

OFFICIAL COPY.

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

OCTOBER 1890.

(Issued as a Supplement to the Weekly Weather Report, 1890.)

ISSUED BY THE METEOROLOGICAL OFFICE, 63, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; JOHN MENZIES & CO., 12, HANOVER
STREET, EDINBURGH, and 21, DRURY STREET, GLASGOW; AND HODGES, FIGGIS, & CO., 104, GRAFTON STREET, DUBLIN.

General Summary.—The weather of October was fair and dry in the early part of the month excepting in the west of Scotland, where exceedingly heavy rains fell during the first few days. Towards the middle of the period conditions became less settled, and at its close the weather was unusually cold for the time of year. Pressure and temperature were everywhere in excess of the average; the winds were mainly Westerly; rainfall was very deficient over England and the east of Ireland, slightly less than the average in the west of Ireland, but greatly in excess over the west of Scotland. The amount of bright sunshine, although deficient in the extreme west and north of the kingdom, was in excess over the south of England. Thunder and lightning occurred in various parts of the country about the middle of the month, and brilliant aurora was seen in Scotland.

Pressure.—*Mean for the month at 8 a.m.* varied from between 30·15 ins. and 30·20 ins. over the south of Ireland, the south-west of England, to a little below 29·75 ins. in the Shetlands, and was everywhere in excess of the average.* In the extreme north of Scotland the difference from the normal did not amount to more than 0·10 in. or 0·12 in., and in the Shetlands it was almost inappreciable, but over the south-western parts of the United Kingdom the values were more than 0·30 in. above the average. The mean gradient was therefore steeper than usual, and was in favour of winds from the northward rather than from the southward of west. *Highest* readings were recorded on the 22nd, when the barometer rose to between 30·40 ins. and 30·55 ins. in nearly all parts of the country. *Lowest* were observed very generally on the night of the 15th, when the barometer fell to about 29·0 ins. in the north of Scotland, but in other parts of the kingdom the minimum was not so low. *Range* was rather large in the extreme north, moderate elsewhere.

Depressions.—Numerous depressions, of considerable size and depth, advanced over Scandinavia from the westward or north-westward, and in many cases the systems spread southwards over the North Sea to our eastern coasts, the most striking instance of this kind occurring between the 15th and 18th. At the very commencement, and also at the extreme end of the month, the centre of a well-marked, though somewhat shallow, depression travelled eastwards directly across Scotland.

Anticyclones.—Several such systems were observed. In the majority of cases the anticyclones advanced over our Islands from the westward, and afterwards moved away in a southerly direction, but on the 12th and 13th a large system spread northwards from France. In no case did the anticyclone continue in the neighbourhood of our Islands for more than three or four days at a time.

Winds were chiefly from the Westward, but in the extreme north of Scotland there was a fair proportion of Northerly breezes, while at Scilly and Jersey there were frequent instances in which the wind was North-easterly or Easterly. Gales were rather numerous, excepting on our southern coasts; at Spurn Head there were 9, at Mullaghmore 12, and at Stornoway 13.

Temperature.—*Mean at Sea Level* varied from between 54° and 55° on our extreme south-west coasts to a little below 50° over South Wales, the northern and eastern parts of England, and some parts of central Ireland, and to a little below 47° in the Shetland Islands. Its relative distribution was fairly normal, but the actual values were in all cases above the average,* the excess ranging in most cases from one to two degrees. In the central and south-eastern parts of Scotland, however, it amounted to about three degrees. *Highest* values were recorded at various times during the earlier part of the month; in the majority of places they occurred between the 9th and 13th. *Lowest* were observed very generally on the 27th or 28th, when sharp frost occurred in nearly all parts of the kingdom. The minima over England were the lowest recorded in October for very many years past; at Loughborough the thermometer fell to 20°, at Newton Reigny to 21°, and at Hawes Junction and Strathfield Turgiss to 22°. *Range* was large, especially at the inland stations: viz., 49° at Loughborough, 47° at Rothamsted, 46° at Oxford, and 45° at Bawtry and Strathfield Turgiss. *Vapour Tension* ranged from 0·28 in., or less over the north and east of Scotland and the central parts of England, and 0·30 in. over central Ireland to between 0·38 in. and 0·40 in. in our extreme south-west coasts. *Relative Humidity* was below 85 per cent. on the north-east coasts of Great Britain and also over North Wales and the south-east of Ireland. At Donaghadee and Scilly, however, the per-centage was as high as 92°, at Hurst Castle 93°, and at Stornoway 96°.

Rainfall was less than an inch and a half over the east of Ireland, and over the greater part of England, the lowest values of all being 0·6 in. at Dublin, 0·7 in. at Scilly, and 0·9 in. at Bawtry. On the west coast of Ireland there were more than 4 ins., while in the west of Scotland, where an exceedingly heavy fall occurred at the commencement of the month, the amounts were considerably over 12 ins. At Glencarron, where the aggregate quantity was no less than 23·1 ins., the rainfall of the 2nd amounted to 5·9 ins., a fall of 3·5 ins. being marked on the same day at Fort William. In comparison with the average* the values showed a marked deficiency over Ireland and England, but a considerable excess in the west of Scotland, and a less decided excess in the northern and eastern parts of that country. Over England the amounts were in most cases less than half the average.

Bright Sunshine was very deficient in the extreme west and north, the per-centage of the possible amount of duration being as low as 14 at Fort Augustus, 17 at Fort William, 18 at Stornoway, and 21 at Glasgow and Markree Castle. Over the southern and eastern parts of England, however, more than 40 per cent of the possible quantity was recorded, the highest values of all being 50 at Geldeston and 44 at Rothamsted.

* The averages employed are—*Pressure and Temperature* for the 20 years, 1861–80; *Rainfall* for the 20 years, 1866–85.