

SUMMARY of the OBSERVATIONS made at the STATIONS included in the DAILY and WEEKLY WEATHER REPORTS for the CALENDAR MONTH.

OCTOBER 1901.

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General Summary.—The weather of October was very changeable, especially in the western and northern parts of the kingdom, where rain was frequent, and at times heavy. Thunder and lightning occurred over nearly the whole of England and Wales on the 1st, in the east and south of England on the 6th, and at many of our northern stations at various times between the 17th and the 21st. Fog was very prevalent over England between the 26th and 28th. Pressure was slightly below the average in the north, but above it in the south; temperature was above the normal in most places; the winds were chiefly from the Westward or South-westward; rainfall was very deficient over England, but exceeded the average in many parts of Scotland and the north of Ireland; bright sunshine differed but little from the normal.

Pressure.—*Mean at 8 a.m.* ranged from 29.95 ins. and upwards in the Channel Islands, and from 29.90 ins. and upwards over the southern parts of the United Kingdom generally, to 29.75 ins. and less in the north of Scotland, and to a little below 29.70 ins. in the Shetlands. The general distribution agreed very closely with the normal, but as the mean values in the north were a trifle below the average,* while those in the south were a little above it, the gradient for Westerly and South-westerly winds was rather steeper than usual. *Highest* readings occurred very generally on the 31st, when the barometer rose to 30.6 ins. and upwards in the north-east of Scotland, and to 30.3 ins. and upwards in all other districts excepting the south of England. In the latter region the highest readings (30.3 ins. to 30.4 ins.) were recorded on the 26th or 27th. *Lowest* readings were observed on the 17th or 18th, when the barometer fell slightly below 29.0 ins. on our extreme north and north-west coasts, and below 29.4 ins. in all other parts of the Kingdom. *Range* was rather less than the normal for the time of year.

Depressions were fairly numerous, but were as a rule of no great depth. The principal cases occurred between the 5th and the 8th, when some large primary systems which advanced over Scandinavia from the westward were accompanied by secondaries moving south-eastward across our islands and the North Sea. On the 6th one of the latter class was developed over the north of England, the system afterwards becoming deep and moving firstly in an east-south-easterly direction to North Germany, afterwards north-eastwards to the Baltic, and finally in a north-north-westerly direction across Scandinavia. Another small secondary which passed south-eastwards across the north of Scotland and the North Sea on the night of the 8th travelled at the unusually rapid rate of about 42 miles per hour.

Anticyclones.—Three such systems were observed. The first advanced from the Atlantic over France and the south of our islands on the night of the 9th, but soon moved away to Northern Europe. The second spread in a similar way over the western countries on the 26th, and afterwards became united with another high pressure area hitherto existing over Central Russia, the combined system moving south-eastwards and dispersing after the 29th. The third advanced over the north of our islands from the northward on the 29th, and soon extended over all but the southern parts of Europe, its central area being situated at the close of the month over the south of Norway.

Winds were chiefly from the Westward or South-westward, a fair proportion of breezes from other quarters being, however, reported in the east and south of England. The number of gales varied greatly in different places, but was as a rule rather large; at Stornoway a gale occurred on as many as 10 days, and at Malin Head and Holyhead on 9 days.

Temperature.—*Mean at sea level* ranged from 55° and upwards in the Scilly Islands, and from 53° and upwards on the south and south-west coasts of Great Britain generally to 47° and less in small areas lying over the north of Ireland and the south-west of Scotland, and to 46° and less over central Scotland. The general distribution agreed very closely with the normal, but the actual values were above the average,* excepting at a few stations in Ireland and the west of Scotland, where a slight deficit was shown. *Highest* readings were recorded on rather irregular dates in Ireland, but mostly on the 1st or 2nd over Great Britain. Over the greater part of Ireland and Scotland the thermometer did not reach 65°, but at many of the English stations it exceeded 70°, the highest readings reported being 77° at Hillington and 75° in London. *Lowest* readings were recorded over Ireland mostly on the 16th, but over Great Britain on the 26th or 27th; frost was experienced on one or other of these dates at most of the northern and inland stations, the lowest readings reported being 23° at Braemar and 26° at Lairg, Nairn and Swarraton. *Range* was large, more than 40° at several of the English stations, and as much as 47° at Hillington. *Vapour Tension* ranged from 0.37 in. at Scilly and 0.32 in. and upwards on most parts of our west, south, and south-east coasts to 0.25 in. and less over the eastern, and apparently over the central parts of Scotland also. *Relative Humidity* varied from a little above 90 per cent. over the eastern and central parts of England and Ireland to 83 per cent. at Pembroke and Portland Bill, and to only 77 per cent. at Jersey.

Rainfall was in excess of the average* in most parts of Scotland, and also in the north of Ireland and at some places on the shores of the Irish Sea. Elsewhere there was a deficit, the amount at many of the English stations being less than half the average. The largest aggregates reported were 8.9 ins. at Glencarron, 8.8 ins. at Fort William, and 7.9 ins. at Laudale; the smallest being 0.9 in. at Dungeness, 1.2 ins. at Chester, Hereford, and Oxford, and 1.3 ins. at Loughborough. The number of days with rain was large in the west and extreme north; at Llandoverly and Edenfel (Omagh) there were as many as 29, and at Valencia 28 such occasions. Individual falls of great weight were, however, somewhat rare, the largest daily amounts reported being 1.8 ins. at Shields on the 21st, and 1.6 ins. at Glencarron and Fort William on the 28th.

Bright Sunshine varied greatly in amount in different localities. At most of our southern stations the duration was rather less than the average,* but at many places in the north there was a slight excess. The percentage of the possible amount ranged from 43 at Felixstowe and 35 and upwards on many parts of our south and east coasts to 20 at Newcastle-on-Tyne and to 19 at Fort William.

* The averages employed are—*Pressure and Temperature* for the 30 years 1871–1900; *Rainfall* for the 35 years 1866–1900; and *Bright Sunshine* for the 20 years 1881–1900. (The averages will be published shortly as an appendix to the "Weekly Weather Report.")