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SUMMARY OF OBSERVATIONS COMPILED FROM RETURNS OF OFFICIAL STATIONS AND VOLUNTEER OBSERVERS

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February, 1948—Mild and unsettled until the 14th; cold 17th-27th.

The unsettled, stormy weather experienced throughout January was maintained during the first half of February. Subsequently cold, mainly anticyclonic conditions set in and persisted until nearly the end of the month. Widespread snow occurred from the 18th-22nd, being most considerable in the south-east on the 20th-21st.

During the opening days an intense depression moved north-east from mid-Atlantic to south-west Iceland; rain occurred fairly generally over the British Isles and gales were widely reported on the 1st and 2nd, while thunderstorms were recorded locally on the 2nd and 3rd. Later, the depression moved away east and then north and filled. On the 5th another depression moved rapidly north-east to the south of Iceland, while a trough of low pressure crossed the British Isles, giving general rain, and a gale locally in Scotland. This was the forerunner of a whole series of Atlantic depressions which moved across the north of Scotland during the ensuing days. Mild, unsettled weather prevailed; gales occurred at times at exposed stations, while the gale on the 8th-9th was widespread and severe locally. On the 13th a small depression moved east-south-east across England and Wales.

A change of type set in on the 15th when a ridge of high pressure developed over the British Isles. Subsequently an anticyclone was centred over southern Scandinavia and an extension covered the British Isles. Thus a cold air stream from north-east Europe brought cold, mainly fair weather to this country. On the 20th a cold front moved west over England and Ireland and was associated with widespread snow. Further small secondaries or troughs moving westward over our southern districts on the 21st brought more snow to the south. By the 23rd a large anticyclone was centred on the Atlantic, south-west of Iceland; during the ensuing days this system moved slowly east-south-east and cold, fair weather prevailed until the 27th. On that day the main centre was situated over Austria and a ridge extended to south Scandinavia; meanwhile a trough of low pressure off our south-west coasts drifted slowly north-east. Rain occurred locally in the south-west on the 27th and some very small amounts of rain were reported on the 28th. The closing day of the month was fair in many places, but fog was rather widespread and was thick and somewhat persistent locally; at many places in England and Wales it was very warm.

Pressure and Wind.—Mean pressure considerably exceeded the average, the excess being greatest in the north; at 9h. the deviation ranged from +9.3 mb. at Lerwick to +6.1 mb. at Scilly. The wind direction was mainly south-west to west during the first half of the month and north-east to east during the second half. Local gales were reported daily from the 1st-10th, on the 19th-21st and 25th-26th. The gale on the 8th-9th was widespread and severe. Among the highest speeds registered in gusts were 80 m.p.h. at Edinburgh on the 1st, 85 m.p.h. at Bell Rock on the 8th, and 87 m.p.h. at Renfrew and 95 m.p.h. at Durham on the 9th.

Temperature.—Mean temperature slightly exceeded the average over the month as a whole, the deviation from the average being +0.8°F. in England and Wales, +0.6°F. in Scotland and +0.5°F. in Northern Ireland. The first half of the month was very mild, but temperature fell on the 16th and remained low until the 27th. The coldest spell occurred roughly from the 19th-22nd; in many parts of southern England temperature remained continuously below freezing point on the 20th and 21st. Day temperature rose considerably in the

south on the last two days, though the nights continued rather cold. At many places in the southern half of England temperature rose to 60°F. or above on the 29th.

The extremes for the month were:— (England and Wales) 64°F. at Milford, Surrey, on the 29th, 5°F. at East Malling on the 22nd; (Scotland) 55°F. at Dunoon, Benmore, on the 8th, 15°F. at Balmoral on the 27th and Glenlivet on the 29th; (Northern Ireland) 57°F. at Ballykelly on the 8th, 23°F. at Ballykelly on the 28th.

Precipitation.—The general precipitation expressed as a percentage of the average for the period 1881-1915 was 73 over England and Wales, 109 over Scotland and 81 over Northern Ireland. More than the average occurred over an area covering most of central, western and southern Scotland and extending southward over much of the Pennines. The average was slightly exceeded also in the extreme north of Scotland, in a small area over the Thames Estuary and west Kent, and locally in Merioneth. More than 150 per cent. was received in an area in central Scotland. Less than 50 per cent. of the average occurred in a coastal belt in east Aberdeenshire and in scattered areas of England south of a line from the Wash to the Bristol Channel.

Among the heavier falls in 24 hours were:—

- 1st 2.75 in. at Kinlochleven (Inverness-shire) and 2.66 in. at Kingairloch (Argyllshire).
- 7th 2.49 in. at Bala (Merioneth).
- 8th 2.97 in. at Bala and 2.50 in. at Kinlochquoich (Inverness-shire).

Thunderstorms occurred at times, mainly on the 2nd-3rd and 6th.

Snow and sleet showers were widespread in Scotland during the last part of the month, local falls of snow up to 2 in. in depth being reported. Snow was widespread in England and Wales on the 20th-22nd, and the falls were heaviest in the south-east. At 9h. on the 22nd level snow was 14 in. at Biggin Hill, 11½ in. at Wilmington (Kent), 10 in. at Croydon and 9 in. at Bexhill and Bromley. Level snow was more than 6 in. deep at Guernsey and 2 in. deep even at Scilly. The easterly winds were strong locally, and drifts 3 to 4 ft. were reported at Hampstead.

Sunshine.—The duration of bright sunshine expressed as a percentage of the average was 96 over both England and Wales and Scotland, and 83 over Northern Ireland (see Table I). In Scotland, it was dull in eastern districts south of Peterhead, throughout the Great Glen and in the Shetlands, but elsewhere it was generally sunnier than usual. In England and Wales, broadly speaking, sunshine exceeded the average in an area extending across Monmouthshire, the Cotswolds and the Chilterns, locally in Kent, on the north-west coasts of Devon and Cornwall, and the borders of the Bristol Channel and Cardigan Bay. On the other hand it was dull over much of the northern half of England and on the south coast of Devon and Cornwall. The last week was the sunniest in most areas.

Fog.—Fog developed at times, mainly on the 8th, 13th-15th, 20th-22nd and 27th-29th. It was most considerable from the 13th-15th and 28th-29th.

Miscellaneous Phenomena.—The aurora was observed from northern stations in Scotland on nine nights. Solar halos were noted at Oxford on ten days.