1850

Meteorology of England

South of Scotland

ending Sept 30 1850

From the London, Edinburgh, and Dublin Philosophical Magazine and Journal of Science for November 1850.]

On the Meteorology of England and the South of Scotland during the Quarter ending September 30, 1850. *By* James Glaisher, *Esq., F.R.S., Hon. Sec. of the British Meteorological Society, &c.*

THE mean daily temperature of the air was below its average value till July 13; the mean defect was 2°·2. From July 12 to the 24th, the period was warm; the average excess of temperature was 4°·8. From July 25 to August 3, the temperature was below the average; its mean deficiency was 1°. From August 4 to August 18, it was above the average; the mean excess was 2°; this was followed by a long period of fine, clear, dry, but cold weather. The average deficiency of temperature between August 19 and September 17 was 3°·5; and after September 18, the daily temperatures were slightly above their average values. Snow fell on Ben-Lomond on August 23.

The mean temperature of the air at Greenwich for the three months ending August, constituting the three summer months, was 61°·1, being 1°·2 *above* the average of the preceding seventy-nine summers.

For the month of July was 62°·2, *exceeding* that of the average of seventy-nine years by 0°·9, and of nine years by 0°·7.

For the month of August was 60°·2, being 0°·3 *less* than the average of seventy-nine years, and 0°·9 *less* than that of the preceding nine years.

For the month of September was 56°·4, *exceeding* the average from seventy-nine years by 0°·1, and *less* than that of the preceding nine years by 0°·7.

The mean for the quarter was 59°·6, *exceeding* that of the average of seventy-nine summer quarters by 0°·2, and *less* than that of the nine preceding years by 0°·3.

The mean temperature of evaporation at Greenwich—

For the month of July was 58°·6; for August was 56°·6; and for June was 52°·9. These values are 0°·9 *greater*, 0°·2 *greater*, and 1°·6 *less* than those of the averages of the same months in the preceding nine years.

The mean temperature of the dew-point at Greenwich—For the months of July, August and September, were 55°·8, 53°·1, and 47°·7 respectively. These values are 1°·5 *greater*, 2°·0 *less*, and 4°·7 *less* respectively than the averages of the same months in the preceding nine years.

The mean elastic force of vapour at Greenwich for the quarter was 0·422 inch, being *less* than the average from the preceding nine years by 0·008 inch.

The mean weight of water in a cubic foot of air for the quarter was 4·8 grains, being of the same value as the average from the preceding nine years.

The mean degree of humidity in July was 0·88, in August was 0·81, and in September was 0·75. The averages from the nine preceding years were 0·79, 0·83 and 0·85 respectively.

The mean reading of the barometer at Greenwich in July was 29·789 inches, in August was 29·787, and in September was 29·930. These readings are 0·010 *less*, of the *same* value, and 0·121 *greater* respectively than the averages of the same months in the preceding nine years.

The average weight of a cubic foot of air in the quarter was 527 grains; exceeding that of the average of the preceding nine years by 1 grain.

The rain fallen at Greenwich in July was 2·9 inches, in August was 4·9, and in September was 1·3. The falls for the three months on an average of nine years, are 2·3, 2·6, and 2·3 inches respectively.

The average daily ranges of the readings of the thermometer in air at the height of four feet above the soil, in July was 20°·0, in August was 18°·6, and in September was 17°·1. The averages for the three months from the preceding nine years were 19°·4, 17°·6 and 18°·9 respectively.

The minimum readings of the thermometer on grass, with its bulb fully exposed to the sky, in July was at or below 40° on eight nights; the lowest was 34°, and was above 40° on twenty-three nights; the highest reading was 55°·5 In August the readings were at and below 32° on two nights; the lowest reading was 26°; between 32° and 40° on six nights, and above 40° on twenty-three nights; the highest reading was 58°. In September the readings were at or below 32° on nine nights; the lowest reading was 24°; between 32° and 40° on six nights, and above 40° on fifteen nights; and the highest reading was 50°.

Thunder-storms occurred on July 2 at Liverpool; on the 4th at Uckfield and Nottingham; on the 9th at Uckfield; on the 15th at Oxford, Aylesbury, Hartwell House, Hartwell Rectory, Stone, Holkham, Norwich and Oxford; on the 16th

at Holkham, Hawarden, Liverpool, Manchester, Norwich, Nottingham and Stonyhurst; on the 17th at Greenwich, Uckfield, Aylesbury, Hartwell House, Stone, Linslade, Cardington, Leicester, Greenwich, Nottingham, and S.W. of Dunino; on the 18th at Helston, Exeter, Greenwich, St. John's Wood, Oxford, Aylesbury, Hartwell House and Rectory, Stone, Linslade, Cardington, Leicester, Durham and Nottingham; on the 23rd at Jersey and Hawarden; on the 28th at Guernsey and Helston. On August 3 at Rose Hill, Oxford; on the 5th at Holkham; on the 6th at Stone and Dunino; on the 7th at Hartwell House; on the 8th at Oxford, Hartwell House, Stone, Linslade, Cardington, Hawarden, Liverpool, York and North Shields; on the 9th at York and Hartwell Rectory; on the 12th at Greenwich, Norwich and Oxford; on the 13th and 15th at St. John's Wood; on the 19th at Liverpool; on the 20th at Holkham and Nottingham; on the 21st at Nottingham; on the 24th at Greenwich and Hartwell House; on the 27th at Guernsey; on the 29th at Guernsey and Helston; and on the 30th at Guernsey. On September 20 at Exeter; on the 23rd at Holkham and Norwich; on the 24th at Holkham; on the 26th at Stonyhurst; and on the 30th at Jersey and Trowbridge.

At Uckfield, during the third week of July, the weather was very wet, and many places in this county were visited by severe thunder-storms.

At Hartwell Rectory, on the 15th of July, at $1^h\ 30^m$ P.M., there was a storm with thunder and lightning, and rain fell to the depth of 0·51 inch. July 17, at $6^h\ 30^m$ P.M., there was another thunder-storm, but very little rain; sheet lightning occurred at intervals during the evening to the south and west. July 18, at $3^h\ 30^m$ P.M., there was a thunder-storm with heavy rain; and sheet lightning was seen all the evening, followed by continued rain, which measured in the gauge, on the following morning, 1·610 inch.

At York, on August 8, a thunder-storm occurred between six and eight in the evening. The Diocesan School and the Roman Catholic Chapel were struck by lightning and injured. Sheep were killed, and two individuals were knocked down, but no human life was lost. This was the severest storm that has occurred in York for the last twenty years. Thunder and lightning occurred again on the 9th.

At Stonyhurst, the lightning during the thunder-storm of July 16 was the most brilliant Mr. Weld remembers ever to have witnessed. It frequently resembled the explosions of fireworks; and on several occasions three or four branches darted from the same centre, while sometimes the sky seemed

traversed in every direction by streaming lightning of the most vivid description. The thunder was incessant, but very distant, and no rain fell. Mr. Weld heard of seven persons being killed, and about as many more struck, but not killed, besides several valuable cows and horses which were killed.

Thunder was heard, but lightning was not seen, on July 4 at North Shields; on the 9th at Holkham; on the 15th at Guernsey; on the 16th at St. John's Wood, Linslade, Stone and Wakefield; on the 17th at Greenwich, Durham and North Shields; on the 18th at Wakefield; on the 19th at Stone; and on the 23rd at Guernsey. On August 6 at Oxford, Aylesbury, Holkham and North Shields; on the 12th at Uckfield, Linslade, Holkham, Hawarden and Liverpool; on the 13th at Jersey; on the 19th at Norwich; on the 21st at Dunino; on the 23rd at Cardington; on the 24th at Exeter, Oxford, Hartwell Rectory and Stone; and on the 28th at Nottingham. On September 3 and 24 at Aylesbury; on the 26th at Durham and North Shields; and on the 27th at St. John's Wood.

Lightning was seen, but thunder was not heard, on July 8 at Uckfield; on the 15th at Uckfield, Hartwell Rectory, Stone and Stonyhurst; on the 16th at Leicester, Nottingham and Manchester; on the 17th at St. John's Wood, Oxford, Hartwell Rectory and Liverpool; on the 19th at Stone; and on the 29th at Manchester. On August 5 at Cardington and Stone; on the 6th at Highfield House; on the 8th at Stonyhurst; on the 9th at Cardington; on the 16th at North Shields; on the 22nd at Norwich and North Shields. On September 23 at Uckfield, Greenwich, Linslade and Cardington; on the 24th at Greenwich, Oxford and Stone; on the 29th at Hartwell Rectory; and on the 30th at Helston, Uckfield, Greenwich, St. John's Wood, Oxford, Hartwell Rectory and Linslade.

Auroræ Boreales were seen at Nottingham on July 5; on July 12 at Norwich. On August 6 at Stone; on the 21st at Stone and Dunino. On September 6 and 10 at Nottingham; on the 13th at Nottingham and Hawarden; on the 14th at Stone; and on the 28th at Hartwell House, Hartwell Rectory and Stone.

Hail fell on July 12 at Hawarden; on the 20th at Oxford and Liverpool; and at Dunino on the 21st and 22nd. On September 29 at Guernsey; and on the 30th at Jersey.

Snow fell on Ben Lomond on August 23.

Frost.—The first frost was seen on August 22 at Uckfield, when the wheat and barley sheaves were frozen into a stiff mat; and Mr. Prince saw ice as thick as a wafer upon his

cucumber frames. On September 5 there was a sharp frost at Hartwell House, and at Trowbridge on September 7 and 8.

Solar halos were seen on July 6 at Uckfield; on the 10th near Oxford and Nottingham. On August 3 at Dunino; on the 7th at Greenwich; on the 20th at Dunino; on the 28th at Uckfield; and on the 29th at Exeter and Nottingham. On September 12 at Guernsey; and on the 29th at Dunino.

Lunar halos were seen on July 22 at Stone, Nottingham and Norwich. On August 21 at Uckfield and Nottingham; on the 22nd at Uckfield, Oxford, Cardington and Nottingham; on the 23rd at Uckfield and Nottingham; on the 24th at Hawarden; on the 26th at Stonyhurst; and on the 31st at Durham. On September 18 at Jersey, Guernsey, Oxford and Hawarden; on the 21st at Oxford, Hartwell Rectory, Cardington, Stone and Durham; on the 22nd at Oxford, Hartwell Rectory, Cardington, Norwich and Stone; on the 24th at Oxford; on the 25th at Cardington; and on the 26th at Durham.

Lunar coronæ were seen at Hartwell Rectory on August 14 and 16.

Lunar rainbows were seen on August 20 at Exeter; and on August 22, the Rev. C. Lowndes, at $10^h\ 40^m$ P.M., when standing on Battersea Bridge, London, saw a perfect lunar rainbow immediately under the Great Bear. The moon was shining very bright at the time, and a shower was passing (toward the north) from west to east.

Fog.—On July 11 at Stone; on the 12th at Stone and Hartwell. On September 11 at Greenwich; on the 12th at Stone, Hartwell House and Trowbridge; on the 15th at Hartwell House and Trowbridge; on the 18th at Trowbridge; on the 19th at Hartwell House and Trowbridge; on the 24th at Stone and Hartwell House; and on the 25th at Stone, Hartwell Rectory and Greenwich.

Whirlwind.—On September 30, during a thunder-storm, a whirlwind was seen by G. A. Fryer, Esq., at Trowbridge, caused by the meeting of two currents from the north-west and east. They took a southerly direction, and coming in contact with a thatched house, carried the thatch to a distance of sixty yards, and then meeting with three elm-trees, it broke the tops off and carried them to a distance of some thirty yards: the diameters of the parts of the trees where broken off were about fifteen inches.

Wheat began to be gathered in Jersey on July 15; at Hawarden, on July 29, cutting of oats; at Guernsey and Exeter on July 30. On August 1 at Nottingham; on the 2nd at Linslade and Cardington; on the 3rd at Leicester; on the

5th at Aylesbury; on the 8th at Oxford; on the 9th at Holkham; on the 12th at Durham; on the 19th at Stonyhurst and North Shields; and on the 26th at Dunino.

Harvest finished.—On August 30 at Guernsey; on the 31st at Cardington. On September 5 at Holkham; and on September 21 at Hawarden.

Remarkable rain.—At Guernsey, on August 8, rain to the depth of 1·333 inch fell in sixteen hours; and on September 28, upwards of an inch of rain fell during twelve hours

At Falmouth, on September 24, rain to the depth of 1·93 inch fell, of which 0·8 inch fell in little more than half an hour.

At Exeter, from August 25 to September 19, no rain fell, and the weather was close, warm and fine for several days; the sky was cloudless: the average reading of the barometer was about 30·25 inches.

The amount of rain which fell during the thunder-storm on September 20 was 1·95 inch, which is the amount by which the rain in the month exceeded the average; the former being 4·33 inches, and the latter 2·39, or rather more than one-half.

At Uckfield, on July 17, the depth of rain which fell within an hour was 1·81 inch, which is almost an unprecedented amount to have fallen in so short a time in the south of England. Much heavy rain fell during the last week of September, which was very beneficial to the autumnal crops.

At Southampton no rain fell till the 21st of September; and on September 27 it fell to the depth of 1·13 inch.

At Aylesbury, on July 15, rain to the depth of 0·75 inch fell in forty-two minutes. No rain fell from the 27th of August to the 20th of September, and much inconvenience is still felt from the short supply of water.

At Cardington the springs became nearly dry during the first week in September, and continued so till the end of the month.

At Derby, the amount of rain which has fallen in the nine months of this year is 15·6 inches; the average is 22·4 inches.

At Norwich, on July 26, rain fell to the depth of 1·18 inch.

At Holkham, on July 16, rain fell to the depth of 1·29 inch in five hours and three-quarters.

At York, on August 8, rain to the depth of 0·7 inch fell within two hours. No appreciable quantity of rain fell in York between the 28th of August and the 20th of September.

At Stonyhurst, on August 5, rain fell to the depth of 0·784 inch, and on August 7 to the depth of 0·858 inch.

At North Shields, on July 25 and 26, rain fell to the depth of 1·482 inch. The month of September was remarkably

fine and dry till the 20th; on that day there was a heavy fall of rain, amounting to 0·76 inch, in five or six hours.

Meteors.—At Uckfield, meteors were very numerous during the nights of July 12, 16, 30; August 9; September 10, 11, 12.

At Hartwell Rectory, on August 11, a large meteor was seen at $10^h\ 10^m$ P.M.

At Stone, on July 13, at $11^h\ 20^m$ P.M., a meteor passed from Arcturus to Petersen's comet.

On July 29, at $9^h\ 57^m$ P.M., a meteor crossed Corona Borealis from N. to S.

September 6, at 11^h, a meteor passed from Pisces to Fomalhaut.

September 17, at $10^h\ 4^m$ P.M., a meteor passed from α Corona Borealis to 4° above Saturn.

September 28, at $9^h\ 30^m$, a meteor as bright as Capella shot from α Draconis to γ Ursæ Majoris.

At Stonyhurst, fine meteors were seen on August 14, 23, 26 and 29.

On July 4, at $9^h\ 26^m$ P.M., a meteor, which increased in brilliancy and size as it progressed, until from a mere point it attained a size equal to three times the apparent diameter of Jupiter, and was nearly six times as bright as that planet; its colour was pale blue; and it fell nearly perpendicularly downwards, inclining very slightly towards the E. It passed from half-way between λ and θ Antinous, fading away 2° to the E. of α Capricorni, and on the same level with that star. Its motion was slow; duration 2 seconds; at first unaccompanied by sparks; finally it suddenly separated, and almost instantaneously vanished.

On July 9, at 10^h P.M., a meteor was seen twice the size of Jupiter, and similar in colour; it fell downwards from the constellation of Coma Berenices.

On August 1, at 10^h P.M., a small meteor with a train of light fell downwards from α Aquila.

On August 3, at $10^h\ 55^m$ P.M., a meteor, equal in size to a star of the fifth magnitude, fell rapidly from α Corona Borealis to ζ Bootis; its duration was $0^s{\cdot}5$, and it instantly disappeared.

On August 6, at 10^h P.M., three small meteors were seen by A. S. H. Lowe, Esq. Another meteor was seen at $10^h\ 22^m$ P.M., which fell from ϵ Pegasi to β Aquarii, leaving a train of light for 20^s afterwards.

On August 8, at $10^h\ 20^m$ P.M., a meteor was seen by A. S. H. Lowe, Esq., which fell from ϵ Ursæ Majoris; at $11^h\ 15^m$ P.M. a meteor fell from α Ophiuchi.

On August 9, at $11^h\ 15^m$ P.M., two meteors were seen, one being in the zenith.

On August 12, at $10^h\ 32^m$ P.M., E. J. Lowe, Esq. saw a meteor which moved horizontally, and which increased in brilliancy from being equal to a star of the fifth magnitude to one of the second. Its colour was blue, and duration $0^s{\cdot}2$. Its path was from 24 Camelopardalis towards λ Draconis.

On August 12, at $10^h\ 32^m$ P.M., a meteor passed τ Cassiopeia near ϕ Ursæ Majoris, and was equal in size to a star of the third magnitude. Its colour was blue, and its duration $\frac{1}{2}^s$.

On the same night, at $11^h\ 9^m$ P.M., a meteor fell from between β, γ and λ Pegasi, perpendicularly down to within 20° of the horizon, when it went behind a cloud; and from 1^s to 2^s after a flash resembling lightning, and quite as vivid, proceeded from behind the cloud, followed immediately by a second flash. The meteor itself was about 12′ in diameter, was globular in form, and yellow in colour. It moved very slowly. This meteor was followed by a train of light.

On August 14, at $8^h\ 45^m$ P.M., a meteor was seen four or five times larger than Jupiter. It was of a pale straw-colour, very globular in form, with a red defined disc. No train of light visible. It fell from between λ Bootis and η Ursæ Majoris perpendicularly downwards. It passed 3° or 4° N. of the large group of stars in Coma Berenices. Its duration was 2^s.

On August 14, at $9^h\ 48^m$ P.M., a small meteor moved from 24 Camelopardalis to Ursæ Majoris. Its colour was blue, and duration $\frac{1}{2}^s$.

On the same night, at $9^h\ 49^m$ P.M., a meteor was seen in the zenith.

On August 22, at 10^h P.M., a meteor fell from ϵ Cephei through λ Andromedæ.

On August 22, at $10^h\ 24^m$ P.M., a meteor was seen about the size of Arcturus, and of a yellow colour. It fell perpendicularly down, inclining to the N., from 5° below γ Bootis.

On August 29, at $9^h\ 59^m\ 35^s$, a meteor of the size of a star of the third magnitude. It was blue in colour, and moved very rapidly. It passed from η Bootis to Arcturus. Its duration was $0^s{\cdot}5$.

On August 29, at $10^h\ 1^m$ P.M., a meteor of the size of a star of the second magnitude. Its colour was red. It left a train of red sparks, and moved rapidly from γ Trianguli to Saturn.

On August 29, at $10^h\ 4^m$ P.M., a meteor was seen of an orange-scarlet colour. It moved slowly from ϵ Persei to near 21 Pegasi in a horizontal direction. Its duration was 2^s. When first seen it was equal to a star of the fifth magnitude, but gradually increased in diameter as it progressed until it became three times as large as Saturn. There was no large ball of light. It disappeared suddenly.

On the same night, at $10^h\ 7^m$ P.M., a meteor was seen, which moved rather slowly, was of a blue colour, with a slight tail; duration, 1^s; in size, superior to a star of the second magnitude.

On September 1, at $9^h\ 5^m$ P.M., a meteor was seen in the zenith.

On September 2, at $11^h\ 13^m$ P.M., a meteor was seen passing rapidly from δ Aquilæ to θ.

On the same night, at $11^h\ 16^m$ P.M., a similar one from ϵ Aquarii to β Capricorni.

On the same night, at $11^h\ 19^m$ P.M., a meteor passed from α Taurus to β Ophiuchi.

Again, on the same night, at $10^h\ 20^m$ P.M., from η Ursæ Minoris to ϵ Ursæ Majoris. Duration, 1^s; colour, yellow.

On September 12, at $12^h\ 6^m$ P.M., a meteor was seen of the size of a star of the third magnitude. Its colour was blue, and moved from below α Aquila towards the west.

On September 28, at $10^h\ 45^m$ P.M., a meteor, which moved from S.S.E. to S.W., at an elevation of 45°, and leaving a long train of light behind.

The temperature of the water of the Thames, from the observations of Lieut. Sanders, R.N., Superintendent of the Dreadnought Hospital Ship, was 64°·6 in July, 63°·2 in August, and 57°·9 in September.

The daily horizontal movement of the air at Greenwich, in July was 79 miles, in August was 119 miles, and in September was 82 miles. At Liverpool, in July was 166 miles, in August was 174 miles, and in September was 129 miles. These determinations are by the use of Whewell's anemometer at both places; and Mr. Hartnup says, that his daily determinations are made in the same manner as at Greenwich.

The series of observations of the *direction of the wind*, at 9^h A.M., taken at the various railway stations, and published in the *Daily News*, has been extended during the past quarter to Ireland. The following Tables have principally been formed from them. The results for Belgium have been formed from monthly reports furnished to the Astronomer Royal:—

Aug. 1850.	Direction of the Wind.										General Remarks.
	On the south coast.	On the south-east coast.	On the east coast.	On the north-east coast.	On the north-west coast.	On the south-west coast.	In the southern counties.	In the midland counties.	In the northern counties.	Belgium.	
1	n.e.	n.w.	n.w.	s.w.	s.e.	n.e.	variable.	e.	s.e.	n.n.e.	Air in gentle motion. Fog at Hastings.
2	s.s.w.	s.w.	s.	w.s.w.	variable.	n.w.	w.s.w.	s.s.w.	variable.	n.n.e.	Very calm in the Southern and Midland Counties, with rain.
3	s.w.	s.w.	n.e.	w.	s.w.	s.w.	s.w.	w.	n.w.	w.s.w.	Similar in character to the preceding day. Rain to the South.
5	s.	n.w.	s.w.	w.	s.w.	s.	s.	w.s.w.	variable.	s.w.	Air in very gentle motion. To the North calm and rain.
6	variable.	n.w.	n.w.	w.	s.w.	s.s.w.	n.w.	s.w.	variable.	s.s.w.	Very variable in strength, particularly on S. coast. Rain in S.
7	w.n.w.	n.	n.w.	w.	s.	s.w.	s.w.	s.e.	s.	n.w.	Calm throughout. Heavy rain at Yarmouth. [of Scotland.
8	s.w.	s.w.	s.w.	s.w.	s.w.	s.w.	s.w.	s.w.	variable.	s.s.w.	Gentle breeze. Rain general to S. coast, over S. Counties, and in
9	w.s.w.	w.	s.w.	w.s.w.	w.	w.s.w.	s.w.	w.	w.	w.s.w.	Gentle breeze to N. Hard wind S. of Leeds. [S. of Scotland.
10	w.s.w.	w.s.w.	w.	w.	w.	s.w.	s.w.	w.	variable.	w.s.w.	Strong breeze at both extremities of the country. Over M. Coun-
12	variable.	n.e.	e.s.e.	variable.	variable.	n.	variable.	e.s.e.	variable.	w.s.w.	Varying from strong breeze to calm. [ties a gentle br. with fog.
13	n.e.	w.	w.	n.w.	s.w.	n.e.	variable.	n.w.	variable.	s.w.	Air in gentle motion. Frosty at Whitby.
14	n.n.e.	n.	n.	n.	n.	n.e.	n.e.	e.n.e.	n.w.	n.n.e.	Gentle breeze and calm. A strong breeze on the South coast.
15	n.w.	n.w.	s.e.	variable.	calm.	calm.	variable.	variable.	w.n.w.	n.n.w.	Varying from calm to strong breeze. Fog to the North.
16	n.w.	n.	n.e.	n.e.	variable.	n.	n.n.e.	e.n.e.	variable.	s.w.	Strong breeze to the South. Calm and fog to the North.
17	w.s.w.	calm.	calm.	w.	n.	n.w.	n.w.	w.n.w.	variable.	n.w.	Calm and gentle breeze. Fog to the North.
19	w.	s.w.	s.w.	w.	w.	n.w.	w.n.w.	w.	w.	w.s.w.	A storm and heavy gale in Scotland. A strong breeze on the
20	w.n.w.	s.w.	w.	w.	n.w.	n.w.	w.s.w.	w.	n.w.	w.s.w.	Strong breeze at most places. [South coast.
21	variable.	s.	s.w.	w.s.w.	s.	n.w.	variable.	s.w.	variable.	s.s.e.	Calm and rain to the South and Midland Counties.
22	s.w.	s.w.	s.w.	s.s.w.	s	w.	s.w.	s.w.	s.w.	w.s.w.	Strong breeze to the South and Midland Counties. Calm and
23	w.s.w.	s.w.	w.	w.s.w.	s.w.	w.s.w.	s.w.	w.s.w.	w.s.w.	variable.	Gentle breeze and calm. [rain to the West.
24	w.s.w.	calm.	s.w.	s.w.	calm.	s.e.	s.s.e.	s.s.w.	s. & e.	s.s.e.	Calm and rain in M. Counties. Gentle breeze at both extrem. of
26	w.s.w.	s.w.	w.	w.	n.w.	s.w.	s.w.	w.	w.	w.s.w.	Stormy with gales at Whitby. Strong br. to the S. coast. [county.
27	variable.	calm.	s.w.	variable.	s.	s.w.	s.	variable.	calm.	s.w.	Gentle breeze at most places. Calm and rain to the North.
28	n.	n.w.	n.w.	w.n.w.	n.w.	n.	n.w.	w.n.w.	w.n.w.	n.w.	Strong breeze at most places. Hard wind to the North.
29	n.w.	n.w.	n.w.	w.n.w.	n.w.	n.e.	n.w.	n.w.	variable.	w.n.w.	Strong breeze in the Midland Counties.
30	n.	n.	n.w.	n.	w.n.w.	n.	w.n.w.	n.w.	w.	w.n.w.	Gentle breeze in most places.
31	n.w.	n.w.	w.	n.n.w.	.....	n.w.	w.	w.	.....	w.s.w.	Calm and gentle breeze.

Sept. 1850.	Direction of the Wind.											General Remarks.
	On the south coast.	On the south-east coast.	On the east coast.	On the north-east coast.	On the north-west coast.	On the south-west coast.	In the southern counties.	In the midland counties.	In the northern counties.	Ireland.	Belgium.	
2	n.w.	s.w.	w.	w.	n.w.	variable.	w.	w.	w.	n.w.	n.w.	Gentle breeze at most places. Strong br. on N.E. coast.
3	n.n.e.	n.	e.	e.n.e.	calm.	n.n.e.	n.e.	e.n.e.	n.e.	calm.	e.n.e.	Calm and gentle breeze. Rain in the North.
4	e.n.e.	n.e.	n.e.	n.e.	calm.	e.n.e.	n.e.	e.n.e.	n.n.e.	s.e.	e.n.e.	Gentle breeze and calm. Fog to the North.
5	n.n.w.	n.w.	n.e.	calm.	calm.	n.e.	n.	calm.	calm.	calm.	n.	Calm general. Fog to the North.
6	n.w.	n.w.	n.w.	n.w.	s.e.	e.s.e.	n.	n.e.	variable.	.....	n.n.w.	Strong breeze to the South. Gentle breeze to the N.
7	n.n.e.	n.	n.w.	n.w.	variable.	w.s.w.	n.w.	n.w.	w.n.w.	n.w.	w.n.w.	Strong breeze over S. and M. Counties. Gentle br. to S.
9	n.	n.	n.w.	n.	calm.	e.s.e.	n.e.	.....	calm.	e.s.e.	variable.	Nearly calm. Much fog to the North.
10	n.n.e.	n.e.	calm.	s.	calm.	e.s.e.	e.	s.e.	variable.	e.s.e.	n.n.e.	Calm and gentle breeze. Fog at Lanark.
11	e.n.e.	s.e.	calm.	e.s.e.	e.s.e.	e.s.e.	e.	s.e.	variable.	s.s.e.	e.n.e.	Calm and gentle breeze.
12	n.e.	e.	e.	e.s.e.	calm.	e.s.e.	e.	e.s.e.	s.e.	s.e.	e.s.e.	Air in gentle motion. Calm at many places.
13	e.	e.	e.	e.s.e.	s.e.	e.s.e.	e.	s.e.	e.	s.s.w.	e.s.e.	Gentle breeze. Fog to the North.
14	e.	e.	e.	calm.	s.e.	e.	e.	n.e.	s.e.	s.e.	n.e.	Strong breeze to the S. coast. Calm and fog to the N.
16	n.e.	e.	e.	calm.	s.e.	e.n.e.	e.	e.	calm.	calm.	e.s.e.	Calm to the N. Strong breeze in the M. Counties.
17	e.n.e.	n.e.	n.e.	calm.	calm.	e.n.e.	e.n.e.	e.s.e.	calm.	calm.	n.e.	Strong breeze to the South. Calm and fog to the N.
18	e.n.e.	e.	n.e.	s.s.w.	s.	e.s.e.	variable.	calm.	variable.	s.s.e.	w.n.w.	Calm and gentle breeze. Fog at Dundee.
19	e.n.e.	s.e.	s.e.	s.e.	w.	s.s.e.	e.	s.e.	variable.	calm.	w.s.w.	Calm and fog at most places.
20	s.e.	s.e.	s.e.	calm.	s.s.e.	n.	e.	e.s.e.	variable.	s.	s.s.e.	Gentle breeze and rain at most places.
21	w.s.w.	s.w.	s.w.	e.s.e.	s.s.e.	w.s.w.	s.w.	s.s.w.	s.s.e.	w.s.w.	w.s.w.	Hard wind S. and M. Counties. Rain and strong br. to N.
23	w.n.w.	w.	n.w.	calm.	calm.	w.n.w.	calm.	variable.	calm.	w.n.w.	s.s.w.	Calm nearly everywhere.
24	n.w.	calm.	s.e.	s.e.	calm.	n.n.e.	n.n.w.	n.n.w.	w.	calm.	s.s.w.	Calm and fog general.
25	calm.	s.w.	calm.	w.s.w.	calm.	s.s.w.	calm.	calm.	calm.	s.w.	w.s.w.	Calm and fog at nearly every station.
26	s.w.	s.w.	s.	s.s.w.	s.s.w.	s.s.w.	s.	s.	variable.	s.w.	s.s.w.	Calm and rain general.
27	variable.	s.w.	s.w.	w.s.w.	s.s.e.	w.s.w.	w.s.w.	w.s.w.	s.w.	s.w.	s.s.w.	Air in gentle motion. Rain at many places.
28	w.	w.	n.w.	w.	w.	w.s.w.	n.w.	w.s.w.	s.w.	n.w.	w.s.w.	Strong breeze at most places. Gale and hard wind to N.
30	w.	w.	s.w.	n.w.	n.w.	w.	variable.	n.e.	n.e.	n.e.	s.w.	Strong breeze and hard wind at many stations.

July 1850.	Direction of the Wind.									General Remarks.
	On the south coast.	On the south-east coast.	On the east coast.	On the north-east coast.	On the north-west coast.	On the south-west coast.	In the southern counties.	In the midland counties.	In the northern counties.	
1	s.w.	s.w.	s.w.	w.	variable.	s.w.	s.w.	s.	w.	A strong wind. Overcast to the S. Partially clear to the N.
2	w. & s.w.	s.w.	s.w.	w.	s.w.	s.w.	s.w.	w.	s.w.	Gentle breeze to the South. A hard wind to the North.
3	s.w.	s.w.	s.w.	s.w.	s.w.	s.w.	s.w.	w. & s.w.	w.	A hard wind. Overcast. Rain general.
4	s.w.	s.w.	s.w.	s.	s.w.	s.w.	s.w.	s.	w.	A hard wind, with heavy rain to the S. and a gentle breeze to
5	w.	w.	w.	w.	w.	s.w.	w.	w.	w.	A gentle breeze. Rain in the North. [the N.
6	s.	s.	s.w.	s.	variable.	s.	s.	s.	w.	Air in gentle motion everywhere.
7	n.	n.n.e.	n.	n.n.w.	n.	n.	n.	n.	n.	
8	n.w.	n.w.	n.w.	n.w.	n.w.	n.w.	n.w.	n.w.	w.	Sky partially cloudy everywhere, and air in gentle motion.
9	n.w.	n.w.	n.w.	n.w.	w.	n.w.	n.w.	n.w.	w.	Sky overcast. Air in gentle motion.
10	n.w.	n.w.	n.w.	n.w.	w.	n.w.	n.w.	n.w.	w.	Sky cloudless at some places. Air in gentle motion.
11	n.w.	n.w.	n.w.	calm.	calm.	n.w.	n.w.	n.w.	w.	Light breezes. Sky overcast generally.
12	variable.	variable.	variable.	variable.	variable.	variable.	variable.	variable.	variable.	Light air at a few places. Fog. Haze. Overcast.
13	variable.	n.e.	n.e.	calm.	variable.	variable.	variable.	variable.	variable.	Calm at most places. Sky cloudless at some places, overcast
14	n.e.	n.e.	n.e.	n.e.	calm.	variable.	variable.	variable.	calm.	Air in gentle motion. [at others.
15	n.e.	n.e.	n.e.	n.e.	e.	e.	variable.	n.	n.e.	Air in gentle motion. The sky partially clear.
16	s.w.	n.e.	n.e.	n.e.	e.	s.e.	variable.	e.	e.	Air in gentle motion.
17	n.w.	n.e.	variable.	variable.	calm.	n.w.	variable.	n.	variable.	Calm. Light airs.
18	n.	n.w.	calm.	calm.	s.e.	calm.	w.n.w.	variable.	calm.	Calm, and air in gentle motion.
19	variable.	s.w.	variable.	n.e.	n.w.	n.w.	variable.	n.w.	calm.	Calm and gentle breezes.
20	n.	n.e.	n.e.	variable.	variable.	n.n.w.	n.w.	n.w.	n.w.	Air in gentle motion. Rain in many places.
21	w.	w.	w.	variable.	s.w.	s.w.	s.w.	s.w.	variable.	Air in gentle motion. Sky mostly cloudless.
22	e.	e.	e.	variable.	s.	s.e.	s.e.	s.e.	calm.	Air in gentle motion. Sky principally cloudless.
23	e.	e.	e.	s.e.	s.e.	s.e.	s.e.	s.e.	s.e.	Gentle breeze. Sky cloudless.
24	w.	w.	s.w.	s.w.	s.	variable.	w.	calm.	calm.	Gentle breeze in S. Calm in N. Sky overcast. Rain in N.
25	s.	s.w.	s.	s.e.	calm.	s.e.	s.e.	calm.	calm.	Rain general to the South. Calm and clear in North.
26	w.	s.w.	s.w.	n.w.	n.w.	n.w.	w.	variable.	calm.	Air in gentle motion. Sky overcast.
27	variable.	w.	s.w.	n.n.w.	n.	n.w.	s.w.	n.w.	n.	Rain falling at most places.
28	n.w.	n.w.	n.	n.	n.w.	n.	n.	n.	n.	
29	n.	n.	n.	n.	n.	n.	n.	n.	n.	
30	n.n.e.	n.	n.n.w.	w.	n.w.	n.	n.e.	calm.	calm.	Rain at some places. Cloudless at others.
31	variable.	variable.	w.	w.	variable.	n.w.	variable.	variable.	variable.	Air in gentle motion. Sky overcast.
										Calm generally. Overcast.

Meteorological Table for the Quarter ending September 30, 1850.

The observations have been reduced to mean values, and the hygrometrical results have been deduced from Glaisher's Tables.

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.	Range of temperature in the quarter.	Mean temperature of the dew-point.	Wind.		Mean amount of cloud.	Rain.		Mean weight of vapour in a cubic foot of air.	Mean additional weight of vapour 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 estimated strength.	General direction.		Number of days on which it fell.	Amount collected.						
	in.	°	°	°	°	°	°	°					in.	grs.	grs.		in.	grs.	feet.
Jersey	29·652	60·0	81·0	48·0	14·4	30·7	33·0	54·5	1·7	s.w. & n.w.	4·8	26	6·4	4·9	1·5	0·822	6·0	529	84
Guernsey	29·599	60·1	75·5	51·5	8·9	19·2	24·0	56·2	1·7	w. & e.	4·9	36	8·8	5·2	0·6	0·898	6·4	528	123
Helston	29·614	58·7	80·0	40·0	15·3	35·3	40·0	54·6	1·4	s.w. & n.w.	5·8	37	7·2	4·9	0·9	0·839	6·0	528	106
Falmouth	....	59·1	78·0	40·0	18·5	33·3	38·0	..	1·4	n.	6·6	33	10·8	..	..	....	..	..	120
Truro	29·694	58·5	77·0	39·0	14·8	34·3	38·0	53·7	1·0	n.	5·9	41	4·8	4·8	1·0	0·834	5·4	530	55
Torquay	....	60·5	77·0	47·0	12·2	26·3	37·0	52·8	2·3	n.	..	29	8·0	4·7	1·3	0·780	5·7	..	160
Exeter	29·660	59·1	81·6	40·7	15·8	35·7	40·9	53·1	1·7	w.	3·7	36	8·0	4·7	1·2	0·804	5·9	529	140
Uckfield	29·598	59·5	89·0	34·0	22·3	45·3	55·0	51·8	..	w.	..	35	7·4	4·5	1·5	0·747	5·5	528	180
Southampton	29·589	59·7	81·0	36·0	17·0	35·9	45·0	..	0·3	.....	6·1	33	9·1	..	..	....	6·3	..	55
Royal Observatory, Greenwich	29·609	59·6	87·0	39·0	18·6	38·0	48·0	52·2	..	n.e. & s.w.	..	39	6·1	4·6	1·2	0·788	5·6	527	159
Maidenstone Hill, Greenwich	29·608	58·5	84·3	39·6	14·6	35·9	44·7	54·8	..	n.e. & s.w.	6·8	33	5·7	5·0	0·7	0·872	6·1	529	107
St. John's Wood	29·649	57·5	83·0	38·0	16·0	37·0	45·0	49·6	..	.....	..	46	5·6	4·1	1·2	0·779	5·1	530	150
Chiswell Street, London	....	61·2	80·0	46·0	21·4	27·3	34·0	51·5	..	.....	..	37	5·9	4·5	1·8	0·716	5·5	527	
Aylesbury	29·650	59·2	86·0	32·0	24·2	46·4	54·0	51·1	0·7	s.	6·5	37	7·5	4·4	1·4	0·765	5·4	525	284
Stone Observatory	29·600	57·8	85·5	33·0	19·9	42·0	52·5	50·7	..	s.w.	5·6	46	5·8	4·3	1·2	0·784	5·4	523	310
Hartwell (near Aylesbury)	29·580	58·6	88·0	32·0	23·4	46·0	56·0	52·6	0·9	n.n.w.	..	32	6·1	4·6	1·0	0·817	5·3	525	250
Hartwell Rectory	29·602	57·1	81·5	33·5	17·2	39·6	48·0	49·6	0·6	n.w. & s.w.	5·8	39	6·9	4·2	1·3	0·771	5·1	526	290
Linslade (Bucks)	....	57·3	85·5	35·0	19·3	40·5	50·5	..	..	s.w.	..	43	7·0	..	..	....	..	..	313
Radcliffe Observatory, Oxford	29·638	57·2	79·6	35·1	15·8	35·6	44·5	51·5	1·9	n.e. & s.w.	7·2	38	8·0	4·5	1·0	0·813	5·5	528	210
Rose Hill (near Oxford)	....	..	84·5	36·5	..	36·9	48·0	..	..	.....	..	36	7·8	..	..	....	..	..	270
Cardington	29·604	58·0	83·5	35·0	19·6	40·9	48·5	52·4	0·9	Variable.	7·1	38	6·6	4·6	1·1	0·806	5·7	529	100
Norwich	29·536	57·8	81·0	41·0	16·8	34·0	40·0	52·8	..	s.w. & n.w.	6·9	43	10·2	4·7	0·9	0·838	5·7	530	23
Leicester Museum	29·538	56·8	79·0	38·0	14·4	32·6	41·0	50·0	1·3	w.	7·5	31	6·1	4·3	1·1	0·791	5·2	527	175
Holkham	29·610	57·1	80·8	37·5	14·6	36·6	43·3	51·3	1·1	n.w.	6·4	47	9·2	4·4	1·0	0·821	5·4	531	39
Highfield House, Notts.	29·557	57·3	87·3	33·0	21·6	45·2	54·3	53·1	0·4	Variable.	6·5	47	7·1	4·7	0·7	0·865	5·8	529	103
Derby	29·586	56·5	82·0	..	..	..	..	52·8	..	s.e.	..	43	6·9	4·7	0·8	0·856	5·7	530	100
Hawarden	29·649	56·5	81·5	39·5	12·7	28·0	42·0	48·8	1·7	n.w.	7·0	44	7·7	4·1	1·3	0·763	5·0	528	260
Liverpool	29·592	58·1	80·9	46·3	10·2	24·9	34·6	53·0	1·3	n.w.	7·6	43	7·8	4·7	0·9	0·837	5·7	530	37
Wakefield	29·585	55·6	83·0	31·0	21·4	44·2	52·0	52·2	2·0	w.	6·7	48	6·7	..	..	....	..	..	115
Stonyhurst	29·629	54·9	77·6	35·2	..	..	42·4	50·0	1·3	e. to w.	6·8	49	12·3	4·3	0·8	0·818	5·2	527	381
York	29·612	55·7	78·0	35·0	14·5	36·0	43·0	50·9	..	Variable.	..	38	6·4	4·3	0·9	0·833	5·3	530	50
Whitehaven	29·547	56·4	84·0	39·5	12·8	31·2	44·5	53·6	3·1	n.w.	..	43	12·5	4·6	0·6	0·880	5·5	532	80
Durham	29·596	53·9	76·8	34·8	14·8	34·3	42·0	49·4	0·8	s. & w.	6·3	44	6·3	4·2	0·8	0·828	5·1	528	340
Newcastle	....	55·5	76·0	37·0	14·8	33·0	39·0	51·6	..	s.w. & e.	..	30	..	4·5	0·7	0·870	5·5	532	
North Shields	29·668	53·5	70·4	36·8	11·1	30·0	33·6	50·8	2·8	n.e. & s.w.	3·4	50	6·6	4·4	0·4	0·927	5·3	535	124
Glasgow	29·555	55·8	79·9	39·0	14·7	33·2	40·9	49·8	..	.....	..	..	8·0	4·2	1·0	0·810	5·2	530	121
Dunino	....	56·3	81·0	37·0	20·0	39·0	44·0	49·1	1·9	Variable.	3·8	31	6·2	4·4	1·2	0·792	5·0	..	250
Number of columns	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19

The mean monthly values of the several subjects of investigation are published in the Quarterly Report of the Registrar-General. Their quarterly values are shown in the preceding table.

The mean of the numbers in the first column is 29·605 inches, and it represents that portion of the reading of the barometer due to the pressure of the air; the remaining portion, or that due to the pressure of water, is 0·397 inch; the sum of those two numbers is 30·002 inches, and it represents the mean reading of the barometer at the mean level of the sea for the quarter ending September 30, 1850.

The mean of the numbers in the second column for Guernsey and Jersey is 60°·1; for those places in the counties of Cornwall and Devonshire, is 59°·2; south of latitude of 52° is 58°·4; between latitudes 52° and 53° is 57°·3; between the latitudes of 53° and 54° is 55°·7; at Liverpool and Whitehaven is 57°·3; for Durham, Newcastle and North Shields, is 54°·6; and for Glasgow and Dunino is 56°·1.

The highest reading of the thermometer in air was about 88°, and the lowest was 32°. The extreme range of temperature during the quarter in England was therefore about 66°. The least daily ranges of temperature took place at Guernsey and Liverpool, and the greatest occurred at Uckfield and in the Vale of Aylesbury.

Rain fell on the least number of days at Jersey and Torquay, and on the greatest number of days at Wakefield, Stonyhurst and North Shields. The places where the least falls took place are London and Truro; and the mean amount at these places was 5·3 inches. The largest falls occurred at Whitehaven and Falmouth, and their average was 12·4 inches.

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NEU REVIDIRTE BILLIGERE AUSGABE

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1. Abtheilung, Architectur,
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On the Meteorology of England and the South of Scotland during the Quarter ending December 31, 1850.

By James Glaisher, *Esq., F.R.S., Secretary of the British Meteorological Society.*

THE mean daily temperatures of the air were below their average values till October 30, excepting the 17th, 18th and 19th days; the mean deficiency was 2°·6. From October 31 to November 12, the period was warm; the average daily excess was 5°·1; the 13th, 14th, and 15th days were cold; their average defect was 5°·3. From November 16 to November 25, the average daily excess of temperature was 3°·2; from November 26 to December 3, the average defect was 4°·7. December 4 and 5 were in excess to the amount of 6°·3; from the 6th to the 11th was in defect to the amount of 4°·3 daily; from the 11th to the 16th the excess was 4°·7; from December 17 to December 23 it was 4°·4 in defect; and on December 24 a period of very warm weather set in; and till the end of the year the daily excess of temperature was 6°·3. The mean temperature of December 31 was 50° nearly, and exceeding its average value by 13°.

During the whole quarter there has been an unusual amount of fog, it having been prevalent more or less on 69 days.

The mean temperature of the air at Greenwich for the three months ending November, constituting the three autumnal months, was 50°, being 0°·7 above the average of the preceding seventy-nine autumns.

For the month of October was 47°·0, being 2°·3 *less* than the average of seventy-nine years, and 2°·8 *less* than that of nine years.

For the month of November was 46°·5, *exceeding* the average of seventy-nine years by 4°·1, and of the preceding nine years by 2°·1.

For the month of December was 40°·6, *exceeding* the average of seventy-nine years by 1°·8, and that of the preceding nine years by 0°·2.

The mean for the quarter was 44°·7, *exceeding* that of the average of seventy-nine quarters by 1°·2, and *less* than that of the preceding nine years by 0°·2.

The mean temperature of evaporation at Greenwich—

For the month of October was 44°·4; for November was 44°·5; and for December was 39°·6. These values are 3°·6 *less*, 1°·4

and 0°·5 *greater* than those of the averages of the same months in the preceding nine years.

The mean temperature of the dew-point at Greenwich—

For the months of October, November and December, were 41°·2, 42°·0, and 38°·3 respectively. These values are 4°·8 *less*, 0°·7 and 1°·3 *greater* than the averages of the same months in the preceding nine years.

The mean elastic force of vapour at Greenwich for the quarter was 0·269 inch, being 0·013 *less* than the average from the preceding nine years.

The mean weight of water in a cubic foot of air for the quarter was 3·1 grains, being 0·2 grain *less* than the average from the preceding nine years.

The mean degree of humidity in October was 0·82, in November was 0·86, and in December was 0·92. The averages from the nine preceding years were 0·88, 0·99, and 0·90 respectively.

The mean reading of the barometer at Greenwich in October was 29·681 inches, in November was 29·728, and in December was 29·914. These readings are 0·014, 0·035, and 0·087 *greater* respectively than the averages of the same months in the preceding nine years.

The average weight of water in a cubic foot of air in the quarter was 543 grains, *exceeding* that of the average from the preceding nine years by 1 grain.

The rain fallen at Greenwich in October was 1·4 inch, in November was 2·5 inches, and in December was 4·3 inches. The falls for these three months on an average of nine years, are 3·4 inches, 2·6 and 1·6 respectively.

The average daily ranges of the readings of the thermometer in air at the height of four feet above the soil, in October was 14°·2, in November was 11°·4, and in December was 8°·7. The averages from the preceding nine years are 13°·9, 10°·4, and 9° respectively.

The minimum readings of the thermometer on grass, with its bulb fully exposed to the sky, in October was at or below 32° on sixteen nights; the lowest was 18°; between 32° and 40° on thirteen nights, and above 40° on two nights; and the highest was 41°. In November was at or below 32° on twelve nights; the lowest was 14°; between 32° and 40° on twelve nights, and above 40° on six nights; the highest was 46°. In December it was at or below 32° on nineteen nights; the lowest was 9°; between 32° and 40° on ten nights, and above 40° on two nights; and the highest was 43°·5.

Thunder-storms occurred on October 1 at Uckfield and Nottingham; on the 5th at Hartwell Rectory, Hartwell House, Stone, Thame and Liverpool; on the 8th at Cardington; on the 9th at Nottingham, Cardington, Manchester and Stonyhurst; on the 11th at Hartwell House; and on the 23rd at Jersey.

On November 4 at Wakefield, and on the 19th at Jersey. On December 14 at Jersey, Guernsey, Helston, Falmouth, Truro and Southampton, accompanied at the last-mentioned place by a violent gale which lasted for half an hour. On the 15th at Guernsey, Helston, Uckfield, Thame, and Rose Hill near Oxford. On this day the lightning set fire to a barn situated about four miles to the south-west of the last-mentioned place, which was burnt notwithstanding the extreme fury of the storm, hail and melted snow falling all the time in torrents; water to the depth of more than 0·5 inch fell; and the observer at Oxford says, that the lightning of this storm struck a rick-yard at Radley in this neighbourhood, and did considerable damage. On the 16th at Jersey, Falmouth, Helston, Truro and Uckfield; on the 17th at Helston and Uckfield; and on the 18th at Uckfield.

Thunder was heard, but lightning was not seen, on October 3 at Thame; on the 5th at Linslade and Trowbridge; on the 9th at Thame and Stonyhurst; and on the 10th at North Shields. On November 4 at North Shields, and on the 26th at Guernsey and Manchester.

Lightning was seen, but thunder was not heard, on October 5 at Stone, Greenwich, Cambridge, Norwich, Nottingham, Hawarden, Manchester and Whitehaven; on the 9th at Uckfield, Thame, Trowbridge, Hartwell House, Holkham and Manchester; on the 10th and 31st at Hartwell House.

On November 2 at Strokestown in Ireland, and at Dunino in Scotland; on the 5th at Hawarden; on the 9th at Hartwell House; on the 24th at Guernsey, Uckfield and Trowbridge; and on the 25th at Guernsey. On December 5 at Guernsey; on the 13th at Helston; and on the 14th at Uckfield.

Auroræ boreales were seen on October 1 at Stone, Hartwell House, Hartwell Rectory, Midhurst, Greenwich, Cambridge, Grantham, Cardington, Nottingham, Holkham, Liverpool, Manchester, Wakefield, Whitehaven, Stonyhurst, North Shields, Durham and Dunino; on the 2nd and 3rd at Dunino; on the 5th at Rose Hill near Oxford; on the 8th and 9th at Holkham; on the 10th at Rose Hill near Oxford; on the 15th at Manchester; and on the 29th at Stonyhurst and North Shields. On November 2 at Midhurst; on the 3rd and 5th at Rose Hill near Oxford; on the 9th and 10th at Jersey; on the 12th at Holkham; on the 18th at Dunino; on the 21st at Cambridge; and on the 28th at Dunino. On December 23 and 26 at Holkham; on the 27th at Hartwell Rectory, Midhurst, Holkham, Whitehaven and Dunino.

Hail fell on October 1, 2 and 4, at Hartwell; on the 5th at Jersey, Hartwell, Whitehaven and North Shields; on the 9th at Thame, Nottingham and Manchester; on the 10th at Jersey and North Shields; on the 11th at Jersey, Holkham, Durham

and North Shields; on the 19th at Uckfield; on the 20th at Cambridge and North Shields; on the 21st at Jersey, Rose Hill near Oxford, Thame, Cardington, Nottingham and Durham; on the 23rd at Jersey, Truro, Rose Hill near Oxford, Liverpool and Hawarden; on the 24th at Durham; on the 25th at Nottingham; and on the 26th at North Shields. On November 4 at North Shields; on the 18th at Truro; on the 19th at Whitehaven; on the 24th at Truro and Hartwell Rectory; on the 25th at Guernsey, Liverpool and Stonyhurst; and on the 27th at Durham and at North Shields. On December 14 at Guernsey, Helston and Falmouth; on the 15th at Guernsey, Uckfield and Stonyhurst; on the 16th at Jersey, Guernsey, Truro, Falmouth, Trowbridge, Uckfield and Hawarden; on the 17th at Truro, Helston, Liverpool and Hawarden; on the 18th at Jersey, Truro, Uckfield and Trowbridge; on the 19th at Rose Hill near Oxford; on the 20th at Linslade; and on the 24th at Manchester.

Rain.—On October 7 at Stonyhurst rain fell to the depth of 0·82 inch, and on the 8th to the depth of 0·84 inch. At Jersey it was mentioned that the falls of rain on October 22 and 23 were remarkable, but the amounts were not given. At Guernsey on the 23rd the fall was 1·67 inch. On October 24 rain fell to the depth of 0·86 inch at Norwich, and of 1·0 inch at Hartwell Rectory. On November 11 rain to the depth of 2·18 inches fell at Stonyhurst; on the 14th at Midhurst, to the depth of 0·71 inch; on the 18th very heavy falls of rain occurred all over the British Isles; at Roscommon the fall amounted to 1·25 inch; at Strokestown to 0·72 inch; at Longford to 0·66 inch; at Carrick-on-Shannon to 0·85 inch; and described as being remarkable at many places in England, as were the falls on November 19 and 20; on the 23rd rain to the depth of 1·3 inch fell at Falmouth; and on the 16th of 1·35 inch at Truro.

Fog.—On October 1 at Norwich; on the 2nd at Plymouth, Kingstown, Dublin and Wakefield; on the 3rd at Stone, Hartwell Rectory, Cambridge, York, Sunderland and Leeds; on the 4th at Plymouth, Southampton, Midhurst, Linslade, Trowbridge, Hartwell, Gloucester, Shap, Hartlepool, Leeds and Stonyhurst; on the 5th at Southampton, Plymouth, Midhurst, Greenwich, Yarmouth and Stonyhurst; on the 10th at Crewe and Lancaster; on the 12th at Cork and Glasgow; on the 13th at Thame and Greenwich; on the 14th at Plymouth and Southampton; on the 15th at Thame, Southampton, Gloucester and Lancaster; on the 16th and 17th at Plymouth and Southampton; on the 18th at Plymouth, Midhurst, Greenwich, Linslade, Thame, Stone, Hartwell, Oxford and Lancaster; on the 19th at Southampton; on the 22nd at Norwich; on the 24th at Southampton, Midhurst and Thame; on the 26th at Southampton and Oxford; on the 27th at Stone; on the 28th at Southampton; on the 29th at

Manchester; on the 30th at Wakefield, Plymouth, Southampton, Poole and Whitehaven; and on the 31st at Norwich. On November 1 at Midhurst, Southampton and Bridgewater; on the 2nd at Southampton; on the 6th at Midhurst; on the 7th at Midhurst and Reading; on the 8th at Norwich; on the 9th at Southampton, Plymouth, Midhurst, Whitehaven, Stonyhurst, Whitby, Youghal and Dundalk in Ireland; on the 11th at Whitehaven; on the 12th at Southampton, Midhurst, Thame and Youghal; on the 13th at many places, and extending from the south of England to Scotland; on the 14th at Greenwich, Liverpool, Wakefield, Leeds, Manchester and Carlisle; on the 15th it was general over England, and extended to Ireland and Scotland; on the 16th at Southampton, Reading, Rugby, Thame, Norwich, Darlington and Dundee; on the 17th at Thame; on the 18th at Hawarden, Wakefield, Leeds and Lancaster; on the 21st at Carlisle; on the 22nd at Cork, Poole, Portsmouth, Bristol, Basingstoke, Peterborough, Reading, Cardington, Leeds, Wakefield and Hawarden; on the 23rd at Poole; on the 26th at Thame, Linslade, Hartwell Rectory, Plymouth and Leeds; on the 27th at Thame; on the 28th at Bristol, Oxford, Manchester and Leeds; and on the 29th and 30th it was general all over the country. On December 1 at Hartwell Rectory; on the 3rd at Southampton and Reading; from the 4th to the 13th fogs were general over the country, at some places continuing all the day, whilst at others portions of the day were free from fog; on the 14th at Southampton; on the 17th at Edinburgh; on the 18th at Liverpool, Cambridge, Southampton, Oxford and Basingstoke; on the 19th at Southampton; on the 20th at Kingstown near Dublin; on the 21st at Plymouth and Poole; on the 22nd at Youghal, Kingstown, Leeds and Southampton; on the 23rd and 24th at many places; on the 25th at Kingstown, Plymouth and Southampton; on the 26th at Southampton, Whitby and Rugby; on the 27th at Plymouth, Southampton, Whitby and Rugby; on the 27th at Plymouth, Southampton and Cork; on the 28th and 29th at Southampton; on the 30th at Plymouth, Southampton and Whitehaven; and on the 31st at Shap and Lancaster.

Snow fell on October 22 at Stone, and on the 24th at Hartwell Rectory. On November 15 at Nottingham, and on November 27 at Thame and North Shields. On December 15 at Rose Hill near Oxford; on the 17th at Leicester, Holkham, Liverpool and Hawarden; on the 18th at Leicester, Holkham and Rugby; on the 18th at Greenwich, Lewisham, Maidenstone Hill, Hartwell Rectory, Stone, Cardington, Linslade, Rose Hill near Oxford, Thame, Leicester and Nottingham; on the 20th at Midhurst, Norwich and Holkham.

Solar halos were seen on October 7 and 15 at Stone; on the 24th and 27th at Nottingham, and on the 28th at Stone. On November 7 at Nottingham. On December 12, 15 and 16, at Nottingham; on the 19th at Stone; and on the 21st at Nottingham.

Lunar halos were seen on October 15 at Maidenstone Hill, Stone and Manchester; on the 16th at Stone; on the 17th at Uckfield, Hartwell and Durham; on the 18th at Uckfield; on the 19th at Hartwell and Liverpool; on the 20th at Greenwich, Maidenstone Hill, Hartwell Rectory, Hartwell, Thame, Rose Hill near Oxford, Linslade, Cardington, Nottingham and Stonyhurst. On November 12 at Durham; on the 13th at Norwich, Cardington and Nottingham; on the 14th at North Shields; on the 17th at Uckfield, Midhurst, Maidenstone Hill, Hartwell Rectory, Rose Hill near Oxford, Thame, Cardington and Liverpool; on the 19th at Jersey, Maidenstone Hill, Linslade and Hartwell Rectory; and on the 23rd at Thame. On December 12 at Cardington, Manchester, Durham and Whitehaven; on the 13th at Maidenstone Hill; on the 14th at Liverpool; on the 18th at Nottingham and Whitehaven; on the 19th at Nottingham, Hawarden, Whitehaven and Durham; and on the 21st at Hartwell Rectory and Nottingham.

Lunar coronæ were seen on October 14, 15 and 16, at Stone; on the 17th at Hartwell; on the 18th and 19th at Cambridge; on the 26th at Stone; and on November 17 at Norwich.

Lunar rainbows were seen on October 21 at Hartwell Rectory and Stone; on November 13 at Grantham; and on November 19 at Greenwich, as recorded by Mr. J. F. Sanders.

Meteors.—At Jersey, on November 29, at $11^h\ 30^m$ P.M., a bright meteor passed from Orion towards Polaris.

At Hartwell Rectory, on October 5, at $10^h\ 15^m$ P.M., a small meteor passed from Andromeda to Cassiopeia; on October 7 a meteor passed from Cassiopeia to Capella; and on December 12, at 6^h P.M., a meteor with a long train of white light passed from β Ceti to Fomalhaut.

At Highfield House near Nottingham, on October 1, at $9^h 44^m 3^s$, a meteor equal in apparent size to Jupiter fell from γ Pegasi at an angle of 45° down towards S. to within 15° of horizon; it was orange-coloured, and without any train of sparks: duration $0''.5$.

October 9, at $10^h\ 30^m$, in the S.W. a small meteor was seen; at $10^h\ 45^m$ another was seen in the E.; and on the same night, at $11^h\ 10^m$, another small meteor was seen in the N.

October 11, a small meteor was seen to the north; on the 15th, at $11^h\ 5^m$, a meteor equal in size to a star of the second magnitude, and in brightness to a star of the first magnitude, of a blue colour, diffusing much light; it moved from half-way between ϵ Pegasi and η Sagittæ, passed through γ Sagittæ, when it ascended again in a rapid curve, exploding about β Cygni; its duration was 0·5 second. On November 1, at $7^h\ 20^m$, a spark-meteor of a yellow colour moved in a nearly horizontal direction, inclining slightly downwards, and passing within half of a degree under α Pegasi, and passed over 10° of space in 1 second of time.

On November 13 a fine meteor fell perpendicularly down from the zenith of the N.W., and was seen at Beeston by J. Watson, Esq.

On November 23, at $10^h\ 55^m$, a meteor, in appearance three times larger than Saturn, being circular, with a well-defined disc, and having a slight train, moved rapidly from half-way between δ and ϵ to D Ceti.

On November 28, at $10^h\ 10^m$, a meteor four times in apparent magnitude to Jupiter, and of the same colour, fell 30° perpendicularly down from Aldebaran.

On November 29, at $8^h\ 43^m$, a meteor of the fourth magnitude, of a yellow colour with a slight train, moved rapidly from γ Draconis downwards towards N. at an angle of 60°.

On December 5, at $11^h\ 30^m$, a blue meteor fell perpendicularly down in E.S.E.; it was circular, and its duration was 3 seconds. Seen by S. Watson, Esq.

December 13, at $11^h\ 40^m$, a small orange-red spark meteor fell from between α and β Geminorum; it fell perpendicularly down, inclining slightly to the N. It was accompanied by several sparks.

On December 24, at $9^h\ 30^m$, a yellow meteor of the second magnitude was seen without sparks; it was star-like, and rose slowly from 20° above W. horizon, passed through the zenith through Gemini, and disappeared suddenly at 30° above the E. horizon; its duration was 4 seconds.

On Dec. 26, at $9^h\ 55^m$, a meteor was seen of the fourth magnitude; it moved rapidly from Ursa Major horizontally, ending midway between Castor and Pollux. It was of a blue colour, with a train of light. Its duration was 0·5 second.

On December 26, at $10^h\ 30^m$, a small meteor fell rapidly and perpendicularly down in W. from an altitude of 45°.

On December 26, at $10^h\ 30^m$, two small meteors in the S.W. were seen; on December 26, at $10^h\ 31^m$, a small meteor in the S.W. fell from an altitude of 45°, and inclining towards S.

On December 27, at $10^h\ 40^m$, a meteor of the size of a star of the fifth magnitude, colourless, and of ill-defined shape, with a train of light, moved from γ Ursæ Majoris to ζ Ursæ Majoris. Its motion was very rapid, and its duration 0·1 second.

On October 28, at $7^h\ 50^m$ P.M., John W. Kelly, Esq., saw a large

meteor. He was travelling in the Galway mail coach, and within about eight statute miles of Limerick. The meteor was followed by a long tail of light, and apparently sparks of fire. It was visible for about three seconds; was first observed near the zenith, moved slowly horizontal (with a slight dip, however,) in a north-easterly direction, was of a reddish colour, and became extinguished apparently a short distance eastward of Limerick.

The following meteors were observed by John Graham, Esq. M.B.M.S.:—

At Darlington, on July 31, at $10^h\ 21^m$, a meteor was seen to the west of γ Herculis. It appeared like a star of the third magnitude, and disappeared immediately, and had no visible motion.

At $10^h\ 22^m$, a meteor, like a star of the second magnitude, appeared near α Coronæ Borealis. It was visible during about half a second, and moved through 2°, and directly towards the horizon.

At $10^h\ 25^m$, a meteor, similar to a star of the third magnitude, moved from a point near ζ Coronæ Borealis, and passed a little to the north of β Serpentarii. It moved through about 20° in about 2 seconds.

On August 6, at $10^h\ 36^m$, a meteor, which equalled if not surpassed Arcturus in brightness, passed about 2° below α Coronæ Borealis, and 3° below δ Serpentarii. It left a brilliant train, which extended over about 15°; its path was convex towards those stars. It moved through about 30° in 4 seconds.

At $10^h\ 38^m$, a meteor, like a star of the third magnitude, with a train, passed about 4° below α Coronæ Borealis and half-way between α and δ Serpentarii. It moved through about 15° in 1 second.

At $10^h\ 52^m\ 30^s$, a meteor, less bright than the last two, passed from o Ophiuchi, and passed between ν Serpentarii and 35 Ophiuchi. Its motion was quick.

At $10^h\ 56^m\ 30^s$, a meteor, similar to a star of the fourth magnitude, passed above o Ophiuchi and through ν Serpentarii, its path being parallel to that of the last. Its motion was quick.

On the 13th, at $10^h\ 7^m$, a very small meteor, with a splendid train, passed about $1\frac{1}{2}$° above η Persei. Its path was nearly parallel, but tending a little towards the horizon. It passed through about 5° in 1 second.

At $10^h\ 55^m$, a meteor, like a star of the third magnitude, passed at 3° above β Herculis, and parallel with 19 Herculis and the former star. It moved through about 10° in 1 second.

At $10^h\ 57^m$, a meteor like the last passed from 70 Equulei to near 64 Capricorni. It moved through about 12° in 1 second.

On the 14th, at $10^h\ 24^m$, a meteor, like a star of the first magnitude, with a splendid train extending over about 15°,

passed about 30° north of α Herculis, and about 1° south of β Ophiuchi. It passed over about 20° in 4 seconds.

At $10^h\ 28^m$, a meteor, like a star of the second magnitude, with a train a little less bright than the last, and extending over about 12°, passed through β Lyræ and about 1° east of β Cygni. It passed through about 15° in 2 seconds.

On the 18th, at $9^h\ 30^m$, a meteor, like a star of the third magnitude, passed from 15 Persei, and moved nearly parallel with γ and α Persei, being nearly perpendicular to the horizon. It passed through 10° in 1 second.

On the 29th, at $9^h\ 55^m$, a meteor, like a star of the third magnitude, with a train, passed through π Andromedæ, and about 1° north of ζ Andromedæ. It moved through about 20° in 2 seconds.

At $10^h\ 2^m$, a meteor, similar to a star of the second magnitude, with a magnificent train extending over fully 25°, passed through 11 Muscæ Borealis, a little above α Arietis, and about 1° below γ Pegasi. It moved through about 45° in 8 seconds. As it moved along its path, an increase in its apparent altitude was evident.

At $10^h\ 4^m$, a meteor like the last was seen, excepting that its train was rather more considerable (extending over at least 30°). It passed about 1° above ϵ Arietis, and directly southward, in a line parallel with the horizon. It moved through about 40° in 6 seconds.

On September 4th, at $9^h\ 33^m$, a meteor, like a star of the second magnitude, with a train extending over about 15°, moved from a point immediately below 13 Herculis, and passed about 4° west of δ Ophiuchi. It traversed a space of about 18° in 3 seconds.

On the 12th, at $8^h\ 31^m$, a meteor, like a star of the second magnitude, with a train extending over about 7°, moved from a point very near 3 Serpentarii, and passed about midway between δ Ophiuchi and η Serpentarii. It moved through about 15° in 1·5 second.

On the 15th, at $9^h\ 31^m$, a meteor, like a star of the first magnitude, moved from a point about $1\frac{1}{2}$° south of the α Lyræ, and passed close to the north of ζ Herculis. It moved through about 25° in 4 seconds.

On the 21st, at $10^h\ 18^m\ 30^s$, a meteor, of unusual apparent magnitude and brightness, appeared. It moved from a point situated in a line perpendicular to the horizon, passing through the ϕ Ursæ Majoris and about 2° below this star. The meteor descended towards the horizon in a direction a little east of north. The line along which it passed subtended an angle of about 10°, with the line perpendicular to the horizon meeting that point of the meteor's path from which it started. The diameter of the

disc of the meteor gradually increased, which just before it burst was estimated at 6′, and its brightness was much greater than that of Venus when she is brightest. This meteor shone with a bluish light, at first pale, but becoming gradually deeper in colour. It was accompanied by a train, which was not diverging, but consisted of a straight line of sparks, which it left in its track. Its disc tapered off to a point, where it joined the train. It moved very slowly and rather irregularly; and neglecting the brilliancy of the object, its appearance might be compared to a flying kite (inverted). This meteor moved over about 7° in 6 seconds. It threw off a quantity of sparks in bursting.

On October 5, at $10^h\ 28^m$, a meteor, like a star of the third magnitude, moved from a point near 49 Lyncis, and passed about 2° east of δ Ursæ Majoris. It moved through about 10° in 1·5 second.

At $10^h\ 40^m$, a meteor like the last moved from κ Ursæ Majoris towards μ Ursæ Majoris. It passed over about 8° in 1 second.

On the 18th, at $9^h\ 45^m$, a meteor, like a star of the second magnitude, passed about 2° east of ε Cygni, and 3° west of the cluster of stars in Delphinus. It passed over about 20° in 3 seconds.

On the 28th, at $9^h\ 26^m$, a meteor, like a star of the third magnitude, passed through 27 Lyncis, and about 1° east of 11 Lyncis. It moved through about 15° in 2 seconds.

On Nov. 8, at $9^h\ 35^m$, a meteor, like a star of the third magnitude, with a tail, moved from a point about half-way between μ and γ Gemini, and passed about 2° below ε Gemini. It moved through about 9° in $1\frac{1}{2}$ second.

On Nov. 8, at $9^h\ 57^m$, a meteor, like a star of the fourth magnitude, passed through the southern confines of Sagitta and towards μ Aquilæ. It moved through about 10° in 1 second.

On Nov. 9, at 10^h, a meteor, like a star of the third magnitude, with a tail, started from a point about 4° north of β Aquarii, and passed through 3 Aquarii. It moved through 6° in 1 second.

On Nov. 10, at 9^h, an unusual appearance occurred, which may be described as follows:—The sky was entirely covered with clouds, when suddenly (at 9^h) a very luminous appearance presented itself, which was seen through the clouds. The light was lenticular-shaped. Its base rested on the horizon a little east of south, the middle part being from 5° to 10° to the eastward of that point. Its breadth at the base was about 4°. The altitude of its apex (which appeared to be perpendicular to its base) was about 30°. The brightest part was the centre of the base, and the light shaded off gradually to the edges. The phænomenon was visible about 10 seconds, when it suddenly disappeared.

There appears to be no other way of accounting for this phænomenon than by supposing it to have been a very large meteor.

On Nov. 28, at $9^h\ 38^m$, a meteor, like a star of the fourth magnitude, passed through ε Tauri and towards 12 Tauri. It passed over about 6° in less than a second.

On Nov. 28, at $9^h\ 43^m$, a meteor, like a star of the fifth magnitude, passed through α Tauri and about 1° south of *m* Tauri. It passed over about 10° in 1 second.

On Nov. 28, at $9^h\ 47^m$, a meteor, like a star of the third magnitude, with a tail extending over about 5°, proceeded from a point about 4° west of, and of the same altitude as α Ceti, and passed about half-way between Saturn and η Ceti. It passed over about 10° in 2 seconds.

On December 4, at $9^h\ 55^m$, a meteor, like a star of the second magnitude, with a tail extending over fully 15°, passed through *o* 2 Orionis, 47 Tauri, and about 1° above κ 2 Ceti. It passed over about 25° in 3 seconds.

On December 12, at $9^h\ 20^m$, a meteor, like a star of the second magnitude, passed about 1° below ζ and *o* Tauri, and about half way between α Ceti and κ 2 Ceti. It passed over about 10° in 1 second.

On December 12, at $9^h\ 32^m$, a meteor like the last appeared near Sirius. Its path was nearly perpendicular to the horizon, but formed a somewhat greater angle with the horizon north than south. The meteor disappeared when it descended to within about 5° of the star; had it continued, it would have passed about 3° E. of Sirius. It passed over about 6° in 3 seconds.

On December 12, at $9^h\ 37^m$, a meteor, like a star of the third magnitude, passed through γ Orionis and above η Orionis, passing the star at a distance of about $3\frac{1}{2}$°. It passed over about 9° in 1·5 second.

At Trowbridge, on October 26, several meteors were seen, one especially as large as the planet Venus; it shot from the constellation of Orion and disappeared in the west. On November 9 several beautiful meteors were seen, and shooting in all directions from east to west. On November 28 two splendid meteors were seen; one passed from Ursa Major and disappeared in the constellation of Orion, leaving a long train of light behind it; the other shot further north, near the Pole Star, and disappeared near the Pleiades, and which also left a train of light behind it. On December 3 a large meteor shot from the W. and disappeared near Arcturus.

The series of observations of the directions of the wind at 9^h A.M., taken at the various railway stations, and published in the *Daily News*, with those furnished to myself and to the Astronomer Royal, have continued with regularity. The following tables have been formed from them:—

Oct. 1850. Days.	Direction of the wind at 9 A.M., Greenwich mean time.														
	Ireland.				Cornwall and Devonshire.	Jersey and Guernsey.	Belgium.	England.							
	Western counties.	Southern counties.	Eastern counties.	Midland counties.				South coast.	South-east coast.	East coast.	North-east coast.	North-west coast.	Southern counties.	Midland counties.	Northern counties.
1	n.w.	.....	n.n.w.	n.w.	n.n.w.	n.w.	s.s.w.	n.n.w.	s.w.	n.w.	n.n.e.	n.e.	n.n.w.	n.w.	n.w.
2	s.e.	.....	n.	n.w.	variable.	n.w.	s.e.	n.n.w.	n.e.	n.w.	n.n.w.	s.	w.n.w.	n.w.	s.w.
3	s.e.	n.	n.e.	variable.	variable.	s.s.e.	s.w.	s.w.	s.w.	s.w.	w.s.w.	s.s.e.	variable.	s.e.	s.s.e.
4	s.w.	n.	s.w.	w.s.w.	s.w.	n.e.	n.e.	e.n.e.	s.w.	s.w.	w.s.w.	n.e.	w.	s.s.e.	s.w.
5	s.e.	n.w.	w.	w.	w.n.w.	w.s.w.	s.w.	n.n.w.	n.w.	w.	w.s.w.	s.	w.	w.s.w.	s.
6	s.e.	s.e.	s.	s.e.	s.s.w.	s.e.	s.w.	w.s.w.	n.w.	s.	s.w.	e.s.e.	s.e.	s.w.	s.e.
7	s.w.	w.n.w.	n.w.	w.n.w.	w.n.w.	n.w.	w.s.w.	w.s.w.	n.w.	s.w.	w.s.w.	n.w.	w.	w.s.w.	w.
8	s.w.	w.n.w.	n.w.	w.n.w.	n.w.	w.s.w.	w.s.w.	w.	n.w.	s.w.	w.n.w.	n.n.e.	w.	w.s.w.	n.n.w.
9	n.e.	n.n.e.	w.n.w.	n.n.w.	n.w.	n.w.	w.s.w.	w.n.w	s.w.	n.w.	w.n.w.	n.w.	w.s.w.	s.s.w.	n.w.
10	n.w.	n.	n.w.	w.n.w.	n.w.	n.	w.n.w.	n.n.w.	n.w.	n.	w.n.w.	n.n.e.	n.n.w.	w.	variable.
11	n.e.	n.	n.w.	n.	n.	n.n.w.	w.s.w.	n.	n.e.	n.e.	n.	n.e.	n.	n.	n.w.
12	n.w.	n.	n.w.	n.n.w.	n.	n.	n.n.w.	n.	n.	n.e.	n.w.	n.w.	n.	n.	calm.
13	n.w.	n.w.	w.	w.s.w.	n.	n.w.	w.s.w.	w.	w.	.....	n.w.	n.w.	w.s.w.	n.w.	s.w.
14	s.s.e.	e.	n.n.w.	w.	n.w.	w.n.w.	w.s.w.	w.n.w.	s.w.	n.w.	w.s.w.	w.s.w.	s.w.	w.	s.w.
15	n.w.	s.w.	n.w.	w.	n.w.	w.n.w.	w.n.w.	n.w.	n.w.	w.	w.n.w.	s.w.	n.w.	s.w.	s.
16	n.e.	n.w.	n.w.	s.w.	calm.	variable.	s.w.	n.	n.w.	s.w.	w.	n.w.	w.s.w.	s.w.	w.
17	s.e.	n.w.	w.	w.s.w.	calm.	n.n.w.	s.s.w.	w.	w.	w.	s.w.	n.w.	w.	w.	w.s.w.
18	s.w.	n.w.	n.w.	w.	w.	w.n.w.	w.s.w.	n.n.w.	w.	s.w.	w.	s.w.	w.	w.	w.s.w.
19	n.e.	w.	n.w.	n.w.	n.w.	variable.	w.s.w.	w.n.w.	s.w.	n.w.	w.	n.w.	w.	w.	n.w.
20	n.w.	n.w.	w.n.w.	n.w.	n.w.	w.	n.w.	n.w.	n.w.	n.w.	n.	n.w.	w.	n.w.	n.n.w.
21	n.e.	n.	n.e.	n.e.	n.e.	n.e.	n.n.e.	n.n.w.	n.w.	n.w.	n.e.	n.e.	n.	n.w.	n.w.
22	n.w.	n.w.	n.w.	w.s.w.	n.e.	n.e.	n.n.e.	n.e.	n.w.	e.	n.w.	variable.	variable.	s.	variable.
23	n.w.	n.	n.w.	n.n.w.	n.w.	s.	s.	n.w.	s.w.	s.w.	n.w.	n.w.	variable.	w.	variable.
24	n.	n.	n.e.	n.e.	e.n.e.	n.	s.e.	n.e.	s.w.	s.e.	e.	s.e.	e.	e.	n.
25	n.e.	n.e.	s.e.	e.	e.n.e.	e.n.e.	e.	n.e.	s.w.	e.	n.e.	n.e.	n.e.	n.n.e.	n.e.
26	n.w.	n.e.	n.w.	variable.	n.	n.	s.w.	n.	s.e.	n.e.	n.e.	n.w.	n.	n.	n.
27	s.w.	w.	n.	w.s.w.	n.	n.w.	w.s.w.	n.w.	.....	n.w.	w.s.w.	.....	.....	w.	n.w.
28	n.w.	n.w.	n.w.	w.n.w.	w.n.w.	w.s.w.	s.s.w.	n.w.	s.w.	w.	w.s.w.	n.e.	w.s.w.	w.s.w.	s.s.w.
29	s.w.	n.w.	w.	w.s.w.	n.w.	n.w.	w.n.w.	n.w.	n.w.	n.w.	n.n.w.	n.e.	w.n.w.	w.	s.e.
30	s.w.	w.	n.w.	w.n.w.	w.n.w.	s.s.w.	w.s.w.	n.w.	s.w.	s.w.	w.s.w.	s.w.	w.s.w.	s.	s.w.
31	s.w.	n.	w.	w.n.w.	n.w.	.....	w.s.w.	n.w.	s.w.	s.w.	n.w.	.....	w.	w.	s.w.

Nov. 1850. Days.	Direction of the wind at 9 A.M., Greenwich mean time.														
	Ireland.				Cornwall and Devonshire.	Jersey and Guernsey.	Belgium.	England.							
	Western counties.	Southern counties.	Eastern counties.	Midland counties.				South coast.	South-east coast.	East coast.	North-east coast.	North-west coast.	Southern counties.	Midland counties.	Northern counties.
1	s.w.	s.w.	s.w.	w.s.w.	variable.	w.n.w.	n.n.w.	w.s.w.	w.	s.w.	s.w.	s.w.	w.s.w.	s.w.	w.
2	s.w.	w.s.w.	w.s.w.	s.w.	s.s.w.	w.n.w.	w.s.w.	w.s.w.	s.w.	s.w.	w.	w.	s.w.	s.s.w.	s.w.
3	s.w.	s.w.	s.w.	w.s.w.	s.w.	s.	w.	w.	.....	s.w.	s.w.	.....	.....	w.	s.w.
4	w.s.w.	w.	n.w.	w.	w.n.w.	s.w.	s.w.	w.s.w.	s.w.	s.w.	w.s.w.	n.n.w.	s.w.	w.	w.s.w.
5	w.s.w.	w.s.w.	s.w.	w.	w.s.w.	w.n.w.	w.s.w.	w.	s.w.	s.w.	w.s.w.	w.	s.w.	w.	w.s.w.
6	w.s.w.	n.w.	s.w.	w.	n.w.	s.w.	w.	w.n.w.	n.w.	w.s.w.	w.n.w.	n.w.	variable.	w.	w.
7	s.w.	s.w.	s.w.	s.w.	w.	s.w.	w.s.w.	n.	s.w.	w.s.w.	s.w.	s.e.	w.	w.s.w.	s.w.
8	n.w.	w.	n.w.	w.	n.w.	variable.	w.s.w.	w.s.w.	n.w.	s.	w.	n.w.	w.s.w.	w.	w.n.w.
9	s.s.w.	s.w.	w.s.w.	w.s.w.	s.w.	w.	w.	n.w.	n.w.	s.w.	s.w.	s.e.	variable.	w.s.w.	variable.
10	s.w.	s.w.	n.w.	w.	w.	w.	w.s.w.	w.s.w.	s.w.	s.w.	s.w.	s.w.	s.w.	s.w.	w.s.w.
11	n.w.	w.	n.w.	w.	w.n.w.	variable.	w.s.w.	w.	s.w.	s.w.	w.	s.w.	w.s.w.	s.w.	s.w.
12	n.e.	variable.	s.w.	n.	n.w.	w.	n.w.	w.	s.w.	n.	w.	n.w.	w.	w.	calm.
13	n.e.	calm.	n.w.	n.w.	n.w.	n.n.e.	n.n.w.	n.w.	n.w.	s.w.	w.s.w.	n.e.	n.w.	n.	calm.
14	s.e.	e.	e.	s.e.	variable.	n.e.	n.w.	n.n.w.	n.e.	n.w.	w.	e.	n.n.w.	n.	e.
15	s.w.	s.w.	s.w.	s.s.e.	e.s.e.	s.e.	n.w.	n.	n.e.	w.	s.w.	s.e.	calm.	calm.	s.w.
16	n.e.	w.	w.s.w.	w.s.w.	s.w.	s.w.	variable.	s.w.	s.w.	s.s.w.	s.s.w.	.....	s.w.	s.	s.s.e.
17	s.w.	w.	n.w.	s.w.	calm.	w.s.w.	n.w.	n.w.	.....	w.	s.w.	.....	s.w.	.....	s.w.
18	n.e.	s.w.	s.w.	variable.	s.s.e.	s.e.	w.s.w.	s.	s.w.	s.w.	s.w.	s.e.	s.s.e.	s.e.	s.
19	n.w.	s.w.	s.w.	n.n.w.	w.s.w.	s.w.	s.w.	w.s.w.	s.w.	s.s.w.	s.w.	s.e.	s.w.	s.s.w.	s.
20	n.w.	n.w.	n.w.	n.w.	n.w.	w.s.w.	s.w.	w.s.w.	s.w.	s.	n.e.	n.w.	s.w.	variable.	n.
21	s.e.	n.w.	s.w.	s.w.	n.w.	n.w.	n.n.w.	n.n.w.	n.e.	n.	n.e.	w.	n.w.	w.	n.w.
22	s.e.	s.w.	s.	s.	s.	s.	s.w.	s.w.	n.w.	s.w.	s.s.w.	s.s.e.	s.s.e.	s.s.e.	s.w.
23	s.w.	w.	w.s.w.	w.n.w.	w.n.w.	variable.	s.w.	s.w.	n.e.	s.	s.w.	s.s.w.	s.w.	w.	w.s.w.
24	s.w.	w.	s.w.	w.n.w.	w.s.w.	s.w.	w.s.w.	w.s.w.	s.w.	s.w.	s.w.	.....	w.s.w.	s.w.	s.w.
25	n.w.	n.w.	n.w.	w.	w.	variable.	s.w.	s.w.	n.e.	s.w.	w.s.w.	.....	w.s.w.	w.	w.s.w.
26	s.w.	n.w.	n.w.	w.s.w.	n.w.	w.s.w.	s.s.w.	n.	s.w.	.....	s.s.w.	n.n.w.	s.w.	w.	.....
27	n.e.	n.e.	n.n.e.	n.	n.n.e.	n.n.w.	s.s.w.	n.n.e.	s.w.	s.w.	n.	e.	n.w.	n.	n.
28	s.w.	n.	n.w.	variable.	n.	n.e.	variable.	n.	n.e.	n.e.	n.w.	n.w.	n.	n.e.	e.
29	s.e.	s.	s.w.	s.	variable.	n.e.	e.n.e.	n.	n.	e.	s.w.	s.e.	n.e.	e.	s.e.
30	s.e.	s.w.	.....	s.	.....	.....	e.s.e.	n.e.	n.w.	n.e.	w.	s.e.	variable.	s.e.	e.s.e.

Direction of the wind at 9 A.M., Greenwich mean time.

Dec. 1850.	Ireland.						England.								
Days.	Western counties.	Southern counties.	Eastern counties.	Midland counties.	Cornwall and Devonshire.	Jersey and Guernsey.	Belgium.	South coast.	South-east coast.	East coast.	North-east coast.	North-west coast.	Southern counties.	Midland counties.	Northern counties.
1	s.e.	s.e.	.....	.....	s.e.	s.e.	s.e.	variable.	.....	.....	variable.	.....	.....	.....	.....
2	s.	s.s.w.	s.e.	e.	s.s.e.	s.e.	s.e.	s.w.	s.w.	s.e.	s.	s.e.	s.e.	.....	s.
3	s.e.	s.w.	s.w.	s.e.	s.c.	s.c.	s.s.e.	e.s.e.	s.w.	s.w.	s.w.	s.	s.	s.e.	s.
4	s.e.	s.w.	n.w.	calm.	calm.	variable.	s.	s.w.	s.w.	s.w.	s.w.	s.	calm.	s.w.	s.
5	s.e.	s.s.e.	s.w.	.....	calm.	variable.	s.s.w.	s.s.e.	s.w.	s.w.	w.s.w.	s.e.	s.	s.	s.
6	s.e.	s.e.	s.e.	s.e.	e.	e.s.e.	s.	variable.	s.w.	s.	w.	n.e.	calm.	variable.	calm.
7	s.e.	s.e.	s.w.	.....	e.	variable.	e.s.e.	e.	s.w.	s.w.	s.w.	e.	s.e.	calm.	calm.
8	s.e.	s.	s.w.	.....	e.s.e.	s.e.	s.w.	.....	s.w.	s.w.	s.w.	.....	calm.	s.	.....
9	s.e.	s.e.	s.w.	.....	e.	variable.	variable.	n.e.	s.e.	s.w.	w.	e.	s.e.	calm.	calm.
10	s.e.	s.	s.e.	s.e.	e.s.e.	s.e.	s.	e.	s.e.	calm.	s.w.	s.w.	e.s.e.	calm.	calm.
11	s.e.	s.	s.w.	s.e.	e.s.e.	s.e.	n.w.	calm.	s.e.	s.w.	s.w.	s.w.	calm.	s.s.e.	.....
12	s.w.	s.w.	s.w.	s.w.	s.w.	variable.	variable.	s.	s.w.	s.w.	w.s.w.	n.w.	s.	s.w.	s.
13	s.e.	s.s.w.	s.w.	s.	s.w.	s.e.	s.s.w.	s.	s.w.	s.w.	s.	s.e.	calm.	s.	s.
14	s.	variable.	s.e.	s.e.	s.e.	s.e.	s.w.	s.w.	s.w.	w.	s.w.	s.e.	s.s.w.	s.s.w.	s.
15	s.w.	s.w.	s.w.	.....	s.w.	s.w.	s.w.	s.w.	.....	s.w.	s.w.	.....	.....	s.w.	w.
16	s.	s.w.	s.w.	s.	w.n.w.	w.	w.s.w.	w.	n.w.	w.	w.	n.e.	s.w.	s.w.	w.s.w.
17	s.w.	w.s.w.	variable.	calm.	n.w.	s.w.	s.w.	w.	n.w.	w.	w.s.w.	s.w.	s.w.	s.w.	w.s.w.
18	s.e.	s.w.	w.s.w.	calm.	n.w.	w.n.w.	w.	variable.	s.w.	n.w.	n.w.	w.	variable.	s.w.	calm.
19	n.e.	n.e.	n.e.	n.	n.w.	s.w.	s.w.	n.w.	calm.	s.e.	variable.	variable.	calm.	variable.	n.
20	s.	n.w.	n.e.	.....	n.w.	n.w.	w.n.w.	n.w.	n.w.	n.w.	n.w.	n.e.	n.w.	n.w.	calm.
21	n.w.	s.	w.	calm.	calm.	s.c.	s.e.	n.	n.e.	s.w.	s.w.	.....	calm.	s.	s.
22	w.	n.w.	calm.	.....	n.	n.e.	s.w.	n.w.	.....	n.e.	s.w.	.....	w.n.w.	w.	s.w.
23	s.e.	n.e.	n.w.	s.w.	n.e.	e.n.e.	n.e.	n.w.	n.e.	w.	variable.	s.e.	calm.	s.e.	s.e.
24	s.	s.	s.w.	s.w.	n.w.	n.e.	n.e.	n.w.	calm.	s.w.	s.s.w.	s.	variable.	s.s.w.	s.w.
25	n.w.	w.	n.w.	.....	calm.	n.w.	s.s.w.	variable.	.....	s.w.	n.w.	.....	s.w.	n.w.	s.w.
26	n.w.	n.w.	n.w.	n.w.	n.w.	n.w.	w.n.w.	n.n.w.	calm.	s.w.	variable.	.....	w.s.w.	w.	w.n.w.
27	n.	n.w.	w.n.w.	calm.	calm.	n.w.	s.w.	n.	calm.	w.	w.n.w.	s.e.	calm.	n.w.	calm.
28	n.w.	n.w.	w.n.w.	n.w.	n.w.	n.n.w.	w.n.w.	n.w.	.....	w.s.w.	w.n.w.	n.w.	s.w.	.....	w.
29	w.	w.	s.w.	.....	w.n.w.	w.n.w.	w.s.w.	variable.	s.w.	s.w.	w.	.....	.....	s.	w.
30	s.w.	s.w.	s.w.	s.w.	n.w.	s.w.	n.w.	variable.	.....	n.w.	s.w.	s.e.	s.w.	.....	s.w.
31	s.	s.w.	s.w.	.....	s.w.	s.w.	w.s.w.	variable.	s.w.	s.w.	w.s.w.	s.	s.w.	w.s.w.	s.

General Remarks on the preceding Tables.

October.—1. Strong breeze; a heavy gale at Youghal. 2. Nearly a calm day. 3. A gale at Guernsey; calm and fog at many places. 4. Calm and fog general. 5. Calm over the midland counties. 6. A gale at Guernsey. 7. A stormy day; gales at many places. 8. Air in gentle motion. 9. Calm and fog to the south; a strong breeze to the north. 10. Air in gentle motion. 11. Hard wind general; gales at many places. 12. A strong breeze round the coast. 13. Calm and fog at most places. 14. A hard wind to the north; calm to the south. 15. Calm and fog at most places. 16. Strong breeze to the north; calm to the south. 17. Strong breeze to the north; calm to the south. 18. Calm at most places. 19. A strong breeze at most places. 20. Air in gentle motion. 21. Strong breeze at most places. 22. Varying from a calm to a high wind. 23. Hard wind on the south coast. 24. Calm and fog at most places. 25. Air in gentle motion. 26. Gentle breeze and fog at many places. 27. Air in gentle motion; fog and frost. 28. Air in gentle motion; squalls at Guernsey. 29. Frost and thick fog. 30. Calm and rain at many places. 31. Calm and fog at many places.

November.—1. Calm at many places. 2. Air in gentle motion; rain at many places. 3. Calm and fog at many places. 4. Storms and hard wind everywhere. 5. Storms and gales everywhere. 6. Air in gentle motion. 7. Strong breeze at many places; a storm at Lancaster. 8. A gale at Crewe. 9. Calm and fog at most places. 10. A storm at Edinburgh. 11. Air in gentle motion. 12. Calm everywhere. 13. Calm and fog at most places. 14. Calm and frost at many places; fog. 15. Calm and fog at most places. 16. Calm and fog. 17. Calm and fog. 18. Calm, fog and rain; a storm at Bridgetown. 19. Storms and gales in Ireland; strong breeze everywhere. 20. Hard wind and gales in Ireland; a storm at Plymouth. 21. Air in gentle motion. 22. Calm, fog and rain. 23. Strong breeze to the south, and rain. 24. Storms and gales at many places. 25. A hard wind everywhere. 26. Calm at most places. 27. Calm, frost, rain and fog. 28. Calm, fog and frost. 29. Calm, fog and frost. 30. Calm, fog and frost.

December.—2. A strong breeze at most places; rain general. 3. Air in gentle motion. 4. Calm and rain general. 5. Calm and rain at most places. 6. Calm and fog at most places. 7. Calm and fog at many places. 8. Calm and fog at most places; stormy in Belgium. 9. Calm and fog at most places; stormy in Belgium. 10. Calm and fog general; stormy in Belgium. 11. Calm and fog at many places; stormy in Belgium. 12. Calm, fog and

Meteorological Table for the Quarter ending December 31, 1850.

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.	Range of temperature in the quarter.	Mean temperature of the dew-point.	Wind. Mean estimated strength.	Wind. General direction.	Mean amount of cloud.	Rain. Number of days on which it fell.	Rain. Amount collected.	Mean weight of vapour in a cubic foot of air.	Mean additional weight of vapour 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.
	in.	°	°	°	°	°	°	°					in.	grs.	grs.		in.	grs.	feet.
Jersey	29·735	48·9	66·0	34·0	10·5	27·7	32·0	45·0	1·6	s.w.	5·6	56	11·8	3·6	0·5	0·872	4·4	541	75
Guernsey	29·695	49·0	60·0	40·0	5·2	16·3	20·0	46·6	1·5	w.	6·5	49	13·0	3·8	0·3	0·909	4·5	539	123
Helston	29·679	48·9	64·0	29·0	11·7	28·0	35·0	45·6	1·5	s.w.	6·2	47	11·1	3·7	0·5	0·866	4·5	539	106
Falmouth	....	49·4	67·0	29·0	12·7	31·7	38·0	..	1·3	w.	6·5	48	11·5	..	..	....	..	..	120
Truro	29·759	48·9	63·5	24·0	12·7	33·8	39·5	44·2	0·8	n.	6·8	53	11·1	3·5	0·7	0·836	4·3	541	50
Exeter	29·806	46·1	64·0	25·0	12·2	32·3	39·0	42·9	1·6	w.	5·1	50	7·7	3·4	0·6	0·871	4·1	545	140
Uckfield	29·744	43·3	62·0	22·0	13·3	35·0	40·0	38·3	..	w.	..	39	9·0	2·9	0·6	0·839	3·4	538	180
Midhurst	....	44·7	..	..	..	..	..	41·1	..	w.s.w.	7·4	41	..	3·2	0·4	0·888	3·7	545	
Chichester	....	42·6	61·0	..	10·6	27·7	34·0	38·0	..	s.w.; n.w.	7·5								
Southampton	29·671	45·9	60·5	27·0	12·6	29·4	33·5	41·2	0·3	.....	6·2	32	9·0	3·2	0·6	0·847	3·8	543	55
Royal Observatory, Greenwich	29·700	44·7	63·9	24·2	11·4	31·7	39·7	40·5	..	.....	..	..	5·2	3·2	0·5	0·866	3·6	543	159
Maidenstone Hill, Greenwich	29·700	44·4	..	24·3	..	..	..	42·3	..	s.w.	6·5	34	5·2	3·3	0·3	0·932	4·0	544	107
St. John's Wood	29·694	43·5	62·0	23·0	11·8	32·2	39·0	38·9	1·2	s.w.	8·0	37	5·3	3·0	0·5	0·860	3·5	545	150
Chiswell Street, London	....	48·9	60·5	31·0	9·4	29·3	38·5	43·9	..	.....	..	37	4·7	3·5	0·8	0·823	4·1	539	
Stone Observatory	29·691	42·7	62·9	23·9	11·9	31·4	39·0	39·2	0·5	s.w.	6·6	56	5·6	3·0	0·4	0·882	3·6	540	320
Hartwell (near Aylesbury)	29·670	44·3	66·3	22·9	13·5	34·7	43·4	41·1	0·6	s.w.	7·5	..	..	3·2	0·4	0·897	3·8	541	250
Hartwell Rectory	29·669	43·1	62·5	22·0	12·3	32·2	40·5	38·6	0·6	s.w.	6·1	47	7·9	2·9	0·5	0·863	3·5	539	290
Linslade (Bucks)	....	42·2	60·5	22·0	12·4	31·8	38·5	..	..	s.w.	..	47	6·3	..	..	....	..	..	313
Thame	29·568	42·9	60·5	20·0	11·0	33·0	40·5	40·6	0·9	w.; s.w.	6·3	56	..	3·1	0·3	0·907	3·7	542	130
Radcliffe Observatory, Oxford	29·702	44·2	61·6	24·2	11·1	32·3	37·4	40·5	2·0	s.w.	7·3	43	5·7	3·1	0·5	0·865	3·7	542	210
Rose Hill (near Oxford)	29·709	43·2	60·1	23·3	11·4	30·4	36·8	40·6	1·7	s.w.	6·8	44	6·1	3·1	0·4	0·898	3·8	542	270
Cardington (near Bedford)	29·758	43·6	62·5	23·0	12·6	34·0	39·5	40·9	0·6	s.w.	7·1	45	4·6	3·2	0·4	0·896	3·8	544	100
Bedford	29·673	44·3	63·6	23·0	11·5	33·3	40·6	39·8	0·6	s.w.	7·4	43	4·6	3·1	0·7	0·821	3·6	542	100
Norwich	29·597	44·1	62·0	24·0	10·1	32·0	38·0	39·8	..	s.w.	7·1	51	7·8	3·1	0·5	0·848	3·7	544	39
Leicester Museum	29·569	43·4	60·0	26·0	7·8	27·3	34·0	39·6	1·7	w.	8·2	41	6·3	3·1	0·5	0·862	3·6	540	175
Holkham	29·636	43·5	60·8	23·7	10·0	30·7	37·1	40·3	1·2	w.	7·4	57	6·7	3·1	0·4	0·890	3·7	539	39
Highfield House, Notts	29·723	43·0	71·7	22·0	14·7	37·9	49·7	39·6	0·5	w.	6·4	53	6·6	3·0	0·4	0·879	3·6	544	203
Derby	....	43·9	62·0	20·0	..	33·7	42·0	41·0	..	..	..	52	6·0	2·9	0·4	0·904	3·7	544	
Manchester	29·697	43·3	61·5	24·0	9·4	33·2	37·5	40·0	..	..	7·5	66	9·1	3·1	0·4	0·895	3·7	543	144
Hawarden	29·645	45·1	62·1	24·5	8·6	29·2	37·6	40·5	1·9	s.w.	6·6	42	5·9	3·2	0·5	0·836	3·7	539	260
Liverpool Observatory	29·618	46·2	59·0	29·6	6·6	24·6	29·4	42·9	1·3	w.	7·4	48	6·4	3·4	0·4	0·902	4·0	544	37
Wakefield Prison	29·583	43·4	62·5	19·0	13·7	38·2	43·5	40·5	2·2	w.s.w.	7·1	61	4·8	3·1	0·4	0·891	3·7	543	115
Stonyhurst Observatory	29·568	42·8	59·1	22·7	11·1	30·7	36·4	39·7	1·5	s.w.	7·4	67	16·5	3·1	0·4	0·805	3·6	539	381
York	29·624	42·5	59·0	17·0	11·7	34·0	42·0	38·4	..	s.w.	..	42	4·4	2·9	0·5	0·854	3·4	545	50
Whitehaven	29·539	44·8	61·0	24·5	7·9	29·5	36·5	42·3	2·4	s.w.	..	58	12·7	3·2	0·4	0·884	3·8	542	80
Durham	29·589	41·9	59·2	18·4	9·7	32·5	40·8	38·0	0·9	w.	5·4	40	5·5	2·9	0·4	0·873	3·5	540	340
Newcastle	....	43·4	60·0	22·0	11·8	34·0	38·0	39·4	..	..	..	25	6·9	3·0	0·5	0·859	3·6	543	
North Shields	29·646	42·6	57·8	25·0	8·3	28·6	32·8	37·9	..	s.w.	4·7	50	5·4	3·1	0·3	0·914	3·6	547	124
Glasgow	29·505	43·1	58·5	23·4	8·4	28·9	35·1	39·6	..	s.w.	..	56	9·7	3·0	0·5	0·852	3·6	541	121
Dunino	29·484	41·3	61·0	23·0	11·5	32·3	38·0	36·5	2·6	s.w.	3·9	32	6·3	2·8	0·5	0·852	3·2	541	250
Number of columns	1	2	3	4	5	5	7	8	9	·10	11	12	13	14	15	16	17	18	19

rain general; stormy in Belgium. 13. Calm and foggy. 14. Air in gentle motion; stormy in Ireland. 15. Stormy on the south coast. 16. Hard wind general. 17. Snow at Shap. 18. Variable in strength. 19. Calm and fog at many places. 20. Frost general. 21. Calm and rain at some places. 22. Calm, fog and frost. 23. Calm and fog. 24. Calm, fog and rain at many places. 25. Variable in strength. 26. Calm. 27. Calm general; stormy in Belgium. 28. Air in gentle motion. 29. Calm and fog. 30. Calm and fog. 31. Variable in strength.

The mean of the numbers in the first column of the adjoining Table is 29·652, and it represents that portion of the reading of the barometer due to the pressure of the air; the remaining portion, or that due to the pressure of water, is 0·271 inch; the sum of those two numbers is 29·923 inches, and it represents the mean reading of the barometer for the quarter ending December 31, 1850.

From the PHILOSOPHICAL MAGAZINE for February 1851.