

SUMMARY OF OBSERVATIONS.

OCTOBER, 1902.

General Summary.—The weather of October was mostly cloudy and changeable, especially around the middle of the month, when gales and heavy rains occurred in nearly all districts. Thunder and lightning were reported in several parts of England on the 5th, in the south of Ireland on the 7th, in the Scilly and Channel Islands on the 9th, and over our eastern, central, and southern counties on the 14th. On the last-mentioned date a shock of earthquake was experienced at Laudale (Loch Sunart). Pressure and temperature were above the mean; the winds were rather variable in the south, but mainly from some Westerly point in the north; rainfall was considerably less than the average in most places; bright sunshine was very deficient excepting in the north of Scotland.

Pressure.—*Mean at 8 a.m.* ranged from 30·0 ins. and upwards in the extreme south of Ireland and also in the Channel Islands to 29·85 ins., and less in the north of Scotland. The actual values were in all cases above the average,* and as the excess was somewhat greater in Ireland than in Great Britain the distribution of pressure was favourable for winds from the northward, rather than from the southward, of West, as is usually the case in October. *Highest* readings occurred, as a rule, on the 24th or 25th, when the barometer rose to 30·5 ins. and upwards in the south of England, and to 30·3 ins. and upwards in all other parts of the United Kingdom. In the Shetlands, however, and the north-east of Scotland the highest readings, 30·4 ins. and upwards, were recorded on the 2nd. *Lowest* readings occurred over the country generally during the passage of a deep cyclonic system on the 15th, when the barometer fell to 28·6 ins. and less in the north of Scotland, to 29·0 ins. and less over the northern parts of the United Kingdom generally, and to 29·5 ins. and less on all but our extreme southern coasts. In the last-mentioned district the minimum values, 29·2 ins. to 29·5 ins., were registered on the 10th. *Range* was moderate in the south but rather large in the north.

Depressions were not especially numerous for the time of year, and were, as a rule, of little intensity. The most important disturbance was observed on the 15th and 16th, the centre in this case moving in an east-north-easterly direction across the north of Scotland, the North Sea, and the south of Scandinavia, and thence very slowly to Western Russia, where the system appears to have dispersed.

Anticyclones.—During the first few days of the month a large anticyclone covered nearly the whole of our islands, the central portion of the system lying at first to the northward of Scotland, but afterwards moving south-eastwards to Western and Southern Russia, the final disappearance of the system from our neighbourhood taking place on the 5th. On the 11th and 12th another high pressure area extended from Spain over a considerable portion of Western Europe, but soon moved away to the southward. On the 21st a large anticyclone spread from the Atlantic over all our more southern districts, and, temporarily, on the 25th over the entire kingdom, after which the system broke up, one portion moving away to the Atlantic and the other to Eastern Europe. Shortly afterwards, *i.e.*, on the 27th, another high pressure area extended over us from the southward, the system moving eastwards on the 29th, but being reinforced on the following day by a new area which came in from the Atlantic. At the close of the month the combined system was drifting away to Southern Europe.

Winds showed considerable variability in the south, but were mainly from some Westerly quarter (South-west to North-west) in the north. On the more exposed parts of the English and Irish coasts gales were rather numerous; at Malin Head and Plymouth they occurred on as many as nine days. In Scotland, however, the weather was somewhat quieter, and over the kingdom generally the gales experienced were less violent than in many recent Octobers.

Temperature.—*Mean at sea level* ranged from between 54° and 55° in the Scilly and Channel Islands, and from 52° and upwards on our south-west coasts generally, to between 46° and 47° over the central and north-eastern parts of Scotland, the general distribution over the United Kingdom being in fair agreement with the normal. Over eastern and central Scotland and on the south-east coasts of England the mean values were slightly below the average,* but in all other localities they were above it, the excess being greatest (between two and two-and-a-half degrees) at some stations in the south of Ireland. *Highest* readings occurred over England mostly on the 10th or 13th, but in Ireland and Scotland at varying times, chiefly in the opening or closing weeks. Over the kingdom generally the thermometer did not rise much above 60°, but at several places in the south and east of England it reached or slightly exceeded 65°, the highest reading reported being 67° in London and at Southampton. *Lowest* readings were registered at very irregular times and varied greatly in different places; frost occurred at many inland stations, the lowest temperatures recorded in the screen being 22° at Braemar, 25° at Newton Reigny, and 26° at Lairg. *Range* was generally rather small for the time of year. *Vapour Pressure* varied between 0·33 in. and 0·35 in. on the west and south coasts of Great Britain, whence it decreased to a little below 0·26 in. in the east of Scotland. *Relative Humidity* varied greatly in different places, but was, as a rule, somewhat large, the percentage values exceeding 90 in many parts of the kingdom and reaching 94 at Dungeness and 95 at Stornoway.

Rainfall was considerably less than the average* over the United Kingdom generally (less than half at some stations in the eastern parts both of Great Britain and Ireland and also in the South of Scotland), but showed an excess at a few isolated places in the north and north-west. The largest aggregates reported were 10·3 ins. at Glencarron, 8·7 ins. at Fort William, and 8·4 ins. at Laudale; the smallest being 0·9 in. at Leith, 1·1 in. at Yarmouth and Cambridge, and 1·2 in. at Donaghadee and Hollesley Bay. Although the total amount was small, the number of days with rain was in many places in excess of the average,* more than 20 being reported not only in Ireland and Scotland, where such numbers are usual in the autumn and winter months, but also in several parts of England. Falls exceeding an inch in 24 hours were recorded at some of the English stations on the 9th and 13th, and in the west and north-west of Scotland on the 14th, 15th, and 23rd, the largest daily amount reported being 2·7 ins. at Glencarron on the 15th.

Bright Sunshine was very deficient in all districts excepting the north of Scotland, where the amount was in excess of the average.* The percentage of the possible duration ranged from 35 at Jersey, and 30 or more at several stations in the north and north-east of Scotland, to 20 or less in many parts of England, and to only 13 in London and at Birmingham and Port Talbot.

* 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. See appendix III. "Weekly Weather Report," 1901.