory, Cardington, Nottingham, and Gainsborough; on the 10th at Eign; on the 11th at Guernsey; on the 12th at Jersey; and on the 16th at Oxford and Bowdon.

Hail fell on 8 days in April, on 16 days in May, and on 8 days in June, at different stations during the quarter.

Solar Halos were seen on the 2d April at Knebworth and Stonyhurst; on the 3d and 4th at Isle of Man; on the 7th at Nottingham and Stonyhurst; on the 8th at Knebworth, Nottingham, Stonyhurst, and West Anstruther; on the 14th at Hartwell House, Knebworth, Lampeter, and Nottingham; on the 20th at Hartwell House; on the 23d at West Anstruther; on the 24th at Falmouth, Clifton, Hartwell House, Knebworth, Grantham, Nottingham, Stonyhurst, North Shields, and West Anstruther; on the 26th at Hartwell House; on the 27th at Isle of Man; on the 29th at Liverpool; and on the 30th at Clifton, Grantham, and Nottingham. On the 3d May at Hartwell House and Hartwell Rectory; on the 4th, 6th, and 9th at Knebworth; on the 14th at Clifton; on the 15th at Knebworth; on the 17th at West Anstruther; on the 18th at Knebworth and West Anstruther; on the 19th at Hartwell House and Hartwell Rectory; on the 20th at Hartwell House, Hartwell Rectory, and Knebworth; on the 22d at Hartwell House and Hartwell Rectory; on the 23d at Knebworth, Nottingham, and West Anstruther; on the 26th at Hartwell House, Hartwell Rectory, North Shields, and West Anstruther; and on the 27th at Hartwell House and Hartwell Rectory. On the 2d June at Knebworth; on the 3d at Clifton, Hartwell Rectory, and Nottingham; on the 4th at Grantham; on the 7th at Knebworth; on the 12th at Clifton; on the 19th and 21st at Knebworth; on the 24th at Helston, Knebworth, and Grantham; on the 25th at Hartwell Rectory and Knebworth; on the 26th at Hartwell House; on the 27th at Falmouth and Grantham; and on the 29th at Hartwell House and Hartwell Rectory.

Lunar Halos were seen on the 1st April at Hartwell House; on the 2d at Knebworth; on the 23d at Eign; on the 24th at Knebworth and Grantham; on the 26th at Falmouth, Truro, Berkhamstead, Cardington, and Lampeter; and on the 27th at Cardington and Grantham. On the 23d May at Berkhamstead, Oxford, Knebworth, Cardington, and Nottingham; on the 24th at Wakefield and Stonyhurst; on the 25th at Manchester, Wakefield, and Stonyhurst; and on the 27th at Knebworth. On the 23d June at Bowdon; on the 24th at Hartwell Rectory; on the 26th at Stonyhurst; and on the 29th at Knebworth.

Fog was prevalent on 19 days in April, on 10 days in May, and on 11 days in June at the different stations during the quarter.

Auroræ were seen on the 4th April at Berkhamstead and Stonyhurst; on the 7th at Stonyhurst; on the 12th at North Shields and Eign; on the 15th at Hawarden; and on the 21st at Stonyhurst. On the 4th May at Arbroath; on the 6th and 7th at Hawarden; on the 8th at Clifton and Nottingham; and on the 11th at Knebworth.

Snow fell on the 2d April at Lampeter and Worcester; on the 3d at Clifton, Hartwell House, Knebworth, Worcester, Belvoir Castle, Hawarden, Warrington, and Leeds; on the 8th at Hartwell House and Eign; and on the 10th at Bicester. On the 1st May at Warrington and North Shields; on the 3d at Clifton, Rose Hill, Hartwell Rectory, Cardington, Lampeter, Worcester, Belvoir Castle, Grantham, Boston, Nottingham, Hawarden, Warrington, Liverpool, York, North Shields, Arbroath, and Eign; on the 4th at Helston, Falmouth, Teignmouth, Rose Hill, Hartwell House, Cardington, Nottingham, Hawarden, Gainsborough, Liverpool, Manchester, Wakefield, Scarborough, and North Shields; on the 5th at Hartwell House and Cardington; on the 6th at Eign; on the 7th at Bicester, West Anstruther, and Arbroath; on the 8th at Royston, Grantham, North Shields, and Eign; on the 9th at West Anstruther and Arbroath; on the 13th at Hartwell Rectory; on the 14th at Belvoir Castle; on the 29th at Totteridge Park and Cardington; and on the 30th at Berkhamstead, Totteridge Park, Knebworth, Cardington, Lampeter, Grantham, Hawarden, and York.

Swallows first seen on the 13th April at Gainsborough; on the 14th at Helston and Eign; on the 15th at Guernsey, Bicester, and Grantham; on the 18th at Clifton and Whitehaven; on the 19th at Belvoir Castle and Arbroath; on the 21st at Hartwell Rectory; on the 22d at Jersey and Stone; on the 23d at Exeter; on the 24th at Worthing; on the 26th at Knebworth; on the 27th at Hawarden; on the 28th at Oxford; and on the 30th at Newport. On the 1st May at Wakefield; on the 2d at Berkhamstead; and on the 3d at Cardington.

Cuckoo first heard on the 18th April at Guernsey and Bicester; on the 20th at Stone, Hartwell Rectory, and Eign; on the 22d at Worthing and Clifton; on the 23d at Gainsborough; on the 26th at Jersey; on the 27th at Hawarden; and on the 29th at Whitehaven. On the 2d May at Berkhamstead and Lampeter; on the 5th at Belvoir Castle; on the 10th at Cardington, Nottingham, and Wakefield; on the 12th at Oxford; on the 13th at Newport; on the 14th at Bowdon; on the 16th at Falmouth; on the 21st at Eign; and on the 23d at Arbroath.

Nightingale first heard on the 20th April at Grantham; on the 24th at Knebworth; on the 25th at Worthing; on the 27th at Hartwell Rectory; and on the 28th at Stone. On the 7th May at Oxford; on the 10th at Berkhamstead and Cardington; and on the 14th at Belvoir Castle.

Lilac in flower on the 11th May at Jersey and Guernsey; on the 12th at Falmouth; on the 14th at Helston; on the 18th at Exeter; on the 21st at Teignmouth; on the 23d at St. Thomas' Hospital; on the 24th at Newport; on the 26th at Knebworth; on the 27th at Berkhamstead, Oxford, and Eign; on the 28th at Rose Hill; on the 29th at Warrington; on the 30th at Clifton, Lampeter, and Belvoir Castle; and on the 31st at Cardington. On the 1st June at Wakefield; on the 2d at Nottingham and Bowdon; on the 3d at Hawarden; on the 4th at Gainsborough; on the 5th at Arbroath; on the 7th at Eign; on the 8th at Hartwell Rectory; and on the 15th at West Anstruther.

Wheat in ear on the 15th June at Hartwell Rectory; on the 20th at Cardington; on the 21st at Newport; on the 24th at Helston, Oxford, and Wakefield; on the 25th at Eign; on the 26th at Berkhamstead, Rose Hill, and Grantham; and on the 30th at Nottingham and Hawarden.

Wheat in flower on the 26th June at Gainsborough; on the 29th at Newport; on the 30th at Guernsey, Hartwell Rectory, and Cardington. On the 2d July at Berkhamstead; and on the 3d at Nottingham.

NAMES OF STATIONS.	Mean Pressure of dry Air reduced to the level of the Sea.		Mean Temperature of the Air.		Mean Range of the Thermometer.		Mean Daily Range of Temperature.		Mean Range of the Thermometer.		Mean Temperature of the Quarter.		Mean Temperature of the Evaporation.		Mean Temperature of the Dew Point.		Mean estimated Strength.	WIND.	General Direction.	Mean Amount of Cloud, which it fell.	RAIN.	Amount collected.		Mean Weight of Vapour in a cubic foot of Air.		Mean additional Weight required to saturate a cubic foot of Air.		Mean degree of Humidity.	Mean whole Amount of Water in a vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.	Height of Clouds of the Barometer above the level of the Sea.
	in.	°	in.	°	in.	°	in.	°	in.	°	in.	°	in.	°	in.	°						in.	gr.	gr.	in.	gr.	in.				
Jersey	29.685	48.6	77.0	34.0	8.8	23.7	43.0	46.9	45.0	1.7	W.S.W. & N.E.	5.4	26	in.	gr.	87	89	in.	4.4	540	140	1.7									
Guernsey	29.711	49.0	77.0	34.0	8.2	25.7	38.0	44.7	44.4	1.6	N.W. & N.E.	4.8	29	in.	gr.	85	87	in.	4.4	539	139	1.6									
Helston	29.724	51.2	78.0	32.0	14.8	30.7	46.0	48.1	44.9	2.2	N.W.	4.9	33	in.	gr.	87	91	in.	4.4	538	138	1.5									
Falmouth	—	51.2	75.0	31.0	14.0	34.7	44.0	—	—	1.8	N.E.	6.4	35	in.	gr.	—	—	in.	—	—	—	—	—	—	—	—	—	—	—	—	—
Truro	29.695	50.0	76.0	22.0	15.5	42.0	54.0	46.7	42.9	1.7	N.	6.6	33	in.	gr.	83	78	in.	4.1	540	140	1.7									
Torquay	29.720	49.0	73.0	17.2	14.7	32.0	42.4	46.7	42.6	0.5	Var.	0.0	—	in.	gr.	—	—	in.	—	—	—	—	—	—	—	—	—	—	—	—	—
Teignmouth	29.730	51.2	78.0	23.0	18.6	46.0	58.0	46.7	41.2	1.1	Var.	6.2	42	in.	gr.	82	77	in.	4.1	538	138	1.5									
High-street, Exeter	29.704	50.0	77.0	24.0	17.0	42.0	55.0	47.2	43.1	2.3	Var.	4.1	31	in.	gr.	83	82	in.	4.0	537	137	1.5									
Exeter	29.722	51.0	77.0	30.0	12.0	33.0	44.0	—	—	0.0	W.	6.2	31	in.	gr.	83	75	in.	4.0	539	139	1.6									
Ventnor	29.711	50.0	79.0	24.0	19.4	46.0	54.7	46.6	42.1	2.4	Var.	5.1	21	in.	gr.	86	81	in.	4.3	537	137	1.5									
Newport	29.700	52.1	80.0	28.0	18.6	47.0	61.0	48.4	44.6	0.6	N.E. & S.W.	5.0	41	in.	gr.	82	77	in.	4.2	535	135	1.5									
Ryde	29.702	52.0	79.0	24.0	17.8	47.0	58.0	46.7	43.8	0.9	N.E. & N.W.	4.9	26	in.	gr.	85	80	in.	4.2	535	135	1.5									
Clifton	29.680	50.0	74.0	24.0	18.2	30.0	61.0	47.4	43.4	0.8	N.E. & W.	6.3	27	in.	gr.	86	83	in.	4.4	538	138	1.5									
Bexley Heath	29.702	52.0	79.0	24.0	17.8	47.0	58.0	46.7	43.8	0.9	N.E. & S.W.	6.6	25	in.	gr.	86	81	in.	4.3	539	139	1.6									
Lewisham	29.702	52.0	79.0	24.0	17.8	47.0	58.0	46.7	43.8	0.9	N.E. & S.W.	6.6	25	in.	gr.	86	81	in.	4.3	539	139	1.6									
Royal Observatory	29.702	52.0	79.0	24.0	17.8	47.0	58.0	46.7	43.8	0.9	N.E. & S.W.	6.6	25	in.	gr.	86	81	in.	4.3	539	139	1.6									
St. Thomas' Hospital	29.702	52.0	79.0	24.0	17.8	47.0	58.0	46.7	43.8	0.9	N.E. & S.W.	6.6	25	in.	gr.	86	81	in.	4.3	539	139	1.6									
Somerset House	29.695	50.0	78.0	23.0	18.2	30.0	61.0	47.4	43.4	0.8	N.W.	7.0	30	in.	gr.	83	71	in.	3.7	537	137	1.5									
St. Mary's Hospital	29.718	50.0	78.0	23.0	18.2	30.0	61.0	47.4	43.4	0.8	Var.	0.0	—	in.	gr.	—	—	in.	—	—	—	—	—	—	—	—	—	—	—	—	—
St. John's Wood	29.718	50.0	78.0	23.0	18.2	30.0	61.0	47.4	43.4	0.8	Var.	0.0	—	in.	gr.	—	—	in.	—	—	—	—	—	—	—	—	—	—	—	—	—
Bayswater	29.693	51.0	78.0	24.0	19.4	46.0	54.7	46.6	42.1	2.4	Var.	0.0	—	in.	gr.	—	—	in.	—	—	—	—	—	—	—	—	—	—	—	—	—
Enfield	29.728	51.0	78.0	24.0	19.4	46.0	54.7	46.6	42.1	2.4	Var.	0.0	—	in.	gr.	—	—	in.	—	—	—	—	—	—	—	—	—	—	—	—	—
Gr. Berkhamstead	29.718	48.0	78.0	23.0	18.2	30.0	61.0	47.4	43.4	0.8	Var.	0.0	—	in.	gr.	—	—	in.	—	—	—	—	—	—	—	—	—	—	—	—	—
Rose Hill	29.750	49.0	83.0	25.0	39.0	47.0	56.3	45.0	40.3	2.3	E.	6.1	29	in.	gr.	83	75	in.	3.7	535	135	1.5									
Biester	29.724	50.0	83.0	24.0	32.2	52.0	61.6	46.4	41.1	1.8	Var.	6.7	28	in.	gr.	87	83	in.	3.8	536	136	1.5									
Oxford	29.711	50.0	82.1	27.0	18.4	42.3	46.8	42.8	2.0	0.0	N.W. & N.E.	7.2	34	in.	gr.	84	78	in.	4.0	539	139	1.6									
Hartwell House	29.690	50.0	82.1	27.0	18.4	42.3	46.8	42.8	2.0	0.0	N.W. & N.E.	7.2	34	in.	gr.	84	78	in.	4.0	539	139	1.6									
Hartwell Rectory	29.690	50.0	82.1	27.0	18.4	42.3	46.8	42.8	2.0	0.0	N.W. & N.E.	7.2	34	in.	gr.	84	78	in.	4.0	539	139	1.6									
Elgin	29.689	49.0	83.0	24.0	32.2	52.0	61.6	46.4	41.1	1.8	Var.	6.7	28	in.	gr.	87	83	in.	3.8	536	136	1.5									
Knebworth	29.735	50.0	83.0	24.0	17.0	47.0	57.0	45.1	41.4	0.6	N.W.	7.1	29	in.	gr.	85	82	in.	3.9	539	139	1.6									
Royston	29.755	50.0	83.0	23.0	18.9	43.0	53.0	43.9	41.2	—	N.	6.2	55	in.	gr.	42	3.2	in.	7.4	3.8	535	135	1.5								
Cardington	29.703	50.0	82.4	25.0	19.1	46.0	54.7	46.6	42.1	2.4	N.	6.2	55	in.	gr.	42	3.2	in.	7.4	3.8	535	135	1.5								
Lampeter	29.720	49.0	79.0	21.0	19.0	48.0	58.0	46.7	42.8	1.5	N.	6.3	29	in.	gr.	83	76	in.	4.1	535	135	1.5									
Worcester	29.718	50.0	84.0	23.0	21.8	50.0	62.0	45.3	40.8	—	Var.	6.3	33	in.	gr.	83	76	in.	4.1	535	135	1.5									
Norwich	29.694	49.0	83.0	27.0	18.0	45.0	55.0	46.7	43.1	1.8	N.E. & N.W.	6.0	25	in.	gr.	84	79	in.	4.0	540	140	1.7									
Belvoir Castle	29.688	48.0	83.0	23.0	21.3	51.0	60.0	46.7	44.7	1.4	Var.	5.9	32	in.	gr.	84	80	in.	4.4	537	137	1.5									
Grantham	29.735	49.0	83.0	25.0	37.3	16.0	45.0	54.0	44.0	0.4	N.E. & S.W.	7.0	35	in.	gr.	83	71	in.	3.7	538	138	1.5									
Boston	29.734	48.0	83.0	28.0	19.1	46.0	54.7	46.6	42.1	1.9	Var.	4.2	31	in.	gr.	83	79	in.	4.1	537	137	1.5									
Derby	29.734	48.0	83.0	28.0	19.1	46.0	54.7	46.6	42.1	1.9	Var.	4.2	31	in.	gr.	83	79	in.	4.1	537	137	1.5									
Holkham	29.709	48.0	84.0	24.0	18.7	33.0	43.0	44.3	39.6	—	N.	5.7	39	in.	gr.	82	76	in.	4.1	536	136	1.5									
Nottingham	29.730	50.0	83.0	23.0	18.6	44.0	54.0	45.9	41.1	1.4	N. & N.E.	5.7	39	in.	gr.	82	76	in.	4.1	536	136	1.5									
Hawarden	29.689	48.0	77.0	28.0	16.0	47.0	56.0	45.9	41.1	1.9	N.W.	6.9	41	in.	gr.	83	79	in.	4.1	535	135	1.5									
Gainsborough	29.689	48.0	77.0	28.0	16.0	47.0	56.0	45.9	41.1	1.9	N.W.	6.7	47	in.	gr.	84	80	in.	4.4	537	137	1.5									
Warrington	29.676	48.0	82.0	24.0	17.0	44.0	54.0	45.9	41.1	1.6	Var.	5.7	30	in.	gr.	85	80	in.	4.3	537	137	1.5									
Liverpool	29.701	49.0	82.0	24.0	17.0	44.0	54.0	45.9	41.1	1.6	Var.	5.6	36	in.	gr.	85	80	in.	4.3	537	137	1.5									
Manchester	29.720	50.0	82.0	24.0	17.0	44.0	54.0	45.9	41.1	1.6	N.W.	6.7	31	in.	gr.	85	80	in.	4.3	537	137	1.5									
Wakefield	29.720	50.0	82.0	24.0	17.0	44.0	54.0	45.9	41.1	1.6	Var.	6.1	42	in.	gr.	84	80	in.	4.3	537	137	1.5									
Leeds	29.732	49.0	83.0	24.0	19.1	46.0	54.7	46.6	42.1	1.9	W. & N.	6.0	54	in.	gr.	84	80	in.	4.3	537	137	1.5									
Stonyhurst	29.718	47.0	77.0	23.0	17.0	44.0	54.0	45.9	41.1	0.7	Var.	7.0	32	in.	gr.	83	76	in.	4.1	535	135	1.5									
York	29.691	47.0	77.0	23.0	17.0	44.0	54.0	45.9	41.1	0.7	N.E.	6.3	39	in.	gr.	82	76	in.	4.0	537	137	1.5									
Scarborough	29.702	46.0	75.0	22.0	16.0	44.0	54.0	45.9	41.1	0.7	N.E.	1.25	33	in.	gr.	—	—	in.	—	—	—	—	—	—	—	—	—	—	—	—	—
Iale of Man	29.747	57.5	126.8	16.1	138.7	48.5	54.6	44.1	0.8	0.0	E. & S.W.	5.9	34	in.	gr.	85	80	in.	4.3	537	137	1.5									
Whitchuan	29.658	47.1	81.0	26.8	16.0	44.0	54.0	45.9	41.1	0.8	N.E.	—	—	in.	gr.	—	—	in.	—	—	—	—	—	—	—	—	—	—	—	—	—
North Shields	29.658	47.1	81.0	26.8	16.0	44.0	54.0	45.9	41.1	0.8	N.E.	—	—	in.	gr.	—	—	in.	—	—	—	—	—	—	—	—	—	—	—	—	—
West Anstruther	29.648	40.1	71.0	23.5	15.0	43.1	47.0	44.0	43.4	2.4	Var.	6.1	41	in.	gr.	83	75	in.	3.3	542	142	1.8									
Arbroath	29.683	46.0	73.0	26.0	18.2	39.0	47.0	46.0	42.6	1.7	Var.	4.3	25	in.																	

[illegible]

ON THE
METEOROLOGY OF ENGLAND AND SCOTLAND,

DURING THE

Quarter ending September 30, 1855.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

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1855.

59.7
3 8.5
4.2
0.6
5.1
3.3
16.0

On the Meteorology of England and Scotland, during the Quarter ending September 30th, 1855.
By JAMES GLAISHER, ESQ., F.R.S., Sec. of the British Meteorological Society.

The daily temperatures of the air during the past quarter have been alternately for a few days together a little above, and for a few days together a little below, their average values, but in no cases have the departures been large. The excesses of temperature have rather preponderated over the defects, so that the mean temperature of each month of the quarter has been somewhat above its average value.

The other subjects of investigation, viz., the temperature of the dew point, the pressures both of the air and water, like the temperature of the air, have been about their average values, nor has there been anything remarkable among the other elements of investigation, all having been of their mean values.

Rain was in excess in July to the amount of $2\frac{1}{2}$ inches, but was deficient in the months of August and September together to the same amount as the excess in the first month of the quarter. The average fall of rain for 23 consecutive months ending September is 47 inches; since 1853, November, the amount collected about London is $32\frac{3}{4}$ inches; so that the deficiency of rain for the period is still $14\frac{1}{4}$ inches, or about 30 per cent.

The barometer readings at extreme southern stations were about 0.1 inch greater in August than in July; this difference gradually diminished going northwards, till at extreme northern stations the readings in August were somewhat lower than in July.

The readings at Jersey and Guernsey in August and September were nearly alike; proceeding northwards September became in excess, till at the extreme northern stations the reading in September exceeded that in August by fully $\frac{1}{4}$ of an inch.

The mean temperature of the air at Greenwich for the quarter ending August, constituting the three summer months, was $60^{\circ} \cdot 4$, being $0^{\circ} \cdot 4$ above the average of 84 years.

1855. MONTHS.	Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
	Air.			Evaporation.		Dew Point.		Air— Daily Range.						
	Mean.	Diff. from ave- rage of 84 years.	Diff. from ave- rage of 14 years.	Mean.	Diff. from ave- rage of 14 years.	Mean.	Diff. from ave- rage of 14 years.	Mean.	Diff. from ave- rage of 14 years.	Water of the Thames.	Mean.	Diff. from ave- rage of 14 years.	Mean.	Diff. from ave- rage of 14 years.
July . .	62.1	+0.7	+0.4	58.2	+0.8	55.5	+1.2	19.2	+1.4	65.3	in.	in.	gr.	gr.
Aug. . .	62.1	+1.6	+1.0	57.3	0.0	53.9	-0.5	19.2	+1.0	66.1	*444	+0.08	5.0	+0.1
Sept. . .	67.1	+0.8	+0.2	53.6	-0.3	50.5	-0.7	20.8	+2.9	61.2	*423	-0.03	4.7	-0.1
Mean .	60.4	+1.0	+0.5	56.4	+0.2	53.3	0.0	19.7	+1.8	64.6	*415	+0.03	4.7	-0.1

1855. MONTHS.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal movement of the Air.	Reading of Thermometer on Grass.				
	Mean.	Diff. from ave- rage of 14 years.	Mean.	Diff. from ave- rage of 14 years.	Mean.	Diff. from ave- rage of 14 years.	Amount.	Diff. from ave- rage of 40 years.		Number of Nights it was			Low- est Read- ing at Night.	High- est Read- ing at Night.
									At or below 40°	Be- tween 40° and 50°	Above 50°			
July . .	80	+ 1	in. 29.769	in. -0.22	gr. 523	gr. - 1	in. 5.0	in. +2.3	Miles. 67	2	13	16	0	58.0
Aug. . .	76	- 5	29.874	+0.81	525	+ 1	1.1	-1.4	106	4	19	8	40.0	56.2
Sept. . .	80	- 2	29.966	+1.20	532	+ 2	1.1	-1.4	75	13	12	5	36.5	55.0
Mean .	79	- 2	29.870	+0.60	527	+ 1	Sum 7.2	Sum -0.2	83	Sum 19	Sum 44	Sum 29	27.0	58.0

NOTE.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunderstorms occurred, or thunder was heard and lightning seen on the 2d July at Hartwell Rectory and Stornoway; on the 5th at Guernsey; on the 8th at Jersey and Guernsey; on the 9th at Jersey, Guernsey, Newport, Patricbourn Vicarage, Lewisham, Greenwich, St. Mary's Hospital, St. John's Wood, Enfield, Great Berkhamstead, Bicester, Hartwell House, Hartwell Rectory, Eign, Knebworth and Cardington; on the 10th at Ryde, St. Thomas' Hospital, Totteridge Park, Hartwell House, Royston, Norwich, Grantham, Boston, Holkham and Nottingham; on the 12th at York and Whitehaven; on the 13th at Guernsey, Teignmouth, Exeter, Ryde, Enfield, Totteridge Park, Eign, Wakefield, Stonyhurst, York, Scarborough, West Anstruther and North Shields; on the 14th at Clifton, Lewisham, Greenwich, St. Thomas' Hospital, St. Mary's Hospital, Great Berkhamstead, Totteridge Park, Bicester, Hartwell House, Hartwell Rectory, Knebworth, Royston, Cardington, Worcester, Belvoir Castle, Grantham, Boston, Nottingham, Gainsborough, Manchester, Scarborough, and West Anstruther; on the 16th at Totteridge and Boston; on the 17th at Newport and Clifton; on the 18th at Hartwell Rectory; on the 19th at Greenwich, St. Mary's Hospital, Eign, Royston, Cardington, Belvoir Castle, Boston, Nottingham, Gainsborough, Warrington, Manchester, Wakefield, Stonyhurst, and West Anstruther; on the 20th at St. Thomas' Hospital; on the 22d at Wakefield; on the 23d at Bayswater, St. John's Wood, Great Berkhamstead, Bicester, Hartwell House, Nottingham, Manchester, Stonyhurst, Whitehaven, and North

Shields; on the 24th at Hartwell Rectory and Gainsborough; on the 25th at Knebworth, Royston, and Gainsborough; on the 26th at Wakefield; on the 27th at Belvoir Castle, Grantham, Nottingham, Gainsborough, Stonyhurst, York, Scarborough, and North Shields; on the 28th at Grantham, York, and West Anstruther; on the 29th at Boston; and on the 30th at Stonyhurst and North Shields. On the 4th August at Hartwell Rectory and North Shields; on the 7th at St. Thomas' Hospital, Great Berkhamstead, Hartwell Rectory, Cardington, Belvoir Castle, Grantham, Boston, Holkham, Nottingham, Warrington, Stonyhurst, and York; on the 8th at Ryde, Patricbourn Vicarage, Lewisham, Norwich, Boston, Holkham, York, and West Anstruther; on the 9th at Helston and Oxford; on the 11th at Aberdeen; on the 14th at Oxford; on the 18th at Jersey, Bicester, and Holkham; on the 19th at Cardington and Grantham; on the 20th at Jersey and Hartwell Rectory; on the 23d at Newport, Ryde, Clifton, Lewisham, Greenwich, St. Thomas' Hospital, St. Mary's Hospital, Great Berkhamstead, Totteridge Park, Bicester, Hartwell House, Worcester, and Wakefield; on the 24th at Lewisham, Greenwich, Berkhamstead, Hartwell Rectory, Cardington, and Aberdeen; on the 26th at Oxford; and on the 28th at West Anstruther. On the 3d September at Jersey and Guernsey; on the 6th at Helston; on the 9th at Jersey; on the 13th at Teignmouth, Clifton, and Worcester; on the 19th and 23d at Oxford; on the 28th at Newport, Greenwich, St. Mary's Hospital, St. John's Wood, Totteridge Park, and Hartwell Rectory; on the 29th at Lewisham and Greenwich; and on the 30th at Truro.

Thunder was heard, but lightning was not seen, on the 1st, 2d, 5th, 8th, 9th, 10th, 11th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, 23d, 25th, 26th, 27th, 28th, 29th, 30th, and 31st July. On the 3d, 7th, 8th, 9th, 18th, 19th, 23d, 26th, 28th, and 29th August at the different stations. On the 13th September at Rose Hill, Hartwell Rectory, Eign, and Worcester; on the 28th at Jersey and Patricbourn Vicarage; on the 29th at Nottingham; and on the 30th at Patricbourn Vicarage.

Lightning was seen, but thunder was not heard, on the 4th, 9th, 11th, 13th, 14th, 16th, 19th, 23d, 24th, and 26th July. On the 7th, 8th, 18th, 19th, 20th, 22d, 23d, 24th, and 25th August at the different stations. On the 3d September at Teignmouth; on the 11th at Worcester; on the 12th at Rose Hill and Worcester; on the 27th at St. Thomas' Hospital and Nottingham; on the 28th at Lewisham and Great Berkhamstead; and on the 29th at Great Berkhamstead and Eign.

Hail fell on 8th July at Exeter; on the 9th at Cardington; on the 14th at Clifton, Rose Hill, and Cardington; on the 17th at Clifton; on the 19th at Newport; and on the 27th at Belvoir Castle. On the 23d August at Ryde and Eign; and on the 24th at Newport. On the 28th September at Newport.

Fog was prevalent on 24 days in July, on 14 days in August, and on 21 days in September, at the different stations during the quarter.

Aurora were seen on the 21st July at Oxford and Isle of Man. On the 11th September at Great Berkhamstead, Nottingham, West Anstruther, and Arbroath; on the 24th at Oxford; and on the 30th at West Anstruther.

Lunar Halos were seen the 31st July at Nottingham. On the 2d at August at Cardington; on the 6th at Grantham; on the 25th at Patricbourn Vicarage; on the 27th at Nottingham; and on the 30th at Patricbourn Vicarage and Nottingham. On the 20th and 23d September at Knebworth; on the 24th at Patricbourn Vicarage; on the 26th at Stonyhurst and Elgin; on the 27th at Nottingham; and on the 28th, 29th, and 30th at Patricbourn Vicarage.

Solar Halos were seen on the 2d July at Grantham; on the 3d at Knebworth and Grantham; on the 8th at Clifton, Hartwell Rectory, Knebworth, and Nottingham; on the 10th and 13th at Knebworth and Nottingham; on the 15th at Hartwell House; on the 18th at Whitehaven; on the 21st at Hartwell House and Knebworth; on the 23d at Grantham and Nottingham; on the 24th at Knebworth and Nottingham; on the 25th at Knebworth; on the 26th at Patricbourn Vicarage; and on the 30th at Knebworth. On the 2d August at West Anstruther; on the 3d at Knebworth; on the 5th at Clifton, Hartwell Rectory, and Knebworth; on the 6th at West Anstruther and Aberdeen; on the 10th at Knebworth and Stonyhurst; on the 16th at West Anstruther; on the 17th at Knebworth; on the 18th at Knebworth, Grantham, and Arbroath; on the 25th at Knebworth and Nottingham; and on the 26th and 30th at Nottingham. On the 5th September at Knebworth; on the 7th at Stonyhurst and West Anstruther; on the 17th at West Anstruther; on the 20th at Knebworth and Nottingham; on the 26th at Nottingham, Hawarden, and Stonyhurst; on the 27th at Knebworth; and on the 29th at Patricbourn Vicarage.

Barley cut on the 13th July at Nottingham. On the 8th August at Helston; on the 11th at Arbroath; on the 13th at Patricbourn Vicarage and Eign; on the 15th at Gainsborough; on the 16th at Newport and Cardington; on the 18th at Grantham; on the 20th at Oxford and Belvoir Castle; on the 21st at Rose Hill; on the 27th at Great Berkhamstead; on the 28th at Lampeter; and on the 30th at West Anstruther and Aberdeen.

Oats cut on the 13th July at Nottingham. On the 10th August at Helston; on the 13th at Arbroath; on the 14th at Grantham; on the 15th at Eign and Gainsborough; on the 16th at Newport and Warrington; on the 20th at Oxford and Belvoir Castle; on the 22d at Great Berkhamstead; and on the 25th at Lampeter. On the 2d September at West Anstruther; and on the 5th at Aberdeen.

Wheat cut on the 14th July at Ryde; and on the 20th at Nottingham. On the 7th August at Helston; on the 8th at Bicester; on the 11th at Rose Hill and Oxford; on the 13th at Guernsey, Great Berkhamstead, Hartwell Rectory, and Eign; on the 14th at Cardington; on the 15th at Newport and Hawarden; on the 16th at Warrington; on the 18th at Gainsborough and Wakefield; on the 20th at Patricbourn Vicarage; on the 22d at Grantham and Elgin; on the 25th at Whitehaven; on the 27th at Belvoir Castle; and on the 28th at West Anstruther. On the 9th September at Stonyhurst; and on the 10th at Aberdeen.

NAMES OF STATIONS.	Mean Pressure of dry Air reduced to the level of the Sea.		Mean Temperature of the Air.		Highest Reading of the Thermometer.		Lowest Reading of the Thermometer.		Mean Daily Range of Temperature.		Mean Monthly Range of Temperature.		Range of Temperature in the Quarter.		Mean Temperature of Evaporation.		Mean Temperature of the Dew Point.		Mean estimated Strength.	General Direction.	WIND.		RAIN.		Mean Weight of Vapour in a cubic foot of Air.		Mean additional Weight required to saturate a cubic foot of Air.		Mean degree of Humidity.	Mean whole Amount of Water in a vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.	Height of Clouds, if observed above the level of the Sea.	
	in.	°	in.	°	in.	°	in.	°	in.	°	in.	°	in.	°	in.	°	in.	°			Mean Amount of Cloud, which it fell.	Number of Days on which it fell.	Amount collected.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required to saturate a cubic foot of Air.	Mean degree of Humidity.	Mean whole Amount of Water in a vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.					Height of Clouds, if observed above the level of the Sea.
Jersey - - - - -	29.646	59.7	61.0	50.0	9.1	21.1	23.0	57.1	55.1	1.5	Var.	3.7	23	5.2	6.3	0.9	86	6.2	61.1	51.1	61.1	51.1	61.1	51.1	61.1	51.1	61.1	51.1	61.1	51.1	61.1	51.1	
Guernsey - - - - -	29.602	59.1	61.2	50.0	9.2	21.2	20.0	56.0	54.0	1.8	S.W. & N.E.	4.3	26	7.5	4.9	0.8	86	6.0	6.0	—	—	—	—	—	—	—	—	—	—	—	—	—	
Helston - - - - -	29.614	61.3	63.5	43.0	17.2	26.3	42.0	61.3	58.2	1.3	S.W.	5.2	35	5.5	5.1	1.0	84	6.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Falmouth - - - - -	—	61.5	63.4	44.0	15.3	18.1	39.0	—	—	1.8	S.W. & W.	5.7	37	5.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Truro - - - - -	29.596	60.3	60.0	52.0	17.0	37.0	48.0	56.8	54.0	1.4	Var.	6.0	35	4.2	4.8	1.1	81	5.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Teignmouth - - - - -	29.605	59.6	76.0	40.7	14.4	28.6	35.9	56.7	54.3	0.7	Var.	5.8	30	5.1	4.8	1.0	84	5.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
High-street, Exeter - - - - -	29.640	61.3	63.8	48.8	16.8	35.8	45.0	56.4	52.9	0.9	Var.	6.4	45	6.6	4.6	1.5	77	5.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Ventnor - - - - -	29.624	61.6	75.0	46.0	9.8	23.3	29.0	—	—	1.6	W.	—	28	6.5	5.6	0.6	91	6.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Newport - - - - -	29.618	60.9	65.0	50.0	20.9	23.8	44.0	56.8	53.5	2.2	S.W. & N.E.	5.4	26	7.2	4.7	1.3	78	5.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Ryde - - - - -	29.619	62.9	64.0	46.0	21.9	35.3	42.0	58.3	55.1	0.6	S.W. & N.E.	4.9	21	5.7	4.9	1.5	77	6.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worthing - - - - -	29.582	59.8	75.5	24.6	11.2	25.2	32.0	57.2	55.0	1.4	N.W. & S.W.	5.1	35	4.5	4.7	0.9	85	6.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Patricdown Vic. - - - - -	29.624	59.5	76.6	32.0	15.5	34.7	44.0	56.5	51.1	0.4	N.W. & S.W.	5.2	37	5.8	4.8	0.9	84	5.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Clifton - - - - -	29.590	59.7	48.2	33.2	16.6	35.7	49.1	57.0	55.2	0.9	Var.	6.3	41	7.1	5.0	1.8	79	5.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Lewisham - - - - -	29.590	59.7	50.2	29.7	21.7	39.9	50.0	57.4	55.5	—	S.W.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Royal Observatory - - - - -	29.633	60.4	79.0	34.1	19.7	37.0	44.4	56.4	53.3	—	Var.	6.1	26	7.2	4.7	1.3	79	5.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
St. Thomas' Hospital - - - - -	29.532	61.5	59.8	43.8	14.5	28.1	37.0	57.0	55.2	—	S.W. & N.W.	—	33	7.7	5.0	1.2	81	5.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Somerset House - - - - -	—	60.6	78.0	41.6	14.3	28.0	36.4	56.2	52.8	—	S.W.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
St. Mary's Hospital - - - - -	29.617	61.6	58.0	40.2	17.6	33.0	42.8	57.4	52.3	—	S.W.	—	30	7.5	4.8	1.4	78	5.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Enfield - - - - -	—	—	—	—	—	—	—	—	—	—	Var.	—	33	10.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Gt. Berkhamstead - - - - -	29.636	59.0	81.6	29.3	21.1	42.0	62.9	55.4	52.4	0.6	S.W. & N.W.	5.7	33	8.9	4.9	0.8	80	5.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Totteridge Park - - - - -	—	59.3	80.5	36.5	21.2	36.6	54.0	56.8	54.7	2.2	Var.	5.7	33	8.9	4.9	0.8	80	5.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Rose Hill - - - - -	29.642	58.4	76.7	32.1	19.6	35.4	44.6	54.0	52.0	1.8	Var.	6.7	34	8.9	4.9	1.1	81	5.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Bicester - - - - -	29.631	61.0	68.6	33.0	20.8	34.4	23.1	56.0	52.1	1.4	Var.	6.7	33	7.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Oxford - - - - -	29.606	60.3	60.3	30.7	16.5	32.7	43.3	57.7	55.5	2.5	W. & S.W.	7.2	34	9.1	5.1	0.9	85	5.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Hartwell House - - - - -	29.531	61.0	68.1	33.5	20.8	33.0	46.0	58.8	56.6	1.1	Var.	6.2	32	7.5	5.2	0.8	87	6.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Hartwell Rectory - - - - -	29.554	59.7	84.0	29.9	21.9	42.8	35.5	45.6	55.4	0.8	S.W. & N.W.	5.1	40	7.4	5.1	0.7	88	6.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Eign - - - - -	29.576	60.7	66.0	30.0	19.7	40.2	49.0	59.0	56.3	0.4	Var.	6.1	35	8.9	4.8	0.8	86	6.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Knebworth - - - - -	29.648	60.4	83.3	33.7	20.0	41.1	34.9	59.0	56.3	0.3	S.W. & N.W.	6.9	38	8.9	4.6	0.9	83	5.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Royston - - - - -	29.648	60.4	83.3	33.7	20.0	41.1	34.9	59.0	56.3	0.3	S.W. & N.W.	6.2	39	8.0	4.6	1.4	77	5.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Cardington - - - - -	29.595	60.1	79.0	30.2	20.1	39.2	49.3	56.6	53.8	0.8	N.W. & S.W.	5.6	31	5.6	4.8	1.1	81	5.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Lampeter - - - - -	—	58.4	84.0	25.8	19.5	44.8	58.2	—	—	1.6	Var.	6.8	46	6.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worcester - - - - -	29.598	59.5	65.0	30.0	20.1	43.3	58.0	56.2	53.4	—	S.W. & N.W.	6.5	33	7.7	4.7	1.1	82	5.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Norwich - - - - -	29.538	60.0	79.0	34.0	21.1	32.8	45.0	57.2	55.1	1.7	S. & S.W.	6.5	33	5.7	5.0	0.9	85	5.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Belvoir Castle - - - - -	29.784	58.3	80.0	27.7	22.2	42.7	53.2	56.4	54.8	1.4	N.W. & S.W.	5.5	30	6.6	5.0	0.5	89	6.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Grantham - - - - -	29.634	59.8	78.5	34.0	16.3	34.8	44.4	55.3	53.2	0.2	S.W.	6.7	36	5.8	4.5	1.2	80	6.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Boston - - - - -	29.611	62.9	82.9	38.9	18.9	36.2	48.2	58.8	55.7	2.2	S.E. & N.W.	—	39	5.6	5.3	0.6	90	6.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Derby - - - - -	29.565	59.1	77.0	34.0	16.4	37.3	46.0	53.9	49.6	—	—	—	31	6.5	4.1	1.6	73	5.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Holkham - - - - -	29.584	59.8	82.7	33.2	15.2	35.7	45.0	56.4	54.4	0.5	S.W.	5.1	32	6.4	4.9	0.9	85	6.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Nottingham - - - - -	29.610	59.0	83.5	33.0	20.9	24.0	12.0	56.7	53.8	0.8	N.W. & S.W.	5.7	33	6.4	4.9	0.9	81	5.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hawarden - - - - -	29.580	58.7	77.0	33.9	13.2	28.0	23.0	57.7	53.6	1.1	N.W. & S.W.	5.5	33	6.4	4.8	0.9	81	5.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gainsborough - - - - -	29.570	59.8	82.0	33.0	17.1	33.7	44.0	55.3	53.2	0.2	S. & S.W.	5.7	32	6.4	4.7	0.9	84	5.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Warrington - - - - -	29.551	58.8	77.0	34.1	16.1	35.3	44.7	56.6	54.5	0.4	N.W.	5.7	37	10.1	5.0	0.6	90	6.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Liverpool - - - - -	29.645	60.7	75.9	42.7	11.2	24.0	33.6	56.2	51.9	0.9	N.W.	6.9	32	8.6	4.6	1.3	79	5.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Wakfield - - - - -	29.608	58.8	74.3	29.7	21.9	42.8	55.4																										

Titterton, July.—The reading of the maximum thermometer on the 24th was altered from 85° to 78°. The readings of the barometer at 9h. A.M. on the 29th and 30th were altered from 29.054 in. and 29.062 in. to 29.04 in. and 29.053 in. respectively. The readings of the thermometer on the 1st at 9h. A.M. was altered from 30.692 in. to 30.669 in. Newbury, July.—The observations of the maximum thermometers, wind and cloud, were taken on the last 18 days only during the month at Newbury. The readings of the barometer at 9h. A.M. on the 24th and 25th were altered from 30.680 in. and 30.682 in. to 30.690 in. and 30.692 in. respectively. The readings of the thermometer on the 24th and 25th were altered from 30.740 in. and 30.620 in. to 30.040 in. and 30.020 in. respectively. The readings of the maximum thermometer on the 10th September were altered from 69.5 to 69.0. Second rain gauges are placed: At Jersey, 41 feet; at Harwell, Reading, 73 feet; the amount was 7.7 inches. At Dorchester, 22 feet; the amount was 5.7 inches. At Newport, 3 feet; the amount was 7.5 inches. At Clifton, 50 feet; the amount was 0.5 inches. At Warrington, 35 feet; the amount was 9.3 inches. And at Widdowson, 73 feet; the amount was 6.9 inches. At Nottingham, 5 feet; the amount was 6.2 inches.

ON THE
METEOROLOGY OF ENGLAND AND SCOTLAND,

DURING THE

Quarter ending December 31, 1855.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

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1856.

On the Meteorology of England and Scotland, during the Quarter ending December 31st, 1855.
By JAMES GLAISHER, ESQ., F.R.S., Sec. of the British Meteorological Society.

Till 23d October the daily temperatures of the air were about 2° in excess; from this time till 17th December, excepting the 7 days ending 12th November, the temperatures of a very few days reached their average values; the deficiency of several in December exceeded 10°, and on the 19th, 20th, 21st, and 22d were from 14° to 19° in defect. The average daily defect of temperature for the 60 days ending 17th December amounted to 4°. The period from 18th December was very warm, and the average daily excess of temperature was as large as 6°.

The pressure of the atmosphere in October was considerably below, in November was much above, and in December was rather below, its average value.

The water mingled with the air was in excess in October and in defect in November and December particularly in the latter month.

The daily ranges of temperature have been of their average values in each month.

The degree of humidity of the air was somewhat above its average in both October and November, and greatly below it in December, the air having been remarkably dry.

Rain fell in excess in October to the amount of 2 inches, and in defect to the same amount in the two remaining months. The fall of rain about London for 26 consecutive months, ending December, should be 5.44 inches; the amount collected was 40 inches; so that the deficiency of rain for the period is 14 inches.

Fog was very prevalent between the latitudes of 51° and 53°, particularly in the month of November.

The readings of the barometer at extreme southern stations were about 0.25 inch greater in November than in the preceding month, this difference increased till at extreme northern stations the excess exceeded 0.5 inch. In December the readings at southern stations were less by 0.1 inch than in November, this difference gradually increased till at extreme northern stations the readings in December were 0.3 less than in November.

The mean temperature of the air at Greenwich for the quarter ending November, constituting the three autumn months, was 50° 2, being 0° 9 above the average of 84 years.

1855. MONTHS.	Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Culide Foot of Air.		
	Air.			Evaporation.		Dew Point.		Air— Daily Range.							
	Mean.	Diff. from ave- rage of 84 years.	Diff. from ave- rage of 14 years.	Mean.	Diff. from ave- rage of 14 years.	Mean.	Diff. from ave- rage of 14 years.	Mean.	Diff. from ave- rage of 14 years.	Water of the Thames.	Mean.	Diff. from ave- rage of 14 years.	Mean.	Diff. from ave- rage of 14 years.	
Oct. . .	51.2	+1.9	+1.5	49.4	+1.7	47.8	+2.5	13.5	-0.3	55.8	.346	in.	4.0	gr.	+0.3
Nov. . .	41.3	-1.2	-2.7	39.9	-2.6	38.3	-2.0	9.7	-1.1	44.6	.250	+0.26	2.9	gr.	-0.2
Dec. . .	35.6	-3.3	-4.9	33.9	-5.1	31.3	-5.5	9.3	-0.2	38.2	.173	+0.21	2.1	gr.	-0.7
Mean .	42.7	-0.9	-2.0	41.1	-2.0	39.2	-1.7	10.8	-0.4	46.2	.258	+0.19	3.0	gr.	-0.2

1855. MONTHS.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Hori- zontal move- ment of the Air.	Reading of Thermometer on Grass.				
	Mean.	Diff. from ave- rage of 14 years.	Mean.	Diff. from ave- rage of 14 years.	Mean.	Diff. from ave- rage of 14 years.	Amount.	Diff. from ave- rage of 40 years.		Number of Nights it was		Low- est Read- ing at Night.	High- est Read- ing at Night.	
										At or below 32°	Be- tween 32° and 40°			Above 40°
Oct. . .	89	+ 3	29.527	-1.43	gr.	gr.	in.	in.	Miles.	5	14	12	30.5	55.0
Nov. . .	92	+ 3	29.864	+1.39	548	+ 5	1.3	1.2	106	14	12	4	29.5	44.0
Dec. . .	79	-10	29.761	-0.71	553	+ 3	1.2	-0.8	64	24	6	1	5.1	40.2
Mean .	87	- 1	29.717	-0.25	544	+ 1	Sum 7.4	Sum +0.1	95	Sum 43	Sum 32	Sum 17	5.1	55.0

NOTE.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunderstorms occurred, or thunder was heard and lightning seen, on the 3d October at Bayswater and Hadden; on the 4th at Clifton, St. Thomas' Hospital, St. John's Wood, Bicester, Eign, Belvoir Castle, Boston, Holkham, Nottingham, Warrington, Liverpool, Manchester, Wakefield, Stonyhurst, Scarborough, North Shields, Anstruther Wester, and Arbroath; on the 12th at Hartwell Rectory; on the 15th at Helston and Warrington; on the 23d at Jersey; and on the 26th at Jersey and Nottingham. On the 8th November at Warrington. On the 8th December at North Shields; on the 23d at Helston, Falmouth, Truro, and Patricbourn Vicarage; on the 24th at Guernsey, Newport, and Ryde; and on the 25th at Ryde.

Thunder was heard, but lightning was not seen, on the 2d October at Nottingham; on the 4th at Knebworth, Cardington, Norwich, and Elgin; on the 5th at Lampeter and Nottingham; on the 7th at Guernsey; and on the 15th at Manchester. On the 3d November at Wakefield; and on the 8th at Nottingham and Stonyhurst. On the 4th December at Aberdeen; and on the 23d at Guernsey.

Lightning was seen, but thunder was not heard, on the 4th October at Guernsey, Anstruther Wester, and Aberdeen; on the 5th at Guernsey; on the 7th at Hartwell Rectory; on the 8th at Clifton, Greenwich, Lampeter, Norwich, and Nottingham; on the 9th at Norwich; on the 12th at Guernsey, Anstruther Wester, Arbroath, and Aberdeen; on the 13th at Bowdon; and on the 15th at Bowdon, Isle of Man, and Aberdeen. On the 5th November at Cardington; and on the 12th at Hartwell

House. On the 24th and 25th December at Jersey; on the 26th and 27th at Helston; and on the 28th at Jersey.

Hail fell on the 4th October at St. Thomas' Hospital, Liverpool, and Manchester; on the 5th at Lampeter; on the 15th at Jersey, Manchester, and Isle of Man; on the 16th at Elgin; on the 24th at Nottingham, Warrington, Liverpool, Manchester, Scarborough, Isle of Man, and North Shields; on the 26th at Newport, Ryde, Nottingham, Manchester, and Isle of Man; on the 27th at Teignmouth and Elgin; and on the 31st at North Shields, Elgin, and Aberdeen. On the 1st November at Scarborough, Anstruther Wester, and Aberdeen; on the 3d at Guernsey, Clifton, Great Berkhamstead, Rose Hill, Boston, Nottingham, Warrington, Wakefield, and Scarborough; on the 8th at Clifton, Rose Hill, and Lampeter; on the 23d at North Shields and Aberdeen; and on the 26th at Holkham. On the 2d December at Patricbourn Vicarage; on the 3d at Holkham and Nottingham; on the 4th at Newport, Eign, Lampeter, Hawarden, Warrington, and Liverpool; on the 5th at Guernsey, Newport, Eign, Lampeter, Hawarden, Warrington, and Liverpool; on the 6th at Jersey, Guernsey, Falmouth, Eign, Lampeter, and Hawarden; on the 7th at Jersey, Helston, Falmouth, Eign, Lampeter, and Hawarden; on the 8th at Jersey, Guernsey, Helston, Falmouth, North Shields, Anstruther Wester, and Arbroath; on the 9th at Jersey, Guernsey, and Exeter; on the 10th at Jersey, Guernsey, and Newport; on the 11th at Jersey, Helston, Newport, and Warrington; on the 12th at Newport and Warrington; on the 14th at Great Berkhamstead, Bicester, and Oxford; on the 22d at Hartwell Rectory; on the 23d at Patricbourn Vicarage, Great Berkhamstead, Grantham, and Nottingham; on the 24th at Guernsey, Newport, and Eign; on the 25th at Helston; on the 26th at Jersey, Teignmouth, and Ryde; and on the 30th at Lampeter.

Snow fell on the 24th October at Anstruther Wester and Elgin; on the 27th at Elgin; and on the 31st at Aberdeen. On the 1st November at Lampeter, Belvoir Castle, Boston, Scarborough, North Shields, Aberdeen, and Elgin; on the 2d at Worthing, Patricbourn Vicarage, Great Berkhamstead, Rose Hill, Bicester, Hartwell House, Hartwell Rectory, Knebworth, Royston, Belvoir Castle, Grantham, and Nottingham; and on the 3d at Bedford and Scarborough. On the 2d December at Norwich; on the 3d at Lewisham, Greenwich, Great Berkhamstead, Rose Hill, Bicester, Oxford, Hartwell House, Hartwell Rectory, Knebworth, Royston, Bedford, Norwich, Nottingham, Leeds, and Stonyhurst; on the 5th at Rose Hill, Boston, Anstruther Wester, Aberdeen, and Elgin; on the 6th at Patricbourn Vicarage, Lewisham, Greenwich, Hartwell House, Hartwell Rectory, Eign, Knebworth, Royston, Cardington, Bedford, Norwich, Belvoir Castle, Grantham, Boston, Gainsborough, Wakefield, Leeds, Stonyhurst, North Shields, Makerstoun, Anstruther Wester, Arbroath, Aberdeen, and Elgin; on the 9th at Jersey, Guernsey, Patricbourn Vicarage, Clifton, Lewisham, Cardington, Bedford, Belvoir Castle, Grantham, Boston, Holkham, Nottingham, Gainsborough, North Shields, Anstruther Wester, Aberdeen, and Elgin; on the 10th at Guernsey, Exeter, Patricbourn Vicarage, Clifton, Lewisham, Greenwich, Great Berkhamstead, Rose Hill, Hartwell House, Hartwell Rectory, Knebworth, Royston, Bedford, Norwich, Belvoir Castle, Grantham, Holkham, Nottingham, Gainsborough, Wakefield, Scarborough, and North Shields; on the 11th at Ryde, Greenwich, Great Berkhamstead, Eign, Knebworth, Royston, Bedford, Lampeter, Norwich, Grantham, Holkham, Hawarden, Bowdon, Warrington, Liverpool, Manchester, Stonyhurst, Scarborough, and North Shields; on the 12th at Great Berkhamstead, Hawarden, Warrington, Liverpool, Stonyhurst, and North Shields; on the 13th at Norwich, Holkham, North Shields, and Aberdeen; on the 20th at Exeter; on the 21st at Exeter and Lampeter; on the 22d at Patricbourn Vicarage, Lewisham, Greenwich, Rose Hill, Oxford, Bedford, Grantham, Nottingham, Wakefield, Leeds, Scarborough, and North Shields; on the 23d at Great Berkhamstead, Knebworth, Royston, Norwich, Grantham, Nottingham, York, North Shields, Arbroath, Aberdeen, and Elgin; and on the 24th at Norwich.

Fog was prevalent on 19 days in October, on every day in November, and on 27 days in December, at the different stations during the quarter.

Aurora Borealis was seen on the 3d October at Hawarden; on the 4th at Lewisham, Oxford, Hartwell Rectory, Cardington, Nottingham, Hawarden, and Aberdeen; on the 5th at Nottingham; on the 9th and 16th at Anstruther Wester and Arbroath; on the 18th at Lewisham, Greenwich, Royston, Cardington, Gainsborough, Stonyhurst, North Shields, Anstruther Wester, Arbroath, and Aberdeen; and on the 31st at Arbroath. On the 2d November at Arbroath; on the 5th at Anstruther Wester, Arbroath, and Elgin; on the 6th at Elgin; on the 15th at Aberdeen; on the 24th at Anstruther Wester; and on the 28th at Stonyhurst. On the 3d December at Makerstoun, Anstruther Wester, and Arbroath; and on the 16th at Anstruther Wester.

Solar Halos were seen on the 1st, 2d, 6th, 7th, 8th, 10th, 13th, 14th, 26th, 27th, and 29th of October. On the 3d November at Knebworth and Nottingham; on the 4th at Nottingham, Anstruther Wester, and Aberdeen; on the 5th at Knebworth and Nottingham; and on the 6th at Anstruther Wester. On the 3d, 9th, 12th, 13th, 17th, 19th, 28th, and 30th December at the various stations.

Lunar Halos were seen on the 19th, 22d, 24th, 25th, 26th, 28th, and 29th October. On the 27th November at Arbroath. On the 13th 16th, 17th, 18th, 19th, 20th, 21st, 22d, 23d, 24th, 25th, and 27th December, at the various stations.

Swallows departed from Aberdeen on 5th Oct.; Grantham 12th Oct.; and Jersey on 31st Oct.

Woodcocks appeared between 6th October and 29th October.

Fieldfares appeared between 20th October and 6th November.

The oak was divested of leaves on 21st October at Arbroath; on the 30th at Clifton, near Bristol; and on 22d December at Newport, Isle of Wight.

The elm was divested of leaves on 20th October at Elgin; on the 31st at Arbroath. On 1st November at Aberdeen; on the 3d at Perth; on the 30th at Clifton, near Bristol. On the 7th of December at Newport; and on the 8th at Guernsey and Teignmouth.

NAMES OF STATIONS.	Mean Pressure of dry Air reduced to the level of the Sea.	Mean Temperature of the Air.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Mean Daily Range of Temperature.	Mean Monthly Range of Temperature.	Range of Temperature in the Quarter.	Mean Temperature of the Month.	Mean Temperature of the Year.	Mean Temperature of the Dew Point.	Mean estimated Strength.	WIND.	Number of Days on which it fell.	RAIN.	Mean Weight or Vapour in a cubic foot of Air.	Mean additional Weight required to saturate a cubic foot of Air.	Mean degree of Humidity.	Mean whole Amount of Water in vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.	Height of Clouds, on the level of the barometer above the station.		
												General Direction.		Amount collected.								
Jersey - - - - -	29.642	47.2	64.0	29.0	5.6	20.2	35.0	44.1	40.1	1.7	Var.	6.4	47	in.	gr.	8.8	79	3.8	540	145		
Guernsey - - - -	29.604	47.6	63.0	32.0	5.0	17.3	38.0	44.8	41.4	1.5	N.E. & N.W.	5.8	48	10.0	3.2	0.7	81	3.9	538	130		
Hatfield - - - - -	29.578	48.5	72.0	29.0	11.0	28.7	43.8	45.8	42.7	2.0	S.W.	6.8	53	7.8	3.0	0.7	82	4.1	539	120		
Falmouth - - - -	29.577	47.7	61.0	29.0	9.0	27.7	44.0	-	-	1.8	Var.	7.1	50	9.0	-	-	-	-	-	120		
Truro - - - - -	29.574	47.6	60.0	29.0	11.3	32.7	46.0	-	-	2.3	N.E. & W.	7.2	52	10.0	3.2	0.7	82	3.9	540	105		
Torquay - - - - -	-	45.7	63.0	27.0	7.2	24.6	36.0	44.4	40.1	1.1	S.W. & W.	6.9	43	8.2	3.2	0.6	85	3.8	543	70		
Teignmouth - - -	29.607	45.6	64.0	27.0	9.6	26.4	37.7	43.3	40.6	1.1	N.W. & N.E.	7.1	49	9.7	3.2	0.6	86	3.9	540	164		
High-street, Exeter	29.610	45.8	67.8	25.3	11.8	32.2	44.2	43.8	41.5	1.1	N. & W.	5.2	43	6.6	3.2	0.5	87	3.7	543	101		
Exeter - - - - -	29.604	45.3	65.8	24.0	13.4	31.1	34.1	43.5	41.1	1.9	N.E. & N.W.	7.7	40	11.2	3.2	0.5	86	3.8	544	110		
Venmore - - - - -	29.627	46.5	64.0	26.0	6.2	29.0	43.0	-	-	0.7	Var.	6.6	32	9.9	3.3	0.4	88	3.9	542	25		
Newport - - - - -	29.599	45.1	67.0	19.0	9.7	32.8	45.0	44.4	41.3	1.2	N.W. & S.W.	7.3	61	10.0	3.2	0.4	87	3.8	544	228		
Ryde - - - - -	29.617	45.7	65.0	18.0	14.0	32.0	46.0	42.4	44.4	1.2	S.W.	7.6	60	7.5	3.1	0.4	87	3.6	542	83		
Worthing - - - - -	29.582	44.4	64.1	17.5	8.1	27.2	40.6	42.4	44.4	0.7	Var.	6.6	32	9.9	3.3	0.4	88	3.9	542	110		
Patrickbourn - - -	-	42.0	63.8	9.5	11.7	33.3	54.4	40.9	39.5	-	N.W. & S.W.	7.3	61	10.0	3.2	0.4	87	3.8	544	228		
Clifton - - - - -	29.618	42.4	64.1	14.1	9.7	33.7	50.3	41.4	39.3	0.7	S.W.	6.6	50	7.5	3.1	0.4	87	3.6	542	83		
Lewisham - - - -	29.632	42.6	67.5	13.0	12.7	36.7	54.6	40.9	38.6	-	Var.	7.8	47	7.6	3.0	0.5	87	3.5	546	180		
Royal Observatory -	29.637	42.7	66.8	16.9	10.8	33.2	49.9	41.1	39.2	-	S.W. & N.W.	7.5	50	7.4	3.0	0.4	87	3.6	544	180		
Bayswater - - - -	29.625	42.3	68.0	16.7	13.7	34.5	55.0	41.7	39.8	-	Var.	-	-	-	3.1	0.4	89	3.7	546	180		
Somerset House - -	29.628	44.1	68.4	19.8	9.9	33.1	49.7	44.0	41.5	-	N.E.	-	-	-	3.2	0.5	86	3.8	-	126		
St. Mary's Hospital	29.611	42.5	69.8	17.3	11.6	33.2	46.0	40.3	40.0	-	N.E.	-	-	-	3.1	0.5	87	3.7	545	370		
Enfield Vicarage -	29.634	41.6	68.8	18.0	11.6	33.4	45.8	40.1	38.1	0.8	Var.	6.7	52	10.0	3.2	0.5	87	3.5	541	370		
Gt. Berkhamstead	29.628	42.1	64.0	14.5	12.4	32.3	45.6	40.6	38.9	1.7	Var.	6.9	47	7.1	3.0	0.4	90	3.6	543	270		
Rice Hill - - - - -	29.646	43.0	71.0	15.5	13.1	33.7	45.5	41.3	39.3	1.1	S.W. & N.W.	6.8	46	6.4	3.1	0.4	88	3.6	542	110		
Bicester - - - - -	29.628	43.2	64.8	14.6	9.8	32.6	43.9	42.4	40.9	1.7	N.W. & S.W.	7.7	48	7.0	3.0	0.5	86	3.6	542	110		
Oxford - - - - -	29.628	43.2	70.0	17.0	9.8	36.7	45.0	41.4	39.8	1.0	N. & N.E.	6.1	42	7.2	3.2	0.3	92	3.9	540	250		
Hartwell House -	29.594	42.9	67.2	16.0	10.6	33.6	45.0	40.3	38.3	0.9	S.W.	5.8	45	6.6	3.0	0.4	89	3.7	541	250		
Hartwell Rectory -	29.629	42.3	67.5	14.0	9.0	32.8	46.1	41.0	39.3	0.9	S.W.	6.8	41	6.3	3.1	0.3	90	3.7	542	250		
Eign - - - - -	-	40.9	61.0	14.0	10.8	28.7	40.7	39.3	38.5	0.6	S.W.	6.7	49	8.9	3.2	0.5	88	3.6	542	250		
Knebworth - - - -	29.648	42.7	71.8	16.2	11.2	32.2	45.5	41.1	39.0	-	S.W. & N.W.	6.7	73	8.5	3.0	0.4	88	3.7	542	271		
Royston - - - - -	29.596	42.3	70.0	15.0	11.9	33.5	45.5	41.1	39.3	0.9	S.W. & N.W.	6.5	46	6.9	3.1	0.3	90	3.6	545	271		
Cardington - - - -	29.619	43.8	65.5	20.0	8.8	30.0	45.0	40.9	39.0	-	Var.	7.8	42	6.7	2.8	0.7	80	3.4	544	100		
Launceston - - - -	29.639	42.5	68.8	15.5	-	-	53.3	40.2	39.2	1.3	Var.	6.8	54	12.0	2.8	0.6	83	3.4	539	125		
Worcester - - - - -	29.613	42.2	68.5	13.0	-	-	46.3	38.5	37.4	3.7	Var.	7.3	36	7.7	2.9	0.5	86	3.4	545	125		
Norwich - - - - -	29.601	40.5	69.0	16.5	9.6	37.8	45.0	41.4	38.4	1.3	S.W.	6.5	48	8.9	3.0	0.5	84	3.5	545	125		
Belvoir Castle - -	29.637	41.3	69.5	17.0	14.6	36.9	45.0	41.4	38.4	1.5	S.W.	6.0	48	8.5	2.8	0.5	85	3.5	548	125		
Grantham - - - - -	29.617	42.0	63.6	20.9	9.3	29.3	42.7	40.2	38.7	0.4	S.W.	8.1	75	8.2	3.2	0.2	87	3.5	544	174		
Boston - - - - -	-	42.3	66.5	17.3	12.9	32.1	52.8	41.6	40.5	-	Var.	-	-	-	3.2	0.2	94	3.8	542	174		
Derby - - - - -	29.598	42.4	64.0	18.0	11.9	32.3	45.6	40.2	40.1	-	Var.	-	-	-	3.9	0.4	2.8	0.6	83	3.5	545	
Holkham - - - - -	29.600	42.9	69.2	17.2	10.9	33.2	43.2	41.1	39.4	1.4	S.W. & S.E.	7.1	55	10.5	3.0	0.4	89	3.6	546	181		
Nottingham - - - -	29.644	41.8	67.9	12.0	12.2	36.1	55.9	39.9	36.5	0.5	N.W. & S.W.	7.5	47	6.5	2.8	0.6	84	3.2	544	200		
Hawarden - - - - -	29.616	43.2	69.0	16.5	9.6	30.7	45.1	41.3	38.5	1.5	Var.	7.7	31	5.1	2.9	0.6	84	3.5	542	200		
Bowdon - - - - -	29.630	41.7	67.3	15.7	14.9	34.0	47.7	40.4	38.7	-	Var.	5.8	40	5.4	3.0	0.3	91	3.5	544	30		
Gainsborough - - -	29.611	41.4	65.5	16.0	9.0	29.0	40.0	39.9	38.6	0.5	Var.	6.7	42	8.1	2.9	0.5	85	3.3	548	30		
Warrington - - - -	29.606	42.3	66.5	14.5	11.6	33.3	45.1	41.0	38.8	0.4	Var.	6.3	38	6.3	2.9	0.7	80	3.5	546	33		
Liverpool - - - - -	29.641	44.4	68.8	3.2	7.8	26.1	46.0	42.0	40.2	1.1	Var.	6.9	35	5.5	3.0	0.6	83	3.6	545	135		
Manchester - - - -	29.589	41.0	68.7	12.0	12.6	33.4	52.2	40.2	39.7	-	S.W. & N.W.	7.6	48	6.9	2.9	0.4	88	3.4	545	115		
Wakefield - - - - -	29.611	42.1	67.0	12.7	10.6	33.7	54.3	40.4	38.4	1.5	N.W. & S.W.	7.0	56	6.6	3.0	0.4	87	3.4	545	121		
Leeds - - - - -	29.614	41.7	66.5	15.0	11.9	33.3	45.0	41.3	38.7	0.6	N.W.	8.2	48	5.2	2.9	0.7	80	3.4	542	181		
Stonyhurst - - - -	29.604	40.9	64.4	16.5	12.9	33.1	47.8	40.9	38.7	-	Var.	6.6	41	12.6	2.8	0.5	86	3.3	544	90		
York - - - - -	29.550	40.9	67.5	22.2	5.7	32.2	48.7	41.8	40.0	2.3	S.W. & N.W.N.W.	-	-	-	3.8	0.2	3.1	0.4	89	3.7	543	90
Scarborough - - -	29.598	43.0	66.9	24.3	11.0	29.0	42.6	41.6	39.8	1.5	Var.	6.1	38	5.8	3.0	0.6	82	3.4	543	100		
North Shields - -	29.636	41.7	67.0	22.2	7.6	25.8	38.7	40.4	39.1	2.0	S.W. & N.W.	6.4	56	5.6	3.0	0.2	92	3.6	545	215		
Makerston - - - - -	29.604	39.5	65.2	12.7	13.5	35.4	50.9	37.9	35.8	1.3	S.W. & N.W.	6.7	38	5.3	2.7	0.4	88	3.1	545	20		
Ansforth Wester -	29.611	41.0	66.5	16.0	9.6	30.0	45.0	40.9	39.5	0.2	N.W. & S.W.	6.5	36	4.4	2.8	0.4	87	3.3	548	11		
Arbroath - - - - -	29.600	39.4	62.0	19.0	11.3	33.3	48.2	39.2	37.2	1.4	N.W.	6.8	39	5.5	2.5	0.6	81	2.8	548	11		
Aberdeen - - - - -	29.538	41.5	62.0	20.1	10.7	29.7	38.7	38.8	37.1	1.4	S.W. & N.W.	6.7	48	7.8	2.6	0.6	81	3.1	546	11		
Elgin - - - - -	29.535	41.5	62.0	19.0	9.1	29.3	43.0	39.3	35.1	0.9	-	-	-	-	-	-	-	-	-	-		

The highest readings of the thermometer in air were 73° at Bowdon, 72°2 at Hartwell Rectory, 72° at Helston and Kyde, 71°2 at Roston, 71° at Falmouth and Bicester, 70°2 at Cardington, and 70° at Hartwell House. The lowest were 7°3 at Makerston, 6°5 at Painsdown, Worcester, and 7°3 at Hartwell Rectory, 11°4 at Eign, 12° at Nottingham, 12°7 at Wakefield, and 13° at Lewisham. Great Berkhamstead, Worcester, and Worcester. The greatest daily ranges took place at Wakefield, Newport, Makerston, Somerset House, Cardington, Bowdon, Ryde, Worcester, and Belvoir Castle; and the least at Jersey, Guernsey, Scarborough, Ventnor, Torquay, North Shields, Liverpool, and Worthing.

Liverpool, and Worthing. Rain fell on the greatest number of days at Royston, Woking, Wakefield, North Shields, Grantham, Boston, Holkham, Lampeter, Helston, Telford, and Scarborough; and on the least number at Hawarden, Ryde, Torquay, Liverpool, Worcester, Anstruther Wester, Warrington, Isle of Man, Makerstun, and Arlroath. The greatest falls took place at Stonyhurst, Lampeter, Newport, Holkham, Patribourn Vicarage, Guernsey, Truro, and Great Berkhamstead; and the mean amount for these places is 10·8 inches; and the least falls occurred at Derby, Anstruther Wester, York, Hawarden, Leeds, Makerstun, Elgin, Bowdon, Liverpool, and Arlroath; and their mean amount is 5·1 inches.

QUARTERLY METEOROLOGICAL TABLE for different PARALLELS of LATITUDE.

QUARTERLY METEOROLOGICAL TABLE FOR DIFFERENT PARALLELS OF LATITUDE.																			
PARALLELS OF LATITUDE, &c.		Mean Pressure of dry Air reduced to the level of the Sea.	Mean Elastic Force of Vapour.	Mean Temperature of the Air.	Mean of Highest Readings of the Thermometer.	Mean of Lowest Readings of the Thermometer.	Average Daily Range of Temperature.	Average Monthly Range of Temperature.	Average Quarterly Range of Temperature.	Mean Temperature of Evaporation.	Mean Temperature of the Dew Point.	RAIN.		Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required to saturate a cubic foot of Air.	Mean degree of Humidity.	Mean whole Amount of Water in a vertical column of Atmosphere.	Mean Weight of a cubic foot of Air.	Mean Vertical of the Barometer.
		in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	Average Number of Days.	Average fall.	gr.	gr.	per cent.	in.	lb.	in.
In the Counties of Cornwall and Devonshire		29.536	2.277	46.5	67.3	25.9	10.6	29.0	44.4	44.3	41.3	4.5	48	8.1	3.2	85	3.9	54.1	1000
Newport and Ryde		29.538	2.284	46.6	67.4	26.0	10.7	29.1	44.5	44.4	41.4	4.6	49	8.2	3.3	86	4.0	54.2	1001
Worthing		29.539	2.286	44.4	67.7	26.1	10.8	29.2	44.6	44.5	41.5	4.7	50	8.3	3.4	87	4.1	54.3	1002
Between the latitudes of 51° and 52°		29.621	2.285	44.7	67.7	26.1	10.8	29.2	44.6	44.5	41.5	4.7	50	8.3	3.4	87	4.1	54.3	1002
Between the latitudes of 52° and 53°		29.619	2.282	44.6	67.6	26.0	10.7	29.1	44.5	44.4	41.4	4.6	49	8.2	3.3	86	4.0	54.2	1001
Between the latitudes of 53° and 54°		29.606	2.244	42.1	67.6	26.0	10.7	29.1	44.5	44.4	41.4	4.6	49	8.2	3.3	86	4.0	54.2	1001
Liverpool		29.641	2.244	42.1	67.6	26.0	10.7	29.1	44.5	44.4	41.4	4.6	49	8.2	3.3	86	4.0	54.2	1001
Scarborough		29.641	2.244	42.1	67.6	26.0	10.7	29.1	44.5	44.4	41.4	4.6	49	8.2	3.3	86	4.0	54.2	1001
Isle of Man		29.698	2.204	43.8	68.3	26.2	10.8	29.3	44.7	44.6	41.6	4.8	51	8.4	3.5	88	4.2	54.4	1003
North Shields		29.636	2.256	41.7	68.0	26.3	10.9	29.4	44.8	44.7	41.7	4.9	52	8.5	3.6	89	4.3	54.5	1004
Makerstoun to Elgin		29.579	2.230	40.5	66.1	26.3	10.9	29.4	44.8	44.7	41.7	4.9	52	8.5	3.6	89	4.3	54.5	1004

In the formation of this Table the results from Jersey and Guernsey have not been combined, on account of the difference between the ranges of temperature of the two places. The results from Ventnor are not combined, on account of the much higher temperatures and less range of temperature than those at the other stations in the Isle of Wight.

Year 1855.	Month.	Mean Pressure of Air and Water.		Air and Water line of the Ba- rometer.	Water or Elan- gine Force of Vapour.	Range of Barometer in the Month.		Mean.				Temperature of the Air.				Mean Amount of Cloud.	Number of Days of full.	Amount of Rain.	Mean Weight of Vapour in a cubic foot of Air.	Additional Weight required to saturate a cubic foot of Air.	Mean Degree of Humi- dity, Sat., = 100.	Mean Weight of a cubic foot of Air.
		in.	in.			From Self- registering therm.	From Self- registering therm.	Adopted.	Highest.	Lowest.	Range in the Month.	Mean of all the Highest.	Mean of all the Lowest.	Mean Daily Range.	Evaporation, Sat., = 100.							
JERSEY.	Oct.	29.668	.380	1.140	54.1	55.2	54.6	64.0	44.0	37.0	58.9	59.4	17.0	47.9	43.0	4.9	32	5.4	2.8	0.8	87	55.2
	Nov.	29.877	.298	1.055	44.6	45.0	44.8	54.0	44.0	37.0	58.9	59.4	17.0	47.9	43.0	4.9	32	5.4	2.8	0.8	87	55.2
	Dec.	29.752	.265	1.024	42.0	42.2	42.1	51.0	41.0	34.0	57.0	57.5	13.0	45.0	40.0	5.0	10	2.8	0.8	77	54.6	
	Oct.	29.767	.352	1.126	54.0	54.2	53.7	62.0	43.0	29.0	57.5	58.1	14.0	48.0	43.0	5.0	14	2.8	0.8	83	54.6	
	Nov.	29.853	.285	1.088	46.2	46.4	46.1	54.0	44.0	37.0	58.9	59.4	17.0	47.9	43.0	4.9	14	2.8	0.8	83	54.6	
	Dec.	29.677	.304	1.114	42.0	42.2	42.1	51.0	41.0	34.0	57.0	57.5	13.0	45.0	40.0	5.0	10	2.8	0.8	77	54.6	
	Oct.	29.761	.293	1.114	42.0	42.2	42.1	51.0	41.0	34.0	57.0	57.5	13.0	45.0	40.0	5.0	10	2.8	0.8	77	54.6	
	Nov.	29.761	.293	1.114	42.0	42.2	42.1	51.0	41.0	34.0	57.0	57.5	13.0	45.0	40.0	5.0	10	2.8	0.8	77	54.6	
	Dec.	29.761	.293	1.114	42.0	42.2	42.1	51.0	41.0	34.0	57.0	57.5	13.0	45.0	40.0	5.0	10	2.8	0.8	77	54.6	
	Oct.	29.624	.284	1.070	43.0	43.2	43.1	51.0	41.0	34.0	57.0	57.5	13.0	45.0	40.0	5.0	10	2.8	0.8	77	54.6	
	Nov.	29.697	.284	1.090	43.0	43.2	43.1	51.0	41.0	34.0	57.0	57.5	13.0	45.0	40.0	5.0	10	2.8	0.8	77	54.6	
	Dec.	29.622	.282	1.070	43.0	43.2	43.1	51.0	41.0	34.0	57.0	57.5	13.0	45.0	40.0	5.0	10	2.8	0.8	77	54.6	
TRURO.	Oct.	29.663	.312	1.061	43.0	43.2	43.1	51.0	41.0	34.0	57.0	57.5	13.0	45.0	40.0	5.0	10	2.8	0.8	77	54.6	
	Nov.	29.663	.312	1.061	43.0	43.2	43.1	51.0	41.0	34.0	57.0	57.5	13.0	45.0	40.0	5.0	10	2.8	0.8	77	54.6	
	Dec.	29.663	.312	1.061	43.0	43.2	43.1	51.0	41.0	34.0	57.0	57.5	13.0	45.0	40.0	5.0	10	2.8	0.8	77	54.6	
	Oct.	29.663	.312	1.061	43.0	43.2	43.1	51.0	41.0	34.0	57.0	57.5	13.0	45.0	40.0	5.0	10	2.8	0.8	77	54.6	
	Nov.	29.663	.312	1.061	43.0	43.2	43.1	51.0	41.0	34.0	57.0	57.5	13.0	45.0	40.0	5.0	10	2.8	0.8	77	54.6	
	Dec.	29.663	.																			

Ester.—The mean reading of the maximum thermometer for November was reduced by one-tenth of an inch, on 11 days and 8 n. g. 14, in November on 5 days and 6 nights, and in December on 3 days and 8 nights.

[illegible]

Seabrook; October.—The reading of the barometer on the 7th at 6h. P.M. was altered from 29·800 in. to 29·300 in. December. The reading of the barometer on the 31st at 9h. A.M. was altered from 30·726 in. to 30·539 in.

Sea and rain gauges are placed : At Jersey, at the height of 10 feet; the amount collected during the quarter was 9·1 inches. At Newport, 8 feet; the amount was 10·9 inches. At Clifton, 50 feet; the amount was 3 inches. At Oxford, 22 feet; the amount was 5·9 inches. At Norwich, 31 feet; the amount was 7·6 inches. At Holkham, 4 feet; the amount was 9·5 inches. At Nottingham, 25 feet; the amount was 9 inches. And at Warrington, 55 feet; the amount was 5·3 inches.

ON THE
METEOROLOGY OF ENGLAND AND SCOTLAND,

DURING THE

Quarter ending March 31, 1856.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

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1856.

On the Meteorology of England and Scotland, during the Quarter ending March 31st, 1856.
By JAMES GLAISHER, ESQ., F.R.S., Sec. of the British Meteorological Society.

The temperature of the air till the end of February was a few days together in excess and defect alternately. The temperature was low throughout March.

The periods and average daily amount of excess were, January 1st to 8th, $6\frac{1}{2}^{\circ}$; January 16th to 27th, $7\frac{1}{2}^{\circ}$; February 5th to 16th, $8\frac{1}{2}^{\circ}$; and from February 22d to 28th, $10\frac{1}{2}^{\circ}$.

The periods and average daily amount of defect were, January 9th to 15th, $3\frac{1}{2}^{\circ}$; January 28th to February 4th, and February 16th to 22d, $4\frac{1}{2}^{\circ}$; and the whole of March 3° daily.

The temperature of January and February was higher than their averages, and that of March was lower. Upon the quarter the temperature was somewhat in excess.

The reading of the barometer at the level of the sea decreased from 29.99 inches at the beginning of the year to 29.02 inches by January 7th; increased to 30.72 inches by the 13th; decreased to 29.17 inches by the 21st; increased to 30.25 inches by the 31st; decreased to 29.71 inches by February 7th; then increased gradually, passing above 30 inches on the 22d to 30.69 inches by March 1st; then decreased gradually, passing below the point 30 inches on March 12th to 29.84 inches by the 19th; and ranged between this point and 30.20 inches to the end of the quarter.

The pressure of the atmosphere in January was much below, and in the remaining two months was above its average value. Upon the whole quarter the pressure was somewhat in excess.

The water mingled with the air was somewhat in excess during the first two months, and in defect in the last month of the quarter.

The degree of humidity was rather above its average in January and February and below it in March.

The daily ranges of temperature were of their average values in January, but were smaller in February and March than their averages.

Rain was somewhat in excess in January and in defect in February and March, particularly in the latter month.

The general direction of the wind for the quarter at places south of latitude 54° was East or a compound of the East, and the least prevalent was the West. At places situated north of this parallel of latitude the West or a compound of the West rather preponderated, but there was very little difference in the resulting numbers for the four cardinal points.

The mean temperature of the air at Greenwich for the quarter ending February, constituting the three winter months, was 39° being $-0^{\circ}3$ below the average of 85 years.

1856. MONTHS.		Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
		Air.			Evaporation.		Dew Point.		Air— Daily Range.		Water of the Thames.				
		Mean.	Diff. from ave- rage of 85 years.	Diff. from ave- rage of 15 years.	Mean.	Diff. from ave- rage of 15 years.	Mean.	Diff. from ave- rage of 15 years.	Mean.	Diff. from ave- rage of 14 years.					
Jan. . .	39.4	+3.5	+1.3	38.2	+1.1	36.4	+1.4	8.5	+0.2	39.6	in. .215	in. .211	gr. 2.6	gr. +0.9	
Feb. . .	42.0	+3.8	+3.8	40.3	+3.6	37.8	+3.7	9.7	-1.1	41.2	.227	+0.025	2.7	+0.4	
Mar. . .	38.7	-2.2	-3.0	36.6	-4.2	33.1	-2.6	12.4	-2.1	42.9	.188	-0.030	2.2	-0.3	
Mean .	40.0	+1.7	+0.7	38.5	+0.2	35.8	+2.5	10.2	-1.0	40.9	.210	+0.002	2.5	+0.1	

1856 MONTHS.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal movement of the Air.	Reading of Thermometer on Grass.				
	Mean.	Diff. from average of 14 years.	Mean.	Diff. from average of 14 years.	Mean.	Diff. from average of 14 years.	Amount.	Diff. from average of 40 years.		Number of Nights it was			Lowest Reading at Night.	Highest Reading at Night.
										At or below 30°	Between 30° and 40°	Above 40°		
Jan. . .	91	+ 2	in. 29.468	-2.77	547	- 9	in. 2.6	+0.8	103	8	14	1	15.0	41.0
Feb. . .	87	+ 1	29.899	+1.41	552	- 2	1.1	-0.6	123	11	11	4	19.5	43.0
Mar. . .	82	- 1	30.011	+2.18	558	+ 8	1.1	-0.5	99	22	8	0	8.0	40.0
Mean .	86.6	+ 1	29.793	+0.27	552	- 1	Sum 4.8	Sum -0.3	108	Sum 41	Sum 33	Sum 5	8.0	43.0

NOTE.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunderstorms occurred, or thunder was heard and lightning seen, on the 24th January at Jersey, Ryde, Clifton, Lewisham, London, Rose Hill, Hartwell, Cardington, Worcester, and Nottingham; on the 25th at Ryde and Lewisham; on the 28th at Hawarden, Warrington, and Liverpool. On the 12th February at York.

Thunder was heard, but lightning was not seen, on the 23d January at Helston. On the 14th February at Teignmouth; on the 16th at Wakefield; and on the 26th at Jersey. On the 17th March at Jersey and Guernsey; and on the 19th at Rose Hill.

Lightning was seen, but thunder was not heard, on the 3d January at Oxford. On the 3d February at Cardington; on the 5th at Grantham; on the 7th at Makerstoun, Anstruther Wester, and Arbroath; on the 10th at Bedford; and on the 14th at Clifton. On the 29th March at Cardington.

Hail fell on 17 days in January, 9 days in February, and 4 days in March.

Aurora were seen on the 9th January at Nottingham; on the 26th at Clifton; and on the 31st at Arbroath. On the 7th and 25th February at Arbroath. On the 6th March at Arbroath; on the 13th at Oxford; and on the 27th and 30th at Arbroath.

Fog was prevalent on the 1st January at Paddington, Berkhamstead, Eign, Cardington, Lampeter, Holkham, Wakefield, and North Shields; on the 2d at Paddington, Bicester, Berkhamstead, Knebworth, Eign, Cardington, Holkham, Belvoir, Boston, Wakefield, Stonyhurst, North Shields, West Anstruther, and Arbroath; on the 3d at Paddington, Berkhamstead, Cardington, Wakefield, North Shields, West Anstruther, and Arbroath; on the 4th at Paddington, Berkhamstead, Cardington, Wakefield, North Shields, Makerstoun, West Anstruther, and Arbroath; on the 5th at Teignmouth, Exeter, Clifton, Paddington, Berkhamstead, Wakefield, West Anstruther, and Arbroath; on the 6th at Teignmouth, Exeter, Paddington, Bayswater, Berkhamstead, Wakefield, Stonyhurst, Scarborough, North Shields, Makerstoun, West Anstruther, Arbroath, and Elgin; on the 7th at Truro, Paddington, Berkhamstead, Knebworth, Holkham, Boston, Wakefield, Stonyhurst, Scarborough, North Shields, Makerstoun, West Anstruther, and Arbroath; on the 8th at London, Eign, Holkham, Bowdon, and Wakefield; on the 9th at Eign; on the 10th at Bowdon; on the 11th at Bowdon and Stonyhurst; on the 13th at Stonyhurst; on the 14th at Paddington, Wakefield, Stonyhurst, and North Shields; on the 15th at Paddington, London, Berkhamstead, Wakefield, Stonyhurst, and North Shields; on the 16th at Clifton, Paddington, Berkhamstead, Oxford, Hartwell Rectory, Knebworth, Royston, Eign, Worcester, Stonyhurst, and West Anstruther; on the 17th at Oxford, Knebworth, Wakefield, Stonyhurst, North Shields, West Anstruther, and Arbroath; on the 18th at Paddington, Oxford, Wakefield, Stonyhurst, and Arbroath; on the 19th at Hawarden, Wakefield, North Shields, West Anstruther, and Arbroath; on the 20th at Teignmouth, Hawarden, Wakefield, Stonyhurst, North Shields, and Makerstoun; on the 21st at Teignmouth, Paddington, London, Rose Hill, Berkhamstead, Oxford, Hartwell, Knebworth, Royston, Cardington, and Holkham; on the 22d at Paddington; on the 24th at West Anstruther and Arbroath; on the 26th at Wakefield; on the 28th at Clifton; and on the 31st at Paddington. On the 1st February at Paddington, Wakefield, Scarborough, and West Anstruther; on the 2d at Clifton, London, Lambeth, Holkham, Wakefield, West Anstruther, and Arbroath; on the 3d at Berkhamstead, Eign, Holkham, Wakefield, West Anstruther, and Arbroath; on the 4th at Teignmouth, Clifton, Paddington, Knebworth, Eign, Holkham, Stonyhurst, Makerstoun, and Arbroath; on the 5th at Paddington, Hartwell, and Arbroath; on the 7th at Paddington; on the 8th at Isle of Man; on the 10th at Berkhamstead and Wakefield; on the 11th at Paddington, Lambeth, Berkhamstead, Knebworth, Wakefield, North Shields, Makerstoun, West Anstruther, and Arbroath; on the 12th at Wakefield and Makerstoun; on the 13th at Clifton, Paddington, Lambeth, and Wakefield; on the 15th at Bayswater, West Anstruther, and Arbroath; on the 16th at Paddington, Knebworth, Wakefield, Scarborough, Makerstoun, and West Anstruther; on the 17th at Paddington, Lambeth, Wakefield, West Anstruther, and Arbroath; on the 18th at Paddington and Wakefield; on the 19th at Battersea and Paddington; on the 22d at Paddington, Oxford, Holkham, Bowdon, and Scarborough; on the 23d at Paddington, Oxford, Lampeter, Bowdon, Warrington, and Stonyhurst; on the 24th at Clifton, Eign, Warrington, Wakefield, and Stonyhurst; on the 25th at Paddington and Lambeth; on the 27th at Paddington, Lambeth, Oxford, and Scarborough; on the 28th at Lambeth, Oxford, Hartwell, and Wakefield; on the 29th at Paddington, Lampeter, and Scarborough. On the 1st March at Paddington, Knebworth, Eign, Hawarden, Wakefield, Scarborough, and West Anstruther; on the 2d at Lambeth; on the 3d at Lambeth and Holkham; on the 4th and 5th at Eign and Holkham; on the 6th at Eign; on the 7th at Paddington; on the 8th at Clifton, Paddington, Berkhamstead, Norwich, Holkham, Stonyhurst, North Shields, and Makerstoun; on the 9th at Teignmouth, Clifton, Rose Hill, Berkhamstead, Hartwell, Oxford, Eign, Hawarden, and Stonyhurst; on the 10th at Teignmouth and Oxford; on the 13th and 15th at Wakefield; on the 17th at Teignmouth, Clifton, Oxford, Knebworth, and Eign; on the 18th at Teignmouth, Eign, and Wakefield; on the 19th at Knebworth, Hartwell, Wakefield, and Arbroath; on the 20th at Oxford, Knebworth, Holkham, Wakefield, and Stonyhurst; on the 21st at Wakefield; on the 22d at Teignmouth and Wakefield; and on the 24th, 25th, 29th, 30th, and 31st at Wakefield.

Snow fell on 33 days during the quarter.

Solar Halos were seen on 21 days during the quarter.

Lunar Halos were seen on 18 days during the quarter.

The elm leaf buds first appeared on the 27th February at Teignmouth. On the 26th March at Hawarden; and on the 29th at Helston.

Hawthorn leaf buds first appeared on the 29th February at Hawarden. On the 1st March at Arbroath; on the 20th at Guernsey; and on the 8th at Knebworth.

Pum in blossom on the 28th March at Arbroath.

Peach in blossom on the 10th March at Arbroath; on the 15th at Battersea; on the 23d at Jersey.

Sycamore leaf buds first appeared on the 25th March at Guernsey; and on the 26th at Hawarden.

Horse-chestnut leaf buds first appeared on the 17th March at Hawarden; on the 20th at Knebworth; and on the 25th at Jersey.

Lime leaf buds first appeared on the 31st March at Guernsey.

Common poplar leaf buds first appeared on the 31st March at Clifton.

The oak leaf buds first appeared on the 31st March at Teignmouth.

The apple and pear leaf buds first appeared on the 20th March at Jersey.

NAMES OF STATIONS.	Mean Pressure of dry Air reduced to the level of the Sea.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Range of Temperature in the Quarter.	Mean of all Highest.	Mean of all Lowest.	Mean Monthly Range of Temperature.	Mean Daily Range of Temperature.	Mean Temperature of the Air.	Mean Temperature of the Dew Point.	Mean Elastic Force of Vapour.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required for saturation.	Mean degree of Humidity.	Mean Weight of a cubic foot of Air.	Mean Reading of Maximum in rays of Sun.	Mean Reading of Minimum on Grass.	WIND.				Mean Amount of Ozone.	Mean Amount of Cloud.	Number of Days on which it fell.	Rain.
																		Relative Proportion of							
																		N.	E.	S.	W.				
																		Mean estimated Strength.							
Jersey	29.588	55.0	26.0	29.0	46.7	40.8	23.0	5.9	42.9	40.5	0.255	2.6	0.2	92	549	—	—	1.6	—	—	—	—	—	5.5	31
Guernsey	29.626	54.0	25.0	24.5	46.1	41.1	22.8	5.0	42.0	39.9	0.247	2.6	0.2	86	549	—	—	—	—	—	—	—	—	5.5	31
Helston	29.675	51.0	30.0	31.0	51.2	41.1	27.0	10.1	45.4	41.1	0.258	2.9	0.7	86	549	—	—	3.3	—	—	—	2.3	4	6.4	48
Falmouth	29.670	55.0	29.0	32.0	49.7	40.9	27.3	8.8	44.8	—	0.257	2.9	0.5	86	549	—	—	3.0	—	—	—	2.3	4	7.0	48
Truro	29.676	57.0	21.0	36.0	47.8	38.1	27.2	9.0	43.7	40.1	0.240	2.8	0.5	84	549	—	—	1.7	—	—	—	—	—	7.0	48
Teignmouth	29.706	55.5	25.0	29.0	47.8	38.1	27.2	11.2	43.5	—	0.237	2.8	0.5	86	549	—	—	1.4	—	—	—	—	—	7.0	48
Exeter	29.703	58.5	22.8	35.7	49.7	37.8	32.4	11.9	43.7	—	0.236	2.8	0.5	85	551	—	—	1.7	—	—	—	4.9	7	7.0	48
Torquay	—	54.0	28.0	26.0	47.2	40.4	21.6	6.7	43.3	33.0	0.225	2.7	0.4	86	548	—	—	0.9	23	28	18	18	—	7.0	48
Venator	29.775	54.0	29.0	25.0	47.2	39.2	22.3	8.0	43.3	37.4	0.224	2.6	0.7	78	—	—	—	1.2	27	22	26	6	—	—	—
Ryde	—	56.0	37.0	29.0	47.7	36.8	25.8	11.3	45.1	37.4	0.224	2.6	0.4	84	—	—	—	0.6	31	34	20	6	—	—	—
Newport	29.735	55.0	35.0	30.6	47.5	37.9	26.8	9.6	42.0	37.2	0.225	2.6	0.4	85	552	—	—	2.1	19	35	15	19	5.4	6.7	—
Patrickbourn	29.736	56.0	35.0	30.6	47.5	37.9	26.8	9.6	42.0	37.2	0.225	2.6	0.4	85	552	—	—	0.6	19	29	15	22	6.6	—	—
Clifton	29.671	57.1	21.0	35.0	57.2	47.3	30.3	10.7	46.8	36.0	0.220	2.5	0.4	88	550	—	—	32.3	—	—	—	—	—	7.0	—
Maldstone	29.696	61.5	26.0	40.0	46.9	38.6	24.6	32.4	42.4	37.1	0.220	2.5	0.4	88	550	—	—	1.4	33	13	15	18	3.3	7.0	—
Royal Observatory	29.761	58.0	24.0	33.7	45.6	35.4	25.2	10.2	40.0	35.0	0.210	2.5	0.6	87	549	54.0	54.0	1.6	20	33	23	15	3.8	7.0	—
Battersea	29.776	59.0	23.0	36.2	45.9	35.6	30.0	10.4	38.8	37.8	0.223	2.6	0.3	89	551	54.0	54.0	0.8	30	42	37	25	7.2	6.3	—
Paddington	29.761	61.2	25.0	35.0	46.6	37.1	30.8	9.5	41.2	38.7	0.223	2.6	0.4	88	552	50.1	50.1	0.3	14	30	16	27	—	—	—
St. Thomas's Hosp.	29.755	58.0	28.0	30.0	46.4	38.5	25.0	7.5	41.3	38.0	0.221	2.6	0.4	85	553	—	—	2.2	50	17	12	17	—	—	—
Enfield	29.759	59.0	33.0	38.0	46.3	36.0	31.7	9.8	40.8	36.4	0.216	2.6	0.4	89	552	—	—	1.2	28	30	19	17	—	—	—
Rose Hill	29.759	59.0	33.0	38.0	46.3	36.0	31.7	9.8	40.8	36.4	0.216	2.6	0.4	89	552	—	—	0.6	27	25	14	15	—	—	—
Bicester	29.750	63.0	21.0	42.0	47.0	36.0	31.0	7.9	39.5	36.9	0.217	3.5	0.3	87	551	51.7	51.7	1.7	—	—	—	—	6.6	8.3	—
Berkhamstead	29.758	57.3	18.0	39.0	45.9	34.5	33.3	11.0	39.2	36.6	0.218	3.6	0.4	87	549	—	—	1.2	22	32	21	16	—	—	—
Oxford	29.745	56.0	21.0	35.0	45.7	35.4	31.3	10.3	38.9	36.7	0.223	2.6	0.3	90	551	57.1	57.1	0.6	27	25	14	15	—	—	—
Hartwell House	29.691	65.0	22.0	43.0	47.2	35.6	31.6	11.6	40.4	37.9	0.228	2.0	0.3	92	549	—	—	1.2	28	30	25	13	3.3	7.3	—
Hartwell Rectory	29.719	59.0	22.0	37.0	45.7	35.1	31.7	10.6	38.9	36.7	0.217	2.6	0.3	90	549	—	—	0.6	27	25	14	15	—	—	—
Royston	29.766	58.1	19.0	38.0	45.7	34.6	33.0	11.1	39.7	36.8	0.214	2.4	0.4	87	551	—	—	0.8	25	26	22	18	7.4	—	—
Knebworth	29.766	58.1	19.0	38.0	45.7	34.6	33.0	11.1	39.7	36.8	0.214	2.4	0.4	87	551	—	—	1.2	21	21	22	18	7.4	—	—
Eign	29.766	58.1	19.0	38.0	45.7	34.6	33.0	11.1	39.7	36.8	0.214	2.4	0.4	87	551	51.7	51.7	0.5	20	29	18	13	7.1	—	—
Cardington	29.745	57.0	21.0	35.0	57.2	47.3	30.3	10.7	46.8	36.0	0.218	2.6	0.4	88	550	55.7	55.7	0.6	27	28	14	23	7.1	—	—
Lampeter	29.724	59.8	16.4	43.4	47.3	34.9	34.6	12.4	40.4	36.6	0.217	2.6	0.3	88	550	50.0	50.0	0.7	22	25	18	13	7.1	—	—
Bedford	29.734	60.5	24.0	36.0	45.6	36.4	32.0	9.2	40.4	36.7	0.202	2.4	0.6	79	552	52.7	52.7	0.7	17	30	20	13	4.2	7.3	—
Worcester	29.718	58.0	19.0	39.0	—	—	—	—	—	—	0.190	3.3	0.4	81	549	54.0	54.0	0.7	25	26	22	18	7.4	—	—
Norwich	29.745	59.0	19.0	37.0	44.8	34.3	33.3	10.5	39.1	35.1	0.205	2.4	0.4	86	556	56.6	56.6	1.6	—	—	—	—	4.0	7.4	—
Grantham	29.765	58.0	21.4	36.0	45.0	35.5	31.6	9.5	39.9	34.9	0.203	2.3	0.5	86	553	—	—	0.5	20	25	25	18	3.0	7.0	—
Belvoir	29.765	58.0	21.4	36.0	45.0	35.5	31.6	9.5	39.9	34.9	0.203	2.3	0.5	86	553	—	—	1.7	35	12	12	12	6.0	—	—
Derby	29.769	56.0	18.0	38.0	43.4	33.9	32.9	11.5	39.7	37.2	0.222	2.6	0.3	90	552	—	—	0.8	27	25	18	13	7.1	—	—
Holkham	29.775	55.5	17.0	38.0	43.8	34.4	36.0	9.8	39.9	35.5	0.222	2.6	0.3	90	552	—	—	0.8	27	25	18	13	7.1	—	—
Nottingham	29.789	59.2	18.5	40.0	45.1	34.1	31.6	11.0	39.9	34.4	0.190	2.5	0.4	87	556	54.3	54.3	0.3	—	—	—	—	3.8	7.3	—
Hawarden	29.691	61.5	23.0	28.5	45.2	35.6	28.5	9.6	39.8	36.7	0.218	2.6	0.4	89	550	50.0	50.0	1.4	—	—	—	—	4.9	7.0	—
Bowdon	29.768	61.7	18.7	43.0	47.0	33.4	32.7	13.5	39.9	36.6	0.215	2.5	0.4	88	554	52.8	52.8	0.8	27	27	14	1.1	5.6	—	—
Warrington	29.724	58.3	17.2	41.1	45.0	35.0	32.8	9.7	40.0	35.6	0.209	2.7	0.3	89	557	55.6	—	0.4	17	29	32	15	7.1	—	—
Liverpool	29.738	59.6	27.0	39.0	45.9	38.2	23.4	7.6	41.6	36.3	0.217	2.5	0.5	83	553	—	—	1.0	—	—	—	—	6.5	—	—
Manchester	29.724	57.1	18.0	39.1	46.0	37.0	33.4	10.4	40.9	36.8	0.218	2.5	0.4	87	556	49.7	49.7	0.9	16	14	11	23	7.8	—	—
Wakfield	29.761	60.7	16.5	44.2	45.6	33.6	32.1	11.9	39.9	34.4	0.208	2.5	0.4	87	556	51.0	51.0	0.3	22	26	13	16	7.8	—	—
Stonyhurst	29.747	58.0	19.0	38.8	44.1	33.5	30.8	10.6	35.5	33.8	0.195	2.2	0.5	83	557	50.0	50.0	0.8	17	38	14	11	7.4	—	—
York	—	54.0	14.0	40.0	42.0	32.6	31.3	9.0	37.7	33.8	0.193	2.8	0.4	86	557	—	—	—	—	—	—	—	—	—	—
Scarborough	—	53.6	22.0	31.4	42.8	35.8	23.6	7.0	38.4	34.6	0.200	2.4	0.4	86	—	—	—	2.3	24	21	19	25	—	—	—
Ile of Man	29.730	51.3	22.0	29.0	45.4	34.7	23.9	8.3	40.8	36.4	0.213	2.5	0.4	87	547	—	—	1.3	22	25	14	20	7.2	—	—
North Shields	29.719	53.0	20.0	29.0	45.5	35.7	24.7	6.8	38.4	35.6	0.209	2.4	0.4	91	556	—	—	1.8	26	17	23	24	6.5	—	—
Bywell	29.770	50.0	16.2	33.0	39.7	30.0	25.6	7.1	39.8	36.2	0.214	2.4	0.4	84	554	—	—	1.9	17	19	16	28	7.4	—	—
Allenheads	29.736	54.6	13.0	41.6	42.2	32.1	34.2	10.0	37.2	33.2	0.211	2.2	0.4	84	553	—	—	29.2	—	—	—	—	6.4	—	—
Makerstoun	29.702	54.0	21.0	33.0	44.0	33.2	28.0	10.8	38.2	33.2	0.210	1.8	0.5	81	553	—	—	0.9	16	14	11	21	6.7	—	—
Anstruther Wester	29.759	55.0	25.0	30.0	42.7	33.8	33.1	8.8	38.6	33.6	0.193	2.3	0.4	85	533	48.7	—	1.9	25	21	21	25	3.8	—	—
Elgin	29.707	52.4	25.0	27.4	42.5	34.9	22.6	7.5	38.0	34.9	0.203	2.3	0.3	88	554	—	—	0.8	12	15	13	34	6.7	—	—
Culloden	29.748	54.0	21.0	33.4	42.8	33.2	28.0	9.6	36.0	32.4	0.184	2.2	0.4	83	557	—									

Year 1856.	Month.	Pressure of Air in Month.			Temperature of Air in Month.			Mean Tem- perature.	Vapour.			Mean Degree of Humi- dity, Sat., = 100.		Mean Weight of a cubic foot of Air.	Mean Reading of Thermometer.		Wind.			Mean Amount of Rain.		Amount col- lected.			
		Mean.	Range.	in.	Lowest.	Highest.	Range.		Of all Highest.	Of all Lowest.	Daily Range.	Air.	Dew Point.		Elastic Force.	Mean.	In a cubic foot of Air.	Maximum in Days of Sun.	Minimum on Grass.	Relative Proportion of Strength.			Mean Amount of Cloud.	Number of Days it fell.	
																				K.	S.				W.
	HASTINGS LITERARY INSTITUT., WILLIAM GANT, Esq., M.E.M.S.	Jan. 29.911	1.658	29.911	29.911	29.911	29.911	29.911	29.911	29.911	29.911	29.911	29.911	29.911	29.911	29.911	29.911	29.911	29.911	29.911	29.911	29.911	29.911		
	PATRICKBOURN VICARAGE (Kent), REV. MAURICE ALLEN SMELT, CLIFTON M.E.M.S.	Jan. 29.974	1.671	29.974	29.974	29.974	29.974	29.974	29.974	29.974	29.974	29.974	29.974	29.974	29.974	29.974	29.974	29.974	29.974	29.974	29.974	29.974	29.974		
	WILLIAM ROBERT BUDDER, Esq., M.E.M.S.	Jan. 29.978	1.680	29.978	29.978	29.978	29.978	29.978	29.978	29.978	29.978	29.978	29.978	29.978	29.978	29.978	29.978	29.978	29.978	29.978	29.978	29.978	29.978		
	MAIDSTONE, GEORGE FIELDING, Esq., M.R.C.S.	Jan. 29.917	1.682	29.917	29.917	29.917	29.917	29.917	29.917	29.917	29.917	29.917	29.917	29.917	29.917	29.917	29.917	29.917	29.917	29.917	29.917	29.917	29.917		
	ENFIELD VICARAGE, REV. JOHN MOORE HEATH, M.A., ROSE HILL, M.E.M.S.	Jan. 29.982	1.687	29.982	29.982	29.982	29.982	29.982	29.982	29.982	29.982	29.982	29.982	29.982	29.982	29.982	29.982	29.982	29.982	29.982	29.982	29.982	29.982		
	REV. JOHN SLATTERY, M.A., F.R.A.S., M.E.M.S.	Jan. 29.987	1.691	29.987	29.987	29.987	29.987	29.987	29.987	29.987	29.987	29.987	29.987	29.987	29.987	29.987	29.987	29.987	29.987	29.987	29.987	29.987	29.987		
	BEICESTER (Oxon), WILLIAM JOHNSON, Esq., F.R.A.S., M.E.M.S.	Jan. 29.986	1.690	29.986	29.986	29.986	29.986	29.986	29.986	29.986	29.986	29.986	29.986	29.986	29.986	29.986	29.986	29.986	29.986	29.986	29.986	29.986	29.986		
	GREAT BERKHAMSTEAD, WILLIAM SQUIRE, Esq., M.E.M.S.	Jan. 29.979	1.689	29.979	29.979	29.979	29.979	29.979	29.979	29.979	29.979	29.979	29.979	29.979	29.979	29.979	29.979	29.979	29.979	29.979	29.979	29.979	29.979		
	OXFORD OBSERVATORY, MANUEL J. JOHNSON, Esq., M.A., PRESIDENT R.A.S.	Jan. 29.978	1.688	29.978	29.978	29.978	29.978	29.978	29.978	29.978	29.978	29.978	29.978	29.978	29.978	29.978	29.978	29.978	29.978	29.978	29.978	29.978	29.978		
	HARTWELL HOUSE, MR. HORTON, Assistant to Dr. LEE, F.R.S., V.P. R.A.S., Pres. B.M.S.	Jan. 29.977	1.687	29.977	29.977	29.977	29.977	29.977	29.977	29.977	29.977	29.977	29.977	29.977	29.977	29.977	29.977	29.977	29.977	29.977	29.977	29.977	29.977		
	HARTWELL RECTORY, REV. CHARLES OWENDES, M.A., F.R.A.S., M.E.M.S.	Jan. 29.976	1.686	29.976	29.976	29.976	29.976	29.976	29.976	29.976	29.976	29.976	29.976	29.976	29.976	29.976	29.976	29.976	29.976	29.976	29.976	29.976	29.976		
	HOYSTON (Hertfordshire), HALE WORTH, Esq., M.B.M.S.	Jan. 29.975	1.685	29.975	29.975	29.975	29.975	29.975	29.975	29.975	29.975	29.975	29.975	29.975	29.975	29.975	29.975	29.975	29.975	29.975	29.975	29.975	29.975		
	CNERWORTH (Herts.), CHARLES B. N. PEARSON, Esq., M.B.M.S.	Jan. 29.974	1.684	29.974	29.974	29.974	29.974	29.974	29.974	29.974	29.974	29.974	29.974	29.974	29.974	29.974	29.974	29.974	29.974	29.974	29.974	29.974	29.974		
	WELLINGTON (Hertford), WILLIAM WATKIN, Esq., M.B.M.S.	Jan. 29.973	1.683	29.973	29.973	29.973	29.973	29.973	29.973	29.973	29.973	29.973	29.973	29.973	29.973	29.973	29.973	29.973	29.973	29.973	29.973	29.973	29.973		
	ARLINGTON (near Bedford), REV. JOHN MACLAREN, M.B.M.S., Ass't. to S.C. WHITEHEAD, Esq., F.R.S., M.B.M.S.	Jan. 29.972	1.682	29.972	29.972	29.972	29.972	29.972	29.972	29.972	29.972	29.972	29.972	29.972	29.972	29.972	29.972	29.972	29.972	29.972	29.972	29.972	29.972		
	AMPTON (Cardiganshire), REV. PROF. J. MATTHEWS, M.A.	Jan. 29.971	1.681	29.971	29.971	29.971	29.971	29.971	29.971	29.971	29.971	29.971	29.971	29.971	29.971	29.971	29.971	29.971	29.971	29.971	29.971	29.971	29.971		
	EDFORD, THOMAS HERBERT BAKER, Esq., M.A., F.R.C.S., M.B.M.S.	Jan. 29.970	1.680	29.970	29.970	29.970	29.970	29.970	29.970	29.970	29.970	29.970	29.970	29.970	29.970	29.970	29.970	29.970	29.970	29.970	29.970	29.970	29.970		
	WORCESTER, Railway Office, SEYMOUR EMBS, Esq., C.E.	Jan. 29.969	1.679	29.969	29.969	29.969	29.969	29.969	29.969	29.969	29.969	29.969	29.969	29.969	29.969	29.969	29.969	29.969	29.969	29.969	29.969	29.969	29.969		
	SWITCH PROXY, WILLIAM WATKIN, Esq., M.B.M.S.	Jan. 29.968	1.678	29.968	29.968	29.968	29.968	29.968	29.968	29.968	29.968	29.968	29.968	29.968	29.968	29.968	29.968	29.968	29.968	29.968	29.968	29.968	29.968		

JOHN DAVIN, Esq., M.R.M.S.		ROCKHAM.		NOTTINGHAM.		E. J. LOWE, Esq., F.R.A.S., M.R.M.S.		HAWARDEN, Esq., M.R.M.S.		THOMAS MOPFAT, Esq., M.D., F.R.A.S., M.R.M.S.		BOWDON (CHESHIRE).		WARWINGTON.		T. GLAZEBROOK RYLANDS, Esq., F.R.A.S.		LIVERPOOL OBSERVATORY.		JOHN HARTNUP, Esq., F.R.A.S.		MANCHESTER.		GEORGE VENABLES VERNON, Esq., F.R.A.S.		WARRINGTON.		WILKINSON, Esq., F.R.A.S.		WILLIAM R. M.B.M.S.		LEEDS PHILOSOPHICAL HALL.		HENRY DENNY, Esq., A.L.S.		STONTHURST COLLEGE.		REV. JAMES CLARE.		YORK.		SCARSDOROUGH.		R. BARRINGTON COOKE, Esq., F.R.A.S.		ISLE OF MAN.		JAMES BURMAN, Esq., F.R.A.S.		NORTH SHIELDS.		ROBERT SPENCE, Esq.		BYWELL, Mr. JOHN PRINGLE, under the direction of T. SOWITH.		ALLEN, Mr. J. M.B.M.S.		EQU. C.E. ASH, Mr. THOMAS BIEWICK.		MAKERSHED (ROXBOROUGHSHIRE).		ALEX. HOGG, Esq., Assail. to GEN.		SIR T. M. BRISBANE, BT., M.B.M.S.		ANSTRUTHER WESTER.		DAVID TESSANT, Esq., M.B.M.S.		ELGIN.		W. GEORGE, Esq., M.D.		CULLODEN.		ARTHUR FORBES, Esq.		ARBROATH.		ALEXANDER BROWN, Esq.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
Year.	Month.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.	Mean.	Range.

Derby.—Mean reading of the barometer for February altered from 29.939 in. to 29.899 in.

Second rain gauges are placed: At Jersey, at the height of 10 feet; the amount collected during the quarter was 5.7 inches. At Newport, 3 feet; the amount was 6.1 inches. At Clifton, 50 feet; the amount was 4.3 inches. At Cardiff, 30 feet; the amount was 3.8 inches. At Oxford, 20 feet; the amount was 4.3 inches. At Norwich, 31 feet; the amount was 2.6 inches. At Hockham, 4 feet; the amount was 5.4 inches. At Nottingham, 25 feet; the amount was 4.8 inches. And at Warrington, 55 feet; the amount was 3.9 inches. All heights are above the level of the sea.

ON THE
METEOROLOGY OF ENGLAND AND SCOTLAND,

DURING THE

Quarter ending June 30, 1856.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

LONDON:
PRINTED BY GEORGE EDWARD EYRE AND WILLIAM SPOTTISWOODE,
PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY,
FOR HER MAJESTY'S STATIONERY OFFICE.

1856.

On the Meteorology of England, during the Quarter ending June 30th, 1856. By JAMES GLAISHER, Esq., F.R.S., Sec. of the British Meteorological Society.

The high day temperature in April was 0.4 in excess; in May was the very large amount of 5.4 in defect; and in June was about its average value.

The low night temperature in April was 0.6 in defect; in May was 1.3 in defect; and in June was about its average value.

The mean temperature in April was slightly in excess, much in defect in May, and differed but little from its average in June. The periods and average daily amount of excess were from April 1st to 15th, 3.4 ; for the first 13 days of June, 1 ; and from June 25th to 30th, 4 . The periods and average daily amount of defect were from April 16th to 30th, 2.4 ; from May 1st to 9th, 9.4 ; from 10th to 31st, 1.4 ; and from June 14th to 24th, 4 . The temperature upon the quarter was in defect to the amount of 1.4 , as compared with the corresponding quarter of the preceding 15 years.

The atmospheric pressure was greater in May than in April at all stations; the amount at extreme northern stations was 0.1 inch, which decreased proceeding northward to 0.03 inches, or 0.04 inches in latitude 53 , and increased to 0.1 inch at extreme northern stations. In June at southern stations the excess over May was 0.26 inches, and this quantity gradually decreased going northwards till at extreme northern stations, the pressure was less in June than in May.

The pressure of the atmosphere was in defect during the months of April and May, and in excess in June. Upon the whole quarter it was slightly in defect.

The water mingled with the air was in defect in the first two months, and slightly in excess in June.

The degree of humidity was below its average in April, of its average value in May, and in excess in June. Upon the quarter it was of its average value.

The daily ranges of temperature were slightly in excess in April; in defect in May; and of their average values in June.

Rain was some what in excess in April and May, particularly in the latter month, and slightly in defect in June.

The general direction of the wind for the quarter was west, and the least prevalent was east at all places.

The mean temperature of the air at Greenwich for the quarter ending May, constituting the three spring months, was 45.0 being -1.5 below the average of 85 years.

1856. MONTHS.	Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
	Air.		Evaporation.		Dew Point.		Air—Daily Range.		Water of the Thames.		Mean.	Diff. from average of 15 years.	Mean.	Diff. from average of 15 years.
	Mean.	Diff. from average of 15 years.	Mean.	Diff. from average of 15 years.	Mean.	Diff. from average of 15 years.	Mean.	Diff. from average of 15 years.						
April ..	46.8	+0.7	43.0	-0.6	33.7	-1.5	19.1	+1.4	50.0	in.	235	-0.14	gr.	2.7
May ..	49.5	-2.9	40.2	-3.1	42.9	-2.7	16.5	-2.8	53.4	in.	276	-0.60	gr.	3.1
June ..	58.5	+0.5	55.0	+0.6	51.8	+1.4	20.8	+0.8	62.4	in.	385	+0.19	gr.	+0.3
Mean ..	52.3	-0.6	48.1	-1.0	44.5	-0.9	18.8	-0.2	55.3	in.	299	-0.08	gr.	3.4

1856. MONTHS.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal movement of the Air.	Reading of Thermometer on Grass.				
	Mean.	Diff. from average of 15 years.	Mean.	Diff. from average of 15 years.	Mean.	Diff. from average of 15 years.	Amount.	Diff. from average of 40 years.		Number of Nights it was			Lowest Reading at Night.	Highest Reading at Night.
										At or below 30°	Between 30° and 40°	Above 40°		
April. .	74	- 5	in. 29.615	in. - '136	gr. 542	gr. - 2	in. 2.3	in. +0.5	Miles. 132	18	7	4	° 16.0	° 47.1
May . .	77	0	29.647	- '124	539	+ 2	3.5	+1.4	148	3	18	9	29.1	47.1
June . .	79	+ 5	29.877	+ '088	533	+ 2	1.6	-0.3	76	1	9	20	31.2	50.1
Mean .	77	0	29.713	- '057	538	+ 1	Sum 7.4	Sum +1.6	119	Sum 22	Sum 34	Sum 33	16.0	50.1

NOTE.—In reading this table it will be borne in mind that the sign (-) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunderstorms occurred, or thunder was heard and lightning seen, on the 4th April at Nottingham and York; on 13th at Scarborough; on the 14th at Helston and Maidstone; and on the 30th at Patricxbourne. On the 7th of May at Maidstone; on the 12th at Lambeth; on the 13th at Leeds and York; on the 14th at York, Allenheads, North Shields, and Durham; on the 17th at Lewisham, London, Battersea, and Lambeth; on the 18th at London and York; on the 19th at North Shields; on the 22d at Berkhamstead, Knebworth, Cardington, Worcester, and Leeds; on the 23d at Worcester, Nottingham, Bowdon, Liverpool, and Stonyhurst; 24th at Eign and Holkham; on the 25th at Worcester; on the 26th at Wakefield, Leeds, and York; on the 27th at Lambeth, Holkham, Liverpool, Leeds, and York; on the 28th at Paddington, Battersea, Rose Hill, Oxford, and Worcester; and on the 29th at Newport. On the 13th of June at Lambeth; on the 14th at

Hartwell and Belvoir; on the 19th at Lambeth, Rose Hill, Bicester, Berkhamstead, Oxford, Lewisham, London, Battersea, Hartwell, Knebworth, and Bedford.

Thunder was heard, but lightning was not seen, on the 4th April at Belvoir and Wakefield; on the 6th at Teignmouth and Rose Hill; on the 7th at Patricxbourne; on the 9th at Teignmouth and Hastings; on the 13th at Knebworth, Worcester, Holkham, Liverpool, and Wakefield; on the 14th at Lampeter; on the 25th at Hastings, Belvoir, and Nottingham; on the 26th at Knebworth; on the 28th at Belvoir, Nottingham, and Wakefield; on the 29th at Belvoir; and on the 30th at Knebworth. On the 11th of May at Holkham; on the 13th at Wakefield; on the 14th at Grantham, Nottingham, and Wakefield; on the 15th at Nottingham; on the 17th at Bicester; on the 21st at Ryde; on the 22d at Guernsey, Hartwell, and Holkham; on the 23d at Eign and Lampeter; on the 24th at Hartwell; on the 25th at Belvoir; on the 26th at Belvoir, Nottingham, Stonyhurst, Scarborough, Bywell, and Durham; on the 27th at Wakefield, Scarborough, Bywell, and Durham; on the 28th at Bicester, Hartwell, Belvoir, Nottingham, and Bowdon; and on the 29th at Ryde and Hastings. On the 14th June at Knebworth; on the 19th at Lampeter and Nottingham; on the 20th at Paddington, Oxford, and Royston; and on 27th at Grantham.

Lightning was seen, but thunder was not heard, on the 13th April at Rose Hill; and on the 25th at Nottingham. On the 3d May at Rose Hill; on the 12th at Patricxbourne; on the 21st at Bicester; and on the 22d at Bicester and Oxford. On the 8th June at Worcester.

Hail fell on the 4th April at Nottingham, Hawarden, Scarborough, Allenheads, and North Shields; on the 5th at Norwich; on the 6th at Patricxbourne, Clifton, Paddington, Rose Hill, Bicester, Berkhamstead, Knebworth, Royston, and Isle of Man; on the 7th at Holkham and Scarborough; on the 9th at Guernsey and Patricxbourne; on the 26th at Knebworth, Lampeter, and Allenheads; on the 27th at Hawarden and Allenheads; on the 28th at Ryde, Nottingham, Stonyhurst, Allenheads, and North Shields; on the 29th at Lambeth, Lampeter, Hawarden, and North Shields; and on the 30th at Teignmouth, Patricxbourne, Lambeth, Bicester, Berkhamstead, Oxford, Knebworth, Norwich, Nottingham, Allenheads, and North Shields. On 20 different days in May, and frequently fell at many places on the same day, and it fell on June 13th, 14th, 19th, and 20th chiefly in the South of England.

Lunar Halos were seen on the 9th April at Patricxbourne, Lewisham, and Cardington; on the 11th at Lambeth and Cardington; on the 13th at Patricxbourne; and on the 14th at Stonyhurst. On the 10th May at Truro; on the 14th at Cardington; on the 17th at Knebworth; on the 20th at Hartwell and Nottingham; and on the 21st at Cardington. On the 10th and 11th June at Knebworth.

An aurora was seen on the 8th April at Clifton. Solar Halos were seen on the 2d April at Knebworth; on the 4th at Clifton; on the 14th at Clifton and Knebworth; on the 15th at Nottingham; on the 24th at Culloden; and on the 25th at Clifton and Hartwell. On the 6th May at Knebworth; on the 7th at Grantham; on the 8th at Nottingham; on the 10th at Knebworth; on the 17th at Nottingham; on the 20th at Clifton; and on the 21st at Berkhamstead and Nottingham. On the 4th and 5th June at Knebworth; on the 6th at Clifton; on the 10th at Nottingham; on the 11th at Grantham; and on the 29th at Nottingham.

Snow fell on the 4th April at Nottingham and Allenheads; on the 17th at Allenheads; on the 19th at Battersea; on the 26th at Stonyhurst and Allenheads; on the 27th at Berkhamstead, Knebworth, Stonyhurst, and Allenheads; on the 28th at Grantham, Allenheads, and North Shields; and on the 29th and 30th at Allenheads. On the 1st May at Maidstone, Stonyhurst, Allenheads, and North Shields; on the 3d at Knebworth and North Shields; on the 4th at Allenheads; and on the 6th at Durham.

Fog was prevalent at one or more stations on 16 days in April; on 17 days in May; and on 11 days in June.

Swallows first seen on the 6th April at Bowdon; on the 10th at Helston; on the 13th at Hartwell; on the 15th at Battersea and Grantham; on the 17th at Jersey and Stonyhurst; on the 22d at Cardington and Belvoir; on the 23d at Patricxbourne and Bicester; on the 24th at Berkhamstead and Royston; on the 25th at Clifton and Nottingham; on the 26th at Scarborough. On the 4th May at Guernsey; on the 9th at Oxford; and on the 16th at Hawarden.

Cuckoo first heard on 13th April at Guernsey and Allenheads; on the 17th at Jersey; on the 20th at Clifton and Bicester; on the 22d at Cardington; on the 24th at Eign; on the 25th at Patricxbourne and Hartwell; on the 26th at Royston and Bowdon; on the 27th at Scarborough; on the 28th at Nottingham. On the 1st May at Newport; on the 4th at Teignmouth and Lampeter; on the 9th at Berkhamstead; on the 10th at Stonyhurst; on the 12th at Grantham; and on the 13th at Hawarden.

Nightingale first heard on the 13th April at Newport; on the 16th at Bicester; on the 18th at Patricxbourne; on the 22d at Cardington; and on the 28th at Hartwell and Nottingham.

Wheat in ear on the 10th June at Jersey; on the 16th at Battersea; on the 17th at Holkham; on the 18th at Helston; on the 20th at Rose Hill; on the 22d at Newport and Oxford; and on the 23d at Berkhamstead.

Lilac in flower on the 18th April at Jersey; on the 24th at Helston; on the 26th at Guernsey. On the 7th May at Newport; on the 10th at Bicester; on the 12th at Oxford; on the 13th at Clifton; on the 18th at Patricxbourne; on the 19th at Eign; on the 20th at Berkhamstead; on the 23d at Hawarden; on the 24th at Nottingham; on the 25th at Stonyhurst; on the 27th at Bowdon; and on the 29th at Hartwell.

Barley in ear on the 26th June at Helston, Oxford, and Nottingham; on the 27th at Berkhamstead; and on the 28th at Battersea.

Laburnum in flower on the 20th May at Bicester; on the 22d at Eign; on the 27th at Berkhamstead; on the 28th at Bowdon; on the 29th at Patricxbourne and Hartwell. On the 7th June at North Shields.

Battersea.—The readings of the barometer are about 0.1 in. too high in each month; no further use has been made of them. St. Thomas's Hospital.—The barometer reading changed on April 6th from 29.490 in. to 29.580 in. Greenwich.—Barometer reading altered on June 1st, from 29.714 in. to 29.714 in. Hartwell House.—The barometer reading on May 24th, from 29.493 in. to 29.468 in. and on May 25th, from 29.468 in. to 29.460 in. Bicester.—Barometer reading was altered on May 24, from 29.400 in. to 29.800 in. and on May 25th, from 29.800 in. to 29.800 in. Merton.—Mean barometer reading for April 19th, 29.560 in.; and in May the reading of the Wet-Bulb Thermometer was erroneous, and therefore the hyometrical deductions have been omitted. Norwich.—Barometer reading was altered on April 15th from 29.696 in. to 29.696 in. and on April 16th, from 29.696 in. to 29.696 in. Second rain-gauge.—The barometer reading was altered on April 26th, from 29.608 in. to 29.608 in. and on April 26th from 29.560 in. to 28.960 in. Bywell.—The barometer reading was conjecturally changed on April 26th, from 29.800 in. to 28.800 in., and on April 6th from 29.560 in. to 28.960 in. Second rain-gauge are placed: At Jersey, at the height of 10 feet; amount collected during the quarter 7.5 inches. At Newport, 3 feet; the amount was 9.6 inches. At Clifton, 50 feet; the amount was 8.8 inches. At Enfield, 30 feet; the amount was 7.0 inches. At Oxford, 22 feet; the amount was 7.7 inches. At Harrogate, 33 feet; the amount was 7.3 inches. At Cardington, 20 feet; the amount was 12.7 inches. At Northampton, 31 feet; the amount was 4.5 inches. At Holkham, 4 feet; the amount was 4.0 inches. At Nottingham, 22 feet; the amount was 12.7 inches.

Blackheath

ON THE
METEOROLOGY OF ENGLAND,

DURING THE

Quarter ending September 30, 1856.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

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1856.

On the Meteorology of England, during the Quarter ending September 30th, 1856. By JAMES GLAISHER, ESQ., F.R.S., Sec. of the British Meteorological Society.

The high day temperatures in July were of their average values; in August were $3\frac{1}{2}^{\circ}$ in excess; and in September were 2° nearly in defect.

The low night temperatures in July were $\frac{3}{4}^{\circ}$ in defect; in August were $1\frac{1}{2}^{\circ}$ in excess; and in September were 1° in defect.

The mean temperature of day and night combined was $\frac{1}{2}^{\circ}$ in defect in July; nearly $2\frac{1}{2}^{\circ}$ in excess in August; and $1\frac{1}{2}^{\circ}$ in defect in September.

The warm periods and average daily amounts of excess of temperature were July 19th to August 16th, $4\frac{1}{2}^{\circ}$; August 24th to 31st, $1\frac{3}{4}^{\circ}$; and September 6th to 17th, 1° .

The cold periods and average daily amounts of defect of temperature were till July 18th, 4° ; August 17th to 23d, $2\frac{3}{4}^{\circ}$; September 1st to 5th, $2\frac{1}{4}^{\circ}$; and from September 17th, $2\frac{1}{2}^{\circ}$.

The temperature upon the quarter was very nearly of the average value as compared with the corresponding quarters of the preceding 15 years.

The pressure of the atmosphere was a little in excess in July, a little in defect in August, and very much in defect in September. It was about 0.1 inch less in August than in July, till approaching the North of England, where the pressure was nearly the same in the two months; in Scotland it was greater in August than in July. It was less at all stations in September than in the preceding month.

The degree of humidity was above its average value in July, of its average in August, and was below it in September.

The daily ranges of temperature were a little in excess in the first two months of the quarter, and somewhat in defect in the last month.

Rain was in defect in July nearly to the amount of two inches; it was in excess in September; upon the quarter the amount of rain was deficient.

The mean temperature of the air at Greenwich for the quarter ending August, constituting the three summer months, was 61.1° being $+1.1^{\circ}$ above the average of 85 years.

1856. MONTHS.		Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
		Air.		Evaporation.		Dew Point.		Air— Daily Range.		Water of the Thames.					
		Mean.	Diff. from average of 15 years.	Mean.	Diff. from average of 15 years.	Mean.	Diff. from average of 15 years.	Mean.	Diff. from average of 15 years.						
July ..	61.1	-0.6	-0.6	57.6	+0.2	54.5	+0.3	20.9	+0.8	65.8	in.	in.	gr.	gr.	
August ..	63.6	+3.1	+2.4	59.6	+2.3	56.2	+2.3	21.2	+2.2	65.9	*425	+0.010	4.8	+0.3	
Sept. ..	55.2	-1.1	-1.7	51.2	-2.7	47.4	-3.6	17.9	-0.8	59.5	*328	-0.007	3.7	-0.5	
Mean ..	59.9	+0.5	0.0	56.2	-0.1	52.7	-0.3	20.0	+0.7	63.6	*402	-0.008	4.5	0.0	

1856. MONTHS.		Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal movement of the Air.	Reading of Thermometer on Grass.					
		Mean.	Diff. from average of 15 years.	Mean.	Diff. from average of 15 years.	Mean.	Diff. from average of 15 years.	Amount.	Diff. from average of 40 years.		Number of Nights it was		Lowest Reading at Night.	Highest Reading at Night.		
											At or below 40°	Be- tween 40° and 50°			Above 50°	
July ..	79	+ 3	in.	in.	gr.	gr.	in.	in.	Miles.	4	19	8	35.2	29.4		
August ..	78	0	29.746	+0.041	829	+ 2	0.9	-1.8	90	2	12	17	35.0	29.3		
Sept. ..	75	- 6	29.752	-0.052	825	- 1	2.4	-0.1	44	12	16	2	29.0	31.0		
Mean ..	77	- 1	29.743	-0.071	829	- 1	Sum 5.8	Sum -1.2	77	Sum 18	Sum 47	Sum 27	29.0	30.4		

NOTE.—In reading this table it will be borne in mind that the sign (-) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunderstorms occurred, or thunder was heard and lightning seen, on the 12th July at Cardington, Norwich, Belvoir, and Durham; on the 13th at Sharnbrook; on the 15th at Patricxsbourn, Lewisham, London, Paddington, Whitehall, and Royston; on the 16th at Clifton, Maidstone, London, Battersea, Lambeth, Paddington, and Norwich; on the 17th at Maidstone; on the 22d at Guernsey and Hartwell; on the 23d at Guernsey, Maidstone, Lewisham, Paddington, Wakefield, York, Scarborough, North Shields, and Durham; on the 24th at Rose Hill, Norwich, Wakefield, York, and Scarborough; on the 25th at Wakefield, Stonyhurst, and York; and on the 26th at Whitehall, Grantham, Belvoir, and Nottingham. On the 6th August at Scarborough and North Shields; on the 7th at Norwich, Grantham, Belvoir, Nottingham, Hawarden, Liverpool, Leeds, Stonyhurst, York, Scarborough, North Shields, Durham, Bywell, and Allenheads; on the 8th at Worcester, Hawarden, Leeds, Stonyhurst, York, Scarborough, and North Shields; on the 10th at Hastings; on the 11th at Guernsey, Hastings, Patricxsbourn, Maidstone, Hartwell, and Knebworth. On the 12th at Worcester, Grantham, Belvoir, Nottingham, and York; on the 13th at Patricxsbourn, Liverpool, Wakefield, Leeds, Stonyhurst, North Shields, Durham, and Allenheads; on the 14th at Maidstone, Berkhamstead, Hartwell, Knebworth, Cardington, Grantham, Belvoir, Nottingham, Wakefield, Leeds, York, and Durham; on the 15th at North Shields; on the 16th at Guernsey,

Newport, Hastings, Patricxsbourn, and Maidstone; and on the 22d at Hastings, Patricxsbourn, and Maidstone. On the 1st September at Exeter, Newport, Whitehall, Berkhamstead, Hartwell, Royston, Knebworth, Cardington, Bedford, Sharnbrook, Wakefield, and York. On the 2d at York; on the 9th at Leeds and North Shields; on the 18th at Liverpool; on the 19th at Berkhamstead, Hartwell, Nottingham, and Liverpool; on the 23d at Clifton; on the 24th at North Shields; on the 25th at Battersea, Scarborough, and Durham; and on the 26th at Battersea.

Thunder was heard, but lightning was not seen, on the 4th July at Hastings; on the 6th at Exeter; on the 9th at Berkhamstead; on the 12th at Royston and Nottingham; on the 13th at Maidstone; on the 15th at Grantham; on the 16th at Lewisham; on the 22d at Hartwell and Grantham; on the 23d at Knebworth and Nottingham; on the 24th at Nottingham and North Shields; on the 25th at Scarborough; on the 26th at Sharnbrook; and on the 27th at Hartwell. On the 1st August at North Shields; on the 6th at Stonyhurst; on the 11th at Newport, Rose Hill, Bicester, Berkhamstead, Royston, Cardington, Bedford, Sharnbrook, and Stonyhurst; on the 12th at Clifton, Worcester, and Stonyhurst; on the 13th at Patricxsbourn; on the 14th at Rose Hill, Royston, and Stonyhurst; on the 16th at Teignmouth; on the 17th at North Shields; and on the 22d at Royston. On the 1st September at Nottingham; on the 5th at Stonyhurst; on the 8th at Lampeter; on the 12th at Hastings; on the 19th at Nottingham and Oxford; on the 25th at Hastings; on the 26th at Helston; and on the 29th at Hastings.

Lightning was seen, but thunder was not heard, on the 7th July at Hartwell; on the 9th at Cardington; on the 15th at Guernsey, Clifton, Battersea, Berkhamstead, Hartwell, Oxford, Royston, Knebworth, Sharnbrook, Grantham, and Nottingham; on the 16th at Berkhamstead; on the 17th at Lambeth; on the 23d at Newport, Clifton, Berkhamstead, Hartwell, Oxford, Royston, Knebworth, Cardington, Sharnbrook, and Grantham; on the 24th at Nottingham; on the 29th at Grantham. On the 7th August at Clifton, Oxford, Sharnbrook, and Durham; on the 10th at Guernsey, Newport, Clifton, Rose Hill, Oxford, Royston, and Sharnbrook; on the 11th at Royston, Grantham, and Nottingham; on the 13th at Maidstone, Royston, Knebworth, and Hawarden; on the 16th at Knebworth; and on the 23d at Bedford. On the 1st September at Helston, Hastings, Rose Hill, Oxford, Royston, Cardington, Sharnbrook, Grantham, Belvoir, Nottingham, and Wakefield; on the 4th at Stonyhurst; on the 9th at Hastings, Nottingham, and Scarborough; on the 10th at Bedford and Nottingham; on the 19th at Clifton, Battersea, Royston, Sharnbrook, Worcester, and Nottingham; on the 22d at Cardington; on the 26th at Guernsey; and on the 29th at Hastings and Cardington.

Fog was prevalent on the 4th July at Knebworth and Lampeter; on the 12th at Helston; on the 13th at Helston and Teignmouth; on the 14th at Helston, Isle of Man, and Allenheads; on the 18th at Helston; on the 19th at Lampeter; on the 20th at Helston, Teignmouth, and Scarborough; on the 21st at Helston, Lewisham, Scarborough, and Allenheads; on the 22d at Helston and Lewisham; on the 23d at Bicester and North Shields; on the 28th at Clifton and Bicester; on the 29th at Helston, Lewisham, Bicester, Oxford, Knebworth, and Holkham; and on the 30th at Helston and Knebworth. On the 1st August at Wakefield and North Shields; on the 2d at Royston and Wakefield; on the 3d at Royston, Knebworth, and North Shields; on the 4th at Bicester, Oxford, Knebworth, Scarborough, and North Shields; on the 5th at Wakefield, North Shields, and Bywell; on the 6th at Bicester, Royston, and Wakefield; on the 7th at Scarborough; on the 8th at Nottingham and Allenheads; on the 9th at Royston, Knebworth, and Allenheads; on the 10th at Lampeter and Allenheads; on the 11th at Wakefield, Scarborough, and North Shields; on the 16th at Bicester; on the 18th and 19th at Allenheads; on the 22d at Knebworth; on the 23d at Bicester and Stonyhurst; on the 24th at Stonyhurst and Scarborough; on the 27th at Allenheads; on the 28th at Stonyhurst; and on the 30th at Clifton, Paddington, and Wakefield. On the 1st September at Clifton; on the 3d at Exeter, Clifton, Whitehall, and North Shields; on the 6th and 7th at Allenheads; on the 8th at Clifton, Battersea, Hartwell, and Bywell; on the 9th at Clifton, Whitehall, Berkhamstead, Hartwell, Knebworth, Scarborough, North Shields, and Bywell; on the 10th at Whitehall, Scarborough, North Shields, and Bywell; on the 11th at Scarborough and Allenheads; on the 12th at Whitehall; on the 16th at Scarborough; and on the 17th, 24th, and 25th at Allenheads.

Hail fell on the 16th July at Clifton and Oxford; on the 25th at Liverpool; and on the 26th at Norwich. On the 8th August at Hawarden; and on the 12th at London. On the 1st September at Hawarden; on the 10th at Nottingham; on the 18th at Stonyhurst; on the 19th at Rose Hill and Oxford; on the 22d at Clifton and London; on the 23d at Battersea; on the 24th at North Shields; and on the 25th at Hastings and Durham.

Solar Halos were seen on the 4th July at Grantham and Nottingham; on the 12th at Nottingham; on the 13th at Knebworth; on the 15th and 23d at Nottingham; on the 26th at Grantham; and on the 27th at Nottingham. On the 13th August at Hartwell and Belvoir; on the 16th at Hartwell, Knebworth, and Nottingham; on the 26th at Hawarden; on the 28th at Nottingham; and on the 31st at Clifton. On the 6th September at Hartwell; on the 8th at Nottingham; on the 14th at Clifton; on the 18th at Knebworth; and on the 26th at Berkhamstead and Nottingham.

Lunar Halos were seen on the 14th July at Stonyhurst. On the 13th August at Berkhamstead, Knebworth, and Cardington; on the 15th at Berkhamstead; on the 21st at Knebworth; and on the 23d at Sharnbrook. On the 14th September at Nottingham; and on the 17th at Hawarden.

Wheat cut on the 1st August at Patricxsbourn; on the 3d at Helston; on the 4th at Newport, Bicester, Hartwell, and Cardington; on the 5th at Guernsey and Berkhamstead; on the 7th at Sharnbrook; on the 8th at Hawarden; on the 11th at Grantham and Belvoir; on the 15th at Clifton; and on the 26th at North Shields.

Barley cut on the 2d August at Helston; on the 3d at Hartwell; on the 7th at Newport and Sharnbrook; on the 8th at Hawarden; on the 18th at Belvoir; and on the 23d at Berkhamstead and Grantham.

Oats cut on the 2d August at Helston, Newport, and Grantham; on the 4th at Hartwell; on the 7th at Sharnbrook; on the 8th at Hawarden; on the 12th at Belvoir; and on the 15th at Berkhamstead.

Meteorological Table, Quarter ending September 30th, 1856.

NAMES OF STATIONS.	Mean Pressure of dry Air reduced to the level of the Sea.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Range of Temperature in the Quarter.	Mean of all Highest.	Mean of all Lowest.	Mean Monthly Range of Temperature.	Mean Daily Range of Temperature.	Mean Temperature of the Air.	Mean Temperature of the Dew Point.	Mean Elastic Force of Vapour.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required for saturation.	Mean Degree of Humidity.	Mean Weight of a cubic foot of Air.	Mean Reading of Maximum in Rays of Sun.	Mean Reading of Minimum on Grass.	Mean estimated Strength.	WIND.			Mean Amount of Ozone.	Mean Amount of Cloud.	Number of Days on which it fell.	
																			Relative Proportion of						
																			N.	E.	S.				W.
Jersey -	29.552	82.0	49.0	33.0	66.8	57.4	25.0	9.4	60.1	54.0	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Guernsey -	29.472	79.6	50.0	29.6	65.6	57.1	21.5	8.9	58.8	54.3	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Helston -	29.468	87.0	41.0	46.0	70.0	55.5	39.7	15.2	61.3	54.4	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Falmouth -	29.466	80.0	40.0	40.0	68.0	55.5	39.7	15.2	61.3	54.4	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Truro -	29.466	80.0	40.0	40.0	68.0	55.5	39.7	15.2	61.3	54.4	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Teignmouth -	29.526	79.6	40.7	38.9	68.6	57.4	25.0	9.4	60.1	54.0	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
High Street, Exeter -	29.526	79.6	40.7	38.9	68.6	57.4	25.0	9.4	60.1	54.0	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Ventnor -	29.543	82.0	44.0	38.0	72.3	59.0	28.3	13.3	64.4	56.0	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Newport -	29.534	81.7	33.0	38.0	71.8	52.0	44.0	19.8	60.6	53.7	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Ryde -	29.504	81.1	41.0	30.0	73.6	53.2	39.7	20.4	62.9	53.7	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Worthing -	29.504	81.1	41.0	30.0	73.6	53.2	39.7	20.4	62.9	53.7	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Hastings -	29.466	85.0	41.0	38.0	68.0	55.5	39.7	15.2	61.3	54.4	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Clifton -	29.504	81.1	41.0	30.0	73.6	53.2	39.7	20.4	62.9	53.7	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Maldstone -	29.428	80.5	38.0	51.5	71.7	50.0	44.0	19.8	60.6	53.7	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Royal Observatory -	29.519	80.9	40.0	49.8	71.6	51.3	39.7	20.4	62.9	53.7	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
St. Thomas's Hosp. -	29.491	88.2	44.0	43.3	70.5	55.8	38.3	14.7	61.1	51.2	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Lambeth -	29.483	88.2	44.0	43.3	70.5	55.8	38.3	14.7	61.1	51.2	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Battersea -	29.483	88.2	44.0	43.3	70.5	55.8	38.3	14.7	61.1	51.2	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Whitehall -	29.483	88.2	44.0	43.3	70.5	55.8	38.3	14.7	61.1	51.2	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Oxford -	29.504	81.1	41.0	30.0	73.6	53.2	39.7	20.4	62.9	53.7	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Berkhamstead -	29.504	81.1	41.0	30.0	73.6	53.2	39.7	20.4	62.9	53.7	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Hartwell House -	29.489	81.0	39.0	32.8	70.8	50.8	42.0	20.0	60.0	50.0	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Hartwell Rectory -	29.489	81.0	39.0	32.8	70.8	50.8	42.0	20.0	60.0	50.0	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Royston -	29.554	82.5	38.0	33.0	70.4	51.4	42.0	19.0	61.0	51.0	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Knebworth -	29.444	85.0	38.0	33.0	70.4	51.4	42.0	19.0	61.0	51.0	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Gloucester -	29.444	85.0	38.0	33.0	70.4	51.4	42.0	19.0	61.0	51.0	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Cardington -	29.501	81.0	39.0	32.8	70.8	50.8	42.0	20.0	60.0	50.0	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Bedford -	29.479	84.0	41.0	35.0	70.0	50.0	42.0	20.0	60.0	50.0	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Sharnbrook -	29.508	88.4	38.8	33.8	54.6	67.3	49.0	45.2	68.8	58.8	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Lampeter -	29.536	82.5	35.0	33.2	56.8	68.8	48.9	42.0	62.0	51.0	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Worcester -	29.536	82.5	35.0	33.2	56.8	68.8	48.9	42.0	62.0	51.0	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Norwich -	29.473	85.0	40.0	35.0	70.4	51.4	42.0	19.0	61.0	51.0	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Grantham -	29.452	83.0	40.0	35.0	70.4	51.4	42.0	19.0	61.0	51.0	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Belvoir -	29.452	83.0	40.0	35.0	70.4	51.4	42.0	19.0	61.0	51.0	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Derby -	29.452	83.0	40.0	35.0	70.4	51.4	42.0	19.0	61.0	51.0	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Holkham -	29.501	80.0	41.0	35.0	70.4	51.4	42.0	19.0	61.0	51.0	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Nottingham -	29.528	82.5	35.0	33.2	56.8	68.8	48.9	42.0	62.0	51.0	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Hawarden -	29.509	84.5	43.0	41.0	61.5	55.4	44.0	44.0	61.0	55.0	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Liverpool -	29.487	83.0	40.0	35.0	70.4	51.4	42.0	19.0	61.0	51.0	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Manchester -	29.474	82.5	34.5	33.2	56.8	68.8	48.9	42.0	62.0	51.0	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Wakefield -	29.536	82.5	35.0	33.2	56.8	68.8	48.9	42.0	62.0	51.0	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Leeds -	29.494	84.0	41.0	35.0	70.4	51.4	42.0	19.0	61.0	51.0	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Stonyhurst -	29.534	83.0	35.5	35.5	55.5	55.5	45.0	45.0	55.0	55.0	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
York -	29.534	83.0	35.5	35.5	55.5	55.5	45.0	45.0	55.0	55.0	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Scarborough -	29.534	83.0	35.5	35.5	55.5	55.5	45.0	45.0	55.0	55.0	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Isle of Man -	29.487	83.0	40.0	35.0	70.4	51.4	42.0	19.0	61.0	51.0	33.0	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
North Shields -	29.506	77.1	31.0	31.0	43.1	33.3	33.3	33.3	43.1	33.3	33.3	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Durham -	29.511	80.1	38.8	38.8	41.3	33.3	33.3	33.3	41.3	33.3	33.3	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Rywell -	29.487	77.1	31.0	31.0	43.1	33.3	33.3	33.3	43.1	33.3	33.3	0.0	1.1	81.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Brywell -	29.509	81.7	30.7	30.7	42.5	31.4	47.5	35.7	13.0	32.1	47.5	31.7	37.0	88.8	84.8	51.4	42.4	2.0	1.1	1.1	1.1	1.1	1.1	1.1	
Allenheads -	29.509	81.7	30.7	30.7	42.5	31.4	47.5	35.7	13.0	32.1	47.5	31.7	37.0	88.8	84.8	51.4	42.4	2.0	1.1	1.1	1.1	1.1	1.1	1.1	

Meteorological Table, Quarter ending September 30th, 1856.

Year 1856.	Month.	Names of Stations and Observers.	Atmosphere in Month.		Temperature of Air in Month.			Mean.		Mean Temp.		Vapour.		Mean Rainfall on Thermometer.		Wind.			Mean Amount of Rain.		
			Range.	Mean.	Highest.	Lowest.	Range.	Of all Highest.	Of all Lowest.	Air.	Dew Point.	Elastic Force.	In a cubic foot of Air.	Maximum in Rays of Sun.	Minimum on Grass.	Strength.	Relative Proportion of		Number of Days in Month.	Amount of Rain.	
																	N.	S. W.			
1856.	Jan.	ST. THOMAS' HOSPITAL, Mr. ORSTED, Assistant to Dr. R. D. THOMSON, F.R.S.L. & E., V.P. B.M.S.	29.783	32.1	38.9	25.9	32.1	25.9	32.1	25.9	32.1	3.5	32.1	25.9	32.1	3.5	32.1	25.9	32.1	3.5	32.1
1856.	Feb.	LAMBETH, F. HODGES, Esq., and W. H. WIDPOW-SON, Esq.	29.871	31.3	38.1	24.5	31.3	24.5	31.3	24.5	31.3	3.5	31.3	24.5	31.3	3.5	31.3	24.5	31.3	3.5	31.3
1856.	Mar.	BATTERSEA TRAINING SCHOOL, REV. SAMUEL CLARK, M.A., M.B.M.S.	29.746	31.6	37.6	25.6	31.6	25.6	31.6	25.6	31.6	3.5	31.6	25.6	31.6	3.5	31.6	25.6	31.6	3.5	31.6
1856.	Apr.	WHITEHALL, J. C. HALL, Esq., Sur-veyor and Draughtsman, by Desire of the President of the Board of Health.	29.883	31.9	38.4	25.9	31.9	25.9	31.9	25.9	31.9	3.5	31.9	25.9	31.9	3.5	31.9	25.9	31.9	3.5	31.9
1856.	May.	PADDINGTON, WILLIAM CORNET, Esq.	29.684	31.6	37.6	25.6	31.6	25.6	31.6	25.6	31.6	3.5	31.6	25.6	31.6	3.5	31.6	25.6	31.6	3.5	31.6
1856.	June.	REV. HILL (near Oxford), M.B.M.S.	29.783	32.1	38.9	25.9	32.1	25.9	32.1	25.9	32.1	3.5	32.1	25.9	32.1	3.5	32.1	25.9	32.1	3.5	32.1
1856.	July.	OXFORD OBSERVATORY, MANUEL J. JOHNSON, Esq., M.A.	29.883	31.9	38.4	25.9	31.9	25.9	31.9	25.9	31.9	3.5	31.9	25.9	31.9	3.5	31.9	25.9	31.9	3.5	31.9
1856.	Aug.	BICESTER, W. B. M.B.M.S.	29.746	31.6	37.6	25.6	31.6	25.6	31.6	25.6	31.6	3.5	31.6	25.6	31.6	3.5	31.6	25.6	31.6	3.5	31.6
1856.	Sept.	GREAT BERNHAMSTEAD, WILLIAM SQUIRE, Esq., M.B.M.S.	29.883	31.9	38.4	25.9	31.9	25.9	31.9	25.9	31.9	3.5	31.9	25.9	31.9	3.5	31.9	25.9	31.9	3.5	31.9
1856.	Oct.	HARTWELL HOUSE, MA. HOWARD, Assistant to Dr. LEGG, F.R.S.V.P. & R.A.S. PRES. B.M.S.	29.746	31.6	37.6	25.6	31.6	25.6	31.6	25.6	31.6	3.5	31.6	25.6	31.6	3.5	31.6	25.6	31.6	3.5	31.6
1856.	Nov.	HARTWELL RECTORY, REV. CHARLES LOWNDEN, M.A.	29.883	31.9	38.4	25.9	31.9	25.9	31.9	25.9	31.9	3.5	31.9	25.9	31.9	3.5	31.9	25.9	31.9	3.5	31.9
1856.	Dec.	ROYSTON (Hertfordshire), F.R.A.S.	29.746	31.6	37.6	25.6	31.6	25.6	31.6	25.6	31.6	3.5	31.6	25.6	31.6	3.5	31.6	25.6	31.6	3.5	31.6
1856.	Jan.	HARTWELL RECTORY, REV. CHARLES LOWNDEN, M.A.	29.883	31.9	38.4	25.9	31.9	25.9	31.9	25.9	31.9	3.5	31.9	25.9	31.9	3.5	31.9	25.9	31.9	3.5	31.9
1856.	Feb.	KNELWORTH (Herts.), CHARLES B. N. PEARSON, Esq.	29.746	31.6	37.6	25.6	31.6	25.6	31.6	25.6	31.6	3.5	31.6	25.6	31.6	3.5	31.6	25.6	31.6	3.5	31.6
1856.	Mar.	GLoucester, W. W. WILLIAMS, Esq., M.D.	29.883	31.9	38.4	25.9	31.9	25.9	31.9	25.9	31.9	3.5	31.9	25.9	31.9	3.5	31.9	25.9	31.9	3.5	31.9
1856.	Apr.	MARDINGTON (near Bedford), to S. J. M. LAMBERT, Esq., F.R.S. & M.B.M.S.	29.746	31.6	37.6	25.6	31.6	25.6	31.6	25.6	31.6	3.5	31.6	25.6	31.6	3.5	31.6	25.6	31.6	3.5	31.6
1856.	May.	WOLVERHAMPTON, M.B.M.S.	29.883	31.9	38.4	25.9	31.9	25.9	31.9	25.9	31.9	3.5	31.9	25.9	31.9	3.5	31.9	25.9	31.9	3.5	31.9
1856.	June.	WOLVERHAMPTON, M.B.M.S.	29.746	31.6	37.6	25.6	31.6	25.6	31.6	25.6	31.6	3.5	31.6	25.6	31.6	3.5	31.6	25.6	31.6	3.5	31.6
1856.	July.	WOLVERHAMPTON, M.B.M.S.	29.883	31.9	38.4	25.9	31.9	25.9	31.9	25.9	31.9	3.5	31.9	25.9	31.9	3.5	31.9	25.9	31.9	3.5	31.9
1856.	Aug.	WOLVERHAMPTON, M.B.M.S.	29.746	31.6	37.6	25.6	31.6	25.6	31.6	25.6	31.6	3.5	31.6	25.6	31.6	3.5	31.6	25.6	31.6	3.5	31.6
1856.	Sept.	WOLVERHAMPTON, M.B.M.S.	29.883	31.9	38.4	25.9	31.9	25.9	31.9	25.9	31.9	3.5	31.9	25.9	31.9	3.5	31.9	25.9	31.9	3.5	31.9
1856.	Oct.	WOLVERHAMPTON, M.B.M.S.	29.746	31.6	37.6	25.6	31.6	25.6	31.6	25.6	31.6	3.5	31.6	25.6	31.6	3.5	31.6	25.6	31.6	3.5	31.6
1856.	Nov.	WOLVERHAMPTON, M.B.M.S.	29.883	31.9	38.4	25.9	31.9	25.9	31.9	25.9	31.9	3.5	31.9	25.9	31.9	3.5	31.9	25.9	31.9	3.5	31.9
1856.	Dec.	WOLVERHAMPTON, M.B.M.S.	29.746	31.6	37.6	25.6	31.6	25.6	31.6	25.6	31.6	3.5	31.6	25.6	31.6	3.5	31.6	25.6	31.6	3.5	31.6

At Fiddington the Observations for August were taken by an inexperienced observer.

[illegible]

ON THE
METEOROLOGY OF ENGLAND,

DURING THE
Quarter ending December 31, 1856.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

LONDON:
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FOR HER MAJESTY'S STATIONERY OFFICE.

1857.

On the Meteorology of England, during the Quarter ending December 31st, 1856. By JAMES GLAISHER, ESQ., F.R.S., Sec. of the British Meteorological Society.

The temperature of the air was above its average value in October, much below in November, and differed little from it in December.

The periods and average daily amounts of excess were October 1st to 24th, 3°; October 31st to November 2d, 4½°; November 20th to 24th, 7°; December 5th to 14th, 9½°; and the last ten days of the quarter 6½°.

The periods and average daily amounts of defect were October 25th to 30th, 4½°; November 3d to 19th, 4°; November 25th to December 4th, 9½°; and from December 15th to 29th, 2½°.

The pressure of the atmosphere was much in excess in October and November, particularly in the former month; and in defect in December. In the South-west of England it was 0.05 inch greater in November than in October, but in other parts of the country it was less, diminishing upwards, till in the north October was 0.1 inch below the following month. It was at all stations in December less than October by about 0.3 inch.

The degree of humidity was slightly in excess in October and December, and of its average value in November.

The daily ranges differed little from their average values.

Rain was much in defect throughout the whole quarter, being to the amount of 3½ inches upon the quarter.

The quarter was remarkable for rapid variations of pressure of the atmosphere, and for extreme changes of temperature.

The mean temperature of the air at Greenwich for the quarter ending November, constituting the three autumn months, was 49.2° being +0.2° above the average of 85 years.

1856. MONTHS.		Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.		
		Air.		Evaporation.		Dew Point.		Air— Daily Range.		Water of the Thames.						
		Mean.	Diff. from ave- rage of 15 years.	Diff. from ave- rage of 15 years.	Mean.	Diff. from ave- rage of 15 years.	Mean.	Diff. from ave- rage of 15 years.	Mean.		Diff. from ave- rage of 15 years.					
												Mean.	Diff. from ave- rage of 15 years.	Mean.	Diff. from ave- rage of 15 years.	Mean.
Oct. . .	51.7	+3.4	+1.9	49.6	+1.8	47.6	+2.2	13.7	-0.9	54.7	.330	in.	+0.030	3.8	gr.	+0.3
Nov. . .	40.7	-1.7	-3.1	39.2	-3.1	37.3	-3.2	11.7	+0.3	45.3	.223	in.	-0.037	2.6	gr.	-0.3
Dec. . .	40.2	+1.4	0.0	38.9	+0.2	37.3	+0.4	9.8	+0.4	42.0	.223	in.	-0.003	2.6	gr.	0.0
Mean .	44.2	+1.0	-0.4	42.6	-0.4	40.7	-0.2	11.7	-0.1	47.3	.259	in.	-0.003	3.0	gr.	0.0

1856. MONTHS.		Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horiz- ontal move- ment of the Air.	Reading of Thermometer on Grass.						
		Mean.	Diff. from ave- rage of 15 years.	Mean.	Diff. from ave- rage of 15 years.	Mean.	Diff. from ave- rage of 15 years.	Amount.	Diff. from ave- rage of 40 years.		Number of Nights it was		Low- est Read- ing at Night.	High- est Read- ing at Night.			
											At or below 40°	Be- tween 40° and 50°			Above 50°		
Oct. . .	87	+ 1	in. 29.991	in. +0.330	grs. 543	grs. + 4	in. 1.6	in. -1.2	Miles. 49	5	9	17	24.0	53.1			
Nov. . .	88	0	29.902	+0.163	554	+ 8	1.0	-1.6	91	19	7	4	9.5	47.9			
Dec. . .	90	+ 2	29.646	-0.181	550	- 2	1.3	-0.9	141	19	5	7	11.3	47.0			
Mean .	89	+ 1	29.846	+0.106	549	+ 3	Sum 3.9	Sum -3.7	Sum 281	Sum 43	Sum 21	Sum 28	9.5	53.1			

NOTE.—In reading this table it will be borne in mind that the sign (-) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunderstorms occurred, or thunder was heard and lightning seen, on the 2d of October at Helston; on the 5th at Liverpool and Scarborough; on the 6th at Clifton; and on the 15th at Rose Hill. On the 1st of December at Scarborough; on the 11th at Guernsey and Newport; on the 12th at Guernsey, Newport, and Clifton; on the 13th at Helston, Teignmouth, and Hastings; on the 24th at Guernsey and Liverpool; on the 25th at Guernsey and North Shields; and on the 26th at North Shields, Durham, and Bywell.

Thunder was heard, but lightning was not seen, on the 10th of November at Helston; on the 24th of December at Manchester, and on the 25th at Hastings.

Lightning was seen, but thunder was not heard, on the 5th of October at Clifton, Rose Hill, Oxford, Berkhamstead, Hartwell, Cardington, Bedford, Sharnbrook, Grantham, Belvoir, and Stonyhurst; on the 6th at Knebworth; on the 19th at Allenheads; and on the 27th at Hastings. On the 19th of November at Helston; on the 27th at Allenheads; on the 28th at Helston; on the 29th at Allenheads; and on the 30th at Clifton. On the 2d of December at Stonyhurst; on the 12th at Hastings, Maidstone, and Pimlico; on the 13th at Newport; on the 25th at Helston and Stonyhurst;

on the 26th at Truro, Falmouth, Stonyhurst, and Allenheads; on the 27th at Clifton; and on the 28th at Stonyhurst and Scarborough.

Hail fell on the 15th of October at Rose Hill; on the 2d of November at Teignmouth; on the 9th at Guernsey; on the 10th at Guernsey, Helston, Truro, Holkham, and Scarborough; on the 11th at Guernsey, Truro, Grantham, Scarborough, and Durham; on the 12th at Grantham, Holkham, and Scarborough; on the 13th at Holkham; on the 14th at Norwich and Scarborough; on the 16th at Norwich; on the 17th at Lampeter; on the 18th at Guernsey; on the 24th at Durham; on the 25th at Hartwell; on the 26th at Berkhamstead; on the 27th at Liverpool; on the 28th at Hawarden; on the 29th at Guernsey, Helston, and Falmouth; and on the 30th at Helston, Falmouth, and Scarborough. On the 1st of December at Helston; on the 5th at Scarborough; on the 11th at Guernsey and Newport; on the 12th at Guernsey, Newport, Hastings, Clifton, Berkhamstead, and Lampeter; on the 13th at Guernsey, Newport, and Lewisham; on the 14th at Guernsey and North Shields; on the 18th at Helston and Truro; on the 24th at Helston, Falmouth, Truro, Paddington, and Manchester; on the 25th at Guernsey, Helston, Falmouth, Truro, and Durham; on the 26th at Guernsey, Helston, Falmouth, Truro, and North Shields; on the 27th at Guernsey and Falmouth; and on the 28th at Guernsey, Truro, Lampeter, and Manchester.

Snow fell on the 9th November at Rose Hill and Hartwell; on the 10th at Berkhamstead, Hartwell, Knebworth, Lampeter, North Shields, Bywell, and Allenheads; on the 11th at Hastings, Royston, Leeds, North Shields, Durham, Bywell, and Allenheads; on the 12th at Leeds, North Shields, and Allenheads; on the 13th at North Shields and Allenheads; on the 14th at Holkham, Hawarden, and North Shields; on the 15th at North Shields; on the 22d at Grantham; on the 25th at Ryde, Clifton, Maidstone, Rose Hill, Holkham, Norwich, Hawarden, Liverpool, Scarborough, Durham, and Bywell; on the 26th at Hastings, Lewisham, London, Lambeth, Pimlico, Whitehall, Paddington, Oxford, Bicester, Berkhamstead, Hartwell, Knebworth, Cardington, Bedford, Grantham, Holkham, Norwich, Hawarden, Manchester, Leeds, North Shields, Durham, Bywell, and Allenheads; on the 27th at Ryde and Hawarden; on the 28th at Teignmouth, Exeter, Newport, Hastings, and Clifton; on the 29th at Exeter, Lampeter, and Scarborough; and on the 30th at Falmouth, Truro, Rose Hill, Oxford, Bicester, Lampeter, Worcester, Norwich, Hawarden, Scarborough, and North Shields; on the 2d at Clifton, Maidstone, Oxford, Hartwell, Royston, Bedford, Lampeter, Grantham, Nottingham, Hawarden, Liverpool, Manchester, and Allenheads; on the 3d at Lewisham, Pimlico, Oxford, Berkhamstead, Royston, Knebworth, Belvoir, Liverpool, and Scarborough; on the 7th at Stonyhurst; on the 24th at Maidstone, Royston, Knebworth, Grantham, Hawarden, Manchester, and Allenheads; on the 25th at Helston, Falmouth, Truro, Teignmouth, Exeter, Newport, Clifton, Oxford, Bicester, Berkhamstead, Lampeter, Worcester, Grantham, Belvoir, Durham, Bywell, and Allenheads; on the 26th at Falmouth, Truro, Teignmouth, Exeter, Newport, Nottingham, Clifton, Oxford, Bicester, Berkhamstead, Lampeter, Worcester, Grantham, Belvoir, Nottingham, Hawarden, Liverpool, North Shields, Durham, Bywell, and Allenheads; on the 27th at Helston, Falmouth, Teignmouth, Exeter, Maidstone, Royston, Norwich, and North Shields; on the 28th at Guernsey, Helston, Oxford, Hartwell, Nottingham, Hawarden, Manchester, and Allenheads; and on the 29th at Royston, Norwich, Stonyhurst, Scarborough, North Shields, Durham, Bywell, and Allenheads.

Fog prevailed on every day in October, excepting the 3d, 4th, and 15th, at one or other station, but chiefly over the Midland counties; it was prevalent on 24 days in November, but less generally distributed than in October; and it was present on 20 days in December, but chiefly confined to stations situated between the latitudes of 51° and 52°.

Aurora was seen on the 4th October at Durham; on the 22d at Berkhamstead, Nottingham, and Durham; and on the 26th at Clifton. On the 7th and 14th November at Nottingham; and on the 19th at Berkhamstead.

Solar Halos were seen on the 16th and 17th October at Knebworth; and on the 26th at Clifton and Knebworth. On the 7th November at Nottingham; and on the 19th at Knebworth. On the 1st December at Knebworth; on the 2d at Nottingham; on the 11th and 19th at Knebworth; on the 23d at Clifton; on the 25th at Grantham and Nottingham; on the 27th at Nottingham; and on the 29th at Knebworth.

Lunar Halos were seen on the 10th October at Liverpool; on the 12th at Bedford; on the 16th at Hartwell and North Shields; and on the 19th at Sharnbrook. On the 5th November at Cardington and Nottingham; on the 9th at Berkhamstead, North Shields, and Allenheads; and on the 14th at Nottingham and Allenheads. On the 7th December at Pimlico, Berkhamstead, Hartwell, Knebworth, Cardington, Bedford, Grantham, and Nottingham; on the 8th at Hartwell, North Shields, and Allenheads; on the 9th at Cardington, Grantham, Nottingham, and North Shields; on the 10th at Berkhamstead, Lampeter, Grantham, Nottingham, and Liverpool; on the 11th at Clifton, Knebworth, Grantham, Nottingham, and North Shields; on the 12th at Berkhamstead, Knebworth, Grantham, and Nottingham; on the 13th at Nottingham; and on the 15th at Bedford.

Meteorological Table, Quarter ending December 31st, 1856.

NAMES OF STATIONS.	Mean Pressure of dry Air reduced to the level of the Sea.										WIND.				Mean Amount of Cloud.	Number of Days on which it fell.	Rain.																																																
	Highest Reading of the Thermometer.										Relative Proportion of																																																						
											N.	E.	S.	W.																																																			
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Meteorological Table, Quarter ending December 31st, 1856.

Year 1856.	Month.	Names of Stations and Observers.	Pressure of Air in Month.			Temperature of Air in Month.			Mean Temperature.			Vapour.			Mean Reading of Thermometer.			Wind.			Rain.		
			Mean.	Range.	Highest.	Lowest.	Range.	Of all Highest.	Of all Lowest.	Daily Range.	Air.	Dew Point.	Elastic Force.	Mean.	Short of Saturation.	Mean Degree of Humidity.	Mean Weight of a cubic foot of Air.	Maximum in Days of Sun.	Minimum on Grass.	Estimated Strength.	Relative Proportion of N. E. S. W.	Mean Amount of Cloud.	Amount of Rain.
Oct.	1856.	ST. THOMAS' HOSPITAL, Mr. ORPHEER, Assistant to Dr. R. D. THOMSON, F.R.S.L. & E. V.P.B.M.S.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Nov.	1856.	GUILDHALL, (City of London), WILLIAM HAYWOOD, Esq., C.E.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Dec.	1856.	BATTERSEA TRAINING SCHOOL, REV. SAMUEL CLARK, M.A., M.B.M.S.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Jan.	1857.	WHITEHALL, J. C. HAILE, Esq., Sur- veyor and Draughtsman, by Desire of the President of the Board of Health.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Feb.	1857.	ST. MARY'S HOSPITAL (Paddington), WILLIAM CORNEY, Esq.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Mar.	1857.	PIMLICO, G. J. SIMONS, Esq., M.B.M.S.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Apr.	1857.	ENFIELD, REV. JOHN MOORE, M.A., F.R.A.S., near Oxford.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
May.	1857.	ROSE HILL, near Oxford, REV. JOHN SLATTERY, M.A., F.R.A.S., M.B.M.S.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Jun.	1857.	OXFORD OBSERVATORY, MANUEL J. JOHNSON, Esq., M.A., President R.A.S.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Jul.	1857.	BIGSTON (Oxon), WILLIAM JOHNSON, Esq., F.R.A.S., M.B.M.S.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Aug.	1857.	GREAT BERNHAMSTEAD, WILLIAM SCUIER, Esq., M.B.M.S.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Sep.	1857.	HARTWELL HOUSE, MR. HORTON, Assistant to Dr. LEE, HARTWELL, READING, M.B.M.S.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Oct.	1857.	ROYSTON (Hertfordshire), F.R.A.S., M.B.M.S.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Nov.	1857.	KNELWORTH (Herts.), M.B.M.S.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Dec.	1857.	CARDINGTON (near Bedford), J. MACLAREN, M.B.M.S., Assistant to S.C.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Jan.	1858.	BEDFORD, THOMAS HERBERT PARKER, Esq., M.B.M.S.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Feb.	1858.	LAMPETER (Gloucestershire), REV. FRED. G. GLENNIE, M.A.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121

Meteorological Table, Quarter ending December 31st, 1856.

Year 1856.	Month.	Names of Stations and Observers.	Pressure of Air in Month.			Temperature of Air in Month.			Mean Temperature.			Vapour.			Mean Reading of Thermometer.			Wind.			Rain.		
			Mean.	Range.	Highest.	Lowest.	Range.	Of all Highest.	Of all Lowest.	Daily Range.	Air.	Dew Point.	Elastic Force.	Mean.	Short of Saturation.	Mean Degree of Humidity.	Mean Weight of a cubic foot of Air.	Maximum in Days of Sun.	Minimum on Grass.	Estimated Strength.	Relative Proportion of N. E. S. W.	Mean Amount of Cloud.	Amount of Rain.
Oct.	1856.	NORWICH PRIORY, M.B.M.S.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Nov.	1856.	GRANTHAM, M.B.M.S.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Dec.	1856.	DELVOIR CASTLE, M.B.M.S.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Jan.	1857.	WILLIAM INGRAM, Esq., M.B.M.S.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Feb.	1857.	DERBY, JOHN DAVIS, Esq., M.B.M.S.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Mar.	1857.	HOLKHAM, S. SHELLHEAR, Esq., M.B.M.S., As- sistant to the Earl of LEICESTER.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Apr.	1857.	NOTTINGHAM, E. J. LOWE, Esq., F.R.A.S., M.B.M.S.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
May.	1857.	HAWARDEN, THOMAS MORTON, Esq., M.D., F.R.A.S., M.B.M.S.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Jun.	1857.	LIVERPOOL OBSERVATORY, JOHN HARTUP, Esq., F.R.A.S., M.B.M.S.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Jul.	1857.	MANCHESTER, F.R.A.S., M.B.M.S.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Aug.	1857.	WAKEFIELD PRISON, WILLIAM RALPH MILNER, Esq., M.B.M.S.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Sep.	1857.	LEEDS PHILOSOPHICAL HALL, HENRY DENNY, Esq., A.L.S.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Oct.	1857.	STONYHURST COLLEGE, REV. ALFRED WILKINSON, M.A., F.R.A.S., M.B.M.S.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Nov.	1857.	YORK, JOHN FORD, Esq.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Dec.	1857.	SCARBOROUGH, R. BARRIE, Esq., B.A., M.B.M.S.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Jan.	1858.	ISLE OF MAN, JAMES BURNAN, Esq., F.R.A.S.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Feb.	1858.	NORTH SHIELDS, ROBERT SPIELDES,	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Mar.	1858.	DURHAM, A. MATH, Esq., F.R.A.S.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
Apr.	1858.	BYWELL, Mr. JOHN PRINGLE, under the direction of T. SORWICK, M.B.M.S.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121
May.	1858.	ALLEN HILL, THOMAS BEWICK, Esq., C.E., Assistant to T. SOR- WICK, Esq., F.R.S., &c.	30.121	30.100	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	29.978	0.143	30.121	30.121	30.121	30.121	30.121	30.121	30.121

Enfield, the barometer reading on November 1

ON THE
METEOROLOGY OF ENGLAND,

DURING THE
Quarter ending March 31, 1857.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

LONDON:
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FOR HER MAJESTY'S STATIONERY OFFICE.

1857.

On the Meteorology of England, during the Quarter ending March 31st, 1857. By JAMES GLAISHER, ESQ., F.R.S., Sec. of the British Meteorological Society.

The temperature of the air differed little from its average value during the quarter.

The periods and average daily amounts of excess were January 1st to 4th, $7\frac{3}{4}^{\circ}$; January 9th to 20th, $3\frac{1}{2}^{\circ}$; February 6th to 24th, $3\frac{1}{2}^{\circ}$; February 27th to March 7th, 3° ; March 14th to 20th, 5° ; and March 28th to the end of the month, $4\frac{1}{2}^{\circ}$.

The periods and average daily amounts of defect were January 5th to 8th, $3\frac{1}{2}^{\circ}$; January 21st to February 5th, $6\frac{1}{4}^{\circ}$; February 25th and 26th, $3\frac{1}{2}^{\circ}$; March 8th to the 13th, $4\frac{3}{4}^{\circ}$; and March 21st to the 27th, 4° .

The pressure of the atmosphere was in excess in February, and in defect in the other two months of the quarter. It was from 0.2 inch to 0.3 inch greater in February than in the preceding month, and from 0.1 inch to 0.2 inch less in March than in February.

The degree of humidity was a little in excess upon the quarter.

The daily ranges of temperature were in excess in January and February, particularly in the latter month, and of their average values in March.

Rain was slightly in excess in January, and in defect in February and March, particularly in the former month, so small a quantity not having fallen in any February since the year 1821, and was in defect to the amount of $1\frac{1}{4}$ inches upon the quarter.

The quarter was remarkable for the storms of snow and hail experienced in March, the hail-balls being large in size and pyramidal in shape.

Also for the very large barometer ranges; each month exceeding 1 inch; and for March in the south of England the range was about $1\frac{1}{4}$ inch; increasing up the country, till at the farther extremity it was nearly 2 inches.

The mean temperature of the air at Greenwich for the quarter ending February, constituting the three winter months, was $38^{\circ} 7'$ being $1^{\circ} 0'$ above the average of 86 years.

1857. MONTHS.	Temperature of								Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
	Air.		Evaporation.		Dew Point.		Air—Daily Range.		Mean.	Diff. from average of 16 years.	Mean.	Diff. from average of 16 years.
	Mean.	Diff. from average of 16 years.	Mean.	Diff. from average of 16 years.	Mean.	Diff. from average of 16 years.	Mean.	Diff. from average of 16 years.				
	Mean.	Diff. from average of 16 years.	Mean.	Diff. from average of 16 years.	Mean.	Diff. from average of 16 years.	Mean.	Diff. from average of 16 years.	Mean.	Diff. from average of 16 years.	Mean.	Diff. from average of 16 years.
Jan. . .	33.6	+0.6	1.5	-1.5	34.6	-0.9	9.7	+0.3	in. .290	-0.005	grs. 2.3	-0.1
Feb. . .	39.2	+0.9	0.7	+0.7	35.5	+0.9	14.7	+3.9	.208	+0.005	2.4	+0.1
Mar. . .	41.8	+0.9	0.2	+0.2	35.8	+0.5	14.6	0.0	.218	+0.002	2.5	-0.2
Mean .	39.2	+0.8	-0.2	-0.2	35.6	+0.2	13.0	+1.4	.209	+0.001	2.4	-0.1

1857. MONTHS.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal movement of the Air.		Reading of Thermometer on Grass.		
	Mean.	Diff. from average of 16 years.	Mean.	Diff. from average of 16 years.	Mean.	Diff. from average of 16 years.	Amount.	Diff. from average of 40 years.	At or below 30°	Between 30° and 40°	Above 40°	Lowest Reading at Night.	Highest Reading at Night.
	Mean.	Diff. from average of 16 years.	Mean.	Diff. from average of 16 years.	Mean.	Diff. from average of 16 years.	Amount.	Diff. from average of 40 years.	At or below 30°	Between 30° and 40°	Above 40°	Lowest Reading at Night.	Highest Reading at Night.
	Mean.	Diff. from average of 16 years.	Mean.	Diff. from average of 16 years.	Mean.	Diff. from average of 16 years.	Amount.	Diff. from average of 40 years.	At or below 30°	Between 30° and 40°	Above 40°	Lowest Reading at Night.	Highest Reading at Night.
Jan. . .	82	+3	in. 29.634	-0.085	grs. 553	0	in. 2.6	+0.8	20	10	1	0	41.0
Feb. . .	87	+1	29.952	+1.85	556	+3	0.2	-1.5	25	3	0	10.7	32.7
Mar. . .	84	+2	29.720	-0.06	549	-2	0.8	-0.8	22	7	2	15.5	42.2
Mean .	83	+2	29.769	+0.005	553	0	Sum 3.6	-1.5	Sum 67	Sum 20	Sum 3	8.9	42.2

NOTE.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunderstorms occurred, or thunder was heard and lightning seen, on the 3d of January at Guernsey; and on the 25th and 26th at North Shields. On the 8th of March at Liverpool; on the 15th at Clifton; on the 18th at Hawarden; on the 23d at Worcester; on the 30th at Nottingham; and on the 31st at Grantham, Belvoir, and Manchester.

Thunder was heard, but lightning was not seen, on the 25th of January at Allenheads. On the 9th of February at Nottingham. On the 15th of March at Exeter; on the 24th at Stonyhurst; on the 30th at Nottingham and Hawarden; and on the 31st at Nottingham and Stonyhurst.

Lightning was seen, but thunder was not heard, on the 23d of January at Manchester; and on the 25th at Truro. On the 18th of March at Liverpool; on the 23d at Little Bridy; on the 26th at Maidstone; on the 28th and 30th at Nottingham; and on the 31st at Bedford.

Hail fell on the 2d of January at Hawarden and Stonyhurst; on the 3d at Guernsey, Teignmouth, and Nottingham; on the 4th and 5th at Nottingham and North Shields; on the 6th at North Shields; on the 20th at Guernsey, Berkhamstead, Lampeter, and Stonyhurst; on the 21st at Truro and Lampeter; on the 22d at Rose Hill; on the 23d at Truro, Teignmouth, Oxford, Knebworth, and Lampeter; on the 24th at Guernsey, Truro, Greenwich, Berkhamstead, Knebworth, Lampeter, Scarborough, and North Shields; on the 25th at Guernsey, Maidstone, Berkhamstead, Royston,

Grantham, Nottingham, Stonyhurst, Scarborough, North Shields, Durham, and Bywell; on the 26th at North Shields; on the 27th at Guernsey and North Shields; on the 28th at North Shields; and on the 31st at Helston. On the 8th of February at Truro; on the 10th at Exeter; and on the 17th at Bedford. On the 8th of March at Guernsey, Truro, Teignmouth, Maidstone, Clifton, Lewisham, London, Battersea, Pimlico, Whitehall, Berkhamstead, Knebworth, Gloucester, Royston, Cardington, Bedford, Sharnbrook, Lampeter, Worcester, Norwich, Grantham, Belvoir, Holkham, Hawarden, Liverpool, Manchester, Wakefield, Stonyhurst, and Scarborough; on the 9th at Lewisham, London, Pimlico, Whitehall, Berkhamstead, Hartwell, Royston, Cardington, Bedford, Worcester, Belvoir, Holkham, Nottingham, Wakefield, North Shields, Durham, and Bywell; on the 12th at Gloucester; on the 13th at Guernsey and Lampeter; on the 14th at Guernsey, Berkhamstead, Scarborough, and North Shields; on the 15th at Truro, Teignmouth, Little Bridy, Maidstone, Clifton, Lewisham, Battersea, Pimlico, Whitehall, Rose Hill, Oxford, Berkhamstead, Worcester, Hawarden, Manchester, Wakefield, Stonyhurst, Scarborough, Bywell, and Allenheads; on the 16th at London; on the 18th at Hawarden; on the 21st at Allenheads; on the 22d at Lewisham, Whitehall, Hartwell, Sharnbrook, Grantham, Belvoir, Holkham, Nottingham, Liverpool, Wakefield, Scarborough, North Shields, Durham, and Bywell. On the 23d at Guernsey, Helston, Little Bridy, Clifton, Sharnbrook, Lampeter, Belvoir, Scarborough; on the 24th at Bywell; on the 30th at Grantham; and on the 31st at Little Bridy, Rose Hill, Oxford, Grantham, and Belvoir.

Fog prevailed on the 1st of January at Helston, Little Bridy, and Allenheads; on the 2d at Wakefield; on the 3d at Allenheads; on the 6th at Exeter and Allenheads; on the 7th at Knebworth and Wakefield; on the 8th at Teignmouth, Exeter, Little Bridy, Oxford, Berkhamstead, Royston, Bedford, and Wakefield; on the 9th at Durham; on the 11th at Wakefield, Durham, and Allenheads; on the 12th at Teignmouth, Greenwich, Oxford, Berkhamstead, Royston, Cardington, Bedford, Norwich, Holkham, Nottingham, Wakefield, and Scarborough; on the 13th at Greenwich, Oxford, Berkhamstead, Knebworth, Royston, Cardington, Norwich, Holkham, Nottingham, Manchester, and Stonyhurst; on the 14th at Greenwich; on the 15th at Exeter, Little Bridy, Greenwich, Norwich, and Wakefield; on the 17th at Truro, Teignmouth, Exeter, Berkhamstead, Norwich, and Allenheads; on the 18th at Little Bridy, Hawarden, and Stonyhurst; on the 19th at Little Bridy, Maidstone, and Hawarden; on the 20th at Hawarden; on the 21st at Lewisham and Gloucester; on the 22d at Lewisham; on the 23d at Norwich; on the 24th at Lewisham, Hawarden, and Allenheads; on the 25th at Allenheads; on the 26th at Wakefield and Allenheads; on the 28th at Hawarden; on the 30th at Wakefield; and on the 31st at Lewisham and London. On the 1st of February at Truro, Teignmouth, Maidstone, Pimlico, Knebworth, Holkham, Nottingham, and Wakefield; on the 2d at Holkham; on the 4th at Exeter and Lewisham; on the 5th at Truro, Exeter, and Stonyhurst; on the 8th at Exeter, Royston, and Wakefield; on the 10th at Paddington; on the 13th at Exeter; on the 14th at Oxford and Norwich; on the 15th at Oxford, Berkhamstead, and Wakefield; on the 16th at Lewisham, Pimlico, Paddington, Rose Hill, Oxford, Cardington, Bedford, Worcester, and Wakefield; on the 17th at Lewisham, Pimlico, Paddington, Knebworth, Worcester, Liverpool, Wakefield, and Durham; on the 18th at Truro, Maidstone, Oxford, Bedford, Liverpool, Wakefield, and North Shields; on the 19th at Truro, Lewisham, Greenwich, Knebworth, Gloucester, Royston, Cardington, Bedford, Worcester, Norwich, Holkham, Liverpool, Wakefield, and Stonyhurst; on the 20th at Lewisham, Pimlico, Paddington, Oxford, Knebworth, Cardington, Bedford, Norwich, Holkham, and Durham; on the 21st at Berkhamstead and Norwich; on the 22d at Oxford, Berkhamstead, and Norwich; on the 23d at Maidstone, Lewisham, Pimlico, Paddington, Rose Hill, and Oxford; on the 24th at Rose Hill, Berkhamstead, Bedford, Holkham, Wakefield, and North Shields; on the 25th at Little Bridy, Maidstone, Lewisham, London, Battersea, Pimlico, Paddington, Oxford, Berkhamstead, Knebworth, Cardington, Bedford, Norwich, Nottingham, Wakefield, Stonyhurst, North Shields, and Durham; on the 26th at Lewisham, Pimlico, Oxford, Nottingham, and North Shields; and on the 27th at Truro, Exeter, and Liverpool. And on every day in March except the 14th, 15th, 16th, 17th, 21st, 26th, and 27th.

Snow fell at one or more of the stations on 21 days in January; on 6 days in February; and on 18 days in March.

Solar Halos were seen on the 2d of January at Little Bridy; on the 11th at Hawarden and Stonyhurst; on the 12th at Nottingham; on the 13th at Knebworth; on the 22d at Knebworth and Nottingham; on the 24th at Nottingham; and on the 30th at Knebworth and Nottingham. On the 9th of February at Nottingham; on the 20th, 21st, 23d, and 27th at Little Bridy. On the 7th of March at Clifton, Berkhamstead, and Wakefield; on the 11th at Clifton; on the 13th at Berkhamstead and Nottingham; on the 15th at Hartwell; and on the 28th at Berkhamstead and Nottingham.

Lunar Halos were seen on the 1st of January at Berkhamstead and North Shields; on the 2d at Little Bridy, Lewisham, Berkhamstead, Grantham, Nottingham, and North Shields; on the 4th at Truro; on the 7th at Little Bridy; on the 10th at Berkhamstead and Nottingham; on the 11th at Bedford, Grantham, Nottingham, Stonyhurst, and North Shields; on the 13th at Bywell; and on the 17th at Berkhamstead. On the 4th of February at Oxford, Knebworth, Grantham, Belvoir, Nottingham, Manchester, and North Shields; on the 5th at Cardington and North Shields; on the 6th at Belvoir and North Shields; on the 8th at North Shields; and on the 26th at Little Bridy. On the 4th of March at Truro; on the 6th at Sharnbrook, Grantham, and Nottingham; on the 7th at Truro, Teignmouth, Little Bridy, Clifton, Pimlico, Oxford, Bicester, Berkhamstead, Hartwell, Knebworth, Cardington, Bedford, Sharnbrook, Lampeter, Grantham, Belvoir, Nottingham, and Liverpool; on the 8th at Clifton and Bywell; on the 9th at Little Bridy and Bywell; on the 11th at Clifton, Oxford, Grantham, Belvoir, and Nottingham; on the 13th at Truro; and on the 23d at Liverpool.

Aurora was seen on the 22d of January at Grantham. On the 26th and 28th of February at Nottingham. On the 18th, 20th, and 27th of March at Little Bridy.

Meteorological Table, Quarter ending March 31st, 1857.

NAMES OF STATIONS.	Mean Pressure of dry Air reduced to the level of the Sea.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Range of Temperature in the Quarter.	Mean of all Highest.	Mean of all Lowest.	Mean Monthly Range of Temperature.	Mean Daily Range of Temperature.	Mean Temperature of the Air.	Mean Temperature of the Dew Point.	Mean Elastic Force of Vapour.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required for saturation.	Mean degree of Humidity.	Mean Weight of a cubic foot of Air.	Mean Reading of Maximum in rays of Sun.	Mean Reading of Minimum on Grass.	Mean estimated Strength.	WIND.				Mean Amount of Ozone.	Mean Amount of Cloud.	Rain in Inches.
																			Relative Proportion of						
																			N.	E.	S.	W.			
Guernsey	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Helston	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Falmouth	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Truro	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Teignmouth	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
High Street, Exeter	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Venitor	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Worthing	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Little Bridy	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Clifton	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Maldstone	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Lewisham	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Royal Observatory	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
St. Thomas's Hosp.	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
St. John's Wood	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Pimlico	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Whitehall	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Greenwich	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Battersea	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Paddington	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Enfield	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Rose Hill	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Oxford	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Bicester	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Berkhamstead	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Hartwell House	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Hartwell Rectory	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Knebworth	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Gloucester	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Royston	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Cardington	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Starnbrook	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Bedford	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Lampeter	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Worcester	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Norwich	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Grantham	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Belvoir	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Derby	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Holkham	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Nottingham	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Hawarden	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Liverpool	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Manchester	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Wakefield	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Stonycroft	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
York	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Scarborough	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
North Shields	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Durham	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Bywell	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	
Allenheads	29.752	54.0	31.5	22.5	46.8	36.3	10.5	10.5	44.9	41.0	29.752	0.000	0.000	100	1.295	55.0	55.0	1.0	1	0	0	1	0	0	

The highest temperature of the air exceeded 60° at many stations. The lowest were at Belvoir 50° 4'; Gloucester and Worcester 50° 1'; and Wakefield 50° 5'. The greatest daily ranges were, at Maldstone 15° 2'; Worcester 15° 1'; Little Briny 14° 3'; and Exeter 14° 1'. The least were, at Scarborough 5° 8'; Guernsey 7° 5'; North Shields 7°

ON THE
METEOROLOGY OF ENGLAND,

DURING THE

Quarter ending June 30, 1857.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

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1857.

On the Meteorology of England, during the Quarter ending June 30th, 1857. By JAMES GLAISHER, ESQ., F.R.S., Sec. of the British Meteorological Society.

April, till the 10th day, and from the 17th to the 21st, was hot, the daily temperatures within these periods being $5\frac{1}{2}^{\circ}$ in excess; from the 11th to the 16th, and from the 24th it was cold, snow falling on every day, and the daily defect of temperature was 6° ; the temperature for the month was about 1° below that of the average of the preceding 16 years. May was cold till the 10th, the average daily defect of temperature was 6° ; from the 11th it was warm, rising in the middle of the month to summer temperature, the maximum in the shade in many places exceeding 80° ; there was a deficiency of rain; the temperature for the month was somewhat in excess. June was warm till the 8th; it was cold from the 9th to the 18th, and hot from the 19th; on the 28th the temperature near the sea rose to 75° ; at places between the latitudes of 51° and 52° it exceeding 91° and in some places 92° ; in London it was 88° ; and at all other places it was somewhat below 90° . This day was the hottest we have experienced since 1846, July 6th; and it was also remarkable for the small amount of water in the air in the invisible shape of vapour, the temperature of the dew point being fully 35° below that of the air, at times, during the day. The temperature for the month was 3° in excess above the average.

In April the temperature by day was about $1\frac{1}{4}^{\circ}$ below that of the average; in May was about 3° above, and in June was about $5\frac{1}{4}^{\circ}$ above their respective average temperatures; during the whole quarter the temperature by night has been that of the average; the excess of temperature upon the quarter has therefore been wholly attributable to higher day temperature than usual from May 11th to June 8th, and from June 19th; and so also the greater daily ranges of temperature are owing to the same cause.

The mean temperature of the air at Greenwich for the quarter ending May, constituting the three spring months, was $47^{\circ}\cdot 2$, being $0^{\circ}\cdot 8$ above the average of 86 years.

1857. MONTHS.	Temperature of						Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.		
	Air.		Evaporation.		Dew Point.		Air—Daily Range.		Mean.		
	Mean.	Diff. from average of 16 years.	Mean.	Diff. from average of 16 years.	Mean.	Diff. from average of 16 years.	Mean.	Diff. from average of 16 years.	Mean.	Diff. from average of 16 years.	Mean.
April ..	45.7	0.0	0.9	43.1	0.4	40.0	0.0	0.2	in.	in.	grs.
May ..	54.0	+1.5	+1.1	50.0	+0.9	45.8	+0.3	23.1	+3.1	308	2.8
June ..	61.8	+3.8	+3.2	56.8	+2.3	52.0	+1.5	24.4	+3.6	368	4.3
Mean ..	53.8	+1.8	+1.1	50.0	+0.9	45.9	+0.6	21.5	+1.8	315	3.6

1857. MONTHS.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal movement of the Air.		Reading of Thermometer on Grass.		
	Mean.	Diff. from average of 16 years.	Mean.	Diff. from average of 16 years.	Mean.	Diff. from average of 16 years.	Amount.	Diff. from average of 40 years.	Miles.	Diff. from average of 40 years.	At or below 32°	Between 32° and 40°	Above 40°
	Mean.	Diff. from average of 16 years.	Mean.	Diff. from average of 16 years.	Mean.	Diff. from average of 16 years.	Amount.	Diff. from average of 40 years.	Miles.	Diff. from average of 40 years.	At or below 32°	Between 32° and 40°	Above 40°
April ..	82	+3	in.	29.632	in.	543	1.4	0.9	91	13	14	3	15.9
May ..	74	-3	29.736	+0.029	537	0	0.6	-2.9	55	10	12	9	18.1
June ..	72	-2	29.858	+0.063	530	-1	2.7	+1.1	87	3	11	16	29.5
Mean ..	76	-1	29.759	-0.006	537	-1	Sum 4.7	Sum -2.7	Mean 78	Sum 26	Sum 37	Sum 28	18.1

NOTE.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunderstorms occurred, or thunder was heard and lightning seen, on the 7th of April at Worcester; on the 9th at Grantham, Belvoir, Nottingham, and Manchester; on the 10th at Worcester, Grantham, Belvoir, Nottingham, Manchester, Wakefield, and North Shields; on the 11th at Hastings; on the 12th at Guernsey and Grantham; on the 14th at Ryde; on the 15th at Exeter; on the 16th at Exeter, Cardington, and Bedford; and on the 20th at the Isle of Man. On the 11th of May at Paddington, Berkhamstead, Hartwell House, Hartwell Rectory, Knebworth, Gloucester, and Cardington; on the 14th at Little Bridy, Worcester, Hawarden, Liverpool, Manchester, Wakefield, and Stonyhurst; on the 15th at Rose Hill, Oxford, Cardington, Bedford, and Stonyhurst; on the 16th at Royston; on the 20th at Worcester; on the 25th at Maidstone, Nottingham, Wakefield, Leeds, and Stonyhurst; on the 28th at Clifton; and on the 30th at Exeter. On the 3d of June at Belvoir, Nottingham, and Wakefield; on the 5th at Bicester, Sharnbrook, Worcester, Liverpool, Wakefield, Scarborough, and North Shields; on the 6th at Berkhamstead, Gloucester, Norwich, and Nottingham; on the 10th at Berkhamstead, Hartwell Rectory, Gloucester, Cardington, Sharnbrook, and Bedford; on the 16th at Bicester, Hartwell House, Sharnbrook, and Bedford; on the 19th at Guernsey, Exeter, Hastings, Little Bridy, Maidstone, Clifton, Lewisham, Greenwich, Battersea, Pimlico, Paddington, Oxford, Bicester, Berkhamstead, Hartwell House, Hartwell Rectory, Knebworth, and Gloucester; on the 20th at Hastings, Lewisham, Greenwich, Battersea, Pimlico, Paddington, Rose Hill, Oxford, Bicester, Berkhamstead, Hartwell House, Hartwell Rectory, Gloucester,

Royston, Cardington, Lampeter, Sharnbrook, Bedford, Nottingham, and Hawarden; on the 21st at Maidstone, Pimlico, Hartwell House, Hartwell Rectory, Gloucester, Nottingham, and Hawarden; on the 27th at Ryde; on the 28th at Hastings, Norwich, Nottingham, Hawarden, Liverpool, Wakefield, Stonyhurst, York, Scarborough, and the Isle of Man; on the 29th at Worcester, Nottingham, Hawarden, Liverpool, Wakefield, Stonyhurst, York, and Scarborough; and on the 30th at Rose Hill, Royston, Cardington, Sharnbrook, Bedford, Worcester, Nottingham, Hawarden, Liverpool, and York.

Thunder was heard, but lightning was not seen, on the 2d of April at Holkham; on the 3d at Bywell; on the 5th at Belvoir and Nottingham; on the 7th at Lewisham, Greenwich, Worcester, and Norwich; on the 8th at Nottingham, Stonyhurst, and Scarborough; on the 9th at Bywell; on the 10th at Pimlico, Hartwell House, Lampeter, Worcester, Grantham, Hawarden, and Bywell; on the 12th at Berkhamstead, Belvoir, and Nottingham; on the 15th at Exeter, Maidstone, Hartwell House, Knebworth, and Cardington; on the 16th at Little Bridy and Sharnbrook; on the 26th at Helston; on the 29th at Sharnbrook; and on the 30th at Little Bridy. On the 1st of May at Lampeter and Durham; on the 2d at Little Bridy and Clifton; on the 7th at Norwich; on the 10th at Hastings; on the 11th at Hastings, Battersea, Pimlico, Paddington, Royston, and Sharnbrook; on the 12th at Norwich; on the 14th at Hastings, Nottingham, Stonyhurst, and Durham; on the 15th at Hastings, Hartwell Rectory, Leeds, and Durham; on the 16th at Hartwell House and Royston; on the 18th at Royston; on the 20th at Rose Hill; on the 22d at Bywell; on the 23d at Hastings; on the 25th at Hastings and Rose Hill; and on the 28th at Guernsey. On the 5th of June at Exeter, Little Bridy, Rose Hill, Lampeter, Nottingham, Hawarden, Durham, Bywell, and Allenheads; on the 6th at Greenwich; on the 10th at Hastings and Rose Hill; on the 11th and 12th at Norwich; on the 16th at Rose Hill, Oxford, Berkhamstead, Hartwell Rectory, and Cardington; on the 17th and 18th at Little Bridy; on the 19th at Helston, Falmouth, and Rose Hill; on the 20th at Guernsey and Helston; on the 21st at Rose Hill, Oxford, Bicester, and Berkhamstead; on the 22d at Guernsey and Bicester; on the 23d at Oxford; on the 24th at Allenheads; on the 28th at Guernsey and Greenwich; and on the 30th at Berkhamstead, Hartwell Rectory, Knebworth, Lampeter, Sharnbrook, and Holkham.

Lightning was seen, but thunder was not heard, on the 2d of April at Holkham; on the 7th at Lewisham, Worcester, and Norwich; on the 8th at Hawarden; on the 9th at Nottingham; on the 10th at Berkhamstead, Cardington, Sharnbrook, and Nottingham; on the 11th at Little Bridy, Royston, and Lampeter; on the 12th at Exeter, Ryde, Hastings, Little Bridy, Pimlico, Whitehall, Oxford, Berkhamstead, Hartwell Rectory, Knebworth, Royston, Cardington, and Nottingham; on the 25th and 26th at Holkham; and on the 30th at York. On the 1st of May at Oxford; on the 7th at Norwich; on the 11th at Hastings, Maidstone, Greenwich, Lambeth, Pimlico, Whitehall, Rose Hill, Sharnbrook, and Bedford; on the 14th at Exeter, Hastings, Maidstone, Clifton, Rose Hill, Oxford, Knebworth, Gloucester, Cardington, and Nottingham; on the 15th at Exeter, Hastings, Little Bridy, Greenwich, Pimlico, Berkhamstead, Knebworth, Gloucester, and Sharnbrook; on the 16th at Greenwich and Hartwell House; on the 20th at Maidstone and Cardington; on the 23d at Hastings; and on the 26th at the Isle of Man. On the 5th of June at Clifton, Rose Hill, Oxford, Hartwell Rectory, Knebworth, and Nottingham; on the 6th at Lewisham and Rose Hill; on the 18th at Little Bridy; on the 19th at Hastings, Rose Hill, Knebworth, Sharnbrook, Bedford, and Hawarden; on the 20th at Exeter, Hastings, Little Bridy, Maidstone, Clifton, Whitehall, Knebworth, and Sharnbrook; on the 27th at Helston; on the 28th at Hastings, Cardington, Bedford, Belvoir, and Nottingham; on the 29th at Hastings and Nottingham; and on the 30th at Berkhamstead and Knebworth.

Hail fell on 15 days in April, 5 in May, and 6 in June, at different places.

Fog prevailed on the 1st of April at North Shields and Allenheads; on the 2d at Scarborough and Allenheads; on the 3d at Hastings, Scarborough, and Allenheads; on the 4th at Helston, Hastings, Little Bridy, Wakefield, Scarborough, North Shields, Bywell, and Allenheads; on the 5th at Helston, Hastings, Paddington, Berkhamstead, Nottingham, Bywell, and Allenheads; on the 6th at Hastings, Little Bridy, Whitehall, Berkhamstead, Nottingham, Hawarden, Wakefield, North Shields, Bywell, and Allenheads; on the 7th at Hastings, Little Bridy, Scarborough, and Allenheads; on the 8th at Hastings, Little Bridy, and Allenheads; on the 9th at Holkham, Nottingham, and Allenheads; on the 10th at Royston, Bedford, Nottingham, Wakefield, and the Isle of Man; on the 16th at Berkhamstead; on the 18th at Wakefield; on the 21st at Greenwich; and on the 28th at Wakefield. On 20 days in May, and on 15 in June, at various places, but of no great density at any place.

Snow fell on the 11th of April at Paddington and Bywell; on the 12th at Ryde, Hastings, Maidstone, Lewisham, Pimlico, Paddington, Rose Hill, Hartwell House, Knebworth, Grantham, Nottingham, Liverpool, Manchester, North Shields, Bywell, and Allenheads; on the 13th at Exeter, Hastings, Little Bridy, Maidstone, Greenwich, Pimlico, Rose Hill, Oxford, Berkhamstead, Hartwell House, Knebworth, Royston, Cardington, Lampeter, Sharnbrook, Bedford, Worcester, Grantham, Nottingham, Hawarden, North Shields, Durham, Bywell, and Allenheads; on the 14th at Hastings and Little Bridy; on the 15th at Knebworth; on the 23d at North Shields; on the 24th at Hastings, Little Bridy, Clifton, Lampeter, Grantham, Scarborough, and North Shields; on the 25th at Hastings, Knebworth, Scarborough, North Shields, and Bywell; on the 26th at Rose Hill, Knebworth, Bedford, Nottingham, Hawarden, Leeds, Stonyhurst, North Shields, Durham, Bywell, and Allenheads; on the 27th at Hastings, Little Bridy, Clifton, Cardington, Bedford, Nottingham, Hawarden, North Shields, and Allenheads; on the 28th at Stonyhurst; on the 29th at Knebworth, North Shields, and Bywell; and on the 30th at Knebworth. On the 13th and 26th of May at Gloucester.

Solar Halos were seen on 9 days in April, 15 in May, and 10 in June, at different places.

Lunar Halos were seen on 6 nights in April, 5 in May, and 10 in June.

Aurora was seen on the 23d of April at Berkhamstead; and on the 15th and 16th of June at Scarborough.

NAMES OF STATIONS.	Mean Pressure of dry Air reduced to the level of the Sea.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Range of Temperature in the Quarter.	Mean of all Highest.	Mean of all Lowest.	Mean Monthly Range of Temperature.	Mean Daily Range of Temperature.	Mean Temperature of the Air.	Mean Temperature of the Dew Point.	Mean Elastic Force of Vapour.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required for saturation.	Mean degree of Humidity.	Mean Weight of a cubic foot of Air.	Mean Reading of Maximum in rays of Sun.	Mean Reading of Minimum on Grass.	Mean estimated Strength.	WIND.				Mean Amount of Cloud.	Number of Days on which Rain fell.	Amount collected.			
																			Relative Proportion of									
																			N. E. S. W.									
																			Mean Amount of Ozone.									
Guernsey	29.529	74.0	36.0	38.0	59.0	49.2	25.0	9.8	51.8	46.0	33.0	3.7	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Heaton	29.525	73.0	35.0	38.0	58.0	48.3	24.0	9.5	51.5	45.0	32.0	3.7	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Falmouth	29.539	75.0	35.0	40.0	60.1	48.3	31.7	12.8	52.5	45.5	30.9	3.5	0.7	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Torquay	29.590	79.0	34.0	45.0	60.1	48.3	31.7	12.8	52.5	45.5	30.9	3.5	0.7	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Ventnor	29.590	79.0	34.0	45.0	60.1	48.3	31.7	12.8	52.5	45.5	30.9	3.5	0.7	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Ryde	29.627	85.0	32.0	53.0	66.8	45.9	38.6	20.9	55.4	48.9	34.0	3.8	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Worthing	29.649	76.6	30.0	46.0	59.0	45.7	30.9	13.9	51.7	48.2	34.3	3.8	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Hastings	29.612	80.0	34.0	49.0	61.1	48.3	31.7	12.8	52.5	45.5	30.9	3.5	0.7	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Fairlight	29.603	84.0	30.0	54.0	60.1	45.8	36.0	14.3	50.7	46.9	34.4	3.7	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Little Brdy	29.634	83.4	31.1	52.3	63.9	42.7	41.8	20.2	51.6	45.2	30.5	3.7	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Clifton	29.604	85.2	27.1	58.1	63.9	42.7	41.8	20.2	51.6	45.2	30.5	3.7	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Maidstone	29.678	91.8	27.6	64.2	69.4	44.1	42.8	19.8	52.8	44.6	30.0	3.7	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Lewisham	29.610	91.6	28.9	62.7	67.4	44.5	41.0	21.8	53.8	45.9	32.1	3.5	0.7	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Royal Observatory	29.616	92.7	28.2	64.5	69.3	44.5	41.0	21.8	53.8	45.9	32.1	3.5	0.7	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
St. Thomas's Hosp.	29.605	92.5	28.6	64.9	69.3	44.5	41.0	21.8	53.8	45.9	32.1	3.5	0.7	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
St. John's Wood	29.593	88.0	32.0	59.0	66.7	46.5	43.6	20.2	54.2	46.0	34.4	3.7	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Pimlico	29.604	91.8	33.6	58.2	65.3	47.6	42.0	17.7	54.5	46.5	32.4	3.3	0.8	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Whitehall	29.602	86.7	33.6	58.2	65.3	47.6	42.0	17.7	54.5	46.5	32.4	3.3	0.8	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Guilford	29.630	86.7	33.6	58.2	65.3	47.6	42.0	17.7	54.5	46.5	32.4	3.3	0.8	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Battersea	29.660	88.8	32.2	59.4	63.6	44.6	44.8	19.3	53.0	44.5	29.6	3.3	0.8	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Paddington	29.640	91.3	32.0	59.0	66.7	46.5	43.6	20.2	54.2	46.0	34.4	3.7	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Enfield	29.629	89.0	32.0	59.0	66.7	46.5	43.6	20.2	54.2	46.0	34.4	3.7	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Rose Hill	29.628	89.0	32.0	59.0	66.7	46.5	43.6	20.2	54.2	46.0	34.4	3.7	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Oxford	29.639	89.0	32.0	59.0	66.7	46.5	43.6	20.2	54.2	46.0	34.4	3.7	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Berkhamstead	29.639	89.0	32.0	59.0	66.7	46.5	43.6	20.2	54.2	46.0	34.4	3.7	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Hartwell House	29.639	89.0	32.0	59.0	66.7	46.5	43.6	20.2	54.2	46.0	34.4	3.7	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Hartwell Rectory	29.637	85.5	27.0	58.5	65.4	43.8	45.0	18.8	51.6	48.8	36.8	3.8	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Knebworth	29.637	85.5	27.0	58.5	65.4	43.8	45.0	18.8	51.6	48.8	36.8	3.8	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Gloucester	29.637	85.5	27.0	58.5	65.4	43.8	45.0	18.8	51.6	48.8	36.8	3.8	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Derby	29.637	85.5	27.0	58.5	65.4	43.8	45.0	18.8	51.6	48.8	36.8	3.8	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Cardington	29.637	85.5	27.0	58.5	65.4	43.8	45.0	18.8	51.6	48.8	36.8	3.8	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Sharnbrook	29.637	85.5	27.0	58.5	65.4	43.8	45.0	18.8	51.6	48.8	36.8	3.8	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Bedford	29.627	90.0	30.0	60.0	69.0	45.1	45.1	19.1	54.1	45.1	34.1	3.7	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Lampeter	29.629	90.0	30.0	60.0	69.0	45.1	45.1	19.1	54.1	45.1	34.1	3.7	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Worcester	29.627	93.0	24.0	65.0	63.6	43.4	47.4	22.8	53.2	46.7	31.7	3.7	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Norwich	29.630	82.0	28.0	55.0	62.7	44.4	45.0	18.8	51.6	48.8	36.8	3.8	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Belvoir	29.637	85.5	27.0	58.5	65.4	43.8	45.0	18.8	51.6	48.8	36.8	3.8	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Derby	29.637	85.5	27.0	58.5	65.4	43.8	45.0	18.8	51.6	48.8	36.8	3.8	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Holkham	29.637	85.5	27.0	58.5	65.4	43.8	45.0	18.8	51.6	48.8	36.8	3.8	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Nottingham	29.637	85.5	27.0	58.5	65.4	43.8	45.0	18.8	51.6	48.8	36.8	3.8	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Hawarden	29.637	85.5	27.0	58.5	65.4	43.8	45.0	18.8	51.6	48.8	36.8	3.8	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Liverpool	29.637	85.5	27.0	58.5	65.4	43.8	45.0	18.8	51.6	48.8	36.8	3.8	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Manchester	29.637	85.5	27.0	58.5	65.4	43.8	45.0	18.8	51.6	48.8	36.8	3.8	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Wakefield	29.637	85.5	27.0	58.5	65.4	43.8	45.0	18.8	51.6	48.8	36.8	3.8	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Stonycroft	29.637	85.5	27.0	58.5	65.4	43.8	45.0	18.8	51.6	48.8	36.8	3.8	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
York	29.637	85.5	27.0	58.5	65.4	43.8	45.0	18.8	51.6	48.8	36.8	3.8	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Scarborough	29.640	74.8	31.3	43.3	54.2	45.6	32.3	11.1	46.7	42.9	31.5	3.5	0.7	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Isle of Man	29.608	82.1	31.0	51.1	59.4	44.6	40.0	14.0	50.0	44.4	34.4	3.7	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
North Shields	29.637	85.5	27.0	58.5	65.4	43.8	45.0	18.8	51.6	48.8	36.8	3.8	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Durham	29.637	85.5	27.0	58.5	65.4	43.8	45.0	18.8	51.6	48.8	36.8	3.8	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Bywell	29.637	85.5	27.0	58.5	65.4	43.8	45.0	18.8	51.6	48.8	36.8	3.8	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				
Allenheads	29.637	85.5	27.0	58.5	65.4	43.8	45.0	18.8	51.6	48.8	36.8	3.8	0.9	83	536	1.7	1.6	1.6	36	1	1	1	1	1				

The station at Fairlight is assumed to be 530 feet above the level of the sea. Rain fell at Hartwell, Battersea, and Scarborough on an average of 21 days; at Falmouth, Wakefield, and North Shields on an average of 47 days. The smallest falls were less than 4 inches, and the greatest was 13 inches at North Shields, Stonycroft 11.5 inches, and Wakefield 10.6 inches.

Meteorological Table, Quarter ending June 30th, 1857.

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ON THE
METEOROLOGY OF ENGLAND,

DURING THE

Quarter ending September 30, 1857.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

LONDON:
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1857.

Remarks on the weather, during the Quarter ending September 30th, 1857. By JAMES GLAISHER, ESQ., F.R.S., &c. Sec. of the British Meteorological Society.

Till the 9th of July the air was cold, and from the 10th to the end of the quarter, with but few exceptions it was warm, and at times hot.

July the mean high day temperature was 78° , exceeding the average by $4\frac{1}{2}^{\circ}$; the low night temperature was $54\frac{1}{2}^{\circ}$, exceeding its average by 1° . The mean temperature of the month was $64^{\circ}5$, being 3° nearly in excess; chiefly due to high day temperature. The mean temperature of this month was somewhat exceeded in the years 1778, 1779, 1781, 1783, 1793, 1794, 1808, 1818, 1825, 1826, 1835, 1846, and 1852; and was less in all other years since 1771.

August was warm throughout, excepting the 7th, 8th, 9th, 13th, and 14th, when the daily temperature was slightly in defect. The mean high day temperature was 78° , exceeding its average by 5° nearly; and that of the low night temperature was $56^{\circ}4$, being 3° in excess. The mean temperature of the month was $65^{\circ}8$, being 5° nearly in excess, and due to both warm days and nights, but rather more to the former than the latter. Since the year 1771, a date as far back as trustworthy records extend, there has been no instance of so high mean temperature in August as in the present month. The nearest approaches were in the years 1780, 1802, and 1842, whose values were $65^{\circ}7$, $64^{\circ}8$, and $65^{\circ}4$ respectively.

In the year 1817 the mean temperature of August was $55^{\circ}4$ only, being the lowest recorded, and this value compared with the present shows a difference between the monthly mean of this summer month of no less than $10^{\circ}4$. Within the interval since the year 1771 there has been one instance only in which the mean monthly temperature exceeded that of this month, viz. in July 1778, when it was $67^{\circ}0$, therefore the month of August of the present year has been the hottest of any for 80 years.

The temperature at a few places reached 90° , and was but little less at many places.

September was warm throughout, with the exception of the 2d, 3d, 4th, and 11th, and exceeded the average temperature of the month by 3° . The mean high day temperature was 70° , exceeding the average by $2\frac{1}{2}^{\circ}$; and that of the low night temperature was 52° , being $3\frac{1}{2}^{\circ}$ nearly in excess above the average. The mean temperature of the month was $59\frac{1}{2}^{\circ}$, and exceeded the average by 3° , and due to both warm days and nights, but to a greater extent to the latter than the former. The mean temperature of this month was somewhat exceeded in the years 1779, 1795, 1815, 1818, 1825, and 1846, and was less in all other years since 1771.

The mean for the three months ending September was $63^{\circ}3$. For the same period in the year 1779 was $63^{\circ}2$, and in 1818 was $63^{\circ}5$. In all other years since 1771 it has been less than 63° . So that in one only corresponding period in an interval of 86 years has the temperature of the past quarter been exceeded, and in this instance by a very trifling quantity.

The mean temperature of the five months ending September was $61^{\circ}2$. In the year 1818 that of the corresponding period was also $61^{\circ}2$, and in 1846 it was $61^{\circ}5$. In all other years since 1771 it was less than 61° . The period from May has been fine and hot.

The mean temperature of the dew point was above its average in each month of the quarter, but in July and August to less amounts than the excesses of temperature, and consequently the air was less humid in those months than usual. In September, however, it exceeded the excess of temperature, and consequently this month was more humid than usual.

The fall of rain was deficient in July, of its average amount in August, and in excess in September. During the quarter the lowest reading of a thermometer with its bulb placed on grass, and freely exposed to the sky, did not descend below 36° , and there were five instances only in which the reading was below 40° ; a most unusual circumstance, as in every month of the year the temperature of vegetation is liable to be below that of the freezing point of water.

The mean temperature of the air at Greenwich for the quarter ending August, constituting the three summer months, was $64^{\circ}0$, being $3^{\circ}7$ above the average of 86 years.

1857. MONTHS.		Temperature of								Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
		Air.		Evaporation.		Dew Point.		Air— Daily Range.					
		Mean.	Diff. from ave- rage of 86 years.	Diff. from ave- rage of 16 years.	Mean.	Diff. from ave- rage of 16 years.	Mean.	Diff. from ave- rage of 16 years.	Mean.	Diff. from ave- rage of 16 years.	Mean.	Diff. from ave- rage of 16 years.	Mean.
July . .	64.5	+2.8	+3.2	59.1	+1.7	54.8	+1.0	23.5	+3.4	in.	in.	grs.	gr.
Aug. . .	65.8	+4.5	+5.3	60.8	+3.4	56.9	+2.8	21.7	+2.6	.451	+0.16	4.8	+0.2
Sept. . .	59.7	+3.0	+3.4	57.2	+3.5	55.2	+1.4	18.1	-0.5	.465	+0.42	5.2	+0.5
Mean .	63.3	+3.5	+4.0	59.0	+2.9	55.6	+2.7	21.1	+1.8	.444	+0.08	4.9	+0.3

1857. MONTHS.		Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Hor- izontal move- ment of the Air.	Reading of Thermometer on Grass.				
		Mean.	Diff. from ave- rage of 16 years.	Mean.	Diff. from ave- rage of 16 years.	Mean.	Diff. from ave- rage of 16 years.	Amount.	Diff. from ave- rage of 40 years.		Number of Nights it was			Low- est Read- ing at Night.	High- est Read- ing at Night.
											At or below 30°	Be- tween 30° and 40°	Above 40°		
July . .	71	- 5	in.	in.	grs.	grs.	in.	in.	Miles.						
Aug. . .	73	- 5	29.847	+0.053	525	+ 1	1.1	-1.6	58	0	0	31	41.0	58.2	
Sept. . .	86	+ 5	29.836	+0.041	525	- 3	2.6	-0.1	102	0	2	28	38.0	59.0	
			29.786	-0.053	530	- 4	3.4	+1.3	51	0	3	28	36.1	54.3	
Mean .	77	- 2	29.806	+0.014	527	- 2	Sum 7.1	Sum -0.2	Mean 70	Sum 0	Sum 5	Sum 87	36.0	59.0	

NOTE.—In reading this table it will be borne in mind that the sign (-) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunderstorms occurred, or thunder was heard and lightning seen, on the 1st of July at Falmouth, Little Bridy, Maidstone, St. John's Wood, Whitehall, and Paddington; on the 4th at Wakefield, York, and Scarborough; on the 5th at Falmouth, Fairlight, Clifton, Oxford, Gloucester, Sharnbrook, Worcester, Grantham, Leeds, and Scarborough; on the 6th at Hastings, Fairlight, Clifton, Oxford, Rose Hill, Bicester, Hartwell House, Gloucester, and Hereford; on the 10th at Nottingham, York, and Bywell; on the 16th at Fairlight and Lampeter; on the 27th at Bicester, Cardington, and Hereford; and on the 28th at Lewisham, Greenwich, Whitehall, and Sharnbrook. On the 4th of August at Hastings and Fairlight; on the 5th at Maidstone; on the 6th at Guernsey, Falmouth, Hastings, Fairlight, Berkhamstead, Royston, Cardington, and Sharnbrook; on the 7th at Royston; on the 8th at Clifton, Hartwell Rectory, Gloucester, Sharnbrook, and Hawarden; on the 9th at Hastings, Maidstone, Paddington, Rose Hill, Oxford, and Hartwell House; on the 13th at Exeter, Ryde, Little Bridy, Clifton, Lewisham, Greenwich, Battersea, Whitehall, Rose Hill, Oxford, Bicester, Berkhamstead, Hartwell House, Hartwell Rectory, Gloucester, Royston, Cardington, Sharnbrook, Grantham, Belvoir, Holkham, Hereford, Hawarden, Wakefield, Scarborough, and Bywell; on the 14th at Hastings, Fairlight, Maidstone, Clifton, Lewisham, Greenwich, Battersea, Whitehall, Rose Hill, Oxford, Bicester, Berkhamstead, Hartwell Rectory, Gloucester, Royston, Cardington, Sharnbrook, Grantham, Hawarden, Liverpool, and Manchester; on the 15th at Falmouth, Hastings, and Fairlight; on the 16th at Ryde; on the 22d at Falmouth; and on the 31st at Maidstone. On the 2d of September at Cardington, North Shields, Bywell, and Allenheads; on the 3d at Fairlight, Maidstone, Lampeter, Liverpool, and Allenheads; on the 4th at Little Bridy, Durham, Bywell, and Allenheads; on the 5th at York, North Shields, and Durham; on the 6th at Maidstone, Norwich, and York; on the 7th at York; on the 8th at Fairlight; on the 9th at Maidstone and Bywell; on the 24th at Rosehill, Royston, and Worcester; and on the 25th at Norwich.

Thunder was heard, but lightning was not seen, on the 1st of July at Helston, Lewisham, Greenwich, and Rose Hill; on the 4th at Rose Hill and Scarborough; on the 5th at Helston and Rose Hill; on the 6th at Hartwell Rectory, Lampeter, and Scarborough; on the 10th at Berkhamstead, Grantham, and Belvoir; on the 16th at Lampeter; on the 18th at Little Bridy; on the 19th at North Shields and Bywell; on the 27th at Rose Hill, Oxford, and Belvoir; and on the 28th at Berkhamstead. On the 4th of August at Maidstone and Little Bridy; on the 5th at Guernsey, Hastings, Fairlight, and Little Bridy; on the 6th at Helston, Teignmouth, Little Bridy, Clifton, Berkhamstead, Hartwell House, Hartwell Rectory, and Holkham; on the 7th at Hartwell House, Cardington, Sharnbrook, Norwich, and Grantham; on the 8th at Rose Hill, Belvoir, Wakefield, and North Shields; on the 9th at Fairlight, Greenwich, Bicester, Berkhamstead, Hartwell Rectory, Gloucester, Cardington, and Belvoir; on the 13th at Fairlight, Paddington, and Allenheads; on the 14th at Helston, Little Bridy, Paddington, Bicester, Norwich, and Belvoir; on the 15th at Sharnbrook; on the 19th at Helston; on the 22d at Helston; on the 23d at Hawarden; on the 24th at Liverpool; and on the 31st at Rose Hill. On the 1st of September at Lampeter; on the 3d at Helston and Norwich; on the 5th at Fairlight, Bywell, and Allenheads; on the 6th at Fairlight, Grantham, and Belvoir; on the 7th at Scarborough; on the 8th at Guernsey, Lampeter, Hawarden, and Liverpool; on the 9th at Liverpool; on the 11th at Fairlight and Little Bridy; on the 12th at Fairlight, Lampeter, and Hawarden; on the 14th at Lampeter; on the 24th at Rose Hill, Cardington, Sharnbrook, and Worcester; and on the 25th at Holkham.

Lightning was seen, but thunder was not heard, on the 6th of July at Oxford; on the 15th at Fairlight; on the 27th at Oxford; and on the 29th at Guernsey. On the 2d and 3d of August at Hawarden; on the 6th at Helston and North Shields; on the 8th at Belvoir and Nottingham; on the 12th at North Shields; on the 13th at Little Bridy, Lewisham, Greenwich, Stonyhurst, and North Shields; on the 14th at Exeter, Hastings, Worcester, Holkham, Nottingham, and Stonyhurst; on the 19th at Wakefield; on the 21st at Exeter; on the 22d at Helston and Little Bridy; on the 23d at Helston; and on the 24th at Stonyhurst. On the 3d of September at Little Bridy; on the 4th at Scarborough; on the 6th at Berkhamstead, Cardington, Grantham, Nottingham, Scarborough, North Shields, and Bywell; on the 10th at Clifton; on the 23d at Guernsey; and on the 24th at Fairlight, Little Bridy, Maidstone, and Cardington.

Hail fell on the 6th of July at Rose Hill. On the 6th of August at Helston; on the 8th at Nottingham; on the 12th at Royston; on the 13th at Gloucester; on the 14th at Clifton, Lewisham, Greenwich, Rose Hill, Berkhamstead, Royston, and Cardington; and on the 22d and 23d at Royston.

Fog was prevalent on 22 days in July, 25 days in August, and 23 days in September, at the different stations during the quarter.

Solar Halos were seen on the 4th and 10th of July at York; and on the 16th, 21st, 26th, and 30th at Little Bridy. On the 4th and 6th of August at Little Bridy; on the 10th at Royston; on the 12th and 13th at Little Bridy; on the 15th at Maidstone, Clifton, and Grantham; on the 24th at Little Bridy; and on the 31st at Nottingham. On the 1st and 4th of September at Nottingham; on the 5th, 6th, and 7th at York; on the 10th at Little Bridy; on the 11th at Little Bridy and Clifton; on the 13th at Clifton; on the 14th at Little Bridy; on the 25th at Sharnbrook; on the 26th at Little Bridy and Berkhamstead; and on the 29th at Hartwell Rectory.

Lunar Halos were seen on the 5th of July at Fairlight. On the 1st of September at Nottingham; on the 3d at Berkhamstead; on the 4th at Wakefield; on the 10th at Little Bridy; on the 20th at Little Bridy, Clifton, Lampeter, Nottingham, Liverpool, and Manchester; and on the 30th at Whitehall.

Aurora Borealis was seen on the 18th of September at Durham; and on the 24th at Hereford. Wheat cut on the 17th of July at Ryde; on the 23d at Little Bridy and Berkhamstead; on the 25th at Bicester; on the 27th at Rose Hill and Cardington; on the 28th at Grantham; on the 29th at Oxford; on the 31st at Helston and Holkham; on the 3d August at Belvoir; and on the 6th at Hawarden.

Barley cut on the 27th of July at Cardington; on the 29th at Helston and Oxford; on the 30th at Fairlight. On the 3d of August at Belvoir.

Oats cut on the 19th of July at Berkhamstead; on the 22d at Grantham; on the 27th at Helston; and on the 29th at Fairlight. On the 4th of August at Ryde and Belvoir.

Meteorological Table, Quarter ending September 30th, 1857.

NAMES OF STATIONS.	Mean Pressure of dry Air reduced to the level of the Sea.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Range of Temperature in the Quarter.	Mean of all Highest.	Mean of all Lowest.	Mean Monthly Range of Temperature.	Mean Daily Range of Temperature.	Mean Temperature of the Air.	Mean Temperature of the Dew Point.	Mean Elastic Force of Vapour.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required for saturation.	Mean degree of Humidity.	Mean Weight of a cubic foot of Air.	Mean Reading of Maximum in Rays of Sun.	Mean Reading of Minimum on Grass.	WIND.				Mean Amount of Ozone.	Mean Amount of Cloud.	Rain.
																		N.	E.	S.	W.			
Guernsey	29.560	78.0	54.0	24.0	68.8	58.8	10.0	10.0	61.0	57.0	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Helston	29.543	83.0	47.0	36.0	73.4	57.2	16.2	16.2	63.6	57.7	3.1	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Falmouth	29.543	81.0	50.0	31.0	72.9	57.0	15.9	15.9	63.2	57.0	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Truro	29.543	81.0	50.0	31.0	72.9	57.0	15.9	15.9	63.2	57.0	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Torquay	29.575	81.0	43.7	37.3	70.9	55.7	15.2	15.2	63.4	54.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Teignmouth	29.575	81.0	43.7	37.3	70.9	55.7	15.2	15.2	63.4	54.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Exeter	29.550	88.8	34.7	54.1	72.5	52.3	20.2	20.2	63.3	53.7	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Hereford Infirmary	29.575	79.0	51.0	28.0	66.0	50.3	15.7	15.7	61.4	50.6	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Ventnor	29.540	84.0	47.0	37.0	70.5	56.5	14.0	14.0	61.7	56.7	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Ryde	29.540	77.2	44.5	32.7	68.9	55.0	13.9	13.9	61.4	57.7	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Fairlight	29.540	77.2	44.5	32.7	68.9	55.0	13.9	13.9	61.4	57.7	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Little Brdy	29.563	85.5	40.5	45.0	70.3	53.2	17.1	17.1	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Clifton	29.575	85.4	36.7	48.7	71.1	54.4	16.7	16.7	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Maidstone	29.474	90.6	40.0	49.6	75.9	53.3	22.6	22.6	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Lewisham	29.567	89.3	43.0	46.3	74.9	53.3	21.6	21.6	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Royal Observatory	29.557	89.7	41.5	48.2	75.3	54.2	21.1	21.1	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
St. John's Wood	29.531	87.9	45.5	42.4	73.8	56.8	17.0	17.0	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Whitehall	29.530	84.3	48.4	35.9	71.6	56.0	15.6	15.6	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Guilhall	29.540	84.0	48.0	36.0	71.0	56.0	15.0	15.0	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Battersea	29.446	88.6	40.0	48.6	75.9	53.3	22.6	22.6	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Paddington	29.519	90.5	45.5	45.0	75.5	56.1	19.4	19.4	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Rose Hill	29.569	83.2	43.0	40.2	70.9	53.3	17.6	17.6	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Oxford	29.588	83.0	43.0	40.2	70.9	53.3	17.6	17.6	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Bicester	29.539	89.0	40.0	49.0	76.0	54.3	21.7	21.7	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Berkhamstead	29.500	85.3	37.0	48.3	72.6	53.0	19.6	19.6	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Hartwell House	29.516	88.8	41.5	44.8	74.7	53.0	21.7	21.7	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Hartwell Rectory	29.543	85.8	41.5	44.8	74.7	53.0	21.7	21.7	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Gloucester	29.543	85.8	41.5	44.8	74.7	53.0	21.7	21.7	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Royston	29.502	87.0	45.1	41.1	74.4	54.4	20.0	20.0	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Cardington	29.578	85.2	42.4	42.8	72.2	54.4	17.8	17.8	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Sharnbrook	29.569	84.7	38.0	47.0	70.9	53.3	17.6	17.6	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Lampeter	29.522	88.0	40.0	49.0	76.0	54.3	21.7	21.7	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Worcester	29.522	88.0	40.0	49.0	76.0	54.3	21.7	21.7	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Norwich	29.522	88.0	40.0	49.0	76.0	54.3	21.7	21.7	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Grantham	29.522	88.0	40.0	49.0	76.0	54.3	21.7	21.7	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Belvoir	29.522	88.0	40.0	49.0	76.0	54.3	21.7	21.7	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Derby	29.522	88.0	40.0	49.0	76.0	54.3	21.7	21.7	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Holkham	29.522	88.0	40.0	49.0	76.0	54.3	21.7	21.7	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Nottingham	29.522	88.0	40.0	49.0	76.0	54.3	21.7	21.7	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Hawarden	29.522	88.0	40.0	49.0	76.0	54.3	21.7	21.7	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Liverpool	29.522	88.0	40.0	49.0	76.0	54.3	21.7	21.7	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Manchester	29.522	88.0	40.0	49.0	76.0	54.3	21.7	21.7	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Wakefield	29.522	88.0	40.0	49.0	76.0	54.3	21.7	21.7	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Stonyhurst	29.522	88.0	40.0	49.0	76.0	54.3	21.7	21.7	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
York	29.522	88.0	40.0	49.0	76.0	54.3	21.7	21.7	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Scarborough	29.522	88.0	40.0	49.0	76.0	54.3	21.7	21.7	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Isle of Man	29.522	88.0	40.0	49.0	76.0	54.3	21.7	21.7	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
North Shields	29.522	88.0	40.0	49.0	76.0	54.3	21.7	21.7	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Durham	29.522	88.0	40.0	49.0	76.0	54.3	21.7	21.7	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Bywell	29.522	88.0	40.0	49.0	76.0	54.3	21.7	21.7	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0
Allenheads	29.522	88.0	40.0	49.0	76.0	54.3	21.7	21.7	63.3	55.1	3.0	0.0	0.0	100	73.0	82.0	74.0	1	1	1	1	1.0	1.0	1.0

The highest temperature of the air exceeded 90° at some places, and was above 80° at many stations. The lowest were at Belvoir, 38°; Lampeter, 38°; Hereford, 34°; and Stonyhurst, 36°. The greatest daily ranges were at Belvoir, 28°; Lampeter, 28°; Hereford, 28°; and Stonyhurst, 28°. Rain fell on the greatest number of days at Allenheads, 14; Guernsey, 10; Ventnor, 10; and North Shields, 10. On the least at Torquay, Ryde, Worcester, Worthing, Maidstone, Bywell, Falmouth, Exeter, and Paddington. Shields: 12.5 in. at Manchester; and 12.0 in. at Allenheads. The heaviest falls were 14.2 in. at Ventnor; 13.5 in. at North Shields; and 6.8 in. at Ryde. The least falls were 3.4 in. at Exeter; 3.5 in. at Torquay; 4.0 in. at Ryde.

QUARTERLY METEOROLOGICAL TABLE for different PARALLELS of LATITUDE.

PARALLELS OF LATITUDE, &c.	Mean Pressure of dry Air reduced to the level of the Sea.	Mean of all Highest Reading of the Thermometer.	Mean of all Lowest Reading of the Thermometer.	Mean Range of Temperature in the Quarter.	Mean of all Highest.	Mean of all Lowest.	Mean Monthly Range of Temperature.	Mean Daily Range of Temperature.	Mean Temperature of the Air.	Mean Temperature of the Dew Point.	Mean Elastic Force of Vapour.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required for saturation.	Mean degree of Humidity.	Mean Weight of a cubic foot of Air.	Mean Reading of Maximum in Rays of Sun.	Mean Reading of Minimum on Grass.
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Year 1857.	Month.	Names of Stations and Observers.	Pressure of Air in Month.		Temperature of Air in Month.		Mean Temperature.		Vapour.		Mean Reading of Thermometer.		Wind.			Rain. Amount col- lected.									
			Mean.	Range.	Highest.	Lowest.	Range.	Mean.	Air.	Dew Point.	Elastic Force.	In a cubic foot of Air.	Mean.	Short of Saturation.	Mean Degrees of Humi- dity. Sat. = 100.		Mean Weight of a cubic foot of Air.	Maximum in Days of Sun.	Minimum on Grass.	Estimated Strength.	Relative Proportion of			Mean Amount of Moisture.	Number of Days fell.
																					N.	S.	W.		
July	29-830	ST. JOHN'S WOOD (Literary Insti- tution).	0.670	87.9	87.0	40.4	41.5	66.3	20.0	64.6	57.4	4.89	1.76	73	62.5	—	11	10	—	1.8					
Aug.	29-840	Mr. JOHN CARTER, Librarian.	0.628	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Sept.	29-850	GUILDHALL (City of London).	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Oct.	29-860	WILLIAM HAYWOOD, Esq., C.E.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Nov.	29-870	WHITEHALL, J. C. HAILE, Esq., Sur- veyor and Draughtsman, by Desire of the President of the Board of Health.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Dec.	29-880	BATTERSEA TRAINING SCHOOL.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Jan.	29-890	REV. SAMUEL GALE, M.A., M.B.M.S.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Feb.	29-900	ST. MARY'S HOSPITAL (Paddington).	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Mar.	29-910	BEKIN, H. PATRICK, Esq., L.S.A., &c.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Apr.	29-920	REV. JOHN HEATH, M.A., F.R.A.S., M.B.M.S.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
May	29-930	ROSE HILL (near Oxford).	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
June	29-940	REV. JOHN SLATTERY, M.A., F.R.A.S., OXFORD OBSERVATORY.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
July	29-950	OXFORD OBSERVATORY.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Aug.	29-960	MARGAL J. JOHNSON, Esq., M.A., VICE-PRESIDENT R.A.S.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Sept.	29-970	BICESTER.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Oct.	29-980	WILLIAM JOHNSON, Esq., M.B.M.S.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Nov.	29-990	GREAT BERKHAMPTON.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Dec.	29-1000	WILLIAM SQUIRE, Esq., M.B.M.S.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Jan.	29-1010	HARTWELL HOUSE.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Feb.	29-1020	Mr. HORTON, Assistant to Dr. LEE.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Mar.	29-1030	F.R.S., V.P. R.A.S., PAES, B.M.S.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Apr.	29-1040	HARTWELL RECTORY.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
May	29-1050	Rev. CHARLES LOWNDER, M.A., R.A.S., M.B.M.S.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
June	29-1060	ROYDON (Hertfordshire).	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
July	29-1070	HALE, W. HATHAM, Esq., F.R.A.S., M.B.M.S.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Aug.	29-1080	GLOUCESTER.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Sept.	29-1090	W. W. WILLIAMS, Esq., M.D., CARDINGTON (near Bedford).	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Oct.	29-1100	J. MACLAREN, M.B.M.S., Assist. to S.C.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Nov.	29-1110	WHITBREAD, Esq., F.R.S., M.B.M.S.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Dec.	29-1120	HEREFORD INFIRMARY.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Jan.	29-1130	SHARNBROOK.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Feb.	29-1140	R. S. STEADMAN, Esq., M.R.C.S., M.B.M.S.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Mar.	29-1150	LAMPETER (Cardiganshire).	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Apr.	29-1160	Rev. Prof. J. M. MATTHEWS, M.A., Worcester, &c., &c., &c.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
May	29-1170	Worcester, &c., &c., &c.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
June	29-1180	Worcester, &c., &c., &c.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
July	29-1190	Worcester, &c., &c., &c.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Aug.	29-1200	Worcester, &c., &c., &c.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Sept.	29-1210	Worcester, &c., &c., &c.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Oct.	29-1220	Worcester, &c., &c., &c.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Nov.	29-1230	Worcester, &c., &c., &c.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					
Dec.	29-1240	Worcester, &c., &c., &c.	0.634	87.0	87.0	39.0	40.5	65.0	19.5	63.0	56.6	4.89	1.76	73	62.5	—	11	10	—	1.8					

DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	July	29-1250	ST. JOHN'S WOOD (Literary Insti- tution).	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Aug.	29-1260	Mr. JOHN CARTER, Librarian.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Sept.	29-1270	GUILDHALL (City of London).	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Oct.	29-1280	WILLIAM HAYWOOD, Esq., C.E.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Nov.	29-1290	WHITEHALL, J. C. HAILE, Esq., Sur- veyor and Draughtsman, by Desire of the President of the Board of Health.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Dec.	29-1300	BATTERSEA TRAINING SCHOOL.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Jan.	29-1310	REV. SAMUEL GALE, M.A., M.B.M.S.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Feb.	29-1320	ST. MARY'S HOSPITAL (Paddington).	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Mar.	29-1330	BEKIN, H. PATRICK, Esq., L.S.A., &c.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Apr.	29-1340	REV. JOHN HEATH, M.A., F.R.A.S., M.B.M.S.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	May	29-1350	ROSE HILL (near Oxford).	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	June	29-1360	REV. JOHN SLATTERY, M.A., F.R.A.S., OXFORD OBSERVATORY.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	July	29-1370	OXFORD OBSERVATORY.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Aug.	29-1380	MARGAL J. JOHNSON, Esq., M.A., VICE-PRESIDENT R.A.S.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Sept.	29-1390	BICESTER.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Oct.	29-1400	WILLIAM JOHNSON, Esq., M.B.M.S.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Nov.	29-1410	GREAT BERKHAMPTON.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Dec.	29-1420	WILLIAM SQUIRE, Esq., M.B.M.S.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Jan.	29-1430	HARTWELL HOUSE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Feb.	29-1440	Mr. HORTON, Assistant to Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Mar.	29-1450	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Apr.	29-1460	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	May	29-1470	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	June	29-1480	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	July	29-1490	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Aug.	29-1500	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Sept.	29-1510	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Oct.	29-1520	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Nov.	29-1530	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Dec.	29-1540	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Jan.	29-1550	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Feb.	29-1560	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Mar.	29-1570	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Apr.	29-1580	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	May	29-1590	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	June	29-1600	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	July	29-1610	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Aug.	29-1620	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Sept.	29-1630	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Oct.	29-1640	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Nov.	29-1650	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Dec.	29-1660	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Jan.	29-1670	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Feb.	29-1680	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Mar.	29-1690	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Apr.	29-1700	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	May	29-1710	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	June	29-1720	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	July	29-1730	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Aug.	29-1740	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Sept.	29-1750	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Oct.	29-1760	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Nov.	29-1770	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Dec.	29-1780	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Jan.	29-1790	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Feb.	29-1800	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Mar.	29-1810	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	Apr.	29-1820	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	May	29-1830	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0	64.6	65.4	4.89	1.76	73	62.5	—	11	10	—	1.8
DEPT. OF AGRICULTURE, F.R.A.S., M.B.M.S.	June	29-1840	Mr. JOHN DAWSON, under the direction of Dr. LEE.	0.634	81.0	87.0	45.0	42.0	42.0											

ON THE
METEOROLOGY OF ENGLAND,

DURING THE

Quarter ending December 31, 1857.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

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1857.

BLACKHEATH
MAY 17 1858

Remarks on the weather, during the Quarter ending December 31st, 1857. By JAMES GLAISHER, ESQ., F.R.S., &c., Sec. of the British Meteorological Society.

October.—Till the 4th the air was warm, being $5\frac{1}{2}^{\circ}$ above the average; it was then cold until the 10th, being deficient from the average by 2° nearly; it was then again warm till the end of the month, being 4° in excess. The mean high day temperature was $61\frac{1}{2}^{\circ}$, exceeding the average by $3\frac{3}{4}^{\circ}$; the low night temperature was 47° , exceeding the average by $3\frac{3}{4}^{\circ}$. The mean temperature of this month was 53° , being $3\frac{3}{4}^{\circ}$ in excess. The mean temperature of this month was exceeded in the years 1795, 1807, 1811, 1818, and 1831; and was less in all other years since 1771.

November was warm until the 12th, being $6\frac{1}{2}^{\circ}$ in excess; on the 12th and 13th it was cold, being about 5° below the average; it was then again warm until the 24th, being about 3° in excess. From the 24th to the end it was cold, being deficient by $1\frac{1}{2}^{\circ}$. The mean high day temperature was 52° , exceeding the average by $2\frac{1}{2}^{\circ}$; and that of the low night temperature was $40^{\circ}\cdot6$, being $2\frac{1}{2}^{\circ}$ in excess. The mean temperature of the month was $45^{\circ}\cdot8$, being $2^{\circ}\cdot2$ in excess. The mean temperature of this month was exceeded in the years 1806, 1817, 1818, 1821, 1822, 1824, 1846, 1847, and 1852.

December was remarkably warm throughout. The mean high day temperature was $50^{\circ}\cdot3$, exceeding the average by $5\frac{1}{2}^{\circ}$ nearly; and that of the low night temperature was $39^{\circ}\cdot6$, being 4° above the average. The mean temperature of the month was $45^{\circ}\cdot1$, being 5° in excess of the average, and due to both warm days and nights. The mean temperature of this month has been but twice exceeded since 1771, a period of 86 years, viz. in the years 1806 and 1852.

The decrease of mean temperature from October to November varied from 5° to 7° all over the country; and the mean temperatures of November and December were nearly alike; that of the latter month, however, at many places in the Midland and Northern Counties, being the higher of the two.

The mean for the three months ending December was $47^{\circ}\cdot9$. For the same period in the year 1806 it was $48^{\circ}\cdot5$, in the year 1818 it was $47^{\circ}\cdot2$, in the year 1821 was $47^{\circ}\cdot4$, in the year 1831 was $47^{\circ}\cdot1$, in the year 1847 it was $47^{\circ}\cdot5$, and in 1852 was $48^{\circ}\cdot1$. In all other years since 1771 it has been less than 47° . So that the temperature of the past quarter, in a corresponding period, has been but twice exceeded during an interval of 86 years.

The mean temperature of the dew point was above its average in each month of the quarter, and in October and November to greater amounts than the excesses of temperature, and consequently the air was more humid than usual in those months. In December, however, the excess was about the same value as that of the air.

The reading of the Barometer at the level of the sea was $30\cdot31$ in. at the beginning of the month of October; descended by the 7th to $28\cdot89$ in., the lowest reading during the year; increased by the 13th to $30\cdot33$ in., being the highest in the month; decreased to $29\cdot61$ in. by the 18th; variable till October 31st, when the reading was $30\cdot23$ in.; descended to $29\cdot79$ in. by November 2d; increased by the 12th to $30\cdot83$ in., being the highest in the year; descended to $29\cdot32$ in. by the 24th, being the lowest in the month; then variable, but generally increasing, till December 8th, when it read $30\cdot76$ in.; then descended to $30\cdot48$ in. by the 10th; increased to $30\cdot80$ in. by the 12th, being the highest reading but one in the year; decreased to $30\cdot10$ in. by the 20th; and increased to $30\cdot64$ in. by the end of the year. The mean reading in October was slightly in excess, in November and December considerably above the average of the preceding 16 years; no mean reading has been so high in November, and the reading in December has been exceeded but once viz. in 1843.

The fall of rain was in excess in October; on the 22d a very heavy fall took place over the counties of Hertford, Cambridge, Buckingham, Middlesex, Surrey, Kent, Norfolk, and Sussex; it fell to the depth of nearly 3 inches in several places. In November and December the fall of rain was deficient, and was somewhat deficient upon the quarter, and about $3\frac{1}{2}$ inches deficient upon the year.

The mean temperature of the air at Greenwich for the quarter ending November, constituting the three autumnal months, was $52^{\circ}\cdot8$, being $3^{\circ}\cdot4$ above the average of the preceding 86 years.

1857. MONTHS.		Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
		Air.		Evaporation.		Dew Point.		Air— Daily Range.		Water of the Thames.					
		Mean.	Diff. from ave- rage of 16 years.	Diff. from ave- rage of 16 years.	Mean.	Diff. from ave- rage of 16 years.	Mean.	Diff. from ave- rage of 16 years.	Mean.		Diff. from ave- rage of 16 years.				
												Mean.	Diff. from ave- rage of 16 years.	Mean.	Diff. from ave- rage of 16 years.
Oct. . .	52·9	+3·6	+3·6	51·6	+3·7	50·3	+4·8	14·5	-0·1	—	·268	in. +·062	grs. 4·1	gr. +0·9	
Nov. . .	45·9	+3·4	+2·3	45·0	+2·9	44·1	+3·8	11·3	-0·1	49·3	·239	+·061	3·3	+0·3	
Dec. . .	45·0	+6·1	+4·8	43·9	+5·2	42·4	+5·5	10·7	+1·2	45·6	·208	+·042	3·1	+0·3	
Mean .	47·9	+4·4	+3·6	46·8	+3·9	45·6	+4·7	12·2	+0·3		·308	+·045	3·5	+0·5	

1857. Months.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal movement of the Air.	Reading of Thermometer on Grass.				
	Mean.	Diff. from average of 16 years.	Mean.	Diff. from average of 16 years.	Mean.	Diff. from average of 16 years.	Amount.	Diff. from average of 40 years.		Number of Nights it was			Lowest Reading at Night.	Highest Reading at Night.
										At or below 30°	Between 30° and 40°	Above 40°		
Oct. . .	92	+ 6	in. 29·695	+·014	grs. 535	- 3	4·2	+0·9	Miles. 71	0	14	17	35·2	54·0
Nov. . .	94	+ 6	29·942	+·107	548	+ 1	1·3	-1·0	38	11	11	8	22·2	32·2
Dec. . .	90	+ 2	30·155	+·342	553	+ 1	0·5	-1·0	117	12	8	11	24·0	45·0
Mean .	92	+ 5	29·931	+·184	549	0	Sum 6·0	Sum -1·1	Mean 75	Sum 23	Sum 33	Sum 36	Lowest 22·2	Highest 54·0

NOTE.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunderstorms occurred, or thunder was heard and lightning seen, on the 5th of October at Little Bridy, Clifton, and Hereford; on the 6th at Truro; on the 9th at Liverpool; on the 20th at Guernsey; on the 22d at Great Berkhamstead; and on the 28th at Royston. On the 6th of November at Fairlight; and on the 22d at Helston.

Thunder was heard, but lightning was not seen, on the 5th of October at Hereford and Liverpool; on the 6th at Little Bridy; on the 20th at Fairlight; and on the 21st at Gloucester. On the 3d of November at Paddington.

Lightning was seen, but thunder was not heard, on the 4th of October at Wakefield, Scarborough, North Shields, and Allenheads; on the 5th at Scarborough, Isle of Man, and Allenheads; on the 6th at Helston and Clifton; on the 22d at Fairlight; and on the 23d at Helston. On the 2d of November at Hartwell Rectory; on the 3d at Battersea; and on the 4th and 12th at Helston. On the 16th of December at Greenwich.

Fog was generally prevalent throughout the country on the 1st of October; on the 6th, 7th, 8th, and 9th in the North of England; on the 11th, 12th, 13th, 14th, 16th, 17th, 18th, 19th, and 20th throughout the country; on the 21st in the Midland and Southern counties; from the 26th to the 28th it prevailed generally over the country; and from the 29th to the 31st in the Midland counties. In the month of November it was very prevalent, especially in the Midland counties; and, with the exception of the 23d, was prevalent on every day in the month. In December it prevailed for the most part on the 1st, 2d, 3d, 5th, 6th, 7th, 8th, and 11th over the Midland and Northern counties; on the 12th throughout the country; on the 13th and 14th in the Midland counties; and from the 26th to the 31st over the country generally.

Hail fell on the 5th of October at Helston, Truro, and the Isle of Man; on the 7th at Rose Hill; on the 9th at Liverpool; on the 12th at Helston; and on the 30th at Grantham. On the 23d of November at Manchester; on the 24th at Stonyhurst; on the 25th at Fairlight; and on the 27th at Guernsey. On the 3d of December at Gloucester; and on the 20th at Liverpool and Stonyhurst.

Snow fell in the North on the 24th of November; on the 25th and 26th in the Midland and Southern counties; and on the 28th in the South.

Solar Halos were seen on the 3d, 10th, and 12th of October at North Shields; on the 18th at Clifton; on the 22d at Little Bridy, Clifton, and Hawarden; and on the 24th and 26th at Clifton. On the 8th of November at North Shields; on the 13th at Little Bridy; on the 17th and 22d at Clifton; and on the 26th at Little Bridy. On the 5th, 20th, and 28th at Little Bridy.

Lunar Halos were seen on the 1st of October at Berkhamstead; on the 2d at Berkhamstead, Gloucester, Cardington, and Grantham; on the 4th at Little Bridy; on the 5th at Truro; on the 6th at Little Bridy and Oxford; on the 22d at Hawarden; on the 27th at Little Bridy; and on the 29th at Rose Hill, Oxford, Berkhamstead, Hartwell Rectory, and Grantham. On the 21st of November at Hereford; on the 26th at Little Bridy; on the 29th at Berkhamstead, Cardington, and Lampeter; and on the 30th at Guernsey. On the 2d of December at Greenwich, Berkhamstead, and Wakefield; on the 3d at Royston; on the 20th at Truro; on the 25th at Grantham; on the 26th at Helston; on the 27th at Little Bridy and Cardington; on the 28th at Oxford; on the 29th at Wakefield; and on the 31st at Greenwich.

Aurora Borealis was seen on the 9th of November at North Shields; on the 11th at Clifton and Cardington; on the 16th at St. John's Wood; on the 21st at Little Bridy; and on the 24th at Clifton. On the 17th of December at Oxford and Berkhamstead.

In the months of October and November the weather was favourable for sowing wheat, and it was very generally sown all over the country, and under very favourable auspices. Acorns were everywhere very large and abundant; chesnuts ripened generally, and were large, and noticed by Mr. Ingram at Belvoir Castle as a fact of rare occurrence.

At the end of December the country generally was remarkably green, and it was noticed at Stonyhurst by the Rev. S. Weld that spring plants are very forward, and such a season was there never known.

At Ryde, Mr. Barrow says, in the month of October a second crop of figs was picked, on the 9th of December fuschias were in blossom, raspberries picked on the 20th, and strawberries in bloom on the 23d.

At Gloucester on December 11th the primrose and Christmas rose were in bloom.

MONTHLY METEOROLOGICAL TABLE FOR THE QUARTER ENDING DECEMBER 31st, 1887.

The Observations have been reduced to Mean values by Glaisher's Barometrical and Diurnal Range Tables, and the Hygrometrical results have been deduced from his second edition of Hygrometrical Tables.

The Observations have been reduced to MEAN MONTHLY MEAN

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Year 1857.	Precipitation of Air in Month.			Mean Temperature.			Mean Force.	In a cubic foot of Air.	Mean Weight of Humidity in 100.	Mean Reading of Thermometer.	Estimated Strength.	Relative Proportion of			Mean Amount of Cloud.	Number of Days it fell.	Rain. Amount col- lected.
	Range.			Mean.								W.	S.	W.			
	Lowest.	Highest.	Range.	Of all Lowest.	Of all Highest.	Range.											
Oct. 29	46.0	61.0	15.0	55.8	59.8	4.0	8.373	7.3	88	35.1	1.8	7	11	8	5.5	16	3.0
Nov. 29	41.0	57.0	16.0	51.8	55.8	4.0	8.373	7.3	88	35.1	1.8	7	11	8	5.5	16	3.0
Dec. 29	41.0	57.0	16.0	51.8	55.8	4.0	8.373	7.3	88	35.1	1.8	7	11	8	5.5	16	3.0
Jan. 29	41.0	57.0	16.0	51.8	55.8	4.0	8.373	7.3	88	35.1	1.8	7	11	8	5.5	16	3.0
Feb. 29	41.0	57.0	16.0	51.8	55.8	4.0	8.373	7.3	88	35.1	1.8	7	11	8	5.5	16	3.0
Mar. 29	41.0	57.0	16.0	51.8	55.8	4.0	8.373	7.3	88	35.1	1.8	7	11	8	5.5	16	3.0
Apr. 29	41.0	57.0	16.0	51.8	55.8	4.0	8.373	7.3	88	35.1	1.8	7	11	8	5.5	16	3.0
May 29	41.0	57.0	16.0	51.8	55.8	4.0	8.373	7.3	88	35.1	1.8	7	11	8	5.5	16	3.0
Jun. 29	41.0	57.0	16.0	51.8	55.8	4.0	8.373	7.3	88	35.1	1.8	7	11	8	5.5	16	3.0
Jul. 29	41.0	57.0	16.0	51.8	55.8	4.0	8.373	7.3	88	35.1	1.8	7	11	8	5.5	16	3.0
Aug. 29	41.0	57.0	16.0	51.8	55.8	4.0	8.373	7.3	88	35.1	1.8	7	11	8	5.5	16	3.0
Sep. 29	41.0	57.0	16.0	51.8	55.8	4.0	8.373	7.3	88	35.1	1.8	7	11	8	5.5	16	3.0
Oct. 29	41.0	57.0	16.0	51.8	55.8	4.0	8.373	7.3	88	35.1	1.8	7	11	8	5.5	16	3.0
Nov. 29	41.0	57.0	16.0	51.8	55.8	4.0	8.373	7.3	88	35.1	1.8	7	11	8	5.5	16	3.0
Dec. 29	41.0	57.0	16.0	51.8	55.8	4.0	8.373	7.3	88	35.1	1.8	7	11	8	5.5	16	3.0
Jan. 29	41.0	57.0	16.0	51.8	55.8	4.0	8.373	7.3	88	35.1	1.8	7	11	8	5.5	16	3.0
Feb. 29	41.0	57.0	16.0	51.8	55.8	4.0	8.373	7.3	88	35.1	1.8	7	11	8	5.5	16	3.0
Mar. 29	41.0	57.0	16.0	51.8	55.8	4.0	8.373	7.3	88	35.1	1.8	7	11	8	5.5	16	3.0
Apr. 29	41.0	57.0	16.0	51.8	55.8	4.0	8.373	7.3	88	35.1	1.8	7	11	8	5.5	16	3.0
May 29	41.0	57.0	16.0	51.8	55.8	4.0	8.373	7.3	88	35.1	1.8	7	11	8	5.5	16	3.0
Jun. 29	41.0	57.0	16.0	51.8	55.8	4.0	8.373	7.3	88	35.1	1.8	7	11	8	5.5	16	3.0
Jul. 29	41.0	57.0	16.0	51.8	55.8	4.0	8.373	7.3	88	35.1	1.8	7	11	8	5.5	16	3

Errata.—The fall of rain at Oxford for the Quarter ending June 80th, 1887, was 5·6 inches on the ground, instead of 6·3 inches; and for the Quarter ending July 1st, 1887, it was 5·9 inches, instead of 6·3 inches. Second rain gauges set up at Clifton, 50 feet above the ground, the amount collected was 5·0 inches; at Norwich, 20 feet, 4·3 inches; at Oxford, 22 feet, 5·2 inches; and at Nottingham, 25 feet, 6·1 inches.

ON THE
METEOROLOGY OF ENGLAND,

DURING THE

Quarter ending March 31, 1858.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

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1858.

Remarks on the weather, during the Quarter ending March 31st, 1858. By JAMES GLAISHER, ESQ., F.R.S., &c., Sec. of the British Meteorological Society.

January.—Till the 7th the air was cold, being $3^{\circ} \cdot 2$ below the average; it then was warm until the 20th, the average excess being $4^{\circ} \cdot 7$; it then again became cold till the 27th, the deficiency being daily $4^{\circ} \cdot 2$ from the average; and from the 28th to the end of the month was warm, being $4^{\circ} \cdot 7$ in excess. The mean high day temperature was $43^{\circ} \cdot 8$, exceeding the average by $0^{\circ} \cdot 8$; the low night temperature was $31^{\circ} \cdot 7$, being $1^{\circ} \cdot 9$ deficient from the average. The mean temperature of the month differed but little from the average.

February was cold nearly throughout, excepting on the 3d, 4th, 5th, 6th, and 13th, when the temperature somewhat exceeded the average. The mean high day temperature was $41^{\circ} \cdot 8$, being $2^{\circ} \cdot 7$ below the average; and the mean low night temperature was $29^{\circ} \cdot 8$, or $3^{\circ} \cdot 6$ deficient from the average. The mean temperature of the month was nearly 4° below the average.

March till the 12th was cold, the average deficiency amounting to 8° ; and from the 13th to the end of the month it was warm, the temperature averaging $5^{\circ} \cdot 3$ in excess. The mean high day temperature of this month was $50^{\circ} \cdot 7$, exceeding the average by 1° ; whilst that of the low night was $33^{\circ} \cdot 6$, being deficient from the average by $1^{\circ} \cdot 5$. This month was nearly of its average temperature.

The decrease of mean temperature of the air from January to February, south of latitude 51° , was 2° ; and north of that parallel varied from 2° to 4° ; and the increase from February to March varied from 2° to 4° at places south of latitude 51° , and from 4° to 7° at places north of 51° . The greatest differences occurred in the Midland counties.

The mean degree of humidity was less in each month, and the mean temperature of the dew-point was also less than its average value in each month, and in all cases to greater amounts than the deficiency of temperature, and therefore the air was less humid than usual.

The reading of the Barometer was nearly half an inch in excess of the average in the month of January, and was much higher than any mean reading during the last 17 years. In February it was slightly above the average, and in March a little in defect.

The fall of rain in January and March was deficient, and in February in excess of the average, and was nearly half an inch in defect upon the quarter.

There was almost a total absence of thunder or lightning during the quarter; one storm only was noticed, on the 5th of March at North Shields; and either thunder was heard or lightning seen on March 24th, 30th, and 31st at Liverpool, Hastings, Wakefield, and Oxford.

The mean temperature of the air at Greenwich for the quarter ending February, constituting the three winter months, was $39^{\circ} \cdot 0$, being $1^{\circ} \cdot 3$ above the average of 87 years.

1858. MONTHS.		Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
		Air.		Evaporation.		Dew Point.		Air— Daily Range.		Water of the Thames.					
		Mean.	Diff. from ave- rage of 17 years.	Diff. from ave- rage of 17 years.	Mean.	Diff. from ave- rage of 17 years.	Mean.	Diff. from ave- rage of 17 years.	Mean.		Diff. from ave- rage of 17 years.				
Jan. . .	37.5	0	+1.6	35.9	-1.2	33.8	-1.6	0	+2.7	0	in.	in.	grs.	gr.	
Feb. . .	34.6	-3.7	-3.9	33.0	-4.0	30.4	-4.3	12.1	+0.9	39.5	.194	-.011	2.2	-0.4	
Mar. . .	41.4	+0.5	-0.2	38.4	-0.8	34.6	-1.7	12.0	+0.9	38.5	.169	-.034	2.0	-0.2	
Mean .	37.8	-0.5	-1.6	35.8	-2.0	32.9	-2.5	13.7	+2.0	39.0	.188	-.020	2.2	-0.2	

1858. MONTHS.		Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horiz- ontal move- ment of the Air.	Reading of Thermometer on Grass.				
		Mean.	Diff. from ave- rage of 17 years.	Mean.	Diff. from ave- rage of 17 years.	Mean.	Diff. from ave- rage of 17 years.	Amount.	Diff. from ave- rage of 40 years.		Number of Nights it was		Low- est Read- ing at Night.	High- est Read- ing at Night.	
											At or below 30°	Be- tween 30° and 40°			Above 40°
Jan. . .	86	-3	in.	in.	grs.	grs.	in.	in.	Miles.				0	0	
Feb. . .	84	-2	29.171	+4.49	563	+10	0.7	-0.6	119	25	4	2	10.2	44.9	
Mar. . .	78	-4	29.841	+0.63	560	+7	1.7	+0.4	83	24	4	0	12.2	39.2	
			29.763	-0.67	551	0	0.9	-0.2	87	19	9	3	15.0	45.2	
Mean .	83	-3	29.926	+1.38	558	+6	Sum 3.3	Sum -0.4	Mean 96	Sum 68	Sum 17	Sum 5	Lowest 10.2	Highest 45.2	

NOTE.—In reading this table it will be borne in mind that the sign (-) minus signifies below the average, and that the sign (+) plus signifies above the average.

Hail fell on the 11th of January at Allenheads; on the 20th at Hawarden, Manchester, Stonyhurst, and Scarborough; and on the 31st at Liverpool and Stonyhurst. On the 1st of February at Hawarden, Liverpool, and the Isle of Man; on the 6th at Gloucester and Liverpool; on the 12th at Rose Hill; on the 14th at Lampeter; on the 15th and 16th at Scarborough; on the 23d at Little Bridy; on the 27th at the Isle of Man; and on the 28th at Holkham, Hawarden, and Scarborough. On the 1st of March at Guernsey and Hartwell Rectory; on the 4th at Guernsey; on the 5th at Guernsey and Berkhamstead; on the 6th at Guernsey, Helston, Little Bridy, Clifton, Rose Hill, Belvoir, and Hawarden; on the 7th at Clifton, Whitehall, Lampeter, and Stonyhurst; on the 8th at Greenwich, Hartwell Rectory, and Lampeter; on the 9th at Berkhamstead, Hartwell Rectory, Lampeter, Hawarden, and Stonyhurst; on the 10th at Barnstaple, Hartwell Rectory, and Lampeter; on the 11th at Lampeter; on the 12th at Little Bridy and Hawarden; on the 13th at Little Bridy; and on the 14th at Whitehall.

Fog was generally prevalent on the 1st of January at Lewisham, Paddington, Bicester, Berkhamstead, Norwich, Wakefield, York, and Allenheads; on the 2d at Teignmouth, Exeter, Lewisham, Greenwich, Oxford, Bicester, Berkhamstead, Gloucester, Hereford, Norwich, Nottingham, Leeds, and York; on the 3d at Wakefield, York, and North Shields; on the 5th at Wakefield; on the 6th and 7th at Exeter; on the 8th at Fairlight, Little Bridy, Wakefield, and Allenheads; on the 9th at Greenwich; on the 10th at Little Bridy; on the 11th at Oxford; on the 13th at Little Bridy, Lewisham, Greenwich, Oxford, Bicester, and Hereford; on the 14th at Clifton, Oxford, and Allenheads; on the 15th at Ryde, Clifton, Lewisham, Greenwich, Bicester, Hereford, and Allenheads; on the 16th at Allenheads; on the 17th at Greenwich, Wakefield, and Allenheads; on the 19th at Little Bridy; on the 23d at Clifton, Greenwich, and Oxford; on the 24th at Exeter, Clifton, Greenwich, Oxford, Nottingham, and Wakefield; on the 25th at Greenwich; on the 26th at Wakefield; on the 27th at Little Bridy and Oxford; on the 28th at Paddington, Hereford, and on the 30th at Little Bridy and Allenheads. On the 2d, 3d, and 4th of February at Little Bridy and Whitehall; on the 5th at Fairlight; on the 6th at Little Bridy; on the 7th at Little Bridy and Bedford; on the 9th and 10th at Whitehall; on the 11th at Whitehall, Paddington, Berkhamstead, and Liverpool; on the 12th at Teignmouth, Exeter, Fairlight, Little Bridy, Lewisham, Whitehall, Berkhamstead, Hartwell Rectory, Royston, Hereford, Liverpool, Wakefield, and North Shields; on the 13th at Teignmouth, Exeter, Fairlight, Little Bridy, Clifton, Lewisham, Greenwich, Bicester, Berkhamstead, Hartwell Rectory, Royston, Cardington, and Hereford; on the 14th at Fairlight, Little Bridy, and Whitehall; on the 15th at Whitehall; on the 16th at Whitehall, Bicester, Liverpool, and Manchester; on the 17th at Clifton, Whitehall, Bicester, Gloucester, Hereford, Hawarden, Liverpool, Manchester, and North Shields; on the 18th at Whitehall; on the 21st at Little Bridy and Hereford; on the 22d at Wakefield; on the 23d at Teignmouth, Exeter, Little Bridy, Whitehall, and Cardington; and on the 24th at Little Bridy. On the 1st, 2d, and 4th of March at Whitehall; on the 5th at Fairlight and Whitehall; on the 6th and 7th at Whitehall; on the 8th at Greenwich; on the 10th at Whitehall; on the 11th at Clifton, Whitehall, and Wakefield; on the 12th at Lewisham and Whitehall; on the 13th at Fairlight, Little Bridy, and Whitehall; on the 14th at Fairlight; on the 15th at Whitehall; on the 17th at Whitehall and Wakefield; on the 18th at Whitehall; on the 19th at Teignmouth, Little Bridy, Clifton, Whitehall, and Stonyhurst; on the 20th at Whitehall and Wakefield; on the 21st at Clifton, Greenwich, Whitehall, Rose Hill, and Wakefield; on the 22d at Rose Hill, Oxford, and Wakefield; on the 23d at Clifton, Greenwich, Rose Hill, and Bicester; on the 24th at Greenwich and Bicester; on the 27th at Whitehall; on the 28th at Little Bridy; on the 29th at Clifton; and on the 30th and 31st at Little Bridy.

Snow fell on the 5th of January at Fairlight, Little Bridy, Clifton, Lewisham, Greenwich, and Berkhamstead; on the 6th at Fairlight, Clifton, Lampeter, Hawarden, Liverpool, Wakefield, and Bywell; on the 7th at Hawarden, Stonyhurst, York, Scarborough, North Shields, and Allenheads; on the 16th at Allenheads; on the 20th at Norwich, Scarborough, and Allenheads; on the 21st at Fairlight, Greenwich, Royston, Hereford, Grantham, and North Shields; on the 22d at Royston and Allenheads; on the 29th at Fairlight and Hereford; and on the 31st at Berkhamstead, Bedford, Hawarden, Wakefield, North Shields, and Allenheads. On the 1st of February at Teignmouth, Osborne, Little Bridy, Clifton, St. John's Wood, Rose Hill, Oxford, Berkhamstead, Hartwell Rectory, Hereford, Lampeter, Bedford, and Nottingham; on the 2d at Osborne, Fairlight, Little Bridy, Clifton, Lewisham, Greenwich, St. John's Wood, Whitehall, Paddington, Rose Hill, Oxford, Berkhamstead, Hartwell Rectory, Gloucester, Royston, Cardington, Hereford, Lampeter, Bedford, Nottingham, and Hawarden; on the 3d at Berkhamstead and Bedford; on the 9th at Hereford; on the 10th at Bicester, Grantham, Belvoir, and Nottingham; on the 11th at Little Bridy and Nottingham; on the 13th at Rose Hill; on the 14th at Exeter, Little Bridy, Clifton, Rose Hill, Bicester, Berkhamstead, Hartwell Rectory, Gloucester, Royston, Cardington, and Lampeter; on the 15th at Helston, Teignmouth, Little Bridy, Clifton, and Berkhamstead; on the 16th at Berkhamstead; on the 18th at Grantham; on the 21st at Hereford and Hawarden; on the 22d at Oxford; on the 23d at Little Bridy, Clifton, Greenwich, St. John's Wood, Oxford, Bicester, Berkhamstead, Hartwell Rectory, Royston, Cardington, Bedford, Grantham, Belvoir, Nottingham, Hawarden, Liverpool, Manchester, Wakefield, Leeds, York, Scarborough, and North Shields; on the 27th at Helston, Teignmouth, Exeter, Osborne, Little Bridy, Oxford, and Wakefield; and on the 28th at Helston, Berkhamstead, Royston; Cardington, Bedford, Grantham, Belvoir, Nottingham, Manchester, Wakefield, Stonyhurst, and North Shields. From the 1st to the 7th of March snow fell over the country generally; on the 8th at Teignmouth, Exeter, Fairlight, Little Bridy, Clifton, Lewisham, Greenwich, Guildhall, Whitehall, Paddington, Oxford, Bicester, Berkhamstead, Hartwell Rectory, Hereford, Lampeter, Nottingham, Hawarden, Liverpool, Manchester, Wakefield, and York; on the 9th at Teignmouth, Exeter, Fairlight, Little Bridy, Clifton, Lewisham, Greenwich, Guildhall, Whitehall, Paddington, Oxford, Bicester, Berkhamstead, Hartwell Rectory, Hereford, Grantham, Belvoir, Nottingham, Hawarden, Liverpool, Manchester, and Stonyhurst; on the 10th at Guernsey, Rose Hill, Exeter, Fairlight, Little Bridy, Barnstaple, Clifton, Lewisham, Greenwich, Whitehall, Hereford, Bedford, Bicester, Berkhamstead, Hartwell Rectory, Gloucester, Royston, Cardington, and Belvoir; and on the 12th at Truro, Exeter, Barnstaple, Hereford, Grantham, and Stonyhurst.

Solar Halos were seen on 3 days in January; 9 days in February; and 5 days in March.

Aurora was seen on 19 different occasions during the quarter. On the 11th at Fairlight; and on the 14th at Royston. On the 2d of February at Stonyhurst; and on the 11th at Fairlight; and on the 14th at Royston. On the 3d of March at Nottingham; on the 12th at York; on the 13th at Little Bridy, Clifton, Rose Hill, Berkhamstead, Royston, Cardington, Grantham, Belvoir, Nottingham, Hawarden, Stonyhurst, York, and North Shields; on the 14th at Little Bridy, Clifton, Rose Hill, Berkhamstead, Cardington, Belvoir, Hawarden, Stonyhurst, and North Shields; and on the 15th at Little Bridy, Clifton, Hawarden, and North Shields; on the 17th at Clifton; and on the 25th at North Shields.

NAMES OF STATIONS.	Mean Pressure of dry Air reduced to the level of the Sea.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Range of Temperature in the Quarter.	Mean of all Highest.	Mean of all Lowest.	Mean Monthly Range of Temperature.	Mean Daily Range of Temperature.	Mean Temperature of the Air.	Mean Temperature of the Dew Point.	Mean Elastic Force of Vapour.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required for saturation.	Mean degree of Humidity.	Mean Weight of a cubic foot of Air.	Mean Reading of Maximum in rays of Sun.	Mean Reading of Minimum on Grass.	WIND.				Mean Amount of Ozone.	Mean Amount of Cloud.	Number of Days on which it fell.	Rain.
																		Relative Proportion of							
																		N. E. S. W.							
																		Mean estimated Strength.							
Guernsey	29.791	61.5	27.5	34.0	46.7	38.8	25.8	7.9	45.9	36.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Helston	29.843	65.0	29.0	36.0	51.6	40.5	25.8	11.1	45.5	41.8	266	27.4	0.4	79	552	—	—	—	—	—	—	—	—	—	
Truro	29.824	68.0	24.0	44.0	49.5	37.5	24.0	12.0	43.2	38.0	220	26.6	0.6	550	—	—	—	—	—	—	—	—	—	—	
Torquay	29.877	59.0	25.0	34.0	40.3	38.3	37.3	8.0	49.7	37.6	226	26.0	0.5	83	—	—	—	—	—	—	—	—	—	—	
Teignmouth	29.877	58.1	23.8	34.3	46.5	35.9	30.1	10.6	41.6	37.0	221	26.6	0.5	85	—	—	—	—	—	—	—	—	—	—	
Exeter	29.930	68.7	19.8	48.9	47.9	35.1	13.6	12.8	41.4	37.7	222	26.6	0.5	555	—	—	—	—	—	—	—	—	—	—	
Ventnor	29.926	64.0	26.0	38.0	47.2	37.9	29.3	9.3	42.5	37.6	226	26.6	0.5	85	—	—	—	—	—	—	—	—	—	—	
Ryde	29.953	72.0	20.0	52.0	48.5	33.9	18.6	14.6	41.0	36.0	221	26.6	0.6	81	553	—	—	—	—	—	—	—	—	—	
Osborne	29.903	68.8	24.1	44.7	45.8	33.6	12.2	9.9	39.7	34.7	222	26.6	0.5	555	—	—	—	—	—	—	—	—	—	—	
Worthing	29.882	59.6	25.0	44.0	46.3	35.9	10.6	6.4	41.4	37.7	221	26.6	0.5	85	—	—	—	—	—	—	—	—	—	—	
Fairlight	29.882	59.6	25.0	44.0	46.3	35.9	10.6	6.4	41.4	37.7	221	26.6	0.5	85	—	—	—	—	—	—	—	—	—	—	
Little Bridy	29.880	73.1	17.2	35.5	45.9	31.7	13.7	9.9	39.7	34.7	214	26.4	0.2	85	—	—	—	—	—	—	—	—	—	—	
Barnstaple	29.823	69.0	23.0	46.0	47.9	35.5	11.6	7.1	41.0	36.0	203	26.4	0.5	552	—	—	—	—	—	—	—	—	—	—	
Clifton	29.808	66.3	20.9	45.4	44.2	32.6	13.0	8.7	37.8	32.9	202	26.4	0.5	84	558	—	—	—	—	—	—	—	—	—	
Lewisham	29.808	66.3	20.9	45.4	44.2	32.6	13.0	8.7	37.8	32.9	202	26.4	0.5	84	558	—	—	—	—	—	—	—	—	—	
Royal Observatory	29.816	68.7	20.9	47.8	45.4	31.7	13.7	9.9	39.7	34.7	136	26.2	0.5	84	559	—	—	—	—	—	—	—	—	—	
St. Thomas's Hospital	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
St. John's Wood	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Griffiths	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Whitehall	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Battersea	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Paddington	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Enfield	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Rose Hill	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Oxford	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Bicester	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Berkhamstead	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Hartwell House	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Hartwell Rectory	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Royston	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Gloucester	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Cardington	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Redford	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Hereford	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Lampeter	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Norwich	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Grantham	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Belvoir	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Derby	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Holkham	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Nottingham	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Hawarden	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Liverpool	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Manchester	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Wakefield	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Stonyhurst	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
York	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Scarborough	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
Isle of Man	29.822	62.4	25.2	46.2	44.4	33.4	12.5	9.1	38.7	32.6	188	26.2	0.6	85	—	—	—	—	—	—	—	—	—	—	
North Shields	29.818	64.5	18.0	46.0	47.3	31.9	13.7	9.9	39.7	34.7	141	26.0	0.8	558	—	—	—	—	—	—	—	—	—	—	
Bywell	29.818	64.5	18.0	46.0	47.3	31.9	13.7	9.9	39.7	34.7	141	26.0	0.8	558	—	—	—	—	—	—	—	—	—	—	
Allenheads	29.810	58.2	13.5	44.0	47.1	28.9	13.3	11.2	34.3	33.1	170	25.0	0.6	558	—	—	—	—	—	—	—	—	—	—	

Year 1858.	Month.	Names of Stations and Observers.	Pressure of Air in Month.			Temperature of Air in Month.			Mean Temperature.		Vapour.		Mean Reading of Thermometer.		Wind.			Rain.		
			Mean.	Range.	Highest.	Lowest.	Range.	Mean.	Air.	Dew Point.	Elastic Force.	In a cubic foot of Air.	Short of Saturation.	Mean Weight of a Cubic Foot of Air.	Maximum in Days of Sun.	Minimum on Grass.	Relative Proportion of			
																	Estimated.		W.	W.
Jan.	30	ST. THOMAS'S HOSPITAL, DR. R. D. THOMSON, F.R.S.L. & E.	30.396	30.16	30.3	29.2	29.1	44.0	35.0	30.7	34.6	.201	.23	67.5	52.2	56.2	5	17	1.7	
Feb.	29	ST. JOHN'S WOOD (Literary Insti- tution), Mr. JOHN CARTER, Librarian.	29.972	29.10	29.7	28.2	28.7	41.5	33.4	28.6	31.2	.176	.20	65.0	50.0	54.0	9	8	0.7	
Mar.	31	GUILDHALL (City of London), WILLIAM HAWOOD, Esq., C.E.	31.000	30.76	30.9	29.8	30.3	42.9	33.9	30.7	35.7	.189	.23	65.0	50.0	54.0	9	8	0.7	
Jan.	30	WHITEHALL, J. C. HAILE, Esq., Sur- veyor and Draughtsman by De- sire of the President of the Board of Health.	30.882	30.16	30.3	29.2	29.7	41.5	33.4	28.6	31.2	.176	.20	65.0	50.0	54.0	9	8	0.7	
Feb.	29	BATTERSEA TRAINING SCHOOL, REV. SAMUEL CLARK, M.A., M.B.M.S.	29.972	29.10	29.7	28.2	28.7	41.5	33.4	28.6	31.2	.176	.20	65.0	50.0	54.0	9	8	0.7	
Mar.	31	ST. MARY'S HOSPITAL (Paddington), DENARD FITZPATRICK, Esq., L.S.A., &c.	31.000	30.76	30.9	29.8	30.3	42.9	33.9	30.7	35.7	.189	.23	65.0	50.0	54.0	9	8	0.7	
Jan.	30	ROSE HILL (near Oxford), REV. JOHN SKEWER, M.A., F.R.A.S.	30.882	30.16	30.3	29.2	29.7	41.5	33.4	28.6	31.2	.176	.20	65.0	50.0	54.0	9	8	0.7	
Feb.	29	OXFORD OBSERVATORY, MANUAL J. JOHNSON, Esq., M.A., VICE PRESIDENT R.A.S.	29.972	29.10	29.7	28.2	28.7	41.5	33.4	28.6	31.2	.176	.20	65.0	50.0	54.0	9	8	0.7	
Mar.	31	WILLIAM JOHNSON, Esq., F.R.A.S., M.B.M.S.	31.000	30.76	30.9	29.8	30.3	42.9	33.9	30.7	35.7	.189	.23	65.0	50.0	54.0	9	8	0.7	
Jan.	30	GREAT BERKHAMSTEAD, WILLIAM SQUIRE, Esq., M.B.M.S.	30.882	30.16	30.3	29.2	29.7	41.5	33.4	28.6	31.2	.176	.20	65.0	50.0	54.0	9	8	0.7	
Feb.	29	HARTWELL HOUSE, Mr. HARTWELL, Esq., M.B.M.S.	29.972	29.10	29.7	28.2	28.7	41.5	33.4	28.6	31.2	.176	.20	65.0	50.0	54.0	9	8	0.7	
Mar.	31	HARTWELL RECTORY, F.R.S., V.P. B.M.S., REV. CHARLES LOWNDEN, M.A., F.R.A.S.	31.000	30.76	30.9	29.8	30.3	42.9	33.9	30.7	35.7	.189	.23	65.0	50.0	54.0	9	8	0.7	
Jan.	30	ROYSTON (Hertfordshire), M.B.M.S.	30.882	30.16	30.3	29.2	29.7	41.5	33.4	28.6	31.2	.176	.20	65.0	50.0	54.0	9	8	0.7	
Feb.	29	GLoucester, W.W. WILLIAMS, Esq., M.D., CARDINGTON (near Bedford), J. W. WILLIAMS, Esq., M.B.M.S.	29.972	29.10	29.7	28.2	28.7	41.5	33.4	28.6	31.2	.176	.20	65.0	50.0	54.0	9	8	0.7	
Mar.	31	BEDEFORD, F.R.S., V.P. B.M.S., THOMAS HERBERT BAKER, Esq., M.D., F.R.S., M.B.M.S.	31.000	30.76	30.9	29.8	30.3	42.9	33.9	30.7	35.7	.189	.23	65.0	50.0	54.0	9	8	0.7	
Jan.	30	HEREFORD INFIRMARY, J. E. SMITH, Esq.	30.882	30.16	30.3	29.2	29.7	41.5	33.4	28.6	31.2	.176	.20	65.0	50.0	54.0	9	8	0.7	
Feb.	29	LAMPETER (Shropshire), M.B.M.S.	29.972	29.10	29.7	28.2	28.7	41.5	33.4	28.6	31.2	.176	.20	65.0	50.0	54.0	9	8	0.7	
Mar.	31	LAMPETER (Shropshire), M.B.M.S.	31.000	30.76	30.9	29.8	30.3	42.9	33.9	30.7	35.7	.189	.23	65.0	50.0	54.0	9	8	0.7	

Year 1858.		Month.	Names of Stations and Observers.	Pressure of Air in Month.			Temperature of Air in Month.			Mean Temperature.		Vapour.		Mean Reading of Thermometer.		Wind.			Rain.
Mean.	Range.			Highest.	Lowest.	Range.	Mean.	Air.	Dew Point.	In a cubic foot of Air.	Short Saturation.	Maximum in Month.	Minimum in Month.	Direction.	Relative Proportion of Cloud.	Amount of Days.			
Jan.	30	ST. THOMAS'S HOSPITAL, Dr. R. D. THOMSON, F.R.S.L. & E.	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
Feb.	29	ST. JOHN'S WOOD (Literary Institution), Mr. JOHN CARTER, Librarian.	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00
Mar.	31	GUILDHALL (City of London), WILLIAM HAWOOD, Esq., C.E.	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00
Jan.	31	WHITEHALL, J. C. HAILE, Esq., Surgeon and Draughtsman, by Desire of the President of the Board of Health.	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00
Feb.	29	BATTERSEA TRAINING SCHOOL, REV. SAMUEL CLARK, M.A., M.B.M.S.	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00
Mar.	31	ST. MARY'S HOSPITAL (Paddington), DENARD FITZPATRICK, Esq.	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00
Jan.	31	EXETER, &c.	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00
Feb.	29	REV. JOHN HEATH, M.A., F.R.A.S.	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00
Mar.	31	ROSE HILL (near Oxford), REV. JOHN SKEWER, M.A., F.R.A.S.	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00
Jan.	31	OXFORD OBSERVATORY, M.B.M.S.	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00
Feb.	29	REV. JOHN SKEWER, M.A., F.R.A.S.	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00
Mar.	31	BICESTER, M.B.M.S.	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00
Jan.	31	WILLIAM JOHNSON, Esq., F.R.A.S.	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00
Feb.	29	GREAT BERKHAMSTEAD, WILLIAM SQUIRE, Esq., M.B.M.S.	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00
Mar.	31	HARTWELL HOUSE, Mr. HARTWELL, Esq., M.B.M.S.	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00
Jan.	31	HARTWELL RECTORY, F.R.S., V.P. R.A.S., V.P. B.M.S.	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00
Feb.	29	REV. CHARLES LOWNDEN, M.A., F.R.A.S.	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00
Mar.	31	ROYSTON (Hertfordshire), M.B.M.S.	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00
Jan.	31	GLoucester, M.B.M.S.	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00
Feb.	29	W.W. WILLIAMS, Esq., M.D., CARDINGTON (near Bedford), J. W. WILLIAMS, Esq., M.B.M.S.	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00
Mar.	31	BEDEFORD, F.R.S., V.P. B.M.S.	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00

Barometer readings changed.

At Worthing.

On the 10th at 9h, A.M. from 30.05 in. to 30.11 in.; and on the 21st at 9h, A.M. from 30.05 in. to 30.11 in.; and on the 22nd at 9h, A.M. from 30.05 in. to 30.11 in.; and on the 23rd at 9h, A.M. from 30.05 in. to 30.11 in.; and on the 24th at 9h, A.M. from 30.05 in. to 30.11 in.; and on the 25th at 9h, A.M. from 30.05 in. to 30.11 in.; and on the 26th at 9h, A.M. from 30.05 in. to 30.11 in.; and on the 27th at 9h, A.M. from 30.05 in. to 30.11 in.; and on the 28th at 9h, A.M. from 30.05 in. to 30.11 in.; and on the 29th at 9h, A.M. from 30.05 in. to 30.11 in.; and on the 30th at 9h, A.M. from 30.05 in. to 30.11 in.; and on the 31st at 9h, A.M. from 30.05 in. to 30.11 in.

ON THE
METEOROLOGY OF ENGLAND,

DURING THE

Quarter ending June 30, 1858.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

LONDON:

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FOR HER MAJESTY'S STATIONERY OFFICE.

1858.



Remarks on the weather, during the Quarter ending June 30th, 1858. By JAMES GLAISHER, ESQ., F.R.S., &c., Sec. of the British Meteorological Society.

April.—Till the 14th the air was cold, being $4^{\circ} \cdot 2$ below the average; from the 15th to the 26th it was warm, the average excess being $5^{\circ} \cdot 9$; and it was then cold again to the end of the month, being $1^{\circ} \cdot 6$ below the average. The mean high day temperature was $57^{\circ} \cdot 6$, exceeding the average by $0^{\circ} \cdot 6$; and the low night temperature was $38^{\circ} \cdot 0$, being $0^{\circ} \cdot 9$ deficient from the average. The mean temperature of the month was nearly of its average value.

May was cold till the 15th, being $4^{\circ} \cdot 1$ deficient from the average; it then became warm until the 24th, averaging $1^{\circ} \cdot 2$ in excess; from the 25th to the 28th it was again cold, being $2^{\circ} \cdot 4$ below the average; and then till the end of the month it was hot, the average excess being $7^{\circ} \cdot 6$. The mean high day temperature was $63^{\circ} \cdot 7$, being $0^{\circ} \cdot 7$ below the average; and the low night temperature was $42^{\circ} \cdot 8$, being $1^{\circ} \cdot 4$ deficient from the average value. The mean temperature of this month was about 1° lower than the average.

June was hot throughout, the average excess being $6^{\circ} \cdot 0$. The mean high day temperature of this month was $79^{\circ} \cdot 5$, being $8^{\circ} \cdot 6$ above the average; and the mean low night temperature was $53^{\circ} \cdot 9$, being 4° above the average. The mean temperature of this month has been but once exceeded since the year 1771, a period of 87 years; viz., in the year 1846, when it was $65^{\circ} \cdot 3$.

On the 16th of June the temperature near the sea rose as high as 88° , and between the latitudes 51° and 52° reached the point 95° . The mean temperature of this day at Greenwich was $76^{\circ} \cdot 9$, and there is no previous instance of so high a mean temperature in the month of June.

The mean temperature of the dew-point was below its average in April and May, and 3° above its average in June. This latter month was less humid than usual, the excess of air temperature over the average being greater than that of dew-point temperature.

The mean reading of the Barometer was in defect in May, and above the average in April and June; the mean reading for the latter month being the highest during the last 17 years.

The fall of rain was in excess in the months of April and May, and in defect in June; but was about the average value for the quarter.

Thunderstorms were very prevalent in June, and some were particularly violent. Mr. Eaton of Little Bridy reports a storm of unparalleled violence having occurred on the 10th in the north-west parts of Dorsetshire. The lightning and thunder, he says, were more terrific than any that had occurred since July 1808. The Rev. John Slatter of Rose Hill writes, June 16th, A most furious storm at this place at 9.45 A.M. from the W. and N.W. A violent hurricane preceded it, and the rain was slow to come, and not remarkable (about half an inch); but the lightning flashed 14 times in about 30 seconds, and the thunder was incessant. I never witnessed such elemental fury. No damage was done here beyond striking a fine elm tree, but elsewhere it was very mischievous.

The mean temperature of the air at Greenwich for the quarter ending May, constituting the three spring months, was $46^{\circ} \cdot 4$, being exactly of the average value.

1858. MONTHS.	Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
	Air.			Evaporation.		Dew Point.		Air—Daily Range.*		Water of the Thames.			Mean.	Diff. from average of 17 years.
	Mean.		Diff. from average of 17 years.	Mean.	Diff. from average of 17 years.	Mean.	Diff. from average of 17 years.	Mean.	Diff. from average of 17 years.		Mean.	Diff. from average of 17 years.		
	Mean.	Diff. from average of 17 years.	Mean.	Diff. from average of 17 years.	Mean.	Diff. from average of 17 years.	Mean.	Diff. from average of 17 years.	Mean.		Mean.	Diff. from average of 17 years.		
April ..	46.2	+0.5	0	42.7	-0.8	38.7	-1.4	19.6	+1.5	49.6	.236	-.014	2.7	-0.3
May ..	51.7	-0.8	0	47.7	-1.4	43.6	-1.9	21.0	+0.6	55.3	.285	-.015	3.2	-0.3
June ..	61.9	+6.9	+0.2	58.8	+4.2	53.7	+3.1	25.6	+5.2	67.3	.414	+.045	4.6	+0.9
Mean ..	54.3	+2.2	+1.6	49.7	+0.7	45.3	0.0	22.0	+2.4	57.4	.311	+.005	3.5	-0.0

1858. MONTHS.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal movement of the Air.		Reading of Thermometer on Grass.			
	Mean.		Mean.		Mean.		Amount.		Miles.		At or below 30°		Lowest Reading at Night.	
	Mean.		Mean.		Mean.		Amount.		Miles.		At or below 30°		Lowest Reading at Night.	
	Mean.	Diff. from average of 17 years.	Mean.	Diff. from average of 17 years.	Mean.	Diff. from average of 17 years.	Mean.	Diff. from average of 17 years.	Mean.	Diff. from average of 17 years.	Mean.	Diff. from average of 17 years.	Mean.	Diff. from average of 17 years.
April ..	76	-3	29.779	+0.043	546	+2	2.4	+0.6	73	18	10	2	18.0	40.2
May ..	75	-1	29.709	-.055	538	0	1.8	+0.3	96	19	7	14	23.8	35.9
June ..	67	-7	29.915	+1.17	527	-4	1.2	-0.7	34	0	2	28	35.0	35.0
Mean ..	73	-4	29.801	+0.035	537	-1	Sum 5.4	Sum +0.1	Mean 68	Sum 28	Sum 19	Sum 44	Lowest 18.0	Highest 40.2

NOTE.—In reading this table it will be borne in mind that the sign (-) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunderstorms occurred or thunder was heard and lightning seen on the 3d of April at Berkhamstead, Holkham, and York; on the 16th at Osborne, Fairlight, Lewisham, Greenwich, St. John's Wood, Battersea, Whitehall, Camden Town, Paddington, Rose Hill, Oxford, Hartwell House, Hartwell Rectory, Gloucester, Cardington, Hereford, Bedford, and Holkham; on the 17th at Bicester, Berkhamstead, and Cardington; on the 20th at Bicester; on the 23d at Helston; on the 24th at Leeds and York; on the 28th at Little Bridy, Manchester, and Wakefield; and on the 30th at Rose Hill, Bicester, Hartwell House, Bedford, Scarborough, North Shields, and Allenheads. On the 2d of May at Berkhamstead and Hartwell House; on the 10th at Clifton; on the 11th at Teign-

month, Exeter, and Little Bridy; on the 12th at Teignmouth; on the 13th at Teignmouth, Oxford, Berkhamstead, Hartwell House, Hartwell Rectory, Gloucester, Cardington, and Hereford; on the 14th at Stonyhurst and North Shields; on the 15th at Hawarden, Stonyhurst, and York; on the 16th at Camden Town, Gloucester, Cardington, Bedford, and Holkham; on the 17th at Manchester and North Shields; on the 19th at Hartwell House and Hartwell Rectory; on the 21st at North Shields, Bywell, and Allenheads; on the 22d at Gloucester, Stonyhurst, and York; on the 23d at Gloucester, Grantham, Belvoir, Holkham, Nottingham, and York; on the 24th at Whitehall; and on the 25th at Bedford and Nottingham. On the 2d of June at Fairlight, Battersea, Paddington, Oxford, Belvoir, and Nottingham; on the 3d at Clifton, Rose Hill, Hartwell House, Hartwell Rectory, Gloucester, Hereford, Bedford, Holkham, Nottingham, Manchester, Wakefield, York, Scarborough, North Shields, Bywell, and Allenheads; on the 4th at Guernsey and Paddington; on the 5th at Fairlight, Lewisham, Greenwich, St. John's Wood, Whitehall, Camden Town, Berkhamstead, Hartwell Rectory, Royston, Cardington, Bedford, and Holkham; on the 7th at Guernsey, Teignmouth, Little Bridy, Paddington, and Lampeter; on the 8th at Guernsey, Teignmouth, Exeter, Osborne, Fairlight, Little Bridy, Barnstaple, Clifton, Greenwich, St. John's Wood, Battersea, Whitehall, Rose Hill, Oxford, Berkhamstead, and Lampeter; on the 9th at Exeter, Cardington, Bedford, Belvoir, Hawarden, Wakefield, and York; on the 10th at Teignmouth, Little Bridy, and Barnstaple; on the 11th at Exeter, Barnstaple, Paddington, Lampeter, and Manchester; on the 12th at Paddington, Royston, Hereford, Lampeter, Belvoir, Holkham, Nottingham, Hawarden, Liverpool, Manchester, and Allenheads; on the 13th at Guernsey, Osborne, Fairlight, and Wakefield; on the 15th at Teignmouth, Fairlight, Clifton, Hereford, Lampeter, Hawarden, Liverpool, Manchester, Wakefield, Stonyhurst, Silloth, Bywell, and Allenheads; on the 16th at Osborne, Fairlight, Clifton, Rose Hill, Oxford, Berkhamstead, Cardington, Hereford, Bedford, Hawarden, Liverpool, Stonyhurst, York, North Shields, Silloth, Bywell, and Allenheads; on the 17th at Royston, Bedford, Liverpool, Wakefield, Stonyhurst, York, Silloth, and Allenheads; and on the 18th at Manchester.

Thunder was heard but lightning was not seen. On the 3d of April at Lewisham, Greenwich, and Grantham; on the 13th at Helston; on the 16th at Rose Hill and Berkhamstead; on the 23d at Helston; on the 24th at Gloucester, Nottingham, Hawarden, and Liverpool; on the 25th at Hartwell Rectory; on the 28th at North Shields; on the 29th at Fairlight; and on the 30th at Hartwell Rectory, Cardington, Belvoir, Hawarden, and Bywell. On the 1st of May at Hawarden, Stonyhurst, and Silloth; on the 2d at Fairlight and Hartwell Rectory; on the 3d at Rose Hill and Hartwell Rectory; on the 4th at Oxford; on the 8th at Bywell; on the 10th at Barnstaple; on the 12th at Oxford, Hartwell Rectory, and Hawarden; on the 13th at Osborne, Little Bridy, Greenwich, Whitehall, Rose Hill, and Hereford; on the 14th at Bywell and Allenheads; on the 15th at Grantham; on the 16th at Grantham, Belvoir, Nottingham, Liverpool, North Shields, Bywell, and Allenheads; on the 18th at Cardington and Leeds; on the 19th at Lewisham, Greenwich, Berkhamstead, and Cardington; on the 21st at Stonyhurst; on the 23d at Camden Town, Berkhamstead, Hartwell Rectory and Lampeter; on the 25th at Cardington; on the 26th at Grantham and Belvoir; and on the 30th at Nottingham. On the 2d of June at Guernsey, Gloucester, Lampeter, and Allenheads; on the 3d at Little Bridy, Hereford, and Lampeter; on the 5th at Fairlight, Rose Hill, Hartwell House, and Royston; on the 6th at Guernsey and Hawarden; on the 7th at Fairlight; on the 8th at Belvoir, Hawarden, and Silloth; on the 9th at Hereford, Liverpool, Stonyhurst, North Shields, and Silloth; on the 11th at Hereford; on the 12th at Clifton, Rose Hill, Berkhamstead, Hartwell House, Hartwell Rectory, Cardington, Hereford, and Bywell; on the 13th at Berkhamstead and Hartwell House; on the 14th at Hartwell House; on the 15th at Exeter, Fairlight, Little Bridy, Barnstaple, Hartwell House, Royston, Lampeter, and North Shields; on the 16th at Little Bridy, Berkhamstead, Hartwell House, Hartwell Rectory, and Belvoir; on the 17th at Cardington, Holkham, North Shields, Bywell, and Allenheads; on the 18th at Liverpool; on the 19th at Belvoir; on the 23d at Silloth; on the 24th at Rose Hill; and on the 30th at Lewisham and Greenwich.

Hail fell on 9 days in April; on 15 in May; and on 7 in June. Lightning was seen but thunder was not heard. On the 5th, 14th, and 17th of April in the south of England; and on the 15th and 16th in the Midland Counties. On the 1st, 7th, 10th, and 31st of May in the south, and on the 17th, in the north of England. And from the 2d to the 17th of June generally throughout the country.

Fog was prevalent on 23 days in April; 16 days in May; and 16 days in June; at the different stations during the quarter.

Snow fell on the 1st of April at Fairlight, Little Bridy, Hawarden, Leeds, Stonyhurst, and Allenheads; on the 2d at Exeter, Fairlight, Clifton, Lewisham, Greenwich, Whitehall, Rose Hill, Oxford, Bicester, Berkhamstead, Hartwell Rectory, Gloucester, Royston, Cardington, Hereford, Lampeter, Belvoir, Nottingham, Hawarden, and Allenheads; on the 3d at Allenheads; on the 5th at Little Bridy, and Clifton; on the 6th at Fairlight; on the 7th at Grantham, Hawarden, Wakefield, Leeds, North Shields, Silloth, Bywell, and Allenheads; on the 8th at Battersea, Oxford, Grantham, Belvoir, Hawarden, Wakefield, Leeds, and Stonyhurst; on the 9th at Greenwich, Rose Hill, Bicester, and Hereford; on the 10th at Fairlight and Leeds; on the 11th at Grantham, Holkham, and Allenheads; on the 12th at Royston, Grantham, Bywell, and Allenheads; and on the 30th at Little Bridy, Grantham, Wakefield, and Allenheads. On the 1st and 2d of May at Allenheads.

Solar Halos were seen on 11 days in April; 18 in May; and on 11 in June, at different places. Lunar Halos were seen on 14 different occasions during the quarter.

Aurora was seen on the 1st of April at Rose Hill; on the 9th at Little Bridy, Cardington, Grantham, Nottingham, Hawarden, Liverpool, Manchester, Wakefield, Stonyhurst, York, North Shields, Silloth, and Allenheads; on the 10th at Clifton, Oxford, Hartwell House, Hartwell Rectory, Cardington, Grantham, Hawarden, Wakefield, North Shields, Silloth, and Allenheads; on the 11th at Clifton; on the 12th at Silloth; on the 24th at Fairlight; and on the 29th at Clifton. On the 6th of June at Oxford.

REYVOIR CASTLE. WILLIAM INGRAM, Esq., M.B.M.S.	April
DERBY.	May
JOHN DAVIS, Esq., M.B.M.S.	June
HOLKHAM.	June
S. SHELLEAR, Esq., M.B.M.S. As-	June
sistant to the EARL OF LEICESTER.	June
NOTTINGHAM.	June
E. J. LOWE, Esq., F.R.A.S., M.B.M.S.	June
HAWTHORN.	June
THOMAS MOPFAT, Esq., M.D.,	June
F.R.A.S., M.B.M.S.	June
LIVERPOOL OBSERVATORY.	June
JOHN HARRIS, Esq., F.R.A.S.	June
CHORLTON-UPON-MEDLOCK,	June
MANCHESTER.	June
MANCHESTER, Esq.	June
GEORGE VERNAN, Esq.,	June
F.R.A.S., M.B.M.S.	June
WAKEFIELD PRISON.	June
WILLIAM RAUPE MUSEL, Esq.,	June
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KEEDS PHILOSOPHICAL HALL,	June
HENRY DENBY, Esq., A.L.S.	June
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REV. ALBERT WELLS, M.A., F.R.A.S.,	June
M.B.M.S.	June
WORK.	June
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SCARBOROUGH.	June
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ISLE OF MAN,	June
JAMES BURMAN, Esq., F.R.A.S.	June
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under the direction of T. SOWTH,	June
Esq., F.R.S., M.B.M.S.	June
ALLENHEADS, THOMAS REWICK,	June
Esq., C.E., Assistant to T. SOW-	June
WITH, Esq., F.R.S., &c.	June

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ON THE
METEOROLOGY OF ENGLAND,

DURING THE

Quarter ending September 30, 1858.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

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1858.



Remarks on the weather, during the Quarter ending September 30th, 1858. By JAMES GLAISHER, ESQ., F.R.S., &c., Sec. of the British Meteorological Society.

Till July the air was cold, being $5^{\circ}7$ below the average temperature; it then became warm until the 25th, the mean excess above the average being $2^{\circ}5$; from the 25th to the end of the month the air was cold again, the average deficiency being $2^{\circ}5$. The mean high day temperature was $73^{\circ}8$, exceeding the average by $0^{\circ}2$; and the mean low night temperature was $51^{\circ}8$, being $1^{\circ}4$ below the average. The mean temperature of the month was about 1° below the average.

August was warm till the 24th, being 2° above the average temperature, then till the end of the month the air was cold, the average deficiency being $2^{\circ}4$. The mean high day temperature was $75^{\circ}6$, exceeding its average by $2^{\circ}9$; and the mean low night temperature was $52^{\circ}1$, being $1^{\circ}4$ below the average. The mean temperature of the month was $1\frac{1}{2}$ above the average of the preceding 87 years.

September was warm throughout, being 4° in excess of the average of 87 years. The mean high day temperature was $70^{\circ}9$, exceeding the average by $3^{\circ}4$; and the mean low night temperature was $52^{\circ}6$, exceeding the average by $3^{\circ}7$. The mean temperature of this month has been but four times exceeded during the last 87 years; viz., in the years 1779, 1795, 1815, and 1818, when the mean temperature was respectively, $60^{\circ}7$, $60^{\circ}8$, $62^{\circ}3$, and $60^{\circ}7$.

The mean temperature of the dew-point was below its average in July and August, and above in September. The mean degree of humidity was in defect in each month of the quarter, and the air, therefore, was somewhat less humid than usual in these months.

The mean reading of the Barometer was in defect in July and in excess of the average in August and September; and was slightly in excess for the quarter.

The fall of rain was a little above the average in July; one inch below in August; and $1\frac{1}{4}$ inches below in September; and for the quarter there was a deficiency of about half an inch. The fall of rain at Lewisham, since January 1, is $14\frac{3}{4}$ inches, and in the corresponding period of last year was somewhat less than $14\frac{1}{4}$ inches.

The mean temperature of the air at Greenwich for the quarter ending September, constituting the three summer months, was $62^{\circ}5$, being $2^{\circ}5$ above the average of 87 years.

Temperature of														Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
Air.			Evaporation.		Dew Point.		Air—Daily Range.			Water of the Thames.							
1858. MONTHS.	Mean.	Diff. from average of 67 years.	Diff. from average of 17 years.	Mean.	Diff. from average of 17 years.	Mean.	Diff. from average of 17 years.	Mean.	Diff. from average of 17 years.		Mean.	Diff. from average of 17 years.	Mean.	Diff. from average of 17 years.	Mean.	Diff. from average of 17 years.	
	°	°	°	°	°	°	°	°	°		°	°	in.	in.	grs.	gr.	
	July . .	60.6	-0.8	-1.1	55.7	-1.8	51.5	-2.4	22.0	+1.6	65.2	.380	-.037	4.3	-0.3		
	August .	62.0	+1.5	+0.6	56.5	-1.1	51.7	-2.6	23.5	+4.2	66.3	.385	-.041	4.3	-0.4		
Sept. . .	60.3	+4.0	+3.4	56.6	+2.7	53.4	+2.4	18.3	-0.3	62.1	.408	+.025	4.6	+0.4			
Mean .	61.0	+1.6	+1.0	56.3	-0.1	52.2	-0.9	21.3	+1.8	64.6	.391	+.018	4.4	-0.1			

1858. MONTHS.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal movement of the Air.	Reading of Thermometer on Grass.					
	Mean.	Diff. from average of 17 years.	Mean.	Diff. from average of 17 years.	Mean.	Diff. from average of 17 years.	Amount.	Diff. from average of 40 years.		Number of Nights it was				Lowest Reading at Night.	Highest Reading at Night.
										At or below 30°	Between 30° and 40°	Above 40°			
													°		
July . .	72	-4	29.781	-.015	529	grs.	in.	in.	Miles.	0	2	29	30.0	0	
August .	70	-8	29.826	+.029	529	+	1.6	2.9	+0.2	0	12	19	32.2	30.3	
Sept. . .	78	-3	29.865	+.027	531	-3	0.9	0.9	-1.2	101	0	6	24	33.8	
Mean .	73	-5	29.824	+.014	530	0	Sum	Sum	Mean	Sum	Sum	Sum	Lowest	Highest	
							1.6	-0.6	—	20	20	72	32.2	33.8	

NOTE.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunderstorms occurred or thunder was heard and lightning seen on the 6th of July at St. John's Wood and North Shields; on the 7th at Little Bridy, Lewisham, Camden Town, Berkhamstead, Hartwell Rectory, Royston, Grantham, and Belvoir; on the 8th at Lewisham, Paddington, Royston, Cardington, Hereford, Bedford, Norwich, Nottingham, and Stonyhurst; on the 14th at Little Bridy; on the 15th at Osborne, Fairlight, Little Bridy, Aldershot, Lewisham, Greenwich, Camden Town, Paddington, Rose Hill, Berkhamstead, Hartwell Rectory, Cardington, Bedford, Grantham, Belvoir, and Scarborough; on the 16th at Little Bridy, Lewisham, Greenwich, St. John's Wood, Camden Town, Berkhamstead, Hartwell House, Hartwell Rectory, Royston, Hereford, Norwich, Grantham, and Scarborough; on the 17th at Truro, St. John's Wood, and Hartwell House; on the 18th at Hereford, Grantham, Nottingham, Manchester, Chorlton-upon-Medlock, Stonyhurst, Scarborough, and North Shields; on the 19th at Wakefield; on the 24th at Chorlton-upon-Medlock, Stonyhurst, Isle of Man, North Shields, Silloth, Bywell, and Allenheads; and on the 25th at Grantham and Allenheads. On the 3d and 5th of August at Stonyhurst; on the 10th at Osborne and Hereford; on the 11th at Exeter, Clifton, Rose Hill, Gloucester, Hereford, Lampeter, Hawarden, and Silloth; on the 12th at Camden Town, Berkhamstead, Hartwell Rectory, Royston, Cardington, Hereford, Bedford, Norwich, Belvoir, Nottingham, Liverpool, Manchester, Chorlton-upon-Medlock, Wakefield, and Leeds; on the 13th at Scarborough; on the 14th at Little Bridy, Aldershot, Lewisham, Green-

wich, Berkhamstead, and Scarborough; on the 18th at Fairlight, Camden Town, Norwich, Holkham, Wakefield, and Scarborough; on the 19th at Little Bridy; on the 24th at Hartwell Rectory; and on the 25th at Fairlight. On the 5th of September at Lewisham, Hartwell House, Cardington, Bedford, Grantham, Stonyhurst, and Silloth; on the 16th at Exeter and Little Bridy; on the 17th at Aldershot, Lewisham, Camden Town, Rose Hill, Berkhamstead, Gloucester, Hereford, Nottingham, Liverpool, Scarborough, and North Shields; on the 18th at Royston, Grantham, and Scarborough; on the 21st at Helston and Truro; and on the 22d at Osborne, Aldershot, Clifton, Hereford, Norwich, Hawarden, Chorlton-upon-Medlock, and Stonyhurst.

Thunder was heard but lightning was not seen on the 5th of July at Aldershot; on the 6th at Bywell; on the 7th at Aldershot, Clifton, Greenwich, Hartwell House, Royston, Cardington, and Holkham; on the 8th at Greenwich, Royston, Holkham, Manchester, and Silloth; on the 9th at Silloth; on the 12th at Hawarden; on the 15th at Helston, Berkhamstead, and Bywell; on the 16th at Fairlight, Clifton, Lewisham, Cardington, Belvoir, Nottingham, Stonyhurst, and Bywell; on the 17th at Hereford; on the 18th at Fairlight, Gloucester, Belvoir, and Nottingham; on the 20th at Hartwell Rectory; and on the 23d at Holkham. On the 3d of August at North Shields; on the 10th at Little Bridy and Hartwell Rectory; on the 11th at Fairlight, Hartwell Rectory, and Royston; on the 12th at Fairlight, Aldershot, Greenwich, Whitehall, Rose Hill, Grantham, Holkham, Hawarden, Chorlton-upon-Medlock, Stonyhurst, and Silloth; on the 13th at Scarborough and Silloth; on the 14th at Teignmouth, Fairlight, Hartwell House, Hartwell Rectory, and Norwich; on the 17th at Berkhamstead and Hartwell Rectory; on the 18th at Bedford; on the 25th at Fairlight; on the 27th at Stonyhurst; on the 30th at Fairlight; and on the 31st at Grantham, Belvoir, and Holkham. On the 5th of September at Fairlight, Greenwich, Camden Town, Belvoir, and Nottingham; on the 7th at Belvoir; and on the 22d at Fairlight, Little Bridy, Camden Town, Berkhamstead, and Cardington.

Hail fell on the 1st of July at North Shields; on the 7th at Grantham; on the 18th at Nottingham; and on the 20th at Rose Hill. On the 25th of August at Fairlight and Berkhamstead; and on the 31st at Bedford. On the 5th of September at Bedford, Stonyhurst, and Silloth.

Lightning was seen but thunder was not heard. On the 7th of July at Greenwich; on the 13th at Guernsey; on the 15th at Little Bridy, Clifton, Lewisham, Gloucester, Royston, and Nottingham; on the 17th at Helston and Truro; on the 18th at Helston and Little Bridy; and on the 24th at Monchester. On the 10th of August at Greenwich, Hartwell Rectory, and Cardington; on the 11th at Osborne, Little Bridy, Lewisham, Greenwich, Berkhamstead, Cardington, Bedford, Liverpool, Manchester, and Silloth; on the 12th at Lewisham, Greenwich, Grantham, Chorlton-upon-Medlock, Stonyhurst, and North Shields; on the 13th at Little Bridy, Aldershot, Lewisham, Berkhamstead, and Silloth; on the 14th at Exeter and Little Bridy; on the 18th at Lewisham, Greenwich, Royston, Cardington, Grantham, and Belvoir; on the 19th at Manchester and North Shields; on the 30th at Lewisham, Greenwich, and Cardington; and on the 31st at Cardington. On the 5th of September at Fairlight, Little Bridy, Aldershot, Clifton, Lewisham, Greenwich, Camden Town, Berkhamstead, Royston, Hereford, Belvoir, and Nottingham; on the 9th at Lewisham; on the 12th at Aldershot; on the 16th at Guernsey, Helston, Truro, Osborne, Clifton, Berkhamstead, Gloucester, Norwich, Nottingham, and Stonyhurst; on the 17th at Osborne, Fairlight, Little Bridy, Clifton, Greenwich, Battersea, Royston, Cardington, Hereford, Grantham, and Holkham; on the 18th at Belvoir and Nottingham; on the 19th at Fairlight; on the 22d at Gloucester and Cardington; and on the 23d at Royston.

Fog was prevalent on the 8th, 9th, 12th, 13th, 14th, 16th, 17th, 22d, 23d, 24th, 28th, 29th, 30th, and 31st of July at different parts of the country. On the 1st of August at Aldershot; on the 2d at Little Bridy; on the 4th at Helston and Little Bridy; on the 7th at Whitehall; on the 8th at Aldershot; on the 9th at Hartwell House and Wakefield; on the 10th at North Shields; on the 11th at Guernsey and Little Bridy; on the 12th at Guernsey, Little Bridy, and Berkhamstead; on the 13th at Lewisham, Wakefield, and North Shields; on the 14th at Little Bridy, Berkhamstead, and Stonyhurst; on the 17th and 18th at Little Bridy and Berkhamstead; on the 19th at Little Bridy; on the 22d at Scarborough; on the 23d at Whitehall, Hereford, and Scarborough; on the 24th at Clifton, Berkhamstead, Hartwell House, Royston, Cardington, Hereford, Lampeter, Wakefield, and Stonyhurst; on the 26th at Lewisham; and on the 29th at Little Bridy. It was prevalent also on 21 days in September, but for the most part in the south of England.

Solar Halos were seen on the 1st and 11th of July at Little Bridy; on the 16th at Little Bridy and the Isle of Man; on the 17th, 19th, 20th, and 23d at Little Bridy; on the 28th at Grantham; on the 29th at Berkhamstead, Grantham, and Nottingham; and on the 31st at Little Bridy. On the 2d and 6th of August at Little Bridy; on the 13th at Grantham; on the 15th at Little Bridy; on the 16th at Berkhamstead; and on the 29th at Little Bridy. On the 2d of September at Hartwell Rectory; on the 17th at Clifton; and on the 18th at Nottingham and Hawarden.

Lunar Halos were seen on the 6th of July at Truro; on the 18th at Little Bridy; on the 26th at Aldershot, Camden Town, Berkhamstead, and Nottingham; and on the 27th and 30th at Hawarden. On the 14th of August at Truro; on the 22d at Hereford; on the 23d at Berkhamstead; on the 25th at Aldershot; on the 28th at Little Bridy and Clifton; and on the 31st at Truro. On the 1st of September at Cardington; on the 16th at Berkhamstead; on the 20th at Helston, Little Bridy, and Clifton; on the 24th at Little Bridy and Nottingham; and on the 25th at Little Bridy.

Aurora was seen on the 16th of July at Liverpool. Wheat cut on 17th July at Royston; on the 19th at Berkhamstead; on the 20th at Cardington and Osborne; on the 23d at Teignmouth; on the 26th at Little Bridy and Grantham; on the 27th at Barnstaple and Belvoir; and on the 28th at Norwich. On the 2d of August at Helston; on the 3d at Fairlight; and on the 7th at Stonyhurst.

Barley cut on 26th July at Bywell; on the 29th at Helston and Royston; and on the 31st at Osborne and Little Bridy. On the 5th of August at Berkhamstead; on the 20th at Grantham; and on the 25th at Fairlight.

Oats cut on 13th July at Helston; on the 14th at Osborne; on the 26th at Grantham; on the 27th at Belvoir; on the 29th at Barnstaple; and on the 30th at Little Bridy. On 2d August at Berkhamstead; on the 7th at Fairlight; and on the 28th at Stonyhurst.

NAMES OF STATIONS.	Mean Pressure of dry Air reduced to the level of the Sea.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Range of Temperature in the Quarter.	Mean of all Highest.	Mean of all Lowest.	Mean Monthly Range of Temperature.	Mean Daily Range of Temperature.	Mean Temperature of the Air.	Mean Temperature of the Dew Point.	Mean Elastic Force of Vapour.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required for saturation.	Mean degree of Humidity.	Mean Weight of a cubic foot of Air.	Mean Reading of Maximum in rays of Sun.	Mean Reading of Minimum on Grass.	Mean estimated Strength.	WIND.			Mean Amount of Ozone.	Mean Amount of Cloud.	Rain.
																			N.	E.	S.	W.		
Guernsey	29.632	75.0	51.0	24.0	55.0	50.0	5.0	5.0	55.0	50.0	3.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Helston	29.610	83.0	46.0	37.0	65.0	55.0	10.0	10.0	60.0	55.0	3.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Truro	29.603	81.0	44.0	37.0	62.0	53.0	9.0	9.0	58.0	53.0	3.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Teignmouth	29.614	78.0	45.0	33.0	56.0	51.0	5.0	5.0	53.0	51.0	2.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Exeter	29.628	83.0	45.0	38.0	61.0	54.0	7.0	7.0	57.0	54.0	3.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Ventnor	29.638	77.0	40.0	37.0	58.0	50.0	8.0	8.0	54.0	50.0	4.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Osborne	29.616	81.0	44.0	37.0	60.0	53.0	7.0	7.0	56.0	53.0	3.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Ryde	29.632	87.0	45.0	42.0	65.0	51.0	14.0	14.0	58.0	51.0	7.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Worthing	29.586	79.0	40.0	33.0	56.0	50.0	6.0	6.0	52.0	50.0	2.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Little Bredy	29.614	80.0	41.0	33.0	56.0	51.0	5.0	5.0	53.0	51.0	2.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Barnstaple	29.578	82.0	44.0	33.0	58.0	50.0	8.0	8.0	54.0	50.0	4.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Aldershot	29.616	81.0	44.0	37.0	60.0	53.0	7.0	7.0	56.0	53.0	3.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Clifton	29.612	82.0	40.0	33.0	56.0	50.0	6.0	6.0	52.0	50.0	2.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Lewisham	29.577	88.0	40.0	37.0	62.0	52.0	10.0	10.0	57.0	52.0	5.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Royal Observatory	29.611	88.0	41.0	37.0	62.0	52.0	10.0	10.0	57.0	52.0	5.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
St. Thomas's Hospital	29.560	91.0	42.0	37.0	65.0	53.0	12.0	12.0	58.0	53.0	5.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
St. John's Wood	29.577	87.0	43.0	37.0	62.0	52.0	10.0	10.0	57.0	52.0	5.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Guildhall	29.584	85.0	44.0	37.0	61.0	53.0	8.0	8.0	56.0	53.0	3.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Whitehall	29.601	83.0	47.0	37.0	60.0	53.0	7.0	7.0	56.0	53.0	3.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Camden Town	29.608	87.0	42.0	37.0	62.0	52.0	10.0	10.0	57.0	52.0	5.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Battersea	29.579	87.0	39.0	37.0	61.0	51.0	10.0	10.0	56.0	51.0	5.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Paddington	29.591	89.0	41.0	37.0	63.0	53.0	10.0	10.0	58.0	53.0	5.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Rose Hill	29.585	85.0	40.0	37.0	61.0	53.0	8.0	8.0	56.0	53.0	3.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Great Berkhamstead	29.551	85.0	38.0	37.0	61.0	50.0	11.0	11.0	55.0	50.0	5.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Hartwell House	29.547	84.0	38.0	37.0	60.0	50.0	10.0	10.0	54.0	50.0	4.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Hartwell Rectory	29.575	87.0	42.0	37.0	62.0	52.0	10.0	10.0	57.0	52.0	5.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Gloucester	29.517	84.0	40.0	37.0	61.0	51.0	10.0	10.0	56.0	51.0	5.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Royston	29.527	87.0	44.0	37.0	62.0	52.0	10.0	10.0	57.0	52.0	5.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Cardington	29.590	88.0	40.0	37.0	61.0	51.0	10.0	10.0	56.0	51.0	5.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Bedford	29.585	85.0	40.0	37.0	61.0	51.0	10.0	10.0	56.0	51.0	5.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Hereford	29.551	85.0	38.0	37.0	61.0	50.0	11.0	11.0	55.0	50.0	5.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Lampeter	29.547	84.0	38.0	37.0	60.0	50.0	10.0	10.0	54.0	50.0	4.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Norwich	29.560	86.0	40.0	37.0	61.0	51.0	10.0	10.0	56.0	51.0	5.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Grantham	29.560	86.0	40.0	37.0	61.0	51.0	10.0	10.0	56.0	51.0	5.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Belvoir Castle	29.574	87.0	40.0	37.0	61.0	51.0	10.0	10.0	56.0	51.0	5.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Holkham	29.589	89.0	40.0	37.0	61.0	51.0	10.0	10.0	56.0	51.0	5.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Nottingham	29.589	89.0	40.0	37.0	61.0	51.0	10.0	10.0	56.0	51.0	5.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Hawarden	29.589	89.0	40.0	37.0	61.0	51.0	10.0	10.0	56.0	51.0	5.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Liverpool	29.548	87.0	38.0	37.0	60.0	50.0	10.0	10.0	54.0	50.0	4.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Chorlton-upon-Medlock	29.548	87.0	38.0	37.0	60.0	50.0	10.0	10.0	54.0	50.0	4.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Manchester	29.548	87.0	38.0	37.0	60.0	50.0	10.0	10.0	54.0	50.0	4.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Wakefield	29.548	87.0	38.0	37.0	60.0	50.0	10.0	10.0	54.0	50.0	4.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Leeds	29.548	87.0	38.0	37.0	60.0	50.0	10.0	10.0	54.0	50.0	4.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Stonyhurst	29.548	87.0	38.0	37.0	60.0	50.0	10.0	10.0	54.0	50.0	4.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
York	29.548	87.0	38.0	37.0	60.0	50.0	10.0	10.0	54.0	50.0	4.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Scarborough	29.548	87.0	38.0	37.0	60.0	50.0	10.0	10.0	54.0	50.0	4.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Isle of Man	29.548	87.0	38.0	37.0	60.0	50.0	10.0	10.0	54.0	50.0	4.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
North Shields	29.548	87.0	38.0	37.0	60.0	50.0	10.0	10.0	54.0	50.0	4.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Silloth	29.548	87.0	38.0	37.0	60.0	50.0	10.0	10.0	54.0	50.0	4.0	0.00	0.00	100.0	1.25	81.0	78.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5

The highest temperature of the air reached 90° at a few places, and was above 80° at nearly all stations. The lowest was 30° at York, 37° at Helston, 37° at Truro, 37° at Teignmouth, 37° at Exeter, 37° at Ventnor, 37° at Osborne, 37° at Ryde, 37° at Worthing, 37° at Little Bredy, 37° at Barnstaple, 37° at Aldershot, 37° at Clifton, 37° at Lewisham, 37° at Royal Observatory, 37° at St. Thomas's Hospital, 37° at St. John's Wood, 37° at Guildhall, 37° at Whitehall, 37° at Camden Town, 37° at Battersea, 37° at Paddington, 37° at Rose Hill, 37° at Great Berkhamstead, 37° at Hartwell House, 37° at Hartwell Rectory, 37° at Gloucester, 37° at Royston, 37° at Cardington, 37° at Bedford, 37° at Hereford, 37° at Lampeter, 37° at Norwich, 37° at Grantham, 37° at Belvoir Castle, 37° at Holkham, 37° at Nottingham, 37° at Hawarden, 37° at Liverpool, 37° at Chorlton-upon-Medlock, 37° at Manchester, 37° at Wakefield, 37° at Leeds, 37° at Stonyhurst, 37° at York, 37° at Scarborough, 37° at Isle of Man, 37° at North Shields, 37° at Silloth. The greatest number of days at Stonyhurst, Chorlton-upon-Medlock, Royston, Truro, Ventnor, and Silloth. The heaviest rain fell at York, 3.8 in.; at Hartwell House, 3.8 in.; at Camden Town, 5.0 in.; at Little Bredy, 5.0 in.; at Truro, 5.0 in.; at Hartwell Rectory, 3.8 in.; at Hartwell House, 3.8 in.; at Camden

ON THE
METEOROLOGY OF ENGLAND,

DURING THE

Quarter ending December 31, 1858.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

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1858.

Remarks on the weather, during the Quarter ending December 31st, 1858. By JAMES GLAISHER, ESQ., F.R.S., &c., Sec. of the British Meteorological Society.

October till the 4th was warm, being $3\frac{1}{2}^{\circ}$ above the average; it was then cold till the 12th, being $2\frac{3}{4}^{\circ}$ deficient from the average; from the 13th to the 28th it was warm, being $3\frac{1}{2}^{\circ}$ in excess; and then till the end of the month was again cold; the mean daily deficiency being $5\frac{1}{2}^{\circ}$. The mean high day temperature was 60° exceeding the average by $1\frac{3}{4}^{\circ}$; and the mean low night was 44° , exceeding the average by $\frac{1}{4}^{\circ}$ only. The mean temperature of the month was $50^{\circ}\cdot 8$ being $1\frac{1}{4}^{\circ}$ above the average.

November was very cold till the 24th, being 6° below the average, and then became warm for the remainder of the month, the average excess being $5\frac{1}{4}^{\circ}$. The mean high day temperature was 46° , being $3\frac{1}{2}^{\circ}$ below the average; and the mean low night was $33\frac{1}{2}^{\circ}$, being $4\frac{1}{2}^{\circ}$ deficient from the average. The mean temperature of the month was $39^{\circ}\cdot 6$, being $4\frac{1}{4}^{\circ}$ below the average of the last 17 years. The mean temperature of this month has been lower on 12 occasions only during the last 87 years. On the 24th of November the lowest temperature recorded at many stations was below 20° , and at Royston in Hertfordshire the temperature decreased to the point 11° . The mean temperature of the 23d and 24th at Greenwich was lower than that of any two consecutive days in November during the last 45 years.

December was warm till the 5th, being $3\frac{3}{4}^{\circ}$ in excess; it was then cold till the 17th, averaging $3\frac{1}{2}^{\circ}$ in defect, and then for the remainder of the month it was warm, the average excess being $5\frac{1}{4}^{\circ}$. The mean high day temperature was 45° , differing but little from the average; and the low night was $36\frac{1}{4}^{\circ}$, exceeding the average by $\frac{1}{4}^{\circ}$. The mean temperature for the month was $4\frac{1}{2}^{\circ}$ above the average of the previous 17 years.

The mean temperature of November was from 10° to 11° lower than that of October in the south and middle of England, but this value decreased to 7° at stations in the North of England. The temperature from November to December increased about 1° at stations South of 52° lat., and was of nearly the same value at stations more northwards.

The mean temperature of the dew-point was above its average in October and December, and below in November. The mean degree of humidity exceeded its average in December, but was deficient in October and November.

The fall of rain was deficient in each month, and the total deficiency for the quarter amounted to $4\cdot 5$ inches. The annual fall for the last four years has shown a yearly decrease; in 1855 the amount was $23\cdot 5$ inches; in 1856, $21\cdot 5$ inches; in 1857, $21\cdot 4$ inches; and in 1858, $17\cdot 2$ inches; and the latter amount is the lowest since 1840, when it was $16\cdot 4$ inches.

The mean pressure of the atmosphere was considerably above the average in October, and somewhat below in November and December.

The mean temperature of the air at Greenwich for the quarter ending November, constituting the three autumnal months, was $50^{\circ}\cdot 2$, being $0^{\circ}\cdot 9$ above the average of 87 years.

1858. MONTHS.		Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
		Air.			Evaporation.		Dew Point.		Air— Daily Range.		Water of the Thames.				
		Mean.	Diff. from ave- rage of 87 years.	Diff. from ave- rage of 17 years.	Mean.	Diff. from ave- rage of 17 years.	Mean.	Diff. from ave- rage of 17 years.	Mean.	Diff. from ave- rage of 17 years.					
Oct.	50·8	+1·5	+1·3	48·5	+0·4	46·1	+0·3	16·0	+1·4	57·0	·313	+·003	3·6	+0·1	
Nov.	39·6	-2·9	-4·2	37·9	-4·4	35·7	-4·8	12·5	+1·1	42·1	·209	-·051	2·4	-0·3	
Dec.	41·0	+2·1	+0·5	39·6	+0·6	37·8	+0·6	8·5	-1·1	41·9	·227	-·002	2·6	-0·1	
Mean	43·8	+0·2	-0·8	42·0	-1·1	39·9	-1·3	12·3	+0·5	47·0	·250	-·017	2·9	-0·1	

1858. MONTHS.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal movement of the Air.	Reading of Thermometer on Grass.				
	Mean.	Diff. from average of 17 years.	Mean.	Diff. from average of 17 years.	Mean.	Diff. from average of 17 years.	Amount.	Diff. from average of 40 years.		Number of Nights it was			Lowest Reading at Night.	Highest Reading at Night.
										At or below 30°	Between 30° and 40°	Above 40°		
Oct.	85	- 1	29.834	+ 1.52	grs. 541	+ 2	in. 1.2	in. -1.6	Miles. 106	3	14	14	o 27.0	o 48.2
Nov.	86	- 2	29.750	- .066	532	+ 5	0.4	- 2.2	67	16	10	4	13.0	43.0
Dec.	89	+ 1	29.771	- .065	551	- 1	1.5	- 0.7	109	8	22	1	24.0	42.0
Mean .	87	- 1	29.785	+ .027	543	+ 2	Sum 3.1	Sum -4.5	Mean 94	Sum 27	Sum 46	Sum 19	Lowest 13.0	Highest 48.2

NOTE.—In reading this table it will be borne in mind that the sign (-) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunderstorms occurred or thunder was heard and lightning seen on the 5th of October at St. Thomas's Hospital, Whitehall, Camden Town, Cardington, and Bedford. On the 18th of December at Clifton, Gloucester, Hereford, Belvoir, Nottingham, and Hawarden; on the 19th and 21st at Guernsey; on the 22nd at Clifton, Rose Hill, Bicester, and Gloucester; and on the 26th at Hartwell Rectory.

Thunder was heard but lightning was not seen on October the 5th at Greenwich; and on the 11th at Scarborough. On the 28th of November at Rose Hill. On December the 19th at Clifton; on the 22nd at Hartwell House and Hartwell Rectory; and on the 26th at Camden Town and Great Berkhamstead.

Hail fell on the 5th of October at Aldershot, Gloucester, Cardington, Bedford, and Chorlton-upon-Medlock; on the 7th at Allenheads; on the 8th at Hawarden, Manchester, Isle of Man, and Allenheads; on the 10th at the Isle of Man; on the 11th at Helston; and on the 29th at North Shields and Bywell. On November the 5th at North Shields; on the 6th and 15th at North Shields and Bywell; on the 16th at Teignmouth; on the 19th at Stonyhurst; and on the 30th at Guernsey and Barnstaple. On the 4th of December at Helston; on the 5th at Guernsey; on the 16th at the Isle of Man; on the 18th at Gloucester, Nottingham, and the Isle of Man; on the 19th at Little Bridy, the Isle of Man, and Silloth; on the 20th at Guernsey; on the 22nd at Barnstaple, Clifton, Bicester, and Lampeter; on the 23d at the Isle of Man; on the 24th at Fairlight and Clifton; on the 26th at Helston, Fairlight, Little Bridy, Clifton, Rose Hill, Bicester, and Manchester; on the 27th at Lampeter; on the 28th at Lampeter, Hawarden, Manchester, and Stonyhurst; on the 29th at Lampeter, Hawarden, and the Isle of Man; and on the 30th at Aspley.

Lightning was seen but thunder was not heard on the 8th of October at Nottingham; on the 9th at Cardington; and on the 11th at Lewisham, Greenwich, and Cardington. On the 13th of November at Aldershot; on the 28th at Helston, Truro, Exeter, and Little Bridy; on the 29th at Guernsey and Berkhamstead; and on the 30th at Guernsey, Osborne, Fairlight, and Aspley. On the 18th of December at Exeter, Barnstaple, Bicester, Bedford, and Grantham; on the 19th at Helston and Little Bridy; on the 21st at Helston; on the 23rd at Rose Hill, Berkhamstead, Hartwell House, Hartwell Rectory, Nottingham, and Hawarden; on the 24th at Fairlight, Lewisham, Battersea, Hartwell House, and Hartwell Rectory; on the 26th at Lewisham and Greenwich; and on the 27th at Rose Hill.

Fog was prevalent in October, on the 10th in the south of England; in the Midland counties on the 7th, 9th, 11th, 29th, and 30th; north of latitude $51\frac{1}{2}^{\circ}$ on the 17th, 20th, 23d, 25th, and 26th; in the north of England on the 1st, 2d, and 3d; and throughout the country generally on the 14th, 15th, 16th, 21st, 22d, 24th, 27th, 28th, and 31st. In November, in the south of England, on the 15th, 16th, 21st, 22d, 24th, 27th, 28th, and 31st. In the Midland counties on the 13th, 16th, 17th, 28th, and 30th; in places north of latitude $51\frac{1}{2}^{\circ}$, on the 1st, 2d, 3d, 5th, 8th, 9th, 12th, 25th, and 26th; and generally throughout the country on the 4th, 10th, 11th, 18th, 19th, 20th, 21st, 22d, 23d, and 24th. In December, in the south of England, on the 21st; in the Midland counties on the 5th, 11th, and 17th; north of latitude $51\frac{1}{2}^{\circ}$ on the 7th, 9th, and 10th; on the west coast on the 27th, 28th, and 29th; and generally throughout the country on the 6th, 8th, 13th, 14th, 15th, 30th, and 31st.

Snow fell on the 8th of October on Skiddaw and Saddleback, and at Allenheads; on the 10th at Guernsey; on the 18th at Hawarden and Allenheads; and on the 29th at Allenheads. On the 6th of November at Allenheads; on the 7th at Royston and Allenheads; on the 14th at Fairlight; on the 15th, 16th, and 18th at Allenheads; and on the 25th at Grantham, North Shields, and Bywell. On the 8th of December at Fairlight; on the 16th at Nottingham, York, and North Shields; on the 17th at Chorlton-upon-Medlock and Leeds; and on the 23d and 24th at Aldershot.

Solar Halos were seen on the 1st of October at Little Bridy and the Isle of Man; on the 2d at Little Bridy; on the 5th at Grantham; on the 9th at Little Bridy and Berkhamstead; on the 11th at Aldershot; and on the 12th at Clifton, Berkhamstead, Nottingham, and Hawarden. On the 8th of November at Lampeter; on the 13th at Berkhamstead and Hartwell Rectory; on the 14th at Berkhamstead; on the 15th at Little Bridy and Nottingham; on the 16th at Aldershot, Grantham, and Nottingham; on the 17th at Clifton, Berkhamstead, and Hartwell Rectory; on the 20th at Little Bridy and Berkhamstead; on the 21st at Berkhamstead; and on the 27th and 30th at Little Bridy. On the 4th and 23d of December at Little Bridy; on the 25th at North Shields; and on the 27th and 28th at Little Bridy.

Lunar Halos were seen on the 5th of October at Truro; on the 20th at Camden Town; on the 23d at Bywell; on the 24th at Wakefield and North Shields; on the 25th at Bywell; on the 27th at Little Bridy; and on the 28th at Little Bridy and Aldershot. On the 10th of November at Aldershot; on the 12th at Aldershot, Berkhamstead, and the Isle of Man; on the 13th at Berkhamstead, Hawarden, and the Isle of Man; on the 14th at Aldershot; on the 16th at Hartwell Rectory, Grantham, Belvoir Castle, Nottingham, Hawarden, Liverpool, and the Isle of Man; on the 17th at Clifton, Berkhamstead, Cardington, Hereford, Lampeter, and Bywell; on the 18th at Stonyhurst; on the 20th and 21st at North Shields; on the 22d at Bywell; on the 23d at Belvoir Castle and Silloth; on the 24th at Bywell; and on the 27th and 30th at Truro. On the 13th of December at Stonyhurst and North Shields; on the 16th at Helston and Silloth; on the 19th at Fairlight; on the 20th at Little Bridy and Wakefield; on the 21st at Little Bridy and Liverpool; and on the 22d at Fairlight, Clifton, Berkhamstead, and Cardington; on the 23d at Little Bridy; and on the 25th at Little Bridy and Berkhamstead; and on the 27th and 28th at Little Bridy.

Aurora was seen on the 2d of October at Hawarden; on the 3d at Clifton; on the 8th at Aldershot, Clifton, Hereford, Nottingham, and Hawarden; and on the 31st Guernsey. On the 8th at Clifton; on the 9th at Clifton; and on the 30th at Rose Hill. On the 1st of December at Clifton; on the 4th at Guernsey, Teignmouth, Exeter, Little Bridy, Aldershot, Clifton, Rose Hill, Hartwell House, Aspley, Cardington, Lampeter, Grantham, Nottingham, Hawarden, Liverpool, York, North Shields, and Silloth; on the 5th at Little Bridy, Clifton, and Nottingham; on the 13th at North Shields; on the 14th and 26th at Silloth; and on the 29th at Rose Hill.

Meteorological Table, Quarter ending December 31st, 1858.

NAMES OF STATIONS.	Mean Pressure of dry Air reduced to the level of the Sea.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Range of Temperature in the Quarter.	Mean of all Highest.	Mean of all Lowest.	Mean Monthly Range of Temperature.	Mean Daily Range of Temperature.	Mean Temperature of the Air.	Mean Temperature of the Dew Point.	Mean Elastic Force of Vapour.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required for saturation.	Mean degree of Humidity.	Mean Weight of a cubic foot of Air.	Mean Reading of Maximum in rays of Sun.	Mean Reading of Minimum on Grass.	Mean estimated Strength.	WIND.			Mean Amount of Cloud.	Rain.
																			N.	E.	S.	W.	
Guernsey	29.683	66.0	30.5	35.5	32.8	45.9	22.5	6.9	48.6	43.5	288	3.2	0.7	82	541	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Helston	29.690	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Truro	29.692	66.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Torquay	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Teignmouth	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Exeter	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Ventnor	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Osborne	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Worthing	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Fairlight	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Little Briny	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Barnstaple	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Aldershot	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lewisham	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Royal Observatory	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
St. Thomas's Hospital	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
St. John's Wood	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Guilford	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Whitehall	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Clifton	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Camden Town	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Battersea	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Paddington	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Rose Hill	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Bicester	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Great Berkhamstead	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Hartwell House	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Hartwell Rectory	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Gloucester	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Royston	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Aspley	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Cardington	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Bedford	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Hereford	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lampeter	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Norwich	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Grantham	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Belvoir Castle	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Dorchester	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Holkham	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Nottingham	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Hawarden	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Liverpool	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Chorlton-upon-Medlock	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Manchester	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Wakefield	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Leeds	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Stonyhurst	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
York	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Scarborough	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Isle of Man	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
North Shields	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Silloth	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Brywell	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Allenheads	29.696	67.0	32.0	35.0	35.8	44.2	23.7	10.9	50.1	45.3	284	3.2	0.7	84	544	12.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

The highest temperatures of the air were at Hereford, 69° 8'; at Aldershot, Greenwich, and Nottingham, 69° 5'; at Bicester,

[illegible]

ON THE
METEOROLOGY OF ENGLAND,

DURING THE

Quarter ending March 31, 1859.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

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1859.

Remarks on the weather, during the Quarter ending March 31st, 1859. By JAMES GLAISHER, ESQ., F.R.S., &c., Sec. of the British Meteorological Society.

Till the 9th of January the temperature was alternately in excess and defect; the mean for the period was nearly that of the average. On the 10th of January a warm period set in, which continued throughout the quarter. The average daily excess of temperature for the 80 days from the 10th of January to the 31st of March was $5^{\circ} \cdot 3$. In January the excess of temperature over the average of 88 years was $4^{\circ} \cdot 4$, in February $4^{\circ} \cdot 9$, and in March it was $5^{\circ} \cdot 5$. Since 1771 the temperature of the month of January has exceeded its average by 4° on 15 different occasions, the last was in 1850; that of February has exceeded its average by 5° in 8 instances, the last was in 1850; and March has exceeded its average by 6° in 3 instances only, viz. in the years 1779, 1780, and 1822.

In January the mean high day temperature and low night temperature were in excess by nearly equal amounts; in February the mean high day temperature exceeded its average by 6° , and that of the low night temperature by 3° ; in March the mean high day temperature was $4^{\circ} \cdot 5$ in excess, and that of the low night temperature was nearly 6° in excess; so that the days of February and the nights of March were remarkably warm.

The mean of the three months ending the 31st of March was $43^{\circ} \cdot 3$; that of the average of 88 years was $38^{\circ} \cdot 4$; so that the excess upon the whole quarter was very nearly 5° .

For the same period in the year 1846 the mean was $43^{\circ} \cdot 6$; in 1822 was $43^{\circ} \cdot 5$, and there has been no other instance in which the mean temperature of the first three months has exceeded that of the present year since 1771, which is as far back as trustworthy records extend.

The temperature of February exceeded that of January at places situated south of latitude 53° by 2° or 3° , except at Guernsey and in Cornwall and Devonshire, where the changes were very small. North of the parallel of 53° February was somewhat colder than January.

The temperature of March exceeded that in February by about 1° at Guernsey, in Cornwall and Devonshire, and by 2° , 3° , and 4° in other places.

The temperature of the dew-point was above its average in each month, but by less amount than the excess of temperature, consequently, although there was more water present in the air than usual, yet the air was less humid in each month than the average.

The reading of the barometer was very high in January, and slightly in excess in February and March. The reading in February was about $0 \cdot 2$ inch less than in January, and in March was slightly greater than in February at southern stations, and slightly less at northern stations. The readings in the three months were highest at southern stations, gradually decreasing to the lowest at northern stations.

The fall of rain was deficient in each month at all the southern stations, excepting Cornwall and Devonshire; only one half of the average fell in January and February. At Greenwich the fall of rain in the five years ending 1853 was 131 inches; in the five years ending 1858 was 104 inches; the difference exceeds one year's fall.

This deficiency is not so great at northern stations, and a marked difference in this respect was experienced at some places in the past quarter, for instance, the Rev. A. Weld of Stonyhurst says, "The weather has been so wet that scarcely anything can be done on the ground; no one remembers so damp and wet a season;" whilst the Rev. J. Slatter of Rose Hill near Oxford says, "The great absence of rain has produced much low fever, &c."

W. Burdon, Esq., of Bristol, reports a remarkable rain which fell there on the 11th, 12th, and 13th of March, amounting to $3 \cdot 29$ inches.

The mean temperature of the air at Greenwich for the quarter ending February, constituting the three winter months, was $41^{\circ} \cdot 5$, being $3^{\circ} \cdot 8$ above the average of 88 years.

1859. MONTHS.		Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
		Air.		Evaporation.		Dew Point.		Air— Daily Range.		Water of the Thames.					
		Mean.	Diff. from ave- rage of 18 years.	Mean.	Diff. from ave- rage of 18 years.	Mean.	Diff. from ave- rage of 18 years.	Mean.	Diff. from ave- rage of 18 years.			Mean.	Diff. from ave- rage of 18 years.	Mean.	Diff. from ave- rage of 18 years.
Jan.	40.4	+4.4	+2.3	38.9	+1.9	37.0	+1.7	10.6	+0.5	41.3	.220	in.	in.	grs.	gr.
Feb.	43.1	+4.9	+4.8	40.6	+3.8	37.6	+3.2	14.1	+3.0	43.9	.225	+0.016	+0.024	2.6	4.7
Mar.	46.4	+5.5	+4.8	43.4	+4.2	40.0	+3.8	13.7	+1.1	47.7	.247	+0.032	+0.032	2.8	4.9
Mean	43.3	+4.9	+4.0	41.0	+3.3	38.2	+2.9	12.6	+0.8	44.3	.231	+0.024	+0.024	2.7	4.7

1859. MONTHS.		Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal movement of the Air.		Reading of Thermometer on Grass.				Low- est Read- ing at Night.		High- est Read- ing at Night.	
		Mean.	Diff. from ave- rage of 18 years.	Mean.	Diff. from ave- rage of 18 years.	Mean.	Diff. from ave- rage of 18 years.	Amount.	Diff. from ave- rage.	Number of Nights it was									
										At or below 30°	Be- tween 30° and 40°	Above 40°							
Jan.	88	-1	in.	30.037	+2.290	grs.	grs.	in.	in.	Miles.	14	15	2	0	23.0	41.5			
Feb.	81	-5	29.823	+0.042	550	-4	0.9	-0.7	150	12	15	1	1	24.4	41.0				
Mar.	79	-3	29.806	+0.006	546	-5	1.3	0.1	130	5	12	14	14	17.0	40.5				
Mean	83	-3	29.880	+1.113	551	-2	Sum	Sum	Mean	Sum	Sum	Sum	Sum	Lowest	Highest				
							3.1	-1.6	135	31	42	17		17.0	49.1				

NOTE.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunder storms occurred or thunder was heard and lightning seen on the 22d of January at St. Paul's Parsonage. On the 17th of February at North Shields; and on the 26th at Holkham.

On the 7th of March at Leeds; on the 8th at Clifton; on the 18th at Hartwell House, Aspley, and North Shields; and on the 30th at Harlstone near Norwich.

Thunder was heard but lightning was not seen on the 10th of February at Oxford. On the 18th of March at Great Berkhamstead, Hartwell Rectory, Royston, Cardington, and Scarborough; on the 20th at Scarborough; and on the 21st at Fairlight, Belvoir, and Nottingham.

Lightning was seen but thunder was not heard on the 23d of January at Stonyhurst; on the 25th at Hartwell House; on the 28th at Cardington; on the 29th at Oxford; and on the 30th at Helston. On the 4th of February at Nottingham. On the 7th of March at Guernsey, Clifton, Gloucester, Norwich Priory, and Stonyhurst; on the 14th at the Isle of Man; on the 15th at Guernsey; on the 28th at North Shields; and on the 30th at Guernsey.

Hail fell on the 6th, 7th, and 8th of January at places N. of latitude of 53° ; on the 14th at Nottingham; on the 19th at Helston, Stonyhurst, and Allenheads; on the 22d at Little Bridy, Gloucester, Lampeter, and Stonyhurst; and on the 23d at Harwarden, Manchester, and Stonyhurst; on the 25th at Oxford, Manchester, and St. Paul's Parsonage; on the 26th, 27th, 29th, 30th, and 31st generally over the county. On the 1st of February at Aspley, and Chorlton-upon-Medlock; on the 2d at Great Berkhamstead, and Hartwell Rectory; on the 3d at Norwich Priory; on the 4th at Guernsey; on the 6th at Little Bridy and Hartwell; on the 7th at Oxford; on the 10th, 11th, 12th, and 14th generally at all places; on the 18th at Stonyhurst; on the 22d at Allenheads; on the 26th at Fairlight, Aspley, Grantham, Belvoir Castle, and St. Paul's Parsonage; on the 28th at Helston and Truro. On the 7th of March at Truro, Lampeter, and Harwarden; on the 8th generally throughout the country; on the 15th at Camden Town and Great Berkhamstead; on the 17th at the Isle of Man; on the 18th at Osborne, Little Bridy, Bicester, Hartwell House, Hartwell Rectory, Royston, Aspley, and the Isle of Man; on the 21st generally in the south of England and at Oxford, Rose Hill, Gloucester, Hereford, Nottingham, and Harwarden; on the 26th at Lampeter; on the 29th at Torquay, Aldershot, Lampeter, Grantham, Leeds, Stonyhurst, and Scarborough; and on the 30th at Torquay, Osborne, Fairlight, Barnstaple, Royston, Cardington, Bedford, Nottingham, Harwarden, Liverpool, and Leeds.

Fog was prevalent generally throughout the country on January the 1st, 2d, 3d, and 4th; on the 5th and 6th throughout the mid-counties; on the 8th at Exeter, Oxford, Royston, and Allenheads; on the 9th at Camden Town and Oxford; on the 10th at Rose Hill and Hartwell; on the 12th at Harwarden; on the 13th, 14th, and 15th generally over the country; on the 17th at Fairlight and Little Bridy; on the 18th at Little Bridy; on the 19th at Fairlight, Camden Town, and Battersea; on the 20th at Oxford; on the 21st and 24th at Little Bridy; on the 25th at Fairlight and Little Bridy; on the 28th at Battersea and Liverpool; on the 29th at Fairlight and Little Bridy; and on the 31st at Hereford. On the 3d of February at Norwich Priory; on the 4th at Little Bridy; on the 8th at Harwarden and Allenheads; on the 9th at Helston, Truro, and Little Bridy; on the 12th at North Shields, Bywell, and Allenheads; on the 13th at Great Berkhamstead, Scarborough, Isle of Man, North Shields, Bywell, and Allenheads; on the 14th at Great Berkhamstead and North Shields; on the 15th at Little Bridy and Allenheads; on the 17th at Fairlight and Little Bridy; on the 20th at Camden Town and Great Berkhamstead; on the 21st at Exeter, Camden Town, and Great Berkhamstead; on the 23d at Great Berkhamstead and Scarborough; on the 24th at Exeter; on the 26th at Aldershot; on the 27th at Oxford; and on the 28th at Clifton. On the 1st of March at Exeter and Fairlight; on the 2d at Little Bridy, Great Berkhamstead, and Wakefield; on the 3d at Fairlight, Little Bridy, and Great Berkhamstead; on the 4th at Truro, Fairlight, and Little Bridy; on the 5th at Guernsey; on the 6th at Guernsey, Fairlight, and Little Bridy; on the 7th at Fairlight and Little Bridy; on the 9th at Camden Town and Cardington; on the 10th at Camden Town and Hereford; on the 11th at Little Bridy; and on the 12th, 13th, and 14th at Fairlight and Little Bridy; on the 19th at Camden Town and Wakefield; on the 30th at Hartwell House; and on the 31st at Oxford.

Snow fell on the 7th of January at North Shields and Bywell; on the 8th generally throughout the mid-counties, and at Aldershot, Camden Town, North Shields, and Allenheads; on the 11th at Fairlight; on the 13th, 16th, 17th, 22d, and 23d at Allenheads; on the 26th very generally north of latitude 54° ; on the 27th at Allenheads; on the 30th at Exeter, Clifton, Hereford, and generally north of latitude 53° ; on the 31st at Fairlight, Aldershot, Clifton, Bicester, Lampeter, and Allenheads. On the 1st of February at Nottingham and St. Paul's Parsonage; on the 2d at Nottingham, Scarborough, St. Paul's Parsonage, and Allenheads; on the 3d at Norwich Priory; on the 6th at Harwarden, Chorlton-upon-Medlock, Stonyhurst, St. Paul's Parsonage, and Allenheads; on the 7th at Aldershot, Great Berkhamstead, Harwarden, the Isle of Man, St. Paul's Parsonage and Allenheads; on the 10th, 14th, and 19th at Allenheads. On the 8th of March at Little Bridy, and generally north of latitude 51° ; on the 9th at Bicester; on the 14th at Manchester and Wakefield; on the 18th at Osborne; on the 21st at Wakefield; on the 22d at Norwich Priory; on the 29th at Oxford, Gloucester, Belvoir Castle, Harwarden, and Scarborough; on the 30th generally throughout the country; and on the 31st at Truro, Norwich Priory, Nottingham, Harwarden, Stonyhurst, and Scarborough.

Solar Halos were seen on January 16th, 17th, and 31st. February 1st, 14th, and 24th. March 2d, 4th, 8th, 9th, 11th, 16th, 19th, 20th, 28th, 29th, and 31st.

Lunar Halos were seen on six nights in January; on ten nights in February; and on seven nights in March.

Aurora was seen on the 22d of January at Helston; and on the 23d at Rose Hill. On the 9th of February at Clifton, Cardington, Grantham, Nottingham, and Allenheads; on the 22d at Clifton, Oxford, Hartwell House, Hereford, Harwarden, Manchester, Scarborough, and St. Paul's Parsonage; on the 23d very generally throughout the country; on the 24th at Clifton, Hartwell House, Norwich Priory, Nottingham, Harwarden, and Scarborough; on the 25th at Nottingham and Stonyhurst; and on the 26th at Clifton, Manchester, and St. Paul's Parsonage. On the 2d of March at Rose Hill; on the 25th at St. Paul's Parsonage; on the 26th at Little Bridy, Clifton, Rose Hill, Oxford, Great Berkhamstead, Hartwell Rectory, Nottingham, Wakefield, and St. Paul's Parsonage; on the 27th at Nottingham and Harwarden; and on the 29th at Harwarden; on the 30th at Clifton, Cardington, Grantham, Belvoir Castle, Harwarden, Wakefield, Stonyhurst, and St. Paul's Parsonage; and on the 31st at St. Paul's Parsonage.

NAMES OF STATIONS.	Mean Pressure of dry Air reduced to the level of the Sea.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Range of Temperature in the Quarter.	Mean of all Highest.	Mean of all Lowest.	Mean Monthly Range of Temperature.	Mean Daily Range of Temperature.	Mean Temperature of the Air.	Mean Temperature of the Dew Point.	Mean Elastic Force of Vapour.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required for saturation.	Mean degree of Humidity.	Mean Weight of a cubic foot of Air.	Mean Reading of Maximum in rays of Sun.	Mean Reading of Minimum on Grass.	WIND.				Mean Amount of Ozone.	Mean Amount of Cloud.	Number of Days on which it fell.	Amount collected.	
																		Relative Proportion of								
																		N.	E.	S.	W.					
Guernsey	29.810	56.0	33.0	23.0	46.0	20.0	13.0	13.0	38.0	38.0	38.0	0.0	0.0	88	549	1.7	1.7	12	12	12	12	4.3	1.1	16	2.5	
Helston	29.839	57.0	31.0	26.0	42.0	20.0	11.0	11.0	39.0	39.0	39.0	0.0	0.0	83	549	1.7	1.7	12	12	12	12	4.3	1.1	16	2.5	
Truro	29.786	57.0	31.0	26.0	42.0	20.0	11.0	11.0	39.0	39.0	39.0	0.0	0.0	83	549	1.7	1.7	12	12	12	12	4.3	1.1	16	2.5	
Torquay	29.839	57.0	31.0	26.0	42.0	20.0	11.0	11.0	39.0	39.0	39.0	0.0	0.0	83	549	1.7	1.7	12	12	12	12	4.3	1.1	16	2.5	
Exeter, Elm Brook, New North Road.	29.883	59.5	26.8	32.7	49.0	20.0	13.0	13.0	38.0	38.0	38.0	0.0	0.0	88	550	1.7	1.7	12	12	12	12	4.3	1.1	16	2.5	
Exeter, 200 High-st.	29.811	58.8	29.2	29.5	49.9	30.9	29.3	10.0	45.0	41.3	36.1	0.0	0.4	88	549	1.7	1.7	12	12	12	12	4.3	1.1	16	2.5	
Ventnor	29.915	59.0	31.0	28.0	49.8	41.6	22.7	8.0	45.7	40.4	38.2	0.0	0.7	88	549	1.7	1.7	12	12	12	12	4.3	1.1	16	2.5	
Osborne	29.863	62.0	28.2	33.8	49.5	37.9	27.2	11.0	43.7	39.3	34.6	0.0	0.5	84	548	1.6	1.6	12	12	12	12	4.3	1.1	16	2.5	
Worthing	29.858	59.5	31.0	28.0	47.1	38.6	23.2	10.0	43.7	38.3	34.1	0.0	0.5	84	548	1.6	1.6	12	12	12	12	4.3	1.1	16	2.5	
Fairlight	29.810	57.0	31.0	26.0	45.8	36.5	24.0	10.0	43.7	38.3	34.1	0.0	0.5	84	548	1.6	1.6	12	12	12	12	4.3	1.1	16	2.5	
Little Briddy	29.841	57.0	31.0	26.0	45.8	36.5	24.0	10.0	43.7	38.3	34.1	0.0	0.5	84	548	1.6	1.6	12	12	12	12	4.3	1.1	16	2.5	
Barnstaple	29.783	56.0	29.0	27.0	43.0	31.0	16.0	10.0	43.7	38.3	34.1	0.0	0.5	84	548	1.6	1.6	12	12	12	12	4.3	1.1	16	2.5	
Aldershot Camp	29.721	58.0	29.0	42.0	50.0	30.5	31.0	10.0	44.6	42.1	36.8	0.0	0.3	91	551	1.7	1.7	12	12	12	12	4.3	1.1	16	2.5	
Clifton	29.820	58.8	29.1	29.7	48.9	39.5	29.2	10.0	43.7	38.3	34.1	0.0	0.5	84	548	1.6	1.6	12	12	12	12	4.3	1.1	16	2.5	
Lewisham	29.838	58.5	25.1	39.4	50.0	37.4	26.3	10.0	43.7	38.3	34.1	0.0	0.5	84	548	1.6	1.6	12	12	12	12	4.3	1.1	16	2.5	
Royal Observatory	29.836	63.5	28.5	35.0	50.0	37.4	26.3	10.0	43.7	38.3	34.1	0.0	0.5	84	548	1.6	1.6	12	12	12	12	4.3	1.1	16	2.5	
St. Thomas's Hospital	29.770	61.9	29.7	32.2	50.3	40.2	25.8	10.0	43.7	38.3	34.1	0.0	0.5	84	548	1.6	1.6	12	12	12	12	4.3	1.1	16	2.5	
St. John's Wood	29.784	67.0	28.2	38.8	52.4	37.5	31.4	14.4	44.4	38.8	34.6	0.0	0.4	84	549	1.7	1.7	12	12	12	12	4.3	1.1	16	2.5	
Guilford	29.772	59.8	30.3	29.5	48.9	39.5	29.2	10.0	43.7	38.3	34.1	0.0	0.5	84	548	1.6	1.6	12	12	12	12	4.3	1.1	16	2.5	
Whitehall	29.772	59.8	30.3	29.5	48.9	39.5	29.2	10.0	43.7	38.3	34.1	0.0	0.5	84	548	1.6	1.6	12	12	12	12	4.3	1.1	16	2.5	
Camden Town	29.835	62.6	27.0	37.0	48.7	38.0	27.8	9.4	44.4	38.8	34.6	0.0	0.4	84	549	1.7	1.7	12	12	12	12	4.3	1.1	16	2.5	
Battersea	29.786	61.4	25.3	36.1	50.4	35.5	30.7	14.4	44.4	38.8	34.6	0.0	0.4	84	549	1.7	1.7	12	12	12	12	4.3	1.1	16	2.5	
St. Mary's Hospital	29.832	62.5	28.5	34.0	49.7	38.3	28.1	11.4	44.4	38.8	34.6	0.0	0.4	84	549	1.7	1.7	12	12	12	12	4.3	1.1	16	2.5	
Enfield	29.822	61.0	24.2	38.8	49.5	37.1	30.8	12.4	43.7	38.3	34.1	0.0	0.5	84	548	1.6	1.6	12	12	12	12	4.3	1.1	16	2.5	
Rose Hill	29.809	63.2	29.9	39.3	49.2	34.8	31.1	13.4	42.0	36.9	32.6	0.0	0.3	84	548	1.6	1.6	12	12	12	12	4.3	1.1	16	2.5	
Oxford	29.825	64.0	29.0	42.0	49.8	37.4	31.3	11.4	43.0	38.2	34.0	0.0	0.3	84	548	1.6	1.6	12	12	12	12	4.3	1.1	16	2.5	
Bicester	29.791	63.0	29.5	39.5	49.8	35.9	32.3	13.6	42.0	36.9	32.6	0.0	0.3	84	548	1.6	1.6	12	12	12	12	4.3	1.1	16	2.5	
Great Berkhamstead	29.831	64.5	29.0	41.5	49.8	35.9	32.3	13.6	42.0	36.9	32.6	0.0	0.3	84	548	1.6	1.6	12	12	12	12	4.3	1.1	16	2.5	
Hartwell House	29.771	65.0	29.0	43.0	47.8	36.0	34.1	13.9	43.9	38.1	33.8	0.0	0.5	85	547	1.7	1.7	10	13	7	24	4.9	6.7	16	2.5	
Hartwell Rectory	29.774	64.5	29.0	41.5	49.8	35.9	32.3	13.6	42.0	36.9	32.6	0.0	0.3	84	548	1.6	1.6	12	12	12	12	4.3	1.1	16	2.5	
Royston	29.829	63.3	27.2	38.1	51.4	38.5	31.3	12.5	42.6	38.2	33.7	0.0	0.7	85	546	1.7	1.7	10	13	5	25	4.6	6.1	16	2.5	
Gloucester	29.833	63.0	27.0	36.0	50.1	38.4	30.0	14.0	44.4	40.1	34.8	0.0	0.5	85	548	1.7	1.7	8	1	29	52	5.0	2.8	6.1	16	2.5
Aspley	29.776	57.6	27.0	27.1	45.3	38.7	22.8	6.6	42.0	38.0	33.8	0.0	0.5	87	551	1.7	1.7	10	13	5	25	4.6	6.1	16	2.5	
Cardington	29.800	64.2	27.0	37.2	48.9	39.5	30.0	12.3	43.0	38.0	33.8	0.0	0.5	87	548	1.7	1.7	10	13	5	25	4.6	6.1	16	2.5	
Bedford	29.790	64.0	29.0	36.0	51.2	38.1	30.7	13.1	44.4	38.1	32.6	0.0	0.7	87	537	1.6	1.6	10	13	5	25	4.6	6.1	16	2.5	
Hereford Infirmary	29.780	62.8	24.5	38.8	49.5	37.0	30.8	13.4	44.4	38.9	33.9	0.0	0.6	88	541	1.6	1.6	10	13	5	25	4.6	6.1	16	2.5	
Lampeter	29.790	62.8	24.5	38.8	49.5	37.0	30.8	13.4	44.4	38.9	33.9	0.0	0.6	88	541	1.6	1.6	10	13	5	25	4.6	6.1	16	2.5	
Norwich Priory	29.886	63.0	22.0	41.0	45.1	35.7	31.2	11.4	43.0	38.2	34.0	0.0	0.3	84	548	1.6	1.6	12	12	12	12	4.3	1.1	16	2.5	
Grantham	29.778	62.4	27.0	33.4	47.7	38.2	28.9	9.6	43.7	38.3	34.1	0.0	0.5	84	548	1.6	1.6	12	12	12	12	4.3	1.1	16	2.5	
Belvoir Castle	29.716	64.3	25.5	38.8	47.8	35.7	30.1	12.1	43.0	38.2	34.0	0.0	0.3	84	548	1.6	1.6	12	12	12	12	4.3	1.1	16	2.5	
Derby	29.716	64.3	25.5	38.8	47.8	35.7	30.1	12.1	43.0	38.2	34.0	0.0	0.3	84	548	1.6	1.6	12	12	12	12	4.3	1.1	16	2.5	
Holkham	29.709	62.5	27.0	33.8	48.4	37.1	29.4	11.2	42.8	38.0	33.0	0.0	0.6	84	542	1.6	1.6	10	13	1	5	—	—	—	—	
Nottingham	29.790	64.0	29.0	36.0	49.0	36.0	35.2	12.7	42.0	36.9	32.6	0.0	0.6	81	544	1.6	1.6	10	13	1	5	—	—	—	—	
Hawarden	29.748	62.2	27.0	33.4	47.7	38.2	28.9	9.6	43.7	38.3	34.1	0.0	0.5	84	548	1.6	1.6	12	12	12	12	4.3	1.1	16	2.5	
Liverpool Observat.	29.769	56.7	30.3	26.4	49.1	41.5	22.8	7.0	43.7	38.3	34.1	0.0	0.5	84	548	1.6	1.6	12	12	12	12	4.3	1.1	16	2.5	
Chorlton-upon-Medlock	29.731	56.8	27.0	29.8	47.6	37.3	28.9	10.2	43.7	38.3	34.1	0.0	0.5	84	548	1.6	1.6	12	12	12	12	4.3	1.1	16	2.5	
Manchester	29.721	58.8	28.0	32.8	48.1	36.3	28.7	11.7	42.0	36.9	32.6	0.0	0.6	88	550	1.7	1.7	10	13	1	5	—	—	—	—	
Wakefield Prison	29.657	60.0	29.0	40.0	49.0	36.0	35.2	12.7	42.0	36.9	32.6	0.0	0.6	82	546	1.6	1.6	10	13	1	5	—	—	—	—	
Leeds Philon. Hall	29.716	58.7	29.0	34.0	49.0	36.0	35.2	12.7	42.0	36.9	32.6	0.0	0.6	80	548	1.6	1.6	10	13	1	5	—	—	—	—	
Stonyhurst College	29.701	59.4	28.4	37.0	48.0	35.0	34.0	11.0	42.0	36.9	32.6	0.0	0.6	80	548	1.6	1.6	10	13	1	5	—	—	—	—	
York	29.632	55.0	24.0	31.0	44.7	34.3	28.7	8.0	43.7	38.3	34.1	0.0	0.5	82	548	1.6	1.6	12	12	12	12	4.3	1.1	16	2.5	
Searborough	29.667	56.0	27.0	29.8	47.6	37.3	28.9	10.2	43.7	38.3	34.1	0.0	0.5	82	548	1.6	1.6	12	12	12	12	4.3	1.1	16	2.5	
Isle of Man	29.685	57.9	28.0																							

Year 1859.	Month.	Names of Stations and Observers.	Pressure of Air in Month.			Temperature of Air in Month.			Mean Tem- perature.		Vapour.		Mean Reading of Thermometer.		Wind.			Rain.	
			Mean.	Range.	Height.	Lowest.	Range.	Highest.	Mean.	Air.	Dew Point.	Elastic Force.	In a cubic foot of Air.	Mean Weight of a Cubic Foot of Air.	Direction.	Force.	Relative Proportion of W. S. W.	Amount of Rain.	Number of Days.
1859.	Jan.	WHITEHALL, J. C. HAILE, Esq., F.R.A.S., Surveyor and Draughts- man, Local Government Act Office.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Feb.	CAMDEN TOWN.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Mar.	G. J. SIMONS, Esq., M.B.M.S.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Jan.	BATTERSEA TRAINING SCHOOL, REV. SAMUEL OLMARK, M.A., M.B.M.S.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Feb.	ST. MARY'S HOSPITAL (Paddington), REV. J. M. HEATH, M.A., F.R.A.S.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Mar.	ENFIELD, Esq.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Jan.	ROSE HILL (near Oxford), REV. JOHN SLATER, M.A., F.R.A.S.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Feb.	OXFORD.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Mar.	BIGGESTER, C. A. QUERLING, Esq.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Jan.	W. JOHNSON, Esq., F.R.A.S.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Feb.	GREAT BARKHAMSTEAD, WILLIAM SQUIRE, Esq., M.B.M.S.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Mar.	HARTWELL HOUSE, M. A. HORTON, Esq., M.B.M.S.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Jan.	F.R.S., V.P. R.A.S., M.B.M.S.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Feb.	HARTWELL RECTORY, REV. CHARLES LOWDER, M.A.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Mar.	ROYSLEY, (Hertfordshire), H. A. WATKINS, Esq., F.R.A.S.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Jan.	GLoucester, W. W. WILLIAMS, Esq., M.D., F.L.S.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Feb.	ASPLEY (Bedford), REV. G. W. MAHON, A.M.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Mar.	CARDINGTON (near Bedford), J. MAGLAREN, M.B.M.S.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Jan.	REDFORD, THOMAS HERBERT BAKER, Esq., M.D., F.R.C.S., M.B.M.S.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Feb.	HEREFORD INFIRMARY, J. E. SMITH, Esq., M.R.C.S.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Mar.	LANYETER (Cockermouth), REV. PROF. J. M. MATTHEWS, M.A.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127

Year 1859.	Month.	Names of Stations and Observers.	Pressure of Air in Month.			Temperature of Air in Month.			Mean Tem- perature.		Vapour.		Mean Reading of Thermometer.		Wind.			Rain.	
			Mean.	Range.	Height.	Lowest.	Range.	Highest.	Mean.	Air.	Dew Point.	Elastic Force.	In a cubic foot of Air.	Mean Weight of a Cubic Foot of Air.	Direction.	Force.	Relative Proportion of W. S. W.	Amount of Rain.	Number of Days.
1859.	Jan.	DELVOIR CASTLE, WILLIAM INGRAM, Esq., M.B.M.S.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Feb.	DERBY.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Mar.	HOLKHAM, S. SHILLAMAR, Esq., M.B.M.S. As- sistant to the EARL OF LEICESTER.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Jan.	NOTTINGHAM, E. J. LOVE, Esq., F.R.A.S., M.B.M.S.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Feb.	HAWARDEN, THOMAS HERBERT BAKER, Esq., M.D., F.R.C.S., M.B.M.S.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Mar.	LIVERPOOL OBSERVATORY, JOHN HARTNUP, Esq., F.R.A.S.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Jan.	CHORLTON-UPON-MEDLOCK, MANCHESTER, GEORGE VERNAMER VERNON, Esq., F.R.A.S., M.B.M.S.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Feb.	WAKEFIELD PRISON, WILLIAM RALPH MULNER, Esq., M.B.M.S.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Mar.	LEEDS PHILOSOPHICAL HALL, HENRY DENNY, Esq., A.L.S.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Jan.	STONYHURST COLLEGE, REV. ALFRED WELD, M.A., F.R.A.S.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Feb.	YORK.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Mar.	SCARBOROUGH, J. N. WOODALL, Esq., B.A.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Jan.	ISLE OF MAN, JAMES BURNAN, Esq., F.R.A.S.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Feb.	NORTH SHIELDS, ROBERT SPENCE, Esq.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Mar.	ST. PAUL'S PARSONAGE, REV. F. REDFORD, M.A., M.B.M.S., Under the direction of T. SOWTH, M.B.M.S.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127
1859.	Jan.	ALLENHEADS, Durham, Esq., C.E., Assistant to T. SOW- TH, Esq., F.R.S., &c.	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127	30.127

Second Rain gauges were placed—At Clifton, 50 feet above the ground, the amount collected was 7.6 inches; at Orford, 22 feet, 3.2 inches; at Cardington, 33 feet, 2.5 inches; at Norwich, 31 feet, 2.8 inches; at
Holkham, 4 feet, 3.6 inches; and at Nottingham, 25 feet, 3.5 inches.

ON THE
METEOROLOGY OF ENGLAND,

DURING THE

Quarter ending June 30. 1859.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

LONDON:
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FOR HER MAJESTY'S STATIONERY OFFICE.

1859.

Remarks on the weather, during the Quarter ending 30th of June 1859. By JAMES GLAISHER, Esq., F.R.S., &c., Sec. of the British Meteorological Society.

Till the 11th of April the air was warm, being 7° above the average. The excesses on the 6th and 7th were as large as 16° and $17\frac{1}{2}^{\circ}$ respectively; from April 8th till May 23d the air was for the most part cold, and the average daily defect was $2\frac{1}{2}^{\circ}$ nearly; and from May 24th to the end of the quarter it was almost always warm; the average daily excess of temperature was 3° nearly.

Till April 11th the wind was from the S.W., passing at the rate of 170 miles daily; from April 11th to May 23d it was mostly N.E., with a daily horizontal movement of nearly 100 miles; from May 24th till June 20th it was N.E. and S.E., and S.W. from June 21st till the end of the quarter. The average daily movement for these last 37 days was 55 miles.

The mean temperatures of April was $0^{\circ}1$, of May $0^{\circ}3$, and that of June $2^{\circ}3$, above their averages for the last 18 years. The high day temperatures in April were $0^{\circ}1$ below, in May $0^{\circ}6$ above, and in June $2^{\circ}5$ above, their averages. The low night temperatures in April were $0^{\circ}3$ above, in May $0^{\circ}2$ below, and in June $2^{\circ}9$ above, their averages. Therefore both night and day temperatures in the months of April and May were very nearly those of their average values; and both these elements were high in June, and therefore the days and nights in this month were warm.

The mean temperature of May exceeded that in April at Guernsey by $2\frac{1}{2}^{\circ}$, which was the smallest value; at Southern and Midland stations it was from 5° to 7° ; at Northern stations the excess was from 7° to 10° ; and at Stonyhurst it was $11\frac{1}{2}^{\circ}$, which was the largest increase.

The mean temperature of June exceeded that of May by quantities varying from 5° to 8° at most stations; but by somewhat less amounts at extreme Northern stations than elsewhere.

The mean temperature of the dew-point was below its average value in April, and above it in May and June. The mean degree of humidity of the air in April and May was very nearly of its average values, and was in excess in June. The air, therefore, in June was somewhat humid.

The reading of the barometer was below the average in April and June, and somewhat above it in May. It increased from April to May at all places; by about $0^{\circ}1$ inch at Guernsey, increasing to $0^{\circ}2$ inch in the Midland Counties, and to nearly $0^{\circ}3$ inch at Northern stations. It slightly increased from May to June at extreme Southern stations, and diminished in the Mid-Counties, gradually increasing in amount to $0^{\circ}1$ inch at Northern stations. The results at Aspley and Harwarden are exceptional, both places indicating an increase.

The fall of rain in the quarter was nearly that of its average. The deficiency from the beginning of the year is $1\frac{1}{2}$ inch. The deficiency in the years 1854, 1855, 1856, 1857, and 1858, amounts to the average fall of one year; viz. 25 inches. From a careful examination of the fall of rain from the year 1815, it would seem that the annual fall is becoming smaller, and that there is but little probability that this large deficiency will be made up by excesses in future years.

The mean temperature of the air at Greenwich for the three months ending May, constituting the three Spring months, was $48^{\circ}7$, being $2^{\circ}3$ above the average of 88 years.

Temperature of															Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
Air.			Evaporation.		Dew Point.		Air— Daily Range.		Water of the Thames.									
Mean.	Diff. from average of 88 years.	Diff. from average of 18 years.	Mean.	Diff. from average of 18 years.	Mean.	Diff. from average of 18 years.	Mean.	Diff. from average of 18 years.		Mean.	Diff. from average of 18 years.	Mean.	Diff. from average of 18 years.					
1859. MONTHS.																		
April .	46.6	+0.8	+0.1	43.4	-0.1	38.9	-1.2	17.8	-0.4	49.4	in. 237	in. -0.012	grs. 2.8	-0.7				
May .	53.1	+0.6	+0.3	49.6	+0.5	45.9	+0.5	21.0	+0.8	54.0	312	+0.013	3.6	+0.2				
June .	61.4	+3.3	+2.3	57.3	+2.5	53.8	+3.0	20.9	-0.4	65.0	415	+0.043	4.6	+0.3				
Mean .	53.7	+1.6	+0.9	50.1	+1.0	46.2	+0.8	19.9	0.0	56.1	321	+0.015	3.7	+0.2				

1859. MONTHS.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal movement of the Air.	Reading of Thermometer on Grass.				
	Mean.	Diff. from average of 18 years.	Mean.	Diff. from average of 18 years.	Mean.	Diff. from average of 18 years.	Amount.	Diff. from average of 44 years.		Number of Nights it was			Low- est Read- ing at Night.	High- est Read- ing at Night.
										At or below 30°	Be- tween 30° and 40°	Above 40°		
April .	78	- 1	in. 29.614	in. -0.125	grs. 542	grs. - 2	in. 2.2	+0.4	Miles. 133	10	9	13	18.0	48.0
May .	77	+ 1	29.769	+0.028	538	0	2.4	+0.3	75	3	14	14	20.0	50.3
June .	77	+ 4	29.766	-0.039	528	- 3	1.4	-0.5	57	0	0	30	40.0	58.7
Mean .	77.3	+ 1	29.723	-0.045	536	- 2	Sum 6.0	Sum +0.2	Mean 88	Sum 13	Sum 23	Sum 57	Lowest 18.0	Highest 58.7

NOTE.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunder storms occurred or thunder was heard and lightning seen on the 9th of April at Aspley and Bedford; on the 10th at Bicester and Chorlton-upon-Medlock; on the 11th at Cardington and Norwich; and on the 28th at Guernsey. On the 9th of May at Worthing; on the 19th at Camden Town, Battersea, Great Berkhamstead, and Hereford; on the 20th at Worthing;

Clifton, and Lewisham; on the 29th at Clifton, Paddington, Rose Hill, Oxford, Bicester, Royston, Gloucester, Cardington, Aspley, Bedford, Hereford, Lampeter, Grantham, Belvoir, Hawarden, Liverpool, and Manchester; on the 30th at Camden Town, Rose Hill, Bicester, Great Berkhamstead, Cardington, Aspley, Hereford, Hawarden, and Liverpool; and on the 31st at Helston, Worthing, Clifton, Camden Town, Rose Hill, Oxford, Bicester, Gloucester, Cardington, Aspley, Bedford, and Hereford. On the 1st of June at Worthing; on the 2d at Worthing, Fairlight, Bedford, and Norwich; on the 4th at Aldershot, Clifton, Great Berkhamstead, Hartwell House, and Hereford; on the 5th at Clifton, Lewisham, Camden Town, Hartwell House, Hartwell Rectory, Gloucester, and Hereford; on the 6th at Aldershot, Camden Town, Rose Hill, Great Berkhamstead, and Hartwell House; on the 7th at Guernsey, Fairlight, Aldershot, Clifton, Oxford, Great Berkhamstead, Hartwell House, Hartwell Rectory, Royston, Gloucester, Hereford, Hawarden, and Stonyhurst; on the 8th at Guernsey and Little Bridy; on the 9th at Guernsey; on the 11th at Rosehill; on the 12th at Camden Town, Paddington, Oxford, Great Berkhamstead, and Hartwell House; on the 19th at Hartwell House; on the 25th at Helston, Hartwell House, Hereford, Liverpool, and the Isle of Man; on the 26th at Exeter, Osborne, Fairlight, Clifton, Lewisham, Great Berkhamstead, Hartwell Rectory, Gloucester, Bedford, Norwich, Grantham, Belvoir, Holkham, Hawarden, Manchester, Wakefield, Leeds, Stonyhurst, and North Shields; and on the 28th at Holkham.

Thunder was heard but lightning was not seen on the 9th of April at Rose Hill and Cardington; on the 10th at Rose Hill, Oxford, Hartwell House, Hartwell Rectory, Gloucester, Cardington, Aspley, Grantham, and Belvoir; on the 11th at Osborne, Camden Town, Oxford, Great Berkhamstead, Hartwell House, and Hartwell Rectory; on the 15th at Camden Town and Isle of Man; on the 21st and 28th at Fairlight. On the 7th of May at Fairlight; on the 9th at Cardington; on the 19th at Osborne, Aldershot, Hartwell House, and Hartwell Rectory; on the 20th at Fairlight and Little Bridy; on the 25th at Little Bridy; on the 27th at Fairlight; on the 28th at Grantham; on the 29th at Exeter, Fairlight, Aldershot, Hartwell House, Hartwell Rectory, Grantham, Holkham, Hawarden, Stonyhurst, Isle of Man, and St. Paul's Parsonage; on the 30th at Osborne, Oxford, Hartwell Rectory, Cardington, Lampeter, Hawarden, and Isle of Man; and on the 31st at Guernsey, and North Shields; on the 2d at Exeter, Hartwell House, Hartwell Rectory, Royston, and Stonyhurst; on the 3d at Hartwell House; on the 4th at Camden Town, Hartwell Rectory, and Royston; on the 5th at Little Bridy, Barnstaple, Aldershot, and Royston; on the 6th at Aldershot, Clifton, Lewisham, Oxford, Wakefield, Leeds, Stonyhurst, and St. Paul's Parsonage; on the 7th at Little Bridy, Bedford, Hereford Infirmary, Liverpool, and St. Paul's Parsonage; on the 8th at Truro, Exeter, Fairlight, and Oxford; on the 11th at Aldershot; on the 12th at Fairlight, Aldershot, Hartwell Rectory, Royston, and Norwich; on the 13th at Fairlight and Rose Hill; on the 24th at Grantham; on the 25th at Hawarden and Stonyhurst; on the 26th at Aldershot; on the 27th at Fairlight and Holkham; and on the 28th at Norwich.

Lightning was seen but thunder was not heard on the 7th of April at Fairlight and Aldershot; on the 27th at Little Bridy; and on the 28th at Exeter. On the 9th of May at Great Berkhamstead; on the 19th at Helston and Oxford; on the 20th at Guernsey; on the 26th at Fairlight; on the 28th at Grantham and Wakefield; on the 29th at Osborne, Camden Town, Royston, Wakefield, and Stonyhurst; and on the 31st at Royston. On the 2d of June at Infirmary; on the 7th at Exeter, Little Bridy, Camden Town, Great Berkhamstead, and Hereford; on the 8th at Helston; on the 9th at Little Bridy; on the 11th at Truro; on the 25th at Little Bridy, Clifton, and Oxford; on the 26th at Little Bridy, Camden Town, Rose Hill, Oxford, Hartwell House, and Royston; and on the 28th, 29th, and 30th at Paddington.

Hail fell on the 1st of April at Falmouth; on the 10th at Aldershot, Oxford, Bicester, Great Berkhamstead, Hartwell House, Hartwell Rectory, Royston, Cardington, Bedford, Hawarden, and Allenheads; on the 11th at Aldershot, Camden Town, Oxford, Hartwell House, Hartwell Rectory, Rose Hill, Great Berkhamstead, Hereford Infirmary, Grantham, and Allenheads; on the 14th at Guernsey, Aldershot, and Hereford Infirmary; on the 15th at Helston, Truro, Exeter, Aldershot, Clifton, Great Berkhamstead, Hartwell Rectory, Hereford Infirmary, Norwich, Grantham, Holkham, Hawarden, Scarborough, Isle of Man, and Allenheads; on the 16th at Helston, Aldershot, Camden Town, Great Berkhamstead, Hartwell Rectory, Royston, Gloucester, Hereford Infirmary, Lampeter, Hawarden, Leeds, Isle of Man, and Allenheads; on the 17th at Teignmouth, Little Bridy, Gloucester, Hawarden, Leeds, Scarborough, and Allenheads; on the 21st at Gloucester and Allenheads; on the 25th at Liverpool; and on the 28th at Guernsey. On the 19th of May at Great Berkhamstead; on the 29th at Grantham; on the 30th at Hawarden; and on the 31st at Aldershot and Clifton. On the 7th of June at Guernsey; on the 8th at Hereford Infirmary; on the 12th at Paddington; and on the 26th at Hartwell Rectory.

Fog was prevalent on April 1st, 2d, 3d, 4th, 5th, 6th, 7th, 8th, 9th, 13th, 14th, 22d, 23d, 24th, 25th, 26th, 28th, and 29th; on May 5th, 7th, 10th, 11th, 17th, 18th, 19th, 20th, 25th, 26th, 28th, 29th, and 30th; on June 1st, 2d, 3d, 4th, 5th, 6th, 7th, 8th, 11th, 12th, 20th, 21st, and 25th at different parts of the country, but was not very general in any instance.

Snow fell on April 1st, 9th, 11th, 12th, 13th, 14th, 15th (very general), 16th (general), 17th, 18th, 19th, 20th, 21st, 22d, 23d, 25th, and 27th at different stations. Also on the 4th of May at Allenheads.

Solar Halos were seen on 18 days in April, on 10 days in May, and on 8 days in June.

Lunar Halos were seen on 6 nights in April, 5 nights in May, and 2 nights in June.

Aurora were seen on April 1st, 21st, 22d, 28th; and on May 1st and 5th.

Meteorological Table, Quarter ending June 30th, 1859.

NAMES OF STATIONS.	Mean Pressure of dry Air reduced to the level of the Sea.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Range of Temperature in the Quarter.	Mean of all Highest.	Mean of all Lowest.	Mean Monthly Range of Temperature.	Mean Daily Range of Temperature.	Mean Temperature of the Air.	Mean Temperature of the Dew Point.	Mean Elastic Force of Vapour.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required for saturation.	Mean degree of Humidity.	Mean Weight of a cubic foot of Air.	Mean Reading of Maximum in rays of Sun.	Mean Reading of Minimum on Grass.	WIND.				Mean Amount of Ozone.	Mean Amount of Cloud.	Rain.		
																		Relative Proportion of								
																		Strength.								
																		N.	E.	S.	W.					
Guernsey	29.698	73.0	36.0	37.0	57.4	47.7	25.3	9.7	51.9	47.4	33.2	3.7	0.7	81	538	—	—	—	—	—	—	—	—	1.9		
Helston	29.572	79.0	32.0	47.0	62.3	48.4	38.3	14.1	55.0	49.4	35.7	3.5	1.0	83	538	—	—	—	—	—	—	—	—	1.9		
Truro	29.530	76.0	25.0	31.0	61.0	44.9	40.7	16.6	52.3	47.3	30.9	3.5	1.0	75	538	—	—	—	—	—	—	—	—	1.9		
Torquay	29.530	72.0	33.0	39.0	51.0	44.0	40.7	16.6	52.3	47.3	30.9	3.5	1.0	75	538	—	—	—	—	—	—	—	—	1.9		
Exeter, Elm Brook, New North Road.	29.530	72.0	33.0	39.0	51.0	44.0	40.7	16.6	52.3	47.3	30.9	3.5	1.0	75	538	—	—	—	—	—	—	—	—	1.9		
Exeter, 200 High-st.	29.530	80.3	28.2	52.1	62.9	45.6	48.6	17.3	53.8	45.2	33.5	3.4	1.3	73	536	—	—	—	—	—	—	—	—	1.9		
Venmore	29.544	72.0	32.0	40.0	60.2	49.0	30.0	11.3	54.6	49.7	38.6	3.4	0.8	85	532	—	—	—	—	—	—	—	—	1.4		
Osborne	29.532	76.8	24.1	52.7	62.7	44.6	41.0	18.1	53.4	49.7	38.6	3.4	0.7	85	536	83.7	42.1	0.9	22	32	15	23	3.8	1.1		
Worthing	29.524	74.9	25.5	49.4	59.2	45.7	50.1	13.5	56.8	48.5	38.3	3.7	1.0	78	538	—	—	2.1	29	33	22	17	5.5	4.2		
Fairlight	29.522	75.0	28.0	47.0	58.2	43.8	44.0	18.4	52.9	47.1	33.1	3.8	0.6	87	534	106.0	38.4	0.9	33	24	15	19	6.8	5.7		
Little Briny	29.571	77.6	25.4	52.2	63.1	42.7	41.7	19.4	50.9	47.1	33.9	3.7	0.8	82	540	95.1	36.7	0.4	27	33	11	20	1.9	1.9		
Barnstaple	29.567	80.0	30.0	50.0	62.9	44.9	40.7	18.0	55.0	48.1	33.9	3.7	1.1	78	537	—	—	1.6	26	28	14	23	3.1	2.1		
Aldershot Camp	29.442	82.5	26.0	55.5	62.8	44.7	46.9	18.1	53.8	47.3	30.9	3.5	1.0	75	538	75.1	41.2	0.6	17	36	17	21	5.9	4.8		
Clifton	29.515	78.8	25.4	53.4	61.0	43.5	39.5	18.1	52.5	45.9	38.3	3.6	1.0	78	536	—	42.0	0.5	25	34	9	23	3.6	2.4		
Lewisham	29.504	81.0	23.0	52.0	65.2	45.3	45.1	19.9	53.7	46.2	38.6	3.4	1.3	73	536	—	—	—	—	—	—	—	—	1.9		
Royal Observatory	29.570	81.8	25.3	56.0	65.2	45.8	45.1	19.9	53.7	46.2	38.6	3.4	1.1	77	536	—	—	—	33	24	18	16	—	—		
St. Thomas's Hospital	29.536	82.3	31.2	51.1	64.0	48.0	37.2	16.0	54.7	46.9	38.6	3.7	1.2	75	537	—	—	—	21	34	8	28	—	—		
St. John's Wood	29.536	83.7	25.4	58.3	65.3	43.9	43.1	19.1	54.4	47.3	38.6	3.7	1.2	77	534	—	—	—	33	23	8	27	—	—		
Guildhall	29.513	78.4	33.0	45.4	63.9	46.0	43.6	21.2	56.0	48.3	38.6	3.4	1.3	76	536	—	—	—	—	—	—	—	—	1.9		
Whitehall	29.523	84.8	29.0	55.8	67.3	46.0	43.6	21.2	56.0	48.3	38.6	3.4	1.3	76	536	—	—	—	—	—	—	—	—	1.9		
Camden Town	29.571	80.8	24.5	56.3	64.0	43.4	44.8	20.6	54.0	47.6	38.6	3.6	1.2	76	536	90.8	44.1	—	22	32	10	27	0.2	0.2		
Battersea	29.504	81.0	23.0	52.0	65.2	45.3	45.1	19.9	53.7	46.2	38.6	3.4	1.3	73	536	—	—	0.6	27	29	10	25	1.1	1.1		
Paddington	29.571	80.8	24.5	56.3	64.0	43.4	44.8	20.6	54.0	47.6	38.6	3.6	1.2	76	536	—	—	—	19	40	8	24	1.3	1.3		
Rose Hill	29.562	78.6	26.2	52.4	61.3	44.6	42.1	19.7	52.8	46.3	38.6	3.7	0.9	74	535	77.5	47.2	—	1.9	22	34	14	21	2.6		
Oxford	29.614	77.0	27.0	50.0	61.8	44.6	42.1	19.7	52.8	46.3	38.6	3.7	1.1	77	536	76.0	44.2	—	1.9	—	—	—	—	3.0		
Bicester	29.549	80.0	21.0	50.0	62.8	42.8	39.6	10.2	53.6	45.1	38.6	3.7	1.0	78	531	—	—	—	1.9	29	34	10	18	—	—	
Great Berkhamstead	29.581	78.0	20.0	58.0	62.0	42.8	46.7	19.2	52.2	44.1	29.5	3.7	1.3	73	532	—	—	—	0.9	30	28	8	24	—	—	
Hartwell House	29.534	80.8	19.0	61.8	62.7	42.5	46.5	20.2	53.0	45.4	38.6	3.5	1.1	77	534	—	—	—	—	37	23	9	22	—	—	
Hartwell Rectory	29.533	78.2	23.5	54.7	62.6	43.8	44.0	19.8	53.8	46.6	38.6	3.2	0.8	0.9	76	532	—	—	—	—	37	23	9	22	—	—
Royston	29.534	80.8	19.0	61.8	62.7	42.5	46.5	20.2	53.0	45.4	38.6	3.5	1.1	77	534	—	—	—	—	34	24	11	20	—	—	
Clodecester	29.561	80.0	21.0	50.0	62.8	42.8	39.6	10.2	53.6	45.1	38.6	3.7	1.1	77	531	—	—	—	—	44	11	20	5.2	6.1		
Cardington	29.561	80.0	21.0	50.0	62.8	42.8	39.6	10.2	53.6	45.1	38.6	3.7	1.1	77	531	—	—	—	—	—	—	—	—	1.9		
Aspley	29.561	80.0	21.0	50.0	62.8	42.8	39.6	10.2	53.6	45.1	38.6	3.7	1.1	77	531	—	—	—	—	—	—	—	—	1.9		
Bedford	29.561	80.0	21.0	50.0	62.8	42.8	39.6	10.2	53.6	45.1	38.6	3.7	1.1	77	531	—	—	—	—	—	—	—	—	1.9		
Hereford Infirmary	29.561	80.0	21.0	50.0	62.8	42.8	39.6	10.2	53.6	45.1	38.6	3.7	1.1	77	531	—	—	—	—	—	—	—	—	1.9		
Lampeter	29.561	80.0	21.0	50.0	62.8	42.8	39.6	10.2	53.6	45.1	38.6	3.7	1.1	77	531	—	—	—	—	—	—	—	—	1.9		
Norwich	29.561	80.0	21.0	50.0	62.8	42.8	39.6	10.2	53.6	45.1	38.6	3.7	1.1	77	531	—	—	—	—	—	—	—	—	1.9		
Grantham	29.561	80.0	21.0	50.0	62.8	42.8	39.6	10.2	53.6	45.1	38.6	3.7	1.1	77	531	—	—	—	—	—	—	—	—	1.9		
Belvoir	29.561	80.0	21.0	50.0	62.8	42.8	39.6	10.2	53.6	45.1	38.6	3.7	1.1	77	531	—	—	—	—	—	—	—	—	1.9		
Derby	29.561	80.0	21.0	50.0	62.8	42.8	39.6	10.2	53.6	45.1	38.6	3.7	1.1	77	531	—	—	—	—	—	—	—	—	1.9		
Holkham	29.561	80.0	21.0	50.0	62.8	42.8	39.6	10.2	53.6	45.1	38.6	3.7	1.1	77	531	—	—	—	—	—	—	—	—	1.9		
Nottingham	29.561	80.0	21.0	50.0	62.8	42.8	39.6	10.2	53.6	45.1	38.6	3.7	1.1	77	531	—	—	—	—	—	—	—	—	1.9		
Harwarden	29.561	80.0	21.0	50.0	62.8	42.8	39.6	10.2	53.6	45.1	38.6	3.7	1.1	77	531	—	—	—	—	—	—	—	—	1.9		
Liverpool Observat.	29.561	80.0	21.0	50.0	62.8	42.8	39.6	10.2	53.6	45.1	38.6	3.7	1.1	77	531	—	—	—	—	—	—	—	—	1.9		
Chertown-on-Medlock	29.561	80.0	21.0	50.0	62.8	42.8	39.6	10.2	53.6	45.1	38.6	3.7	1.1	77	531	—	—	—	—	—	—	—	—	1.9		
Manchester	29.561	80.0	21.0	50.0	62.8	42.8	39.6	10.2	53.6	45.1	38.6	3.7	1.1	77	531	—	—	—	—	—	—	—	—	1.9		
Wakfield	29.561	80.0	21.0	50.0	62.8	42.8	39.6	10.2	53.6	45.1	38.6	3.7	1.1	77	531	—	—	—	—	—	—	—	—	1.9		
Leeds	29.561	80.0	21.0	50.0	62.8	42.8	39.6	10.2	53.6	45.1	38.6	3.7	1.1	77	531	—	—	—	—	—	—	—	—	1.9		
Stonyhurst	29.561	80.0	21.0	50.0	62.8	42.8	39.6	10.2	53.6	45.1	38.6	3.7	1.1	77	531	—	—	—	—	—	—	—	—	1.9		
Scarborough	29.561	80.0	21.0	50.0	62.8	42.8	39.6	10.2	53.6	45.1	38.6	3.7	1.1	77	531	—	—	—	—	—	—	—	—	1.9		
Isle of Man	29.561	80.0	21.0	50.0	62.8	42.8	39.6	10.2	53.6	45.1	38.6	3.7	1.1	77	531	—	—	—	—	—	—	—	—	1.9		
North Shields	29.561	80.0	21.0	50.0	62.8	42.8	39.6	10.2	53.6	45.1	38.6	3.7	1.1	77	531	—	—	—	—	—	—	—	—	1.9		
St. Paul's Parsonage	29.561	80.0	21.0	50.0	62.8	42.8	39.6	10.2	53.6	45.1	38.6	3.7	1.1	77	531	—	—	—	—	—	—	—	—	1.9		
Bywell	29.561	80.0	21.0	50.0	62.8	42.8	39.6	10.2	53.6	45.1	38.6	3.7	1.1	77	531	—	—	—	—	—	—	—	—	1.9		
Allenheads	29.561	80.0	21.0	50.0	62.8	42.8	39.6	10.2	53.6	45.1	38.6	3.7	1.1	77	531	—	—	—	—	—	—	—	—	1.9		

Meteorological Table, Quarter ending June 30th, 1859.

Year 1859.	Month.	Pressure of Atmosphere in Month.			Temperature of Air in Month.			Mean Temperature.			Mean Reading of Thermometer.			Wind.			Mean Amount of Rain.						
		Mean.	Range.	in.	Highest.	Lowest.	Range.	Of all Highest.	Of all Lowest.	Daily Range.	Air.	Dew Point.	Elastic Force.	Mean.	In a cubic foot of Air.	Short Saturation.		Mean Weight of a cubic foot of Air.	Maximum in Mays.	Minimum in Grass.	Mean Amount of Rain.	Number of Days it fell.	
																							N.
ST. JOHN'S WOOD (Literary Institution).																							
Mr. JOHN CARTER, Librarian.																							
GUILDHALL (City of London).																							
WILLIAM HAYWOOD, Esq., C.E.																							
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CAMDEN TOWN.																							
G. J. SYMONS, Esq., M.B.E.S.																							
BATTERSEA TRAINING SCHOOL.																							
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WHITEHEAD, Esq., F.R.S., M.B.E.S.																							
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MERCER INFIRMARY.																							
J. L. SMITH, Esq., M.B.E.S.																							

	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total	Inch.	Barom.	Therm.	Wind	Clouds	Remarks
LAMPETER (Cardiganshire)	29-684	29-685	29-686	29-687	29-688	29-689	29-690	29-691	29-692	29-693	29-694	29-695	29-696	29-697	29-698	29-699
Rev. Prof. J. Matthews, M.A.	29-684	29-685	29-686	29-687	29-688	29-689	29-690	29-691	29-692	29-693	29-694	29-695	29-696	29-697	29-698	29-699
NORWICH PRIORY	29-684	29-685	29-686	29-687	29-688	29-689	29-690	29-691	29-692	29-693	29-694	29-695	29-696	29-697	29-698	29-699
WILLIAM BROOKS, Esq., F.R.S.,	29-684	29-685	29-686	29-687	29-688	29-689	29-690	29-691	29-692	29-693	29-694	29-695	29-696	29-697	29-698	29-699
M.B.M.S.	29-684	29-685	29-686	29-687	29-688	29-689	29-690	29-691	29-692	29-693	29-694	29-695	29-696	29-697	29-698	29-699
GRANVILLE	29-684	29-685	29-686	29-687	29-688	29-689	29-690	29-691	29-692	29-693	29-694	29-695	29-696	29-697	29-698	29-699
JAMES HARRIS, Esq.	29-684	29-685	29-686	29-687	29-688	29-689	29-690	29-691	29-692	29-693	29-694	29-695	29-696	29-697	29-698	29-699
M.B.M.S.	29-684	29-685	29-686	29-687	29-688	29-689	29-690	29-691	29-692	29-693	29-694	29-695	29-696	29-697	29-698	29-699
BELVOIR CASTLE,	29-684	29-685	29-686	29-687	29-688	29-689	29-690	29-691	29-692	29-693	29-694	29-695	29-696	29-697	29-698	29-699
WILLIAM INGRAM, Esq., M.B.M.S.	29-684	29-685	29-686	29-687	29-688	29-689	29-690	29-691	29-692	29-693	29-694	29-695	29-696	29-697	29-698	29-699
DURHAM	29-684	29-685	29-686	29-687	29-688	29-689	29-690	29-691	29-692	29-693	29-694	29-695	29-696	29-697	29-698	29-699
JOHN DAVIS, Esq.	29-684	29-685	29-686	29-687	29-688	29-689	29-690	29-691	29-692	29-693	29-694	29-695	29-696	29-697	29-698	29-699
HOLKHAM	29-684	29-685	29-686	29-687	29-688	29-689	29-690	29-691	29-692	29-693	29-694	29-695	29-696	29-697	29-698	29-699
S. SULLIVAN, Esq., M.B.M.S., As-	29-684	29-685	29-686	29-687	29-688	29-689	29-690	29-691	29-692	29-693	29-694	29-695	29-696	29-697	29-698	29-699
sistant to the EARL OF LEICESTER.	29-684	29-685	29-686	29-687	29-688	29-689	29-690	29-691	29-692	29-693	29-694	29-695	29-696	29-697	29-698	29-699
HAWARDEN	29-684	29-685	29-686	29-687	29-688	29-689	29-690	29-691	29-692	29-693	29-694	29-695	29-696	29-697	29-698	29-699
THOMAS MORFAT, Esq., M.D.,	29-684	29-685	29-686	29-687	29-688	29-689	29-690	29-691	29-692	29-693	29-694	29-695	29-696	29-697	29-698	29-699
F.R.S., M.B.M.S.	29-684	29-685	29-686	29-687	29-688	29-689	29-690	29-691	29-692	29-693	29-694	29-695	29-696	29-697	29-698	29-699
LIVERPOOL OBSERVATORY	29-684	29-685	29-686	29-687	29-688	29-689	29-690	29-691	29-692	29-693	29-694	29-695	29-696	29-697	29-698	29-699
JOHN HARTUP, Esq., F.R.S.	29-684	29-685	29-686	29-687	29-688	29-689	29-690	29-691	29-692	29-693	29-694	29-695	29-696	29-697	29-698	29-699
HORLTON UPON-MEDLOCK,	29-684	29-685	29-686	29-687	29-688	29-689	29-									

Second Rata games were placed.—At Elmbrook, Exeter, 37 feet above the ground, the amount collected was 5.1 inches; at Clifton, 50 feet, 6.2 inches; at Oxford, 22 feet, 5.9 inches; at Carlington, 36 feet, 5.3 inches; and at Norwich, 31 feet, 5.5 inches.

ON THE
METEOROLOGY OF ENGLAND,

DURING THE

Quarter ending September 30, 1859.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

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1859.

On the Weather during the Quarter ending September 30th, 1859.

Remarks on the weather, during the Quarter ending 30th of September 1859. By JAMES GLAISHER, Esq., F.R.S., &c., Sec. of the British Meteorological Society.

From the beginning of the quarter till the 27th of August the weather was unusually fine and hot; the heat during some parts of July was excessive. The excess of heat for the 51 days ending August 27th averaged $4\frac{1}{2}^{\circ}$ daily. From August 28th to September 22d a cold period prevailed; the defect of temperature averaged $1\frac{1}{2}^{\circ}$ daily; and from September 23d to the end of the quarter the temperature was daily in excess to the average amount of $4\frac{1}{2}^{\circ}$.

The month of July was warm throughout, the temperature of the air in the shade reached 92° on the 12th, and 93° on both the 13th and 18th days; the mean temperature of these days was $75^{\circ}7$, $75^{\circ}2$, and $74^{\circ}3$ respectively, and on seven other days in the month the mean temperature of the 24 hours exceeded 70° . In the years 1826 and 1837 the mean temperature exceeded 70° on nine days; but back to the year 1814 there is no instance of 10 days in the month of July of such high temperature. It sometimes happens that several years together pass, as in the years 1838, 1839, 1840, 1841, and 1842, without any instance of a mean temperature for the day reaching 70° , and there was but one only in each of the three following years 1842, 1843, and 1844.

The mean temperature of the month, as might be expected from the preceding facts, was remarkable; it was $68^{\circ}1$; whilst its average, as found from 88 years consecutive observations, is $61^{\circ}4$; the excess of temperature, therefore, for the whole month was no less than $6^{\circ}7$. The temperature of this month is very remarkable in another respect; the highest monthly temperature in any month in the 88 preceding years was 67° in the year 1778, and the temperature of this month exceeds this by $1^{\circ}1$, and therefore the temperature of July stands out as the highest monthly temperature ever experienced as far back as trustworthy records extend.

The mean high day temperature of July was $81^{\circ}8$, exceeding its average by $8\frac{1}{2}^{\circ}$. In the year 1831 it was $76^{\circ}6$, 1846 was $77^{\circ}9$, 1847 was $80^{\circ}6$, and in 1852 was $77^{\circ}8$. The high day temperatures were therefore remarkably high.

The mean low night temperature was $57^{\circ}2$, being $4^{\circ}1$ above the average. The nights were therefore warm, but the high temperature of the month was mostly attributable to excess of day temperature.

The month of August was for the most part warm; its mean temperature was $63^{\circ}3$, showing an excess of 3° nearly. The mean of the high day temperatures was $76^{\circ}1$, being $3^{\circ}9$ in excess. The mean low night temperature was $54\frac{1}{2}^{\circ}$, differing but little from its average for the month; so that the excess of temperature this month also was almost wholly attributable to high day temperature.

September was chiefly cold till the 22d, and very warm from the 23d; its mean temperature was $56\frac{3}{4}^{\circ}$, being $\frac{1}{4}^{\circ}$ above the average of 88 years.

The mean temperature for the three months ending September was $62^{\circ}8$. For the same period in the years 1779 it was $63^{\circ}2$, 1818 it was $63^{\circ}5$, 1846 was $62^{\circ}6$, and 1857 was $63^{\circ}3$; in all other years since 1771 it has been less than $62\frac{3}{4}^{\circ}$; so that in three corresponding periods only, during an interval of 88 years, the temperature of the past three months has been exceeded.

The mean temperature of the 9 months ending September is $53^{\circ}3$, exceeding the average by $3^{\circ}3$. The temperature of every month of this year has been in excess; similarly, every month up to September in the years 1781, 1835, and 1846 were in excess; in both the years 1822 and 1832 eight of the nine months were in excess. The sum of the excesses in 1781 was $16^{\circ}7$, in 1822 was $26^{\circ}1$, in 1834 was $17^{\circ}1$, in 1835 was $15^{\circ}1$, in 1846 was $36^{\circ}5$, and in the year 1859 was $29^{\circ}3$. So that in one instance only, viz., in 1846, has the temperature of the first nine months of this year been exceeded in 88 years.

The mean temperature of the dew-point was above its average value in July, was about its average in August, and below it in September. The amount of water present in the air was therefore greater than usual in July, of the ordinary amount in August, and less in September. The excess, however, of temperature in July being greater than the excess of temperature of the dew-point, and the comparative high temperature of the other two months, caused the degree of humidity of the air to be less than usual throughout the quarter.

The pressure of the atmosphere was greater than its average in July, of nearly its usual value in August, and was less in September. The decrease in the readings of the barometer from month to month was about 0.1 inch, and was unusually uniform all over the country.

The decrease of temperature from July to August was from 2° to 3° at places situated near to the sea; it amounted to 4° , 5° , or 6° at places inland, situated between 51° and 53° of latitude; and was 2° , 3° , or 4° at places north of the parallel of 53° .

The fall of rain in the quarter exceeded its average by 0.7 inch. The deficiency upon the year is thus reduced to $\frac{3}{4}$ inch only.

The temperature of vegetation, as indicated by the readings of a thermometer with its bulb placed on grass, was never below 40° in the months of July and August; a most remarkable circumstance. In the month of September a thermometer thus placed read once 35° , and on eight other occasions never between 35° and 40° . During one entire night in September the temperature of vegetation never descended below $64\frac{1}{2}^{\circ}$; whilst in July and August the highest readings were 60° . Usually the temperature of vegetation descends to that of the freezing point of water several times during three months, and is liable to do so every month in the year. This long continued great heat cannot but exercise a great influence on vegetation.

It is very desirable to ascertain the effects of the high temperature of the current period upon public health, agriculture, and vegetation generally. These perhaps may be best ascertained by comparing the results of the present year with those of other years of contrary character, i.e., those remarkable for low temperatures. The following are those thus distinguished; 1771, 1773, 1784, 1785, 1786, 1799, 1814, 1816, 1817, 1820, 1823, and 1845, and of these, perhaps, the year 1816 exhibits the greatest contrasts as compared with the present year. The monthly temperatures of the years 1816 and 1859 are as follow:—

Year.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.
1816 - -	36.7	36.6	39.2	43.4	48.8	53.1	54.5	57.9	58.9
1859 - -	40.4	43.1	46.4	46.6	53.1	61.4	68.1	63.5	56.7
Diff. - -	3.7	6.5	7.2	3.2	4.3	8.3	13.6	5.6	-2.2

The sign (-) denotes that the temperature of September in the year 1859 was less than in the year 1816; in all the remaining months it was greater by the quantities in the lowest line of the above table.

On the Weather during the Quarter ending September 30th, 1859.

The sum of the differences in the first eight months is $50^{\circ}2$, or averaging $5^{\circ}6$ monthly. The temperatures $53^{\circ}1$ in June and $54^{\circ}5$ in July 1816 are the lowest recorded within the period of 88 years for those months, and $68^{\circ}1$ is the highest in July in the same period; the difference, $15^{\circ}6$, shows the extreme range of monthly temperature in this month,—a summer month,—and clearly shows the necessity of long continued observations in this country, to determine average or true values.

The mean temperature of the air at Greenwich for the three months ending August, constituting the three summer months, was $64^{\circ}3$, being $4^{\circ}3$ above the average of 88 years.

1859. Months.	Temperature of						Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.		
	Air.		Evaporation.	Dew Point.		Air— Daily Range.	Water of the Thames.	Mean.	Diff. from average of 18 years.	Mean.	Diff. from average of 18 years.
	Mean.	Diff. from average of 88 years.	Mean.	Diff. from average of 18 years.	Mean.	Diff. from average of 18 years.					
July	68.1	+0.7	0.5	0.0	58.3	+4.6	0	in.	in.	grs.	gr.
Aug.	63.5	+2.8	2.1	58.4	54.2	+0.1	68.0	*487	+0.063	5.4	+0.8
Sept.	56.7	+0.3	0.4	52.7	50.0	-1.2	61.8	*421	-0.062	4.7	0.0
Mean	62.8	+3.3	2.7	57.9	54.2	+1.2	67.0	*423	+0.013	4.7	+0.2

1859. Months.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal movement of the Air.		Reading of Thermometer on Grass.			
	Mean.		Mean.		Mean.		Amount.		Diff. from average of 44 years.		Number of Nights it was		Lowest Reading at Night.	
	Mean.	Diff. from average of 18 years.	Mean.	Diff. from average of 18 years.	Mean.	Diff. from average of 18 years.	Amount.	Diff. from average of 44 years.	Amount.	Diff. from average of 44 years.	At or below 30° .	Between 30° and 40° .	Above 40° .	Highest Reading at Night.
July	70	-6	in.	in.	grs.	grs.	in.	in.	Miles.		0	0	31	0
Aug.	72	-5	29.937	+1.42	524	-3	3.3	+0.6	37		0	0	32	40.5
Sept.	75	-6	29.818	+0.019	527	-1	1.1	-1.3	86		0	9	21	40.1
Mean	72	-6	29.769	-1.30	522	-2	3.8	+1.4	97		0	9	21	64.3
							Sum	Sum	Sum	Sum	Sum	Sum	Sum	Sum
	72	-6	29.821	+0.010	528	-2	8.2	+0.7	80		0	10	84	Lowest 35.0 Highest 64.3

NOTE.—In reading this table it will be borne in mind that the sign (-) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunder storms occurred or thunder was heard and lightning seen on the 2d and 3d of July at places south of latitude 52° . On the 4th at Worthing, Clifton, St. John's Wood, Aspley, Norwich, and the Isle of Man; on the 11th at Worthing; on the 18th at places lying between the latitudes 49° and 54° ; on the 19th at Worthing, Stonyhurst, York, Scarborough, Isle of Man, and St. Paul's Parsonage; on the 20th in most parts of the country, but principally in the north; on the 21st, 22d, and 23d in the Southern and Midland Counties generally, and at Scarborough and Leeds; on the 1st of August at Wakefield; on the 3d and 4th at Helston and Nottingham; on the 13th at Guernsey; on the 14th at Guernsey and Fairlight; on the 15th at Cardington and Holkham; on the 25th in the Southern and Midland Counties generally; on the 27th in the Midland and Northern Counties generally; on the 29th at Battersea; and on the 30th at Fairlight, London, Oxford, and Cardington. On the 4th of September at Fairlight; on the 6th at Grantham, Belvoir, and Holkham; on the 12th at Royston; on the 13th at Clifton; on the 21st and 22d at Manchester; and on the 25th at Fairlight and Stonyhurst.

Thunder was heard but lightning was not seen at different places on 15 days in July; on 12 in August; and on 5 in September.

Lightning was seen but thunder was not heard on 9 days in July; on 6 days in August; and on 9 days in September.

Hail fell on the 18th, 20th, 21st, and 31st of July. On the 30th of August at Guernsey, Truro, Clifton, and London; and on the 10th, 13th, 21st, and 29th of September.

Fog was prevalent on 13 days in July, on 17 days in August, and on 8 days in September. It was generally partial and very thin.

Solar halos were seen 29 days during the quarter.

Lunar halos were seen on 9 nights during the quarter.

Aurora were seen from all parts of the country on August 12th, 28th, and 29th. On 1st of September at Clifton near Bristol and Hawarden; on the 2d at Clifton, London, Nottingham, and North Shields; on the 3d and 4th at places north of latitude 51° ; on the 5th at places north of latitude 53° ; on the 8th at Nottingham; on the 21st and 23d at Aldershot; on the 24th and 25th at places north of 51° ; on the 26th at Nottingham; and on the 29th at places north of 51° .

Wheat was cut in the South of England on the 11th of July, and in the North about the end of the month.

Barley was cut in the South about the 13th of July, and in the North at the beginning of August.

Rye was cut at southern stations about the 19th of July, and in the North about the 10th of August.

Oats were cut at southern stations about the middle of July, and at northern stations about the end of the month.

Meteorological Table, Quarter ending September 30th, 1859.

NAMES OF STATIONS.	Mean Pressure of dry Air reduced to the level of the Sea.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Range of Temperature in the Quarter.	Mean of all Highest.	Mean of all Lowest.	Mean Monthly Range of Temperature.	Mean Daily Range of Temperature.	Mean Temperature of the Air.	Mean Temperature of the Dew Point.	Mean Elastic Force of Vapour.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required for saturation.	Mean degree of Humidity.	Mean Weight of a cubic foot of Air.	Mean Reading of Maximum in rays of Sun.	Mean Reading of Minimum on Grass.	WIND.				Mean Amount of Cloud.	Mean Amount of Rain.	
																		N.	E.	S.	W.			
Guernsey	29.508	85.5	50.0	35.5	67.2	56.9	21.8	10.8	62.0	57.1	467	5.3	0.8	86	57.8	528	528	2.0	30	18	17	27	2.6	9
Helston	29.516	90.0	44.0	46.0	73.9	53.3	20.3	20.3	60.3	57.4	472	5.2	1.3	80	578	529	529	2.0	30	18	17	27	2.6	9
Truro	29.476	86.0	40.0	46.0	71.3	54.0	17.3	17.3	61.8	55.1	434	4.6	1.7	66	530	530	530	1.9	31	8	25	33	6.4	6
Torquay	29.662	87.0	42.7	44.3	69.2	52.9	16.3	16.3	61.5	54.9	431	4.8	1.3	79	530	530	530	1.2	26	11	27	28	4.8	6
Exeter, Elm Brook, New North Road.	29.505	89.7	43.8	45.9	70.0	50.5	18.5	18.5	61.5	50.1	467	5.3	0.8	86	57.8	528	528	1.4	20	9	31	31	4.0	5
Exeter, 200 High-st.	29.566	79.0	45.0	34.0	68.9	58.8	25.0	10.1	63.9	57.7	469	5.2	1.3	83	529	529	529	1.7	16	24	11	27	3.6	5
Ventnor	29.542	88.1	44.6	41.5	69.0	54.2	14.8	14.8	59.9	57.9	470	5.2	1.3	83	529	529	529	1.0	12	16	25	41	3.7	5
Osborne	29.502	82.2	47.9	32.3	65.3	56.0	24.6	9.9	62.2	55.0	433	4.8	1.3	82	528	528	528	1.7	16	12	25	41	3.7	5
Worthing	29.531	82.0	42.0	40.0	68.2	53.1	15.1	15.1	60.8	55.0	433	4.8	1.3	82	528	528	528	1.7	16	12	25	41	3.7	5
Fairlight	29.564	88.1	41.1	46.7	69.9	50.0	19.9	19.9	61.5	50.1	467	5.3	0.8	86	57.8	528	528	1.0	12	16	25	41	3.7	5
Little Bridy	29.425	88.0	40.0	46.5	69.8	52.7	17.1	17.1	61.0	55.4	424	4.7	1.2	80	526	526	526	1.4	12	13	23	38	6.4	4
Barnstaple	29.574	87.2	40.0	46.5	69.8	52.7	17.1	17.1	61.0	55.4	424	4.7	1.2	80	526	526	526	1.4	12	13	23	38	6.4	4
Aldershot Camp	29.568	83.0	41.5	51.5	75.0	63.5	11.9	11.9	62.7	58.2	410	4.5	2.2	82	528	528	528	1.1	14	10	37	31	4.5	5
Clifton	29.574	87.2	40.0	46.5	69.8	52.7	17.1	17.1	61.0	55.4	424	4.7	1.2	80	526	526	526	1.1	14	10	37	31	4.5	5
Royal Observatory	29.568	83.0	41.5	51.5	75.0	63.5	11.9	11.9	62.7	58.2	410	4.5	2.2	82	528	528	528	1.1	14	10	37	31	4.5	5
St. John's Wood	29.590	94.0	37.9	56.1	72.4	49.8	12.6	12.6	63.4	51.1	376	4.2	2.8	69	529	529	529	1.5	18	10	16	42	3.0	6
Guildhall	29.568	83.0	41.5	51.5	75.0	63.5	11.9	11.9	62.7	58.2	410	4.5	2.2	82	528	528	528	1.5	18	10	16	42	3.0	6
Whitehall	29.574	87.2	40.0	46.5	69.8	52.7	17.1	17.1	61.0	55.4	424	4.7	1.2	80	526	526	526	1.5	18	10	16	42	3.0	6
Camden Town	29.574	87.2	40.0	46.5	69.8	52.7	17.1	17.1	61.0	55.4	424	4.7	1.2	80	526	526	526	1.5	18	10	16	42	3.0	6
Battersea	29.586	88.6	39.5	49.1	70.7	49.7	11.0	11.0	61.5	50.1	467	5.3	0.8	86	57.8	528	528	2.3	12	22	35	—	5.9	—
St. Mary's Hospital	29.574	87.2	40.0	46.5	69.8	52.7	17.1	17.1	61.0	55.4	424	4.7	1.2	80	526	526	526	2.1	26	13	29	—	5.9	—
Rose Hill	29.574	87.2	40.0	46.5	69.8	52.7	17.1	17.1	61.0	55.4	424	4.7	1.2	80	526	526	526	2.1	26	13	29	—	5.9	—
Oxford	29.507	86.0	39.0	47.0	72.5	54.5	15.0	15.0	61.5	53.1	405	4.5	1.6	75	531	531	531	0.2	18	6	28	40	2.6	5
GreatBerkhamstead	29.516	89.8	38.3	51.5	71.6	51.3	20.3	20.3	61.6	51.5	420	4.3	1.9	66	524	524	524	2.8	10	15	35	09	5.9	—
Hartwell House	29.584	91.0	37.0	54.0	68.9	49.0	19.9	19.9	62.3	50.2	364	4.2	1.9	66	524	524	524	1.7	21	12	8	33	4.6	—
Hartwell Rectory	29.584	91.0	37.0	54.0	68.9	49.0	19.9	19.9	62.3	50.2	364	4.2	1.9	66	524	524	524	1.7	21	12	8	33	4.6	—
Royston	29.600	90.5	41.2	49.9	72.4	52.7	19.7	19.7	61.4	54.1	420	4.3	1.9	66	524	524	524	0.7	10	7	19	28	2.2	5
Gloucester	29.515	87.2	37.4	50.1	71.5	53.9	17.6	17.6	60.3	53.9	418	4.6	1.4	75	527	527	527	0.8	21	8	17	45	4.5	—
Cardington	29.556	92.0	40.6	51.4	67.4	51.2	16.2	16.2	60.4	53.4	420	4.3	1.9	66	524	524	524	0.3	19	9	10	42	4.6	—
Aspley	29.465	82.0	45.0	37.0	65.5	55.0	25.0	10.0	60.5	55.0	437	4.7	1.0	77	528	528	528	0.8	16	29	40	—	5.9	—
Exeter Infirmary	29.578	89.1	36.4	52.7	73.3	51.6	16.7	16.7	60.8	54.0	418	4.2	1.9	66	524	524	524	0.3	19	9	10	42	4.6	—
Lampeter	29.493	86.0	39.0	55.4	69.8	48.4	21.4	21.4	59.5	57.2	469	5.0	0.8	86	57.8	528	528	0.8	16	29	40	—	5.9	—
Norwich	29.578	89.1	36.4	52.7	73.3	51.6	16.7	16.7	60.8	54.0	418	4.2	1.9	66	524	524	524	0.3	19	9	10	42	4.6	—
Belvoir Castle	29.578	89.1	36.4	52.7	73.3	51.6	16.7	16.7	60.8	54.0	418	4.2	1.9	66	524	524	524	0.3	19	9	10	42	4.6	—
Derby	29.553	86.5	37.5	49.9	68.8	53.1	15.7	15.7	60.4	54.1	420	4.3	1.9	66	524	524	524	1.5	17	4	32	37	3.7	—
Holkham	29.542	83.1	42.5	40.0	72.8	51.1	21.7	21.7	60.7	54.2	418	4.3	1.9	66	524	524	524	1.5	17	4	32	37	3.7	—
Nottingham	29.435	83.0	41.0	42.0	66.0	54.5	29.0	12.0	58.7	52.1	389	4.2	1.9	66	524	524	524	1.5	17	4	32	37	3.7	—
Hawarden	29.600	92.0	40.6	51.4	67.4	51.2	16.2	16.2	60.4	53.4	420	4.3	1.9	66	524	524	524	1.5	17	4	32	37	3.7	—
Liverpool Observat.	29.509	82.0	48.1	33.9	67.5	49.0	25.3	17.6	60.6	52.7	399	4.2	1.9	66	524	524	524	1.5	17	4	32	37	3.7	—
Wakfield	29.509	82.0	48.1	33.9	67.5	49.0	25.3	17.6	60.6	52.7	399	4.2	1.9	66	524	524	524	1.5	17	4	32	37	3.7	—
Leeds	29.514	83.6	37.9	43.7	68.7	50.5	18.4	18.4	60.0	51.8	360	4.1	2.0	70	529	529	529	1.6	22	13	23	32	—	—
Stonyhurst	29.447	92.0	35.0	37.0	64.0	50.6	13.6	13.6	57.4	52.1	404	4.5	0.8	86	57.8	528	528	1.6	22	13	23	32	—	—
York	29.514	83.6	37.9	43.7	68.7	50.5	18.4	18.4	60.0	51.8	360	4.1	2.0	70	529	529	529	1.6	22	13	23	32	—	—
Scarborough	29.556	77.4	45.0	32.4	62.0	53.7	23.9	23.9	58.3	53.1	404	4.5	0.8	86	57.8	528	528	1.6	22	13	23	32	—	—
Seaton	29.568	74.9	38.0	36.9	70.0	50.0	29.4	29.4	50.0	57.2	331	4.0	1.4	75	530	530	530	1.8	11	6	17	22	3.0	—
Isle of Man	29.631	81.4	41.0	40.4	63.8	49.0	30.0	14.8	59.6	51.5	381	4.2	1.4	75	530	530	530	1.7	15	15	22	32	—	—
North Shields	29.492	83.5	35.7	47.6	65.3	52.9	14.1	14.1	58.2	46.9	322	4.0	1.4	75	530	530	530	1.7	15	15	22	32	—	—
St. Paul's Parsonage	29.564	83.5	44.0	41.5	68.2	51.8	16.4	16.4	59.5	46.4	316	3.6	2.2	64	530	530	530	1.7	16	7	19	43	—	—
Bywell	29.564	83.5	44.0	41.5	68.2	51.8	16.4	16.4	59.5	46.4	316	3.6	2.2	64	530	530	530	1.7	16	7	19	43	—	—
Allenheads	29.564	83.5	44.0	41.5	68.2	51.8	16.4	16.4	59.5	46.4	316	3.6	2.2	64	530	530	530	1.7	16	7	19	43	—	—

The highest temperatures of the air were at Whitehall, 94.0°; at St. John's Wood, 94.0°; at Aldershot and Royal Observatory, 92.0°; at Camden Town, 91.0°; and at Leamington, 90.5°. The lowest were at Lampeter, 36.4°; at Wakefield, 34.0°; at St. Paul's Parsonage, 33.9°; and at Stonyhurst, 32.9°; at Derby, 32.4°; at Isle of Man, 32.0°; at Gloucester, 31.4°; at Holkham, 31.0°; at St. John's Wood, 30.0°; at Leeds, 29.4°; and at Battersea, 29.0°. The greatest daily ranges were at Leeds, 28.4°; at Wakefield, 28.0°; at St. John's Wood, 28.0°; and at Aldershot and Royal Observatory, 27.7°. The least were at Scarborough, 8.0°; at Guernsey, 10.2°; at Aspley, 10.0°; at Clifton, 10.0°; at Torquay and Liverpool, 11.0°. The heaviest falls were at Barnstaple, 14.1 in.; at Wakefield, 12.8 in.; at Aspley, 12.2 in.; at Clifton, 11.4 in.; at Rose Hill, 11.2 in.; and at Lampeter, 11.1 in. The least falls were at the Isle of Man, 5.5 in.; at Scarborough, 5.3 in.; at Wakefield, 5.0 in.; and at Fairlight, 6.0 in.

QUARTERLY METEOROLOGICAL TABLE FOR DIFFERENT PARALLELS OF LATITUDE.

PARALLELS OF LATITUDE, &c.	Mean Pressure of dry Air reduced to the level of the Sea.	Mean of all Highest Readings of the Thermometer.	Mean of all Lowest Readings of the Thermometer.	Mean Range of Tempera- ture in the Quarter.	Mean of all Highest.	Mean of all Lowest.	Mean Monthly Range of Temperature.	Mean Daily Range of Temperature.	Mean Temperature of the Air.	Mean Temperature of the Dew Point.	Mean Elastic Force of Vapour.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required for saturation.	Mean degree of Humidity.	Mean Weight of a cubic foot of Air.	Mean Reading of Maximum in Rays of Sun.	Mean Reading of Minimum on Grass.	Mean Strength.	WIND.				Mean Amount of Cloud. Mean Amount of Rain. Mean Number of Days in which it fell.	Rain.		
																			Relative Pro- portion of							
																			N.	E.	S.	W.				
Guernsey - - - -	29.508	83.5	50.0	33.5	67.2	56.0	21.8	10.8	62.0	57.1	467	5.3	0.8	86	57.8	528	528	2.0	30	18	17	27	2.6	9		
The Counties of Cornwall and Devonshire - -	29.564	87.2	42.7	44.7	70.3	54.0	29.9	16.3	61.6	54.4	424	4.7	1.3	76	528	528	528	1.5	22	9	30	33	4.2	3.7		
Ventnor and Osborne Worthing, Fairlight, and Little Bridy - - -	29.554	82.5	44.3	37.7	68.9	56.5	29.3	12.4	61.9	57.2	465	5.2	1.4	82	528	528	528	1.0	12	16	24	31	3.8	5.4		
Between the latitudes, 51° and 52° - - -	29.540	83.8	42.8	41.0	68.2	53.6	31.0	14.5	61.3	54.8	430	4.7	1.3	79	526	526	526	1.0	14	14	29	39	3.9	4.0		
52° and 53° - - -	29.562	90.3	44.1	55.5	71.8	52.8	40.5	19.0	62.2	53.2	414	4.5	1.7	74	527	527	527	91.2	49.7	1.5	20	13	28	34	2.4	5.4
53° and 54° - - -	29.545	87.0	39.8	47.7	69.3	51.5	37.6	17.8	50.5	53.8	381	4.2	1.7	77	528	528	528	94.0	45.4	1.2	17	10	24	31	3.5	5.4
54° and 55° - - -	29.558	81.8	39.9	42.6	66.6	50.1	26.9	15.5	57.0	50.0	363	4.2	1.8	76	527	527	527	81.6	41.7	1.5	13	13	27	30	3.1	5.1
North Shields - - -	29.631	81.4	41.0	40.4	63.3	49.0	30.0	14.8	59.5	63.1	381	4.2	1.8	76	527	527	527	81.6	41.7	1.5	13	13	27	30	3.1	5.1

NORWICH PRIORY

ON THE
METEOROLOGY OF ENGLAND,

DURING THE

Quarter ending December '31, 1859.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

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1860.

On the Weather during the Quarter ending December 31st, 1859.

Remarks on the weather, during the Quarter ending 31st of December 1859. By JAMES GLAISHER, Esq., F.R.S., &c., Secretary of the British Meteorological Society.

From October 1st to the 20th the weather was very fine, and the average excess of daily temperature was 6°. On the 21st a sudden and very severe cold set in; the depressions below their average temperatures on the 21st and 22d exceeded 12° on both days, and was as much as 15° below on the 23d, and nearly 16° on the 24th; the daily average defect of temperature from October 21st to the end of the month was 8½° nearly. From November 1st to 8th was warm; the daily excess of temperature was 3½°. A cold period set in on November 9th, and continued, with the exception of a very few days, to December 23d; the cold was very severe between December 14th and 19th, particularly so from 16th to 19th; the defect of temperature on these days amounted to 15°, 17°, 16½°, and 15½° respectively; the average daily defect of temperature for the 45 days ending December 23d was 2¼°. From December 24th to the end of the year was warm, particularly on the last two days, when excesses of temperature over their averages were 13° and 15° respectively, and for the eight days ending December 31st averaged 8° daily.

The ranges of temperatures in the months of October and December, as might be expected from the preceding facts, were very remarkable, the extreme readings having been both remarkably high and low in both months all over the country; the following Tables show these extreme readings in October:

TABLE of the Maxima and Minima Temperatures during the Month of OCTOBER 1859.

Names of Stations.	Highest.	Lowest.	Range.	Names of Stations.	Highest.	Lowest.	Range.	Names of Stations.	Highest.	Lowest.	Range.
Guernsey	71.0	37.0	34.0	Battersea	79.0	22.0	57.0	Derby	76.0	21.0	55.0
Helston	73.0	32.0	41.0	St. Mary's Hospital	82.0	27.0	55.0	Holkham	74.2	25.2	49.0
Truro	73.0	30.0	43.0	Rose Hill	73.7	22.8	50.9	Nottingham	77.5	19.4	58.1
Exeter (Elmbrook)	70.0	28.0	42.0	Oxford	70.0	21.7	48.3	Liverpool	69.4	29.7	39.7
Exeter (200 High St.)	71.2	29.7	41.5	Bicester	72.0	21.5	50.5	Manchester	72.8	24.0	48.8
Osborne	74.8	29.9	44.9	Great Berkhamstead	77.2	20.2	57.0	Ben Rhydding	71.0	21.5	49.5
Worthing	71.2	30.5	40.7	Hartwell House	75.0	21.0	54.0	Wakefield	77.0	20.0	57.0
Fairlight	71.0	24.0	47.0	Hartwell Rectory	77.6	25.0	52.6	Leeds	71.7	25.2	46.5
Little Bridy	79.9	26.4	53.5	Roydon	80.3	26.3	54.0	Stonyhurst	68.0	19.0	49.0
Barnstaple	73.5	32.0	41.5	Gloucester	75.0	24.0	51.0	York	64.5	27.0	37.5
Aldershot Camp	79.0	23.5	55.5	Aspley	76.5	30.5	46.0	Scarborough	66.3	29.0	37.3
Clifton	73.1	24.6	48.5	Cardington	70.0	21.6	54.4	Isle of Man	69.0	21.1	47.9
Royal Observatory	81.0	26.5	54.5	Hereford	76.8	22.5	54.3	North Shields	73.2	21.1	52.1
St. Thomas's Hospital	78.7	30.1	48.6	Lampeter	71.4	21.2	50.2	St. Paul's Parsonage	79.0	24.0	55.0
St. John's Wood	80.0	27.0	53.0	Norwich	74.0	25.0	49.0	Bywell	69.0	24.0	45.0
Guildhall	75.5	31.2	44.3	Grantham	73.5	28.8	44.7	Allenheads	73.2	22.3	50.9
Whitehall	83.0	28.3	54.7	Belvoir Castle	76.5	20.5	56.0	Sale Hall	73.2	22.3	50.9
Camden Town	80.9	23.6	57.3								

From the numbers in this table it will be seen that in some cases the range of temperature has closely approximated to 60°, though not actually attained in any instance. The effect of the vicinity of the sea in lessening the maximum and raising the minima temperatures, are well shown. The ranges of temperatures in this month are very similar to those in the month of April of this year. The next table shows the extreme readings in December.

TABLE of the Maxima and Minima Temperatures during the Month of DECEMBER 1859.

Names of Stations.	Highest.	Lowest.	Range.	Names of Stations.	Highest.	Lowest.	Range.	Names of Stations.	Highest.	Lowest.	Range.
Guernsey	55.0	26.5	28.5	Whitehall	59.0	18.5	40.5	Holkham	55.5	8.8	46.7
Helston	57.0	22.0	35.0	Camden Town	56.4	14.4	42.0	Nottingham	53.8	7.9	45.9
Truro	57.0	9.0	48.0	Battersea	55.0	15.0	40.0	Hawarden	55.0	10.9	44.1
Exeter (Elmbrook)	57.0	14.5	42.5	Rose Hill	56.1	11.5	44.6	Liverpool	54.0	11.2	42.8
Exeter (200 High St.)	57.4	16.2	41.2	Oxford	56.5	11.4	45.1	Manchester	54.5	11.5	43.0
Osborne	64.3	17.6	46.7	Bicester	55.0	10.5	44.5	Ben Rhydding	51.0	5.0	46.0
Worthing	51.9	20.9	31.0	Great Berkhamstead	55.9	13.6	42.3	Wakefield	52.5	14.0	38.5
Fairlight	52.0	20.0	32.0	Hartwell Rectory	54.8	12.0	42.8	Leeds	52.3	12.7	39.6
Little Bridy	53.3	15.5	37.8	Roydon	54.5	10.0	44.5	York	50.0	6.5	43.5
Barnstaple	55.0	17.0	38.0	Gloucester	54.0	20.0	34.0	Scarborough	52.9	10.5	42.4
Aldershot Camp	55.0	15.5	39.5	Aspley	53.6	2.0	51.6	Isle of Man	51.8	12.0	39.8
Clifton	55.0	10.2	44.8	Cardington	53.0	1.0	52.0	North Shields	51.1	12.0	39.1
Lewisham	56.5	10.0	46.5	Lampeter	54.0	2.0	52.0	St. Paul's Parsonage	51.1	12.0	39.1
Royal Observatory	56.5	14.0	42.5	Norwich	53.0	1.0	52.0	Bywell	50.5	10.5	40.0
St. Thomas's Hospital	55.5	19.8	35.7	Grantham	54.2	12.7	41.5	Allenheads	48.0	10.5	37.5
St. John's Wood	55.8	17.2	38.6	Belvoir Castle	53.7	9.3	44.4				
Guildhall	55.2	21.0	34.2	Derby	52.0	9.0	43.0				

From this table it will be seen that the temperatures in the month of December have been remarkably low. At Lampeter it is stated to have been as low as, -2°; at Norwich, 1°, confirmed by Holkham, 3°, although it is situated close to the sea; these very low temperatures are, however, confined to a few localities only; at many stations the minima readings were, however, below 10°.

The mean high day temperature of October was 59°, being 3° above the average; of November was 49° 4, being the same as the average; and of December was 41½°, being 4° below the average.

The mean low night temperature of October was 45°, being 1½° in excess; of November was 35½°, being 2½° below the average; and in December was 31½°, being 4° too low.

Therefore both the days and nights in October were moderately warm; in November the days were of their average warmth, but the nights were cold; and both the days and nights in December were very cold.

The mean temperature of October was 1½° in excess, November was 1½°, and December was 3½° in defect, as compared with the average of the 18 preceding years.

The mean temperature of the whole year was 50° 8, being 2° 5 above the average of 88 years.

The mean temperature of the dew-point was above its average in October, and below it in November and December. The degree of humidity for the quarter is that of the average.

The mean temperature of the dew-point for the year was 44½°, and the mean degree of humidity was 80, complete saturation being represented by 100.

The pressure of the atmosphere was above its average in November, and was much less both in October and December. The mean for the year at the height of 160 feet above the level of the sea, and in latitude 51½°, was 29.772 inches.

The decrease of temperature from October to November was from 5° to 10°, being generally small near the sea, excepting at Worthing; the decrease from November to December was 5° or 6°, and nearly uniform all over the country.

On the Weather during the Quarter ending December 31st, 1859.

The reading of the barometer was low in October; it increased 0.3 inch generally by November, and was 0.2 inch lower in December than in the preceding month.

The range of readings of the barometer in the month of November was large, amounting to 1½ inch in the south of England, gradually increasing to 2½ inches in the north, and in December was also large, exceeding 2 inches at all places.

The fall of rain in the quarter was 8½ inches, exceeding the average by 1.6 inch. The fall in the year amounted to 25.9 inches, exceeding the average by half an inch; this is the first year since 1854 that the fall of rain has not been short of the average.

The temperature of vegetation, as indicated by a thermometer placed on grass, was below 30° on 52 nights out of the quarter.

The mean temperature of the air at Greenwich for the three months ending November, constituting the three autumn months, was 49° 9, being 0° 7 below the average of 88 years.

1859. MONTHS.		Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
		Air.		Evaporation.		Dew Point.		Air—Daily Range.		Water of the Thames.	Mean.	Diff. from average of 18 years.	Mean.	Diff. from average of 18 years.	
		Mean.	Diff. from average of 18 years.	Mean.	Diff. from average of 18 years.	Mean.	Diff. from average of 18 years.	Mean.	Diff. from average of 18 years.						
Oct.	50.9	+1.0	49.4	+1.3	47.9	+2.1	14.0	-0.7	57.9	3.4	+0.24	3.7	+0.2		
Nov.	42.1	-0.3	41.3	-1.3	38.3	-2.0	13.9	+2.4	43.9	2.1	-0.23	2.6	-0.3		
Dec.	36.8	-2.2	37.7	-3.7	33.4	-5.9	9.7	+0.2	39.0	1.91	-0.33	2.2	-0.4		
Mean	43.3	-0.5	41.7	-1.3	39.9	-1.3	12.5	+0.6	47.6	2.32	-0.13	2.8	-0.2		

1859. MONTHS.		Degree of Humidity.	Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Reading of Thermometer on Grass.					
		Mean.	Diff. from average of 18 years.	Mean.	Diff. from average of 18 years.	Mean.	Diff. from average of 18 years.	Amount.	Diff. from average of 44 years.	Number of Nights it was			Lowest Reading at Night.	Highest Reading at Night.
										At or below 30°.	Between 30° and 40°.	Above 40°.		
Oct.	89	+2	in.	in.	grs.	grs.	in.	in.	8	3	20	0	56.0	
Nov.	87	-2	29.523	-1.68	535	-4	3.6	+0.8	20	6	4	18.2	45.0	
Dec.	88	-1	29.824	+0.68	551	+4	2.9	+0.5	24	5	2	11.0	43.0	
Mean	88	0	29.657	-1.03	546	0	Sum 8.7	Sum +1.6	Sum 52	Sum 14	Sum 26	Lowest 11.0	Highest 56.0	

NOTE.—In reading this table it will be borne in mind that the sign (-) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunder storms occurred or thunder was heard and lightning seen on the 7th of October at Fairlight, Cardington, and Holkham; on the 8th at Norwich; on the 10th at Fairlight; on the 21st at Holkham, Scarborough, and the Isle of Man; on the 22d at Fairlight; on the 23d at Allenheads; on the 24th at Fairlight and Little Bridy; on the 25th at Helston; on the 26th at Manchester; on the 30th at Barnstaple; and on the 31st at Barnstaple and Oxford. On the 1st of November at Helston, Osborne, Fairlight, and Clifton; on the 6th at Aldershot and Great Berkhamstead; on the 7th at Fairlight and Manchester; and on the 30th at Scarborough. On the 17th of December at North Shields; on the 21st at Aldershot and Gloucester; on the 27th at Helston; on the 28th at Guernsey, Truro, Exeter, and Little Bridy; on the 30th at Clifton, Nottingham, and North Shields; and on the 31st at Norwich.

Thunder was heard but lightning was not seen on the 4th of October at Stonyhurst and Allenheads; on the 7th at Scarborough; on the 21st at Helston, Osborne, and Oxford; on the 22d at Osborne and Stonyhurst; and on the 25th at Oxford. On the 6th of November at Little Bridy; on the 17th and 20th of December at Little Bridy; and on the 30th at Bywell.

Lightning was seen but thunder not heard on the 10th and 17th of October at Little Bridy; on the 21st, 22d, 23d, 24th, 25th, and 26th throughout most parts of the country; on the 27th near Oxford; and on the 31st in different parts of the country; and also on 6 days in November and 9 days in December.

Solar halos were seen on 9 days in October, 9 days in November, and on 13 days in December.

Aurora were seen on 5 nights in October, 8 nights in November, and 9 nights in December. Auroras were seen on the 1st of October at Fairlight, Little Bridy, Clifton, Great Berkhamstead, Cardington, Norwich, Hereford, Nottingham, and Bywell; on the 2d at Little Bridy, Clifton, on the 7th at Camden Town; on the 12th at Helston, Exeter, Fairlight, Little Bridy, Clifton, Camden Town, Cardington, Grantham, Nottingham, Stonyhurst, and Allenheads; on the 13th at Osborne; on the 14th at Osborne; on the 15th and 16th at Nottingham; on the 17th at Osborne; on the 20th at North Shields and Allenheads; on the 21st at Little Bridy, Nottingham, and North Shields; on the 22d at Great Berkhamstead, North Shields, and Allenheads; on the 23d at Grantham and Nottingham; and on the 31st at Nottingham. On the 3d of November at Allenheads; on the 5th at North Shields; on the 10th at Belvoir; on the 13th at Clifton and Allenheads; on the 14th at Allenheads; and on the 15th at Cardington and Nottingham. On the 13th of December at Clifton, Bicester, Cardington, Nottingham, and Scarborough; on the 14th at Nottingham, Stonyhurst, and St. Paul's Parsonage; on the 19th at Little Bridy; and on the 22d at Nottingham.

Snow fell frequently at most places between 31st October and 23d December. Hail fell during the latter part of the month of October at several places; and on 6 days in November and on 10 days in December at different places.

Year 1859.	Month.	Names of Stations and Observers.	Pressure of Atmosphere in Month.		Temperature of Air in Month.			Mean Tem- perature.	Vapour.		Mean Reading of Thermometer. (Grass.)	Wind.		Mean Amount of Rain.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
			Mean.	Range.	Highest.	Lowest.	Range.		Of all Highest.	Of all Lowest.		Daily Range.	Air.		Dew Point.	Elastic Force.	Mean. In a cubic foot of Air.	Saturation. Duty, $R_{100} = 100$.	Mean Weight of a cubic foot of Air.	Maximum in Days of Sun.	Minimum on Days of Grass.	Estimated Strength.	Relative Proportion of				Mean Amount of Ozone.	Number of Days it fell.	Rain.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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Oct.	29	GUILDHALL (City of London), WILLIAM HAYWOOD, Esq., C.E.	29.649	0.922	75.5	30.2	45.3	60.6	48.0	12.9	31.7	49.3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Year	Month	Name of Station and Observer	Pressure of Atmosphere in Month		Temperature of Air in Month		Mean Temperature	Vapour		Mean Reading of Thermometer (Grass)	Wind		Mean Amount of Rain
			Mean	Range	Highest	Lowest		Range	Of all Highest		Of all Lowest	Mean	
Oct.	29	GRANTHAM, JAMES WILLIAM LEANS, Esq., M.B.M.S.	29.753	0.916	58.1	30.4	27.7	49.0	39.3	9.7	34.3	39.3	1
Nov.	29	REYVOIR CASTLE, WILLIAM INGRAM, Esq., M.B.M.S.	29.674	0.818	53.2	21.0	34.2	43.4	34.1	9.3	33.2	37.8	1
Dec.	29	DERRY, JOHN DAVIS, Esq.	29.800	0.987	56.0	18.5	37.5	54.3	38.8	8.5	38.8	46.7	1
Oct.	29	HOLKHAM, S. SELLAR, Esq., M.B.M.S., As- sistant to the Earl of LEICESTER.	29.667	0.933	59.2	24.3	34.9	48.3	39.4	11.4	39.4	44.3	1
Nov.	29	NOTTINGHAM, E. J. LOWE, Esq., F.R.A.S., M.B.M.S.	29.667	0.933	59.2	24.3	34.9	48.3	39.4	11.4	39.4	44.3	1
Dec.	29	HAWARDEN, THOMAS MOPPAT, Esq., M.D., F.R.A.S., M.B.M.S.	29.667	0.933	59.2	24.3	34.9	48.3	39.4	11.4	39.4	44.3	1
Oct.	29	LIVERPOOL OBSERVATORY, JOHN HARTUP, Esq., F.R.A.S.	29.667	0.933	59.2	24.3	34.9	48.3	39.4	11.4	39.4	44.3	1
Nov.	29	MANCHESTER, GEORGE VENABLES VERNON, Esq., F.R.A.S., M.B.M.S.	29.667	0.933	59.2	24.3	34.9	48.3	39.4	11.4	39.4	44.3	1
Dec.	29	WATFORD PRISON, RALPH MILNER, Esq., M.B.M.S.	29.667	0.933	59.2	24.3	34.9	48.3	39.4	11.4	39.4	44.3	1
Nov.	29	LEEDS PHILOSOPHICAL HALL, HENRY DENT, Esq., A.L.S.	29.667	0.933	59.2	24.3	34.9	48.3	39.4	11.4	39.4	44.3	1
Dec.	29	STONYHURST COLLEGE, Rev. ALFRED WILD, M.A., F.R.A.S.	29.667	0.933	59.2	24.3	34.9	48.3	39.4	11.4	39.4	44.3	1
Nov.	29	YORK, JOHN FORD, Esq.	29.667	0.933	59.2	24.3	34.9	48.3	39.4	11.4	39.4	44.3	1
Dec.	29	SCARBOROUGH, J. W. WOODALL, Esq., B.A.	29.667	0.933	59.2	24.3	34.9	48.3	39.4	11.4	39.4	44.3	1
Nov.	29	ISLE OF MAN, JAMES BURNAN, Esq., F.R.A.S.	29.667	0.933	59.2	24.3	34.9	48.3	39.4	11.4	39.4	44.3	1
Dec.	29	NORTH SHIELDS, ROBERT SPENCE, Esq.	29.667	0.933	59.2	24.3	34.9	48.3	39.4	11.4	39.4	44.3	1
Nov.	29	ST. PAUL'S PARSONAGE, Rev. S. SELLAR, Esq., M.B.M.S., Rev. J. H. DENT, Esq., M.B.M.S., under the direction of T. SOR- BY, Esq., F.R.S., M.B.M.S.	29.667	0.933	59.2	24.3	34.9	48.3	39.4	11.4	39.4	44.3	1
Dec.	29	ALLENHEADS, THOMAS BOWEN, Esq., C.E., Assistant to T. Sor- by, Esq., F.R.S., &c.	29.667	0.933	59.2	24.3	34.9	48.3	39.4	11.4	39.4	44.3	1
Nov.	29	SALE HALL (near Manchester), J. CURTIS, Esq.	29.667	0.933	59.2	24.3	34.9	48.3	39.4	11.4	39.4	44.3	1
Dec.	29	BEN RHYDDING, R. C. TAYLOR, Esq.	29.667	0.933	59.2	24.3	34.9	48.3	39.4	11.4	39.4	44.3	1

Second Rain gauges were placed—At Clifton, 50 feet above the ground, the amount collected was 7.7 inches; at Rose Hill, 7 feet, 6.7 inches; at Cardington, 38 feet, 3.7 inches; at Norwich, 31 feet, 7.7 inches; at Hockham, 4 feet, 7.5 inches; and at Nottingham, 25 feet, 4.6 inches. Liverpool, November.—Mean reading of barometer has been altered conjecturally from 29.33 to 29.333, the former being evidently erroneous.

53
83
77.3
72.
88
4/320.3
80

ON THE
METEOROLOGY OF ENGLAND,

DURING THE

Quarter ending March 31, 1860.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

Jan 88.8
Feb 81.8
Mar 79.7
Apr 78.7
May 77.7
Jun 77.8
Jul 70 ✓
Aug 72
Sep 75
Oct 89
Nov 87
Dec 88
Jan 88
Feb 80
Mar 79

BRITISH METEOROLOGICAL SOCIETY

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FOR HER MAJESTY'S STATIONERY OFFICE.

1860.

Remarks on the weather, during the Quarter ending 31st of March 1860. By JAMES GLAISHER, Esq., F.R.S., &c., Secretary of the British Meteorological Society.

The weather during the past quarter has been remarkable for a long continuance of low temperature; frequent and great changes in the pressure of the atmosphere, and an almost continuous succession of gales of wind.

The warm period which set in on December 24th 1859, continued to January 24th 1860; the excess of the temperature on the 1st day of the year was 16° , that of the 2d 11° , and of the 3d was 13° , and from January 1st to the 24th it averaged $4^{\circ} \cdot 1$ daily; on the 25th a cold period set in, at first not severely, but became so afterwards, and continued, with very few and trifling exceptions, to the end of the quarter, the average defect of the 67 days ending March 31st was $1\frac{1}{2}^{\circ}$ daily below the average.

The mean high day temperature of January was $1^{\circ} \cdot 9$ above, of February was $2^{\circ} \cdot 2$ below, and of March was $0^{\circ} \cdot 8$ below their averages.

The mean low night temperature of January was $1^{\circ} \cdot 2$ above, of February was $3^{\circ} \cdot 4$ below, and of March was $0^{\circ} \cdot 3$ below their averages.

Therefore both the days and nights in January were warm; in February were both cold, particularly the nights, and both were cold in March, but the nights less so than the days.

The mean temperature of January was $1\frac{1}{2}^{\circ}$ in excess, of February was 3° nearly in defect, and of March $\frac{3}{4}^{\circ}$ in defect as compared with the average of the preceding 19 years. As compared with the year 1859 January was $\frac{3}{4}^{\circ}$, February $7\frac{1}{2}^{\circ}$, and March $5\frac{1}{4}^{\circ}$ colder.

At many places the month of January was the warmest in the quarter; at extreme southern stations February was $4^{\circ} \cdot 9$ colder than January; at places situated between the parallels $50\frac{1}{2}^{\circ}$ and 52° it was 4° colder, between 52° and 53° it was 3° colder, and north of 53° it was $2\frac{1}{2}^{\circ}$ colder.

March was warmer than February by $4^{\circ} \cdot 8$ at extreme southern stations; by $5^{\circ} \cdot 3$ at stations between the parallels $50\frac{1}{2}^{\circ}$ and 52° ; by 5° at those between 52° and 53° ; and by $3^{\circ} \cdot 5$ at extreme northern stations.

The decrease of mean temperature for the quarter was about 1° for an increase of 1° in latitude. During the whole of the quarter the pressure of the atmosphere was constantly varying, the following is an account of the principal changes.

At the level of the sea the reading of the barometer on January 2d was $29 \cdot 85$ in.; this reading decreased to $28 \cdot 82$ in. by the 5th; increased to $30 \cdot 38$ in. by the 8th; decreased to $29 \cdot 82$ in. by the 15th; then there was an increase of pressure amounting to $0 \cdot 5$ in. by the next day; followed by a decrease to $28 \cdot 96$ in. by the 21st; then an increase of $\frac{1}{2}$ in. took place by the 23d, and from the 23d to the 24th there was a decrease of $\frac{3}{4}$ in., the reading being $28 \cdot 73$ in. on the latter day; an increase of nearly $1\frac{1}{2}$ in. took place by the 26th, the reading being $29 \cdot 89$ in., when a sudden decrease of $\frac{3}{4}$ in. took place by the 27th, and as sudden an increase to the same amount by the next day, the reading on the 28th being $30 \cdot 16$ in., when it changed to decrease and was $28 \cdot 95$ in. on the 30th, showing a decrease of $1\frac{1}{2}$ in. nearly; as sudden an increase then took place of nearly $1\frac{1}{2}$ in. by February 3d, the reading being $30 \cdot 38$ in.; there was a decrease of $\frac{1}{2}$ in. by the 6th, the reading being $29 \cdot 88$ in.; this reading increased to $30 \cdot 25$ in. by the next day, there was then a sudden decrease to $29 \cdot 60$ in. by the 8th; an increase of $\frac{1}{2}$ in. took place by the 10th, the reading being $30 \cdot 14$ in., which decreased to $29 \cdot 82$ in. by the 11th; then there was an increase of $\frac{3}{4}$ in. by the 14th, the reading being $30 \cdot 60$ in.; a decrease of $\frac{1}{2}$ in. then took place by the 16th, followed by an increase of $\frac{1}{4}$ in. by the 17th, the reading being $30 \cdot 45$ in.; there was a decrease of 1 in. by the 20th, the reading being $29 \cdot 48$ in.; there was an increase to $30 \cdot 27$ in. by the 23d; then a decrease to $29 \cdot 21$ in. by the 27th; followed by an increase of nearly $\frac{1}{2}$ in. on the same day, the reading being $29 \cdot 66$ in.; then a decrease to $29 \cdot 30$ in. on the 28th; an increase of $\frac{3}{4}$ in. then took place by March 1st, the reading being $30 \cdot 12$ in.; this reading decreased to $29 \cdot 69$ in. by the 4th; then increased to $30 \cdot 57$ in. by the 6th; decreased to $30 \cdot 13$ in. by the next day; increased to $30 \cdot 41$ in. by the 8th; there was then a decrease of almost 1 in. by the 12th, the reading being $29 \cdot 50$ in.; which increased to $29 \cdot 67$ in. by the next day; decreased to $29 \cdot 44$ in. by the 14th; then there was an increase of $\frac{3}{4}$ in. by the 19th; followed by a decrease to the same amount by the 21st, the reading being $29 \cdot 46$ in.; then an increase took place of $\frac{1}{2}$ in. by the next day, the reading being $29 \cdot 94$ in.; which decreased to $29 \cdot 07$ in. by the 24th; then there was an increase of $\frac{3}{4}$ in. by the 26th, the reading being $29 \cdot 78$ in.; then a decrease of $\frac{1}{4}$ in. to $29 \cdot 51$ in. by the 29th; followed by an increase to the same amount by the next day, the reading being $29 \cdot 78$ in.; which decreased rapidly to $28 \cdot 80$ in. by the 31st, being a decrease of 1 in. in the day.

The mean pressure of the atmosphere in January and March was below its average by $\frac{1}{4}$ in.; in February it was slightly in excess, as found from the preceding 19 years, and within this period the mean reading of the barometer has not been so low in January as it was in this year.

The decrease of mean pressure of the atmosphere was about $0 \cdot 03$ in. for an increase of 1° of latitude.

The range of the barometer in January at extreme southern stations was $1 \cdot 6$ in., in February was $1 \cdot 0$ in., and in March was $1 \cdot 7$ in., these values gradually increased going northwards to $1 \cdot 8$ in. in January, and to 2 in. nearly, both in February and March.

The temperature of the dew point in January was $\frac{3}{4}^{\circ}$ in excess, differing but little from the excess of the mean temperature of the month, and therefore the degree of humidity was very nearly that of the average for the month. In February and March the temperature of the dew point was more below its average than the temperature of the air was below its average, and therefore the air was drier in both months than their averages.

The temperature of vegetation, as indicated by a thermometer placed on grass, was below 30° on 58 nights during the quarter; of these 16 were in February. Vegetation is very backward.

The wind. The air has been in rapid motion for one hour out of two throughout the quarter; a succession of gales of wind of unusual duration have been frequent. From January 20 the wind blew continuously for 40 hours, and pressures of 18lbs. on the square foot were recorded; pressures to the same amount took place on the 23d day, when the wind blew without ceasing for 23 hours. For 40 hours following February 1, 9h. A.M., the wind was in rapid motion; and again for 46 hours

from the 5th, and pressures of 12lbs. were recorded; again for 30 hours following February 7d. 2h., for 47 hours following February 15d. 4h., for 57 hours continuously from February 19d. 4h. A.M.; and for 42 hours following February 27d. 10h. A.M.; in this gale a pressure of 28lbs. was registered; and this kind of stormy weather continued to the end of the quarter.

The mean temperature of the air at Greenwich for the three months ending February, constituting the three winter months, was $37^{\circ} \cdot 4$, being $0^{\circ} \cdot 4$ below the average of 89 years.

1860. MONTHS.		Temperature of								Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
		Air.		Evaporation.	Dew Point.		Air—Daily Range.		Water of the Thames.	Mean.	Diff. from average of 19 years.	Mean.	Diff. from average of 19 years.
		Mean.	Diff. from average of 19 years.	Mean.	Diff. from average of 19 years.	Mean.	Diff. from average of 19 years.	Mean.					
Jan.	°	39.7	+3.6	38.2	+1.1	36.2	+0.8	10.2	+0.7	42.1	in. 214	grs. 2.5	+0.1
Feb.	°	35.7	-2.6	33.6	-3.4	30.4	-4.2	12.4	+1.1	36.6	170	2.0	-0.3
Mar.	°	41.1	+0.2	38.4	-1.0	35.0	-1.4	14.2	-0.5	42.3	204	-0.13	-0.1
Mean.	°	38.8	+0.4	36.7	-1.1	35.9	-1.6	12.3	+0.4	40.3	196	-0.12	-0.1

1860. MONTHS.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Reading of Thermometer on Grass.			
	Mean.		Mean.		Mean.		Amount.		Number of Nights it was		Lowest Reading at Night.	Highest Reading at Night.
	Mean.	Diff. from average of 19 years.	Mean.	Diff. from average of 19 years.	Mean.	Diff. from average of 19 years.	Amount.	Diff. from average of 45 years.	At or below 30° .	Between 30° and 40° .	Above 40° .	
Jan.	88	-1	29.514	-2.48	548	-6	1.8	0.0	15	13	3	18.3
Feb.	80	-6	29.857	+0.74	559	+5	1.1	-0.5	26	5	9	9.5
Mar.	79	-3	29.655	-1.45	549	-2	1.9	+0.4	17	11	3	21.0
Mean	82	-3	29.675	-1.06	552	-1	Sum 4.8	Sum -0.1	Sum 58	Sum 27	Sum 6	Lowest 9.5

NOTE.—In reading this table it will be borne in mind that the sign (-) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunder storms occurred or thunder was heard and lightning seen on the 16th of January at St. Paul's Parsonage; on the 20th at Rose Hill; and on the 23d, 24th, and 30th at Guernsey.

On the 26th of February at Barnstaple; on the 27th at Exeter. On the 21st of March at Clifton.

Thunder was heard but lightning was not seen on the 1st of January at Helston; on the 4th at Clifton; and on the 26th at Grantham. On the 5th of February at Manchester; and on the 25th at Nottingham. On the 4th of March at Nottingham.

Lightning was seen but thunder not heard on the 1st of January at Clifton; on the 13th at Truro; on the 15th at Rose Hill; on the 16th at Nottingham; on the 20th at Clifton; on the 21st at Helston; on the 23d at Little Bridg, Clifton, and Nottingham; on the 24th at Osborne, Fairlight, Aldershot, Camden Town, and Nottingham; on the 26th at Aspley; and on the 27th at Rose Hill. On the 25th of February at Nottingham; and on the 26th at the Isle of Man.

Aurora were seen on January 4, 11, 21, 27, 28; February 1, 12, 16, 20, 21, 22, 23; March 5, 12, 13, 14, 18, 22, and 25.

Solar halos were seen on 8 days in January, 2 days in February, and 10 days in March.

Lunar halos were seen on 13 nights in January, 6 nights in February, and 5 nights in March.

Snow fell on 16 days in January and throughout the country during the greater part of the months of February and March.

Hail fell at different parts of the country on 15 days in January, on 18 days in February, and on 14 days in March.

Fog prevailed on 33 days during the quarter.

The pear was in blossom at Guernsey on the 7th of March; and at Helston on the 29th.

The peach was in blossom at Guernsey on the 3d of March; at Helston on the 8th; at Rose Hill near Oxford on the 26th of March; and at Exeter and Nottingham on the 28th.

The elm was in leaf at Helston on the 23d of March; at Exeter on the 28th; and at Hawarden on the 29th.

The horse-chestnut was in leaf at Hawarden on the 29th of February; at Grantham on the 10th; at the Isle of Man on the 25th; at Helston on the 27th; at Guernsey on the 30th; and at Clifton on the 31st.

The scyamore was in leaf at Hawarden on the 29th of February; and at Clifton on the 31st of March.

The hawthorn was in leaf on the 16th of March at Hawarden; on the 19th at Manchester; on the 25th at Grantham and the Isle of Man; on the 28th at Guernsey; and on the 31st at Clifton and Cardington.

The honeysuckle was in flower on the 26th of February at Wakefield.

The lilac was in leaf on the 26th of February at Wakefield; and on the 15th of March at Manchester.

The poplar was in leaf at Helston on the 19th of March.

Thrushes were seen at Gloucester on the 25th of January; and at Wakefield on the 26th of February.

Larks were seen at Gloucester on the 26th of January; and at Wakefield on the 26th of February.

NAMES OF STATIONS.	Mean Pressure of dry Air reduced to the level of the Sea.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Range of Temperature in the Quarter.	Mean of all Highest.	Mean of all Lowest.	Mean Monthly Range of Temperature.	Mean Daily Range of Temperature.	Mean Temperature of the Air.	Mean Temperature of the Dew Point.	Mean Elastic Force of Vapour.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required for saturation.	Mean degree of Humidity.	WIND.				Mean Amount of Ozone.	Mean Amount of Cloud.	Rain.		
															Relative Proportion of								
															N.	E.	S.	W.					
															Mean estimated Strength.								
Guernsey	29.681	54.5	27.5	27.0	46.1	39.2	21.6	6.9	42.0	0.38	231	2.6	0.4	86	1	1	1	1	1	1	1	1	
Helston	29.687	56.0	28.0	28.0	46.6	38.9	19.6	11.7	47.5	0.40	251	2.9	0.4	87	548	2.4	8	5	7	10	4.7	5.7	
Truro	29.682	56.0	28.0	24.0	48.7	37.4	30.3	11.3	43.6	0.38	217	2.5	0.7	75	548	2.7	12	3	4	11	3.7	5.7	
Torquay	29.683	55.7	26.0	32.0	45.5	36.1	20.0	9.2	41.7	0.34	201	2.3	0.7	79	552	2.9	8	5	5	12	3.7	5.7	
Exeter, Elm Brook.	29.683	55.7	26.0	31.0	45.4	33.7	27.2	9.7	40.3	0.34	200	2.3	0.5	79	550	3.2	15	3	4	10	5.2	5.7	
Exeter, 200 High-st.	29.683	55.7	26.0	31.0	45.4	33.7	27.2	9.7	40.3	0.34	200	2.3	0.5	79	550	3.2	15	3	4	10	5.2	5.7	
Ventnor	29.684	54.0	26.0	28.0	46.7	37.0	20.0	10.8	41.2	0.37	223	2.5	0.4	85	552	1.8	9	5	5	12	4.6	5.7	
Osborne	29.685	55.9	26.0	31.9	46.3	34.5	27.4	11.3	40.9	0.35	211	2.4	0.7	79	549	6	5	6	13	4.6	5.7		
Worthing	29.689	54.2	22.6	31.6	44.3	35.1	24.8	9.2	39.2	0.33	217	2.5	0.4	87	550	5.5	32	4	6	12	4.6	5.7	
Fairlight	29.689	54.2	22.6	31.6	44.3	35.1	24.8	9.2	39.2	0.33	217	2.5	0.4	87	550	5.5	32	4	6	12	4.6	5.7	
Little Bridy	29.690	54.0	21.5	32.5	42.9	32.6	27.1	9.6	37.2	0.35	209	2.4	0.1	83	550	3.0	8	3	7	11	6.1	5.7	
Barnstaple	29.690	54.0	20.7	33.6	45.3	36.2	29.2	13.2	39.3	0.34	216	2.4	0.3	92	547	5.0	30	1	7	12	6.1	5.7	
Aldershot Camp	29.692	55.0	23.5	34.5	47.5	36.6	29.6	10.6	41.4	0.37	227	2.3	0.4	87	552	5.9	53	20	4	7	12	6.1	5.7
Clifton	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Royal Observatory	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
St. Thomas's Hospital	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
St. John's Wood	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Guildhall	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Whitehall	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Camden Town	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Battersea	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Rose Hill	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Oxford	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Bicester	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Hartwell House	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Hartwell Rectory	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Royston	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Gloucester	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Cardington	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Aspley	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Bedford	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Lampeter	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Norwich	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Grantham	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Belvoir Castle	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Derby	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Holkham	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Nottingham	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Hawarden	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Liverpool Observat.	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Manchester	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Walsley	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Leeds	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Stonbury	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Ben Rhydding	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Scarborough	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Isle of Man	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
North Shields	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
St. Paul's Parsonage	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
Bywell	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		
High House Farm (Alnwick.)	29.698	56.0	24.0	34.5	45.3	38.3	31.4	12.2	38.8	0.39	196	2.3	0.5	82	552	0.7	7	6	12	4.7	5.7		

The highest temperatures of the air were at Gloucester, 63° 5; Whitehall, 62° 2; Cardington, 60° 0; Greenwich, 59° 5; Bicester, 59° 5; Hartwell House, 59° 2; Guildhall, 58° 3; St. John's Wood, 58° 2; Rose Hill, 57° 3; Torquay, Norwich, and Belvoir Castle, 57° 0. The lowest were at Gloucester, 15° 3; Hartwell House, 14° 0; Lampeter, 13° 4; Nottingham, 13° 3; and Lampeter, 13° 2. The heaviest falls were at Gloucester, 6.9 in.; Aspley, 7° 0; Scarborough, 7° 3; Liverpool, 7° 5; Ventnor, 8° 7; and North Shields, 8° 8. The greatest number of days at Royston, 79; Exeter, 75; at Truro and Little Bridy, 68; Stonbury, 67; St. John's Wood, 66; Parsonage, 11° 1 in.; Guernsey, 10° 9 in.; and North Shields, 10° 8 in. The least falls were at Guildhall, 3° 9 in.; Scarborough, 3° 9 in.; St. Thomas's Hospital and Whitehall, 4° 1 in.; Leeds, 4° 8 in.; and Bicester, 4° 9 in.

QUARTERLY METEOROLOGICAL TABLE FOR DIFFERENT PARALLELS OF LATITUDE.

PARALLELS OF LATITUDE, &c.	Mean Pressure of dry Air reduced to the level of the Sea.	Mean of all Highest Readings of the Thermometer.	Mean of all lowest Readings of the Thermometer.	Mean Range of Tempera- ture in the Quarter.	Mean of all Highest.	Mean of all Lowest.	Mean Monthly Range of Temperature.	Mean Daily Range of Temperature.	Mean Temperature of the Air.	Mean Temperature of the Dew Point.	Mean Elastic Force of Vapour.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required for saturation.	Mean degree of Humidity.	WIND.					Mean Amount of Ozone.	Mean Amount of Cloud.	Rain.			
															Mean Estimated Strength.	Relative Pro- portion of									
																N.	E.	S.	W.						
Guernsey - - - - -	29.681	54.5	27.0	29.0	46.1	39.2	21.6	6.0	42.0	0.8	0.4	86	1	0.5	8	5	7	10	4.7	5.0	54	0.4			
The Counties of Cornwall and Devonshire - - -	29.677	56.5	25.1	29.9	31.4	47.3	36.8	25.9	10.5	42.8	3.5	8	1	0.5	8	1	4	13	11.6	6.0	63	0.6			
Ventnor and Osborne -	29.658	54.0	25.0	29.9	46.3	36.1	26.0	10.2	41.1	3.0	1	0.5	83	549	68.2	31.4	2.3	3	4	13	5.2	5.0	43	0.4	
Worthing, Fairlight, and Little Briday - - - -	29.674	54.1	21.6	32.5	44.1	33.7	27.0	10.4	33.7	3.5	3	0.2	90	550	68.2	31.4	2.3	3	4	6	13	5.2	5.0	43	0.4
Between the latitudes, —																									
51° and 52° - - - - -	29.632	57.6	31.6	26.0	45.8	33.2	29.9	12.6	39.7	3.5	4	0.6	550	548	68.2	31.4	2.3	3	4	6	13	5.2	5.0	43	0.4
52° and 53° - - - - -	29.607	58.3	32.7	25.6	43.8	33.6	32.6	10.2	38.1	3.3	6	0.5	84	550	54.7	31.4	2.3	3	4	6	13	5.2	5.0	43	0.4
53° and 54° - - - - -	29.583	58.5	32.1	26.4	43.6	32.5	29.4	11.1	37.9	3.4	4	0.5	84	550	54.7	31.4	2.3	3	4	6	13	5.2	5.0	43	0.4
North Shields - - - - -	29.557	58.0	31.9	26.1	43.1	31.9	28.4	10.6	36.4	3.3	3	0.5	83	552	50.8	31.4	2.3	3	4	6	13	5.2	5.0	43	0.4

MONTHLY METEOROLOGICAL TABLE FOR THE QUARTER ENDING MARCH 31st, 1860. The Observations have been reduced to Mean values by Glaisher's Barometrical and Diurnal Range Tables, and the Hypometrical results have been deduced from his second edition of Hypometrical Tables.

NAMES OF STATIONS AND OBSERVERS.	Year 1860.	Month.	Pressure of Air in Month.			Temperature of Air in Month.			Mean Temperature.	Vapour.	Mean Weight of a cubic foot of Air.	Mean Degree of Humidity.	Mean Reading of Thermometer.	Wind.			Rain.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
			Mean.	Range.	Direction.	Highest.	Lowest.	Range.						Of all Highest.	Of all Lowest.	Mean.	Daily Range.	Air.	Dew Point.	Elastic Force.	Mean.	Short of Saturation.	Mean Weight of a cubic foot of Air.	Mean Degree of Humidity.	Mean Reading of Thermometer.	Strength.	Relative Proportion of	W.	Z.	E.	Mean Amount of Cloud.	Amount of Rain.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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GUERNSEY.	Jan.	29.631	1.070	54.5	35.0	19.5	48.2	41.4	6.8	44.8	0.8	86	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

ON THE
METEOROLOGY OF ENGLAND,

DURING THE

Quarter ending June 30, 1860.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

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1860.

Remarks on the weather, during the Quarter ending 30th of June 1860. By JAMES GLAISHER, ESQ., F.R.S., &c., Secretary of the British Meteorological Society.

The cold weather which set in on January 25, and which was prevalent to the end of the last quarter, continued, with the exception of the 19 days following May 8, till the end of the present quarter.

The mean daily deficiency of temperature for the 38 days beginning April 1 amounted to $3\frac{1}{2}^{\circ}$, and for the 34 days ending June 30 was as large at $4\frac{1}{2}^{\circ}$; the average daily deficiency for these 72 days was $3\frac{1}{2}^{\circ}$. The remaining 19 days, viz., from May 8 to May 26, were warm, and their temperatures were daily in excess over their averages to the amount of $3\frac{1}{2}^{\circ}$.

The mean high day temperature in April was $3^{\circ}\cdot 3$ below; in May was $1^{\circ}\cdot 2$ above; and in June was the very large amount of $6^{\circ}\cdot 5$ below their respective averages.

The mean low night temperature in April was $3^{\circ}\cdot 2$ below; in May was $0^{\circ}\cdot 5$ above; and in June was $1^{\circ}\cdot 8$ below their averages.

Therefore, both the days and nights in April were remarkably cold, and to an almost equal amount; in May both were somewhat warmer than usual; and in June both were cold, particularly the high day temperatures, which were distinguished by being of lower value than in May, when usually they are higher to the amount of 7 degrees, and being lower than any as far back as 1840, which is as far as trustworthy records extend.

The mean temperature of April was $3^{\circ}\cdot 6$ in defect; in May was $1^{\circ}\cdot 0$ in excess; and in June was $4^{\circ}\cdot 4$ in defect as compared with their respective averages of the preceding 19 years. As compared with the year 1859, April was $3^{\circ}\cdot 7$ colder; May was $0^{\circ}\cdot 7$ warmer; and June was $6^{\circ}\cdot 6$ colder.

The month of April was colder than any April since the year 1839, and we must travel back to the year 1821 to find so cold a June.

The temperature of the month of May exceeded that of April everywhere, to the amount of 7° , 8° , and 9° at extreme northern stations, and of 9° , 10° , and 11° at midland and southern stations.

The month of June was colder than May at Guernsey, in Cornwall and Devonshire, and near the sea south of latitude 53° ; and was somewhat warmer at places situated north of this parallel.

The mean pressure of the atmosphere in April was a little above; in May was a little below; and in June was much below, their averages. The pressure was less than in any June since 1852. The changes of pressure of the atmosphere have been constant during the last quarter as in the preceding quarter.

The range of the barometer readings at extreme southern stations was $1\cdot 2$ inch in April; $1\cdot 0$ inch in May; and somewhat less than an inch in June; these values gradually increased going northward to $1\cdot 9$ inch in April; to $1\cdot 3$ inch in May; and something more than an inch in June at extreme northern stations.

The temperatures of the dew point in April was $3^{\circ}\cdot 4$ in defect, being very nearly the same in amount as that of the air; and therefore the degree of humidity was of its average value; in May it was $0\cdot 8$ in excess, being somewhat less than the excess of temperature of the air, and the air was slightly drier than the average; in June its defect was $1^{\circ}\cdot 3$, whilst that of the air was $4^{\circ}\cdot 4$, so that the air in June was remarkably humid.

The fall of rain at Greenwich in April was $0\cdot 8$ in. in defect; in May was $1\cdot 8$ in. in excess, and in June was $3\cdot 9$ inches in excess. The total fall in the quarter was $10\cdot 7$ in., being $4\cdot 9$ in. over the average for those three months. The fall of rain since 1st January is $15\cdot 5$ in., being $4\cdot 8$ in. in excess, all of which fell in May and June; the fall in the latter month was $5\cdot 8$ in., and is three times the average fall for the month. The fall in the month of June from the year 1815 is shown in the following table:—

FALL OF RAIN in the Month of JUNE at GREENWICH, from 1815 to 1860.

Years.	Amount in Inches.	Years.	Amount in Inches.	Years.	Amount in Inches.	Years.	Amount in Inches.	Years.	Amount in Inches.	Years.	Amount in Inches.
1815	1.9	1823	1.2	1831	2.1	1839	1.9	1847	1.5	1854	1.0
1816	2.4	1824	3.8	1832	3.3	1840	1.5	1848	3.5	1855	1.6
1817	1.4	1825	0.8	1833	2.2	1841	2.7	1849	0.2	1856	2.7
1818	0.7	1826	1.1	1834	1.5	1842	1.0	1850	0.9	1857	1.2
1819	2.5	1827	0.7	1835	2.4	1843	1.3	1851	1.3	1858	1.4
1820	2.3	1828	2.2	1836	1.1	1844	1.8	1852	4.6	1859	5.8
1821	2.4	1829	1.7	1837	1.0	1845	1.9	1853	2.8	1860	
1822	0.9	1830	2.6	1838	5.1	1846	0.5				

From this table it will be seen that from the years 1815 to 1837, there was no instance of a fall so large as 4 in.; in 1838 there was one of $5\cdot 1$ in.; and in the year 1852 one of $4\cdot 6$ in., but back to 1815 there is no instance of a fall so large as in the present June.

This large fall was, however, greatly exceeded at stations situated south of Greenwich, and particularly in Hampshire. The following table shows the amounts at various places, arranged in order of fall, beginning with Southampton, where the amount was largest:—

FALL OF RAIN at different Places in JUNE 1860.

Stations.	Amount collected.	Stations.	Amount collected.	Stations.	Amount collected.	Stations.	Amount collected.
Southampton	9.0	Manchester	in.	Hartwell Rectory	in.	Holkham	in.
Petersfield (Hants)	8.9	Ben Rhydding	6.0	Aspley	5.1	Cardington	4.3
Little Bredy	7.5	Greenwich	5.9	Guernsey	5.1	Hawarden	3.8
Lampeter	7.5	Guildhall	5.8	Worthing	5.0	St. Paul's Parsonage	3.7
Truro	7.4	Bleicester	5.8	Isle of Man	5.0	Belvoir Castle	3.5
Exeter (Elmbrook)	7.1	Battersea	5.6	Helston	4.9	Fairlight	3.5
Clifton	7.0	Aldershot	5.5	Rose Hill, near Oxford	4.9	Liverpool	3.3
Barnstaple	7.0	Camden Town	5.5	Hartwell House	4.9	Nottingham	3.1
Exeter (200 High St.)	6.9	Osborne	5.4	Ventnor	4.8	High House (Alwrick)	3.0
Allenheads	6.5	Gloucester	5.3	Wakefield	4.8	North Shields	2.8
Stonyhurst	6.4	Whitehall	5.2	Bywell	4.6	Carlisle	2.8
St. John's Wood	6.2	St. Thomas's Hospital	5.1	Norwich	4.5	Scarborough	2.8
Great Berkhamstead	6.0	Oxford	5.1	Leeds	4.4		

The temperature of vegetation, as indicated by a thermometer placed on grass, was below 30° on 15 nights; was between 30° and 40° on 35 nights. In April it was as low as 20° ; in May as 27° ; and in June as 31° .

The wind, which was remarkable in the preceding quarter for long-continued rapid motion, has been, although less continuously rapid, as remarkable for the season of the year; during each month the air was moving quickly for one hour out of three, night and day. In April it blew mostly from N.E., and was continuous for 70 hours, beginning the 18th; for 66 hours from the 24th, and for considerable periods at other times. The greatest pressure was 12 lbs. on the square foot. In May the direction was S.W., blowing strongly from 10 hours to 20 hours at different times, and for 90 hours following 26th May, during which gale pressures of 23 lbs. were recorded. In June it blew from S.W. mostly, for 40 hours continuously on two occasions, and for 60 hours from 27th June. On 2d June pressure of 23 lbs. were recorded. This kind of windy weather has been prevalent all this year.

The mean temperature of the air at Greenwich for the three months ending May, constituting the three spring months, was $45^{\circ}\cdot 9$, being $0^{\circ}\cdot 5$ below the average of the preceding 89 years.

1860. MONTHS.	Temperature of								Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
	Air.		Evaporation.		Dew Point.		Air—Daily Range.		Mean.	Diff. from average of 19 years.	Mean.	Diff. from average of 19 years.
	Mean.	Diff. from average of 19 years.	Mean.	Diff. from average of 19 years.	Mean.	Diff. from average of 19 years.	Mean.	Diff. from average of 19 years.				
April	42.9	-2.9	3.6	-3.6	40.1	-3.4	36.7	-3.4	18.1	-0.1	46.2	2.5
May	53.8	+1.3	50.0	+0.9	46.2	+0.8	30.9	+0.7	54.0	+0.13	3.5	+0.1
June	54.8	-3.3	4.4	-4.4	42.2	-2.7	49.7	-1.3	10.5	-4.8	59.2	4.0
Mean	50.5	-1.6	2.3	-2.3	47.4	-1.7	44.2	-1.3	18.5	-1.4	52.3	-0.2

1860. MONTHS.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Reading of Thermometer on Grass.			
	Mean.		Mean.		Mean.		Amount.		Number of Nights it was		Lowest Reading at Night.	Highest Reading at Night.
	Mean.	Diff. from average of 19 years.	Mean.	Diff. from average of 19 years.	Mean.	Diff. from average of 19 years.	Amount.	Diff. from average of 45 years.	At or below 30° .	Between 30° and 40° .	Above 40° .	
April	79	0	29.796	+0.061	grs. 549	+5	in. 1.0	-0.8	13	16	1	19.8
May	75	-1	29.746	-0.016	536	-2	3.9	+1.8	2	16	13	26.8
June	82	+9	29.613	-0.190	532	+1	5.8	+3.9	0	27	30.3	55.0
Mean	79	+3	29.718	-0.047	539	+1	Sum 10.7	Sum +4.9	Sum 15	Sum 35	Sum 41	Lowest 19.8

NOTE.—In reading this table it will be borne in mind that the sign (-) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunder storms occurred or thunder was heard and lightning seen on the 1st of April at Helston; on the 4th at Bywell and Allenheads; and on the 9th at Cardington. On the 11th of May at Hawarden, Manchester, York, Stonyhurst, Ben Rhydding, Scarborough, and North Shields; on the 12th and 13th at Cardington and Hawarden; on the 14th at Grantham and Stonyhurst; on the 15th at Aldershot Camp, Royston, Cardington, Holkham, Belvoir Castle, Stonyhurst, and Hawarden; on the 17th at Scarborough; on the 18th at Norwich and Scarborough; on the 19th at Hawarden; on the 23d at Scarborough; on the 18th at Norwich and Wakefield; and on the 26th at Norwich, Belvoir Castle, Bicester, Hartwell, Leeds, North Shields, Bywell, and Allenheads. On the 1st of June at Scarborough; on the 5th at Holkham; on the 6th at Holkham and York; on the 7th at Hartwell, Hawarden, and Allenheads; on the 9th at Manchester and Carlisle; on the 10th at Oxford, Bicester, and Hartwell; on the 11th at Scarborough, Bywell, and Carlisle; on the 15th at Manchester, Stonyhurst, and Bywell; on the 16th at Osborne, Clifton, Oxford, Bicester, Hartwell, Manchester, and Allenheads; on the 18th at Cardington and Hawarden; on the 20th at Berkhamstead, Cardington, Bicester, Hartwell, Holkham, York, and Liverpool; on the 21st at Gloucester, Cardington, Hartwell, York, Scarborough, and Bywell; on the 25th at Stonyhurst, Scarborough, Bywell, and Allenheads; on the 28th at Scarborough; and on the 29th at Fairlight, Hartwell, and Bywell.

Thunder was heard but lightning was not seen on 2 days in April, 9 in May, and 16 in June, at different parts of the country.

Lightning was seen but thunder not heard on the 9th of April at Aldershot Camp and Manchester. On the 10th of May at Guernsey; on the 12th at Royston; and on the 23d at Clifton and Cardington. On the 10th of June at Holkham and Stonyhurst; and on the 15th at Clifton.

Hail fell on 28 days during the quarter, of which 14 were in April, 6 in May, and 8 in June. Solar halos were seen on 12 days in April, on 10 days in May, and on 7 days in June.

Lunar halos were seen on 8 nights in April, on the 2d of May at Grantham, Manchester, and Stonyhurst; and on the 27th of June at Truro.

Aurora were seen on April 8, 9, 10, 16, 18, 21, 23; and on May 6, 8, 9, 18.

Snow fell on 16 days in April, between the 1st and 24th, generally over the country; on the 21st at Guernsey; and on the 27th, 28th, and 29th of May.

Fog prevailed on 12 nights in April, 16 days in May, and 10 days in June.

Cuckoo were first seen on 10th April at Royston and Barnstaple.

The Lime was first heard on 4th April at Aspley; and on the 6th at Hartwell.

Apple in blossom 14th to 26th May, remarkably late. The Pear from 2d April to 3d May; the Plum 3d April to 3d May; and the Cherry 15th April to 1st May, at different parts of the country.

NAMES OF STATIONS.	Mean Pressure of dry Air reduced to the level of the Sea.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Range of Temperature in the Quarter.	Mean of all Highest.	Mean of all Lowest.	Mean Monthly Range of Temperature.	Mean Daily Range of Temperature.	Mean Temperature of the Air.	Mean Temperature of the New Point.	Mean Elastic Force of Vapour.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required for saturation.	Mean degree of Humidity.	Mean Weight of a cubic foot of Air.	Mean Reading of Maximum in Rays of Sun.	Mean Reading of Minimum on Grass.	Mean Estimated Strength.	WIND.				Mean Amount of Cloud.	Mean Amount of Rain.
																			N.	E.	S.	W.		
Guernsey	29.619	68.5	35.0	33.5	55.8	40.5	21.1	9.3	49.6	45.5	30.5	3.6	0.6	80	76.6	41.0	1.8	1.9	8	5	7	10	4.0	4.4
Helston	29.611	72.0	30.0	42.0	61.9	48.6	30.6	14.0	52.0	48.7	33.2	3.7	0.9	82	77.1	42.0	1.9	2.1	10	10	10	10	4.0	4.4
Truro	29.577	72.0	30.0	42.0	61.9	48.6	30.6	14.0	52.0	48.7	33.2	3.7	0.9	82	77.1	42.0	1.9	2.1	10	10	10	10	4.0	4.4
Exeter, 200 High-st.	29.580	74.2	32.4	41.8	60.4	45.0	30.7	15.4	53.8	49.9	34.4	3.8	1.0	83	78.0	43.0	2.0	2.2	10	10	10	10	4.0	4.4
Venator	29.603	66.0	34.0	32.0	50.0	40.0	20.0	10.0	45.0	41.0	25.0	3.0	0.5	78	75.0	40.0	1.5	1.6	8	8	8	8	3.5	3.8
Osborne	29.609	73.0	31.0	42.0	57.0	44.0	31.0	16.0	51.0	47.0	32.0	3.6	0.8	81	76.0	41.0	1.8	2.0	10	10	10	10	4.0	4.4
Worthing	29.611	69.0	31.0	38.0	55.0	41.0	24.0	13.0	48.0	44.0	29.0	3.4	0.7	79	74.0	40.0	1.6	1.7	8	8	8	8	3.5	3.8
Fairlight	29.611	69.0	31.0	38.0	55.0	41.0	24.0	13.0	48.0	44.0	29.0	3.4	0.7	79	74.0	40.0	1.6	1.7	8	8	8	8	3.5	3.8
Little Brily	29.622	72.0	27.4	44.6	55.3	41.4	29.6	13.9	47.4	44.0	31.1	3.5	0.8	81	76.0	41.0	1.8	2.0	10	10	10	10	4.0	4.4
Barnstaple	29.567	78.0	31.0	47.1	59.1	45.4	33.9	16.7	51.1	47.7	34.2	3.7	0.9	82	77.0	42.0	1.9	2.1	10	10	10	10	4.0	4.4
Aldershot Camp	29.573	79.0	27.4	51.6	61.1	41.8	37.8	19.3	51.1	47.7	34.2	3.7	0.9	82	77.0	42.0	1.9	2.1	10	10	10	10	4.0	4.4
Clifton	29.573	79.0	27.4	51.6	61.1	41.8	37.8	19.3	51.1	47.7	34.2	3.7	0.9	82	77.0	42.0	1.9	2.1	10	10	10	10	4.0	4.4
Royal Observatory	29.590	70.0	28.0	42.0	59.0	41.0	18.0	13.0	48.0	44.0	29.0	3.4	0.7	79	74.0	40.0	1.6	1.7	8	8	8	8	3.5	3.8
St. Thomas's Hospital	29.599	77.8	34.0	43.8	62.3	47.1	31.2	15.2	53.2	49.2	32.0	3.7	0.9	82	77.0	42.0	1.9	2.1	10	10	10	10	4.0	4.4
St. John's Wood	29.598	74.5	32.4	42.1	60.9	43.3	32.2	17.6	50.5	46.9	32.8	3.5	0.8	81	76.0	41.0	1.8	2.0	10	10	10	10	4.0	4.4
Guildhall	29.584	72.7	32.4	40.3	58.1	42.4	34.7	15.7	48.9	45.2	31.1	3.5	0.8	81	76.0	41.0	1.8	2.0	10	10	10	10	4.0	4.4
Whitehall	29.618	81.0	30.0	46.0	63.0	43.0	35.0	16.0	50.0	46.0	31.0	3.5	0.8	81	76.0	41.0	1.8	2.0	10	10	10	10	4.0	4.4
Camden Town	29.611	76.1	27.9	48.2	58.6	42.6	35.0	16.0	50.0	46.0	31.0	3.5	0.8	81	76.0	41.0	1.8	2.0	10	10	10	10	4.0	4.4
Battersea	29.563	77.0	28.1	48.9	58.6	42.6	35.0	16.0	50.0	46.0	31.0	3.5	0.8	81	76.0	41.0	1.8	2.0	10	10	10	10	4.0	4.4
Rose Hill	29.547	73.2	26.8	46.4	60.0	41.0	37.5	19.0	50.0	46.0	31.0	3.5	0.8	81	76.0	41.0	1.8	2.0	10	10	10	10	4.0	4.4
Oxford	29.573	72.0	28.0	44.0	58.0	42.0	34.0	14.0	48.0	44.0	29.0	3.4	0.7	79	74.0	40.0	1.6	1.7	8	8	8	8	3.5	3.8
Bicester	29.525	77.5	29.0	48.5	59.0	40.0	18.0	13.0	48.0	44.0	29.0	3.4	0.7	79	74.0	40.0	1.6	1.7	8	8	8	8	3.5	3.8
Great Berkhamstead	29.592	73.8	32.4	41.4	58.1	42.4	34.7	15.7	48.9	45.2	31.1	3.5	0.8	81	76.0	41.0	1.8	2.0	10	10	10	10	4.0	4.4
Hartwell House	29.584	72.7	32.4	40.3	58.1	42.4	34.7	15.7	48.9	45.2	31.1	3.5	0.8	81	76.0	41.0	1.8	2.0	10	10	10	10	4.0	4.4
Hartwell Rectory	29.546	73.8	32.4	41.4	58.1	42.4	34.7	15.7	48.9	45.2	31.1	3.5	0.8	81	76.0	41.0	1.8	2.0	10	10	10	10	4.0	4.4
Royston	29.620	76.0	29.0	47.0	60.0	41.0	37.5	19.0	50.0	46.0	31.0	3.5	0.8	81	76.0	41.0	1.8	2.0	10	10	10	10	4.0	4.4
Gloucester	29.557	75.0	28.0	47.0	60.0	41.0	37.5	19.0	50.0	46.0	31.0	3.5	0.8	81	76.0	41.0	1.8	2.0	10	10	10	10	4.0	4.4
Cardington	29.576	75.0	28.0	47.0	60.0	41.0	37.5	19.0	50.0	46.0	31.0	3.5	0.8	81	76.0	41.0	1.8	2.0	10	10	10	10	4.0	4.4
Aspley	29.582	75.0	28.0	47.0	60.0	41.0	37.5	19.0	50.0	46.0	31.0	3.5	0.8	81	76.0	41.0	1.8	2.0	10	10	10	10	4.0	4.4
Bedford	29.568	78.0	29.0	49.0	61.4	44.1	37.8	17.7	51.1	47.7	34.2	3.7	0.9	82	77.0	42.0	1.9	2.1	10	10	10	10	4.0	4.4
Lampeter	29.577	74.0	25.0	49.0	58.0	41.0	37.5	19.0	50.0	46.0	31.0	3.5	0.8	81	76.0	41.0	1.8	2.0	10	10	10	10	4.0	4.4
Norwich	29.563	74.0	25.0	49.0	58.0	41.0	37.5	19.0	50.0	46.0	31.0	3.5	0.8	81	76.0	41.0	1.8	2.0	10	10	10	10	4.0	4.4
Grantham	29.582	74.0	25.0	49.0	58.0	41.0	37.5	19.0	50.0	46.0	31.0	3.5	0.8	81	76.0	41.0	1.8	2.0	10	10	10	10	4.0	4.4
Belvoir Castle	29.530	77.0	27.0	50.0	59.0	41.0	37.5	19.0	50.0	46.0	31.0	3.5	0.8	81	76.0	41.0	1.8	2.0	10	10	10	10	4.0	4.4
Holkham	29.561	70.0	27.0	43.0	57.0	41.0	37.5	19.0	50.0	46.0	31.0	3.5	0.8	81	76.0	41.0	1.8	2.0	10	10	10	10	4.0	4.4
Hawarden	29.561	71.0	27.0	44.0	58.0	41.0	37.5	19.0	50.0	46.0	31.0	3.5	0.8	81	76.0	41.0	1.8	2.0	10	10	10	10	4.0	4.4
Liverpool Observat.	29.527	69.7	24.4	45.3	54.1	40.0	37.5	19.0	50.0	46.0	31.0	3.5	0.8	81	76.0	41.0	1.8	2.0	10	10	10	10	4.0	4.4
Wakefield	29.570	76.7	27.0	49.7	59.5	40.4	37.8	17.7	51.1	47.7	34.2	3.7	0.9	82	77.0	42.0	1.9	2.1	10	10	10	10	4.0	4.4
Stonbury	29.570	77.0	29.0	48.0	59.0	40.0	37.5	19.0	50.0	46.0	31.0	3.5	0.8	81	76.0	41.0	1.8	2.0	10	10	10	10	4.0	4.4
Ben Rhydding	29.539	73.0	28.0	45.0	58.0	41.0	37.5	19.0	50.0	46.0	31.0	3.5	0.8	81	76.0	41.0	1.8	2.0	10	10	10	10	4.0	4.4
Scarborough	29.626	68.1	31.0	37.1	52.8	42.0	24.0	13.0	48.0	44.0	29.0	3.4	0.7	79	74.0	40.0	1.6	1.7	8	8	8	8	3.5	3.8
Isle of Man	29.550	69.0	30.0	39.0	51.0	41.0	24.0	13.0	48.0	44.0	29.0	3.4	0.7	79	74.0	40.0	1.6	1.7	8	8	8	8	3.5	3.8
North Shields	29.626	67.0	28.0	39.0	55.1	41.0	30.1	13.0	48.0	44.0	29.0	3.4	0.7	79	74.0	40.0	1.6	1.7	8	8	8	8	3.5	3.8
St. Paul's Parsonage	29.543	70.4	28.1	42.3	57.2	40.0	37.4	17.2	50.0	46.0	31.0	3.5	0.8	81	76.0	41.0	1.8	2.0	10	10	10	10	4.0	4.4
Bywell	29.511	70.0	32.0	44.0	58.0	43.0	34.0	15.0	49.0	45.0	30.0	3.5	0.8	81	76.0	41.0	1.8	2.0	10	10	10	10	4.0	4.4
Alnwick	29.549	62.5	25.0	37.5	52.7	38.6	30.4	14.1	43.5	39.8	24.5	2.8	0.5	75	70.0	35.0	1.2	1.3	5	5	5	5	2.5	2.8
High House Farm (Alnwick)	29.566	71.0	29.0	48.0	58.2	39.5	33.0	18.7	47.1	44.3	29.6	3.3	0.8	81	76.0	41.0	1.8	2.0	10	10	10	10	4.0	4.4

The highest temperatures of the air were at Whitehall, 81°; Aldershot, 79°; Hartwell House, 78°; Barnstaple, 78°; Bedford, 78°; St. Thomas's Hospital, 77°; Bicester, 77°; St. John's Wood, 76°; Belvoir Castle, 75°; Lampeter and Allenhands, 75°; Cardington, 75°; High House Farm, 75°; Exeter, 74°; Great Berkhamstead, 74°; Norwich, 74°; Grantham, 74°; Truro, 74°; Wakefield, 74°; St. Paul's Parsonage, 74°; Bywell, 74°; North Shields, 74°; Isle of Man, 74°; Scarborough, 74°; Ben Rhydding, 74°; Stonbury, 74°; Wakefield, 74°; The Counties of Devon and Cornwall, 74°; Venator, 74°; Worthing, Fairlight, and Little Brily, 74°; Between the latitudes, 74° and 50°; 50° and 30°; 30° and 10°; 10° and 0°; 0° and 10°; 10° and 20°; 20° and 30°; 30° and 40°; 40° and 50°; 50° and 60°; 60° and 70°; 70° and 80°; 80° and 90°; 90° and 100°; 100° and 110°; 110° and 120°; 120° and 130°; 130° and 140°; 140° and 150°; 150° and 160°; 160° and 170°; 170° and 180°; 180° and 190°; 190° and 200°; 200° and 210°; 210° and 220°; 220° and 230°; 230° and 240°; 240° and 250°; 250° and 260°; 260° and 270°; 270° and 280°; 280° and 290°; 290° and 300°; 300° and 310°; 310° and 320°; 320° and 330°; 330° and 340°; 340° and 350°; 350° and 360°; 360° and 370°; 370° and 380°; 380° and 390°; 390° and 400°; 400° and 410°; 410° and 420°; 420° and 430°; 430° and 440°; 440° and 450°; 450° and 460°; 460° and 470°; 470° and 480°; 480° and 490°; 490° and 500°; 500° and 510°; 510° and 520°; 520° and 530°; 530° and 540°; 540° and 550°; 550° and 560°; 560° and 570°; 570° and 580°; 580° and 590°; 590° and 600°; 600° and 610°; 610° and 620°; 620° and 630°; 630° and 640°; 640° and 650°; 650° and 660°; 660° and 670°; 670° and 680°; 680° and 690°; 690° and 700°; 700° and 710°; 710° and 720°; 720° and 730°; 730° and 740°; 740° and 750°; 750° and 760°; 760° and 770°; 770° and 780°; 780° and 790°; 790° and 800°; 800° and 810°; 810° and 820°; 820° and 830°; 830° and 840°; 840° and 850°; 850° and 860°; 860° and 870°; 870° and 880°; 880° and 890°; 890° and 900°; 900° and 910°; 910° and 920°; 920° and 930°; 930° and 940°; 940° and 950°; 950° and 960°; 960° and 970°; 970° and 980°; 980° and 990°; 990°

Year 1860.	Month.	Names of Stations and Observers.	Pressure of Atmosphere in Month.			Temperature of Air in Month.			Mean Temperature.	Vapour.			Mean Reading of Thermometer.			Wind.			Mean Amount of Rain.						
			Mean.	Range.	Highest.	Lowest.	Range.	Of all Highest.		Of all Lowest.	Daily Range.	Air.	Dew Point.	Elastic Force.	Mean.	Short of Saturation.	Mean Degree of Humi- dity.	Mean Weight of a Cubic Foot of Air.	Maximum in May or Sun.	Minimum on Cross.	Strength.	Relative Proportion of N. E. S. W.	Mean Amount of Cloud.	Number of Days it fell.	Amount col- lected.
1860.	April	GUILDHALL (City of London).	29.926	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	May	WHITEHALL, J. C. HAILE, Esq., F.R.S., Surveyor and Draughts- man, Local Government Act Office.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	June	CAMDEN TOWN.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	July	BATTERSEA TRAINING SCHOOL.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	August	ST. MARY'S HOSPITAL (Paddington).	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	September	BERNARD FETTERIDGE, Esq., L.S.A., &c.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	October	ROSE HILL (near Oxford).	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	November	REV. JOHN SLATTERY, M.A., F.R.S., M.B.M.S.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	December	RADCLIFFE OBSERVATORY, (Oxford).	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	January	BICESTER.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	February	W. JOHNSON, Esq., F.R.S., M.B.M.S.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	March	GREAT BERRHAMSTEAD.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	April	HARTWELL HOUSE.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	May	HARTWELL HOUSE, Assistant to Dr. LEE, F.R.S., &c.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	June	HARTWELL HOUSE, M.B.M.S.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	July	REV. CHARLES LOWDES, M.A., F.R.S.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	August	ROYSTON (Hertfordshire).	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	September	HALE WORTHAM, Esq., F.R.S., M.B.M.S.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	October	GLOUCESTER.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	November	W. J. WILLIAMS, Esq., M.D., F.R.S.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	December	CARDINGTON (near Bedford).	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	January	J. MACLEOD, M.B.M.S., Assistant to S. C. WHITEHEAD, Esq., F.R.S., M.B.M.S.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	February	ASPLEY (Bedford).	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	March	REDFORD.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	April	T. H. BAKER, Esq., M.D., F.R.C.S., M.B.M.S.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	May	LAMPETER (Cardiganshire).	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	June	SCARBOROUGH.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	July	SCARBOROUGH.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	August	SCARBOROUGH.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	September	SCARBOROUGH.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	October	SCARBOROUGH.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	November	SCARBOROUGH.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5
	December	SCARBOROUGH.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5

Year 1860.	Month.	Names of Stations and Observers.	Pressure of Atmosphere in Month.			Temperature of Air in Month.			Mean Tem- perature.		Vapour.		Mean Reading of Thermometer.		Wind.			Mean Amount of Rain.								
			Mean.	Range.	Highest.	Lowest.	Range.	Of all Highest.	Of all Lowest.	Daily Range.	Air.	Dew Point.	Elastic Force.	Mean.	Short of Saturation.	Mean Degree of Humi- dity.	Mean Weight of a Cubic Foot of Air.	Maximum in May or Sun.	Minimum on Cross.	Strength.	Relative Proportion of N. E. S. W.	Mean Amount of Cloud.	Number of Days it fell.	Amount col- lected.		
1860.	April	GRANTHAM.	29.926	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	11	1.5	
	May	BELVOIR CASTLE.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	June	WILLIAM INGRAM, Esq., M.B.M.S., HOLKHAM.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	July	S. SHELLABEAR, Esq., M.B.M.S., As- sistant to the EARL OF LEICESTER.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	August	NOTTINGHAM.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	September	E. J. LOWE, Esq., F.R.S., M.B.M.S.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	October	HAWARD.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	November	THOMAS MOFFAT, Esq., M.D., F.R.S., M.B.M.S.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	December	LIVERPOOL OBSERVATORY.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	January	JOHN HARTNUP, Esq., F.R.S.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	February	MANCHESTER.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	March	GEORGE VENABLE, VERNON, Esq., F.R.S., M.B.M.S.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	April	WAKEFIELD PRISON.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	May	WILLIAM RALPH, MILNER, Esq., F.R.S., M.B.M.S.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	June	LEEDS PHILOSOPHICAL HALL.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	July	NEWBURY COLLEGE.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	August	W. ALFRED WELLS, M.A., F.R.S., M.B.M.S.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	September	S. RHYDDING.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	October	C. C. TAYLOR, Esq.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	November	W. K.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	December	JOHN FORD, Esq.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	January	BARBOROUGH	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	February	J. CHAMPEL, Esq.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	March	E. OF MAN.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	April	JAMES BURNAN, Esq., F.R.S.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	May	W. SHIELDS.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	June	ROBERT SWEZE, Esq.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	July	PAUL'S PARSONAGE.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	August	ST. SMITH, CUMBERLAND.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	September	REV. F. REDFORD, N.A., M.B.M.S., RUSLE.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	October	J. CANTRELL, Esq.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	November	W. WELLS.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	December	MR. JOHN DAWSON, under the direction of T. SOPWITH, J. HENRI, M.B.M.S.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	January	THOMAS B. T. S. OF WICK.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	February	Q. E. OF F.R.S., WITH, Esq., F.R.S., M.B.M.S.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	March	MR. SCOTT, for His Grace the Duke of Northumberland.	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5
	April	Second Rain gauges were placed at Elmbrook, 11 inches; at Cardington, 48 inches; at Exeter, 87 feet above the ground, the amount collected	29.901	0.908	60.6	34.5	26.1	29.1	38.6	14.0	43.7	38.1	280	2.6	87.6	88	552	—	—	—	—	—	—	—	11	1.5

ON THE
METEOROLOGY OF ENGLAND,

DURING THE

Quarter ending September 30, 1860.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

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1860.

On the Weather during the Quarter ending September 30th, 1860.

Remarks on the weather, during the Quarter ending 30th of September 1860. By JAMES GLAISHER, ESQ., F.R.S., &c., Secretary of the British Meteorological Society.

The weather during the past quarter has been very remarkable for continued low temperature, frequent rain, large amount of cloud, little sunshine, and bad weather generally.

The temperature within the three months reached its average on 9 days only, and fell short on 83 days; the mean excess on the 9 days was less than $\frac{1}{2}^{\circ}$; whilst the average daily deficiency for the 83 days exceeded 4° .

The mean high day temperature in July was $4^{\circ}8$; in August $5^{\circ}9$; and in September $4^{\circ}3$ below their averages; whilst in June it was as large as $6^{\circ}5$. The average deficiency of high day temperature for the four months ending September was $5^{\circ}4$. This large deficiency for these months is, I believe, unprecedented.

The mean low night temperature in July was $3^{\circ}2$; in August $1^{\circ}7$; and in September $3^{\circ}3$ below their averages.

In the four months ending September both days and nights have been remarkably cold, and almost always below their averages.

The mean temperature of July was $4^{\circ}3$; in August $3^{\circ}8$; and in September $3^{\circ}7$ in defect, as compared with their respective averages from the preceding 19 years. As compared with the year 1859, July was $10^{\circ}5$; August $5^{\circ}8$; and September $3^{\circ}3$ colder.

The mean temperature of the three months ending September was $56^{\circ}2$; and once only, viz., in 1817 has the mean temperature of the same months been so low since the year 1771.

The mean temperature of the four months ending September is still more remarkable; its value was $55^{\circ}9$, and there is no other instance, as far as trustworthy records extend, of a temperature of so low a value for these four important months.

The following Table shows the average temperature at Greenwich of these three and four months respectively in every year since 1771.

MEAN TEMPERATURE of July, August, and September, and of Four Months ending September, at Greenwich, from 1771 to 1860.

Year.	Mean Temperature.		Year.	Mean Temperature.		Year.	Mean Temperature.		Year.	Mean Temperature.	
	July, Aug., Sept.	June, Aug., Sept.		July, Aug., Sept.	June, Aug., Sept.		July, Aug., Sept.	June, Aug., Sept.		July, Aug., Sept.	June, Aug., Sept.
1771	56.6	56.0	1794	59.5	59.0	1817	56.2	56.9	1839	58.2	58.4
1772	58.2	58.5	1795	60.2	58.6	1818	63.5	63.4	1840	58.1	58.4
1773	57.7	57.2	1796	59.2	58.4	1819	61.2	60.0	1841	58.8	58.2
1774	58.9	59.8	1797	59.0	57.9	1820	57.5	57.1	1842	60.7	61.2
1775	60.7	61.2	1798	59.7	59.7	1821	59.7	58.3	1843	60.8	59.7
1776	59.3	59.2	1799	57.2	56.8	1822	59.9	60.6	1844	58.7	59.2
1777	60.3	59.3	1800	61.6	60.0	1823	58.1	57.4	1845	56.9	57.9
1778	61.3	61.3	1801	60.6	60.0	1824	60.1	57.4	1846	62.6	63.3
1779	63.2	61.9	1802	59.4	59.0	1825	62.3	61.5	1847	60.6	60.0
1780	62.7	61.8	1803	59.3	58.5	1826	61.8	62.1	1848	58.6	58.6
1781	61.7	61.9	1804	59.8	59.2	1827	59.3	59.3	1849	61.3	60.4
1782	57.1	57.3	1805	60.0	58.7	1828	59.5	59.6	1850	59.6	59.9
1783	60.3	59.9	1806	59.9	59.9	1829	57.0	57.5	1851	59.8	59.6
1784	57.7	57.3	1807	60.1	59.5	1830	58.2	57.5	1852	61.8	60.4
1785	58.8	59.0	1808	61.2	60.4	1831	61.3	60.9	1853	58.5	58.5
1786	56.4	57.2	1809	58.2	58.0	1832	59.6	59.5	1854	59.8	58.8
1787	59.0	58.7	1810	60.3	59.8	1833	57.4	58.0	1855	60.4	59.6
1788	58.8	58.8	1811	59.1	58.8	1834	61.6	61.5	1856	60.0	59.6
1789	57.9	57.1	1812	57.2	56.8	1835	61.6	61.2	1857	63.3	63.0
1790	57.6	57.4	1813	57.2	56.8	1836	58.4	58.6	1858	61.0	62.0
1791	57.2	56.8	1814	58.2	57.0	1837	58.8	58.6	1859	62.8	62.4
1792	58.7	57.7	1815	60.9	60.2	1838	58.2	57.9	1860	56.2	55.9
1793	58.9	58.0	1816	57.1	56.1						

The temperature of August differed but little from that of July at all stations south of the latitude 53° ; north of this parallel August was colder than July, gradually increasing to 3° and 4° at extreme northern stations. September was from 3° to 4° colder than August at all stations.

The mean pressure of the atmosphere in July was a little above, in August much below, and in September below their respective averages. The pressure in August was less than in any August in the preceding 20 years.

The pressure was less in August than in July at extreme southern stations by 0.25 in., increasing gradually to 0.40 in. at northern stations. It was greater in September than in August by 0.15 in., at southern stations gradually increasing to 0.33 in. at extreme northern stations.

The temperature of the dew point was below its average, in July and August to the amount of $1^{\circ}6$, and in September to $0^{\circ}9$.

The fall of rain in July was 2.8 in.; in August 3.7 in.; and in September 3.1 in.; amounting in the three months to 9.6 in., and being 2.1 in. in excess. The fall of rain from January 1 is 25.1 in., being 6.9 in. in excess.

The following Table shows the fall of rain at Greenwich in the nine months ending September, from the year 1815.

FALL OF RAIN at GREENWICH in the Nine Months ending September, from 1815 to 1860.											
Years.	Amount of Rain in the first 9 Months of each Year.	Years.	Amount of Rain in the first 9 Months of each Year.	Years.	Amount of Rain in the first 9 Months of each Year.	Years.	Amount of Rain in the first 9 Months of each Year.	Years.	Amount of Rain in the first 9 Months of each Year.	Years.	Amount of Rain in the first 9 Months of each Year.
1815	16.1	1823	18.1	1831	21.1	1839	20.9	1847	11.8	1854	13.3
1816	21.2	1824	22.4	1832	14.0	1840	13.3	1848	22.9	1855	13.7
1817	20.6	1825	15.2	1833	14.6	1841	21.2	1849	17.3	1856	18.3
1818	19.5	1826	16.9	1834	16.8	1842	16.3	1850	14.5	1857	15.4
1819	22.0	1827	15.6	1835	18.1	1843	17.6	1851	18.6	1858	14.2
1820	21.0	1828	26.5	1836	18.7	1844	16.2	1852	22.2	1859	17.2
1821	22.0	1829	21.8	1837	15.4	1845	16.6	1853	22.5	1860	25.1
1822	17.1	1830	21.8	1838	16.8	1846	17.6				

On the Weather during the Quarter ending September 30th, 1860.

From the foregoing Table it will be seen that the fall of rain up to this time has been larger than any since the year 1828. The following Table shows the rain-fall for the first nine months of the year 1860 at several stations over England.

FALL OF RAIN at different Places in the Nine Months ending September 1860.

Stations.	Amount collected.	Stations.	Amount collected.	Stations.	Amount collected.	Stations.	Amount collected.
Guernsey	33.9	Clifton	31.0	Hartwell Rectory	21.9	Hawarden	20.1
Helston	29.1	Greenwich	25.1	Royston	23.3	Liverpool	20.4
Truro	35.4	St. Thomas's Hospital	27.7	Gloucester	22.1	Wakefield	24.9
Exeter	28.2	Guilford	23.0	Cardington	20.2	Leeds	36.4
Exeter (High Street)	25.7	Whitehall	22.0	Aspley	25.4	Stonyhurst	27.4
Ventnor	27.0	Camden Town	24.8	Lampeter	42.6	Ben Rhydding	16.8
Osborne	26.5	Battersea	21.8	Norwich	23.1	Scarborough	26.0
Worthing	25.9	Rose Hill, near Oxford	19.7	Belvoir Castle	24.6	North Shields	26.8
Fairlight	23.2	Oxford	23.7	Holkham	24.9	St. Paul's Parsonage	23.2
Little Bridy	36.8	Hartwell House	25.3	Nottingham		High House (Alnwick)	
Aldershot	25.4						

The temperature of vegetation, as indicated by a thermometer placed on grass, was below 40° on 32 nights, and above 40° on 60 nights.

The wind in July was in rapid motion for 72 hours, mostly from S.W. and N., it blew for 14 hours from N.N.W. from July 24th at noon; this was the longest continuous wind in the month. The greatest pressure on the square foot was $5\frac{1}{2}$ lbs. In August the air was in sensible motion for 317 hours, and was almost continuously so from the 18th to the 24th, with pressures of 6 lbs. and 7 lbs. on the square foot. In September there was less continuous wind, the air was in quick motion for 131 hours during the month, and this was mostly between the 15th and 28th.

The mean temperature of the air at Greenwich for the three months ending August, constituting the three summer months, was $56^{\circ}7$, being $3^{\circ}4$ below the average of the preceding 89 years.

1860. MONTHS.	Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
	Air.		Evaporation.		Dew Point.		Air—Daily Range.		Water of the Thames.	Diff. from average of 19 years.	Mean.	Diff. from average of 19 years.	Mean.	Diff. from average of 19 years.
	Mean.	Diff. from average of 19 years.	Mean.	Diff. from average of 19 years.	Mean.	Diff. from average of 19 years.	Mean.	Diff. from average of 19 years.						
July	57.6	-2.8	4.3	54.8	52.3	-1.6	19.1	-1.6	62.6	-3.93	3.93	-0.25	4.4	-0.2
Aug.	57.7	-3.0	3.8	55.0	52.5	-1.6	15.4	-4.2	60.9	-3.96	3.96	-0.27	4.4	-0.3
Sept.	53.4	-3.0	3.7	51.8	50.2	-0.9	17.6	-1.0	58.4	-3.94	3.94	-0.19	4.1	-0.1
Mean	56.2	-3.3	3.9	53.9	51.7	-1.4	17.4	-2.3	60.6	-3.94	3.94	-0.24	4.3	-0.2

1860. MONTHS.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal movement of the Air.		Reading of Thermometer on Grass.			
	Mean.		Mean.		Mean.		Amount.		Miles.		Number of Nights it was		Lowest Reading at Night.	
	Mean.	Diff. from average of 19 years.	Mean.	Diff. from average of 19 years.	Mean.	Diff. from average of 19 years.	Amount.	Diff. from average of 19 years.	Mean.	Diff. from average of 19 years.	At or below 30°.	Between 30° and 40°.	Above 40°.	Highest Reading at Night.
July	83	+7	29.345	+0.043	554	+7	2.8	+0.1	172	0	9	22	32.0	61.7
Aug.	83	+6	29.556	-0.244	528	0	3.7	+1.3	172	0	16	13	28.0	55.0
Sept.	88	+7	29.761	-0.071	537	+3	3.1	+0.7	200	1	6	13	28.0	55.0
Mean	85	+7	29.721	-0.091	533	+3	Sum 9.6	Sum +2.1	—	Sum 1	Sum 31	Sum 60	Lowest 28.0	Highest 55.0

NOTE.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunder storms occurred or thunder was heard and lightning seen on 9 days in July; on 6 days in August; and on 4 days in September.

Thunder was heard but lightning was not seen on 31 days during the quarter, of which 17 were in July, 8 in August, and 6 in September.

Lightning was seen but thunder was not heard on 2 days in July; and on 5 days in August.

Solar halos were seen on 5 days in July; on 11 days in August; and on 4 days in September.

Lunar halos were seen on one night in July; on 5 nights in August; and on 7 nights in September.

Aurora were seen on the 16th of August at Clifton and on the 26th at Wakefield; on the 2d and 4th of September at Nottingham; on the 6th at Oxford; on the 7th and 8th at Newcastle; on the 10th at Nottingham; and on the 17th, 19th, and 20th at St. Paul's Parsonage.

Hail fell on 13 days during the quarter.

Fog prevailed on 41 days during the quarter, of which 16 were in July, and 11 in August.

Wheat was in flower at some places on the 1st of July, and not until the latter end of the month at others; it was cut on 6th August at a few places, but some was uncut at the end of the quarter; it has ripened very irregularly all over the country.

Barley was cut about the latter end of August in the south, and not until the latter end of September in the north; a great deal being still uncut at the beginning of October.

Apples were ripe on 15th September at Nottingham and on the 20th at North Shields.

The season has been very backward owing to the cold and wet spring and summer. In some places the grass was left uncut until about the middle of September. Barley and oats promise good crops, and wheat is on the whole a better crop than was expected. The potato disease is not so bad in the south as in the north.

Meteorological Table, Quarter ending September 30th, 1860.

NAMES OF STATIONS.		Mean Pressure of dry Air reduced to the level of the Sea.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Range of Temperature in the Quarter.	Mean of all Highest.	Mean of all Lowest.	Mean Monthly Range of Temperature.	Mean Daily Range of Temperature.	Mean Temperature of the Air.	Mean Temperature of the Dew Point.	Mean Elastic Force of Vapour.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required for saturation.	Mean degree of Humidity.	Mean Weight of a cubic foot of Air.	Mean Reading of Maximum in Rays of Sun.	Mean Reading of Minimum on Grass.	WIND.				Mean Amount of Ozone.	Mean Amount of Cloud.	Number of Days on which it fell.	Rain.
																			Relative Proportion of							
																			N.	E.	S.	W.				
																			Mean Estimated Strength.							
Guernsey	29.543	68.0	47.0	21.0	60.0	52.0	16.6	7.6	56.1	52.5	38.5	87	570	87	570	53.5	53.5	53.5	1	1	1	1	5.5	5.5	17	5.1
Helston	29.566	75.0	40.0	35.0	60.0	53.0	20.0	12.8	57.5	53.8	40.1	401	401	401	57.5	57.5	57.5	1	1	1	1	5.5	5.5	17	5.1	
Truro	29.534	75.0	34.0	41.0	65.0	49.7	31.0	13.3	57.7	54.9	35.1	404	404	404	57.7	57.7	57.7	1	1	1	1	5.5	5.5	17	5.1	
Torquay	29.537	74.0	42.0	32.0	60.0	50.5	20.0	9.9	55.7	50.0	37.3	433	433	433	55.7	55.7	55.7	1	1	1	1	5.5	5.5	17	5.1	
Exeter (St. Leonard's)	29.508	78.5	36.0	42.5	62.5	49.0	22.5	9.9	55.7	50.0	37.3	433	433	433	55.7	55.7	55.7	1	1	1	1	5.5	5.5	17	5.1	
Exeter, 200 High-st.	29.537	78.0	30.0	30.0	60.0	53.0	20.0	12.8	57.5	53.8	40.1	401	401	401	57.5	57.5	57.5	1	1	1	1	5.5	5.5	17	5.1	
Ventnor	29.510	70.0	41.0	29.0	61.8	53.4	27.4	8.4	54.0	54.0	41.8	418	418	418	54.0	54.0	54.0	1	1	1	1	5.5	5.5	17	5.1	
Osborne	29.488	75.6	42.6	33.0	65.5	51.4	27.3	14.1	57.0	54.0	41.8	418	418	418	54.0	54.0	54.0	1	1	1	1	5.5	5.5	17	5.1	
Worthing	29.448	75.1	42.6	32.5	62.6	51.9	27.3	10.7	56.7	51.1	41.8	418	418	418	54.0	54.0	54.0	1	1	1	1	5.5	5.5	17	5.1	
Fairlight	29.518	71.0	40.5	30.5	62.6	49.1	25.6	13.5	51.6	52.2	39.1	391	391	391	51.6	51.6	51.6	1	1	1	1	5.5	5.5	17	5.1	
Little Briny	29.547	76.5	38.0	38.0	64.4	47.4	31.0	17.0	55.1	51.1	41.8	418	418	418	54.0	54.0	54.0	1	1	1	1	5.5	5.5	17	5.1	
Barnstaple	29.537	80.5	36.0	36.0	64.4	47.4	31.0	17.0	55.1	51.1	41.8	418	418	418	54.0	54.0	54.0	1	1	1	1	5.5	5.5	17	5.1	
Aldershot Camp	29.518	76.5	38.0	38.0	64.4	47.4	31.0	17.0	55.1	51.1	41.8	418	418	418	54.0	54.0	54.0	1	1	1	1	5.5	5.5	17	5.1	
Clifton	29.537	80.5	36.0	36.0	64.4	47.4	31.0	17.0	55.1	51.1	41.8	418	418	418	54.0	54.0	54.0	1	1	1	1	5.5	5.5	17	5.1	
Royal Observatory	29.504	75.0	35.7	39.3	66.6	49.2	30.9	15.4	50.0	50.0	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
Regent's Park	29.504	71.9	39.5	32.4	63.4	48.8	24.0	15.0	54.2	51.1	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
St. John's Wood	29.491	75.3	38.8	37.0	60.3	49.5	29.8	18.8	56.6	51.1	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
Guildhall	29.509	72.3	38.3	37.0	60.3	49.5	29.8	18.8	56.6	51.1	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
Whitehall	29.517	78.5	42.0	36.5	63.5	52.9	20.5	11.4	56.8	53.6	41.6	416	416	416	53.6	53.6	53.6	1	1	1	1	5.5	5.5	17	5.1	
Camden Town	29.524	75.9	36.4	39.5	66.6	49.7	31.7	17.7	58.0	48.0	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
Battersea	29.491	72.3	38.9	33.4	62.5	48.2	29.7	14.9	56.3	50.0	39.6	400	400	400	56.3	56.3	56.3	1	1	1	1	5.5	5.5	17	5.1	
Radcliffe Observatory	29.508	73.3	35.0	40.5	63.3	49.6	30.0	12.7	55.3	50.0	38.6	403	403	403	55.3	55.3	55.3	1	1	1	1	5.5	5.5	17	5.1	
Bicester	29.480	76.6	37.3	43.1	63.0	47.2	32.9	16.3	54.4	49.2	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
Great Berkhamstead	29.527	75.5	31.0	44.5	65.2	47.7	33.2	17.5	54.4	49.2	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
Hartwell House	29.490	74.0	32.0	44.0	65.2	47.7	33.2	17.5	54.4	49.2	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
Hartwell Rectory	29.487	75.0	35.7	39.3	66.6	49.2	30.9	15.4	50.0	50.0	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
Royston	29.498	78.0	38.4	44.0	65.9	47.7	35.5	15.8	53.5	50.4	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
Gloucester	29.502	77.0	38.0	43.0	65.0	48.0	34.0	16.0	56.5	50.5	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
Cardington	29.492	76.4	32.0	44.4	65.5	48.3	34.1	17.2	55.5	51.5	39.2	403	403	403	55.5	55.5	55.5	1	1	1	1	5.5	5.5	17	5.1	
Aspley	29.518	69.7	42.5	27.2	60.0	51.4	19.5	17.2	55.5	52.1	40.0	400	400	400	55.5	55.5	55.5	1	1	1	1	5.5	5.5	17	5.1	
Bedford	29.491	80.0	34.0	46.0	69.3	50.0	32.2	16.3	56.6	50.4	39.7	397	397	397	50.4	50.4	50.4	1	1	1	1	5.5	5.5	17	5.1	
Nottingham	29.491	75.0	34.0	41.0	64.0	49.6	30.0	14.5	54.4	51.1	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
Lampeter	29.516	78.0	39.4	38.9	64.1	47.5	34.0	16.0	56.5	50.5	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
Belvoir Castle	29.504	75.0	35.7	39.3	66.6	49.2	30.9	15.4	50.0	50.0	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
Derby	29.504	75.0	35.7	39.3	66.6	49.2	30.9	15.4	50.0	50.0	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
Holkham	29.504	75.0	35.7	39.3	66.6	49.2	30.9	15.4	50.0	50.0	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
Nottingham	29.504	75.0	35.7	39.3	66.6	49.2	30.9	15.4	50.0	50.0	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
Hawarden	29.504	75.0	35.7	39.3	66.6	49.2	30.9	15.4	50.0	50.0	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
Liverpool Observat.	29.504	75.0	35.7	39.3	66.6	49.2	30.9	15.4	50.0	50.0	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
Wakfield	29.499	77.2	37.0	40.0	63.0	48.0	34.0	16.0	56.5	50.5	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
Leeds	29.494	78.0	33.0	45.0	64.0	49.4	30.0	14.5	54.4	51.1	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
Stonbury	29.441	75.0	37.0	40.0	63.0	48.0	34.0	16.0	56.5	50.5	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
Ben Rhydding	29.441	75.0	37.0	40.0	63.0	48.0	34.0	16.0	56.5	50.5	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
York	29.441	75.0	37.0	40.0	63.0	48.0	34.0	16.0	56.5	50.5	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
Scarborough	29.441	75.0	37.0	40.0	63.0	48.0	34.0	16.0	56.5	50.5	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
North Shields	29.441	75.0	37.0	40.0	63.0	48.0	34.0	16.0	56.5	50.5	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
St. Paul's Parsonage	29.462	78.2	32.4	45.5	65.8	48.5	33.5	13.1	54.3	48.8	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
Bywell	29.462	78.2	32.4	45.5	65.8	48.5	33.5	13.1	54.3	48.8	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
Altenhead	29.459	68.5	34.0	34.5	58.0	45.1	20.0	12.6	56.5	49.9	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
Carlisle	29.462	78.8	31.8	45.0	64.0	47.8	34.0	16.0	56.5	50.5	39.7	397	397	397	50.0	50.0	50.0	1	1	1	1	5.5	5.5	17	5.1	
Wharfedale House Farm (Alnwick).	29.498	77.0	32.0	45.0	62.0	47.8	35.0	17.1	53.2	51.1	37.5	421	421	421	53.2	53.2	53.2	1	1	1	1	5.5	5.5	17	5.1	

ON THE
METEOROLOGY OF ENGLAND,

DURING THE

Quarter ending December 31, 1860.

BY JAMES GLAISHER, ESQ., F.R.S.
SECRETARY OF THE BRITISH METEOROLOGICAL SOCIETY.

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1861.

Remarks on the Weather, during the Quarter ending 31st of December 1860. By JAMES GLAISHER, ESQ., F.R.S., &c., Secretary of the British Meteorological Society.

With the exception of the last ten days in October, and the first ten days in December, the weather has been cold throughout the quarter. The deficiency of temperature was large about the 12th of October, was about 3° below the daily average in November, and was very large from the 18th to the 29th of December, the cold having been singularly severe between these days, exhibiting a great contrast to the weather at the beginning of the month. On December 5th and 6th the excess of temperature above the average was 9°; from the 18th to the 23d it was from 7° to 10° below each day; as large as 15° on the 24th; 16° on the 25th; and 14° on the 29th. On the 7th day the temperature in the neighbourhood was as high as 54°, and on the 25th and 29th was as low as 7° and 8°. These latter temperatures are very remarkable for December.

Passing now to different parts of the country, on Christmas Day the lowest temperature at Guernsey was 30°; at Helston was 32°; at Truro 26°; at Ventnor 24°; and on the south coast of England from 17° to 20°; these temperatures gradually decreased to 6°, 7°, and 8° in the latitude of 51½°; and to 0° (Zero) at lat. 51° 50'; was between 0° and -5° between the parallels 52° and 54°; at Nottingham the lowest reading was noted as -8°; and above the parallel 54° the readings gradually increased from 0° to 12° at Alnwick; the temperature at the Isle of Man was 15°; on the West Coast of Dumfries, and the east coast of England from Scarborough to Edinburgh, being about 16°, the temperature of the sea being about 44° at the same time.

The range of temperature in December was very large at all places. The extreme readings at the different places and ranges of temperatures are shown in the following Table.

TABLE of the Maxima Temperatures in the Month and Minima Temperatures on the 25th and 29th of DECEMBER 1860.

Names of Stations.	Highest.	Lowest on the 25th.	Lowest on the 29th.	Range.	Names of Stations.	Highest.	Lowest on the 25th.	Lowest on the 29th.	Range.	Names of Stations.	Highest.	Lowest on the 25th.	Lowest on the 29th.	Range.
Guernsey	54°	30°	29°	25°	St John's Wood	53°	11°	11°	12°	Derby	52°	5°	12°	25°
Helston	55°	32°	30°	23°	Battersea	54°	10°	12°	43°	Holkham	52°	0°	7°	53°
Truro	55°	25°	30°	29°	Camden Town	53°	6°	12°	46°	Nottingham	52°	-8°	1°	60°
Exeter (St. Leonards)	54°	13°	10°	30°	Pembroke Dockyard	53°	22°	29°	51°	Hawarden	50°	8°	16°	54°
Exeter (High St.)	54°	15°	20°	38°	Cobham Lodge	53°	1°	6°	1°	Liverpool	50°	15°	23°	54°
Ventnor	53°	24°	30°	29°	Oxford	52°	1°	4°	30°	Manchester	52°	-3°	12°	54°
Osborne	53°	18°	20°	34°	Rose Hill (Oxford)	51°	1°	4°	30°	Wakefield	52°	-2°	8°	54°
Worthing	52°	17°	33°	34°	Oxford	53°	0°	5°	50°	Leeds	52°	6°	15°	46°
Fairlight	51°	20°	20°	31°	Great Berkhamstead	52°	4°	5°	48°	Ben Rhydding	49°	6°	15°	43°
Little Bridy	52°	16°	21°	36°	Hartwell House	53°	10°	20°	43°	Otley	50°	3°	9°	47°
St. John's College (Brighton)	53°	3°	5°	50°	Royston	53°	10°	6°	47°	Stonyhurst	49°	16°	25°	33°
Peterfield	51°	15°	7°	43°	Royston	52°	1°	14°	21°	Harrogate	50°	9°	16°	41°
Barnstable	49°	13°	12°	46°	Carlington	53°	1°	8°	52°	York	52°	4°	18°	48°
Aldershot Camp	54°	10°	8°	46°	Aspley	54°	3°	10°	44°	Scarborough	46°	16°	18°	30°
Clifton	53°	11°	7°	46°	Beiford	53°	6°	12°	47°	Isle of Man	49°	15°	18°	31°
Lewisham	54°	7°	7°	47°	Lampeter	51°	5°	21°	45°	St. Paul's Parsonage	52°	8°	18°	44°
Royal Observatory	54°	8°	10°	46°	Norwich	52°	1°	11°	51°	Carlisle	49°	8°	12°	41°
Guildhall	52°	—	19°	—	Diss (Norfolk)	52°	-3°	8°	35°	Bywell	48°	3°	7°	44°
Whitehall	54°	12°	7°	41°	Grantham	51°	3°	13°	38°	North Shields	47°	8°	12°	41°
Regent's Park	53°	10°	14°	42°	Belvoir Castle	51°	-1°	12°	32°	High House	46°	12°	19°	34°

The range temperature in the month of December has therefore varied from 23° at Helston to 60° at Nottingham.

In the year 1846 the mean temperature of December was 32°·9, being 3°·4 lower than the month just passed. The hottest December in the 20 years was 47°·6 in the year 1852, and which was 11°·3 warmer than that of 1860.

The mean high day temperature in October was 58°·6, being 4° above; of November was 46°·7, being 2°·7 below; and of December was 40°·7 being 4°·7 below their respective averages.

The mean low night temperature of October was 44°·0, being 1° above; of November was 35°·0, being 2½° below, and of December was 31°·9, being 3½° below their respective averages.

The mean temperature of October was 1° above; of November was 2½° below; and of December was 4° below their averages as found from the observations of the preceding 19 years.

The pressure of the atmosphere was slightly above its average in October, and below both in November and December, being smaller in December than in any December for 20 years.

The fall of rain was slightly deficient in the quarter, and amounted to 32 in. in the year. This was exceeded in the years 1821, 1824, and 1852, but is greater than in all other years since 1815, as is shown in the following Table.

FALL OF RAIN at GREENWICH in each Year from 1815 to 1860.

Years.	Fall of Rain.	Years.	Fall of Rain.	Years.	Fall of Rain.	Years.	Fall of Rain.	Years.	Fall of Rain.	Years.	Fall of Rain.
1815	22·5	1823	27·1	1831	29·8	1839	29·5	1847	17·8	1854	18·1
1816	30·1	1824	36·3	1832	19·3	1840	18·3	1848	30·2	1855	29·2
1817	29·0	1825	24·6	1833	23·0	1841	33·3	1849	23·9	1856	21·4
1818	25·7	1826	23·0	1834	19·6	1842	22·8	1850	19·7	1857	17·8
1819	31·1	1827	24·9	1835	24·9	1843	24·6	1851	21·6	1858	23·9
1820	27·7	1828	31·5	1836	27·1	1844	24·9	1852	54·2	1859	53·0
1821	31·5	1829	23·2	1837	21·0	1845	22·4	1853	29·0	1860	
1822	27·7	1830	27·2	1838	23·8	1846	25·3				

The fall of rain at the different stations over the country was large, the amounts are shown in the following Table:—

FALL OF RAIN at various Stations during the Year 1860.

Stations.	No. of days it fell.	Amount collected.	Stations.	No. of days it fell.	Amount collected.	Stations.	No. of days it fell.	Amount collected.	Stations.	No. of days it fell.	Amount collected.
Guernsey	230	48·0	Aldershot	183	33·4	Royston	274	39·4	Liverpool	181	23·7
Helston	203	42·2	Clifton	221	40·2	Gloucester	193	28·1	Manchester	225	35·5
Truro	235	50·7	Royal Observatory	192	32·0	Cardington	196	25·3	Wakefield	243	33·6
Exeter	228	38·4	St. John's Wood	236	34·4	Aspley (Beds.)	190	31·4	Leeds	230	28·2
Exeter (High Street)	234	35·9	Guildhall	165	27·9	Lampeter	215	34·3	Stonyhurst	252	50·4
Ventnor	183	33·2	Whitehall	175	27·5	Norwich	151	33·2	Ben Rhydding	187	37·3
Osborne	148	35·5	Camden Town	196	30·1	Grantham	214	28·1	Scarborough	168	25·8
Worthing	179	34·6	Battersea	165	27·7	Belvoir Castle	188	29·1	St. Paul's Parsonage	187	37·6
Fairlight	151	29·4	Rose Hill (Oxford)	182	25·4	Derby	211	33·3	Broughton in Furness	49·7	
Little Bridy	237	48·8	Oxford	182	31·1	Holkham	184	33·5	Bwell	239	38·1
Barnstable	220	50·0	Hartwell House	114	22·9	Hawarden	151	28·8	Highhouse (Alnwick)	186	36·8
Cobham (Surrey)	31·6		Hartwell Rectory	139	28·1						

The amounts have varied from 25·3 in. at Cardington and Scarborough to 54·2 in. at Lampeter.

The mean temperature of the air at Greenwich for the three months ending November, constituting the three autumn months, was 48°·3, being 1°·1 below the average of the preceding 89 years.

1860. MONTHS.	Temperature of						Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.		
	Air.		Evaporation.		Dew Point.		Air—Daily Range.		Water of the Thames.		
	Mean.	Diff. from average of 89 years.	Mean.	Diff. from average of 19 years.	Mean.	Diff. from average of 19 years.	Mean.	Diff. from average of 19 years.	Mean.	Diff. from average of 19 years.	Mean.
Oct.	50°	+1·2	49°	+0·9	47°	+1·7	14·1	-0·5	51·6	+0·19	3·7
Nov.	40°	-1·6	39°	-2·7	38°	-1·3	11·4	-0·2	46·1	-0·19	2·7
Dec.	36°	-2·7	35°	-3·6	33°	-3·6	8·6	-0·9	39·6	-0·35	2·2
Mean	42°	-1·0	41°	-1·6	40°	-1·1	11·4	-0·5	45·8	-0·12	2·9

1860. MONTHS.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Reading of Thermometer on Grass.			
	Mean.		Mean.		Mean.		Mean.		At or below 30°.		Lowest Reading at Night.	
	Mean.	Diff. from average of 19 years.	Mean.	Diff. from average of 19 years.	Mean.	Diff. from average of 19 years.	Amount.	Diff. from average of 45 years.	Sum	Sum	Sum	Sum
Oct.	89	+2	29·85	+0·174	541	+2	1·6	-1·2	3	15	13	27·0
Nov.	93	+4	29·695	-0·064	550	+3	2·5	+0·1	16	12	2	21·4
Dec.	92	+3	29·491	-0·330	551	-1	2·8	+0·9	19	10	2	2·0
Mean	91	+3	29·681	-0·073	547	+1	Sum 6·9	-0·2	Mean 210	Sum 38	Sum 37	Sum 17

NOTE.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunder storms occurred or thunder was heard and lightning seen on November 27th at Helston; and on December 19th at Truro and North Shields; and on the 21st at North Shields.

Lightning was seen but thunder was not heard on October 8th at Fairlight and Scarborough, and on the 20th at Allenheads. On November 17th at Clifton, and on the 28th at Truro; and on December 3d at Exeter.

Aurora were seen on October 4th at Helston; on November 2d at Clifton and Grantham; on December 10th at Little Bridy; and on the 15th at Little Bridy and North Shields.

Solar halos were seen on the 3d October at Clifton and Great Berkhamstead; on the 4th at Little Bridy, Clifton, and Grantham; on the 8th at Little Bridy, Clifton, and Berkhamstead; on the 12th at Little Bridy, Clifton, Berkhamstead, and Grantham; on the 21st at Lampeter; on the 23d at Clifton; on the 25th at Little Bridy, Clifton, and Berkhamstead; and on the 29th at Lampeter. On November 5th at Guernsey; on the 11th at Leyton; on the 16th at Clifton and 19th at Berkhamstead; on the 21st and 24th at Camden Town; on the 25th at Little Bridy, Camden Town, Berkhamstead, Cardington, and Lampeter.

Lunar halos were seen on 13 nights in October, 5 in November, and 9 in December.

Fog prevailed on 6 days in October, 11 in November, 12 in December.

The remaining 24 in December.

Snow fell on the 10th and 11th of October at Allenheads; and on the 12th at Diss, Scarborough, and Allenheads. On November 14th at Lampeter; on the 16th at Stonyhurst; on the 17th throughout the greater part of the country; on the 18th at Grantham, Leeds, Stonyhurst, and York, and on the 26th at Little Bridy, Clifton, Berkhamstead, and Rose Hill (near Oxford), and throughout the greater part of the country during the latter part of December.

Meteorological Table, Quarter ending December 31st, 1860.

NAMES OF STATIONS.	Mean Pressure of dry Air reduced to the level of the Sea.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Range of Temperature in the Quarter.	Mean of all Highest.	Mean of all Lowest.	Mean Monthly Range of Temperature.	Mean Daily Range of Temperature.	Mean Temperature of the Air.	Mean Temperature of the Dew Point.	Mean Elastic Force of Vapour.	Mean Weight of Vapour in a cubic foot of Air.	Mean additional Weight required for saturation.	Mean degree of Humidity.	Mean Weight of a cubic foot of Air.	Mean Reading of Maximum in Rays of Sun.	Mean Reading of Minimum on Grass.	WIND.				Mean Amount of Ozone.	Mean Amount of Cloud.	Mean Number of Days on which it Rained.
																		Relative Proportion of						
																		N. E. S. W.						
																		Mean Estimated Strength.						
	in.	°	°	°	°	°	°	°	°	°	in.	grs.	grs.		grs.	°	°	N.	E.	S.	W.			
Guernsey	29.524	61.5	29.0	32.5	50.3	44.5	20.6	5.8	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Helston	29.554	55.5	18.0	47.0	54.2	43.2	29.0	11.0	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Truro	29.526	55.0	11.0	55.0	52.2	40.9	32.3	11.3	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Torquay	29.500	57.0	13.0	39.0	49.7	41.1	22.8	7.8	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Exeter (St. Leonard's)	29.583	55.2	15.9	49.9	49.2	38.7	9.4	44.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Exeter, 200 High-st.	29.583	55.2	15.9	49.9	49.2	38.7	9.4	44.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Venstor	29.589	63.4	22.0	41.0	49.7	42.1	29.1	6.3	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Osborne	29.553	56.7	18.9	47.9	50.8	39.9	29.1	11.2	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Worthing	29.557	55.7	17.9	47.7	48.2	39.1	29.7	8.7	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Fairlight	29.557	55.7	17.9	47.7	48.2	39.1	29.7	8.7	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Little Brdy	29.585	56.7	16.2	40.8	49.7	42.1	29.1	6.3	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Petersfield	29.594	57.7	17.5	38.2	51.1	35.4	14.7	15.7	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Barnstaple	29.555	58.7	8.7	39.9	48.2	38.7	9.4	44.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Aldershot Camp	29.590	62.7	7.1	55.4	47.7	37.4	13.1	9.8	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Clifton	29.590	62.7	7.1	55.4	47.7	37.4	13.1	9.8	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Pembroke	29.578	63.0	18.7	44.4	50.3	40.6	26.7	9.7	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Royal Observatory	29.608	64.7	8.0	60.5	48.6	37.2	36.1	11.9	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Recent's Park	29.602	62.0	10.0	51.1	48.7	38.7	30.8	10.0	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
St. John's Wood	29.577	66.2	11.0	55.2	48.8	37.8	33.0	11.0	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Guildhall	29.598	61.7	14.5	47.3	48.2	40.4	29.9	7.8	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Camden Town	29.621	65.2	1.0	64.2	47.0	34.7	33.7	12.9	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Battersea	29.649	64.7	10.7	53.3	48.1	37.7	34.2	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Rose Hill (Oxford)	29.599	65.2	1.0	64.2	47.0	34.7	33.7	12.9	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Oxford	29.602	63.0	0.0	63.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Great Berkhamstead	29.567	66.0	4.0	60.7	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Hartwell House	29.553	66.0	10.0	50.0	49.0	38.4	34.4	12.2	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Hartwell Rectory	29.553	66.0	10.0	50.0	49.0	38.4	34.4	12.2	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Royston	29.615	63.0	1.0	63.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Gloucester	29.591	64.0	1.0	64.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Cardington	29.598	64.0	1.0	64.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Aspley	29.598	64.0	1.0	64.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Bedford	29.598	64.0	1.0	64.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Lampeter	29.598	64.0	1.0	64.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Diss (Norfolk)	29.598	64.0	1.0	64.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Norwich	29.598	64.0	1.0	64.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Grantham	29.598	64.0	1.0	64.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Belvoir Castle	29.598	64.0	1.0	64.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Derby	29.598	64.0	1.0	64.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Holkham	29.598	64.0	1.0	64.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Notttingham	29.598	64.0	1.0	64.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Hawarden	29.598	64.0	1.0	64.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Liverpool Observat.	29.598	64.0	1.0	64.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Manchester	29.598	64.0	1.0	64.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Wakefield	29.598	64.0	1.0	64.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Leeds	29.598	64.0	1.0	64.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Stonyhurst	29.598	64.0	1.0	64.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Orley	29.598	64.0	1.0	64.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Pen Rhudding	29.598	64.0	1.0	64.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Scarborough	29.598	64.0	1.0	64.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Tale of Man	29.598	64.0	1.0	64.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
St. Paul's Parsonage	29.598	64.0	1.0	64.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Bywell	29.598	64.0	1.0	64.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Allenheads	29.598	64.0	1.0	64.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
North Shields	29.598	64.0	1.0	64.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
High House Farm	29.598	64.0	1.0	64.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7
Alnwick	29.598	64.0	1.0	64.0	47.7	37.7	35.1	10.4	288	3.4	89	540	540	540	540	540	540	1.7	8	7	8	7	8	7

Metereological Table, Quarter ending December 31st, 1866.

GRANTHAM.	Oct. 29, 76.	Nov. 29, 76.	Dec. 29, 76.	Jan. 29, 77.	Feb. 29, 77.	Mar. 29, 77.	Apr. 29, 77.	May 29, 77.	Jun. 29, 77.	Jul. 29, 77.	Aug. 29, 77.	Sep. 29, 77.	Oct. 29, 77.	Nov. 29, 77.	Dec. 29, 77.	Jan. 29, 78.	Feb. 29, 78.	Mar. 29, 78.	Apr. 29, 78.	May 29, 78.	Jun. 29, 78.	Jul. 29, 78.	Aug. 29, 78.	Sep. 29, 78.	Oct. 29, 78.	Nov. 29, 78.	Dec. 29, 78.	Jan. 29, 79.	Feb. 29, 79.	Mar. 29, 79.	Apr. 29, 79.	May 29, 79.	Jun. 29, 79.	Jul. 29, 79.	Aug. 29, 79.	Sep. 29, 79.	Oct. 29, 79.	Nov. 29, 79.	Dec. 29, 79.	Jan. 29, 80.	Feb. 29, 80.	Mar. 29, 80.	Apr. 29, 80.	May 29, 80.	Jun. 29, 80.	Jul. 29, 80.	Aug. 29, 80.	Sep. 29, 80.	Oct. 29, 80.	Nov. 29, 80.	Dec. 29, 80.	Jan. 29, 81.	Feb. 29, 81.	Mar. 29, 81.	Apr. 29, 81.	May 29, 81.	Jun. 29, 81.	Jul. 29, 81.	Aug. 29, 81.	Sep. 29, 81.	Oct. 29, 81.	Nov. 29, 81.	Dec. 29, 81.	Jan. 29, 82.	Feb. 29, 82.	Mar. 29, 82.	Apr. 29, 82.	May 29, 82.	Jun. 29, 82.	Jul. 29, 82.	Aug. 29, 82.	Sep. 29, 82.	Oct. 29, 82.	Nov. 29, 82.	Dec. 29, 82.	Jan. 29, 83.	Feb. 29, 83.	Mar. 29, 83.	Apr. 29, 83.	May 29, 83.	Jun. 29, 83.	Jul. 29, 83.	Aug. 29, 83.	Sep. 29, 83.	Oct. 29, 83.	Nov. 29, 83.	Dec. 29, 83.	Jan. 29, 84.	Feb. 29, 84.	Mar. 29, 84.	Apr. 29, 84.	May 29, 84.	Jun. 29, 84.	Jul. 29, 84.	Aug. 29, 84.	Sep. 29, 84.	Oct. 29, 84.	Nov. 29, 84.	Dec. 29, 84.	Jan. 29, 85.	Feb. 29, 85.	Mar. 29, 85.	Apr. 29, 85.	May 29, 85.	Jun. 29, 85.	Jul. 29, 85.	Aug. 29, 85.	Sep. 29, 85.	Oct. 29, 85.	Nov. 29, 85.	Dec. 29, 85.	Jan. 29, 86.	Feb. 29, 86.	Mar. 29, 86.	Apr. 29, 86.	May 29, 86.	Jun. 29, 86.	Jul. 29, 86.	Aug. 29, 86.	Sep. 29, 86.	Oct. 29, 86.	Nov. 29, 86.	Dec. 29, 86.	Jan. 29, 87.	Feb. 29, 87.	Mar. 29, 87.	Apr. 29, 87.	May 29, 87.	Jun. 29, 87.	Jul. 29, 87.	Aug. 29, 87.	Sep. 29, 87.	Oct. 29, 87.	Nov. 29, 87.	Dec. 29, 87.	Jan. 29, 88.	Feb. 29, 88.	Mar. 29, 88.	Apr. 29, 88.	May 29, 88.	Jun. 29, 88.	Jul. 29, 88.	Aug. 29, 88.	Sep. 29, 88.	Oct. 29, 88.	Nov. 29, 88.	Dec. 29, 88.	Jan. 29, 89.	Feb. 29, 89.	Mar. 29, 89.	Apr. 29, 89.	May 29, 89.	Jun. 29, 89.	Jul. 29, 89.	Aug. 29, 89.	Sep. 29, 89.	Oct. 29, 89.	Nov. 29, 89.	Dec. 29, 89.	Jan. 29, 90.	Feb. 29, 90.	Mar. 29, 90.	Apr. 29, 90.	May 29, 90.	Jun. 29, 90.	Jul. 29, 90.	Aug. 29, 90.	Sep. 29, 90.	Oct. 29, 90.	Nov. 29, 90.	Dec. 29, 90.	Jan. 29, 91.	Feb. 29, 91.	Mar. 29, 91.	Apr. 29, 91.	May 29, 91.	Jun. 29, 91.	Jul. 29, 91.	Aug. 29, 91.	Sep. 29, 91.	Oct. 29, 91.	Nov. 29, 91.	Dec. 29, 91.	Jan. 29, 92.	Feb. 29, 92.	Mar. 29, 92.	Apr. 29, 92.	May 29, 92.	Jun. 29, 92.	Jul. 29, 92.	Aug. 29, 92.	Sep. 29, 92.	Oct. 29, 92.	Nov. 29, 92.	Dec. 29, 92.	Jan. 29, 93.	Feb. 29, 93.	Mar. 29, 93.	Apr. 29, 93.	May 29, 93.	Jun. 29, 93.	Jul. 29, 93.	Aug. 29, 93.	Sep. 29, 93.	Oct. 29, 93.	Nov. 29, 93.	Dec. 29, 93.	Jan. 29, 94.	Feb. 29, 94.	Mar. 29, 94.	Apr. 29, 94.	May 29, 94.	Jun. 29, 94.	Jul. 29, 94.	Aug. 29, 94.	Sep. 29, 94.	Oct. 29, 94.	Nov. 29, 94.	Dec. 29, 94.	Jan. 29, 95.	Feb. 29, 95.	Mar. 29, 95.	Apr. 29, 95.	May 29, 95.	Jun. 29, 95.	Jul. 29, 95.	Aug. 29, 95.	Sep. 29, 95.	Oct. 29, 95.	Nov. 29, 95.	Dec. 29, 95.	Jan. 29, 96.	Feb. 29, 96.	Mar. 29, 96.	Apr. 29, 96.	May 29, 96.	Jun. 29, 96.	Jul. 29, 96.	Aug. 29, 96.	Sep. 29, 96.	Oct. 29, 96.	Nov. 29, 96.	Dec. 29, 96.	Jan. 29, 97.	Feb. 29, 97.	Mar. 29, 97.	Apr. 29, 97.	May 29, 97.	Jun. 29, 97.	Jul. 29, 97.	Aug. 29, 97.	Sep. 29, 97.	Oct. 29, 97.	Nov. 29, 97.	Dec. 29, 97.	Jan. 29, 98.	Feb. 29, 98.	Mar. 29, 98.	Apr. 29, 98.	May 29, 98.	Jun. 29, 98.	Jul. 29, 98.	Aug. 29, 98.	Sep. 29, 98.	Oct. 29, 98.	Nov. 29, 98.	Dec. 29, 98.	Jan. 29, 99.	Feb. 29, 99.	Mar. 29, 99.	Apr. 29, 99.	May 29, 99.	Jun. 29, 99.	Jul. 29, 99.	Aug. 29, 99.	Sep. 29, 99.	Oct. 29, 99.	Nov. 29, 99.	Dec. 29, 99.	Jan. 29, 100.	Feb. 29, 100.	Mar. 29, 100.	Apr. 29, 100.	May 29, 100.	Jun. 29, 100.	Jul. 29, 100.	Aug. 29, 100.	Sep. 29, 100.	Oct. 29, 100.	Nov. 29, 100.	Dec.
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Second Rain gauges were placed—At St Leonard's, Exeter, 20 feet above the ground, the amount collected was 9.3 inches; at Clifton, 5 feet, 8.2 inches; Guildhall, 77 feet, 3.4 inches; Rose Hill, 8 feet, 4.7 inches; Oxford, 22 feet, 6.8 inches; Norwich, 31 feet, 8 inches; Holkham, 4 feet, 7.2 inches; Liverpool, 25 feet, 5.5 inches; and Allenhead, 18.3 inches; Rose Hill, 235

HYGROMETRICAL TABLES

ADAPTED TO THE USE OF THE

WET- AND DRY-BULB THERMOMETER.

BY

JAMES GLAISHER, ESQ., F.R.S. &c.

SECOND EDITION.

LONDON:

TAYLOR AND FRANCIS, RED LION COURT, FLEET STREET.

1856.

PREFACE.

MANY instruments have been constructed for the purpose of measuring the quantity of aqueous vapour in the atmosphere and ascertaining its effects. Instruments used for this purpose are called *Hygrometers* (measurers of moisture), and have generally been made of substances which possess a great capability for absorption, and undergo variation from that cause. Amongst hygrometrical substances may be reckoned cordage, catgut, wood (especially deal), the beard of the wild oat, &c. These in turn have all furnished material for the construction of Hygrometers, or rather Hygroscopes; but in use they are found to become less and less sensitive, and finally to lose all their hygrometrical properties.

Other substances have been sought for which would regularly lengthen and shorten by the loss or absorption of moisture. Saussure of Geneva thought that this property might be found in a human hair, freed from all unctuousity by being boiled in a caustic ley. Thus prepared, he stretched and fastened it at one end to an easily moveable grooved wheel, with an index attached: whenever the hair was shortened or lengthened, the wheel and index were moved round, and thus indicated every increase or diminution of moisture.

M. De Luc constructed an hygrometer of a very thin piece of whalebone cut in a direction transverse to the fibre; this he affixed at one end by a small gold wire to a delicate wheel carrying an index, &c. The idea was suggested by the fact, that whalebone lengthens as it absorbs moisture, and shortens or contracts as it becomes dry. These two instruments are still in use on the continent, but confidence cannot be placed in their indications, nor in any which are dependent upon the hygrometric properties of any substance that has as yet been employed.

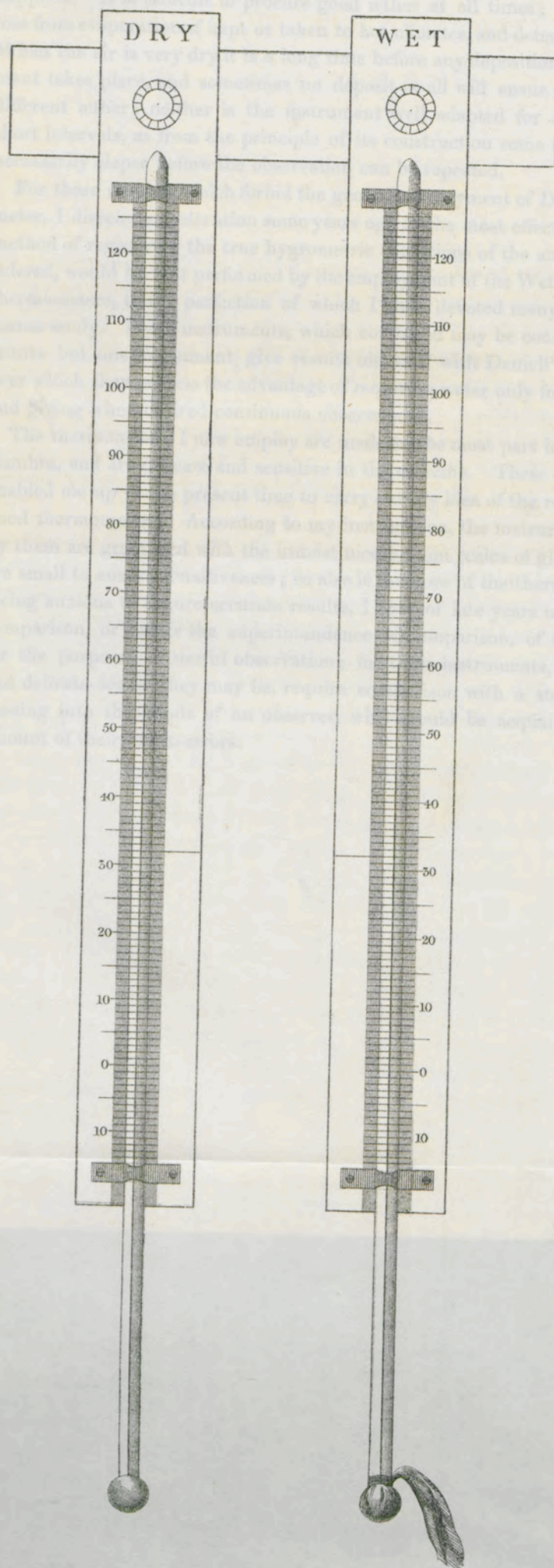
The Hygrometer invented by Mr. Daniell was a great advance upon the previous methods of construction. It denotes the degree of moisture in the air with considerable accuracy, and exhibits the amount in temperatures of the dew-point, expressed in degrees of the ordinary thermometer, which are thus referred to a well-known standard of comparison.

To use this instrument effectively experience is required, united with a keen

eye, and promptness of observation. Its employment is expensive, owing to the required æther, which must be the best in quality and not sparingly supplied. It is difficult to procure good æther at all times; it suffers much loss from evaporation if kept or taken to hot climates, and deteriorates rapidly. When the air is very dry it is a long time before any deposition on the instrument takes place, and sometimes no deposit at all will ensue with bad or indifferent æther; neither is the instrument well adapted for observations at short intervals, as from the principle of its construction some little time must necessarily elapse before the observation can be repeated.

For these reasons, which forbid the general employment of Daniell's Hygrometer, I directed my attention some years ago to the most effective and simple method of registering the true hygrometric conditions of the air. This, I considered, would be best performed by the employment of the Wet- and Dry-bulb thermometers, to the perfection of which I have devoted many years of assiduous study. These instruments, which combined may be considered to constitute but one instrument, give results identical with Daniell's Hygrometer, over which they possess the advantage of requiring water only for their supply, and giving when desired continuous observations.

The thermometers I now employ are made for the most part by Negretti and Zambra, and are delicate and sensitive in the extreme. These opticians have enabled me up to the present time to carry out my idea of the requirements of good thermometers. According to my instructions, the instruments supplied by them are graduated with the utmost nicety upon scales of glass; the bulbs are small to ensure sensitiveness; so also is the bore of the thermometer tube. Being anxious to ensure accurate results, I have of late years undertaken the comparison, or rather the superintendence of comparison, of thermometers, for the purposes of useful observation; for these instruments, how sensitive and delicate soever they may be, require comparison with a standard, before passing into the hands of an observer, who should be acquainted with the amount of their index-errors.



DESCRIPTION OF THE DRY- AND WET-BULB THERMOMETER.

THE instrument, as represented in the engraving, consists of two parallel thermometers, as nearly as possible identical, the one marked Dry, the other Wet. They are united by a cross-piece of metal, upon which the thermometers may be adjusted at pleasure, either near together or far separated. When not in use they may be detached for the convenience of travelling, and fitted into a leather case. The engraving represents the instrument in use, as ordinarily employed.

The bulb of the Wet thermometer is covered with thin muslin, round the neck of which is twisted a conducting thread of lamp-wick, common darning cotton, or floss silk; this passes into an adjacent vessel of water placed at such a distance as to allow a length of conducting thread of about three inches. The cup or glass should be placed on one side and a little beneath, so that the water within may not affect the reading of the dry bulb by its too near vicinity.

I greatly object to those instruments in which a long cistern of glass as a reservoir for the supply of water occupies the central space between the two thermometers; the water in the cistern becomes heated or cooled in excess of the surrounding temperature, and never fails, however imperceptibly, to vitiate the readings of the thermometer on either side. In this method of construction a large surface of metal is employed for the reception of the thermometers and cistern, and fails not to act injuriously upon the accuracy of the readings; nor do they in compensation offer a more symmetrical arrangement.

Position of the Dry- and Wet-Bulb Thermometer, and Precautions in using it.

The instrument should be mounted in an open space with the bulbs raised about four feet above the soil, in the shade, at some little distance from walls, trees, &c.

The water-vessel or reservoir should always be supplied with rain or distilled water.

If the temperature of the air should have descended below 32° , it will frequently happen that the wet-bulb thermometer will, for a time, read higher than the dry-bulb: such observations must not be recorded; when water has begun to freeze, the proper readings will take place. In frosty weather the water in the reservoir will be frozen, but this is no reason for the suspension of the observation; if the water upon the muslin is frozen at the same time, the readings are perfectly available. If the muslin be dry, it is necessary that it be wetted by the observer, who should leave it a sufficient time to allow the water to become frozen, and who (having satisfied himself of the fact) will proceed to take the reading in the usual way. When the weather is known to be frosty, the muslin should be wetted a sufficient time before the appointed hour of observation; as a rule in frosty weather it is desirable to immerse the bulb and conducting thread in water after every observation. If the temperature of the air should have ascended above 32° , immerse the wet-bulb thermometer for a short time in warm water, so as to melt any ice which may remain on it.

Before use the cotton lamp-wick should be washed in a solution of carbonate of soda, and pressed whilst under water throughout its length. In use it should be of such extent that the water conveyed be sufficient in quantity to keep the muslin on the bulb as moist as when the air is saturated with vapour. The amount of water supplied can be increased or diminished by increasing or decreasing the extent of the conducting thread.

In observing the eye should be placed on a level with the top of the mercury in the tube; and the observer should be careful to refrain from breathing whilst taking the observation.

Temperature of the Air and of Evaporation

is given by the readings of the two thermometers.

Temperature of the Dew-Point.

If a mass of air be gradually cooled, it will descend to a degree of temperature at which it will be saturated by the quantity of vapour contained in it. This temperature is called the dew-point. It can be found directly from observation by the use of Daniell's or Regnault's Hygrometer; the latter instrument is the better, being free from several errors to which the former is liable.

Calculating the Dew-Point from observations of the Dry- and Wet-Bulb Thermometers.

TABLE I.—Factors by which it is necessary to multiply the excess of the reading of the dry thermometer over that of the wet, to give the excess of the temperature of the air above that of the Dew-Point, for every degree of air temperature, from 10° to 100°.

Reading of Dry-Bulb Therm.	Factor.	Reading of Dry-Bulb Therm.	Factor.	Reading of Dry-Bulb Therm.	Factor.	Reading of Dry-Bulb Therm.	Factor.
10	8.78	33	3.01	56	1.94	79	1.69
11	8.78	34	2.77	57	1.92	80	1.68
12	8.78	35	2.60	58	1.90	81	1.68
13	8.77	36	2.50	59	1.89	82	1.67
14	8.76	37	2.42	60	1.88	83	1.67
15	8.75	38	2.36	61	1.87	84	1.66
16	8.70	39	2.32	62	1.86	85	1.65
17	8.62	40	2.29	63	1.85	86	1.65
18	8.50	41	2.26	64	1.83	87	1.64
19	8.34	42	2.23	65	1.82	88	1.64
20	8.14	43	2.20	66	1.81	89	1.63
21	7.88	44	2.18	67	1.80	90	1.63
22	7.60	45	2.16	68	1.79	91	1.62
23	7.28	46	2.14	69	1.78	92	1.62
24	6.92	47	2.12	70	1.77	93	1.61
25	6.53	48	2.10	71	1.76	94	1.60
26	6.08	49	2.08	72	1.75	95	1.60
27	5.61	50	2.06	73	1.74	96	1.59
28	5.12	51	2.04	74	1.73	97	1.59
29	4.63	52	2.02	75	1.72	98	1.58
30	4.15	53	2.00	76	1.71	99	1.58
31	3.70	54	1.98	77	1.70	100	1.57
32	3.32	55	1.96	78	1.69		

The numbers in this Table have been found from the combination of all the simultaneous observations of the dry- and wet-bulb thermometers with Daniell's Hygrometer, taken at the Royal Observatory, Greenwich, from the

year 1841 to 1854, with some observations taken at high temperatures in India, and others at low and medium temperatures at Toronto. The results at the same temperatures being found to be alike at these different places, the factors are of general application.

By the numbers in this Table the temperatures of the dew-point in the general tables have been calculated.

Expansion of Air from Heat.

M. Regnault has determined that air expands $\frac{1}{491.13}$ part for every increase of 1° of heat. The following Table has been calculated using this value, considering a volume of air under the pressure of 30 inches of mercury and at the temperature of 32° as the unit of comparison.

TABLE II.—Showing the volume of a mass of Dry Air after expansion from heat, for every degree of Fahrenheit's scale, from 0° to 100°.

Temp. Fahr.	The volume after expansion from heat.	Temp. Fahr.	The volume after expansion from heat.	Temp. Fahr.	The volume after expansion from heat.
0	0.9348448	34	1.0040722	68	1.0732996
1	0.9368809	35	1.0061083	69	1.0753357
2	0.9389170	36	1.0081444	70	1.0773718
3	0.9409531	37	1.0101805	71	1.0794079
4	0.9429892	38	1.0122166	72	1.0814440
5	0.9450253	39	1.0142527	73	1.0834801
6	0.9470614	40	1.0162888	74	1.0855162
7	0.9490975	41	1.0183249	75	1.0875523
8	0.9511336	42	1.0203610	76	1.0895884
9	0.9531697	43	1.0223971	77	1.0916245
10	0.9552058	44	1.0244332	78	1.0936606
11	0.9572419	45	1.0264693	79	1.0956967
12	0.9592780	46	1.0285054	80	1.0977328
13	0.9613141	47	1.0305415	81	1.0997689
14	0.9633502	48	1.0325776	82	1.1018050
15	0.9653863	49	1.0346137	83	1.1038411
16	0.9674224	50	1.0366498	84	1.1058772
17	0.9694585	51	1.0386859	85	1.1079133
18	0.9714946	52	1.0407220	86	1.1099494
19	0.9735307	53	1.0427581	87	1.1119855
20	0.9755668	54	1.0447942	88	1.1140216
21	0.9776029	55	1.0468303	89	1.1160577
22	0.9796390	56	1.0488664	90	1.1180938
23	0.9816751	57	1.0509025	91	1.1201299
24	0.9837112	58	1.0529386	92	1.1221660
25	0.9857473	59	1.0549747	93	1.1242021
26	0.9877834	60	1.0570108	94	1.1262382
27	0.9898195	61	1.0590469	95	1.1282743
28	0.9918556	62	1.0610830	96	1.1303104
29	0.9938917	63	1.0631191	97	1.1323465
30	0.9959278	64	1.0651552	98	1.1343826
31	0.9979639	65	1.0671913	99	1.1364187
32	1.0000000	66	1.0692274	100	1.1384548
33	1.0020361	67	1.0712635		

Elastic Force of Aqueous Vapour.

M. Regnault has determined by a very careful series of experiments, the value of the Elastic Force of Vapour (*Annales de Chimie et de Physique*, 3 série, tom. xv.). The numbers in the following Table have been calculated from his results.

TABLE III.—Showing the Elastic Force of Aqueous Vapour, in inches of Mercury, for every tenth of a degree, from 0° to 100°, calculated from the experiments of Regnault.

Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.
0°	in.	0°	in.	0°	in.	0°	in.	0°	in.
0°0	0°044	6°1	0°057	12°2	0°075	18°3	0°099	24°4	0°131
1°	0°044	2°	0°057	3°	0°075	4°	0°099	5°	0°131
2°	0°044	3°	0°058	4°	0°075	5°	0°099	6°	0°131
3°	0°044	4°	0°058	5°	0°076	6°	0°101	7°	0°133
4°	0°045	5°	0°058	6°	0°076	7°	0°101	8°	0°134
5°	0°045	6°	0°059	7°	0°077	8°	0°102	9°	0°134
6°	0°045	7°	0°059	8°	0°077	9°	0°102	10°	0°135
7°	0°045	8°	0°059	9°	0°077	10°	0°103	11°	0°136
8°	0°045	9°	0°059	10°	0°078	11°	0°103	12°	0°136
9°	0°046	10°	0°060	11°	0°078	12°	0°104	13°	0°137
10°	0°046	11°	0°060	12°	0°078	13°	0°104	14°	0°138
11°	0°046	12°	0°060	13°	0°079	14°	0°105	15°	0°139
12°	0°046	13°	0°060	14°	0°079	15°	0°105	16°	0°139
13°	0°047	14°	0°061	15°	0°080	16°	0°106	17°	0°140
14°	0°047	15°	0°061	16°	0°080	17°	0°106	18°	0°140
15°	0°047	16°	0°061	17°	0°081	18°	0°107	19°	0°141
16°	0°047	17°	0°061	18°	0°081	19°	0°107	20°	0°142
17°	0°047	18°	0°062	19°	0°082	20°	0°108	21°	0°143
18°	0°047	19°	0°062	20°	0°082	21°	0°108	22°	0°143
19°	0°048	20°	0°062	21°	0°083	22°	0°109	23°	0°144
20°	0°048	21°	0°062	22°	0°083	23°	0°110	24°	0°145
21°	0°048	22°	0°063	23°	0°084	24°	0°111	25°	0°145
22°	0°048	23°	0°063	24°	0°084	25°	0°111	26°	0°146
23°	0°049	24°	0°063	25°	0°085	26°	0°112	27°	0°147
24°	0°049	25°	0°064	26°	0°085	27°	0°113	28°	0°148
25°	0°049	26°	0°064	27°	0°086	28°	0°114	29°	0°149
26°	0°049	27°	0°065	28°	0°086	29°	0°115	30°	0°150
27°	0°050	28°	0°065	29°	0°087	30°	0°116	31°	0°151
28°	0°050	29°	0°066	30°	0°088	31°	0°117	32°	0°152
29°	0°051	30°	0°066	31°	0°089	32°	0°118	33°	0°153
30°	0°051	31°	0°067	32°	0°089	33°	0°119	34°	0°154
31°	0°051	32°	0°067	33°	0°090	34°	0°120	35°	0°155
32°	0°052	33°	0°068	34°	0°091	35°	0°121	36°	0°156
33°	0°052	34°	0°068	35°	0°092	36°	0°122	37°	0°157
34°	0°052	35°	0°069	36°	0°093	37°	0°123	38°	0°158
35°	0°053	36°	0°069	37°	0°094	38°	0°124	39°	0°159
36°	0°053	37°	0°070	38°	0°095	39°	0°125	40°	0°160
37°	0°053	38°	0°070	39°	0°096	40°	0°126	41°	0°161
38°	0°053	39°	0°071	40°	0°097	41°	0°127	42°	0°162
39°	0°054	40°	0°071	41°	0°098	42°	0°128	43°	0°163
40°	0°054	41°	0°072	42°	0°099	43°	0°129	44°	0°164
41°	0°054	42°	0°072	43°	0°100	44°	0°130	45°	0°165
42°	0°055	43°	0°072	44°	0°101	45°	0°131	46°	0°166
43°	0°055	44°	0°073	45°	0°102	46°	0°132	47°	0°167
44°	0°055	45°	0°073	46°	0°103	47°	0°133	48°	0°168
45°	0°056	46°	0°074	47°	0°104	48°	0°134	49°	0°169
46°	0°056	47°	0°074	48°	0°105	49°	0°135	50°	0°170
47°	0°056	48°	0°075	49°	0°106	50°	0°136		
48°	0°057	49°	0°075	50°	0°107				
49°	0°057	50°	0°076						
50°	0°057								

TABLE III. (continued.)

Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.
50°	in.	50°	in.	50°	in.	50°	in.	50°	in.
30°5	0°170	37°0	0°220	43°5	0°283	50°0	0°361	56°5	0°457
6°	0°171	1°	0°221	6°	0°284	1°	0°362	6°	0°459
7°	0°172	2°	0°222	7°	0°285	2°	0°364	7°	0°461
8°	0°172	3°	0°223	8°	0°286	3°	0°365	8°	0°462
9°	0°173	4°	0°224	9°	0°287	4°	0°366	9°	0°464
31°0	0°174	5°	0°225	10°	0°288	5°	0°367	10°	0°465
1°	0°174	6°	0°225	11°	0°289	6°	0°369	11°	0°467
2°	0°175	7°	0°226	12°	0°290	7°	0°370	12°	0°469
3°	0°176	8°	0°227	13°	0°292	8°	0°371	13°	0°470
4°	0°176	9°	0°228	14°	0°293	9°	0°373	14°	0°472
5°	0°177	10°	0°229	15°	0°294	10°	0°374	15°	0°473
6°	0°178	11°	0°230	16°	0°295	11°	0°375	16°	0°475
7°	0°179	12°	0°231	17°	0°296	12°	0°377	17°	0°477
8°	0°179	13°	0°231	18°	0°297	13°	0°378	18°	0°479
9°	0°180	14°	0°232	19°	0°298	14°	0°379	19°	0°480
32°0	0°181	15°	0°233	20°	0°299	15°	0°381	20°	0°482
1°	0°182	16°	0°234	21°	0°301	16°	0°382	21°	0°483
2°	0°182	17°	0°235	22°	0°302	17°	0°384	22°	0°485
3°	0°183	18°	0°236	23°	0°303	18°	0°385	23°	0°487
4°	0°184	19°	0°237	24°	0°304	19°	0°386	24°	0°489
5°	0°184	20°	0°238	25°	0°305	20°	0°388	25°	0°491
6°	0°185	21°	0°238	26°	0°306	21°	0°389	26°	0°492
7°	0°186	22°	0°239	27°	0°307	22°	0°391	27°	0°494
8°	0°186	23°	0°240	28°	0°308	23°	0°393	28°	0°496
9°	0°187	24°	0°241	29°	0°309	24°	0°394	29°	0°498
33°0	0°188	25°	0°242	30°	0°311	25°	0°396	30°	0°500
1°	0°188	26°	0°243	31°	0°312	26°	0°397	31°	0°501
2°	0°189	27°	0°244	32°	0°313	27°	0°399	32°	0°503
3°	0°190	28°	0°245	33°	0°315	28°	0°400	33°	0°505
4°	0°191	29°	0°246	34°	0°316	29°	0°401	34°	0°507
5°	0°192	30°	0°247	35°	0°317	30°	0°403	35°	0°509
6°	0°193	31°	0°248	36°	0°318	31°	0°404	36°	0°511
7°	0°193	32°	0°249	37°	0°319	32°	0°406	37°	0°512
8°	0°194	33°	0°250	38°	0°321	33°	0°407	38°	0°514
9°	0°195	34°	0°251	39°	0°322	34°	0°409	39°	0°516
34°0	0°196	35°	0°252	40°	0°323	35°	0°410	40°	0°518
1°	0°196	36°	0°253	41°	0°324	36°	0°412	41°	0°520
2°	0°197	37°	0°254	42°	0°325	37°	0°413	42°	0°522
3°	0°198	38°	0°255	43°	0°327	38°	0°415	43°	0°524
4°	0°199	39°	0°256	44°	0°328	39°	0°416	44°	0°526
5°	0°199	40°	0°257	45°	0°329	40°	0°418	45°	0°528
6°	0°200	41°	0°258	46°	0°330	41°	0°419	46°	0°529
7°	0°201	42°	0°259	47°	0°331	42°	0°421	47°	0°531
8°	0°202	43°	0°260	48°	0°333	43°	0°422	48°	0°533
9°	0°203	44°	0°261	49°	0°334	44°	0°424	49°	0°535
35°0	0°204	45°	0°262	50°	0°335	45°	0°425	50°	0°537
1°	0°204	46°	0°263	51°	0°336	46°	0°427	51°	0°539
2°	0°205	47°	0°264	52°	0°338	47°	0°428	52°	0°541
3°	0°206	48°	0°265	53°	0°339	48°	0°430	53°	0°543
4°	0°207	49°	0°266	54°	0°340	49°	0°431	54°	0°545
5°	0°208	50°	0°267	55°	0°342	50°	0°433	55°	0°546
6°	0°208	51°	0°268	56°	0°343	51°	0°434	56°	0°548
7°	0°209	52°	0°269	57°	0°344	52°	0°436	57°	0°550
8°	0°210	53°	0°270	58°	0°345	53°	0°437	58°	0°552
9°	0°211	54°	0°271	59°	0°346	54°	0°439	59°	0°554
36°0	0°212	55°	0°272	60°	0°348	55°	0°441	60°	0°556
1°	0°213	56°	0°273	61°	0°349	56°	0°443	61°	0°558
2°	0°214	57°	0°274	62°	0°351	57°	0°444	62°	0°560
3°	0°214	58°	0°275	63°	0°352	58°	0°446	63°	0°562
4°	0°215	59°	0°276	64°	0°353	59°	0°447	64°	0°564
5°	0°216	60°	0°277	65°	0°355	60°	0°449	65°	0°566
6°	0°217	61°	0°278	66°	0°356	61°	0°451	66°	0°568
7°	0°218	62°	0°279	67°	0°357	62°	0°453	67°	0°570
8°	0°218	63°	0°280	68°	0°358	63°	0°454	68°	0°572
36°9	0°219	64°	0°281	69°	0°360	64°	0°456	69°	0°574

TABLE III. (continued.)

Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.
°	in.	°	in.	°	in.	°	in.	°	in.
63°	0.576	69°	0.721	76°	0.897	82°	1.110	89°	1.366
1	.578	6	.723	1	.900	6	.114	1	.370
2	.580	7	.726	2	.903	7	.117	2	.375
3	.582	8	.728	3	.906	8	.121	3	.379
4	.584	9	.731	4	.909	9	.124	4	.384
5	.586	70°	.733	5	.912	83°	.128	5	.388
6	.588	1	.736	6	.915	1	.131	6	.393
7	.590	2	.738	7	.918	2	.135	7	.397
8	.592	3	.741	8	.921	3	.139	8	.401
9	.594	4	.744	9	.924	4	.142	9	.406
64°	.596	5	.746	77°	.927	5	.146	90°	.410
1	.598	6	.749	1	.930	6	.150	1	.415
2	.601	7	.751	2	.934	7	.154	2	.419
3	.603	8	.754	3	.937	8	.157	3	.424
4	.605	9	.756	4	.940	9	.161	4	.428
5	.607	71°	.759	5	.943	84°	.165	5	.433
6	.609	1	.761	6	.946	1	.169	6	.437
7	.611	2	.764	7	.949	2	.173	7	.442
8	.613	3	.766	8	.952	3	.176	8	.446
9	.615	4	.769	9	.955	4	.180	9	.451
65°	.617	5	.772	78°	.958	5	.184	91°	.455
1	.620	6	.774	1	.961	6	.188	1	.460
2	.622	7	.777	2	.965	7	.192	2	.464
3	.624	8	.779	3	.968	8	.196	3	.469
4	.626	9	.782	4	.971	9	.200	4	.473
5	.628	72°	.785	5	.974	85°	.203	5	.478
6	.630	1	.788	6	.977	1	.207	6	.483
7	.633	2	.790	7	.981	2	.211	7	.487
8	.635	3	.793	8	.984	3	.215	8	.492
9	.637	4	.796	9	.987	4	.219	9	.496
66°	.639	5	.799	79°	.990	5	.222	92°	.501
1	.641	6	.801	1	.994	6	.226	1	.505
2	.644	7	.804	2	.997	7	.230	2	.510
3	.646	8	.807	3	1.000	8	.234	3	.515
4	.648	9	.810	4	.003	9	.238	4	.519
5	.650	73°	.812	5	.007	86°	.242	5	.524
6	.652	1	.815	6	.010	1	.246	6	.529
7	.655	2	.818	7	.013	2	.250	7	.534
8	.657	3	.820	8	.016	3	.254	8	.538
9	.659	4	.823	9	.020	4	.258	9	.543
67°	.661	5	.826	80°	.023	5	.262	93°	.548
1	.664	6	.829	1	.026	6	.266	1	.553
2	.666	7	.832	2	.030	7	.270	2	.557
3	.668	8	.834	3	.033	8	.274	3	.562
4	.671	9	.837	4	.037	9	.278	4	.567
5	.673	74°	.840	5	.040	87°	.282	5	.572
6	.675	1	.843	6	.043	1	.286	6	.577
7	.678	2	.846	7	.047	2	.290	7	.581
8	.680	3	.848	8	.050	3	.295	8	.586
9	.682	4	.851	9	.053	4	.299	9	.591
68°	.684	5	.854	81°	.057	5	.303	94°	.596
1	.687	6	.857	1	.060	6	.307	1	.601
2	.689	7	.860	2	.064	7	.311	2	.606
3	.692	8	.863	3	.067	8	.315	3	.611
4	.694	9	.865	4	.070	9	.319	4	.616
5	.697	75°	.868	5	.074	88°	.323	5	.621
6	.699	1	.871	6	.077	1	.328	6	.626
7	.701	2	.874	7	.081	2	.332	7	.631
8	.704	3	.877	8	.084	3	.336	8	.636
9	.706	4	.880	9	.088	4	.340	9	.641
69°	.708	5	.883	82°	.092	5	.345	95°	.646
1	.711	6	.885	1	.095	6	.349	1	.651
2	.713	7	.888	2	.099	7	.353	2	.657
3	.716	8	.891	3	.103	8	.357	3	.662
69°4	0.718	75°9	0.894	82°4	1.106	88°9	1.361	95°4	1.667

TABLE III. (continued.)

Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.	Temp. Fahr.	Force of Vapour.
°	in.	°	in.	°	in.	°	in.	°	in.
95°	1.672	96°	1.724	97°	1.779	98°	1.833	99°	1.879
6	.677	6	.730	6	.784	6	.839	6	.884
7	.682	7	.735	7	.790	7	.845	7	.890
8	.687	8	.741	8	.795	8	.850	8	.896
9	.692	9	.746	9	.801	9	.856	9	.901
96°	.697	97°	.751	98°	.806	99°	.862	100°	.907
1	.703	1	.757	1	.811	1	.868	1	.912
2	.708	2	.762	2	.817	2	.873	2	.918
3	.714	3	.768	3	.822	3	.878	3	.923
96°4	1.719	97°4	1.773	98°4	1.828	99°4	1.883	100°4	1.938

From the numbers in this Table the Elastic Force of Vapour in the General Tables have been found.

The numbers in this Table show the length of a column of mercury, corresponding to the pressure of aqueous vapour at different temperatures. As in an atmosphere of pure steam its force at the earth's surface is its weight, so in a mixture of atmospheres, the elastic force of each at the surface of the earth is the weight of each. Therefore the elastic force of aqueous vapour representing the weight of the entire mass diffused throughout the atmosphere, expresses the pressure on the surface in the cistern of the barometer, produced by the vapour present at the time of observation. The pressure of dry air is found from the readings of the barometer, diminished by the quantity due to the elastic force of vapour. To find the elastic force of vapour at any time, it is simply necessary to determine the temperature of the dew-point, and to seek for that temperature in this Table, and the quantity of vapour which corresponds to it is seen by inspection.

For instance, suppose the temperature of the dew-point be 51°, opposite to this reading in the Table is 0.374 inch of mercury; a quantity which is about $\frac{1}{80}$ th part of an atmosphere whose whole pressure is 30 inches.

As the pressure of the whole atmosphere is about 15 lbs. on the square inch when the reading of the barometer is about 30 inches, and as the weight of vapour in the atmosphere when the temperature of the dew-point is 51° is about $\frac{1}{80}$ th part of the whole pressure, it follows that the actual weight of the vapour is about $\frac{1.5}{80}$ lbs., or 1300 grains nearly. The weight of a cubic inch of water is 253 grains, therefore the quantity of water present in a column of the atmosphere reading to its limit is $\frac{1.5 \times 1300}{253}$, or 5 inches.

An examination of the numbers in this Table at different temperatures shows that the increased capacity of heat for aqueous vapour at higher temperatures does not follow the same ratio as the temperature, the capacity for aqueous vapour at any temperature being less than the mean of equidistant temperatures; for example, at 60° the elastic force of vapour is 0.361 inch, and at 70° is 0.733 inch; if, therefore, two masses of air, the one at 50° and the other at 70° (both being saturated with moisture), be mixed together, the compound will take a mean temperature of 60°; but the elastic force of vapour at 60° is 0.518 inch, while the mean of the forces at 50° and 70° is 0.547. The tension of vapour is therefore greater than the air can sustain, and the excess falls in the shape of rain.

Weight of a Cubic Foot of Air.

From M. Regnault's experiments, 1000 cubic inches of dry air under the pressure of 30 inches of mercury, and at the temperature of 60°, weighs
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310.3529 grains, and 1000 cubic inches of water under the same pressure, and at the same temperature, weighs 252525 grains; therefore water is 813.67 times heavier than air.

From Table II., the volume of a mass of dry air at 60°, whose volume at 32° is represented by unity, is 1.05701.

Therefore, the weight of a cubic foot of dry air at 32° is equal to the weight at 60°, viz. 536.3 grains, multiplied by 1.05701, or to 566.86 grains.

The following Table has been calculated by dividing 566.86 by the number expressing the volume of dry air after expansion from heat, as contained in Table II.

TABLE IV.—Showing the weight in Grains of a Cubic Foot of Dry Air, under the pressure of 30 inches of Mercury, for every degree from 0° to 100°.

Temp. Fahr.	Weight of a Cubic Foot of Dry Air.	Temp. Fahr.	Weight of a Cubic Foot of Dry Air.	Temp. Fahr.	Weight of a Cubic Foot of Dry Air.	Temp. Fahr.	Weight of a Cubic Foot of Dry Air.
0	grs. 606.37	26	573.87	51	545.74	76	520.25
1	605.05	27	572.69	52	544.67	77	519.28
2	603.74	28	571.51	53	543.61	78	518.31
3	602.43	29	570.34	54	542.55	79	517.35
4	601.13	30	569.17	55	541.50	80	516.39
5	599.83	31	568.01	56	540.45	81	515.43
6	598.54	32	566.85	57	539.40	82	514.48
7	597.26	33	565.70	58	538.36	83	513.53
8	595.98	34	564.56	59	537.32	84	512.59
9	594.71	35	563.42	60	536.28	85	511.65
10	593.44	36	562.28	61	535.25	86	510.71
11	592.18	37	561.15	62	534.22	87	509.77
12	590.92	38	560.02	63	533.20	88	508.84
13	589.67	39	558.89	64	532.18	89	507.91
14	588.42	40	557.77	65	531.17	90	506.99
15	587.18	41	556.66	66	530.16	91	506.07
16	585.95	42	555.55	67	529.15	92	505.15
17	584.72	43	554.44	68	528.14	93	504.23
18	583.49	44	553.34	69	527.14	94	503.32
19	582.27	45	552.24	70	526.15	95	502.41
20	581.05	46	551.15	71	525.16	96	501.50
21	579.84	47	550.06	72	524.17	97	500.60
22	578.64	48	548.97	73	523.18	98	499.70
23	577.44	49	547.89	74	522.20	99	498.81
24	576.24	50	546.82	75	521.22	100	497.93

Enlargement of Volume of Air by Vapour.

If a volume of dry air, of known elasticity, be mixed with an equal volume of vapour, also of known elasticity, and if the mixture be so compressed as to occupy a space only equal to one of these volumes, the elasticity of the mixture will be the sum of the two elasticities of the air and vapour; or, if the mixture be allowed to expand till its elasticity is equal to that of the unmixed air, it will occupy a larger volume in the proportion of the sum of the two elasticities to the elasticity of the air alone.

Let p = the atmospheric pressure as measured by inches of mercury in the barometer tube.

E_t = the elastic force of vapour at temperature t measured in inches of mercury in the barometer tube.

n = the bulk of a certain quantity of air, when dry, at the temperature t , and under the pressure p .

Let n' = the bulk of the same quantity of air when saturated with vapour, at the temperature t , and under the pressure p .

The elasticity varies inversely as the volume, the temperature remaining the same, therefore that portion of the elastic force p , which depends on the air

only which occupies the space $n' = \frac{np}{n'}$,

and the whole atmospheric pressure

$$p = \frac{np}{n'} + E_t,$$

$$\text{or } \frac{n}{n'} = \frac{p - E_t}{p},$$

$$= 1 - \frac{E_t}{p};$$

$$\therefore n' = \frac{n}{1 - \frac{E_t}{p}}.$$

And from this formula the following Table has been constructed:—

TABLE V.—Showing the enlargement which a volume of Dry Air receives when saturated with Vapour under the pressure of 30 inches of Mercury, for every degree of temperature, from 0° to 100°.

Temp. Fahr.	Increased volume owing to the pre- sence of vapour, the original bulk being considered as unity.	Temp. Fahr.	Increased volume owing to the pre- sence of vapour, the original bulk being considered as unity.	Temp. Fahr.	Increased volume owing to the pre- sence of vapour, the original bulk being considered as unity.	Temp. Fahr.	Increased volume owing to the pre- sence of vapour, the original bulk being considered as unity.
0	1.0015	26	1.0047	51	1.0125	76	1.0299
1	1.0015	27	1.0049	52	1.0129	77	1.0309
2	1.0016	28	1.0051	53	1.0134	78	1.0319
3	1.0017	29	1.0053	54	1.0139	79	1.0330
4	1.0018	30	1.0056	55	1.0144	80	1.0341
5	1.0018	31	1.0058	56	1.0150	81	1.0352
6	1.0019	32	1.0060	57	1.0155	82	1.0364
7	1.0020	33	1.0063	58	1.0161	83	1.0376
8	1.0020	34	1.0065	59	1.0167	84	1.0389
9	1.0021	35	1.0068	60	1.0173	85	1.0402
10	1.0023	36	1.0071	61	1.0179	86	1.0414
11	1.0024	37	1.0074	62	1.0185	87	1.0427
12	1.0025	38	1.0077	63	1.0192	88	1.0441
13	1.0026	39	1.0080	64	1.0199	89	1.0455
14	1.0027	40	1.0083	65	1.0206	90	1.0470
15	1.0029	41	1.0086	66	1.0213	91	1.0485
16	1.0030	42	1.0089	67	1.0220	92	1.0500
17	1.0031	43	1.0093	68	1.0228	93	1.0516
18	1.0033	44	1.0096	69	1.0236	94	1.0532
19	1.0034	45	1.0100	70	1.0244	95	1.0549
20	1.0036	46	1.0104	71	1.0253	96	1.0566
21	1.0038	47	1.0108	72	1.0262	97	1.0584
22	1.0039	48	1.0112	73	1.0271	98	1.0602
23	1.0041	49	1.0116	74	1.0280	99	1.0620
24	1.0043	50	1.0120	75	1.0289	100	1.0639
25	1.0045						

Weight of Vapour in a Cubic Foot of Air.

Vapours, so long as they remain in an æriform state, expand by the increase of temperature as permanently elastic fluids, and suffer changes of volume proportional to the changes of pressure. Air, as before stated, expands $\frac{1}{491.13}$, or .0020361 for every increase of 1° of heat; it therefore expands 0.3665 of its bulk from 32° to 212°, and its expansion is uniform between these points.

Therefore, if the weight of a cubic foot of vapour, under the pressure of 30 inches of mercury, and at the temperature of 212°, be called W ; and the weight expressed in the same denomination, of an equal volume of vapour, at the temperature t , and under the same pressure of 30 inches, be called W' ; and if E_t be the elasticity of vapour at the temperature t , then (the expansion of dry air from 32° to 210° being 0.3665, or 0.0020361 for each degree of temperature),

$$W' = \frac{1.3665 \times W \times E_t}{30(1 + .0020361 \times (t - 32^\circ))}$$

A cubic foot of vapour at 212°, and under a pressure of 30 inches, weighs 258.448 grains. Therefore, substituting this value of a cubic foot of vapour at 212°, and under a pressure of 30 inches, the above formula becomes

$$W' = \frac{1.3665 \times 258.448 \times E_t}{30(1 + .0020361 \times (t - 32^\circ))}$$

And from this formula the next Table has been formed.

TABLE VI.—Showing the Weight in Grains of a Cubic Foot of Vapour, under the pressure of 30 inches of Mercury, for every degree of temperature, from 0° to 100°.

Temp. Fahr.	Weight in grains of a Cubic Foot of Vapour.	Temp. Fahr.	Weight in grains of a Cubic Foot of Vapour.	Temp. Fahr.	Weight in grains of a Cubic Foot of Vapour.	Temp. Fahr.	Weight in grains of a Cubic Foot of Vapour.
0	grs. 0.55	26	grs. 1.68	51	grs. 4.24	76	grs. 9.69
1	0.57	27	1.75	52	4.39	77	9.99
2	0.59	28	1.82	53	4.55	78	10.31
3	0.62	29	1.89	54	4.71	79	10.64
4	0.65	30	1.97	55	4.87	80	10.98
5	0.68	31	2.05	56	5.04	81	11.32
6	0.71	32	2.13	57	5.21	82	11.67
7	0.74	33	2.21	58	5.39	83	12.03
8	0.77	34	2.30	59	5.58	84	12.40
9	0.80	35	2.39	60	5.77	85	12.78
10	0.84	36	2.48	61	5.97	86	13.17
11	0.88	37	2.57	62	6.17	87	13.57
12	0.92	38	2.66	63	6.38	88	13.98
13	0.96	39	2.76	64	6.59	89	14.41
14	1.00	40	2.86	65	6.81	90	14.85
15	1.04	41	2.97	66	7.04	91	15.29
16	1.09	42	3.08	67	7.27	92	15.74
17	1.14	43	3.20	68	7.51	93	16.21
18	1.19	44	3.32	69	7.76	94	16.69
19	1.24	45	3.44	70	8.01	95	17.18
20	1.30	46	3.56	71	8.27	96	17.68
21	1.36	47	3.69	72	8.54	97	18.20
22	1.42	48	3.82	73	8.82	98	18.73
23	1.48	49	3.96	74	9.10	99	19.28
24	1.54	50	4.10	75	9.39	100	19.84
25	1.61						

From the numbers in this Table, it appears that air has its capacity for moisture double for a rise from 0° to 16°; from 16° to 33°; from 33° to 52°; from 52° to 73°; and from 73° to 96°; so that if the quantities of water held in solution be taken in a geometrical progression, the temperatures increase in a quicker ratio than the terms of an arithmetical progression.

When the readings of the dry- and wet-bulb thermometer are alike, the weight of a cubic foot of vapour is at once taken from the numbers in Table VI. In all other cases, as the quantity of vapour at the temperature of the dew-point expands in the same ratio as air, the weight of a cubic foot of vapour is calculated from the following formula:—

$$\left. \begin{array}{l} \text{Weight of} \\ \text{a cubic foot} \\ \text{of vapour} \end{array} \right\} = \frac{\text{Volume at temperature of dew-point} \times \text{weight of a cubic foot} \\ \text{of vapour at temperature of dew-point}}{\text{Volume at temperature of air}}$$

Sum of the Weights of a Cubic Foot of Air and a Cubic Foot of Vapour.

TABLE VII.—Showing the Weight of a Cubic Foot of Dry Air added to the Weight of a Cubic Foot of Vapour, at all temperatures between 0° and 100°, under a pressure of 30 inches of Mercury.

Temp. Fahr.	Sum of the weights of a Cubic Foot of Dry Air and of a Cubic Foot of Vapour.	Temp. Fahr.	Sum of the weights of a Cubic Foot of Dry Air and of a Cubic Foot of Vapour.	Temp. Fahr.	Sum of the weights of a Cubic Foot of Dry Air and of a Cubic Foot of Vapour.	Temp. Fahr.	Sum of the weights of a Cubic Foot of Dry Air and of a Cubic Foot of Vapour.
0	grs. 606.92	26	grs. 575.55	51	grs. 549.98	76	grs. 529.94
1	605.62	27	574.44	52	549.06	77	529.27
2	604.33	28	573.33	53	548.16	78	528.62
3	603.05	29	572.23	54	547.26	79	527.99
4	601.78	30	571.14	55	546.37	80	527.37
5	600.51	31	570.06	56	545.49	81	526.75
6	599.25	32	568.98	57	544.62	82	526.15
7	598.00	33	567.91	58	543.75	83	525.56
8	596.75	34	566.86	59	542.90	84	524.99
9	595.51	35	565.81	60	542.05	85	524.43
10	594.28	36	564.76	61	541.22	86	523.88
11	593.06	37	563.72	62	540.39	87	523.34
12	591.84	38	562.68	63	539.58	88	522.82
13	590.63	39	561.65	64	538.77	89	522.32
14	589.43	40	560.63	65	537.98	90	521.84
15	588.23	41	559.63	66	537.20	91	521.36
16	587.04	42	558.63	67	536.42	92	520.89
17	585.86	43	557.64	68	535.65	93	520.44
18	584.68	44	556.66	69	534.90	94	520.01
19	583.51	45	555.68	70	534.16	95	519.59
20	582.35	46	554.71	71	533.43	96	519.18
21	581.20	47	553.75	72	532.71	97	518.80
22	580.06	48	552.79	73	532.00	98	518.43
23	578.92	49	551.85	74	531.30	99	518.09
24	577.78	50	550.92	75	530.61	100	517.77
25	576.66						

The next Table is computed from the following formula:—

$$\left. \begin{array}{l} \text{Weight of a} \\ \text{cubic foot} \\ \text{of saturated} \\ \text{air} \end{array} \right\} = \frac{\text{Weight of a cubic foot of air and a cubic foot of vapour} \\ \text{(Table VII.)}}{\text{Increase of volume of a cubic foot of dry air in consequence} \\ \text{of its saturation with moisture (Table V).}}$$

Weight of a Cubic Foot of Saturated Air.

TABLE VIII.—Showing the Weight in Grains of a Cubic Foot of Air saturated with moisture, at all temperatures between 0° and 100°, under the pressure of 30 inches of Mercury.

Temp. Fahr.	Weight of a Cubic Foot of Air saturated with Vapour.	Temp. Fahr.	Weight of a Cubic Foot of Air saturated with Vapour.	Temp. Fahr.	Weight of a Cubic Foot of Air saturated with Vapour.	Temp. Fahr.	Weight of a Cubic Foot of Air saturated with Vapour.
0	grs. 606.03	26	grs. 572.85	51	grs. 543.21	76	grs. 514.55
1	604.69	27	571.63	52	542.06	77	513.40
2	603.37	28	570.42	53	540.89	78	512.26
3	602.05	29	569.20	54	539.75	79	511.13
4	600.72	30	567.99	55	538.60	80	509.97
5	599.40	31	566.79	56	537.45	81	508.81
6	598.11	32	565.58	57	536.30	82	507.67
7	596.80	33	564.38	58	535.16	83	506.51
8	595.51	34	563.18	59	534.00	84	505.36
9	594.24	35	561.99	60	532.84	85	504.19
10	592.94	36	560.79	61	531.69	86	503.05
11	591.64	37	559.59	62	530.55	87	501.90
12	590.35	38	558.42	63	529.42	88	500.74
13	589.08	39	557.22	64	528.27	89	499.57
14	587.82	40	556.03	65	527.14	90	498.43
15	586.55	41	554.87	66	526.01	91	497.25
16	585.30	42	553.69	67	524.86	92	496.07
17	584.03	43	552.52	68	523.71	93	494.90
18	582.76	44	551.36	69	522.55	94	493.74
19	581.51	45	550.19	70	521.41	95	492.56
20	580.26	46	549.01	71	520.27	96	491.39
21	579.03	47	547.85	72	519.12	97	490.19
22	577.78	48	546.69	73	517.98	98	489.01
23	576.56	49	545.53	74	516.82	99	487.83
24	575.32	50	544.36	75	515.69	100	486.65
25	574.08						

When the readings of the two thermometers are alike, the weight of a cubic foot of air, under a pressure of 30 inches of mercury, will be found opposite to the temperature in the above Table.

In all other cases it is necessary to multiply the degree of humidity into the excess of the weight of a cubic foot of dry air (Table III.) above that of a cubic foot of saturated air (Table VIII.), and to take the product from the weight of a cubic foot of dry air: the result will be under a pressure of 30 inches of mercury. The numbers in the General Tables have been calculated for a pressure of 29 inches.

Degree of Humidity.

In calculating the numbers in the Tables saturation has been assumed as 100°, and air without moisture as zero. The numbers are found by dividing the quantity of vapour, corresponding to the temperature of the dew-point, by the quantity which would have been present had the air been saturated.

ON THE MANNER OF USING THE TABLES.

To find the Temperature of the Dew-Point.

CASE I.—If the readings of both the dry- and wet-bulb thermometers be whole degrees, the dew-point will be found opposite to the reading of the wet-bulb.

CASE II.—If the reading of the dry-bulb be affected with parts of a degree, in the fourth column, opposite to the reading of the wet-bulb, will be found the amount of the decrease in the temperature of the dew-point, corresponding to an increase of reading of 1° in the dry-bulb. A proportional part of this, for the parts of a degree, is to be taken from the dew-point opposite to the reading of the wet-bulb.

CASE III.—If the readings of the dry- and wet-bulb be both affected with parts of a degree, then the decrease due to the excess above the whole degree in the dry, will be found as in Case II; and the increase due to the excess of reading of the wet-bulb above the whole degree, will be found by taking the difference between two consecutive dew-points, which will give the difference for an increase of one degree in the wet-bulb: a proportional part of this being taken and applied will give the reading required.

Example.—Suppose the reading of the dry- and wet-bulb be 51°·6 and 46°·4.

In Table, 50° dry, on page 10,—

The dew-point opposite to 46° wet is 40.8

The dew-point opposite to 47° wet is 42.8

Difference, or the increase in dew-point for an increase of 1° in wet 2.0

Proportional part of the increase for 0°·4 is + 0.8

Temperature of the dew-point corresponding to 51° dry and 46°·4 wet is 41.6

In the fourth column the decrease of dew-point for an increase of 1° in the dry is 0.9, the proportional part for 0.6 is — 0.5

The temperature of dew-point corresponding to 51°·6 dry and 46°·4 wet is 41.1

In like manner, the elastic force of vapour; the weight of vapour in a cubic foot of air; the additional weight required to saturate a cubic foot of air; and the degree of humidity may be found.

To find the weight of a cubic foot of air the reading of the barometer is required in addition.

Example.—Required the weight of a cubic foot of air, when the reading of the dry-bulb is 51°·6, wet 46°·4, and barometer 29°·72.

In column 13, opposite 46° wet is grs. 525.9

In column 14, the decrease of weight for an increase of 1° in dry is 1°; the proportional part for 0°·6 is — 0.6

Carried over 525.3

	Brought over . . .	525 ^{grs.} ·3
In column 14, the increase of weight for an increase in the reading of the barometer for one inch is 18·1 grs.		
Opposite ·7 (in the Table, under 18·1 in last column) is . .		12·7
Opposite ·02 (in the little Table in right-hand corner of the page)		0·4
The weight required is		538·4

When the reading of the barometer exceeds 30 inches, the numbers in column 13 are to be increased by the quantity in column 14 for one inch, and still further increased by the quantities in the little tables in the last column, corresponding to the excess of reading above 30 inches.

When the reading is less than 29 inches, the difference from 29 inches is to be taken, and the quantities from the small Tables, corresponding to the difference, are to be taken and applied, subtractively to the number in column 13.

In all cases throughout the Tables the sign — denotes decrease, and the sign + increase.

General Remarks.

In addition to its value to the meteorologist, there are many cases in ordinary life for which this instrument may be used to advantage, and the simple inspection of the two thermometers will often afford a better criterion of the weather, and of the probability of rain than the barometer itself: regard, however, must be had to the time of the day and the time of the year when the observation is made.

In summer, when the diurnal range of temperature is great, if in the morning the difference between the air temperature and the dew-point temperature be small, and the rise of temperature during the day considerable, it is probable that the difference will increase; and if the temperature of the dew-point at the same time decrease, it is an indication of very fine weather. If, on the contrary, the temperature of both should increase with the day in nearly equal proportion, rain will almost certainly follow, as the temperature of the air falls with the declining sun.

In winter, when the diurnal range of temperature is small, the indication of the weather is shown by the increase or decrease in the temperature of the dew-point, rather than by the difference between the temperatures of the air and of the dew-point. In showery weather the indications vary rapidly, and a person making observations at short intervals may predict the approach of a storm, particularly if he take simultaneous observations with the barometer.

Use of the Instrument to the Sick Chamber.

The importance of this instrument to the requirements of a sick chamber are scarcely to be over-rated, and will be at once obvious to all who know that the comfort of the patient is dependent not so much on the temperature, as on the hygrometric condition of the air. In cold frosty weather the air of the apartment is not unfrequently too dry, in which case the difference between the readings of the two thermometers will be great, and this condition will be manifest to the sufferer by the degree of inconvenience he will experience attributable to this cause. If the air be moist, the difference between the

readings will be less in proportion to the degree of moisture; and if the air be saturated, the readings will be alike. It would be well for the medical profession to enforce, as far as lay in its power, the use of this simple and effectual instrument, which at all times is valuable with reference to the record of external temperature, as well as hygrometric conditions of the air, and which in case of sickness gives indications so important to the comfort and convalescence of the patient. If the air in the apartment be too dry, that is to say, if the difference between the readings of the wet and dry thermometers is very considerable, it will be necessary to expose water in some shallow vessel of some extent of surface, so that the evaporation arising from it, mixing with the air, shall create a greater degree of humidity. This process may be considerably accelerated by heating the water, when the evaporation will proceed more rapidly. The reading of the instrument will point out when the proper degree of humidity is attained. If by heated water, the evaporating surface should be either covered over or removed; if by cold water, it may be suffered to remain.

If, on the contrary, the air should be too moist, or should be required to be remarkably dry, all water must either be removed or covered over; and the required degree of dryness will be obtained either by raising the temperature, or by placing in the room sulphuric acid or any other medium, which has the property of rapidly absorbing all watery vapour. By these simple means an artificial locality may be produced, and invalids whose circumstances or avocations prevent them from seeking a climate suited to their peculiar constitution, may to a great extent, by the assistance of this instrument, obviate the necessity of so doing.

The instrument in use should be placed in a part of the room away from the immediate influence of the fire, and not exposed to open doors or currents of air; in ordinarily constructed rooms, the best place is in a recess on the same side of the room as the fire.

A difference of from 6 to 8 degrees between the readings of the two thermometers will generally be found to give a pleasant degree of humidity.

Use of the Instrument in Hothouses, Greenhouses, and in Conservatories.

In regulating the hygrometrical state of the air in conservatories, &c., it may be made to render the most essential service, the temperature of the air being regulated by the dry-bulb, and the degree of humidity by the difference between the two.

It is well known that in greenhouses the plants often become shrivelled or otherwise injured before there is any suspicion of an alteration in the state of the air; with the view of remedying the evil, a quantity of water, without any guide as to the amount required, is thrown upon the walls; and at other times, with the view of preservation, it is administered in the same indefinite manner, on the supposition of the air being too dry, as determined by the senses. These, with regard to heat and humidity, are very fallacious guides; and everybody must have felt in summer the heat at times to be almost insupportable, without any apparent reason as shown by the reading of the thermometer; this arises from the air being nearly calm and moist.

Should the air become in motion, under the same hygrometric conditions we feel cool and experience a relief; and should these hygrometric conditions change, with the same temperature, and become dryer, evaporation of moisture from the skin takes place with activity, and we feel a marked sensation of cold; so that with the same temperature, and enjoying an equal state of health, we experience according to our own sensations various vicissitudes of temperature; in fact, our senses cannot guide us with regard to heat and humidity.

A wet- and dry-bulb thermometer properly understood, and its indications attended to, would be the preservation of many rare and valuable plants which have hitherto perished in an ill-regulated atmosphere.

To make the instrument properly available for this purpose, a knowledge is required of the climatic conditions of the countries in which the plants naturally have their growth. The temperature of the hothouse may then be regulated by the dry bulb, and the degree of humidity by the wet bulb. For example, suppose the temperature of the climate to be 70° , and its mean state of humidity about 60 or 70 per cent. of the quantity of aqueous vapour which the air would contain if saturated. It is necessary then that the reading of the dry thermometer should be maintained at 70° , and the reading of the wet between 60° and 64° . These last numbers are found by looking in the Table at div. 70° of the dry bulb, and under degree of humidity for 0.6 or 0.7, which gives a corresponding reading between 60° and 64° . The introduction of a large surface of water with a moveable cover to regulate at pleasure the extent of evaporating surface, is a certain means of obtaining and afterwards continuing the required degree of humidity; should it be found desirable to throw water on the walls, for the preservation of cleanliness, the attendant will find in the instrument a certain guide as to the degree of humidity in the air occasioned by the performance of this operation, which he will regulate accordingly: I have no hesitation in saying that the employment of this instrument would save the lives of many valuable plants.

Value of the Instrument in places where Stoves are used.

The use of stoves is very general, and each year becoming more so, but their effects are often injurious to health, and frequently subject the occupant of rooms so heated to much pain and inconvenience; this arises in a great measure from the excessive dryness of the air of such rooms, which causes all perspiration and moisture from the skin to evaporate too rapidly.

Lewisham, February 1856.

ERRATA.

Page xii, line 12 from top, for 210° read 212° .

Page xiv, line 3 from bottom, for 100° read 100.

Reading of Thermometer.		Temperature of the Dew-point.	Difference for an increase of 1° in Dry.	Elastic force of Vapour.	Difference for an increase of 1° in Dry.	Vapour in a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Vap. reqd. to sat. a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Degree of Humidity. (Satn. = 100.)	Difference for an increase of 1° in Dry.	Weight of a Cubic Foot of Air, Bar. reading 29 inches.	Diff. for an increase of 1° in Dry.	Difference for one inch in Barometer and proportional parts.
Dry.	Wet.													
10	10.0	10.0	-7.8	0.068	-0.020	0.8	-0.2	0.0	+0.2	100	-33	573.1	-1.1	19.8
	9.8	8.2	7.8	0.063	0.18	0.8	0.2	0.1	0.2	92	29	573.1	+19.8	1.1 2.0
	9.6	6.5	7.8	0.058	0.16	0.7	0.2	0.1	0.2	85	26	573.1		2.2 4.0
	9.4	4.7	7.7	0.054	0.15	0.7	0.2	0.2	0.2	78	23	573.1		3.3 5.9
	9.2	3.0	7.7	0.050	0.14	0.6	0.2	0.2	0.2	72	20	573.1		4.4 7.9
	9.0	1.2	-7.7	0.046	-0.12	0.6	-0.2	0.3	+0.2	67	-18	573.1		5.5 9.9
11	11.0	11.0	-7.8	0.071	-0.021	0.9	-0.2	0.0	+0.2	100	-34	571.9	-1.1	19.7
	10.8	9.2	7.8	0.065	0.18	0.8	0.2	0.1	0.2	92	30	571.9	+19.7	1.1 2.0
	10.6	7.5	7.8	0.060	0.16	0.8	0.2	0.1	0.2	85	27	571.9		2.2 4.0
	10.4	5.7	7.7	0.056	0.14	0.7	0.2	0.2	0.2	78	24	571.9		3.3 5.9
	10.2	4.0	7.7	0.052	0.12	0.7	0.2	0.2	0.2	72	22	571.9		4.4 7.9
	10.0	2.2	7.7	0.048	0.10	0.6	0.2	0.3	0.2	67	20	571.9		5.5 9.9
	9.8	0.5	-7.7	0.045	-0.08	0.6	-0.2	0.3	+0.2	62	-18	571.9		6.6 11.9
12	12.0	12.0	-7.8	0.074	-0.022	0.9	-0.2	0.0	+0.3	100	-34	570.7	-1.1	19.7
	11.8	10.2	7.8	0.068	0.20	0.8	0.2	0.1	0.3	92	31	570.7	+19.7	1.1 2.0
	11.6	8.5	7.8	0.063	0.18	0.8	0.2	0.1	0.3	85	28	570.7		2.2 4.0
	11.4	6.7	7.7	0.058	0.16	0.7	0.2	0.2	0.3	78	26	570.7		3.3 5.9
	11.2	5.0	7.7	0.054	0.14	0.7	0.2	0.2	0.3	72	24	570.7		4.4 7.9
	11.0	3.2	7.7	0.050	0.12	0.6	0.2	0.3	0.3	66	22	570.7		5.5 9.9
	10.8	1.5	-7.7	0.047	-0.10	0.6	-0.2	0.3	+0.3	61	-20	570.7		6.6 11.9
13	13.0	13.0	-7.8	0.078	-0.023	1.0	-0.3	0.0	+0.3	100	-34	569.5	-1.1	19.6
	12.8	11.3	7.8	0.072	0.21	0.9	0.3	0.1	0.3	92	31	569.5	+19.6	1.1 2.0
	12.6	9.5	7.8	0.066	0.19	0.8	0.2	0.2	0.3	85	28	569.5		2.2 4.0
	12.4	7.7	7.7	0.061	0.17	0.8	0.2	0.2	0.3	78	25	569.5		3.3 5.9
	12.2	6.0	7.7	0.056	0.15	0.7	0.2	0.3	0.3	72	23	569.5		4.4 7.9
	12.0	4.2	7.7	0.052	0.13	0.7	0.2	0.3	0.3	66	21	569.5		5.5 9.9
	11.8	2.5	7.7	0.048	0.11	0.6	0.2	0.4	0.3	61	19	569.5		6.6 11.9
	11.6	0.7	-7.7	0.045	-0.09	0.6	-0.2	0.4	+0.3	57	-18	569.5		7.7 12.8
14	14.0	14.0	-7.8	0.082	-0.025	1.0	-0.3	0.0	+0.3	100	-33	568.2	-1.1	19.6
	13.8	12.2	7.8	0.075	0.22	0.9	0.3	0.1	0.3	92	30	568.2	+19.6	1.1 2.0
	13.6	10.5	7.8	0.069	0.20	0.9	0.3	0.1	0.3	85	28	568.2		2.2 4.0
	13.4	8.7	7.7	0.064	0.18	0.8	0.2	0.2	0.3	78	26	568.2		3.3 5.9
	13.2	7.0	7.7	0.059	0.16	0.7	0.2	0.3	0.3	72	24	568.2		4.4 7.9
	13.0	5.2	7.7	0.055	0.14	0.7	0.2	0.3	0.3	66	22	568.2		5.5 9.9
	12.8	3.5	7.7	0.051	0.12	0.6	0.2	0.4	0.3	61	20	568.2		6.6 11.9
	12.6	1.7	-7.7	0.048	-0.10	0.6	-0.2	0.4	+0.3	57	-18	568.2		7.7 12.8
15	15.0	15.0	-7.7	0.086	-0.026	1.1	-0.3	0.0	+0.3	100	-33	567.0	-1.1	19.5
	14.8	13.3	7.7	0.079	0.24	1.0	0.3	0.1	0.3	92	30	567.0	+19.5	1.1 2.0
	14.6	11.5	7.7	0.073	0.22	0.9	0.3	0.2	0.3	85	27	567.0		2.2 4.0
	14.4	9.7	7.7	0.067	0.20	0.8	0.3	0.3	0.3	78	25	567.0		3.3 5.9
	14.2	8.0	7.7	0.062	0.18	0.8	0.3	0.3	0.3	72	24	567.0		4.4 7.9
	14.0	6.2	7.6	0.057	0.16	0.7	0.2	0.4	0.3	67	22	567.0		5.5 9.9
	13.8	4.5	7.6	0.053	0.14	0.7	0.2	0.4	0.3	62	19	567.0		6.6 11.9
	13.6	2.7	7.6	0.049	0.12	0.6	0.2	0.5	0.3	57	17	567.0		7.7 12.8
	13.4	1.0	-7.6	0.046	-0.10	0.6	-0.2	0.5	+0.3	52	-16	567.0		8.8 13.8
16	16.0	16.0	-7.6	0.090	-0.027	1.1	-0.3	0.0	+0.3	100	-32	565.8	-1.1	19.4
	15.8	14.3	7.6	0.083	0.25	1.0	0.3	0.1	0.3	92	29	565.8	+19.4	1.1 2.0
	15.6	12.5	7.6	0.076	0.22	0.9	0.3	0.2	0.3	85	27	565.8		2.2 4.0
	15.4	10.8	7.6	0.070	0.20	0.9	0.3	0.2	0.3	79	25	565.8		3.3 5.9
	15.2	9.0	7.5	0.065	0.18	0.8	0.3	0.3	0.3	73	23	565.8		4.4 7.9
	15.0	7.3	7.5	0.060	0.16	0.7	0.2	0.4	0.3	67	22	565.8		5.5 9.9
	14.8	5.6	7.5	0.055	0.14	0.7	0.2	0.4	0.3	62	21	565.8		6.6 11.9
	14.6	3.8	7.5	0.051	0.12	0.6	0.2	0.5	0.3	58	19	565.8		7.7 12.8
	14.4	2.1	7.4	0.047	0.10	0.6	0.2	0.5	0.3	53	18	565.8		8.8 13.8
	14.2	0.3	-7.4	0.044	-0.08	0.5	-0.2	0.6	+0.3	50	-17	565.8		9.9 14.8

Reading of Thermometer.		Temperature of the Dew-Point.	Difference for an increase of 1° in Dry.	Elastic force of Vapour.	Difference for an increase of 1° in Dry.	Vapour in a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Vap. reqd. to sat. a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Degree of Humidity. (Satn. = 100.)	Difference for an increase of 1° in Dry.	Weight of a Cubic Foot of Air, Bar. reading 29 inches.	Diff. for an inc. ease of 1 in. in Bar.	Difference for one inch in Barometer and proportional parts.
Dry.	Wet.													
17	17°0	17°0	-7°5	0°094	-0°28	1°1	-0°3	0°1	+0°4	100	-32	564°5	-1°1	19°5
	16°8	15°3	7°5	0°087	0°26	1°0	0°3	0°1	0°4	93	30	564°5		
	16°6	13°6	7°5	0°080	0°23	1°0	0°3	0°1	0°4	86	28	564°5		
	16°4	11°8	7°4	0°074	0°21	0°9	0°3	0°2	0°4	80	26	564°5		
	16°2	10°1	7°4	0°068	0°19	0°8	0°2	0°3	0°4	74	24	564°5		
	16°0	8°4	7°4	0°063	0°17	0°8	0°2	0°3	0°4	68	22	564°5		
	15°8	6°7	7°3	0°058	0°15	0°7	0°2	0°4	0°3	63	20	564°5		
	15°6	4°9	7°3	0°054	0°13	0°6	0°2	0°5	0°2	58	18	564°5		
	15°4	3°2	7°3	0°050	0°11	0°6	0°2	0°5	0°2	53	16	564°5		
	15°2	1°5	-7°3	0°047	-0°09	0°5	-0°2	0°6	+0°2	49	-14	564°9		
18	18°0	18°0	-7°3	0°098	-0°28	1°2	-0°3	0°0	+0°4	100	-32	563°4	-1°1	19°5
	17°8	16°3	7°3	0°091	0°26	1°1	0°3	0°1	0°4	93	30	563°4		
	17°6	14°6	7°3	0°084	0°24	1°0	0°3	0°2	0°4	86	28	563°4		
	17°4	12°9	7°3	0°077	0°22	1°0	0°3	0°2	0°4	80	26	563°4		
	17°2	11°2	7°2	0°071	0°20	0°9	0°3	0°3	0°4	74	24	563°4		
	17°0	9°5	7°2	0°066	0°18	0°8	0°3	0°3	0°4	68	22	563°4		
	16°8	7°8	7°1	0°061	0°16	0°7	0°2	0°5	0°3	63	19	563°4		
	16°6	6°1	7°1	0°057	0°14	0°7	0°2	0°5	0°3	58	17	563°4		
	16°4	4°4	7°0	0°053	0°12	0°6	0°2	0°6	0°2	54	15	563°4		
	16°2	2°7	7°0	0°049	0°10	0°6	0°2	0°6	0°2	50	13	563°4		
	16°0	1°0	-6°9	0°046	-0°08	0°6	-0°2	0°6	+0°2	46	-11	563°8		
19	19°0	19°0	-7°1	0°103	-0°30	1°3	-0°3	0°0	+0°4	100	-32	562°1	-1°1	19°5
	18°8	17°3	7°1	0°095	0°27	1°2	0°3	0°1	0°4	93	29	562°1		
	18°6	15°7	7°1	0°088	0°25	1°1	0°3	0°2	0°4	86	27	562°1		
	18°4	14°0	7°0	0°081	0°22	1°0	0°3	0°3	0°3	80	25	562°1		
	18°2	12°3	7°0	0°075	0°20	0°9	0°3	0°4	0°3	74	22	562°1		
	18°0	10°7	6°9	0°070	0°19	0°9	0°3	0°4	0°3	68	20	562°1		
	17°8	9°0	6°9	0°065	0°17	0°8	0°2	0°5	0°2	63	18	562°1		
	17°6	7°3	6°8	0°060	0°15	0°7	0°2	0°6	0°2	58	17	562°1		
	17°4	5°6	6°8	0°055	0°13	0°7	0°2	0°6	0°2	54	16	562°1		
	17°2	4°0	6°7	0°051	0°11	0°6	0°2	0°7	0°2	50	14	562°1		
	17°0	2°3	6°7	0°048	0°09	0°6	0°2	0°7	0°2	47	13	562°1		
	16°8	0°7	-6°7	0°045	-0°08	0°6	-0°2	0°7	+0°2	44	-11	562°5		
20	20°0	20°0	-6°9	0°108	-0°30	1°3	-0°3	0°0	+0°4	100	-30	561°0	-1°1	19°5
	19°8	18°4	6°8	0°100	0°28	1°2	0°3	0°1	0°4	93	28	561°0		
	19°6	16°7	6°7	0°093	0°26	1°1	0°3	0°2	0°4	86	26	561°0		
	19°4	15°1	6°7	0°086	0°24	1°0	0°3	0°3	0°4	80	24	561°0		
	19°2	13°5	6°7	0°079	0°21	1°0	0°3	0°3	0°4	74	22	561°0		
	19°0	11°9	6°6	0°073	0°19	0°9	0°2	0°4	0°3	68	20	561°0		
	18°8	10°2	6°5	0°068	0°17	0°8	0°2	0°5	0°3	63	18	561°0		
	18°6	8°6	6°5	0°063	0°15	0°8	0°2	0°5	0°3	59	16	561°0		
	18°4	7°0	6°5	0°059	0°14	0°7	0°2	0°6	0°3	55	15	561°0		
	18°2	5°4	6°4	0°055	0°13	0°7	0°2	0°6	0°3	51	14	561°0		
	18°0	3°7	6°4	0°051	0°12	0°6	0°2	0°7	0°2	48	13	561°0		
	17°8	2°1	6°4	0°048	0°11	0°6	0°2	0°7	0°2	45	12	561°0		
	17°6	0°5	-6°3	0°045	-0°10	0°5	-0°2	0°8	+0°2	42	-11	561°4		
21	21°0	21°0	-6°6	0°113	-0°30	1°4	-0°3	0°0	+0°4	100	-29	559°7	-1°1	19°5
	20°8	19°4	6°5	0°105	0°28	1°3	0°3	0°1	0°4	93	27	559°7		
	20°6	17°9	6°5	0°097	0°25	1°2	0°3	0°2	0°3	87	25	559°7		
	20°4	16°3	6°5	0°090	0°23	1°1	0°3	0°3	0°3	81	23	559°7		
	20°2	14°7	6°4	0°084	0°21	1°0	0°3	0°4	0°3	75	21	559°9		
	20°0	13°1	6°3	0°078	0°19	1°0	0°3	0°4	0°3	70	20	560°0		
	19°8	11°5	6°2	0°072	0°17	0°9	0°2	0°5	0°2	65	18	560°0		
	19°6	10°0	6°2	0°067	0°16	0°8	0°2	0°6	0°2	60	16	560°0		
	19°4	8°4	6°2	0°062	0°14	0°8	0°2	0°6	0°2	56	15	560°0		
	19°2	6°8	6°1	0°058	0°13	0°7	0°2	0°7	0°2	52	14	560°0		
	19°0	5°2	6°1	0°054	0°12	0°7	0°2	0°7	0°2	49	13	560°0		
	18°8	3°7	6°0	0°051	0°11	0°6	0°2	0°8	0°2	46	12	560°0		
	18°6	2°1	6°0	0°048	0°10	0°6	0°2	0°8	0°2	43	11	560°0		
	18°4	0°5	-5°9	0°045	-0°10	0°5	-0°2	0°8	+0°2	40	-10	560°2		

Reading of Thermometer.		Temperature of the Dew-Point.	Difference for an increase of 1° in Dry.	Elastic force of Vapour.	Difference for an increase of 1° in Dry.	Vapour in a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Vap. reqd. to sat. a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Degree of Humidity. (Satn. = 100.)	Difference for an increase of 1° in Dry.	Weight of a Cubic Foot of Air, Bar. reading 29 inches.	Diff. for an increase of 1° in Dry.	Difference for one inch in Barometer and proportional parts.
Dry.	Wet.													
22	22°0	22°0	-6°3	0°118	-0°30	1°4	-0°3	0°0	+0°4	100	-28	558°5	-1°1	19°3
	21°8	20°5	6°2	0°110	0°27	1°3	0°3	0°1	0°4	94	26	558°5		
	21°6	19°0	6°1	0°102	0°25	1°2	0°3	0°2	0°4	88	24	558°5	+19°3	1°1 1°9
	21°4	17°4	6°0	0°095	0°23	1°2	0°3	0°2	0°4	82	23	558°5		2°2 3°9
	21°2	15°9	6°0	0°089	0°22	1°1	0°3	0°3	0°4	76	21	558°5		3°3 5°8
	21°0	14°4	6°0	0°083	0°20	1°0	0°2	0°4	0°3	71	19	558°5		4°4 7°7
	20°8	12°9	5°9	0°077	0°18	0°9	0°2	0°5	0°3	66	18	558°5		5°5 9°7
	20°6	11°4	5°8	0°072	0°17	0°9	0°2	0°5	0°3	62	16	558°5		6°6 11°6
	20°4	9°8	5°7	0°067	0°15	0°8	0°2	0°6	0°3	58	15	558°5		7°7 13°5
	20°2	8°3	5°7	0°063	0°14	0°8	0°2	0°6	0°3	54	15	558°5		8°8 15°4
	20°0	6°8	5°6	0°059	0°13	0°7	0°2	0°7	0°3	50	14	558°5		9°9 17°4
	19°8	5°3	5°6	0°055	0°12	0°7	0°2	0°7	0°2	47	13	559°0		
	19°6	3°8	5°5	0°051	0°11	0°6	0°2	0°8	0°2	44	12	559°0		
19°4	2°2	5°5	0°048	0°10	0°6	0°2	0°8	0°2	41	12	559°0			
19°2	0°7	-5°4	0°045	-0°10	0°5	-0°2	0°9	+0°2	38	-11	559°0			
23	23°0	23°0	-5°9	0°123	-0°29	1°5	-0°3	0°0	+0°4	100	-27	557°4	-1°1	19°2
	22°8	21°5	5°8	0°115	0°27	1°4	0°3	0°1	0°4	94	25	557°4		
	22°6	20°1	5°8	0°108	0°26	1°3	0°3	0°2	0°3	88	23	557°4	+19°2	1°1 1°9
	22°4	18°6	5°7	0°101	0°24	1°2	0°3	0°3	0°3	82	22	557°4		2°2 3°8
	22°2	17°2	5°6	0°094	0°22	1°1	0°3	0°4	0°3	77	20	557°4		3°3 5°8
	22°0	15°7	5°5	0°088	0°20	1°1	0°3	0°4	0°3	72	19	557°4		4°4 7°7
	21°8	14°3	5°5	0°082	0°18	1°0	0°2	0°5	0°2	67	17	557°4		5°5 9°6
	21°6	12°8	5°4	0°077	0°17	0°9	0°2	0°6	0°2	63	16	557°4		6°6 11°5
	21°4	11°4	5°4	0°072	0°16	0°9	0°2	0°6	0°2	59	15	557°4		7°7 13°4
	21°2	9°9	5°3	0°067	0°14	0°8	0°2	0°7	0°2	55	14	557°4		8°8 15°4
	21°0	8°4	5°2	0°063	0°13	0°8	0°2	0°7	0°2	52	13	557°4		9°9 17°3
	20°8	7°0	5°2	0°059	0°12	0°7	0°2	0°8	0°2	48	12	557°4		
	20°6	5°5	5°1	0°055	0°11	0°7	0°2	0°8	0°2	45	11	557°4		
20°4	4°1	5°0	0°052	0°10	0°6	0°2	0°9	0°2	42	10	557°4			
20°2	2°6	-5°0	0°049	-0°10	0°6	-0°2	0°9	+0°2	39	-9	557°9			
24	24°0	24°0	-5°5	0°129	-0°29	1°5	-0°3	0°0	+0°4	100	-26	556°1	-1°1	19°1
	23°8	22°6	5°4	0°121	0°27	1°5	0°3	0°1	0°4	94	24	556°1		
	23°6	21°2	5°3	0°114	0°25	1°4	0°3	0°2	0°3	88	23	556°1	+19°2	1°1 1°9
	23°4	19°8	5°2	0°107	0°23	1°3	0°3	0°3	0°3	83	21	556°1		2°2 3°8
	23°2	18°5	5°2	0°100	0°21	1°2	0°3	0°3	0°3	78	20	556°1		3°3 5°8
	23°0	17°1	5°2	0°094	0°20	1°1	0°3	0°4	0°3	73	18	556°1		4°4 7°7
	22°8	15°7	5°1	0°088	0°19	1°1	0°3	0°4	0°3	69	17	556°1		5°5 9°6
	22°6	14°3	5°0	0°082	0°17	1°0	0°3	0°5	0°3	65	15	556°1		6°6 11°5
	22°4	12°9	4°9	0°077	0°15	0°9	0°3	0°6	0°3	61	14	556°1		7°7 13°4
	22°2	11°5	4°8	0°072	0°13	0°9	0°2	0°6	0°2	57	13	556°1		8°8 15°3
	22°0	10°2	4°7	0°068	0°12	0°8	0°2	0°7	0°2	53	12	556°1		9°9 17°2
	21°8	8°8	4°7	0°064	0°11	0°8	0°2	0°7	0°2	50	12	556°1		
	21°6	7°4	4°6	0°060	0°10	0°7	0°2	0°8	0°2	47	11	556°1		
21°4	6°0	4°5	0°056	0°10	0°7	0°2	0°8	0°2	44	10	556°1			
21°2	4°6	4°5	0°053	0°09	0°6	0°2	0°9	0°2	42	10	556°1			
21°0	3°2	-4°4	0°050	-0°09	0°6	-0°2	0°9	+0°2	39	-9	556°7			
25	25°0	25°0	-5°1	0°135	-0°28	1°6	-0°3	0°0	+0°4	100	-24	555°0	-1°1	19°1
	24°8	23°7	5°0	0°127	0°26	1°5	0°3	0°1	0°4	94	22	555°0		
	24°6	22°4	4°9	0°120	0°24	1°4	0°3	0°2	0°4	89	21	555°0	+19°1	1°1 1°9
	24°4	21°1	4°8	0°113	0°22	1°4	0°3	0°2	0°4	84	20	555°0		2°2 3°8
	24°2	19°8	4°7	0°106	0°20	1°3	0°3	0°3	0°4	79	18	555°0		3°3 5°8
	24°0	18°5	4°7	0°100	0°19	1°2	0°2	0°4	0°3	74	17	555°0		4°4 7°7
	23°8	17°2	4°6	0°094	0°18	1°1	0°2	0°5	0°3	70	16	555°0		5°5 9°6
	23°6	15°9	4°5	0°089	0°17	1°1	0°2	0°5	0°3	66	14	555°0		6°6 11°5
	23°4	14°6	4°4	0°084	0°16	1°0	0°2	0°6	0°3	62	13	555°0		7°7 13°4
	23°2	13°3	4°3	0°079	0°14	1°0	0°2	0°6	0°3	59	12	555°0		8°8 15°3
	23°0	11°9	4°2	0°074	0°13	0°9	0°2	0°7	0°3	55	11	555°0		9°9 17°2
	22°8	10°6	4°1	0°069	0°12	0°8	0°2	0°8	0°3	52	10	555°0		
	22°6	9°3	4°0	0°065	0°11	0°8	0°2	0°8	0°2	49	9	555°0		
22°4	8°0	3°9	0°062	0°10	0°9	0°2	0°9	0°2	46	8	555°0			
22°2	6°7	3°8	0°059	-0°10	0°9	-0°2	0°9	+0°2	43	-7	555°5			

Reading of Thermometer.		Temperature of the Dew-Point.	Difference for an increase of 1° in Dry.	Elastic force of Vapour.	Difference for an increase of 1° in Dry.	Vapour in a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Vap. reqd. to sat. a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Degree of Humidity. (Satn. = 100.)	Difference for an increase of 1° in Dry.	Weight of a Cubic Foot of Air, Bar. reading 29 inches.	Diff. for an increase of 1° in Dry.	Difference for one inch in Barometer and proportional parts.
Dry.	Wet.													
26	26°0	26°0	-4°6	0°141	-0°27	1°7	-0°3	0°1	+0°3	100	-21	553°7	-1°1	19°1
	25°8	24°8	4°5	0°134	0°25	1°6	0°3	0°1	0°3	95	20	553°7		
	25°6	23°6	4°4	0°127	0°23	1°5	0°3	0°2	0°3	90	18	553°9	+19°1	
	25°4	22°3	4°3	0°120	0°21	1°4	0°3	0°3	0°3	85	17	554°0		
	25°2	21°1	4°2	0°113	0°19	1°4	0°3	0°3	0°3	80	16	554°0		
	25°0	19°9	4°1	0°107	0°18	1°3	0°2	0°4	0°2	76	15	554°0		
	24°8	18°7	4°0	0°101	0°17	1°2	0°2	0°5	0°2	72	14	554°0		
	24°6	17°5	4°0	0°096	0°16	1°1	0°2	0°6	0°2	68	13	554°0		
	24°4	16°3	3°9	0°091	0°15	1°1	0°1	0°6	0°2	64	12	554°0		
	24°2	15°1	3°8	0°086	0°14	1°0	0°1	0°7	0°1	61	11	554°0		
	24°0	13°8	3°7	0°081	0°13	1°0	0°1	0°7	0°1	58	11	554°0		
	23°8	12°6	3°6	0°076	0°12	0°9	0°1	0°8	0°1	55	10	554°0		
	23°6	11°4	3°5	0°072	0°11	0°9	0°1	0°8	0°1	52	10	554°0		
	23°4	10°2	3°5	0°068	0°10	0°8	0°1	0°9	0°1	49	9	554°0		
	23°2	9°0	3°4	0°065	0°09	0°8	0°1	0°9	+0°1	46	9	554°3		
27	27°0	27°0	-4°1	0°147	-0°25	1°7	-0°3	0°0	+0°3	100	-20	552°5	-1°1	
	26°8	25°9	4°0	0°140	0°23	1°7	0°3	0°1	0°3	95	19	552°5		
	26°6	24°8	3°9	0°133	0°21	1°6	0°3	0°1	0°3	91	18	552°5	+19°1	
	26°4	23°6	3°8	0°126	0°19	1°5	0°2	0°2	0°3	87	17	552°5		
	26°2	22°5	3°7	0°120	0°18	1°4	0°2	0°3	0°3	83	16	552°5		
	26°0	21°4	3°6	0°114	0°17	1°4	0°2	0°3	0°3	79	15	552°5		
	25°8	20°3	3°5	0°109	0°16	1°3	0°2	0°4	0°3	75	14	552°5		
	25°6	19°2	3°4	0°104	0°15	1°2	0°2	0°5	0°3	71	13	552°5		
	25°4	18°0	3°3	0°099	0°14	1°2	0°2	0°5	0°3	68	12	552°5		
	25°2	16°9	3°2	0°094	0°13	1°1	0°1	0°6	0°2	64	12	552°5		
	25°0	15°8	3°1	0°089	0°13	1°1	0°1	0°6	0°2	61	11	552°5		
	24°8	14°7	3°0	0°084	0°12	1°0	0°1	0°7	0°2	58	10	552°5		
	24°6	13°5	2°9	0°080	0°11	1°0	0°1	0°7	0°2	55	9	552°5		
	24°4	12°4	2°8	0°076	0°10	0°9	0°1	0°8	0°2	52	8	552°5		
	24°2	11°3	2°7	0°072	0°10	0°9	0°1	0°8	+0°2	49	7	553°1		
28	28°0	28°0	-3°6	0°153	-0°23	1°8	-0°3	0°0	+0°3	100	-18	551°4	-1°1	
	27°8	27°0	3°6	0°146	0°21	1°7	0°3	0°1	0°3	95	16	551°4		
	27°6	26°0	3°5	0°140	0°20	1°7	0°3	0°1	0°3	91	15	551°4	+19°0	
	27°4	24°9	3°4	0°134	0°19	1°6	0°2	0°2	0°3	87	14	551°4		
	27°2	23°9	3°3	0°128	0°18	1°5	0°2	0°3	0°3	84	14	551°4		
	27°0	22°9	3°2	0°122	0°16	1°5	0°2	0°3	0°3	80	13	551°4		
	26°8	21°9	3°1	0°117	0°15	1°4	0°2	0°4	0°3	76	12	551°4		
	26°6	20°8	3°0	0°112	0°14	1°3	0°2	0°5	0°3	73	11	551°4		
	26°4	19°8	2°9	0°107	0°13	1°3	0°2	0°5	0°3	70	11	551°4		
	26°2	18°8	2°8	0°102	0°12	1°2	0°1	0°6	0°2	67	10	551°4		
	26°0	17°8	2°8	0°097	0°11	1°2	0°1	0°6	0°2	64	10	551°4		
	25°8	16°7	2°7	0°093	0°10	1°1	0°1	0°7	0°2	61	9	551°4		
	25°6	15°7	2°6	0°089	0°10	1°1	0°1	0°7	0°2	58	8	551°4		
	25°4	14°7	2°5	0°085	0°09	1°0	0°1	0°8	0°2	55	8	551°4		
	25°2	13°7	2°4	0°081	0°09	1°0	0°1	0°8	+0°2	53	7	551°9		
29	29°0	29°0	-3°1	0°160	-0°20	1°9	-0°2	0°0	+0°3	100	-17	550°2	-1°1	
	28°8	28°1	3°1	0°154	0°19	1°8	0°2	0°1	0°3	96	16	550°2		
	28°6	27°2	3°0	0°148	0°18	1°8	0°2	0°1	0°3	93	15	550°2	+19°0	
	28°4	26°2	2°9	0°142	0°17	1°7	0°2	0°2	0°3	89	14	550°2		
	28°2	25°3	2°8	0°136	0°16	1°6	0°2	0°3	0°3	86	14	550°2		
	28°0	24°4	2°7	0°130	0°14	1°6	0°2	0°3	0°3	82	13	550°2		
	27°8	23°4	2°6	0°125	0°13	1°5	0°2	0°4	0°3	79	12	550°2		
	27°6	22°5	2°5	0°120	0°12	1°4	0°2	0°5	0°3	76	12	550°2		
	27°4	21°6	2°4	0°115	0°11	1°4	0°2	0°5	0°3	73	11	550°2		
	27°2	20°7	2°3	0°110	0°10	1°3	0°1	0°6	0°2	70	10	550°2		
	27°0	19°7	2°2	0°106	0°09	1°3	0°1	0°6	0°2	67	9	550°2		
	26°8	18°8	2°1	0°102	0°09	1°2	0°1	0°7	0°2	64	9	550°2		
	26°6	17°9	2°0	0°098	0°08	1°2	0°1	0°7	0°2	61	8	550°2		
	26°4	17°0	1°9	0°094	0°08	1°1	0°1	0°8	0°2	58	7	550°2		
	26°2	16°0	1°8	0°090	0°07	1°1	0°1	0°8	+0°2	56	7	550°7		

Reading of Thermometer.		Temperature of the Dew-Point.	Difference for an increase of 1° in Dry.	Elastic force of Vapour.	Difference for an increase of 1° in Dry.	Vapour in a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Vap. reqd. to sat. a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Degree of Humidity. (Satn. = 100.)	Difference for an increase of 1° in Dry.	Weight of a Cubic Foot of Air. Bar. reading 29 inches.	Diff. for an increase of 1° in Dry.	Difference for one inch in Barometer and proportional parts.
Dry.	Wet.													
30	30°0	30°0	-2°7	0°167	-0°19	2°0	-0°2	0°0	+0°3	100	-15	549°1	-1°1	18°9
	29°8	29°2	2°6	0°161	0°18	1°9	0°2	0°1	0°3	96	14	549°1		in. 1°9
	29°6	28°3	2°5	0°155	0°17	1°8	0°2	0°2	0°3	93	14	549°1	+18°9	1°1
	29°4	27°5	2°4	0°150	0°16	1°8	0°2	0°2	0°3	90	13	549°1		2°3
	29°2	26°7	2°4	0°145	0°15	1°7	0°2	0°3	0°3	86	12	549°1		3°3
	29°0	25°9	2°3	0°140	0°14	1°7	0°2	0°3	0°3	83	11	549°1		4°7
	28°8	25°0	2°2	0°135	0°13	1°6	0°2	0°4	0°3	80	10	549°1		5°9
	28°6	24°2	2°1	0°130	0°12	1°5	0°1	0°5	0°2	77	10	549°1		6°11
	28°4	23°4	2°0	0°125	0°11	1°5	0°1	0°5	0°2	75	9	549°1		7°13
	28°2	22°5	1°9	0°120	0°10	1°4	0°1	0°6	0°2	72	8	549°1		8°15
	28°0	21°7	1°8	0°116	0°09	1°4	0°1	0°6	0°2	69	7	549°1		9°17
	27°8	20°9	1°7	0°112	0°08	1°3	0°1	0°7	0°2	67	7	549°1		
	27°6	20°0	1°7	0°108	0°08	1°3	0°1	0°7	0°2	64	6	549°1		
	27°4	19°2	1°6	0°104	0°08	1°2	0°1	0°8	0°2	62	5	549°1		
27°2	18°4	1°5	0°100	0°07	1°2	0°1	0°8	+0°2	60	4	549°6			
31	31°0	31°0	-2°3	0°174	-0°17	2°1	-0°2	0°0	+0°2	100	-13	547°9	-1°1	
	30°8	30°3	2°2	0°168	0°15	2°0	0°2	0°1	0°2	96	12	547°9		
	30°6	29°5	2°1	0°163	0°14	1°9	0°2	0°2	0°2	93	12	547°9	+18°9	
	30°4	28°8	2°1	0°158	0°13	1°9	0°2	0°2	0°2	90	11	547°9		
	30°2	28°0	2°0	0°153	0°12	1°8	0°2	0°3	0°2	87	10	547°9		
	30°0	27°3	1°9	0°148	0°11	1°7	0°2	0°4	0°2	85	9	547°9		
	29°8	26°6	1°9	0°143	0°10	1°7	0°1	0°4	0°1	82	9	547°9		
	29°6	25°8	1°8	0°139	0°10	1°6	0°1	0°5	0°1	79	8	547°9		
	29°4	25°1	1°7	0°135	0°10	1°6	0°1	0°5	0°1	77	8	547°9		
	29°2	24°3	1°6	0°131	0°10	1°5	0°1	0°6	0°1	74	7	547°9		
	29°0	23°6	1°5	0°127	0°09	1°5	0°1	0°6	0°1	72	7	547°9		
	28°8	22°9	1°5	0°123	0°09	1°4	0°1	0°7	0°1	70	6	547°9		
	28°6	22°1	1°4	0°119	0°08	1°4	0°1	0°7	0°1	68	6	547°9		
	28°4	21°4	1°3	0°115	0°07	1°4	0°1	0°7	0°1	66	5	547°9		
28°2	20°6	1°2	0°111	0°07	1°3	0°1	0°8	+0°1	64	5	548°3			
32	32°0	32°0	-2°0	0°182	-0°15	2°1	-0°2	0°0	+0°3	100	-11	546°7	-1°1	
	31°8	31°3	1°9	0°177	0°14	2°1	0°2	0°0	0°3	97	11	546°7		
	31°6	30°7	1°9	0°172	0°13	2°0	0°2	0°1	0°3	94	10	546°7	+18°9	
	31°4	30°0	1°8	0°167	0°12	2°0	0°2	0°1	0°3	92	10	546°7		
	31°2	29°3	1°7	0°162	0°11	1°9	0°2	0°2	0°3	89	9	546°7		
	31°0	28°7	1°7	0°157	0°10	1°9	0°2	0°2	0°3	87	8	546°7		
	30°8	28°0	1°6	0°153	0°10	1°8	0°1	0°3	0°2	84	8	546°7		
	30°6	27°4	1°6	0°149	0°10	1°8	0°1	0°3	0°2	82	7	546°7		
	30°4	26°7	1°5	0°145	0°09	1°8	0°1	0°3	0°2	79	7	546°9		
	30°2	26°0	1°4	0°141	0°08	1°7	0°1	0°4	0°2	77	7	547°0		
	30°0	25°4	1°3	0°137	0°08	1°6	0°1	0°5	0°2	75	6	547°0		
	29°8	24°7	1°3	0°133	0°08	1°6	0°1	0°5	0°2	73	6	547°0		
	29°6	24°0	1°2	0°129	0°08	1°5	0°1	0°6	0°2	71	6	547°0		
	29°4	23°4	1°1	0°125	0°07	1°5	0°1	0°6	0°2	69	5	547°1		
29°2	22°7	1°1	0°121	0°07	1°4	0°1	0°7	+0°2	67	5	547°1			
33	33°0	33°0	-1°8	0°188	-0°12	2°2	-0°2	0°0	+0°3	100	-11	545°6	-1°1	
	32°8	32°4	1°7	0°183	0°11	2°2	0°2	0°0	0°3	97	11	545°6		
	32°6	31°8	1°7	0°179	0°11	2°1	0°2	0°1	0°3	95	10	545°6	+18°8	
	32°4	31°2	1°6	0°175	0°11	2°1	0°2	0°1	0°3	93	10	545°6		
	32°2	30°6	1°6	0°171	0°11	2°0	0°2	0°2	0°3	91	9	545°6		
	32°0	30°0	1°5	0°167	0°11	2°0	0°1	0°2	0°2	89	9	545°6		
	31°8	29°4	1°5	0°163	0°11	1°9	0°1	0°3	0°2	86	9	545°6		
	31°6	28°8	1°4	0°159	0°10	1°9	0°1	0°3	0°2	84	8	545°6		0°1 0°2
	31°4	28°2	1°4	0°155	0°10	1°8	0°1	0°4	0°2	82	8	545°6		0°2 0°4
	31°2	27°6	1°4	0°151	0°09	1°8	0°1	0°4	0°2	80	8	545°6		0°3 0°6
	31°0	27°0	1°3	0°147	0°09	1°7	0°1	0°5	0°2	78	7	545°6		0°4 0°8
	30°8	26°4	1°3	0°143	0°09	1°7	0°1	0°5	0°2	76	7	545°9		0°5 1°0
	30°6	25°8	1°3	0°139	0°09	1°6	0°1	0°6	0°2	74	7	545°9		0°6 1°1
	30°4	25°2	1°2	0°136	0°08	1°6	0°1	0°6	0°2	72	6	546°0		0°7 1°3
30°2	24°6	1°2	0°133	0°08	1°6	0°1	0°6	+0°2	71	6	546°0		0°8 1°5	

Reading of Thermometer.		Temperature of the Dew-Point.	Difference for an increase of 1° in Dry.	Elastic force of Vapour.	Difference for an increase of 1° in Dry.	Vapour in a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Vap. reqd. to sat. a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Degree of Humidity. (Satn. = 100.)	Difference for an increase of 1° in Dry.	Weight of a Cubic Foot of Air, Bar. reading 29 inches.	Diff. for an increase of 1° in Dry.	Difference for one inch in Barometer and proportional parts.
D.	Wet.													
34	34.0	34.0	-1.6	0.196	-0.12	2.3	-0.2	0.0	+0.3	100	-10	544.4	-1.1	18.8
	33.8	33.5	1.6	0.192	0.12	2.3	0.2	0.0	0.3	98	10	544.4	+1.1	18.8
	33.6	32.9	1.5	0.188	0.12	2.2	0.2	0.1	0.3	96	10	544.4	+1.1	18.8
	33.4	32.3	1.5	0.184	0.12	2.2	0.2	0.1	0.3	93	9	544.4	+1.1	18.8
	33.2	31.8	1.5	0.180	0.12	2.1	0.2	0.2	0.3	91	9	544.4	+1.1	18.8
	33.0	31.2	1.4	0.176	0.12	2.1	0.1	0.2	0.2	89	9	544.4	+1.1	18.8
	32.8	30.7	1.4	0.172	0.11	2.0	0.1	0.3	0.2	87	8	544.4	+1.1	18.8
	32.6	30.1	1.4	0.168	0.11	2.0	0.1	0.3	0.2	85	8	544.4	+1.1	18.8
	32.4	29.6	1.3	0.164	0.10	1.9	0.1	0.4	0.2	83	8	544.4	+1.1	18.8
	32.2	29.0	1.3	0.160	0.09	1.9	0.1	0.4	0.2	81	7	544.4	+1.1	18.8
	32.0	28.5	1.3	0.156	0.08	1.8	0.1	0.5	0.2	79	7	544.4	+1.1	18.8
	31.8	27.9	1.2	0.152	0.08	1.8	0.1	0.5	0.2	78	7	544.4	+1.1	18.8
	31.6	27.4	1.2	0.148	0.08	1.8	0.1	0.5	0.2	76	7	544.4	+1.1	18.8
	31.4	26.8	1.2	0.145	0.08	1.7	0.1	0.6	0.2	74	6	544.4	+1.1	18.8
	31.2	26.2	-1.1	0.142	-0.08	1.7	-0.0	0.6	+0.1	73	-6	544.4	-1.1	18.8
35	35.0	35.0	-1.5	0.204	-0.11	2.4	-0.2	0.0	+0.3	100	-10	543.3	-1.1	18.7
	34.8	34.5	1.5	0.200	0.11	2.3	0.2	0.1	0.3	98	9	543.3	+1.1	18.7
	34.6	34.0	1.5	0.196	0.10	2.3	0.2	0.1	0.3	96	9	543.3	+1.1	18.7
	34.4	33.4	1.5	0.192	0.10	2.2	0.2	0.2	0.3	94	9	543.3	+1.1	18.7
	34.2	34.9	1.4	0.188	0.10	2.2	0.2	0.2	0.3	92	8	543.3	+1.1	18.7
	34.0	32.4	1.4	0.184	0.09	2.1	0.1	0.3	0.2	90	8	543.3	+1.1	18.7
	33.8	31.9	1.4	0.180	0.09	2.1	0.1	0.3	0.2	88	8	543.3	+1.1	18.7
	33.6	31.4	1.4	0.176	0.08	2.1	0.1	0.3	0.2	86	8	543.3	+1.1	18.7
	33.4	30.8	1.4	0.172	0.08	2.0	0.1	0.4	0.2	84	7	543.3	+1.1	18.7
	33.2	30.3	1.3	0.168	0.07	2.0	0.1	0.4	0.2	82	7	543.3	+1.1	18.7
	33.0	29.8	1.3	0.164	0.06	1.9	0.1	0.5	0.2	80	7	543.3	+1.1	18.7
	32.8	29.3	1.3	0.160	0.06	1.9	0.1	0.5	0.2	79	7	543.3	+1.1	18.7
	32.6	28.8	1.3	0.157	0.06	1.9	0.1	0.5	0.2	77	6	543.3	+1.1	18.7
	32.4	28.2	1.2	0.154	0.06	1.8	0.1	0.6	0.2	75	6	543.3	+1.1	18.7
	32.2	27.7	1.2	0.151	0.06	1.8	0.0	0.6	0.1	74	6	543.3	+1.1	18.7
36	32.0	27.2	-1.2	0.148	-0.06	1.7	-0.0	0.7	+0.1	72	-6	543.3	-1.1	18.7
	36	36.0	-1.4	0.212	-0.12	2.5	-0.1	0.0	+0.2	100	-9	542.1	-1.1	18.7
	35	33.5	1.3	0.193	0.11	2.2	0.1	0.3	0.2	91	8	542.1	+1.1	18.7
	34	31.0	1.3	0.175	0.10	2.0	0.1	0.5	0.2	82	7	542.1	+1.1	18.7
	33	28.5	1.2	0.158	0.09	1.8	0.1	0.7	0.2	74	6	542.1	+1.1	18.7
	32	26.0	1.1	0.142	0.08	1.7	0.1	0.8	0.2	66	5	542.1	+1.1	18.7
	31	23.5	1.0	0.127	0.07	1.5	0.1	1.0	0.2	59	5	542.1	+1.1	18.7
	30	21.0	0.9	0.113	0.06	1.3	0.1	1.2	0.2	53	4	542.1	+1.1	18.7
	29	18.5	0.9	0.101	0.05	1.2	0.1	1.3	0.2	47	4	542.1	+1.1	18.7
	28	16.0	-0.8	0.090	-0.04	1.1	-0.1	1.4	+0.2	42	-3	542.1	-1.1	18.7
	37	37.0	-1.4	0.220	-0.12	2.6	-0.1	0.0	+0.2	100	-9	540.9	-1.1	18.7
	36	34.6	1.3	0.200	0.10	2.3	0.1	0.3	0.2	91	8	540.9	+1.1	18.7
	35	32.2	1.3	0.182	0.09	2.1	0.1	0.5	0.2	83	7	540.9	+1.1	18.7
	34	29.7	1.2	0.165	0.08	1.9	0.1	0.7	0.2	75	6	540.9	+1.1	18.7
	33	27.3	1.1	0.149	0.07	1.7	0.1	0.9	0.2	68	6	540.9	+1.1	18.7
37	32	24.9	1.1	0.134	0.06	1.6	0.1	1.0	0.2	61	5	540.9	+1.1	18.7
	31	22.5	1.0	0.120	0.05	1.4	0.1	1.2	0.2	55	5	540.9	+1.1	18.7
	30	20.1	0.9	0.107	0.04	1.3	0.1	1.3	0.2	49	4	540.9	+1.1	18.7
	29	17.6	0.8	0.096	0.04	1.1	0.0	1.5	0.1	44	3	540.9	+1.1	18.7
	28	15.2	-0.8	0.086	-0.03	1.0	-0.0	1.6	+0.1	39	-2	540.9	-1.1	18.7
	38	38.0	-1.3	0.228	-0.10	2.7	-0.1	0.0	+0.2	100	-8	539.8	-1.1	18.6
	37	35.6	1.3	0.208	0.09	2.4	0.1	0.3	0.2	91	7	539.8	+1.1	18.6
	36	33.3	1.3	0.190	0.09	2.2	0.1	0.5	0.2	83	6	539.8	+1.1	18.6
	35	30.9	1.2	0.173	0.09	2.0	0.1	0.7	0.2	75	6	539.8	+1.1	18.6
	34	28.6	1.2	0.157	0.08	1.8	0.1	0.9	0.2	68	5	539.8	+1.1	18.6
	33	26.2	1.1	0.142	0.07	1.7	0.1	1.0	0.2	62	5	539.8	+1.1	18.6
	32	23.8	1.1	0.128	0.06	1.5	0.1	1.2	0.2	56	4	539.8	+1.1	18.6
	31	21.5	1.0	0.115	0.05	1.3	0.0	1.4	0.1	50	4	539.8	+1.1	18.6
	30	19.1	1.0	0.103	0.04	1.2	0.0	1.5	0.1	45	3	539.8	+1.1	18.6
	29	16.8	1.0	0.092	0.03	1.1	0.0	1.6	0.1	41	3	539.8	+1.1	18.6
	28	14.4	-0.9	0.083	-0.03	1.0	-0.0	1.7	+0.1	37	-3	539.8	-1.1	18.6

Reading of Thermometer.		Temperature of the Dew-Point.	Difference for an increase of 1° in Dry.	Elastic force of Vapour.	Difference for an increase of 1° in Dry.	Vapour in a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Vap. reqd. to sat. a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Degree of Humidity. (Satn. = 100.)	Difference for an increase of 1° in Dry.	Weight of a Cubic Foot of Air, Bar. reading 29 inches.	Diff. for an increase of 1° in Dry.	Difference for one inch in Barometer and proportional parts.	
Dry.	Wet.														
39	39	39.0	-1.3	0.238	-0.12	2.8	-0.1	0.0	+0.2	100	-8	538.6	-1.1	18.6	
	38	36.7	1.3	0.218	0.11	2.5	0.1	0.3	0.2	92	8	538.6	+1.1	18.6	
	37	34.4	1.3	0.199	0.10	2.3	0.1	0.5	0.2	84	8	538.6	+1.1	18.6	
	36	32.0	1.2	0.181	0.09	2.1	0.1	0.7	0.2	77	7	538.6	+1.1	18.6	
	35	29.7	1.2	0.164	0.08	1.9	0.1	0.9	0.2	70	7	538.6	+1.1	18.6	
	34	27.4	1.1	0.149	0.07	1.7	0.1	1.1	0.2	63	6	538.6	+1.1	18.6	
	33	25.1	1.1	0.135	0.06	1.6	0.1	1.2	0.2	57	6	538.6	+1.1	18.6	
	32	22.8	1.1	0.122	0.05	1.4	0.1	1.4	0.2	52	5	538.6	+1.1	18.6	
	31	20.4	1.0	0.110	0.04	1.3	0.1	1.5	0.2	47	5	538.6	+1.1	18.6	
	30	18.1	1.0	0.099	0.03	1.2	0.1	1.6	0.2	42	4	538.6	+1.1	18.6	
	29	15.8	1.0	0.089	0.02	1.0	0.0	1.8	0.1	38	4	538.6	+1.1	18.6	
	28	13.5	-1.0	0.080	-0.02	0.9	-0.0	1.9	+0.1	34	-3	538.6	-1.1	18.6	
	40	40	40.0	-1.2	0.247	-0.12	2.9	-0.1	0.0	+0.2	100	-8	537.5	-1.1	18.5
		39	37.7	1.2	0.226	0.11	2.6	0.1	0.3	0.2	92	8	537.5	+1.1	18.5
		38	35.4	1.2	0.207	0.10	2.4	0.1	0.5	0.2	84	7	537.5	+1.1	18.5
37		33.1	1.1	0.189	0.09	2.2	0.1	0.7	0.2	76	6	537.5	+1.1	18.5	
36		30.8	1.1	0.172	0.08	2.0	0.1	0.9	0.2	69	5	537.5	+1.1	18.5	
35		28.5	1.1	0.156	0.07	1.8	0.1	1.1	0.2	63	5	537.5	+1.1	18.5	
34		26.3	1.1	0.142	0.07	1.6	0.1	1.3	0.2	57	4	537.5	+1.1	18.5	
33		24.0	1.1	0.129	0.07	1.5	0.1	1.4	0.2	51	4	537.5	+1.1	18.5	
32		21.7	1.0	0.117	0.07	1.4	0.1	1.5	0.2	46	3	537.5	+1.1	18.5	
31		19.4	1.0	0.106	0.07	1.2	0.1	1.7	0.2	42	3	537.5	+1.1	18.5	
30		17.1	1.0	0.096	0.07	1.1	0.1	1.8	0.2	38	3	537.5	+1.1	18.5	
29		14.8	0.9	0.087	0.07	1.0	0.1	1.9	0.2	34	3	537.5	+1.1	18.5	
28		12.5	-0.9	0.078	-0.06	0.9	-0.0	2.0	+0.1	31	-2	537.5	-1.1	18.5	
41		41	41.0	-1.2	0.257	-0.12	3.0	-0.1	0.0	+0.2	100	-8	536.4	-1.1	18.5
		40	38.7	1.2	0.235	0.10	2.7	0.1	0.3	0.2	92	7	536.4	+1.1	18.5
	39	36.5	1.2	0.215	0.08	2.5	0.1	0.5	0.2	84	6	536.4	+1.1	18.5	
	38	34.2	1.1	0.197	0.07	2.3	0.1	0.7	0.2	77	5	536.4	+1.1	18.5	
	37	32.0	1.1	0.180	0.06	2.1	0.1	0.9	0.2	70	5	536.4	+1.1	18.5	
	36	29.7	1.1	0.164	0.05	1.9	0.1	1.1	0.2	64	4	536.4	+1.1	18.5	
	35	27.4	1.0	0.149	0.05	1.7	0.1	1.3	0.2	58	4	536.4	+1.1	18.5	
	34	25.2	1.0	0.135	0.05	1.6	0.1	1.4	0.2	53	4	536.4	+1.1	18.5	
	33	22.9	1.0	0.122	0.05	1.4	0.1	1.6	0.2	48	3	536.4	+1.1	18.5	
	32	20.7	1.0	0.110	0.04	1.3	0.1	1.7	0.2	43	3	536.4	+1.1	18.5	
	31	18.4	0.9	0.099	0.03	1.2	0.1	1.8	0.2	39	3	536.4	+1.1	18.5	
	30	16.1	0.9	0.089	0.02	1.0	0.0	2.0	0.1	35	2	536.4	+1.1	18.5	
	29	13.9	0.9	0.080	0.02	0.9	0.0	2.1	0.1	31	2	536.4	+1.1	18.5	
	28	11.6	-0.8	0.072	-0.02	0.9	-0.0	2.1	+0.1	28	-2	537.7	-1.1	18.5	
	42	42	42.0	-1.2	0.267	-0.12	3.1	-0.1	0.0	+0.2	100	-8	535.2	-1.1	18.5
41		39.8	1.2	0.245	0.11	2.8	0.1	0.3	0.2	92	8	535.2	+1.1	18.5	
40		37.5	1.1	0.225	0.10	2.6	0.1	0.5	0.2	85	7	535.2	+1.1	18.5	
39		35.3	1.1	0.207	0.10	2.4	0.1	0.7	0.2	78	7	535.2	+1.1	18.5	
38		33.1	1.1	0.190	0.09	2.2	0.1	0.9	0.2	72	6	535.2	+1.1	18.5	
37		30.9	1.1	0.174	0.08	2.0	0.1	1.1	0.2	66	6	535.2	+1.1	18.5	
36		28.6	1.0	0.159	0.07	1.8	0.1	1.3	0.2	60	5	535.2	+1.1	18.5	
35		26.4	1.0	0.144	0.06	1.7	0.1	1.4	0.2	54	5	535.2	+1.1	18.5	
34		24.2	1.0	0.130	0.05	1.5	0.1	1.6	0.2	49	4	535.2	+1.1	18.5	
33		21.9	0.9	0.117	0.04	1.4	0.1	1.7	0.2	44	4	535.2	+1.1	18.5	
32		19.7	0.9	0.106	0.04	1.2	0.0	1.9	0.1	40	3	535.2	+1.1	18.5	
31		17.5	0.9	0.096	0.04	1.1	0.0	2.0	0.1	36	2	535.2	+1.1	18.5	
30		15.2	0.8	0.087	0.04	1.0	0.0	2.1	0.1	33	2	535.2	+1.1	18.5	
29		13.0	0.8	0.078	0.04	0.9	0.0	2.2	0.1	40	2	535.2	+1.1	18.5	
28		10.8	-0.8	0.070	-0.04	0.8	-0.0	2.3	+0.1	27	-2	536.6	-1.1	18.5	
43	43	43.0	-1.2	0.277	-0.12	3.2	-0.1	0.0	+0.2	100	-8	534.1	-1.1	18.4	
	42	40.8	1.2	0.255	0.11	2.9	0.1	0.3	0.2	92	8	534.1	+1.1	18.4	
	41	38.6	1.1	0.234	0.10	2.7	0.1	0.5	0.2	84	7	534.1	+1.1	18.4	
	40	36.4	1.1	0.215	0.10	2.5	0.1	0.7	0.2	78	7	534.1	+1.1	18.4	
	39	34.2	1.1	0.197	0.09	2.3	0.1	0.9	0.2	71	6	534.1	+1.1	18.4	
	38	32.0	-1.1	0.181	-0.09	2.1	-0.1	1.1	+0.2	65	-6	534.8	-1.1	18.4	

Reading of Thermometer.		Temperature of the Dew-Point.	Difference for an increase of 1° in Dry.	Elastic force of Vapour.	Difference for an increase of 1° in Dry.	Vapour in a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Vap. reqd. to sat. a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Degree of Humidity. (Satn. = 100.)	Difference for an increase of 1° in Dry.	Weight of a Cubic Foot of Air, Bar. reading 29 inches.	Diff. for an increase of 1° in Dry.	Difference for one inch in Barometer and proportional parts.
Dry.	Wet.													
43	38	32.0	-1.1	0.181	-0.09	2.1	-0.1	1.1	+0.2	65	-6	534.8	-1.1	18.4
	37	29.8	1.1	0.166	0.09	1.9	0.1	1.3	0.2	59	5	534.9		
	36	27.6	1.0	0.152	0.09	1.7	0.1	1.5	0.2	54	5	535.0	+18.4	
	35	25.4	1.0	0.138	0.08	1.6	0.1	1.6	0.2	49	4			
	34	23.2	1.0	0.125	0.07	1.4	0.1	1.8	0.2	45	4			
	33	21.0	1.0	0.113	0.06	1.3	0.1	1.9	0.2	41	4			
	32	18.8	1.0	0.102	0.05	1.2	0.1	2.0	0.2	37	3			
	31	16.6	0.9	0.092	0.04	1.1	0.1	2.1	0.2	34	3			
	30	14.4	0.9	0.083	0.03	1.0	0.1	2.2	0.2	31	3			
	29	12.2	-0.9	0.074	-0.03	0.9	-0.1	2.3	+0.2	28	-3	535.5		
44	44	44.0	-1.2	0.288	-0.13	3.3	-0.1	0.0	+0.2	100	-8	533.0	-1.0	
	43	41.8	1.1	0.265	0.12	3.0	0.1	0.3	0.2	92	7			
	42	39.6	1.1	0.244	0.11	2.8	0.1	0.5	0.2	84	6			
	41	37.5	1.1	0.224	0.10	2.6	0.1	0.7	0.2	77	6			
	40	35.3	1.1	0.205	0.08	2.4	0.1	0.9	0.2	71	5			
	39	33.1	1.1	0.188	0.07	2.2	0.1	1.2	0.2	65	5			
	38	30.9	1.0	0.172	0.06	2.0	0.1	1.3	0.2	59	4			
	37	28.7	1.0	0.157	0.05	1.8	0.1	1.5	0.2	54	4			
	36	26.6	1.0	0.143	0.04	1.7	0.1	1.6	0.2	49	4	533.9		
	35	24.4	1.0	0.130	0.03	1.5	0.1	1.8	0.2	45	3	534.0		
	34	22.2	1.0	0.118	0.03	1.4	0.1	1.9	0.2	41	3			
	33	20.0	0.9	0.107	0.03	1.2	0.0	2.1	0.1	37	3			
	32	17.8	0.9	0.097	0.03	1.1	0.0	2.2	0.1	34	3			
	31	15.7	0.9	0.088	0.03	1.0	0.0	2.3	0.1	31	3			
	30	13.5	-0.9	0.080	-0.02	0.9	-0.0	2.4	0.1	28	-3	534.4		
45	45	45.0	-1.1	0.299	-0.13	3.4	-0.1	0.0	+0.3	100	-7	531.9	-1.0	18.3
	44	42.8	1.1	0.275	0.11	3.1	0.1	0.3	0.3	92	7	532.1		
	43	40.7	1.1	0.253	0.09	2.9	0.1	0.5	0.3	85	6			
	42	38.5	1.1	0.233	0.08	2.7	0.1	0.7	0.3	78	6			
	41	36.4	1.1	0.214	0.07	2.5	0.1	0.9	0.3	72	5			
	40	34.2	1.0	0.197	0.07	2.3	0.1	1.1	0.3	66	5			
	39	32.0	1.0	0.181	0.07	2.1	0.1	1.3	0.3	60	4			
	38	29.9	1.0	0.166	0.07	1.9	0.1	1.5	0.3	55	4			
	37	27.7	1.0	0.152	0.07	1.7	0.1	1.7	0.3	50	4	532.9		
	36	25.6	1.0	0.139	0.07	1.6	0.1	1.8	0.3	46	3	533.0		
	35	23.4	0.9	0.127	0.07	1.4	0.0	2.0	0.2	42	3			
	34	21.2	0.9	0.115	0.06	1.3	0.0	2.1	0.2	38	3			
	33	19.1	0.9	0.104	0.05	1.2	0.0	2.2	0.2	34	3			
	32	16.9	0.9	0.094	0.04	1.1	0.0	2.3	0.1	31	3			
	31	14.8	-0.9	0.085	-0.03	1.0	-0.0	2.4	+0.1	28	-3	533.4		
46	46	46.0	-1.1	0.311	-0.13	3.6	-0.2	0.0	+0.3	100	-7	530.7	-1.0	
	45	43.9	1.1	0.287	0.12	3.3	0.2	0.3	0.3	93	7	530.9		
	44	41.7	1.1	0.265	0.12	3.1	0.2	0.5	0.3	86	7	531.0		
	43	39.6	1.1	0.244	0.11	2.8	0.1	0.8	0.2	79	6			
	42	37.4	1.0	0.225	0.11	2.6	0.1	1.0	0.2	73	6			
	41	35.3	1.0	0.207	0.10	2.4	0.1	1.2	0.2	67	5			
	40	33.2	1.0	0.190	0.09	2.2	0.1	1.4	0.2	61	5			
	39	31.0	1.0	0.174	0.08	2.0	0.1	1.6	0.2	56	4			
	38	28.9	1.0	0.159	0.07	1.8	0.1	1.8	0.2	51	4			
	37	26.7	0.9	0.145	0.06	1.7	0.1	1.9	0.2	47	4	531.9		
	36	24.6	0.9	0.132	0.05	1.5	0.1	2.1	0.2	43	3	532.0		
	35	22.5	0.9	0.120	0.04	1.4	0.1	2.2	0.2	39	3			
	34	20.3	0.9	0.109	0.04	1.3	0.1	2.3	0.2	35	3			
	33	18.2	0.9	0.099	0.04	1.1	0.0	2.5	0.1	32	3			
	32	16.0	-0.8	0.090	-0.03	1.0	-0.0	2.6	+0.1	29	-3	532.2		
47	47	47.0	-1.1	0.323	-0.14	3.7	-0.2	0.0	+0.3	100	-7	529.6	-1.0	
	46	44.9	1.1	0.298	0.13	3.4	0.2	0.3	0.3	93	7			
	45	42.8	1.1	0.275	0.12	3.2	0.2	0.5	0.3	86	6			
	44	40.6	1.0	0.253	0.10	2.9	0.1	0.8	0.2	79	6			
	43	38.5	-1.0	0.233	-0.09	2.7	-0.1	1.0	+0.2	73	-5	530.1		

Reading of Thermometer.		Temperature of the Dew-point.	Difference for an increase of 1° in Dry.	Elastic force of Vapour.	Difference for an increase of 1° in Dry.	Vapour in a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Vap. reqd. to sat. a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Degree of Humidity. (Satn. = 100.)	Difference for an increase of 1° in Dry.	Weight of a Cubic Foot of Air, Bar. reading 29 inches.	Diff. for an increase of 1° in Dry.	Difference for one inch in Barometer and proportional parts.
Dry.	Wet.													
47	43	38.5	-1.0	0.233	-0.09	2.7	-0.1	1.0	+0.2	73	-5	530.1	-1.0	18.2
	42	36.4	1.0	0.214	0.08	2.5	0.1	1.2	0.2	67	5			
	41	34.3	1.0	0.197	0.08	2.3	0.1	1.4	0.2	61	5			
	40	32.2	1.0	0.181	0.08	2.1	0.1	1.6	0.2	56	4			
	39	30.0	0.9	0.166	0.07	1.9	0.1	1.8	0.2	51	4			
	38	27.9	0.9	0.152	0.06	1.7	0.1	2.0	0.2	47	3			
	37	25.8	0.9	0.139	0.05	1.6	0.1	2.1	0.2	43	3			
	36	23.7	0.9	0.127	0.05	1.5	0.1	2.2	0.2	39	3	530.9		
	35	21.6	0.9	0.116	0.05	1.3	0.0	2.4	0.1	36	3	531.0		
	34	19.4	0.8	0.105	0.04	1.2	0.0	2.5	0.1	33	2			
33	17.3	-0.8	0.095	-0.04	1.1	-0.0	2.6	+0.1	30	-2	531.1			
48	48	48.0	-1.1	0.335	-0.13	3.8	-0.2	0.0	+0.3	100	-7	528.5	-1.0	
	47	45.9	1.1	0.309	0.11	3.5	0.2	0.3	0.3	93	7			
	46	43.8	1.0	0.285	0.09	3.3	0.2	0.5	0.3	86	7	528.8		
	45	41.7	1.0	0.263	0.08	3.0	0.1	0.8	0.3	79	6	530.0		
	44	39.6	1.0	0.243	0.08	2.8	0.1	1.0	0.3	73	6			
	43	37.5	1.0	0.224	0.07	2.6	0.1	1.2	0.3	67	5			
	42	35.4	1.0	0.206	0.06	2.4	0.1	1.4	0.3	62	5			
	41	33.3	0.9	0.189	0.05	2.2	0.1	1.6	0.3	57	4			
	40	31.2	0.9	0.173	0.04	2.0	0.1	1.8	0.3	52	4			
	39	29.1	0.9	0.159	0.04	1.8	0.1	2.0	0.2	48	3			
38	27.0	0.9	0.146	0.04	1.7	0.1	2.1	0.2	44	3				
37	24.9	0.9	0.134	0.04	1.5	0.1	2.3	0.2	40	3				
36	22.8	0.8	0.122	0.04	1.4	0.1	2.4	0.2	36	2	530.9			
35	20.7	0.8	0.111	0.04	1.3	0.0	2.5	0.2	33	2	531.0			
34	18.6	-0.8	0.101	-0.04	1.2	-0.0	2.6	+0.2	30	-2	531.1			
49	49	49.0	-1.1	0.348	-0.14	4.0	-0.2	0.0	+0.3	100	-7	527.3	-1.0	
	48	46.9	1.0	0.322	0.13	3.7	0.2	0.3	0.3	93	7			
	47	44.8	1.0	0.298	0.12	3.4	0.1	0.6	0.2	86	6			
	46	42.8	1.0	0.276	0.11	3.1	0.1	0.9	0.2	79	6	527.8		
	45	40.7	1.0	0.255	0.10	2.9	0.1	1.1	0.2	73	5	528.0		
	44	38.6	1.0	0.235	0.09	2.7	0.1	1.3	0.2	67	5			
	43	36.5	0.9	0.217	0.09	2.5	0.1	1.5	0.2	62	4			
	42	34.4	0.9	0.200	0.09	2.3	0.1	1.7	0.2	57	4			
	41	32.4	0.9	0.184	0.08	2.1	0.1	1.9	0.2	53	4			
	40	30.3	0.9	0.169	0.07	1.9	0.1	2.1	0.2	49	4			
39	28.2	0.9	0.155	0.06	1.8	0.1	2.2	0.2	45	3				
38	26.1	0.8	0.142	0.06	1.6	0.1	2.4	0.2	41	3				
37	24.0	0.8	0.130	0.06	1.5	0.1	2.5	0.2	37	3				
36	22.0	0.8	0.118	0.05	1.3	0.0	2.7	0.1	34	2	528.9			
35	19.9	0.8	0.107	0.04	1.2	0.0	2.8	0.1	31	2	529.0			
34	17.8	-0.8	0.097	-0.03	1.1	-0.0	2.9	+0.1	28	-2	529.0			
50	50	50.0	-1.0	0.361	-0.13	4.1	-0.2	0.0	+0.3	100	-7	526.2	-1.0	
	49	47.9	1.0	0.334	0.12	3.8	0.2	0.3	0.3	93	7			
	48	45.9	1.0	0.309	0.11	3.5	0.1	0.6	0.2	86	6			
	47	43.8	1.0	0.286	0.10	3.3	0.1	0.8	0.2	80	6			
	46	41.8	1.0	0.265	0.10	3.0	0.1	1.1	0.2	74	5	526.8		
	45	39.7	0.9	0.245	0.09	2.8	0.1	1.3	0.2	68	5	527.0		
	44	37.6	0.9	0.226	0.08	2.6	0.1	1.5	0.2	63	5			
	43	35.6	0.9	0.208	0.07	2.4	0.1	1.7	0.2	58	4			
	42	33.5	0.9	0.191	0.06	2.2	0.1	1.9	0.2	53	4			
	41	31.5	0.9	0.176	0.06	2.0	0.1	2.1	0.2	49	3			
40	29.4	0.8	0.162	0.06	1.8	0.1	2.3	0.2	45	3				
39	27.3	0.8	0.149	0.06	1.7	0.1	2.4	0.2	41	3				
38	25.3	0.8	0.136	0.05	1.5	0.1	2.6	0.2	37	2				
37	23.2	0.8	0.124	0.04	1.4	0.1	2.7	0.2	34	2				
36	21.2	0.8	0.113	0.03	1.3	0.0	2.8	0.1	31	2				
35	19.1	0.7	0.103	0.03	1.2	0.0	2.9	0.1	29	2	527.9			
34	17.0	-0.7	0.094	-0.03	1.1	-0.0	3.0	+0.1	27	-2	528.0			

Reading of Thermometer.		Temperature of Dew-Point.	Difference for an increase of 1° in Dry.	Elastic force of Vapour.	Difference for an increase of 1° in Dry.	Vapour in a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Vap. reqd. to sat. a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Degree of Humidity. (Satn. = 100.)	Difference for an increase of 1° in Dry.	Weight of a Cubic Foot of Air, Bar. reading 29 inches.	Diff. for an increase of 1° in Dry.	Difference for one inch in Barometer and proportional parts.
Dry.	Wet.													
51	51	51.0	-1.0	0.374	-0.13	gr. 4.2	-0.1	0.0	+	100	-7	525.1	-1.0	18.1
50	50	49.0	1.0	0.348	0.13	3.9	0.1	0.3	+	93	7	525.1	-1.0	18.1
49	49	46.9	0.9	0.323	0.12	3.6	0.1	0.6	+	86	6	525.1	-1.0	18.1
48	48	44.9	0.9	0.299	0.11	3.4	0.1	0.8	+	80	6	525.1	-1.0	18.1
47	47	42.8	0.9	0.276	0.10	3.1	0.1	1.1	+	74	5	525.1	-1.0	18.1
46	46	40.8	0.9	0.255	0.09	2.9	0.1	1.3	+	68	4	525.1	-1.0	18.1
45	45	38.8	0.9	0.236	0.09	2.7	0.1	1.5	+	63	4	525.1	-1.0	18.1
44	44	36.7	0.8	0.218	0.08	2.5	0.1	1.7	+	58	4	525.1	-1.0	18.1
43	43	34.7	0.8	0.201	0.07	2.3	0.1	1.9	+	54	4	525.1	-1.0	18.1
42	42	32.6	0.8	0.185	0.06	2.1	0.1	2.1	+	50	3	525.1	-1.0	18.1
41	41	30.6	0.8	0.170	0.05	1.9	0.1	2.3	+	46	3	525.1	-1.0	18.1
40	40	28.6	0.8	0.156	0.04	1.8	0.1	2.4	+	42	3	525.1	-1.0	18.1
39	39	26.5	0.8	0.143	0.04	1.6	0.1	2.6	+	38	3	525.1	-1.0	18.1
38	38	24.5	0.8	0.131	0.04	1.5	0.1	2.7	+	35	2	525.1	-1.0	18.1
37	37	22.4	0.7	0.120	0.04	1.4	0.1	2.8	+	32	2	525.1	-1.0	18.1
36	36	20.4	0.7	0.110	0.04	1.2	0.0	3.0	+	29	2	525.1	-1.0	18.1
35	35	18.4	0.7	0.100	0.03	1.1	0.0	3.1	+	27	2	525.1	-1.0	18.1
34	34	16.3	-0.7	0.091	-0.03	1.0	-0.0	3.2	+	25	2	525.1	-1.0	18.1
52	52	52.0	-1.0	0.388	-0.14	4.4	-0.2	0.0	+	100	-7	524.0	-1.0	18.0
51	51	50.0	1.0	0.361	0.13	4.1	0.2	0.3	+	93	6	524.0	-1.0	18.0
50	50	48.0	1.0	0.335	0.12	3.8	0.2	0.6	+	86	6	524.0	-1.0	18.0
49	49	45.9	0.9	0.310	0.11	3.5	0.1	0.9	+	80	5	524.0	-1.0	18.0
48	48	43.9	0.9	0.287	0.10	3.3	0.1	1.1	+	74	5	524.0	-1.0	18.0
47	47	41.9	0.9	0.266	0.09	3.0	0.1	1.4	+	69	4	524.0	-1.0	18.0
46	46	39.9	0.9	0.246	0.08	2.8	0.1	1.6	+	64	4	524.0	-1.0	18.0
45	45	37.9	0.9	0.227	0.07	2.6	0.1	1.8	+	59	4	524.0	-1.0	18.0
44	44	35.9	0.9	0.210	0.07	2.4	0.1	2.0	+	54	4	524.0	-1.0	18.0
43	43	33.8	0.8	0.194	0.06	2.2	0.1	2.2	+	50	3	524.0	-1.0	18.0
42	42	31.8	0.8	0.179	0.05	2.0	0.1	2.4	+	46	3	524.0	-1.0	18.0
41	41	29.8	0.8	0.165	0.05	1.9	0.1	2.5	+	42	3	524.0	-1.0	18.0
40	40	27.8	0.8	0.152	0.05	1.7	0.1	2.7	+	39	3	524.0	-1.0	18.0
39	39	25.7	0.7	0.139	0.04	1.6	0.1	2.8	+	36	2	524.0	-1.0	18.0
38	38	23.7	0.7	0.127	0.03	1.4	0.0	3.0	+	33	2	524.0	-1.0	18.0
37	37	21.7	0.7	0.116	0.03	1.3	0.0	3.1	+	30	2	524.0	-1.0	18.0
36	36	19.7	0.7	0.106	0.03	1.2	0.0	3.2	+	27	2	524.0	-1.0	18.0
35	35	17.7	-0.7	0.097	-0.03	1.1	-0.0	3.3	+	25	2	524.0	-1.0	18.0
53	53	53.0	-1.0	0.403	-0.15	4.5	-0.1	0.0	+	100	-7	522.9	-1.0	18.0
52	52	51.0	1.0	0.374	0.14	4.2	0.1	0.3	+	93	6	522.9	-1.0	18.0
51	51	49.0	0.9	0.347	0.13	3.9	0.1	0.6	+	86	6	522.9	-1.0	18.0
50	50	47.0	0.9	0.322	0.12	3.6	0.1	0.9	+	80	5	522.9	-1.0	18.0
49	49	45.0	0.9	0.299	0.11	3.4	0.1	1.1	+	74	5	522.9	-1.0	18.0
48	48	43.0	0.9	0.277	0.10	3.1	0.1	1.4	+	69	4	522.9	-1.0	18.0
47	47	41.0	0.9	0.257	0.09	2.9	0.1	1.6	+	64	4	522.9	-1.0	18.0
46	46	39.0	0.8	0.238	0.08	2.7	0.1	1.8	+	59	4	522.9	-1.0	18.0
45	45	37.0	0.8	0.220	0.07	2.5	0.1	2.0	+	55	4	522.9	-1.0	18.0
44	44	35.0	0.8	0.203	0.06	2.3	0.1	2.2	+	51	4	522.9	-1.0	18.0
43	43	33.0	0.8	0.188	0.06	2.1	0.1	2.4	+	47	3	522.9	-1.0	18.0
42	42	31.0	0.8	0.174	0.06	2.0	0.1	2.5	+	43	3	522.9	-1.0	18.0
41	41	29.0	0.7	0.160	0.05	1.8	0.1	2.7	+	39	3	522.9	-1.0	18.0
40	40	27.0	0.7	0.147	0.05	1.7	0.1	2.8	+	36	3	522.9	-1.0	18.0
39	39	25.0	0.7	0.135	0.05	1.5	0.0	3.0	+	33	2	522.9	-1.0	18.0
38	38	23.0	0.7	0.124	0.05	1.4	0.0	3.1	+	30	2	522.9	-1.0	18.0
37	37	21.0	0.7	0.113	0.04	1.3	0.0	3.2	+	28	2	522.9	-1.0	18.0
36	36	19.0	-0.7	0.103	-0.04	1.2	-0.0	3.3	+	26	2	522.9	-1.0	18.0
54	54	54.0	-1.0	0.418	-0.15	4.7	-0.2	0.0	+	100	-7	521.8	-1.0	18.0
53	53	52.0	1.0	0.388	0.13	4.4	0.2	0.3	+	93	6	521.8	-1.0	18.0
52	52	50.0	0.9	0.360	0.12	4.1	0.2	0.6	+	86	6	521.8	-1.0	18.0
51	51	48.1	0.9	0.334	0.11	3.8	0.1	0.9	+	80	5	521.8	-1.0	18.0
50	50	46.1	0.9	0.310	0.09	3.5	0.1	1.2	+	74	5	521.8	-1.0	18.0
49	49	44.1	0.9	0.288	0.08	3.3	0.1	1.4	+	69	4	521.8	-1.0	18.0
48	48	42.1	-0.8	0.267	-0.07	3.0	-0.1	1.7	+	64	4	521.8	-1.0	18.0

Reading of Thermometer.		Temperature of the Dew-Point.	Difference for an increase of 1° in Dry.	Elastic force of Vapour.	Difference for an increase of 1° in Dry.	Vapour in a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Vap. reqd. to sat. a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Degree of Humidity. (Satn. = 100.)	Difference for an increase of 1° in Dry.	Weight of a Cubic Foot of Air, Bar. reading 29 inches.	Diff. for an increase of 1° in Dry.	Difference for one inch in Barometer and proportional parts.
Dry.	Wet.													
54	43	42.1	-0.8	0.267	-0.007	3.0	-0.1	1.7	+0.3	64	-4	522.7	-1.0	18.0
	47	40.1	0.8	0.248	0.007	2.8	0.1	1.9	0.3	59	4	522.9	-1.0	18.0
	46	38.2	0.8	0.230	0.007	2.6	0.1	2.1	0.3	55	3	523.0	+18.0	1.8
	45	36.2	0.8	0.213	0.007	2.4	0.1	2.3	0.3	51	3	523.1	1.2	3.6
	44	34.2	0.8	0.197	0.007	2.2	0.1	2.5	0.3	47	3	523.2	1.1	5.4
	43	32.2	0.7	0.182	0.007	2.1	0.1	2.6	0.3	43	3	523.3	1.0	7.2
	42	30.2	0.7	0.168	0.006	1.9	0.1	2.8	0.3	40	3	523.4	1.0	9.0
	41	28.3	0.7	0.155	0.005	1.7	0.0	3.0	0.2	37	2	523.5	1.0	10.8
	40	26.3	0.7	0.142	0.004	1.6	0.0	3.1	0.2	34	2	523.6	1.0	12.6
	39	24.3	0.7	0.130	0.003	1.5	0.0	3.2	0.2	31	2	523.7	1.0	14.4
55	38	22.3	0.6	0.119	0.003	1.3	0.0	3.4	0.2	28	2	523.8	1.0	16.2
	37	20.3	-0.6	0.109	-0.003	1.2	-0.0	3.5	+0.2	26	-2	523.8	-1.0	1.8
	55	55.0	-0.9	0.433	-0.14	4.9	-0.1	0.0	+0.2	100	-7	520.6	-1.0	1.8
	54	53.0	0.9	0.403	0.12	4.5	0.1	0.4	0.2	93	6	520.8	+18.0	3.6
	53	51.1	0.9	0.375	0.10	4.2	0.1	0.7	0.2	87	5	521.0	2.2	5.4
	52	49.1	0.9	0.349	0.09	3.9	0.1	1.0	0.2	81	5	521.2	2.1	7.2
	51	47.2	0.9	0.325	0.08	3.7	0.1	1.2	0.2	75	5	521.4	2.0	9.0
	50	45.2	0.8	0.302	0.07	3.4	0.1	1.5	0.2	70	5	521.6	1.9	10.7
	49	43.2	0.8	0.280	0.06	3.1	0.1	1.8	0.2	65	4	521.8	1.8	12.5
	48	41.3	0.8	0.260	0.06	2.9	0.1	2.0	0.2	60	4	521.9	1.7	14.3
56	47	39.3	0.8	0.241	0.06	2.7	0.1	2.2	0.2	56	4	522.0	1.6	16.1
	46	37.4	0.8	0.223	0.06	2.5	0.1	2.4	0.2	52	3	522.1	1.5	1.8
	45	35.4	0.7	0.206	0.06	2.3	0.0	2.6	0.2	48	3	522.2	1.4	3.6
	44	33.4	0.7	0.190	0.05	2.1	0.0	2.8	0.2	44	3	522.3	1.3	5.4
	43	31.5	0.7	0.175	0.04	2.0	0.0	2.9	0.2	41	3	522.4	1.2	7.2
	42	29.5	0.7	0.162	0.04	1.8	0.0	3.1	0.2	38	2	522.5	1.1	9.0
	41	27.6	0.7	0.150	0.04	1.7	0.0	3.2	0.2	35	2	522.6	1.0	10.7
	40	25.6	0.6	0.138	0.03	1.6	0.0	3.3	0.2	32	2	522.7	0.9	12.5
	39	23.6	0.6	0.127	0.03	1.4	0.0	3.5	0.2	29	2	522.7	0.8	14.3
	38	21.7	-0.6	0.116	-0.03	1.3	-0.0	3.6	+0.2	27	-2	522.7	0.7	16.1
57	56	56.0	-0.9	0.449	-0.15	5.0	-0.2	0.0	+0.4	100	-7	519.6	-1.0	1.8
	55	54.1	0.9	0.419	0.14	4.7	0.2	0.3	0.4	93	6	519.8	+17.9	3.6
	54	52.1	0.9	0.391	0.14	4.4	0.2	0.6	0.4	87	6	519.9	1.7	5.4
	53	50.2	0.9	0.365	0.14	4.1	0.2	0.9	0.4	81	6	520.1	1.6	7.2
	52	48.2	0.8	0.340	0.13	3.8	0.1	1.2	0.3	75	5	520.3	1.5	9.0
	51	46.3	0.8	0.317	0.13	3.5	0.1	1.5	0.3	70	5	520.5	1.4	10.7
	50	44.4	0.8	0.295	0.12	3.3	0.1	1.7	0.3	65	4	520.7	1.3	12.5
	49	42.4	0.8	0.274	0.11	3.1	0.1	1.9	0.3	60	4	520.9	1.2	14.3
	48	40.5	0.8	0.254	0.10	2.8	0.1	2.2	0.3	56	4	521.0	1.1	16.1
	47	38.5	0.7	0.235	0.08	2.6	0.1	2.4	0.3	52	3	521.1	1.0	1.8
58	46	36.6	0.7	0.217	0.07	2.4	0.1	2.6	0.3	48	3	521.2	0.9	3.6
	45	34.7	0.7	0.200	0.05	2.3	0.1	2.7	0.3	44	3	521.3	0.8	5.4
	44	32.7	0.7	0.185	0.04	2.1	0.1	2.9	0.3	41	3	521.4	0.7	7.2
	43	30.8	0.7	0.171	0.04	1.9	0.0	3.1	0.2	38	2	521.5	0.6	9.0
	42	28.8	0.6	0.158	0.04	1.8	0.0	3.2	0.2	35	2	521.6	0.5	10.7
	41	26.9	0.6	0.146	0.04	1.6	0.0	3.4	0.2	32	2	521.7	0.4	12.5
	40	25.0	0.6	0.135	0.04	1.5	0.0	3.5	0.2	29	2	521.7	0.3	14.3
	39	23.0	-0.6	0.124	-0.04	1.4	-0.0	3.6	+0.2	27	-2	521.7	0.2	16.1
	57	57.0	-0.9	0.465	-0.14	5.2	-0.2	0.0	+0.4	100	-6	518.4	-1.0	1.8
	56	55.1	0.9	0.434	0.13	4.8	0.2	0.4	0.4	93	6	518.6	+17.9	3.6
55	53.2	0.9	0.405	0.12	4.5	0.1	0.7	0.3	87	6	518.8	1.7	5.4	
54	51.2	0.8	0.377	0.11	4.2	0.1	1.0	0.3	81	5	519.0	1.6	7.2	
53	49.3	0.8	0.351	0.10	3.9	0.1	1.3	0.3	75	5	519.2	1.5	9.0	
52	47.4	0.8	0.327	0.09	3.7	0.1	1.5	0.3	70	4	519.4	1.4	10.7	
51	45.5	0.8	0.304	0.08	3.4	0.1	1.8	0.3	65	4	519.6	1.3	12.5	
50	43.6	0.8	0.283	0.08	3.2	0.1	2.0	0.3	61	4	519.7	1.2	14.3	
49	41.6	0.7	0.263	0.07	3.0	0.1	2.2	0.3	57	4	519.9	1.1	16.1	
48	39.7	0.7	0.244	0.06	2.7	0.1	2.5	0.3	53	3	520.0	1.0	1.8	
47	37.8	0.7	0.227	0.06	2.5	0.1	2.7	0.3	49	3	520.1	0.9	3.6	
46	35.9	0.7	0.211	0.06	2.4	0.1	2.8	0.3	45	3	520.2	0.8	5.4	
45	34.0	-0.7	0.196	-0.06	2.2	-0.1	3.0	+0.3	42	-2	520.2	0.7	7.2	

Reading of Thermometer.		Temperature of the Dew-Point.	Difference for an increase of 1° in Dry.	Elastic force of Vapour.	Difference for an increase of 1° in Dry.	Vapour in a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Vap. reqd. to sat. a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Degree of Humidity. (Satn. = 100.)	Difference for an increase of 1° in Dry.	Weight of a Cubic Foot of Air, Bar. reading 29 inches.	Diff. for an increase of 1° in Dry.	Difference for one inch in Barometer and proportional parts.
Dry.	Wet.													
57	45	34.0	-0.7	0.196	-0.006	2.2	-0.1	3.0	+0.3	42	-2	520.2	-1.0	17.8
	44	32.0	0.6	0.181	0.005	2.0	0.0	3.2	0.2	39	2	520.2	-1.0	17.8
	43	30.1	0.6	0.167	0.004	1.9	0.0	3.3	0.2	36	2	520.2	-1.0	17.8
	42	28.2	0.6	0.154	0.003	1.7	0.0	3.5	0.2	33	2	520.2	-1.0	17.8
	41	26.3	0.6	0.142	0.003	1.6	0.0	3.6	0.2	30	2	520.2	-1.0	17.8
	40	24.4	0.6	0.131	0.003	1.5	0.0	3.7	0.2	28	2	520.2	-1.0	17.8
	39	22.4	-0.6	0.120	-0.003	1.4	-0.0	3.8	+0.2	26	-2	520.7	-1.0	17.8
	58	58	58.0	-0.9	0.482	-0.015	5.4	-0.2	0.0	+0.4	100	-6	517.4	-1.0
57		56.1	0.9	0.451	0.015	5.0	0.2	0.4	0.4	93	6	517.4	-1.0	17.8
56		54.2	0.9	0.421	0.014	4.7	0.2	0.7	0.4	87	6	517.8	-1.0	17.8
55		52.3	0.9	0.393	0.013	4.4	0.2	1.0	0.4	81	5	518.0	-1.0	17.8
54		50.4	0.9	0.367	0.013	4.1	0.1	1.3	0.3	76	5	518.0	-1.0	17.8
53		48.5	0.8	0.342	0.012	3.8	0.1	1.6	0.3	71	5	518.0	-1.0	17.8
52		46.6	0.8	0.318	0.010	3.6	0.1	1.8	0.3	66	4	518.0	-1.0	17.8
51		44.7	0.8	0.296	0.009	3.3	0.1	2.1	0.3	61	4	518.0	-1.0	17.8
50		42.8	0.8	0.275	0.008	3.1	0.1	2.3	0.3	57	4	518.0	-1.0	17.8
49		40.9	0.8	0.256	0.008	2.9	0.1	2.5	0.3	53	4	518.0	-1.0	17.8
48		39.0	0.8	0.238	0.008	2.7	0.1	2.7	0.3	49	3	519.0	-1.0	17.8
47		37.1	0.8	0.221	0.008	2.5	0.1	2.9	0.3	46	3	519.0	-1.0	17.8
46		35.2	0.8	0.205	0.008	2.3	0.1	3.1	0.3	43	3	519.0	-1.0	17.8
45		33.3	0.8	0.190	0.008	2.1	0.1	3.3	0.3	40	3	519.0	-1.0	17.8
44		31.4	0.7	0.176	0.007	2.0	0.1	3.4	0.3	37	2	519.0	-1.0	17.8
43		29.5	0.7	0.163	0.006	1.8	0.0	3.6	0.2	34	2	519.0	-1.0	17.8
42	27.6	0.7	0.151	0.006	1.7	0.0	3.7	0.2	31	2	519.0	-1.0	17.8	
41	25.7	0.7	0.139	0.005	1.6	0.0	3.8	0.2	28	2	519.0	-1.0	17.8	
40	23.8	-0.7	0.128	-0.004	1.4	-0.0	4.0	+0.2	26	-2	519.7	-1.0	17.8	
59	59	59.0	-0.8	0.500	-0.015	5.6	-0.2	0.0	+0.4	100	-6	516.2	-1.0	17.8
	58	57.1	0.8	0.467	0.014	5.2	0.2	0.4	0.4	94	6	516.2	-1.0	17.8
	57	55.2	0.8	0.436	0.013	4.9	0.2	0.7	0.4	88	6	516.8	-1.0	17.8
	56	53.3	0.8	0.407	0.012	4.6	0.2	1.0	0.4	82	5	516.8	-1.0	17.8
	55	51.4	0.8	0.380	0.011	4.3	0.2	1.3	0.4	76	5	517.0	-1.0	17.8
	54	49.5	0.8	0.354	0.010	4.0	0.2	1.6	0.4	71	5	517.0	-1.0	17.8
	53	47.7	0.8	0.330	0.009	3.7	0.1	1.9	0.3	66	4	517.0	-1.0	17.8
	52	45.8	0.8	0.308	0.009	3.5	0.1	2.1	0.3	61	4	517.0	-1.0	17.8
	51	43.9	0.8	0.287	0.009	3.2	0.1	2.4	0.3	57	4	517.0	-1.0	17.8
	50	42.0	0.8	0.267	0.008	3.0	0.1	2.6	0.3	53	4	517.0	-1.0	17.8
	49	40.1	0.8	0.248	0.007	2.8	0.1	2.8	0.3	49	3	517.9	-1.0	17.8
	48	38.2	0.8	0.230	0.006	2.6	0.1	3.0	0.3	46	3	518.0	-1.0	17.8
	47	36.3	0.7	0.213	0.005	2.4	0.1	3.2	0.3	43	3	518.0	-1.0	17.8
	46	34.4	0.7	0.197	0.004	2.2	0.1	3.4	0.3	40	3	518.0	-1.0	17.8
	45	32.5	0.7	0.182	0.003	2.1	0.1	3.5	0.3	37	2	518.0	-1.0	17.8
	44	30.7	0.7	0.169	0.003	1.9	0.1	3.7	0.3	34	2	518.0	-1.0	17.8
43	28.8	0.7	0.157	0.003	1.8	0.1	3.8	0.3	31	2	518.0	-1.0	17.8	
42	26.9	0.7	0.145	0.003	1.6	0.0	4.0	0.2	29	2	518.0	-1.0	17.8	
41	25.0	0.7	0.134	0.003	1.5	0.0	4.1	0.2	27	2	518.0	-1.0	17.8	
40	23.1	-0.7	0.124	-0.003	1.4	-0.0	4.2	+0.2	25	-2	518.7	-1.0	17.8	
60	60	60.0	-0.8	0.518	-0.015	5.8	-0.2	0.0	+0.4	100	-6	515.0	-1.0	17.8
	59	58.1	0.8	0.485	0.015	5.4	0.2	0.4	0.4	94	6	515.0	-1.0	17.8
	58	56.2	0.8	0.453	0.014	5.1	0.2	0.7	0.4	88	6	515.0	-1.0	17.8
	57	54.4	0.8	0.423	0.013	4.7	0.1	1.1	0.3	82	5	515.0	-1.0	17.8
	56	52.5	0.8	0.395	0.012	4.4	0.1	1.4	0.3	76	5	515.9	-1.0	17.8
	55	50.6	0.8	0.369	0.011	4.1	0.1	1.7	0.3	71	5	516.0	-1.0	17.8
	54	48.7	0.8	0.344	0.010	3.8	0.1	2.0	0.3	66	4	516.0	-1.0	17.8
	53	46.8	0.8	0.321	0.010	3.6	0.1	2.2	0.3	62	4	516.0	-1.0	17.8
	52	45.0	0.8	0.299	0.010	3.3	0.1	2.5	0.3	58	4	516.0	-1.0	17.8
	51	43.1	0.8	0.278	0.009	3.1	0.1	2.7	0.3	54	3	516.0	-1.0	17.8
	50	41.2	0.8	0.259	0.009	2.9	0.1	2.9	0.3	50	3	516.0	-1.0	17.8
	49	39.3	0.7	0.241	0.009	2.7	0.1	3.1	0.3	46	3	516.9	-1.0	17.8
	48	37.4	0.7	0.224	0.008	2.5	0.1	3.3	0.3	43	3	517.0	-1.0	17.8
	47	35.6	0.7	0.208	0.007	2.3	0.1	3.5	0.3	40	3	517.0	-1.0	17.8
	46	33.7	-0.7	0.193	-0.006	2.2	-0.1	3.6	+0.3	37	-2	517.2	-1.0	17.8

Reading of Thermometer.		Temperature of the Dew-Point.	Difference for an increase of 1° in Dry.	Elastic force of Vapour.	Difference for an increase of 1° in Dry.	Vapour in a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Vap. reqd. to sat. a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Degree of Humidity. (Satn. = 100.)	Difference for an increase of 1° in Dry.	Weight of a Cubic Foot of Air, Bar. reading 29 inches.	Diff. for an increase of 1° in Dry of 1 in. in Bar.	Difference for one inch in Barometer and proportional parts.
Dry.	Wet.													
60	46	33.7	-0.7	0.193	-0.006	2.2	-0.1	3.6	+0.3	37	-2	517.2	-1.0	17.7
	45	31.8	0.7	0.179	0.005	2.0	0.1	3.8	0.3	34	2	517.2	-1.0	17.7
	44	30.0	0.7	0.166	0.005	1.8	0.0	4.0	0.2	32	2	517.2	-1.0	17.7
	43	28.1	0.7	0.154	0.005	1.7	0.0	4.1	0.2	30	2	517.2	-1.0	17.7
	42	26.2	0.7	0.142	0.004	1.6	0.0	4.2	0.2	28	2	517.2	-1.0	17.7
	41	24.3	0.7	0.131	0.004	1.4	0.0	4.4	+0.2	26	-2	517.6	-1.0	17.7
	61	61	61.0	-0.8	0.537	-0.017	6.0	-0.2	0.0	+0.4	100	-6	514.0	-1.0
60		59.1	0.8	0.503	0.016	5.6	0.2	0.4	0.4	94	6	514.0	-1.0	17.7
59		57.3	0.8	0.470	0.014	5.2	0.2	0.8	0.4	88	6	514.0	-1.0	17.7
58		55.4	0.8	0.439	0.013	4.9	0.2	1.1	0.4	82	5	514.0	-1.0	17.7
57		53.5	0.8	0.410	0.012	4.6	0.2	1.4	0.4	77	5	514.0	-1.0	17.7
56		51.7	0.8	0.383	0.011	4.3	0.2	1.7	0.4	72	5	514.0	-1.0	17.7
55		49.8	0.8	0.358	0.011	4.0	0.1	2.0	0.3	67	4	514.0	-1.0	17.7
54		47.9	0.8	0.334	0.010	3.7	0.1	2.3	0.3	62	4	514.0	-1.0	17.7
53		46.0	0.8	0.311	0.009	3.5	0.1	2.5	0.3	58	4	514.0	-1.0	17.7
52		44.1	0.8	0.289	0.008	3.2	0.1	2.8	0.3	54	3	514.0	-1.0	17.7
51		42.3	0.8	0.269	0.007	3.0	0.1	3.0	0.3	50	3	514.0	-1.0	17.7
50		40.4	0.7	0.250	0.006	2.8	0.1	3.2	0.3	47	3	514.0	-1.0	17.7
49		38.6	0.7	0.232	0.005	2.6	0.1	3.4	0.3	44	3	514.0	-1.0	17.7
48		36.7	0.7	0.216	0.005	2.4	0.1	3.6	0.3	41	2	514.0	-1.0	17.7
47		34.8	0.7	0.201	0.005	2.3	0.1	3.7	0.3	38	2	514.0	-1.0	17.7
46		33.0	0.7	0.187	0.005	2.1	0.1	3.9	0.3	35	2	514.0	-1.0	17.7
45		31.1	0.7	0.174	0.005	1.9	0.0	4.1	0.2	32	2	514.0	-1.0	17.7
44	29.2	0.7	0.161	0.004	1.8	0.0	4.2	0.2	30	2	514.0	-1.0	17.7	
43	27.3	0.6	0.149	0.004	1.7	0.0	4.3	0.2	28	2	514.0	-1.0	17.7	
42	25.5	0.6	0.138	0.004	1.5	0.0	4.5	+0.2	26	-2	516.6	-1.0	17.7	
62	62	62.0	-0.8	0.556	-0.016	6.2	-0.2	0.0	+0.4	100	-6	512.9	-1.0	17.7
	61	60.1	0.8	0.520	0.015	5.8	0.2	0.4	0.4	94	6	512.9	-1.0	17.7
	60	58.3	0.8	0.487	0.014	5.4	0.2	0.8	0.4	88	6	512.9	-1.0	17.7
	59	56.4	0.8	0.456	0.013	5.1	0.2	1.1	0.4	82	5	512.9	-1.0	17.7
	58	54.6	0.8	0.427	0.013	4.7	0.1	1.5	0.3	77	5	512.9	-1.0	17.7
	57	52.7	0.8	0.399	0.012	4.4	0.1	1.8	0.3	72	5	512.9	-1.0	17.7
	56	50.8	0.8	0.372	0.011	4.1	0.1	2.1	0.3	67	4	512.9	-1.0	17.7
	55	49.0	0.8	0.347	0.010	3.9	0.1	2.3	0.3	62	4	512.9	-1.0	17.7
	54	47.1	0.8	0.323	0.009	3.6	0.1	2.6	0.3	58	4	512.9	-1.0	17.7
	53	45.3	0.7	0.301	0.009	3.4	0.1	2.8	0.3	54	3	512.9	-1.0	17.7
	52	43.4	0.7	0.281	0.009	3.1	0.1	3.1	0.3	50	3	512.9	-1.0	17.7
	51	41.5	0.7	0.262	0.008	2.9	0.1	3.3	0.3	47	3	512.9	-1.0	17.7
	50	39.7	0.7	0.244	0.008	2.7	0.1	3.5	0.3	44	3	512.9	-1.0	17.7
	49	37.8	0.7	0.227	0.007	2.5	0.1	3.7	0.3	41	3	512.9	-1.0	17.7
	48	36.0	0.7	0.211	0.006	2.4	0.1	3.8	0.3	38	3	512.9	-1.0	17.7
	47	34.1	0.7	0.196	0.005	2.2	0.1	4.0	0.3	35	2	512.9	-1.0	17.7
	46	32.2	0.7	0.182	0.004	2.0	0.0	4.2	0.2	32	2	512.9	-1.0	17.7
45	30.4	0.6	0.169	0.004	1.9	0.0	4.3	0.2	30	2	512.9	-1.0	17.7	
44	28.5	0.6	0.157	0.004	1.7	0.0	4.5	0.2	28	2	512.9	-1.0	17.7	
43	26.7	0.6	0.145	0.004	1.6	0.0	4.6	+0.2	26	-2	515.6	-1.0	17.7	
63	63	63.0	-0.8	0.576	-0.016	6.4	-0.2	0.0	+0.4	100	-6	511.7	-1.0	17.7
	62	61.2	0.8	0.540	0.015	6.0	0.2	0.4	0.4	94	6	511.7	-1.0	17.7
	61	59.3	0.8	0.506	0.014	5.6	0.2	0.8	0.4	88	5	511.7	-1.0	17.7
	60	57.5	0.8	0.474	0.013	5.2	0.1	1.2	0.3	82	5	511.7	-1.0	17.7
	59	55.6	0.8	0.443	0.012	4.9	0.1	1.5	0.3	77	4	511.7	-1.0	17.7
	58	53.8	0.8	0.414	0.011	4.6	0.1	1.8	0.3	72	4	511.7	-1.0	17.7
	57	51.9	0.7	0.387	0.011	4.3	0.1	2.1	0.3	67	4	511.7	-1.0	17.7
	56	50.1	0.7	0.361	0.010	4.0	0.1	2.4	0.3	63	4	511.7	-1.0	17.7
	55	48.2	0.7	0.337	0.009	3.7	0.1	2.7	0.3	59	4	511.7	-1.0	17.7
	54	46.4	0.7	0.314	0.008	3.5	0.1	2.9	0.3	55	3	511.7	-1.0	17.7
	53	44.5	0.6	0.292	0.007	3.3	0.1	3.1	0.3	51	3	511.7	-1.0	17.7
	52	42.6	0.6	0.272	0.006	3.0	0.0	3.4	0.2	47	3	511.7	-1.0	17.7
	51	40.8	0.6	0.253	0.005	2.8	0.0	3.6	0.2	44	2	511.7	-1.0	17.7
	50	39.0	0.6	0.236	0.004	2.6	0.0	3.8	0.2	41	2	511.7	-1.0	17.7
	49	37.1	0.5	0.220	0.004	2.4	0.0	4.0	+0.2	38	-2	514.1	-1.0	17.7

Reading of Thermometer.		Temperature of the Dew-Point.	Difference for an increase of 1° in Dry.	Elastic force of Vapour.	Difference for an increase of 1° in Dry.	Vapour in a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Vap. reqd. to sat. a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Degree of Humidity. (Satn. = 100.)	Difference for an increase of 1° in Dry.	Weight of a Cubic Foot of Air, Bar. reading 29 inches.	Diff. for an increase of 1° in Dry.	Difference for one inch in Barometer and proportional parts.
Dry.	Wet.													
63	49	37.1	-0.5	0.220	-0.04	2.4	-0.0	4.0	+0.2	38	-2	514.1	-1.0	17.6
	48	35.2	0.5	0.205	0.04	2.3	0.0	4.1	0.2	35	2	514.2		
	47	33.4	0.5	0.191	0.04	2.1	0.0	4.3	0.2	33	2	514.3	+17.7	
	46	31.6	0.5	0.178	0.04	2.0	0.0	4.4	0.2	31	2	514.4		
	45	29.7	0.5	0.165	0.04	1.8	0.0	4.6	0.2	29	2	514.5		
	44	27.8	-0.5	0.153	-0.04	1.7	-0.0	4.7	+0.2	27	-2	514.5		
64	64	64.0	-0.8	0.596	-0.16	6.6	-0.2	0.0	+0.4	100	-6	510.7	-0.9	
	63	62.2	0.8	0.560	0.16	6.2	0.2	0.4	0.4	94	6	510.9		
	62	60.3	0.8	0.525	0.15	5.8	0.2	0.8	0.4	88	5	511.1	+17.6	
	61	58.5	0.8	0.492	0.14	5.4	0.2	1.2	0.4	82	5	511.4		
	60	56.7	0.8	0.461	0.14	5.1	0.2	1.5	0.4	77	5	511.6		
	59	54.8	0.8	0.431	0.13	4.8	0.2	1.8	0.4	72	4	511.8		
	58	53.0	0.8	0.403	0.12	4.5	0.2	2.1	0.4	67	4	511.9		
	57	51.2	0.8	0.376	0.10	4.2	0.2	2.4	0.4	63	4	512.1		
	56	49.4	0.8	0.351	0.09	3.9	0.1	2.7	0.3	59	4	512.3		
	55	47.5	0.7	0.328	0.08	3.6	0.1	3.0	0.3	55	3	512.5		
	54	45.7	0.7	0.306	0.07	3.4	0.1	3.2	0.3	51	3	512.7		
	53	43.9	0.7	0.286	0.07	3.2	0.1	3.4	0.3	48	3	512.8		
	52	42.0	0.7	0.267	0.07	3.0	0.1	3.6	0.3	45	3	513.0		
	51	40.2	0.7	0.249	0.07	2.8	0.1	3.8	0.3	42	3	513.1		
	50	38.4	0.7	0.232	0.06	2.6	0.1	4.0	0.3	39	2	513.2		
	49	36.6	0.7	0.216	0.06	2.4	0.1	4.2	0.3	36	2	513.3		
	48	34.7	0.6	0.201	0.05	2.2	0.0	4.4	0.2	33	2	513.4		
	47	32.9	0.6	0.187	0.05	2.1	0.0	4.5	0.2	31	2	513.5		
	46	31.1	0.6	0.174	0.05	1.9	0.0	4.7	0.2	29	2	513.5		
	45	29.2	-0.6	0.162	-0.04	1.8	-0.0	4.8	+0.2	27	-2	513.5		
65	65	65.0	-0.8	0.617	-0.16	6.8	-0.2	0.0	+0.4	100	-6	509.5	-0.9	
	64	63.2	0.8	0.580	0.16	6.4	0.2	0.4	0.4	94	6	509.8		
	63	61.4	0.8	0.544	0.15	6.0	0.2	0.8	0.4	88	6	510.0	+17.6	
	62	59.5	0.8	0.510	0.14	5.6	0.2	1.2	0.4	83	5	510.2		
	61	57.7	0.8	0.478	0.13	5.3	0.2	1.5	0.4	78	5	510.4		
	60	55.9	0.8	0.447	0.12	4.9	0.1	1.9	0.3	73	5	510.6		
	59	54.1	0.8	0.418	0.11	4.6	0.1	2.2	0.3	68	4	510.8		
	58	52.3	0.8	0.391	0.10	4.3	0.1	2.5	0.3	63	4	511.0		
	57	50.4	0.7	0.366	0.10	4.0	0.1	2.8	0.3	59	4	511.2		
	56	48.6	0.7	0.342	0.09	3.8	0.1	3.0	0.3	55	4	511.4		
	55	46.8	0.7	0.320	0.09	3.5	0.1	3.3	0.3	51	3	511.6		
	54	45.0	0.7	0.299	0.09	3.3	0.1	3.5	0.3	48	3	511.8		
	53	43.2	0.7	0.279	0.08	3.1	0.1	3.7	0.3	45	3	512.0		
	52	41.3	0.7	0.260	0.07	2.9	0.1	3.9	0.3	42	2	512.2		
	51	39.5	0.7	0.242	0.06	2.7	0.1	4.1	0.3	39	2	512.4		
	50	37.7	0.7	0.225	0.05	2.5	0.1	4.3	0.3	36	2	512.6		
	49	35.9	0.7	0.210	0.05	2.3	0.1	4.5	0.3	34	2	512.8		
	48	34.1	0.7	0.196	0.05	2.2	0.1	4.6	0.3	32	2	513.0		
	47	32.2	0.6	0.182	0.04	2.0	0.0	4.8	0.2	29	2	513.2		
	46	30.4	0.6	0.169	0.04	1.9	0.0	4.9	0.2	27	1	513.4		
	45	28.6	0.6	0.157	0.04	1.7	0.0	5.1	0.2	25	1	513.6		
	44	26.8	-0.6	0.146	-0.03	1.6	-0.0	5.2	+0.2	23	-1	513.6		
66	66	66.0	-0.8	0.639	-0.17	7.0	-0.2	0.0	+0.5	100	-6	508.5	-0.9	
	65	64.2	0.8	0.601	0.17	6.6	0.2	0.4	0.5	94	6	508.8		
	64	62.4	0.8	0.564	0.16	6.2	0.2	0.8	0.5	88	5	509.0	+17.5	
	63	60.6	0.8	0.529	0.15	5.8	0.2	1.2	0.5	83	5	509.2		
	62	58.8	0.8	0.496	0.14	5.5	0.2	1.5	0.5	78	5	509.4		
	61	57.0	0.8	0.464	0.12	5.1	0.1	1.9	0.4	73	4	509.6		
	60	55.1	0.7	0.434	0.11	4.8	0.1	2.2	0.4	68	4	509.8		
	59	53.3	0.7	0.406	0.10	4.5	0.1	2.5	0.4	64	4	510.0		
	58	51.5	0.7	0.380	0.09	4.2	0.1	2.8	0.4	60	3	510.2		
	57	49.7	0.7	0.356	0.08	3.9	0.1	3.1	0.4	56	3	510.4		
	56	47.9	0.7	0.333	0.08	3.7	0.1	3.3	0.4	52	3	510.6		
	55	46.1	0.7	0.311	0.07	3.4	0.1	3.6	0.4	48	3	510.8		
	54	44.3	-0.7	0.280	-0.06	3.2	-0.1	3.8	+0.4	45	-3	510.8		

Reading of Thermometer.		Temperature of the Dew-Point.	Difference for an increase of 1° in Dry.	Elastic force of Vapour.	Difference for an increase of 1° in Dry.	Vapour in a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Vap. reqd. to sat. a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Degree of Humidity. (Satn. = 100.)	Difference for an increase of 1° in Dry.	Weight of a Cubic Foot of Air, Bar. reading 29 inches.	Diff. for an increase of 1° in Dry.	Difference for one inch in Barometer and proportional parts.
Dry.	Wet.													
66	54	44.3	-0.7	0.280	-0.06	3.2	-0.1	3.8	+0.4	45	-3	510.8	-0.9	17.5
	53	42.5	0.7	0.271	0.06	3.0	0.1	4.0	0.4	42	2	510.9		in. 1.8
	52	40.7	0.7	0.253	0.06	2.8	0.1	4.2	0.4	40	2	511.0	+17.5	2 3'
	51	38.9	0.7	0.236	0.06	2.6	0.1	4.4	0.4	37	2	511.1		3 5'
	50	37.0	0.6	0.220	0.06	2.4	0.1	4.6	0.4	34	2	511.2		4 7.0
	49	35.2	0.6	0.205	0.06	2.3	0.1	4.7	0.4	32	2	511.3		5 8.8
	48	33.4	0.6	0.191	0.06	2.1	0.1	4.9	0.4	30	2	511.4		6 10.5
	47	31.6	0.6	0.178	0.06	2.0	0.0	5.0	0.3	28	2	511.5		7 12.3
	46	29.8	0.6	0.165	0.05	1.8	0.0	5.2	0.3	26	2	511.6		8 14.0
	45	28.0	-0.6	0.153	-0.05	1.7	-0.0	5.3	+0.3	24	-2	511.7		9 15.8
67	67	67.0	-0.8	0.661	-0.17	7.3	-0.2	0.0	+0.4	100	-6	507.4	-0.9	
	66	65.2	0.8	0.622	0.16	6.8	0.2	0.5	0.4	94	6	507.6		
	65	63.4	0.8	0.585	0.16	6.4	0.2	0.9	0.4	88	6	507.9	+17.5	
	64	61.6	0.8	0.549	0.15	6.0	0.2	1.3	0.4	83	5	508.1		
	63	59.8	0.7	0.515	0.14	5.6	0.2	1.7	0.4	78	5	508.3		
	62	58.0	0.7	0.483	0.13	5.3	0.2	2.0	0.4	73	5	508.5		
	61	56.2	0.7	0.453	0.12	5.0	0.2	2.3	0.4	68	5	508.7		
	60	54.4	0.7	0.424	0.11	4.7	0.2	2.6	0.4	64	4	508.9		
	59	52.6	0.7	0.397	0.10	4.4	0.2	2.9	0.4	60	4	509.1		
	58	50.8	0.7	0.372	0.10	4.1	0.1	3.2	0.3	56	4	509.3		
	57	49.0	0.7	0.348	0.09	3.8	0.1	3.5	0.3	52	4	509.5		
	56	47.2	0.7	0.325	0.08	3.6	0.1	3.7	0.3	49	3	509.7		
	55	45.4	0.7	0.304	0.08	3.3	0.1	4.0	0.3	46	3	509.9		
	54	43.6	0.7	0.284	0.08	3.1	0.1	4.2	0.3	43	3	510.1		
	53	41.8	0.6	0.265	0.07	2.9	0.1	4.4	0.3	40	3	510.3		
	52	40.0	0.6	0.247	0.06	2.7	0.1	4.6	0.3	37	3	510.5		
	51	38.2	0.6	0.230	0.05	2.5	0.1	4.8	0.3	34	3	510.7		
	50	36.4	0.6	0.214	0.04	2.4	0.0	4.9	0.3	32	2	510.9		
68	49	34.6	0.6	0.199	0.03	2.2	0.0	5.1	0.2	30	2	511.1		
	48	32.8	0.6	0.185	0.03	2.0	0.0	5.3	0.2	28	2	511.3		
	47	31.0	0.6	0.172	0.03	1.9	0.0	5.4	0.2	26	2	511.5		
	46	29.2	-0.6	0.160	-0.03	1.8	-0.0	5.5	+0.2	24	-2	511.6		
	68	68.0	-0.8	0.684	-0.18	7.5	-0.2	0.0	+0.5	100	-6	506.2	-0.9	
	67	66.2	0.8	0.644	0.18	7.1	0.2	0.4	0.5	94	6	506.4		
	66	64.4	0.8	0.606	0.17	6.6	0.2	0.9	0.5	88	6	506.7	+17.5	
	65	62.6	0.8	0.569	0.17	6.2	0.2	1.3	0.5	83	5	507.0		
	64	60.8	0.8	0.534	0.16	5.8	0.2	1.7	0.5	78	5	507.3		
	63	59.1	0.8	0.501	0.15	5.5	0.1	2.0	0.4	73	5	507.6		
69	62	57.3	0.8	0.470	0.13	5.2	0.1	2.3	0.4	68	5	507.8		
	61	55.5	0.7	0.441	0.12	4.8	0.1	2.7	0.4	64	4	508.0		
	60	53.7	0.7	0.413	0.11	4.5	0.1	3.0	0.4	60	4	508.3		
	59	51.9	0.7	0.387	0.10	4.2	0.1	3.3	0.4	56	4	508.6		
	58	50.1	0.7	0.362	0.09	4.0	0.1	3.5	0.4	52	4	508.9		
	57	48.3	0.7	0.339	0.09	3.7	0.1	3.8	0.4	49	3	509.2		
	56	46.5	0.6	0.317	0.08	3.5	0.1	4.0	0.4	46	3	509.5		
	55	44.7	0.6	0.296	0.07	3.2	0.0	4.3	0.3	43	3	509.8		
	54	42.9	0.6	0.276	0.07	3.0	0.0	4.5	0.3	40	3	510.1		
	53	41.2	0.6	0.258	0.06	2.8	0.0	4.7	0.3	37	3	510.4		
	52	39.4	0.6	0.241	0.06	2.6	0.0	4.9	0.3	33	3	510.7		
	51	37.6	0.6	0.225	0.06	2.5	0.0	5.0	0.3	31	2	511.0		
	50	35.8	0.6	0.210	0.06	2.3	0.0	5.2	0.3	29	2	511.3		
	49	34.0	0.6	0.196	0.06	2.2	0.0	5.3	0.3	27	2	511.6		
	48	32.2	0.6	0.182	0.05	2.0	0.0	5.5	0.3	25	2	511.9		
	47	30.4	0.6	0.169	0.05	1.9	0.0	5.6	0.3	23	-2	512.2		
	46	28.6	-0.6	0.157	-0.04	1.7	-0.0	5.8	+0.3					
	69	69	69.0	-0.8	0.707	-0.18	7.8	-0.2	0.0	+0.4	100	-6	505.2	-0.9
68		67.2	0.8	0.665	0.16	7.3	0.2	0.5	0.4	94	6	505.4		
67		65.4	0.8	0.625	0.15	6.9	0.2	0.9	0.4	88	5	505.7	+17.4	
66		63.7	0.8	0.587	0.14	6.5	0.2	1.3	0.4	83	5	505.9		
65		61.9	0.8	0.551	0.13	6.1	0.2	1.7	0.4	78	5	506.2		
64		60.1	-0.7	0.517	-0.12	5.7	-0.2	2.1	+0.4	73	-4	506.4		

Reading of Thermometer.		Temperature of the Dew-Point.	Difference for an increase of 1° in Dry.	Elastic force of Vapour.	Difference for an increase of 1° in Dry.	Vapour in a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Vap. reqd. to sat. a Cubic Foot of Air.	Degree of Humidity. (Satn. = 100.)	Difference for an increase of 1° in Dry.	Weight of a Cubic Foot of Air, Bar. reading 29 inches.	Diff. for an increase of 1° in Dry.	Difference for one inch in Barometer and proportional parts.
Dry.	Wet.												
69	64	60.1	-0.7	0.547	-0.12	5.7	-0.2	2.1	73	-	506.4	-0.9	17.4
	63	58.3	0.7	0.486	0.11	5.3	0.1	2.5	68	4	506.6	-	
	62	56.5	0.7	0.457	0.10	5.0	0.1	2.8	64	4	506.8	+17.4	
	61	54.8	0.7	0.429	0.10	4.7	0.1	3.1	60	4	507.0	-	
	60	53.0	0.7	0.402	0.09	4.4	0.1	3.4	56	3	507.1	-	
	59	51.2	0.7	0.377	0.09	4.1	0.1	3.7	53	3	507.3	-	
	58	49.4	0.6	0.353	0.08	3.9	0.1	3.9	50	3	507.5	-	
	57	47.6	0.6	0.330	0.07	3.6	0.1	4.2	47	3	507.7	-	
	56	45.9	0.6	0.309	0.07	3.4	0.1	4.4	44	3	507.9	-	
	55	44.1	0.6	0.289	0.06	3.2	0.1	4.6	41	3	508.0	-	
70	54	42.3	0.6	0.270	0.05	3.0	0.1	4.8	38	2	508.2	-	17.4
	53	40.5	0.6	0.252	0.05	2.8	0.1	5.0	35	2	508.4	-	
	52	38.7	0.6	0.235	0.05	2.6	0.1	5.2	33	2	508.6	-	
	51	37.0	0.6	0.219	0.05	2.4	0.1	5.4	31	2	508.8	-	
	50	35.2	0.6	0.204	0.05	2.2	0.0	5.6	29	2	509.0	-	
	49	33.4	0.6	0.190	0.04	2.1	0.0	5.7	27	2	509.2	-	
	48	31.6	-0.6	0.177	-0.04	2.0	-0.0	5.8	25	-	509.4	-	
	70	70.0	-0.8	0.733	-0.19	8.0	-0.2	0.0	100	-	504.0	-0.9	
	69	68.2	0.8	0.691	0.19	7.5	0.2	0.5	94	6	504.2	-	
	68	66.5	0.8	0.651	0.18	7.1	0.2	0.9	88	5	504.4	+17.4	
71	67	64.7	0.7	0.613	0.17	6.7	0.2	1.3	83	5	504.6	-	17.4
	66	62.9	0.7	0.576	0.16	6.3	0.2	1.7	78	5	504.8	-	
	65	61.1	0.7	0.541	0.15	5.9	0.2	2.1	73	4	505.0	-	
	64	59.4	0.7	0.508	0.14	5.5	0.2	2.5	69	4	505.2	-	
	63	57.6	0.7	0.476	0.13	5.2	0.1	2.8	65	4	505.4	-	
	62	55.8	0.7	0.446	0.11	4.9	0.1	3.1	61	4	505.6	-	
	61	54.0	0.7	0.418	0.10	4.6	0.1	3.4	57	3	505.8	-	
	60	52.3	0.7	0.392	0.09	4.3	0.1	3.7	53	3	506.0	-	
	59	50.5	0.7	0.368	0.09	4.0	0.1	4.0	50	3	506.2	-	
	58	48.8	0.7	0.345	0.09	3.8	0.1	4.2	47	3	506.4	-	
72	57	47.0	0.6	0.323	0.08	3.5	0.1	4.5	44	2	506.6	-	17.4
	56	45.2	0.6	0.302	0.07	3.3	0.1	4.7	41	2	506.8	-	
	55	43.5	0.6	0.283	0.07	3.1	0.1	4.9	38	2	507.0	-	
	54	41.7	0.6	0.265	0.07	2.9	0.1	5.1	36	2	507.2	-	
	53	39.9	0.6	0.247	0.06	2.7	0.1	5.3	34	2	507.4	-	
	52	38.1	0.6	0.230	0.05	2.5	0.0	5.5	31	2	507.6	-	
	51	36.4	0.6	0.214	0.04	2.3	0.0	5.7	29	2	507.8	-	
	50	34.6	0.5	0.199	0.03	2.2	0.0	5.8	27	2	508.0	-	
	49	32.8	-0.5	0.185	-0.03	2.0	-0.0	6.0	25	-	508.2	-	
	71	71.0	-0.8	0.759	-0.20	8.3	-0.2	0.0	100	-	502.9	-0.9	
73	70	69.2	0.8	0.714	0.18	7.8	0.2	0.5	94	5	503.2	-	17.4
	69	67.5	0.8	0.672	0.17	7.3	0.2	1.0	88	5	503.4	-	
	68	65.7	0.8	0.633	0.16	6.9	0.2	1.4	83	5	503.6	-	
	67	64.0	0.8	0.596	0.15	6.5	0.2	1.8	78	5	503.8	-	
	66	62.2	0.7	0.560	0.13	6.1	0.2	2.2	73	4	504.0	-	
	65	60.4	0.7	0.526	0.12	5.7	0.1	2.6	69	4	504.2	-	
	64	58.7	0.7	0.494	0.11	5.4	0.1	2.9	65	4	504.4	-	
	63	56.9	0.7	0.464	0.10	5.1	0.1	3.2	61	3	504.6	-	
	62	55.2	0.7	0.436	0.10	4.7	0.1	3.6	57	3	504.8	-	
	61	53.4	0.7	0.409	0.10	4.4	0.1	3.9	53	3	505.0	-	
74	60	51.6	0.7	0.383	0.09	4.2	0.1	4.1	50	2	505.2	-	17.2
	59	49.9	0.7	0.359	0.09	3.9	0.1	4.4	47	2	505.4	-	
	58	48.1	0.6	0.336	0.08	3.7	0.1	4.6	44	2	505.6	-	
	57	46.4	0.6	0.315	0.08	3.4	0.1	4.9	41	2	505.8	-	
	56	44.6	0.6	0.295	0.08	3.2	0.1	5.1	38	2	506.0	-	
	55	42.8	0.6	0.276	0.07	3.0	0.1	5.3	36	2	506.2	-	
	54	41.1	0.6	0.258	0.06	2.8	0.1	5.5	34	2	506.4	-	
	53	39.3	0.6	0.241	0.05	2.6	0.1	5.7	32	2	506.6	-	
	52	37.6	0.6	0.225	0.04	2.5	0.1	5.8	30	2	506.8	-	
	51	35.8	0.5	0.210	0.03	2.3	0.1	6.0	28	2	507.0	-	
75	50	34.0	0.5	0.196	0.03	2.1	0.1	6.2	26	1	507.2	-	17.2
	49	32.3	0.5	0.183	0.03	2.0	0.0	6.3	24	1	507.4	-	
	48	30.5	-0.5	0.170	-0.03	1.9	-0.0	6.4	22	-	507.6	-	
	74	74.0	-0.7	0.840	-0.20	9.1	-0.2	0.0	100	-	499.6	-0.9	
	73	72.3	0.7	0.793	0.19	8.6	0.2	0.5	94	5	499.9	-	
	72	70.5	0.7	0.748	0.18	8.1	0.2	1.0	89	5	500.2	+17.2	
	71	68.8	0.7	0.705	0.17	7.6	0.2	1.5	84	5	500.5	-	
	70	67.1	0.7	0.664	0.16	7.2	0.2	1.9	79	5	500.7	-	
	69	65.3	0.7	0.625	0.15	6.8	0.2	2.3	74	4	501.0	-	
	68	63.6	0.7	0.588	0.14	6.4	0.2	2.7	70	4	501.2	-	
76	67	61.9	0.7	0.554	0.13	6.0	0.2	3.1	66	4	501.5	-	17.2
	66	60.2	0.7	0.522	0.13	5.6	0.1	3.5	62	4	501.7	-	
	65	58.4	0.6	0.492	0.12	5.3	0.1	3.8	58	3	501.9	-	
	64	56.7	0.6	0.463	0.11	5.0	0.1	4.1	55	3	502.1	-	
	63	55.0	0.6	0.435	0.11	4.7	0.1	4.4	52	3	502.3	-	
	62	53.2	0.6	0.408	0.10	4.4	0.1	4.7	48	3	502.5	-	
	61	51.5	-0.6	0.382	-0.09	4.1	-0.1	5.0	45	-	502.6	-	
	75	75.0	-0.7	0.860	-0.20	9.4	-0.2	0.0	100	-	499.6	-0.9	
	74	73.3	0.7	0.813	0.19	8.9	0.2	0.5	94	5	499.9	-	
	73	71.5	0.7	0.768	0.18	8.4	0.2	1.0	89	5	500.2	+17.2	

Reading of Thermometer.		Temperature of the Dew-Point.	Difference for an increase of 1° in Dry.	Elastic force of Vapour.	Difference for an increase of 1° in Dry.	Vapour in a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Vap. reqd. to sat. a Cubic Foot of Air.	Degree of Humidity. (Satn. = 100.)	Difference for an increase of 1° in Dry.	Weight of a Cubic Foot of Air, Bar. reading 29 inches.	Diff. for an increase of 1° in Dry.	Difference for one inch in Barometer and proportional parts.		
Dry.	Wet.														
72	72	72.0	-0.7	0.785	-0.19	8.8	-0.2	0.0	100	-	501.8	-0.9	17.3		
	71	70.2	0.7	0.739	0.17	8.0	0.2	0.5	94	5	502.1	+17.3			
	70	68.5	0.7	0.696	0.16	7.6	0.2	0.9	89	5	502.3				
	69	66.7	0.7	0.655	0.15	7.1	0.2	1.4	84	5	502.6				
	68	65.0	0.7	0.617	0.14	6.7	0.2	1.8	79	4	502.9				
	67	63.2	0.7	0.581	0.13	6.3	0.2	2.2	74	4	503.1				
	66	61.5	0.7	0.547	0.13	5.9	0.2	2.6	69	4	503.4				
	65	59.7	0.7	0.514	0.12	5.6	0.2	2.9	65	4	503.7				
	64	58.0	0.7	0.483	0.11	5.3	0.2	3.2	61	4	504.0				
	63	56.2	0.7	0.454	0.11	5.0	0.1	3.5	57	3	504.3				
	62	54.5	0.6	0.426	0.10	4.7	0.1	3.8	54	3	504.6				
	61	52.7	0.6	0.399	0.09	4.4	0.1	4.1	51	3	504.9				
	60	51.0	0.6	0.374	0.08	4.1	0.1	4.4	48	3	505.2				
	59	49.2	0.6	0.350	0.07	3.8	0.1	4.7	45	3	505.5				
	58	47.5	0.6	0.328	0.06	3.6	0.1	4.9	42	2	505.8				
	57	45.7	0.6	0.307	0.05	3.3	0.0	5.2	39	2	506.1				
	56	44.0	0.6	0.287	0.05	3.1	0.0	5.4	36	2	506.4				
73	55	42.2	0.6	0.269	0.05	2.9	0.0	5.6	34	2	506.7	-0.9	17.3		
	54	40.5	0.6	0.252	0.04	2.7	0.0	5.8	32	2	507.0	+17.3			
	53	38.7	0.6	0.236	0.04	2.6	0.0	5.9	30	2	507.3				
	52	37.0	0.5	0.221	0.04	2.4	0.0	6.1	28	2	507.6				
	51	35.3	0.5	0.207	0.04	2.2	0.0	6.3	26	1	507.9				
	50	33.5	0.5	0.193	0.04	2.0	0.0	6.5	24	1	508.2				
	49	31.8	-0.5	0.180	-0.04	1.9	-0.0	6.6	23	-1	508.5			-0.9	
	73	73.0	-0.7	0.812	-0.19	8.8	-0.2	0.0	100	-	500.7			+17.3	
	72	71.3	0.7	0.766	0.18	8.3	0.2	0.5	94	5	501.0				+17.3
	71	69.5	0.7	0.722	0.17	7.8	0.2	1.0	89	5	501.3				
	70	67.8	0.7	0.680	0.16	7.4	0.2	1.4	84	5	501.5				
	69	66.0	0.7	0.641	0.16	7.0	0.2	1.8	79	4	501.8				
	68	64.3	0.7	0.604	0.15	6.6	0.2	2.2	74	4	502.0				
	67	62.6	0.7	0.568	0.14	6.2	0.2	2.6	70	4	502.3				
	66	60.8	0.7	0.534	0.13	5.8	0.2	3.0	66	4	502.6				
	65	59.1	0.7	0.502	0.11	5.4	0.1	3.4	62	3	502.9				
	64	57.3	0.6	0.472	0.09	5.1	0.1	3.7	58	3	503.2				
63	55.6	0.6	0.443	0.08	4.8	0.1	4.0	54	3	503.5					
62	53.9	0.6	0.416	0.08	4.5	0.1	4.3	51	3	503.8					
61	52.1	0.6	0.390	0.08	4.2	0.1	4.6	48	3	504.1					
60	50.4	0.6	0.366	0.08	4.0	0.1	4.8	45	2	504.4					
59	48.6	0.6	0.343	0.07	3.7	0.1	5.1	42	2	504.7					
74	58	46.9	0.6	0.322	0.07	3.5	0.1	5.3	40	2	505.0	-0.9	17.2		
	57	45.2	0.6	0.302	0.07	3.3	0.1	5.5	37	2	505.3	+17.2			
	56	43.4	0.6	0.283	0.07	3.1	0.1	5.7	34	2	505.6				
	55	41.7	0.6	0.265	0.07	2.9	0.1	5.9	32	2	505.9				
	54	39.9	0.5	0.248	0.07	2.7	0.1	6.1	30	2	506.2				
	53	38.2	0.5	0.232	0.07	2.5	0.1	6.3	28	2	506.5				
	52	36.5	0.5	0.217	0.06	2.3	0.0	6.5	26	1	506.8				
	51	34.7	0.5	0.202	0.06	2.2	0.0	6.6	24	1	507.1				
	50	33.0	-0.5	0.188	-0.05	2.0	-0.0	6.8	23	-1	507.4			-0.9	
	74	74.0	-0.7	0.840	-0.20	9.1	-0.2	0.0	100	-	499.6			+17.2	
	73	72.3	0.7	0.793	0.19	8.6	0.2	0.5	94	5	499.9				+17.2
	72	70.5	0.7	0.748	0.18	8.1	0.2	1.0	89	5	500.2				
	71	68.8	0.7	0.705	0.17	7.6	0.2	1.5	84	5	500.5				
	70	67.1	0.7	0.664	0.16	7.2	0.2	1.9	79	5	500.7				
	69	65.3	0.7	0.625	0.15	6.8	0.2	2.3	74	4	501.0				
	68	63.6	0.7	0.588	0.14	6.4	0.2	2.7	70	4	501.3				
	67	61.9	0.7	0.554	0.13	6.0	0.2	3.1	66	4	501.6				
66	60.2	0.7	0.522	0.13	5.6	0.1	3.5	62	4	501.9					
65	58.4	0.6	0.492	0.12	5.3	0.1	3.8	58	3	502.2					
64	56.7	0.6	0.463	0.12	5.0	0.1	4.1	55	3	502.5					
63	55.0	0.6	0.435	0.11	4.7	0.1	4.4	52	3	502.8					
62	53.2	0.6	0.408	0.10	4.4	0.1	4.7	48	3	503.1					
61	51.5	-0.6	0.382	-0.09	4.1	-0.1	5.0	45	-2	503.4	-0.9				

Reading of Thermometer.		Temperature of the Dew-Point.	Difference for an increase of 1° in Dry.	Elastic force of Vapour.	Difference for an increase of 1° in Dry.	Vapour in a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Vap. reqd. to sat. a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Degree of Humidity. (Satn. = 100.)	Difference for an increase of 1° in Dry.	Weight of a Cubic Foot of Air, Bar. reading 29 inches.	Diff. for an increase of 1° in Dry.	Difference for one inch in Barometer and proportional parts.
Dry.	Wet.													
74	61	51.5	-0.6	0.382	-0.009	4.1	-0.1	5.0	+0.4	45	-2	502.6	-0.9	17.2
	60	49.8	0.6	0.358	0.008	3.9	0.1	5.2	0.4	43	2	502.7		in. grs.
	59	48.1	0.6	0.336	0.007	3.6	0.1	5.5	0.4	40	2	502.9	+17.2	1.7
	58	46.3	0.6	0.315	0.007	3.4	0.1	5.7	0.4	37	2	503.0		2.3
	57	44.6	0.6	0.295	0.007	3.2	0.1	5.9	0.4	35	2	503.1		3.5
	56	42.9	0.6	0.276	0.006	3.0	0.1	6.1	0.4	33	2	503.2		4.6
	55	41.1	0.5	0.258	0.005	2.8	0.1	6.3	0.4	31	2	503.3		5.8
	54	39.4	0.5	0.241	0.004	2.6	0.0	6.5	0.4	29	1	503.4		6.9
	53	37.7	0.5	0.225	0.004	2.4	0.0	6.7	0.3	27	1	503.5		8.0
	52	35.9	0.5	0.210	0.003	2.3	0.0	6.8	0.3	25	1	503.6		9.1
	51	34.2	-0.5	0.196	-0.003	2.1	-0.0	7.0	+0.3	23	-1	503.7		10.2
75	75	75.0	-0.7	0.868	-0.020	9.4	-0.2	0.0	+0.5	100	-6	498.5	-0.9	
	74	73.3	0.7	0.820	0.019	8.9	0.2	0.5	0.5	94	5	498.8		in. grs.
	73	71.6	0.7	0.774	0.018	8.4	0.2	1.0	0.5	89	5	499.1	+17.2	1.7
	72	69.8	0.7	0.731	0.018	7.9	0.2	1.5	0.5	84	5	499.4		2.3
	71	68.1	0.7	0.690	0.018	7.4	0.2	2.0	0.5	79	4	499.7		3.5
	70	66.4	0.7	0.650	0.017	7.0	0.2	2.4	0.5	74	4	499.9		4.6
	69	64.7	0.7	0.612	0.016	6.6	0.2	2.8	0.5	70	4	500.1		5.8
	68	63.0	0.7	0.576	0.015	6.2	0.1	3.2	0.5	66	4	500.4		6.9
	67	61.2	0.6	0.542	0.014	5.8	0.1	3.6	0.4	62	3	500.6		8.0
	66	59.5	0.6	0.510	0.012	5.5	0.1	3.9	0.4	58	3	500.8		9.1
	65	57.8	0.6	0.479	0.011	5.2	0.1	4.2	0.4	55	3	501.0		10.2
	64	56.1	0.6	0.450	0.010	4.9	0.1	4.5	0.4	52	3	501.2		
	63	54.4	0.6	0.423	0.009	4.6	0.1	4.8	0.4	49	3	501.4		in. grs.
	62	52.6	0.6	0.397	0.008	4.3	0.1	5.1	0.4	46	3	501.6		1.7
	61	50.9	0.6	0.373	0.007	4.0	0.1	5.4	0.4	43	2	501.8		2.3
	60	49.2	0.6	0.350	0.007	3.8	0.1	5.6	0.4	40	2	502.0		3.5
	59	47.5	0.6	0.328	0.006	3.6	0.1	5.8	0.4	38	2	502.1		4.6
	58	45.8	0.6	0.307	0.006	3.3	0.0	6.1	0.3	36	2	502.2		5.8
	57	44.0	0.5	0.288	0.005	3.1	0.0	6.3	0.3	33	2	502.3		6.9
	56	42.3	0.5	0.270	0.005	2.9	0.0	6.5	0.3	31	1	502.4		8.0
	55	40.6	0.5	0.253	0.005	2.7	0.0	6.7	0.3	29	1	502.5		9.1
	54	38.9	0.5	0.237	0.005	2.6	0.0	6.8	0.3	27	1	502.6		10.2
	53	37.2	-0.5	0.222	-0.005	2.4	-0.0	7.0	+0.3	25	-1	502.6		
76	76	76.0	-0.7	0.897	-0.020	9.7	-0.2	0.0	+0.5	100	-5	497.4	-0.9	
	75	74.3	0.7	0.848	0.019	9.2	0.2	0.5	0.5	94	5	497.7		in. grs.
	74	72.6	0.7	0.801	0.018	8.6	0.2	1.1	0.5	89	5	498.0	+17.2	1.7
	73	70.9	0.7	0.756	0.017	8.2	0.2	1.5	0.5	84	5	498.3		2.3
	72	69.2	0.7	0.713	0.016	7.7	0.2	2.0	0.5	79	4	498.6		3.5
	71	67.4	0.6	0.672	0.014	7.2	0.1	2.5	0.5	75	4	498.8		4.6
	70	65.7	0.6	0.633	0.013	6.8	0.1	2.9	0.4	71	4	499.0		5.8
	69	64.0	0.6	0.596	0.012	6.4	0.1	3.3	0.4	67	4	499.3		6.9
	68	62.3	0.6	0.561	0.011	6.1	0.1	3.6	0.4	63	3	499.5		8.0
	67	60.6	0.6	0.528	0.010	5.7	0.1	4.0	0.4	59	3	499.8		9.1
	66	58.9	0.6	0.497	0.009	5.4	0.1	4.3	0.4	55	3	499.9		10.2
	65	57.2	0.6	0.468	0.009	5.1	0.1	4.6	0.4	52	3	500.1		
	64	55.5	0.6	0.441	0.008	4.8	0.1	4.9	0.4	49	3	500.3		in. grs.
	63	53.8	0.6	0.415	0.008	4.5	0.1	5.2	0.4	46	2	500.5		1.7
	62	52.1	0.6	0.390	0.008	4.2	0.1	5.5	0.4	43	2	500.7		2.3
	61	50.4	0.6	0.366	0.008	3.9	0.1	5.8	0.4	40	2	500.9		3.5
	60	48.6	0.5	0.343	0.007	3.7	0.1	6.0	0.4	38	2	501.0		4.6
	59	46.9	0.5	0.322	0.007	3.5	0.1	6.2	0.4	36	2	501.1		5.8
	58	45.2	0.5	0.302	0.007	3.3	0.1	6.4	0.4	34	2	501.2		6.9
	57	43.5	0.5	0.283	0.007	3.1	0.1	6.6	0.4	32	2	501.3		8.0
	56	41.8	0.5	0.265	0.006	2.9	0.1	6.8	0.4	30	1	501.4		9.1
	55	40.1	0.5	0.248	0.005	2.7	0.1	7.0	0.4	28	1	501.5		10.2
	54	38.4	0.5	0.232	0.005	2.5	0.0	7.2	0.3	26	1	501.6		
	53	36.7	-0.5	0.217	-0.005	2.3	-0.0	7.4	+0.3	24	-1	501.7		in. grs.
77	77	77.0	-0.7	0.927	-0.021	10.0	-0.2	0.0	+0.5	100	-5	496.3	-0.9	1.2
	76	75.3	0.7	0.877	0.020	9.5	0.2	0.5	0.5	94	5	496.6		1.7
	75	73.6	0.7	0.829	0.019	8.9	0.2	1.1	0.5	89	5	496.9	+17.1	2.3

Reading of Thermometer.		Temperature of the Dew-point.	Difference for an increase of 1° in Dry.	Elastic force of Vapour.	Difference for an increase of 1° in Dry.	Vapour in a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Vap. reqd. to sat. a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Degree of Humidity. (Satn. = 100.)	Difference for an increase of 1° in Dry.	Weight of a Cubic Foot of Air, Bar. reading 29 inches.	Diff. for an increase of 1° in Dry.	Difference for one inch in Barometer and proportional parts.
Dry.	Wet.													
77	75	73.6	-0.7	0.829	-0.019	8.9	-0.2	1.1	+0.5	89	-5	496.9	-0.9	17.1
	74	71.9	0.7	0.783	0.018	8.4	0.2	1.6	0.5	84	5	497.2		in. grs.
	73	70.2	0.7	0.739	0.017	8.0	0.2	2.0	0.5	79	4	497.5	+17.1	1.7
	72	68.5	0.7	0.697	0.016	7.5	0.2	2.5	0.5	75	4	497.8		2.3
	71	66.8	0.7	0.658	0.015	7.1	0.2	2.9	0.5	71	4	498.0		3.5
	70	65.1	0.7	0.620	0.014	6.7	0.2	3.3	0.5	67	4	498.3		4.6
	69	63.4	0.7	0.584	0.013	6.3	0.1	3.7	0.4	63	3	498.6		5.8
	68	61.7	0.6	0.550	0.012	5.9	0.1	4.1	0.4	59	3	498.9		6.9
	67	60.0	0.6	0.518	0.011	5.6	0.1	4.4	0.4	56	3	499.1		8.0
	66	58.3	0.6	0.488	0.010	5.3	0.1	4.7	0.4	53	3	499.4		9.1
	65	56.6	0.6	0.459	0.010	4.9	0.1	5.1	0.4	50	2	499.7		10.2
	64	54.9	0.6	0.431	0.009	4.6	0.1	5.4	0.4	47	2	499.9		
	63	53.2	0.6	0.405	0.008	4.3	0.1	5.7	0.4	44	2	500.1		in. grs.
	62	51.5	0.6	0.381	0.008	4.1	0.1	5.9	0.4	41	2	500.3		1.7
	61	49.8	0.6	0.358	0.008	3.9	0.1	6.1	0.4	38	2	499.9		2.3
	60	48.1	0.6	0.336	0.008	3.6	0.1	6.4	0.4	36	2	500.1		3.5
	59	46.4	0.6	0.315	0.007	3.4	0.1	6.6	0.4	34	2	500.3		4.6
78	58	44.7	0.6	0.295	0.006	3.2	0.1	6.8	0.4	32	2	500.5		5.8
	57	43.0	0.6	0.276	0.005	3.0	0.1	7.0	0.4	30	2	500.7		6.9
	56	41.3	0.6	0.259	0.005	2.8	0.1	7.2	0.4	28	1	500.9		8.0
	55	39.6	0.6	0.243	0.005	2.6	0.1	7.4	0.4	26	1	501.1		9.1
	54	37.9	-0.6	0.228	-0.005	2.4	-0.0	7.6	+0.3	24	-1	501.3		10.2
	100													
	78	78.0	-0.7	0.958	-0.021	10.3	-0.2	0.0	+0.5	100	-5	495.2	-0.9	
	77	76.3	0.7	0.906	0.019	9.7	0.2	0.6	0.5	94	5	495.5		in. grs.
	76	74.6	0.7	0.857	0.018	9.2	0.2	1.1	0.5	89	5	495.8	+17.1	1.7
	75	72.9	0.6	0.810	0.017	8.7	0.2	1.6	0.5	84	5	496.1		2.3
	74	71.2	0.6	0.765	0.016	8.2	0.2	2.1	0.5	79	4	496.4		3.5
	73	69.5	0.6	0.722	0.015	7.8	0.2	2.5	0.5	75	4	496.7		4.6
	72	67.8	0.6	0.681	0.015	7.3	0.2	3.0	0.5	71	4	496.9		5.8
	71	66.1	0.6	0.642	0.014	6.9	0.2	3.4	0.5	67	3	497.2		6.9
	70	64.4	0.6	0.605	0.013	6.5	0.1	3.8	0.4	63	3	497.5		8.0
	69	62.7	0.6	0.571	0.013	6.2	0.1	4.1	0.4	59	3	497.8		9.1
	68	61.1	0.6	0.539	0.013	5.8	0.1	4.5	0.4	56	3	498.0		10.2
67	59.4	0.6	0.508	0.012	5.5	0.1	4.8	0.4	53	3	498.3			
66	57.7	0.6	0.478	0.011	5.1	0.1	5.2	0.4	50	3	498.6		in. grs.	
65	56.0	0.6	0.449	0.010	4.8	0.1	5.5	0.4	47	3	498.9		1.7	
64	54.3	0.6	0.422	0.009	4.5	0.1	5.8	0.4	44	3	499.1		2.3	
63	52.6	0.6	0.397	0.009	4.3	0.1	6.0	0.4	41	2	499.4		3.5	
62	50.9	0.6	0.373	0.008	4.0	0.1	6.3	0.4	39	2	499.7		4.6	
61	49.2	0.6	0.350	0.007	3.8	0.1	6.5	0.4	37	2	499.9		5.8	
60	47.5	0.6	0.328	0.006	3.5	0.1	6.8	0.4	35	2	500.1		6.9	
59	45.8	0.6	0.308	0.006	3.3	0.1	7.0	0.4	32	2	500.3		8.0	
58	44.1	0.6	0.289	0.006	3.1	0.1	7.2	0.4	30	2	500.5		9.1	
57	42.4	0.6	0.271	0.006	2.9	0.1	7.4	0.4	28	1	500.7		10.2	
56	40.7	0.6	0.254	0.005	2.7	0.0	7.6	0.3	27	1	500.9			
55	39.0	-0.5	0.238	-0.005	2.5	-0.0	7.8	+0.3	25	-1	501.1		in. grs.	
79	79	79.0	-0.7	0.990	-0.022	10.6	-0.2	0.0	+0.6	100	-5	494.1	-0.9	
	78	77.3	0.7	0.937	0.021	10.1	0.2	0.5	0.6	95	5	494.4		in. grs.
	77	75.6	0.7	0.887	0.020	9.5	0.2	1.1	0.6	90	5	494.8	+17.0	1.7
	76	73.9	0.7	0.839	0.019	9.0	0.2	1.6	0.6	85	5	495.1		2.3
	75	72.3	0.7	0.793	0.018	8.5	0.2	2.1	0.6	80	4	495.4		3.5
	74	70.6	0.7	0.749	0.018	8.0	0.2	2.6	0.6	75	4	495.7		4.6
	73	68.9	0.7	0.707	0.017	7.6	0.2	3.0	0.6	71	4	495.9		5.8
	72	67.2	0.7	0.666	0.016	7.2	0.2	3.4	0.6	67	4	496.2		6.9
	71	65.5	0.6	0.628	0.015	6.8	0.2	3.8	0.6	63	3	496.5		8.0
	70	63.8	0.6	0.592	0.014	6.4	0.2	4.2	0.6	59	3	496.8		9.1
	69	62.1	0.6	0.558	0.013	6.0	0.2	4.6	0.6	56	3	497.0		10.2
	68	60.4	0.6	0.526	0.013	5.6	0.1	5.0	0.5	53	3	497.3		
	67	58.7	0.6	0.495	0.012	5.3	0.1	5.3	0.5	50	3	497.6		in. grs.
	66	57.0	0.6	0.466	0.011	5.0	0.1	5.6	0.5	47	3	497.9		1.7
	65	55.4	0.6	0.439	0.010	4.7	0.1	5.9	0.5	44	3	498.2		2.3
	64	53.7	-0.6	0.413	-0.009	4.4	-0.1	6.2	+0.5	42	-3	498.5		3.5

Reading of Thermometer.		Temperature of the Dew-Point.	Difference for an increase of 1° in Dry.	Elastic force of Vapour.	Difference for an increase of 1° in Dry.	Vapour in a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Vap. reqd. to sat. a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Degree of Humidity. (Satn. = 100.)	Difference for an increase of 1° in Dry.	Weight of a Cubic Foot of Air, Bar. reading 29 inches.	Diff. for an increase of 1 in. in Dry.	Difference for one inch in Barometer and proportional parts.	
Dry.	Wet.													in.	grs.
79	64	53.7	-0.6	0.413	-0.009	4.4	-0.1	6.4	0.5	42	-3	497.8	-0.9	17.0	
63	52.0	0.6	0.388	0.008	4.2	0.1	6.4	0.5	39	2	497.9				
62	50.3	0.6	0.365	0.008	3.9	0.1	6.7	0.5	37	2	498.1	+17.0			
61	48.6	0.6	0.343	0.008	3.7	0.1	6.9	0.5	35	2					
60	46.9	0.6	0.322	0.007	3.5	0.1	7.1	0.5	32	2					
59	45.2	0.5	0.302	0.006	3.2	0.0	7.4	0.4	30	2					
58	43.5	0.5	0.283	0.005	3.0	0.0	7.6	0.4	28	1					
57	41.8	0.5	0.265	0.005	2.8	0.0	7.8	0.4	26	1					
56	40.2	-0.5	0.248	-0.005	2.7	-0.0	7.9	+0.4	25	-1	498.8				
80	80	80.0	-0.7	1.023	-0.023	11.0	-0.2	0.0	+0.5	100	-5	493.0	-0.9		
79	78.3	0.7	0.968	0.021	10.4	0.2	0.6	0.5	95	5					
78	76.6	0.7	0.916	0.020	9.8	0.2	1.2	0.5	90	5	493.7	+17.0			
77	75.0	0.7	0.867	0.019	9.3	0.2	1.7	0.5	85	5	494.0				
76	73.3	0.7	0.820	0.018	8.8	0.2	2.2	0.5	80	4					
75	71.6	0.7	0.775	0.017	8.3	0.2	2.7	0.5	75	4					
74	69.9	0.6	0.732	0.016	7.8	0.2	3.2	0.5	71	4	494.8				
73	68.2	0.6	0.690	0.015	7.4	0.2	3.6	0.5	67	4	495.1				
72	66.5	0.6	0.650	0.013	7.0	0.2	4.0	0.5	63	3					
71	64.9	0.6	0.613	0.012	6.6	0.2	4.4	0.5	59	3					
70	63.2	0.6	0.578	0.011	6.2	0.2	4.8	0.5	56	3	495.8				
69	61.5	0.6	0.545	0.011	5.8	0.1	5.2	0.4	53	3	496.0				
68	59.8	0.6	0.513	0.010	5.5	0.1	5.5	0.4	50	3					
67	58.1	0.6	0.483	0.010	5.2	0.1	5.8	0.4	47	2					
66	56.4	0.6	0.455	0.010	4.9	0.1	6.1	0.4	44	2					
65	54.8	0.6	0.429	0.010	4.6	0.1	6.4	0.4	41	2					
64	53.1	0.6	0.404	0.010	4.3	0.1	6.7	0.4	39	2	496.9				
63	51.4	0.6	0.380	0.009	4.1	0.1	6.9	0.4	37	2	497.0				
62	49.7	0.6	0.357	0.008	3.8	0.1	7.2	0.4	35	2					
61	48.0	0.6	0.335	0.007	3.6	0.1	7.4	0.4	33	2					
60	46.3	0.5	0.315	0.007	3.4	0.1	7.6	0.4	31	1					
59	44.7	0.5	0.296	0.007	3.2	0.1	7.8	0.4	29	1					
58	43.0	0.5	0.278	0.006	3.0	0.1	8.0	0.4	27	1					
57	41.3	-0.5	0.261	-0.006	2.8	-0.0	8.2	+0.3	25	-1	497.8				
81	81	81.0	-0.7	1.057	-0.024	11.3	-0.2	0.0	+0.6	100	-5	491.8	-0.9		
80	79.3	0.7	1.000	0.022	10.7	0.2	0.6	0.6	95	5	492.2				
79	77.7	0.7	0.947	0.021	10.1	0.2	1.2	0.6	90	5		+17.0			
78	76.0	0.7	0.897	0.020	9.5	0.2	1.8	0.6	85	4	492.8				
77	74.3	0.7	0.849	0.019	9.1	0.2	2.2	0.6	80	4	493.1				
76	72.6	0.6	0.802	0.018	8.6	0.2	2.7	0.6	76	4					
75	70.9	0.6	0.757	0.016	8.1	0.2	3.2	0.6	72	4	493.7				
74	69.3	0.6	0.715	0.015	7.6	0.1	3.7	0.5	68	4	494.0				
73	67.6	0.6	0.675	0.014	7.2	0.1	4.1	0.5	64	3					
72	65.9	0.6	0.637	0.013	6.8	0.1	4.5	0.5	60	3					
71	64.2	0.6	0.601	0.013	6.4	0.1	4.9	0.5	56	3					
70	62.6	0.6	0.567	0.013	6.0	0.1	5.3	0.5	53	3	494.9				
69	60.9	0.6	0.534	0.012	5.7	0.1	5.6	0.5	50	3	495.1				
68	59.2	0.6	0.503	0.011	5.4	0.1	5.9	0.5	47	2					
67	57.5	0.6	0.473	0.009	5.1	0.1	6.2	0.5	44	2					
66	55.8	0.6	0.445	0.008	4.8	0.1	6.5	0.5	41	2					
65	54.2	0.6	0.419	0.008	4.5	0.1	6.8	0.5	39	2	495.8				
64	52.5	0.6	0.394	0.007	4.2	0.1	7.1	0.5	37	2	496.0				
63	50.8	0.6	0.371	0.007	4.0	0.1	7.3	0.5	35	2					
62	49.1	0.6	0.349	0.007	3.7	0.1	7.6	0.5	33	2					
61	47.5	0.6	0.328	0.007	3.5	0.1	7.8	0.5	31	2					
60	45.8	0.6	0.308	0.007	3.3	0.1	8.0	0.5	29	2					
59	44.1	0.5	0.289	0.007	3.1	0.1	8.2	0.5	27	1					
58	42.4	-0.5	0.271	-0.006	2.9	-0.0	8.4	+0.4	26	-1	496.7				
82	82	82.0	-0.7	1.091	-0.025	11.7	-0.3	0.0	+0.6	100	-5	490.8	-0.8		
81	80.3	0.7	1.033	0.024	11.1	0.3	0.6	0.6	95	5	491.1				
80	78.7	0.7	0.978	0.023	10.5	0.3	1.2	0.6	90	5		+16.9			
79	77.0	-0.7	0.926	-0.022	9.9	-0.3	1.8	+0.6	85	-5	491.8				

Reading of Thermometer.		Temperature of the Dew-Point.	Difference for an increase of 1° in Dry.	Elastic force of Vapour.	Difference for an increase of 1° in Dry.	Vapour in a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Vap. reqd. to sat. a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Degree of Humidity, (Satn. = 100.)	Difference for an increase of 1° in Dry.	Weight of a Cubic Foot of Air, Bar. reading 29 inches.	Diff. for an increase of 1° in Dry.	Difference for one Inch in Barometer and proportional parts.
Dry.	Wet.													
82	79	77.0	-0.7	0.926	-0.022	9.9	-0.3	1.8	+0.6	85	-5	491.8	-0.8	16.9
	78	75.3	0.6	0.877	0.021	9.4	0.3	2.3	0.6	80	4	492.1		
	77	73.6	0.6	0.830	0.020	8.9	0.3	2.8	0.6	76	4		+16.9	
	76	72.0	0.6	0.785	0.019	8.4	0.2	3.3	0.5	72	4	492.7		
	75	70.3	0.6	0.742	0.018	7.9	0.2	3.8	0.5	68	4	493.0		
	74	68.6	0.6	0.701	0.017	7.5	0.2	4.2	0.5	64	3			
	73	67.0	0.6	0.662	0.016	7.1	0.2	4.6	0.5	60	3			
	72	65.3	0.6	0.624	0.014	6.7	0.2	5.0	0.5	57	3			
	71	63.6	0.6	0.588	0.013	6.3	0.2	5.4	0.5	54	3	493.9		
	70	61.9	0.6	0.554	0.012	5.9	0.2	5.8	0.5	51	3	494.1		
	69	60.3	0.6	0.522	0.011	5.6	0.2	6.1	0.5	48	3			
	68	58.6	0.6	0.492	0.010	5.2	0.1	6.5	0.4	45	3			
	67	56.9	0.6	0.464	0.010	4.9	0.1	6.8	0.4	42	2			
	66	55.3	0.6	0.437	0.009	4.7	0.1	7.0	0.4	40	2	494.8		
	65	53.6	0.6	0.411	0.008	4.4	0.1	7.3	0.4	38	2	495.0		
	83	64	51.9	0.6	0.387	0.008	4.1	0.1	7.6	0.4	35	2		
63		50.2	0.6	0.364	0.008	3.9	0.1	7.8	0.4	33	2			
62		48.6	0.6	0.342	0.007	3.6	0.1	8.1	0.4	31	1			
61		46.9	0.5	0.321	0.006	3.4	0.1	8.3	0.4	29	1			
60		45.2	0.5	0.301	0.005	3.2	0.1	8.5	0.4	27	1			
59		43.5	-0.5	0.282	-0.005	3.0	-0.1	8.7	+0.4	26	-1	495.8		
83		83.0	-0.7	1.127	-0.023	12.0	-0.3	0.0	+0.7	100	-5	489.6	-0.8	
82		81.3	0.7	1.067	0.022	11.7	0.3	0.6	0.7	95	5	490.0		
81		79.7	0.6	1.010	0.021	10.8	0.3	1.2	0.7	90	5		+16.9	
80		78.0	0.6	0.956	0.019	10.2	0.2	1.8	0.6	85	5	490.7		
79		76.3	0.6	0.905	0.018	9.7	0.2	2.3	0.6	80	4	491.0		
78		74.7	0.6	0.856	0.017	9.1	0.2	2.9	0.6	76	4			
77		73.0	0.6	0.810	0.016	8.6	0.2	3.4	0.6	72	4			
76		71.3	0.6	0.766	0.015	8.2	0.2	3.8	0.6	68	4	491.8		
75		69.7	0.6	0.724	0.014	7.7	0.2	4.3	0.6	64	3	492.1		
84		74	68.0	0.6	0.684	0.013	7.3	0.2	4.7	0.6	60	3		
	73	66.3	0.6	0.646	0.012	6.9	0.2	5.1	0.6	57	3			
	72	64.7	0.6	0.610	0.012	6.5	0.2	5.5	0.6	54	3	492.9		
	71	63.0	0.6	0.576	0.012	6.1	0.2	5.9	0.6	51	3	493.1		
	70	61.3	0.6	0.543	0.011	5.8	0.2	6.2	0.6	48	2			
	69	59.7	0.6	0.512	0.011	5.4	0.1	6.6	0.5	45	2			
	68	58.0	0.6	0.482	0.010	5.1	0.1	6.9	0.5	42	2			
	67	56.3	0.6	0.454	0.009	4.8	0.1	7.2	0.5	40	2	493.8		
	66	54.7	0.6	0.428	0.009	4.6	0.1	7.4	0.5	38	2	494.0		
	65	53.0	0.5	0.403	0.009	4.3	0.1	7.7	0.5	36	2			
	64	51.3	0.5	0.379	0.008	4.0	0.1	8.0	0.5	34	2			
	63	49.7	0.5	0.356	0.007	3.8	0.1	8.2	0.5	32	2			
	62	48.0	0.5	0.335	0.007	3.6	0.1	8.4	0.5	30	1			
	61	46.3	0.5	0.315	0.007	3.3	0.1	8.7	0.5	28	1			
	60	44.7	-0.5	0.296	-0.006	3.1	-0.1	8.9	+0.5	26	-1	494.8		
	84	84.0	-0.6	1.164	-0.023	12.4	-0.3	0.0	+0.7	100	-5	488.4	-0.8	
83	82.3	0.6	1.103	0.021	11.7	0.3	0.7	0.7	95	5	488.8			
82	80.7	0.6	1.045	0.019	11.1	0.2	1.3	0.6	90	5	489.2	+16.9		
81	79.0	0.6	0.990	0.017	10.5	0.2	1.9	0.6	85	4				
80	77.4	0.6	0.938	0.016	10.0	0.2	2.4	0.6	80	4	489.9			
79	75.7	0.6	0.888	0.015	9.4	0.2	3.0	0.6	76	4	490.2			
78	74.0	0.6	0.840	0.014	8.9	0.2	3.5	0.6	72	4				
77	72.4	0.6	0.794	0.013	8.5	0.2	3.9	0.6	68	4	490.8			
76	70.7	0.6	0.751	0.013	8.0	0.2	4.4	0.6	64	3	491.1			
75	69.1	0.6	0.710	0.012	7.5	0.1	4.9	0.5	60	3				
74	67.4	0.6	0.671	0.011	7.1	0.1	5.3	0.5	57	3				
73	65.7	0.6	0.634	0.011	6.7	0.1	5.7	0.5	54	3	491.8			
72	64.1	0.6	0.598	0.010	6.3	0.1	6.1	0.5	51	3	492.0			
71	62.4	0.6	0.564	0.009	6.0	0.1	6.4	0.5	48	2				
70	60.8	0.6	0.532	0.008	5.6	0.1	6.8	0.5	45	2				
69	59.1	0.6	0.501	0.007	5.3	0.1	7.1	0.5	43	2				
68	57.4	-0.6	0.472	-0.006	5.0	-0.1	7.4	+0.5	41	-2	492.8			

Reading of Thermometer.		Temperature of the Dew-Point.	Difference for an increase of 1° in Dry.	Elastic force of Vapour.	Difference for an increase of 1° in Dry.	Vapour in a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Vap. reqd. to sat. a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Degree of Humidity. (Satn. = 100.)	Weight of a Cubic Foot of Air, Bar. reading 29 inches.	Diff. for an increase of 1 in. in Bar.	Difference for one inch in Barometer and proportional parts.
Dry.	Wet.												
84	68	57.4	-0.6	0.472	-0.006	5.0	-0.1	7.4	+0.5	41	2	492.8	-0.8
	67	55.8	-0.6	0.445	-0.006	4.7	-0.1	7.7	+0.5	38	2	492.9	-0.8
	66	54.1	-0.6	0.419	-0.006	4.5	-0.1	7.9	+0.5	36	2	493.1	+16.9
	65	52.5	-0.6	0.394	-0.006	4.2	-0.1	8.2	+0.5	34	2	493.2	-0.8
	64	50.8	-0.6	0.371	-0.006	4.0	-0.1	8.4	+0.5	32	2	493.3	-0.8
	63	49.1	-0.5	0.349	-0.006	3.7	-0.1	8.7	+0.5	30	2	493.4	-0.8
	62	47.5	-0.5	0.328	-0.006	3.5	-0.1	8.9	+0.5	28	2	493.5	-0.8
	61	45.8	-0.5	0.308	-0.006	3.3	-0.1	9.1	+0.5	26	2	493.6	-0.8
	85	85.0	-0.6	1.203	-0.023	12.8	-0.3	0.0	+0.7	100	5	487.4	-0.8
	84	83.4	-0.6	1.141	-0.021	12.1	-0.3	0.7	+0.7	95	5	487.8	+16.8
85	83	81.7	-0.6	1.082	-0.020	11.5	-0.3	1.3	+0.7	90	5	488.2	+16.8
	82	80.0	-0.6	1.026	-0.019	10.9	-0.3	1.9	+0.7	85	4	488.5	+16.8
	81	78.4	-0.6	0.973	-0.018	10.3	-0.2	2.5	+0.6	80	4	488.8	+16.8
	80	76.7	-0.6	0.922	-0.018	9.7	-0.2	3.1	+0.6	76	4	489.2	+16.8
	79	75.1	-0.6	0.873	-0.018	9.2	-0.2	3.6	+0.6	72	4	489.5	+16.8
	78	73.4	-0.6	0.826	-0.018	8.7	-0.2	4.1	+0.6	68	3	489.8	+16.8
	77	71.8	-0.6	0.781	-0.018	8.3	-0.2	4.5	+0.6	64	3	490.0	+16.8
	76	70.1	-0.6	0.738	-0.017	7.8	-0.2	5.0	+0.6	61	3	490.3	+16.8
	75	68.5	-0.6	0.698	-0.017	7.4	-0.2	5.4	+0.6	58	3	490.6	+16.8
	74	66.8	-0.6	0.660	-0.017	7.0	-0.2	5.8	+0.6	55	3	490.8	+16.8
86	73	65.2	-0.6	0.623	-0.016	6.6	-0.2	6.2	+0.6	52	3	491.0	+16.8
	72	63.5	-0.6	0.588	-0.015	6.2	-0.2	6.6	+0.6	49	3	491.2	+16.8
	71	61.8	-0.6	0.555	-0.014	5.9	-0.2	6.9	+0.6	46	2	491.4	+16.8
	70	60.2	-0.6	0.524	-0.014	5.5	-0.1	7.3	+0.5	43	2	491.6	+16.8
	69	58.5	-0.6	0.494	-0.014	5.2	-0.1	7.6	+0.5	40	2	491.8	+16.8
	68	56.9	-0.6	0.466	-0.013	4.9	-0.1	7.9	+0.5	38	2	492.0	+16.8
	67	55.2	-0.6	0.439	-0.012	4.6	-0.1	8.2	+0.5	36	2	492.2	+16.8
	66	53.6	-0.6	0.413	-0.011	4.3	-0.1	8.5	+0.5	34	2	492.4	+16.8
	65	51.9	-0.5	0.388	-0.009	4.1	-0.1	8.7	+0.5	32	1	492.6	+16.8
	64	50.2	-0.5	0.365	-0.008	3.8	-0.1	9.0	+0.5	30	1	492.8	+16.8
87	63	48.6	-0.5	0.343	-0.007	3.6	-0.1	9.2	+0.5	28	1	493.0	+16.8
	62	46.9	-0.5	0.322	-0.006	3.4	-0.1	9.4	+0.5	27	1	493.2	+16.8
	86	86.0	-0.6	1.242	-0.024	13.2	-0.3	0.0	+0.7	100	5	486.2	-0.8
	85	84.3	-0.6	1.180	-0.023	12.5	-0.3	0.7	+0.7	95	5	486.6	+16.8
	84	82.7	-0.6	1.121	-0.023	11.8	-0.2	1.4	+0.6	90	5	487.0	+16.8
	83	81.1	-0.6	1.064	-0.022	11.2	-0.2	2.0	+0.6	85	4	487.4	+16.8
	82	79.4	-0.6	1.008	-0.022	10.6	-0.2	2.6	+0.6	80	4	487.7	+16.8
	81	77.8	-0.6	0.955	-0.021	10.1	-0.2	3.1	+0.6	76	4	488.1	+16.8
	80	76.1	-0.6	0.904	-0.020	9.5	-0.2	3.7	+0.6	72	4	488.5	+16.8
	79	74.5	-0.6	0.855	-0.018	9.0	-0.2	4.2	+0.6	68	3	488.7	+16.8
88	78	72.8	-0.6	0.808	-0.016	8.5	-0.2	4.7	+0.6	64	3	489.0	+16.8
	77	71.2	-0.6	0.763	-0.014	8.1	-0.2	5.1	+0.6	61	3	489.3	+16.8
	76	69.5	-0.6	0.721	-0.013	7.6	-0.2	5.6	+0.6	58	3	489.6	+16.8
	75	67.9	-0.6	0.681	-0.012	7.2	-0.2	6.0	+0.6	55	3	489.9	+16.8
	74	66.2	-0.6	0.643	-0.011	6.8	-0.2	6.4	+0.6	52	2	490.0	+16.8
	73	64.6	-0.6	0.607	-0.010	6.4	-0.2	6.8	+0.6	49	2	490.2	+16.8
	72	62.9	-0.6	0.573	-0.009	6.1	-0.2	7.1	+0.6	46	2	490.4	+16.8
	71	61.3	-0.6	0.541	-0.009	5.7	-0.1	7.5	+0.5	43	2	490.6	+16.8
	70	59.6	-0.6	0.510	-0.008	5.4	-0.1	7.8	+0.5	40	2	490.8	+16.8
	69	58.0	-0.6	0.480	-0.007	5.1	-0.1	8.1	+0.5	38	2	491.0	+16.8
89	68	56.3	-0.6	0.452	-0.007	4.8	-0.1	8.4	+0.5	36	2	491.2	+16.8
	67	54.7	-0.6	0.426	-0.007	4.5	-0.1	8.7	+0.5	34	1	491.4	+16.8
	66	53.0	-0.5	0.402	-0.007	4.2	-0.1	9.0	+0.5	32	1	491.6	+16.8
	65	51.4	-0.5	0.379	-0.006	4.0	-0.1	9.2	+0.5	30	1	491.8	+16.8
	64	49.7	-0.5	0.357	-0.006	3.7	-0.1	9.5	+0.5	28	1	492.0	+16.8
	63	48.1	-0.5	0.336	-0.006	3.5	-0.1	9.7	+0.5	27	1	492.2	+16.8
	87	87.0	-0.6	1.282	-0.024	13.6	-0.3	0.0	+0.7	100	5	485.2	-0.8
	86	85.4	-0.6	1.219	-0.024	12.9	-0.3	0.7	+0.7	95	5	485.6	+16.7
	85	83.7	-0.6	1.158	-0.024	12.2	-0.3	1.4	+0.7	90	5	486.0	+16.7
	84	82.1	-0.6	1.098	-0.023	11.6	-0.3	2.0	+0.7	85	5	486.4	+16.7
	83	80.4	-0.6	1.040	-0.022	11.0	-0.2	2.6	+0.6	81	4	486.7	+16.7

Reading of Thermometer.		Temperature of the Dew-Point.	Difference for an increase of 1° in Dry.	Elastic force of Vapour.	Difference for an increase of 1° in Dry.	Vapour in a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Vap. reqd. to sat. a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Degree of Humidity. (Satn. = 100.)	Weight of a Cubic Foot of Air, Bar. reading 29 inches.	Diff. for an increase of 1 in. in Bar.	Difference for one inch in Barometer and proportional parts.
Dry.	Wet.												
87	83	80.4	-0.6	1.040	-0.022	11.0	-0.2	2.6	+0.6	81	4	486.7	-0.8
	82	78.8	-0.6	0.985	-0.021	10.4	-0.2	3.2	+0.6	77	4	487.1	+16.7
	81	77.1	-0.6	0.933	-0.020	9.8	-0.2	3.8	+0.6	73	4	487.5	+16.7
	80	75.5	-0.6	0.884	-0.019	9.3	-0.2	4.3	+0.6	69	4	487.9	+16.7
	79	73.9	-0.6	0.837	-0.018	8.8	-0.2	4.8	+0.6	65	4	488.3	+16.7
	78	72.2	-0.6	0.792	-0.017	8.3	-0.2	5.3	+0.6	61	3	488.7	+16.7
	77	70.6	-0.6	0.749	-0.016	7.9	-0.2	5.7	+0.6	58	3	489.0	+16.7
	76	68.9	-0.6	0.708	-0.015	7.4	-0.1	6.2	+0.5	55	3	489.3	+16.7
	75	67.3	-0.6	0.669	-0.014	7.0	-0.1	6.6	+0.5	52	3	489.6	+16.7
	74	65.6	-0.6	0.632	-0.013	6.6	-0.1	7.0	+0.5	49	3	489.9	+16.7
88	73	64.0	-0.6	0.597	-0.012	6.3	-0.1	7.3	+0.5	46	2	490.2	+16.7
	72	62.4	-0.6	0.564	-0.011	5.9	-0.1	7.7	+0.5	43	2	490.5	+16.7
	71	60.7	-0.6	0.532	-0.010	5.6	-0.1	8.0	+0.5	41	2	490.8	+16.7
	70	59.1	-0.6	0.502	-0.010	5.3	-0.1	8.3	+0.5	39	2	491.0	+16.7
	69	57.4	-0.5	0.473	-0.009	5.0	-0.1	8.6	+0.5	37	2	491.2	+16.7
	68	55.8	-0.5	0.446	-0.009	4.7	-0.1	8.9	+0.5	35	2	491.4	+16.7
	67	54.1	-0.5	0.420	-0.009	4.4	-0.1	9.2	+0.5	33	2	491.6	+16.7
	66	52.5	-0.5	0.395	-0.008	4.2	-0.1	9.4	+0.5	31	2	491.8	+16.7
	65	50.8	-0.5	0.372	-0.007	3.9	-0.1	9.7	+0.5	29	1	492.0	+16.7
	64	49.2	-0.5	0.351	-0.006	3.7	-0.1	9.9	+0.5	27	1	492.2	+16.7
89	88	88.0	-0.6	1.323	-0.024	14.0	-0.3	0.0	+0.7	100	5	484.0	-0.8
	87	86.4	-0.6	1.258	-0.023	13.3	-0.3	0.7	+0.7	95	5	484.4	+16.7
	86	84.7	-0.6	1.195	-0.023	12.6	-0.3	1.4	+0.7	90	5	484.8	+16.7
	85	83.1	-0.6	1.134	-0.022	12.0	-0.3	2.0	+0.7	85	4	485.2	+16.7
	84	81.5	-0.6	1.075	-0.021	11.4	-0.3	2.6	+0.7	81	4	485.6	+16.7
	83	79.8	-0.6	1.018	-0.020	10.8	-0.3	3.2	+0.7	77	4	485.9	+16.7
	82	78.2	-0.6	0.964	-0.019	10.2	-0.2	3.8	+0.6	73	4	486.3	+16.7
	81	76.5	-0.6	0.913	-0.018	9.6	-0.2	4.4	+0.6	69	3	486.7	+16.7
	80	74.9	-0.6	0.865	-0.018	9.1	-0.2	4.9	+0.6	65	3	486.9	+16.7
	79	73.3	-0.6	0.819	-0.018	8.6	-0.2	5.4	+0.6	61	3	487.2	+16.7
90	78	71.6	-0.6	0.775	-0.018	8.1	-0.2	5.9	+0.6	58	3	487.5	+1

Reading of Thermometer.		Temperature of the Dew-Point.	Difference for an increase of 1° in Dry.	Elastic force of Vapour.	Difference for an increase of 1° in Dry.	Vapour in a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Vap. reqd. to sat. a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Degree of Humidity. (Satn. = 100.)	Difference for an increase of 1° in Dry.	Weight of a Cubic Foot of Air, Bar. reading 29 inches.	Diff. for an increase of 1° in Dry.	Difference for one inch in Barometer and proportional parts.
Dry.	Wet.													
89	72	61.3	-0.5	in. 0.541	in. -0.10	gr. 5.7	gr. -0.1	gr. 8.7	gr. +0.5	39	-2	487.9	-0.8	16.6
	71	59.6	0.5	0.511	0.10	5.4	0.1	9.0	0.5	37	2	488.1		
	70	58.0	0.5	0.482	0.09	5.1	0.1	9.3	0.5	35	2	3	+16.7	
	69	56.4	0.5	0.455	0.09	4.8	0.1	9.6	0.5	33	2	4		
	68	54.7	0.5	0.429	0.08	4.5	0.1	9.9	0.5	31	1	6		
	67	53.1	0.5	0.404	0.07	4.2	0.1	10.2	0.5	29	1	8		
	66	51.5	-0.5	0.381	-0.06	4.0	-0.1	10.4	+0.5	28	-1	488.9		
90	90	90.0	-0.6	1.411	-0.27	14.8	-0.3	0.0	+0.8	100	-5	481.8	-0.8	
	89	88.4	0.6	1.342	0.26	14.1	0.3	0.7	0.8	95	5	482.3		
	88	86.8	0.6	1.276	0.26	13.4	0.3	1.4	0.8	90	4	482.7	+16.6	
	87	85.1	0.6	1.212	0.25	12.7	0.3	2.1	0.8	85	4	483.1		
	86	83.5	0.6	1.151	0.24	12.1	0.3	2.7	0.8	81	4	4		
	85	81.9	0.6	1.092	0.23	11.4	0.2	3.4	0.7	77	4	483.8		
	84	80.3	0.6	1.036	0.22	10.8	0.2	4.0	0.7	73	4	484.1		
	83	78.6	0.6	0.982	0.21	10.3	0.2	4.5	0.7	69	3	5		
	82	77.0	0.6	0.930	0.20	9.7	0.2	5.1	0.7	65	3	484.8		
	81	75.4	0.6	0.880	0.18	9.2	0.2	5.6	0.7	62	3	485.1		
	80	73.7	0.5	0.833	0.17	8.7	0.2	6.1	0.7	59	3	4		
	79	72.1	0.5	0.788	0.16	8.3	0.2	6.5	0.7	56	3	6		
	78	70.5	0.5	0.745	0.15	7.8	0.2	7.0	0.7	53	3	485.9		
	77	68.8	0.5	0.704	0.14	7.4	0.2	7.4	0.7	50	2	486.1		
	76	67.2	0.5	0.665	0.13	7.0	0.2	7.8	0.7	47	2	4		
	75	65.6	0.5	0.629	0.13	6.6	0.1	8.2	0.6	44	2	6		
	74	64.0	0.5	0.595	0.13	6.2	0.1	8.6	0.6	42	2	486.8		
	73	62.4	0.5	0.562	0.12	5.9	0.1	8.9	0.6	40	2	487.0		
	72	60.7	0.5	0.531	0.11	5.6	0.1	9.2	0.6	38	2	2		
	71	59.1	0.5	0.501	0.10	5.3	0.1	9.5	0.6	36	2	4		
	70	57.5	0.5	0.473	0.10	5.0	0.1	9.8	0.6	34	2	5		
	69	55.8	0.5	0.446	0.09	4.7	0.1	10.1	0.6	32	2	7		
	68	54.2	0.5	0.421	0.08	4.4	0.1	10.4	0.6	30	1	487.8		
	67	52.6	-0.5	0.397	-0.07	4.2	-0.1	10.6	+0.6	28	-1	488.0		
91	91	91.0	-0.6	1.455	-0.27	15.3	-0.3	0.0	+0.7	100	-5	480.7	-0.8	
	90	89.4	0.6	1.384	0.27	14.5	0.3	0.8	0.7	95	5	481.1	+16.6	
	89	87.8	0.6	1.316	0.27	13.8	0.3	1.5	0.7	90	4	5		
	88	86.1	0.6	1.250	0.26	13.1	0.3	2.2	0.7	86	4	481.9		
	87	84.5	0.6	1.187	0.25	12.5	0.3	2.8	0.7	82	4	482.3		
	86	82.9	0.6	1.127	0.23	11.8	0.2	3.5	0.6	78	4	482.6		
	85	81.3	0.6	1.069	0.21	11.2	0.2	4.1	0.6	74	4	483.0		
	84	79.7	0.6	1.013	0.19	10.6	0.2	4.7	0.6	70	4	4		
	83	78.0	0.6	0.960	0.17	10.1	0.2	5.2	0.6	66	3	483.7		
	82	76.4	0.6	0.910	0.16	9.5	0.2	5.8	0.6	62	3	484.0		
	81	74.8	0.6	0.862	0.15	9.0	0.2	6.3	0.6	59	3	3		
	80	73.2	0.6	0.816	0.14	8.5	0.2	6.8	0.6	56	3	5		
	79	71.6	0.6	0.772	0.13	8.1	0.2	7.2	0.6	53	3	484.8		
	78	69.9	0.5	0.730	0.12	7.7	0.2	7.6	0.6	50	3	485.1		
	77	68.3	0.5	0.690	0.11	7.2	0.1	8.1	0.5	47	2	3		
	76	66.7	0.5	0.652	0.10	6.8	0.1	8.5	0.5	44	2	5		
	75	65.1	0.5	0.616	0.09	6.5	0.1	8.8	0.5	42	2	485.8		
	74	63.5	0.5	0.582	0.09	6.1	0.1	9.2	0.5	40	2	486.0		
	73	61.8	0.5	0.550	0.09	5.8	0.1	9.5	0.5	38	2	1		
	72	60.2	0.5	0.520	0.09	5.5	0.1	9.8	0.5	36	2	3		
	71	58.6	0.5	0.491	0.08	5.1	0.1	10.2	0.5	34	2	5		
	70	57.0	0.5	0.463	0.07	4.8	0.1	10.5	0.5	32	1	7		
	69	55.3	0.5	0.437	0.07	4.5	0.1	10.8	0.5	30	1	486.8		
	68	53.7	-0.5	0.413	-0.06	4.3	-0.1	11.0	+0.5	28	-1	487.0		
92	92	92.0	-0.6	1.501	-0.28	15.7	-0.3	0.0	+0.8	100	-5	479.5	-0.8	
	91	90.4	0.6	1.428	0.27	14.9	0.3	0.8	0.8	95	5	480.0	+16.6	
	90	88.8	0.6	1.357	0.25	14.2	0.3	1.5	0.8	90	4	4		
	89	87.1	0.6	1.289	0.24	13.5	0.3	2.2	0.8	85	4	480.8		
	88	85.5	0.6	1.224	0.23	12.8	0.3	2.9	0.8	81	4	481.2		
	87	83.9	-0.6	1.162	-0.22	12.2	-0.3	3.5	+0.8	77	-4	481.5		

Reading of Thermometer.		Temperature of the Dew-Point.	Difference for an increase of 1° in Dry.	Elastic force of Vapour.	Difference for an increase of 1° in Dry.	Vapour in a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Vap. reqd. to sat. a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Degree of Humidity. (Satn. = 100.)	Difference for an increase of 1° in Dry.	Weight of a Cubic Foot of Air, Bar. reading 29 inches.	Diff. for an increase of 1° in Dry.	Difference for one inch in Barometer and proportional parts.
Dry.	Wet.													
92	87	83.9	-0.6	in. 1.162	in. -0.22	gr. 12.2	gr. -0.3	gr. 3.5	gr. +0.8	77	-4	481.5	-0.8	16.5
	86	82.3	0.6	1.103	0.21	11.6	0.3	4.1	0.8	73	4	481.9		
	85	80.7	0.6	1.047	0.20	11.0	0.3	4.7	0.8	70	4	482.3	+16.6	
	84	79.1	0.6	0.994	0.20	10.4	0.2	5.3	0.7	66	3	6		
	83	77.5	0.6	0.943	0.20	9.9	0.2	5.8	0.7	62	3	482.9		
	82	75.9	0.6	0.894	0.19	9.3	0.2	6.4	0.7	59	3	483.2		
	81	74.2	0.6	0.847	0.18	8.8	0.2	6.9	0.7	56	3	5		
	80	72.6	0.5	0.802	0.17	8.3	0.2	7.4	0.7	53	3	483.7		
	79	71.0	0.5	0.759	0.15	7.9	0.1	7.8	0.6	50	2	484.0		
	78	69.4	0.5	0.718	0.14	7.5	0.1	8.2	0.6	47	2	2		
	77	67.8	0.5	0.679	0.13	7.1	0.1	8.6	0.6	45	2	5		
	76	66.2	0.5	0.642	0.12	6.7	0.1	9.0	0.6	43	2	7		
	75	64.5	0.5	0.607	0.11	6.3	0.1	9.4	0.6	41	2	484.9		
	74	62.9	0.5	0.573	0.09	6.0	0.1	9.7	0.6	38	2	485.1		
	73	61.3	0.5	0.541	0.08	5.7	0.1	10.0	0.6	36	2	3		
	72	59.7	0.5	0.511	0.08	5.3	0.1	10.4	0.6	34	2	5		
	71	58.1	0.5	0.483	0.08	5.0	0.1	10.7	0.6	32	1	6		
	70	56.5	0.5	0.456	0.07	4.8	0.1	10.9	0.6	30	1	485.8		
	69	54.8	-0.5	0.430	-0.07	4.5	-0.1	11.2	+0.6	28	-1	486.0		
93	93	93.0	-0.6	1.548	-0.28	16.2	-0.3	0.0	+0.8	100	-5	478.4	-0.8	
	92	91.4	0.6	1.473	0.27	15.4	0.3	0.8	0.8	95	5	478.9	+16.5	
	91	89.8	0.6	1.401	0.26	14.7	0.3	1.5	0.8	90	4	479.3		
	90	88.2	0.6	1.332	0.25	14.0	0.3	2.2	0.8	86	4	479.7		
	89	86.6	0.6	1.266	0.24	13.3	0.3	2.9	0.8	82	4	480.1		
	88	85.0	0.6	1.203	0.22	12.6	0.3	3.6	0.8	78	4	5		
	87	83.4	0.6	1.142	0.21	11.9	0.2	4.3	0.7	74	4	480.9		
	86	81.7	0.5	1.084	0.20	11.3	0.2	4.9	0.7	70	3	481.2		
	85	80.1	0.5	1.028	0.18	10.7	0.2	5.5	0.7	66	3	6		
	84	78.5	0.5	0.974	0.16	10.2	0.2	6.0	0.7	63	3	481.9		
	83	76.9	0.5	0.923	0.15	9.6	0.2	6.6	0.7	60	3	482.2		
	82	75.3	0.5	0.874	0.14	9.1	0.2	7.1	0.7	57	3	5		
	81	73.7	0.5	0.828	0.13	8.7	0.2	7.5	0.7	54	3	482.8		
	80	72.1	0.5	0.785	0.13	8.2	0.2	8.0	0.7	51	3	483.0		
	79	70.5	0.5	0.744	0.12	7.8	0.2	8.4	0.7	48	2	3		
	78	68.9	0.5	0.704	0.12	7.4	0.2	8.8	0.7	45	2	5		
	77	67.2	0.5	0.666	0.11	6.9	0.1	9.3	0.6	42	2	483.7		

Reading of Thermometer.		Temperature of Dew-Point.	Difference for an increase of 1° in Dry.	Elastic force of Vapour.	Difference for an increase of 1° in Dry.	Vapour in a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Vap. reqd. to sat. a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Degree of Humidity. (Satn. = 100.)	Difference for an increase of 1° in Dry.	Weight of a Cubic Foot of Air, Bar. reading 29 inches.	Diff. for an increase of 1° in Dry.	Difference for one inch in Barometer and proportional parts.
Dry.	Wet.													
94	76	65°1	-0°5	0°620	-0°10	6°4	-0°1	10°3	+0°6	39	-2	483°1	-0°8	16°4
	75	63°5	0°5	0°587	0°10	6°1	0°1	10°6	0°6	37	2	483°3		
	74	61°9	0°5	0°555	0°10	5°7	0°1	11°0	0°6	35	2	483°5	+16°5	
	73	60°3	0°5	0°524	0°10	5°4	0°1	11°3	0°6	33	1	483°7		
	72	58°7	0°5	0°494	0°09	5°1	0°1	11°6	0°6	31	1	483°9		
	71	57°1	-0°5	0°466	-0°08	4°9	-0°1	11°8	+0°6	29	-1	484°0		
95	95	95°0	-0°6	1°646	-0°30	17°2	-0°3	0°0	+0°8	100	-5	476°2	-0°8	
	94	93°4	0°6	1°567	0°29	16°3	0°3	0°9	0°8	95	5	476°6		
	93	91°8	0°6	1°492	0°28	15°5	0°3	1°7	0°8	91	5	477°1	+16°4	
	92	90°2	0°6	1°420	0°27	14°8	0°3	2°4	0°8	86	4	477°5		
	91	88°6	0°6	1°350	0°26	14°1	0°3	3°1	0°8	82	4	477°9		
	90	87°0	0°6	1°283	0°24	13°4	0°3	3°8	0°8	78	4	478°3		
	89	85°4	0°5	1°219	0°22	12°7	0°3	4°5	0°8	74	4	478°7		
	88	83°8	0°5	1°158	0°20	12°1	0°3	5°1	0°8	70	4	479°1		
	87	82°2	0°5	1°099	0°18	11°5	0°3	5°7	0°8	66	3	479°5		
	86	80°6	0°5	1°043	0°17	10°9	0°2	6°3	0°7	63	3	479°8		
	85	79°0	0°5	0°990	0°16	10°3	0°2	6°9	0°7	60	3	480°1		
	84	77°4	0°5	0°940	0°16	9°8	0°2	7°4	0°7	57	3	480°4		
	83	75°8	0°5	0°892	0°16	9°3	0°2	7°9	0°7	54	2	480°7		
	82	74°2	0°5	0°846	0°15	8°8	0°2	8°4	0°7	51	2	481°0		
	81	72°6	0°5	0°802	0°14	8°3	0°2	8°9	0°7	48	2	481°3		
	80	71°0	0°5	0°759	0°13	7°9	0°2	9°3	0°7	45	2	481°7		
	79	69°4	0°5	0°718	0°12	7°5	0°2	9°7	0°7	43	2	482°0		
	78	67°8	0°5	0°680	0°12	7°1	0°2	10°1	0°7	41	2	482°3		
	77	66°2	0°5	0°644	0°11	6°7	0°2	10°5	0°7	39	2	482°6		
	76	64°6	0°5	0°610	0°10	6°3	0°1	10°9	0°6	37	2	482°9		
	75	63°0	0°4	0°577	0°09	6°0	0°1	11°2	0°6	35	2	483°2		
	74	61°4	0°4	0°545	0°08	5°6	0°1	11°6	0°6	33	2	483°5		
	73	59°8	0°4	0°514	0°07	5°3	0°1	11°9	0°6	31	2	483°8		
	72	58°2	-0°4	0°485	-0°07	5°0	-0°1	12°2	+0°6	30	-1	483°1		
96	96	96°0	-0°6	1°697	-0°31	17°7	-0°3	0°0	+0°8	100	-5	475°0	-0°8	
	95	94°4	0°6	1°616	0°30	16°8	0°3	0°9	0°8	95	5	475°5		
	94	92°8	0°6	1°538	0°28	16°0	0°3	1°7	0°8	90	4	475°9	+16°4	
	93	91°2	0°6	1°464	0°27	15°2	0°3	2°5	0°8	86	4	476°4		
	92	89°6	0°6	1°393	0°25	14°5	0°3	3°2	0°8	82	4	476°8		
	91	88°0	0°6	1°325	0°23	13°8	0°3	3°9	0°8	78	4	477°2		
	90	86°4	0°6	1°260	0°22	13°1	0°3	4°6	0°8	74	3	477°6		
	89	84°9	0°6	1°198	0°21	12°4	0°2	5°3	0°7	70	3	478°0		
	88	83°3	0°6	1°138	0°20	11°8	0°2	5°9	0°7	66	3	478°4		
	87	81°7	0°6	1°081	0°19	11°2	0°2	6°5	0°7	63	3	478°7		
	86	80°1	0°6	1°026	0°17	10°7	0°2	7°0	0°7	60	3	479°0		
	85	78°5	0°5	0°974	0°16	10°1	0°2	7°6	0°7	57	3	479°3		
	84	76°9	0°5	0°924	0°15	9°6	0°2	8°1	0°7	54	3	479°6		
	83	75°3	0°5	0°876	0°14	9°1	0°2	8°6	0°7	52	3	479°9		
	82	73°7	0°5	0°831	0°13	8°6	0°2	9°1	0°7	49	2	480°2		
	81	72°1	0°5	0°788	0°13	8°2	0°2	9°5	0°7	46	2	480°5		
	80	70°5	0°5	0°746	0°12	7°7	0°1	10°0	0°6	43	2	480°8		
	79	68°9	0°5	0°706	0°11	7°3	0°1	10°4	0°6	41	2	481°1		
	78	67°3	0°5	0°668	0°10	6°9	0°1	10°8	0°6	39	2	481°4		
	77	65°7	0°5	0°633	0°10	6°5	0°1	11°2	0°6	37	2	481°7		
	76	64°2	0°5	0°600	0°10	6°2	0°1	11°5	0°6	35	2	482°0		
	75	62°6	0°5	0°568	0°10	5°9	0°1	11°8	0°6	33	1	482°3		
	74	61°0	0°5	0°537	0°09	5°6	0°1	12°1	0°6	31	1	482°6		
	73	59°4	-0°4	0°507	-0°08	5°3	-0°1	12°4	+0°6	30	-1	482°9		
97	97	97°0	-0°6	1°750	-0°30	18°2	-0°3	0°0	+0°8	100	-5	473°8	-0°7	
	96	95°4	0°6	1°666	0°27	17°3	0°3	0°9	0°8	95	5	474°3		
	95	93°8	0°6	1°586	0°25	16°5	0°3	1°7	0°8	90	4	474°7	+16°4	
	94	92°2	0°6	1°510	0°24	15°7	0°3	2°5	0°8	86	4	475°2		
	93	90°6	0°6	1°437	0°24	14°9	0°3	3°3	0°8	82	4	475°6		
	92	89°1	0°6	1°368	0°23	14°2	0°3	4°0	0°8	78	4	476°1		
	91	87°5	-0°6	1°302	-0°22	13°5	-0°3	4°7	+0°8	74	-3	476°5		

Reading of Thermometer.		Temperature of the Dew-Point.	Difference for an increase of 1° in Dry.	Elastic force of Vapour.	Difference for an increase of 1° in Dry.	Vapour in a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Vap. reqd. to sat. a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Degree of Humidity. (Satn. = 100.)	Difference for an increase of 1° in Dry.	Weight of a Cubic Foot of Air, Bar. reading 29 inches.	Diff. for an increase of 1° in Dry.	Difference for one inch in Barometer and proportional parts.
Dry.	Wet.													
97	91	87.5	-0.6	1.302	-0.22	13.5	-0.3	4.7	+0.8	74	-3	476.5	-0.7	16.3
	90	85.9	0.6	1.238	0.21	12.8	0.2	5.4	0.7	70	3	476.8		
	89	84.3	0.5	1.177	0.20	12.2	0.2	6.0	0.7	67	3	477.2	+16.4	
	88	82.7	0.5	1.118	0.19	11.6	0.2	6.6	0.7	64	3	477.6		
	87	81.1	0.5	1.062	0.19	11.0	0.2	7.2	0.7	60	3	477.9		
	86	79.5	0.5	1.009	0.19	10.4	0.2	7.8	0.7	57	3	478.2		
	85	78.0	0.5	0.958	0.18	9.9	0.2	8.3	0.7	54	3	478.5		
	84	76.4	0.5	0.909	0.16	9.4	0.2	8.8	0.7	52	3	478.8		
	83	74.8	0.5	0.863	0.15	8.9	0.2	9.3	0.7	49	2	479.1		
	82	73.2	0.5	0.818	0.14	8.4	0.2	9.8	0.7	46	2	479.4		
	81	71.6	0.5	0.775	0.13	8.0	0.2	10.2	0.7	44	2	479.7		
	80	70.0	0.5	0.734	0.12	7.6	0.2	10.6	0.7	42	2	479.9		
	79	68.4	0.5	0.695	0.11	7.2	0.1	11.0	0.6	39	2	480.1		
	78	66.8	0.5	0.658	0.10	6.8	0.1	11.4	0.6	37	2	480.3		
98	98	98.0	-0.6	1.807	-0.32	18.7	-0.3	0.0	+0.9	100	-5	472.7	-0.7	
	97	96.4	0.6	1.721	0.31	17.8	0.3	0.9	0.9	95	5	473.2		
	96	94.8	0.6	1.639	0.29	17.0	0.3	1.7	0.9	90	4	473.7	+16.3	
	95	93.3	0.6	1.561	0.27	16.2	0.3	2.5	0.9	86	4	474.2		
	94	91.7	0.6	1.487	0.25	15.4	0.3	3.3	0.9	82	4	474.6		
	93	90.1	0.5	1.416	0.23	14.6	0.3	4.1	0.9	78	4	475.0		
	92	88.5	0.5	1.347	0.21	13.9	0.3	4.8	0.9	74	3	475.4		
	91	86.9	0.5	1.281	0.19	13.2	0.3	5.5	0.9	70	3	475.8		
	90	85.3	0.5	1.218	0.17	12.6	0.3	6.1	0.9	67	3	476.2		
	89	83.8	0.5	1.157	0.16	12.0	0.3	6.7	0.9	64	3	476.6		
	88	82.2	0.5	1.099	0.15	11.4	0.2	7.3	0.8	61	3	476.9		
	87	80.6	0.5	1.043	0.14	10.8	0.2	7.9	0.8	58	3	477.3		
	86	79.0	0.5	0.990	0.13	10.2	0.2	8.5	0.8	55	3	477.6		
	85	77.4	0.5	0.940	0.13	9.7	0.2	9.0	0.8	52	2	477.9		
99	99	99.0	-0.6	1.862	-0.34	19.3	-0.4	0.0	+0.9	100	-5	471.5	-0.7	
	98	97.4	0.6	1.774	0.32	18.4	0.4	0.9	0.9	95	5	472.0		
	97	95.9	0.6	1.690	0.30	17.5	0.4	1.8	0.9	91	4	472.5	+16.3	
	96	94.3	0.6	1.610	0.29	16.7	0.4	2.6	0.9	87	4	473.0		
	95	92.7	0.6	1.534	0.28	15.9	0.4	3.4	0.9	83	4	473.5		
	94	91.1	0.6	1.462	0.27	15.1	0.3	4.2	0.8	79	4	473.9		
	93	89.6	0.6	1.393	0.26	14.4	0.3	4.9	0.8	75	4	474.3		
	92	88.0	0.6	1.327	0.26	13.7	0.3	5.6	0.8	71	3	474.7		
	91	86.4	0.5	1.263	0.25	13.0	0.3	6.3	0.8	67	3	475.1		
	90	84.8	0.5	1.201	0.25	12.3	0.2	7.0	0.7	64	3	475.5		
	89	83.2	0.5	1.141	0.25	11.7	0.2	7.6	0.7	61	3	475.9		
	88	81.7	0.5	1.084	0.24	11.1	0.2	8.2	0.7	58	3	476.2		
	87	80.1	0.5	1.029	0.23	10.5	0.1	8.8	0.6	55	2	476.5		
	86	78.5	0.5	0.977	0.22	10.0	0.1	9.3	0.6	52	2	476.8		

Reading of Thermometer.		Temperature of the Dew-point.	Difference for an increase of 1° in Dry.	Elastic force of Vapour.	Difference for an increase of 1° in Dry.	Vapour in a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Vap. reqd. to sat. a Cubic Foot of Air.	Difference for an increase of 1° in Dry.	Degree of Humidity. (Satn. = 100.)	Difference for an increase of 1° in Dry.	Weight of a Cubic Foot of Air, Bar. reading 29 inches.	Diff. for an increase of 1° in Dry of 1 in. in Bar.	Difference for one inch in Barometer and proportional parts.
Dry.	Wet.													
99	80	69.1	-0.5	0.712	-0.13	7.3	-0.1	12.0	+0.6	38	-2	478.4	-0.7	16.2
	79	67.5	0.5	0.675	0.12	6.9	0.1	12.4	0.6	36	2	478.6		
	78	65.9	0.4	0.639	0.11	6.6	0.1	12.7	0.6	34	2	478.8	+16.3	1.1
	77	64.3	0.4	0.605	0.11	6.2	0.1	13.1	0.6	32	1	479.0		2.2
	76	62.8	-0.4	0.572	-0.10	5.9	-0.1	13.4	+0.6	31	-1	479.2		3.3
100	100	100.0	-0.6	1.918	-0.35	19.8	-0.4	0.0	+1.0	100	-5	470.5	-0.7	4.4
	99	98.4	0.6	1.828	0.33	18.9	0.4	0.9	1.0	95	5	471.0		5.5
	98	96.9	0.6	1.742	0.31	18.0	0.4	1.8	1.0	90	4	471.5	+16.2	6.6
	97	95.3	0.6	1.660	0.29	17.2	0.4	2.6	1.0	86	4	472.0		7.7
	96	93.7	0.6	1.582	0.27	16.3	0.3	3.5	0.9	82	4	472.9		8.8
	95	92.1	0.6	1.508	0.26	15.5	0.3	4.3	0.9	78	4	473.3		9.9
	94	90.6	0.6	1.437	0.25	14.8	0.3	5.0	0.9	74	4	473.7		11.0
	93	89.0	0.6	1.368	0.23	14.1	0.3	5.7	0.9	71	4	474.1		12.1
	92	87.4	0.6	1.301	0.22	13.4	0.3	6.4	0.9	68	3	474.5		13.2
	91	85.9	0.6	1.237	0.20	12.7	0.3	7.1	0.9	64	3	474.9		14.3
	90	84.3	0.5	1.175	0.18	12.1	0.2	7.7	0.8	61	3	475.2		15.4
	89	82.7	0.5	1.116	0.17	11.5	0.2	8.3	0.8	58	3	475.6		16.5
	88	81.2	0.5	1.060	0.16	10.9	0.2	8.9	0.8	55	3	476.0		17.6
	87	79.6	0.5	1.006	0.15	10.4	0.2	9.4	0.8	52	3	476.4		18.7
	86	78.0	0.5	0.955	0.14	9.9	0.2	9.9	0.8	49	2	476.8		19.8
	85	76.5	0.5	0.907	0.14	9.4	0.2	10.4	0.8	47	2	477.2		20.9
	84	74.9	0.5	0.861	0.13	8.9	0.2	10.9	0.8	45	2	477.6		22.0
	83	73.3	0.5	0.818	0.13	8.4	0.2	11.4	0.8	43	2	478.0		23.1
	82	71.7	0.5	0.777	0.13	8.0	0.1	11.8	0.7	40	2	478.4		24.2
	81	70.2	0.5	0.738	0.12	7.6	0.1	12.2	0.7	38	2	478.8		25.3
	80	68.6	0.5	0.700	0.12	7.2	0.1	12.6	0.7	36	2	479.2		26.4
	79	67.0	0.5	0.663	0.12	6.8	0.1	13.0	0.7	34	2	479.6		27.5
	78	65.5	0.4	0.628	0.11	6.4	0.1	13.4	0.7	32	1	480.0		28.6
	77	63.9	0.4	0.594	0.11	6.1	0.1	13.7	0.7	30	1	480.4		29.7
	76	62.4	-0.4	0.561	-0.10	5.8	-0.1	14.0	+0.7	29	-1	480.8		30.8

