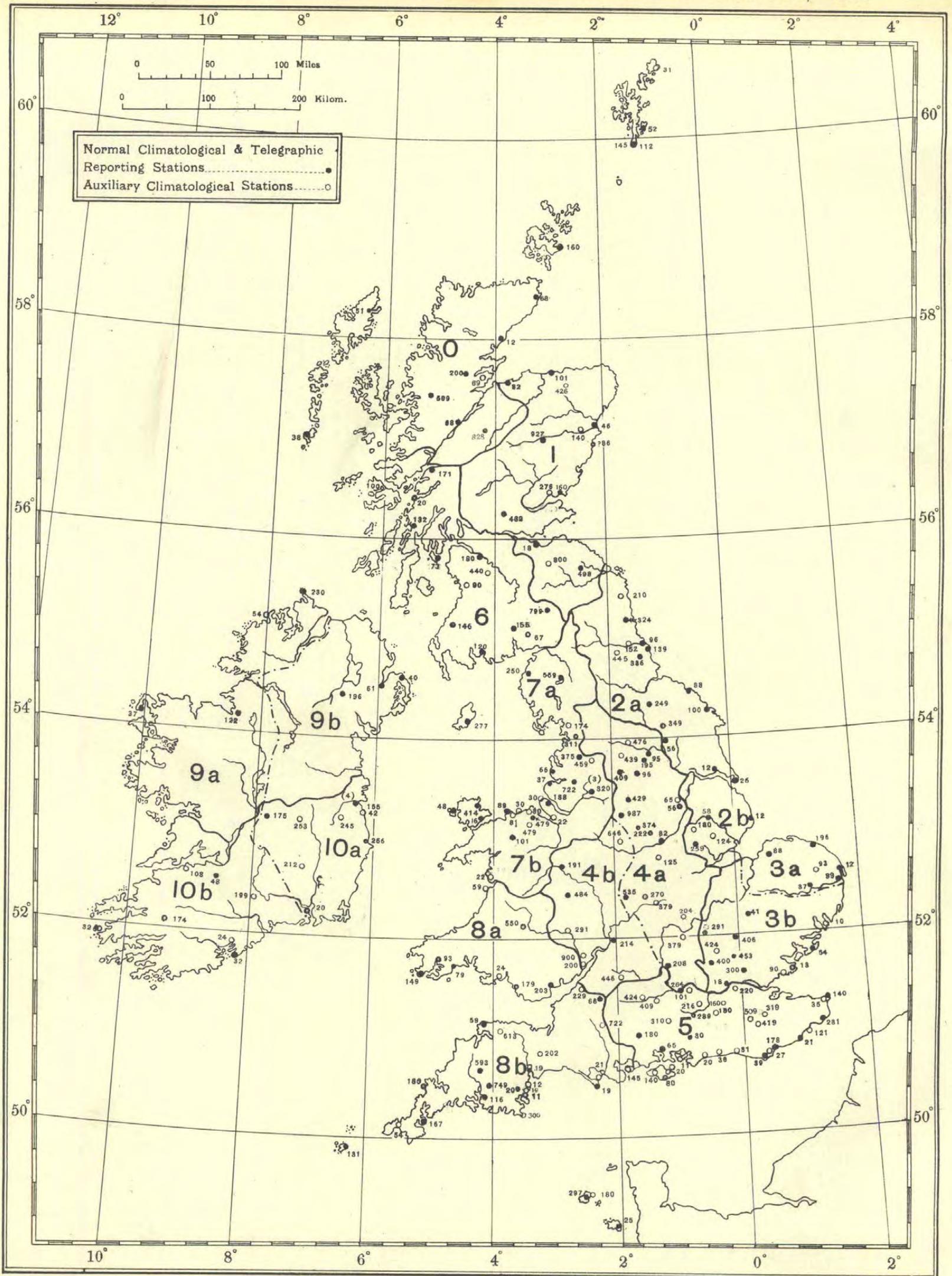


M-1911

MONTHLY WEATHER REPORT, POSITIONS AND HEIGHTS OF STATIONS, 1911.



Scale 1:5,000,000.

The heights of the stations above Mean Sea Level are inserted against the positions, and will serve to identify the names of the stations as given in the List of Stations on pp. IV. and V.

FOR OFFICIAL USE.

THE  
MONTHLY WEATHER REPORT

OF THE  
METEOROLOGICAL OFFICE

FOR THE YEAR

1911

ISSUED AS A SUPPLEMENT TO THE

WEEKLY WEATHER REPORT

(VOL XXVIII.-NEW SERIES)

AND FORMING

PART II. OF THE BRITISH METEOROLOGICAL AND MAGNETIC  
YEAR BOOK, 1911.

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Published by the Authority of the Meteorological Committee.

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## PREFACE

The Monthly Weather Report is issued as a supplement to the Weekly Weather Report and is included in the subscription to the latter. The Report gives a complete resumé of the observations dealt with each month at the Meteorological Office, and takes the place of the summaries printed up to the end of 1907 in Parts II. and III. of the annual volumes of "Observations at Stations of the Second Order" as well as the old "Monthly Summary" to the Weekly Weather Report. Monthly Summaries for a number of additional stations will be found in the "Meteorological Record" issued by the Royal Meteorological Society or in the Journal of the Scottish Meteorological Society. The summaries given in the latter are also printed in the Quarterly Reports of the Registrar General for Scotland. The Meteorological data in the Quarterly Reports of the Registrar General for England and Wales and for Ireland are abstracted from the Monthly Weather Report. Additional information as to rainfall is to be found in the annual volumes of "British Rainfall."

### MONTHLY SUMMARIES FOR YEARS 1869 TO 1910.

Monthly summaries of observations made at stations in connexion with the Meteorological Office were first published in 1869 in the "Quarterly Weather Report," a publication issued for each of the years 1869 to 1880.

**Stations of the Second Order.** (*Normal Climatological Stations*). A permanent Meteorological Committee was appointed by the Congress of Official Delegates which met in Vienna in 1873, and at a meeting held in Utrecht in 1874 prescribed an international form for the publication of observations from Stations of the Second Order. Summaries in this form have been published for each year from 1873 to 1907 in the annual volumes of "Observations at Stations of the Second Order." For the years 1873 to 1876 these volumes formed an appendix to the "Quarterly Weather Report." For the years 1876 to 1880 inclusive the summaries were printed month by month in the Quarterly Report, and also in the annual volumes referred to above. The summaries since 1908 have been printed in the Monthly Weather Reports.

**Telegraphic Reporting Stations.** Summaries of the observations at the hour of morning observation (8 a.m. G.M.T.) at these stations were published in international form for the years 1876 to 1880 inclusive in the "Quarterly Weather Report." The corresponding summaries for the years 1881 to 1883 (inclusive) have not been issued. For the years 1884 to 1887 the summaries were printed in the "Monthly Weather Report," which also contains abridged summaries for the remaining stations included in the Weekly Weather Report. In 1888 the Monthly Weather Report was merged in the Weekly Weather Report to which it formed a supplement (Monthly Summary). The scope of this supplement has been successively enlarged. In 1902 full summaries for a few normal climatological stations were added. In the following year, 1903, an annual summary was issued for the first time. In 1906 the form was extended so as to include both the morning and the evening observations, and a column was added giving for each month the number of days of fog. At the close of 1907 the publication included results for all stations in connexion with the Office, either directly or through the Royal Meteorological Society or the Scottish Meteorological Society, for which monthly summaries are prepared. In the same year the title "Monthly Weather Report" was revived.

The observations on which these statistics are based have been carried out on a uniform plan, and the results form a homogeneous series as far as that is possible. Particulars of the methods adopted in taking the observations are given in the "Observer's Handbook." Attention is here drawn to the fact that a change was made at the commencement of 1906 in the method of computing the number of days of gale. Up to the end of 1905 wind-force 7 on the Beaufort scale was regarded as the lower limit for a "gale" but in January, 1906, when a revised scale of velocity equivalents of the Beaufort numbers was brought into use, force 8 was adopted for this limit in order to bring the results into conformity with the uninterrupted practice of the Office in relation to the service of storm warnings. At stations for which summaries are supplied by the Royal Meteorological Society (marked  $\mathcal{M}$  in the reports) the number of days of gale are computed with reference to force 8, but the results are based on observations at 9 a.m. and 9 p.m. only, whereas at other stations a "day of gale" is one on which a wind of force 8 or above occurred at any time during the 24 hours. Another break in continuity was introduced by the change in the hour of morning observations from 8 a.m. G.M.T. to 7 a.m. at telegraphic reporting stations on July 1st, 1908. At normal climatological stations the hours 9 a.m. and 9 p.m. have been adhered to.

### THE MONTHLY WEATHER REPORT FOR 1911.

**Additional Observations in the early Afternoon.** Advantage was taken of the change in the hour of observing at telegraphic reporting stations from 8 a.m. to 7 a.m., referred to in the Report for 1908, to arrange for regular observations at 7 a.m., 1 p.m., and 9 p.m., at a number of these stations. This combination of hours is among those recognised by the Committee appointed by the Congress of Vienna as suitable for use at stations of the second order. Space has been provided in the Reports since 1909 for summaries of the observations taken at

these three epochs. In view of the importance of an observation in the early afternoon for the adequate representation of an element such as humidity which exhibits conspicuous diurnal variations, summaries of the observations taken at 1 p.m. at those telegraphic reporting stations at which there was difficulty in arranging for an observation at 9 p.m. are also printed. The hours of observation at these stations are accordingly 7 a.m., 1 p.m., and 6 p.m. The observers at several normal climatological stations have co-operated in the endeavour to give a more adequate representation of the distribution of humidity by contributing observations at 3 p.m., the hour associated by international convention with 9 a.m. and 9 p.m. Summaries of these observations are also printed. The type used for the names of stations in the tables given in the Reports, indicates the hours at which observations are taken in accordance with the system explained in the notes of each issue.

**Wind Summaries.** The additional observation gave rise to some difficulty in connexion with the arrangement of the summaries of wind. For some stations there are three observations each day, for others only two, while for a few stations there is only one. In years previous to 1909 it was customary to multiply by two the figures giving the number of observations of calm and of wind from each of eight principal points for those stations at which only one observation per day is taken. This manipulation of the figures rendered the results for the whole set of stations approximately comparable. In the reports for the years 1909, 1910 it was adhered to in the case of stations reporting through the Scottish Meteorological Society (marked S), but no attempt was made to "weight" the figures for English or Irish stations, and accordingly the sum of the numbers of calms and of winds from each of the eight directions was 93, 62, or 31 for months of 31 days, according as observations are taken three times, twice, or once a day, and similarly for other months. Reduction to an approximately comparable basis could be effected by dividing by 3, 2, or 1, according to the number of observations.

This method had certain practical disadvantages and for the current year all the observations have been reduced to a comparable basis. The total of the published numbers per month for every station is 93, or 90 (84 for February) *i.e.*, the actual numbers for stations observing only once a day have been multiplied by 3, for stations observing twice a day by 3/2. The method has the additional advantage that the published numbers are approximate percentages.

**Correction of Barometer readings for Diurnal Range.** The readings of the barometer quoted in the tables are the means of observations at 9 a.m. and 9 p.m., 7 a.m., 1 p.m., and 9 p.m., or 7 a.m. and 6 p.m., respectively. The figures shown in the column headed "C. Correction for Diurnal Range," gives the amount of the correction required to reduce to the true mean for 24 hours. They are based on the harmonic analysis of the hourly averages for the 35 years, 1871-1905, for the four observatories: Valencia, Aberdeen, Falmouth, Kew. As a general rule, only the corrections due to the second harmonic component are applied, as those for other components either vanish or are very small for the combinations of hours used in the Reports. The only exception is in the case of the correction applied during December, January, and February, to the combination 7 a.m., 1 p.m., 9 p.m. During these months the correction due to the third component is opposite in sign and approximately equal in magnitude to that due to the second component, and hence the whole correction may be taken as zero.

#### GENERAL ARRANGEMENT OF THE REPORT.

The arrangement of each issue of the Report is as follows:—

- I. General remarks on the Weather over the British Islands.
- II. Summaries, in international form, of observations made at normal climatological stations at 9 a.m. [3 p.m.], and 9 p.m., and at telegraphic reporting stations at 7 a.m., 1 p.m., and 9 p.m., or at 7 a.m., [1 p.m.] and 6 p.m. The international form has been extended to include information regarding the duration of bright sunshine, earth temperature at 1 foot and 4 feet (from 1906), the number of observations of fresh or strong winds (forces 4-7 of the Beaufort Scale, from 1906), the number of days of fog (from 1906), and of ground frost (minimum temperatures on the grass, 30° and below, from 1908). Summaries for districts, based on observations at the stations of the Weekly Weather Report are given for the elements dealt with in that Report.
- III. Abridged summaries of extremes of temperature, rainfall, sunshine, earth temperatures, and grass minimum temperatures for auxiliary climatological stations.
- IV. A plate of four maps showing:—
  - i. The monthly distribution of pressure and winds based on the morning observations at telegraphic reporting stations; also the average distribution of pressure for the month for the period 1871-1905.
  - ii. The movements of depressions.
  - iii. The distribution of mean temperature over the land and in the coastal waters.
  - iv. The distribution of bright sunshine. This map was added for the first time in the issue for 1908.
- V. A full page map showing by means of isohyetal lines the distribution of the month's precipitation. These maps are prepared by Dr. H. R. Mill, the Director of the British Rainfall Organization, and are based on data from nearly 1,000 stations.

LIST OF STATIONS.

The Stations included in the Monthly Report and in the Weekly Weather Report are shown in the following list, arranged under the Districts. The positions of the stations may be identified on the accompanying map by the numbers which give their heights in feet above the Mean Sea Level.

*Height above Mean Sea Level.*—The figures given in this column refer, in general, to the height of the ground on which the rain gauge stands. At Sunshine Stations which do not possess a rain gauge, the height refers to the sunshine recorder.

*Nature of Information published.*—The character of the information given for each station is indicated by the following symbols :—

- W. Weekly Weather Report. Temperature and rainfall data.
- ☉ Bright Sunshine data.
- M. Monthly Weather Report. Full summary in the international form.
- m. Monthly Weather Report. Abridged summary of temperature and rainfall.

*Average Values.*—Reference is made to Publications of the Office containing average values for long periods by means of the following letters :—

- a. Appendix III. of the Weekly Weather Report for 1906. Monthly averages of mean maximum, mean minimum and mean temperature, and of rainfall for the 35 years 1871-1905 and (when available) of bright sunshine for the twenty-five years 1881-1905.
- b. Appendix I. to the volume of "Meteorological Observations at Stations of the Second Order" for 1891. Monthly averages for all elements for the fifteen years 1876-1890.
- c. "Temperature Tables of the British Islands," 1871-1900. Monthly average of mean maximum, mean minimum and mean temperature generally for the thirty years 1871-1900, together with information on the extremes of temperature in the same period.
- d. "Rainfall tables of the British Islands," Part I., 1866-80, Part II., 1880-90. Monthly averages of rainfall for lustra and for the periods named.

*Royal Observatory, Greenwich.*—The averages for Temperature and Rainfall, with which the current values are compared, are for the 65 years 1841-1905. The averages for sunshine are for the period 1897-1911.

*Radcliffe Observatory, Oxford.*—The averages with which the figures given in the second line are compared, are for the 54 years 1855-1908 in the case of pressure, and for the 94 years 1815-1908 in that of rainfall. The values for the current months given in this second line are the means of observations at 8 a.m., Noon, and 8 p.m., reduced to mean daily values by the application of monthly corrections based on observations during the period 1880-1887. The value given under the heading "Cloud" is the mean of observations at 8 a.m., Noon, and 8 p.m. The total rainfall and the maximum rainfall in a day are taken from the daily readings of the self-recording rain gauge, which correspond to the civil day ending at midnight.

*Meteorological Societies.*—Data for stations marked **M** are supplied by the Royal Meteorological Society, and for stations marked **S** by the Scottish Meteorological Society. Stations marked M or S are in connection with one or other of the Societies as well as with the Office.

Stations.	Height in feet above M.S.L.	Character of information published.	Averages.	Stations.	Height in feet above M.S.L.	Character of information published.	Averages.
<b>O. SCOTLAND, N.</b>				<b>1. SCOTLAND, E.</b>			
<i>a. Islands.</i>							
<i>b. Mainland.</i>							
Baltasound - - - - -	S 31	W, ☉, m.	—	Aberdeen - - - - -	46	W, ☉, M.	<b>a, c.</b>
Castlebay, Barra Island - - - - -	38	W, ☉, M.	—	Balmoral - - - - -	927	W, M.	—
Deerness - - - - -	S 160	☉, M.	<b>a, b, c.</b>	Balruddery - - - - -	276	☉, m.	—
Stornoway - - - - -	51	W, ☉, M.	<b>a, c.</b>	Crathes - - - - -	140	☉, m.	—
Sumburgh Head - - - - -	112	W, M.	<b>a, c.</b>	Crieff - - - - -	432	W, M.	—
Lerwick - - - - -	52	W, M.	—	Dundee - - - - -	160	M.	<b>c, d.</b>
Dunrobin Castle - - - - -	\$ 12	M.	<b>c, d.</b>	Gordon Castle - - - - -	101	W, ☉, M.	<b>c, d.</b>
Fort Augustus - - - - -	\$ 68	W, ☉, M.	<b>a, c.</b>	Leith - - - - -	18	W, M.	<b>a, c.</b>
Fort William - - - - -	\$ 171	W, M.	<b>a, c.</b>	Marchmont - - - - -	498	W, ☉, M.	<b>a, c.</b>
Glencarron - - - - -	\$ 500	W, M.	<b>a, c.</b>	Nairn - - - - -	82	W, ☉, M.	<b>a, c.</b>
Kingussie - - - - -	\$ 828	M.	—	Stonehaven - - - - -	? 86	☉, m.	—
Strathpeffer Sp. - - - - -	\$ 200	W, ☉, M.	<b>a.</b>	West Linton - - - - -	S 800	W, ☉, m.	—
Wick - - - - -	68	W, M.	<b>a, c.</b>				
Fortrose - - - - -	69	☉, m.	—				
Insch - - - - -	426	☉, m.	—				
Dunrossness - - - - -	145	m.	—				



Station.	Height in feet above M.S.L.	Character of information published.	Averages.	Station.	Height in feet above M.S.L.	Character of information published.	Averages.
<b>(b) NORTH WALES.</b>				<b>9. IRELAND, N.</b>			
Aberdovey	22	⊙, m.	—	a. Western.			
Bettws-y-Coed*	150	W, ⊙, M.	—	b. Eastern.			
Colwyn Bay	82	⊙, m.	—	Blacksod Point	37	W, M.	a.
Dwyran†	16	M.	—	Dunfanaghy	54	m.	—
Holyhead	48	W, M.	a, c.	Malin Head	230	W, M.	a, c.
Llandudno	89	W, ⊙, M.	a, b, c, d.	Markree Castle	122	W, ⊙, M.	a, b, c.
Llanegrad	414	M.	—	Armagh	196	W, ⊙, M.	a, c, d.
Rhyl	30	⊙, m.	a.	Belfast	61	⊙, M.	a, d.
St. Asaph (St. Beuno's, Coll.)	479	m.	—	Donaghadee	40	W, M.	a, c.
<b>8. a. SOUTH WALES.</b>				<b>10. IRELAND, S.</b>			
<b>b. ENGLAND, S.W.</b>				<b>a. Eastern.</b>			
Aberystwyth	59	⊙, m.	—	b. Western.			
Cardiff	203	W, ⊙, M.	a, d.	Clongowes Wood College	245	⊙, m.	—
Haverfordwest	93	⊙	—	Dublin, City	47	W, M.	a, b, c.
Llangammarch Wells	550	W, ⊙, M.	a.	" Trinity College	12	⊙, M.	—
Pembroke (St. Ann's Head)	149	W, ⊙, M.	a, c.	" Phoenix Park	155	⊙, M.	a, c.
Port Talbot	179	⊙	—	" Glasnevin	67	m.	a, c.
Swansea	24	⊙, m.	—	Newcastle, Co. Wicklow	256	m.	—
Tenby	79	⊙	a.	Kilkenny	212	W, m.	a, c.
Arlington	613	W, m.	a, c.	Kingstown	42	⊙, m.	—
Clifton (Bristol)	229	W, ⊙, m.	a, d.	Mountmellick	253	m.	—
Cullompton	202	W, ⊙, m.	a, c.	Waterford	20	W, m.	a.
Falmouth	167	W, ⊙, M.	a, c.	Ballinacurra	24	⊙, m.	—
Forest of Dean	200	m.	—	Birr Castle	175	W, ⊙, M.	a, b, c.
" "	900	⊙, m.	—	Cahir	199	W, m.	—
Fowey	51	⊙, m.	—	Foynes	108	W, m.	a, c.
Newquay	189	⊙, M.	a, d.	Killarney	174	W, m.	a, c.
Paignton	11	⊙, m.	—	Limerick	48	M.	—
Penzance	54	⊙, m.	d.	Roche's Point	32	W, M.	a, c.
Plymouth	116	W, ⊙, M.	a, c.	Valencia	32	W, ⊙, M.	a, c.
Portland Bill	19	W, M.	—	<b>11. ENGLISH CHANNEL.</b>			
Salcombe	300	⊙	—	Guernsey (Villa Carey)	180	W, ⊙, m.	a.
Shaftesbury	722	W, m.	a, d.	" Brooklyn	297	⊙, M.	a, c.
Sheepstor	749	m.	—	Jersey (St. Aubin's)	25	W, M.	a, c.
Teignmouth	19	⊙, m.	—	" (St. Helier's)	—	⊙.	a.
Torquay	12	⊙	a, d.	Scilly	131	W, ⊙, M.	a, c.
Weymouth	21	⊙, m.	—				
Whitchurch	593	M.	—				
Woolacombe	59	⊙, M.	a.				

\* The thermometer screen stands on ground 100 ft. above M.S.L.

† Dwyran took the place of Llaneugrad in July.

THE following is a LIST of the VOLUNTEER OBSERVERS to whom the Committee are indebted for observations contributed to the Monthly Weather Report during 1911, together with the NAMES of their STATIONS:—

Names of Stations.	Names of Observers.	Names of Stations.	Names of Observers.
Aberdovey	W. J. Eves.	Bradford	H. Lander, for the Corporation.
Aberystwyth	A. Thomas, M.D., for the District Council.	Brighton	D. Forbes, M.D., for the Corporation.
Alnwick Castle	Robert Kyle, for the Duke of Northumberland, K.G.	Broadstairs	Howard Hurd, C.E., for the District Council.
Ampleforth	Rev. R. C. Hesketh, O.S.B.	Bucklebury	J. W. Harris, for A. W. Sutton.
Arlington (N. Devon)	Miss Chichester.	Burnley	Thos. Holt, M.D., for the Corporation.
Armagh	J. L. E. Dreyer, Ph.D., and Staff of Observatory.	Buxton	W. Pilkington.
Aspatia	J. Smith Hill, B.A., B.Sc.	Cahir	R. W. Smith, Junr.
Ballinacurra	John H. Bennett.	Cally Gatehouse	W. Thomson, for Col. F. Murray, Baillie.
Balmoral	J. M. Troup, for J. Michie, M.V.O.	Cambridge	R. Irwin Lynch, M.A., for the Botanic Garden Syndicate.
Balruddery	G. Davie, for J. White.	Cardiff	E. Walford, M.D., for the Corporation.
Baltasound	T. Edmonston Saxby F.R.C.S., Ed.	Carnforth	W. Farrer.
Basingstoke	A. M. Pitkin, F.R.G.S.	Cheadle	Col. B. H. Philips.
Bath	W. H. Symons, M.D., for the Corporation.	Cheltenham	A. C. Saxby, for the Corporation.
Bawtry (Hesley Hall)	B. I. Whitaker, J.P.	Chopwellwood	J. F. Annand.
Belfast	J. Wylie, B.A., and G. Robinson, for Prof. Morton.	Girencester	Prof. M. Kershaw, B.A., for the R. A. College.
Belper	W. W. Tunnicliffe, B.Sc., F.C.S.	Clacton-on-Sea	A. W. Shadick, for the Town Council.
Belvoir Castle	W. H. Divers, for the Duke of Rutland.	Clifton (the College)	D. Rintoul, M.A.
Bennington	The late Rev. J. Dunne Parker, LL.D., and Miss Parker.	Clongowes Wood College,	Rev. J. J. Nerney, S.J., and Rev. C. J. Byrne, S.J.
Berkhamsted	E. Mawley.	Cockle Park, near Morpeth.	T. E. W. Dobson, for Northumberland County Council.
Bettws-y-Coed	Hugh W. Fox, M.D., for the Rural District Council.	Colmonell	A. Ogg, for J. W. McConnel.
Bexhill-on-Sea	G. Brisley, M.P.S., for Rural District Council.	Colwyn Bay	W. Jones, A.M.L.C.E., for Urban District Council.
Birmingham (Edgbaston).	Alfred Cresswell, for the Midland Institute.	Coventry	E. Hugh Snell, M.D., for the Corporation.
Blackpool	E. W. Rees Jones, M.D., for the Corporation.	Crathes	J. Smith.
Bognor	H. C. L. Morris, M.D., and A. G. Thompson.	Crieff	George Reid, for Dr. Meikle.
Bournemouth	C. Dales, for the Corporation.	Cromer	W. H. Archer, for the District Council.
		Cullompton	M. T. Foster.

THE following is a LIST of the VOLUNTEER OBSERVERS to whom the Committee are indebted for observations contributed to the Monthly Weather Report during 1911, together with the NAMES of their STATIONS—cont. :—

Names of Stations.	Names of Observers.	Names of Stations.	Names of Observers.
Darwen - - -	F. G. Howarth, M.B., for the Corporation.	Newcastle-on-Tyne -	N. H. Martin, F.C.S., F.R.S.E.
Deerness - - -	M. Spence.	Newcastle, Co. Wick-	J. T. Crowe, M.D. and O. D. Hanan, M.B.,
Douglas, Isle of Man -	F. Cottle, for the Corporation.	low.	National Hospital for Consumption.
Dover - - -	W. C. Hawke, for the Corporation.	Newquay - - -	C. C. Vigurs, B.A., M.D., for Urban Council.
Dublin (City) - - -	Sir John W. Moore, M.D.	Newton Rigg - - -	W. T. Lawrence, for the Cumberland County
" (Glasnevin) - - -	Sir F. W. Moore, M.R.I.A.		Council.
" (Phoenix Park) - - -	Lt.-Col. J. Pery, R.E.	Nottingham - - -	J. Brown, A.M.I.C.E., City Engineer.
" (Trinity College) -	Prof. Thrift.	Norwich - - -	A. W. Preston.
Dulwich - - -	W. Marriott.	Norwood - - -	W. Marriott.
Dumfries - - -	C. C. Easterbrook, M.D., Crichton R. Institute.		
Dundee - - -	J. Carnochan.	Oban - - -	E. Baily, M.B., M.O.H.
Dunfanaghy - - -	J. J. MacGrath, L.R.C.P.S.	Oxford - - -	The Radcliffe Observer.
Dunrobin Castle - - -	D. Melville, for the Duke of Sutherland, K.G.		
Dunrossness - - -	Rev. W. Fotheringham.	Paignton - - -	F. J. Rodgers, for Town Council.
Durham - - -	F. C. H. Carpenter.	Penzance - - -	C. H. Benn, for the District Council.
Dwyran - - -	W. E. Sotheby.	Plymouth - - -	H. Victor Frigg, A.M.I.C.E., for the Corporation.
		Portlalloch - - -	D. S. Melville, for Col. E. D. Malcolm, C.B., R.E.
Eastbourne - - -	S. R. Henderson, for the Corporation.	Portsmouth - - -	A. Mearns Fraser, M.D., for the Corporation.
Eltham - - -	Miss A. Bramwell, B.Sc.	Port Talbot - - -	Miss Talbot and G. Lipscombe.
Epsom - - -	Spencer C. Russell.		
		Ramsgate - - -	T. G. Taylor, C.E., for the Corporation.
Felixstowe - - -	Montague Humphrey, for the Urban District	Rauceby Hall - - -	J. Hope, for General Sir M. Willson, K.C.B.
	Council.	Raunds - - -	Léon, G. H. Lee.
Folkestone - - -	The Borough Engineer, for the Corporation.	Reading (Leighton Park	C. I. Evans, M.A.
Forest of Dean - - -	V. F. Leese.	School)	
Fort Augustus - - -	Rev. C. von Dieckhoff, O.S.B.	Rhyl - - -	A. A. Goodall, C.E., for District Council.
Fortrose - - -	Archd. Thom, M.A.	Rothamsted - - -	The Lawes' Agricultural Trust.
Fort William - - -	W. T. Kilgour.	Rothsay - - -	D. Penney, for Robert Henderson.
Fowey - - -	Dr. W. H. Boger.	Rounton - - -	J. Hanagan, for Sir Hugh Bell, Bart.
Foynes - - -	J. J. Alcorn, for Lord Monteagle, K.P.	Rugby (the School) -	Rev. D. E. Shorto, M.A.
Fulbeck - - -	Rev. Vere F. Willson, M.A.	Ruthwell - - -	W. H. Whellens, for A. Johnstone Douglas, D.L.,
			J.P.
Garforth - - -	Prof. Seton, B.Sc., for the Yorkshire College,	St. Asaph - - -	Rev. J. Rowland, S.J. and Rev. C. Baillon, S.J.,
	Leeds.		B.Sc.
Geldeston - - -	E. T. Dowson.	Salcombe - - -	The late J. Fairweather, for the Corporation.
Glasgow - - -	Prof. Becker and the Staff of Observatory.	Salisbury - - -	Thos. Challis, for the Earl of Pembroke, G.C.V.O.
Glencarron - - -	D. D. Munro.	Sandown - - -	C. E. Gilchrist, for Free Library.
Gordon Castle - - -	C. Webster, for the Duke of Richmond and	Scarborough - - -	John Knight, M.D., D.P.H., for the Corporation.
	Gordon, K.G.	Seaham - - -	G. H. Aird.
Greenwich - - -	Astronomer Royal.	Sevenoaks - - -	W. Tattersall.
Guernsey (Villa Carey)	F. E. Carey, M.D.	Shaftesbury - - -	Rev. F. Ehlers.
" (Fort Road) - - -	A. Collette.	Sheffield - - -	F. Howarth, F.R.A.S.
		Sheepstor - - -	Rev. H. N. Breton, M.A.
Harrogate - - -	C. E. Rivers, A.M.I.C.E., for the Corporation.	Shoeburyness - - -	Supt. of Experiments.
Hastings (St. Leonards)	H. Colborne, M.R.C.S., for the Corporation.	Shrewsbury - - -	Capt. C. S. Reid, R.E.
Haverfordwest - - -	J. W. Phillips.	Skegness - - -	S. Coetmore Jones, for the District Council.
Hawarden Bridge - - -	F. B. Summers.	Southampton - - -	A. Vaughan, for Director General, Ordnance
Hereford (Belmont) -	The Prior.		Survey.
Hillington - - -	The late Rev. H. E. B. Ffolkes, M.A.	Southend-on-Sea - -	E. J. Elford, C.E., for the Corporation.
Hove - - -	A. Griffith, M.D., M.O.H., for the Corporation.	Southport - - -	J. Baxendell, for the Corporation.
Hoylake - - -	Tom Robinson and R. W. Fraser, for U.D. Council.	Stonehaven - - -	J. Hart, for the Corporation.
Huddersfield - - -	J. Firth, for the Corporation.	Stonyhurst - - -	Rev. W. Sidgreaves, S. J. and the Staff of Ob-
Hull - - -	H. B. Witty, for the Corporation.		servatory.
		Strathpeffer Spa - -	H. W. Kaye, B.A., M.B.
Insch - - -	J. Bisset.	Swansea - - -	D. Bliss, for the Corporation.
		Swarraton - - -	Rev. W. L. W. Eyre, M.A.
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Kilmarnock - - -	Thomas Moffat, for West of Scotland Agricul-	Tenby - - -	Miss Mildred B. Truscott, for the Corporation.
	tural College.	Thorntonhall,	J. Wilson, for A. Henderson Bishop.
Kingston-on-Soar - -	Fred Wakerly, for the Midland Agricultural	Lanarkshire.	
	and Dairy College.	Torquay - - -	F. March, for the Corporation.
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Kingussie - - -	W. de Watteville, M.D.	Tottenham - - -	J. F. Butler-Hogan, M.D., LL.D., for District
			Council.
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Llandudno - - -	W. Little, for Town Council.		
Llanegrad - - -	W. E. Sotheby.	Ventnor Hospital - -	Miss M. Gibson.
Llangammarch Wells -	W. Black Jones, M.D., M.O.H.		
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" (Westminster) - - -	Rev. H. B. Workman, D. Lit.	Whitby - - -	T. Newbitt, for the Lit. and Phil. Soc.
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(Oldham Road).		Woburn - - -	H. M. Freear, F.C.S., for the Royal Agricultural
Manchester - - -	F. Gore, for the Medical Superintendent of the		Society.
(Prestwich).	Asylum.	Wokingham - - -	The Medical Superintendent of the Sanatorium.
Manchester - - -	Professor Rutherford and W. L. Lantsbery, for	Woolacombe - - -	T. S. Watkinson.
(Whitworth Pk.).	the University of Manchester.	Workshop - - -	Lt.-Col. H. Mellish, J.P.
Marchmont - - -	J. A. Wood, for Sir J. H. P. Hume-Campbell, Bt.	Worthing - - -	R. H. Wilshaw, M.B., D.P.H., for the Corporation.
Margate - - -	J. Stokes, J.P., for the Corporation.		
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Marlborough - - -	Meddowes Taylor and G. G. Becher, for the	" (Bootham) - - -	H. Richardson, M.A.
	College.		
Matfield - - -	D'Arcy Reeve.		
Mayfield - - -	G. C. Lawson.		
Mountmellick - - -	W. A. Robinson.		

Meteorological Office,  
London, S.W.,

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MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.  
(Supplement to the Weekly Weather Report.)SUMMARY OF OBSERVATIONS COMPILED FROM THE RETURNS OF OFFICIAL STATIONS AND VOLUNTEER OBSERVERS IN THE UNITED KINGDOM, WITH  
A CHART OF RAINFALL CONTRIBUTED BY THE BRITISH RAINFALL ORGANISATION.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE,

AND PUBLISHED FOR H.M. STATIONERY OFFICE BY WYMAN AND SONS, LTD., FETTER LANE, E.C.; OR OLIVER AND BOYD, EDINBURGH; OR E. PONSONBY, LTD.,  
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Vol. XXVII. (New Series)  
Weekly Weather Report. } No. I.

JANUARY, 1911.

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## SUMMARY OF OBSERVATIONS.

**Pressure, Winds and Weather.**—The distribution of atmospheric pressure over the British Isles during the month was mainly anticyclonic. Throughout the period areas of high pressure were continually present, and always on the move in our immediate neighbourhood or about the western half of the Continent, occasionally eastward into Russia. Nearly all the areas of low pressure were, under these circumstances, kept at a considerable distance from our shores. In numerous instances the centres of depressions moved from the north-west quarter of the Atlantic across Iceland, or passed up between Iceland and Greenland, and disappeared over the Arctic Sea beyond the North Cape. In the night of the 5th the barometer fell below 28 in. in the north of Iceland, and rose above 31 in. at Moscow, remaining at this high level until the evening of the 7th. In the north of Iceland the barometer fell below 28.5 in. in the night of the 16th, and next morning it mounted to 30.9 in. over Bavaria. The mean results for the entire month show that the highest values, above 30.35 in., were southward of the English Channel, diminishing northward across these islands to less than 29.5 in. in the south-west of Iceland. At our home stations the figures ranged from 30.35 in. at Jersey, and 30.33 in. at Scilly to 30.08 in. at Wick and 30 in. at Sumburgh Head. Everywhere the values were well in excess of the average, by as much as 0.28 in. in Shetland, and 0.38 in. at Roche's Point. With these fairly uniform deviations the general distribution of pressure was very similar to the average, and consequently the type was distinctly South-Westerly to Westerly, with a fair representation of winds in other quarters as the various systems altered their positions. But although the barometer maintained an abnormally high level nearly all through the month, the differences of pressure were, as a rule, considerable, so that for the thirty-one days the mean gradient between the south of Ireland and the north west of Iceland amounted to as much as 0.85 in. This fact affords an explanation of the breezy character of the month. The returns from the telegraphic reporting stations show that the 23rd was the only day on which the force of a strong wind was not exceeded in any part of the country, while on as many as twenty days the strength of a gale was registered at one or more stations.

A cyclonic system which was moving eastward along the Arctic Circle on the last day of December changed its direction on reaching the Norwegian coast, and during the first two days of the New Year passed across Norway and Denmark, and finally dispersed over the Low Countries. During this time a well-marked anticyclone, which at first was centred near our western coasts, moved round by the north of Scotland to Scandinavia, so that there was a decided gradient for Northerly and North-Easterly winds over these islands. Gale force extended as far south as Scilly, and on the 1st a strong gale (force 9) was attained at Sumburgh Head, a whole gale (force 10) at Spurn Head on the 2nd. The Aberdeen anemometer registered gusts at the rate of 60 miles an hour on the 1st. This polar current, however, was not productive of anything approaching severe winter weather, only slight night frost being experienced here and there, and the precipitation, which was small in quantity nearly everywhere, was mostly in the form of rain, a little snow or hail falling in places in the eastern half of England. On the morning of the 2nd a thunderstorm occurred at various eastern stations, between the Tyne and the Thames, severe at Norwich, accompanied by snow and hail. At the same time there was at Epsom "a remarkably brilliant display of sheet lightning. Many of the flashes were of such marked intensity, contrasted with the extreme blackness of the sky, that the surrounding country was clearly lit up."

From the exceptionally deep depression crossing Iceland in the night of the 5th, to which reference has already been made, an elongated "V"-shaped secondary extended next morning southward from the Farøe down our western channels to the Bay of Biscay, and moved slowly eastward across Britain for the North Sea in the course of the day. At Stornoway the barometer dropped to 29.19 in., the lowest reading of the month in these islands. A Southerly gale blew in many parts of the kingdom, a strong South-Westerly gale at Malin Head, and a strong South-Easterly gale at Sumburgh Head. As the "V" advanced rain fell everywhere, in moderately large quantities in several neighbourhoods, nearly an inch at Bettws-y-Coed and Colmonell, and 2.1 in. at Gruline (Mull). A few northern and western stations reported snow or hail showers.

From the 8th, when the country occupied the middle region between an anticyclone centred over Bavaria, barometer 30½ in., and a deep depression northward of Iceland, barometer below 29 in., until the 13th, the distribution of pressure was continually undergoing important variations—the anticyclone sometimes on the Continent, at others over the sea to the south-westward. The main disturbance bore away beyond the Arctic Circle as it moved eastward, but secondary systems visited the British Isles. Small "V"-shaped irregularities of pressure crossed the southern districts on the 9th, and on the following day wireless reports from steamers indicated the existence of a large area of low pressure over the upper portion of the Atlantic.

It was moving rapidly; by the morning of the 11th its centre had already reached the Moray Firth, and continuing on its easterly path it disappeared across Russia on the 13th. On the evening of the 11th it threw off a secondary system over the Irish Sea. By the morning of the 12th this secondary had reached the Straits of Dover, and had acquired considerable energy, its influence being felt over the whole of Western Europe. Afterwards it moved down across France to southern Spain, then eastward across the Western Mediterranean. The approach of the Atlantic depression was marked by a strong South-Westerly gale at Blacksod Point and Malin Head on the 10th. On the following days, with the lowest pressure to eastward or south-eastward, the wind was from Northerly directions, attaining the force of a strong gale on the 11th at Malin Head, Donaghadee, Roche's Point and Holyhead, a storm (force 11) at Scilly; a strong gale on the 12th at Holyhead, a whole gale at Malin Head, Newquay, Scilly and Spurn Head; and a strong gale on the 13th at Dungeness and Spurn Head. The anemometer registered a mean hourly velocity of 51 miles at Scilly, 52 at Dover and Holyhead, and 54 at Pendennis on the 12th, the highest velocities in squalls being at the rate of 66 miles per hour at Pendennis, 69 at Scilly, and 71 at Dover. Rain was general during this windy spell, and in some localities heavy. On the 10th, the largest amounts were in the west and south of Scotland and north-west of England, in several instances exceeding an inch, ranging up to 1.82 in. at Ford, 2.1 in. at Cruachan, both on Loch Awe, and 3.4 in. at Seathwaite. Next day the largest quantities fell in Kent, 1.1 in. at Kearsney, and 1.2 in. at Dover Water Works. In the north-east, between Durham and West Linton, thunderstorms were experienced on the 12th, and snow fell in many places, again in small quantities, the largest noted being a depth of 3 in. at Ardross Castle, Ross-shire.

With one or two unimportant exceptions the atmospheric pressure during the remainder of the month was continuously high, the barometer reaching 30.82 in. at Jersey and Newquay on the 18th, and 30.77 in. at Nottingham on the 31st. Nevertheless, high winds and gales were frequently reported—a strong South-Westerly gale at Sumburgh Head on the 15th and 24th, and at Malin Head on the 25th, a whole gale from South-West at Malin Head on the 26th and 28th, and from South at Blacksod Point on the 28th. At Pendennis, in the night of the 30th, the anemometer registered a mean hourly velocity of 53 miles, with gusts at the rate of 66 miles per hour. On the 24th, heavy rain fell in the west of Scotland, up to 1.5 in. at Cruachan, but, speaking generally, the period from about the 12th to the end was very dry, many localities having from 17 to 20 rainless days, many others only one or two trifling showers, or moisture in the form of dew or fog, during the same spell, the drought continuing far into February.

As a whole, the month was mild, the mean temperature exceeding the average in the northern and western districts, by as much as 3° at Kingussie and Strathpeffer. There was frost occasionally, but temperature rarely descended as low as 25°, although it fell to 16° at Balmoral on the 4th, and at West Linton on the 31st. Many afternoon maxima were up in the fifties, Killarney having a maximum of 59° on the 25th. High night minima were also common, up to 49° at Penzance on the morning of the 9th, and 51° at Colwyn Bay on the 26th. Aurora was reported by various observers in Scotland on the 2nd-4th, 8th, 22nd-25th, 27th and 31st.

Fog was rather more prevalent than for some time past in the inland districts, Lincoln experiencing on the 19th the thickest fog for over twenty years. Sea fogs were very frequent, especially off the east coast, at times dense.

The coastal water was colder than in December, by as much as 5° at the Shipwash, the Goodwin and Eastbourne, and 6° on the Straits of Dover. At nearly all points the water was warmer than the air, by from 4° to 6° along the south coast.

**Rainfall.**—In all districts precipitation was below the average, the deficiency ranging up to 3.1 in. at Falmouth and Valencia, 3.5 in. at Roche's Point and 4.5 in. at Killarney. In numerous instances the month's totals were less than an inch, 0.5 in. at Hoylake, 0.4 in. at Kingstown, and 0.3 in. at Shrewsbury and Hawarden Bridge. Only in the more mountainous regions were there falls exceeding 6 in., up to 11.2 in. at Seathwaite, and 14.4 in. at Glenquoich (Inverness). Over a large area nearly the whole of the precipitation was received within the first 12 days, on only 6 days at several stations, 5 days at Colwyn Bay, 4 days at Hawarden Bridge. Some localities had more than 20 days, Glencarron 24, Stornoway 25, and Baltasound 28.

**Bright Sunshine.**—Most districts had an excess of sunshine, Cirencester being 19 hours to the good, and Cullompton 21 hours. On the other hand, Marlborough had a deficiency of 15 hours and Margate of 18 hours. The aggregate totals ranged from 11 hours (4 per cent. of the possible) at Bunhill Row, 14 hours at Fortrose, Ross-shire, and 16 hours at Manchester and Prestwich (7 per cent.) to 80 hours at Weymouth, and 81 hours at Bognor and Salcombe (31 per cent.).

TABLE A.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at 9 a.m., 3 p.m. and 9 p.m. at NORMAL STATIONS in the BRITISH ISLANDS

Table with columns: DISTRICT, STATION, Height of Barometer, BAROMETER (Mean at 32° F., Diff. from Normal, Cor. for Diurnal Range), AIR TEMPERATURE (Mean of A, B, Mean of A and B, Diff. from Normal, Absolute Maximum and Minimum), and HYGROMETER (Observations at 9 a.m., 3 p.m., and 9 p.m., or at 7 a.m., 1 p.m., 6 p.m., or 9 p.m.; Dry Bulb, Dep. of Wet, Vap. Pressure, Humidity).

For notes see p. xvi. NOTE.—The Sunshine entered to Woburn is recorded at Aspley Guise.

CLIMATOLOGICAL STATIONS, at 7 a.m., 1 p.m. and 6 p.m. or 9 p.m. or at 7 a.m. and 6 p.m. at TELEGRAPHIC REPORTING during the month of JANUARY, 1911.

Earth Temperature.		BRIGHT SUNSHINE.				CLOUD (0-10.)			RAIN AND OTHER FORMS OF PRECIPITATION.				WEATHER. No. of Days of								WIND.								STATIONS.					
At 1 foot depth.	At 4 feet depth.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.	Mean Amount.			Total Fall.	Diff. from Normal.	Most in a day.		Precipitation.	Snow.	Hail.	Thunderstorm.	Clear Sky.	Overcast.	Fog.	Ground Frost.	Wind-force 8 and above.	No. of Observations reduced to a total of 98 for the month.												
						I.	II.	III.			Amount.	Day.										Forces 4-7.	Calm.	N.	N.E.	E.	S.E.	S.		S.W.	W.	N.W.		
39.5	—	25	0	11	0	7.7	8.2	6.6	4.34	-1.88	1.18	21	2	0	0	0	22	1	—	4	18	0	5	9	2	6	2	40	18	11	Dundee.			
—	—	—	—	—	—	9.0	—	8.9	0.62	-1.49	0.17	12	2	0	0	0	22	1	—	4	18	0	5	9	2	6	2	40	18	11	Dundee.			
—	—	44	—	20	—	5.5	6.9	5.3	1.04	-0.86	0.18	11th, 26th	13	2	0	0	2	5	0	—	0	12	23	7	1	4	1	0	11	45	1	Nairn.		
—	—	41	—	18	—	6.6	—	4.6	1.10	-1.11	0.18	10th, 11th	15	3	2	0	4	6	0	—	2	8	0	0	8	0	11	20	43	3	8	Gordon Castle.		
—	40.3	47	-3	21	-1	5.5	6.4	5.1	1.43	-0.75	0.23	5th, 10th	14	4	2	0	3	6	1	—	0	12	12	4	1	2	3	22	25	16	8	Aberdeen.		
—	—	—	—	—	—	7.4	—	—	1.88	-1.11	0.78	11th	13	3	0	0	2	13	0	20	4	21	0	3	3	6	9	0	15	48	9	Balmoral.		
—	—	—	—	—	—	7.0	—	5.8	1.26	-3.20	0.38	5th	14	0	0	0	3	11	0	—	2	38	0	6	3	22	0	0	0	56	6	Crieff.		
—	—	—	—	—	—	7.1	—	6.5	0.75	-0.98	0.29	11th	15	3	0	0	1	11	2	—	0	30	2	6	2	4	6	9	27	27	10	Leith.		
36.3	—	52	+7	22	+3	6.3	—	4.5	1.40	-1.05	0.54	11th	14	3	1	0	4	10	2	18	0	20	0	6	5	10	0	10	24	29	9	Marchmont.		
—	—	49	+6	22	+3	6.8	—	6.0	1.38	-1.19	0.78	15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	—	6.5	—	5.8	1.56	-0.14	0.33	11th	11	2	2	1	5	13	0	—	0	29	4	6	6	5	3	12	27	25	5	Seaham.		
—	—	69	—	29	—	5.9	—	5.2	1.45	-0.31	0.37	11th	11	2	2	1	7	11	2	—	1	9	2	3	9	0	19	0	54	0	6	Whitby.		
37.2	39.7	52	—	22	—	6.7	—	6.1	2.32	+0.28	0.61	11th	15	6	3	0	0	10	0	21	5	44	0	3	11	2	13	4	16	35	9	Cockle Pk (Mor-Shields. (peth.)		
—	—	—	—	—	—	3.3	—	7.9	1.45	-0.15	0.50	11th	10	1	1	0	0	17	3	—	0	23	6	8	4	6	5	9	33	18	4	Durham.		
—	—	55	+11	23	+5	6.7	—	6.8	1.46	-0.34	0.45	11th	10	4	1	1	2	13	3	16	1	20	21	3	3	3	2	9	31	15	6	Durham.		
36.3	—	—	—	—	—	6.1	—	6.4	1.13	-0.63	0.29	2nd	11	3	0	1	4	13	4	26	1	38	5	3	5	3	12	20	30	6	9	Rounton.		
—	41.7	59	—	24	—	7.2	—	8.0	1.35	-0.52	0.37	1st	13	1	0	0	0	14	2	—	2	45	0	0	12	4	2	5	12	7	51	Scarborough.		
38.9	42.3	28	-2	12	0	7.1	—	6.3	1.36	-0.33	0.32	2nd, 6th	13	3	0	0	4	16	3	—	0	3	0	11	5	3	7	23	10	27	7	York.		
—	—	—	—	—	—	7.8	7.0	7.8	1.37	+0.14	0.35	11th	9	2	2	0	0	8	6	—	4	57	0	5	4	6	8	13	28	22	7	Spurn Head.		
36.6	41.2	—	—	—	—	6.1	—	3.5	1.37	-0.26	0.28	6, 8, 11	18	2	0	0	9	10	2	—	0	5	12	5	5	6	0	1	10	45	9	Lincoln.		
—	—	63	—	26	—	6.7	—	5.2	1.85	-0.34	0.34	2nd, 11th	17	2	0	0	5	12	4	—	0	11	0	9	4	9	6	6	23	30	6	Skegness.		
37.6	42.8	29	—	12	—	7.3	—	5.9	1.32	-0.38	0.29	11th	16	5	3	0	1	13	5	16	0	3	12	13	6	0	9	2	9	21	21	11	Hull.	
37.5	41.8	53	+10	22	+4	6.9	—	6.2	1.43	-0.34	0.68	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
37.3	42.0	71	—	29	—	6.7	—	6.4	1.97	+0.47	0.60	1st	14	4	1	0	7	17	9	14	1	29	0	3	6	6	8	5	20	33	12	Lowestoft.		
—	—	70	—	28	—	7.5	—	7.2	1.58	-0.42	0.42	1st	21	1	1	0	2	16	4	—	0	39	3	6	5	2	9	15	25	12	16	16	Cromer.	
—	—	52	+5	21	+2	7.8	—	7.2	2.33	+0.40	0.48	11th	18	1	2	1	2	17	6	29	1	11	20	9	6	3	5	5	21	15	9	Hillington.		
—	—	—	—	—	—	—	—	—	2.17	—	0.46	1st	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Norwich.
37.0	42.2	67	—	27	—	6.7	6.5	6.5	1.82	+0.20	0.43	11th	11	3	1	0	4	15	9	—	0	17	2	4	7	6	3	5	19	39	8	Yarmouth.		
—	—	69	+15	28	+7	7.0	—	6.4	1.77	+0.24	0.40	11th	18	3	3	1	6	16	2	—	0	3	4	8	8	9	1	6	24	24	9	Geldeston.		
37.9	42.5	68	+17	27	+7	7.3	—	6.2	1.46	+0.01	0.27	11th	13	3	1	0	4	15	7	18	0	6	18	13	0	4	3	17	24	9	5	Cambridge.		
39.8	44.3	68	—	27	—	7.9	7.0	7.2	1.13	-0.22	0.22	11th	11	4	0	0	2	17	4	17	0	22	3	11	4	9	3	10	14	20	19	19	Clacton.	
—	—	60	—	24	—	7.8	—	6.1	1.01	-0.31	0.31	6th	13	2	0	0	4	17	5	—	0	15	15	6	10	8	0	5	25	18	6	Woburn.		
38.6	41.2	72	—	29	—	6.9	—	7.1	1.39	-0.58	0.31	11th	16	3	2	0	5	18	10	21	0	2	28	8	6	2	3	19	18	3	3	Bennington.		
37.4	—	61	—	24	—	8.1	—	6.8	1.34	-1.03	0.38	6th	15	4	1	0	1	16	6	23	0	0	18	9	3	9	0	5	16	20	13	Berkhamsted.		
38.2	42.7	63	+11	25	+4	7.4	—	6.8	1.65	-0.09	0.60	14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
39.5	42.6	28	—	11	—	7.5	—	6.8	0.89	-0.34	0.34	2nd	18	5	2	0	2	14	4	—	0	2	12	10	9	6	2	7	15	24	8	8	Garforth.	
38.3	41.6	25	—	10	—	7.4	6.7	7.1	1.58	-0.30	0.30	6th, 11th	18	3	0	0	2	13	2	9	0	21	12	3	3	5	1	9	19	27	14	14	Huddersfield.	
—	—	—	—	—	—	8.3	—	6.6	0.70	-1.19	0.20	2nd	9	3	0	0	1	16	4	—	0	8	3	14	0	2	6	12	19	25	12	12	Wakefield.	
40.5	42.6	68	—	28	—	7.2	—	5.7	1.41	-0.34	0.31	6th	19	2	0	0	3	11	9	13	0	15	15	11	1	3	5	4	29	16	9	15	Belvoir Castle.	
33.3	44.0	47	—	19	—	6.9	—	—	0.88	-1.15	0.39	6th	10	2	0	0	7	17	2	16	0	21	6	6	3	3	6	3	6	30	18	15	15	Coventry.
36.9	40.1	36	—	15	—	7.5	7.0	6.9	0.91	-0.91	0.24	11th	14	2	1	0	1	13	4	18	0	26	4	9	6	7	2	3	21	33	8	8	Nottingham.	
39.8	44.3	35	—	14	—	8.0	—	5.7	0.87	-1.17	0.40	6th	6	0	0	0	2	13	0	15	0	6	18	9	4	6	2	9	24	12	9	9	Birmingham	
—	—	64	+16	25	+6	7.9	—	6.8	0.90	-1.04	0.24	6th	13	1	0	0	4	18	5	14	0	14	9	15	4	6	3	8	27	13	8	8	Oxford.	
—	—	71	—	—	—	7.1	—	—	0.80	-1.12	0.24	6th	13	1	0	0	4	18	5	14	0													

TABLE A. (continued).—Giving a Summary of the METEOROLOGICAL OBSERVATIONS made at 9 a.m., 3 p.m. and 9 p.m. at NORMAL STATIONS in the BRITISH ISLANDS

Table with columns: DISTRICT, STATION, Height of Barometer, BAROMETER (Mean at 32° F., Diff. from Normal, Cor. for Diurnal Range), AIR TEMPERATURE (Mean of A, B; Mean of A and B; Diff. from Normal; Absolute Maximum and Minimum), and HYGROMETER (Observations at 9 a.m., 3 p.m. and 9 p.m., or at 7 a.m., 1 p.m., 6 p.m., or 9 p.m.; Dry Bulb, Dep. of Wet, Vap. Pressure, Humidity).

For notes see p. xvii.

CLIMATOLOGICAL STATIONS, at 7 a.m., 1 p.m. and 6 p.m. or 9 p.m. or at 7 a.m. and 6 p.m. at TELEGRAPHIC REPORTING during the Month of JANUARY, 1911.

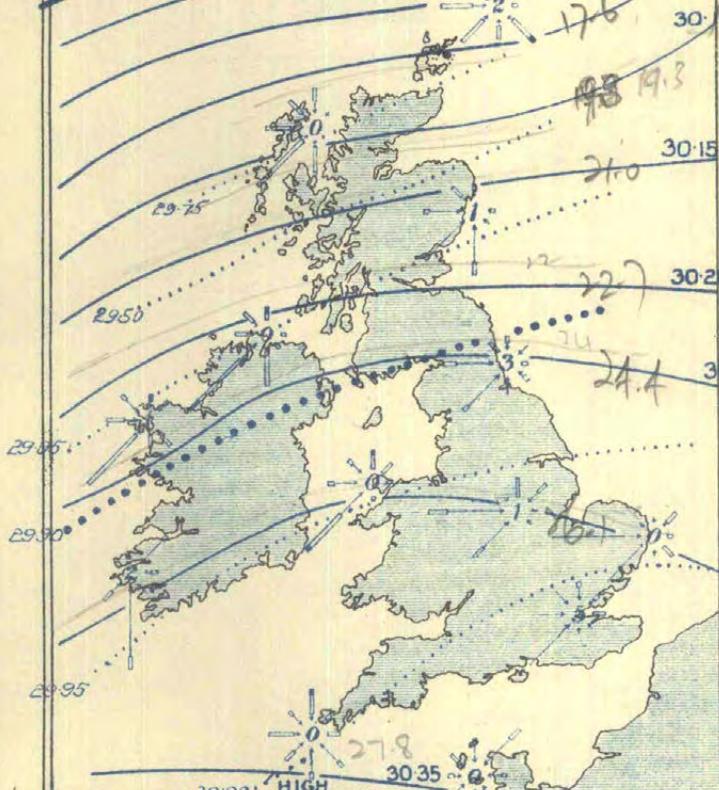
Earth Temperature.		BRIGHT SUNSHINE.				CLOUD (0-10).			RAIN AND OTHER FORMS OF PRECIPITATION.				WEATHER. No. of Days of								WIND.								STATIONS.				
At 1 foot depth.	At 4 feet depth.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.	Mean Amount.			Total Fall.	Diff. from Normal.	Most in a day.		Precipitation.	Snow.	Hail.	Thunderstorm.	Clear Sky.	Overcast.	Fog.	Ground Frost.	Wind-force 8 and above.	No. of Observations reduced to a total of 93 for the month.											
						I.	II.	III.			Amount.	Day.										Forces 4-7.	Calm.	N.	N.E.	E.	S.E.	S.		S.W.	W.	N.W.	
40.1	44.5	70	+ 14	27	+ 5	7.2	—	4.8	2.11	-0.62	0.86	11th	16	2	0	0	9	15	5	—	1	8	6	10	22	5	5	2	10	7	26	Eastbourne.	
39.8	44.8	73	—	28	—	6.9	—	6.2	1.75	—	0.70	11th	16	3	0	0	3	15	10	12	1	39	0	11	7	5	9	4	20	16	21	Dover.	
—	—	—	—	—	—	8.1	7.7	7.5	1.70	-0.15	0.48	11th	17	4	1	0	0	12	11	—	2	31	0	19	8	9	4	6	14	21	12	Dungeness.	
38.8	43.7	75	+ 14	29	+ 6	7.1	—	5.5	1.62	-0.88	0.66	11th	18	3	0	0	8	14	10	14	1	23	5	18	6	10	5	5	13	10	21	Hastings.	
—	—	54	+ 2	21	+ 1	6.9	—	6.3	1.43	-1.37	0.45	6th	16	0	0	0	6	16	5	16	0	9	0	0	36	0	6	0	23	0	28	Southampton.	
—	—	75	+ 17	29	+ 7	6.9	—	—	1.41	-1.38	0.40	11th	12	0	0	0	5	17	0	—	1	21	6	27	9	6	5	6	7	15	12	Ventnor.	
38.9	43.3	63	+ 13	25.	+ 6	7.3	—	6.2	1.44	-0.88	0.92	14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	43.8	42	—	17	—	8.1	—	7.7	1.36	—	0.33	11th	12	2	0	0	2	19	4	11	0	2	12	18	2	3	3	7	15	18	15	Tottenham.	
—	—	53	—	21	—	7.7	—	7.4	1.27	—	0.31	6th	14	4	0	0	4	20	6	19	1	9	15	3	11	6	3	3	19	19	9	Hampstead.	
38.2	42.9	31	—	12	—	7.9	—	—	1.38	-0.49	0.32	6th	12	1	0	0	4	22	5	13	—	—	6	21	3	3	6	9	24	6	15	Camden Square.	
—	—	21	+ 2	8	+ 1	—	—	—	1.16	-0.66	0.24	11th	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Westminster.
—	42.8	33	- 10	13	- 4	7.7	—	7.5	1.23	-0.65	0.29	9th	12	3	0	0	4	21	8	13	0	7	9	5	9	5	2	1	13	15	3	Greenwich.	
38.3	—	—	—	—	—	7.5	—	7.6	1.19	-0.66	0.30	11th	11	3	0	0	4	20	9	17	0	6	18	12	8	8	0	16	16	10	5	Norwood.	
38.3	43.6	48	+ 6	19	+ 2	7.6	7.1	6.8	1.19	-0.60	0.31	11th	12	3	0	0	4	18	4	14	0	16	27	13	5	6	2	5	13	15	7	Kew.	
—	—	11	- 4	4	- 2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Bunhill Row.	
—	—	23	—	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Plumstead.	
—	—	36	—	15	—	8.1	8.0	7.5	4.24	—	1.13	10th	21	6	1	0	1	19	1	—	3	45	11	11	4	3	2	14	36	9	3	Eskdalemuir.	
—	—	—	—	—	—	7.8	—	7.1	5.04	+0.01	1.36	10th	24	1	0	0	3	19	0	—	0	41	9	7	5	0	5	12	27	25	3	Poltalloch.	
—	—	21	- 2	9	- 1	8.5	—	7.8	2.13	-1.49	0.56	10th	16	0	1	0	1	22	2	10	0	16	14	9	2	6	3	4	35	18	2	Glasgow.	
—	—	—	—	—	—	6.9	—	6.6	3.88	-0.72	0.88	10th	22	2	1	0	5	15	6	—	1	29	5	9	0	12	3	11	5	43	5	Rothsay.	
—	—	—	—	—	—	7.0	—	—	2.74	-1.85	0.95	5th	14	0	0	0	4	17	0	4	3	45	0	12	0	9	0	6	15	45	6	Colmonell.	
38.7	41.2	40	—	17	—	9.2	—	7.7	1.66	-2.34	0.85	10th	15	0	0	0	2	23	8	9	3	20	9	16	0	0	3	3	50	2	10	Dumtries.	
—	—	—	—	—	—	—	—	—	2.64	-2.01	0.87	10th	13	0	0	0	—	—	—	—	2	14	0	12	9	2	15	0	13	6	36	36	Cally.
—	—	54	+ 5	22	+ 2	7.6	—	6.7	1.89	-2.11	0.86	5th	11	3	0	0	4	16	2	6	1	32	0	10	3	9	5	9	25	24	8	Douglas.	
—	—	38	+ 1	16	0	7.9	—	7.2	2.86	-1.88	1.36	17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
38.1	41.2	45	+ 4	18	+ 1	7.5	7.2	7.1	0.80	-1.90	0.34	5th	9	0	0	0	3	18	1	14	0	40	0	10	4	4	15	12	31	7	10	Southport.	
38.8	43.0	16	—	7	—	6.3	—	5.8	1.14	-1.75	0.32	8th	10	1	0	0	0	4	2	4	0	5	0	8	3	7	12	21	22	12	8	Manchester (City).	
—	—	19	—	8	—	3.1	7.5	7.7	1.15	—	0.31	6th	10	1	0	0	1	19	4	—	0	5	30	4	3	6	5	15	13	8	9	" (Whit. Pk.).	
38.3	41.4	26	—	11	—	8.7	—	8.4	2.56	—	0.48	6th	20	4	1	0	0	19	2	13	1	30	0	6	2	2	9	22	21	19	12	Darwen.	
39.6	43.2	51	—	21	—	7.5	—	6.7	2.05	-0.84	1.04	10th	17	2	1	0	1	14	0	10	0	26	15	10	0	9	0	9	30	18	2	Aspatia.	
39.9	41.4	54	+ 14	23	+ 6	6.1	—	5.2	1.12	-2.24	0.29	10th	16	3	1	0	4	7	3	24	1	29	5	5	2	10	12	10	30	12	7	Newton Rigg.	
—	—	23	- 11	9	- 5	8.5	—	7.3	1.75	-2.34	0.43	10th	18	3	3	0	1	19	2	11	0	10	28	7	4	3	1	4	23	18	5	Stonyhurst.	
40.9	44.5	47	+ 9	19	+ 4	8.1	—	7.2	0.98	-1.78	0.35	10th	16	1	1	0	1	18	0	14	0	32	0	9	9	5	13	10	25	14	8	Blackpool.	
—	—	16	- 5	7	- 2	8.7	—	7.4	1.21	-1.88	0.22	8th	15	2	0	0	1	20	1	14	1	21	11	3	6	0	13	13	23	3	3	Manch's t (Prest).	
—	—	62	—	25	—	6.6	—	7.4	0.64	-1.50	0.24	5th	7	2	3	0	3	12	1	—	0	24	0	9	3	6	18	8	27	16	6	Liver'ol, Bid.Obs.	
—	—	61	+ 13	25	+ 6	7.2	—	8.6	0.70	-1.92	0.20	8th	8	0	0	0	2	18	1	—	1	8	2	3	3	15	3	22	9	33	3	Llandudno.	
—	—	—	—	—	—	7.6	7.2	7.2	1.28	-1.81	0.48	5th	9	1	0	0	1	12	2	—	4	20	2	7	4	9	4	8	34	17	8	Holyhead.	
40.1	44.2	42	—	17	—	6.6	—	6.2	2.49	—	0.92	5th	14	1	0	0	3	8	0	10	2	20	2	8	5	9	2	0	34	21	12	Bettws-y-Coed.	
40.3	42.9	56	—	23	—	7.8	—	7.2	2.07	—	0.74	5th	12	0	0	0	1	17	1	5	1	62	0	9	5	10	5	28	24	9	3	Llaneugrad.	
39.5	42.7	49	+ 11	20	+ 4	7.5	7.3	7.1	1.25	-1.78	1.04	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
40.1	44.6	45	—	18	—	8.5	—	—	2.08	—	0.48	5th	15	1	0	0	2	25	5	24	0	27	33	0	6	9	3	3	24	9	6	Llangamm, Wells.	
—	—	63	+ 9	25	+ 4	7.7	7.4	7.8	2.54	-1.00	0.46	5th	17	1	1	0	1	14	4	—	0	49	1	14	10	7	6	12	26	11	6	Pembroke.	
—	—	62	—	24	—	—	—	—	1.17	-1.86	0.38	11th	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Clifton.
—	—	—	—	—	—	7.1	6.7	5.9	0.70	—	0.28	6th	9	0	0	0	3	11	2	—	4	39	2	21	14	11	4	2	14	13	12	12	Portland Bill.
41.4	—	60	+ 9																														

TABLE B.—SUMMARY of the OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE at additional STATIONS, JANUARY, 1911.

DISTRICT.	STATION.	Height of Gauge above M.S.L. Ft.	AIR TEMPERATURE.								Earth Temperature		Gr'nd Frost. No. of Nig'ts	RAIN AND OTHER FORMS OF PRECIPITATION.				BRIGHT SUNSHINE.				
			Mean of		Mean of A and B.	Diff. of Mean from Normal.	Absolute Maximum and Minimum.				1 ft.	4 ft.		Total Fall. In.	Diff. from Normal. In.	Most in a day.		Number of Days.	Total in Hours. Hr.	Diff. from Normal. Hr.	Per Cent. %	Diff. from Normal. %
			A	B			Max.	Day.	Min.	Day.			Amt. In.			Day.						
			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
0. SCOTLAND, N.	p Baltasound - - - S	31	42.6	36.2	39.4	—	49	17th, 18th	29	11th	—	38.8	—	3.85	—	0.35	10th	28	14	—	7	—
	a Fortrose - - - -	69	45.2	35.4	40.3	—	52	17th	26	4th	—	—	—	0.84	—	0.18	26th	13	42	—	19	—
1. SCOTLAND, E.	p Insh - - - -	426	42.7	32.4	37.6	—	53	20th	24	31st	35.4	—	19	1.11	—	0.38	11th	14	50	—	22	—
	p Crathes - - - - S	140	44.0	31.4	37.7	—	55	18th	21	15th	35.8	39.0	22	1.70	—	0.42	11th	13	50	—	26	—
	p Stonehaven - - -	286	43.9	33.6	38.8	—	51	19th	28	31st	—	—	—	1.72	—	0.33	11th	13	60	—	27	—
	p Balruddery - - - S	276	44.0	33.7	38.9	—	53	18th	26	31st	—	—	—	0.58	—	0.11	11th	14	44	—	19	—
	a West Linton - - - S	800	41.4	31.8	36.6	+ 0.8	50	25th	16	31st	—	—	—	2.15	—	0.74	10th	20	40	—	17	—
2. ENGLAND, N.E.	a Alnwick Castle - - -	210	45.7	35.3	40.5	+ 2.7	54	25th	26	31st	—	—	—	2.70	+ 0.08	0.60	11th	11	—	—	—	—
	p Newcastle-on-Tyne -	162	44.7	36.6	40.7	—	55	25th, 26th	27	21st	—	—	—	1.46	- 0.40	0.35	11th	14	25	- 2	11	0
	p Ampleforth - - - -	349	42.7	33.3	38.0	—	52	26th	24	20th	—	—	—	1.69	—	0.68	2nd	7	—	—	—	—
	a Fulbeck - - - -	180	42.6	33.8	38.2	+ 2.0	52	26th	28	31st	—	—	17	1.15	- 0.52	0.26	8th	14	39	—	16	—
	a Rauceby - - - -	124	42.8	32.7	37.8	—	54	26th	25	29th	38.2	42.8	20	1.25	- 0.60	0.36	6th	13	59	—	24	—
3. ENGLAND, E.	a Felixstowe - - - -	10	42.3	33.4	37.9	- 0.6	54	26th	26	20th	—	—	—	1.20	—	0.23	6th	18	74	—	29	—
	a Rothamsted - - - -	424	41.9	32.2	37.1	0.0	53	26th	23	14th	—	—	—	1.22	- 0.99	0.31	11th	16	65	+ 17	26	+ 7
	a Shoeburyness - - -	18	42.0	33.2	37.6	- 0.7	52	28th	25	17th	—	—	—	0.90	- 0.48	0.21	4th	12	—	—	—	—
	a Southend-on-Sea - -	90	41.9	34.2	38.1	—	51	26th, 28th	29	15th, 16th	39.2	—	18	0.89	- 0.61	0.16	4th	13	64	—	25	—
4. MIDLAND COUNTIES	a Harrogate - - - -	476	42.4	34.4	38.4	+ 1.5	50	26th, 28th	22	31st	39.0	40.6	12	1.31	- 0.88	0.29	2nd	16	52	—	21	—
	a Bradford - - - -	489	42.3	35.4	38.9	—	52	25th	26	31st	38.2	42.3	12	1.30	—	0.22	24th	14	24	—	10	—
	a Beadley - - - -	646	41.6	32.7	37.2	+ 0.6	50	26th	25	31st	—	—	22	0.85	- 1.74	0.39	6th	11	—	—	—	—
	a Bawtry - - - -	65	43.3	33.3	38.3	+ 1.0	55	28th	20	31st	—	—	—	0.79	- 0.86	0.18	11th	11	—	—	—	—
	a Worksop - - - -	56	43.5	32.9	38.2	+ 0.9	55	26th	18	31st	37.5	40.9	24	0.89	- 1.10	0.24	11th	9	39	+ 3	16	+ 1
	a Mayfield (Staffs.) -	374	42.1	33.2	37.7	—	54	26th	23	20th	—	—	14	1.18	—	0.67	6th	9	—	—	—	—
	a Belper - - - -	222	43.3	33.9	38.6	—	54	26th	24	31st	—	—	11	1.01	—	0.50	6th	11	—	—	—	—
	a Kingston-on-Soar - -	125	42.8	33.3	38.1	—	53	26th	25	31st	38.8	—	—	0.76	—	0.21	10th	13	—	—	—	—
	p Rugby - - - -	379	42.8	32.6	37.7	+ 0.9	52	26th	25	14th	—	—	16	0.80	—	0.22	6th	12	—	—	—	—
	a Raunds - - - -	210	42.8	32.2	37.5	- 0.3	54	26th	24	31st	38.2	—	18	1.00	—	0.29	6th	10	—	—	—	—
	a Winslow - - - -	379	41.1	33.1	37.1	—	51	26th	24	31st	—	—	17	1.11	—	0.36	6th	14	—	—	—	—
	a Hereford - - - -	291	43.5	33.2	38.4	+ 0.1	56	26th	23	31st	—	—	19	1.04	- 1.26	0.53	8th	9	—	—	—	—
a Cirencester - - - -	446	42.6	30.8	36.7	- 0.6	53	28th	22	15th	38.9	42.4	20	1.16	- 1.36	0.40	6th	12	66	+ 19	26	+ 7	
5. ENGLAND, S.E.	a Epsom - - - -	160	42.0	32.6	37.3	—	51	28th	21	15th	—	—	16	1.23	—	0.28	6th	16	—	—	—	—
	a Wokingham - - - -	216	42.1	31.0	36.6	—	54	28th	19	15th	—	—	—	1.19	—	0.32	11th	15	—	—	—	—
	a Maidenhead - - - -	101	43.1	32.6	37.9	—	53	26th	22	16th	—	—	25	0.73	—	0.22	5th	9	—	—	—	—
	a Marlborough - - - -	424	42.4	31.8	37.1	- 0.4	53	28th	22	15th	—	—	18	1.35	- 1.45	0.46	6th	15	57	+ 15	22	+ 5
	a Bucklebury - - - -	409	41.7	33.0	37.4	—	53	28th	25	14th, 15th	—	—	18	1.30	—	0.38	11th	14	—	—	—	—
	a Swarraton - - - -	310	41.9	32.2	37.1	- 0.3	52	28th	21	15th	—	—	—	1.45	- 1.35	0.52	11th	14	—	—	—	—
	a Margate - - - -	85	42.9	35.1	39.0	0.0	52	26th	28	31st	39.6	42.9	8	1.40	- 0.33	0.50	11th	11	65	+ 18	26	+ 7
	Broadstairs - - - -	140	—	—	—	—	—	—	—	—	—	—	—	1.52	—	0.44	11th	12	73	—	29	—
	Ramsgate - - - -	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	72	—	28	—
	a Eltham - - - -	200	41.5	33.8	37.7	—	50	5, 26, 28	27	14th, 15th	—	—	—	1.10	—	0.30	11th	12	—	—	—	—
	a Wisley - - - -	150	42.6	33.6	38.1	+ 0.1	53	23th	23	15th	38.0	42.2	15	1.11	—	0.38	11th	13	59	—	23	—
	a Basingstoke - - - -	289	41.8	33.0	37.4	—	52	28th	22	15th	39.7	43.9	17	1.17	—	0.49	11th	12	—	—	—	—
a Sevenoaks - - - -	509	40.9	33.1	37.0	—	52	28th	25	31st	37.6	42.7	13	1.66	—	0.50	11th	14	—	—	—	—	
a Tunbridge Wells - -	421	40.9	32.3	36.6	- 0.8	50	26th	25	15th	38.0	—	17	1.77	- 0.79	0.43	11th	15	63	+ 16	25	+ 7	
a Matfield - - - -	320	41.5	32.7	37.1	—	52	28th	24	31st	—	—	15	1.59	—	0.43	11th	13	—	—	—	—	
p Folkestone - - - -	121	42.7	35.7	39.2	—	51	28th	28	31st	—	44.3	—	2.14	- 0.25	0.92	12th	15	66	—	26	—	
a Littlestone - - - -	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	57	—	22	—
a Bexhill - - - -	27	43.5	35.2	39.4	—	50	28th	29	14th	41.2	—	12	1.33	—	0.59	11th	13	58	—	26	—	
a Hove - - - -	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	65	—	25	—
a Worthing - - - -	36	43.2	34.2	38.7	- 0.2	51	28th	26	16th	38.5	43.9	13	1.43	- 1.03	0.59	11th	13	79	—	31	—	
a Bognor - - - -	20	43.7	35.2	39.5	—	49	9th, 28th	28	15th	—	46.0	16	1.05	—	0.31	22nd	10	81	—	31	—	
Westbourne - - - -	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	68	—	26	—
a Totland Bay - - - -	140	43.2	36.1	39.7	—	51	28th	28	15th	—	—	7	1.16	- 1.21	0.47	11th	11	76	—	29	—	
a Sandown - - - -	20	44.6	36.2	40.4	—	52	24th	28	15th	—	—	—	1.68	—	0.61	11th	12	70	—	27	—	
p Bournemouth - - - -	145	44.4	34.7	39.6	—	52	28th	26	15th	39.0	41.9	—	1.28	—	0.43	11th	12	78	—	30	—	
6. SCOTLAND, W.	p Oban - - - -	20	46.1	37.7	41.9	—	52	28th	27	4th	—	—	10	5.10	—	1.22	10th	18	44	—	19	—
	a Thorntonhall (Lanarkshire)	440	43.3	34.3	38.8	—	50	25th	20	4th	—	—	14	3.36	—	0.85	5th	18	37	—	16	—
	a Kilmarnock - - - -	90	45.1	34.5	39.8	+ 0.4	51	25th	22	13th	—	—	—	2.89	—	0.74	5th	17	42	—	18	—
	p Ruthwell - - - - S	67	44.5	34.9	39.7	—	52	25th	24	31st	—	—	—	1.63	—	0.74	12th	14	46	—	19	—
7. ENGLAND, N.W.	a Carnforth - - - -	174	42.7	34.7	38.7	—	49															

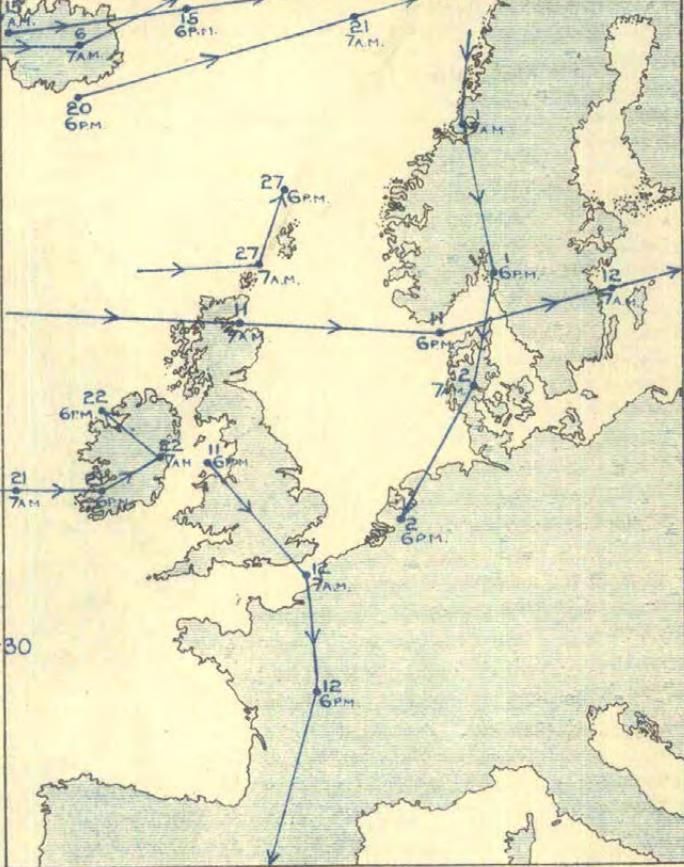
**1. BAROMETER AND WIND AT 7 A.M.**

The dotted lines indicate the normal distribution of pressure in January based on 35 years' observations, 1871-1905.



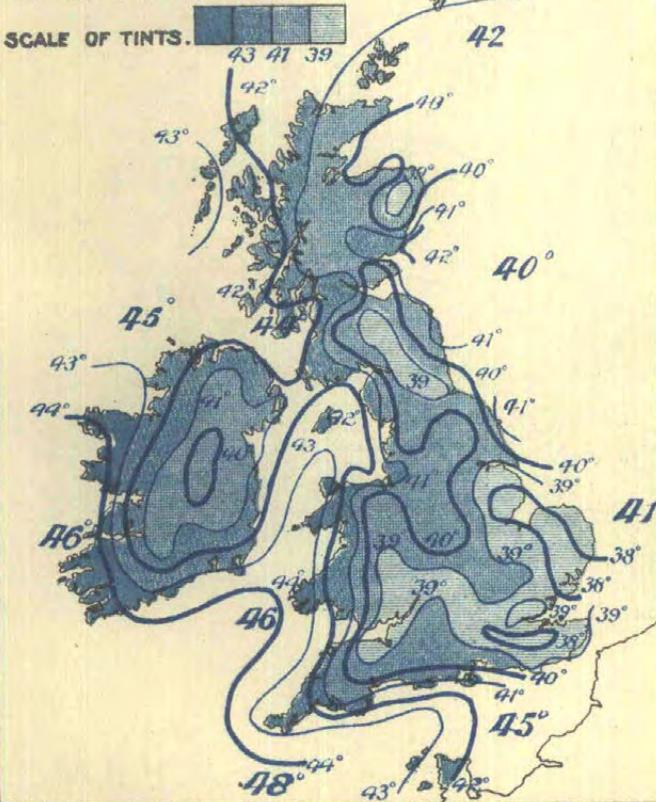
WIND ROSES. The arrows fly with the wind and indicate frequency and force, thus:   
 Light moderate strong   
 30 Obs = 1 inch

**2. MOVEMENTS OF DEPRESSIONS.**



**3. DISTRIBUTION OF MEAN TEMPERATURE.**

Reduced to sea level by a correction of 1°F for 300ft.



Sea temperatures are shown in large figures thus: - 44°

**4. BRIGHT SUNSHINE, IN HOURS.**

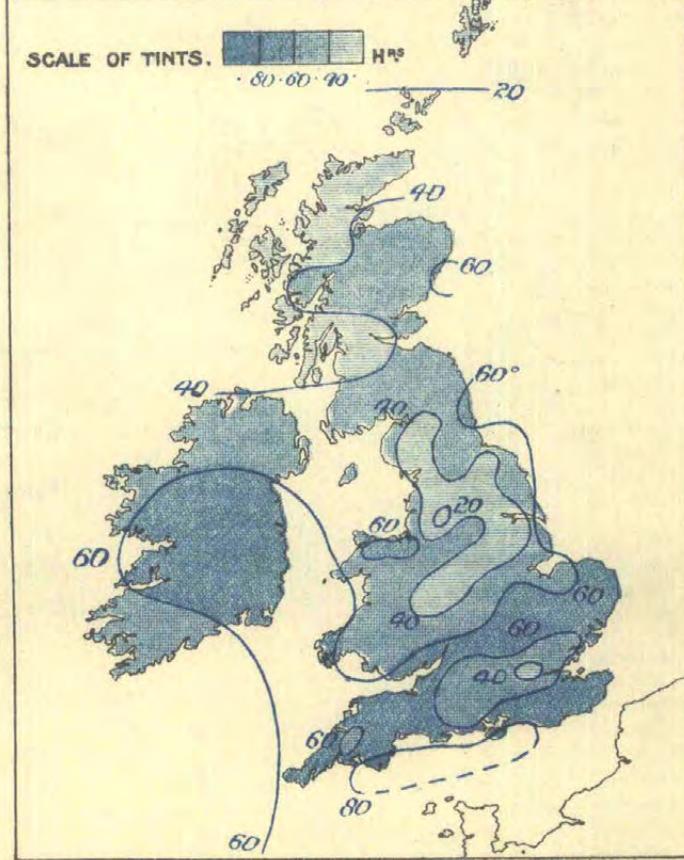




TABLE B (continued).—SUMMARY of the OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE at additional STATIONS, JANUARY, 1911.

DISTRICT.	STATION.	Height of Gauge above M.S.L. Ft.	AIR TEMPERATURE.								Earth Temperature.		Gr'nd Frost. No. of Nig'ts	RAIN AND OTHER FORMS OF PRECIPITATION.				BRIGHT SUNSHINE.					
			Mean of				Absolute Maximum and Minimum.				1 ft.	4 ft.		Total Fall. In.	Most in a day.		Number of Days.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.		
			A	B	Mean of A and B.	Diff. of Mean from Normal.	Max.	Day.	Min.	Day.			In.		In.	In.						Day.	
			Max.	Min.	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	
8. ENGLAND, S.W.	§ p Aberystwyth	59	45.1	38.2	41.7	—	49	16th	31	31st	—	—	—	1.65	—	0.64	8th	11	64	—	26	—	
	§ Haverfordwest	93	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	62	—	25	—	
	§ Tenby	79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	58	—	23	—	
	§ Port Talbot	179	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	64	—	25	—	
	§ Forest of Dean	200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	§ "	900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	§ p Cardiff	203	43.1	34.3	38.7	-1.6	53	28th	27	31st	38.8	43.0	15	1.53	-2.30	0.45	5th	14	71	—	28	—	
	§ a Swansea	24	45.7	37.4	41.6	—	50	9, 24, 31	31	2nd	40.4	46.4	18	1.90	—	0.32	11th	13	56	—	22	—	
	§ a Shaftesbury	722	41.3	33.2	37.3	-0.1	51	28th	25	31st	38.4	—	—	1.10	-1.68	0.29	11th	13	—	—	—	—	
	§ a Arlington	613	43.2	34.5	38.9	-1.0	49	28th	26	15th	—	—	—	3.15	-1.33	0.63	11th	15	—	—	—	—	
	§ a Cullompton	202	44.4	34.0	39.2	-0.6	53	28th	22	15th	41.3	—	15	1.23	-2.03	0.41	11th	15	66	+21	26	+9	
	§ Torquay	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	75	+16	29	+6
	§ a Weymouth	21	44.7	36.5	40.6	—	50	9th	28	15th	—	—	—	1.06	—	0.42	6th	13	80	—	31	—	
	§ p Paignton	11	45.5	35.7	40.6	—	53	28th	27	14th	—	—	—	1.01	—	0.31	5th	9	64	—	25	—	
§ p Sheepstor	749	43.3	32.3	37.8	—	48	16th	22	15th	—	—	—	3.03	—	0.80	11th	15	—	—	—	—		
§ a Newquay	100	46.3	38.4	42.4	-1.3	50	9th, 25th	28	15th	42.8	—	—	1.83	-1.46	0.43	5th	15	71	+18	27	+7		
§ Salcombe	300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	81	—	31	—	
§ a Teignmouth	19	46.3	37.3	41.8	—	55	26th	28	15th	—	—	11	0.82	—	0.24	6th	7	71	—	27	—		
§ a Fowey	—	47.4	35.4	41.4	—	52	10th	27	15th	—	—	—	1.17	—	0.34	5th	11	73	—	28	—		
§ a Penzance	54	47.7	40.6	44.2	—	52	24th	31	15th	—	—	—	2.43	—	0.90	5th	17	71	—	27	—		
§ p Dunfanaghy	54	47.0	38.2	42.6	—	53	28th	29	4th	—	—	—	1.85	—	0.39	5th	17	—	—	—	—		
§ p Dublin (Glasnevin)	67	46.5	34.7	40.6	+0.1	56	25th	27	31st	—	—	—	20	0.79	-1.49	0.22	5th	11	—	—	—		
§ a Kingstown	42	47.0	37.0	42.0	—	57	25th	29	19th, 21st	—	—	—	0.37	—	0.15	5th	8	79	—	32	—		
§ p Clongowes Wood College	245	45.0	33.2	39.1	—	51	25th	22	2nd, 13th	—	—	17	1.17	—	0.56	5th	12	66	—	27	—		
§ a Mountmellick	253	44.6	33.5	39.1	—	55	25th	20	4th	—	—	—	2.32	—	0.93	5th	14	—	—	—	—		
§ p Newcastle (Co. Wicklow)	256	46.0	35.3	40.7	—	57	27th	26	20th	—	—	—	0.59	—	0.51	5th	6	—	—	—	—		
§ a Kilkenny	212	45.5	33.3	39.4	-1.3	55	25th	25	10, 13, 19	—	—	—	1.53	-1.86	0.45	5th	14	—	—	—	—		
§ a Cahir	199	46.0	35.0	40.5	-0.8	55	26th	21	4th	—	—	—	2.11	—	0.57	5th	14	—	—	—	—		
§ a Foynes	108	47.5	37.0	42.3	+0.9	54	25th	28	4th	—	—	—	1.82	-1.84	0.41	21st	21	—	—	—	—		
§ a Ballinacurra	34	47.2	37.6	42.4	—	53	25th	27	23rd	—	—	—	0.91	—	0.26	5th	11	49	—	19	—		
§ a Guernsey (Villa Carey)	180	45.7	39.5	42.6	-0.7	50	1, 8, 9, 15	33	31st	—	—	—	1.86	-1.73	0.72	11th	18	70	+18	27	+7		

NOTES ON THE STATISTICAL TABLES.

**Hours of Observation.**—The following types are used to indicate the hours of observation at Stations included in Table A:—Clarendon, Normal Climatological Stations—I, 9 a.m. [II, 3 p.m.], III, 9 p.m. Black Capitals, telegraphic reporting normal climatological stations—I, 7 a.m., II, 1 p.m., III, 9 p.m. Roman, telegraphic reporting stations—I, 7 a.m., [II, 1 p.m.], III, 6 p.m. Italic, auxiliary climatological stations—I, 9 a.m. only, at Colmonell and Ventnor 3 p.m. The summaries are based on observations made three times a day wherever the data are available, except in the case of the element pressure (see below). At stations shown in clarendon type the maximum and minimum temperatures are read at 9 p.m.; at the remaining stations these observations are made at I. In Table B the letters a and p indicate whether the readings of the maximum and minimum are taken at the hours of morning or evening observation.

**Barometer.**—The correction for latitude has not been applied to the readings quoted in the Tables. It is applied to the readings at sea level from which the chart showing the mean monthly distribution of pressure is prepared. The values given in the tables are for station level. The values printed are (1) for stations shown in clarendon type, the means of observations at 9 a.m. and 9 p.m.; (2) for stations shown in Capitals, the means of observations at 7 a.m., 1 p.m., 9 p.m.; (3) for stations shown in Roman type, the means of observations at 7 a.m. and 6 p.m.; (4) for stations shown in italic type, the means of observations at 9 a.m. The column headed C gives the correction for diurnal variation required to reduce the means of observations at fixed hours to true diurnal means, based on the analysis of the values obtained at the four observatories for the period 1871-1905. The difference from normal is based upon the 7 a.m. readings only, except in the cases of Kew, Greenwich, Aberdeen, Valencia and Falmouth (see below).

**Rainfall.**—The amounts are those for the 24 hours commenced at the time of morning observation.

**Hygrometer.**—At certain stations the vapour pressure and the relative humidity are the results obtained from the daily values. These are entered in clarendon type.

At other stations the calculations are made from the monthly means of the dry and wet bulb readings.

**Weather Phenomena.**—The number of days of Rain, Snow, Hail, Thunderstorm, Fog, Ground Frost, and Gale, are counted irrespective of the hours at which the phenomena occur. Except in the cases of rainfall (see above) and ground frost the day is the civil day. A day is reckoned as a day of "clear sky," if the mean of the estimates of the "amount of cloud" at the fixed hours of observation is less than 2, and as an "overcast" day if the mean is greater than 8. Days of Ground Frost.—A day is counted as a "Day of Ground Frost" if it follows a night on which the minimum has sunk to 30° or less.

**Wind Summaries.**—The results given under wind direction, and the number of observations of calms and of fresh or strong wind, are based on the observations at fixed hours. At Deerness, Aberdeen, Valencia, Falmouth, Kew, Glasgow, Stonyhurst and Armagh the wind observations are based on the records of a standard Robinson anemometer (factor 2.2). Velocities of between 13 and 38 miles in the hour have been entered as "fresh or strong winds," velocities of 39 miles in the hour, or above, as gales. (At Brighton, Plymouth and Southport the equivalent values are obtained from a Dines Pressure Tube Anemometer.)

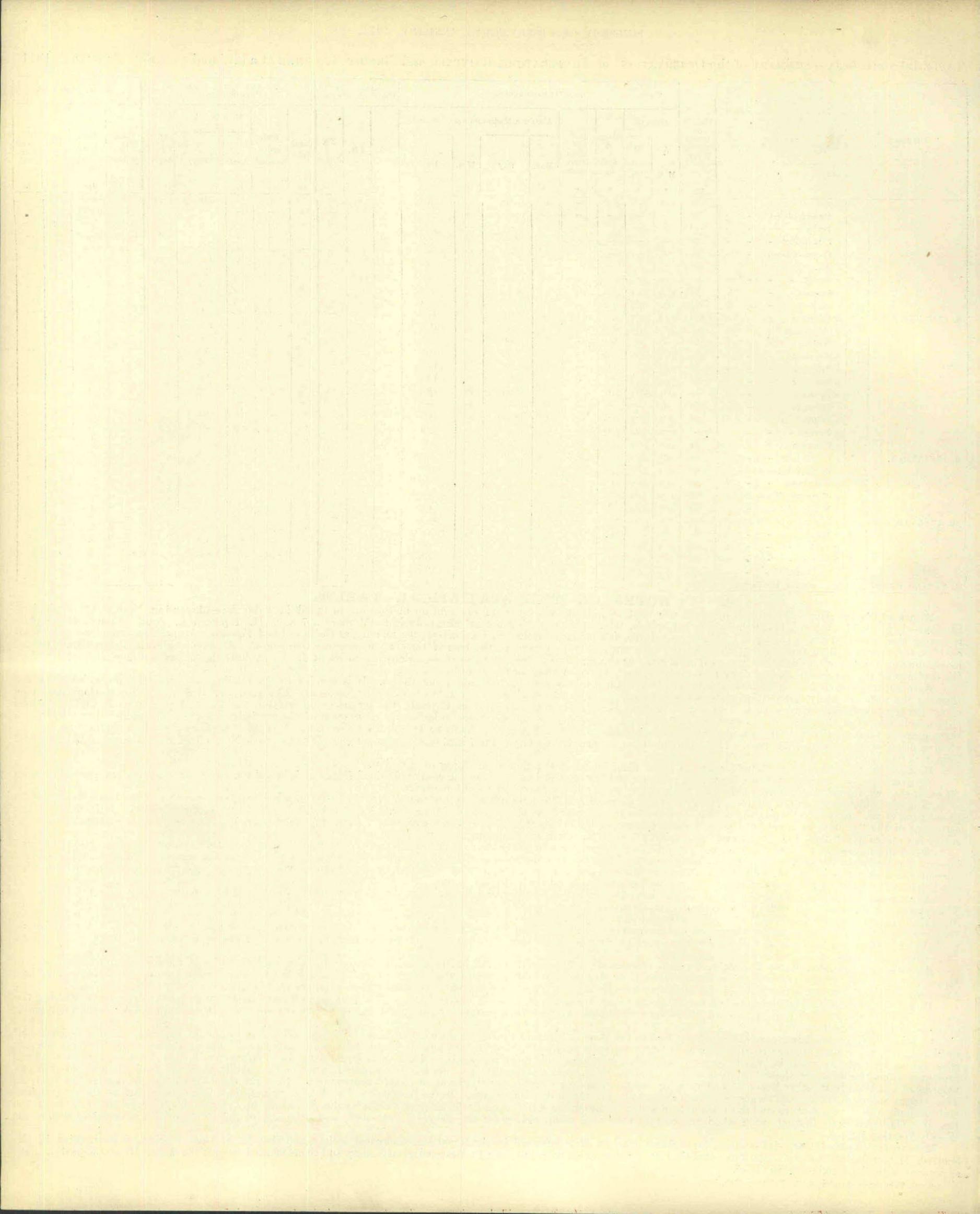
**Averages.**—The normal averages used for stations are—Pressure, Temperature, and Rainfall for the 35 years 1871-1905; Bright Sunshine for the 25 years 1881-1905. The values are published in Appendix III. to the Weekly Weather Report for 1906. For Greenwich and Oxford, averages for longer periods are used. (See Notes in Monthly Weather Reports for 1908.) Monthly averages of pressure at telegraphic reporting stations for the epoch 8 a.m. are published in Appendix I. to the Daily Weather Report. In order to render these averages comparable with the data for the present month, a correction, based on the results for the four observatories as published in "Hourly Readings at the Observatories under the Meteorological Council," has been applied to each of them before the figures given in the column headed "Barometer—Difference from Normal" were computed.

**Aberdeen, Falmouth, Kew, Valencia, Oxford, Greenwich.**—The figures quoted in the second line assigned to these observatories in the columns for Barometer and Mean Temperature are the true daily means computed from the hourly tabulations of the traces of the photographic recording instruments. For Kew, Falmouth, Aberdeen and Valencia the divergences of the means of the readings at 9 a.m. and 9 p.m. from their normal averages are also given.

**Royal Observatory, Greenwich.**—The earth temperatures are taken at a depth of 3 ft. 2 ins. The daily rainfall amounts are those for the 24 hours comprising the civil day. The number of days in the month which were persistently overcast from midnight to midnight was 6, the number of persistently cloudless days was 0, the number of persistently foggy days was 0.

§ **Mean Values for Districts.**—The stations used in the Weekly Weather Report for the computation of "district values" of rainfall and temperature are distinguished by the sign §, those used for the computation of "district values of bright sunshine" by the sign §. These stations are distributed between Tables A and B. The monthly mean values for districts given in this Report for maximum, minimum and mean temperature, duration of bright sunshine, number of rain days and amount of rainfall, are computed from the data for these "representative" stations. The mean temperature for districts is computed in the manner shown in the preface to this and previous volumes of the Weekly Weather Report. The monthly mean values for districts for "amount of cloud" are computed from the data for all stations included in Table A. The extreme values of the various elements in each district are printed in distinctive type. In the lines devoted to district values, the columns referring to absolute highest and absolute lowest temperature and the maximum amount of rainfall in a day contain the extreme values for the district at any station included in either table of the Report. The averages for districts with which the current values are compared are for the 25 years 1881-1905, as in the case of the corresponding values published in the Weekly Weather Report.

**Meteorological Societies.**—Information for stations marked § is supplied by the Royal Meteorological Society, and that for stations marked § is supplied by the Scottish Meteorological Society. Stations marked S are in connexion with the Scottish Meteorological Society and those marked M with the Royal Meteorological Society as well as with the Meteorological Office.



MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.  
(Supplement to the Weekly Weather Report.)SUMMARY OF OBSERVATIONS COMPILED FROM THE RETURNS OF OFFICIAL STATIONS AND VOLUNTEER OBSERVERS IN THE UNITED KINGDOM, WITH  
A CHART OF RAINFALL CONTRIBUTED BY THE BRITISH RAINFALL ORGANISATION.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE,

AND PUBLISHED FOR H.M. STATIONERY OFFICE BY WYMAN AND SONS, LTD., FETTER LANE, E.C.; OR OLIVER AND BOYD, EDINBURGH; OR E. PONSONBY, LTD.,  
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Weekly Weather Report. } No. II.

FEBRUARY, 1911.

[Price 6d.]

## SUMMARY OF OBSERVATIONS.

**Pressure, Winds and Weather.**—The month now under review was divided between two well-defined and nearly equal periods of widely different conditions of atmospheric pressure. An area of high barometer readings which had made its appearance over the United Kingdom, from the Atlantic, before the middle of January became the dominant feature in the situation over the western half of Europe, and for five weeks, down to the middle of February, it maintained its ascendancy without any very striking interruption. In January the central space of the system varied its position from day to day between these islands and the Continent, but during the first eight days of February it remained practically stationary over the British Isles, the barometer attaining its maximum height on the 1st, when it stood at 30·8 in. and upwards over the greater part of the country, reaching 30·85 in. at Donaghadee, and 30·86 in. at Castlebay. A slight break in the distribution occurred on the 10th, occasioned by a disturbance which had for some days been in the neighbourhood of the Azores. On the evening of the 7th, it passed north-eastward between the islands, and arriving off the south-west of Ireland in the night of the 9th, it assumed a "V"-shaped formation and it moved eastward across England on the following day, finally dispersing over the North Sea on the morning of the 12th. This disturbance exercised but little influence on our weather, producing small quantities of rain, and not much wind. Immediately in its rear the anti-cyclonic conditions were resumed, but the highest pressure was now transferred to Eastern Europe, and by the 15th, when the barometer had passed above 30·5 in. in most parts of the British Isles, pressure had increased to nearly 31 in. in the south of Russia.

A marked change in the pressure distribution was now in course of development. On the 9th a series of deep cyclonic systems began to move eastward in the vicinity of Iceland. At first their centres passed up between Iceland and Greenland and on to the Arctic Sea, but after the 15th, the anti-cyclone receded across France, and the Peninsula, towards the Azores, and throughout the remainder of the month all the depressions which appeared on the upper region of the Atlantic progressed along paths to the eastward or north-eastward, between Scotland and Iceland, the areas of the successive systems embracing practically the whole of the British Isles. They were of considerable depth, the barometer frequently standing below 29 in. in the far north, on as many as eight days in Shetland, the lowest reading of the month in the British Isles, 28·29 in., being registered at Sumburgh Head on the 23rd. Owing to the steady persistency of high values in the earlier period the mean pressure for the whole month was in excess of the normal at all stations excepting Sumburgh Head, where there was a deficiency of 0·03 in. Elsewhere the excess ranged from 0·04 in. at Wick, and 0·06 in. at Nairn and Aberdeen to 0·23 in. at Roche's Point, and 0·24 in. at Jersey. The highest mean pressure, above 30·3 in., was over the Bay of Biscay and Western France, the lowest, below 29·5 in., over Western Iceland. At the home stations the values ranged from 30·29 in. at Jersey to 29·76 in. at Sumburgh Head, so that there was a mean Westerly to South-Westerly gradient of 0·53 in., against a normal of 0·26 in. Winds from between South and West prevailed in all districts, with a fair proportion at North-West or North in some localities.

Under the high pressure system of the first half of the month, the weather conditions were of a very quiet character, the only instances of a wind force exceeding a strong breeze occurring at Jersey, Scilly, Malin Head, and Stornoway. The feature of the period was its dryness. Over an extensive region the weather was rainless, until the passage of the "V"-shaped disturbance of the 10th, already mentioned, but the precipitation on this occasion, although general, was everywhere unimportant. Down to the 20th or 22nd the dryness was maintained at a large number of stations, one or two very slight showers being recorded. This dry spell had commenced as far back as January 11th or 12th, no rain falling on 20 or more successive days at numerous places, 26 days at Bidston Observatory and Ruthin, 28 days at Mayfield, Staffs., and Newcastle, Wicklow, 29 days at Braceland and Worcester Lodge, Forest of Dean, Bath, Birmingham and Colwyn Bay, in nearly every instance ending on February 9th, while at Dursley, Gloucestershire, no rain was measured on any of the 37 days, January 12th to February 17th. Other places had only small aggregates, including dew and moisture deposited by fogs. Great Billing totalled 0·08 in. in 27 days, Sandwich 0·17 in. in 35 days, and Tonbridge 0·19 in. in 41 days, January 13th to February 22nd. The temperature during this period of drought was as a rule moderate, but the opening days of February were severely cold throughout the country, the thermometer in the shade falling to 20° and below at a large number of stations on the 1st and 2nd, to 12° at Wokingham, 11° at Balmoral, and 10° at Garforth, and remaining below 35° in the afternoons, 31° at Wisley, Manchester and Glasgow, and 30° at Markree Castle and Ruthwell.

With the change in the distribution of pressure the conditions became very unsettled and stormy, the result being that on fourteen consecutive days, the 15th to the 28th, the force of a strong gale (force 9) was attained at one or more of the telegraphic reporting stations. A whole gale (force 10) was felt from South-West or West at Malin Head on the 15th and 16th; at Spurn Head on the 17th; at Malin Head on the 18th; Scilly on the 21st; Malin Head on the 22nd; Malin Head, Scilly and Spurn Head on the 23rd, with the deepest depression of the month, and a very steep pressure gradient of 1·3 in. between Shetland and Jersey; at Spurn Head on the 24th; and at Malin Head on the 28th. The anemometers registered gusts at the rate of 70 miles an hour at Aberdeen on the 17th; of 66 miles at Pendennis and Roche's Point, 67 miles at Llanneigrad and Quilty, and 68 miles at Southport on the 23rd; and 72 miles at Southport on the 26th.

In the extreme north and west the dry weather came to an end on the appearance of a deep cyclonic system over Iceland in the night of the 12th, its South-Westerly wind bringing heavy rain to various parts of Scotland and Ireland. On the 13th Oban registered 1·2 in., Ford (Argyll) and Valencia Island 1·3 in., Glencarron 1·6 in., and Cruachan 1·8 in. This was the commencement of a very wet spell of eleven days in western Scotland. In the five days, 13th to 17th, Glencarron registered a total of 6·1 in., and in the three days, 21st to 23rd, a further 3·5 in., Fort William receiving 4·5 in. in the same three days, while Cruachan received the very large amount of 11·1 in. in the twelve days, 12th to 23rd. The largest of the daily quantities were 1·6 in. at Rothesay, 1·7 in. at Glasgow and Poltalloch, 2 in. at Ford, 2·4 in. at Inverary, and 2·5 in. at Cruachan on the 17th; 1·7 in. at Cruachan and Fort William on the 21st; and 1·8 in. at the latter station on the 22nd. There were some large amounts in the north-west of England on the 14th, more than an inch at Darwen; on the 16th, over an inch at Burnley; on the 18th, 1·2 in. at Uldale, and 3·7 in. at Seathwaite (when, also, 1·3 in. fell at Glenarm, Antrim, and 1·4 in. at Seaforde Down); and on the 21st, up to 2·1 in. at Arncliffe. In the southern districts the only rainstorm of note occurred on the 27th, mainly in South Wales and the south-west of England, the records ranging up to 1·4 in. at Abersychan and Sheepstor, 1·6 in. at Pant-yr-Eos (Monmouthshire), and 1·9 in. at Arlington. Hail and snow showers were comparatively frequent, but they were unimportant. There were very few thunderstorms, about half the number reported being in the extreme north, between Caithness and Shetland. Mildness ruled during the disturbed period, many of the day maxima exceeding 55°, Torquay registering 60° on the 17th. High minima were also rather frequent, 50° at several stations on the mornings of the 18th and 28th, and 51° at Barnstaple on the 25th.

The mildness of the second half of the month more than balanced the cold of the first half, so that the mean temperature for the whole month was above the normal nearly everywhere, by more than 2° in several places, nearly 3° at Scarborough and Worksop.

Aurora was seen at various stations in Scotland on the 21st–25th, 27th, and 28th, and at Aspatria on the 28th.

Fog was seldom reported inland, but on the western, southern and eastern coasts it was experienced at one or more places almost daily.

The temperature of the sea water round our coasts did not differ materially from what it had been during the preceding month, a little lower in some instances, but in nearly all neighbourhoods it was warmer than the air on shore, by 3° or 4° locally, by as much as 5° at Wick.

**Rainfall.**—As a rule there was a deficiency of precipitation over eastern, midland and southern England, the Channel and Southern Ireland, an excess in most other districts. At Glencarron there was an excess of 5·9 in. at Fort William, of 5·2 in., and at Poltalloch of 4·5 in., while the largest deficiencies were 1·3 in. at Cockle Park and Killarney, 1·4 in. at Jersey, and 1·5 in. at Roche's Point. In the mountainous regions of the west and north-west there were many very large aggregates, more than 10 in. at a number of stations, 13·2 in. at Cruachan, 14·1 in. at Ardnadam (Holy Loch), and 20·6 in. at Seathwaite. There were also numerous instances of less than an inch, down to about 0·6 in. at Whitby, Felixstowe, Sandwich and Newcastle-on-Tyne. The frequency ranged from 24 days at Stornoway, Gruline and Ford, and 22 days at Cruachan, Fort William, Cromer and 9 days at Coventry, Tonbridge and in the Forest of Dean, 7 days at Dursley.

**Bright Sunshine.**—The duration of sunshine was rather variable. Strathpeffer 16 hours, and Scilly 15 hours, below the average, while Eastbourne, Tunbridge Wells and Totland Bay had 14 hours, and Westminster 20 hours, above the average. The total duration ranged from 94 hours at Dover, and 93 hours at Hastings (34 per cent. of the possible), and 91 hours (33 per cent.) at Bournemouth and Jersey to 27 hours (10 per cent.) at Manchester.

TABLE A.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at 9 a.m., 3 p.m. and 9 p.m. at NORMAL STATIONS in the BRITISH ISLANDS

Table with columns: DISTRICT, STATION, Height of Barometer, BAROMETER (Mean at 82° F., Diff. from Normal, C., Cor. for Diurnal Range), AIR TEMPERATURE (Mean of A, B; Mean of A and B; Diff. from Normal; Absolute Maximum and Minimum), and HYGROMETER (Observations at 9 a.m., 3 p.m., and 9 p.m., or at 7 a.m., 1 p.m., 6 p.m., or 9 p.m.; Dry Bulb, Dep. of Wet, Vap. Pressure, Humidity).

Continued on page xxii.

For notes see p. xxvii. NOTE.—The Sunshine entered to Woburn is recorded at Aspley Guise.

CLIMATOLOGICAL STATIONS, at 7 a.m., 1 p.m. and 6 p.m. or 9 p.m. or at 7 a.m. and 6 p.m. at TELEGRAPHIC REPORTING during the month of FEBRUARY, 1911.

Earth Temperature.		BRIGHT SUNSHINE.			CLOUD (0-10.)			RAIN AND OTHER FORMS OF PRECIPITATION.				WEATHER. No. of Days of							WIND. No. of Observations reduced to a total of 84 for the month.										STATIONS.			
at 1 foot depth.	At 4 feet depth.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.	Mean Amount.			Total Fall.	Diff. from Normal.	Most in a day.		Precipitation.	Snow.	Hail.	Thunderstorm.	Clear Sky.	Overcast.	Fog.	Ground Frost.	Wind-force 8 and above.	Forces 4-7.	Calm.	N.	N.E.	E.	S.E.	S.		S.W.	W.	N.W.
—	—	61	—	23	—	9.1	8.5	8.4	3.14	—	0.45	17th	21	1	8	0	0	20	0	—	3	42	7	4	—	0	3	12	16	22	17	Castlebay (Isd.)
—	—	49	-5	12	-2	7.5	—	6.5	3.00	+0.14	0.53	17th	16	2	5	1	0	12	0	—	2	53	2	3	1	0	1	17	16	24	20	Deerness.
—	—	—	—	—	—	8.8	8.5	8.9	4.45	+1.57	0.64	22nd	19	7	0	1	0	20	0	—	8	47	3	10	0	1	8	15	21	8	18	Sumburgh Head.
—	—	53	-7	21	-2	8.5	8.2	8.6	5.16	+1.27	0.63	21st	24	4	5	0	0	17	0	—	5	52	5	3	1	0	0	12	25	25	13	Stornoway.
—	—	—	—	—	—	7.6	—	7.2	2.75	+0.66	0.50	23rd	18	5	0	2	0	13	0	—	1	32	1	24	0	0	0	9	8	27	15	Wick.
—	—	45	-16	17	-6	8.0	—	5.8	4.77	+2.14	0.64	22nd	13	5	0	0	1	12	0	—	1	24	35	2	0	0	5	15	16	10	Strathpeffer.	
—	—	—	—	—	—	8.6	—	7.3	12.99	+5.88	1.62	21st	19	3	5	0	1	17	0	—	1	35	2	4	0	0	18	0	0	60	0	Glencarron.
—	—	31	-11	12	-4	8.5	—	6.8	6.81	+2.74	1.14	21st	19	4	0	0	1	16	1	—	3	30	0	2	2	3	2	4	52	18	1	Fort Augustus.
—	—	—	—	—	—	8.0	—	7.0	4.47	—	0.66	16th	18	6	0	0	2	16	0	—	2	45	15	0	6	0	0	0	12	36	15	Kingussie.
—	—	—	—	—	—	8.4	—	7.8	12.45	+5.21	1.83	22nd	22	4	2	0	1	18	0	—	2	26	20	0	4	6	0	2	42	7	3	Fort William.
39.3	—	—	—	—	—	7.0	—	6.8	2.87	+0.46	0.36	19th, 25th	16	2	0	0	2	10	0	—	1	18	5	7	2	0	0	3	18	13	36	Dunrobin Castle.
—	—	48	-11	18	-4	8.2	8.4	7.4	7.05	+2.40	1.83	—	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Dundee.
—	—	—	—	—	—	8.2	—	7.9	1.10	-1.06	0.20	21st	18	2	1	0	0	16	0	—	4	14	0	2	3	2	3	3	46	15	10	Nairn.
—	—	57	—	22	—	8.5	7.4	7.9	3.19	+1.60	0.42	21st	20	2	0	0	1	15	0	—	0	5	19	1	0	1	0	3	8	49	3	Gordon Castle.
—	—	70	—	27	—	7.0	—	6.0	1.99	+0.09	0.42	25th	18	6	2	0	2	9	0	—	2	15	0	0	0	0	17	9	36	6	16	Aberdeen.
—	39.7	84	+12	32	+4	5.9	5.5	5.3	1.07	-1.17	0.22	20th	13	2	1	0	3	8	0	—	0	25	6	1	0	0	0	18	21	20	18	Balmoral.
—	—	—	—	—	—	7.6	—	—	2.00	-0.66	0.49	23rd	15	5	0	0	4	16	0	21	5	12	0	0	6	3	3	0	24	21	27	Crieff.
—	—	—	—	—	—	7.3	—	6.1	4.17	+0.90	0.84	22nd	17	4	0	1	4	13	0	—	4	18	0	23	0	7	0	0	6	37	11	Leith.
—	—	—	—	—	—	7.9	—	8.0	1.55	+0.09	0.29	18th	13	0	0	0	0	18	2	—	2	23	6	1	0	2	2	9	27	33	4	Marchmont.
36.5	—	61	-4	23	-2	7.4	—	4.7	1.90	-0.39	0.52	22nd	12	1	1	0	7	12	1	12	1	20	0	8	2	3	0	12	15	40	4	Seaham.
—	—	74	+1	28	0	7.5	—	6.6	2.61	+0.41	0.84	—	16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Whitby.
—	—	—	—	—	—	7.0	—	5.5	1.17	-0.42	0.31	14th	10	1	1	0	3	12	0	—	4	24	2	3	0	0	0	10	21	37	11	Cockle Pk (Mor-Shields. (peth.)
—	—	68	—	26	—	7.2	—	6.4	0.64	-1.04	0.19	21st	10	1	0	0	4	16	0	—	0	3	0	13	3	0	12	2	27	2	25	Durham.
37.2	39.6	85	—	32	—	6.4	—	5.8	0.80	-1.28	0.27	18th	11	0	0	0	2	11	0	14	5	21	0	5	5	0	1	12	15	22	24	Rounton.
—	—	—	—	—	—	8.3	—	8.3	0.84	-0.64	0.23	14th	12	0	0	0	0	18	0	—	1	27	3	3	0	3	0	15	21	21	13	Scarborough.
—	—	70	+4	26	+2	7.6	—	6.3	0.83	-0.69	0.19	23rd	10	0	0	0	3	14	0	11	6	24	19	5	0	0	0	15	14	25	6	York.
37.2	—	—	—	—	—	7.8	—	6.1	0.89	-0.70	0.18	21st	14	0	0	0	4	16	2	19	2	45	3	9	2	0	7	15	17	10	21	Spurn Head.
—	41.1*	57	—	21	—	7.7	—	8.0	1.08	-0.71	0.24	21st	15	0	0	0	13	4	—	2	44	0	1	4	0	4	2	23	3	47	37	Lincoln.
39.1	41.2	48	-9	18	-3	7.1	—	6.7	0.87	-0.77	0.21	21st	12	0	0	0	2	14	1	—	0	18	0	7	0	2	2	19	3	30	21	Hull.
—	—	—	—	—	—	7.3	7.3	7.8	0.77	-0.40	0.20	21st	11	2	0	0	0	8	1	—	9	58	0	4	3	0	3	13	17	27	17	Skegness.
37.4	40.2	—	—	—	—	5.9	—	4.2	0.89	-0.67	0.26	21st	12	0	0	0	5	6	0	—	4	15	6	0	0	0	3	6	21	37	11	Skegness.
—	—	58	—	21	—	6.3	—	6.4	1.50	—	0.35	10th	16	1	0	0	3	13	0	—	0	26	0	16	5	0	0	4	18	24	17	Hull.
38.5	41.3	49	—	18	—	7.6	—	6.9	1.36	-0.38	0.26	21st	16	2	0	0	2	16	1	9	3	14	7	18	2	0	0	15	12	30	—	Lowestoft.
38.1	40.9	65	-10	24	-4	7.2	—	6.5	0.91	-0.56	0.38	—	13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Cromer.
39.0	41.1	69	—	25	—	6.9	—	5.8	1.45	+0.06	0.20	27th	17	3	2	0	3	9	3	8	0	33	6	10	3	0	0	8	17	18	22	Hillington.
—	—	66	—	24	—	8.0	—	7.1	1.22	—	0.30	21st	22	0	0	0	0	17	1	—	0	47	3	16	2	0	0	19	15	12	17	Norwich.
—	—	46	-24	17	-9	7.6	—	6.4	2.45	+0.70	0.50	11th	19	2	1	0	0	11	1	21	0	29	6	7	5	0	3	2	24	16	21	Yarmouth.
—	—	—	—	—	—	—	—	—	1.89	—	0.39	11th	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Geldeston.
38.1	41.5	66	—	24	—	7.4	7.0	5.9	1.43	-0.10	0.22	18th	20	0	0	0	10	3	—	1	24	0	8	2	0	4	5	21	30	14	11	Cambridge.
—	—	67	-7	25	-2	7.9	—	6.1	1.24	-0.14	0.24	11th	20	1	1	0	4	15	1	—	1	9	3	12	3	1	3	6	21	24	11	Clacton.
38.8	41.6	81	+7	30	+3	7.3	—	5.5	0.79	-0.59	0.18	27th	13	0	2	0	6	14	1	16	5	12	10	2	0	0	8	8	28	18	10	Woburn.
40.3	43.3	80	—	29	—	7.7	7.3	6.8	0.77	—	0.27	27th	13	0	0	0	0	13	0	11	1	27	0	11	2	0	4	13	12	21	21	Bennington.
—	—	72	—	26	—	7.7	—	6.6	1.33	—	0.23	18th	14	0	0	0	4	16	0	—	3	20	12	10	2	2	0	7	19	24	8	Berkhamsted.
38.9	40.3	80	—	29	—	7.4	—	6.9	1.20	-0.47	0.26	27th	14	0	0	0	5	17	3	18	0	16	20	6	3	0	3	6	15	27	4	Garforth.
38.4	—	70	—	26	—	7.4	—	7.2	1.58	-0.46	0.38	27th	15	0	1	0	4	16	2	18												

TABLE A. (continued).—Giving a Summary of the METEOROLOGICAL OBSERVATIONS made at 9 a.m., 3 p.m. and 9 p.m. at NORMAL STATIONS in the BRITISH ISLANDS

Table with columns: DISTRICT, STATION, Height of Barometer, BAROMETER (Mean at 32° F., Diff. from Normal, Cor. for Diurnal Range), AIR TEMPERATURE (Mean of A, B; Mean of A and B; Diff. from Normal; Absolute Maximum and Minimum), and HYGROMETER (Observations at 9 a.m., 3 p.m., and 9 p.m., or at 7 a.m., 1 p.m., 6 p.m., or 9 p.m.; Dry Bulb, Dep. of Wet, Vap. Pressure, Humidity).

For notes see p. xxvii.

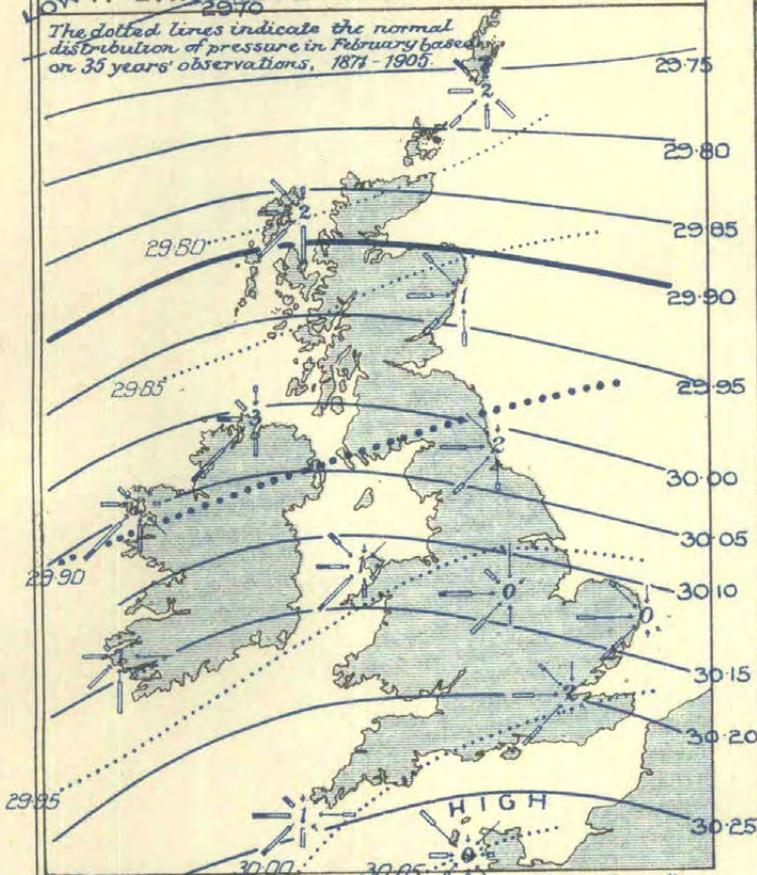


TABLE B.—SUMMARY of the OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE at additional STATIONS, FEBRUARY, 1911.

DISTRICT.	STATION.	Height of Gauge above M.S.L. Ft.	AIR TEMPERATURE.								Earth Temperature.		Grnd. Frost. No. of Nig'ts	RAIN AND OTHER FORMS OF PRECIPITATION.				BRIGHT SUNSHINE.				
			Mean of		Mean of A and B.	Diff. of Mean from Normal.	Absolute Maximum and Minimum.				1 ft.	4 ft.		Total Fall.		Most in a day.		Number of Days.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.
			A	B			Max.	Day.	Min.	Day.			In.	In.	Amt.	Day.						
			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
0. SCOTLAND, N.	p Baltasound	31	43.5	35.2	39.4	—	48	6th, 16th	24	20th	38.6	—	—	4.70	—	0.70	21st	20	40	—	16	—
	a Fortrose	60	46.3	34.4	40.4	—	57	16th	28	1st	—	—	—	2.56	—	0.38	17th	17	57	—	22	—
1. SCOTLAND, E.	p Insch	426	44.3	31.4	37.9	—	57	16th	23	1st	36.0	—	13	1.31	—	0.21	14th, 25th	14	80	—	31	—
	p Crathes	140	46.2	31.2	38.7	—	59	16th	19	1st	36.5	38.3	17	0.87	—	0.20	19th	10	87	—	33	—
	p Stonehaven	786	46.4	33.7	40.1	—	59	19th	24	1st	—	—	—	0.88	—	0.13	14, 19, 25	13	85	—	33	—
	p Balruddery	276	45.1	31.6	38.4	—	55	21st, 22nd	22	2nd	—	—	—	1.66	—	0.27	21st, 22nd	17	83	—	32	—
	a West Linton	800	42.5	30.3	36.4	+ 0.1	52	21st	17	1st, 2nd	—	—	—	5.00	—	0.82	18th	17	62	—	24	—
2. ENGLAND, N.E.	a Alnwick Castle	210	47.0	33.7	40.4	+ 2.0	56	21st	21	1st	—	—	—	0.92	- 1.23	0.27	18th	13	—	—	—	—
	p Newcastle-on-Tyne	152	46.3	36.5	41.4	—	57	18th	27	1st	—	—	—	0.56	- 1.03	0.09	23rd	12	56	+ 8	21	+ 3
	p Ampleforth	349	45.3	34.1	39.7	—	53	22nd	21	1st	—	—	—	1.06	—	0.28	14th	14	—	—	—	—
	a Fulbeck	180	45.5	34.3	39.9	+ 1.5	55	18th, 25th	20	1st	—	—	13	1.14	- 0.46	0.32	21st	15	36	—	13	—
	a Tauceby	124	46.1	34.7	40.4	—	56	18th	19	1st	39.3	42.0	11	1.45	- 0.50	0.38	21st	13	71	—	26	—
3. ENGLAND, E.	a Felixstowe	10	44.1	34.1	39.1	- 0.2	54	18th, 25th	24	1st, 2nd	—	—	—	0.62	—	0.10	18th	17	80	—	29	—
	a Rothamsted	424	45.9	33.1	39.5	+ 1.1	55	17th, 25th	18	1st, 2nd	—	—	—	1.71	- 0.18	0.32	27th	15	76	+ 8	28	+ 3
	a Shoeburyness	13	46.3	35.0	40.7	+ 0.9	55	17th, 18th	24	1st	—	—	—	0.65	- 0.54	0.21	27th	14	—	—	—	—
	a Southend-on-Sea	90	45.5	36.2	40.9	—	54	17th	26	1st	39.8	—	13	0.71	- 0.69	0.25	27th	12	81	—	30	—
4. MIDLAND COUNTIES	a Harrogate	476	44.3	34.7	39.5	+ 1.8	52	22nd, 28th	21	1st	38.8	40.2	14	2.59	+ 0.52	0.51	21st	14	65	—	24	—
	a Bradford	489	44.4	34.4	39.4	—	53	18th	20	1st	37.8	40.9	11	3.61	—	0.60	16th	14	66	—	25	—
	a Cheadle	646	44.4	33.8	39.1	+ 1.4	53	18th	22	1st	—	—	—	1.80	- 0.44	0.30	27th	12	—	—	—	—
	a Bawtry	65	46.0	34.6	40.3	+ 1.3	59	18th	16	1st	—	—	—	0.70	- 0.85	0.14	21st	10	—	—	—	—
	a Worksop	56	47.2	34.4	40.8	+ 2.6	60	18th	16	1st	38.2	40.3	14	0.78	- 1.13	0.16	18th	12	55	- 2	20	- 1
	a Mayfield (Staffs.)	374	45.0	32.9	39.0	—	54	18th	13	1st	—	—	12	2.64	—	0.40	25th	15	—	—	—	—
	a Telper	222	45.9	34.0	40.0	—	56	18th	16	1st	—	—	9	2.26	—	0.38	21st	17	—	—	—	—
	a Kingston-on-Soar	125	45.9	33.9	39.9	—	56	25th	14	1st	39.1	—	—	1.28	—	0.28	21st	16	—	—	—	—
	p Rugby	379	47.0	33.9	40.5	+ 2.0	56	15, 19, 25	15	1st	—	—	11	1.38	—	0.24	27th	15	—	—	—	—
	a Raunds	210	47.1	33.5	40.3	+ 0.8	58	25th	14	1st	38.9	—	12	1.05	—	0.20	23rd	13	—	—	—	—
	a Winslow	379	44.5	34.1	39.3	—	54	25th	19	1st	—	—	14	1.55	—	0.28	28th	16	—	—	—	—
	a Hereford	291	46.5	34.6	40.6	+ 0.9	57	18th	18	1st	—	—	11	1.31	- 0.71	0.25	18th	15	—	—	—	—
a Cirencester	446	45.5	32.3	38.9	+ 0.5	55	18, 23, 26	14	2nd	39.3	41.6	12	1.81	- 0.46	0.40	27th	14	71	- 1	26	0	
5. ENGLAND, S.E.	a Epsom	160	45.8	33.8	39.8	—	55	17th	17	1st	—	—	17	1.24	—	0.25	27th	16	—	—	—	—
	a Wokingham	216	45.9	31.9	38.9	—	55	17th	13	1st	—	—	—	1.30	—	0.30	27th	14	—	—	—	—
	a Marlborough	424	45.0	33.2	39.1	+ 0.2	52	18th, 25th	16	2nd	—	—	12	2.59	+ 0.23	0.60	28th	15	65	+ 6	24	+ 3
	a Bucklebury	409	44.8	34.1	39.5	—	53	17th, 25th	18	1st	—	—	17	1.57	—	0.32	27th	13	—	—	—	—
	a Swarraton	310	44.9	32.5	38.7	- 0.1	54	17th	16	2nd	—	—	—	1.65	- 0.76	0.43	27th	15	—	—	—	—
	a Margate	85	46.0	36.5	41.3	+ 1.3	54	17th, 25th	26	1st	39.5	41.4	—	0.83	- 0.55	0.25	27th	12	71	0	26	0
	Broadstairs	140	—	—	—	—	—	—	—	—	—	—	—	0.90	—	0.33	27th	13	88	—	32	—
	Ramsgate	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	82	—	30	—
	a Eltham	200	45.4	34.5	40.0	—	54	25th	21	1st	—	—	—	1.10	—	0.30	27th	11	—	—	—	—
	a Wisley	150	45.7	34.8	40.3	+ 1.1	55	17th	19	1st	38.7	41.4	13	1.17	—	0.27	27th	13	72	—	26	—
	a Basingstoke	289	44.9	34.0	39.5	—	54	17th	18	2nd	40.0	42.6	12	1.88	—	0.37	27th	16	—	—	—	—
	a Sevenoaks	509	44.0	33.7	38.9	—	53	17th	20	1st	37.8	41.3	14	1.95	—	0.36	27th	16	—	—	—	—
a Tunbridge Wells	421	44.5	33.7	39.1	+ 0.2	53	17th	23	1st	37.9	—	16	1.70	- 0.44	0.35	28th	13	82	+ 14	30	+ 6	
a Matfield	320	45.0	33.9	39.5	—	54	17th	22	1st	—	—	13	1.43	—	0.33	28th	12	—	—	—	—	
p Folkestone	121	45.7	36.8	41.3	—	56	17th	28	1st	—	43.1	—	1.07	- 0.86	0.42	28th	12	82	—	30	—	
Littlestone	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	81	—	29	—	
a Bexhill	27	45.8	36.7	41.3	—	54	17th	27	1, 2, 3	41.2	—	12	1.21	—	0.30	27th	10	86	—	31	—	
Hove	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	77	—	28	—
a Worthing	36	46.3	36.1	41.2	+ 1.2	55	17th, 25th	26	1st, 14th	35.4	42.5	11	1.28	- 0.71	0.34	27th	12	81	—	29	—	
a Bognor	20	46.2	36.9	41.6	—	56	25th	26	1st	—	44.4	14	1.32	—	0.38	27th	13	87	—	32	—	
Westbourne	80	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	84	—	30	—
a Totland Bay	140	46.0	37.8	41.9	—	54	25th	27	2nd	—	—	7	1.40	- 0.67	0.31	27th	14	89	—	32	—	
a Sandown	20	47.5	38.0	42.8	—	57	17th	29	1st	—	—	—	1.73	—	0.40	27th	15	84	—	30	—	
p Bournemouth	145	47.1	36.5	41.8	—	57	17th, 25th	22	2nd	39.4	41.0	—	1.62	—	0.32	27th	16	91	—	33	—	
6. SCOTLAND, W.	p Oban	20	46.7	36.0	41.4	—	53	21st	24	1st	—	—	9	7.75	—	1.20	13th	21	61	—	23	—
	a Thorntonhall (Lanarkshire)	440	44.2	32.7	38.5	—	55	21st	18	2nd	—	—	14	5.79	—	1.37	17th	20	55	—	21	—
	a Kilmarnock	90	45.5	32.9	39.2	- 0.1	56	21st	19	2nd	—	—	—	6.18	—	1.35	17th	20	45	—	17	—
	p Ruthwell	67	44.6	33.3	39.0	—	51	17th, 18th	18	2nd	—	—	—	4.19	—	0.76	18th	18	55	—	21	—
7. ENGLAND, N.W.	a Carnforth	174	44.4	33.6	39.0	—	53	21st	20	1st	—	—	15	4.74	—	0.90	27th	15	50	—	19	—
	a Lancaster	311	44.7	34.9	39.8	—	51	21st	25	1st	39.2	43.1	19	4.97	—	0.93	27th	17	53	—	20	—
	a Burnley	459	43.9	32.9	38.4	—	52															

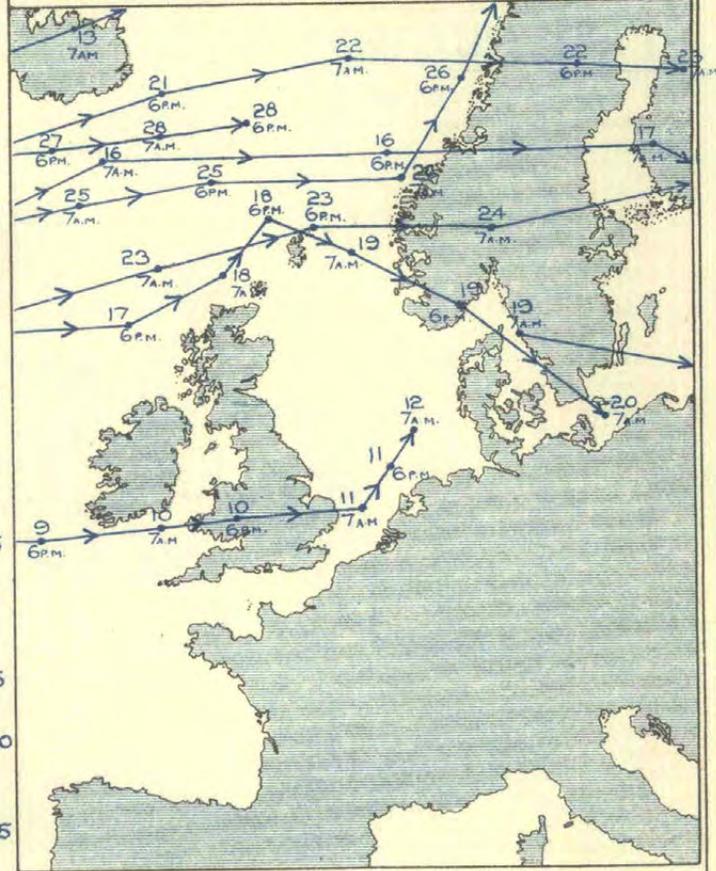
## 1. BAROMETER AND WIND AT 7 A.M.

The dotted lines indicate the normal distribution of pressure in February based on 35 years' observations, 1874-1905.



WIND ROSES. The arrows fly with the wind and indicate frequency and force, thus:   
 Light moderate strong   
 30 Obs = 1 inch

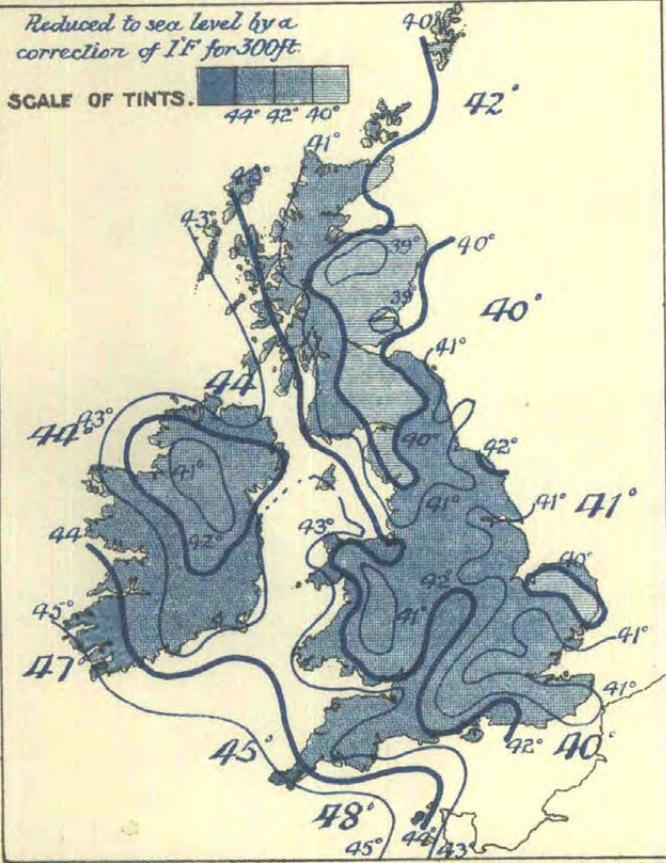
## 2. MOVEMENTS OF DEPRESSIONS.



## 3. DISTRIBUTION OF MEAN TEMPERATURE.

Reduced to sea level by a correction of 1° for 300ft.

SCALE OF TINTS.



Sea temperatures are shown in large figures thus:— 44°.

## 4. BRIGHT SUNSHINE, IN HOURS.

SCALE OF TINTS. 80 60 40 Hrs



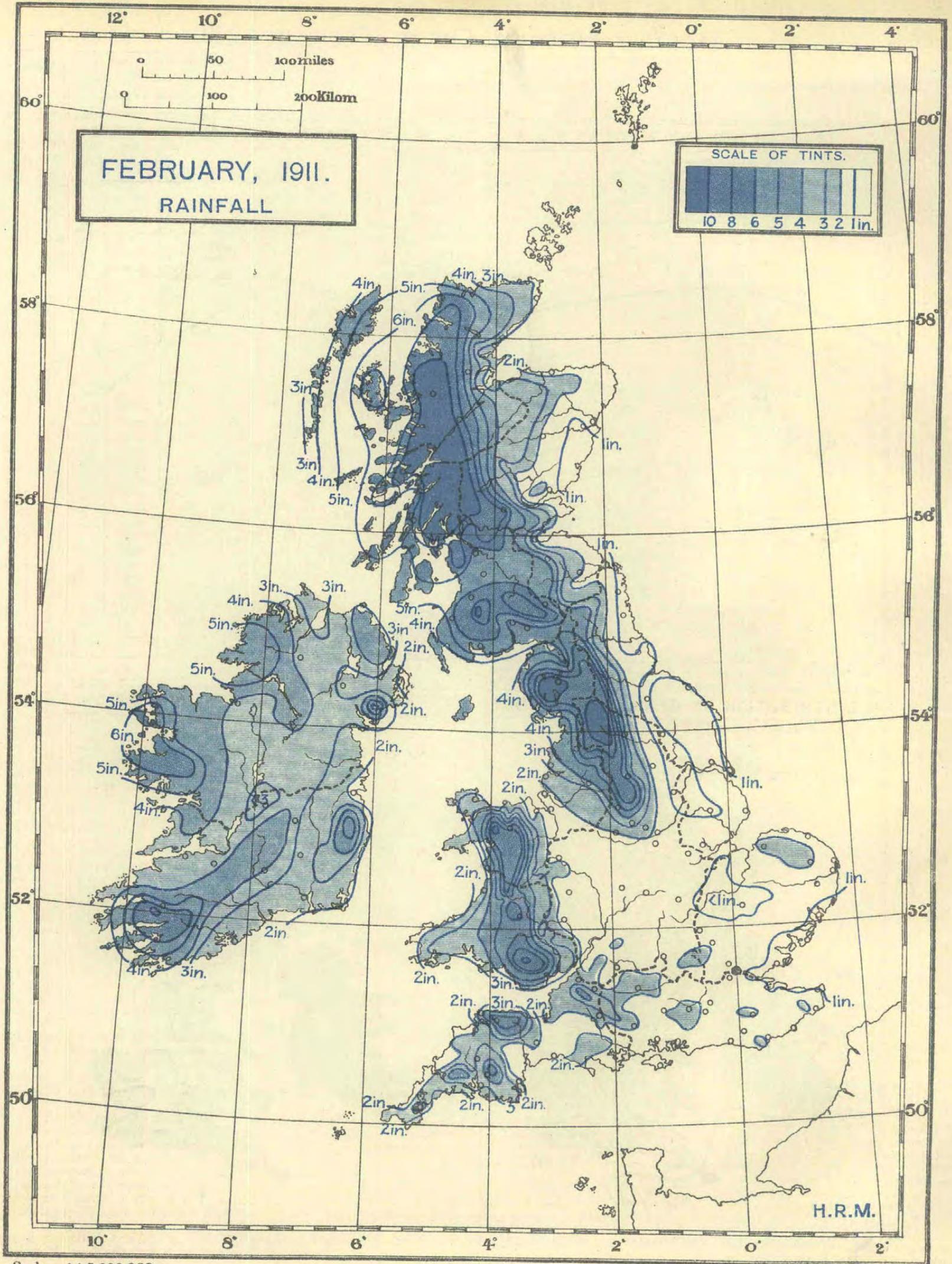


TABLE B (continued).—SUMMARY OF THE OBSERVATIONS OF TEMPERATURE, RAINFALL, AND BRIGHT SUNSHINE AT ADDITIONAL STATIONS, FEBRUARY, 1911.

DISTRICT.	STATION.	Height of Gauge above M.S.L. Ft.	AIR TEMPERATURE.								Earth Temperature		Grnd Frost. No. of Nig'ts	RAIN AND OTHER FORMS OF PRECIPITATION.					BRIGHT SUNSHINE.			
			Mean of				Absolute Maximum and Minimum.				1 ft.	4 ft.		Total Fall. In.	Diff. from Normal. In.	Most in a day.		Number of Days.	Total in Hours.	Diff. from Normal. Hr.	Per Cent. %	Diff. from Normal. %
			A	B	Mean of A and B.	Diff. of Mean from Normal.	Max.	Day.	Min.	Day.			Amt.			Day.						
			Max.	Min.	°	°	°	°	°	°	°	°	°	°	In.	In.	In.	Day.	Hr.	Hr.	%	%
8. ENGLAND, S.W.	§ p Aberystwyth - - -	59	45.7	37.5	41.6	-	54	22nd	24	1st	-	-	-	2.52	-	0.35	10 1	17	72	-	26	-
	§ Haverfordwest - - -	93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	69	-	25	-
	§ Tenby - - -	79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68	- 11	25	- 4
	§ Port Talbot - - -	179	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	-	22	-
	§ Forest of Dean - - -	200	-	-	-	-	-	-	-	-	-	-	-	1.42	-	0.38	27th	9	-	-	-	-
	§ "	900	-	-	-	-	-	-	-	-	-	-	-	1.92	-	0.32	23rd	13	-	-	-	-
	§ p Cardiff - - -	203	46.0	36.1	41.1	+ 0.4	54	22nd	23	1st	39.4	41.9	9	4.21	+ 1.07	1.28	27th	17	76	-	23	-
	§ a Swansea - - -	24	46.9	37.9	42.4	-	54	17th, 25th	25	1st, 2nd	40.6	45.7	9	4.16	-	0.91	27th	16	58	-	21	-
	§ a Shaftesbury - - - §	722	43.9	34.4	39.2	+ 0.8	53	17th, 25th	23	2nd	39.0	-	-	2.14	- 0.32	0.42	27th	16	-	-	-	-
	§ a Arlington - - -	613	45.3	35.1	40.5	- 0.1	52	21st	22	2nd	-	-	-	5.86	+ 1.90	1.85	27th	16	-	-	-	-
	§ a Cullompton - - - §	202	47.8	35.7	41.8	+ 0.7	56	17th	21	2nd	41.5	-	10	2.34	- 0.48	0.39	27th	17	71	+ 2	26	+ 1
	§ Torquay - - -	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	76	+ 1	27	0
	§ a Weymouth - - -	21	47.1	38.7	42.9	-	54	17th	27	2nd	-	-	-	1.49	-	0.44	27th	13	80	-	29	-
	§ p Paignton - - -	11	48.3	37.9	43.1	-	58	17th	25	12th	-	-	-	2.09	-	0.56	27th	15	69	-	25	-
	§ p Sheepstor - - -	740	45.1	34.6	39.9	-	52	15th	23	2, 3, 12	-	-	-	4.86	-	1.37	27th	17	-	-	-	-
§ Salcombe - - -	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	73	-	26	-	
§ a Teignmouth - - -	19	48.4	39.6	44.0	-	58	17th	28	3rd	-	-	9	1.13	-	0.23	27th	11	70	-	25	-	
§ a Fowey - - -	-	48.8	37.9	43.4	-	55	17th	25	2nd	-	-	-	2.16	-	0.59	27th	16	70	-	25	-	
§ a Penzance - - -	54	49.0	41.7	45.4	-	55	25th	34	3rd	-	-	-	2.57	-	0.68	27th	17	73	-	26	-	
§ p Dunfanaghy - - -	54	46.9	36.4	41.7	-	57	21st	25	1st	-	-	-	4.65	-	0.91	22nd	18	-	-	-	-	
§ p Dublin (Glasnevin) - - -	67	48.4	35.4	41.9	+ 0.7	58	21st	21	1st	-	-	15	1.46	- 0.53	0.37	26th	16	-	-	-	-	
§ a Kingstown - - -	42	49.5	39.1	44.3	-	61	21st	31	2, 3, 12	-	-	-	0.88	-	0.37	26th	14	77	-	29	-	
§ p Clongowes Wood College - - -	245	47.2	33.1	40.2	-	56	21st	19	1st	-	-	19	2.25	-	0.35	26th	17	74	-	27	-	
§ a Mountmellick - - -	253	47.3	34.4	40.9	-	57	24th	20	1st	-	-	-	3.48	-	0.74	26th	16	-	-	-	-	
§ p Newcastle (Co. Wicklow) - - -	256	47.7	37.0	42.4	-	57	18th	28	2nd, 3rd	-	-	-	2.28	-	0.67	26th	14	-	-	-	-	
§ a Kilkenny - - -	212	47.9	34.9	41.4	- 0.2	58	18th	23	1st, 2nd	-	-	-	2.92	+ 0.36	0.50	26th	19	-	-	-	-	
§ a Cahir - - - §	199	47.7	35.1	41.4	- 0.4	56	17th	24	2nd	-	-	-	3.67	-	0.63	18th	17	-	-	-	-	
§ a Foynes - - -	108	48.5	37.8	43.2	+ 0.4	57	21st	24	2nd	-	-	-	3.44	+ 0.43	0.63	18th	19	-	-	-	-	
§ a Ballinacurra - - -	34	48.6	36.2	42.4	-	55	24th, 25th	26	2nd	-	-	-	2.31	-	0.38	14th	15	70	-	26	-	
§ a Guernsey (Villa Carrey) - - -	180	47.8	30.8	43.8	+ 0.2	52	23, 24, 26	33	1st, 14th	-	-	-	1.62	- 1.15	0.36	24th, 28th	14	70	- 8	28	- 3	

NOTES ON THE STATISTICAL TABLES.

Hours of Observation.—The following types are used to indicate the hours of observation at Stations included in Table A:—Clarendon, Normal Climatological Stations—I., 9 a.m. [II., 3 p.m.], III., 9 p.m. Black Capitals, telegraphic reporting normal climatological stations—I., 7 a.m., II., 1 p.m., III., 9 p.m. Roman, telegraphic reporting stations—I., 7 a.m., [II., 1 p.m.], III., 6 p.m. Italic, auxiliary climatological stations—I., 9 a.m. only, at Colmell and Ventnor 3 p.m. The summaries are based on observations made three times a day wherever the data are available, except in the case of the element pressure (see below). At stations shown in clarendon type the maximum and minimum temperatures are read at 9 p.m.; at the remaining stations these observations are made at 1. In Table B the letters a and p indicate whether the readings of the maximum and minimum are taken at the hours of morning or evening observation.

Barometer.—The correction for latitude has not been applied to the readings quoted in the Tables. It is applied to the readings at sea level from which the chart showing the mean monthly distribution of pressure is prepared. The values given in the tables are for station level. The values printed are (1) for stations shown in clarendon type, the means of observations at 9 a.m. and 9 p.m.; (2) for stations shown in Capitals, the means of observations at 7 a.m., 1 p.m., 9 p.m.; (3) for stations shown in Roman type, the means of observations at 7 a.m. and 6 p.m.; (4) for stations shown in italic type, the means of observations at 9 a.m. The column headed C gives the correction for diurnal variation required to reduce the means of observations at fixed hours to true diurnal means, based on the analysis of the values obtained at the four observatories for the period 1871-1905. The difference from normal is based upon the 7 a.m. readings only, except in the cases of Kew, Greenwich, Aberdeen, Valencia and Falmouth (see below).

Rainfall.—The amounts are those for the 24 hours commenced at the time of morning observation.

Hygrometer.—At certain stations the vapour pressure and the relative humidity are the results obtained from the daily values. These are entered in clarendon type.

At other stations the calculations are made from the monthly means of the dry and wet bulb readings.

Weather Phenomena.—The number of days of Rain, Snow, Hail, Thunderstorm, Fog, Ground Frost, and Gale, are counted irrespective of the hours at which the phenomena occur. Except in the cases of rainfall (see above) and ground frost the day is the civil day. A day is reckoned as a day of "clear sky," if the mean of the estimates of the "amount of cloud" at the fixed hours of observation is less than 2, and as an "overcast" day if the mean is greater than 8. Days of Ground Frost.—A day is counted as a "Day of Ground Frost" if it follows a night on which the minimum has sunk to 30° or less.

Wind Summaries.—The results given under wind direction, and the number of observations of calms and of fresh or strong wind, are based on the observations at fixed hours. At Deerness, Aberdeen, Valencia, Falmouth, Kew, Glasgow, Stonyhurst and Armagh the wind observations are based on the records of a standard Robinson anemometer (factor 2.2). Velocities of between 13 and 38 miles in the hour have been entered as "fresh or strong winds," velocities of 39 miles in the hour, or above, as gales. (At Brighton, Plymouth and Southport the equivalent values are obtained from a Dines Pressure Tube Anemometer.)

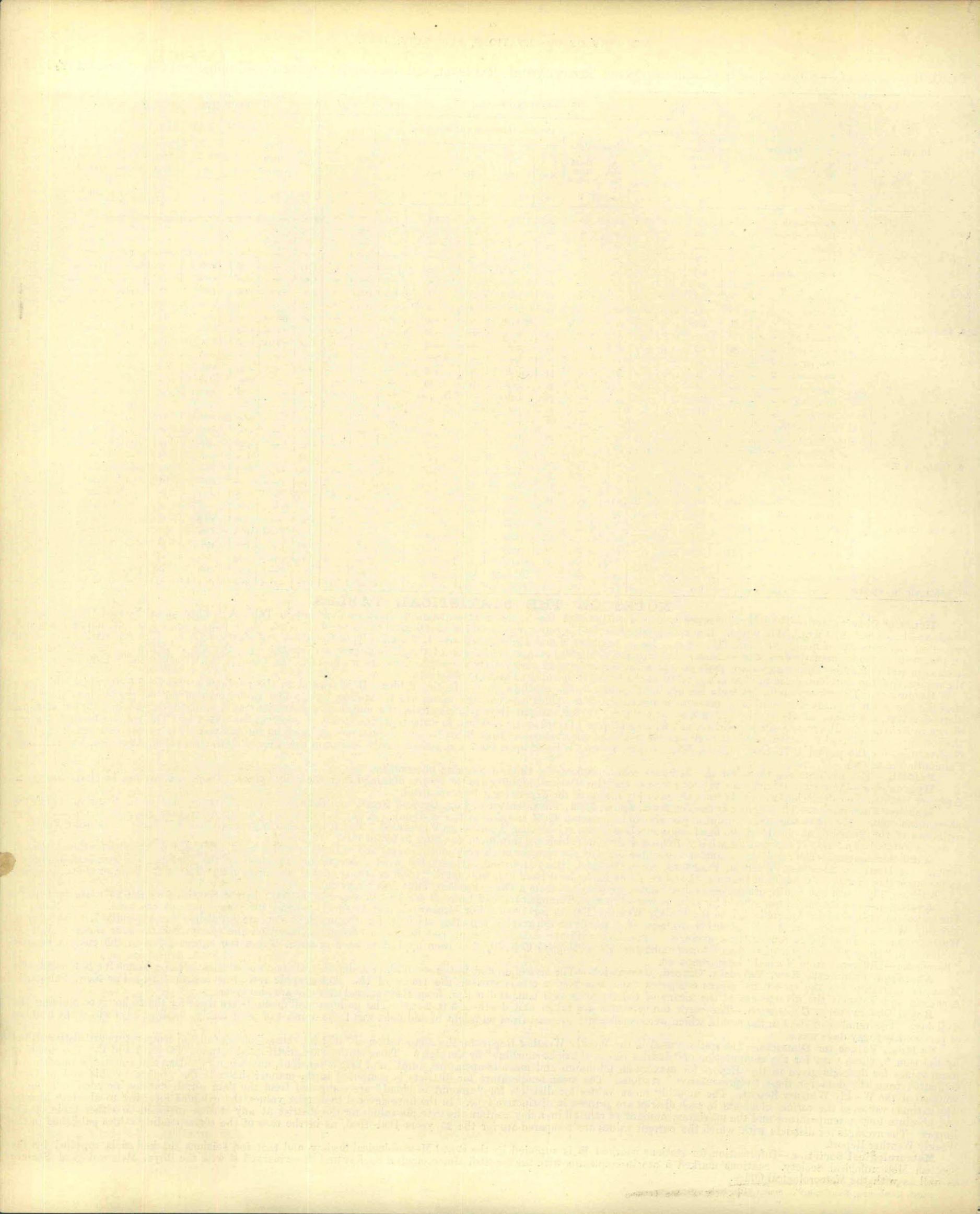
Averages.—The normal averages used for stations are—Pressure, Temperature, and Rainfall for the 35 years 1871-1905; Bright Sunshine for the 25 years 1881-1905. The values are published in Appendix III. to the Weekly Weather Report for 1906. For Greenwich and Oxford, averages for longer periods are used. (See Notes in Monthly Weather Reports for 1908.) Monthly averages of pressure at telegraphic reporting stations for the epoch 8 a.m. are published in Appendix I. to the Daily Weather Report. In order to render these averages comparable with the data for the present month, a correction, based on the results for the four observatories as published in "Hourly Readings at the Observatories under the Meteorological Council," has been applied to each of them before the figures given in the column headed "Barometer—Difference from Normal" were computed.

Aberdeen, Falmouth, Kew, Valencia, Oxford, Greenwich.—The figures quoted in the second line assigned to these observatories in the columns for Barometer and Mean Temperature are the true daily means computed from the hourly tabulations of the traces of the photographic recording instruments. For Kew, Falmouth, Aberdeen and Valencia the divergences of the means of the readings at 9 a.m. and 9 p.m. from their normal averages are also given.

Royal Observatory, Greenwich.—The earth temperatures are taken at a depth of 3 ft. 2 ins. The daily rainfall amounts are those for the 24 hours comprising the civil day. The number of days in the month which were persistently overcast from midnight to midnight was 1, the number of persistently cloudless days was 0, the number of persistently foggy days was 0.

Mean Values for Districts.—The stations used in the Weekly Weather Report for the computation of "district values" of rainfall and temperature are distinguished by the sign §, those used for the computation of "district values of bright sunshine" by the sign §. These stations are distributed between Tables A and B. The monthly mean values for districts given in this Report for maximum, minimum and mean temperature, duration of bright sunshine, number of rain days and amount of rainfall, are computed from the data for these "representative" stations. The mean temperature for districts is computed in the manner shown in the preface to this and previous volumes of the Weekly Weather Report. The monthly mean values for districts for "amount of cloud" are computed from the data for all stations included in Table A. The extreme values of the various elements in each district are printed in distinctive type. In the lines devoted to district values, the columns referring to absolute highest and absolute lowest temperature and the maximum amount of rainfall in a day contain the extreme values for the district at any station included in either table of the Report. The averages for districts with which the current values are compared are for the 25 years 1881-1905, as in the case of the corresponding values published in the Weekly Weather Report.

Meteorological Societies.—Information for stations marked § is supplied by the Royal Meteorological Society, and that for stations marked § is supplied by the Scottish Meteorological Society. Stations marked S are in connexion with the Scottish Meteorological Society and those marked M with the Royal Meteorological Society as well as with the Meteorological Office.



**FOR OFFICIAL USE.**  
**MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE**  
(Supplement to the Weekly Weather Report.)

SUMMARY OF OBSERVATIONS COMPILED FROM THE RETURNS OF OFFICIAL STATIONS AND VOLUNTEER OBSERVERS IN THE UNITED KINGDOM, WITH  
A CHART OF RAINFALL CONTRIBUTED BY THE BRITISH RAINFALL ORGANISATION.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE,

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[Price 6d.]

**SUMMARY OF OBSERVATIONS.**

**Pressure, Winds and Weather.**—The distribution of atmospheric pressure during the month now under review was very variable. Within the region under observation there were numerous disturbances and several high pressure systems, but in nearly all instances the centres kept well outside the British Isles. During the first twelve days an anticyclone of varying intensity extended from our south-western coasts and the Bay of Biscay down to and beyond the Azores. The main depressions of this period were all in the far north, the majority of them keeping on north-easterly courses across Iceland or between Iceland and Greenland. A large depression which appeared far out on the Atlantic in the direction of southern Greenland on the morning of the 1st followed, however, a course well to the southward of Iceland, and travelling at a rapid rate to the northward of Shetland it crossed the southern parts of Norway and Sweden, and dispersed over the interior of Russia on the morning of the 3rd. Another disturbance, appearing between Iceland and Greenland in the night of the 9th, moved slowly on a south-easterly course, dispersing over southern Norway on the morning of the 13th. Over the United Kingdom the weather of these twelve days was influenced more by a series of "V"-shaped depressions, secondaries formed near the southern limits of the far northern disturbances. One of these "V's" appeared on the morning of the 3rd out on the Atlantic in about 49° N., 26° W. It moved across Ireland and England, and disappeared over the North Sea in the night of the 4th. Another formed in about 54° N., 13° W. on the evening of the 5th, and dispersed next day over England. A third was developed in the St. George's Channel on the evening of the 8th, crossed England and the North Sea, and died out on the Baltic. A fourth appeared on the morning of the 10th in 54° N., 18° W., advanced to our western districts, and by next morning had developed a distinct cyclonic centre over Brittany, where it dispersed in the course of the day. A fifth made its appearance on the morning of the 11th in 52° N., 25° W. By the evening of the following day it had formed a separate centre immediately to the north of Scilly. Moving eastward along the south coast of England it deepened quickly, the barometer falling to 29 in. over Belgium on the morning of the 13th. Subsequently the system made slow and erratic progress, passing to the mouth of the Elbe, crossing the North Sea to the coast of Norfolk, then down to the north-east of France, where it dispersed on the 16th.

After the 12th the general distribution of pressure underwent considerable modification—in fact there was a complete reversal of the conditions. For the rest of the month anticyclones frequented the northern half of our area—Iceland, Scandinavia, Denmark and the Baltic, and from the 25th to the 28th near Scotland and the Hebrides. Depressions were now found where during the earlier portion of the month areas of high pressure were in the ascendant. Every day from the 12th to the 31st, the barometer was relatively low between our south-western coasts and the Azores, the centres of some of the systems passing down almost to the latitude of Madeira. The most important of these disturbances appeared over mid-ocean on the 50th parallel in the night of the 14th, moving due eastward as far as the 15th meridian by the evening of the 16th. Its progress was then arrested, and until the 24th it wandered about irregularly beyond our south-western coasts and on the Bay of Biscay, finally dispersing without reaching the mainland. An unusual track was followed by a depression which formed over Algeria on the 20th. It passed across Tunis and Sicily, then curved northward and north-westward through Italy and Eastern France to the English Channel by the 27th, and during the next two days it moved westward along the 50th parallel as far as the 17th meridian, where it dispersed.

Under these circumstances the mean distribution of pressure over these islands for the whole month bears no resemblance to the conditions at any particular period. The mean highest pressure, slightly above 30 in., was outside our north-western coasts, and the lowest, a little below 29.9 in., between the Thames Estuary and Rhineland, but the extreme values ranged from 30.22 in. at the Azores to below 29.8 in. northward of Iceland and across to northern Scandinavia. The greatest range of pressure at our home stations was in the extreme north and along the Channel and south-east coasts, where it exceeded an inch, 1.5 in. at Sumburgh Head, and 1.2 in. from Scilly to Dover. Between these it diminished to about  $\frac{3}{4}$  in. at Birr Castle and Liverpool. The highest reading in the south, 30.57 in., occurred at Jersey on the 3rd; and in the north, 30.58 in., at Stornoway on the 25th. Sumburgh Head had the lowest value in the north, 29.01 in. on the 1st; Dungeness the lowest in the south, 29.16 in. on the 13th. The mean results were below the normal in the south, by 0.07 in. at Dungeness, above elsewhere, by as much as 0.18 in. at Sumburgh Head, and 0.23 in. at Stornoway. The distribution of mean pressure thus differed widely from what is usual at this season, so that there was a great preponderance of polar winds—North-Westerly to Northerly in the earlier days, afterwards Northerly to Easterly.

Taken as a whole the month was rather windy, the force of a gale being reached at one or more of the telegraphic reporting stations on 20 days. A strong South-Westerly gale was felt at Malin Head and Sumburgh Head on

the 1st; North-Westerly at Scilly on the 5th and 6th; South-Westerly on the 11th, and Northerly on the 13th; a whole Northerly gale at Malin Head on the 13th, and at Spurn Head on the 14th and 15th; a strong Easterly gale at Scilly on the 18th, and at Spurn Head on the 19th; North-Easterly at Yarmouth on the 25th, Yarmouth and Nottingham on the 26th, Dungeness on the 27th; and a whole Northerly gale at Dungeness on the 26th. The anemometrical records disclose a few instances of gusts in which the velocity was at the rate of 60 or more miles per hour, up to 64 miles at Dover on the 26th. There were several shipping casualties about the southern and eastern coasts during the North-Easterly gale of the 25th and 26th, and the cross Channel Services were delayed considerably.

Although the unsettled and windy type of conditions was general, the weather itself presented varied features. Rain was much more frequent in the south and east than in the north and west, unusual dryness prevailing in the latter districts after the 12th. In many neighbourhoods this period was not an absolute drought owing to the occurrence of one or two trifling showers, but Glenarm (Antrim), Blacksod Point, Kinlochewe and Loch Awe had 16 consecutive rainless days, Oban 17 days, Gruline (Mull) 18 days, and Cargen (Dumfries) 24 days, the drought continuing well into April. There were very few records of as much as an inch of rain on any day during the month:—On the 1st an inch at Glencarron, 1.7 in. at Arncliffe, and 2.4 in. at Seathwaite; on the 10th, an inch at Haverfordwest and Plymouth, 1.2 in. at Whitechurch, 1.3 in. on Loch Torridon, and 1.5 in. at Sheepstor; and on the 12th, when heavy rain was general in the south, an inch at Brighton, Portland Bill, Rousdon and Sheepstor, 1.1 in. at Ventnor, and 1.2 in. at Eastbourne. Snow was experienced on several days, the greatest depths noted being 4  $\frac{1}{2}$  in. at Heathfield (Sussex) on the 12th, 4 in. at Mareham-le-Fen (Lincs.) on the 14th, and 6 in. at Heathfield in the night of the 25th. Thunderstorms occurred on the 13th in various parts of England, causing some structural damage at Rothamsted. A thunderstorm visited many of the southern counties on the 22nd.

The keen North-Easterly winds gave an impression of great cold, but the temperature of the air preserved a fairly uniform level about, or rather above, the normal during the greater part of the month. Afternoon maxima of 60° and upwards were uncommon, 62° on the 21st at Epsom, Greenwich and Margate, and on the 22nd at Camden Square and Guernsey, 63° at Tottenham on the 22nd, and at Arlington on the 30th. As a rule the frosts of the month were slight, the shaded thermometer descending to 24° at a few stations on various dates, to 23° at Cromer on the 26th, and to 22° at Llangammarch Wells on the 17th, Balmoral on the 21st and 29th, Fort Augustus on the 22nd, and Markree Castle on the 26th.

Aurora was reported at Nairn on the 1st, Baltasound on the 5th, Stornoway on the 20th, Deerness on the 23rd, and Nairn on the 29th.

Fog was a rare visitor through the greater part of the month, but on the morning of the 29th the atmosphere became very foggy over an extensive area, embracing a considerable portion of England, the neighbouring parts of the Continent, and the adjacent seas, from the Bay of Biscay to Norway. The fog lasted five days, to April 2nd, and was very dense at times, especially at sea, so that shipping movements were greatly delayed, and there were some casualties.

Compared with February the temperature of the sea water round our coasts showed scarcely any change, but off Margate and Usan (Montrose), it was 3°, and off Eastbourne 4° warmer. At nearly all points the water was warmer than the air on shore, by as much as 3° locally in the west and north.

**Rainfall.**—There was an excess of precipitation over the south-eastern quarter of England and in the Channel Islands, Hillington returning more than double the usual amount. Over the rest of the Kingdom there was a deficiency, which was more and more marked in the north-west and north, and amounted in western Scotland to 2.38 in. (62 per cent.), and in northern Scotland to 1.39 in. (31 per cent.). Few of the aggregates for the month exceeded 4 in., even at Seathwaite the fall was only 6.2 in., a loss of 4.5 in. The smallest totals were 0.9 in. (41 per cent.), at Malin Head, 0.9 in. at Edinburgh and Cargen, and 0.6 in. (44 per cent.) at Hawarden Bridge. The frequency was irregular, the falls being very small in most cases. Roche's Point and Caragh Lake returned 27 rain days, Cahir, Sheepstor and Cromer 25, against 8 at Cally and Colwyn Bay, and 4 at Cargen.

**Bright Sunshine.**—The distribution of insolation presented most unusual features, the smallest records being in the Thames watershed, increasing westward and northward to the highest values in Western Scotland and the neighbouring islands. The duration was below the average at Cullompton, 39 hours, at Kew 35, at Torquay 33, at Oxford 32, and at Margate 31, while it was above the average at Fort Augustus, 39, and at Stornoway 69 hours. Oban totalled 192 hours (53 per cent. of the possible), Castlebay 179 hours (49 per cent.), and Stornoway 172 hours (48 per cent.), against Westminster 60 hours, and Plumstead 58 hours (16 per cent.), and Bunhill Row 52 hours (14 per cent.).

TABLE A.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at 9 a.m., 3 p.m. and 9 p.m. at NORMAL STATIONS in the BRITISH ISLANDS

DISTRICT.	STATION.	Height of Barometer at 32° F. at Level and Latitude of Station.	BAROMETER.			AIR TEMPERATURE.								HYGROMETER.											
			Mean at 32° F. at Level and Latitude of Station.	Diff. from Normal.	Cor. for Diurnal Range.	Mean of		Mean of A and B.	Diff. from Normal.	Absolute Maximum and Minimum.				Observations at 9 a.m., 3 p.m., and 9 p.m., or at 7 a.m., 1 p.m., 6 p.m., or 9 p.m.											
						A	B			Max.	Day.	Min.	Day.	Dry Bulb.			Dep. of Wet.			Vap. Pressure.			Humidity.		
			Max.	Min.	I.	II.	III.	I.	II.					III.	I.	II.	III.	I.	II.	III.					
<b>0. SCOTLAND, N.</b>																									
Islands.	CASTLEBAY - - -	48	29.920	+ .210	-.002	46.3	38.4	42.4	+0.8	52	31st	35	1st, 7th	41.3	44.7	42.5	2.3	3.4	2.4	In. .213	In. .223	In. .222	% 82	% 75	% 82
	Deerness - - -	163	29.763	-	-.006	43.5	36.2	39.9	+0.6	49	3rd	31	11th	39.8	-	38.9	1.9	-	1.7	.209	-	.205	85	-	86
	SUMBURGH HEAD	126	29.775	+ .184	-.002	45.4	34.1	39.8	+1.2	49	3rd, 29th	32	11, 19, 26	38.0	41.5	38.3	2.0	3.2	2.3	.190	.198	.187	83	76	81
	STORNOWAY - -	52	29.923	+ .227	-.002	46.3	34.8	40.6	+0.9	53	30th	28	21st, 22nd	38.3	44.8	39.5	1.1	3.0	1.2	.209	.232	.218	91	79	90
	Wick - - -	80	29.855	+ .190	+ .003	45.1	33.5	39.3	-0.2	53	30th	28	7, 8, 24	37.7	-	40.1	2.0	-	1.9	.189	-	.210	83	-	85
	Strathpeffer - -	210	29.739	-	-.007	44.8	34.2	39.5	+0.4	54	3rd	26	22nd	39.4	-	38.2	2.2	-	1.8	.199	-	.195	83	-	85
	Glencarron - -	504	29.415	-	-.006	43.9	33.4	38.7	+0.4	54	29th	26	22nd	38.5	-	37.5	2.6	-	2.0	.183	-	.186	79	-	83
	Fort Augustus -	73	29.908	-	-.006	44.9	33.8	39.4	-0.3	54	29th	22	22nd	38.8	-	39.8	1.8	-	2.0	.201	-	.206	85	-	84
Kingussie - - -	828	29.061	-	-.006	43.5	31.0	37.3	-	52	30th	21	23rd	37.2	-	36.2	2.8	-	2.2	.170	-	.173	77	-	81	
Fort William - -	38	29.938	-	-.006	46.6	34.4	40.3	-0.3	55	29th	26	7th, 22nd	40.2	-	39.3	3.2	-	2.6	.191	-	.192	76	-	79	
Dunrobin Castle	16	29.940	-	-.006	44.3	34.9	39.6	-0.7	54	3rd	32	10, 11, 22, 23	40.3	-	39.6	2.5	-	2.5	.202	-	.196	81	-	80	
District Value - - -																									
<b>1. SCOTLAND, E.</b>																									
Mainland.	Dundee - - -	164	29.801	-	-.007	44.4	35.0	39.7	-0.3	52	3rd	31	24th	39.4	-	38.3	1.9	-	1.6	.206	-	.202	85	-	87
	Nairn - - -	82	29.854	+ .172	+ .004	45.2	31.8	38.5	-1.3	55	29th	24	22nd	35.8	43.3	40.2	1.4	3.1	2.2	.185	.216	.205	88	77	83
	Gordon Castle	107	29.849	-	-.006	45.6	33.6	39.6	-0.9	51	3rd, 29th	29	23rd	40.8	-	38.8	2.6	-	2.1	.203	-	.196	80	-	84
	Aberdeen - - -	90	29.873	+ .165	-.007	43.9	36.8	40.4	+0.3	55	3rd	23	24th	40.3	42.6	39.7	2.9	3.9	2.9	.193	.197	.189	77	72	77
	Balmoral - - -	927	-	-	-	44.2	30.7	37.5	+1.2	54	2nd	22	21st, 29th	37.3	-	-	1.8	-	-	.188	-	-	85	-	-
	Crieff - - -	436	29.488	-	-.007	45.0	34.0	39.5	-0.6	54	3rd	30	5, 12, 13	39.4	-	38.3	2.9	-	2.5	.186	-	.184	78	-	79
	Leith - - -	37	29.920	+ .140	+ .004	45.3	37.0	41.2	-0.2	55	3rd	33	20th	39.6	-	41.9	2.3	-	3.3	.199	-	.202	81	-	76
	Marchmont - -	500	29.414	-	-.007	42.9	33.4	38.2	-1.0	53	3rd	29	5th, 13th	38.8	-	36.8	2.2	-	1.8	.194	-	.184	83	-	85
District Value - - -																									
<b>2. ENGLAND, N.E.</b>																									
Northern Part.	Seaham - - -	188	29.796	-	-.008	44.7	36.4	40.6	-0.6	57	3rd	31	13th	40.5	-	38.8	2.1	-	1.3	.213	-	.211	83	-	90
	Whitby - - -	145	29.753	-	-.008	45.5	37.0	41.3	-0.1	58	3rd	32	8th	41.3	-	40.0	2.4	-	2.0	.213	-	.208	82	-	84
	Cockle P'rk (Morpeth)	331	29.591	-	-.008	43.4	34.9	39.2	-	53	2nd	29	13th	39.6	-	37.8	1.9	-	1.6	.208	-	.197	85	-	86
	Shields - - -	117	29.812	+ .090	+ .003	44.9	34.9	39.9	-0.9	56	3rd	29	13th	39.5	-	41.6	1.4	-	2.4	.214	-	.214	89	-	82
	Durham - - -	362	29.554	-	-.008	43.8	34.7	39.3	-0.9	57	3rd	30	8th, 13th	39.7	-	38.1	1.5	-	1.1	.217	-	.209	89	-	91
	Rounton - - -	245	29.655	-	-.008	44.7	34.4	39.6	-0.3	54	2nd, 3rd	28	13th	39.7	-	37.8	2.0	-	1.3	.204	-	.201	84	-	89
	Scarborough - M	127	29.773	-	-.008	44.9	36.9	40.9	-0.4	58	3rd	32	20th	41.7	-	40.2	1.8	-	1.7	.227	-	.215	87	-	87
	York - - -	53	29.890	-	-.008	46.1	36.3	41.2	-0.2	56	3rd	30	13th	41.0	-	39.3	2.5	-	1.8	.206	-	.206	81	-	86
Southern Part.	Spurn Head - -	28	29.862	+ .024	+ .003	44.1	36.6	40.4	-0.6	51	2nd, 3rd	31	25th	40.0	43.1	41.3	1.6	2.8	1.8	.215	.220	.223	87	79	86
	Lincoln - - -	42	-	-	-	46.3	35.6	41.0	-0.8	56	2nd	30	13th	40.9	-	-	1.7	-	-	.226	-	-	87	-	-
	Skewness - - -	16	29.897	+ .032	+ .003	44.6	35.0	39.8	-	57	3rd	30	10th, 11th	38.7	-	41.0	0.9	-	1.5	.218	-	.225	93	-	88
	Hull - - -	12	-	-	-.008	45.8	36.2	41.0	0.0	57	3rd	30	13th	41.9	-	40.0	2.5	-	1.8	.216	-	.211	82	-	86
District Value - - -																									
<b>3. ENGLAND, E.</b>																									
Northern Part.	Lowestoft - -	75	29.813	-	-.009	45.5	36.0	40.8	-0.4	58	3rd	30	25th	42.6	-	39.8	2.2	-	1.1	.226	-	.223	83	-	91
	Cromer - - -	139	29.730	-	-.009	45.4	35.3	40.4	-	57	3rd	23	26th	40.2	-	38.8	0.8	-	0.4	.232	-	.228	93	-	97
	Hillington - -	92	29.798	-	-.009	46.2	35.0	40.6	-0.9	56	2nd	29	10th	40.2	-	39.0	1.4	-	1.1	.220	-	.216	88	-	91
	Norwich - - -	98	-	-	-	46.7	36.2	41.5	-	57	2nd	30	6th	-	-	-	-	-	-	-	-	-	-	-	-
	YARMOOUTH - -	27	29.862	-.002	-.003	45.5	36.5	41.0	+0.5	57	2nd	31	10th, 26th	39.2	44.0	40.2	1.4	3.3	1.6	.212	.218	.216	88	75	88
	Geldeston - - -	47	29.846	-	-.009	47.2	35.6	41.4	-0.2	59	2nd	30	12th	40.6	-	39.3	1.2	-	0.9	.227	-	.223	90	-	93
	Cambridge - - -	43	29.856	-	-.009	47.7	35.3	41.5	-0.4	60	22nd	28	10th	40.8	-	39.7	1.5	-	1.2	.227	-	.223	88	-	91
	CLACTON - - -	62	29.828	-.027	-.003	46.9	35.9	41.4	-0.8	59	2nd	32	8, 17, 26	39.5	44.5	40.9	0.9	2.3	1.0	.224	.242	.235	93	83	92
Southern Part.	Woburn - - -	294	29.625	-	-.009	46.2	34.9	40.6	-	59	22nd	27	8th	39.9	-	39.2	1.4	-	1.3	.220	-	.216	88	-	90
	Bennington - -	411	29.507	-	-.009	46.9	34.6	40.8	-0.5	59	22nd	30	17th	39.7	-	38.2	1.4	-	1.1	.216	-	.208	89	-	90
	Berkhamsted - -	397	29.492	-	-.009	47.3	34.5	40.9	-0.6	61	2nd	28	8th, 17th	39.7	-	38.7	1.6	-	1.2	.212	-	.211	87	-	90
	District Value - - -																								
<b>4. MIDLAND COS.</b>																									
Eastern Part.	Garforth - - -	198	-	-	-.008	45.3	35.2	40.3	-	55	3rd	27	9th	41.2	-	38.9	2.3	-	1.7	.215	-	.205	83	-	86
	Huddersfield - -	411	29.494	-	-.008	43.8	35.1	39.5	-	54	3rd	31	13th	39.3	42.1	38.4	1.6	2.6	1.1	.211	.216	.213	87	81	91
	Wakefield - - -	100	29.842	-	-.008	46.1	36.1	41.1	0.0	56	3rd	31	8th	41.8	-	41.2	2.5	-	1.9	.214	-	.219	81	-	85
	Belvoir Castle -	276	29.637	-	-.009	44.8	35.3	40.1	-0.6	56	2nd	30	8th	39.1	-	38.7	1.3	-	1.1	.213	-	.214	89	-	91
	Coventry - - -	309	29.593	-	-	47.1	36.4	41.8	-0.3	58	2nd	31	17th	40.9	-	-	2.4	-	-	.208	-	-	82	-	-
	NOTTINGHAM - -	85	29.831	+ .015	-.003	46.0	35.3	40.7	-0.9	56	2nd	30	10th	38.4	44.7	40.2	1.3	3.5	1.9	.206	.221	.211	89	74	85
	Birmingham - -	542	29.344	-	-.009	45.3	35.7	40.5	-0.7	58	2nd	31	13th	37.7	-	39.3	1.4	-	1.8	.204	-	.207	88	-	85
	Oxford - - -	212	29.735	+ .003	-	47.4	35.9	41.7	-0.4	59	2nd, 22nd	30	17th	39.1	-	40.8	1.4	-	-	.211	-	-	89	-	-
Western Part.	Bath - - -	84	29.825	+ .001	+ .004	48.0	35.7	41.9	-0.8	57	22nd, 31st	28													

CLIMATOLOGICAL STATIONS, at 7 a.m., 1 p.m. and 6 p.m. or 9 p.m. or at 7 a.m. and 6 p.m. at TELEGRAPHIC REPORTING during the month of MARCH, 1911.

Earth Temperature.		BRIGHT SUNSHINE.				CLOUD (0-10.)			RAIN AND OTHER FORMS OF PRECIPITATION.				WEATHER. No. of Days of								WIND.								STATIONS.				
At 1 foot depth.	At 4 feet depth.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.	Mean Amount.			Total Fall.	Diff. from Normal.	Most in a day.		Precipitation.	Snow.	Hail.	Thunderstorm.	Clear Sky.	Overcast.	Fog.	Ground Frost.	Wind-force 8 and above.	No. of Observations reduced to a total of 84 qz for the month.											
						I.	II.	III.			Day.	4-7.										Calm.	N.	N.E.	E.	S.E.	S.	S.W.		W.	N.W.		
—	—	179	—	49	—	6.3	7.4	5.1	1.10	—	0.20	7th	15	0	2	0	1	10	0	—	0	39	3	14	19	18	5	6	3	13	12	Castlebay (Barra Isd.)	
—	—	122	+18	34	+5	6.4	—	7.3	2.08	-0.73	0.50	11th	15	5	6	0	0	14	0	—	2	51	5	23	6	11	15	3	7	13	10	Deerness.	
—	—	—	—	—	—	7.9	7.2	7.0	1.98	-0.98	0.46	8th	13	7	0	0	0	10	0	—	2	34	10	27	6	1	16	5	8	6	14	14	Sumburgh Head.
—	—	172	+59	48	+19	6.1	5.4	6.3	3.17	-0.74	0.80	10th	20	2	8	0	2	6	0	—	1	55	2	13	19	18	12	5	6	15	3	Stornoway.	
—	—	—	—	—	—	7.5	—	6.6	1.77	-0.37	0.30	1st	21	4	0	0	0	11	0	—	2	29	0	25	2	17	12	4	0	18	15	Wick.	
—	—	105	+14	29	+4	7.4	—	6.6	1.87	-0.72	0.38	11th	18	3	0	0	1	10	0	—	1	38	27	6	12	17	4	3	12	8	4	Strathpeffer.	
—	—	—	—	—	—	6.7	—	4.7	4.72	-3.13	1.00	1st	16	5	5	0	5	8	1	—	0	53	0	23	9	33	0	0	0	28	0	Glencarron.	
—	—	117	+39	32	+11	6.8	—	6.4	3.13	-0.55	0.68	1st	18	4	0	0	1	10	0	—	1	47	2	13	38	2	0	6	27	4	1	Fort Augustus.	
—	—	—	—	—	—	6.6	—	7.4	2.12	—	0.65	1st	20	7	0	0	2	13	0	—	2	36	0	0	24	21	6	0	3	27	12	Kingussie.	
—	—	—	—	—	—	5.7	—	5.1	4.58	-2.08	0.86	1st	14	8	0	0	4	5	0	—	1	26	14	0	35	12	1	6	15	9	1	Fort William.	
40.5	—	—	—	—	—	6.1	—	7.5	2.01	-0.51	0.36	12th	12	3	0	0	3	13	0	—	0	18	0	23	6	33	9	2	4	0	16	Dunrobin Castle.	
—	—	129	+34	36	+10	6.7	6.7	6.4	3.03	-1.39	1.00	17th	17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	7.9	—	9.2	1.14	-0.81	0.31	18th	17	3	0	0	0	20	0	—	3	27	0	6	22	22	6	0	20	9	8	—	Dundee.
—	—	118	—	33	—	7.5	5.9	7.4	1.24	-0.59	0.16	11th	20	0	0	0	1	10	0	—	0	9	14	5	2	27	4	1	4	30	6	—	Nairn.
—	—	118	—	33	—	7.2	—	7.4	1.17	-1.06	0.24	14th	19	1	6	0	1	13	0	—	2	8	0	15	21	8	12	8	15	4	10	—	Gordon Castle.
—	40.3	107	-11	30	-3	6.8	7.2	7.4	1.74	-0.59	0.28	13th	22	6	10	0	0	13	0	—	0	36	1	11	12	10	17	5	11	11	15	—	Aberdeen.
—	—	—	—	—	—	8.1	—	—	2.07	-0.58	0.28	16th	16	8	0	0	2	17	0	23	4	12	0	9	15	12	6	6	3	21	21	—	Balmoral.
—	—	—	—	—	—	7.6	—	8.5	1.11	-1.81	0.23	1st	18	3	0	0	0	21	0	—	3	12	0	4	3	53	6	0	0	15	12	—	Crieff.
—	—	—	—	—	—	7.5	—	7.5	1.85	+0.31	0.76	1st	19	2	2	0	0	15	0	—	0	14	0	12	18	24	3	0	17	12	7	—	Leith.
38.2	—	91	-17	25	-5	7.5	—	7.5	2.53	+0.05	0.32	17th	20	8	8	0	2	20	0	8	0	21	0	26	14	19	0	4	6	22	2	—	Marchmont.
—	—	105	-1	29	0	7.8	—	7.8	1.81	-0.49	0.76	20th	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	8.3	—	7.5	2.02	+0.15	0.39	16th	16	5	4	1	2	20	3	—	0	36	2	12	30	19	0	5	6	16	3	—	Seaham.
—	—	90	—	25	—	7.3	—	8.3	1.35	-0.50	0.27	13th	17	2	3	0	3	17	5	—	1	11	0	3	30	0	17	3	12	6	22	—	Whitby.
38.6	40.4	112	—	31	—	6.9	—	7.1	2.33	+0.02	0.38	13th	23	4	3	0	0	13	2	18	1	27	3	11	19	21	6	3	6	13	11	—	Cockle P'k (Mor-Shields, peth.)
—	—	—	—	—	—	8.2	—	8.3	1.87	+0.18	0.33	16th	20	3	3	0	0	18	2	—	0	27	0	16	27	14	0	4	12	11	9	—	Durham.
—	—	84	-29	23	-8	8.8	—	7.3	1.72	-0.12	0.20	14th	18	7	0	0	2	21	3	12	1	30	2	11	16	27	0	6	6	18	7	—	Rounton.
39.3	—	—	—	—	—	7.9	—	7.6	1.62	-0.27	0.29	8th	22	4	3	1	2	20	2	20	1	65	2	19	21	21	2	9	4	8	7	—	Scarborough.
—	42.8	81	—	22	—	7.7	—	8.6	1.55	-0.24	0.30	13th	18	1	0	0	0	15	0	—	1	63	3	0	30	3	27	0	6	6	18	—	York.
41.1	42.2	85	-17	23	-5	7.0	—	7.7	1.19	-0.46	0.31	13th	18	4	0	0	2	17	1	—	0	8	0	30	14	19	2	9	6	7	6	—	Spurn Head.
—	—	—	—	—	—	7.3	7.4	7.7	1.46	+0.14	0.30	13th	16	6	2	0	0	5	3	—	7	78	1	18	20	14	2	4	10	14	10	—	Lincoln.
39.7	41.6	—	—	—	—	7.7	—	6.3	1.44	+0.02	0.23	23rd	16	4	1	0	2	15	0	—	0	14	9	7	6	30	0	2	12	6	21	—	Skegness.
—	—	104	—	29	—	6.6	—	6.9	2.31	—	0.44	23rd	21	4	0	0	1	13	3	—	0	30	0	15	17	26	1	3	7	15	9	—	Hull.
40.8	42.0	72	—	20	—	7.2	—	7.5	2.19	+0.46	0.48	13th	22	8	1	0	1	15	0	10	0	11	0	9	18	21	14	0	3	6	22	—	—
40.2	41.9	94	-30	26	-8	7.6	—	7.6	1.68	-0.06	0.48	19th	19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
41.6	42.5	101	—	28	—	7.5	—	7.2	2.12	+0.64	0.46	15th	18	4	3	0	2	14	3	8	2	32	0	11	18	16	2	3	16	16	11	—	Lowestoft.
—	—	92	—	25	—	8.2	—	7.5	1.49	—	0.39	12th	25	1	0	0	0	14	4	—	0	47	0	12	15	16	8	10	12	12	8	—	Cromer.
—	—	94	-21	26	-5	8.0	—	7.7	3.60	+1.88	0.64	12th	22	3	4	0	1	19	5	18	1	33	2	7	39	4	0	2	12	12	15	—	Hillington.
—	—	—	—	—	—	—	—	—	2.82	—	0.41	12th	21	—	—	—	—	—	—	—	15	—	—	—	—	—	—	—	—	—	—	—	Norwich.
40.9	43.5	97	—	27	—	7.7	7.1	5.8	1.93	-0.29	0.33	12th	20	3	5	0	0	13	4	—	4	23	0	9	24	14	2	2	13	16	13	—	Yarmouth.
—	—	93	-33	25	-9	8.6	—	7.1	2.26	+0.74	0.37	12th	19	2	6	0	1	19	2	—	0	12	3	9	22	15	2	6	11	16	9	—	Geldeston.
41.8	43.3	103	-20	28	-6	7.4	—	7.1	1.43	+0.08	0.36	12th	16	5	6	0	1	14	2	15	1	11	9	31	5	3	2	3	16	8	16	—	Cambridge.
42.6	44.6	96	—	26	—	7.3	7.9	7.3	2.06	—	0.46	22nd	18	6	2	1	0	14	2	16	0	40	0	18	18	10	1	5	8	17	16	—	Clacton.
—	—	79	—	22	—	8.1	—	7.6	1.78	—	0.40	12th	17	7	3	2	1	18	2	—	0	32	6	8	25	17	0	2	10	16	9	—	Woburn.
41.2	42.0	88	—	24	—	7.8	—																										

TABLE A. (continued).—Giving a Summary of the METEOROLOGICAL OBSERVATIONS made at 9 a.m., 3 p.m. and 9 p.m. at NORMAL STATIONS in the BRITISH ISLANDS

Table with columns: DISTRICT, STATION, Height of Barometer, BAROMETER (Mean at 32° F., Diff. from Normal, Cor. for Diurnal Range), AIR TEMPERATURE (Mean of A, B, Mean of A and B, Diff. from Normal, Absolute Maximum and Minimum), and HYGROMETER (Observations at 9 a.m., 3 p.m., and 9 p.m., or at 7 a.m., 1 p.m., 6 p.m., or 9 p.m., Dry Bulb, Dep. of Wet., Vap. Pressure, Humidity).

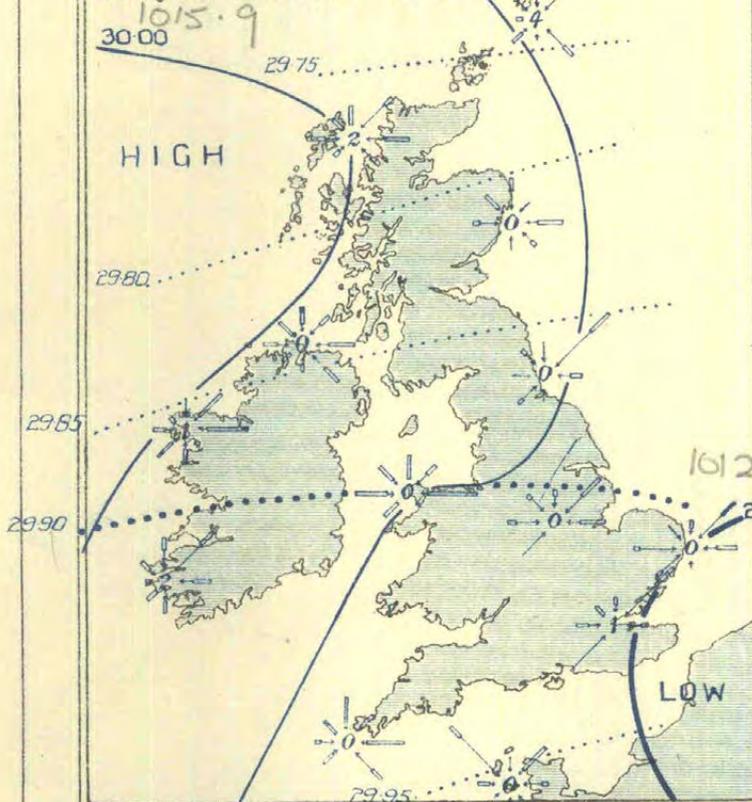


TABLE B.—SUMMARY of the OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE at additional STATIONS, MARCH, 1911.

DISTRICT.	STATION.	Height of Gauge above M.S.L. Ft.	AIR TEMPERATURE.								Earth Temperature		Grnd Frost. No. of Nig'ts	RAIN AND OTHER FORMS OF PRECIPITATION.				BRIGHT SUNSHINE.						
			Mean of		Mean of A and B.	Diff. of Mean from Normal.	Absolute Maximum and Minimum.				1 ft.	4 ft.		Total Fall. In.	Diff. from Normal. In.	Most in a day.		Number of Days.	Total in Hours. Hr.	Diff. from Normal. Hr.	Per Cent. %	Diff. from Normal. %		
			A	B			Max.	Day.	Min.	Day.			Amt.			Day.								
			Max.	Min.	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	
0. SCOTLAND, N.	p Baltasound	S	31	43.2	34.6	38.9	—	50	27th	26	12th	38.1	—	—	2.30	—	0.68	12th	20	79	—	22	—	
	a Fortrose	—	60	46.1	34.4	40.3	—	55	3rd, 10th	30	22nd	—	—	—	1.13	—	0.27	12th	18	126	—	35	—	
1. SCOTLAND, E.	p Insch	—	426	43.7	33.4	38.6	—	56	3rd	30	11th, 19th	37.8	—	12	1.93	—	0.37	12th	24	100	—	28	—	
	p Crathes	S	140	45.6	34.1	39.9	—	57	3rd	29	11th, 24th	38.7	39.4	13	1.93	—	0.27	12th	10	98	—	27	—	
	p Stonehaven	—	286	46.2	35.2	40.7	—	55	9th	30	11th, 19th	—	—	—	1.45	—	0.23	13th	20	111	—	31	—	
	p Balruddery	S	276	45.6	34.4	40.0	—	55	3rd	30	7, 11, 24	—	—	—	1.62	—	0.40	18th	21	113	—	31	—	
	a West Linton	S	800	41.8	31.9	36.9	-1.8	49	2nd, 3rd	27	11th, 13th	—	—	—	2.76	—	0.48	1st, 11th	22	90	—	25	—	
2. ENGLAND, N.E.	a Alnwick Castle	—	210	44.4	35.7	40.1	-0.1	55	3rd	30	8th	—	—	—	2.72	+0.39	0.41	13th	22	—	—	—	—	
	p Newcastle-on-Tyne	—	152	44.3	37.2	40.8	—	55	3rd	31	12th, 13th	—	—	—	1.90	-0.09	0.26	16th	23	76	—	14	21	-4
	a Chopwellwood	—	445	44.5	34.6	39.6	—	58	2nd	29	13th	—	—	19	3.12	—	0.37	13th	24	89	—	25	—	
	p Ampleforth	—	349	44.4	34.7	39.6	—	56	2nd	30	13th	—	—	—	2.04	—	0.48	13th	20	—	—	—	—	
	a Fulbeck	—	180	45.7	35.7	40.7	-0.8	56	2nd	30	5th, 13th	—	—	15	1.57	+0.13	0.28	12th	23	82	—	23	—	
	a Rauceby	—	124	45.7	35.6	40.7	—	57	2nd	30	25th	41.5	43.1	17	1.71	+0.21	0.26	12th	19	100	—	27	—	
3. ENGLAND, E.	a Felixstowe	—	10	46.2	36.4	41.3	-0.5	59	2nd	31	8, 10, 25	—	—	—	2.23	—	0.40	22nd	18	107	—	29	—	
	a Rothamsted	—	424	47.1	34.8	41.0	-0.1	59	2nd	29	8, 12, 17	—	—	—	2.06	+0.26	0.47	12th	23	85	—	32	23	-9
	a Shoeburyness	—	18	47.1	37.0	42.1	-0.4	59	2nd	32	8, 17, 25	—	—	—	1.58	+0.42	0.43	12th	16	—	—	—	—	—
	a Southend-on-Sea	—	90	47.2	37.5	42.4	—	59	2nd	31	15th	42.4	—	14	2.01	+0.69	0.49	12th	17	86	—	24	—	
4. MIDLAND COUNTIES	a Harrogate	—	476	43.5	34.9	39.2	-0.8	53	3rd	30	13th	40.0	41.2	13	1.57	-0.55	0.20	1st, 13th	18	79	—	22	—	
	a Bradford	—	439	43.5	35.6	39.6	—	52	2nd, 3rd	30	13th	38.8	41.3	10	0.98	—	0.24	1st	19	84	—	23	—	
	a Cheadle	—	646	45.5	33.9	39.7	-0.6	54	2nd	28	13th	—	—	20	1.41	-0.81	0.42	1st	9	—	—	—	—	
	a Bawtry	—	65	46.5	36.0	41.3	-0.2	56	2nd	30	8th, 13th	—	—	—	1.12	-0.38	0.16	13th	17	—	—	—	—	
	a Worksop	—	56	47.3	36.0	41.7	0.0	59	2nd	30	5th	41.1	42.2	16	1.13	-0.74	0.17	13th	19	88	—	13	24	-4
	a Mayfield (Staffs.)	—	874	45.3	35.0	40.2	—	55	2nd	27	10th	—	—	10	1.64	—	0.32	12th	15	—	—	—	—	
	a Belper	—	222	46.2	35.4	40.8	—	55	2nd	28	10th	—	—	9	1.57	—	0.31	12th	17	—	—	—	—	
	a Kingston-on-Soar	—	125	46.3	35.8	41.1	—	58	2nd	26	10th	41.5	—	—	1.35	—	0.30	12th	18	—	—	—	—	
	p Rugby	—	379	46.5	33.8	40.2	-1.2	59	2nd	28	10th	—	—	12	2.23	—	0.53	12th	19	—	—	—	—	
	a Raunds	—	210	47.4	34.8	41.1	-0.7	60	2nd	28	8th	41.4	—	15	1.71	—	0.41	12th	18	—	—	—	—	
	a Winslow	—	379	46.0	35.0	40.5	—	58	2nd	28	8th	—	—	13	1.99	—	0.47	12th	19	—	—	—	—	
	a Hereford	—	291	47.2	35.7	41.5	-0.8	58	2nd	27	17th	—	—	12	1.80	+0.14	0.35	12th, 21st	17	—	—	—	—	
	a Cirencester	—	446	46.0	33.6	39.8	-1.1	58	2nd	24	17th	41.3	43.0	13	2.84	+0.83	0.53	12th	20	85	—	31	23	-9
5. ENGLAND, S.E.	a Epsom	—	160	48.3	35.9	42.1	—	62	21st	28	5th, 8th	—	—	15	2.03	—	0.53	12th	23	—	—	—	—	
	a Wokingham	—	216	48.2	34.4	41.3	—	60	22nd	24	8th	—	—	—	1.64	—	0.50	12th	17	—	—	—	—	
	a Marlborough	—	424	46.4	34.7	40.6	-0.5	57	22nd, 31st	28	8, 10, 17	—	—	12	2.44	+0.22	0.66	12th	17	78	—	27	21	-8
	a Bucklebury	—	409	46.5	34.8	40.7	—	58	22nd	29	8, 10, 17	—	—	18	1.84	—	0.53	12th	15	—	—	—	—	
	a Swarraton	—	310	47.6	35.2	41.4	+0.3	61	21st	26	10th	—	—	—	2.37	+0.19	0.58	12th	17	—	—	—	—	
	a Margate	—	85	47.5	37.7	42.6	+0.2	62	21st	31	25th, 26th	42.4	43.3	22	2.26	+0.83	0.62	22nd	18	91	—	31	25	-8
		Broadstairs	—	140	—	—	—	—	—	—	—	—	—	—	—	2.12	—	0.60	12th	16	100	—	27	—
		Ramsgate	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	99	—	27	—
		a Eltham	—	200	47.4	36.6	42.0	—	59	21st	30	8th	—	—	—	1.91	—	0.39	12th	15	—	—	—	—
		a Wisley	—	150	48.0	36.4	42.2	+0.2	59	21st	29	8th	41.3	43.1	13	1.47	—	0.44	12th	14	75	—	21	—
6. SCOTLAND, W.	a Basingstoke	—	289	47.3	35.8	41.6	—	59	22nd	29	8th	42.6	44.0	9	1.82	—	0.49	12th	13	—	—	—	—	
	a Sevenoaks	—	509	46.0	35.3	40.7	—	61	21st	29	26th	41.0	42.5	12	2.69	—	0.65	12th	19	—	—	—	—	
	a Tunbridge Wells	—	421	46.9	35.0	41.0	-0.6	60	21st, 22nd	26	8th	41.0	—	15	2.85	+0.81	0.72	12th	18	96	—	26	26	-7
	a Matfield	—	320	47.4	35.8	41.6	—	60	22nd	31	26th	—	—	13	2.20	—	0.66	12th	19	—	—	—	—	
	p Folkestone	—	121	47.5	37.9	42.7	—	61	21st	30	25th	—	44.0	—	2.65	+0.82	0.95	13th	20	108	—	30	—	
		Littlestone	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	104	—	28	—
		a Bexhill	—	27	48.0	38.7	43.4	—	57	23rd	31	8th	44.3	—	6	2.64	—	0.94	12th	14	119	—	33	—
		Hove	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	123	—	34	—
		a Worthing	—	36	49.4	37.5	43.5	+1.3	59	22nd, 23rd	29	17th	43.2	44.3	9	1.81	+0.14	0.85	12th	16	130	—	36	—
		a Bognor	—	20	48.4	38.0	43.2	—	55	3rd, 22nd	30	5th	—	45.2	10	1.53	—	0.81	12th	13	120	—	33	—
7. ENGLAND, N.W.	Westbourne	—	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	126	—	35	—
	a Totland Bay	—	140	48.1	38.1	43.1	+0.6	57	22nd	30	17th	—	—	3	1.91	+0.17	0.85	12th	16	115	—	32	—	
	a Sandown	—	20	49.5	38.2	43.9	—	56	22nd	32	26th	—	—	—	1.95	—	0.92	12th	15	120	—	33	—	
	p Bournemouth	—	145	49.7	36.6	43.2	—	59	22nd, 31st	25	17th	42.3	43.4	—	2.31	—	0.90	12th	15	128	—	35	—	
	6. SCOTLAND, W.	p Oban	—	20	48.8	35.4	42.1	—	56	30th	27	24th	—	—	16	1.84	—	0.44	8th	13	192	—	53	—
		a Thorntonhall (Lanarkshire)	—	440	43.5	33.9	38.7	—	51	2nd	27	7th	—	—	18	1.35	—	0.46	1st	15	97	—	27	—
		a Kilmarnock	—	90	46.1	34.1	40.1	-1.1	51	2nd	24	26th	—											

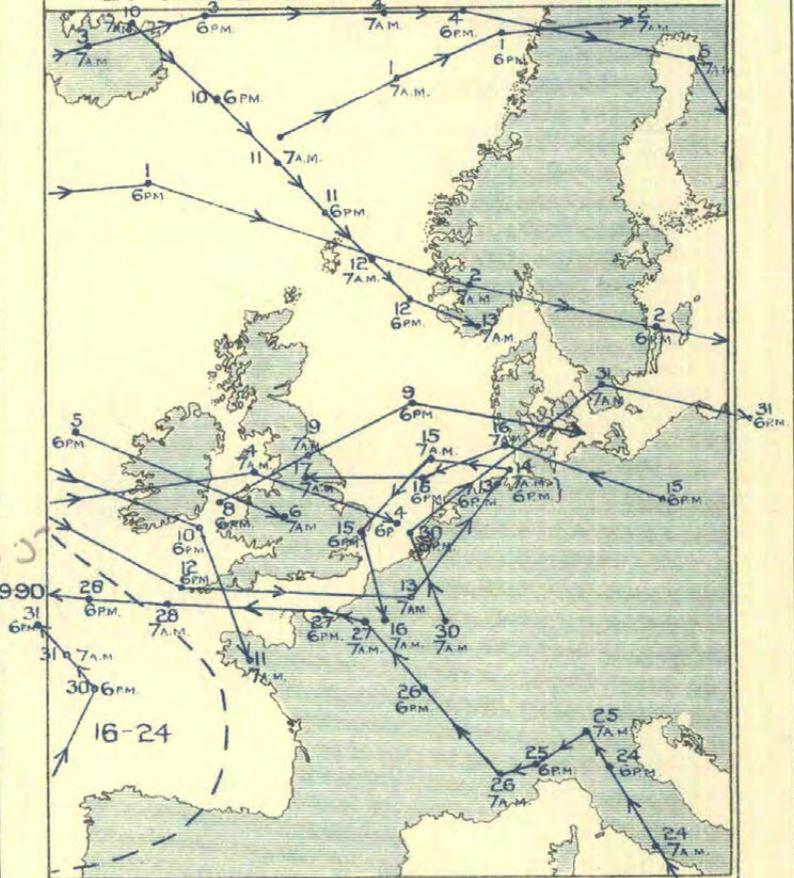
1. BAROMETER AND WIND AT 7 A.M.

The dotted lines indicate the normal distribution of pressure in March, based on 35 years' observations, 1871-1905.



WIND ROSES. The arrows fly with the wind and indicate frequency and force, thus:  $\left\{ \begin{array}{l} \text{Light} \\ \text{Moderate} \\ \text{Strong} \end{array} \right.$   $\left\{ \begin{array}{l} 10 \\ 10 \\ 10 \end{array} \right.$   $\left\{ \begin{array}{l} \text{30 Obs} \\ = 1 \text{ inch} \end{array} \right.$

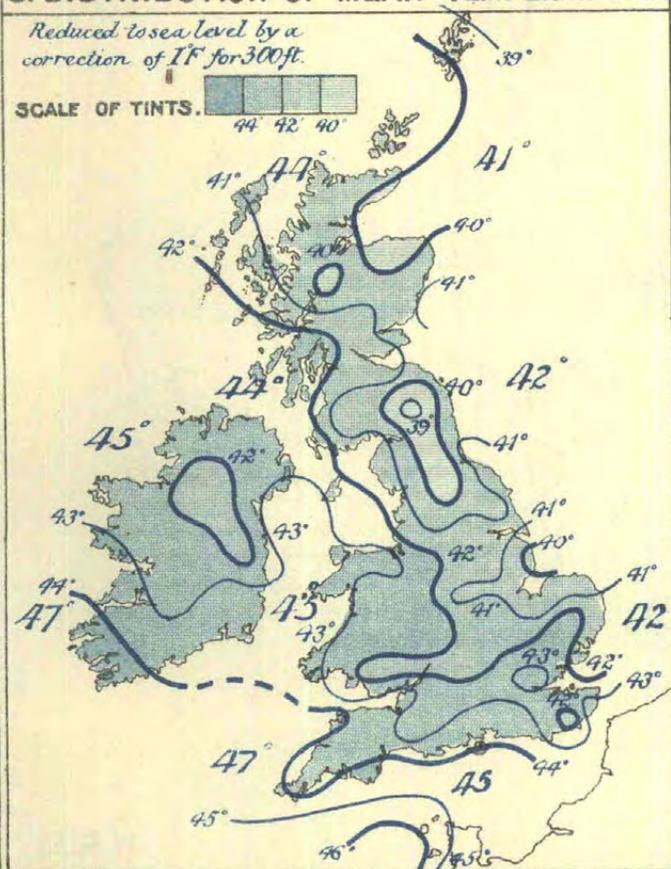
2. MOVEMENTS OF DEPRESSIONS.



3. DISTRIBUTION OF MEAN TEMPERATURE.

Reduced to sea level by a correction of 1° for 300 ft.

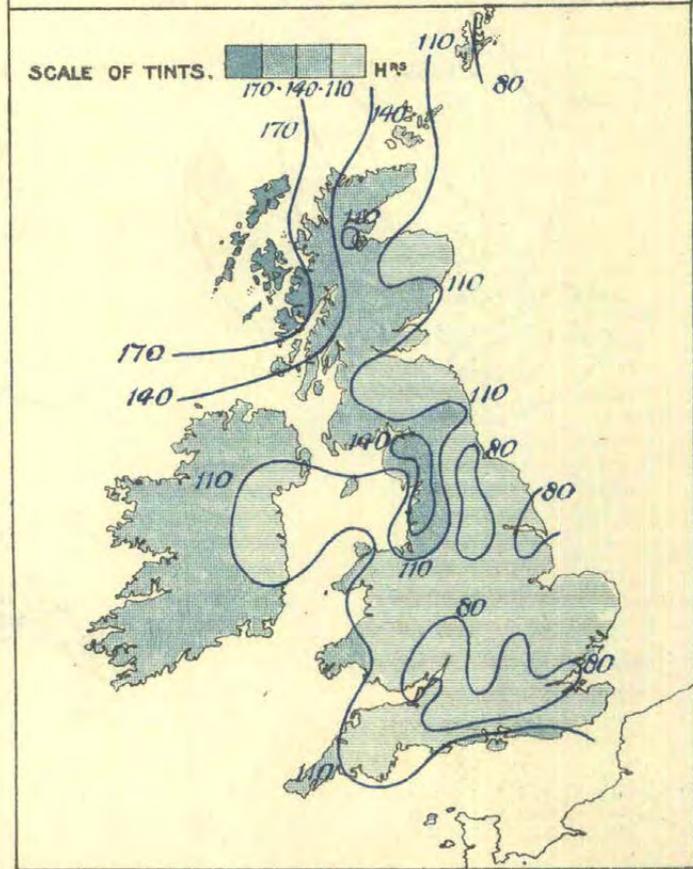
SCALE OF TINTS.

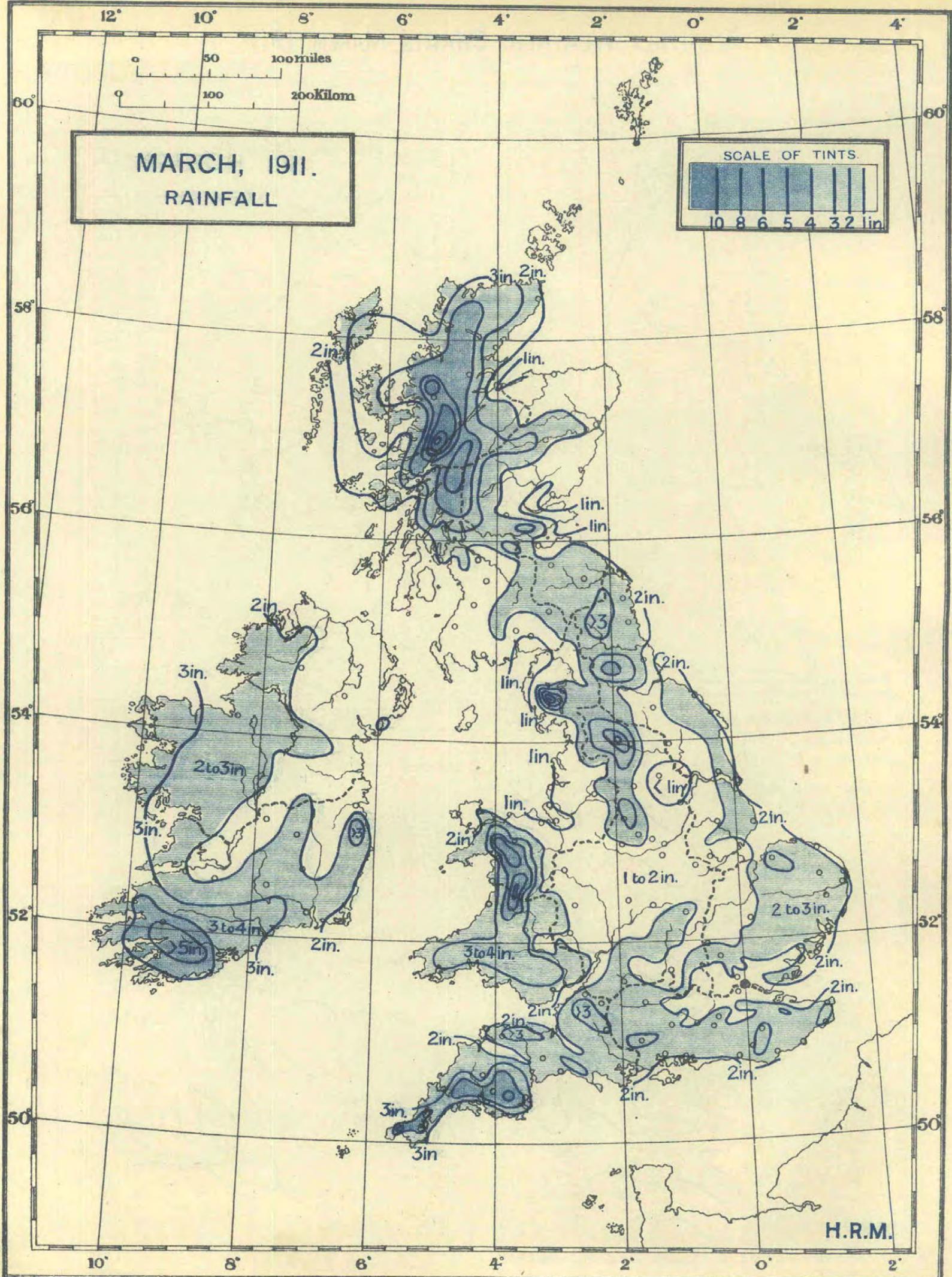


Sea temperatures are shown in large figures, thus - 44°.

4. BRIGHT SUNSHINE, IN HOURS.

SCALE OF TINTS.





Scale 1 : 5,000,000.

TABLE B (continued).—SUMMARY of the OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE at additional STATIONS, MARCH, 1911.

DISTRICT.	STATION.	Height of Gauge above M.S.L. Ft.	AIR TEMPERATURE.								Earth Temperature		Grnd Frost.	RAIN AND OTHER FORMS OF PRECIPITATION.				BRIGHT SUNSHINE.					
			Mean of		Mean of A and B.	Diff. of Mean from Normal.	Absolute Maximum and Minimum.				1 ft.	4 ft.		No. of Nig'ts	Total Fall.	Diff. from Normal.	Most in a day.		Number of Days.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.
			A	B			Max.	Day.	Min.	Day.			In.				In.	In.					
8. ENGLAND, S.W.	§ p Aberystwyth	59	47.3	38.4	42.9	—	54	30th	30	17th	—	—	—	1.89	—	0.62	12th	18	115	—	32	—	
	Haverfordwest	93	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	123	—	34	—	
	Tenby	79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	118	-21	32	-6	
	Port Talbot	179	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	122	—	33	—	
	Forest of Dean	200	—	—	—	—	—	—	—	—	—	—	—	2.28	—	0.63	12th	15	—	—	—	—	
	"	900	—	—	—	—	—	—	—	—	—	—	—	2.35	—	0.60	12th	17	—	—	—	—	
	¶ p Cardiff	208	46.8	35.9	41.4	-1.9	55	31st	29	17th	41.4	43.3	12	2.23	-0.67	0.52	12th	17	91	—	—	25	—
	a Swansea	24	43.9	38.3	43.6	—	58	20th	32	5th, 17th	43.6	40.5	14	2.48	—	0.89	10th	11	111	—	—	30	—
	¶ a Shaftesbury	722	45.6	34.5	40.1	-0.8	58	31st	29	13th	41.5	—	—	2.34	+0.16	0.75	12th	13	—	—	—	—	—
	¶ a Arlington	613	46.8	35.6	41.2	-0.0	63	30th	27	17th	—	—	—	2.87	-0.84	0.80	12th	10	—	—	—	—	—
	¶ § a Cullompton	202	46.6	36.3	42.5	-1.2	61	31st	24	17th	43.6	—	11	2.35	-0.07	0.83	12th	20	82	-39	22	-11	—
	¶ § Torquay	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	107	-33	29	-9
	a Weymouth	21	48.9	38.1	43.5	—	57	29th	29	17th	—	—	—	2.23	—	0.69	12th	19	122	—	—	33	—
	p Paignton	11	48.4	38.6	43.5	—	57	2nd	28	17th	—	—	—	2.70	—	0.53	10th	16	104	—	—	28	—
p Sheepstor	749	47.1	33.9	40.5	—	61	30th	26	10th	—	—	—	5.50	—	1.46	10th	25	—	—	—	—	—	
Salcombe	300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	115	—	32	—	
a Teignmouth	19	43.5	39.5	44.0	—	57	2nd	30	17th	—	—	2	2.49	—	0.50	12th	13	98	—	—	27	—	
a Fowey	—	49.9	38.8	44.4	—	58	20th	32	16th	—	—	—	2.84	—	0.58	11th	18	127	—	—	35	—	
a Penzance	54	49.7	41.3	45.5	—	57	31st	35	17th	—	—	—	4.32	—	0.96	10th	22	113	—	—	31	—	
9. IRELAND, N.	p Dunfanaghy	54	46.5	37.5	42.0	—	52	2nd, 3rd	31	22nd	—	—	—	2.10	—	0.40	3rd	15	—	—	—	—	—
p Dublin (Glasnevin)	67	47.7	36.8	42.3	-0.1	58	2nd	26	17th	—	—	18	1.86	-0.19	0.31	31st	17	—	—	—	—	—	
a Kingstown	42	47.2	39.0	43.1	—	58	2nd	33	14th, 15th	—	—	—	1.32	—	0.25	31st	14	101	—	—	28	—	
p Clongowes Wood College	245	47.1	34.1	40.6	—	56	2nd	23	17th	—	—	21	1.63	—	0.26	3rd	18	104	—	—	29	—	
a Mountmellick	253	48.1	35.4	41.8	—	55	2nd, 3rd	26	17th	—	—	—	1.49	—	0.25	10th	16	—	—	—	—	—	
10. IRELAND, S.	p Newcastle (Co. Wicklow)	256	46.5	37.2	41.9	—	56	2nd	32	14th	—	—	—	1.51	—	0.19	10th, 28th	22	—	—	—	—	—
¶ a Kilkenny	212	48.8	36.2	42.5	-0.7	58	30th	28	17th, 26th	—	—	—	1.59	-0.58	0.35	10th	20	—	—	—	—	—	
¶ a Cahir	199	48.8	36.3	42.6	-0.7	57	2nd	29	7th	—	—	—	2.37	—	0.41	5th	25	—	—	—	—	—	
¶ a Foynes	108	49.0	37.6	43.3	-0.3	58	31st	30	17th	—	—	—	1.73	-1.08	0.29	3rd	18	—	—	—	—	—	
¶ § a Ballinacurra	34	49.1	37.2	43.2	—	60	2nd	32	11th, 17th	—	—	—	3.18	—	0.86	18th	16	137	—	—	38	—	
11. ENGLISH CHANNEL	¶ § a Guernsev (Villa Carey)	180	50.0	40.8	45.4	+0.4	62	22nd	32	17th	—	—	—	2.66	+0.23	0.49	10th	24	121	-26	33	-7	

NOTES ON THE STATISTICAL TABLES.

Hours of Observation.—The following types are used to indicate the hours of observation at Stations included in Table A:—Clarendon, Normal Climatological Stations—I, 9 a.m. [II, 3 p.m.], III, 9 p.m. Black Capitals, telegraphic reporting normal climatological stations—I, 7 a.m., II, 1 p.m., III, 9 p.m. Roman, telegraphic reporting stations—I, 7 a.m., [II, 1 p.m.], III, 6 p.m. Italic, auxiliary climatological stations—I, 9 a.m. only, at Colmonell and Ventnor 3 p.m. The summaries are based on observations made three times a day wherever the data are available, except in the case of the element pressure (see below). At stations shown in clarendon type the maximum and minimum temperatures are read at 9 p.m.; at the remaining stations these observations are made at I. In Table B the letters a and p indicate whether the readings of the maximum and minimum are taken at the hours of morning or evening observation.

Barometer.—The correction for latitude has not been applied to the readings quoted in the Tables. It is applied to the readings at sea level from which the chart showing the mean monthly distribution of pressure is prepared. The values given in the tables are for station level. The values printed are (1) for stations shown in clarendon type, the means of observations at 9 a.m. and 9 p.m.; (2) for stations shown in Capitals, the means of observations at 7 a.m., 1 p.m., 9 p.m.; (3) for stations shown in Roman type, the means of observations at 7 a.m. and 6 p.m.; (4) for stations shown in italic type, the means of observations at 9 a.m. The column headed C gives the correction for diurnal variation required to reduce the means of observations at fixed hours to true diurnal means, based on the analysis of the values obtained at the four observatories for the period 1871-1905. The difference from normal is based upon the 7 a.m. readings only, except in the cases of Kew, Greenwich, Aberdeen, Valencia and Falmouth (see below).

Rainfall.—The amounts are those for the 24 hours commenced at the time of morning observation.

Hygrometer.—At certain stations the vapour pressure and the relative humidity are the results obtained from the daily values. These are entered in clarendon type. At other stations the calculations are made from the monthly means of the dry and wet bulb readings.

Weather Phenomena.—The number of days of Rain, Snow, Hail, Thunderstorm, Fog, Ground Frost, and Gale, are counted irrespective of the hours at which the phenomena occur. Except in the cases of rainfall (see above) and ground frost the day is the civil day. A day is reckoned as a day of "clear sky," if the mean of the estimates of the "amount of cloud" at the fixed hours of observation is less than 2, and as an "overcast" day if the mean is greater than 8. Days of Ground Frost.—A day is counted as a "Day of Ground Frost" if it follows a night on which the minimum has sunk to 30° or less.

Wind Summaries.—The results given under wind direction, and the number of observations of calms and of fresh or strong wind, are based on the observations at fixed hours. At Deerness, Aberdeen, Valencia, Falmouth, Kew, Glasgow, Stonyhurst and Armagh the wind observations are based on the records of a standard Robinson anemometer (factor 2.2). Velocities of between 13 and 38 miles in the hour have been entered as "fresh or strong winds," velocities of 39 miles in the hour, or above, as gales. (At Brighton, Plymouth and Southport the equivalent values are obtained from a Dines Pressure Tube Anemometer.)

Averages.—The normal averages used for stations are—Pressure, Temperature, and Rainfall for the 35 years 1871-1905; Bright Sunshine for the 25 years 1881-1905. The values are published in Appendix III. to the Weekly Weather Report for 1906. For Greenwich and Oxford, averages for longer periods are used. (See Notes in Monthly Weather Reports for 1908.) Monthly averages of pressure at telegraphic reporting stations for the epoch 8 a.m. are published in Appendix I. to the Daily Weather Report. In order to render these averages comparable with the data for the present month, a correction, based on the results for the four observatories as published in "Hourly Readings at the Observatories under the Meteorological Council," has been applied to each of them before the figures given in the column headed "Barometer—Difference from Normal" were computed.

Aberdeen, Falmouth, Kew, Valencia, Oxford, Greenwich.—The figures quoted in the second line assigned to these observatories in the columns for Barometer and Mean Temperature are the true daily means computed from the hourly tabulations of the traces of the photographic recording instruments. For Kew, Falmouth, Aberdeen and Valencia the divergences of the means of the readings at 9 a.m. and 9 p.m. from their normal averages are also given.

Royal Observatory, Greenwich.—The earth temperatures are taken at a depth of 3 ft. 2 ins. The daily rainfall amounts are those for the 24 hours comprising the civil day. The number of days in the month which were persistently overcast from midnight to midnight was 3, the number of persistently cloudless days was 0, the number of persistently foggy days was 0.

Mean Values for Districts.—The stations used in the Weekly Weather Report for the computation of "district values" of rainfall and temperature are distinguished by the sign ¶, those used for the computation of "district values of bright sunshine" by the sign §. These stations are distributed between Tables A and B. The monthly mean values for districts given in this Report for maximum, minimum and mean temperature, duration of bright sunshine, number of rain days and amount of rainfall, are computed from the data for these "representative" stations. The mean temperature for districts is computed in the manner shown in the preface to this and previous volumes of the Weekly Weather Report. The monthly mean values for districts for "amount of cloud" are computed from the data for all stations included in Table A. The extreme values of the various elements in each district are printed in distinctive type. In the lines devoted to district values, the columns referring to absolute highest and absolute lowest temperature and the maximum amount of rainfall in a day contain the extreme values for the district at any station included in either table of the Report. The averages for districts with which the current values are compared are for the 25 years 1881-1905, as in the case of the corresponding values published in the Weekly Weather Report.

Meteorological Societies.—Information for stations marked ¶ is supplied by the Royal Meteorological Society, and that for stations marked § is supplied by the Scottish Meteorological Society. Stations marked S are in connexion with the Scottish Meteorological Society and those marked M with the Royal Meteorological Society as well as with the Meteorological Office.



MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE  
(Supplement to the Weekly Weather Report.)

SUMMARY OF OBSERVATIONS COMPILED FROM THE RETURNS OF OFFICIAL STATIONS AND VOLUNTEER OBSERVERS IN THE UNITED KINGDOM, WITH A CHART OF RAINFALL CONTRIBUTED BY THE BRITISH RAINFALL ORGANISATION.  
ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE,  
AND PUBLISHED FOR H.M. STATIONERY OFFICE BY WYMAN AND SONS, LTD., FETTER LANE, E.C.; OR OLIVER AND BOYD, EDINBURGH; OR E. PONSONBY, LTD., 116, GRAFTON STREET, DUBLIN.

THIRTY-SIXTH YEAR.  
Vol. XXVIII. (New Series.) } No. IV.  
Weekly Weather Report.

APRIL, 1911.

[Price 6d.]

## SUMMARY OF OBSERVATIONS

**Pressure, Winds and Weather.**—The month now under notice may be divided into two periods of almost equal duration, in which the distribution of atmospheric pressure was totally different. During the second half of March anticyclones ruled in the neighbourhood of the Arctic Circle, while disturbances remained nearly stationary for days out at sea beyond our south-western coasts and on the Bay of Biscay. On the morning of April 1st a general southward transference of both types was observed to be in progress, the low pressure system eventually passing down to Madeira, and the high pressure becoming established over the British Isles. A steady rise of the barometer took place, and by the 5th the anticyclone had attained its greatest intensity, pressure exceeding 30.5 in. at the northern and north-western stations, reaching 30.62 in. at Nairn, and 30.63 in. at Stornoway, the highest readings in these islands during the month, but on the evening of the 8th 30.71 in. was reported out at sea a short distance from the north-west of Ireland. With the barometer at about 30.4 in. to 30.5 in., the anticyclone maintained its position over the country for nearly a fortnight, without undergoing much change of position or shape. From the reports of the morning of the 14th it was evident that a rapid change in the situation was setting in. The area of high pressure was passing southward towards the Bay of Biscay and the Spanish Peninsula, the barometer was giving way briskly over all the northern regions, and thenceforward, until the close of the month, the weather over these islands was affected mainly by a series of cyclonic disturbances from the Atlantic, advancing upon our western coast or passing eastward beyond the north of Scotland. As a general rule these disturbances were of no great depth, pressure diminishing to a little below 29.5 in. at the centres of some of them. One, however, proved unusually deep for the time of year the barometer falling below 29 in. when the centre was nearing the Irish coast on the evening of the 18th. Next morning the pressure minimum was over Ireland, 28.72 in. at Blacksod Point, and 28.73 in. at Birr Castle, the lowest values for the month. The system then altered its course to the northward, accelerated its movement, and disappeared to the north-eastward of Iceland on the 21st. In a secondary depression which formed over eastern Scotland on the morning of the 29th, the lowest barometer reading was 29.15 in. at Nairn. On the 21st there was a temporary northward expansion of the anticyclone from south-western Europe to the southern half of the United Kingdom, the barometer mounting above 30.5 in. along the south coast of England, and touching 30.6 in. at Jersey. For the entire month, therefore, the range of pressure was rather large, being more than an inch at Oxford and in London, exceeding 1½ in. at Birr Castle and Malin Head, and amounting to 1.9 in. at Blacksod Point. The distribution of mean pressure was somewhat irregular, the lowest values being up the Norwegian coast, below 29.7 in. at Bodø, beyond the Arctic Circle. The highest results were in France and the Azores, up to nearly 30.1 in., and to the northward of Iceland, about 30 in. At the home stations the values were from 30.06 in. at Jersey to 29.86 in. at Sumburgh Head. This Shetland value was practically equal to the average, all other stations being above the average, the excess increasing southward from 0.04 in. at Wick to 0.13 in. at Roche's Point and Jersey, and 0.14 in. at Scilly. The mean gradient was consequently considerably steeper than usual, 0.20 in., against 0.08 in., between Shetland and the Channel Islands. Owing to the month having been divided nearly equally between anticyclonic and cyclonic types the winds varied greatly in direction, the South-East quarter being the least frequented.

Taken as a whole, the month was of a very breezy character, even during the existence of the anticyclonic system over us, winds exceeding the force of a strong breeze being reported on all but five days. A well-marked disturbance in the Italian region in the early part of the month spread northward, and occasioned a decided increase in the pressure gradient over our southern and eastern districts between the 5th and the 7th, high North-Easterly winds resulting. On the 5th a gale was felt at Yarmouth, a strong gale (force 9) at Dover; and next day the gale was general over the southern half of England, a strong gale at Dungeness and Scilly. Gusts at the rate of 63 miles per hour were experienced at Gorleston on the 3rd, and 59 miles an hour at Shoeburyness on the 5th. These boisterous conditions were accompanied by daily falls of snow over a wide area, a depth of from 3 in. to 4 in. in a day being measured by several observers. The most remarkable feature of the period was the unprecedented cold during the daytime. More striking were the low afternoon maxima on the 5th, numerous stations in England, mainly in the south, failing to rise above 35°, Southend touching 32°, Matfield (Kent) 31°, and Sandown 30°. At noon the Hampstead reading was 28°; at Westminster, 3 p.m., 32°; and at Matfield, 3.20 p.m., 26°. At Totland Bay, Isle of Wight, the lowest April maximum in the previous twenty-six years had been 43°, but on the 5th of the present month it was

only 34.6°; next day it touched 38°, and on the 7th 42°. In Scotland the maxima were generally 40° and upwards. Frost was general, many night shade temperatures descending to 25° and under, to 23° at Armagh, Birr Castle and Poltalloch; 22° at Wokingham, Hampstead, Cromer, Llangamarch Wells, and Markree Castle; 21° at Balmoral, Kingussie and Sheepstor; 20° at Colmonell and Thorntonhall, and 17° at West Linton.

Between the 10th and the 13th a depression near Madeira expanded northward across the Peninsula, again steepening the gradient and causing high North-Easterly winds across southern England.

Thereafter Southerly to Westerly or North-Westerly winds prevailed ~~ascendant~~, under the influence of the various low pressure systems, but although these produced a very windy period, the only gale worthy of mention was that associated with the deep depression which moved up our western districts between the 18th and 20th. Out on the Atlantic ships had experienced a strong to whole Northerly and North-Westerly gale on the 17th and 18th, and as the centre approached Ireland on the latter date a Southerly gale sprang up on our western and south-western coasts, a whole gale (force 10) at Roche's Point, the anemometer at Pendennis Castle registering a velocity of 52 miles in an hour, while in gusts, velocities were recorded at the rate of 64 miles per hour at Plymouth, 66 miles at Roche's Point, 67 miles at Llanegrad, and 68 miles at Pendennis. Next day the Southerly gale was maintained in many places, a strong gale at Holyhead and Nottingham, a whole gale at Scilly, with anemometrical records in gusts of 67 miles per hour at Holyhead, and 70 miles at Llanegrad. As the centre moved northward, the wind veered to the West on the 20th, blowing a strong gale at Scilly, a whole gale at Malin Head.

Occasionally during the second half of the month fairly high temperatures were registered in various districts, above 65° in places, 67° on the 14th or 15th at Westminster, Camden Square and Wilton (Salisbury), 68° on the 13th at Killarney, and on the 22nd at Camden Square, Cromer and Geldeston, and 69° at Hull on the 21st, and at Cambridge and Norwich on the 22nd, many of the morning minima on the latter day being 51° or 52°, and on the morning of the 23rd as high as 54° at Kingstown.

A notable characteristic of the month was the almost entire absence of heavy rainstorms, even during the more unsettled period, few instances of more than an inch in a day being registered, 1.5 in. at Gruline (Mull) on the 17th, and at Bethesda on the 19th; 1.8 in. at Loch Torridon on the 21st; and 2.2 in. at Seathwaite on the 25th. On the other hand, rainless spells of 14 or more consecutive days were experienced at a very large number of stations. In the north-west the drought which set in about the middle of March continued in places till the middle of April, 30 rainless days at Gruline, and 29 at Graythwaite. Further south the dry weather was within the first twenty-four days of April, 18 days at Oundle and Send (Surrey), 19 at Brandon, and 20 at Beaconsfield.

The thunderstorms of the month were few and unimportant, and aurora was seen on the 8th at Stornoway only.

Fog was rather prevalent on the western and southern coasts on the 1st and 2nd, and from the 13th to the 28th; but up the east coast it was an occasional visitor at one or two places.

On nearly every section of our coasts the temperature of the sea water was higher than in March, by 3° off the west and north-west of Ireland, 4° at the Orkneys. The water was colder than the air on the east coast of Britain and western channels, as much as 5° colder on the Firth of Cromarty. In other localities the water was warmer than the air, by 3° off Shetland, 4° on the Kerry coast.

**Rainfall.**—There was a considerable excess of precipitation in the north and west of Scotland, and a fairly large deficiency over the eastern half of England, but elsewhere it differed little from the normal. Fort William had an excess of 2.7 in. (172 % of the average), and Whitby a deficiency of 1.3 in. (20 %). Totals exceeding 6 in. were not numerous, the only ones exceeding 9 in. being 12.7 in. at Seathwaite, and 17.5 in. at Glenquoich, Loan. Many stations received less than an inch in all, 0.5 in. at Ruthin, St. Asaph and Shrewsbury, 0.4 in. (30 %) at Hawarden Bridge, and 0.3 in. (20 %) at Whitby. The frequency ranged from 29 days at Baltasound, and 24 at Stornoway and Wick to 10 or less in many places, 8 at Beaconsfield, and 7 at Brandon and Dursley.

**Bright Sunshine.**—Over the greater part of the kingdom there was a marked lack of sunshine, the deficiency exceeding 30 hours in several instances, 46 hours at Newton Rigg, 47 (31 % of the average) at Strathpeffer, and 50 (31 %) at Stornoway, while London did well, Westminster showing an excess of 31 hours (28 %). The aggregate totals ranged from 202 hours at Felixstowe, 201 at Guernsey (104 %), and 200 at Jersey (106 %), to 90 hours at West Linton, and 88 at Eskdalemuir, and 71 hours (61 %) at Fort Augustus.

TABLE A.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at 9 a.m., 3 p.m. and 9 p.m. at NORMAL STATIONS in the BRITISH ISLANDS

DISTRICT.	STATION.	Height of Barometer cistern above M.S.L.	BAROMETER.			AIR TEMPERATURE.								HYGROMETER.												
			Mean at 32° F. at Level and Latitude of Station.	Diff. from Normal.	C. Cor. for Diurnal Range.	Mean of		Mean of A and B.	Diff. from Normal.	Absolute Maximum and Minimum.				Observations at 9 a.m., 3 p.m., and 9 p.m., or at 7 a.m., 1 p.m., 6 p.m., or 9 p.m.												
						A	B			Max.	Day.	Min.	Day.	Dry Bulb.			Dep. of Wet.			Vap. Pressure.			Humidity.			
														I.	II.	III.	I.	II.	III.	I.	II.	III.	I.	II.	III.	
<b>1. SCOTLAND, N.</b>																										
Islands.	CASTLEBAY	Ft. 48	In. 29.840	In. +.075	.002	43.5	40.5	44.5	+0.4	51	21, 27, 29	32	4th	43.0	46.2	44.5	1.9	2.3	1.8	In. .245	In. .261	In. .253	% 85	% 84	% 87	
	Deerness	163	29.687	—	.007	46.9	38.5	42.7	+0.3	55	22nd	29	3rd	43.6	—	41.1	2.0	—	1.4	.242	—	.231	85	—	89	
	SUMBURGH HEAD	126	29.687	—	.004	.002	47.0	34.7	40.9	-0.6	53	8th	28	4, 5, 17	41.1	43.7	40.9	1.3	2.5	1.5	.230	.231	.224	89	81	88
	STORNOWAY	52	29.839	+ .077	.002	49.0	37.8	43.4	+0.2	54	22nd, 23rd	30	3rd, 4th	42.5	47.9	42.0	1.1	3.1	1.7	.248	.262	.231	91	80	87	
	Wick	80	29.775	+ .041	.003	49.4	37.3	43.4	+0.3	58	8th, 22nd	28	17th	42.0	—	43.8	2.1	—	2.4	.223	—	.234	84	—	81	
	Strathpeffer	210	29.662	—	.008	50.8	37.7	44.3	+0.7	59	21st	28	6th	45.4	—	43.0	2.7	—	2.1	.244	—	.232	81	—	83	
	Glencarron	504	29.347	—	.007	48.1	36.1	42.1	-0.8	55	18th	26	6th	42.9	—	41.2	2.4	—	2.0	.226	—	.217	83	—	85	
	Fort Augustus	78	29.845	—	.037	49.4	37.4	43.4	-1.1	60	11th	24	6th	44.4	—	43.7	2.3	—	1.5	.242	—	.252	83	—	88	
	Kingussie	828	28.998	—	.007	48.6	35.9	42.3	—	61	11th	21	6th	43.4	—	40.9	3.7	—	2.4	.206	—	.208	74	—	82	
	Fort William	88	29.878	—	.007	50.0	37.7	43.9	-1.2	57	18th	26	6th	44.2	—	43.2	2.7	—	2.3	.236	—	.236	80	—	83	
Dunrobin Castle	16	29.871	—	.007	49.9	37.5	43.7	-0.1	59	23rd, 25th	28	4th	44.9	—	42.8	3.1	—	2.3	.235	—	.231	78	—	83		
District Value						49.1	37.0	42.8	-0.1	61			21													
<b>2. ENGLAND, N.E.</b>																										
Northern Part.	Dundee	164	29.749	—	.007	51.2	38.2	44.7	+0.4	61	13th	28	6th	45.1	—	43.1	2.8	—	1.7	.244	—	.245	80	—	86	
	Nairn	82	29.788	+ .050	.003	51.0	37.2	44.1	0.0	62	25th	26	6th	41.4	48.6	45.4	1.8	3.9	2.7	.224	.252	.244	87	73	81	
	Gordon Castle	107	29.780	—	.007	51.4	37.2	44.3	0.0	64	22nd	26	6th	45.7	—	43.1	3.1	—	2.1	.239	—	.233	78	—	83	
	Aberdeen	90	29.805	+ .024	.007	49.8	39.1	44.5	+0.7	62	22nd	30	6th	45.0	47.9	43.5	3.6	4.4	2.7	.222	.235	.225	74	71	79	
	Balmoral	927	—	—	—	50.8	34.3	42.6	+1.9	58	11, 22, 27	21	6th	42.7	—	—	2.3	—	—	.225	—	—	83	—	—	
	Crieff	486	29.435	—	.007	52.2	37.1	44.7	-0.1	63	11th, 13th	26	6th	45.7	—	43.1	4.4	—	2.8	.215	—	.220	70	—	79	
	Leith	37	29.880	+ .067	.003	51.8	40.3	46.1	+0.8	63	22nd	32	6th	43.5	—	48.5	2.8	—	4.0	.223	—	.249	78	—	79	
	Marchmont	500	29.394	—	.007	49.7	37.2	43.5	+0.3	60	13th	28	5th	44.0	—	41.9	3.0	—	2.4	.224	—	.218	77	—	83	
	District Value						50.6	37.2	43.6	+0.3	65			17												
	<b>3. ENGLAND, E.</b>																									
Northern Part.	Whitby	145	29.775	—	.008	52.9	39.7	46.3	+1.3	64	14th	28	2nd	46.6	—	45.3	3.8	—	3.2	.238	—	.234	75	—	78	
	Cockle Pk (Morpeth)	331	29.580	—	.008	50.0	38.1	44.1	—	62	22nd	29	5th	44.7	—	42.0	2.9	—	1.8	.238	—	.234	80	—	86	
	Shields	117	29.812	+ .069	.003	50.9	37.9	44.4	+0.2	61	22nd, 23rd	28	5th, 6th	42.8	—	47.5	1.9	—	3.5	.235	—	.248	85	—	70	
	Durham	352	29.555	—	.008	49.7	38.1	43.9	-0.3	58	21st	28	2nd	44.6	—	42.9	2.8	—	2.1	.239	—	.235	81	—	85	
	Rounton	245	29.674	—	.008	50.4	38.5	44.5	+0.7	60	22nd	26	5th	44.7	—	43.3	2.9	—	2.1	.232	—	.235	78	—	84	
	Scarborough	127	29.802	—	.008	51.6	40.5	46.1	+1.4	63	14th	30	5th	45.7	—	45.3	2.3	—	2.6	.256	—	.245	84	—	81	
	York	53	29.919	—	.008	52.9	39.9	46.4	+0.5	61	21st	29	5th	45.9	—	45.2	3.0	—	2.9	.244	—	.237	79	—	79	
	Spurn Head	28	29.918	+ .077	.002	50.4	40.6	45.5	+0.7	60	21st	30	5th, 6th	43.5	49.3	46.1	1.6	3.5	2.8	.248	.269	.249	87	76	80	
	Lincoln	42	—	—	—	53.4	38.8	46.1	-0.5	63	15th	27	5th	45.9	—	—	2.5	—	—	.268	—	—	81	—	—	
	Skegness	16	29.960	+ .099	.002	52.1	39.2	45.7	—	65	21st	30	6th	43.0	—	48.7	1.0	—	1.6	.255	—	.304	92	—	89	
Hull	12	—	—	.008	53.3	40.0	46.7	+1.5	69	21st	29	7th	47.2	—	45.0	3.6	—	2.6	.243	—	.241	76	—	81		
District Value						51.5	39.0	45.0	+0.7	69			26													
<b>4. MIDLAND COS.</b>																										
Eastern Part.	Lowestoft	75	29.912	—	.009	52.0	39.3	45.7	+0.5	63	24th	26	5th	47.3	—	44.2	4.2	—	3.1	.232	—	.225	71	—	78	
	Cromer	139	29.821	—	.009	53.5	38.7	46.1	—	63	22nd	22	5th	40.0	—	44.0	2.5	—	1.6	.255	—	.252	83	—	87	
	Hillington	92	29.836	—	.009	54.2	38.3	46.3	+0.2	68	22nd	27	5th	46.4	—	44.2	2.7	—	2.0	.253	—	.245	80	—	84	
	Norwich	98	—	—	—	53.7	39.4	46.6	—	69	22nd	27	6th	—	—	—	—	—	—	—	—	—	—	—	—	
	YARMOUTH	27	29.958	+ .120	.003	52.4	39.5	46.0	+1.2	65	22nd	27	6th	42.9	49.7	45.6	2.1	5.4	3.8	.232	.235	.225	85	66	74	
	Geldeston	47	29.945	—	.009	54.0	38.6	46.3	+0.5	68	22nd	27	5th	46.7	—	44.2	3.8	—	2.8	.234	—	.230	74	—	79	
	Cambridge	43	29.949	—	.009	54.6	38.4	46.5	-0.5	69	22nd	26	12th	46.6	—	44.8	3.8	—	3.4	.239	—	.230	75	—	76	
	CLACTON	62	29.942	+ .110	.003	52.1	39.4	45.8	-0.9	64	24th	25	6th	43.0	48.5	44.6	1.7	4.0	2.7	.240	.249	.230	86	73	80	
	Woburn	294	29.716	—	.009	53.5	37.9	45.7	—	65	22nd	26	12th	45.3	—	44.4	3.1	—	2.9	.239	—	.236	79	—	80	
	Bennington	411	29.600	—	.009	53.4	37.2	45.3	-0.8	65	22nd	25	6th	45.1	—	43.0	3.1	—	2.7	.232	—	.221	77	—	80	
Berkhamsted	397	29.597	—	.009	54.0	37.3	45.7	-0.5	65	22nd	25	6th	44.9	—	43.3	3.3	—	2.8	.226	—	.221	76	—	79		
District Value						53.6	38.9	46.0	+0.4	69			22													
Western Part.	Garforth	198	—	—	.008	52.3	37.6	45.0	—	62	23rd	24	5th, 6th	46.1	—	43.3	3.7	—	2.4	.235	—	.234	75	—	82	
	Huddersfield	411	29.528	—	.008	50.8	38.9	44.9	—	59	22nd	27	5th, 6th	44.3	49.8	43.3	2.8	4.7	2.3	.236	.245	.237	80	70	83	
	Wakefield	100	29.875	—	.008	53.4	39.7	46.0	+1.2	62	23rd	28	5th, 7th	46.8	—	46.0	3.2	—	2.5	.247	—	.253	77	—	81	
	Belvoir Castle	276	29.704	—	.009	52.6	38.3	45.5	-0.4	63	15th, 22nd	26	6th	44.7	—	43.8	2.7	—	2.1	.236	—	.241	80	—	84	
	Coventry	309	29.675	—	—	53.4	39.3	46.4	-0.6	63	15th, 24th	26	6th	46.7	—	—	4.1	—	—	.228	—	—	73	—	—	
	NOTTINGHAM	85	29.894	+ .090	.003	53.0	38.8	45.9	-0.5	62	15th	27	6th	42.5	50.8	45.3	1.9	5.1	2.7	.232	.252	.243	85	68	80	
	Birmingham	542	29.415	—	.009	52.0	38.6	45.3	-0.4	63	14th	27	6th	42.9	—	44.7	2.6	—	3.6	.225	—	.225	81	—	75	
	Oxford																									



TABLE A. (continued).—Giving a Summary of the METEOROLOGICAL OBSERVATIONS made at 9 a.m., 3 p.m. and 9 p.m. at NORMAL STATIONS in the BRITISH ISLANDS

Table with columns: DISTRICT, STATION, Height of Barometer, BAROMETER (Mean at 32° F., Diff. from Normal, C. Cor. for Diurnal Range), AIR TEMPERATURE (Mean of A, B; Mean of A and B; Diff. from Normal; Absolute Maximum and Minimum), and HYGROMETER (Observations at 9 a.m., 3 p.m. and 9 p.m., or at 7 a.m., 1 p.m., 6 p.m., or 9 p.m.; Dry Bulb, Dep. of Wet, Vap. Pressure, Humidity).

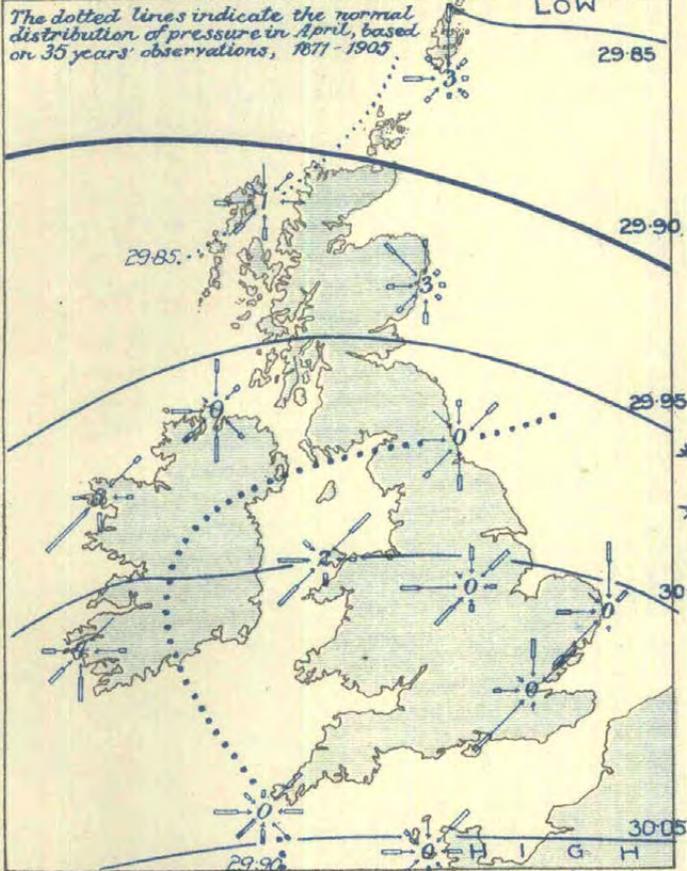
CLIMATOLOGICAL STATIONS, at 7 a.m., 1 p.m. and 6 p.m. or 9 p.m. or at 7 a.m. and 6 p.m. at TELEGRAPHIC REPORTING during the Month of APRIL, 1911.

Earth Temperature.		BRIGHT SUNSHINE.				CLOUD (0-10).			RAIN AND OTHER FORMS OF PRECIPITATION.				WEATHER. No. of Days of								WIND. No. of Observations reduced to a total of 90 for the month.								STATIONS.				
At 1 foot depth.	At 4 feet depth.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.	Mean Amount.			Total Fall.	Diff. from Normal.	Most in a day.		Precipitation.	Snow.	Hail.	Thunderstorm.	Clear Sky.	Overcast.	Fog.	Ground Frost.	Wind-force 8 and above.	Forces 4-7.	Calm.	N.	N.E.	E.	S.E.	S.		S.W.	W.	N.W.	
						I.	II.	III.			In.	In.																					In.
46.1	46.1	181	+ 9	44	+ 2	5.7	—	4.4	2.02	+0.15	0.72	1st	12	4	0	0	8	9	0	—	0	5	3	35	1	0	0	30	17	3	Eastbourne.		
44.7	44.9	183	—	45	—	6.9	—	5.3	1.26	—	0.45	1st	12	5	0	0	3	10	4	6	2	63	2	20	15	3	0	3	38	5	4	Dover.	
—	—	—	—	—	—	7.6	7.1	7.5	1.35	-0.33	0.46	1st	14	6	0	0	4	8	8	—	2	57	1	12	23	1	3	6	31	12	1	Dungeness.	
46.3	45.3	174	+ 1	42	0	6.7	—	4.0	1.62	-0.20	0.57	1st	12	4	0	0	4	6	5	8	1	38	0	18	21	2	0	7	27	13	2	Hastings.	
—	—	163	+ 5	40	- 1	5.2	—	4.6	1.86	-0.12	0.41	28th, 29th	12	3	0	0	11	8	1	10	0	27	0	2	37	0	0	0	43	0	8	Southampton.	
—	—	188	+ 7	46	+ 2	5.7	—	—	1.29	-0.56	0.35	26th	13	3	0	0	4	11	3	—	0	35	5	16	11	6	2	4	30	13	3	Ventnor.	
45.8	45.8	163	+ 2	40	+ 1	6.7	—	5.2	1.68	+0.06	0.81	1st	10	4	0	0	0	11	0	7	0	12	0	16	16	6	0	0	27	17	8	Tottenham.	
—	45.5	168	—	41	—	7.9	—	5.7	1.00	—	0.65	1st	10	4	0	0	0	11	0	7	0	12	0	16	16	6	0	0	27	17	8	Hampstead.	
—	—	161	—	39	—	7.8	—	5.7	1.78	—	0.61	1st	14	4	1	0	1	11	0	9	1	11	5	12	24	0	3	3	24	16	3	Camden Square.	
45.5	43.9	164	—	40	—	7.8	—	—	1.80	+0.12	0.57	1st	11	2	1	0	3	18	0	8	—	—	0	33	9	0	0	9	15	18	6	Westminster.	
—	—	144	+ 31	35	+ 7	—	—	—	1.40	-0.25	0.54	1st	10	5	0	0	—	—	0	7	—	—	—	—	—	—	—	—	—	—	—	—	South Kensington
—	—	139	—	34	—	8.2	—	—	—	—	—	—	5	0	0	1	17	0	9	0	27	3	15	15	9	0	3	36	9	0	0	Greenwich.	
—	44.7	151	0	37	0	8.0	—	5.8	1.73	+0.16	0.79	2nd	12	5	1	0	3	14	1	10	0	24	3	14	21	3	0	3	28	16	2	0	Norwood.
44.9	—	—	—	—	—	7.7	—	6.3	1.78	+0.10	0.80	1st	12	5	0	0	1	12	1	8	0	15	9	18	16	2	0	9	17	19	0	2	Kew.
45.4	44.8	148	- 1	36	0	7.7	7.1	5.0	1.88	+0.26	0.80	1st	14	4	0	0	1	11	0	10	0	44	6	15	17	3	1	8	21	16	3	—	Bunhill Row.
—	—	131	+ 13	32	+ 3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Plumstead.
—	—	99	—	24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Esksdalemuir.
—	—	88	—	21	—	9.8	8.3	8.6	6.78	—	0.90	19th	21	6	5	3	0	21	0	—	0	61	11	9	22	0	0	8	23	12	5	—	Poltalloch.
—	—	—	—	—	—	7.7	—	6.2	4.22	+1.71	0.68	17th	17	0	0	1	2	16	0	—	2	23	11	6	16	9	2	2	21	15	7	—	Glasgow.
—	—	—	—	—	—	8.2	—	7.6	2.85	+0.80	0.47	29th	17	0	2	0	1	19	0	11	0	24	10	8	13	10	2	8	17	21	1	—	Rothesay.
—	—	93	- 35	22	- 8	8.2	—	6.1	3.96	+1.32	0.66	24th	18	0	1	0	6	10	0	—	3	16	15	6	3	15	4	3	9	23	12	—	Colmonell.
—	44.0	—	—	—	—	7.9	—	—	4.12	+1.80	0.72	19th	16	2	0	0	2	18	2	10	1	39	0	3	18	15	0	9	3	36	6	—	Dumfries.
44.3	43.7	121	—	29	—	9.0	—	8.4	3.34	+1.07	0.55	25th	16	2	0	0	0	22	0	12	1	29	3	2	30	0	3	3	34	3	12	—	Cally.
—	—	—	—	—	—	—	—	—	4.19	+1.39	0.81	28th	16	0	1	—	—	—	0	—	1	4	0	0	7	12	29	0	17	9	16	—	Douglas.
—	—	147	- 33	35	- 8	7.5	—	6.9	2.97	+0.57	0.79	28th	14	2	2	0	0	12	6	2	1	42	0	7	21	5	5	9	15	13	—	—	
—	—	120	- 34	29	- 4	7.8	—	7.3	3.54	+0.78	0.90	16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Southport.
45.9	44.9	148	- 15	35	- 8	7.1	6.7	6.1	2.54	+0.82	0.62	29th	11	3	0	0	2	9	0	13	0	64	4	5	14	6	4	6	23	19	9	—	Manchester (City).
44.3	44.3	114	—	27	—	5.0	—	5.3	2.55	+0.64	0.58	27th	14	3	1	0	3	3	0	3	0	18	0	14	12	3	6	19	16	14	6	—	" (Whit. P'k).
—	—	94	—	23	—	8.5	7.0	6.9	2.88	—	0.64	27th	13	1	0	0	1	15	1	—	0	33	11	7	17	2	4	16	13	16	7	—	Darwen.
44.4	42.4	98	—	24	—	8.5	—	7.3	4.24	—	0.63	25th	20	2	1	1	0	18	0	8	1	51	0	11	17	2	4	19	12	19	6	—	Aspatia.
44.6	43.8	105	—	25	—	8.3	—	7.2	4.05	+2.02	0.82	25th	18	2	0	0	0	19	0	8	1	24	4	10	10	9	2	11	14	28	2	—	Newton Bigg.
43.5	42.3	104	- 46	25	- 11	8.2	—	7.6	2.24	+0.18	0.34	18th	17	1	0	0	0	17	0	8	1	36	11	15	8	2	3	13	19	15	4	—	Stonyhurst.
—	—	111	- 39	27	- 9	8.6	—	6.5	3.03	+0.55	0.48	28th	18	3	1	0	1	14	0	9	1	28	15	9	13	2	2	8	25	14	2	—	Blackpool.
44.2	44.3	142	- 12	34	- 3	7.4	—	6.6	2.29	+0.49	0.63	20th	15	1	0	0	2	10	0	13	0	42	0	5	21	5	3	10	21	16	9	—	Manch's'r (Prest).
—	—	92	- 34	22	- 8	8.7	—	7.7	2.71	+0.65	0.47	29th	15	1	0	1	0	20	0	7	0	44	5	12	16	3	0	15	10	27	2	—	Liverpol. Bid. Obs.
—	—	146	—	35	—	7.3	—	6.5	1.80	+0.23	0.41	27th	14	4	0	0	0	11	1	—	0	30	0	9	15	3	9	6	21	24	3	—	Llandudno.
—	—	168	+ 12	40	+ 2	6.8	—	6.4	1.47	-0.31	0.39	19th	12	2	0	1	3	8	0	—	0	8	8	0	2	22	2	16	10	30	0	—	Holyhead.
—	—	—	—	—	—	7.4	7.0	6.9	2.01	+0.05	0.46	20th	12	2	0	0	0	9	9	—	2	48	3	3	23	3	0	6	29	13	10	—	Bettws-y-Coed.
44.6	44.5	121	- 29	—	—	7.0	—	5.5	2.96	—	0.65	20th	12	3	0	0	0	7	0	6	2	33	0	5	17	15	0	3	22	19	9	—	Llaneugrad.
46.3	44.1	159	—	38	—	7.5	—	5.8	3.03	—	0.74	20th	11	2	0	0	2	11	2	5	3	60	2	6	21	8	0	13	19	12	9	—	—
44.7	43.8	130	- 15	31	- 4	7.6	6.9	6.6	2.29	+0.20	0.82	14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Llangamm. Wells.
43.7	44.0	110	—	27	—	8.5	—	—	3.78	—	0.54	19th, 26th	19	3	1	0	1	19	0	14	0	24	9	3	6	15	6	0	21	24	6	—	Pembroke.
—	—	172	- 5	42	- 1	6.1	6.3	5.8	1.69	-0.34	0.40	26th	16	1	0	0	2	5	4	—	2	54	0	11	21	4	5	14	19	11	—	—	Clifton.
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TABLE B.—SUMMARY of the OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE at additional STATIONS, APRIL, 1911.

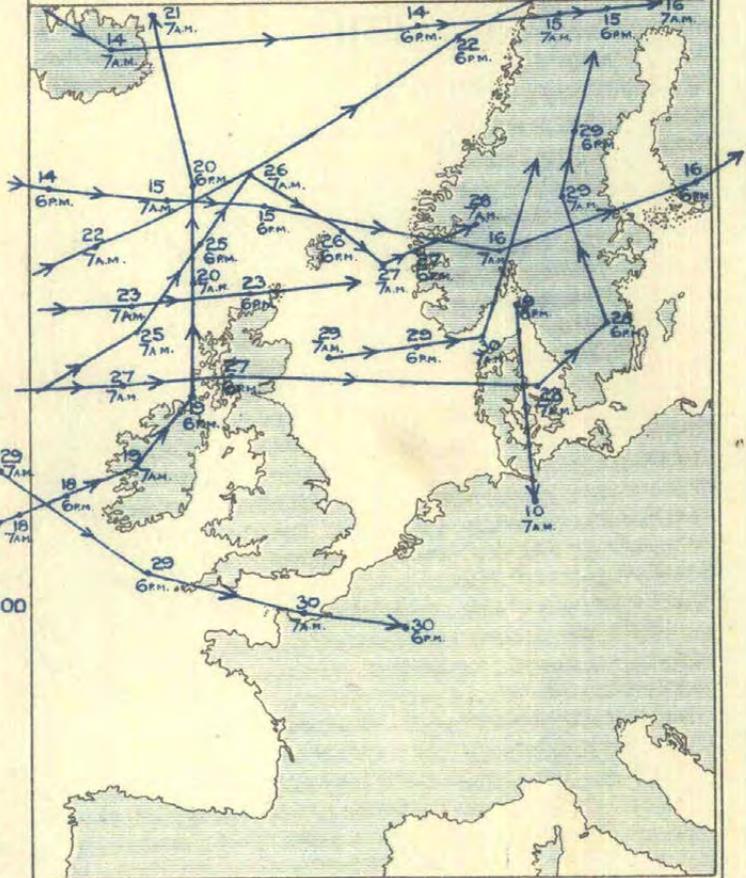
DISTRICT.	STATION.	Height of Gauge above M.S.L. Ft.	AIR TEMPERATURE.								Earth Temperature		Grnd. Frost.		RAIN AND OTHER FORMS OF PRECIPITATION.					BRIGHT SUNSHINE.			
			Mean of		Mean of A and B.	Diff. of Mean from Normal.	Absolute Maximum and Minimum.				1 ft.	4 ft.	No. of Nig'ts	Total Fall.	Diff. from Normal.	Most in a day.		Number of Days.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.	
			A	B			Max.	Day.	Min.	Day.						In.	Day.						
			°	°	°	°	°	°	°	°	In.	In.	In.	In.	In.	In.	°	°	%	%			
O. SCOTLAND N.	p Baltasound	S 31	46.0	36.5	41.3	—	52	13th	28	1, 2, 17	42.1	—	—	3.55	—	0.56	14th	29	108	—	25	—	
	a Fortrose	—	60	50.4	38.9	44.7	—	58	22nd	31	4th	—	—	—	1.55	—	0.37	17th	16	118	—	28	—
1. SCOTLAND, E.	p Insch	—	426	50.8	36.1	43.5	—	64	27st, 22nd	24	5th	42.6	—	8	1.34	—	0.30	24th	22	104	—	25	—
	p Crathes	S 140	—	52.2	36.3	44.3	—	62	22nd	26	6th	43.6	42.1	14	1.40	—	0.33	18th	18	112	—	26	—
	p Stonehaven	—	786	51.7	37.3	44.5	—	64	23rd	28	3rd	—	—	—	0.88	—	0.22	24th	13	136	—	32	—
	p Balruddery	S 276	—	53.0	37.4	45.2	—	65	13th	27	17th	—	—	—	0.87	—	0.13	17th, 24th	15	125	—	30	—
	a West Linton	S 800	—	48.2	35.3	41.8	-0.8	62	13th	17	6th	—	—	—	3.10	—	0.43	24th	23	90	—	21	—
2. ENGLAND, N.E.	a Alnwick Castle	—	210	51.2	38.7	45.0	+1.6	61	22nd, 23rd	29	2nd	—	—	—	1.41	-0.67	0.35	25th	16	—	—	—	—
	p Newcastle-on-Tyne	—	152	50.7	39.7	45.2	—	60	23rd	31	5th	—	—	—	1.44	-0.29	0.41	28th	19	93	-15	22	-4
	a Chopwellwood	—	445	50.8	37.7	44.3	—	59	22, 23, 25	27	2nd	—	—	14	1.55	—	0.30	27th	18	122	—	29	—
	p Ampleforth	—	349	51.0	37.4	44.2	—	58	22nd	27	5th	—	—	—	0.89	—	0.21	4th	15	—	—	—	—
	a Fulbeck	—	180	53.2	37.9	45.6	-0.3	62	15th	27	6th	—	—	9	0.76	-0.88	0.16	4th	12	—	—	—	—
	a Raucsey	—	124	53.8	37.9	45.9	—	64	22nd	27	6th	46.0	44.1	14	0.74	-1.16	0.15	26th	10	147	—	36	—
3. ENGLAND, E.	a Felixstowe	—	10	52.2	39.0	45.6	-0.7	63	15, 23, 24	26	6th	—	—	—	0.94	—	0.26	26th	14	202	—	49	—
	a Rothamsted	—	424	53.5	37.7	45.6	-0.2	65	22nd	26	6th, 12th	—	—	—	1.47	-0.37	0.39	1st	12	164	+14	40	+4
	a Shoberyess	—	13	53.0	39.5	46.3	-1.0	64	22nd	27	5th, 6th	—	—	—	1.25	-0.01	0.39	1st	13	—	—	—	—
	a Southend-on-Sea	—	90	52.8	39.6	46.2	—	64	24th	27	6th	46.2	—	8	1.66	+0.21	0.53	1st	13	169	—	41	—
4. MIDLAND COUNTIES	a Harrogate	—	476	50.4	38.4	44.4	+0.2	59	21st, 23rd	26	5th	42.8	42.6	9	1.36	-0.72	0.34	20th	16	123	—	30	—
	a Bradford	—	489	49.8	39.2	44.5	—	60	21st	27	6th	42.9	42.3	7	1.03	—	0.18	20th, 27th	15	128	—	31	—
	a Cheadle	—	646	51.0	36.2	43.6	-1.2	60	15th, 16th	22	4th	—	—	13	1.37	-0.68	0.40	25th	10	—	—	—	—
	a Bawtry	—	65	54.0	38.9	46.5	+0.3	63	23rd	28	6th, 7th	—	—	—	0.61	-0.99	0.16	28th	10	—	—	—	—
	a Worksop	—	56	54.4	38.6	46.5	+0.5	64	15th	28	6th	45.4	44.4	13	0.63	-1.07	0.16	28th	13	111	-21	27	-5
	a Mayfield (Staffs.)	—	374	51.4	37.0	44.2	—	60	15th	24	12th	—	—	8	2.05	—	0.40	25th, 27th	14	—	—	—	—
	a Belper	—	222	53.0	38.9	46.0	—	62	27th	27	6th	—	—	4	1.70	—	0.29	27th	12	—	—	—	—
	a Kingston-on-Soar	—	125	53.4	38.1	45.8	—	62	15th	24	12th	—	—	—	0.81	—	0.19	26th, 23th	11	—	—	—	—
	p Rugby	—	379	53.2	37.3	45.3	-0.8	64	24th	26	5th	45.4	—	9	0.95	—	0.30	27th	10	—	—	—	—
	a Raunds	—	210	55.0	37.5	46.3	-0.5	68	22nd	23	12th	44.8	—	11	0.74	—	0.23	26th	11	—	—	—	—
	a Winslow	—	379	53.2	38.0	45.6	—	65	22nd	26	6th	—	—	7	1.50	—	0.39	1st	14	—	—	—	—
	a Hereford	—	291	53.8	38.4	46.1	-0.6	66	14th	26	12th	—	—	11	0.92	-0.83	0.23	18th	14	—	—	—	—
a Cirencester	—	446	54.9	36.5	45.7	+0.2	67	23rd	25	6th	44.0	43.8	7	1.01	-0.96	0.41	28th	9	148	-9	36	-2	
5. ENGLAND, S.E.	a Epsom	—	160	54.3	38.0	46.2	—	66	22nd	26	8th	—	—	10	2.13	—	0.73	1st	15	—	—	—	—
	a Wokingham	—	216	53.9	36.6	45.3	—	65	15th, 22nd	22	8th	—	—	—	1.61	—	0.41	1st	15	—	—	—	—
	a Marlborough	—	424	52.3	36.8	44.6	-1.3	64	14th	25	6, 8, 12	—	—	14	1.34	-0.79	0.33	28th	12	132	-10	32	-2
	a Bucklebury	—	409	52.3	37.4	44.9	—	63	14th	25	12th	—	—	14	0.98	—	0.34	1st	9	—	—	—	—
	a Swarraton	—	310	52.4	37.3	44.9	-0.8	64	15th	26	6th	—	—	—	2.25	-0.32	0.46	29th	13	—	—	—	—
	a Margate	—	35	52.7	39.6	46.2	-0.7	66	22nd	29	5th, 6th	45.0	44.3	4	0.98	-0.48	0.18	26th	14	160	+4	39	+1
	Broadstairs	—	140	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Ramsgate	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	a Eltham	—	200	53.7	39.4	46.6	—	65	15th	26	6th	—	—	—	2.40	—	0.81	1st	12	—	—	—	—
	a Wisley	—	150	53.7	39.1	46.4	-1.1	65	15th	26	6th	45.1	44.5	11	1.62	—	0.52	1st	11	155	—	38	—
	a Basingstoke	—	289	52.6	37.9	45.3	—	64	15th	26	6th	45.9	44.7	9	1.44	—	0.32	28th	12	—	—	—	—
	a Sevenoaks	—	509	51.5	37.7	44.6	—	63	24th	24	6th	44.9	43.7	9	2.41	—	0.77	1st	12	—	—	—	—
a Tunbridge Wells	—	421	51.8	37.0	44.4	-2.0	63	24th	24	6th	45.0	—	12	2.56	+0.71	0.75	1st	13	165	+3	40	+1	
a Matfield	—	320	51.6	37.6	44.6	—	63	24th	24	6th	—	—	13	2.12	—	0.70	1st	13	—	—	—	—	
p Folkestone	—	121	48.9	39.0	44.0	—	58	18th, 26th	27	6th	—	—	—	1.34	-0.48	0.29	2nd	11	182	—	44	—	
Littlestone	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
a Bexhill	—	27	49.4	40.0	44.7	—	58	26th	27	6th	46.8	—	6	1.34	—	0.52	1st	10	182	—	44	—	
Hove	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
a Worthing	—	36	50.1	39.4	44.8	-2.3	59	30th	26	6th	46.5	45.8	9	1.55	+0.05	0.58	1st	10	173	—	42	—	
a Bognor	—	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Westbourne	—	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
a Totland Bay	—	140	49.8	39.9	44.9	-2.0	57	26th	27	6th	—	—	6	1.45	-0.30	0.42	29th	14	177	—	43	—	
a Sandown	—	20	53.1	40.2	46.7	—	62	24th	27	6th	—	—	—	1.43	—	0.41	26th	10	182	—	44	—	
p Bournemouth	—	145	52.7	39.3	46.0	—	61	24th	26	6th	45.4	45.3	—	1.61	—	0.45	28th	11	187	—	45	—	
6. SCOTLAND, W.	p Oban	—	20	51.3	37.9	44.6	—	58	9th	25	6th	—	—	10	4.79	—	0.84	17th	15	120	—	29	—
	a Thorntonhall (Lanarkshire)	—	440	50.6	36.7	43.7	—	59	13th	20	6th	—	—	11	2.80	—	0.36	20th	20	106	—	25	—
	a Kilmarnock	—	90	51.4	37.0	44.2	-1.0	60	22nd	20	6th	—	—	—	2.68	—	0.55	27th	15	91	—	22	—
p Ruthwell	S 67	—	51.4	38.4	44.9	—	61	12th	27	6th	—	—	—	3.82	—	0.86	25th	16	110	—	26	—	
7. ENGLAND, N.W.	a Carnforth	—	17																				

### 1. BAROMETER AND WIND AT 7 A.M

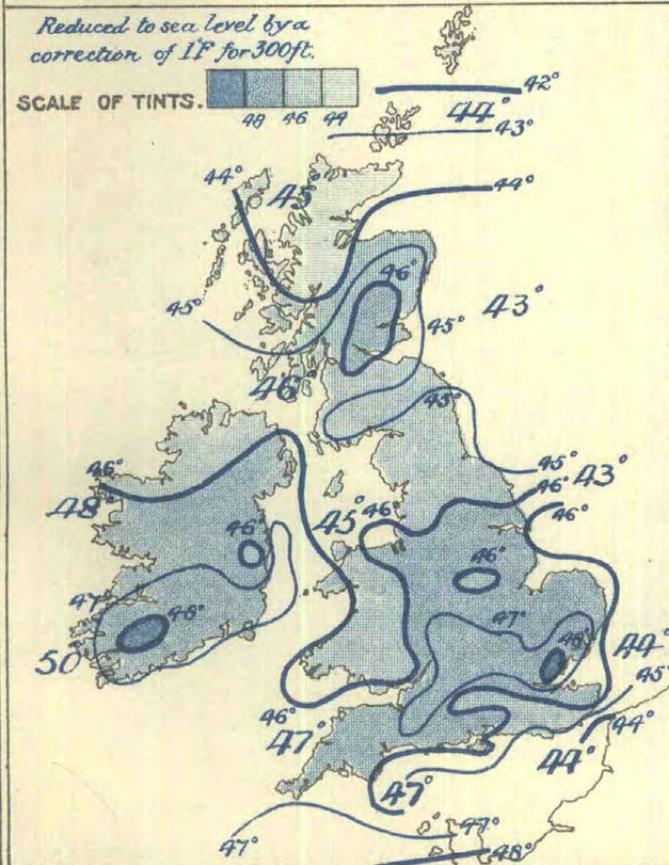


WIND ROSES. The arrows fly with the wind and indicate frequency and force, thus:   
 Light moderate strong   
 K-30 Obs<sup>s</sup> = 1 inch

### 2. MOVEMENTS OF DEPRESSIONS.

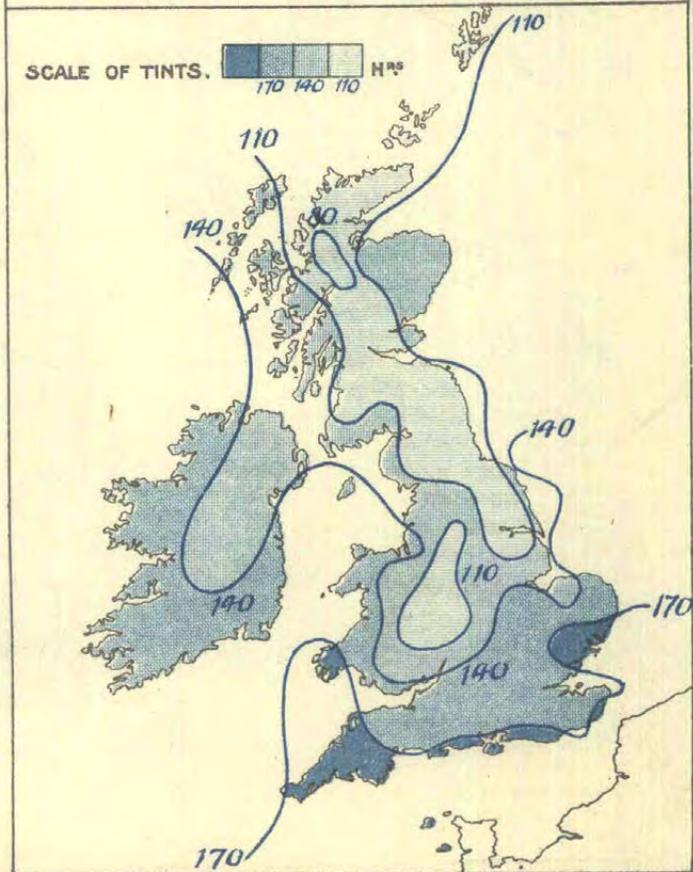


### 3. DISTRIBUTION OF MEAN TEMPERATURE.

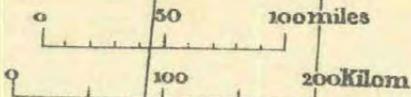


Sea temperatures are shown in large figures thus - 47°

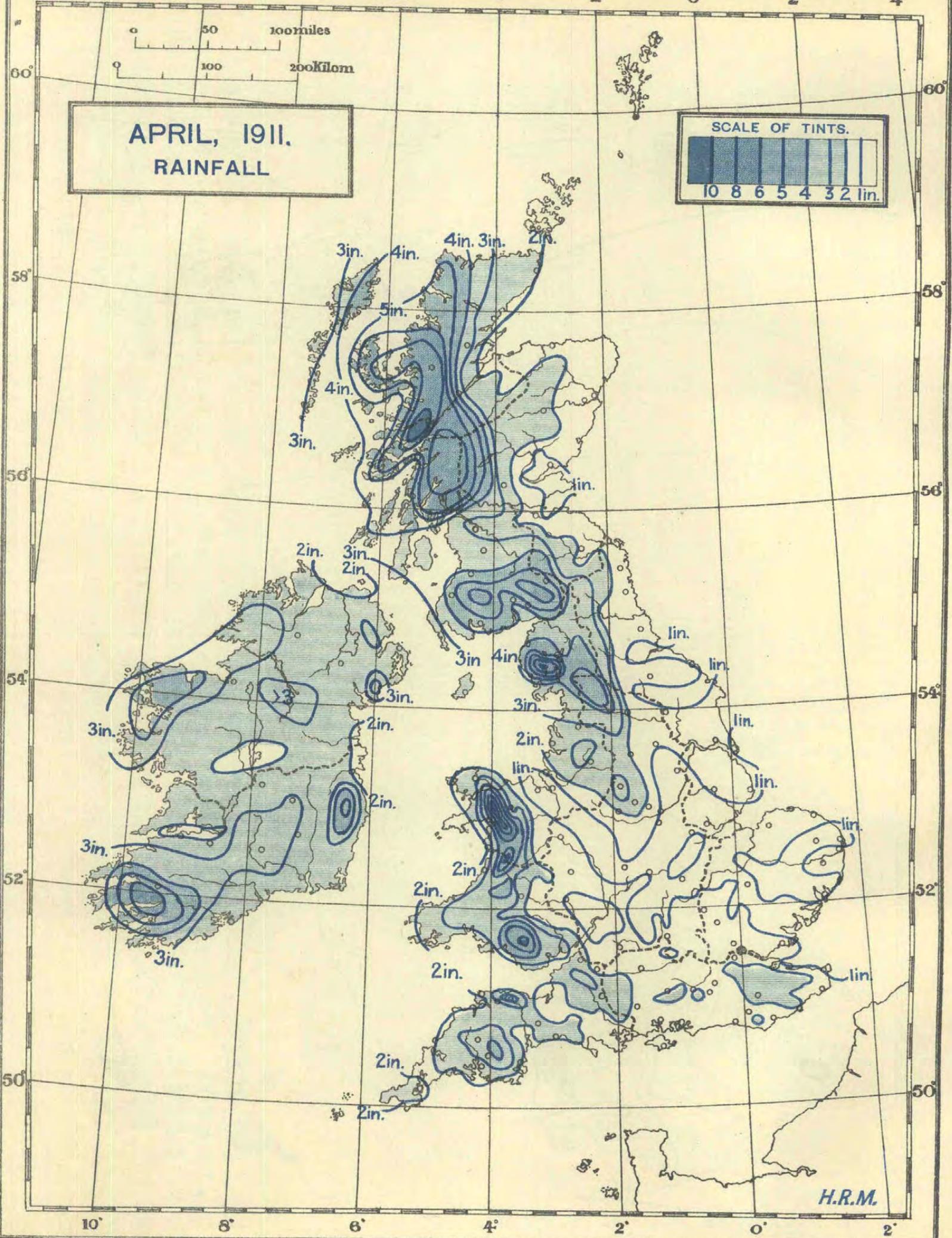
### 4. BRIGHT SUNSHINE, IN HOURS.



12° 10° 8° 6° 4° 2° 0° 2° 4°



**APRIL, 1911.**  
**RAINFALL**



H.R.M.

TABLE B (continued).—SUMMARY of the OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE at additional STATIONS, APRIL, 1911.

DISTRICT.	STATION.	Height of Gauge above, M.S.L. Ft.	AIR TEMPERATURE.								Earth Temperature		Grnd Frost. No. of Nig'ts	RAIN AND OTHER FORMS OF PRECIPITATION.					BRIGHT SUNSHINE.				
			Mean of				Absolute Maximum and Minimum.				1 ft.	4 ft.		Total Fall. In.	Diff. from Normal. In.	Most in a day.		Number of Days.	Total in Hours. Hr.	Diff. from Normal. Hr.	Per Cent. %	Diff. from Normal. %	
			A	B	Mean of A and B.	Diff. of Mean from Normal.	Max.	Day.	Min.	Day.			Amt.			Day.							
			Max.	Min.	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
8. ENGLAND, S.W.	§ p Aberystwyth	59	50.1	40.5	45.3	—	57	1st	30	6th	—	—	—	1.69	—	0.32	26th	13	148	—	36	—	
	§ Haverfordwest	98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	171	—	42	—	
	§ Tenby	79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	176	-7	43	-2	
	§ Port Talbot	179	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	119	—	29	—	
	§ Forest of Dean	200	—	—	—	—	—	—	—	—	—	—	—	0.99	—	0.23	26th	11	—	—	—	—	
	§ "	900	—	—	—	—	—	—	—	—	—	—	—	1.47	—	0.23	18th	17	—	—	—	—	—
	¶ p Cardiff	203	51.6	39.1	45.4	-2.4	61	14th	27	5th, 6th	45.2	43.5	6	2.96	+0.50	0.94	20th	13	149	—	36	—	
	¶ a Swansea	24	51.6	40.5	46.1	—	61	14th	30	6th	47.8	48.1	9	3.83	—	0.97	1st	13	141	—	34	—	
	¶ a Shaftesbury	722	51.1	37.3	44.2	-1.3	63	14th	23	6th	45.1	—	—	2.19	-0.25	0.86	29th	14	—	—	—	—	
	¶ a Arlington	613	50.5	37.8	44.2	-1.1	60	13th	27	4, 6, 8	—	—	—	4.30	+1.31	0.70	26th	10	—	—	—	—	
	¶ a Cullompton	202	54.2	38.8	46.5	-1.4	66	14th	25	8th	47.1	—	7	2.41	-0.05	0.51	28th	18	141	-12	34	-3	
	¶ Torquay	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	191	+16	46	+3	
	¶ a Weymouth	21	52.4	40.6	46.5	—	58	24th	27	6th	—	—	—	1.39	—	0.35	28th	11	186	—	45	—	
	¶ Paignton	11	52.8	40.7	46.8	—	62	14th	28	6th	—	—	—	1.52	—	0.46	28th	12	180	—	44	—	
	¶ p Sheepstor	749	50.5	35.8	43.2	—	61	14th	21	8th	—	—	—	4.24	—	0.87	26th	19	—	—	—	—	
¶ Salcombe	300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	185	—	45	—		
¶ a Teignmouth	19	53.4	41.2	47.3	—	63	24th	28	6th	—	—	3	1.19	—	0.36	28th	12	165	—	40	—		
¶ a Fowey	—	53.4	39.1	46.3	—	64	14th	28	5th	—	—	—	1.52	—	0.38	26th	14	177	—	43	—		
¶ a Penzance	54	53.6	42.6	48.1	—	60	14th	29	6th	—	—	—	2.43	—	0.50	26th	17	185	—	45	—		
9. IRELAND, N.	¶ p Dunfanaghy	54	50.6	39.9	45.3	—	58	21st	27	6th	—	—	—	2.48	—	0.37	27th	16	—	—	—	—	
	¶ p Dublin (Glasnevin)	67	53.6	40.0	46.8	+0.8	63	22nd	29	4th	—	—	12	1.55	-0.39	0.47	18th	17	—	—	—	—	
	¶ a Kingstown	42	53.6	42.9	48.3	—	64	22nd	34	6th, 12th	—	—	—	1.09	—	0.76	18th	14	148	—	36	—	
10. IRELAND, S.	¶ p Clongowes Wood College	245	53.2	36.7	45.0	—	63	13th	25	12th	—	—	17	2.02	—	0.35	18th	18	151	—	36	—	
	¶ a Mountmellick	253	53.5	38.7	46.1	—	64	13th	27	12th	—	—	—	2.56	—	0.48	26th	16	—	—	—	—	
	¶ p Newcastle (Co. Wicklow)	256	52.7	40.4	46.6	—	64	24th	33	5th	—	—	—	1.86	—	0.67	18th	12	—	—	—	—	
	¶ a Kilkenny	212	53.8	39.3	46.6	-0.5	63	13th	28	4th	—	—	—	2.65	+0.45	0.58	18th	17	—	—	—	—	
	¶ a Cahir	199	54.4	39.0	46.7	-0.6	63	13th	28	12th	—	—	—	2.73	—	0.44	26th	17	—	—	—	—	
	¶ a Foynes	108	54.0	40.5	47.3	0.0	61	22nd	29	6th	—	—	—	1.67	-0.77	0.28	25th	17	—	—	—	—	
	¶ a Ballinacurra	34	53.6	40.3	47.0	—	61	14th	29	6th	—	—	—	2.33	—	0.37	26th	14	143	—	35	—	
11. ENGLISH CHANNEL	¶ a Guernsev (Villa Carey)	180	52.6	42.3	47.5	-1.2	62	22nd	29	6th	—	—	—	2.82	+0.37	0.52	5th	14	201	+8	49	+2	

## NOTES ON THE STATISTICAL TABLES.

**Hours of Observation.**—The following types are used to indicate the hours of observation at Stations included in Table A:—Clarendon, Normal Climatological Stations—I, 9 a.m. [II, 3 p.m.], III, 9 p.m. Black Capitals, telegraphic reporting normal climatological stations—I, 7 a.m., II, 1 p.m., III, 9 p.m. Roman, telegraphic reporting stations—I, 7 a.m., [II, 1 p.m.], III, 6 p.m. Italic, auxiliary climatological stations—I, 9 a.m. only, at *Colmonell* and *Ventnor* 3 p.m. The summaries are based on observations made three times a day wherever the data are available, except in the case of the element pressure (see below). At stations shown in clarendon type the maximum and minimum temperatures are read at 9 p.m.; at the remaining stations these observations are made at I. In Table B the letters *a* and *p* indicate whether the readings of the maximum and minimum are taken at the hours of morning or evening observation.

**Barometer.**—The correction for latitude has not been applied to the readings quoted in the Tables. It is applied to the readings at sea level from which the chart showing the mean monthly distribution of pressure is prepared. The values given in the tables are for station level. The values printed are (1) for stations shown in clarendon type, the means of observations at 9 a.m. and 9 p.m.; (2) for stations shown in Capitals, the means of observations at 7 a.m., 1 p.m., 9 p.m.; (3) for stations shown in Roman type, the means of observations at 7 a.m. and 6 p.m.; (4) for stations shown in italic type, the means of observations at 9 a.m. The column headed C gives the correction for diurnal variation required to reduce the means of observations at fixed hours to true diurnal means, based on the analysis of the values obtained at the four observatories for the period 1871-1905. The difference from normal is based upon the 7 a.m. readings only, except in the cases of Kew, Greenwich, Aberdeen, Valencia and Falmouth (see below).

**Rainfall.**—The amounts are those for the 24 hours commenced at the time of morning observation.

**Hygrometer.**—At certain stations the vapour pressure and the relative humidity are the results obtained from the daily values. These are entered in clarendon type. At other stations the calculations are made from the monthly means of the dry and wet bulb readings.

**Weather Phenomena.**—The number of days of Rain, Snow, Hail, Thunderstorm, Fog, Ground Frost, and Gale, are counted irrespective of the hours at which the phenomena occur. Except in the cases of rainfall (see above) and ground frost the day is the civil day. A day is reckoned as a day of "clear sky," if the mean of the estimates of the "amount of cloud" at the fixed hours of observation is less than 2, and as an "overcast" day if the mean is greater than 8. Days of Ground Frost.—A day is counted as a "Day of Ground Frost" if it follows a night on which the minimum has sunk to 30° or less.

**Wind Summaries.**—The results given under wind direction, and the number of observations of calms and of fresh or strong wind, are based on the observations at fixed hours. At Derrness, Aberdeen, Valencia, Falmouth, Kew, Glasgow, Stonyhurst and Armagh the wind observations are based on the records of a standard Robinson anemometer (factor 2.2). Velocities of between 13 and 38 miles in the hour have been entered as "fresh or strong winds," velocities of 39 miles in the hour, or above, as gales. (At Brighton, Plymouth and Southport the equivalent values are obtained from a Dines Pressure Tube Anemometer.)

**Averages.**—The normal averages used for stations are—Pressure, Temperature, and Rainfall for the 35 years 1871-1905; Bright Sunshine for the 25 years 1881-1905. The values are published in Appendix III. to the Weekly Weather Report for 1906. For Greenwich and Oxford, averages for longer periods are used. (See Notes in Monthly Weather Reports for 1908.) Monthly averages of pressure at telegraphic reporting stations for the epoch 8 a.m. are published in Appendix I. to the Daily Weather Report. In order to render these averages comparable with the data for the present month, a correction, based on the results for the four observatories as published in "Hourly Readings at the Observatories under the Meteorological Council," has been applied to each of them before the figures given in the column headed "Barometer—Difference from Normal" were computed.

**Aberdeen, Falmouth, Kew, Valencia, Oxford, Greenwich.**—The figures quoted in the second line assigned to these observatories in the columns for Barometer and Mean Temperature are the true daily means computed from the hourly tabulations of the traces of the photographic recording instruments. For Kew, Falmouth, Aberdeen and Valencia the divergences of the means of the readings at 9 a.m. and 9 p.m. from their normal averages are also given.

**Royal Observatory, Greenwich.**—The earth temperatures are taken at a depth of 3 ft. 2 ins. The daily rainfall amounts are those for the 24 hours comprising the civil day. The number of days in the month which were persistently overcast from midnight to midnight was 0, the number of persistently cloudless days was 0, the number of persistently foggy days was 0.

¶ § **Mean Values for Districts.**—The stations used in the Weekly Weather Report for the computation of "district values" of rainfall and temperature are distinguished by the sign ¶, those used for the computation of "district values of bright sunshine" by the sign §. These stations are distributed between Tables A and B. The monthly mean values for districts given in this Report for maximum, minimum and mean temperature, duration of bright sunshine, number of rain days and amount of rainfall, are computed from the data for these "representative" stations. The mean temperature for districts is computed in the manner shown in the preface to this and previous volumes of the Weekly Weather Report. The monthly mean values for districts for "amount of cloud" are computed from the data for all stations included in Table A. The extreme values of the various elements in each district are printed in distinctive type. In the lines devoted to district values, the columns referring to absolute highest and absolute lowest temperature and the maximum amount of rainfall in a day contain the extreme values for the district at any station included in either table of the Report. The averages for districts with which the current values are compared are for the 25 years 1881-1905, as in the case of the corresponding values published in the Weekly Weather Report.

**Meteorological Societies.**—Information for stations marked ¶ is supplied by the Royal Meteorological Society, and that for stations marked § is supplied by the Scottish Meteorological Society. Stations marked S are in connexion with the Scottish Meteorological Society and those marked M with the Royal Meteorological Society as well as with the Meteorological Office.



**FOR OFFICIAL USE.**  
**MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE**  
(Supplement to the Weekly Weather Report.)

SUMMARY OF OBSERVATIONS COMPILED FROM THE RETURNS OF OFFICIAL STATIONS AND VOLUNTEER OBSERVERS IN THE UNITED KINGDOM, WITH  
A CHART OF RAINFALL CONTRIBUTED BY THE BRITISH RAINFALL ORGANISATION.  
ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE,  
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MAY, 1911.

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**SUMMARY OF OBSERVATIONS.**

**Pressure, Winds and Weather.**—The distribution of atmospheric pressure during May was unusually variable, so that it is difficult to divide the month into periods exhibiting any approach to definite types of conditions. Cyclonic and anticyclonic systems were always on the move, and in nearly all instances their centres were outside the British Isles, to east, west, north or south. The highest barometer readings occurred in extensions over these islands of Continental or Arctic anticyclones. On the 6th and 7th values were above 30.3 in. at most of our southern stations; on the 19th a reading of 30.41 in. was recorded at Stornoway in a high pressure area which had spread down from the north; and on the 28th the mercury reached 30.47 in. in Shetland, the centre of the system, with the barometer above 30.5 in., being on the Norwegian coast. Numerous disturbances were indicated in the course of the month on the north-west quarter of the Atlantic, but all moved along paths to the north-eastward, the centre of one passing close to the Farøe, while the others crossed Iceland, or moved up Denmark Strait, between Iceland and Greenland. Some of these depressions were very deep, the barometer descending below 29 in. One which appeared beyond the south-west of Iceland on the morning of the 1st, advanced due eastward at a very slow rate, not reaching the Farøe until the morning of the 4th. On its approach the barometer at Stornoway fell rapidly to 28.89 in. on the 3rd, the only record in this country below 29 in. during the month. The centre then moved to the north-eastward, and soon disappeared beyond the Arctic Circle. Several disturbances visited Southern Europe. One of these, which appeared over northern Italy on the 6th, followed an erratic path to Spain and Western France, and finally dispersed over north-eastern France on the 11th. The only depression whose centre crossed the British Isles travelled along an unusual path. It was indicated to the north-westward of the Azores on the 9th moving south-eastward. Altering its course to the eastward it reached Portugal on the evening of the 10th, then followed an irregular path to Brittany by the evening of the 12th. On the 13th and 14th it moved northward through the western channels to the Irish Sea, the barometer falling to about 29.6 in. Subsequently the depression crossed the south of Scotland to the North Sea, and eventually dispersed on the 16th, between Shetland and Norway.

Owing to the proximity of one of the Icelandic disturbances the range of pressure during the month over the northern half of these islands exceeded an inch, and at Stornoway it amounted to 1.52 in. In the south, however, no deep depressions were experienced, so that the range at most of the southern stations was less than  $\frac{1}{2}$  in. The mean pressure results for the whole month show that the highest values, above 30.05 in., were over Sweden and eastern Germany, with a belt of relatively high values, above 30 in., stretching across the North Sea and England to Brittany and the Bay of Biscay. This belt separated a shallow low over western Europe, below 30 in., from an extensive depression having its centre off the south-west of Iceland, where the barometer was 29.6 in. At the home stations the mean results ranged from 30.06 in. at Kew Observatory to 29.95 in. at Birr Castle and Castlebay. The distribution differed considerably from the normal, and as a result of the ever-changing position of the various pressure systems the winds were distributed through every quarter of the compass.

In the opening days of the month the depression to the southward of Iceland was marked by a considerable gradient for winds from between West and South over these Islands, so that the force of a strong breeze was exceeded in many parts of the country. The conditions, however, were not of a stormy character, a strong gale (force 9) being noted at Malin Head on the 1st and 2nd, and a gale (force 8) at Holyhead, Pembroke, Portland Bill, Nottingham and Spurn Head on the 3rd. This absence of very rough weather is confirmed by the records from anemometers which show that the only instances during the month of wind velocities at the rate of 50 miles an hour and upwards in gusts of short duration were 58 miles at Llaneugrad on the 2nd, 52 miles at Quilty and Shoburyness, 55 miles at Holyhead, 57 miles at Pendennis Castle, and 64 miles at Llaneugrad on the 3rd. Under the influence of other disturbances near Iceland a Southerly gale was felt at Stornoway on the 8th, and at Stornoway and Malin Head on the 25th. These exhaust the instances of gale force at the telegraphic reporting stations.

A remarkable feature of the weather of the month was the general absence of rain in all parts of the kingdom, the number of days on which precipitation was measured being less than 10 at the great majority of stations. Continuous periods of 15 or more rainless days occurred in many districts—16 days from the 14th at Skegness, from the 15th at Heathfield, and from the 16th at Killiney and Inch; 17 days from the 14th at Colwyn Bay and Sandgate, and from the 15th at Eastbourne, Brighton, Barnstaple, Hidcote Campden and Lampeter; 18 days from the 11th at Plymouth, Falmouth and Penzance, and from the 14th at Rhyl and Bridlington; 20 days from the 5th at Edgbaston, and from the 12th at Newcastle, Wicklow; and from the 4th, 21 days at Rugby

and Sparkhill; 22 days at Wistanstow; 23 days at Sheepstor; and 26 days at Fowey. In some of these cases the drought remained unbroken at the close of the month, and extended far into June.

Notwithstanding this droughty feature there were some heavy rainstorms. The most windy days of the month brought with them large amounts of rain to many localities, without being accompanied by thunderstorms. On the 1st Gruline (Mull) registered 2.1 in., Cruachan 1.5 in., Fort William 1.3 in., Ford (Argyll) 1.2 in., and Caragh Lake (Kerry) and Oban a little over an inch; on the 2nd there was a fall of 2.2 in. at Caragh Lake, and an inch or a little over at Sheepstor, Valencia Observatory and Broadford (Clare); and on the 3rd 1.4 in. at Graythwaite (Ulverston), at Bethesda 1.2 in., and 1.1 in. at Uldale, Pant-yr-Eos and Eskdalemuir.

With the arrival over the Bay of Biscay and the north of France of the shallow depression which had previously worked round from Italy, conditions became favourable for thunderstorms over southern England on the 10th, and on the three following days the greater part of the kingdom was affected. In many instances the storms were reported to be violent and the thunder of unusual intensity. Numerous churches and other buildings in various districts were damaged by the lightning, and horses and cattle were killed. Locally, also, there was considerable destruction caused by the overflowing of the smaller rivers, but the returns disclose very few cases of large falls of rain. On the 11th, Valencia Island had 1.2 in.; on the 13th Burnley and Newton Rigg 1.7 in., York 1.3 in., Carrigallen (Leitrim) 1.1 in., and Belfast an inch; and on the 14th Burnley had another 1.3 in., making 3 in. in 2 days. At Kirkby Lonsdale 0.5 in. fell in half-an-hour. From the 15th to the 24th there were only a few sporadic thunderstorms or heavy local rains, 1.2 in. at Kinlochewe on the 22nd; but the 25th to the 27th were again marked by severe thunderstorms, and a few heavy rainfalls. On the 25th Wokingham had 1.8 in. of rain, Winslow 1.6 in., Watergate and Watlington 1.4 in., and Reading 1.3 in.; and on the 26th Claypole (Lines.) 1.5 in. in  $6\frac{1}{2}$  hours, and Bromyard in 8 hours. Belvoir Castle 1.4 in. in 9 hours, and Abergavenny during the day; Great Billing an inch in 4 hours, and another inch in the next 5 hours, or 2 in. for the day. At Upwey (Dorset) 1.3 in. fell in 1 hour 25 minutes. Much damage resulted from floods and lightning. At Epsom, in the night of the 25th, 1,797 lightning flashes were registered in 6 hours 50 minutes, the maximum number in one minute being 22, and in one hour 581. Another very violent storm broke over a large part of England on the 31st, rainless in some places, heavy rain in others, 1.1 in. at Newdigate (Surrey), 1.3 in. at Offley, 1.6 in. in one hour at Sevenoaks, 2.44 in. in 50 minutes at Epsom, 2.86 in. in 3 hours, 3.6 in. at Banstead. At Epsom there were 159 flashes of sheet and fork lightning in 15 minutes, and within a radius of 3 miles, 3 persons were killed, 14 injured, 4 horses killed, and 3 hayricks fired.

Mildness was an almost constant feature of the month, so that the mean temperature was everywhere above the average, by more than 4° at many stations, nearly 5½° at Buxton and Prestwich. At Southport the mean temperature was the highest May value in 40 years. The warmest days were at the close, temperature ascending to 80° and upwards on the 29th to 31st, to 83° at Balmoral and Fort William on the 29th. Frost occurred on various dates, the lowest record being 27° at Eskdalemuir on the 6th. The touch of cold which is usual about the 12th was on this occasion delayed until about the 21st, but it affected the day readings mostly, a few maxima being below 50°. Very few of the night readings indicated frost in the shade.

Fog was very prevalent on the western coasts from the 5th to the 9th, 13th to 18th, and 23rd to 26th; on the south coast, 11th to 18th, and 23rd to 25th; and on the east coast, 12th to 18th, and 26th to 31st.

The sea water was everywhere warmer than in April, by as much as 9° off Eastbourne and Margate, and 10° on Cromarty Firth. Nevertheless the water was colder than the air on shore in nearly all localities, to the extent of 6° at several eastern stations, and 7° off Plymouth and at the entrance to the Mersey.

**Rainfall.**—In a few cases the heavy thunderstorm rains caused the aggregate amount for the month to be above the normal, but generally the precipitation was well under the average, by more than an inch in many localities. Killarney returned 5.5 in. (184 per cent. of the average), Rothamstead 3.6 (181 per cent.), and Fort William 6.1 in. (161 per cent.), but Guernsey had only 0.6 in. (31 per cent.), and Birmingham 0.71 in. (32 per cent.). The largest totals were 10.1 in. at Glenquoich (183 per cent.), and 8.7 in. (115 per cent.) at Seathwaite, but those below an inch were very numerous, down to 0.4 in. at Stifford and Bridlington. Rain fell on 20 days at Caragh Lake, but as a rule the frequency was small, only 4 days in several places.

**Bright Sunshine.**—There was an all-round excess of sunshine, by more than 50 hours at many stations. Hastings had 286 hours (122 per cent. of the average), Felixstowe 286, Penzance 282, Douglas 279 (123 per cent.), and Scilly 278 (117 per cent.), being 59 or 60 per cent. of the possible duration, while Fort Augustus had 160 hours (118 per cent. of the average), and Hull 150 hours.

TABLE A.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at 9 a.m., 3 p.m. and 9 p.m. at NORMAL STATIONS in the BRITISH ISLANDS

DISTRICT.	STATION.	Height of Barometer cistern above M.S.L.	BAROMETER.			AIR TEMPERATURE.								HYGROMETER.											
			Mean at 32° F. at Level and Latitude of Station.	Diff. from Nor- mal.	C. Cor. for Diurnal Range.	Mean of		Mean of A and B.	Diff. from Nor- mal.	Absolute Maximum and Minimum.				Observations at 9 a.m., 3 p.m., and 9 p.m., or at 7 a.m., 1 p.m., 6 p.m., or 9 p.m.											
						A	B			Max.	Day.	Min.	Day.	Dry Bulb.			Dep. of Wet.			Vap. Pressure.			Humidity.		
														I.	II.	III.	I.	II.	III.	I.	II.	III.	I.	II.	III.
<b>1. SCOTLAND, N.</b>																									
Islands.	CASTLEBAY - - -	48	29'861	- '009	- '002	56'3	46'6	51'5	+2'6	73	30th	40	1st	51'0	54'4	51'6	3'0	4'3	2'9	In. '299	In. '309	In. '309	% 80	% 73	% 80
	Deerness - - -	163	29'763	-	- '006	53'4	44'5	49'0	+2'6	59	12th, 30th	38	1st	50'3	-	47'0	2'7	-	1'5	'301	-	'289	83	-	90
	LERWICK - - -	59	29'872	+ '037	- '002	52'6	44'3	48'5	+3'3	61	11th, 30th	36	1st	47'7	51'1	47'7	1'6	3'1	1'5	'292	'298	'294	89	79	86
	STORNOWAY - - -	52	29'866	+ '014	- '002	56'5	43'8	50'2	+2'9	71	30th	34	1st	50'0	54'6	49'5	3'0	4'3	2'1	'286	'312	'302	80	74	89
	Wick - - -	80	29'847	+ '020	+ '003	55'6	42'3	49'0	+1'7	69	25th	30	1st	48'2	-	49'8	2'2	-	2'3	'283	-	'300	85	-	85
	Strathpeffer - - -	210	29'718	-	- '006	60'4	43'3	51'9	+3'7	75	29th	33	6th	53'9	-	50'1	4'2	-	2'7	'305	-	'294	73	-	81
	Glencarron - - -	504	29'395	-	- '006	59'6	42'9	51'3	+3'3	79	29th	35	6th	52'8	-	49'9	4'2	-	2'5	'293	-	'297	74	-	84
Mainland.	Fort Augustus - - -	78	29'876	-	- '006	58'4	42'8	50'6	+1'2	78	29th	29	1st	51'0	-	50'4	2'7	-	1'9	'306	-	'328	82	-	88
	Kingussie - - -	828	29'058	-	- '006	61'9	41'7	51'8	-	77	20th, 30th	30	1st, 6th	53'7	-	50'4	5'0	-	3'8	'285	-	'274	69	-	76
	Fort William - - -	38	29'907	-	- '006	62'8	44'0	53'4	+3'4	83	29th	32	1st	53'7	-	51'9	4'0	-	2'9	'314	-	'319	76	-	83
	Dunrobin Castle - - -	16	29'924	-	- '005	57'1	44'2	50'7	+2'5	69	25th	36	1st	52'4	-	49'3	3'6	-	2'5	'304	-	'294	77	-	83
	District Value - - -					58'0	43'3	50'3	+2'5	83		29													
<b>2. SCOTLAND, E.</b>																									
Northern Part.	Dundee - - -	164	29'799	-	- '006	60'8	44'4	52'6	+3'2	70	25th	33	5th	55'1	-	49'9	3'8	-	2'2	'334	-	'307	77	-	85
	Nairn - - -	32	29'838	+ '018	+ '003	58'6	41'5	50'1	+1'1	73	25th	31	1st, 6th	47'7	55'7	53'5	1'9	4'8	3'6	'285	'318	'314	87	71	76
	Gordon Castle - - -	107	29'838	-	- '006	61'8	42'0	51'9	+2'8	78	29th	34	1st	54'3	-	50'2	4'3	-	2'6	'308	-	'307	73	-	85
	Aberdeen - - -	90	29'877	+ '018	- '006	56'0	44'8	50'4	+2'1	67	23rd	37	1st	52'2	53'7	49'6	3'7	4'5	2'6	'297	'296	'291	76	71	82
	Balmoral - - -	927	29'868	+ '015	-	-	-	50'3	+3'1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Crieff - - -	436	29'499	-	- '006	63'6	43'0	53'3	+3'2	76	30th	32	1st	54'4	-	49'9	4'6	-	2'9	'303	-	'287	71	-	81
	Leith - - -	37	29'928	+ '032	+ '003	58'9	45'5	52'2	+2'1	69	25th	38	1st	49'9	-	55'1	2'5	-	4'6	'297	-	'313	84	-	72
	Marchmont - - -	500	29'437	-	- '006	61'0	43'6	52'3	+4'4	70	28th	34	1st	54'1	-	49'6	4'6	-	2'8	'298	-	'287	72	-	82
District Value - - -					60'2	42'7	51'1	+2'7	83		28														
<b>3. ENGLAND, E.</b>																									
Northern Part.	Whitby - - -	145	29'818	-	- '007	62'2	44'6	53'4	+4'5	79	25th	32	1st	55'5	-	51'7	4'8	-	2'9	'316	-	'313	72	-	82
	Cockle P'rk (Morpeth) - - -	331	29'630	-	- '007	60'3	45'0	52'7	-	73	25th	33	3rd	55'7	-	48'7	4'9	-	1'9	'318	-	'299	72	-	86
	Shields - - -	117	29'851	+ '033	+ '003	58'4	44'6	51'5	+2'9	73	25th	36	1st	50'0	-	54'4	1'9	-	3'2	'312	-	'335	87	-	79
	Durham - - -	352	29'600	-	- '007	60'7	44'3	52'5	+3'7	71	25th	34	6th	55'0	-	49'8	4'2	-	1'9	'327	-	'318	76	-	87
	Rounton - - -	245	29'709	-	- '007	61'3	44'3	52'8	+4'6	73	25th	34	6th	53'7	-	50'0	3'6	-	2'0	'318	-	'309	77	-	86
	Scarborough - - -	127	29'838	-	- '007	59'4	46'8	53'1	+3'8	73	25th	38	1st	54'8	-	52'0	2'9	-	2'5	'350	-	'323	81	-	83
	York - - -	53	29'941	-	- '007	64'8	46'8	55'8	+4'8	77	27th	38	1st	56'9	-	53'5	5'3	-	3'8	'319	-	'309	68	-	75
Southern Part.	Spurn Head - - -	28	29'939	+ '017	+ '003	57'5	46'6	52'1	+2'3	65	24th	42	1, 3, 9, 10	50'5	55'5	52'7	-	4'0	2'5	-	'333	'331	-	75	83
	Lincoln - - -	42	-	-	-	64'7	45'8	55'3	+3'1	76	27th	36	6th	56'8	-	-	4'6	-	-	'340	-	-	73	-	-
	Skegness - - -	16	29'963	+ '021	+ '003	58'7	45'3	52'0	-	72	23rd	37	3rd	51'0	-	54'9	1'7	-	2'6	'331	-	'358	88	-	83
	Hull - - -	12	-	-	- '007	63'5	45'8	54'7	+4'5	77	25th	31	1st	56'8	-	52'1	4'6	-	2'9	'335	-	'314	72	-	80
District Value - - -					61'6	45'4	53'1	+3'8	79		31														
<b>4. MIDLAND COS.</b>																									
Eastern Part.	Lowestoft - - -	75	29'907	-	- '007	57'4	47'0	52'2	+2'1	71	24th	37	1st	54'8	-	50'8	3'2	-	1'6	'342	-	'330	80	-	89
	Cromer - - -	139	29'821	-	- '007	60'8	45'9	53'4	-	77	25th	37	1st	55'3	-	50'5	3'3	-	1'0	'346	-	'342	79	-	93
	Hillington - - -	92	29'881	-	- '007	64'5	44'5	54'5	+3'4	77	27th	35	6th	57'3	-	51'8	3'3	-	1'5	'374	-	'345	80	-	90
	Norwich - - -	98	-	-	-	64'9	46'0	55'5	-	75	25, 27, 31	35	22nd	-	-	-	-	-	-	-	-	-	-	-	-
	YARMOUTH - - -	27	29'948	+ '015	- '003	57'8	47'2	52'5	+2'5	71	24th	37	1st	51'5	55'7	51'9	2'2	4'4	3'1	'324	'326	'308	85	73	80
	Geldeston - - -	47	29'937	-	- '007	63'6	45'0	54'3	+3'4	73	25th	32	22nd	57'7	-	50'9	4'9	-	1'6	'340	-	'332	71	-	89
	Cambridge - - -	43	29'927	-	- '007	66'6	44'7	55'7	+3'5	78	29th	33	22nd	57'2	-	53'1	4'8	-	2'7	'343	-	'339	73	-	83
	CLACTON - - -	62	29'918	-	- '008	61'3	47'7	54'5	+2'2	73	24th	38	8th	53'0	58'0	54'0	2'2	3'9	2'4	'342	'370	'350	85	77	84
	Woburn - - -	294	29'691	-	- '007	65'7	44'2	55'0	-	78	29th	35	9th	55'7	-	53'8	4'0	-	2'8	'340	-	'346	76	-	83
	Bennington - - -	411	29'583	-	- '007	65'3	45'3	55'3	+4'1	76	29th	34	22nd	56'2	-	52'4	4'1	-	2'9	'338	-	'318	75	-	81
Berkhamsted - - -	397	29'578	-	- '007	66'0	44'4	55'2	+4'1	78	29th	33	22nd	55'4	-	52'3	4'0	-	2'4	'330	-	'329	75	-	84	
District Value - - -					63'4	46'0	54'3	+3'1	78		32														
Western Part.	Garforth - - -	198	-	-	- '007	63'0	43'8	53'4	-	75	29th	28	6th	56'3	-	52'7	4'9	-	2'8	'327	-	'330	72	-	82
	Huddersfield - - -	411	29'552	-	- '007	62'4	46'1	54'3	-	75	29th	37	1st	54'8	60'8	52'4	4'4	6'7	2'9	'319	'341	'323	74	65	81
	Wakefield - - -	100	29'885	-	- '007	65'2	45'9	55'6	+5'0	78	29th	36	1st	56'7	-	55'3	5'2	-	3'3	'319	-	'345	69	-	79
	Belvoir Castle - - -	276	29'702	-	- '007	63'4	45'6	54'5	+3'5	74	27th	35	6th	54'7	-	52'6	4'0	-	2'4	'321	-	'332	75	-	83
	Coventry - - -	309	29'666	-	- '007	65'6	46'5	56'1	+3'7	77	29th	39	4th	56'6	-	-	4'7	-	-	'330	-	-	72	-	-
	NOTTINGHAM - - -	85	29'888	+ '006	- '002	64'5	45'3	54'9	+3'4	75	27th	34	9th	51'3	62'2	53'7	1'9	5'6	2'2	'329	'386	'352	87	69	86
	Birmingham - - -	542	29'413	-	- '007	64'3	47'1	55'7	+5'0	75	31st	39	3rd	51'9	-	55'6	3'3	-	4'3	'306	-	'333	79	-	74
	Oxford - - -	212	29'773	+ '016	-	65'5	47'1	56'3																	



TABLE A. (continued).—Giving a Summary of the METEOROLOGICAL OBSERVATIONS made at 9 a.m., 3 p.m. and 9 p.m. at NORMAL STATIONS in the BRITISH ISLANDS

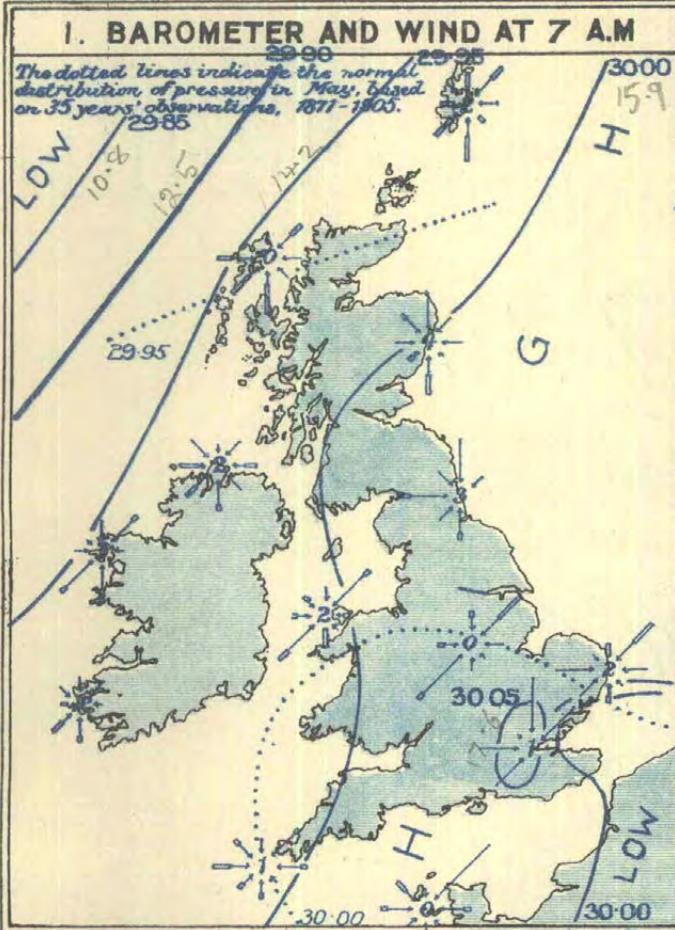
Table with columns: DISTRICT, STATION, Height of Barometer, BAROMETER (Mean at 32° F., Diff. from Normal, C. Cor. for Diurnal Range), AIR TEMPERATURE (Mean of A, B, Mean of A and B, Diff. from Normal, Absolute Maximum and Minimum), and HYGROMETER (Observations at 9 a.m., 3 p.m., and 9 p.m., or at 7 a.m., 1 p.m., 6 p.m., or 9 p.m., Dry Bulb, Dep. of Wet, Vap. Pressure, Humidity).

For notes see p. lvii.

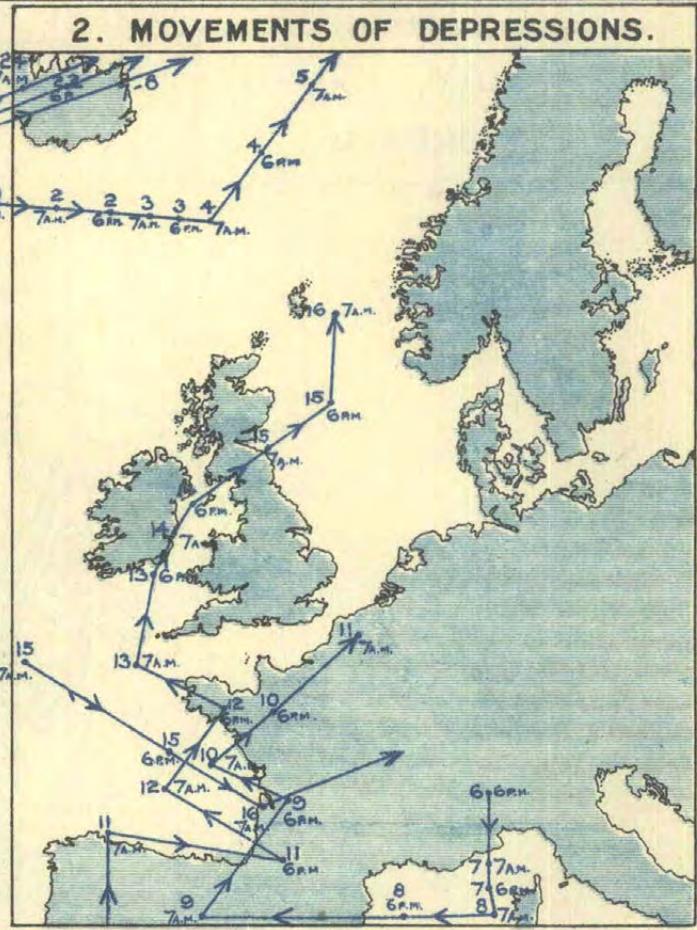


TABLE B.—SUMMARY of the OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE at additional STATIONS, MAY, 1911.

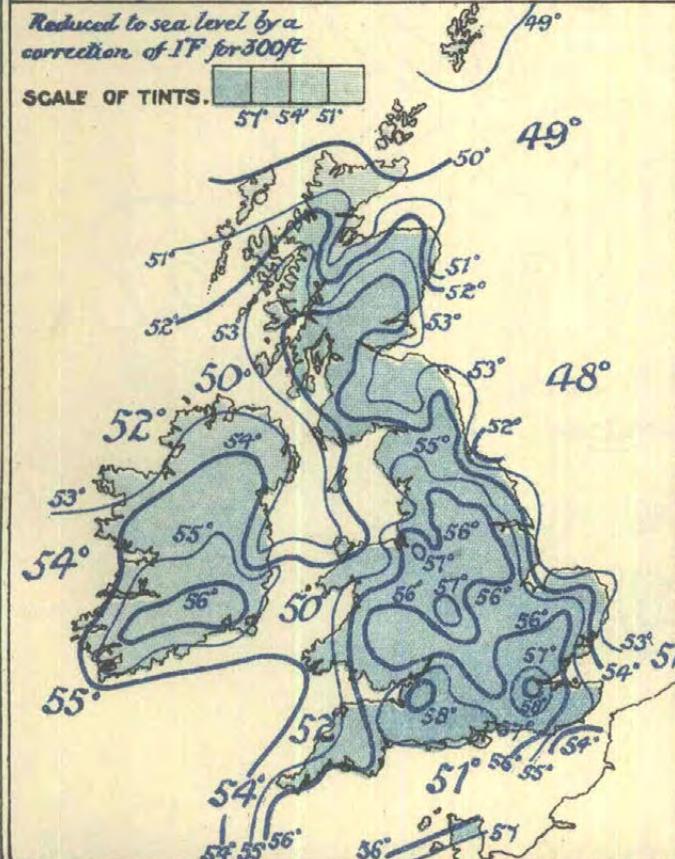
DISTRICT.	STATION.	Height of Gauge above M.S.L. Ft.	AIR TEMPERATURE.								Earth Temperature		Grnd Frost.	RAIN AND OTHER FORMS OF PRECIPITATION.				BRIGHT SUNSHINE.					
			Mean of		Mean of A and B.	Diff. of Mean from Normal.	Absolute Maximum and Minimum.				1 ft.	4 ft.	No. of Nig'ts	Total Fall.	Diff. from Normal.	Most in a day.		Number of Days.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.	
			A	B			Max.	Day.	Min.	Day.						In.	Day.						
			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
O. SCOTLAND N.	p Baltasound	81	53.6	43.0	48.3	—	64	30th	36	1st, 6th	48.8	—	—	2.55	—	0.51	21st	17	198	—	37	—	
	a Fortrose	69	56.8	44.0	50.4	—	66	25th	33	5th	—	—	—	2.21	—	0.55	13th	11	211	—	42	—	
1. SCOTLAND, E.	p Insch	426	62.0	42.0	52.0	—	77	29th	32	21st	51.3	—	5	2.39	—	0.63	15th	10	197	—	39	—	
	p Crathes	140	62.0	43.1	52.6	—	72	29th	30	5th	51.6	47.3	7	2.57	—	0.74	3rd	10	210	—	42	—	
	p Stonehaven	186	58.6	44.1	51.4	—	67	30th, 31st	33	5th	—	—	—	1.62	—	0.78	14th	11	206	—	41	—	
	p Balruddery	276	63.5	43.1	53.3	—	73	29th, 30th	34	5th	—	—	—	0.86	—	0.30	3rd	9	245	—	49	—	
	a West Linton	800	59.1	41.1	50.1	+ 2.4	71	29th	28	1st	—	—	—	2.23	—	0.49	13th	14	216	—	43	—	
2. ENGLAND, N.E.	a Alnwick Castle	210	61.3	44.7	53.0	+ 4.8	77	25th	36	1st, 6th	—	—	—	1.03	-1.13	0.33	14th	11	—	—	—	—	—
	p Newcastle-on-Tyne	152	60.7	47.6	54.2	—	75	25th	40	5th	—	—	—	0.62	-1.24	0.19	14th	11	150	+ 5	30	+ 1	
	a Chopwellwood	445	62.1	43.3	52.7	—	72	26th	31	1st	—	—	9	0.86	—	0.28	14th	11	194	—	39	—	
	p Ampleforth	349	62.9	45.1	54.0	—	77	29th	37	3rd	—	—	—	1.20	—	0.33	13th	12	—	—	—	—	
	a Fulbeck	180	66.2	44.5	55.4	+ 3.6	78	27th	36	9th	—	—	2	1.29	-0.56	0.56	26th	6	182	—	37	—	
	a Rauceby	124	64.6	44.5	54.6	—	75	27th	36	6th	56.1	49.4	5	0.94	-1.00	0.27	14th	7	217	—	45	—	
3. ENGLAND, E.	a Felixstowe	10	60.1	47.0	53.6	+ 1.4	71	24th	39	8th, 22nd	—	—	—	0.56	—	0.18	14th	9	286	—	59	—	
	a Rothamsted	424	65.1	44.6	54.9	+ 3.9	76	29th	33	22nd	—	—	—	3.63	+1.62	1.23	13th	10	212	+ 16	44	+ 3	
	a Shoeburyness	13	62.1	46.9	54.5	+ 1.9	71	29th	37	8th	—	—	—	0.83	-0.46	0.33	14th	5	—	—	—	—	
	a Southend-on-Sea	90	63.8	48.0	55.9	—	74	29th, 31st	42	3, 7, 2	56.2	—	0	0.96	-0.42	0.41	14th	7	242	—	51	—	
4. MIDLAND COUNTIES	a Harrogate	476	61.7	45.5	53.6	+ 4.7	74	29th	37	3rd, 6th	50.4	48.3	1	0.97	-1.01	0.29	14th	10	180	—	37	—	
	a Bradford	439	61.4	46.2	53.8	—	74	29th	35	21st	52.2	46.8	2	0.97	—	0.30	3rd	11	192	—	39	—	
	a Cheadle	646	63.4	46.0	54.7	+ 5.0	74	29th	36	3rd	—	—	3	0.89	-1.32	0.38	3rd	7	—	—	—	—	
	a Bawtry	65	66.0	45.9	56.0	+ 4.9	77	29th	33	9th	—	—	—	0.76	-1.14	0.33	26th	8	—	—	—	—	
	a Worksop	56	65.6	44.7	55.2	+ 4.1	75	29th	31	9th	53.2	49.6	5	0.83	-1.21	0.38	26th	8	188	+ 18	39	+ 4	
	a Mayfield (Staffs.)	374	63.2	43.5	53.4	—	73	31st	32	21st	—	—	2	1.01	—	0.43	14th	6	—	—	—	—	
	a Belper	222	65.5	45.9	55.7	—	76	29th, 30th	35	3rd	—	—	0	1.16	—	0.67	14th	6	—	—	—	—	
	a Kingston-on-Soar	125	64.8	43.6	54.2	—	75	27th	31	6th	53.8	—	—	1.04	—	0.30	25th	8	—	—	—	—	
	p Rugby	379	65.4	42.6	54.0	+ 3.1	76	29th, 31st	35	3rd, 30th	—	—	1	0.95	—	0.68	25th	4	—	—	—	—	
	a Raunds	210	66.1	44.3	55.2	+ 3.4	77	27th	36	6th, 22nd	54.1	—	5	1.45	—	0.43	14th	8	—	—	—	—	
5. ENGLAND, S.E.	a Winslow	379	65.6	45.3	55.5	—	76	29th	38	5th	—	—	0	2.40	—	1.59	25th	10	—	—	—	—	
	a Hereford	291	65.8	45.2	55.5	+ 3.5	75	29th	34	21st	—	—	4	1.28	-0.76	0.48	26th	6	—	—	—	—	
	a Cirencester	446	65.0	43.8	54.4	+ 3.7	75	29th	34	5th	53.0	49.0	2	0.86	-1.22	0.37	2nd	7	180	- 24	38	- 4	
	a Epsom	160	66.6	46.2	56.4	—	79	29th	34	22nd	—	—	2	4.61	—	2.86	31st	11	—	—	—	—	
	a Wokingham	216	65.4	42.4	53.9	—	77	29th	29	5th	—	—	—	3.35	—	1.83	25th	9	—	—	—	—	
	a Marlborough	424	64.7	43.0	53.9	+ 3.0	76	29th	32	22nd	—	—	7	0.98	-1.00	0.28	2nd	8	181	- 5	38	- 1	
	a Bucklebury	409	64.6	45.1	54.9	—	76	29th	36	22nd	—	—	6	1.82	—	0.60	25th	9	—	—	—	—	
	a Swarraton	810	64.5	45.0	54.8	+ 4.2	75	29th	32	22nd	—	—	—	2.04	+0.05	0.84	25th	10	—	—	—	—	
	a Margate	35	61.0	48.2	54.6	+ 2.2	75	13th	41	3rd, 7th	54.0	50.2	0	1.12	-0.48	0.35	13th	7	229	+ 31	48	+ 7	
	Broadstairs	140	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Ramsgate	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
a Eltham	200	66.6	47.2	56.9	—	80	27th	39	22nd	—	—	—	1.22	—	0.47	31st	6	—	—	—	—		
a Wisley	150	65.5	46.2	55.9	+ 3.4	77	29th	36	22nd	54.7	50.6	3	0.83	—	0.34	14th	8	205	—	43	—		
a Basingstoke	289	64.8	46.0	55.4	—	75	29th	36	5th	54.5	49.9	1	2.26	—	0.55	25th	11	—	—	—	—		
a Sevenoaks	509	64.6	45.9	55.3	—	78	31st	36	22nd	55.7	49.2	0	2.16	—	0.86	31st	7	—	—	—	—		
a Tunbridge Wells	421	64.9	45.6	55.3	+ 3.0	78	31st	36	1st	56.1	—	4	1.13	-0.68	0.26	2nd, 14th	7	262	+ 56	55	+ 12		
a Matfield	320	64.3	45.7	55.0	—	76	31st	35	7th	—	—	6	1.63	—	0.64	14th	8	—	—	—	—		
p Folkestone	121	62.6	48.4	55.5	—	72	29th	40	3rd	—	48.5	—	0.94	-0.76	0.54	14th	6	269	—	56	—		
a Littlestone	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
a Bexhill	27	61.5	49.3	55.4	—	75	29th	40	1st	56.0	—	0	0.68	—	0.32	2nd	6	267	—	56	—		
Hove	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
a Worthing	36	63.6	48.4	56.0	+ 3.7	77	29th	37	5th, 22nd	56.6	51.4	0	0.87	-0.64	0.24	2nd	6	235	—	49	—		
a Bognor	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Westbourne	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
a Totland Bay	140	63.3	48.5	55.9	- 4.2	76	26th, 29th	40	5th	—	—	0	1.18	-0.51	0.45	25th	8	267	—	56	—		
a Sandown	20	63.9	49.2	56.6	—	76	29th	40	22nd	—	—	—	1.20	—	0.35	2nd, 25th	7	247	—	52	—		
p Bournemouth	145	65.9	47.1	56.5	—	78	29th	37	22nd	54.9	52.5	—	0.59	—	0.26	2nd	7	266	—	56	—		
6. SCOTLAND, W.	p Obau	20	61.5	45.6	53.6	—	80	29th	35	1st	—	—	1	3.85	—	1.08	1st	11	241	—	48	—	
	a Thorntonhall (Lanarkshire)	440	61.0	42.6	51.8	—	74	29th	34	6th	—	—	2	2.42	—	0.65	3rd	16	206	—	41	—	
	a Kilmarnock	90	62.3	43.6	53.0	+ 2.8	79	29th	33	1st	—	—	—	2.35	—	0.53	3rd	14	214	—	43	—	
p Ruthwell	67	63.5	44.4	54.0	—	80	28th	31	1st	—	—	—	2.22	—	0.65	3rd	12	227	—	46	—		
7. ENGLAND, N.W.	a Carnforth	174	63.1	46.2	54.7	—	76	31st	34	21st	—	—	2	2.09	—	0.97	3rd	9	216	—	44	—	
	a Lancaster	311	63.5	47.2	55.4	—	77	29th	37	21st	54.9	52.4	3	1.74	—	0.95	3rd	8	191	—	39	—	



WIND ROSES. The arrows fly with the wind and indicate frequency and force, thus: Light moderate strong  
 $\frac{1}{30}$  obs. = 1 inch  $\frac{1}{4}$

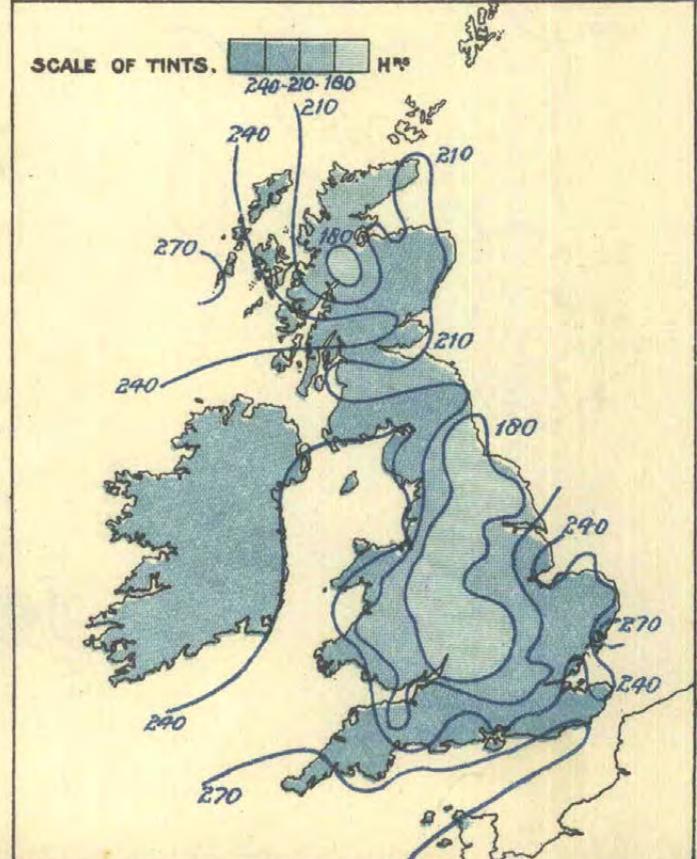


### 3. DISTRIBUTION OF MEAN TEMPERATURE.



*Sea temperatures are shown in large figures thus: - 54°.*

### 4. BRIGHT SUNSHINE, IN HOURS.



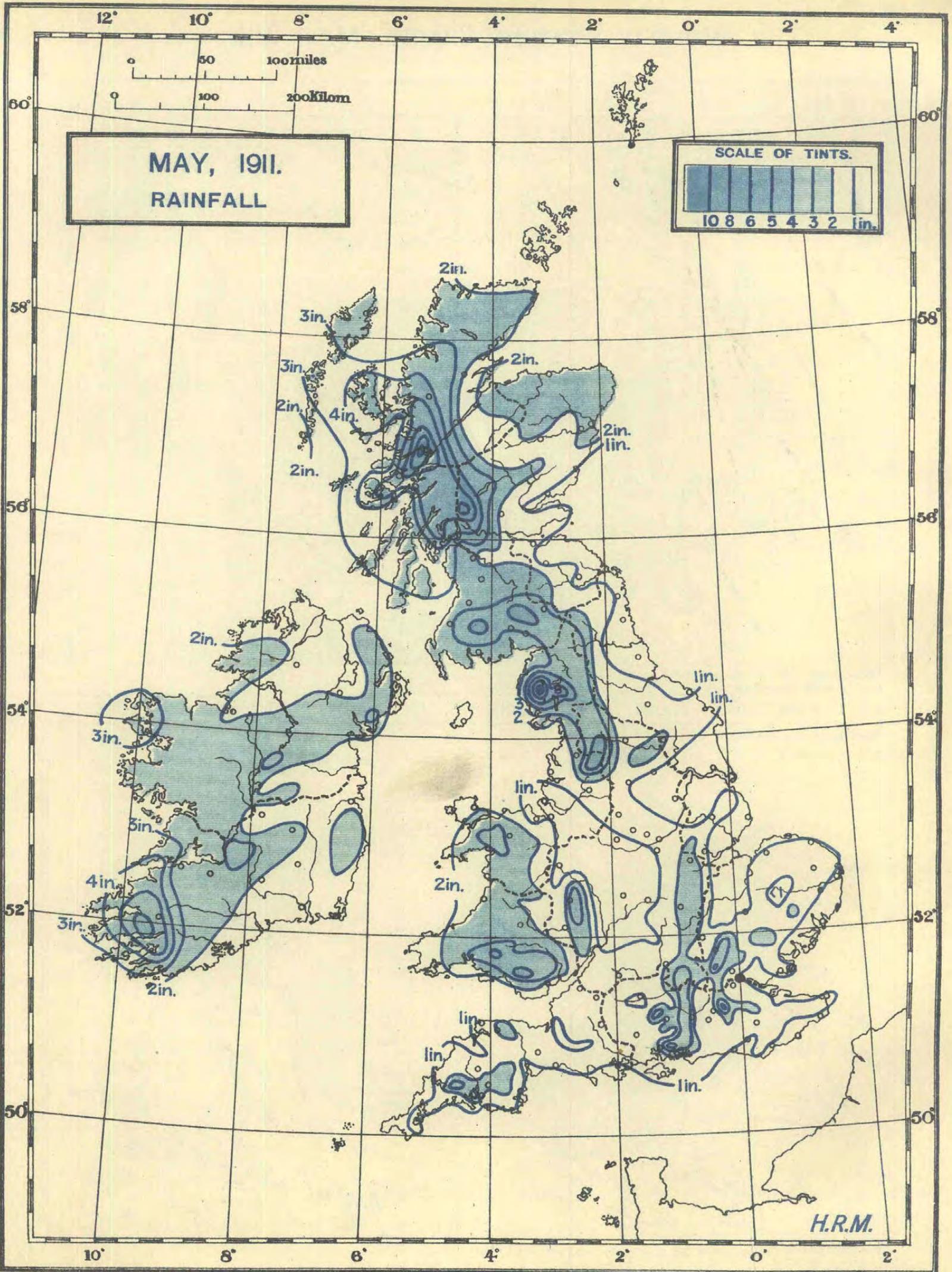


TABLE B (continued).—SUMMARY of the OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE at additional STATIONS, MAY, 1911.

DISTRICT.	STATION.	Height of Gauge above M.S.L. Ft.	AIR TEMPERATURE.								Earth Temperature		Grnd Frost. No. of Nig'ts	RAIN AND OTHER FORMS OF PRECIPITATION.				BRIGHT SUNSHINE.						
			Mean of		Mean of A and B.	Diff. of Mean from Normal.	Absolute Maximum and Minimum.				1 ft.	4 ft.		Total Fall. In.	Diff. from Normal. In.	Most in a day.		Number of Days.	Total in Hours.	Diff. from Normal. Hr.	Per Cent. %	Diff. from Normal. %		
			A	B			Max.	Day.	Min.	Day.			Amt.			Day.								
			Max.	Min.	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°		
8. ENGLAND, S.W.	p Aberystwyth	59	61.2	50.5	55.9	—	79	29th, 30th	42	21st	—	—	—	2.01	—	0.33	13th	—	10	217	—	45	—	
	Haverfordwest	98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	267	—	56	—	
	Tenby	79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	252	+28	53	+6	
	Port Talbot	179	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	216	—	45	—	
	Forest of Dean	200	—	—	—	—	—	—	—	—	—	—	—	1.57	—	0.41	2nd	—	6	—	—	—	—	
	"	900	—	—	—	—	—	—	—	—	—	—	—	1.90	—	0.80	26th	—	7	—	—	—	—	
	p Cardiff	203	61.6	47.2	55.4	+2.6	76	29th	38	21st	55.2	49.9	0	1.25	-1.18	0.56	3rd	—	12	225	—	47	—	
	a Swansea	24	63.9	49.5	56.7	—	78	29th	41	1st	58.4	52.9	0	2.43	—	0.73	3rd	—	8	229	—	48	—	
	a Shaftesbury	722	63.8	46.4	55.1	+4.6	75	29th	38	3rd	55.2	—	—	1.81	-0.29	1.12	10th	—	7	—	—	—	—	
	a Arlington	613	62.9	46.0	54.5	+3.9	75	29th	36	21st	—	—	—	1.85	-0.93	0.72	3rd	—	5	—	—	—	—	
	a Cullompton	202	67.2	45.0	56.4	+3.9	78	29th	34	21st	56.2	—	1	1.72	-0.33	0.64	26th	—	9	204	+3	43	+1	
	Torquay	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	273	+45	57	+9
	a Weymouth	21	64.7	49.3	57.0	—	78	30th	40	22nd	—	—	—	0.60	—	0.27	2nd	—	6	264	—	56	—	
	p Paignton	11	63.8	48.6	56.2	—	75	29th	40	3rd, 22nd	—	—	—	0.69	—	0.32	2nd	—	4	261	—	55	—	
	p Sheepstor	749	63.3	43.1	53.2	—	76	29th	31	1st	—	—	—	1.79	—	1.00	2nd	—	5	—	—	—	—	
Salcombe	390	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	269	—	57	—	
a Teignmouth	19	63.7	49.2	56.5	—	76	30th	39	21st	—	—	0	0.61	—	0.36	2nd	—	4	234	—	49	—		
a Fowey	—	63.9	46.7	55.3	—	76	28th	39	21st	—	—	—	0.65	—	0.26	3rd	—	4	269	—	57	—		
a Penzance	54	63.5	49.5	56.5	—	76	28th	43	3th	—	—	—	0.80	—	0.34	1st	—	6	282	—	60	—		
9. IRELAND, N.	p Dunfanaghy	54	59.3	45.3	52.3	—	75	29, 30, 31	39	21st	—	—	—	1.17	—	0.38	3rd	—	12	—	—	—	—	
	p Dublin (Glasnevin)	67	61.6	45.0	53.3	+3.2	69	30th	35	21st	—	—	4	1.26	-0.75	0.41	3rd	—	11	—	—	—	—	
	a Kingstown	42	60.0	47.7	53.9	—	66	24th, 29th	39	21st	—	—	—	0.54	—	0.27	3rd	—	10	238	—	49	—	
10. IRELAND, S.	p Clongowes Wood College	245	61.3	43.3	52.3	—	69	29th, 30th	33	21st	—	—	?	1.36	—	0.44	3rd	—	12	232	—	48	—	
	a Mountmellick	233	63.9	46.0	55.0	—	75	30th	40	3rd, 21st	—	—	—	2.35	—	0.61	2nd	—	14	—	—	—	—	
	p Newcastle (Co. Wicklow)	256	59.5	45.8	52.7	—	67	29th	39	21st	—	—	—	1.23	—	0.43	2nd	—	7	—	—	—	—	
	a Kilkenny	212	63.7	46.6	55.2	+3.6	76	29th	39	4th	—	—	—	1.65	-0.41	0.32	2nd	—	13	—	—	—	—	
	a Cahir	199	64.5	46.2	55.4	+3.8	76	29th	38	4th	—	—	—	1.63	—	0.38	2nd, 3rd	—	11	—	—	—	—	
11. ENGLISH CHANNEL	a Foynes	108	62.5	47.0	54.8	+3.3	75	29, 30, 31	41	4th, 16th	—	—	—	2.43	+0.20	1.06	2nd	—	19	—	—	—	—	
	a Ballinaacurra	34	62.3	46.2	54.3	—	74	29th	37	4th	—	—	—	1.18	—	0.48	1st	—	8	207	—	43	—	
	a Guernsev (Villa Carey)	180	62.7	48.8	55.8	+3.0	73	27th	38	22nd	—	—	—	0.50	-1.41	0.34	3rd	—	5	269	+11	57	+2	

NOTES ON THE STATISTICAL TABLES.

**Hours of Observation.**—The following types are used to indicate the hours of observation at Stations included in Table A:—Clarendon, Normal Climatological Stations—I, 9 a.m. [II, 3 p.m.], III, 9 p.m. Black Capitals, telegraphic reporting normal climatological stations—I, 7 a.m., II, 1 p.m., III, 9 p.m. Roman, telegraphic reporting stations—I, 7 a.m., [II, 1 p.m.], III, 6 p.m. Italic, auxiliary climatological stations—I, 9 a.m. only, at *Colmonell* and *Ventnor* 3 p.m. The summaries are based on observations made three times a day wherever the data are available, except in the case of the element pressure (see below). At stations shown in clarendon type the maximum and minimum temperatures are read at 9 p.m.; at the remaining stations these observations are made at I. In Table B the letters *a* and *p* indicate whether the readings of the maximum and minimum are taken at the hours of morning or evening observation.

**Barometer.**—The correction for latitude has not been applied to the readings quoted in the Tables. It is applied to the readings at sea level from which the chart showing the mean monthly distribution of pressure is prepared. The values given in the tables are for station level. The values printed are (1) for stations shown in clarendon type, the means of observations at 9 a.m. and 9 p.m.; (2) for stations shown in Capitals, the means of observations at 7 a.m., 1 p.m., 9 p.m.; (3) for stations shown in Roman type, the means of observations at 7 a.m. and 6 p.m.; (4) for stations shown in italic type, the means of observations at 9 a.m. The column headed C gives the correction for diurnal variation required to reduce the means of observations at fixed hours to true diurnal means, based on the analysis of the values obtained at the four observatories for the period 1871-1905. The difference from normal is based upon the 7 a.m. readings only, except in the cases of Kew, Greenwich, Aberdeen, Valencia and Falmouth (see below).

**Rainfall.**—The amounts are those for the 24 hours commenced at the time of morning observation.

**Hygrometer.**—At certain stations the vapour pressure and the relative humidity are the results obtained from the daily values. These are entered in clarendon type.

At other stations the calculations are made from the monthly means of the dry and wet bulb readings.

**Weather Phenomena.**—The number of days of Rain, Snow, Hail, Thunderstorm, Fog, Ground Frost, and Gale, are counted irrespective of the hours at which the phenomena occur. Except in the cases of rainfall (see above) and ground frost the day is the civil day. A day is reckoned as a day of "clear sky," if the mean of the estimates of the "amount of cloud" at the fixed hours of observation is less than 2, and as an "overcast" day if the mean is greater than 8. Days of Ground Frost.—A day is counted as a "Day of Ground Frost" if it follows a night on which the minimum has sunk to 30° or less.

**Wind Summaries.**—The results given under wind direction, and the number of observations of calms and of fresh or strong wind, are based on the observations at fixed hours. At Deerness, Aberdeen, Valencia, Falmouth, Kew, Glasgow, Stonyhurst and Armagh the wind observations are based on the records of a standard Robinson anemometer (factor 2.2). Velocities of between 13 and 38 miles in the hour have been entered as "fresh or strong winds," velocities of 39 miles in the hour, or above, as gales. (At Brighton, Plymouth and Southport the equivalent values are obtained from a Dines Pressure Tube Anemometer.)

**Averages.**—The normal averages used for stations are—Pressure, Temperature, and Rainfall for the 35 years 1871-1905; Bright Sunshine for the 25 years 1881-1905. The values are published in Appendix III. to the Weekly Weather Report for 1906. For Greenwich and Oxford, averages for longer periods are used. (See Notes in Monthly Weather Reports for 1908.) Monthly averages of pressure at telegraphic reporting stations for the epoch 8 a.m. are published in Appendix I. to the Daily Weather Report. In order to render these averages comparable with the data for the present month, a correction, based on the results for the four observatories as published in "Hourly Readings at the Observatories under the Meteorological Council," has been applied to each of them before the figures given in the column headed "Barometer—Difference from Normal" were computed.

**Aberdeen, Falmouth, Kew, Valencia, Oxford, Greenwich.**—The figures quoted in the second line assigned to these observatories in the columns for Barometer and Mean Temperature are the true daily means computed from the hourly tabulations of the traces of the photographic recording instruments. For Kew, Falmouth, Aberdeen and Valencia the divergences of the means of the readings at 9 a.m. and 9 p.m. from their normal averages are also given.

**Royal Observatory, Greenwich.**—The earth temperatures are taken at a depth of 3 ft. 2 ins. The daily rainfall amounts are those for the 24 hours comprising the civil day. The number of days in the month which were persistently overcast from midnight to midnight was 0, the number of persistently cloudless days was 0, the number of persistently foggy days was 0.

**Mean Values for Districts.**—The stations used in the Weekly Weather Report for the computation of "district values" of rainfall and temperature are distinguished by the sign †, those used for the computation of "district values of bright sunshine" by the sign §. These stations are distributed between Tables A and B. The monthly mean values for districts given in this Report for maximum, minimum and mean temperature, duration of bright sunshine, number of rain days and amount of rainfall, are computed from the data for these "representative" stations. The mean temperature for districts is computed in the manner shown in the preface to this and previous volumes of the Weekly Weather Report. The monthly mean values for districts for "amount of cloud" are computed from the data for all stations included in Table A. The extreme values of the various elements in each district are printed in distinctive type. In the lines devoted to district values, the columns referring to absolute highest and absolute lowest temperature and the maximum amount of rainfall in a day contain the extreme values for the district at any station included in either table of the Report. The averages for districts with which the current values are compared are for the 25 years 1881-1905, as in the case of the corresponding values published in the Weekly Weather Report.

**Meteorological Societies.**—Information for stations marked † is supplied by the Royal Meteorological Society, and that for stations marked § is supplied by the Scottish Meteorological Society. Stations marked S are in connexion with the Scottish Meteorological Society and those marked M with the Royal Meteorological Society as well as with the Meteorological Office.



## MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

(Supplement to the Weekly Weather Report.)

SUMMARY OF OBSERVATIONS COMPILED FROM THE RETURNS OF OFFICIAL STATIONS AND VOLUNTEER OBSERVERS IN THE UNITED KINGDOM, WITH A CHART OF RAINFALL CONTRIBUTED BY THE BRITISH RAINFALL ORGANISATION.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE,

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## SUMMARY OF OBSERVATIONS.

**Pressure, Winds and Weather.**—The main features of the general distribution of atmospheric pressure during the period now under review were divided between two well-marked types, each occupying about one-half of the month. In the closing week of May, an extensive anticyclonic system was established over the northern half of Europe, and by the opening days of June it was expanding in all directions, the Atlantic high pressure area at the same time spreading north-eastward. Eventually the two systems coalesced, and became one great anticyclone. By the evening of the 5th, the centre was taking up a position over or near our western and north-western districts, the maximum pressure being attained on the 6th, when the barometer rose above 30.6 in. in Scotland and the north of Ireland, 30.65 in. at Castlebay. After this the intensity diminished slowly, and the centre drifted gradually to the north-westward and northward, to a position off the east of Iceland, where it was situated from the 11th to the 13th. Then it changed its movement to the southward again, passing across the British Isles on the 15th and 16th, on its way to Italy and the Mediterranean, the highest barometer readings during this period of translation being about 30½ in. As this system left our coasts the type of conditions underwent a complete transformation, and the remainder of the month was of a continuously unsettled cyclonic character.

Wireless reports from steamships had indicated the existence of a disturbance in the vicinity of the Banks of Newfoundland as early as the 10th, but its progress to the eastward, across the ocean, was very slow, its centre arriving in 47° N., 30° W., on the morning of the 15th. By this time it was beginning to declare its existence in the observations on our south-western coasts. Until the evening of the 16th it maintained a due easterly course to 48° N., 16° W., when, with one high pressure on the Continent, and another beyond the Arctic Circle, its advance became exceedingly erratic. Bearing away about north-north-east, off the west of Ireland, it took two days to reach the Southern Hebrides. Thence it drifted about over the sea between Scotland and Iceland, returning to the vicinity of St. Kilda on the morning of the 22nd, then struck off towards Shetland, but before reaching there retreated to the Hebrides, and in the night of the 23rd it suddenly moved off to the south-east at a much faster rate, its centre being found over Norfolk next morning. Here its course was again arrested, and during the next two days it crept slowly up the east coast of Britain, and from the morning of the 26th it followed a north-easterly path up the Norwegian coast and across Lapland to the Arctic Ocean. During the long period of its complex wanderings in our neighbourhood it was of fairly uniform depth, the pressure minimum on most days being below 29.5 in., on the morning of the 22nd, descending to 29.25 in. at Castlebay, on the return from the Iceland region, and to 29.29 in. at Spurn Head on the evening of the 24th, when moving up the east coast. After the disappearance of this disturbance to the northward of Scandinavia another appeared over Iceland on the 28th. Its centre passed close to Shetland, where the barometer fell to 29.31 in. on the morning of the 30th, then curved off to the north-eastward up the Norwegian coast.

With an almost equal division of the period between anticyclones and cyclones the mean pressure for the month differed very little from the normal, the result at Lerwick being nearly 0.03 in. less, and at Blacksod 0.03 in. more than the normal. The actual values ranged from 30.07 in. at Paris, and 30.04 in. at Jersey, to 29.92 in. at Lerwick, and 29.89 in. at Bodö, this belt of lower readings being flanked on its northern side by an Arctic high pressure, the mean reading at Seydisfjord, in the east of Iceland, being 30.01 in. The range of pressure amounted to 1.4 in. at Castlebay and Malin Head, and 1.3 in. at Spurn Head, considerably less at the south-western stations. The gradient was very slight, and the conditions during the month favoured winds from all quarters of the compass.

It was not until the return of the Atlantic disturbance from the Iceland region towards the Hebrides, on the 22nd, that the winds showed any marked increase of strength, a strong South-westerly gale being felt at Malin Head on that day. On the 24th and 25th, gale force from points between south-west, north-west and north-east was experienced at a few coast stations, and on the 26th Malin Head reported an extreme force of 10 (a whole gale) from west north-west, and on the following day a strong gale (force 9) from north. This general absence of much wind was confirmed by the self-registering anemometers, only Roche's Point supplying an instance of a gust of short duration in which the wind attained a velocity at the rate of 55 miles per hour, on the 24th, there being no other record of as much as 47 miles.

The weather itself presented several interesting features. Under the high pressure distribution of the first half of the month there was a marked absence of rain, but, as explained in the summary for May, this dry spell had set in in the earlier days of that month, and over an extensive region it was maintained as a partial drought until June 15th, with only one or two

trifling showers in a period of five weeks or longer. Both in May and in June there were very numerous instances of a complete drought of 15 or more consecutive rainless days, the longest unbroken spells, exceeding three weeks, being 22 days at Belfast and Bethesda, 23 days at Inch and Holyhead, 24 days at Lincoln, 30 days at Killiney, 31 days at Eastbourne, Brighton and Barnstaple, and 34 days at Newcastle, Wicklow. There were, however, a few heavy local rains in the first part of June, accompanying small irregularities of pressure. Thunderstorms occurred in many parts of the country between the 1st and the 4th, in many cases rainless. There was a terrific storm at Fortrose on the 1st, producing only 0.1 in. of rain, while on the same day Cornwall and Devon suffered greatly from very heavy rain and hail during a severe storm, many cattle being killed. On the 3rd a thunderstorm at Mountmellick precipitated 1.3 in. of rain. A heavy storm visited the Channel Islands on the 8th, with rainfall up to 1.7 in. in Guernsey, the lightning causing considerable damage.

With the break which occurred on the 16th, the weather became very wet for a period of ten days, with thunderstorms of more or less violence in numerous districts almost daily. Until the 22nd the falls of an inch or more in a day were comparatively few, the largest 1.8 in. at Cruachan, and 1.9 in. at Gruline on the 21st. But the march of the disturbance from the Hebrides to Norfolk and thence up the east coast was marked by a remarkable rain-storm, unattended by electrical outbursts. Falls of more than an inch were unusually numerous, on the 23rd ranging up to 2.3 in. at St. Asaph, and 3.2 in. at Uldale; and on the 24th to 2 in. at Bethesda, 2.1 in. at Morpeth, 2.2 in. at Tynemouth, 2.3 in. at Leeds, 2.6 in. at Alnwick and Shields, 2.7 in. at Marchmont and 2.8 in. at Rothbury. In a continuous fall extending over about 55 hours Whitby registered 3.65 in. During the remainder of the month the rainfall was unimportant.

Temperature attained a high level in the first week, passing 80° in many places, and touching 85° on the 5th at East Ham, Barnet, and Norwood, and 88° at Camden Square. At Stonehaven a reading of 85° was recorded on the 8th. As a rule the remainder of the month had moderate day and night temperatures, but there were one or two brief, but sharp, touches of cold. A good deal of damage was occasioned by frost on the mornings of the 14th, 15th and 16th, in various parts of the Kingdom, the shade temperature touching 28° at Balmoral and Garforth, while at Llangammarch Wells there was a grass minimum of 19° and at Chopwellwood 20°, spruces and other forest plants being injured in this neighbourhood. Round the 25th, the afternoon maxima were low, down to 49° at Eskdalemuir on the 24th, accompanied by flakes of snow, and 48° at Inch on the 26th.

On our coasts fog was less prevalent than usual at this season, reported at many places in the first four days, then from the 16th to the 18th in the west, and the 18th and 19th in the east. Towards the close it was recorded at a few western stations.

The temperature of the sea water along the coasts was everywhere warmer than in the preceding month, by as much as 5° to 7° at a large number of stations. Off the west and north of Ireland and along Sussex and Kent the water was warmer than the air on shore, by as much as 3° locally on the Irish coast. In most localities, however, the water was colder than the air, by 4° or 5° in several places.

**Rainfall.**—Showed considerable local variations. Over Ireland and a considerable portion of central and southern England the total amount was much less than the average. A slight deficiency was reported also at several of the Scottish stations, but over North Britain as a whole the aggregate fall was large, the difference from the normal being especially noticeable in the north-east of England. In many parts of Northumberland and Berwickshire, the total quantity for the month exceeded 5 in., the largest amounts reported to the Meteorological Office being 6.0 in. at Rothbury, 5.9 in. (285 per cent. of the average) at Alnwick Castle, 5.4 in. (291 per cent.) at North Shields, and 5.3 in. (234 per cent.) at Cockle Park, Morpeth. The lowest aggregates were 0.8 in. (39 per cent. of the average), at Malin Head, 0.9 in. (42 per cent.) at Dundee, and 1.0 in. at Dunrossness and Dunrobin Castle. The number of days with rain was generally rather small, less than 10 at several of the English and Irish stations, and only 8 at Margate, Broadstairs, Clacton, Scilly and Kingstown.

**Bright Sunshine.**—The total duration was nearly everywhere in excess of the normal, but the difference was, as a rule, somewhat small. On many parts of the English and Welsh coasts more than 250 hours were registered, the largest aggregates reported being 269 hours at Sandown, 261 hours at Totland Bay and Haverfordwest, and 260 hours at Westbourne. The smallest aggregates were 148 hours (110 per cent. of the average) at Fort Augustus, 153 hours at Hull, 162 hours at Balta Sound and Birmingham, and 165 hours (equal at the two respective stations to 107 and 116 per cent. of the average) at Deerness and Newcastle-on-Tyne.

TABLE A.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at 9 a.m., 3 p.m. and 9 p.m. at NORMAL STATIONS in the BRITISH ISLANDS

DISTRICT.	STATION.	Height of Barometer cistern above M.S.L.	BAROMETER.				AIR TEMPERATURE.						HYGROMETER.													
			Mean at 32° F. at Level and Latitude of Station.	Diff. from Normal.	C. Cor. for Diurnal Range.	Mean of		Mean of A and B.	Diff. from Normal.	Absolute Maximum and Minimum.				Observations at 9 a.m., 3 p.m., and 9 p.m., or at 7 a.m., 1 p.m., 6 p.m., or 9 p.m.												
						A	B			Max.	Day.	Min.	Day.	Dry Bulb.			Dep. of Wet.			Vap. Pressure.			Humidity.			
														I.	II.	III.	I.	II.	III.	I.	II.	III.	I.	II.	III.	
O. SCOTLAND, N.																										
Islands.	CASTLEBAY - - -	Ft. 48	In. 29.875	+ .020	- .001	57.7	49.8	53.8	+0.2	67	3rd	44	10th, 14th	52.7	55.8	52.6	2.5	4.4	2.9	.331	.329	.307	84	73	80	
	Deerness - - -	168	29.720	-	- .004	55.6	47.0	51.3	0.0	65	4th	42	13th	52.6	-	48.9	2.5	-	1.7	.334	-	.307	84	-	88	
	LERWICK - - -	59	29.817	- .025	- .001	54.7	47.0	50.9	+1.2	63	3rd, 4th	41	10, 13, 14	50.6	53.0	50.1	2.5	3.4	2.4	.306	.313	.301	83	78	83	
Mainland.	STORNOWAY - - -	52	29.870	+ .013	- .001	59.1	48.4	53.8	+1.4	78	2nd	40	10th, 14th	53.1	57.6	50.8	2.9	4.8	2.1	.326	.341	.319	80	72	86	
	WICK - - -	94	29.799	- .020	- .001	56.4	47.5	52.0	-0.2	65	5th, 7th	35	15th	50.9	53.9	50.2	1.5	2.5	1.6	.335	.346	.322	90	84	89	
	Strathpeffer - - -	210	29.666	-	- .005	63.4	46.8	55.1	+1.0	77	3rd	37	14th	57.8	-	53.0	4.8	-	3.5	.344	-	.311	72	-	77	
	Glencarron - - -	504	29.373	-	- .004	59.9	46.1	53.0	-0.8	80	2nd	35	10th, 14th	54.4	-	51.2	4.2	-	2.6	.312	-	.311	72	-	83	
	Fort Augustus - - -	78	29.843	-	- .004	62.1	45.3	53.7	-1.2	77	2nd, 3rd	35	15th	55.4	-	55.3	3.4	-	3.3	.345	-	.346	79	-	79	
	Kingussie - - -	828	29.031	-	- .004	62.0	43.9	53.2	-	76	1st, 4th	31	15th	55.9	-	51.7	5.8	-	3.7	.298	-	.291	66	-	76	
	Fort William - - -	38	29.888	-	- .004	63.9	47.1	55.5	+0.2	72	3rd	38	10th, 14th	56.5	-	54.7	4.8	-	3.7	.333	-	.333	73	-	78	
Dunrobin Castle - - -	16	29.882	-	- .004	60.6	47.8	54.2	+1.0	79	1, 4, 5	39	10th	56.4	-	52.1	4.1	-	3.2	.346	-	.312	76	-	79		
District Value - - -																										
1. SCOTLAND, E.																										
Islands.	Dundee - - -	164	29.757	-	- .005	63.9	47.3	55.6	0.0	79	7th	40	10th, 14th	58.5	-	53.2	4.8	-	2.9	.356	-	.332	73	-	82	
	Nairn - - -	82	29.809	- .021	+ .003	63.1	45.9	54.5	-0.2	81	2nd	34	15th	52.7	59.9	58.1	3.1	5.7	5.1	.317	.550	.341	80	67	70	
	Gordon Castle - - -	107	29.803	-	- .004	64.1	46.0	55.1	+0.2	82	1st	38	10th	58.4	-	52.2	6.0	-	3.5	.324	-	.301	66	-	77	
	Mainland.	Aberdeen - - -	90	29.824	- .037	- .005	59.6	47.5	53.6	-0.3	74	7th	40	16th	55.2	57.6	52.7	4.3	5.7	3.4	.322	.320	.310	74	68	78
		Balmoral - - -	927	-	-	-	63.3	41.7	52.5	-0.2	79	6th	28	16th	54.7	-	-	2.7	-	-	.352	-	-	82	-	-
		Crieff - - -	436	29.453	-	- .004	66.1	46.1	56.1	-0.1	81	7th	38	14th, 15th	57.8	-	53.2	6.0	-	3.9	.316	-	.304	66	-	75
	Leith - - -	37	29.891	- .007	+ .003	64.1	49.3	56.7	+0.8	80	7th	38	15th	54.5	-	59.8	4.2	-	5.8	.313	-	.346	74	-	69	
Marchmont - - -	500	29.398	-	- .005	63.3	46.1	54.7	+0.7	79	1st, 7th	38	15th	57.4	-	52.4	5.7	-	3.2	.317	-	.311	67	-	77		
District Value - - -																										
2. ENGLAND, N.E.																										
Northern Part.	Whitby - - -	145	29.777	-	- .006	65.5	48.2	56.9	+1.9	76	7th	39	15th	59.7	-	55.5	5.5	-	3.5	.358	-	.349	70	-	79	
	Cockle P'rk (Morpeth) - - -	331	29.592	-	- .005	61.6	46.2	53.9	-	75	5th	38	15th	56.9	-	50.8	4.4	-	2.0	.348	-	.324	75	-	87	
	Shields - - -	117	29.814	- .013	+ .003	62.5	47.9	55.2	+0.6	75	5th	42	10th	54.2	-	57.9	2.8	-	4.3	.342	-	.359	81	-	85	
	Durham - - -	352	29.560	-	- .005	64.8	45.9	55.4	-0.3	79	5th, 7th	34	15th	58.6	-	52.4	4.7	-	2.5	.363	-	.334	74	-	84	
	Roupton - - -	245	29.670	-	- .006	65.0	46.1	55.6	+0.9	79	8th	32	15th	57.4	-	52.3	4.2	-	2.6	.353	-	.324	75	-	82	
	Scarborough - - -	127	29.795	-	- .006	62.7	49.9	56.3	+0.7	77	8th	45	15th	58.2	-	55.0	3.5	-	2.8	.332	-	.354	79	-	82	
	York - - -	58	29.902	-	- .006	66.8	48.9	57.9	+0.4	81	5th, 8th	40	10th, 13th	59.5	-	54.6	5.1	-	3.0	.359	-	.345	79	-	81	
Southern Part.	Spurn Head - - -	28	29.913	- .022	+ .003	62.4	51.9	57.2	+1.2	78	8th	45	15th	55.9	61.0	57.4	2.8	5.3	3.8	.359	.376	.363	83	71	77	
	Lincoln - - -	42	-	-	-	67.4	49.4	58.4	-0.5	82	5th	37	15th	60.1	-	-	5.4	-	-	.365	-	-	70	-	-	
	Skegness - - -	16	29.944	- .007	+ .003	63.2	50.3	56.8	-	76	8th	40	15th	55.8	-	59.5	2.4	-	3.6	.378	-	.398	84	-	78	
Hull - - -	12	-	-	- .006	66.0	49.1	57.6	+0.7	81	8th	40	15th, 16th	60.2	-	55.2	4.5	-	3.0	.385	-	.352	74	-	81		
District Value - - -																										
3. ENGLAND, E.																										
Northern Part.	Lowestoft - - -	75	29.904	-	- .006	62.7	50.9	56.8	+0.4	72	28th	40	14th	59.0	-	55.0	4.1	-	2.3	.377	-	.367	75	-	85	
	Cromer - - -	139	29.810	-	- .006	64.6	50.2	57.4	-	74	8th	43	16th	58.1	-	54.7	3.5	-	2.3	.382	-	.363	78	-	85	
	Hillington - - -	92	29.874	-	- .006	68.1	49.2	58.7	+0.9	80	8th	39	16th	60.0	-	55.1	3.8	-	2.4	.401	-	.366	77	-	84	
	Norwich - - -	93	-	-	-	66.9	50.4	58.7	-	78	5th, 8th	39	15th, 16th	-	-	-	-	-	-	-	-	-	-	-	-	
	YARMOUTH - - -	27	29.946	- .005	- .002	63.6	52.1	57.9	+1.3	73	5th, 28th	42	14th	56.2	61.0	56.2	3.0	5.6	3.3	.367	.368	.360	81	69	79	
	Geldeston - - -	47	29.934	-	- .006	66.9	49.3	58.1	+0.8	80	5th	37	16th	60.3	-	54.2	4.8	-	2.0	.379	-	.364	73	-	86	
	Southern Part.	Cambridge - - -	43	29.928	-	- .006	69.1	49.4	59.3	+0.5	82	4th	38	15th	60.9	-	57.3	5.4	-	3.4	.378	-	.378	71	-	80
CLACTON - - -		62	29.925	- .010	- .002	64.7	51.8	58.3	-0.6	73	28th	39	15th	57.0	62.1	57.3	2.9	5.3	3.3	.380	.393	.374	82	71	79	
Woburn - - -		294	29.604	-	- .006	68.1	48.2	58.2	-	82	5th	32	15th	59.4	-	57.5	4.6	-	3.5	.376	-	.377	73	-	79	
Mainland.	Bennington - - -	411	29.589	-	- .006	67.5	48.9	58.2	+0.4	82	4th, 5th	38	14th	59.4	-	55.5	4.7	-	2.9	.367	-	.358	72	-	81	
	Berkhamsted - - -	397	29.584	-	- .006	68.3	48.6	58.5	+0.8	82	5th	35	15th	59.4	-	55.7	4.8	-	2.8	.365	-	.364	72	-	82	
	District Value - - -																									
4. MIDLAND COS.																										
Eastern Part.	Garforth - - -	198	-	-	- .006	65.8	44.7	55.3	-	80	8th	28	15th	59.5	-	54.5	5.7	-	3.8	.349	-	.329	69	-	77	
	Huddersfield - - -	411	29.525	-	- .006	65.5	48.3	56.9	-	81	4th	37	15th	58.1	63.1	54.6	4.6	7.2	3.1	.358	.361	.347	74	63	81	
	Wakefield - - -	100	-	-	- .006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Belvoir Castle - - -	276	29.687	-	- .006	67.2	48.3	57.8	-0.1	81	5th	34	15th	58.6	-	55.0	4.6	-	3.2	.359	-	.344	73	-	80	
	Coventry - - -	309	29.660	-	- .006	68.5	50.1	59.3	+0.5	82	5th	38	15th	60.9	-	-	6.1	-	-	.355	-	-	66	-	-	
	NOTTINGHAM - - -	85	29.876	- .016	- .002	67.5	49.3	58.4	+0.1	81	5th	37	15th	55.9	64.7	56.2	3.0	6.8	3.0	.364	.393	.367	81	64	81	
	Birmingham - - -	542	29.407	-	- .006	66.7	50.2	58.5	+1.1	81	8th	41	10th	56.0	-	57.5	4.6	-	5.0	.330	-	.342	73	-	71	
Western Part.	Oxford - - -	212	29.774	+ .006	-	68.2	50.8	59.5	+0.9	82	5th	39	14th	58.0	-	59.9	4.3	-	-	.360	-	-	75	-	-	
	Bath - - -	84	29.915	+ .021	+ .004	68.5	50.7	59.6	-0.1	81	4th	40	14th	57.1	-	64.8	-	-	-	-	-	-	-	-	-	
	Shrewsbury - - -	212	29.757	-	- .006	68.4	47.7	58.1	-0.4	82	3th	33	15th	59.3	-	56.3										

CLIMATOLOGICAL STATIONS, at 7 a.m., 1 p.m. and 6 p.m. or 9 p.m. or at 7 a.m. and 6 p.m. at TELEGRAPHIC REPORTING during the month of JUNE, 1911.

Earth Temperature.		BRIGHT SUNSHINE.				CLOUD (0-10.)			RAIN AND OTHER FORMS OF PRECIPITATION.				WEATHER. No. of Days of								WIND. No. of Observations reduced to a total of 90 for the month.								STATIONS.					
At 1 foot depth.	At 4 feet depth.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.	Mean Amount.			Total Fall.	Diff. from Normal.	Most in a day.		Precipitation.	Snow.	Hail.	Thunderstorm.	Clear Sky.	Overcast.	Fog.	Ground Frost.	Wind-force 8 and above.	No. of Observations reduced to a total of 90 for the month.												
						I.	II.	III.			Amount.	Day.										Forces 4-7.	Calm.	N.	N.E.	E.	S.E.	S.		S.W.	W.	N.W.		
—	—	200	—	38	—	7.6	6.9	6.6	1.75	—	0.79	21st	14	0	0	0	2	12	2	—	0	54	0	10	9	10	7	3	9	15	27	Castlebay (Barra (Isd.)		
—	—	165	+11	30	+2	6.8	—	6.7	2.10	+0.25	0.68	24th	13	0	0	0	2	11	6	—	0	47	9	18	4	4	13	12	5	13	12	Deerness.		
—	—	—	—	—	—	7.1	6.6	6.2	2.75	—	0.60	30th	20	0	0	0	0	7	4	—	0	47	2	19	5	9	12	15	7	10	11	Sumburgh Head.		
—	—	181	-4	34	-1	7.6	7.3	7.7	1.70	-0.74	0.65	21st	15	0	0	0	1	15	0	—	0	45	2	11	17	7	6	11	11	15	10	Stornoway.		
—	—	—	—	—	—	7.1	6.9	6.7	3.19	+1.38	1.18	24th	15	0	0	0	1	9	6	—	2	27	6	16	6	10	9	9	8	9	17	Wick.		
—	—	187	+26	35	+4	6.8	—	6.2	1.49	-0.59	0.61	19th	14	0	0	2	2	9	0	—	1	35	24	2	9	9	3	7	12	15	9	Strathpeffer.		
—	—	—	—	—	—	7.8	—	7.1	5.45	+1.41	1.09	21st	15	0	0	0	2	17	0	—	0	30	0	19	4	20	0	2	0	43	2	Glencarron.		
—	—	148	+13	28	+2	6.9	—	6.8	1.94	-0.05	0.38	21st	16	0	0	1	3	14	0	—	0	44	2	3	34	5	3	2	34	7	0	Fort Augustus.		
—	—	—	—	—	—	7.5	—	7.0	1.68	—	0.49	19th	15	0	0	0	3	19	0	—	1	45	3	15	6	6	6	3	9	33	9	Kingussie.		
—	—	—	—	—	—	7.3	—	7.0	3.29	-0.51	1.38	21st	13	0	0	1	3	15	0	—	0	18	27	0	14	4	4	3	26	10	2	Fort William.		
58.2	—	—	—	—	—	5.6	—	6.5	1.04	-1.04	0.43	24th	9	0	0	1	3	9	0	—	0	12	11	2	0	22	4	9	9	33	0	Dunrobin Castle.		
—	—	170	+14	32	+3	7.1	6.9	6.8	2.83	+0.07	1.88	—	15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	6.7	—	6.7	0.88	-1.20	0.22	17th	11	0	0	2	1	10	0	—	1	17	0	3	20	10	7	3	35	4	8	Dundee.		
—	—	213	—	40	—	6.2	5.6	6.1	2.89	+1.03	1.20	24th	14	0	0	3	4	6	0	—	0	6	18	3	12	18	4	1	3	29	2	Nairn.		
—	—	198	—	38	—	7.0	—	6.9	2.08	-0.09	1.07	24th	13	0	0	3	2	14	0	0	1	15	0	9	12	3	18	3	15	4	26	0	Gordon Castle.	
—	—	51.7	212	+25	40	+4	5.9	6.0	5.7	2.37	+0.52	1.31	24th	18	0	0	2	3	7	3	—	0	23	9	11	3	6	18	12	8	7	16	Aberdeen.	
—	—	—	—	—	—	6.6	—	—	1.26	-1.12	0.47	24th	11	0	0	2	7	16	0	2	4	30	0	3	3	3	6	6	24	30	15	0	Balmoral.	
—	—	—	—	—	—	5.8	—	5.3	2.11	-0.79	0.52	24th	9	0	0	3	4	7	0	—	2	30	0	9	6	27	0	0	4	42	2	0	Crieff.	
—	—	—	—	—	—	5.6	—	6.6	2.44	+0.52	0.87	19th	12	0	0	1	3	10	0	—	0	18	3	3	12	15	7	3	15	21	11	0	Leith.	
56.7	—	229	+44	44	+8	5.3	—	5.2	5.11	+2.67	2.71	24th	11	0	0	1	7	9	0	0	9	0	15	14	19	2	9	4	21	6	0	Marchmont.		
—	—	214	+33	41	+6	6.1	5.8	6.1	2.72	+0.54	2.71	—	13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	230	—	45	—	5.7	—	5.0	5.05	+3.09	1.63	24th	13	0	0	3	5	4	3	—	0	0	2	3	7	0	18	0	25	5	30	0	Whitby.	
57.6	54.5	216	—	42	—	6.1	—	6.0	5.29	+3.03	2.10	24th	15	0	0	3	0	7	0	0	0	29	3	9	8	6	16	2	16	14	16	0	Cockle P'k (Mor-Shields. (peth.)	
—	—	—	—	—	—	7.0	—	6.3	5.35	+3.51	2.57	24th	15	0	0	0	1	12	0	—	0	23	0	14	14	13	6	7	18	12	6	0	—	
—	—	205	+34	40	+6	6.9	—	6.0	3.57	+1.61	1.21	24th	12	0	0	2	5	12	0	1	0	12	27	13	3	5	5	6	13	12	6	0	Durham.	
58.1	—	—	—	—	—	6.7	—	6.5	3.57	+1.38	1.27	24th	13	0	0	3	4	13	3	1	1	35	6	9	14	4	9	2	21	7	12	0	Rounton.	
—	55.7	214	—	42	—	7.1	—	7.1	4.61	+2.65	1.35	24th	16	0	0	1	2	7	3	—	0	36	1	5	33	0	12	0	18	2	18	0	Scarborough.	
58.0	54.2	198	+22	39	+4	5.3	—	5.2	3.50	+1.39	1.34	24th	12	0	0	2	7	8	0	—	0	2	0	18	10	8	2	15	10	19	8	0	York.	
—	—	—	—	—	—	7.5	6.6	6.8	3.25	+1.74	1.33	24th	14	0	0	2	0	5	0	—	2	58	1	11	12	14	8	7	14	11	12	0	Spurn Head.	
59.2	54.2	—	—	—	—	6.5	—	5.3	3.06	+0.99	1.35	24th	11	0	0	2	7	12	0	—	0	23	0	8	8	22	3	0	15	28	6	0	Lincoln.	
—	—	239	—	48	—	5.3	—	5.3	3.14	—	1.33	23rd	17	0	0	0	6	7	0	—	0	27	0	7	9	19	11	3	9	18	14	0	Skegness.	
57.8	52.1	153	—	30	—	5.7	—	5.8	3.15	+1.17	1.03	24th	16	0	1	2	5	6	0	0	2	6	3	22	2	9	5	16	9	18	0	0	Hull.	
58.9	54.1	214	+26	43	+6	6.3	—	5.9	3.91	+2.08	2.60	—	13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
61.2	55.9	246	—	50	—	5.9	—	4.8	2.06	+0.30	0.58	23rd	13	0	0	1	4	6	0	0	0	18	0	11	15	11	4	9	19	12	9	0	Lowestoft.	
—	—	237	—	48	—	6.9	—	6.4	2.44	—	0.59	23rd	18	0	0	0	2	12	0	—	0	29	0	15	9	9	8	13	16	14	6	0	Cromer.	
—	—	202	+5	41	+1	6.9	—	5.9	3.74	+1.49	1.85	23rd	15	0	0	3	4	11	0	0	0	21	2	7	26	4	2	3	19	17	10	0	Hillington.	
—	—	—	—	—	—	—	—	—	3.02	—	0.83	23rd	15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Norwich.
63.2	58.4	223	—	45	—	5.9	5.3	5.0	1.77	-0.13	0.41	19th	9	0	0	1	3	4	0	—	0	21	0	14	13	5	11	6	21	13	7	0	Yarmouth.	
—	—	223	+14	45	+3	7.5	—	3.8	2.25	+0.41	0.62	23rd	12	0	0	2	6	10	0	—	0	0	3	12	11	9	9	13	16	12	5	0	Geldeston.	
61.5	56.9	222	+23	45	+5	6.4	—	5.3	2.81	+0.57	0.90	23rd	13	0	1	1	7	13	0	0	0	18	10	13	5	6	8	18	13	12	5	0	Cambridge.	
59.3	55.7	231	—	47	—	5.3	5.7	6.1	2.06	—	1.24	23rd	8	0	0	1	1	11	0	1	0	39	0	4	10	14	11	13	13	17	8	0	Clacton.	
—	—	205	—	42	—	6.3	—	6.0	1.76	—	0.58	23rd	11	0	0	1	6	11	1	—	0	20	7	3	21	9	3	5	18	16	8	0	Woburn.	
61.2	57.9	209	—	43	—	6.7	—	5.1	3.26	+1.23	1.23	23rd	12	0	0	4	6	11	2	2	0	20	0	7	14	9	0	16	16	8	0	0	Bennington.	
62.3	—	202	—	41	—	6.5	—																											

TABLE A. (continued).—Giving a Summary of the METEOROLOGICAL OBSERVATIONS made at 9 a.m., 3 p.m. and 9 p.m. at NORMAL STATIONS in the BRITISH ISLANDS

Table with columns: DISTRICT, STATION, Height of Barometer, BAROMETER (Mean at 32° F., Diff. from Normal, C. Cor. for Diurnal Range), AIR TEMPERATURE (Mean of A, B, Mean of A and B, Diff. from Normal, Absolute Maximum and Minimum), and HYGROMETER (Observations at 9 a.m., 3 p.m., and 9 p.m., or at 7 a.m., 1 p.m., 6 p.m., or 9 p.m. including Dry Bulb, Dep. of Wet, Vap. Pressure, Humidity).

For notes see p. lxvii.

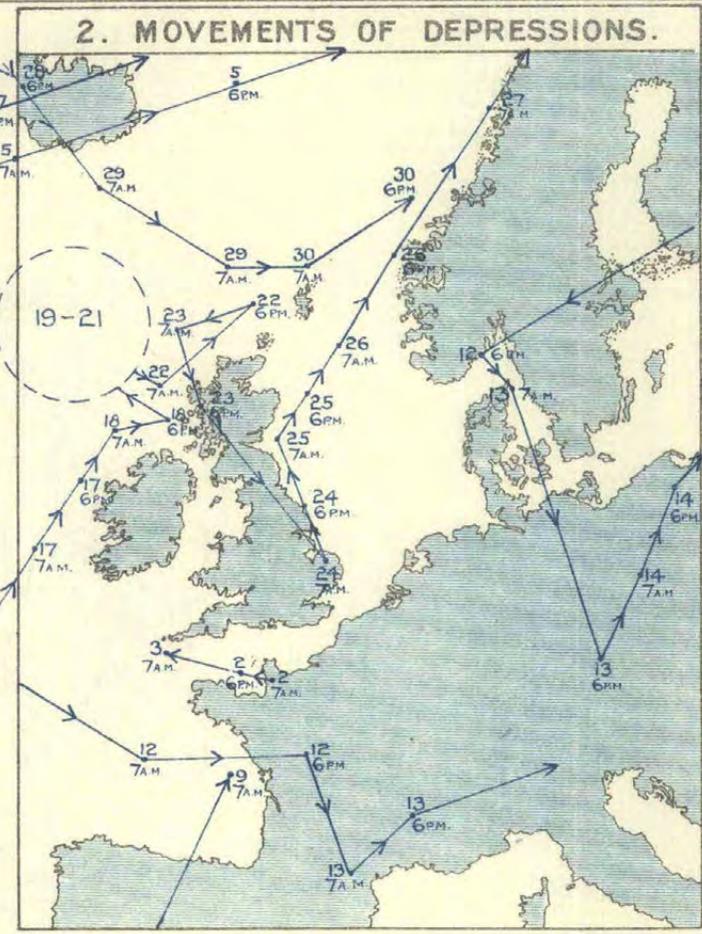
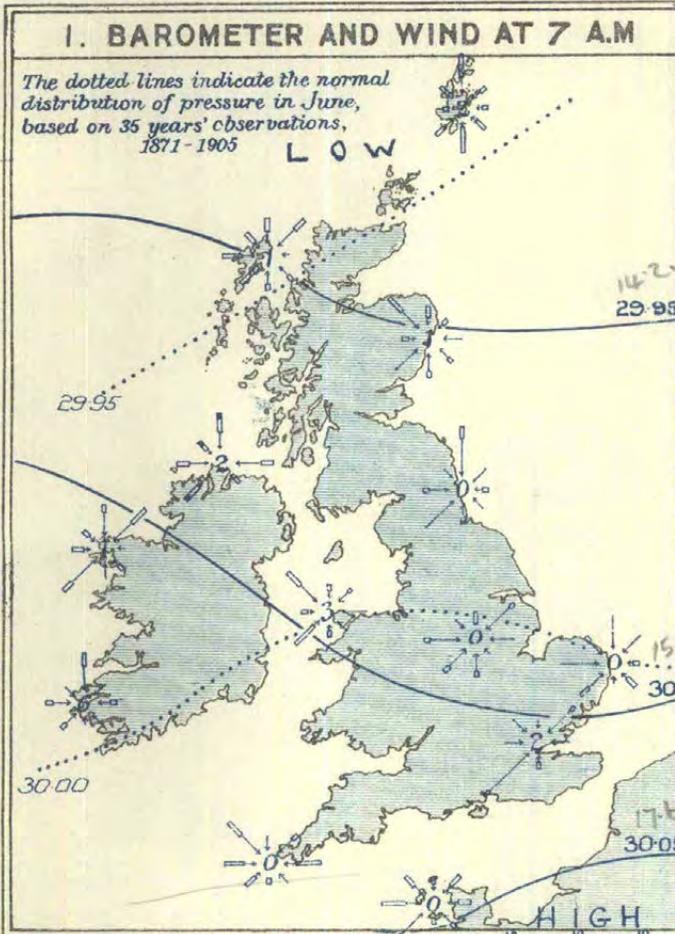
\* Dulwich now takes the place of Norwood from which it is distant 1 mile E.

CLIMATOLOGICAL STATIONS, at 7 a.m., 1 p.m. and 6 p.m. or 9 p.m. or at 7 a.m. and 6 p.m. at TELEGRAPHIC REPORTING during the Month of JUNE, 1911.

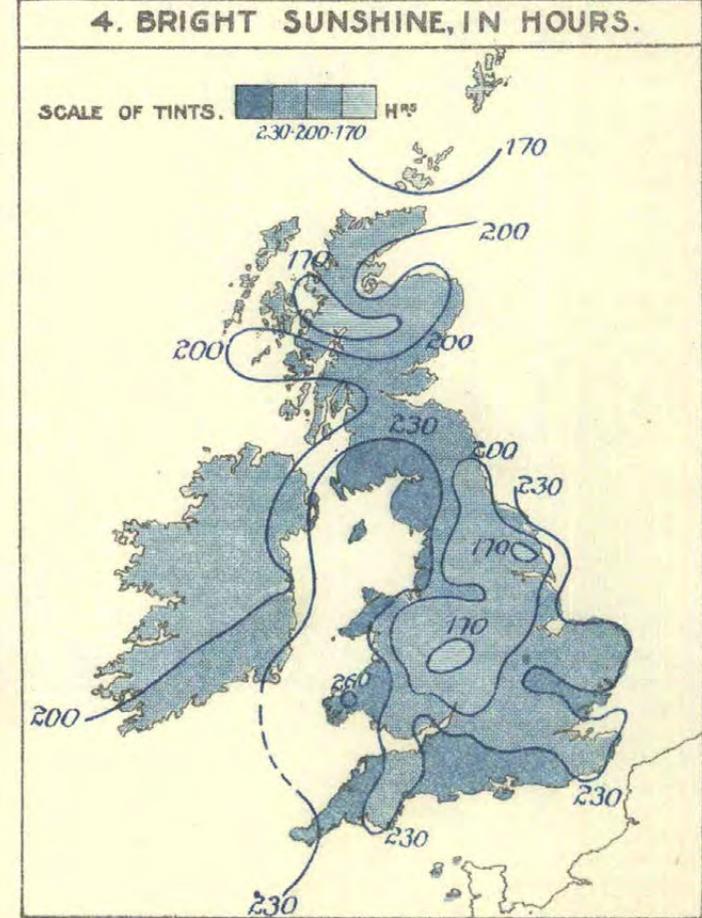
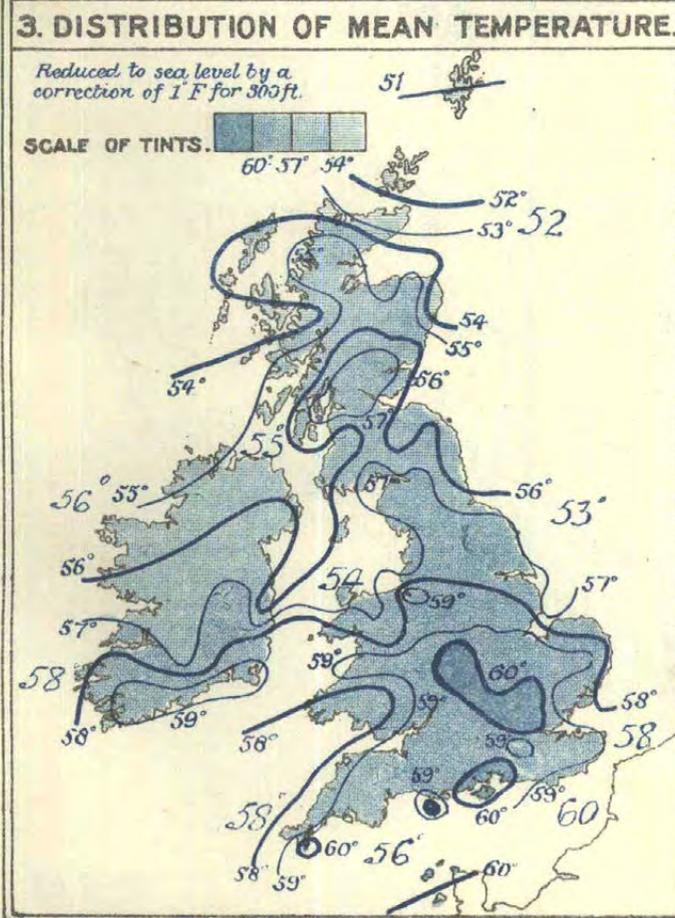
Earth Temperature.		BRIGHT SUNSHINE.				CLOUD (0-10.)			RAIN AND OTHER FORMS OF PRECIPITATION.				WEATHER. No. of Days of							WIND. No. of Observations reduced to a total of 90 for the month.								STATIONS.							
At 1 foot depth.	At 4 feet depth.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.	Mean Amount.			Total Fall.	Diff. from Normal.	Most in a day.		Precipitation.	Snow.	Hail.	Thunderstorm.	Clear Sky.	Overcast.	Fog.	Ground Frost.	Wind-force 8 and above.	Force 4-7.	Calm.	N.	N.E.	E.	S.E.		S.	S.W.	W.	N.W.			
61.5	57.7	252	+30	52	+6	5.6	—	4.0	2.39	+0.43	1.15	23rd	10	0	0	2	10	10	0	0	0	2	12	1	18	3	9	2	28	9	8	Eastbourne.			
58.2	53.4	248	—	51	—	5.7	—	3.9	2.15	—	0.79	23rd	13	0	0	2	7	6	0	0	0	44	5	10	11	9	1	9	32	4	9	Dover.			
—	—	—	—	—	—	7.2	7.2	6.9	2.26	+0.73	0.90	23rd	11	0	0	3	0	4	3	—	0	47	0	6	18	10	2	9	27	13	5	Dungess.			
62.3	57.4	227	-2	47	0	6.3	—	4.5	2.06	+0.17	0.86	23rd	11	0	0	1	7	10	2	0	0	39	0	9	18	6	6	6	19	12	14	Hastings.			
—	—	240	+28	49	+6	4.3	—	4.7	1.50	-0.59	0.39	24th	13	0	0	0	11	8	0	0	0	21	0	0	17	2	12	0	43	0	16	Southampton.			
—	—	259	+63	53	+13	5.1	—	—	1.81	-0.09	0.46	23rd	12	0	0	0	8	6	1	—	2	23	0	4	4	12	14	29	18	8	1	Ventnor.			
61.5	57.0	234	+23	48	+8	5.7	—	5.1	1.94	+0.07	1.15	—	11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Tettenham.			
—	58.5	223	—	46	—	6.3	—	5.2	2.50	—	1.12	23rd	10	0	0	1	6	11	0	0	0	2	3	8	16	3	9	5	27	10	9	Hampstead.			
—	—	216	—	44	—	5.7	—	5.5	2.19	—	0.80	23rd	13	0	1	1	6	9	0	1	0	8	10	11	13	8	2	6	22	13	5	Camden Square.			
62.1	55.7	193	—	39	—	6.1	—	—	2.69	+0.40	0.92	23rd	11	0	1	1	9	15	0	0	—	3	15	18	3	2	3	3	12	24	9	—	Westminster.		
—	—	210	+43	43	+9	—	—	—	2.20	-0.01	0.86	23rd	10	0	0	1	—	—	0	0	—	—	—	—	—	—	—	—	—	—	—	—	South Kensington		
—	—	207	—	42	—	6.1	—	—	—	—	—	—	—	0	1	2	7	13	0	0	0	21	3	6	12	15	0	6	27	12	9	—	Greenwich.		
—	58.6	225	+31	45	+6	6.9	—	5.6	2.10	+0.06	0.61	17th	12	0	0	1	6	12	0	2	0	6	6	6	10	10	5	4	27	17	5	—	Norwood.		
60.6	—	—	—	—	—	6.1	—	5.1	2.33	-0.04	0.82	23rd	9	0	0	1	7	11	1	—	0	5	11	11	7	9	4	12	11	16	9	—	Kew.		
60.3	55.3	211	+15	43	+3	5.8	6.0	5.0	1.98	-0.24	0.64	23rd	11	0	0	1	6	9	1	2	0	18	6	11	12	10	1	9	27	11	3	—	Bunhill Row.		
—	—	199	+22	41	+5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Plumstead.		
—	—	182	—	37	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Eskdalemuir.		
—	—	210	—	41	—	7.1	7.4	5.3	3.44	—	0.67	21st	14	1	0	2	3	11	0	—	0	41	21	6	11	5	5	1	20	11	10	—	Poltalloch.		
—	—	—	—	—	—	6.8	—	5.6	2.51	-0.71	0.75	21st	14	0	0	0	4	13	0	—	1	29	9	17	11	3	4	15	4	24	3	—	Glasgow.		
—	—	199	+34	39	+7	6.5	—	7.0	2.21	-0.62	0.58	17th	12	0	0	3	3	16	0	1	0	14	10	7	14	9	2	3	15	26	4	—	Rothsay.		
—	—	—	—	—	—	4.9	—	5.3	2.77	-0.47	0.70	21st	15	0	0	0	3	8	1	—	1	18	10	18	0	22	0	2	3	26	9	—	Colmonell.		
—	53.7	—	—	—	—	5.2	—	—	2.59	+0.02	0.75	24th	13	0	0	0	10	10	1	2	1	45	0	15	9	0	9	9	9	27	12	—	Dumfries.		
60.9	57.3	236	—	46	—	6.2	—	6.4	3.39	+0.51	1.01	17th	14	0	0	1	4	13	0	2	1	12	17	3	9	4	13	0	24	3	17	—	Cally.		
—	—	—	—	—	—	—	—	—	2.87	-0.26	0.57	24th	12	0	0	1	—	—	0	—	1	0	0	2	18	7	18	6	13	2	24	—	Douglas.		
—	—	246	+26	49	+5	5.9	—	5.3	3.01	+0.48	1.21	24th	10	0	0	1	7	10	1	0	1	29	0	11	3	11	7	8	7	21	22	—	—		
—	—	223	+32	44	+7	—	—	—	2.68	-0.15	1.21	—	13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Southport.		
62.1	58.1	239	+32	48	+7	5.3	5.5	5.8	2.31	+0.15	0.88	24th	14	0	0	1	7	10	0	2	0	53	1	7	4	12	6	4	12	18	26	—	—	Manchester (City).	
60.0	56.6	171	—	34	—	4.0	—	4.6	2.38	-0.49	0.88	24th	12	0	0	1	7	1	0	0	0	6	1	8	12	13	8	14	16	12	6	—	—	" (Whit. P'k.)	
—	—	169	—	34	—	6.7	6.2	6.3	2.63	—	1.05	24th	13	0	0	0	6	13	0	—	0	8	15	8	19	8	3	8	15	20	4	—	—	Darwen.	
59.5	53.6	185	—	37	—	7.2	—	6.3	4.78	—	1.39	24th	13	0	1	1	3	13	0	0	0	27	0	5	12	5	4	15	9	3	18	18	6	—	Aspatia.
58.7	52.9	248	—	49	—	5.4	—	4.7	4.00	+1.53	1.56	24th	15	0	0	0	7	9	0	2	0	11	12	5	4	15	9	3	18	18	6	—	—	Newton Rigg.	
58.8	53.2	233	+24	46	+5	6.2	—	5.7	3.86	+1.82	1.70	24th	12	0	0	1	5	10	0	3	0	17	10	9	5	6	12	8	24	13	3	—	—	Stonyhurst.	
—	—	186	-10	37	-2	6.5	—	5.3	3.78	+0.60	1.04	24th	15	0	0	1	7	13	0	0	0	7	14	10	8	9	1	1	22	19	6	—	—	Blackpool.	
58.1	53.3	245	+46	49	+9	5.9	—	6.3	2.61	+0.39	1.24	24th	12	0	0	1	7	12	0	0	0	29	1	8	3	17	5	1	16	12	23	—	—	Manch'str (Prest).	
—	—	174	+5	53	+1	7.6	—	7.7	2.65	-0.22	0.78	24th	13	0	0	1	3	19	0	1	0	8	2	6	19	9	3	10	8	28	5	—	—	Liverp'ol, Bid.Obs.	
—	—	236	—	47	—	4.9	—	5.2	2.34	+0.17	1.02	24th	14	0	0	2	10	8	0	—	0	21	0	6	2	13	9	5	16	21	18	—	—	Llandudno.	
—	—	243	+39	49	+8	5.2	—	5.3	2.63	+0.66	1.27	24th	15	0	0	1	9	12	0	—	0	8	9	5	2	18	12	7	18	12	7	—	—	Holyhead.	
—	—	—	—	—	—	5.6	5.5	5.1	1.50	-0.69	0.64	24th	9	0	0	0	5	3	2	—	1	28	6	11	8	7	3	5	16	10	24	—	—	Bettws-y-Coed.	
58.2	53.7	201	—	40	—	5.9	—	5.5	3.70	—	1.29	24th	16	0	0	1	5	8	0	0	0	15	0	6	6	20	6	0	21	13	18	—	—	Llanegwad.	
61.3	55.5	258	—	52	—	5.1	—	4.8	2.80	—	0.95	24th	12	0	0	2	10	9	0	0	1	30	5	17	6	21	1	0	16	16	8	—	—	—	
60.6	54.6	226	+29	45	+8	5.8	5.7	5.7	2.97	+0.75	2.30	—	13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Llangam. Wells.
56.7	52.0	203	—	41	—	6.4	—	—	3.31	—	0.98	17th	14	0	0	2	7	15	0	8	0	9	9	9	12	12	9	3	9	12	15	—	—	—	Pembroke.
—	—	249	+23	51	+5	5.1	5.1	5.1	1.33	-0.73	0.39	24th	11	0	0	1	6	3	1	—	0	48	0	14	14	8	8	7	16	14	—	—	—	—	Clifton.
—	—	227	—	46																															

TABLE B.—SUMMARY of the OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE at additional STATIONS, JUNE, 1911.

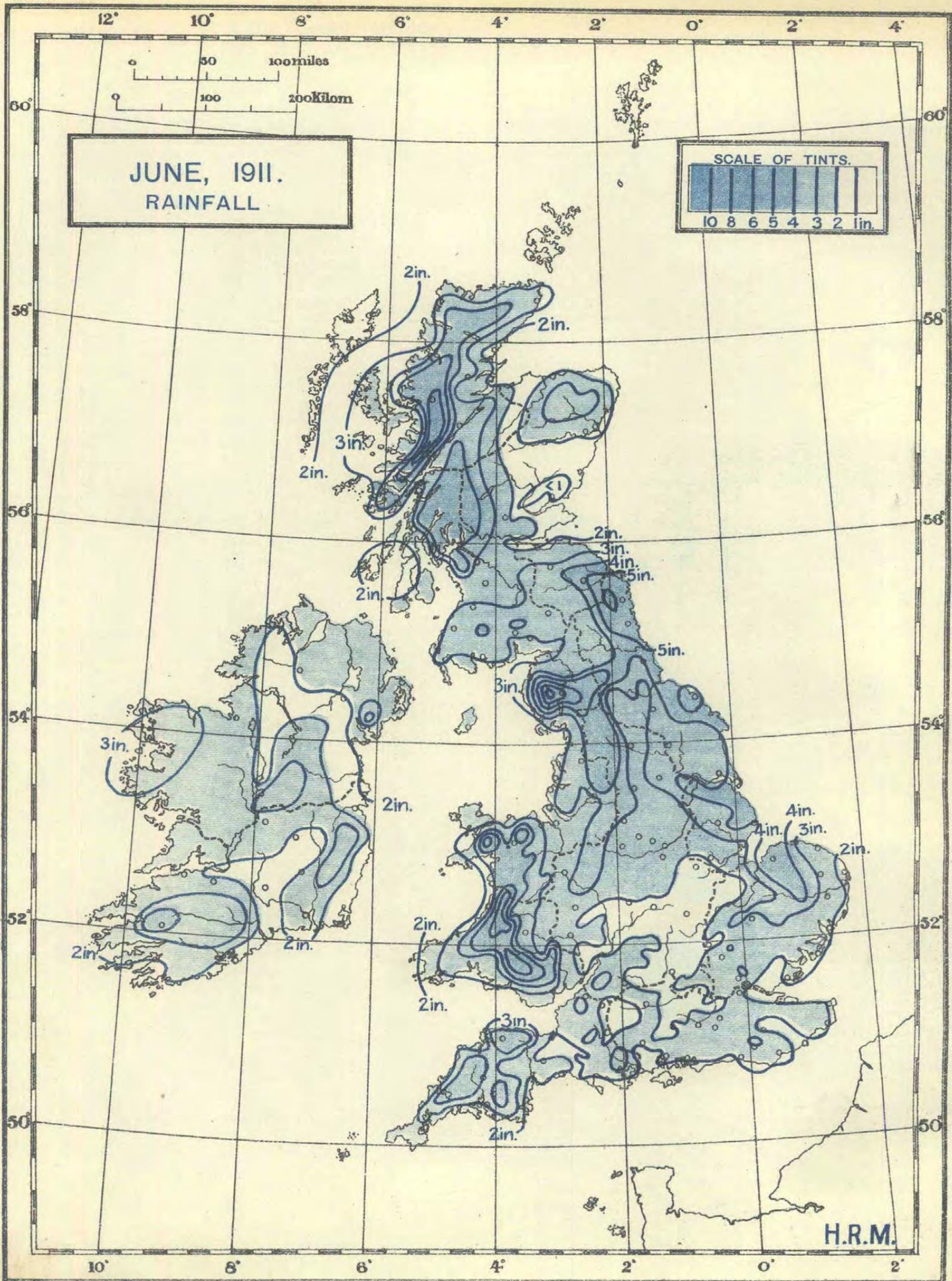
DISTRICT.	STATION.	Height of Gauge above M.S.L. Ft.	AIR TEMPERATURE.								Earth Temperature		Gr'nd Frost.	RAIN AND OTHER FORMS OF PRECIPITATION.				BRIGHT SUNSHINE.				
			Mean of		Mean of A and B.	Diff. of Mean from Normal.	Absolute Maximum and Minimum.				1 ft.	4 ft.		No. of Nig'ts	Total Fall.	Diff. from Normal.	Most in a day.		Number of Days.	Total in Hours.	Diff. from Normal.	Per Cent.
			A	B			Max.	Day.	Min.	Day.			In.				In.	In.				
			Max.	Min.	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
0. SCOTLAND N.	p Baltasound - - - S	31	54.9	45.8	50.4	—	66	4th	40	15th	53.1	—	—	2.58	—	0.55	24th	23	162	—	29	—
	p Dunrossness - - -	145	56.9	45.2	51.1	—	67	2nd	39	15th	—	—	—	0.97	—	0.19	25th	13	—	—	—	—
	a Fortrose - - -	69	62.0	48.6	55.3	—	79	3rd	41	14th	—	—	—	2.48	—	1.12	24th	12	233	—	44	—
1. SCOTLAND, E.	p Insch - - -	426	63.4	44.9	54.2	—	80	5th	32	16th	57.0	—	1	3.36	—	1.15	24th	14	191	—	36	—
	p Crathes - - - S	140	64.3	46.1	55.2	—	78	4th, 7th	34	16th	56.7	52.9	7	1.78	—	1.11	24th	14	200	—	38	—
	p Stonehaven - - -	786	63.1	46.3	54.7	—	85	8th	35	10th	—	—	—	2.06	—	1.23	24th	12	228	—	44	—
	p Balruddery - - - S	276	67.8	46.2	57.0	—	80	4th, 7th	37	13th	—	—	—	1.20	—	0.33	16th	12	215	—	41	—
	a West Linton - - - S	300	763.2	43.2	753.2	- 0.3	78	7th	32	15th	—	—	—	7.47	—	2.20	24th	15	209	—	41	—
2. ENGLAND, N.E.	a Alnwick Castle - - -	210	63.1	46.8	55.0	+ 0.6	73	7th	35	16th	—	—	—	5.85	+ 3.80	2.60	24th	12	—	—	—	—
	p Newcastle-on-Tyne - - -	152	63.9	49.0	56.5	—	77	5th	39	15th	—	—	—	3.25	+ 1.27	0.90	23rd	15	165	+ 23	32	+ 4
	a Chopwellwood - - -	445	63.8	44.5	54.2	—	78	8th	35	15th	—	—	9	4.37	—	1.65	24th	12	216	—	42	—
	p Ampleforth - - -	349	64.5	47.9	56.2	—	80	8th	39	13th	—	—	—	3.22	—	1.18	23rd	14	—	—	—	—
	a Fulbeck - - -	180	68.4	48.7	58.6	+ 0.2	84	5th	37	15th	—	—	2	2.41	+ 0.43	0.97	23rd	12	192	—	39	—
	a Rauceby - - -	124	67.9	48.5	58.2	—	83	5th	37	15th	62.5	55.7	0	2.30	+ 0.39	1.07	23rd	11	214	—	43	—
3. ENGLAND, E.	a Felixstowe - - -	10	64.3	51.7	58.0	0.0	71	3rd, 28th	40	10th, 15th	—	—	—	2.56	—	1.72	23rd	12	254	—	52	—
	a Rothamsted - - -	424	67.4	49.1	58.3	+ 0.8	80	5th	34	15th	—	—	—	2.52	+ 0.24	0.87	23rd	16	202	+ 9	41	+ 2
	a Shoeburyness - - -	13	66.4	51.4	58.9	- 0.6	77	5th	40	14th	—	—	—	1.97	+ 0.18	1.30	23rd	9	—	—	—	—
	a Southend-on-Sea - - -	90	67.1	52.7	59.9	—	78	5th, 6th	40	14th, 15th	62.7	—	0	1.77	- 0.28	0.97	23rd	11	231	—	47	—
4. MIDLAND COUNTIES	a Harrogate - - -	476	64.4	47.5	56.0	+ 0.5	79	8th	37	15th	56.0	54.1	1	2.80	+ 0.35	1.20	24th	12	197	—	39	—
	a Bradford - - -	489	63.9	48.2	56.1	—	78	8th	37	15th	58.8	53.8	1	3.32	—	1.67	24th	11	225	—	45	—
	a Cheadle - - -	646	65.7	47.4	56.6	+ 0.7	79	8th	38	14th	—	—	0	3.09	+ 0.30	0.74	17th	13	—	—	—	—
	a Bawtry - - -	65	67.7	47.8	57.8	- 0.1	82	5th, 8th	35	15th	—	—	—	2.76	+ 0.71	1.47	24th	9	—	—	—	—
	a Worksop - - -	56	68.4	47.3	57.9	+ 0.3	83	5th	34	15th	58.9	55.1	4	2.52	+ 0.45	1.13	24th	9	197	+ 32	39	+ 6
	a Mayfield (Staffs.) - - -	374	65.7	45.7	55.7	—	81	4th	30	15th	—	—	3	2.50	—	0.65	24th	14	—	—	—	—
	a Belper - - -	222	68.4	48.2	58.3	—	83	5th	35	15th	—	—	0	2.42	—	0.74	17th	11	—	—	—	—
	a Kingston-on-Soar - - -	125	67.5	47.3	57.4	—	81	5th	30	15th	58.7	—	—	2.05	—	0.68	24th	10	—	—	—	—
	p Rugby - - -	379	68.7	46.9	57.8	+ 0.3	84	5th	33	15th	—	—	3	1.53	—	0.50	24th	12	—	—	—	—
	a Raunds - - -	210	70.0	48.7	59.4	+ 1.1	83	5th	32	15th	60.1	—	0	1.28	—	0.49	23rd	10	—	—	—	—
	a Winslow - - -	379	69.0	49.6	59.3	—	81	5th, 8th	38	15th	—	—	3	1.50	—	0.33	24th	11	—	—	—	—
a Hereford - - -	291	68.5	48.7	58.6	+ 0.3	80	8th	36	10th	—	—	1	2.10	- 0.12	0.68	23rd	11	—	—	—	—	
a Cirencester - - -	446	67.0	48.4	58.2	+ 1.2	79	5th	36	14th	59.5	54.9	1	2.04	- 0.35	0.48	22nd	11	200	+ 5	41	+ 1	
5. ENGLAND, S.E.	a Epsom - - -	160	70.0	50.6	60.3	—	84	5th	37	15th	—	—	2	2.63	—	0.82	23rd	12	—	—	—	—
	a Wokingham - - -	216	68.2	47.9	58.1	—	81	5th	31	14th	—	—	—	1.70	—	0.53	19th	12	—	—	—	—
	a Marlborough - - -	424	68.1	47.3	57.7	+ 0.5	80	4th, 5th	32	14th	—	—	4	2.19	- 0.27	0.68	18th	13	210	+ 22	43	+ 6
	a Bucklebury - - -	409	67.1	49.2	58.2	—	80	4th, 5th	38	10th, 14th	—	—	4	1.94	—	0.50	19th	13	—	—	—	—
	a Swarraton - - -	310	67.0	48.8	57.9	+ 1.1	79	4th	35	11th	—	—	—	1.95	- 0.32	0.50	19th	12	—	—	—	—
	a Margate - - -	35	66.2	52.4	59.3	+ 1.2	78	4th	43	11th	59.7	56.1	0	1.47	- 0.42	0.70	23rd	8	226	+ 40	46	+ 8
	Broadstairs - - -	140	—	—	—	—	—	—	—	—	—	—	—	1.70	—	0.84	23rd	8	259	—	53	—
	Ramsgate - - -	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	a Eltham - - -	200	68.5	51.2	59.9	—	84	5th	43	10th, 15th	—	—	—	1.77	—	0.86	23rd	9	—	—	—	—
	a Wisley - - -	160	68.8	50.1	59.5	+ 0.4	83	4th	36	15th	62.0	57.1	4	2.02	—	0.68	23rd	11	235	—	48	—
	a Basingstoke - - -	289	67.4	49.6	58.5	—	79	4th, 5th	36	15th	61.4	55.5	0	1.75	—	0.47	19th	10	—	—	—	—
	a Sevenoaks - - -	509	67.0	50.0	58.5	—	83	5th	37	15th	61.1	55.4	0	2.10	—	0.83	23rd	12	—	—	—	—
a Tunbridge Wells - - -	421	67.5	49.3	58.4	+ 0.3	83	5th	38	15th	61.9	—	2	2.14	- 0.15	1.04	23rd	10	225	+ 25	46	+ 5	
a Matfield - - -	320	66.8	49.4	58.1	—	80	5th	38	11th	—	—	1	2.26	—	1.14	23rd	12	—	—	—	—	
p Folkestone - - -	121	63.4	52.7	58.1	—	75	6th	45	11, 14, 15	—	53.2	—	2.17	+ 0.24	1.13	24th	12	242	—	50	—	
Littlestone - - -	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
a Bexhill - - -	27	64.7	53.1	58.9	—	78	6th	42	14th	62.3	—	0	1.66	—	0.95	23rd	11	230	—	47	—	
Hove - - -	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
a Worthing - - -	36	65.8	52.3	59.1	+ 0.9	80	6th	41	—	62.7	57.3	0	1.92	+ 0.03	0.70	23rd	10	259	—	53	—	
a Bognor - - -	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Westbourne - - -	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
a Totland Bay - - -	140	66.4	52.5	59.5	+ 2.0	80	6th	42	11th	—	—	0	1.48	- 0.53	0.35	16th	11	261	—	54	—	
a Sandown - - -	20	67.1	53.3	60.2	—	80	9th	43	11th	—	—	—	1.77	—	0.39	16th	13	269	—	55	—	
p Bournemouth - - -	145	68.0	51.3	59.7	—	82	6th	40	11th	61.1	59.1	—	1.98	—	0.37	24th	12	249	—	51	—	
6. SCOTLAND, W.	p Oban - - -	20	62.9	49.3	55.6	—	79	2nd	36	14th	—	—	0	2.84	—	0.75	22nd	11	203	—	39	—
	a Thorntonhall (Lanarkshire) - - -	440	63.7	44.9	54.3	—	77	1st	31	14th	—	—	2	2.07	—	0.57	24th	14	213	—	41	—
	a Kilmarnock - - -	90	64.3	46.2	55.3	- 0.7	78	1, 2, 3	31	14th	—	—	—	2.09	—	0.59	17th	13	216	—	42	—
	p Ruthwell - - - S	67	67.0	46.9	57.0	—	82	1st	37	14th	—	—	—	2.79	—	0.91	17th	12	239			



WIND ROSES The arrows fly with the wind and indicate frequency and force, thus: LIGHT MODERATE STRONG ← 30 Obs<sup>12</sup> = 1 Inch →



Sea temperatures are shown in large figures thus - 54°



Scale 1:5,000,000.

TABLE B (continued).—SUMMARY of the OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE at additional STATIONS, JUNE, 1911.

DISTRICT.	STATION.	Height of Gauge above M.S.L. Ft.	AIR TEMPERATURE.								Earth Temperature		Gr'd Frost. No. of Nig'ts	RAIN AND OTHER FORMS OF PRECIPITATION.				BRIGHT SUNSHINE.				
			Mean of		Mean of A and B.	Diff. of Mean from Normal.	Absolute Maximum and Minimum.				1 ft.	4 ft.		Total Fall. In.	Diff. from Normal. In.	Most in a day.		Number of Days.	Total in Hours. Hr.	Diff. from Normal. Hr.	Per Cent. %	Diff. from Normal. %
			A	B			Max.	Day.	Min.	Day.			Amt.			Day.						
			Max.	Min.																		
ENGLAND, S.W.	§ p Aberystwyth	59	64.9	52.1	58.5	—	80	1st	44	14th	—	—	—	2.57	—	0.69	18th	13	244	—	49	—
	§ Haverfordwest	93	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	261	—	53	—
	§ Tenby	79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	246	+17	50	+3
	§ Port Talbot	179	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	197	—	40	—
	§ Forest of Dean	200	—	—	—	—	—	—	—	—	—	—	—	1.85	—	0.38	24th	12	—	—	—	—
	§ "	900	—	—	—	—	—	—	—	—	—	—	—	1.78	—	0.52	24th	13	—	—	—	—
	§ p Cardiff	203	66.8	50.5	58.7	-0.1	79	4th, 5th	42	14th, 15th	61.6	56.4	0	2.39	-0.19	0.60	29th	13	234	—	48	—
	§ a Swansea	24	66.5	53.4	60.0	—	78	6th	45	14th, 27th	64.7	58.3	0	3.14	—	0.95	17th	9	209	—	43	—
	§ a Shaftesbury	722	66.0	49.4	57.7	+1.2	80	5th	41	14th	60.6	—	—	2.45	+0.08	0.65	24th	12	—	—	—	—
	§ a Arlington	613	65.8	49.7	57.8	+1.6	78	6th	40	12th, 15th	—	—	—	4.64	+1.46	1.50	29th	14	—	—	—	—
	§ a Cullompton	202	69.4	50.2	59.8	+1.6	82	5th	37	15th	63.5	—	0	2.22	-0.18	0.33	18th	13	220	+23	45	+5
	§ Torquay	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	246	+15	51	+3
	§ a Weymouth	21	66.9	53.0	60.0	—	83	9th	41	11th	—	—	—	1.25	—	0.28	16th	10	250	—	52	—
	§ p Paignton	11	64.9	52.5	58.7	—	76	9th	42	15th	—	—	—	1.56	—	0.43	16th	10	233	—	49	—
	§ p Sheepstor	749	65.0	47.9	56.5	—	80	6th	33	11th	—	—	—	4.12	—	0.83	19th	13	—	—	—	—
§ Salcombe	390	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	241	—	50	—	
§ a Teignmouth	19	66.0	53.3	59.7	—	77	9th	44	15th	—	—	0	2.44	—	0.44	24th	11	238	—	49	—	
§ a Fowey	—	66.2	50.6	58.4	—	80	9th	42	10th	—	—	—	2.48	—	0.53	23rd	14	233	—	48	—	
§ a Penzance	54	65.9	54.2	60.1	—	74	6th	45	11th	—	—	—	2.32	—	0.78	16th	14	228	—	47	—	
IRELAND, N.	§ p Dunfanaghy	54	59.3	49.1	54.2	—	68	1st, 3rd	43	15th	—	—	—	2.63	—	0.77	17th	17	—	—	—	—
	§ p Dublin (Glasnevin)	67	65.0	48.1	56.6	+0.4	73	1st	35	15th	—	—	2	1.65	-0.43	0.35	16th	13	—	—	—	—
	§ a Kingstown	42	64.0	51.5	57.8	—	71	2nd	43	15th	—	—	—	1.47	—	0.85	16th	8	208	—	42	—
	§ Clongowes Wood College	245	65.2	45.2	55.2	—	78	2nd	33	15th	—	—	?	2.09	—	0.44	23rd	15	215	—	43	—
O. IRELAND, S.	§ a Mountmellick	233	66.0	47.5	56.8	—	79	8th	36	15th	—	—	—	2.68	—	1.31	3rd	11	—	—	—	—
	§ p Newcastle (Co. Wicklow)	256	63.6	48.9	56.3	—	70	2nd, 3rd	37	15th	—	—	—	2.19	—	1.01	16th	10	—	—	—	—
	§ a Kilkenny	212	66.3	48.8	57.6	+0.4	77	3th	36	15th	—	—	—	1.29	-1.18	0.28	16th	13	—	—	—	—
	§ a Cahir	199	67.3	48.8	58.1	+1.3	82	7th	40	15th	—	—	—	1.95	—	0.45	18th	15	—	—	—	—
	§ a Foynes	108	63.5	50.0	56.8	-0.2	78	3th	43	15th	—	—	—	2.37	+0.02	0.48	23rd	15	—	—	—	—
	§ a Ballinacurra	34	66.3	50.7	58.5	—	74	1st, 9th	42	15th	—	—	—	1.99	—	0.76	18th	12	207	—	42	—
11. ENGLISH CHANNEL	§ a Guernsey (Villa Carey)	180	64.8	53.3	59.1	+1.4	77	5th	47	15th	—	—	—	3.12	+0.98	1.10	8th	15	257	+9	54	+2

NOTES ON THE STATISTICAL TABLES.

Hours of Observation.—The following types are used to indicate the hours of observation at Stations included in Table A:—Clarendon, Normal Climatological Stations—I, 9 a.m. [II, 3 p.m.], III, 9 p.m. Black Capitals, telegraphic reporting normal climatological stations—I, 7 a.m., II, 1 p.m., III, 9 p.m. Roman, telegraphic reporting stations—I, 7 a.m., [II, 1 p.m.], III, 6 p.m. Italic, auxiliary climatological stations—I, 9 a.m. only, at Colmonell and Ventnor 3 p.m. The summaries are based on observations made three times a day wherever the data are available, except in the case of the element pressure (see below). At stations shown in clarendon type the maximum and minimum temperatures are read at 9 p.m.; at the remaining stations these observations are made at 1. In Table B the letters a and p indicate whether the readings of the maximum and minimum are taken at the hours of morning or evening observation.

Barometer.—The correction for latitude has not been applied to the readings quoted in the Tables. It is applied to the readings at sea level from which the chart showing the mean monthly distribution of pressure is prepared. The values given in the tables are for station level. The values printed are (1) for stations shown in clarendon type, the means of observations at 9 a.m. and 9 p.m.; (2) for stations shown in Capitals, the means of observations at 7 a.m., 1 p.m., 9 p.m.; (3) for stations shown in Roman type, the means of observations at 7 a.m. and 6 p.m.; (4) for stations shown in italic type, the means of observations at 9 a.m. The column headed C gives the correction for diurnal variation required to reduce the means of observations at fixed hours to true diurnal means, based on the analysis of the values obtained at the four observatories for the period 1871-1905. The difference from normal is based upon the 7 a.m. readings only, except in the cases of Kew, Greenwich, Aberdeen, Valencia and Plymouth (see below).

Rainfall.—The amounts are those for the 24 hours commenced at the time of morning observation.

Hygrometer.—At certain stations the vapour pressure and the relative humidity are the results obtained from the daily values. These are entered in clarendon type. At other stations the calculations are made from the monthly means of the dry and wet bulb readings.

Weather Phenomena.—The number of days of Rain, Snow, Hail, Thunderstorm, Fog, Ground Frost, and Gale, are counted irrespective of the hours at which the phenomena occur. Except in the cases of rainfall (see above) and ground frost the day is the civil day. A day is reckoned as a day of "clear sky," if the mean of the estimates of the "amount of cloud" at the fixed hours of observation is less than 2, and as an "overcast" day if the mean is greater than 8. Days of Ground Frost. A day is counted as a "Day of Ground Frost" if it follows a night on which the minimum has sunk to 30° or less.

Wind Summaries.—The results given under wind direction, and the number of observations of calms and of fresh or strong wind, are based on the observations at fixed hours. At Deerness, Aberdeen, Valencia, Falmouth, Kew, Glasgow, Stonyhurst and Armagh the wind observations are based on the records of a standard Robinson anemometer (factor 2.2). Velocities of between 13 and 38 miles in the hour have been entered as "fresh or strong winds," velocities of 39 miles in the hour, or above, as gales. (At Brighton, Plymouth and Southport the equivalent values are obtained from a Dines Pressure Tube Anemometer.)

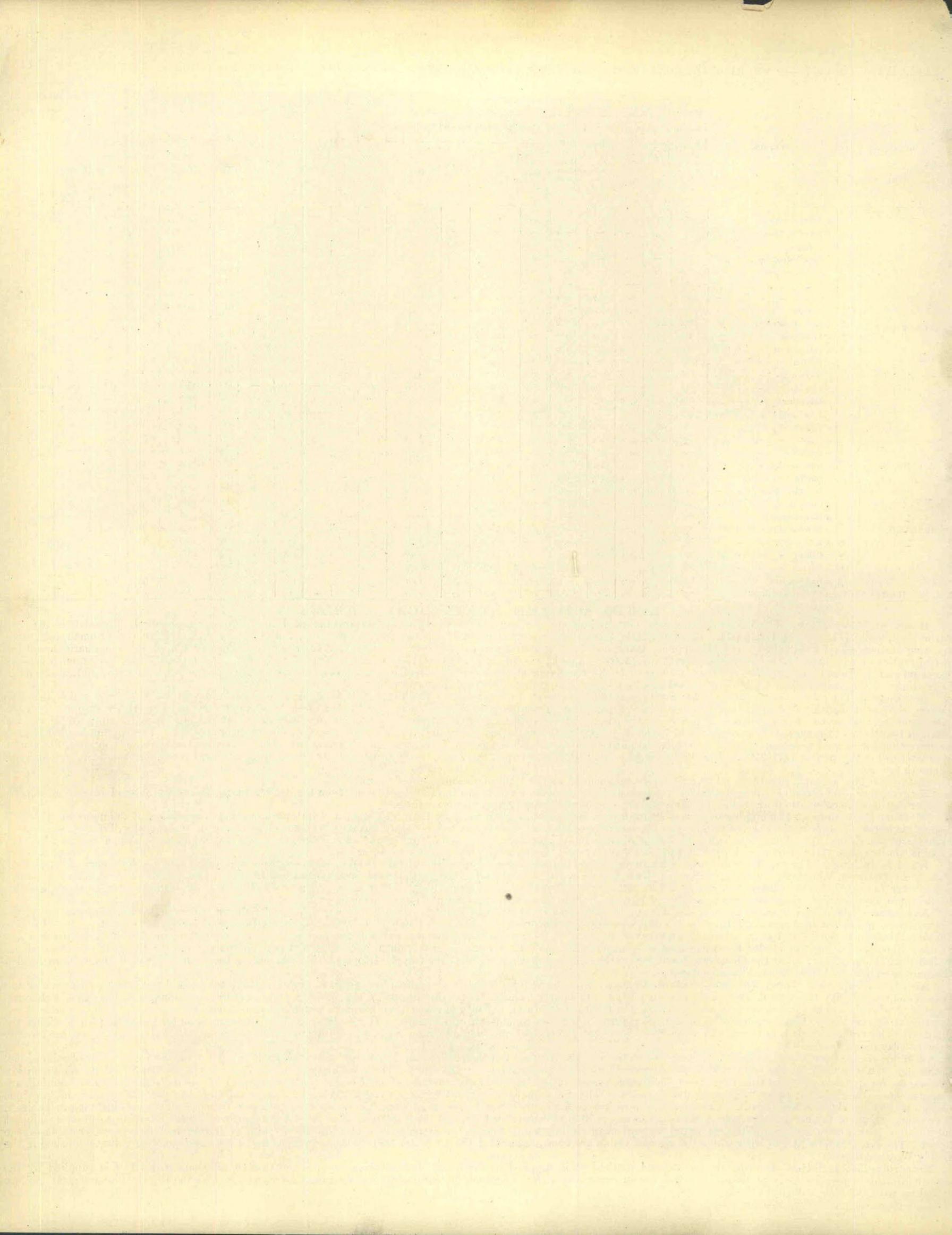
Averages.—The normal averages used for stations are—Pressure, Temperature, and Rainfall for the 35 years 1871-1905; Bright Sunshine for the 25 years 1881-1905. The values are published in Appendix III. to the Weekly Weather Report for 1906. For Greenwich and Oxford, averages for longer periods are used. (See Notes in Monthly Weather Reports for 1908.) Monthly averages of pressure at telegraphic reporting stations for the epoch 8 a.m. are published in Appendix I. to the Daily Weather Report. In order to render these averages comparable with the data for the present month, a correction, based on the results for the four observatories as published in "Hourly Readings at the Observatories under the Meteorological Council," has been applied to each of them before the figures given in the column headed Barometer—Difference from Normal" were computed.

Aberdeen, Falmouth, Kew, Valencia, Oxford, Greenwich.—The figures quoted in the second line assigned to these observatories in the columns for Barometer and Mean Temperature are the true daily means computed from the hourly tabulations of the traces of the photographic recording instruments. For Kew, Falmouth, Aberdeen and Valencia the divergences of the means of the readings at 9 a.m. and 9 p.m. from their normal averages are also given.

Royal Observatory, Greenwich.—The earth temperatures are taken at a depth of 3 ft. 2 ins. The daily rainfall amounts are those for the 24 hours comprising the civil day. The number of days in the month which were persistently overcast from midnight to midnight was 0, the number of persistently cloudless days was 0, the number persistently foggy days was 0.

Mean Values for Districts.—The stations used in the Weekly Weather Report for the computation of "district values" of rainfall and temperature are distinguished by the sign §, those used for the computation of "district values of bright sunshine" by the sign §. These stations are distributed between Tables A and B. The monthly mean values for districts given in this Report for maximum, minimum and mean temperature, duration of bright sunshine, number of rain days and amount of rainfall, are computed from the data for these "representative" stations. The mean temperature for districts is computed in the manner shown in the preface to this and previous volumes of the Weekly Weather Report. The monthly mean values for districts for "amount of cloud" are computed from the data for all stations included in Table A. The extreme values of the various elements in each district are printed in distinctive type. In the lines devoted to district values, the columns referring to absolute highest and absolute lowest temperature and the maximum amount of rainfall in a day contain the extreme values for the district at any station included in either table of the Report. The averages for districts with which the current values are compared are for the 25 years 1881-1905, as in the case of the corresponding values published in the Weekly Weather Report.

Meteorological Societies.—Information for stations marked § is supplied by the Royal Meteorological Society, and that for stations marked § is supplied by the Scottish Meteorological Society. Stations marked S are in connexion with the Scottish Meteorological Society and those marked M with the Royal Meteorological Society as well as with the Meteorological Office.



MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE  
(Supplement to the Weekly Weather Report.)SUMMARY OF OBSERVATIONS COMPILED FROM THE RETURNS OF OFFICIAL STATIONS AND VOLUNTEER OBSERVERS IN THE UNITED KINGDOM, WITH  
A CHART OF RAINFALL CONTRIBUTED BY THE BRITISH RAINFALL ORGANISATION.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE,

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## SUMMARY OF OBSERVATIONS.

**Pressure, Winds and Weather.**—In its general features the distribution of atmospheric pressure during the month of July was similar in character to that of June, the two months being almost equally divided between two main types—anticyclonic and cyclonic. The unsettled conditions which had ruled through the second half of June came to an end practically on the opening day of July, when the last of the series of depressions was travelling away across northern Scandinavia. On this day the barometer stood as low as 29.42 in. in Shetland, and this proved to be the lowest reading in the British Isles throughout the month. A steady increase of pressure was then in progress, under the influence of an anticyclone which was spreading in from the Atlantic, and by the evening of the 2nd the system embraced the whole country. Thenceforward, until the close of the 16th, the region of highest pressure maintained its position either over these islands or in their immediate neighbourhood, such depressions as were indicated within the area under observation, keeping well beyond the Arctic Circle or over northern Russia. As early as the 4th the barometer had passed above 30.5 in. at our Channel stations, but the anticyclone did not attain its maximum intensity until a week later, the readings at many stations on the 10th and 11th being above 30.6 in., the highest record, 30.66 in., occurring at North Shields. At this time the central space occupied the northern half of Britain. Slowly the system diminished in intensity, and as slowly drifted out to the Atlantic again, so that by the morning of the 17th it was situated well beyond our south-western coasts. This change of position rendered it possible for a depression, which had made its appearance at some distance to the westward of Iceland on the previous day, to advance to the neighbourhood of Cape Wrath, and eastward beyond the north-east of Scotland. The barometer dropped below 29.5 in. in the extreme north, and less settled conditions became general over the northern and north-western districts. This system was short-lived, dispersing in the course of the 18th, but thenceforward, until the close of the month, the conditions in the far western and northern districts were influenced mainly by three depressions which had their centres out at sea, the first moving slowly on a very erratic path beyond our north-western coasts for nearly a week; the second following a fairly steady course northward near the western coasts; and the third slow-moving on an irregular path off the south-west of Ireland. During this more disturbed period in Ireland and Scotland the pressure distribution over England was on several days anticyclonic, the centres of the systems being found on the Continent, moving eastward from Spain or the Bay of Biscay.

Under these circumstances the mean barometric values for the month show the region of highest pressure, exceeding 30.15 in., to have been over the western portion of the Continent and nearly the whole of England, the values at Bath and Brest being a trifle short of 30.2 in. Northward the means diminished to below 29.95 in. along a belt extending from the south-west of Iceland to northern Scandinavia. Everywhere there was a marked excess of pressure, of 0.13 in. at Dungeness, and 0.15 in. at Jersey, increasing to 0.21 in. at Liverpool, Spurn Head, Leith and Lerwick, and 0.22 in. at Shields. The range of pressure for the month was nearly 1.2 in. in the north of Scotland, against 0.7 in. at Jersey. The mean gradient was slight, and the winds were mainly Southerly to Westerly in the west and north, but very variable over southern England and the Channel.

The month was unusually free from weather of a boisterous character, even the force of a strong breeze being uncommon at the telegraphic reporting stations, although at Malin Head the strength of a gale was registered on the 22nd-23rd and on the 30th. The anemometrical records show similar results. Even in gusts of short duration, velocities at the rate of 30 miles an hour and upwards were rare. On the 29th, however, various districts in the southern half of England experienced a remarkably sudden and violent squall. It was, perhaps, related more directly to the thunderstorm then in progress, than to the shallow depression which was centred beyond our south-western coasts. Rapid oscillations of the barometer marked the progress of the line-squall from the south-west towards the north-east, the direction of the wind in the squall being South or South-East. Penzance was struck by a heavy squall at 2.15 p.m.; the pressure tube anemometer at Pendennis Castle registered a rise from 0 to 61 miles per hour at 2.35, then back to zero; ten minutes later, at Lostwithiel (Cornwall), the wind rose suddenly from a dead calm to the force of a hurricane, which lasted about half an hour, a remarkable rise and fall of the tide in the River Fowey being noted. This sea disturbance was observed later at Salcombe, Teignmouth, and as far east as the Downs. The squall reached Guernsey at 3 p.m., the wind increasing suddenly from 0 to 45 miles per hour. Swansea was visited by swirling gusts from 4.30 to 5.30, the counties on both sides of the Severn estuary experiencing a furious Southerly

blast laden with dust, attended by the darkness of night. Abergavenny and Southampton had the squall at 6 p.m., a violent wind storm, driving clouds of dense smoke before it at the former station, a gusty strong wind at the latter. At 6.10 p.m. Brighton had a thunder squall of 57 miles per hour; at 6.35 Watergate, Sussex, had "an extraordinarily severe squall;" and from 6.35 to 6.45 Basingstoke a terrific wind and dust storm. A series of sharp squalls set in at Kew Observatory at 6.45, and ended at 7.10, a maximum of 41 miles per hour occurring at 6.58. At Dwyran (Anglesey), a squall at the rate of 46 miles an hour was registered at 7.15, while Shoeburyness had one of 41 miles at 7.55, and Dover a violent dust squall of 40 miles at 8 p.m. The squall thus passed along the south coast, from Penzance to Dover, at the rate of 49 miles an hour.

As a whole the month was exceptionally fine, dry, bright and hot over the greater part of the kingdom, and especially so over England. At several places in the south of England and of Ireland a long spell of dry weather set in on June 30th, and by July 5th the drought had become established over an extensive region. Stations with 25 to 27 rainless days are far too numerous to be mentioned here. The duration of the drought was 28 days, or four complete weeks, at Bucklebury, Wilton (Wilts.), Stockbridge (Hants.), Bournemouth, Salcombe, Dursley (Glos.), Newport, Ynis-y-fro, Pant-yr-Eos, Newchurch, Abergavenny (Mon.) and Cardiff; 29 days at Weymouth, Portland Bill, Teignmouth, Torquay and Fowey; 31 days at Bath. All these stations are in the south-western counties. South of a line drawn from Cromer to Fishguard nearly every station was rainless for three weeks.

The combination of calm, drought and brilliant sunshine was conducive to exceptional warmth. At the start temperature was low, below 60° in many localities in the first three days, 55° and under in places, but thenceforward high maxima ruled, exceeding 80° frequently, touching 90° at Epsom, and 91° at Wilton as early as the 8th. After the 20th these records were passed at many stations, 93° at Raunds on the 21st, and at Bath, Rugby, Epsom and Matfield (Kent) on the 29th, while on the 22nd Margate mounted to 94°, Greenwich to 96°, and Epsom to 97°. Some of the nights were very warm also, a minimum of 67° at Hawarden Bridge on the morning of the 13th, and at Jersey, Westminster and Manchester on the 29th. At Balmoral there was a shade minimum of 32° on the morning of the 20th.

Down till the 24th the thunderstorms of the month were unimportant, afterwards they became widespread and heavy, but not producing much rain, excepting over very restricted areas. At Huddersfield a thundershower on the 25th yielded 0.20 in. of rain in 3 minutes; in a violent storm over London on the 28th 0.75 in. of rain fell in 10 minutes at Camden Square, and 1.1 in. in 15 minutes at South Kensington. The thunderstorm of the 29th was the most extensive of the month, abnormally violent in Ireland, 1.21 in. of rain falling at Dublin in 65 minutes, and 2.21 in. at Kilkenny in 2½ hours, the rainfall being very heavy generally over the southern half of Ireland.

Fog was of rare occurrence along the English Channel, while on our western and eastern coasts it was reported almost daily, most frequently round Ireland.

The temperature of the coastal waters was higher than in June, by as much as 5° in the south-east, between Eastbourne and the Shipwash, but with the exception of the north-west and north of Ireland and the Minch the water was colder than the air on shore, by 5° or 6° in many localities, and by 7° on the coast of Berwick.

**Rainfall.**—With the exception of a few stations in Scotland and Ireland there was a general deficiency of precipitation, and as a rule the deficiency was very large. Kilkenny received a total of 4.9 in., or 183 per cent. of the average, Stornoway 5.3 in., or 175 per cent., and Loch Torridon (Ross) 8.5 in., or 158 per cent., but in numerous localities the aggregates were only a fraction of the normal, a considerable number of stations returning less than 0.25 in., Cardiff, Shaftesbury, Portland Bill, Nottingham, Wilton, Clifton, Swarraton, and Cirencester gave from 4 per cent. to 1 per cent. of their usual quantities, while Bath had none at all. Rain was measured on 24 days at Inverary, Quinish (Mull) and Loch Torridon, but at scores of places on less than five days—even those returning one day only are too numerous to mention.

**Bright Sunshine.**—There was everywhere a large excess of insolation. The smallest aggregate for the month, 139 hours at Fort Augustus, was 139 per cent. of the average. In southern England the excess was very striking, averaging about 5 hours a day more than usual at some stations. Eastbourne and Hastings had 160 per cent. of the average, Greenwich and Kew Observatories 161, Brighton 163, Plymouth 169, Torquay 172, and Tunbridge Wells 180 per cent.

TABLE A.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at 9 a.m., 3 p.m. and 9 p.m. at NORMAL STATIONS in the BRITISH ISLANDS

DISTRICT.	STATION.	Ft.	BAROMETER.			AIR TEMPERATURE.								HYGROMETER.												
			In.	In.	C.	Mean of		Mean of A and B.	Diff. from Normal.	Absolute Maximum and Minimum.				Observations at 9 a.m., 3 p.m., and 9 p.m., or at 7 a.m., 1 p.m., 6 p.m., or 9 p.m.												
						A	B			Max.	Day.	Min.	Day.	Dry Bulb.			Dep. of Wet.			Vap. Pressure.			Humidity.			
														I.	II.	III.	I.	II.	III.	I.	II.	III.	I.	II.	III.	
<b>O. SCOTLAND, N.</b>																										
Islands.	CASTLEBAY	48	29.984	+1.186	—	59.7	52.0	55.9	-1.3	71	12th	45	3rd	55.5	57.9	55.6	2.3	3.2	2.2	*376	*388	*380	85	80	85	
	Deerness	163	29.857	—	—	59.7	49.7	54.7	+0.5	72	12th	43	2nd	55.8	—	52.8	2.8	—	1.5	*372	—	*361	83	—	90	
	LERWICK	59	29.947	+1.226	—	58.7	49.5	54.1	+1.3	70	11th, 12th	43	17th	53.5	57.0	53.4	2.7	4.5	*2.2	*336	*339	*347	82	73	85	
	STORNOWAY	52	29.962	+1.175	—	61.8	49.3	55.6	+0.8	75	11th	40	2nd	55.6	60.4	54.5	2.5	4.2	1.7	*372	*306	*376	84	75	89	
	WICK	94	29.935	+1.188	—	61.2	48.8	55.0	-0.3	74	5th	40	9th	54.1	57.8	53.7	1.7	3.2	1.8	*370	*385	*362	88	81	88	
	Strathpeffer	210	29.806	—	—	67.1	49.6	58.4	+1.9	83	12th	40	20th	61.4	—	56.7	4.8	—	3.3	*395	—	*365	73	—	79	
	Glencarron	504	29.505	—	—	63.7	49.1	56.4	+1.1	80	11th	42	3rd	58.6	—	54.6	3.8	—	2.4	*380	—	*359	77	—	84	
Mainland.	Fort Augustus	78	29.973	—	—	65.1	49.7	57.4	+0.3	85	12th	38	3rd	58.5	—	57.3	3.5	—	3.0	*386	—	*382	78	—	81	
	Kingussie	828	29.184	—	—	66.7	48.8	57.8	—	86	11th, 12th	37	3rd	59.7	—	56.7	5.4	—	3.7	*355	—	*355	69	—	77	
	Fort William	88	30.024	—	—	66.3	50.9	58.6	+1.4	84	12th, 13th	42	26th	60.0	—	57.1	3.6	—	3.0	*412	—	*385	80	—	83	
	Dunrobin Castle	16	30.026	—	—	64.1	50.4	57.3	+1.2	75	12th, 21st	41	26th	59.9	—	56.2	4.0	—	3.1	*403	—	*370	78	—	78	
	District Value	—	—	—	—	63.4	49.6	56.1	+1.2	86	—	37	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Dundee	164	29.909	—	—	68.8	51.7	60.3	+1.5	82	12th	43	3rd	62.1	—	57.8	4.5	—	2.5	*420	—	*408	78	—	85	
1. SCOTLAND, E.	Nairn	82	29.938	+1.178	+1.003	67.2	49.1	58.2	+0.8	81	12th	40	10th, 23rd	55.7	64.3	60.7	2.7	5.8	4.3	*368	*413	*398	83	69	75	
	Gordon Castle	107	29.930	—	—	68.0	48.9	58.5	+1.1	80	11th	40	9th	61.7	—	56.0	5.3	—	2.3	*386	—	*383	70	—	85	
	Aberdeen	90	29.976 29.969	+1.194 +1.192	—	65.3 65.3	51.0 51.0	58.2 58.2	+1.0 +2.0	78	5th	43	10th	60.1 62.3	57.8	5.3	6.2	3.3	*363	*372	*383	70	67	80		
	Balmoral	927	29.067	—	—	69.0	47.4	58.2	+3.1	88	13th	32	20th	58.2	63.5	—	3.4	7.0	—	*385	*369	—	79	63	—	
	Crieff	486	29.611	—	—	70.3	50.8	60.6	+1.8	89	12th	40	3rd	61.0	—	57.7	5.1	—	3.5	*381	—	*376	72	—	78	
	Leith	37	30.043	+1.210	+1.003	68.6	52.7	60.7	+1.6	81	14th	44	3rd	57.9	—	62.8	3.1	—	5.3	*390	—	*403	81	—	71	
	Marchmont	500	29.561	—	—	68.7	50.6	59.7	+2.5	82	12th	40	3rd	62.6	—	57.3	6.1	—	3.6	*379	—	*366	68	—	78	
	District Value	—	—	—	—	68.0	49.9	58.6	+2.0	89	—	32	—	—	—	—	—	—	—	—	—	—	—	—	—	
	<b>2. ENGLAND, N.E.</b>																									
	Northern Part.	Whitby	145	29.951	—	—	74.8	51.9	63.4	+4.4	86	14th	40	11th	65.5	—	61.0	6.0	—	3.3	*433	—	*441	68	—	81
Cockle P'rk (Morpeth)		331	29.763	—	—	68.9	51.1	60.0	—	80	28th	41	2nd	63.7	—	56.4	5.2	—	1.9	*428	—	*408	72	—	88	
Shields		117	29.991	+1.224	+1.003	69.5	51.7	60.6	+2.3	82	14th, 28th	42	3rd	59.3	—	64.5	3.4	—	5.8	*401	—	*417	79	—	69	
Durham		352	29.736	—	—	71.9	50.6	61.3	+1.8	85	14th	36	10th	64.5	—	58.7	5.6	—	3.2	*430	—	*405	71	—	81	
Rounton		245	29.850	—	—	72.2	50.7	61.5	+3.4	84	14th	37	10th	63.8	—	58.4	6.3	—	3.4	*391	—	*386	66	—	79	
Scarborough		127	29.974	—	—	70.3	55.3	62.7	+3.3	84	21st	46	2nd, 3rd	62.9	—	60.6	4.6	—	3.9	*424	—	*408	74	—	78	
York		58	30.085	—	—	74.6	53.5	64.1	+3.4	86	21st	43	3rd, 10th	65.3	—	61.3	6.6	—	5.1	*407	—	*385	66	—	71	
Southern Part.	Spurn Head	28	30.095	+1.212	+1.003	69.7	50.5	63.1	+2.9	86	21st	48	3rd	62.0	67.2	63.9	4.2	6.4	4.2	*421	*445	*454	76	66	76	
	Lincoln	42	—	—	—	76.4	53.6	65.0	+3.1	89	21st	44	3rd	66.4	—	—	7.7	—	—	—	*402	—	—	62	—	—
	Skegness	16	30.123	+1.206	+1.003	71.1	54.3	62.7	—	89	21st	43	3rd	61.5	—	66.9	—	—	—	—	—	—	—	—	—	
	Hull	12	—	—	—	75.1	53.8	64.5	+3.9	89	21st	45	3rd	67.2	—	62.1	6.8	—	4.3	*434	—	*420	65	—	75	
District Value	—	—	—	—	72.6	52.9	62.3	+3.6	91	—	36	—	—	—	—	—	—	—	—	—	—	—	—	—		
<b>3. ENGLAND, E.</b>																										
Northern Part.	Lowestoft	75	30.076	—	—	69.5	56.3	62.9	+2.3	79	8th	43	3rd	66.1	—	60.7	6.0	—	2.8	*436	—	*441	68	—	83	
	Cromer	139	29.987	—	—	72.4	56.0	64.2	—	91	21st	46	3rd	65.4	—	61.1	5.7	—	2.6	*433	—	*454	70	—	84	
	Hillington	92	30.044	—	—	77.0	52.9	65.0	+3.6	92	21st	42	3rd, 16th	66.9	—	61.0	6.1	—	2.8	*447	—	*446	68	—	83	
	Norwich	98	—	—	—	74.8	55.2	65.0	—	91	21st	44	16th	—	—	—	—	—	—	—	—	—	—	—	—	
	YARMOUTH	27	30.118	+1.200	+1.002	71.0	57.3	64.2	+3.5	86	21st	45	3rd	61.8	68.1	62.2	4.4	8.0	4.4	*413	*415	*419	75	60	75	
	Geldeston	47	30.104	—	—	75.2	54.2	64.7	+3.4	92	21st	42	3rd	68.1	—	60.6	7.2	—	2.9	*437	—	*436	64	—	83	
	District Value	—	—	—	—	75.0	55.2	64.6	+4.0	92	—	40	—	—	—	—	—	—	—	—	—	—	—	—	—	
Southern Part.	Cambridge	43	30.099	—	—	77.6	53.8	65.7	+3.3	91	21st	43	16th	67.8	—	63.0	7.9	—	4.7	*423	—	*433	62	—	74	
	CLACTON	62	30.091	+1.188	+1.002	72.5	57.0	64.8	+1.9	83	28th	45	16th	63.1	69.6	64.3	4.0	7.3	4.6	*445	*459	*448	77	63	75	
	Woburn	294	29.867	—	—	77.5	52.4	65.0	—	89	21st, 29th	40	11th	67.0	—	64.9	7.5	—	6.3	*417	—	*416	63	—	68	
	Bennington	411	29.752	—	—	77.1	53.9	65.5	+4.0	90	28th	46	10th	67.8	—	62.0	8.6	—	5.5	*394	—	*385	58	—	69	
	Berkhamsted	897	29.754	—	—	78.2	53.1	65.7	+4.4	90	28th	44	10th	66.8	—	61.8	7.6	14.2	4.8	*404	*397	*401	61	43	73	
	District Value	—	—	—	—	75.0	55.2	64.6	+4.0	92	—	40	—	—	—	—	—	—	—	—	—	—	—	—	—	
	<b>4. MIDLAND COS.</b>																									
	Eastern Part.	Garforth	198	—	—	—	74.2	48.0	61.1	—	85	28th	34	11th, 24th	65.2	—	60.1	6.3	—	3.7	*426	—	*418	69	—	79
		Huddersfield	411	29.701	—	—	73.5	53.6	63.6	—	84	14th	44	3rd	64.7	71.5	62.0	5.9	9.0	4.1	*426	*454	*433	70	89	77
		Wakefield	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Belvoir Castle		276	29.868	—	—	76.3	52.9	64.6	+3.2	89	21st	44	11th	65.2	—	62.4	6.2	—	5.1	*416	—	*402	67	—	72	
Coventry		309	29.834	—	—	78.3	55.2	66.8	+4.8	91	29th	43	3rd	67.7	—	—	8.7	—	—	*390	—	—	57	—	—	
NOTTINGHAM		85	30.050	+1.198	+1.002	76.6	52.6	64.6	+3.1	89	28th, 29th	43	11th	60.6	73.4	64.0	3.5	10.5	5.3	*						



TABLE A. (continued).—Giving a Summary of the METEOROLOGICAL OBSERVATIONS made at 9 a.m., 3 p.m. and 9 p.m. at NORMAL STATIONS in the BRITISH ISLANDS

Table with columns: DISTRICT, STATION, Height of Barometer, BAROMETER (Mean at 32° F., Diff. from Normal, Cor. for Diurnal Range), AIR TEMPERATURE (Mean of A, B, Mean of A and B, Diff. from Normal, Absolute Maximum and Minimum), and HYGROMETER (Observations at 9 a.m., 3 p.m. and 9 p.m., or at 7 a.m., 1 p.m., 6 p.m., or 9 p.m.; Dry Bulb, Dep. of Wet, Vap. Pressure, Humidity).

\* Dulwich now takes the place of Norwood from which it is distant 1 mile E. † Dwyran now takes the place of Llaneluad.

CLIMATOLOGICAL STATIONS, at 7 a.m., 1 p.m. and 6 p.m. or 9 p.m. or at 7 a.m. and 6 p.m. at TELEGRAPHIC REPORTING during the Month of JULY, 1911.

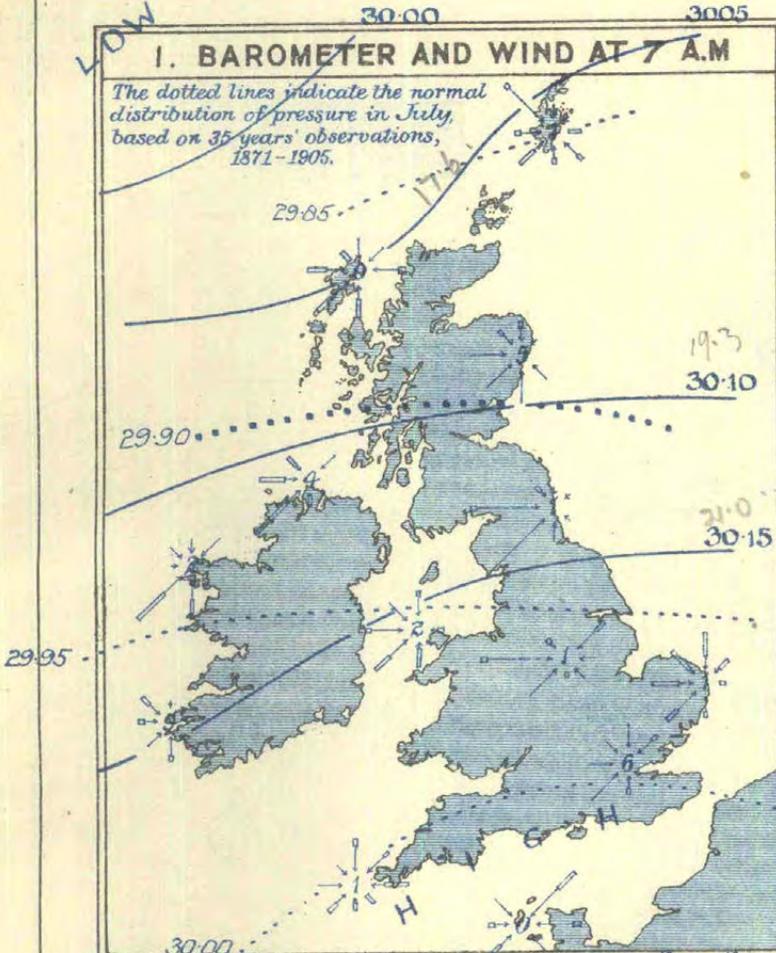
Earth Temperature.		BRIGHT SUNSHINE.				CLOUD (0-10).			RAIN AND OTHER FORMS OF PRECIPITATION.				WEATHER. No. of Days of							WIND. No. of Observations reduced to a total of 93 for the month.								STATIONS.						
At 1 foot depth.	At 4 feet depth.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.	Mean Amount.			Total Fall.	Diff. from Normal.	Most in a day.	Precipitation.	Snow.	Hail.	Thunderstorm.	Clear sky.	Overcast.	Fog.	Ground Frost.	Wind-force 8 and above.	No. of Observations reduced to a total of 93 for the month.													
					I.	II.	III.	In.	In.	In.										Forces 4-7.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.		W.	N.W.				
65.8	60.6	384	+144	79	+30	1.6	—	1.2	0.24	-2.07	0.20	29th	2	0	0	1	20	0	0	0	2	20	5	23	4	1	1	13	8	9	Eastbourne.			
61.7	55.8	359	—	—	—	2.1	—	2.9	0.26	—	0.14	24th	3	0	0	2	15	0	0	0	32	3	12	21	6	3	6	22	6	14	Dover.			
67.2	60.5	384	+144	79	+30	5.7	5.8	5.8	0.34	-1.33	0.13	28th, 29th	3	0	1	2	0	1	1	0	27	2	4	25	12	5	7	24	9	5	Dungeness.			
—	—	350	+126	72	+26	2.8	—	2.4	0.24	-1.07	0.18	29th	2	0	0	1	15	1	0	0	18	6	10	22	8	3	8	12	8	16	Hastings.			
—	—	362	+141	74	+29	1.8	—	1.5	0.13	-2.45	0.11	29th	2	0	0	2	18	0	0	0	6	3	0	25	0	14	0	33	0	18	Southampton.			
66.3	60.5	353	+137	72	+28	2.5	—	0.49	-1.81	0.39	—	25th	5	0	0	2	16	1	0	0	6	2	9	2	15	13	24	19	9	0	Ventnor.			
—	62.0	327	—	66	—	4.5	—	3.5	0.86	—	0.51	28th	6	0	0	3	8	2	0	0	0	2	15	19	4	2	3	24	16	8	Tottenham.			
—	—	321	—	65	—	4.7	—	3.4	0.76	—	0.34	25th	6	0	0	3	8	1	0	0	2	24	6	16	8	5	3	13	12	6	Hampstead.			
57.8	59.2	283	—	58	—	3.1	—	—	1.17	-1.40	0.89	28th	5	0	0	1	17	6	0	0	—	6	15	18	0	0	6	9	18	21	Camden Square.			
—	—	320	+139	65	+28	—	—	—	1.46	-0.92	0.55	28th	6	0	0	1	—	—	?	0	—	—	—	—	—	—	—	—	—	—	Westminster.			
—	—	303	—	62	—	4.7	—	—	—	—	—	—	—	0	0	3	5	5	0	0	3	6	12	12	6	3	9	24	15	6	South Kensington.			
—	62.7	334	+109	67	+22	4.5	—	3.5	0.27	-2.13	0.16	29th	4	0	0	0	10	2	0	0	2	11	8	15	13	1	6	20	15	4	Greenwich.			
65.0	—	—	—	—	—	4.5	—	3.2	0.46	-2.07	0.31	25th	4	0	0	3	10	2	0	0	3	18	12	21	4	2	9	9	12	6	Dulwich.			
65.4	58.2	334	+126	68	+26	4.4	4.2	2.6	0.83	-1.55	0.56	25th	5	0	0	2	10	2	0	0	13	11	12	11	10	2	10	14	14	9	9	Kew.		
—	—	298	+114	61	+24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Bunhill Row.			
—	—	278	—	57	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Plumstead.			
—	—	199	—	39	—	7.4	6.9	6.8	2.30	—	0.78	27th	16	0	0	0	3	14	0	0	41	16	4	8	2	2	16	24	13	8	9	Eskdalemuir.		
—	—	—	—	—	—	7.1	—	7.1	5.84	+1.66	0.83	7th	23	0	0	1	4	16	1	1	21	9	2	2	1	1	21	12	36	9	9	Poltalloch.		
—	—	179	+35	35	+7	7.9	—	7.0	2.18	-1.17	0.63	27th	18	0	0	0	3	18	0	0	12	13	2	10	3	5	9	22	26	3	6	Glasgow.		
—	—	—	—	—	—	6.5	—	7.6	4.24	+0.23	0.65	24th	21	0	0	2	4	15	5	1	10	24	4	0	12	0	9	2	36	6	3	Rothsay.		
—	55.2	—	—	—	—	6.3	—	—	1.99	-1.19	0.33	25th	17	0	0	1	7	16	2	0	1	18	0	0	3	3	6	15	21	36	9	9	Colmonell.	
62.8	59.2	224	—	44	—	6.9	—	7.1	1.25	-2.08	0.59	27th	13	0	0	0	5	14	0	0	1	12	16	9	0	0	8	6	38	0	16	Dumfries.		
—	—	—	—	—	—	—	—	—	2.21	-1.52	0.93	27th	12	0	0	0	—	—	—	0	4	0	0	9	2	24	18	21	0	19	0	19	Cally.	
—	—	253	+54	50	+11	6.2	—	5.3	2.34	-0.83	0.74	27th	13	0	0	4	3	8	7	0	0	30	0	2	6	5	10	12	16	24	18	18	Douglas.	
—	—	216	+43	42	+8	6.9	—	6.9	2.82	-0.79	0.98	17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Southport.		
65.8	60.8	284	—	56	+16	5.2	4.5	5.1	0.35	-2.64	0.10	30th	3	0	0	1	6	5	0	0	41	6	4	5	8	3	11	8	25	23	23	23	Southport.	
62.6	58.6	246	—	49	—	2.7	—	3.8	0.64	-2.89	0.18	25th	8	0	0	1	8	0	0	0	3	7	3	8	9	9	10	15	21	11	10	10	Manchester (City).	
—	—	252	—	50	—	5.0	4.6	5.5	0.99	—	0.44	25th	8	0	0	1	5	7	0	0	10	17	2	6	8	3	11	12	24	10	11	11	11	" (Whit. Pk.).
64.1	56.1	253	—	50	—	5.7	—	6.3	0.43	—	0.08	20th	10	0	0	1	2	8	0	0	18	2	3	10	5	3	12	9	36	13	13	13	Darwen.	
60.7	54.7	225	—	44	—	5.3	—	5.5	0.97	-3.01	0.29	20th	14	0	0	0	6	7	0	0	6	10	0	3	11	0	13	21	27	8	8	8	Aspatia.	
61.5	55.9	241	+63	47	+12	5.2	—	5.3	0.40	-2.77	0.14	20th	10	0	0	1	7	6	1	0	18	13	3	0	6	5	24	21	19	2	2	2	Newton Rigg.	
—	—	263	+84	52	+16	6.0	—	5.5	0.94	-3.25	0.26	1st	10	0	0	1	4	5	8	0	6	22	4	10	3	1	10	14	27	2	2	2	Stonyhurst.	
60.1	55.4	288	+100	57	+20	5.6	—	5.7	0.68	-2.33	0.30	30th	10	0	0	3	5	8	0	0	18	2	5	6	9	10	13	11	22	15	15	15	Blackpool.	
—	—	262	+98	52	+19	7.1	—	8.0	0.48	-3.11	0.12	25th	9	0	0	1	0	15	0	0	11	12	8	9	9	0	9	7	36	3	3	3	Manch'st r (Prest).	
—	—	284	—	57	—	3.7	—	5.1	0.47	-2.43	0.10	30th	9	0	0	8	7	5	0	0	17	0	3	3	8	13	11	6	30	19	19	19	Liverpol, Bid.Obs.	
—	—	269	+85	54	+17	4.4	—	5.5	1.17	-1.39	0.85	29th	9	0	0	2	6	6	0	0	0	21	0	0	12	0	18	9	24	9	9	9	Llandudno.	
61.4	55.9	251	—	50	—	6.3	4.9	6.0	1.22	-1.37	0.37	29th	13	0	0	1	4	4	—	0	28	6	8	1	5	2	14	26	14	17	17	17	Holyhead.	
65.7	58.5	278	—	55	—	4.7	—	4.5	1.00	—	0.29	29th	11	0	0	1	6	2	0	0	11	3	3	0	15	7	2	27	28	8	8	8	Bettws-y-Coed.	
62.8	57.0	259	+77	51	+15	5.2	4.7	5.5	0.79	-2.25	0.85	10	9	0	0	1	9	9	0	1	29	18	6	6	2	2	21	19	15	4	4	4	Dwyran.	
61.5	54.4	273	—	55	—	5.7	—	—	0.62	—	0.39	29th	8	0	0	1	9	10	?	5	0	9	15	9	15	3	3	3	32	21	12	12	12	Llangamm. Wells.
—	—	273	+67	55	+13	5.5	4.7	4.9	0.43	-2.12	0.14	21st, 31st	6	0	0	0	5	4	0	0	35	6	7	19	5	4	19	8	15	10	10	10	Pembroke.	
—	—	352	—	72	—	—	—	—	0.07	-2.96	0.07	26th	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Clifton.	
69.4	—	350	+145	73	+30	4.0	3.7	3.7	0.10	—	0.10	29th	1	0	0	1	7	0	4	0	31	5	5	13	13	5	9	12	15	16	16	16	Portland Bill.	
—	—	—	—	—	—	4.1	3.1	3.8	1.49	-1.40	1.34	29th	4	0	0	1	9	0	0	?	?	3	14											

TABLE B.—SUMMARY of the OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE at additional STATIONS, JULY, 1911.

DISTRICT.	STATION.	Height of Gauge above M.S.L. Ft.	AIR TEMPERATURE.								Earth Temperature		Gr'nd Frost.	RAIN AND OTHER FORMS OF PRECIPITATION.					BRIGHT SUNSHINE.			
			Mean of		Mean of A and B.	Diff. of Mean from Normal.	Absolute Maximum and Minimum.				1 ft.	4 ft.	No. of Nig'ts	Total Fall.	Diff. from Normal.	Most in a day.		Number of Days.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.
			A	B			Max.	Day.	Min.	Day.						Amt.	Day.					
			°	°	°	°	°	°	°	°	In.	In.	In.	In.	°	°	°	°				
0. SCOTLAND N.	p Baltasound - - - S	31	57.6	48.3	53.0	—	66	12th	42	9th	54.9	—	—	1.75	—	0.22	27th	18	181	—	33	—
	p Dunrossness - - -	145	58.4	47.9	53.2	+ 0.4	69	11th	40	1st	—	—	—	1.28	- 1.12	0.19	27th	14	—	—	—	—
	a Fortrose - - -	69	65.5	51.7	58.6	—	79	12th	43	3rd	—	—	—	1.61	—	0.30	16th, 18th	12	217	—	41	—
1. SCOTLAND, E.	p Insh - - -	426	69.3	48.3	58.8	—	84	12th	39	20th	60.5	—	0	1.62	—	0.35	16th	17	209	—	40	—
	p Crathes - - - S	140	70.0	49.5	59.8	—	83	12th	38	3, 10, 20	59.6	54.9	3	1.83	—	0.49	18th	16	213	—	41	—
	p Stonehaven - - -	286	65.9	50.6	58.3	—	80	6th	39	10th	—	—	—	2.25	—	0.63	18th	16	237	—	45	—
2. ENGLAND, N.E.	p Balruddery - - - S	276	72.1	52.1	62.1	—	87	12th	43	10th	—	—	—	1.25	—	0.23	20th	17	183	—	35	—
	a West Linton - - - S	800	66.6	48.4	57.5	+ 0.2	84	12th	35	10th	—	—	—	1.35	—	0.38	20th	14	193	—	37	—
	a Alnwick Castle - - -	210	71.1	50.9	61.0	+ 2.9	82	28th	36	10th	—	—	—	0.57	- 2.24	0.31	2nd	7	—	—	—	—
3. ENGLAND, E.	p Newcastle-on-Tyne - - -	152	71.8	54.3	63.1	—	81	14th, 28th	44	3rd	—	—	—	1.07	- 1.88	0.51	2nd	11	215	+ 69	42	+ 13
	a Chopwellwood - - -	445	70.7	49.7	60.2	—	81	14th	39	10th	—	—	2	0.88	—	0.21	20th	9	270	—	53	—
	a Fulbeck - - -	180	77.7	53.3	65.5	+ 4.5	91	29th	43	3rd, 11th	—	—	0	0.36	- 2.07	0.21	29th	7	268	—	54	—
4. MIDLAND COUNTIES	a Rauceby - - -	124	76.9	53.0	65.0	—	90	21st	44	3rd	67.2	58.9	0	0.41	- 2.16	0.22	27th	5	294	—	59	—
	a Felixstowe - - -	10	72.5	56.8	64.7	+ 2.7	83	8th	45	3rd	—	—	—	0.45	—	0.18	24th	6	359	—	73	—
	a Rothamsted - - -	424	76.3	53.5	64.9	+ 3.8	88	21st	44	4th, 16th	—	—	—	0.61	- 2.02	0.23	26th	5	316	+ 101	64	+ 20
5. ENGLAND, S.E.	a Shoeburyness - - -	13	76.0	57.0	66.5	+ 3.2	90	21st	47	16th	—	—	—	0.12	- 1.69	0.10	24th	3	—	—	—	—
	a Southend-on-Sea - - -	90	77.0	58.5	67.8	—	91	22nd	50	3rd, 11th	68.8	—	0	0.35	- 1.77	0.16	25th	3	339	—	69	—
	a Harrogate - - -	476	72.2	52.2	62.2	+ 3.4	85	14th	41	3rd, 10th	58.9	56.6	0	0.47	- 2.29	0.16	2nd	7	275	—	54	—
6. SCOTLAND, W.	a Bradford - - -	489	71.8	53.1	62.5	—	82	28th	43	24th	63.3	57.8	0	0.19	—	0.09	20th	5	281	—	56	—
	a Cheadle - - -	646	73.9	52.4	63.2	+ 4.3	86	29th	43	3rd	—	—	0	0.35	- 2.72	0.09	1st, 29th	6	—	—	—	—
	a Bawtry - - -	65	76.7	51.8	64.3	+ 3.3	89	21st, 28th	40	21st	—	—	—	0.23	- 2.33	0.09	29th	5	—	—	—	—
7. ENGLAND, N.W.	a Worksop - - -	56	77.0	50.7	63.9	+ 3.1	89	28th	39	11th	62.3	57.4	0	0.15	- 2.31	0.05	19th, 29th	6	258	+ 92	51	+ 18
	a Mayfield (Staffs.) - - -	374	74.9	48.8	61.9	—	87	21st	37	11th	—	—	—	0.38	—	0.20	29th	6	—	—	—	—
	a Belper - - -	222	77.2	51.9	64.6	—	88	21st	42	3rd	—	—	0	0.05	—	0.02	1st, 19th	3	—	—	—	—
8. SCOTLAND, W.	a Kingston-on-Soar - - -	125	76.8	50.4	63.6	—	88	20th	36	11th	62.2	—	—	0.15	—	0.10	19th	4	—	—	—	—
	p Rugby - - -	379	78.7	53.8	66.3	+ 5.6	93	29th	41	11th	—	—	0	0.31	—	0.15	1st	4	—	—	—	—
	a Raunds - - -	210	79.4	53.2	66.3	+ 4.4	93	21st	43	11th	63.9	—	0	0.45	—	0.37	27th	2	—	—	—	—
9. SCOTLAND, W.	a Winslow - - -	379	79.0	55.0	67.0	—	91	21st	45	10th	—	—	0	0.27	—	0.12	29th	4	—	—	—	—
	a Hereford - - -	291	76.3	52.2	64.3	+ 3.1	87	29th	39	11th	—	—	0	0.45	- 1.93	0.35	29th	3	—	—	—	—
	a Cirencester - - -	446	78.1	52.6	65.4	+ 5.1	89	21st, 29th	42	3rd	63.9	57.9	0	0.04	- 2.81	0.03	23rd	2	305	+ 106	62	+ 22
10. SCOTLAND, W.	a Epsom - - -	160	80.6	55.1	67.9	—	97	22nd	47	11th, 16th	—	—	0	0.47	—	0.15	29th	7	—	—	—	—
	a Wokingham - - -	216	78.9	49.8	64.4	—	89	22nd, 28th	38	13th	—	—	—	0.45	—	0.28	29th	4	—	—	—	—
	a Marlborough - - -	424	78.4	49.8	64.1	+ 3.9	89	28th	40	3rd, 11th	—	—	0	0.16	- 2.54	0.15	29th	2	327	+ 137	66	+ 27
11. SCOTLAND, W.	a Bucklebury - - -	409	77.8	53.5	65.7	—	89	29th	42	11th	—	—	1	0.03	—	0.03	29th	1	—	—	—	—
	a Swarraton - - -	310	77.3	52.2	64.8	+ 4.5	89	29th	42	4th	—	—	—	0.05	- 2.52	0.03	29th	3	—	—	—	—
	a Margate - - -	85	75.2	58.0	66.6	+ 4.2	94	22nd	48	16th	64.9	59.6	0	0.33	- 1.65	0.11	24th	4	337	+ 130	69	+ 27
12. SCOTLAND, W.	Broadstairs - - -	140	—	—	—	—	—	—	—	—	—	—	—	0.38	—	0.20	24th	4	352	—	72	—
	Ramsgate - - -	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	a Eltham - - -	200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
13. SCOTLAND, W.	a Wisley - - -	150	78.9	54.1	66.5	+ 3.0	91	22nd	45	16th	67.1	60.7	0	1.25	—	0.94	25th	6	344	—	70	—
	a Basingstoke - - -	289	78.1	53.8	66.0	—	90	29th	44	3rd	67.2	59.1	0	0.08	—	0.04	27th	3	—	—	—	—
	a Sevenoaks - - -	509	78.2	54.2	66.2	—	91	22nd	46	3rd, 16th	65.7	58.4	0	0.47	—	0.41	25th	3	—	—	—	—
14. SCOTLAND, W.	a Tunbridge Wells - - -	421	78.1	53.8	66.0	+ 4.6	92	29th	44	3rd	66.8	—	0	0.37	- 2.03	0.27	29th	3	379	+ 168	77	+ 34
	a Matfield - - -	320	77.5	53.5	65.5	—	93	29th	46	3rd	—	—	0	0.59	—	0.52	29th	2	—	—	—	—
	p Folkestone - - -	121	72.7	58.1	65.4	—	82	29th	49	16th	—	55.9	—	0.28	- 1.90	0.16	30th	3	362	—	74	—
15. SCOTLAND, W.	Littlestone - - -	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	a Bexhill - - -	27	73.5	58.3	65.9	—	81	13th	47	3rd	66.7	—	0	0.15	—	0.10	29th	2	344	—	70	—
	Hove - - -	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
16. SCOTLAND, W.	a Worthing - - -	36	75.3	56.0	65.7	+ 4.2	84	12th, 13th	46	3rd	67.2	60.4	0	0.32	- 1.75	0.18	29th	5	369	—	76	—
	a Bognor - - -	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Westbourne - - -	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
17. SCOTLAND, W.	a Totland Bay - - -	140	74.5	56.8	65.7	+ 5.0	85	29th	47	4th	—	—	0	0.15	- 2.22	0.13	29th	2	378	—	77	—
	a Sandown - - -	20	76.0	57.9	67.0	—	87	22nd	48	3rd	—	—	—	1.03	—	0.58	25th	4	368	—	76	—
	p Bournemouth - - -	145	77.1	55.0	66.1	—	86	8th, 22nd	45	3rd, 4th	65.4	62.3	—	0.23	—	0.23	29th	1	382	—	78	—
18. SCOTLAND, W.	p Oban - - -	20	64.2	51.5	57.9	—	76	12th	37	3rd	—	—	0	4.44	—	0.71	24th	20	167	—	32	—
	a Thorntonhal (Lanarkshire) - - -	440	67.5	49.7	58.6	—	82	12th	39	3rd	—	—	0	2.04	—	0.56	27th	16	187	—	36	—
	a Kilmarnock - - -	90	67.6	51.6	59.6	+ 0.9	81	12th, 13th	38	3rd	—	—	—	2.47	—	0.69	27th	18	190	—	37	—
19. SCOTLAND, W.	p Ruthwell - - - S	67	70.3	52.3	61.3	—	87	13th	37	3rd	—	—	—	1.41	—	0.61	27th	12	216	—	42	—

**1. BAROMETER AND WIND AT 7 A.M.**

The dotted lines indicate the normal distribution of pressure in July, based on 35 years' observations, 1871-1905.

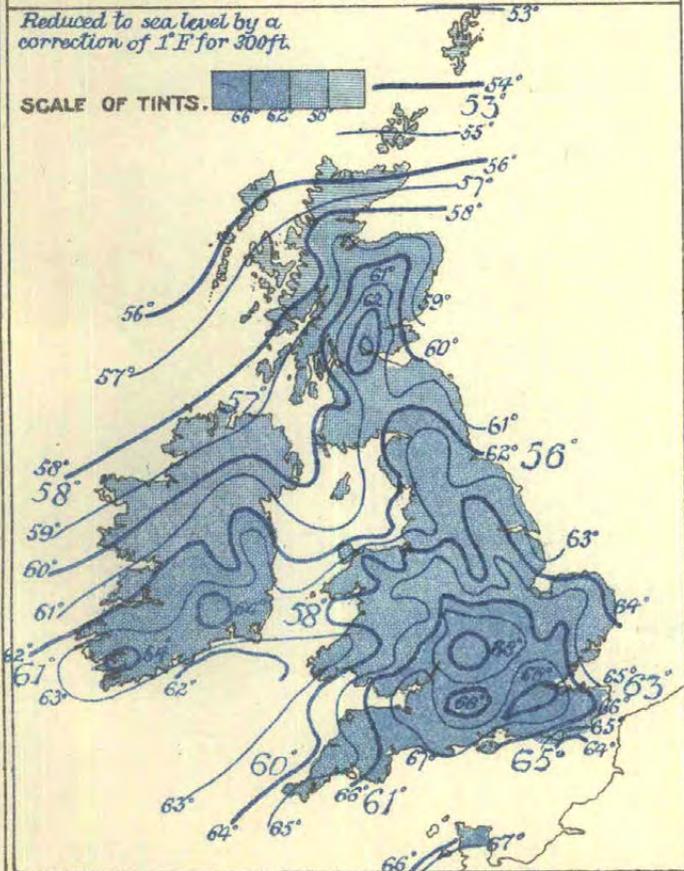


WIND ROSES. The arrows fly with the wind and indicate frequency and force, thus

**3. DISTRIBUTION OF MEAN TEMPERATURE.**

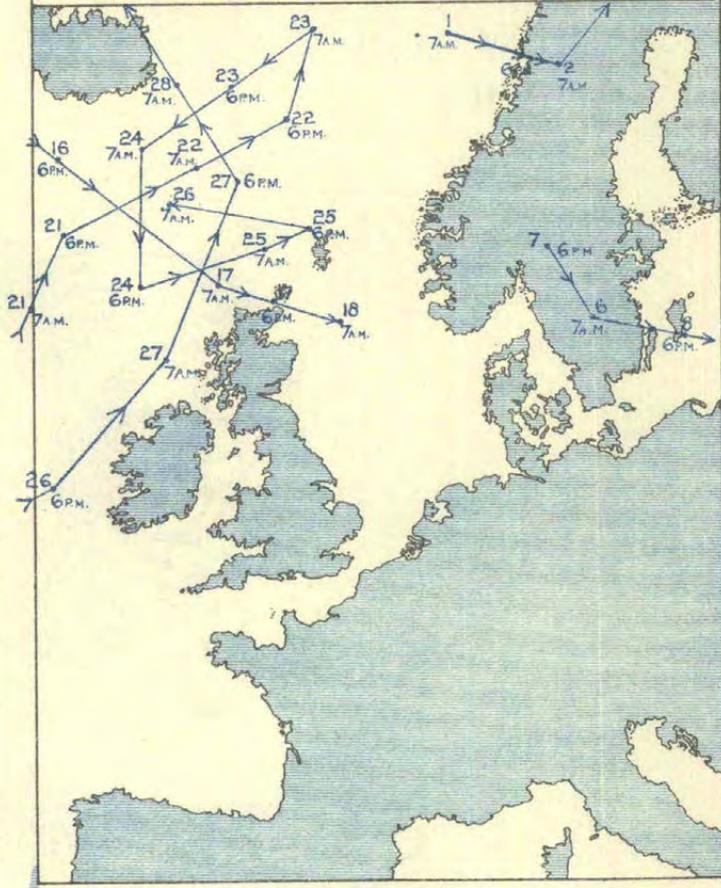
Reduced to sea level by a correction of 1° F for 300 ft.

SCALE OF TINTS.



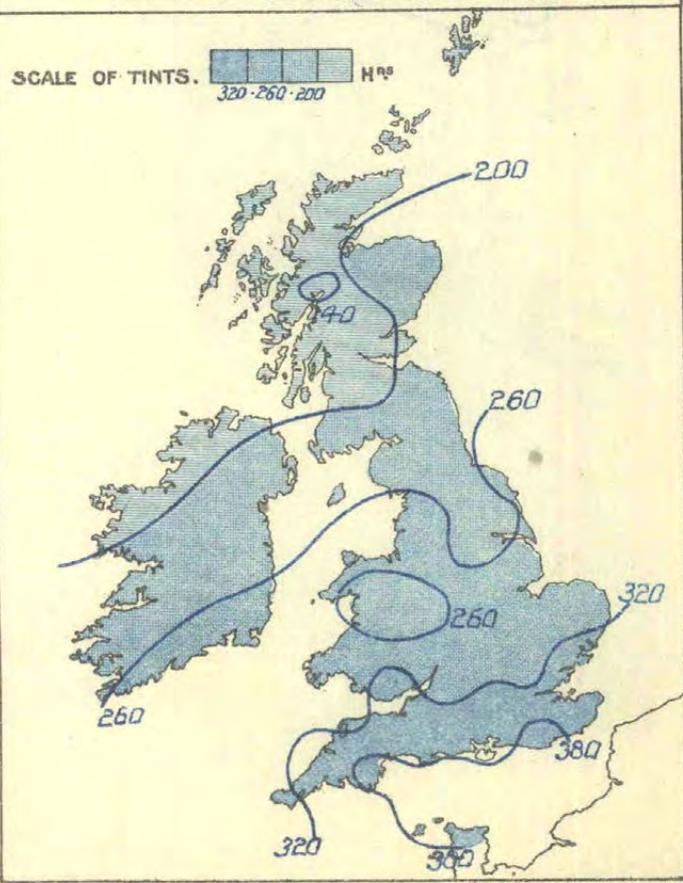
Sea temperatures are shown in large figures, thus 60°

**2. MOVEMENTS OF DEPRESSIONS.**

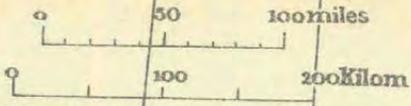


**4. BRIGHT SUNSHINE, IN HOURS.**

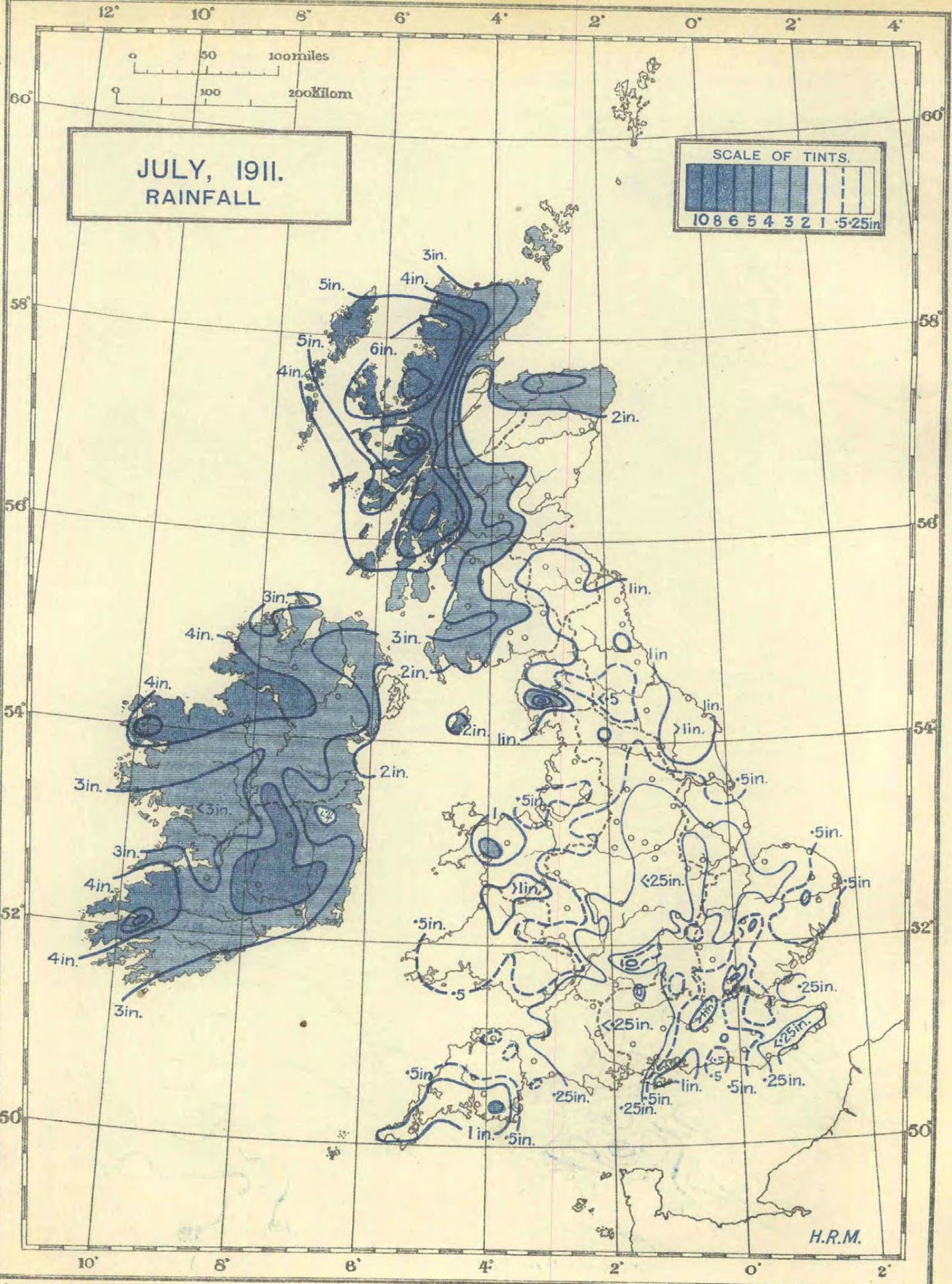
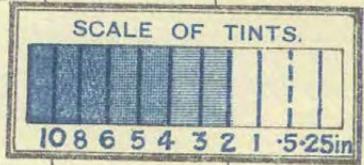
SCALE OF TINTS.



12° 10° 8° 6° 4° 2° 0° 2° 4°



**JULY, 1911.  
RAINFALL**



H.R.M.

TABLE B (continued).—SUMMARY of the OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE at additional STATIONS, JULY, 1911.

DISTRICT.	STATION.	Height of Gauge above M.S.L. Ft.	AIR TEMPERATURE.								Earth Temperature		Grnd Frost. No. of Nig'ts	RAIN AND OTHER FORMS OF PRECIPITATION.				BRIGHT SUNSHINE.				
			Mean of		Mean of A and B.	Diff. of Mean from Normal.	Absolute Maximum and Minimum.				1 ft.	4 ft.		Total Fall. In.	Diff. from Normal. In.	Most in a day.		Number of Days.	Total in Hours.	Diff. from Normal. Hr.	Per Cent. %	Diff. from Normal. %
			A	B			Max.	Day.	Min.	Day.			In.			In.	In.					
			Max.	Min.	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
8. ENGLAND, S.W.	§ p Aberystwyth - - -	59	70.1	56.8	63.5	-	83	29th	48	24th	-	-	-	0.83	-	0.36	31st	4	291	-	59	-
	§ Haverfordwest - - -	93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	296	-	60	-
	§ Tenby - - -	79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	293	+84	59	+17
	§ Port Talbot - - -	179	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	280	-	57	-
	§ Forest of Dean - - -	200	-	-	-	-	-	-	-	-	-	-	-	0.51	-	0.26	29th	4	-	-	-	-
	§ " " - - -	900	-	-	-	-	-	-	-	-	-	-	-	0.59	-	0.29	29th	4	-	-	-	-
	¶ p Cardiff - - -	203	75.7	55.0	65.4	+ 4.0	91	29th	46	3rd	66.1	59.4	0	0.13	-3.33	0.11	30th	3	342	-	70	-
	¶ a Swansea - - -	24	74.6	57.8	66.2	-	85	8th, 29th	50	2nd, 3rd	68.5	60.7	0	0.28	-	0.20	29th	6	303	-	62	-
	¶ a Shaftesbury - - -	722	75.8	54.5	65.2	+ 5.0	87	8th	45	3rd	65.6	-	-	0.10	-2.74	0.10	29th	1	-	-	-	-
	¶ a Arlington - - -	613	73.5	54.0	63.8	+ 4.4	87	29th	46	3rd	-	-	-	0.70	-3.45	0.40	26th	4	-	-	-	-
	¶ a Cullompton - - -	202	79.0	53.5	66.3	+ 4.6	90	8th	44	3rd	63.0	-	0	0.30	-2.72	0.20	29th	3	336	+148	69	+30
	¶ Torquay - - -	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	383	+160	79	+33
	¶ a Weymouth - - -	21	75.9	57.7	66.8	-	85	14th	49	3rd	-	-	-	0.12	-	0.12	29th	1	380	-	78	-
	¶ Paignton - - -	11	73.9	57.2	65.6	-	83	14th	50	5th	-	-	-	0.38	-	0.33	29th	3	373	-	77	-
	¶ p Sheepstor - - -	749	73.2	50.5	61.9	-	85	8th	39	3rd	-	-	-	1.37	-	0.90	29th	4	-	-	-	-
¶ Salcombe - - -	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	371	-	76	-
¶ a Teignmouth - - -	19	74.3	58.1	66.2	-	83	14th	52	3rd	-	-	0	0.62	-	0.57	29th	2	366	-	75	-	
¶ a Fowey - - -	-	73.0	55.6	64.3	-	80	15th	46	2nd	-	-	-	0.86	-	0.62	30th	2	340	-	70	-	
¶ a Penzance - - -	54	72.3	58.8	65.6	-	84	8th	50	4th	-	-	-	0.95	-	0.40	29th	6	296	-	61	-	
9. IRELAND, N.	¶ p Dunfanaghy - - -	54	-	-	-	-	78	12th	45	26th	-	-	-	2.37	-	0.39	26th	23	-	-	-	-
	¶ p Dublin (Glasnevin) - - -	67	71.9	53.3	62.6	+ 3.4	84	13th	43	2nd, 3rd	-	-	0	2.68	-0.07	1.16	29th	13	-	-	-	-
	¶ a Kingstown - - -	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	¶ p Clongowes Wood College - - -	245	71.6	50.5	61.1	-	85	13th	40	2nd	-	-	0	1.62	-	0.36	19th	14	253	-	50	-
	¶ a Mountmellick - - -	233	72.2	51.9	62.1	-	87	13th	43	11th, 12th	-	-	-	3.59	-	1.31	29th	15	-	-	-	-
10. IRELAND, S.	¶ p Newcastle (Co. Wicklow) - - -	256	70.5	52.5	61.5	-	81	7th	43	2nd	-	-	-	2.55	-	0.57	26th	10	-	-	-	-
	¶ a Kilkenny - - -	212	74.0	53.2	63.6	+ 3.9	88	13th	42	2nd, 3rd	-	-	-	4.93	+2.23	2.21	29th	12	-	-	-	-
	¶ a Cahir - - -	199	73.8	52.3	63.1	+ 3.5	88	13th	43	2nd	-	-	-	3.84	-	1.94	29th	9	-	-	-	-
	¶ a Foynes - - -	108	70.0	54.0	62.0	+ 3.5	84	13th	46	2nd	-	-	-	1.53	-1.51	0.53	19th	11	-	-	-	-
11. ENGLISH CHANNEL	¶ a Ballinacurra - - -	34	72.4	54.3	63.4	-	86	14th	45	1st, 11th	-	-	-	2.75	-	1.00	29th	8	279	-	57	-
	¶ a Guernsey (Villa Carey) - - -	180	72.7	57.3	65.0	+ 3.6	83	20th	48	4th	-	-	-	0.75	-1.60	0.58	25th	4	376	+120	78	+25

NOTES ON THE STATISTICAL TABLES.

Hours of Observation.—The following types are used to indicate the hours of observation at Stations included in Table A:—Clarendon, Normal Climatological Stations—I, 9 a.m. [II, 3 p.m.], III, 9 p.m. Black Capitals, telegraphic reporting normal climatological stations—I, 7 a.m., II, 1 p.m., III, 9 p.m. Roman, telegraphic reporting stations—I, 7 a.m., [II, 1 p.m.], III, 6 p.m. Italic, auxiliary climatological stations—I, 9 a.m. only, at Balmoral, Colmonell and Ventnor 3 p.m. also. The summaries are based on observations made three times a day wherever the data are available, except in the case of the element pressure (see below). At stations shown in clarendon type the maximum and minimum temperatures are read at 9 p.m.; at the remaining stations these observations are made at I. In Table B the letters a and p indicate whether the readings of the maximum and minimum are taken at the hours of morning or evening observation.

Barometer.—The correction for latitude has not been applied to the readings quoted in the Tables. It is applied to the readings at sea level from which the chart showing the mean monthly distribution of pressure is prepared. The values given in the tables are for station level. The values printed are (1) for stations shown in clarendon type, the means of observations at 9 a.m. and 9 p.m.; (2) for stations shown in Capitals, the means of observations at 7 a.m., 1 p.m., 9 p.m.; (3) for stations shown in Roman type, the means of observations at 7 a.m. and 6 p.m.; (4) for stations shown in italic type, the means of observations at 9 a.m. The column headed C gives the correction for diurnal variation required to reduce the means of observations at fixed hours to true diurnal means, based on the analysis of the values obtained at the four observatories for the period 1871-1905. The difference from normal is based upon the 7 a.m. readings only, except in the cases of Kew, Greenwich, Aberdeen, Valencia and Falmouth (see below).

Rainfall.—The amounts are those for the 24 hours commenced at the time of morning observation.

Hygrometer.—At certain stations the vapour pressure and the relative humidity are the results obtained from the daily values. These are entered in clarendon type. At other stations the calculations are made from the monthly means of the dry and wet bulb readings.

Weather Phenomena.—The number of days of Rain, Snow, Hail, Thunderstorm, Fog, Ground Frost, and Gale, are counted irrespective of the hours at which the phenomena occur. Except in the cases of rainfall (see above) and ground frost the day is the civil day. A day is reckoned as a day of "clear sky," if the mean of the estimates of the "amount of cloud" at the fixed hours of observation is less than 2, and as an "overcast" day if the mean is greater than 8. Days of Ground Frost.—A day is counted as a "Day of Ground Frost" if it follows a night on which the minimum has sunk to 30° or less.

Wind Summaries.—The results given under wind direction, and the number of observations of calms and of fresh or strong wind, are based on the observations at fixed hours. At Deerness, Aberdeen, Valencia, Falmouth, Kew, Glasgow, Stonyhurst and Armagh the wind observations are based on the records of a standard Robinson anemometer (factor 2.2). Velocities of between 13 and 38 miles in the hour have been entered as "fresh or strong winds," velocities of 39 miles in the hour, or above, as gales. (At Brighton, Plymouth and Southport the equivalent values are obtained from a Dines Pressure Tube Anemometer.)

Averages.—The normal averages used for stations are—Pressure, Temperature, and Rainfall for the 35 years 1871-1905; Bright Sunshine for the 25 years 1881-1905. The values are published in Appendix III. to the Weekly Weather Report for 1906. For Greenwich and Oxford, averages for longer periods are used. (See Notes in Monthly Weather Reports for 1908.) Monthly averages of pressure at telegraphic reporting stations for the epoch 8 a.m. are published in Appendix I. to the Daily Weather Report. In order to render these averages comparable with the data for the present month, a correction, based on the results for the four observatories as published in "Hourly Readings at the Observatories under the Meteorological Council," has been applied to each of them before the figures given in the column headed "Barometer—Difference from Normal" were computed.

Aberdeen, Falmouth, Kew, Valencia, Oxford, Greenwich.—The figures quoted in the second line assigned to these observatories in the columns for Barometer and Mean Temperature are the true daily means computed from the hourly tabulations of the traces of the photographic recording instruments. For Kew, Falmouth, Aberdeen and Valencia the divergences of the means of the readings at 9 a.m. and 9 p.m. from their normal averages are also given.

Royal Observatory, Greenwich.—The earth temperatures are taken at a depth of 3 ft. 2 ins. The daily rainfall amounts are those for the 24 hours comprising the civil day. The number of days in the month which were persistently overcast from midnight to midnight was 0, the number of persistently cloudless days was 0, the number of persistently foggy days was 0.

¶ § Mean Values for Districts.—The stations used in the Weekly Weather Report for the computation of "district values" of rainfall and temperature are distinguished by the sign ¶, those used for the computation of "district values of bright sunshine" by the sign §. These stations are distributed between Tables A and B. The monthly mean values for districts given in this Report for maximum, minimum and mean temperature, duration of bright sunshine, number of rain days and amount of rainfall, are computed from the data for these "representative" stations. The mean temperature for districts is computed in the manner shown in the preface to this and previous volumes of the Weekly Weather Report. The monthly mean values for districts for "amount of cloud" are computed from the data for all stations included in Table A. The extreme values of the various elements in each district are printed in distinctive type. In the lines devoted to district values, the columns referring to absolute highest and absolute lowest temperature and the maximum amount of rainfall in a day contain the extreme values for the district at any station included in either table of the Report. The averages for districts with which the current values are compared are for the 25 years 1881-1905, as in the case of the corresponding values published in the Weekly Weather Report.

Meteorological Societies.—Information for stations marked ¶ is supplied by the Royal Meteorological Society, and that for stations marked § is supplied by the Scottish Meteorological Society. Stations marked S are in connexion with the Scottish Meteorological Society and those marked M with the Royal Meteorological Society as well as with the Meteorological Office.

No.		Name		Address		Occupation		Remarks	
1	1	John	Smith	123	Main St	Teacher			
2	2	Mary	Johnson	456	Maple St	Homemaker			
3	3	Robert	Williams	789	Pine St	Farmer			
4	4	Elizabeth	Brown	101	Oak St	Teacher			
5	5	James	Miller	202	Elm St	Merchant			
6	6	Anna	Davis	303	Cedar St	Homemaker			
7	7	Charles	Wilson	404	Birch St	Farmer			
8	8	Margaret	Moore	505	Walnut St	Teacher			
9	9	Thomas	Taylor	606	Spruce St	Merchant			
10	10	Isabella	Anderson	707	Pine St	Homemaker			
11	11	George	Thomas	808	Maple St	Farmer			
12	12	Frances	White	909	Oak St	Teacher			
13	13	Edward	Black	1010	Elm St	Merchant			
14	14	Josephine	Green	1111	Cedar St	Homemaker			
15	15	William	King	1212	Birch St	Farmer			
16	16	Lucy	Wright	1313	Walnut St	Teacher			
17	17	Henry	Scott	1414	Spruce St	Merchant			
18	18	Emily	Walker	1515	Pine St	Homemaker			
19	19	Frank	Young	1616	Maple St	Farmer			
20	20	Elizabeth	Allen	1717	Oak St	Teacher			
21	21	John	Evans	1818	Elm St	Merchant			
22	22	Mary	King	1919	Cedar St	Homemaker			
23	23	Robert	Wright	2020	Birch St	Farmer			
24	24	Anna	Scott	2121	Walnut St	Teacher			
25	25	Charles	Walker	2222	Spruce St	Merchant			
26	26	Isabella	Young	2323	Pine St	Homemaker			
27	27	George	Allen	2424	Maple St	Farmer			
28	28	Frances	Evans	2525	Oak St	Teacher			
29	29	Edward	King	2626	Elm St	Merchant			
30	30	Josephine	Wright	2727	Cedar St	Homemaker			
31	31	William	Scott	2828	Birch St	Farmer			
32	32	Lucy	Walker	2929	Walnut St	Teacher			
33	33	Henry	Young	3030	Spruce St	Merchant			
34	34	Emily	Allen	3131	Pine St	Homemaker			
35	35	Frank	Evans	3232	Maple St	Farmer			
36	36	Elizabeth	King	3333	Oak St	Teacher			
37	37	John	Wright	3434	Elm St	Merchant			
38	38	Mary	Scott	3535	Cedar St	Homemaker			
39	39	Robert	Walker	3636	Birch St	Farmer			
40	40	Anna	Young	3737	Walnut St	Teacher			
41	41	Charles	Allen	3838	Spruce St	Merchant			
42	42	Isabella	Evans	3939	Pine St	Homemaker			
43	43	George	King	4040	Maple St	Farmer			
44	44	Frances	Wright	4141	Oak St	Teacher			
45	45	Edward	Scott	4242	Elm St	Merchant			
46	46	Josephine	Walker	4343	Cedar St	Homemaker			
47	47	William	Young	4444	Birch St	Farmer			
48	48	Lucy	Allen	4545	Walnut St	Teacher			
49	49	Henry	Evans	4646	Spruce St	Merchant			
50	50	Emily	King	4747	Pine St	Homemaker			
51	51	Frank	Wright	4848	Maple St	Farmer			
52	52	Elizabeth	Scott	4949	Oak St	Teacher			
53	53	John	Walker	5050	Elm St	Merchant			
54	54	Mary	Young	5151	Cedar St	Homemaker			
55	55	Robert	Allen	5252	Birch St	Farmer			
56	56	Anna	Evans	5353	Walnut St	Teacher			
57	57	Charles	King	5454	Spruce St	Merchant			
58	58	Isabella	Wright	5555	Pine St	Homemaker			
59	59	George	Scott	5656	Maple St	Farmer			
60	60	Frances	Walker	5757	Oak St	Teacher			
61	61	Edward	Young	5858	Elm St	Merchant			
62	62	Josephine	Allen	5959	Cedar St	Homemaker			
63	63	William	Evans	6060	Birch St	Farmer			
64	64	Lucy	King	6161	Walnut St	Teacher			
65	65	Henry	Wright	6262	Spruce St	Merchant			
66	66	Emily	Scott	6363	Pine St	Homemaker			
67	67	Frank	Walker	6464	Maple St	Farmer			
68	68	Elizabeth	Young	6565	Oak St	Teacher			
69	69	John	Allen	6666	Elm St	Merchant			
70	70	Mary	Evans	6767	Cedar St	Homemaker			
71	71	Robert	King	6868	Birch St	Farmer			
72	72	Anna	Wright	6969	Walnut St	Teacher			
73	73	Charles	Scott	7070	Spruce St	Merchant			
74	74	Isabella	Walker	7171	Pine St	Homemaker			
75	75	George	Young	7272	Maple St	Farmer			
76	76	Frances	Allen	7373	Oak St	Teacher			
77	77	Edward	Evans	7474	Elm St	Merchant			
78	78	Josephine	King	7575	Cedar St	Homemaker			
79	79	William	Wright	7676	Birch St	Farmer			
80	80	Lucy	Scott	7777	Walnut St	Teacher			
81	81	Henry	Walker	7878	Spruce St	Merchant			
82	82	Emily	Young	7979	Pine St	Homemaker			
83	83	Frank	Allen	8080	Maple St	Farmer			
84	84	Elizabeth	Evans	8181	Oak St	Teacher			
85	85	John	King	8282	Elm St	Merchant			
86	86	Mary	Wright	8383	Cedar St	Homemaker			
87	87	Robert	Scott	8484	Birch St	Farmer			
88	88	Anna	Walker	8585	Walnut St	Teacher			
89	89	Charles	Young	8686	Spruce St	Merchant			
90	90	Isabella	Allen	8787	Pine St	Homemaker			
91	91	George	Evans	8888	Maple St	Farmer			
92	92	Frances	King	8989	Oak St	Teacher			
93	93	Edward	Wright	9090	Elm St	Merchant			
94	94	Josephine	Scott	9191	Cedar St	Homemaker			
95	95	William	Walker	9292	Birch St	Farmer			
96	96	Lucy	Young	9393	Walnut St	Teacher			
97	97	Henry	Allen	9494	Spruce St	Merchant			
98	98	Emily	Evans	9595	Pine St	Homemaker			
99	99	Frank	King	9696	Maple St	Farmer			
100	100	Elizabeth	Wright	9797	Oak St	Teacher			

This document is a record of the names and addresses of the residents of the town of ... in the year 1917. The information was obtained from the ... of the town clerk. The names are listed in alphabetical order by last name. The addresses are given as far as they are known. The occupations are given where they are known. The remarks column contains any other information that was available at the time the record was made.

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**FOR OFFICIAL USE.**  
**MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE**  
(Supplement to the Weekly Weather Report.)

SUMMARY OF OBSERVATIONS COMPILED FROM THE RETURNS OF OFFICIAL STATIONS AND VOLUNTEER OBSERVERS IN THE UNITED KINGDOM, WITH  
A CHART OF RAINFALL CONTRIBUTED BY THE BRITISH RAINFALL ORGANISATION.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE,

AND PUBLISHED FOR H.M. STATIONERY OFFICE BY WYMAN AND SONS, LTD., FETTER LANE, E.C.; OR OLIVER AND BOYD, EDINBURGH; OR E. PONSONBY, LTD.,  
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THIRTY-SIXTH YEAR.  
Vol. XXVIII. (New Series) } No. VIII.  
Weekly Weather Report.

AUGUST, 1911.

[Price 6d.]

**SUMMARY OF OBSERVATIONS.**

**Pressure, Winds and Weather.**—During the period to which this summary relates the distribution of atmospheric pressure over the United Kingdom and the surrounding regions was somewhat more variable than was the case in June and July, each of these two months being almost equally divided between comparatively simple anticyclonic and cyclonic systems. August, however, admits of being separated into four fairly well-defined pressure types. The combination of land observations on both sides of the Atlantic and wireless reports from vessels out on the ocean showed that the first ten days of the month had a distinct prevalence of anticyclonic conditions extending from the Eastern States eastward along the middle latitudes of the Atlantic, and thence away to Eastern and North-eastern Europe. The minor systems which made up this great belt varied a little in shape and position from day to day, but their changes of intensity were unimportant. To the northward of the high belt lay a well-developed area of low pressure, whose movements in any direction were so slight that the system may be regarded as practically stationary over the upper part of the ocean, with its central space situated between our north-western coasts and Southern or South-western Iceland. From this it will be seen that the British Isles occupied an intermediate position between the high and the low pressure systems. The depression does not appear to have been of any great depth, 29½ in. in 55° N., 25° W. on the 1st being the lowest barometer reading reported. By the 10th the pressure at the centre had increased to nearly 30 in., the system was dispersing over Iceland, and on the 11th the anticyclone previously over North-eastern Europe took up a position over the British Isles and the regions to the northward, and in the next four days the highest pressure during the month, nearly 30½ in., was attained—at stations in Scotland, Norway and Iceland. After the 15th the system diminished in intensity and in extent as it moved slowly southward across the British Isles to France by the 18th. Another change in the pressure distribution now took place. In addition to the anticyclone near the Azores there was an area of relatively high barometer readings about the Arctic Circle, and the conditions had thus become favourable to the advance of disturbances from the Atlantic to the British Isles, the Bay of Biscay, and the Continent. This type was maintained until the 23rd, and on the following day the distribution of pressure reverted to something like what it had been from the 1st to the 10th. The barometer again stood relatively high along the middle latitudes of the Atlantic and across Europe, and low to the northward, but instead of a stationary depression between our north-western coasts and Iceland, the closing week witnessed a succession of disturbances, following each other quickly across the ocean, bearing away on a north-easterly course close to the Farøe, and disappearing beyond the Arctic Circle. As a rule these disturbances were not of much depth, but on the closing day as the centre of one passed across Iceland, the barometer fell very rapidly to 28½ in., then rose as quickly as the system crossed the Arctic Circle.

The mean distribution of pressure for the whole month was consequently more nearly allied to the conditions experienced during the very similar first and last periods, high on the Continent, and low out on the upper Atlantic. The mean barometric values ranged from above 30.05 in. across the north of France, and 30.04 in. at Jersey to 29.88 in. at Blacksod Point, and 29.83 in. in the south-west of Iceland. Over the south-west quarter of Ireland the values were a trifle below the normal, but over the rest of the United Kingdom they were in excess, to the extent of 0.1 in. at Aberdeen, Leith and Shields, and 0.12 in. in Shetland. The gradient, usually about Westerly to South-Westerly, was thus South-Westerly to Southerly, and the winds experienced were in accordance with the pressure results, but with four different types of pressure during the month there was a fair proportion of breezes from other directions. The absolute range of pressure for the month did not differ materially from what is usual at this season—about an inch in the extreme north-west and north, and less than ½ in. over England and Southern Ireland.

Although the month as a whole was rather more breezy than June and July, winds exceeding the force of a strong breeze were uncommon, and in nearly every instance the highest forces occurred at the more exposed situations in the west and north, and were from some Southerly point. While the depression of the first part of the month remained outside our north-western coasts, a strong gale was felt at Malin Head early in the morning of the 1st, and in the following night gale force was reached at Blacksod Point and Malin Head. The anemometrical records showed that on the 2nd there was a gust at the rate of 52 miles per hour at Quilty, and of 57 miles at Roche's Point, the only instances during the month of gusts exceeding 45 miles. Between the 7th and the 12th a high wind was reported at a few places, and it was not until the 31st that a higher force was attained, the passage of a very deep depression across Iceland being marked by a gale at Blacksod

Point, Stornoway and Lerwick, and a strong gale at Malin Head. Out on the Atlantic also many ships encountered a gale on this day.

Weather as remarkable as that of July was again experienced, drought, large records of bright sunshine, and exceptionally high temperatures forming the most striking features of the month, and rendered more striking by their forming a continuation of such unusual weather through a period of many weeks. Our more western and northern districts being influenced in the main by the various disturbances which appeared on the Atlantic, had much more changeable weather than Southern, Central and Eastern England, affected by the Continental anticyclones. Early in the month there were some heavy rainstorms, the largest falls on the 2nd being 1.2 in. at Caragh Lake, and 1.3 in. at Sheepstor; on the 4th, 1.5 in. at Bettws-y-Coed and Graythwaite, 1.8 in. at Bethesda, and 2.5 in. at Seathwaite; and on the 5th, 1.4 in. at Darwen and Liverpool. As early as the 2nd, however, a spell of very dry weather set in over the southern and eastern counties, and at scores of stations the drought was maintained for a fortnight or more, many places having no rain on as many as 18 consecutive days, Barnet on 19 days. Then on the 20th small irregularities of pressure brought the atmosphere into an electrical state over the country generally, there were numerous reports of thunderstorms, and considerable rains on two days, 1.4 in. at Ruthin and Bexhill-on-Sea on the 20th; and 1.4 in. at Portsmouth, Wilton (Wilts.) and Hereford, and 1.5 in. at Bromyard and Llandrindod Wells on the 21st. These changeable conditions were maintained through the remainder of the month, with thunder and lightning here and there daily, and occasional heavy local rainfalls. The deep disturbance of the 31st produced a very heavy rain-storm in Western Scotland, 1.8 in. at Fort William and Ford (Argyll), 2.3 in. at Cruachan, and 2.5 in. at Inverary.

The heat of the month was without precedent in the records of the country. Maximum temperatures well above 80° were registered in Scotland and Ireland, while stations in England yielded hundreds of records of 90° and upwards, the hottest day being the 9th, when the thermometer reached 97° at Hillington, Wokingham and in various parts of London, 98° at Canterbury, Epsom and Raunds, 99° at Isleworth, and 100° at the Royal Observatory, Greenwich, 3° higher than the previous maximum registered since the establishment of regular meteorological observations in 1841. Many night minima were above 65°, as high as 71° at Llandudno, and 72° at Lancaster on the morning of the 13th. As a result the mean temperature of the whole month was exceptionally high. Vegetation is represented as having suffered very severely under the unusual intensity of the drought, sunshine and heat.

Aurora borealis was visible at Stornoway and Sumburgh Head on the 23rd, at the latter station it was of a very bright green.

In a report from Mr. Spencer Compton Collin, it is stated that on the 7th "we saw the stars in daylight. It was a beautiful day, and towards afternoon the wind lulled, and in a cloudless sky, with a brilliant sun from 5 p.m. to 6 p.m., the stars in the eastern meridian shone. Vega and Aquila were brightest, and we counted 20 stars visible in that quarter. At about 6 o'clock they became invisible—still in a cloudless sky. This happened in West Essex, near Saffron Walden. I was helping in my harvest, and my labourers were sadly disconcerted at seeing stars in the daylight and sunshine."

An earthquake shock was recorded at Mungret College, Limerick, from 11.1 p.m., 16th, till 1.20 a.m., 17th.

Fog was fairly frequent on the western and eastern coasts, but on the south coast it was seldom reported.

The temperature of the coastal water was warmer than in July, by as much as 4° or 5° in the south-east, between the Isle of Wight and the Humber, but the water was nearly everywhere colder than the air on shore, by 5° on the coasts of Berwick and Down.

**Rainfall.**—With a few unimportant exceptions the month's precipitation was everywhere deficient, in numerous instances between 2 in. and 3 in. less than usual. In various parts of Britain the total fall was less than 25 per cent. of the normal, 22 per cent. at Gordon Castle and Guernsey (Brooklyn), 21 per cent. at Geldeston, London (Camden Square), Totland Bay, Guernsey (Villa Carey), and Jersey, 20 per cent. at Bennington, and 19 per cent. at Brighton. In several places the fall was less than ½ in. There were few instances of more than 20 days with rain, while below 10 they were numerous, only 4 rain days at Rothamsted, Heathfield and Eastbourne.

**Bright Sunshine.**—A great excess of insolation was noticeable practically everywhere, from two to three hours per day in many places, the Llandudno aggregate being 100 hours, and that of Blackpool 104 hours in excess. Strathpeffer's record was 107 per cent. of the normal, the results elsewhere ranging up to 158 per cent. at Fort Augustus, 160 per cent. at Llandudno, and 164 per cent. at Blackpool.

TABLE A.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at 9 a.m., 3 p.m., and 9 p.m. at NORMAL STATIONS in the BRITISH ISLANDS

Table with columns: DISTRICT, STATION, Height of Barometer, BAROMETER (Mean at 32° F., Diff. from Normal, C. for Diurnal Range), AIR TEMPERATURE (Mean of A and B, Mean of A and B, Diff. from Normal, Absolute Maximum and Minimum), and HYGROMETER (Observations at 9 a.m., 3 p.m., and 9 p.m., or at 7 a.m., 1 p.m., 6 p.m., or 9 p.m.; Dry Bulb, Dep. of Wet, Vap. Pressure, Humidity).

For notes see p. lxxxvii.

NOTE.—The Sunshine entered to Woburn is recorded at Aspley Guise and that entered to Portsmouth at Southsea.

CLIMATOLOGICAL STATIONS, at 7 a.m., 1 p.m. and 6 p.m. or 9 p.m. or at 7 a.m. and 6 p.m. at TELEGRAPHIC REPORTING during the month of AUGUST, 1911.

Earth Temperature.		BRIGHT SUNSHINE.				CLOUD (0-10.)			RAIN AND OTHER FORMS OF PRECIPITATION.				WEATHER. No. of Days of										WIND.								STATIONS.						
at 1 foot depth.	At 4 feet depth.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.	Mean Amount.			Total Fall.	Diff. from Normal.	Most in a day.		Precipitation.	Snow.	Hail.	Thunderstorm.	Clear Sky.	Overcast.	Fog.	Ground Frost.	Wind-force 8 and above.	No. of Observations reduced to a total of 98 for the month.															
						I.	II.	III.			Amount.	Day.										Forces 4-7.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.		N.W.					
60.9		183	+38	33	+8	7.0	6.4	6.8	3.74	-0.55	1.84	17										10	11	12	8	12	17	12	9	Castlebay (Barra)							
		193		42		7.5	6.9	6.8	2.70		0.67	24th	19	0	0	0	2	16	1		0	4.3	2							5	Deerness.						
		173	+54	37	+12	6.9		5.8	2.82	-0.05	0.69	17th	13	0	0	3	1	10	2		0	24	5	8	1	17	16	24	9	8	Sumburgh Head.						
		166	+32	35	+6	7.1	6.5	6.8	3.02	+0.04	0.73	24th	21	0	0	0	0	11	0		1	35	2	4	17	6	9	19	26	6	4	Stornoway.					
		131	+9	28	+2	7.4		6.9	0.97	-1.66	0.24	24th	16	0	0	0	1	12	0		0	12	37	2	3	3	8	9	15	13	3	Wick.					
		142	+52	31	+12	7.5		7.4	5.57	-1.74	1.27	31st	16	0	0	0	5	18	0		1	30	0	16	2	24	0	2	1	48	0	Strathpeffer.					
						7.6		6.5	1.61		0.32	28th	18	0	0	0	3	11	0		1	35	8	0	9	10	0	14	14	34	4	Glencarron.					
						7.3		6.6	7.15	+1.13	1.84	31st	17	0	0	3	4	13	4		1	33	22	0	17	7	2	3	36	6	0	Fort Augustus.					
						6.0		7.3	0.78		1.95	20th	10	0	0	0	4	15	0		1	6	12	3	4	33	4	6	8	20	3	0	Kingussie.				
						7.1		7.1	1.13	-2.22	0.23	19th	14	0	0	3	0	10	0		1	8	0	2	5	17	18	6	40	4	1	0	Fort William.				
		155		33		7.5	6.3	6.5	0.80	-1.85	0.13	19th, 24th	17	0	0	0	0	3	2		0	2	25	1	8	17	2	6	19	14	1	0	Dunrobin Castle.				
		170		37		7.6		6.4	0.76	-2.67	0.14	19th	17	0	0	0	0	12	0		1	14	0	0	18	0	29	12	22	0	12	0	Gordon Castle.				
	56.1	181	+28	39	+6	6.7	6.2	6.1	1.12	-1.95	0.32	9th	19	0	0	3	1	9	0		0	9	6	6	13	10	9	27	15	2	5	0	Aberdeen.				
						7.4			0.92	-2.26	0.46	28th	8	0	0	4	3	14	0		1	24	0	0	0	3	0	15	36	36	3	0	Balmoral.				
						7.0		6.6	2.43	-1.56	0.50	24th	18	0	0	3	1	8	0		1	23	0	2	0	28	0	9	9	42	3	0	Crieff.				
						6.0		5.6	0.97	-1.92	0.22	31st	16	0	0	0	2	7	0		0	23	2	2	13	10	12	12	27	13	2	0	Leith.				
59.8		192	+44	42	+10	5.9		6.2	1.54	-2.08	0.41	5th	13	0	0	1	3	11	0		0	20	0	9	6	18	0	25	12	20	3	0	Marchmont.				
		176	+27	38	+6	6.9	6.3	6.4	1.32	-1.85	0.53		16																								
		171		38		6.0		6.4	2.67	+0.29	1.26	20th	9	0	0	2	4	11	2		0	0	1	2	9	0	16	2	42	0	21	0	Whitby.				
60.8	58.6	189		41		6.0		5.0	2.27	-0.75	0.53	5th	18	0	0	2	1	3	0		0	42	5	9	10	2	8	13	18	16	12	0	0	Cockle P'k (Mor-Shields, peth.)			
						7.3		7.4	2.81	-0.03	1.28	21st	15	0	0	0	0	12	3		0	8	6	13	6	4	6	21	21	8	8	0	0	Durham.			
		169	+19	37	+4	7.5		6.1	1.99	-0.76	0.54	21st	13	0	0	0	3	10	2		0	15	15	15	6	2	1	18	27	3	6	0	0	Durham.			
62.2						7.5		6.4	3.74	+0.36	1.22	21st	11	0	0	3	3	14	4		0	8	11	9	16	0	6	18	26	3	4	0	0	Rounton.			
	61.8	187		41		6.6		7.6	3.02	+0.22	1.07	22nd	14	0	0	1	0	10	2		0	27	3	6	23	0	12	1	35	1	12	0	0	Scarborough.			
62.9	59.5	174	+23	38	+5	5.5		5.2	1.84	-0.78	0.39	20th, 27th	13	0	0	1	6	7	0		0	0	0	19	8	3	3	36	10	8	6	0	0	York.			
						5.9	6.1	6.2	1.08	-0.88	0.50	27th	9	0	0	2	2	5	3		0	56	0	13	10	8	18	9	14	15	6	0	0	Spurn Head.			
64.4	60.0					4.7		3.2	1.13	-1.44	0.52	27th	12	0	0	2	9	6	0		0	17	3	5	10	13	5	8	19	21	9	0	0	Lincoln.			
		221		49		4.3		6.0	1.79		0.42	19th	11	0	0	0	6	9	0		0	23	0	4	18	9	15	7	11	26	3	0	0	Skegness.			
63.3	58.5	151		33		5.4		5.2	2.23	-0.61	0.68	27th	11	0	0	3	5	8	0		0	2	15	5	16	5	6	6	18	19	3	0	0	Hull.			
63.8	59.7	192	+31	42	+6	6.1		5.9	2.11	-0.63	1.32		13																								
67.7	62.4	264		59		4.7		3.7	0.84	-1.42	0.36	25th	7	0	0	4	8	3	0		0	17	0	12	12	12	8	13	24	9	3	0	0	Lowestoft.			
		206		46		5.8		5.8	1.18		0.60	19th	17	0	0	2	5	9	1		0	29	0	13	0	5	13	17	16	17	6	0	0	0	Cromer.		
		231	+52	52	+12	6.5		5.5	1.36	-1.54	0.49	21st	17	0	0	5	4	9	0		0	11	7	6	30	0	3	6	24	12	5	0	0	0	Hillington.		
									0.74		0.15	1st	9																						0	0	Norwich.
70.1	65.7	238		53		4.7	4.8	4.5	0.67	-1.76	0.22	21st	6	0	0	4	4	7	0		0	12	0	11	12	8	12	8	24	10	8	0	0	0	Yarmouth.		
		235	+44	52	+9	5.5		3.6	0.46	-1.72	0.19	25th	7	0	0	5	9	7	0		0	0	2	18	5	12	7	10	21	15	3	0	0	0	Geldeston.		
68.3	64.0	244	+55	55	+13	5.8		3.8	0.61	-1.76	0.24	20th	6	0	0	7	7	5	0		0	12	12	18	5	5	10	13	19	9	2	0	0	0	Cambridge.		
66.2	62.2	273		61		5.8	4.9	5.8	0.64		0.22	20th	6	0	0	2	3	3	0		0	22	0	10	12	14	9	16	14	12	6	0	0	0	0	Clacton.	
		223		50		6.2		4.7	0.99		0.28	21st	10	0	0	4	5	7	2		0	14	11	1	20	8	7	7	27	9	3	0	0	0	0	Woburn.	
67.9	64.8	238		53		5.7		3.7	0.52	-2.03	0.21	20th	5	0	0	4	8	7	2		0	0	20	2	17	4	7	12	10	21	0	0	0	0	0	0	Bennington.
67.9		226		51		5.9		3.9	0.65	-1.92	0.32	20th	11	0	0	5	6	4	0		0	0	18	6	8	7	7	17	15	15	0	0	0	0	0	0	Berkhamsted.
68.8	64.2	237	+52	53	+12	5.7		4.5	0.80	-1.54	0.88																										
60.0	56.5	180		40		5.5		5.5	1.88		0.59	20th	12	0	0	7	7	7	0		0	16	15	9	8	2	13	11	16	3	0	0	0	0	0	0	Garforth.
66.0	60.1	199		44		5.4	5.9	5.7	2.30		0.14	20th	10	0	0	4	6	11	0		0	5	9	4	19	5	4	10	12	27	3	0	0	0	0	0	Huddersfield.
62.5	59.9	226		50		5.7		4.7	1.75	-0.82	0.54	27																									

TABLE A. (continued).—Giving a Summary of the METEOROLOGICAL OBSERVATIONS made at 9 a.m., 3 p.m. and 9 p.m. at NORMAL STATIONS in the BRITISH ISLANDS

Table with columns: DISTRICT, STATION, Height of Barometer, BAROMETER (Mean at 32° F., Diff. from Normal, Cor. for Diurnal Range), AIR TEMPERATURE (Mean of A, B; Mean of A and B; Diff. from Normal; Absolute Maximum and Minimum), and HYGROMETER (Observations at 9 a.m., 3 p.m. and 9 p.m., or at 7 a.m., 1 p.m., 6 p.m., or 9 p.m.; Dry Bulb, Dep. of Wet, Vap. Pressure, Humidity).

\* Dulwich now takes the place of Norwood from which it is distant 1 mile E.

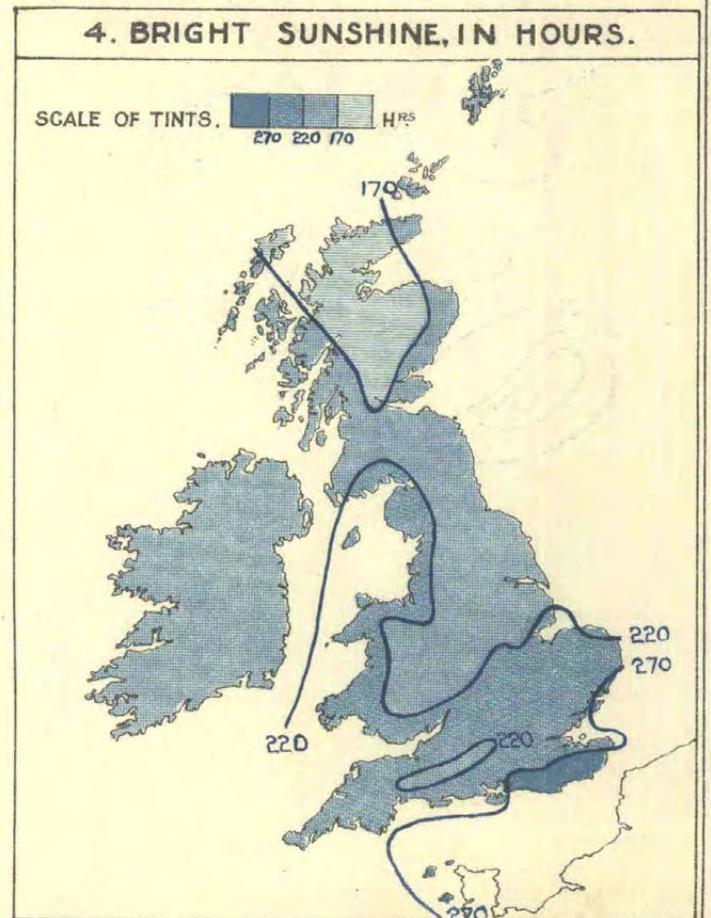
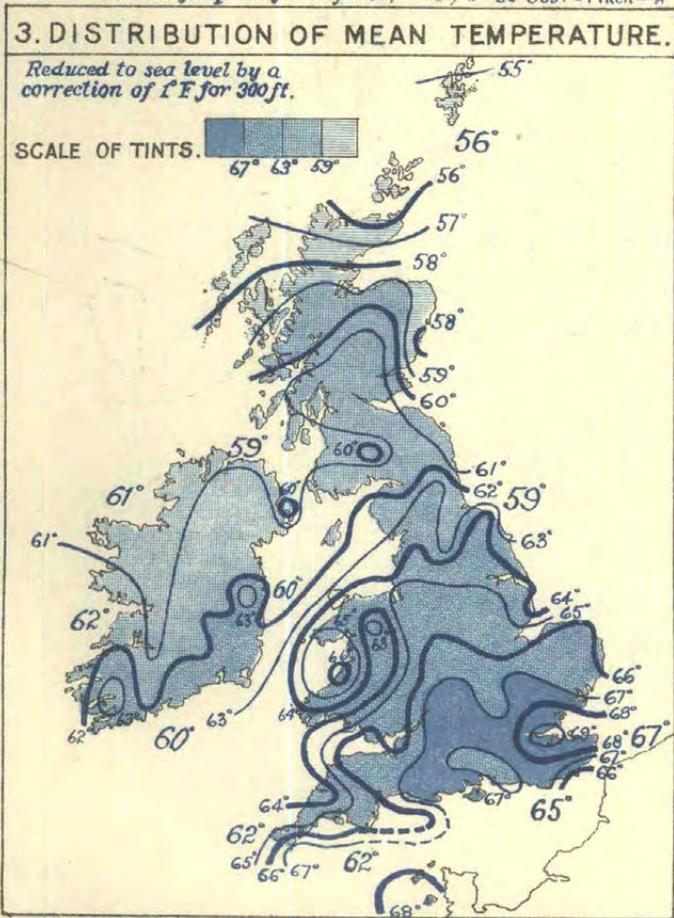
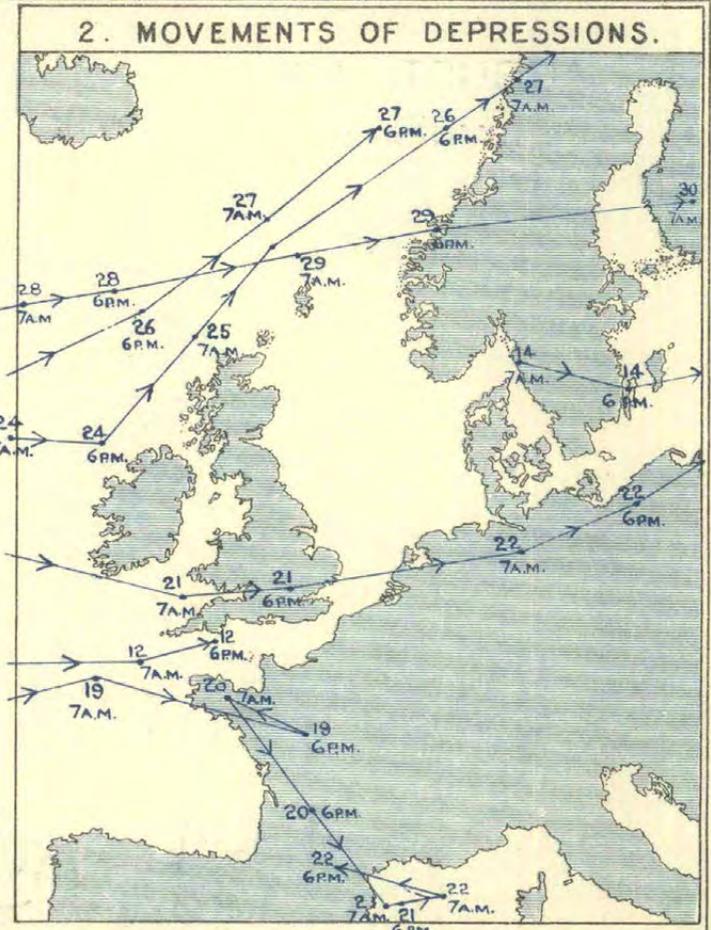
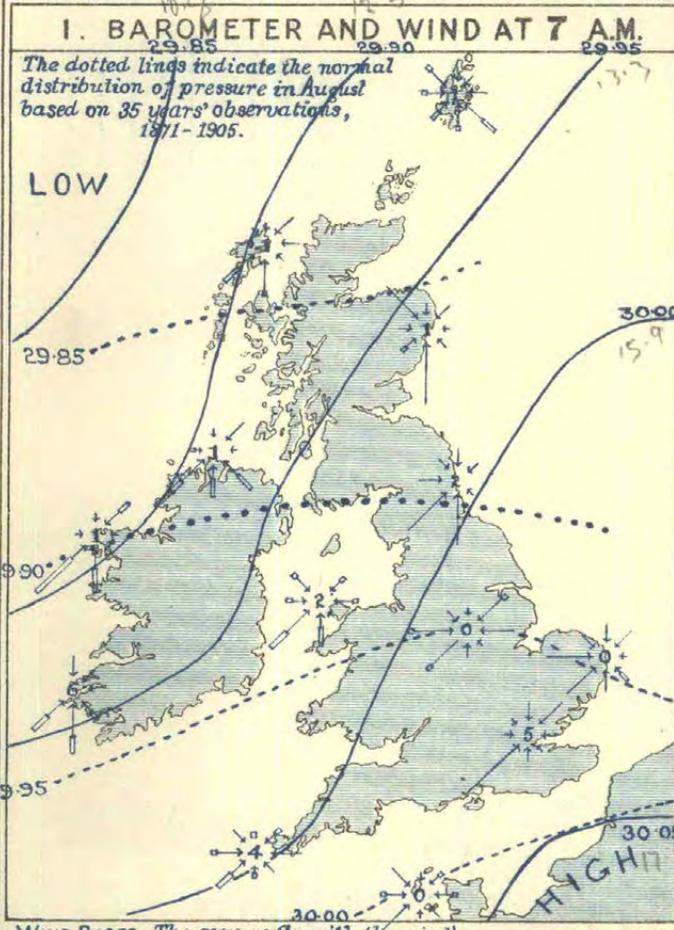
† Dwyran now takes the place of Llanegrad.

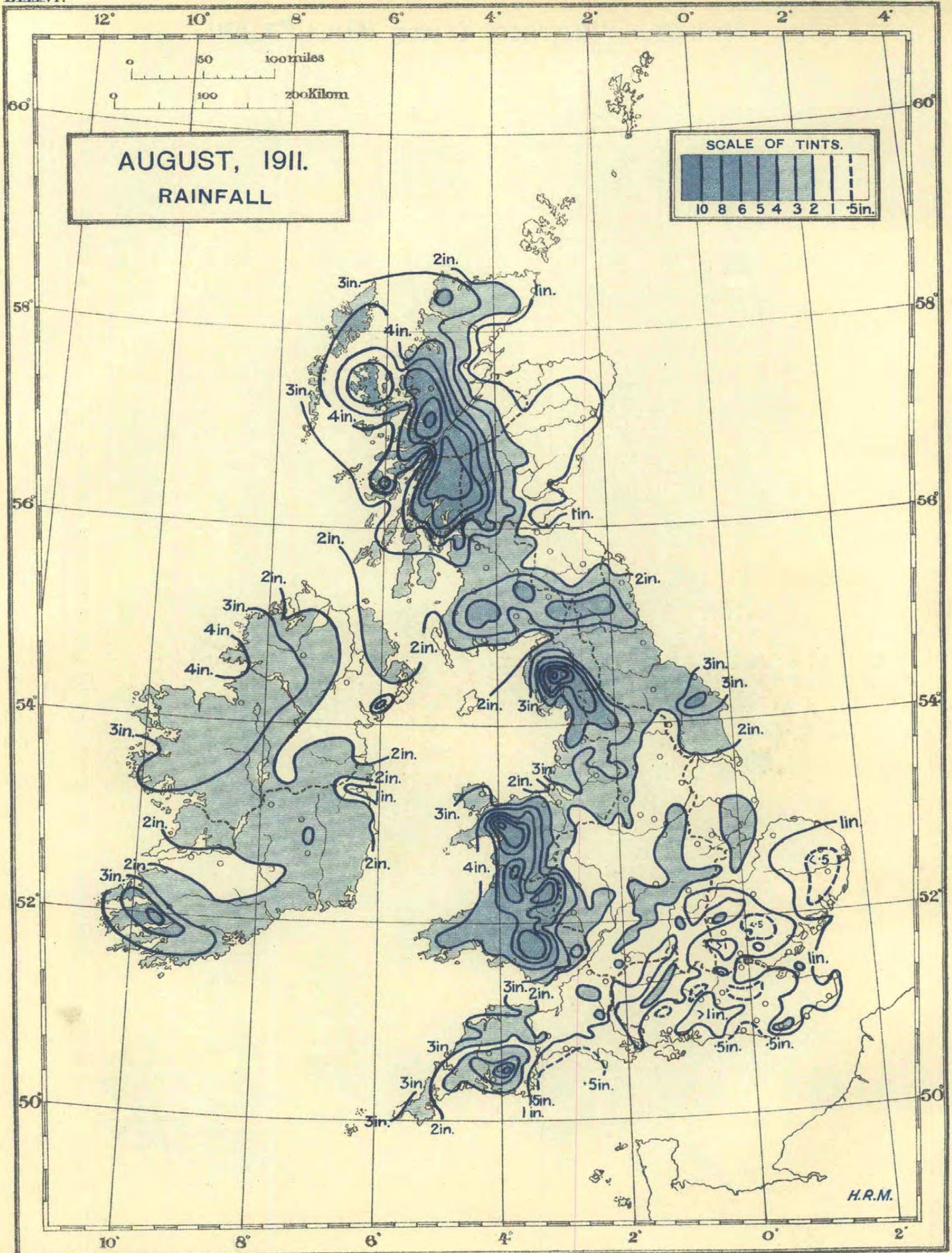
CLIMATOLOGICAL STATIONS, at 7 a.m., 1 p.m. and 6 p.m. or 9 p.m. or at 7 a.m. and 6 p.m. at TELEGRAPHIC REPORTING during the Month of AUGUST, 1911.

Earth Temperature.		BRIGHT SUNSHINE.			CLOUD (0-10.)			RAIN AND OTHER FORMS OF PRECIPITATION.				WEATHER. No. of Days of						WIND.								STATIONS.						
At 1 foot depth.	At 4 feet depth.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.	Mean Amount.			Total Fall.	Diff. from Normal.	Most in a day.		Precipitation.	Snow.	Hail.	Thunderstorm.	Clear Sky.	Overcast.	Fog.	Ground Frost.	Wind-force 8 and above.	No. of Observations reduced to a total of 93 for the month.										
		Hr.	%		I.	II.	III.	In.	In.	In.	Day.											Caln.	N.	N.E.	E.		S.E.	S.	S.W.	W.	N.W.	
67.7	64.0	299	+ 91	67	3.6	—	2.4	1.59	-0.98	0.89	20th	4	0	0	2	14	3	0	0	0	0	21	0	18	0	6	2	34	9	3	Eastbourne.	
64.0	59.0	292	—	66	4.1	—	4.4	1.10	—	0.67	20th	8	0	0	3	4	2	0	0	0	29	0	12	19	3	5	8	34	7	5	Dover.	
—	—	—	—	—	6.3	5.8	6.6	0.64	-1.34	0.26	22nd	5	0	0	1	0	0	3	0	0	29	0	6	17	13	5	9	32	6	5	Dungeness.	
69.3	64.6	296	+ 83	67	5.3	—	2.9	2.27	-0.20	1.23	22nd	6	0	0	1	8	6	0	0	0	21	2	13	18	6	9	5	24	13	3	Hastings.	
—	—	252	+ 44	57	5.4	—	2.0	0.72	-2.04	0.23	25th	9	0	0	3	11	3	0	0	0	12	0	2	16	5	10	0	42	10	8	Southampton.	
—	—	250	+ 43	56	5.8	—	—	0.83	-1.45	0.24	12th	8	0	0	1	5	9	0	0	0	24	3	6	8	12	6	19	30	9	0	Ventnor.	
67.6	63.7	261	+ 67	59	4.9	—	3.6	0.97	-1.51	1.40	7	7	0	0	0	0	0	0	0	0	2	6	12	6	10	6	42	7	2	Tottenham.		
—	66.3	242	—	54	5.6	—	4.5	0.62	—	0.28	20th	5	0	0	3	4	6	0	0	0	0	2	6	12	6	10	6	42	7	2	Hampstead.	
—	—	234	—	53	5.5	—	4.0	0.78	—	0.28	20th	7	0	0	4	6	7	0	0	0	5	11	6	21	8	1	4	32	9	1	Camden Square.	
68.2	62.8	207	—	47	4.5	—	—	0.49	-1.90	0.22	20th	7	0	0	3	11	10	0	0	—	3	30	12	0	12	12	9	6	9	9	Westminster.	
—	—	243	+ 75	55	—	—	—	1.11	-1.28	0.53	19th	6	0	0	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	South Kensington
—	—	240	—	54	4.8	—	—	—	—	—	—	—	0	0	4	8	5	0	0	0	12	2	3	12	6	9	15	33	9	3	Greenwich.	
—	66.4	260	+ 49	58	5.2	—	4.0	1.34	-1.00	0.58	19th	8	0	0	2	7	7	0	0	0	1	6	6	14	9	6	5	31	15	1	Dulwich.	
65.8	—	—	—	—	4.2	—	3.7	1.70	-0.66	0.83	21st	5	0	0	4	9	4	0	0	0	0	11	5	9	12	0	9	25	18	4	Kew.	
66.8	61.1	244	+ 56	55	5.2	5.8	2.9	0.81	-1.46	0.23	21st	7	0	0	4	6	3	1	0	0	15	7	9	13	11	0	13	32	6	2	Bunhill Row.	
—	—	228	+ 64	51	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Plumstead.	
—	—	220	—	49	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Eskdalemuir.	
—	—	197	—	43	6.4	6.4	5.9	3.22	—	0.99	31st	14	0	0	1	4	9	0	0	0	45	14	8	15	1	3	11	32	7	2	Poltalloch.	
—	—	—	—	—	7.0	—	5.9	4.53	-0.33	1.03	31st	19	0	0	1	4	12	0	0	1	23	14	2	7	1	3	18	16	29	3	Glasgow.	
—	—	170	+ 38	37	7.0	—	7.0	2.15	-1.91	0.73	31st	15	0	0	1	0	12	0	0	0	9	13	1	7	17	2	10	28	14	1	Rothsay.	
—	56.6	—	—	—	6.0	—	5.3	4.44	-0.43	1.08	31st	19	0	0	4	8	12	1	0	0	15	21	0	0	20	2	10	3	31	6	Colmonell.	
—	—	—	—	—	5.2	—	—	2.06	-2.06	0.45	31st	13	0	0	1	6	8	1	0	1	18	3	9	6	12	6	6	9	39	3	Dumfries.	
63.2	61.2	227	—	50	6.8	—	7.3	2.84	-1.13	0.70	31st	14	0	1	0	4	13	0	0	0	12	32	0	10	0	5	7	32	0	7	Cally.	
—	—	—	—	—	—	—	—	2.07	-2.66	0.61	31st	13	0	0	1	—	—	—	—	—	5	0	0	29	9	25	0	17	1	12	Douglas.	
—	—	256	+ 81	56	6.7	—	4.9	1.93	-2.20	0.43	4th	14	0	0	1	3	9	4	0	0	23	0	5	12	10	11	9	21	15	10	—	
—	—	213	+ 59	47	6.6	—	6.1	2.82	-1.78	1.15	15	15	0	0	2	6	5	0	0	0	41	3	6	5	15	9	11	21	12	11	Southport.	
65.6	63.2	264	+ 93	58	5.1	4.1	5.5	3.62	-0.09	1.11	5th	13	0	0	2	6	5	0	0	0	6	2	6	12	10	12	18	21	10	2	Manchest'r (City).	
65.5	62.7	192	—	42	3.4	—	3.4	2.44	-1.30	0.71	27th	12	0	0	2	9	7	1	0	0	13	12	2	13	12	2	17	21	9	5	" (Whit. Pk.).	
—	—	198	—	44	5.9	4.7	4.3	2.73	—	0.68	27th	13	0	0	2	9	7	1	0	0	13	12	2	13	12	2	17	21	9	5	—	
63.7	58.7	203	—	45	5.9	—	6.1	4.72	—	1.37	5th	15	0	0	2	4	9	0	0	0	14	4	1	9	12	6	23	20	7	11	Darwen.	
61.1	56.7	253	—	55	5.3	—	4.5	2.38	-2.07	0.79	31st	13	0	0	1	6	6	0	0	0	14	15	2	10	7	2	10	27	18	2	Aspatia.	
61.8	58.0	231	+ 79	51	5.4	—	4.7	2.83	-0.65	0.80	5th	16	0	0	0	7	5	4	0	1	12	18	2	0	5	7	30	18	7	6	Newton Rigg.	
—	—	214	+ 62	47	5.6	—	5.5	3.14	-2.11	0.90	5th	14	0	0	3	7	9	0	0	0	8	24	8	10	4	1	11	27	8	0	Stonyhurst.	
62.8	58.1	267	+ 104	59	5.3	—	6.0	3.39	-0.21	1.02	4th	13	0	0	2	3	7	0	0	0	27	2	4	7	14	14	11	27	7	7	Blackpool.	
—	—	191	+ 54	42	6.6	—	3.2	2.47	-1.41	0.84	20th	13	0	0	3	9	8	0	0	0	11	11	6	12	13	2	19	25	3	2	Manch's'r (Prest).	
—	—	239	—	53	5.0	—	5.0	3.11	+0.03	1.26	5th	12	0	0	2	4	3	0	0	0	5	0	8	6	15	13	12	22	11	6	Liverp'ol, Bid. Obs.	
—	—	267	+ 100	59	5.0	—	5.2	2.94	-0.09	0.97	4th	12	0	0	2	5	7	0	0	0	11	1	0	1	32	3	29	18	9	0	Llandudno.	
—	—	—	—	—	4.5	5.2	4.5	2.83	-0.40	1.26	4th	14	0	0	1	1	4	8	—	0	36	2	6	15	9	4	11	29	8	9	Holyhead.	
61.1	58.0	213	—	47	5.2	—	5.4	4.64	—	1.47	4th	15	0	0	2	5	5	0	0	0	11	0	3	3	18	2	3	36	24	4	Bettws-y-Coed.	
67.3	61.6	250	—	55	5.5	—	3.9	3.14	—	1.29	4th	12	0	0	3	5	2	0	0	0	38	27	0	6	3	0	27	24	0	0	Dwyran.	
63.6	59.6	241	+ 85	53	5.4	—	4.8	2.99	-0.68	1.47	13	13	0	0	3	6	15	0	1	0	3	24	0	18	15	0	9	27	6	0	Llangam. Wells.	
61.8	57.1	206	—	46	6.2	—	—	4.52	—	0.95	27th	17	0	0	3	6	15	0	0	0	3	24	0	18	15	0	9	27	6	0	Pembroke.	
—	—	229	+ 36	51	6.0	5.3	4.8	3.30	+0.24	0.97	4th	12	0	0	1	4	4	2	0	0	40	3	9	13	3	8	16	25	10	6	Clifton.	
—	—	236	—	53	—	—	—	1.31	-2.26	0.43	28th	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
—	—	—	—	—	5.1	4.8	3.7	1.06	—	0.72	22nd	7	0	0	0	4	0	5	—	0	43	2	4	12	11	6	12	30	12	4	Portland Bill.	
68.3	—	256	+ 59	58	5.2	4.8	4.1	2.51	-0.51	0.83	2																					

TABLE B.—SUMMARY of the OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE at additional STATIONS, AUGUST, 1911.

DISTRICT.	STATION.	Height of Gauge above M.S.L. Ft.	AIR TEMPERATURE.								Earth Temperature			RAIN AND OTHER FORMS OF PRECIPITATION.				BRIGHT SUNSHINE.					
			Mean of		Mean of A and B.	Diff. of Mean from Normal.	Absolute Maximum and Minimum.				1 ft.	4 ft.	No. of Nig'ts	Total Fall.	Diff. from Normal.	Most in a day.		Number of Days.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.	
			A	B			Max.	Day.	Min.	Day.						In.	Day.						
			Max.	Min.	°	°	°	°	°	°	In.	In.	In.	In.	Hr.	Hr.	%	%					
0. SCOTLAND N.	p Baltasound	81	59.7	50.2	55.0	—	67	8th	43	22nd, 23 d	56.6	—	—	3.20	—	0.90	24th	21	179	—	37	—	
	p Dunrossness	145	60.0	49.1	54.6	+ 1.6	66	2nd, 28th	42	23rd	—	—	—	2.37	-0.80	0.78	24th	13	—	—	—	—	
	a Fortrose	69	64.4	53.2	58.8	—	76	9th	46	24th	—	—	—	0.89	—	0.24	24th	9	161	—	35	—	
1. SCOTLAND, E.	p Insh	426	67.6	49.2	58.4	—	83	9th	38	30th	60.8	—	0	1.02	—	0.19	19th, 20th	19	164	—	35	—	
	p Crathes	140	68.1	50.9	59.5	—	82	9th	39	24th, 30th	59.9	56.9	1	1.21	—	0.53	9th	14	172	—	37	—	
	p Stonehaven	786	63.7	51.8	57.8	—	73	9th	41	17th, 30th	—	—	—	0.84	—	0.27	9th	15	191	—	41	—	
	p Balruddery	276	69.3	51.0	60.2	—	82	9th	42	30th	—	—	—	1.20	—	0.34	3rd	15	182	—	39	—	
a West Linton	800	65.6	49.0	57.3	+ 1.0	76	17th	37	16th	—	—	—	2.04	—	0.51	31st	18	177	—	39	—		
2. ENGLAND, N.E.	a Alnwick Castle	210	68.2	52.5	60.4	+ 3.1	81	8th	42	17th, 23rd	—	—	—	2.51	-0.70	0.91	21st	15	—	—	—	—	—
	p Newcastle-on-Tyne	152	69.2	55.9	62.6	—	89	9th	47	17th	—	—	—	2.72	-0.39	1.31	21st	14	141	+ 8	31	+ 2	
	a Chopwellwood-	445	69.5	50.7	60.1	—	88	9th	42	31st	—	—	2	3.12	—	1.32	21st	14	176	—	39	—	
	p Ampleforth	349	?	?	?	?	?	?	?	?	?	?	?	2.65	—	?	?	?	?	?	?	?	?
a Fulbeck	180	76.1	56.0	66.1	+ 5.5	96	9th	47	16th	—	—	0	1.47	-1.16	0.28	20th	15	208	—	46	—		
a Rauceby	124	75.8	55.2	65.5	—	96	9th	45	17th, 31st	67.3	62.1	0	1.36	-1.29	0.35	27th	13	212	—	47	—		
3. ENGLAND, E.	a Felixstowe	10	73.5	59.9	66.7	+ 4.9	84	18th	51	17th	—	—	—	1.04	—	0.35	21st	8	285	—	64	—	
	a Rothamsted	424	75.9	55.0	65.5	+ 5.3	92	9th	45	31st	—	—	—	0.91	-1.68	0.59	20th	11	227	+ 36	51	+ 8	
	a Shoeburyness	13	74.5	59.3	66.9	+ 4.0	83	1, 10, 18	51	17th	—	—	—	1.48	-0.27	0.88	21st	5	—	—	—	—	—
	a Southend-on-Sea	90	77.5	60.4	69.0	—	91	9th	54	31st	73.3	—	c	1.60	-0.34	0.63	21st	6	268	—	60	—	
4. MIDLAND COUNTIES	a Harrogate	476	70.6	54.0	62.3	+ 4.3	87	9th	45	17th	60.2	58.7	0	2.97	+0.14	0.80	20th	11	182	—	40	—	
	a Bradford	489	70.9	54.7	62.8	—	88	9th	40	31st	63.1	62.4	0	2.04	—	0.80	20th	11	205	—	45	—	
	a Cheadle	646	73.6	54.2	63.9	+ 6.0	89	9th	46	31st	—	—	0	1.78	-1.82	0.73	27th	11	—	—	—	—	
	a Bawtry	65	76.4	53.4	64.9	+ 5.1	94	9th	42	17th	—	—	—	1.44	-1.05	0.49	27th	15	—	—	—	—	
	a Worksop	56	75.7	53.7	64.7	+ 5.0	94	9th	42	17th	63.6	60.0	0	1.65	-0.89	0.62	27th	13	184	+ 37	41	+ 8	
	a Mayfield (Staffs.)	374	74.0	51.9	63.0	—	92	9th	37	31st	—	—	0	1.68	—	0.54	20th, 27th	12	—	—	—	—	
	a Belper	222	75.5	54.2	64.9	—	93	9th	41	31st	—	—	0	1.68	—	0.66	27th	12	—	—	—	—	
	a Kingston-on-Soar	125	76.0	54.9	65.5	—	95	8th	42	16th	63.4	—	—	2.08	—	0.82	19th	11	—	—	—	—	
	p Rugby	379	76.7	54.2	65.5	+ 5.6	96	9th	42	31st	—	—	0	1.69	—	0.47	27th	13	—	—	—	—	
	a Raunds	210	78.1	54.8	66.5	+ 5.2	98	9th	43	31st	64.8	—	0	2.35	—	1.11	21st	9	—	—	—	—	
	a Winslow	379	77.3	56.2	66.8	—	94	9th	45	31st	—	—	0	0.93	—	0.27	5th	11	—	—	—	—	
	a Hereford	291	75.1	54.1	64.6	+ 4.3	92	9th	42	31st	—	—	0	2.60	+0.02	1.40	21st	9	—	—	—	—	
a Cirencester	446	76.3	54.1	65.2	+ 6.2	93	9th	43	31st	64.7	60.7	0	1.10	-2.05	0.31	5th	10	236	+ 54	53	+ 12		
5. ENGLAND, S.E.	a Epsom	160	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	a Wokingham	216	78.2	51.0	64.6	—	97	9th	33	31st	—	—	—	1.59	—	1.21	21st	9	—	—	—	—	
	a Marlborough	424	77.2	52.3	64.8	+ 5.4	96	9th	34	31st	—	—	1	0.82	-2.04	0.25	5th	9	219	+ 41	49	+ 9	
	a Bucklebury	409	76.8	55.0	65.9	—	94	9th	46	31st	—	—	0	1.05	—	0.27	21st	9	—	—	—	—	
	a Swaraton	310	76.4	54.2	65.3	+ 5.8	93	9th	41	31st	—	—	—	1.30	-1.60	0.49	30th	12	—	—	—	—	
	a Margate	35	76.0	60.7	68.4	+ 6.1	92	9th	54	31st	67.1	63.5	0	0.96	-1.09	0.42	20th	6	253	+ 63	57	+ 14	
	Broadstairs	140	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Ramsgate	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	a Eltham	200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	a Wisley	150	78.4	55.7	67.1	+ 4.6	96	9th	43	31st	67.8	64.3	0	0.62	—	0.28	28th	6	257	—	58	—	
	a Basingstoke	289	77.2	54.1	65.7	—	94	9th	44	31st	67.7	62.6	0	0.94	—	0.80	21st	5	—	—	—	—	—
	a Sevenoaks	509	77.3	56.2	66.8	—	95	9th	47	31st	66.6	61.6	0	0.61	—	0.13	20th, 21	6	—	—	—	—	—
a Tunbridge Wells	421	77.5	55.5	66.5	+ 5.8	95	9th	47	31st	66.9	—	0	0.74	-1.60	0.27	20th	6	277	+ 81	62	+ 18		
a Matfield	320	77.1	55.2	66.2	—	95	9th	45	31st	—	—	0	0.82	—	0.29	20th	5	—	—	—	—	—	
p Folkestone	121	73.1	60.4	66.8	—	90	9th	55	16th, 31st	—	59.1	—	1.19	-1.25	0.68	21st	6	277	—	62	—		
Littlestone	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
a Bexhill	27	73.6	61.0	67.3	—	86	10th	53	16th	69.8	—	0	2.38	—	1.37	20th	5	288	—	65	—		
Hove	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
a Worthing	36	74.7	59.1	66.9	+ 5.4	88	13th	48	31st	68.4	63.9	0	1.01	-1.30	0.43	22nd	8	272	—	61	—		
a Bognor	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Westbourne	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
a Totland Bay	140	73.9	59.6	66.8	+ 5.1	87	13th	48	31st	—	—	0	0.50	-1.88	0.22	28th	7	252	—	57	—		
a Sandown	20	74.3	60.8	67.6	—	83	18th	51	31st	—	—	—	1.04	—	0.57	22nd	9	263	—	59	—		
p Bournemouth	145	74.9	57.5	66.2	—	85	9, 12, 14	49	31st	66.9	65.6	—	1.25	—	0.43	30th	8	263	—	59	—		
6. SCOTLAND, W.	p Oban	20	68.0	53.5	60.8	—	84	13th	45	30th	—	—	0	4.61	—	1.15	31st	15	199	—	43	—	
	a Thorntonhall (Lanarkshire)	440	66.7	50.8	58.8	—	75	17th	42	16th	—	—	0	2.42	—	1.11	31st	16	164	—	40	—	
	a Kilmarnock	90	68.8	51.7	60.3	+ 2.6	78	13th	41	30th	—	—	—	2.53	—	0.68	31st	14	216	—	47	—	
	p Ruthwell	67	70.3	52.4	61.4	—	86	13th	40	23rd	—	—	—	2.00	—	0.62	31st	13	226	—	50	—	
	a Carnforth	174	70.4	55.0	62.7	—	84	14th	45	23rd	—	—	0	4.21	—	0.85	4th	14	230	—	51	—	
	a Lancaster	311	71.1	56.9	64.0	—	86	14th	50	16													





Scale 1 : 5,000,000.

TABLE B (continued).—SUMMARY OF THE OBSERVATIONS OF TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE at additional STATIONS, AUGUST, 1911.

DISTRICT.	STATION.	Height of Gauge above M.S.L. Ft.	AIR TEMPERATURE.								Earth Temperature		Grnd Frost.	RAIN AND OTHER FORMS OF PRECIPITATION.					BRIGHT SUNSHINE.				
			Mean of		Mean of A and B.	Diff. of Mean from Normal.	Absolute Maximum and Minimum.				1 ft.	4 ft.		No. of Nig'ts	Total Fall.	Diff. from Normal.	Most in a day.		Number of Days.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.
			A	B			Max.	Day.	Min.	Day.			In.				In.	In.					
			°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
8. ENGLAND, S.W.	§ p Aberystwyth - - -	59	72°0	59°6	65°8	-	91	13th	53	23rd, 31st	-	-	-	6°06	-	1°24	27th	15	240	-	53	-	
	Haverfordwest - - -	93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	239	-	54	-	
	Tenby - - -	79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	236	+40	53	+9	
	Port Talbot - - -	179	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	213	-	48	-	
	Forest of Dean - - -	200	-	-	-	-	-	-	-	-	-	-	-	1°95	-	0°56	27th	8	-	-	-	-	
	" - - -	900	-	-	-	-	-	-	-	-	-	-	-	2°44	-	0°80	27th	11	-	-	-	-	
	¶ p Cardiff - - -	203	74°2	56°6	65°4	+4°8	91	13th	46	31st	66°1	62°6	0	2°83	-1°72	0°92	27th	13	237	-	53	-	
	a Swansea - - -	24	73°1	59°3	66°2	-	87	13th	50	31st	68°9	63°4	?0	4°02	-	0°59	4th	13	227	-	51	-	
	¶ a Shaftesbury - - §	722	74°5	56°0	65°3	+5°9	91	9th	48	31st	66°4	-	-	1°52	-1°43	0°51	21st	10	-	-	-	-	
	¶ a Arlington - - -	613	72°7	55°5	64°1	+5°2	86	13th	44	31st	-	-	-	3°43	-1°53	0°85	26th	16	-	-	-	-	
	¶ § a Cullompton - - §	202	76°7	55°1	65°9	+5°4	90	14th	43	31st	67°7	-	0	2°67	-0°34	1°24	5th	15	220	+38	50	+9	
	Torquay - - -	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	261	+51	59	+12
	a Weymouth - - -	21	75°1	59°8	67°5	-	87	10th	52	31st	-	-	-	0°51	-	0°25	28th	5	260	-	59	-	
	p Paignton - - -	11	73°2	58°1	65°7	-	82	9th	48	31st	-	-	-	0°73	-	0°21	2nd, 3rd	9	262	-	59	-	
	p Sheepstor - - -	749	71°7	51°2	61°5	-	83	13th	40	31st	-	-	-	5°01	-	1°31	2nd	12	-	-	-	-	
Salcombe - - -	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	270	-	61	-	
a Teignmouth - - -	19	73°7	59°0	66°4	-	82	9th	50	31st	-	-	0	0°62	-	0°21	21st	8	245	-	55	-		
a Fowey - - -	-	72°8	56°3	64°6	-	79	16th	44	31st	-	-	-	1°49	-	0°82	4th	7	239	-	54	-		
a Penzance - - -	54	71°4	59°6	65°5	-	77	14th	52	31st	-	-	-	2°94	-	1°37	4th	14	238	-	54	-		
9. IRELAND, N.	p Dunfanaghy - - -	54	66.9	54.2	60.6	-	79	14th	46	30th	-	-	-	3°06	-	1°19	28th	18	-	-	-	-	
	p Dublin (Glasnevin) - -	67	70°2	53°8	62°0	+3.5	80	17th	45	11th	-	0	1°29	-2°16	0°35	28th	18	-	-	-	-		
	a Kingstown - - -	42	68°8	56°3	62°6	-	76	17th	50	30th	-	-	-	0°91	-	0°34	23rd	15	242	-	54	-	
	p Clongowes Wood College	245	70°1	50°9	60°5	-	80	14th	42	11th	-	0	2°28	-	0°64	28th	19	203	-	45	-		
	a Mountmellick - - -	233	70°3	52°3	61°3	-	85	14th	42	30th	-	-	-	2°20	-	0°60	23rd	20	-	-	-		
10. IRELAND, S.	p Newcastle (Co. Wicklow)	256	67°8	54°2	61°0	-	77	14th	48	30th	-	-	-	2°22	-	0°87	1st	16	-	-	-		
	¶ a Kilkenny - - -	212	69°7	53°6	61°7	+2°4	82	15th	44	30th, 31st	-	-	-	2°26	-1°42	0°35	2nd	19	-	-	-		
	¶ a Cahir - - - §	199	70°3	53°2	62°0	+3°2	81	15th	44	11th	-	-	-	2°14	-	0°33	23rd	19	-	-	-		
	¶ a Foynes - - -	108	69°8	55°1	62°5	+3°7	82	15th	49	11th, 23rd	-	-	-	1°31	-2°76	0°29	2nd	15	-	-	-		
	§ a Ballinacurra - - -	34	69°4	55°0	62°2	-	78	13th	44	30th	-	-	-	2°51	-	0°72	2nd	15	211	-	47	-	
11. ENGLISH CHANNEL	¶ a Guernsey (Villa Carey) -	180	74°1	59°3	66°7	+4°8	84	9th	51	25th	-	-	-	0°58	-2°13	0°25	28th	6	236	+44	65	+10	

NOTES ON THE STATISTICAL TABLES.

**Hours of Observation.**—The following types are used to indicate the hours of observation at Stations included in Table A:—Clarendon, Normal Climatological Stations—I, 9 a.m. [II, 3 p.m.], III, 9 p.m. Black Capitals, telegraphic reporting normal climatological stations—I, 7 a.m., II, 1 p.m., III, 9 p.m. Roman, telegraphic reporting stations—I, 7 a.m., [II, 1 p.m.], III, 6 p.m. Italic, auxiliary climatological stations—I, 9 a.m. only, at *Balmoral, Colmonell* and *Ventnor* 3 p.m. also. The summaries are based on observations made three times a day wherever the data are available, except in the case of the element pressure (see below). At stations shown in clarendon type the maximum and minimum temperatures are read at 9 p.m.; at the remaining stations these observations are made at I. In Table B the letters *a* and *p* indicate whether the readings of the maximum and minimum are taken at the hours of morning or evening observation.

**Barometer.**—The correction for latitude has not been applied to the readings quoted in the Tables. It is applied to the readings at sea level from which the chart showing the mean monthly distribution of pressure is prepared. The values given in the tables are for station level. The values printed are (1) for stations shown in clarendon type, the means of observations at 9 a.m. and 9 p.m.; (2) for stations shown in Capitals, the means of observations at 7 a.m., 1 p.m., 9 p.m.; (3) for stations shown in Roman type, the means of observations at 7 a.m. and 6 p.m.; (4) for stations shown in italic type, the means of observations at 9 a.m. The column headed C gives the correction for diurnal variation required to reduce the means of observations at fixed hours to true diurnal means, based on the analysis of the values obtained at the four observatories for the period 1871-1905. The difference from normal is based upon the 7 a.m. readings only, except in the cases of Kew, Greenwich, Aberdeen, Valencia and Falmouth (see below).

**Rainfall.**—The amounts are those for the 24 hours commenced at the time of morning observation.

**Hygrometer.**—At certain stations the vapour pressure and the relative humidity are the results obtained from the daily values. These are entered in clarendon type.

At other stations the calculations are made from the monthly means of the dry and wet bulb readings.

**Weather Phenomena.**—The number of days of Rain, Snow, Hail, Thunderstorm, Fog, Ground Frost, and Gale, are counted irrespective of the hours at which the phenomena occur. Except in the cases of rainfall (see above) and ground frost the day is the civil day. A day is reckoned as a day of "clear sky," if the mean of the estimates of the "amount of cloud" at the fixed hours of observation is less than 2, and as an "overcast" day if the mean is greater than 8. Days of Ground Frost.—A day is counted as a "Day of Ground Frost" if it follows a night on which the minimum has sunk to 30° or less.

**Wind Summaries.**—The results given under wind direction, and the number of observations of calms and of fresh or strong wind, are based on the observations at fixed hours. At Deerness, Aberdeen, Valencia, Falmouth, Kew, Glasgow, Stonyhurst and Armagh the wind observations are based on the records of a standard Robinson anemometer (factor 2.2). Velocities of between 13 and 38 miles in the hour have been entered as "fresh or strong winds," velocities of 39 miles in the hour, or above, as gales. (At Brighton, Plymouth and Southport the equivalent values are obtained from a Dines Pressure Tube Anemometer.)

**Averages.**—The normal averages used for stations are—Pressure, Temperature, and Rainfall for the 35 years 1871-1905; Bright Sunshine for the 25 years 1881-1905. The values are published in Appendix III. to the Weekly Weather Report for 1906. For Greenwich and Oxford, averages for longer periods are used. (See Notes in Monthly Weather Reports for 1908.) Monthly averages of pressure at telegraphic reporting stations for the epoch 7 a.m. are published in Appendix I. to the Daily Weather Report. In order to render these averages comparable with the data for the present month, a correction, based on the results for the four observatories as published in "Hourly Readings at the Observatories under the Meteorological Council," has been applied to each of them before the figures given in the column headed "Barometer—Difference from Normal" were computed.

**Aberdeen, Falmouth, Kew, Valencia, Oxford, Greenwich.**—The figures quoted in the second line assigned to these observatories in the columns for Barometer and Mean Temperature are the true daily means computed from the hourly tabulations of the traces of the photographic recording instruments. For Kew, Falmouth, Aberdeen and Valencia the divergences of the means of the readings at 9 a.m. and 9 p.m. from their normal averages are also given.

**Royal Observatory, Greenwich.**—The earth temperatures are taken at a depth of 3 ft. 2 ins. The daily rainfall amounts are those for the 24 hours comprising the civil day. The number of days in the month which were persistently overcast from midnight to midnight was 0, the number of persistently cloudless days was 1, the number of persistently foggy days was 0.

¶ § **Mean Values for Districts.**—The stations used in the Weekly Weather Report for the computation of "district values" of rainfall and temperature are distinguished by the sign ¶, those used for the computation of "district values of bright sunshine" by the sign §. These stations are distributed between Tables A and B. The monthly mean values for districts given in this Report for maximum, minimum and mean temperature, duration of bright sunshine, number of rain days and amount of rainfall, are computed from the data for these "representative" stations. The mean temperature for districts is computed in the manner shown in the preface to this and previous volumes of the Weekly Weather Report. The monthly mean values for districts for "amount of cloud" are computed from the data for all stations included in Table A. The extreme values of the various elements in each district are printed in distinctive type. In the lines devoted to district values, the columns referring to absolute highest and absolute lowest temperature and the maximum amount of rainfall in a day contain the extreme values for the district at any station included in either table of the Report. The averages for districts with which the current values are compared are for the 25 years 1881-1905, as in the case of the corresponding values published in the Weekly Weather Report.

**Meteorological Societies.**—Information for stations marked ¶ is supplied by the Royal Meteorological Society, and that for stations marked § is supplied by the Scottish Meteorological Society. Stations marked S are in connexion with the Scottish Meteorological Society and those marked M with the Royal Meteorological Society as well as with the Meteorological Office.



## MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

(Supplement to the Weekly Weather Report.)

SUMMARY OF OBSERVATIONS COMPILED FROM THE RETURNS OF OFFICIAL STATIONS AND VOLUNTEER OBSERVERS IN THE UNITED KINGDOM, WITH A CHART OF RAINFALL CONTRIBUTED BY THE BRITISH RAINFALL ORGANISATION.  
ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE,  
AND PUBLISHED FOR H.M. STATIONERY OFFICE BY WYMAN AND SONS, LTD., FETTER LANE, E.C.; OR OLIVER AND BOYD, EDINBURGH; OR E. PONSONBY, LTD.,  
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THIRTY-SIXTH YEAR.  
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SEPTEMBER, 1911.

[Price 6d.]

## SUMMARY OF OBSERVATIONS.

**Pressure, Winds and Weather.**—In the early part of September the country experienced a continuance of the abnormally fine hot weather which had prevailed so extensively throughout the two preceding months. After about the 12th the type of pressure distribution underwent an entire change, and for the remainder of the month the weather was cool, changeable and showery.

In the opening days the greater part of the United Kingdom lay under the influence of a large anticyclone having its central portion over Austria, our extreme western and northern districts being affected at the same time by a rather deep depression which passed from Iceland to Northern Europe. During the latter part of the 2nd a new anticyclone came in from the Atlantic, and shortly afterwards the two high pressure systems became united, the combination resulting in a spell of fine warm weather, which lasted almost uninterruptedly until the 9th. During this period the winds were mainly from the Southward and South-Westward in our more northern districts, but from points between North and East in the south, neither current being of any great strength. On the 10th the large high pressure area withdrew bodily to the eastward, the change being followed, in the first instance, by the passage of a deep cyclonic disturbance from Iceland to Norway, and later, on the 12th, by the movement of a shallow depression north-eastwards from the Bay of Biscay across England to the North Sea. Between the 13th and 15th the arrival of a new anticyclone off our western coasts was marked by cool Northerly winds, blowing with considerable strength at exposed places in the north and north-west. The central portion of the anticyclone eventually advanced directly over these islands, and at various times between the 15th and 17th the barometer attained its highest level for the month, the readings being above 30.3 in. over the United Kingdom generally, above 30.4 in. in Ireland and Scotland, and above 30.45 in. on the 15th, in the Hebrides. After the 19th an extensive low pressure system of little depth spread south-eastwards from the Icelandic region over practically the whole of North-Western Europe, and on the 20th the barometer in these islands reached its minimum level, the mercury falling below 29.5 in. over the country generally, and below 29.3 in. over nearly the whole of North Britain. The winds at the time were mostly from between South and West and of little force, but on the 21st, when the depression travelled eastwards, a strong current from North and North-West set in, reaching in gusts a velocity of 52 miles per hour at Quilty, Co. Clare, 54 miles at Roche's Point, and 62 miles at Scilly. Between the 22nd and 24th, a South-Westerly type of weather was produced by a new depression whose borders extended southwards from Iceland; while from the 26th to the 28th the conditions were influenced by another disturbance which passed eastwards along the Arctic Circle, and occasioned in these islands brisk cool winds from South-West, veering to West and North-West.

Until very nearly the close of September no autumn gale of any consequence had occurred on any part of our coasts. The immunity from such visitations was rudely broken at the end of the month. At 6 p.m. on the 28th, wireless reports from Atlantic liners indicated the existence of a shallow barometrical depression slightly to the westward of the 30th meridian, with its centre in about Lat. 53° N. During the ensuing 24 hours the system advanced steadily eastwards, and by 6 p.m. on the 29th its centre had reached a position about 200 miles to the westward of the Southern Hebrides. In the course of the ensuing night the disturbance passed rapidly (at the rate of over 40 miles per hour), across North Britain, and increased in depth, the minimum readings of the barometer next morning, when the centre had reached the Yorkshire coast, being below 29.6 in., or apparently about 0.3 in. lower than those of the previous evening. A further intensification took place as the depression passed on to the Continent, and by 6 p.m., when the centre was over the Zuyder Zee, the barometer had fallen below 29.2 in. After this the disturbance began to fill up, its subsequent progress comprising a slow and very erratic movement across North Germany, the Baltic and Denmark to the North Sea, where the system appears to have entirely dispersed on the night of October 3rd. In the front of the depression the Southerly and South-Westerly winds were of no great strength, but in its rear (owing partly to the decrease in pressure which took place within the central area, and partly to a rapid increase on its western side), a gale from North or North-West was experienced on nearly all the English and Welsh coasts, and a severe gale over the entire southern half of the North Sea area. At the telegraphic reporting stations the extreme force of the gale by Beaufort's Scale was returned as 10 (a whole gale) at Spurn Head, Yarmouth and Dover, while at sea the wind was described by several observers as "of hurricane strength." At none of the anemometrical stations in this country did the mean hourly velocity reach 47 miles per hour (the minimum limit of a strong gale), but in squalls that rate was greatly exceeded. At Pendennis Castle, Falmouth, an extreme of 57 miles was attained, at Shoeburyness 58 miles, at Gorleston 64 miles, and at Dover 66 miles. The gale resulted in numerous casualties in the North Sea and on the French and Dutch coasts, accompanied in many instances by serious loss of life.

The mean barometrical pressure of the month was slightly above the average, and as the divergence was greater in the west and south than

elsewhere the gradient was favourable for winds from the Westward rather than from the South-Westward, as shown by the map of normal pressure. The actual mean values over these islands varied from a trifle below 30.10 in. in the Channel Islands, and 30.05 in. and upwards over the southern portions of the country generally, to 29.85 in. and less in Shetland. Further to the northward the values decreased to a little below 29.65 in. in Iceland.

In the early part of the month there was a decided preponderance of fair, dry weather, but while several English localities experienced an absence of rain lasting for 10 or 12 days, the returns include no record of an absolute drought. Thunderstorms occurred in various isolated parts of England on the 4th, and more generally in the north and east of England on the 8th. The passage across England of the shallow barometrical depression of the 12th was accompanied by much electrical disturbance, and by a heavy down-pour of rain over nearly the whole of North Wales and the north-west of England, as well as in the Scilly Islands. At St. Asaph the fall amounted to 1.6 in.; at Scilly to 1.7 in.; at Southport and Lampeter to 1.8 in., and at Ruthin to 1.9 in. Thunderstorms were again experienced over a large portion of the country on the 20th and 21st, but, with a few local exceptions, the accompanying rainfall was small. During the formation of a small secondary depression over the St. George's Channel on the 25th, exceedingly heavy rain occurred in the south-east of Ireland; at Waterford the fall amounted to 2.2 in., and at Roche's Point to as much as 3.0 in.

The first twelve days of the month were marked by three touches of unusual warmth. On the 2nd, the thermometer rose above 85° in many parts of our eastern, midland and south-eastern counties, and reached 90° at Camden Square, Cromer and Hillington, and 91° at East Ham. Still higher readings were observed on the 7th and 8th, when shade maxima exceeding 90° occurred over a large portion of England; at Hampstead, Cambridge, Rugby and Bath the thermometer on the 8th reached 93°, and at Greenwich, Isleworth, and Raunds, Northamptonshire, it touched 94°, the Greenwich reading being the highest on record for the month of September. The third burst of warmth, and the last of the season, occurred on the 12th, when the thermometer rose to 85° and upwards in many parts of our eastern and south-eastern counties, to 88° at Greenwich, and to 89° at Camden Square. Between the 8th and 12th the nights were extremely mild, and the minimum temperature in the south of England on some occasions exceeded 65°. After the middle of the month no midday temperatures appreciably above 70° were recorded in any part of the United Kingdom. Sharp ground frosts occurred in most of the northern and central districts on the 15th and 16th, and again on the 21st and 22nd.

The temperature of the sea water was lower than in August, but at all but a few places round our north-east and south-west coasts it was higher than that of the air on shore.

**Rainfall.**—Owing mainly to the heavy downpour of the 12th the total rainfall in the north of England was in excess of the average. A decided excess was reported also in those parts of Southern Ireland which experienced the rainstorm of the 25th, but in nearly all other portions of the United Kingdom the aggregate was small, many stations in Southern England and the south and east of Scotland recording considerably less than half the normal quantity. The largest totals reported to the Meteorological Office were 9.6 in. (114 per cent. of the average) at Glencarron, 7.7 in. at Gruline, Mull, 6.8 in. (92 per cent. of the average) at Fort William, 5.4 in. at Cruachan, and Caragh, Co. Kerry, and 5.1 in. (respectively 115 and 173 per cent. of the average) at Stonyhurst and Liverpool. At a number of places in eastern and central Scotland, and at a few scattered stations in Ireland and the South of England, less than an inch was collected, the smallest totals being 0.4 in. at Balmoral (only 14 per cent. of the average), 0.5 in. at Killiney, near Dublin, and 0.6 in. at Crathes and Foynes (at the latter station only 21 per cent. of the average). Over a large portion of Eastern, Central and Southern England and in some parts of Eastern and Central Scotland there were less than 10 days with a measurable quantity of rain, at Harefield only 6, and at Carnoustie only 5. Many stations in the west and north of Scotland reported at least 20 such days, the highest numbers being 28 at Baltasound and Stornoway, and 26 at Glencarron.

**Bright Sunshine** was rather deficient in Orkney and the Hebrides, as well as at Scilly, but was in excess of the average over the United Kingdom generally, and largely in excess over Eastern, Central and Southern England. South of a line drawn from Yarmouth to Plymouth the total duration exceeded 210 hours, and at some stations in Kent and Sussex it exceeded 250 hours, the largest aggregates reported being 264 hours (158 per cent. of the average) at Hastings, 261 hours (156 per cent. of the average) at Eastbourne, and 257 hours (164 per cent. of the average) at Tunbridge Wells and Worthing. In the north and west of Scotland and the neighbouring islands the aggregates were mostly below 120 hours, Castlebay and Deerness experiencing only 106 hours, Oban only 102 hours, and Fort Augustus only 94 hours. At Deerness the total amounted to only 97 per cent. of the average, but at Fort Augustus the total, though small, was equal to 115 per cent. of the average.

TABLE A.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at 9 a.m., 3 p.m. and 9 p.m. at NORMAL STATIONS in the BRITISH ISLANDS

DISTRICT.	STATION.	Height of Barometer cistern above M.S.L.	BAROMETER.				AIR TEMPERATURE.								HYGROMETER.										
			Mean at 32° F. at Level and Latitude of Station.	Diff. from Nor- mal.	C. Cor. for Diurnal Range.	Mean of		Mean of A and B.	Diff. from Nor- mal.	Absolute Maximum and Minimum.				Observations at 9 a.m., 3 p.m., and 9 p.m., or at 7 a.m., 1 p.m., 6 p.m., or 9 p.m.											
						A	B			Max.	Da y.	Min.	Da y.	Dry Bulb.			Dep. of Wet.			Vap. Pressure.			Humidity.		
														I.	II.	III.	I.	II.	III.	I.	II.	III.	I.	II.	III.
O. SCOTLAND, N.																									
Islands.	CASTLEBAY	48	29.878	+0.83	—	56.6	50.3	53.5	+1.1	60	2, 4, 11	42	30th	53.0	55.4	53.4	2.2	3.1	2.6	.342	.353	.337	85	81	83
	Deerness	163	29.636	—	—	55.8	48.0	51.9	+0.4	64	2nd	39	30th	52.3	—	50.4	2.5	—	1.9	.331	—	.321	84	—	87
	LERWICK	59	29.746	—0.05	—0.02	54.8	48.1	51.5	+0.9	61	11th	39	30th	50.8	53.5	51.0	2.3	3.5	2.2	.314	.316	.318	85	77	85
	STORNOWAY	52	29.842	+0.65	—0.02	57.2	47.2	52.2	+0.7	64	7th, 10th	36	21st	50.3	55.4	51.0	1.6	3.2	2.1	.324	.350	.321	89	80	85
	WICK	94	29.777	+0.35	—0.02	57.0	46.6	51.8	—0.1	67	7th	35	30th	50.3	55.6	50.4	2.1	3.9	2.0	.311	.337	.315	85	76	87
	Strathpeffer	210	29.694	—	—0.07	59.9	45.6	52.8	+1.0	68	10th	36	21, 25, 30	53.3	—	50.2	3.0	—	2.1	.326	—	.310	80	—	86
Mainland.	Glencarron	504	29.382	—	—0.06	56.4	45.6	51.0	—0.5	67	10th	35	21st, 30th	51.5	—	49.4	2.1	—	2.1	.326	—	.300	86	—	86
	Fort Augustus	78	29.861	—	—0.06	58.8	46.0	52.4	—0.9	67	10th	32	21st	53.4	—	51.1	2.7	—	1.9	.335	—	.327	82	—	86
	Kingussie	828	30.047	—	—0.06	57.7	43.1	50.4	—	66	10th	27	21st	51.4	—	48.1	3.7	—	2.3	.286	—	.280	76	—	84
	Fort William	88	29.916	—	—0.06	58.7	46.5	52.6	—1.1	65	2, 6, 12	34	22nd	52.7	—	51.2	2.2	—	2.5	.344	—	.319	85	—	83
	Dunrobin Castle	16	29.883	—	—0.06	59.9	45.8	52.9	+0.3	68	6th, 7th	37	21st	54.5	—	51.3	3.2	—	2.7	.341	—	.314	80	—	82
	District Value	—	—	—	—	57.5	46.5	51.6	—0.1	68	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1. SCOTLAND, E.																									
Northern Part.	Dundee	164	29.791	—	—0.07	61.8	45.4	53.6	0.0	71	6th	35	22nd	53.3	—	51.2	3.2	—	2.4	.330	—	.327	80	—	84
	Nairn	82	29.808	+0.45	+0.03	60.5	44.7	52.6	—0.3	71	10th	32	21st	49.7	58.5	54.8	1.8	5.2	3.5	.312	.344	.335	88	70	78
	Gordon Castle	107	29.805	—	—0.06	61.9	46.0	54.0	+0.7	74	10th, 11th	36	21st	55.2	—	51.3	4.3	—	2.4	.322	—	.318	74	—	83
	Aberdeen	90	29.843 29.832	+0.56 +0.52	—0.07	60.6	46.9	53.8 53.9	+0.8 +1.5	73	6th	38	21st	54.9	58.9	52.7	4.6	6.6	3.7	.310	.316	.302	72	63	76
	Balmoral	927	28.928	—	—	61.5	40.6	51.1	+1.3	77	6th	25	21st	46.3	58.5	—	2.3	4.3	—	.261	.365	—	84	74	—
	Crieff	436	29.495	—	—0.07	61.3	44.1	52.7	—0.7	70	7th	34	22nd	53.4	—	49.9	3.8	—	2.6	.309	—	.294	76	—	83
	Leith	37	29.934	+0.94	+0.03	61.8	47.5	54.7	—0.2	73	11th	35	22nd	51.3	—	57.3	2.6	—	5.0	.313	—	.331	82	—	71
	Marchmont	500	29.450	—	—0.07	62.0	43.9	53.0	+0.5	72	7th, 10th	34	30th	55.0	—	50.5	4.7	—	2.6	.309	—	.302	72	—	82
District Value	—	—	—	—	61.1	44.4	52.5	+0.2	80	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
2. ENGLAND, N.E.																									
Northern Part.	Whitby	145	29.844	—	—0.08	68.0	48.4	58.2	+3.2	84	6th	36	22nd	58.7	—	55.0	5.2	—	3.5	.352	—	.341	71	—	78
	Cockle P'rk (Morpeth)	331	29.647	—	—0.08	61.7	46.2	54.0	—	73	7th	37	30th	55.5	—	50.6	3.9	—	2.0	.339	—	.324	76	—	87
	Shields	117	29.868	+0.83	+0.03	63.1	46.2	54.7	+0.4	79	2nd	38	22nd, 23rd	51.3	—	57.4	1.9	—	4.2	.329	—	.352	87	—	77
	Durham	352	29.624	—	—0.08	63.3	45.6	54.5	+0.4	79	8th	33	22nd	57.0	—	51.5	3.9	—	1.8	.361	—	.339	76	—	88
	Rounton	245	29.745	—	—0.08	63.7	45.8	54.8	+1.2	80	7th	32	22nd	56.2	—	51.5	4.0	—	2.4	.340	—	.318	75	—	83
	Scarborough	127	29.555	—	—0.08	64.3	49.4	56.9	+1.7	77	6th	42	29th, 30th	57.3	—	56.3	3.7	—	3.5	.364	—	.356	78	—	78
Southern Part.	York	53	29.979	—	—0.08	66.1	47.4	56.8	+1.3	80	11th	37	22nd	56.3	—	54.0	3.8	—	2.8	.349	—	.339	76	—	81
	Spurn Head	28	29.974	+0.67	+0.03	63.9	52.9	58.4	+1.6	77	6th	46	17, 29, 30	56.0	62.8	59.4	2.6	5.9	3.6	.375	.387	.398	83	69	79
	Lincoln	42	—	—	—	68.1	47.7	57.9	+1.6	82	8th	34	22nd	57.5	—	—	4.3	—	—	.357	—	—	75	—	—
	Skegness	16	30.007	+0.83	+0.02	65.3	49.0	57.2	—	78	6th	41	29th	52.9	—	60.8	1.7	—	4.3	.353	—	.399	88	—	76
Hull	12	—	—	—0.08	66.4	48.0	57.2	+1.9	82	7th	37	22nd	58.7	—	54.7	4.0	—	2.8	.376	—	.351	76	—	81	
District Value	—	—	—	—	64.9	47.6	56.0	+1.7	90	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
3. ENGLAND, E.																									
Northern Part.	Lowestoft	75	29.962	—	—0.09	67.0	52.2	59.6	+2.5	78	1st	42	29th	63.4	—	57.9	5.3	—	2.6	.412	—	.403	71	—	84
	Cromer	139	29.872	—	—0.09	69.7	51.6	60.7	—	90	2nd	42	30th	60.2	—	58.1	4.6	—	3.3	.383	—	.387	73	—	79
	Hillington	92	29.937	—	—0.09	69.6	46.3	58.0	+1.8	90	8th	34	22nd	59.6	—	54.7	3.4	—	1.9	.406	—	.373	79	—	87
	Norwich	98	—	—	—	69.6	49.7	59.4	—	91	8th	37	23rd	—	—	—	—	—	—	—	—	—	—	—	—
	YARMOUTH	27	30.010	+0.76	—0.03	67.1	51.9	59.5	+2.6	80	1st	41	29th	55.6	64.2	58.9	1.4	4.3	2.0	.402	.455	.435	90	76	87
	Geldeston	47	29.999	—	—0.09	71.5	47.7	59.6	+2.8	91	8th	36	23rd	61.1	—	55.6	4.8	—	2.6	.390	—	.369	73	—	83
Southern Part.	Cambridge	43	29.993	—	—0.09	71.4	46.9	59.2	+2.1	93	8th	33	22nd	60.7	—	55.0	4.9	—	2.7	.389	—	.365	73	—	81
	CLACTON	62	29.985	+0.56	—0.03	67.6	52.2	59.9	+2.0	78	8th	43	18, 22, 30	56.9	65.4	59.4	2.4	6.2	3.0	.392	.419	.414	85	67	82
	Woburn	294	29.763	—	—0.09	70.0	46.1	58.1	—	91	5th	32	22nd	59.5	—	56.5	5.3	—	4.1	.360	—	.360	71	—	77
	Bennington	411	29.649	—	—0.09	71.1	48.6	59.9	+3.4	91	7th	39	22nd	60.4	—	56.3	6.1	—	4.0	.346	—	.342	66	—	75
Berkhamsted	397	29.652	—	—0.09	71.0	46.1	58.6	+2.3	92	8th	34	23rd	59.3	—	54.6	5.3	—	3.2	.352	—	.339	70	—	79	
District Value	—	—	—	—	69.7	49.3	59.1	+3.2	93	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
4. MIDLAND COS.																									
Eastern Part.	Garforth	198	—	—	—0.08	65.5	43.2	54.4	—	80	7th	26	22nd	57.4	—	51.4	3.8	—	2.2	.372	—	.330	78	—	86
	Huddersfield	411	29.595	—	—0.09	64.1	47.1	55.6	—	82	8th	37	22nd	55.2	62.0	52.8	3.8	7.8	2.8	.340	.338	.333	77	61	82
	Belvoir Castle	276	29.759	—	—0.09	67.4	46.8	57.1	+1.3	80	8th	32	22nd	57.7	—	53.4	4.5	—	2.6	.350	—	.337	73	—	83
	Coventry	309	29.737	—	—	68.6	48.4	58.5	+2.3	90	8th	37	22nd	59.2	—	—	5.6	—	—	.342	—	—	68	—	—
	NOTTINGHAM	85	29.942	+0.68	—0.03	67.8	45.3	56.6	+0.7	89	8th	34	22nd, 23rd	50.2	65.8	55.3	0.9	8.1	2.5	.340	.376	.367	94	60	84
	Birmingham	542	29.478	—	—0.09	67.4	49.1	58.3	+2.8	89	8th	40	22nd	5											



TABLE A. (continued).—Giving a Summary of the METEOROLOGICAL OBSERVATIONS made at 9 a.m., 3 p.m. and 9 p.m. at NORMAL STATIONS in the BRITISH ISLANDS

Table with columns: DISTRICT, STATION, Height of Barometer, BAROMETER (Mean at Level, Diff. from Normal, Cor. for Diurnal Range), AIR TEMPERATURE (Mean of A and B, Diff. from Normal, Absolute Maximum and Minimum), and HYGROMETER (Observations at 9 a.m., 3 p.m., and 9 p.m., or at 7 a.m., 1 p.m., 6 p.m., or 9 p.m.). Rows include stations like Eastbourne, Dover, London, Glasgow, Manchester, Liverpool, and Jersey.

\* Dulwich now takes the place of Norwood from which it is distant 1 mile E.

† Dwyran now takes the place of Llaneluad.

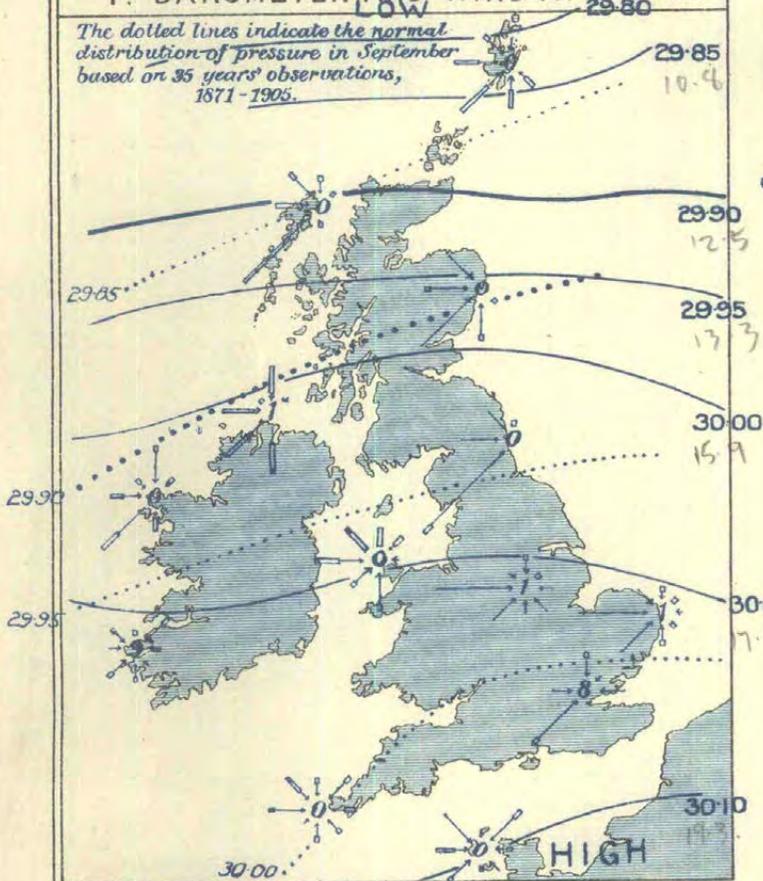


TABLE B.—SUMMARY of the OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE at additional STATIONS, SEPTEMBER, 1911.

DISTRICT.	STATION.	Height of Gauge above M.S.L. Ft.	AIR TEMPERATURE.								Earth Temperature		Grnd Frost. No. of Nigts	RAIN AND OTHER FORMS OF PRECIPITATION.				BRIGHT SUNSHINE.				
			Mean of		Mean of A and B.	Diff. of Mean from Normal.	Absolute Maximum and Minimum.				1 ft.	4 ft.		Total Fall.		Most in a day.		Number of Days.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.
			A	B			Max.	Day.	Min.	Day.			In.	In.	In.	Day.						
			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
O. SCOTLAND N.	p Baltasound - - - S	31	54.7	47.4	51.1	—	61	11th	39	30th	52.2	—	—	4.14	—	0.55	23rd	28	113	—	30	—
	p Dunrossness - - -	145	55.5	45.2	50.4	- 0.2	60	1, 4, 15	32	30th	—	—	—	2.55	- 0.77	0.24	23rd	23	—	—	—	—
	a Fortrose - - -	69	59.1	47.4	53.3	—	66	6th	37	21st	—	—	—	1.24	—	0.28	8th	13	129	—	34	—
1. SCOTLAND, E.	p Inach - - -	426	61.7	43.5	52.6	—	76	7th	32	21st	54.8	—	4	0.76	—	0.29	30th	10	120	—	34	—
	p Crathes - - - S	140	63.6	43.6	53.6	—	78	7th	32	21st, 28th	54.4	55.1	8	0.63	—	0.29	8th	9	134	—	36	—
	p Stonehaven - - -	786	60.4	46.8	53.6	—	80	8th	37	28th, 30th	—	—	—	0.93	—	0.38	8th	9	157	—	42	—
	p Balruddery - - - S	276	63.8	42.5	53.2	—	73	6th, 18th	33	29th	—	—	—	1.00	—	0.28	8th	11	170	—	45	—
2. ENGLAND, N.E.	a West Linton - - - S	800	59.5	41.6	50.6	- 1.9	70	10th, 11th	24	22nd	—	—	—	1.56	—	0.61	29th	17	130	—	35	—
	a Alnwick Castle - - -	210	62.9	45.9	54.4	+ 0.9	74	7th	33	22nd	—	—	—	2.21	- 0.38	0.85	29th	11	—	—	—	—
	p Newcastle-on-Tyne - - -	152	62.0	48.8	55.4	—	74	7th	39	22nd, 30th	—	—	—	2.61	+ 0.44	0.75	11th	13	154	+ 55	41	+ 15
	a Chopwellwood - - -	445	62.7	45.0	53.9	—	78	7th	32	22nd	—	—	—	2.45	—	0.67	12th	13	187	—	50	—
	p Ampleforth - - -	349	64.0	46.3	55.2	—	77	11th	38	21st	—	—	—	2.45	—	0.63	12th	11	—	—	—	—
3. ENGLAND, E.	a Fulbeck - - -	180	68.4	47.9	58.2	+ 2.3	89	8th	35	22nd	—	—	3	1.36	- 0.70	0.53	23rd	12	211	—	56	—
	a Raucely - - -	124	68.9	46.9	57.9	—	90	8th	34	23rd	60.6	60.2	2	1.30	- 1.05	0.55	23rd	10	197	—	53	—
	a Felkstone - - -	10	67.3	52.7	60.0	+ 3.0	78	6th	41	25th	—	—	—	1.85	—	0.49	29th	8	252	—	67	—
4. MIDLAND COUNTIES	a Rothamsted - - -	424	68.8	47.2	58.0	+ 2.3	90	8th	35	23rd	—	—	—	1.32	- 1.08	0.35	13th	9	223	+ 77	60	+ 21
	a Shoeburyness - - -	13	68.7	52.5	60.6	+ 2.0	85	2nd	40	23rd	—	—	—	1.04	- 0.86	0.39	13th	8	—	—	—	—
	a Southend-on-Sea - - -	90	70.5	53.8	62.2	—	88	2nd	43	22nd, 29th	65.5	—	0	1.00	- 1.00	0.33	13th	9	215	—	57	—
	a Harrogate - - -	476	63.0	46.5	54.8	+ 0.7	78	7th	38	22nd, 30th	55.6	56.3	0	2.82	+ 0.34	0.87	12th	11	201	—	54	—
	a Bradford - - -	489	63.0	47.5	55.3	—	78	7th	36	22nd	56.4	61.7	1	2.93	—	1.05	12th	17	171	—	46	—
	a Cheadle - - -	646	65.1	40.0	55.6	+ 1.4	85	8th	38	22nd	—	—	0	2.32	- 0.58	0.51	12th	11	—	—	—	—
	a Bawtry - - -	65	68.2	44.9	56.6	+ 1.2	85	8th	32	22nd	—	—	—	1.74	- 0.26	0.43	23rd	10	—	—	—	—
	a Worksop - - -	56	68.3	45.3	56.8	+ 1.6	88	8th	32	22nd	57.2	57.6	3	1.52	- 0.50	0.42	23rd	10	165	+ 46	44	+ 12
	a Mayfield (Staffs.) - - -	374	65.6	42.3	54.0	—	86	8th	30	22nd	—	—	2	2.33	—	0.57	23rd	11	—	—	—	—
	a Belper - - -	222	68.1	45.0	56.6	—	88	8th	33	22nd	—	—	1	1.49	—	0.53	23rd	10	—	—	—	—
	a Kingston-on-Soar - - -	125	67.7	46.1	56.9	—	89	8th	31	22nd	57.0	—	—	1.57	—	0.65	12th	9	—	—	—	—
	p Rugby - - -	379	69.9	46.1	58.0	+ 2.4	93	8th	39	16, 19, 29	—	—	1	1.37	—	0.37	13th	9	—	—	—	—
5. ENGLAND, S.E.	a Raunds - - -	210	70.9	46.4	58.7	+ 2.4	94	8th	33	22nd	59.1	—	2	1.26	—	0.25	13th, 23rd	8	—	—	—	—
	a Winslow - - -	379	68.0	48.5	58.3	—	90	8th	36	22nd	—	—	1	1.57	—	0.46	20th	7	—	—	—	—
	a Hereford - - -	291	66.8	46.3	56.6	+ 0.8	86	8th	32	22nd	—	—	9	1.46	- 0.88	0.50	19th	9	—	—	—	—
	a Cirencester - - -	446	68.9	46.5	57.7	+ 2.6	91	8th	34	22nd	59.3	59.1	0	1.28	- 1.41	0.44	13th	10	215	+ 76	57	+ 20
	a Epsom - - -	160	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	a Wokingham - - -	216	70.2	42.1	56.2	—	92	8th	28	22nd	—	—	—	1.10	—	0.39	13th	7	—	—	—	—
	a Marlborough - - -	424	69.4	43.4	56.4	+ 1.5	91	8th	29	22nd	—	—	9	0.97	- 1.73	0.26	13th	10	216	+ 86	58	+ 23
	a Bucklebury - - -	409	69.2	48.2	58.7	—	90	8th	36	22nd	—	—	8	1.23	—	0.33	13th	8	—	—	—	—
	a Swarraton - - -	310	68.9	46.0	57.5	+ 2.0	88	8th	32	19th	—	—	—	1.14	- 1.43	0.35	13th	8	—	—	—	—
	a Margate - - -	35	70.5	56.2	63.4	+ 4.8	91	8th	47	23rd	61.1	61.3	0	1.70	- 0.39	0.67	13th	11	234	+ 84	63	+ 23
6. SCOTLAND, W.	Broadstairs - - -	140	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Ramsgate - - -	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	a Eltham - - -	200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	a Wisley - - -	150	70.5	47.7	59.1	+ 1.1	91	8th	35	22nd	60.5	61.7	4	1.01	—	0.33	13th	9	235	—	63	—
	a Basingstoke - - -	289	69.5	46.7	58.1	—	90	8th	36	22nd	60.4	60.5	1	1.11	—	0.36	13th	8	—	—	—	—
	a Sevenoaks - - -	509	70.3	50.0	60.2	—	90	8th	38	22nd	59.3	59.9	0	1.46	—	0.52	13th	10	—	—	—	—
	a Tunbridge Wells - - -	421	70.6	48.9	59.8	+ 3.1	91	8th	38	29th	60.4	—	0	1.76	- 0.71	0.66	13th	9	257	+ 100	69	+ 27
	a Matfield - - -	320	70.4	49.0	59.7	—	90	8th	37	23rd	—	—	4	1.27	—	0.36	13th	10	—	—	—	—
	p Folkestone - - -	121	68.9	56.3	62.6	—	84	12th	44	29th	—	58.3	—	1.39	- 1.08	0.51	13th	8	243	—	65	—
	Littlestone - - -	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	a Bexhill - - -	27	68.8	55.5	62.2	—	79	8th	42	29th	64.9	—	0	1.13	—	0.33	23rd	8	252	—	68	—
	Hove - - -	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
a Worthing - - -	36	69.1	51.7	60.4	+ 2.4	80	5, 7, 8	41	29th	61.8	62.2	0	1.64	- 0.81	0.41	13th	9	257	—	69	—	
a Bognor - - -	20	67.2	52.4	59.8	—	79	5th	43	29th	—	60.2	1	1.22	—	0.28	21st	9	245	—	66	—	
Westbourne - - -	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
a Totland Bay - - -	140	67.7	53.4	60.6	+ 2.8	79	5th, 7th	42	22nd	—	—	0	1.22	- 1.26	0.24	20th	10	241	—	65	—	
a Sandown - - -	20	69.9	54.6	62.3	—	82	2nd	43	22nd	—	—	—	1.16	—	0.22	29th	11	230	—	62	—	
p Bournemouth - - -	145	68.5	50.2	59.4	—	81	5th, 7th	39	22nd	61.0	62.1	—	1.10	—	0.28	19th	12	232	—	62	—	
7. ENGLAND, N.W.	p Oban - - -	20	59.0	48.7	53.9	—	63	4th, 10th	38	30th	—	—	0	3.97	—	0.53	19th	18	102	—	27	—
	a Thorntonhall (Lanarkshire) - - -	440	59.4	44.0	51.7	—	69	11th	32	9th, 22nd	—	—	3	2.03	—	0.57	29th	13	128	—	34	—
	a Kilmarnock - - -	90	60.5	45.2	52.9	- 0.8	69	11th	32	16th	—	—	—	2.02	—	0.42	29th	15	128	—	34	—
	p Ruthwell - - - S	67	63.3	44.6	54.0	—	73	10th	30	22nd	—	—	—	1.77	—	0.38	29th	9	150	—	40	—
	a Carnforth - - -	174	61.9																			

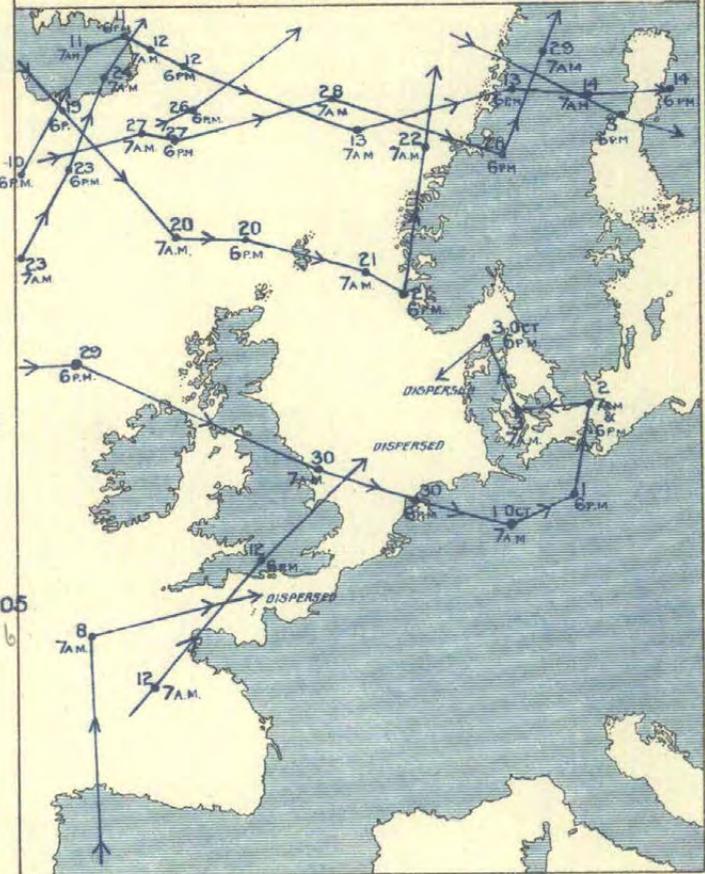
1. BAROMETER AND WIND AT 7 A.M.

The dotted lines indicate the normal distribution of pressure in September based on 35 years' observations, 1871-1905.



WIND ROSES. The arrows fly with the wind and indicate frequency and force, thus:   
 LIGHT MODERATE STRONG   
 k-30 Obs. 1 Inch

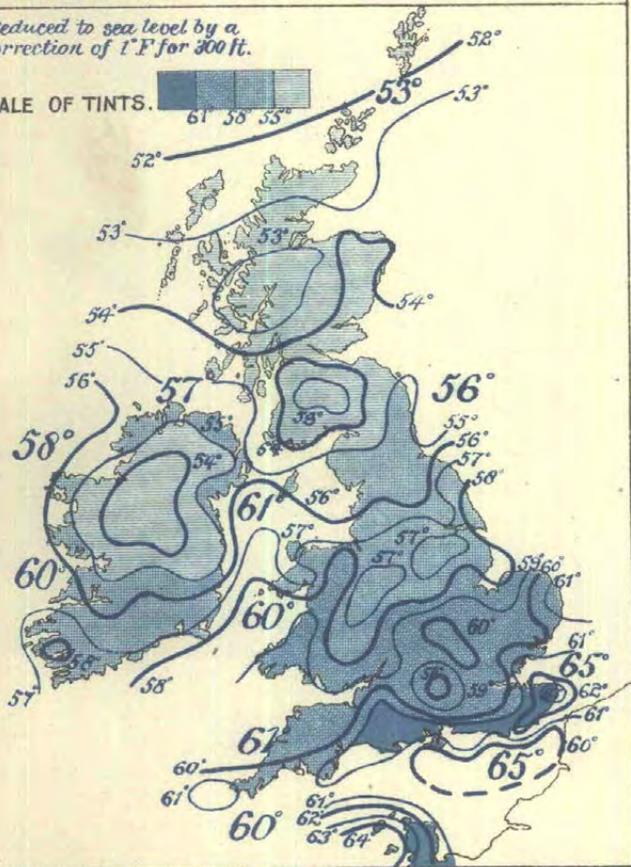
2. MOVEMENTS OF DEPRESSIONS.



3. DISTRIBUTION OF MEAN TEMPERATURE.

Reduced to sea level by a correction of 1° F for 300 ft.

SCALE OF TINTS.

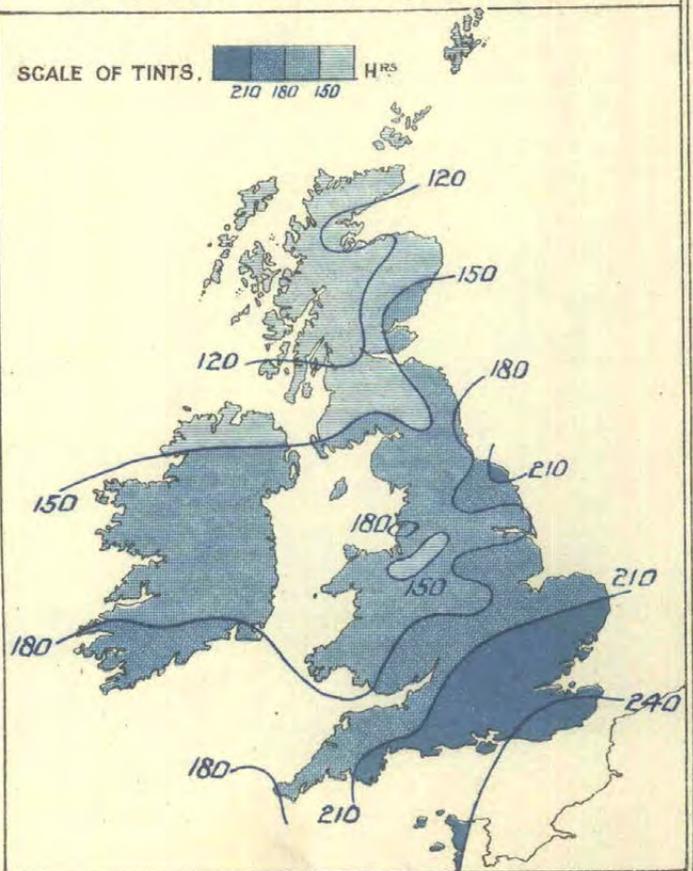


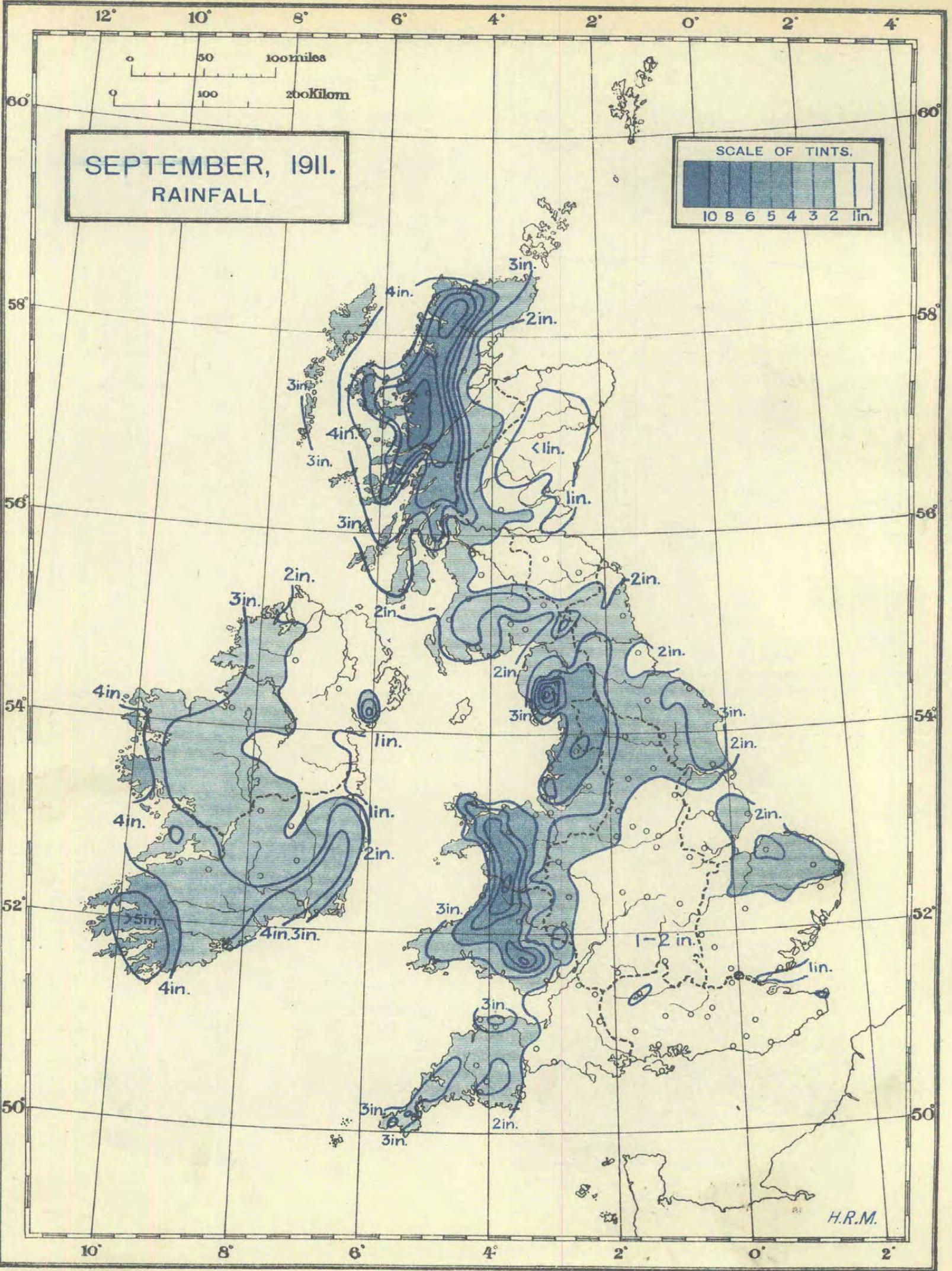
Sea temperatures are shown in large figures thus 60°

4. BRIGHT SUNSHINE, IN HOURS.

SCALE OF TINTS.

210 180 150 HRS





Scale 1 : 5,000,000.

TABLE B (continued).—SUMMARY OF THE OBSERVATIONS OF TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE at additional STATIONS, SEPTEMBER, 1911.

DISTRICT.	STATION.	Height of Gauge above M.S.L. Ft.	AIR TEMPERATURE.								Earth Temperature		Grnd Frost. No. of Nig'ts	RAIN AND OTHER FORMS OF PRECIPITATION.				BRIGHT SUNSHINE.				
			Mean of		Mean of A and B.	Diff. of Mean from Normal.	Absolute Maximum and Minimum.				1 ft.	4 ft.		Total Fall. In.	Diff. from Normal. In.	Most in a day.		Number of Days.	Total in Hours. Hr.	Diff. from Normal. Hr.	Per Cent. %	Diff. from Normal. %
			A	B			Max.	Day.	Min.	Day.			Amt.			Day.						
			Max.	Min.	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
8. ENGLAND, S.W.	§ p Aberystwyth	59	64.3	52.4	58.4	—	79	8th	40	16th	—	—	—	2.97	—	1.38	12th	14	179	—	48	—
	Haverfordwest	93	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	186	—	50	—
	Tenby	79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	175	+23	47	+6
	Port Talbot	179	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	170	—	45	—
	Forest of Dean	200	—	—	—	—	—	—	—	—	—	—	—	1.07	—	0.32	13th	11	—	—	—	—
	"	900	—	—	—	—	—	—	—	—	—	—	—	1.36	—	0.41	13th	10	—	—	—	—
	¶ p Cardiff	208	67.0	49.0	58.0	+ 1.2	88	8th	40	22nd	59.4	60.6	0	2.05	-1.86	0.53	13th	13	200	—	53	—
	a Swansea	24	67.5	52.0	59.8	—	85	8th	42	22nd	62.5	62.1	0	3.11	—	0.91	19th	13	174	—	47	—
	¶ a Shaftesbury	722	67.5	50.3	58.9	+ 2.9	88	8th	39	22nd	60.9	—	—	1.12	-1.30	0.31	13th	9	—	—	—	—
	¶ a Arlington	613	65.8	49.5	57.7	+ 2.2	87	8th	40	17th	—	—	—	4.38	-0.27	0.81	20th	11	—	—	—	—
	¶ § a Cullompton	202	70.2	46.7	58.5	+ 1.4	89	7th	34	17th	61.7	—	0	1.60	-1.31	0.33	19th, 29th	13	184	+41	49	+11
	Torquay	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	211	+50	57	+14
	a Weymouth	21	69.0	53.7	61.4	—	81	5th, 6th	43	22nd	—	—	—	1.05	—	0.20	19th	11	226	—	61	—
	p Paignton	11	66.9	51.6	59.3	—	82	2nd	42	17th	—	—	—	2.02	—	0.45	19th	13	205	—	55	—
	p Sheepstor	749	67.3	44.9	56.1	—	85	7th	34	19th	—	—	—	3.29	—	1.05	19th	11	—	—	—	—
Salcombe	300	67.6	52.5	60.1	—	80	8th	44	19th	—	—	—	2.00	—	0.55	22nd	13	218	—	58	—	
a Teignmouth	19	67.5	52.3	59.9	—	80	2nd	42	17th, 19th	—	—	0	1.45	—	0.31	19th	11	196	—	53	—	
a Fowey	—	68.5	50.1	59.3	—	80	5th	40	16th	—	—	—	2.61	—	0.51	22nd	13	202	—	54	—	
a Penzance	54	67.2	55.4	61.3	—	78	7th	47	21st	—	—	—	4.16	—	0.96	22nd	15	184	—	49	—	
9. IRELAND, N.	¶ Dunfanaghy	54	60.1	49.6	54.9	—	66	4, 9, 10	43	20th, 21st	—	—	—	2.39	—	0.41	1st	22	—	—	—	—
¶ p Dublin (Glasnevin)	67	63.6	46.0	54.8	+ 0.1	76	5th	35	21st	—	—	4	1.40	-0.93	0.49	25th	12	—	—	—	—	
a Kingstown	42	63.1	51.1	57.1	—	75	5th	44	21st	—	—	—	0.85	—	0.40	25th	10	181	—	48	—	
¶ p Clongowes Wood College	245	62.8	43.5	53.2	—	74	11th	33	16th	—	—	2	1.58	—	0.45	26th	12	154	—	41	—	
a Mountmellick	283	64.0	45.8	54.9	—	76	6th, 8th	38	21st	—	—	—	2.05	—	0.45	22nd	14	—	—	—	—	
10. IRELAND, S.	¶ p Newcastle (Co. Wicklow)	256	61.4	48.3	54.9	—	75	5th	42	21st	—	—	—	1.90	—	0.88	25th	11	—	—	—	—
¶ a Kilkenny	212	63.5	46.0	54.8	- 0.4	77	7th, 8th	32	29th	—	—	—	2.51	-0.16	0.91	25th	13	—	—	—	—	
¶ a Cahir	199	64.1	47.3	55.7	+ 0.7	78	8th	38	29th	—	—	—	3.93	—	1.12	25th	13	—	—	—	—	
¶ a Foynes	108	63.1	49.9	56.5	+ 1.1	75	9th	44	16th, 21st	—	—	—	0.64	-2.35	0.15	25th	15	—	—	—	—	
¶ a Ballinacurra	34	64.5	48.5	56.5	—	75	7th, 8th	39	29th	—	—	—	3.12	—	1.52	25th	14	182	—	49	—	
ENGLISH CHANNEL	¶ § a Guernsey (Villa Carey)	180	70.7	56.4	63.8	+ 4.3	89	8th	49	18th, 19th	—	—	—	1.36	-1.81	0.28	19th	10	236	+60	63	+16

NOTES ON THE STATISTICAL TABLES.

Hours of Observation.—The following types are used to indicate the hours of observation at Stations included in Table A:—Clarendon, Normal Climatological Stations—I., 9 a.m. (II., 3 p.m.), III., 9 p.m. Black Capitals, telegraphic reporting normal climatological stations—I., 7 a.m., II., 1 p.m., III., 9 p.m. Roman, telegraphic reporting stations—I., 7 a.m., (II., 1 p.m.), III., 6 p.m. Italic, auxiliary climatological stations—I., 9 a.m. only, at Balmoral, Colmonell and Ventnor 3 p.m. also. The summaries are based on observations made three times a day wherever the data are available, except in the case of the element pressure (see below). At stations shown in Clarendon type the maximum and minimum temperatures are read at 9 p.m.; at the remaining stations these observations are made at I. In Table B the letters a and indicate whether the readings of the maximum and minimum are taken at the hours of morning or evening observation.

Barometer.—The correction for latitude has not been applied to the readings quoted in the Tables. It is applied to the readings at sea level from which the chart showing the mean monthly distribution of pressure is prepared. The values given in the tables are for station level. The values printed are (1) for stations shown in Clarendon type, the means of observations at 9 a.m. and 9 p.m.; (2) for stations shown in Capitals, the means of observations at 7 a.m., 1 p.m., 9 p.m.; (3) for stations shown in Roman type, the means of observations at 7 a.m. and 6 p.m.; (4) for stations shown in italic type, the means of observations at 9 a.m. The column headed C gives the correction for diurnal variation required to reduce the means of observations at fixed hours to true diurnal means, based on the analysis of the values obtained at the four observatories for the period 1871-1905. The difference from normal is based upon the 7 a.m. readings only, except in the cases of Kew, Greenwich, Aberdeen, Valencia and Falmouth (see below).

Rainfall.—The amounts are those for the 24 hours commenced at the time of morning observation.

Hygrometer.—At certain stations the vapour pressure and the relative humidity are the results obtained from the daily values. These are entered in Clarendon type. At other stations the calculations are made from the monthly means of the dry and wet bulb readings.

Weather Phenomena.—The number of days of Rain, Snow, Hail, Thunderstorm, Fog, Ground Frost, and Gale, are counted irrespective of the hours at which the phenomena occur. Except in the cases of rainfall (see above) and ground frost the day is the civil day. A day is reckoned as a day of "clear sky," if the mean of the timates of the "amount of cloud" at the fixed hours of observation is less than 2, and as an "overcast" day if the mean is greater than 8. Days of Ground Frost.—day is counted as a "Day of Ground Frost" if it follows a night on which the minimum has sunk to 30° or less.

Wind Summaries.—The results given under wind direction, and the number of observations of calms and of fresh or strong wind, are based on the observations at fixed hours. At Deerness, Aberdeen, Valencia, Falmouth, Kew, Glasgow, Stonyhurst and Armagh the wind observations are based on the records of a standard Robinson anemometer (factor 2.2). Velocities of between 13 and 38 miles in the hour have been entered as "fresh or strong winds," velocities of 39 miles in the hour, or above, as gales. At Brighton, Plymouth and Southport the equivalent values are obtained from a Dines Pressure Tube Anemometer.

Averages.—The normal averages used for stations are—Pressure, Temperature, and Rainfall for the 35 years 1871-1905; Bright Sunshine for the 25 years 1881-1905. The values are published in Appendix III. to the Weekly Weather Report for 1906. For Greenwich and Oxford, averages for longer periods are used. (See Notes in Monthly Weather Reports for 1908.) Monthly averages of pressure at telegraphic reporting stations for the epoch 7 a.m. are published in Appendix I. to the Daily Weather Report. In order to render these averages comparable with the data for the present month, a correction, based on the results for the four observatories as published in "Hourly Readings at the Observatories under the Meteorological Council," has been applied to each of them before the figures given in the column headed Barometer—Difference from Normal" were computed.

Aberdeen, Falmouth, Kew, Valencia, Oxford, Greenwich.—The figures quoted in the second line assigned to these observatories in the columns for Barometer and Earth Temperature are the true daily means computed from the hourly tabulations of the traces of the photographic recording instruments. For Kew, Falmouth, Aberdeen and Valencia the divergences of the means of the readings at 9 a.m. and 9 p.m. from their normal averages are also given.

Royal Observatory, Greenwich.—The earth temperatures are taken at a depth of 3 ft. 2 ins. The daily rainfall amounts are those for the 24 hours comprising the civil day. The number of days in the month which were persistently overcast from midnight to midnight was 0, the number of persistently cloudless days was 0, the number of persistently foggy days was 0.

¶ § Mean Values for Districts.—The stations used in the Weekly Weather Report for the computation of "district values" of rainfall and temperature are distinguished by the sign ¶, those used for the computation of "district values of bright sunshine" by the sign §. These stations are distributed between Tables A and B. The monthly mean values for districts given in this Report for maximum, minimum and mean temperature, duration of bright sunshine, number of rain days and amount of rainfall, are computed from the data for these "representative" stations. The mean temperature for districts is computed in the manner shown in the preface to this and previous volumes of the Weekly Weather Report. The monthly mean values for districts for "amount of cloud" are computed from the data for all stations included in Table A. The extreme values of the various elements in each district are printed in distinctive type. In the lines devoted to district values, the columns referring to absolute highest and absolute lowest temperature and the maximum amount of rainfall in a day contain the extreme values for the district at any station included in either table of the Report. The averages for districts with which the current values are compared are for the 25 years 1881-1905, as in the case of the corresponding values published in the Weekly Weather Report.

Meteorological Societies.—Information for stations marked ¶ is supplied by the Royal Meteorological Society, and that for stations marked § is supplied by the Scottish Meteorological Society. Stations marked S are in connexion with the Scottish Meteorological Society and those marked M with the Royal Meteorological Society as well as with the Meteorological Office.



## MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

(Supplement to the Weekly Weather Report.)

SUMMARY OF OBSERVATIONS COMPILED FROM THE RETURNS OF OFFICIAL STATIONS AND VOLUNTEER OBSERVERS IN THE UNITED KINGDOM, WITH A CHART OF RAINFALL CONTRIBUTED BY THE BRITISH RAINFALL ORGANISATION.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE,

AND PUBLISHED FOR H.M. STATIONERY OFFICE BY WYMAN AND SONS, LTD., FETTER LANE, E.C.; OR OLIVER AND BOYD, EDINBURGH; OR E. PONSONBY, LTD., 116, GRAFTON STREET, DUBLIN.

THIRTY-SIXTH YEAR.  
Vol. XXVIII. (New Series)  
Weekly Weather Report. } No. X.

OCTOBER, 1911.

[Price 6d.]

## SUMMARY OF OBSERVATIONS.

**Pressure, Winds and Weather.**—Following immediately in the rear of the cyclonic disturbance which occasioned the very tempestuous weather at the close of September there came a decided change in the type of pressure distribution over and around the British Isles. By the morning of October 1st this country had been brought under the influence of an extensive area of high pressure, whose central space was out on the Atlantic, about the 20th meridian. Thenceforward, through the first eighteen days of the month, this anticyclone was the dominating factor in determining the weather over these islands. For a week the region of maximum pressure remained out on the ocean, the barometer ascending to about 30.7 in. on the 4th, in 55° N., 20° W. On the 8th the centre was over Iceland. From this locality it advanced along a general south-easterly course, crossed Britain, from the Hebrides to the south-east coast, and by the 12th it had reached Central Europe where it dispersed. The highest pressure over these islands was attained on the 10th, the barometer mounting to 30.5 in. and upwards at all stations, and above 30.6 in. from the north of Ireland to the Tyne and the Forth, to 30.63 in. at Leith. On the 14th a new anticyclone developed over Scandinavia and moved down to Central Europe, these islands being under the influence of the western part of the system.

After the 18th a cyclone moved gradually eastward from the Atlantic, and on the 21st its centre lay at the west of Ireland. For the remainder of the month the weather was dominated by this and other low pressure systems arriving from the Atlantic. The lowest readings reported were 28.77 in. at Holyhead on the 26th, and 28.77 in. at Lerwick on the 30th.

For the entire month the mean distribution of pressure differed greatly from the normal, a belt of relatively high values, above 29.9 in., extending from Iceland across Britain and southern Scandinavia, with local patches above 29.95 in. in Scotland and eastern Iceland. On either side of this area the values diminished to below 29.8 in. on the Bay of Biscay and in the far north of Norway. Over the greater part of this country the results were higher than usual, by as much as 0.18 in. at Lerwick, and 0.17 in. at Stornoway, but along the south-western coasts they were lower, to the extent of 0.06 in. at Scilly. Instead of the normal Westerly to South-Westerly type the mean gradient was South-Easterly to North-Easterly and Northerly, and winds from these points were most prevalent.

During the first four days of the month there was a considerable Northerly gradient between the high pressure beyond Ireland and depressions extending from the Bay of Biscay to Denmark, so that on each of these days strong or high North-Westerly to North-Easterly winds were experienced, attaining the force of a gale locally. The conditions then became much quieter, and continued so through the remainder of the anticyclonic period. The weather generally was dry for close upon three weeks, no rain being measured at many stations on twelve or more consecutive days, fifteen days in Anglesey, at Colwyn Bay and Kilmarnock, and sixteen days at Ruthwell (Dumfries). There were, however, some interesting exceptions. On the 4th and 7th shallow disturbances on the Continent caused heavy rains in Kent, the amounts on the former date ranging up to 1.5 in. at Tonbridge, and on the latter to 1.2 in. at Broadstairs. An extremely slight irregularity in pressure on the 13th, extending up the Channel to Belgium, brought the wind into East over our south-eastern counties, where heavy rain fell, up to 1.3 in. at Hemel Hempstead, while Jersey had 2.4 in. The dry period was marked by frequent and sometimes dense fogs over the inland districts.

With the reversal of the pressure distribution the character of the weather underwent a complete change, bringing to a close the great drought of 1911, which had held, with but few and brief interruptions, for about four months. The Isleworth observer notes that all through this long period the ground below a depth of 4 in. remained dry continuously; and the Broadford (Co. Clare) observer reports that all the lakes in the district were lower than ever they were before, exposing the remains of some remarkable ancient deer.

From the 19th onward wind and rainstorms occurred except on the 28th. In nearly every instance the gales were Southerly to Westerly in direction. By the 21st the wind had increased to a strong gale (force 9) at Scilly and Pendennis, gusts having a velocity of 68 miles per hour being registered at the latter station. On the 22nd the strength of a whole gale (force 10) was reached at Scilly, the anemometrical records showing gusts at the rate of 60 miles an hour at Brighton, 64 miles at Pendennis, and 66 miles at Scilly. Next day a whole gale was felt at Dungeness, the Dover anemometer registering gusts of 64 miles an hour. A strong gale blew at Dungeness

on the 25th, at Malin Head (from East) on the 26th, and at Jersey on the 27th, Dover at the same time having gusts at the rate of 64 miles an hour. The passage of a deep cyclonic area across the Farøe in the last three days marked the most stormy period of the month. Lerwick, Wick and Malin Head experienced a strong gale on the 29th; Lerwick, Deerness and Castlebay on the 30th, Pendennis a whole gale, while Malin Head reported a storm (force 11), the anemometers recording gusts of 61 miles an hour at Quilty, 66 miles at Dwyran (Anglesey), 68 miles at Scilly, and 71 miles at Pendennis. On the 31st Malin Head and Nottingham had a strong gale, and Dungeness a whole gale.

The rainfall during this stormy fortnight was heavy in nearly all districts, there being scarcely a day without falls of an inch or more of rain. On the 20th, the fall was heaviest in Ireland, up to 1.3 in. at Newcastle (Wicklow); on the 21st in the southern half of England and Wales, up to 1.7 in. at Brighton; on the 23rd in northern Scotland and south-eastern England, 1.4 in. at Dyce (Aberdeen) and Hastings. The whole of England and Wales seems to have been affected on the 24th, the heaviest once more being in the south-east, 1.5 in. at Send, 1.8 in. at Watergate and Westbourne, and 1.9 in. at Eastbourne. Ireland and northern England had the heaviest on the 26th, up to 1.4 in. at Glenarm. The worst and most extensive storm occurred on the 29th, more than 1½ in. of rain falling in various parts of England, Wales, Scotland and Ireland, the heaviest, 2 in. at Kirkby Lonsdale and Colmonell, 2.1 in. at Inverary, 2.3 in. at Graythwaite, 2.5 in. at Eskdalemuir, 2.8 in. at Lickeen, Caragh Lake, 3.2 in. at Cruachan, 4.2 in. at Ambleside, while the gauge at Seathwaite registered 7 in. At Ardross the storm brought about an excessive flood. In the last week snow showers fell in many localities. At Sumburgh Head there was a deep fall in the night of the 26th. Local thunderstorms occurred on many days.

On the whole the temperature maintained a fairly uniform level during the month. The early days were unusually cold generally, and minima of 32° and below were recorded in nearly all districts on the 1st and 2nd. The 12th, and 13th, and the 18th to the 20th were warm, with numerous afternoon maxima of 66° to 68°, at Sheepstor (Devon) 69° on the 12th, and about the 20th many of the night minima were above 55°, as high as 59° at Teignmouth, Jersey and Bognor. On the 26th and 27th, a number of northern stations had maxima below 40°, Sumburgh Head only 35°. It was not until the night of the 28th that a severe frost, lasting a few hours, was experienced, the shaded thermometer falling to 25° and under at a very large number of stations, to 20° at Nairn and Llangammarch Wells, 19° at Crathes and Eskdalemuir, 18° at Inch and West Linton, and 15° at Balmoral. This was followed by the heavy rain of the 29th mentioned above.

Aurora was noted at a few northern stations on the 2nd, 10th, 17th, 18th and 25th.

Coast fogs were experienced in many localities between the 11th and 21st.

The temperature of the coastal waters was several degrees lower than in September, as much as 9° between Eastbourne and the Shipwash, but the water was warmer than the air on shore, by 6° off the north-east of Scotland.

**Rainfall.**—In spite of the many heavy falls of rain after the 18th, the precipitation for the whole month was less than the normal, excepting in the south of Ireland, the Channel Islands and south-eastern England. Northern Scotland as a whole received only 53 per cent. of the average. Bendamph and Glencarron had 34 per cent., Dunrossness 35, and Fort William 50 per cent. On the other hand Kent and Sussex had excessive amounts, Margate 183 per cent., Dungeness 187, and Folkestone 209 per cent. The aggregates ranged from 1.3 in. at Brandon (Suffolk), and 1.4 in. at Dundee to more than 7 in. round Dover, 11.5 in. at Glenquoich, and 13.2 in. at Seathwaite. Rain was measured on 9 days at Donaghadee, and 10 at Dumfries and Ruthwell, against 24 at Cockle Park, Belvoir Castle, Cromer and Hillington, and 25 at Boston.

**Bright Sunshine.**—As a general rule the duration of insolation differed little from the average, but Llandudno had 136 per cent. of the normal, Blackpool 128, and Woolacombe 127 per cent., against Deerness 74 per cent., Durham 73, and Marchmont 70 per cent. Portsmouth, Worthing and Dwyran (Anglesey) totalled 131 hours, Woolacombe 129 hours, while Slieve Donard had 52, Baltasound 49, and Huddersfield only 48 hours.

TABLE A.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at 9 a.m., 3 p.m. and 9 p.m. at NORMAL STATIONS in the BRITISH ISLANDS

Table with columns: DISTRICT, STATION, Height of Barometer, BAROMETER (Mean at 32° F., Diff. from Normal, Cor. for Diurnal Range), AIR TEMPERATURE (Mean of A, B; Mean of A and B; Diff. from Normal; Absolute Maximum and Minimum), and HYGROMETER (Observations at 9 a.m., 3 p.m., and 9 p.m., or at 7 a.m., 1 p.m., 6 p.m., or 9 p.m.; Dry Bulb; Dep. of Wet.; Vap. Pressure; Humidity).

Continued on page cii.

For notes see p. cvii.

NOTE.—The Sunshine entered to Woburn is recorded at Aspley Guise, and that entered to Portsmouth at Southsea.



TABLE A. (continued).—Giving a Summary of the METEOROLOGICAL OBSERVATIONS made at 9 a.m., 3 p.m. and 9 p.m. at NORMAL STATIONS in the BRITISH ISLANDS

DISTRICT.	STATION.	Height of Barometer station above M.S.L.	BAROMETER.			AIR TEMPERATURE.								HYGROMETER.												
			Mean at 32° F. at Level and Latitude of Station.	Diff. from Normal.	C. Cor. for Diurnal Range.	Mean of		Mean of A and B.	Diff. from Normal.	Absolute Maximum and Minimum.				Observations at 9 a.m., 3 p.m. and 9 p.m., or at 7 a.m., 1 p.m., 6 p.m., or 9 p.m.												
						A	B			Max.	Day.	Min.	Day.	Dry Bulb.			Dep. of Wet.			Vap. Pressure.			Humidity.			
														I.	II.	III.	I.	II.	III.	I.	II.	III.	I.	II.	III.	
5. ENGLAND, S.E.—cont.	Eastbourne	86	29.874	—	—	57.4	47.4	52.4	+2.0	62	12th	36	29th	53.7	—	52.7	2.4	—	1.7	.354	—	.353	84	—	88	
	Dover	234	29.658	.000	—	57.2	45.1	51.2	—	65	19th	35	29th	49.4	—	52.3	1.2	—	2.2	.322	—	.334	91	—	85	
	Dungeness	21	29.847	-.025	+ .001	58.2	46.5	52.4	+1.0	65	19th	32	29th	50.9	56.4	54.8	1.5	3.0	2.3	.335	.369	.365	90	81	86	
	Hastings	174	29.734	—	—	57.3	46.7	52.0	+0.9	63	14th	31	29th	53.0	—	51.5	2.8	—	2.2	.327	—	.324	81	—	85	
	Southampton	84	29.827	—	—	58.1	45.7	51.9	+1.0	66	18th	30	29th	51.7	—	50.3	2.7	—	1.9	.320	—	.328	82	—	87	
	Ventnor	80	29.797	—	—	58.4	48.9	53.7	+0.8	64	12th	35	29th	53.8	—	—	2.9	—	—	.335	—	—	80	—	—	
	District Value					57.2	44.9	50.9	+0.6	67		21														
LONDON	Tottenham	55	29.847	—	—	57.3	45.1	51.2	+2.1	66	19th	31	29th	50.3	—	49.8	1.7	—	1.0	.332	—	.337	89	—	93	
	Hampstead	453	29.429	—	—	55.0	44.3	49.7	—	61	18th, 19th	32	29th	49.4	—	48.7	1.6	—	1.3	.312	—	.311	90	—	91	
	Camden Square	123	29.787	—	—	58.1	43.9	51.0	+0.9	63	18th	29	29th	50.1	—	49.6	1.7	—	1.3	.318	—	.322	88	—	91	
	Westminster	—	—	—	—	58.0	46.1	52.1	+2.9	65	12th	31	29th	51.1	55.6	—	2.6	4.9	—	.310	.314	—	82	71	—	
	South Kensington	70	29.841	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Greenwich	159	29.742 29.732	—	—	57.4	43.9	50.7	+0.3 +0.5	68	12th	28	29th	50.1	—	49.0	1.9	—	1.3	.313	—	.315	87	—	91	
	Dulwich*	190	29.713	—	—	57.9	43.5	50.7	+1.2	68	12th	27	29th	49.6	—	48.8	1.9	—	1.5	.306	—	.307	86	—	89	
	Kew	34	29.885 29.875	-.009 -.009	—	56.7	44.8	50.8	+1.6 +1.7	64	12th	31	29th	49.8	55.5	50.1	2.3	4.8	2.0	.300	.314	.311	85	71	86	
	Bunhill Row	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Plumstead	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6. SCOTLAND, W.	Esksdalemuir	778	29.071	—	—	50.8	37.0	43.9	—	58	18th	19	29th	43.9	48.2	42.3	2.1	3.2	1.4	.246	.287	.245	84	78	89	
	Poltalloch	185	29.760	—	—	53.1	41.0	47.1	-0.4	59	8th, 17th	24	28th	46.6	—	44.5	2.3	—	1.7	.265	—	.255	84	—	87	
	Glasgow	184	29.706	—	—	51.9	41.7	46.8	0.0	59	21st	29	29th	45.5	—	46.1	2.2	—	2.0	.261	—	.272	84	—	86	
	Rothsay	76	29.820	—	—	53.8	41.6	47.7	-0.1	58	5, 7, 8	29	28th, 29th	46.9	—	45.9	2.3	—	2.0	.267	—	.265	84	—	86	
	Colmonell	150	29.761	—	—	55.1	39.5	47.3	-0.6	66	17th	25	29th	46.8	52.6	—	2.6	3.7	—	.259	.302	—	81	76	—	
	Dumfries	155	29.753	—	—	53.7	40.1	46.9	-0.8	62	13th	24	29th	45.0	—	46.2	2.3	—	2.3	.247	—	.261	83	—	84	
	Cally, Gatehouse	120	29.801	—	—	54.7	39.3	47.0	-0.1	62	7th	25	29th	47.6	—	44.7	2.3	—	2.3	.275	—	.244	84	—	83	
	Douglas	284	29.594	—	—	53.9	44.6	49.3	+0.7	60	20th	32	28th, 29th	49.7	—	48.5	2.3	—	1.8	.303	—	.303	84	—	87	
		District Value					53.7	40.7	47.1	-0.6	66		19													
	7. ISLE OF MAN	Southport	42	29.873	—	—	54.8	43.1	49.0	+0.4	63	18th	31	29th	48.7	53.1	47.8	1.9	3.6	1.4	.298	.310	.298	86	77	89
Manchester (City)		195	29.702	—	—	54.9	45.3	50.1	—	67	13th	32	29th	49.4	—	49.4	2.4	—	2.4	.239	—	.298	83	—	84	
„ (Whitworth P'k)		127	29.750	—	—	55.4	44.1	49.8	—	67	13th	28	29th	49.2	53.5	48.8	1.8	—	1.4	.308	—	.308	87	78	90	
Darwen		780	29.131	—	—	52.5	42.2	47.4	—	62	13th	31	29th	47.3	—	46.1	2.0	—	1.5	.235	—	.281	83	—	89	
Aspatia		254	29.632	—	—	54.3	40.1	47.2	+0.2	62	14th	28	28th	47.2	—	45.5	2.0	—	1.3	.278	—	.275	86	—	91	
Newton Rigg		559	29.291	—	—	53.9	38.8	46.4	+0.3	64	13th	23	29th	44.3	—	44.8	0.6	—	0.4	.277	—	.287	90	—	97	
Stonyhurst		363	29.528	—	—	53.2	42.6	47.9	+0.4	60	13th	29	29th	47.4	—	47.0	2.3	—	2.1	.278	—	.278	83	—	85	
Blackpool		73	29.826	—	—	54.7	42.3	48.5	-0.5	63	20th	29	29th	50.9	—	47.9	2.8	—	1.5	.303	—	.296	82	—	90	
M'nch't'r (Prastwich)		320	29.565	—	—	54.8	42.8	48.8	+1.0	68	13th	28	29th	48.6	—	47.9	1.2	—	1.0	.312	—	.309	92	—	93	
Liverp'l, Bidston Obs.		197	29.684	—	—	53.9	44.6	49.3	+0.1	61	13th	33	29th	48.4	—	48.8	1.7	—	1.8	.298	—	.300	88	—	87	
8. NORTH WALES	Llandudno	21	29.883	—	—	55.8	46.7	51.3	+0.7	64	13th	35	29th	51.6	—	51.2	2.5	—	1.9	.318	—	.328	83	—	87	
	HOLYHEAD	48	29.825	+ .015	—	55.6	46.9	51.3	+0.5	65	18th	42	11, 12, 29	49.8	54.2	52.0	1.1	2.4	1.9	.330	.353	.338	92	84	87	
	Bettws-y-Coed	100	29.768	—	—	55.6	42.0	48.8	-1.9	68	13th	29	29th	48.8	—	46.8	1.4	—	1.0	.310	—	.296	90	—	93	
	Dwyran†	30	29.866	—	—	56.4	44.5	50.5	—	67	18th	32	29th	53.3	—	49.2	2.3	—	1.1	.343	—	.322	84	—	93	
		District Value					54.8	43.0	48.7	-0.1	68		23													
9. SOUTH WALES	Llangamarch Wells	585	29.258	—	—	54.9	39.5	47.2	-2.6	65	13th	20	29th	47.0	—	—	1.2	—	—	.293	—	—	92	—	—	
	PEMBROKE	150	29.699	-.026	—	57.2	47.4	52.3	+0.7	62	14th	39	28th, 29th	50.9	54.9	52.1	1.9	3.8	2.7	.324	.329	.319	87	76	81	
	Clifton	229	—	—	—	57.1	46.0	51.6	+1.9	66	19th	31	29th	—	—	—	—	—	—	—	—	—	—	—	—	
	PORTLAND BILL	23	29.841	-.049	—	58.1	43.5	53.3	+0.6	64	19th	39	29th, 30th	53.0	56.3	54.4	1.9	3.0	2.2	.350	.369	.362	87	81	85	
	Plymouth	116	29.759	—	—	58.4	47.3	52.9	+1.6	67	12th	32	29th	54.6	56.3	52.6	2.3	3.4	2.2	.350	.359	.349	82	78	86	
10. ENGLAND, S.W.	Falmouth	183	29.701 29.692	-.027 -.026	—	56.5	49.1	52.8	+0.9 +1.1	62	19th	39	29th	52.5	55.0	52.4	2.2	3.2	2.2	.336	.344	.335	85	80	85	
	Newquay	161	29.694	-.043	—	57.5	48.9	53.2	+0.8	63	12th, 18th	34	29th	52.0	—	54.2	2.2	—	2.9	.330	—	.340	85	—	81	
	Woolacombe	120	29.778	—	—	58.5	49.5	54.0	+0.1	66	18th	39	29th	54.2	—	53.4	3.0	—	2.7	.339	—	.335	81	—	82	
		District Value					56.8	45.4	50.9	+0.7	70		20													
11. IRELAND, N.	Malin Head	230	29.604	+ .061	+ .003	53.3	45.4	49.6	+0.5	62	18th	35	11th	48.3	52.3	50.3	1.3	2.0	1.4	.306	.339	.320	91	86	90	
	BLACKSOD POINT	41	29.819	+ .012	-.002	55.5	46.8	51.2	+1.1	63	18th	39	28th	50.2	54.0	51.6	0.8	1.8	0.8	.343	.366	.361	95	87</		

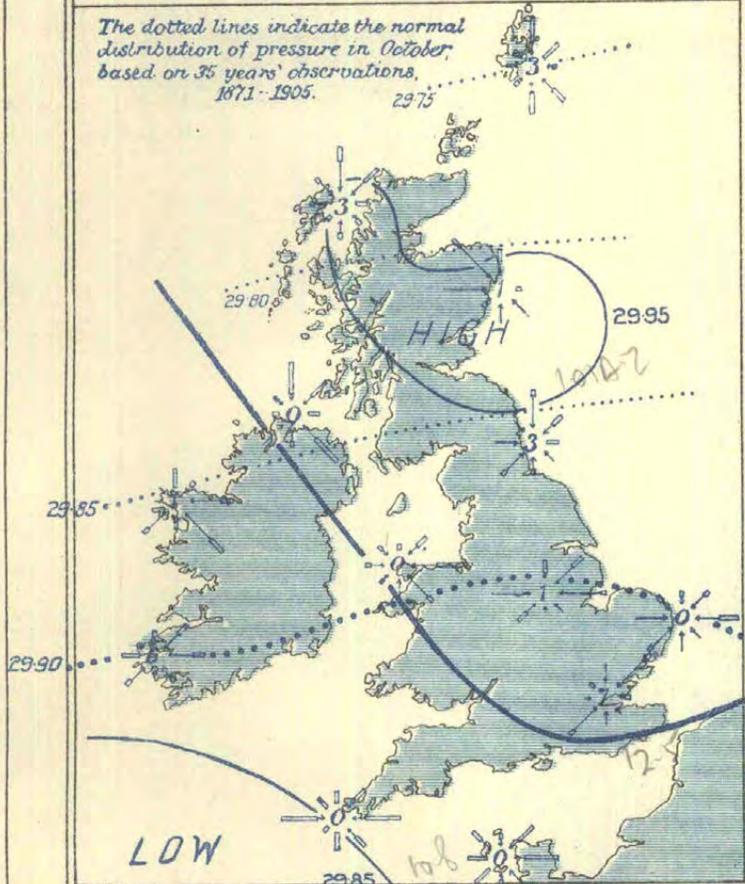


TABLE B.—SUMMARY of the OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE at additional STATIONS, OCTOBER, 1911.

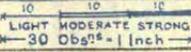
DISTRICT.	STATION.	Height of Gauge above M.S.L.	AIR TEMPERATURE.								Earth Temperature		Grnd Frost.		RAIN AND OTHER FORMS OF PRECIPITATION.						BRIGHT SUNSHINE.			
			Mean of		Mean of A and B.	Diff. of Mean from Normal.	Absolute Maximum and Minimum.				At 1 foot depth.	At 4 feet depth.	No. of Nig'ts	Total Fall.	Diff. from Normal.	Most in a day.		Number of Days.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.		
			A	B			Max.	Day.	Min.	Day.						Amt.	Day.							
<p><b>0. SCOTLAND N.</b></p> <p><i>p</i> Baltasound - - - S 31 48.8 41.6 45.2 - 55 19th 25 29th 46.2 - - 1.98 - 0.45 29th 22 49 - - 16 -</p> <p><i>p</i> Dunrossness - - - 145 49.0 38.2 43.6 - 2.1 55 22nd 25 26, 27, 28 - - - 1.53 - 2.85 0.42 29th 14 - - - - -</p> <p><i>a</i> Fortrose - - - 69 51.0 40.0 45.5 - 60 3rd 29 28th - - - 2.71 - 0.86 23rd 17 104 - - 33 -</p>																								
<p><b>1. SCOTLAND, E.</b></p> <p><i>p</i> Insch - - - 426 50.3 35.8 43.1 - 60 11th 18 29th 46.4 - 11 2.28 - 0.83 23rd 17 88 - - 28 -</p> <p><i>p</i> Crathes - - - S 140 52.1 36.1 44.1 - 59 7, 11, 15 19 29th 46.4 50.6 13 2.01 - 0.48 23rd 13 71 - - 23 -</p> <p><i>p</i> Stonehaven - - - ? 86 52.3 40.4 46.4 - 63 15th 26 29th - - - 2.13 - 0.63 24th 17 91 - - 29 -</p> <p><i>p</i> Balruddery - - - S 276 53.2 38.1 45.7 - 59 7, 11, 15 26 29th - - - 1.66 - 0.59 24th 15 85 - - 27 -</p> <p><i>a</i> West Linton - - - S 800 50.9 36.3 43.6 - 1.7 57 11, 13, 20 18 29th - - - 3.82 - 0.99 30th 17 79 - - 25 -</p>																								
<p><b>2. ENGLAND, N.E.</b></p> <p><i>a</i> Alnwick Castle - - - 210 52.5 41.1 46.8 - 0.3 58 29th 25 29th - - - 3.96 + 0.40 0.87 26th 21 - - - - -</p> <p><i>p</i> Newcastle-on-Tyne - - 152 52.8 43.1 48.0 - 60 20th 29 29th - - - 2.11 - 0.89 0.62 26th 22 55 - 15 17 - 5</p> <p><i>a</i> Chopwellwood - - - 445 53.6 40.4 47.0 - 64 20th 26 29th - - - 1.0 2.62 - 0.91 26th 21 69 - - 22 -</p> <p><i>p</i> Ampleforth - - - 349 54.0 41.4 47.7 - 61 7th 30 28th - - - 2.46 - 0.69 26th 20 - - - - -</p> <p><i>a</i> Fulbeck - - - 180 55.9 41.2 48.6 + 1.2 63 8th 29 29th - - - 1.97 - 0.50 0.33 22nd 17 81 - - 25 -</p> <p><i>a</i> Raucby - - - 124 55.4 41.7 48.6 - 63 20th 29 29th 50.8 55.3 5 1.96 - 0.76 0.46 24th 17 85 - - 26 -</p>																								
<p><b>3. ENGLAND, E.</b></p> <p><i>a</i> Felixstowe - - - 10 56.7 46.7 51.7 + 1.9 61 18th 32 29th - - - 2.54 - 0.36 24th 14 125 - - 39 -</p> <p><i>a</i> Rothamsted - - - 424 56.1 42.0 49.1 + 1.1 62 18th, 20th 27 29th - - - 3.23 + 0.16 0.72 13th 18 99 - 8 31 - 2</p> <p><i>a</i> Shoeburyness - - - 13 56.5 46.1 51.3 + 0.3 61 19th 32 29th - - - 2.44 + 0.18 0.55 4th 15 - - - - -</p> <p><i>a</i> Southend-on-Sea - - - 90 56.9 46.6 51.8 - 65 19th 33 29th 54.1 - 4 2.78 + 0.34 0.59 4th 13 102 - - 31 -</p>																								
<p><b>4. MIDLAND COUNTIES</b></p> <p><i>a</i> Harrogate - - - 476 52.0 42.0 47.0 + 0.1 60 11th 30 29th 49.2 51.4 2 3.09 - 0.23 0.73 26th 18 80 - - 25 -</p> <p><i>a</i> Bradford - - - 489 52.3 42.2 47.3 - 57 7th 28 29th 49.1 57.0 4 3.43 - 0.79 26th 19 58 - - 18 -</p> <p><i>a</i> Cheadle - - - ft 646 53.3 40.4 46.9 0.0 62 13th 31 27th, 29th - - - 2.29 - 0.97 0.40 29th 17 - - - - -</p> <p><i>a</i> Bawtry - - - 65 54.5 40.8 47.7 + 0.1 60 11th 26 29th - - - 1.67 - 0.93 0.31 21st 18 - - - - -</p> <p><i>a</i> Worksop - - - ft 56 56.0 40.9 48.5 + 0.5 61 8th 27 29th 49.8 52.7 10 2.05 - 0.61 0.32 21st 17 70 - 13 22 - 4</p> <p><i>a</i> Mayfield (Staffs.) - - 374 54.2 39.4 46.8 - 60 18th, 20th 21 29th - - - 7 2.28 - 0.39 29th 16 - - - - -</p> <p><i>a</i> Belper - - - 222 55.8 41.2 48.5 - 62 13th, 20th 24 29th - - - 5 2.18 - 0.36 29th 17 - - - - -</p> <p><i>a</i> Kingston-on-Soar - - - 125 55.1 40.9 48.0 - 63 20th 23 29th 50.2 - - 1.51 - 0.25 4th 15 - - - - -</p> <p><i>p</i> Rugby - - - 379 56.2 40.1 48.2 + 0.6 66 13th 28 29th - - - 5 1.92 - 0.82 24th 15 - - - - -</p> <p><i>a</i> Raunds - - - ft 210 56.2 40.7 48.5 + 0.5 64 20th 25 29th 50.9 - 6 1.84 - 0.41 4th 17 - - - - -</p> <p><i>a</i> Winslow - - - 379 54.6 42.3 48.5 - 63 21st 25 29th - - - 4 2.31 - 0.41 4th 20 - - - - -</p> <p><i>a</i> Hereford - - - ft 291 55.7 41.4 48.6 + 0.2 62 20th 25 29th - - - ? 1.3 1.53 - 1.19 0.35 21st 12 - - - - -</p> <p><i>a</i> Cirencester - - - 446 55.2 41.8 48.5 + 0.9 63 13th 25 29th 51.2 54.5 4 3.10 - 0.05 0.77 21st 17 104 + 3 32 + 1</p>																								
<p><b>5. ENGLAND, S.E.</b></p> <p><i>a</i> Wokingham - - - 216 56.9 40.4 48.7 - 66 12th 21 29th - - - 2.58 - 0.90 24th 15 - - - - -</p> <p><i>a</i> Marlborough - - - 424 56.3 41.0 48.7 + 1.1 64 12th 22 29th - - - ? 10 2.35 - 1.05 0.43 21st 15 92 - 4 28 - 2</p> <p><i>a</i> Bucklebury - - - 409 55.8 42.3 49.1 - 62 12th 27 29th - - - 11 2.04 - 0.43 24th 16 - - - - -</p> <p><i>a</i> Swaraton - - - ft 310 56.2 42.0 49.1 + 1.1 64 12th 25 29th - - - 3.70 + 0.13 0.94 24th 18 - - - - -</p> <p><i>a</i> Margate - - - 35 58.0 48.6 53.3 + 2.2 67 19th 33 29th 52.7 55.5 0 5.13 + 2.33 1.03 7th 18 97 - 9 30 - 3</p> <p>Broadstairs - - - 140 - - - - - - - - - 5.61 - 1.15 7th 17 114 - - 35 -</p> <p>Ramsgate - 100 - - 34 -</p> <p><i>a</i> Eltham - - - 200 -</p> <p><i>a</i> Wisley - - - 150 56.7 42.4 49.6 + 0.9 67 12th 28 29th 50.9 53.6 11 2.96 - 1.30 24th 16 91 - - 28 -</p> <p><i>a</i> Basingstoke - - - 289 56.0 41.9 49.0 - 63 19th 26 29th 51.4 55.6 5 3.04 - 0.99 24th 15 - - - - -</p> <p><i>a</i> Sevenoaks - - - 509 55.7 43.2 49.5 - 67 18th 29 29th 50.7 55.1 2 4.32 - 0.54 24th 17 - - - - -</p> <p><i>a</i> Tunbridge Wells - - ft 421 56.1 42.7 49.4 + 0.6 66 18th 29 29th 51.9 - 6 6.30 + 2.77 1.12 21st 17 115 + 6 36 + 2</p> <p><i>a</i> Matfield - - - 320 56.6 42.9 49.8 - 66 13th 30 29th - - - 14 5.58 - 1.06 4th 16 - - - - -</p> <p><i>p</i> Folkestone - - - 121 57.9 48.5 53.2 - 64 20th 36 29th - - - 55.0 - 6.89 + 3.59 1.02 23rd 21 118 - - 36 -</p> <p>Littlestone -</p> <p><i>a</i> Bexhill - - - 27 57.6 48.2 52.9 - 62 14th 34 2nd, 29th 56.0 - 2 4.77 - 1.17 23rd 19 120 - - 37 -</p> <p>Hove -</p> <p><i>a</i> Worthing - - - 36 58.3 45.9 52.1 + 1.3 64 14th, 19th 30 29th 53.2 57.4 3 5.27 + 1.82 0.96 23rd 15 132 - - 40 -</p> <p><i>a</i> Bognor - - - 20 57.3 46.9 52.1 - 61 21st 34 29th - - - 57.1 7 4.37 - 0.62 5th 16 124 - - 38 -</p> <p>Westbourne - - - 30 -</p> <p><i>a</i> Totland Bay - - - 140 57.1 47.0 52.1 + 0.9 64 12th 32 29th - - - 1 5.21 + 1.55 1.07 24th 13 116 - - 36 -</p> <p><i>a</i> Sandown - - - 20 58.5 48.1 53.3 - 64 20th 35 29th - - - 5.73 - 0.97 24th 17 108 - - 33 -</p> <p><i>p</i> Bournemouth - - - 145 58.0 45.6 51.8 - 65 18th 30 29th 52.9 55.6 - 4.91 - 1.01 27th 19 117 - - 36 -</p>																								
<p><b>6. SCOTLAND, W.</b></p> <p><i>p</i> Oban - - - 20 55.5 41.8 48.7 - 64 15th 27 28th - - - 3 3.02 - 1.51 29th 12 101 - - 32 -</p> <p><i>a</i> Thorntonhall (Lanarkshire) 440 51.2 36.4 43.8 - 60 13th 22 28th, 29th - - - 6 3.31 - 1.64 29th 12 74 - - 23 -</p> <p><i>a</i> Kilmarnock - - - 96 53.2 37.6 45.4 - 1.9 61 13th, 17th 21 28th - - - 2.69 - 1.36 29th 11 84 - - 26 -</p> <p><i>p</i> Ruthwell - - - S 67 54.7 39.5 47.1 - 64 13th 23 29th - - - 4.01 - 1.71 29th 10 108 - - 34 -</p> <p><i>a</i> Carnforth - - - 174 54.5 41.7 48.1 - 64 13th 27 29th - - - 5 4.37 - 1.41 29th 14 100 - - 31 -</p> <p><i>a</i> Lancaster - - - 311 55.1 43.8 49.5 - 64 13th 32 28th 49.7 55.0 2 4.49 - 1.40 29th 14 98 - - 30 -</p> <p><i>a</i> Burnley - - - 459 53.7 41.1 47.4 - 63 13th 25 29th 48.3 52.0 10 3.35 - 0.57 26th 19 65 - - 20 -</p>																								
<p><b>7. ENGLAND, N.W.</b></p> <p><i>a</i> Hoylake - - - 30 57.7 44.3 51.0 - 68 18th 32 27th - - - 3 2.45 - 0.78 26th 15 106 - - 33 -</p> <p><i>a</i> Rhyl - - - 30 56.4 45.5 51.0 - 68 13th 32 29th - - - 1 2.83 - 0.82 0.52 2nd 14 108 - - 34 -</p> <p><i>a</i> Colwyn Bay - - - 82 56.0 45.8 50.9 - 66 20th 38 10, 28, 29 - - - 3.32 - 0.55 24th 14 116 - - 36 -</p> <p><i>a</i> Hawarden Bridge - - - 22 55.9 43.6 49.8 + 0.2 62 21st 29 29th - - - 2.10 - 1.16 0.38 2nd 18 - - - - -</p> <p><i>a</i> St. Asaph (St. Beuno's Coll.) 479 54.7 43.9 49.3 - 67 13th 35 29th - - - 2 2.49 - 0.57 2nd 17 - - - - -</p> <p><i>p</i> Aberdovey - - - 22 57.1 48.0 52.6 - 68 13th 37 29th - - - 4.18 - 0.62 21st 15 107 - - 33 -</p>																								

1. BAROMETER AND WIND AT 7 A.M.

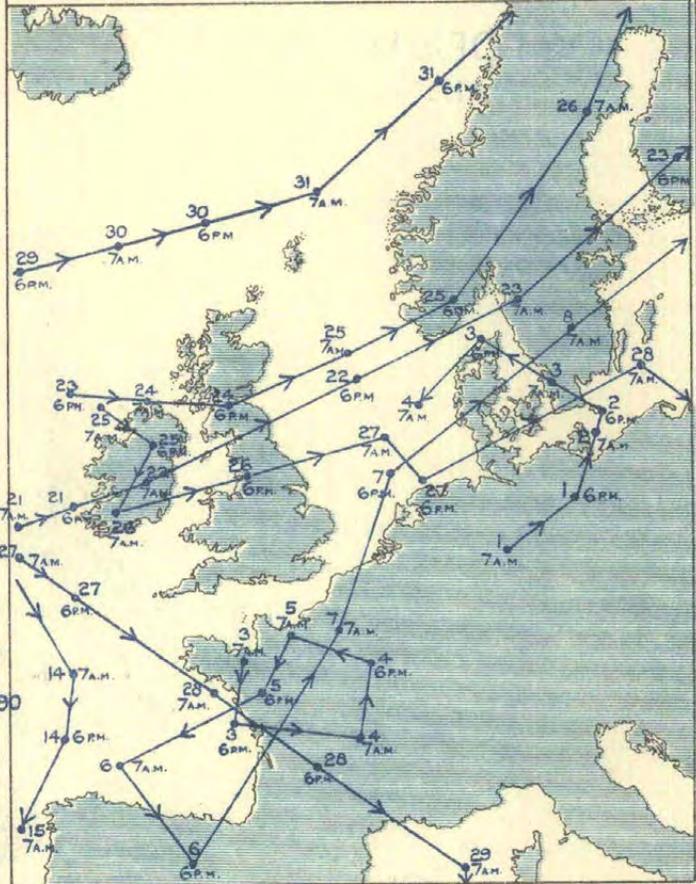
The dotted lines indicate the normal distribution of pressure in October, based on 35 years' observations, 1871-1905.



WIND ROSES. The arrows fly with the wind and indicate frequency and force, thus



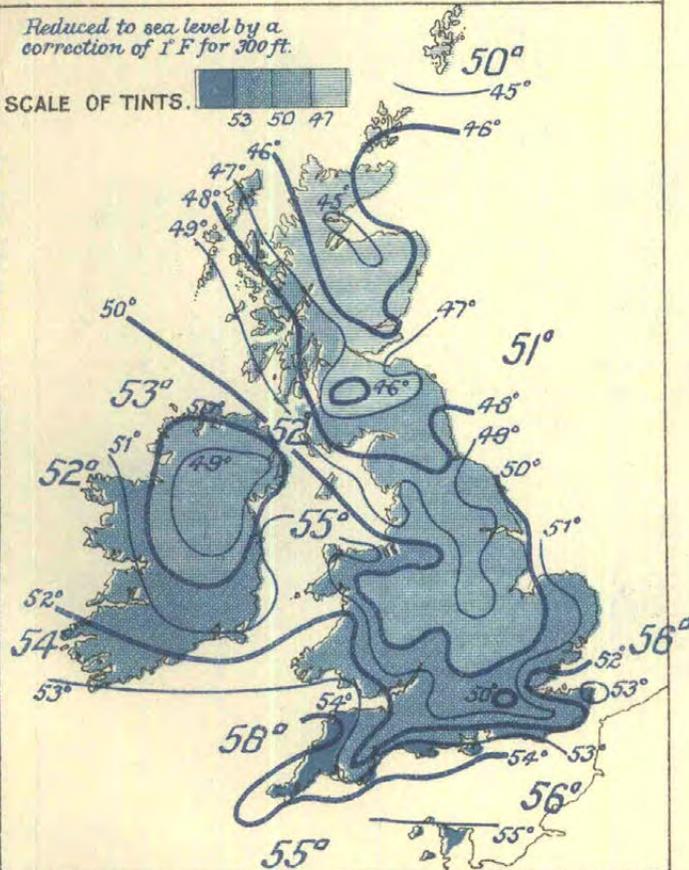
2. MOVEMENTS OF DEPRESSIONS.



3. DISTRIBUTION OF MEAN TEMPERATURE.

Reduced to sea level by a correction of 1° F for 300 ft.

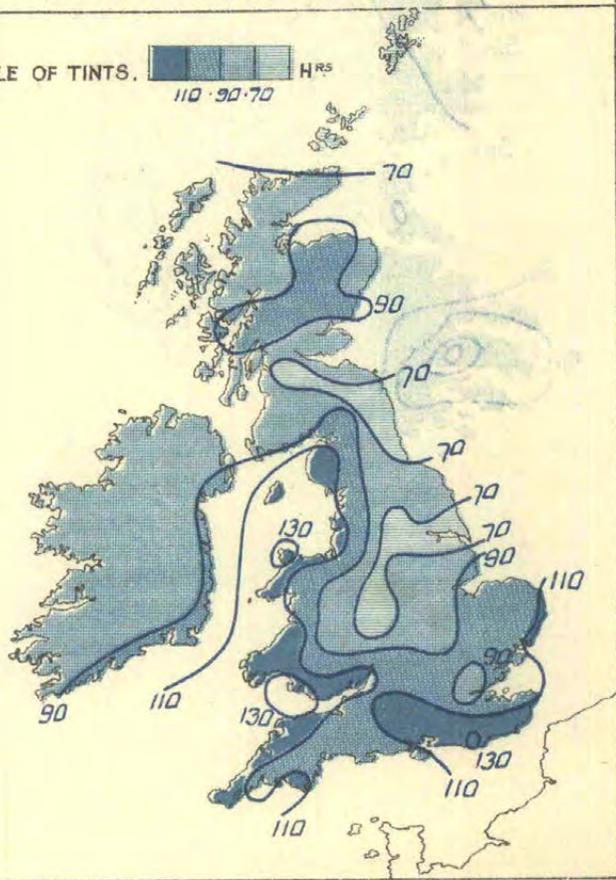
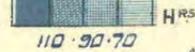
SCALE OF TINTS.

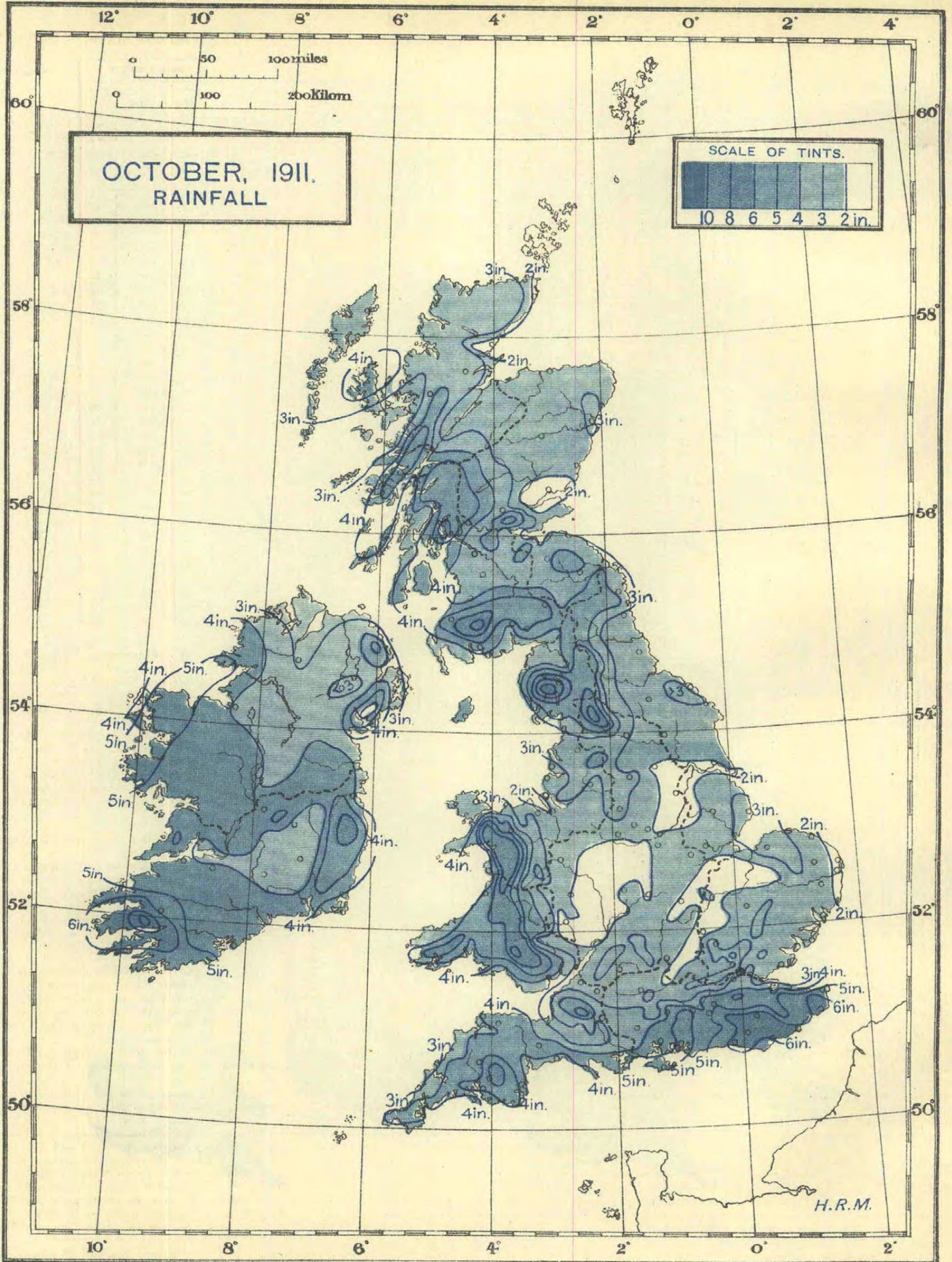


Sea temperatures are shown in large figures, thus - 55°

4. BRIGHT SUNSHINE, IN HOURS.

SCALE OF TINTS.





Scale 1 : 5,000,000.



Table 1. General Statistics of the Republic of China, 1949

Item	1949		1948		1947		1946		1945	
	Value	Index								
Total Population	45,000,000	100	44,000,000	98	43,000,000	96	42,000,000	94	41,000,000	92
Male	23,000,000	100	22,500,000	98	22,000,000	96	21,500,000	94	21,000,000	92
Female	22,000,000	100	21,500,000	98	21,000,000	96	20,500,000	94	20,000,000	92
Urban	10,000,000	100	9,500,000	95	9,000,000	90	8,500,000	85	8,000,000	80
Rural	35,000,000	100	34,500,000	98	34,000,000	96	33,500,000	94	33,000,000	92
Population Density	100	100	98	98	96	96	94	94	92	92
Population Growth Rate	1.5%	100	1.4%	93	1.3%	87	1.2%	80	1.1%	73
Life Expectancy	45 years	100	44 years	98	43 years	96	42 years	94	41 years	92
Infant Mortality Rate	100	100	105	105	110	110	115	115	120	120
Illiteracy Rate	80%	100	78%	98	76%	96	74%	94	72%	92
Health Services	100	100	95	95	90	90	85	85	80	80
Medical Personnel	100	100	98	98	96	96	94	94	92	92
Hospitals	100	100	98	98	96	96	94	94	92	92
Medical Equipment	100	100	95	95	90	90	85	85	80	80
Public Health	100	100	98	98	96	96	94	94	92	92
Sanitation	100	100	98	98	96	96	94	94	92	92
Water Supply	100	100	98	98	96	96	94	94	92	92
Waste Disposal	100	100	98	98	96	96	94	94	92	92
Maternal and Child Health	100	100	98	98	96	96	94	94	92	92
Maternal Mortality Rate	100	100	105	105	110	110	115	115	120	120
Child Mortality Rate	100	100	105	105	110	110	115	115	120	120
Family Planning	100	100	98	98	96	96	94	94	92	92
Family Size	100	100	98	98	96	96	94	94	92	92
Family Income	100	100	98	98	96	96	94	94	92	92
Family Expenditure	100	100	98	98	96	96	94	94	92	92
Family Savings	100	100	98	98	96	96	94	94	92	92
Family Debt	100	100	98	98	96	96	94	94	92	92
Family Education	100	100	98	98	96	96	94	94	92	92
Family Health	100	100	98	98	96	96	94	94	92	92
Family Security	100	100	98	98	96	96	94	94	92	92
Family Welfare	100	100	98	98	96	96	94	94	92	92

NOTES ON THE STATISTICAL TABLES

The data in this table are based on the 1949 Statistical Yearbook of the Republic of China. The figures are preliminary and subject to revision. The index numbers are based on the 1949 figures as 100. The population figures are based on the 1949 census. The health statistics are based on the 1949 reports. The family statistics are based on the 1949 surveys. The data are presented in the following order: General Statistics, Health Services, Family Planning, Family Income, Family Expenditure, Family Savings, Family Debt, Family Education, Family Health, Family Security, and Family Welfare. The data are presented in the following order: General Statistics, Health Services, Family Planning, Family Income, Family Expenditure, Family Savings, Family Debt, Family Education, Family Health, Family Security, and Family Welfare.

## MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

(Supplement to the Weekly Weather Report.)

SUMMARY OF OBSERVATIONS COMPILED FROM THE RETURNS OF OFFICIAL STATIONS AND VOLUNTEER OBSERVERS IN THE UNITED KINGDOM, WITH A CHART OF RAINFALL CONTRIBUTED BY THE BRITISH RAINFALL ORGANISATION.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE,

AND PUBLISHED FOR H.M. STATIONERY OFFICE BY WYMAN AND SONS, LTD., FETTER LANE, E.C.; OR OLIVER AND BOYD, EDINBURGH; OR E. PONSONBY, LTD., 116, GRAFTON STREET, DUBLIN.

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## SUMMARY OF OBSERVATIONS.

**Pressure, Winds and Weather.**—Under the influence of numerous and very deep cyclonic systems, moving across or in the immediate vicinity of the British Isles, the mean barometric pressure for November was everywhere considerably below the usual level. The smallest deficiency was in the south-west, as much as 0.16 in. at Jersey, and 0.19 in. at Scilly, while at Birr Castle it was 0.25 in., and at Malin Head 0.26 in. There was thus no decided variation in the large deficiency, indicating that the general distribution of mean pressure was in close agreement with the normal, relatively high in the south, and low in the north, favourable to a preponderance of winds from between South and West. From 29.88 in. at Paris, and 29.80 in. at Jersey the barometric values diminished northward to 29.55 in. at Wick, and 29.54 in. at Lerwick. A trough of low pressure stretched from the Upper Atlantic east north-eastward between Scotland and Iceland towards the north of Norway, the lowest mean value being 29.50 in. on the south-west coast of Iceland, at Reykjavik. Thence the values increased northward, to above 29.6 in. beyond the north coast of the island. The anticyclonic systems of the month were almost entirely confined to Continental countries and the Iceland-Greenland region, so that the barometer seldom passed above 30 in. in these islands, but on the 14th it mounted to 30.38 in. at Dover and Jersey, on the 26th to 30.45 in. at Lerwick, and on the 29th to the same height at Yarmouth and Jersey. Notwithstanding this absence of very high readings the range of pressure for the month was large. At every station in the kingdom the barometer dropped below 29 in. on at least one day, at nearly all on two days, and in many cases on three, four or five days. The deepest depressions were those of the 4th and 5th, when the readings were below 28.5 in. over the northern half of Scotland, and as low as 28.09 in. at Lerwick. On the evening of the 18th the mercury went down to 28.5 in. on the coast of Kent. In the west of Ireland the extreme range was  $1\frac{1}{2}$  in., but over a great part of the kingdom it exceeded  $1\frac{1}{2}$  in., and at the most northern stations in Scotland it was more than 2 in., amounting to 2.4 in. at Lerwick.

After about four months of remarkably fine and droughty weather, the conditions underwent a complete reversal in October, wind and rain storms becoming general from the 19th of that month. This abnormally disturbed type was maintained, without any appreciable interruption, until about November 18th or 19th. Wireless reports from steamships showed that throughout this period the conditions on the upper portion of the Atlantic were of a stormy character, under the influence of a series of deep cyclonic areas passing from the western to the eastern side of the ocean. Some of these followed a north-easterly course between Scotland and Iceland, the deepest of the series crossing the Farøe on the morning of the 4th, with the barometer below 28 in., its immediate successor being nearly as deep as it crossed Shetland next morning. Two moved from our north-western coasts, south-eastward to London, then north-eastward to the North Sea; one appeared off the south of Ireland and struck off northward across Scotland to the north of Scandinavia; one died out on reaching the west of Scotland, others followed more variable paths. After the deep depression of the 18th, mentioned above, a change in the pressure distribution set in, the Iceland-Greenland anticyclone moving eastward and south-eastward and becoming established over Northern Europe and to some extent over the British Isles. The immediate result was to check the advance of the Atlantic disturbances, and to divert them to more southerly paths, to the Bay of Biscay and southward, but still near enough to affect our weather, though to a modified degree.

Under these circumstances the month was of an exceedingly windy character, a strong or high wind (forces 6 and 7) being felt on every day in several localities, while on as many as twenty-four days, the first twenty-one in succession, at least a gale (force 8) was registered at one or more of the telegraphic reporting stations. Through the first seventeen days the strong winds and gales were in nearly all cases from points between South and West; from the 18th to the 20th, North-Westerly to Northerly; from the 21st to the 26th, North-Easterly; and from the 27th to the 30th, between East and South. The most tempestuous period of the month was associated with the passage of the two deep depressions of the 4th and 5th which followed each other at an interval of 24 hours. Out on the ocean ships experienced very severe weather, a South-Westerly to a North-Westerly whole gale to a hurricane (forces 10 to 12) being recorded. The approach of the first depression was marked by a decided increase of the South-Westerly wind on our coasts on the 3rd, a strong gale at Castlebay and Malin Head, and a whole gale at Wick. Next day the area affected was greatly enlarged, a whole gale at Blacksod Point, Castlebay, and Spurn Head, hurricane force at Malin Head. On the 5th

the gale was general, and in many localities very violent, about half the stations a strong or whole gale, Donaghadee a storm (force 11), and Malin Head reporting a hurricane. By the 6th the centre of disturbance had passed to Scandinavia, the gale over this country was moderating and veering more Westerly, but a whole gale was felt at Newquay, and again a hurricane on the Donegal coast. Anemometrical registers show that from the 3rd to the 7th gusts at the rate of 60 miles and upwards per hour occurred in various localities, on the 5th 70 miles at Dwyran (Anglesey), 73 at Alnwick Castle and at Pendennis Castle, 74 at Quilty, 75 at Holyhead, and 78 at Shields; and on the 7th 72 miles at Pendennis Castle. Afterwards the only instance of a higher force than that of a strong gale was at Newquay, on the 18th, where a whole gale from North-West blew.

While the wind was in the Western half of the compass, the weather maintained the excessively wet features of the second half of October. Day after day there were heavy falls of rain, occasionally varied by hail, sleet or snow. In all parts of the kingdom falls of an inch or more in a day were exceptionally numerous, the largest quantities reported being 3.3 in. at Seathwaite on the 3rd, 2.1 in. on the 5th, and 2 in. on the 8th at Cruachan, and 2.5 in. at Caragh Lake on the 14th. At Cruachan the aggregate for the first seventeen days was 12.5 in., of which an inch or more fell on as many as six days. The generally wettest day of the month was the 11th, involving the whole of the southern half of England, within which area at least 30 observers registered an inch and upwards, up to 1.8 in. at Kearsney, Kent. During the wet period which set in about October 19th, rain was of daily occurrence in many places, and the total rainfall was unusually large. For instance, at Gruline (Mull) and Cruachan there were 30 consecutive rain days, yielding 14.7 in. at the former station, 17.9 in. at the latter; Caragh Lake had 32 days, yielding 18.7 in.; Abersychan, 33 days, with 10.6 in.; and Newquay, 35 days, with 5.8 in. Various observers, however, add a note to the effect that "most of the rain registered has fallen during the night, and the days as a whole have been fine, with a good deal of sun." After November 19th the conditions were influenced by the Scandinavian anticyclone, and hardly any heavy falls of rain were experienced, the returns from many districts, especially in the west, showing nine or ten consecutive rainless days.

The temperature of the month was fairly uniform, about or rather below the normal. There were a few afternoon maxima of 60° in the first five days, and there were occasional night frosts, mostly about the 11th, 22nd and 26th, with the shade minimum 25° or lower in many places, 20° at Wokingham on the 22nd, and at Nairn on the 26th.

Thunderstorms were, for the time of year, fairly common in the first ten days, particularly in Scotland. At Crieff, on the 2nd, the lightning was described as "fire flashes"; and on the 5th, during a very severe storm at Fort Augustus, "ball lightning" was reported in many places.

Aurora was observed at Liverpool on the 8th, at Aberdeen and Crathes on the 13th, and at Gordon Castle on the 16th.

Both inland and on the coasts there was an unusual absence of fog until the last two or three days of the month, and then it was of a local character.

There was a general decrease in the temperature of the coastal sea water as compared with October, lower by 5° and upwards in many localities, by as much as 9° at the entrance to Milford Haven. The water was, however, warmer than the air on shore, by 6° on the east coast of Ireland, 8° off Wick.

**Rainfall.**—Nearly all stations returned an excess of precipitation. Hawarden Bridge received 1.7 in., and Hoylake, Rhyl and Kingston-on-Soar, 1.9 in., but there were few totals less than  $2\frac{1}{2}$  in., while the largest amounts were 8.8 in. at Cuckfield (Sussex), 13.5 in. at Cruachan, 14.4 in. on Plynlimmon, 14.6 in. at Treherbert, 16.5 in. at Glenquoich, and 18.1 in. at Seathwaite. The percentage of the normal ranged from 71 at Hawarden Bridge and Hoylake, 82 at Dunrossness, and 83 at Alnwick Castle to more than 200 in several localities, 245 at Worthing, and 257 at Nairn. As was the case in October, Kent and Sussex were excessively wet. Rain was measured on 13 days at Yarmouth, and on 14 days at Tottenham and Dursley (Glos.), but as a rule on more than 20 days, 28 at Mareham le Fen, Clongowes Wood and Newcastle (Wicklow), and 29 at Baltasound and Balruddery.

**Bright Sunshine.**—There was an excess of insolation in most places, the records ranging from 28 hours in London (City), and 29 in Manchester (City) to 97 at Torquay and Fowey, and 103 at Falmouth. The percentage of the normal ranged from 87 at Aberdeen and Margate to 127 in London (City), 130 and upwards in various places, 160 at Stornoway, and 162 at York.

TABLE A.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at 9 a.m., 3 p.m. and 9 p.m. at NORMAL STATIONS in the BRITISH ISLANDS

DISTRICT.	STATION.	Height of Barometer cistern above M.S.L.	BAROMETER.			AIR TEMPERATURE.								HYGROMETER.											
			Mean at 32° F. at Level and Latitude of Station.	Diff. from Normal.	C. Cor. for Diurnal Range.	Mean of		Mean of A and B.	Diff. from Normal.	Absolute Maximum and Minimum.				Observations at 9 a.m., 3 p.m., and 9 p.m., or at 7 a.m., 1 p.m., 6 p.m., or 9 p.m.											
						A	B			Max.	Day.	Min.	Day.	Dry Bulb.			Dep. of Wet.			Vap. Pressure.			Humidity.		
														I.	II.	III.	I.	II.	III.	I.	II.	III.	I.	II.	III.
<b>0. SCOTLAND, N.</b>																									
Islands.	CASTLEBAY - - -	48	29.476	-.232	.000	47.5	40.8	44.2	-0.4	53	4th, 14th	34	21st	44.4	46.0	44.8	2.0	2.5	2.1	.248	.255	.250	85	83	85
	Deerness - - -	163	29.352	-	.005	45.4	38.2	41.8	-0.6	51	13th, 15th	31	16th	41.4	-	41.9	2.3	-	2.2	.217	-	.222	82	-	83
	LERWICK - - -	59	29.456	-.207	.005	45.2	37.5	41.4	-0.9	50	and	30	17th	41.8	43.4	42.1	2.4	3.0	2.5	.217	.219	.217	82	77	81
	STORNOWAY - -	52	29.482	-.200	.000	45.7	35.1	40.4	-1.9	53	14th, 30th	26	27th	39.7	42.7	41.3	1.3	1.3	1.9	.218	.246	.221	89	89	85
	WICK - - -	94	29.419	-.223	.000	46.5	35.7	41.1	-0.6	55	1st	27	10th, 24th	40.8	43.5	42.9	1.6	2.0	2.0	.221	.240	.234	88	84	85
	Strathpeffer -	210	29.331	-	.006	43.1	33.6	38.4	-2.0	52	30th	21	26th	37.5	-	38.4	1.6	-	1.2	.193	-	.208	86	-	90
	Glencarron - -	504	28.995	-	.006	43.0	34.1	38.6	-2.1	56	30th	23	25th	38.3	-	38.5	1.4	-	1.5	.203	-	.203	88	-	93
	Fort Augustus -	78	29.492	-	.006	44.7	35.0	39.9	-1.9	54	15th	29	21, 24, 26	39.1	-	40.0	0.8	-	0.9	.223	-	.203	93	-	93
	Kingussie - - -	828	28.637	-	.006	41.8	32.5	37.2	-	50	14th	25	24th	36.9	-	37.8	1.7	-	1.8	.187	-	.192	86	-	85
	Fort William -	38	29.531	-	.006	44.8	35.5	40.2	-2.5	53	14th, 15th	27	11th	39.7	-	40.2	1.8	-	1.9	.211	-	.218	86	-	85
Dunrobin Castle	16	29.535	-	.005	45.7	35.6	40.7	-1.5	55	4th	29	8th	39.9	-	41.0	1.7	-	2.2	.214	-	.215	86	-	83	
District Value - - -																									
<b>1. SCOTLAND, E.</b>																									
Mainland.	Dundee - - -	164	29.412	-	.006	45.5	36.0	40.8	-0.4	52	14th, 15th	29	10th	40.4	-	40.2	1.5	-	1.3	.221	-	.226	88	-	90
	Nairn - - -	82	29.445	-.240	+.002	43.2	32.6	37.9	-3.1	53	15th	20	26th, 27th	37.2	41.2	38.7	1.4	2.0	1.4	.194	.217	.208	87	83	89
	Gordon Castle -	107	29.445	-	.006	45.4	35.2	40.3	-1.7	55	15th	28	9, 11, 24	39.1	-	40.8	1.5	-	1.8	.209	-	.217	88	-	86
	Aberdeen - - -	90	29.492	-.222	.006	46.0	38.1	42.1	+0.2	54	14th	32	21st	41.4	43.8	42.2	2.2	2.9	2.5	.216	.224	.218	84	77	82
	Balmoral - - -	927	28.532	-	.006	44.1	32.3	38.0	0.0	49	3rd	21	25th	36.3	42.4	-	1.9	3.0	-	.179	.210	-	84	78	-
	Crieff - - -	436	29.106	-	.006	45.6	35.2	40.4	-0.6	53	15th	29	10th	40.1	-	40.2	2.2	-	1.8	.204	-	.213	82	-	86
	Leith - - -	37	29.543	-.240	+.002	47.6	38.3	43.0	+0.1	58	14th	33	10, 23, 28	42.4	-	44.3	2.5	-	2.5	.219	-	.237	81	-	81
	Marchmont - -	500	29.052	-	.007	45.7	35.2	40.5	-0.1	53	5th, 14th	30	21st, 28th	40.6	-	40.1	2.0	-	1.7	.212	-	.214	85	-	86
	District Value - - -																								
	<b>2. ENGLAND, N.E.</b>																								
Northern Part.	Whitby - - -	145	29.452	-	.007	48.5	38.6	43.6	-0.6	57	2nd	30	9th, 10th	43.0	-	42.9	2.3	-	2.3	.230	-	.231	83	-	83
	Cockle P'rk (Morpeth)	331	29.252	-	.007	46.2	36.7	41.5	-	55	14th	30	9th	41.8	-	41.3	1.5	-	1.6	.235	-	.231	89	-	88
	Shields - - -	117	29.479	-.237	+.001	47.8	37.7	42.8	-0.3	57	14th	29	21st	42.3	-	44.2	1.7	-	2.1	.234	-	.244	97	-	84
	Durham - - -	352	29.229	-	.007	46.4	36.5	41.5	-0.1	59	14th	29	21st	40.8	-	41.1	1.4	-	1.6	.229	-	.229	90	-	88
	Rounton - - -	245	29.352	-	.007	46.8	36.5	41.7	0.0	55	5th	28	21st	40.8	-	41.0	1.3	-	1.6	.227	-	.223	89	-	87
	Scarborough - M	127	29.489	-	.008	47.7	39.7	43.7	+0.1	55	5th	32	21st	42.4	-	42.6	1.6	-	2.0	.237	-	.231	88	-	85
	York - - -	53	29.603	-	.008	47.9	38.0	43.0	+0.4	58	5th	30	21, 29, 30	41.5	-	42.0	1.9	-	1.7	.223	-	.231	86	-	87
	Spurn Head - -	28	29.606	-.242	+.001	47.8	40.0	43.9	-0.3	55	4th	34	21, 28, 30	43.6	46.6	45.0	1.7	2.6	2.2	.247	.258	.249	87	82	84
	Lincoln - - -	42	-	-	-	47.9	37.8	42.9	+0.8	57	4th	29	30th	42.5	-	-	1.5	-	-	.242	-	-	88	-	-
	Skegness - - -	16	29.548	-.217	+.001	47.8	38.2	43.0	-	57	4th	30	22nd	42.4	-	44.3	0.8	-	1.1	.254	-	.266	94	-	92
Hull - - -	12	-	-	.008	48.4	38.8	43.6	+1.2	56	5th	29	29th	42.9	-	43.5	2.1	-	2.2	.232	-	.235	85	-	82	
District Value - - -																									
<b>3. ENGLAND, E.</b>																									
Northern Part.	Lowestoft - - -	75	29.633	-	.008	49.0	39.3	44.4	+0.1	59	5th	29	22nd	45.6	-	43.4	1.9	-	1.2	.262	-	.255	86	-	91
	Cromer - - -	139	29.528	-	.008	49.0	37.9	43.5	-	57	16th	30	22nd	42.7	-	42.1	1.4	-	0.6	.244	-	.255	88	-	95
	Hillington - - -	92	29.592	-	.008	47.8	36.6	42.2	-0.1	60	12th	27	23rd	42.6	-	42.3	1.3	-	1.4	.244	-	.239	89	-	89
	Norwich - - -	98	-	-	-	48.3	38.1	43.2	-	58	4th	28	23rd	-	-	-	-	-	-	-	-	-	-	-	-
	YARMOUTH - - -	27	29.675	-.203	.000	49.0	39.2	44.1	+0.4	59	4th	29	22nd	43.0	46.5	44.3	1.2	1.8	1.4	.251	.274	.260	90	87	89
	Geldeston - - -	47	29.662	-	.008	49.5	39.0	44.3	+0.8	60	5th	28	22nd	43.3	-	43.1	1.7	-	1.5	.244	-	.246	87	-	83
	Cambridge - - -	43	29.657	-	.009	49.1	37.5	43.3	+0.7	59	5th	27	28th	43.1	-	42.4	1.5	-	1.5	.250	-	.243	89	-	89
	CLACTON - - -	62	29.664	-.196	.000	48.6	40.4	44.5	+0.3	57	4th, 5th	29	22nd	43.9	46.6	44.6	1.3	2.2	1.6	.258	.267	.258	90	85	88
	Woburn - - -	294	29.418	-	.009	48.2	37.2	42.7	-	58	5th	28	22nd, 23rd	42.4	-	42.1	1.5	-	1.7	.243	-	.235	89	-	87
	Bennington - -	411	29.323	-	.009	48.0	36.6	42.3	-0.1	58	5th	27	22nd	41.7	-	41.0	1.4	-	1.5	.234	-	.225	89	-	88
Berkhamsted - -	397	29.310	-	.009	48.3	36.4	42.4	0.0	57	5th	26	22nd	41.9	-	41.4	1.6	-	1.7	.231	-	.225	87	-	86	
District Value - - -																									
<b>4. MIDLAND COS.</b>																									
Eastern Part.	Garforth - - -	198	-	-	.008	47.1	36.3	41.7	-	58	4th	23	6th	41.4	-	41.6	1.7	-	2.1	.229	-	.225	87	-	85
	Huddersfield - -	411	29.207	-	.008	46.4	37.5	42.0	-	57	5th	29	21st	41.1	44.2	41.1	1.6	2.7	1.7	.228	.235	.226	88	80	87
	Belvoir Castle -	276	29.399	-	.008	47.6	37.4	42.5	0.0	57	1st, 5th	31	28, 29, 30	40.7	-	41.8	1.7	-	1.8	.218	-	.227	86	-	86
	Coventry - - -	309	29.375	-	-	47.6	37.0	42.7	-0.2	57	4th	30	22nd	41.9	-	-	1.8	-	-	.228	-	-	87	-	-
	NOTTINGHAM - -	85	29.589	-.235	.000	48.0	37.0	42.5	0.0	57	4th	26	30th	41.0	46.0	42.7	1.3	2.8	1.8	.229	.248	.236	90	80	86
	Birmingham - -	542	29.110	-	.009	46.7	37.5	42.1	-0.6	56	5th	30	21st, 28th	40.7	-	42.1	1.6	-	2.2	.224	-	.226	88	-	84
	Oxford - - -	212	29.508	-.208	-	49.1	38.0	43.6	+0.4	58	4th	28	22nd	41.7	-	43.0	1.5	-	-	.232	-	-	89	-	-
	Bath - - -	84	29.625	-.224	+.002	49.9	37.1	43.5	-1.2	57	1st, 14th	27	11th	41.7	-	45.6	-	-	-	-	-	-	-	-	-
	Shrewsbury - -	212	29.460	-	.008	49.3	36.8	43.1	-0.2	59	3rd	28	11th	42.2	-	42.1	1.9	-	1.7	.234	-	.236	86	-	87
	Sheffield - - -	450	29.180	-	.008	47.3	38.7	43.0	-0.4	57	5th	31	21												

CLIMATOLOGICAL STATIONS, at 7 a.m., 1 p.m. and 6 p.m. or 9 p.m. or at 7 a.m. and 6 p.m. at TELEGRAPHIC REPORTING during the month of NOVEMBER, 1911.

Earth Temperature.		BRIGHT SUNSHINE.				CLOUD (0-10.)			RAIN AND OTHER FORMS OF PRECIPITATION.				WEATHER. No. of Days of										WIND.								STATIONS.						
At 1 foot depth.	At 4 feet depth.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.	Mean Amount.			Total Fall.	Diff. from Normal.	Most in a day.		Precipitation.	Snow.	Hail.	Thunderstorm.	Clear Sky.	Overcast.	Fog.	Ground Frost.	Wind-force 8 and above.	No. of Observations reduced to a total of 90 for the month.															
						I.	II.	III.			Amount.	Day.										Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.							
—	—	65	—	28	—	7.6	7.0	6.6	3.45	—	0.49	14th	23	1	7	2	0	15	0	—	4	53	0	16	12	14	10	8	7	20	3	Castlebay (Barra)					
—	—	41	+ 3	18	+ 1	6.7	—	6.5	4.64	+0.68	0.78	7th	23	1	5	1	1	9	1	—	4	55	5	12	10	13	10	16	11	8	5	Deerness.					
—	—	—	—	—	—	7.7	6.8	7.3	5.46	—	0.97	3rd	23	4	6	4	0	7	0	—	6	47	7	13	11	9	10	14	11	7	8	Lerwick.					
—	—	67	+ 25	29	+ 11	7.0	6.5	6.6	5.72	+0.31	0.84	3rd	22	2	3	1	1	8	0	—	4	47	5	17	13	10	10	6	19	5	5	Stornoway.					
—	—	—	—	—	—	7.4	7.2	7.5	3.30	+0.46	0.40	12th	21	3	3	0	0	11	2	—	7	44	0	10	10	10	6	13	17	17	7	7	Wick.				
—	—	43	0	18	0	7.0	—	6.2	4.38	+1.44	0.86	15th	22	3	0	0	1	10	0	—	1	30	36	6	5	6	4	3	12	12	6	6	Strathpeffer.				
—	—	—	—	—	—	7.2	—	5.9	9.02	-0.03	1.24	5th	22	6	0	2	2	12	2	—	1	53	0	13	7	26	0	0	0	44	0	0	Glencarron.				
—	—	30	+ 9	13	+ 4	8.1	—	7.4	8.91	+4.65	1.51	16th	25	7	1	2	0	16	2	—	4	35	0	0	33	3	2	2	36	10	4	4	Fort Augustus.				
—	—	—	—	—	—	8.0	—	7.7	6.15	—	0.77	1st	13	7	0	1	0	15	0	—	3	15	24	4	3	15	0	0	2	39	3	3	Kingussie.				
—	—	—	—	—	—	7.2	—	7.2	11.25	+3.03	1.63	3rd	20	4	1	4	3	16	0	—	2	30	26	0	21	6	0	3	30	4	0	0	Fort William.				
41.4	—	—	—	—	—	7.8	—	7.8	4.37	+1.17	0.93	15th	21	4	0	0	2	19	1	—	1	15	6	20	7	25	0	0	6	20	6	6	Dunrobin Castle.				
—	—	45	+ 9	19	+ 3	7.4	6.9	7.0	6.86	+1.34	1.63	—	22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
—	—	—	—	—	—	8.2	—	8.7	2.82	+0.06	0.49	15th	23	1	0	0	1	17	1	—	3	15	0	10	18	9	6	3	30	8	6	6	Dundee.				
—	—	46	—	20	—	7.4	7.1	7.1	5.67	+3.46	1.64	16th	26	2	0	0	0	13	2	—	0	9	31	7	2	7	1	1	11	24	4	6	6	Nairn.			
—	—	53	—	23	—	7.7	—	6.8	5.68	+2.76	1.24	16th	21	3	2	0	2	15	0	—	1	30	0	4	9	2	20	14	28	4	9	9	9	Gordon Castle.			
—	45.6	48	- 7	20	- 3	7.0	6.6	6.3	4.68	+1.46	0.85	15th	24	2	4	0	2	11	0	—	0	23	4	10	6	7	7	14	18	7	17	17	17	Aberdeen.			
—	—	—	—	—	—	8.6	—	—	6.24	+2.38	1.02	17th	18	4	0	0	1	20	0	17	5	18	0	9	3	0	9	0	15	33	21	21	21	Balmoral.			
—	—	—	—	—	—	6.9	—	6.5	6.93	+2.53	0.96	3rd	23	1	0	1	0	11	0	—	3	29	0	3	8	33	0	7	3	29	7	7	7	Crieff.			
—	—	—	—	—	—	5.8	—	7.8	3.83	+1.66	0.81	17th	25	0	1	0	1	12	0	—	1	30	0	8	6	11	12	12	18	16	7	7	7	Leith.			
40.1	—	54	+ 3	23	+ 2	7.8	—	5.3	5.47	+2.00	1.20	17th	23	2	2	0	2	11	0	8	1	21	0	20	7	19	6	2	26	7	3	3	3	Marchmont.			
—	—	52	+ 2	22	+ 1	7.4	—	6.9	5.85	+2.53	1.64	—	23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
—	—	73	—	29	—	6.8	—	6.1	2.83	+0.15	0.51	21st	20	0	0	0	3	9	0	—	0	6	2	2	21	0	13	6	40	0	6	6	6	Whitby.			
39.9	44.8	69	—	23	—	6.6	—	5.8	2.99	-0.03	0.52	26th	26	2	2	0	0	9	0	11	2	39	2	3	6	13	5	21	8	19	13	13	13	Cockle Pk (Mor-Shields) (peth.)			
—	—	—	—	—	—	8.2	—	8.3	3.40	+0.96	0.72	18th	22	2	3	0	0	17	2	—	2	21	3	8	15	7	3	21	23	5	5	5	5	5	Durham.		
—	—	56	+ 3	23	+ 1	7.5	—	7.7	3.54	+0.74	1.01	19th	19	2	2	1	1	15	4	8	3	17	12	9	3	12	2	27	15	7	3	3	3	3	Durham.		
42.7	—	—	—	—	—	7.8	—	6.7	3.28	+0.83	0.85	19th	25	1	1	0	1	13	3	15	2	32	4	9	9	7	4	17	29	6	5	5	5	5	Rounton.		
—	50.0	63	—	25	—	8.2	—	8.8	3.33	+0.46	0.64	10th	22	0	0	0	0	18	8	—	3	47	0	0	6	3	16	0	41	3	21	21	21	21	21	Scarborough.	
44.8	49.2	63	+ 24	25	+ 9	6.3	—	7.1	3.19	+0.93	0.44	21st	24	1	0	0	2	13	3	—	0	5	0	24	5	3	4	30	9	13	2	2	2	2	2	York.	
—	—	—	—	—	—	7.8	7.6	7.7	2.72	+0.76	0.75	18th	19	1	2	0	0	14	3	—	3	72	0	4	8	7	7	26	19	11	8	8	8	8	8	Spurn Head.	
42.5	48.6	—	—	—	—	6.1	—	5.9	2.22	+0.20	0.45	26th	23	2	1	0	2	6	4	—	3	14	8	1	4	14	4	4	24	23	8	8	8	8	8	Lincoln.	
—	7.1	—	28	—	—	7.1	—	5.8	3.50	—	0.64	17th	23	0	0	0	3	15	1	—	0	24	0	11	2	13	2	9	22	25	6	6	6	6	6	Skegness.	
43.0	49.0	38	—	15	—	6.7	—	6.4	3.22	+0.83	0.65	26th	23	4	1	0	2	9	2	10	1	5	9	10	5	9	3	5	22	19	8	8	8	8	8	Hull.	
42.8	48.4	64	+ 9	25	+ 3	7.2	—	6.9	2.97	+0.57	1.01	—	23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
44.0	49.9	63	—	25	—	6.9	—	5.2	3.45	+0.90	1.49	18th	17	2	2	0	4	7	4	4	0	38	2	0	3	10	0	20	27	21	7	7	7	7	7	Lowestoft.	
—	60	—	24	—	—	7.7	—	6.7	2.39	-0.71	—	18th	26	0	0	0	1	11	2	—	1	47	2	3	3	8	6	31	16	12	9	9	9	9	9	Cromer.	
—	—	49	- 6	19	- 3	8.5	—	6.9	4.65	+1.98	1.55	18th	25	3	0	0	1	18	2	15	0	33	2	2	12	4	3	10	36	12	9	9	9	9	9	Hillington.	
—	—	—	—	—	—	—	—	—	3.14	—	0.97	18th	23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
43.1	49.9	55	—	21	—	7.1	7.0	5.3	2.72	+0.02	0.95	18th	13	0	0	0	1	7	4	—	0	26	1	0	7	5	2	24	25	23	3	3	3	3	3	3	Yarmouth.
—	—	60	- 3	23	- 2	7.3	—	6.1	2.98	+0.44	1.23	18th	19	2	2	0	4	11	2	—	0	8	3	2	5	9	5	16	31	16	3	3	3	3	3	3	Geldeston.
44.0	50.2	65	+ 5	25	+ 2	7.9	—	5.5	2.64	+0.58	0.60	18th	19	2	1	0	2	13	2	9	2	24	7	7	5	2	15	15	25	9	5	5	5	5	5	5	Cambridge.
46.9	51.4	58	—	22	—	7.8	7.9	6.8	3.42	—	0.85	18th	18	1	1	0	0	12	1	?	1	50	0	1	10	1	4	23	27	13	11	11	11	11	11	Clacton.	
—	—	56	—	22	—	7.8	—	5.1	2.58	—	0.58	11th	20	1	0																						

TABLE A. (continued).—Giving a Summary of the METEOROLOGICAL OBSERVATIONS made at 9 a.m., 3 p.m. and 9 p.m. at NORMAL STATIONS in the BRITISH ISLANDS

Table with columns: DISTRICT, STATION, Height of Barometer, BAROMETER (Mean, Diff. from Normal, Cor. for Diurnal Range), AIR TEMPERATURE (Mean of A, B, Mean of A and B, Diff. from Normal, Absolute Maximum and Minimum), and HYGROMETER (Observations at 9 a.m., 3 p.m., and 9 p.m., or at 7 a.m., 1 p.m., 6 p.m., or 9 p.m., Dry Bulb, Dep. of Wet, Vap. Pressure, Humidity).

\* Dulwich now takes the place of Norwood from which it is distant 1 mile E.

† Dwyran now takes the place of Llanelgrud.

CLIMATOLOGICAL STATIONS, at 7 a.m., 1 p.m. and 6 p.m. or 9 p.m. or at 7 a.m. and 6 p.m. at TELEGRAPHIC REPORTING during the Month of NOVEMBER, 1911.

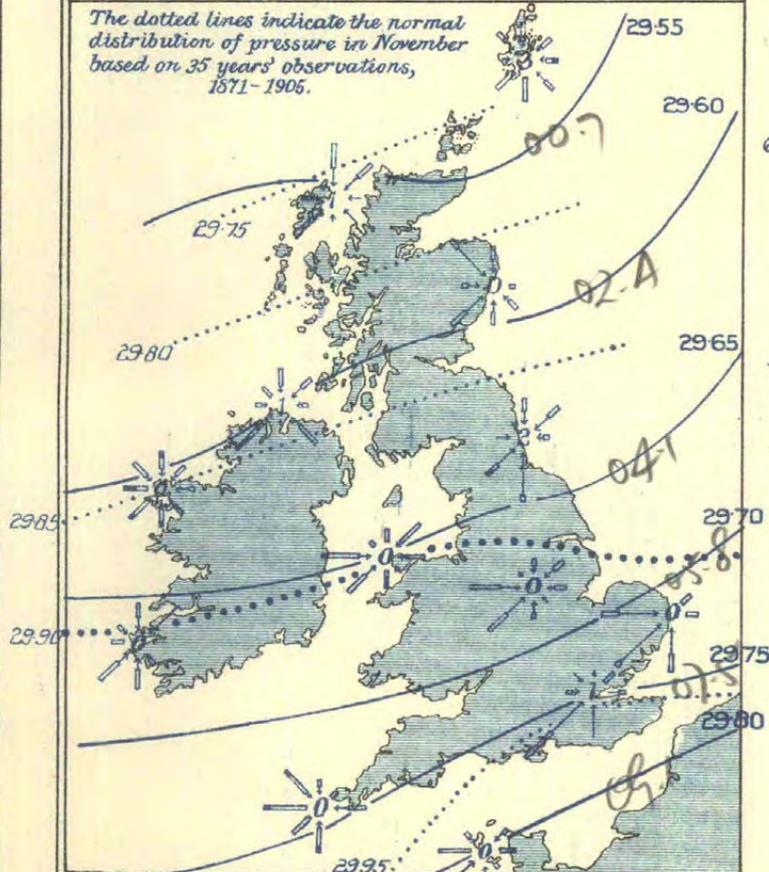
Earth Temperature.		BRIGHT SUNSHINE.			CLOUD (0-10).			RAIN AND OTHER FORMS OF PRECIPITATION.				WEATHER. No. of Days of							WIND.								STATIONS.						
At 1 foot depth.	At 4 feet depth.	Total In Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.	Mean Amount.			Total Fall.	Diff. from Normal.	Most in a day.		Precipitation.	Snow.	Hail.	Thunderstorm.	Clear Sky.	Overcast.	Fog.	Ground Frost.	Wind-force 8 and above.	No. of Observations reduced to a total of 90 for the month.											
						I.	II.	III.			Amount.	Day.										Forces 4-7.	Calm.	N.	N.E.	E.		S.E.	S.	S.W.	W.	N.W.	
48.2	52.7	66	0	25	0	6.8	—	5.9	6.59	+3.04	1.40	11th	18	1	0	1	5	11	0	0	15	0	6	14	2	0	4	27	12	25	Eastbourne.		
47.0	51.8	66	—	25	—	7.1	—	6.7	5.10	—	0.95	11th	19	1	3	1	2	15	2	9	50	0	0	10	3	2	9	45	12	9	Dover.		
—	—	—	—	—	—	7.8	7.4	7.7	5.71	+3.06	0.99	11th	16	1	4	0	0	12	2	—	7	55	1	3	9	5	3	15	34	11	9	Dungeness.	
46.4	52.2	63	- 8	24	- 3	7.6	—	6.1	5.65	+2.32	0.98	7th	19	1	0	1	4	13	2	4	6	45	2	6	11	3	6	9	31	12	10	Hastings.	
—	—	64	+ 1	24	0	6.4	—	5.9	4.43	+1.23	1.16	11th	17	2	0	0	5	10	6	13	0	29	0	0	21	0	6	0	39	11	13	Southampton.	
—	—	81	+ 13	31	+ 5	6.0	—	—	6.35	+2.94	1.35	11th	20	0	2	1	4	12	0	—	1	42	2	13	8	3	2	9	21	25	7	Ventnor.	
46.0	51.3	62	+ 1	24	+ 1	7.0	—	6.4	4.65	+1.71	1.40	19	19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Tottenham.	
—	51.8	46	—	18	—	7.9	—	7.0	3.56	—	0.72	11th	14	2	0	0	1	12	0	8	0	5	0	6	5	6	5	46	6	10	8	Hampstead.	
—	—	56	—	22	—	7.6	—	6.6	3.62	—	0.64	11th	17	4	0	0	2	15	6	16	2	21	10	2	13	2	3	9	31	12	8	Camden Square.	
44.2	50.2	46	—	18	—	7.1	—	—	3.62	+1.26	0.68	11th	19	0	0	0	4	17	0	6	—	—	—	—	—	—	—	—	—	—	—	6	Westminster.
—	—	39	+ 12	15	+ 5	—	—	—	3.02	+0.67	0.55	11th	17	2	0	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	South Kensington.
—	—	41	—	16	—	7.6	—	—	—	—	—	—	—	3	2	0	2	18	2	8	0	18	0	3	9	3	0	6	42	12	6	Greenwich.	
—	50.1	55	+ 3	21	0	7.9	—	7.1	3.42	+1.20	0.71	18th	21	3	1	0	2	16	3	9	0	28	5	5	9	5	3	14	34	12	3	Dulwich.	
46.1	—	—	—	—	—	7.5	—	6.2	3.23	+0.83	0.60	11th	17	2	0	0	4	15	3	—	1	21	7	4	6	6	3	18	23	17	6	Kew.	
44.3	50.6	55	+ 5	21	+ 2	7.5	7.0	7.2	3.40	+1.19	0.61	11th	20	2	0	0	1	15	3	13	0	33	9	3	13	1	1	22	29	3	4	Bunhill Row.	
—	—	28	+ 6	11	+ 3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Plumstead.	
—	—	48	—	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Eskdalemuir.	
—	—	48	—	20	—	7.7	8.4	6.9	8.21	—	1.20	3rd	22	6	0	0	1	16	0	—	?	52	8	16	15	7	1	7	32	2	2	Poitalloch.	
—	—	—	—	—	—	6.5	—	6.0	7.84	+2.42	1.31	5th	19	0	2	3	4	11	0	—	3	2	5	6	9	4	17	11	9	19	9	Glasgow.	
—	—	35	+ 9	15	+ 4	8.0	—	7.2	5.01	+1.31	0.79	3rd	20	0	2	0	0	14	0	12	1	16	8	10	13	13	4	9	21	11	1	Rothesay.	
—	46.7	—	—	—	—	6.4	—	5.5	6.83	+1.88	1.00	5th	19	0	1	2	5	11	2	—	2	27	3	11	3	28	2	9	4	26	4	Colmonell.	
—	—	—	—	—	—	5.7	—	—	3.91	-1.01	0.51	4th	20	0	0	0	6	10	0	8	3	39	0	6	6	24	12	6	3	30	3	Dumfries.	
41.8	47.0	46	—	19	—	6.1	—	5.6	5.15	+1.11	0.63	4th	19	2	1	0	4	9	1	10	2	17	11	15	10	10	2	4	33	2	3	Cally.	
—	—	—	—	—	—	—	—	—	5.92	+0.61	1.07	13th	17	0	1	0	—	—	—	—	—	2	18	0	2	16	9	18	0	17	4	24	Douglas.
—	—	72	+ 11	29	+ 5	6.7	—	5.5	5.17	+0.37	0.87	13th	20	5	7	1	4	8	0	3	2	44	0	14	10	9	6	8	13	24	6	Southport.	
41.8	47.1	67	+ 20	27	+ 8	7.3	7.5	7.0	3.16	-0.08	0.41	11th	20	0	2	1	0	9	2	11	2	48	1	11	8	11	14	19	11	11	4	Manchester (City).	
43.2	49.7	29	—	12	—	5.3	—	5.2	3.45	+0.37	0.52	12th	21	0	0	0	1	1	3	0	12	0	9	10	8	12	18	18	8	7	—	(Whit. P'k.)	
—	—	33	—	13	—	7.6	8.3	7.4	2.80	—	0.44	12th	17	0	0	0	0	13	1	—	0	25	9	4	7	10	8	23	14	6	9	Darwen.	
42.1	47.2	43	—	17	—	8.5	—	8.0	5.61	—	0.98	3rd	23	1	3	1	0	16	1	7	1	47	0	5	11	6	0	31	12	13	12	Aspatia.	
42.4	47.9	64	—	26	—	6.7	—	5.7	5.60	+1.49	0.94	3rd	23	1	5	2	3	11	1	11	2	12	7	9	11	12	3	9	16	17	6	Newton Rigg.	
43.1	47.0	59	+ 1	20	0	6.9	—	5.3	4.35	+0.65	0.63	17th	24	2	0	1	2	6	1	19	3	27	3	9	5	5	9	22	16	13	8	Stonyhurst.	
—	—	50	+ 5	20	+ 2	7.4	—	7.5	4.57	+0.19	0.81	3rd	20	0	7	5	2	15	0	7	0	20	21	2	10	6	2	17	18	8	6	Blackpool.	
45.2	50.2	56	+ 9	22	+ 3	7.9	—	7.2	3.30	-0.18	0.46	1st	19	0	2	1	1	15	0	14	1	36	0	13	12	9	13	12	18	11	2	Manch's't'r (Prest).	
—	—	35	+ 5	14	+ 2	7.9	—	6.4	3.41	+0.05	0.47	12th	21	0	0	0	2	13	1	8	2	18	7	12	6	11	0	28	12	11	3	Liver'ol, Bid.Obs.	
—	—	67	—	27	—	6.8	—	7.4	2.19	-0.46	0.42	11th	18	2	1	0	3	13	2	—	1	27	0	6	10	11	13	19	15	8	8	Llandudno.	
—	—	57	+ 2	23	+ 1	6.8	—	7.7	2.77	-0.58	0.33	11th	20	0	0	0	1	10	0	—	0	24	0	7	5	19	2	12	7	36	2	Holyhead.	
—	—	—	—	—	—	6.7	6.9	7.6	5.07	+0.93	0.54	9th	23	2	6	0	2	9	0	—	—	8	58	0	9	12	13	2	8	23	20	3	Bettws-y-Coed.
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Dwyran.	
45.5	49.5	65	—	26	—	7.0	—	7.0	5.43	—	0.92	1st	23	0	2	3	3	12	0	7	8	56	3	15	10	8	2	22	14	10	6	Llangamm. Wells.	
43.3	48.4	58	+ 9	23	+ 3	7.1	7.6	6.9	3.66	+0.07	0.98	20	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8	Pembroke.
44.7	50.3	56	—	19	—	8.5	—	7.01	—	—	1.43	12th	25	1	2	0	1	24	2	21	0	36	30	3	3	12	0	9	15	15	3	Clifton.	
—	—	70	+ 7	27	+ 3	7.4	7.3	6.7	6.24	+2.30	1.46	9th	23	0	1	0	0	10	0	—	5	59	1	8	10	6	5	13	20	19	8	Portland Bill.	
—	—	66	—	25	—	—	—	—	4.41	+1.14	0.91	11th	22	—	—	—	—	—	—	—	9	—	—	—	—	—	—	—	—	—	—	10	Plymouth.
46.8	—	85	+ 19	32	+ 7	8.2	7.5	6.3	4.76	+1.10	1.05	11th	22	0	2	0	0	13	4	9	?	?	3	9	12	4	8	5	23	16	10	9	Falmouth.
—	—	103	+ 30	39	+ 11	6.3																											

TABLE B.—SUMMARY of the OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE at additional STATIONS, NOVEMBER, 1911.

DISTRICT.	STATION.	Height of Gauge above M.S.L.	AIR TEMPERATURE.							Earth Temperature		Grnd Frost.		RAIN AND OTHER FORMS OF PRECIPITATION.					BRIGHT SUNSHINE.					
			Mean of		Mean of A and B.	Diff. of Mean from Normal.	Absolute Maximum and Minimum.				At 1 foot depth.	At 4 feet depth.	No. of Nig'ts	Total Fall	Diff. from Normal.		Most in a day.		Number of Days.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.	
			A	B			Max.	Day.	Min.	Day.					In.	In.	Amt.	Day.						Hr.
0. SCOTLAND, N.	p Baltasound	S 31	44.3	35.6	40.0	—	49	3rd	24	16th	40.2	—	—	4.89	—	0.71	—	—	2nd	29	48	—	23	—
	p Dunrossness	— 145	—	—	—	—	—	—	—	—	—	—	—	3.25	-0.71	0.30	—	—	3rd, 12th	20	—	—	—	—
	a Fortrose	— 69	44.2	35.3	39.8	—	53	14th	26	25th	—	—	—	4.80	—	1.10	—	—	16th	19	56	—	24	—
1. SCOTLAND, E.	p Inch	— 426	43.4	33.8	38.6	—	53	15th	25	9th	39.9	—	14	5.61	—	1.08	—	—	16th	22	48	—	20	—
	p Crathes	S 140	45.7	35.2	40.5	—	55	14th, 15th	28	9th, 10th	40.9	43.8	12	4.88	—	0.69	—	—	12th	24	42	—	18	—
	p Stonehaven	— 276	42.7	36.9	39.8	—	50	15th	30	21st	—	—	—	4.70	—	0.88	—	—	12th	27	46	—	19	—
2. ENGLAND, N.E.	p Balruddery	S 276	46.9	35.4	41.2	—	54	1st	30	10th, 21st	—	—	—	3.00	—	0.29	—	—	15th	29	68	—	29	—
	a West Linton	S 800	43.6	32.9	38.3	-2.0	53	14th	21	10th	—	—	—	5.89	—	0.82	—	—	17th	24	47	—	20	—
	a Alnwick Castle	— 210	47.3	37.4	42.4	+0.1	56	4th	29	9th	—	—	—	2.91	-0.60	0.50	—	—	18th, 26th	20	—	—	—	—
3. ENGLAND, E.	p Newcastle-on-Tyne	— 152	46.6	38.8	42.7	—	57	14th, 15th	30	21st	—	—	—	3.57	+0.90	0.71	—	—	26th	27	42	+8	17	+3
	a Chopwellwood	— 445	46.7	35.7	41.2	—	57	4th	28	10th, 21st	—	—	14	3.49	—	0.85	—	—	26th	22	66	—	27	—
	p Ampleforth	— 349	46.5	37.1	41.8	—	54	4th	29	20th	—	—	—	3.67	—	0.59	—	—	21st	23	—	—	—	—
4. MIDLAND COUNTIES	a Fulbeck	— 180	47.5	37.5	42.5	+0.5	55	16th	30	21, 22, 30	—	—	14	2.17	+0.13	0.42	—	—	26th	24	56	—	22	—
	a Rauceby	— 124	47.8	36.8	42.3	—	58	4th	28	28th	44.0	50.4	11	2.69	+0.40	0.50	—	—	18th	26	62	—	24	—
	a Felixstowe	— 10	48.9	40.3	44.6	+0.2	56	4, 5, 16	30	22nd	—	—	—	3.88	—	1.22	—	—	18th	19	71	—	28	—
5. ENGLAND, S.E.	a Rothamsted	— 424	48.3	37.0	42.7	+0.4	58	4th	28	22nd, 28th	—	—	—	3.16	+0.40	0.57	—	—	11th	21	68	+8	26	+3
	a Shoeburyness	— 13	49.3	39.8	44.6	+0.1	59	4th	30	22nd	—	—	—	3.30	+1.17	0.85	—	—	17th	18	—	—	—	—
	a Southend-on-Sea	— 90	48.3	40.3	44.3	—	57	3rd, 5th	29	22nd	46.5	—	9	2.52	+0.41	0.76	—	—	18th	18	57	—	22	—
6. SCOTLAND, W.	a Harrogate	— 476	45.8	36.7	41.3	-0.4	54	5th, 14th	28	21st	43.2	46.4	11	3.42	+0.73	0.53	—	—	4th	24	70	—	28	—
	a Bradford	— 489	46.1	37.9	42.0	—	55	4th	29	21st	42.0	51.0	7	3.55	—	0.62	—	—	11th	18	59	—	24	—
	a Cheadle	— 646	46.4	35.3	40.9	-0.6	52	14th	26	11th	—	—	21	2.65	-0.30	0.45	—	—	11th	25	—	—	—	—
7. ENGLAND, N.W.	a Bawtry	— 65	47.7	37.5	42.6	+0.3	57	4th	29	21st	—	—	—	2.36	+0.33	0.44	—	—	26th	18	—	—	—	—
	a Worksop	— 56	47.9	37.2	42.6	+0.2	57	1st, 4th	29	21st	43.2	47.6	16	2.78	+0.75	0.52	—	—	19th	20	54	+8	21	+3
	a Mayfield (Staffs.)	— 374	46.4	34.7	40.6	—	56	4th	21	11th	—	—	12	2.71	—	0.37	—	—	11th, 12th	22	—	—	—	—
8. ENGLAND, N.W.	a Belper	— 222	47.3	36.3	41.8	—	57	4th	25	11th	—	—	9	2.56	—	0.34	—	—	11th	20	—	—	—	—
	a Kingstons-on-Soar	— 125	47.5	37.0	42.3	—	58	4th	25	30th	44.1	—	—	1.88	—	0.39	—	—	11th	18	—	—	—	—
	p Rugby	— 379	48.1	35.2	41.7	-0.3	60	5th	28	11th, 21st	—	—	12	2.42	—	0.46	—	—	11th	19	—	—	—	—
9. ENGLAND, N.W.	a Raunds	— 210	48.5	36.4	42.5	-0.1	58	16th	27	22nd	44.9	—	10	2.34	—	0.41	—	—	11th	20	—	—	—	—
	a Winslow	— 379	47.2	36.9	42.1	—	56	4th	26	22nd	—	—	9	2.76	—	0.65	—	—	11th	20	—	—	—	—
	a Hereford	— 291	47.5	36.8	42.2	-0.9	58	4th	29	11th, 22nd	—	—	14	2.93	+0.38	0.49	—	—	11th	19	—	—	—	—
10. ENGLAND, N.W.	a Cirencester	— 446	46.8	35.9	41.4	-0.5	56	4th	26	28th	44.7	49.4	9	3.42	+0.45	0.82	—	—	11th	20	56	-1	22	0
	a Wokingham	— 216	48.8	35.3	42.1	—	58	4th	20	22nd	—	—	—	3.67	—	0.69	—	—	11th	18	—	—	—	—
	a Marlborough	— 424	48.1	36.4	42.3	+0.2	57	4th	24	22nd	—	—	15	3.76	+0.45	0.65	—	—	11th	20	48	-3	18	-2
11. ENGLAND, N.W.	a Bucklebury	— 409	47.9	37.0	42.5	—	57	4th	28	22nd, 27th	—	—	20	3.40	—	0.70	—	—	11th	19	—	—	—	—
	a Swarraton	— 810	48.0	36.2	42.1	-0.4	57	4th	25	22nd	—	—	—	3.97	+0.77	0.92	—	—	11th	21	—	—	—	—
	a Margate	— 85	50.2	40.9	45.6	+0.4	59	4th, 5th	29	22nd	46.3	50.2	?	3.59	+1.00	0.64	—	—	11th	18	53	-8	20	-3
12. ENGLAND, N.W.	Broadstairs	— 140	—	—	—	—	—	—	—	—	—	—	—	3.95	—	0.72	—	—	18th	18	62	—	24	—
	Ramsgate	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	59	—	23	—
	a Eltham	— 200	48.9	39.2	44.1	—	57	16th	28	22nd	—	—	—	3.30	—	0.65	—	—	11th	18	—	—	—	—
13. ENGLAND, N.W.	a Wisley	— 150	49.3	38.6	44.0	-0.4	59	4th	27	30th	44.6	50.2	14	3.26	—	0.69	—	—	11th	16	61	—	23	—
	a Basingstoke	— 289	48.1	37.2	42.7	—	56	16th	26	22nd	45.5	51.2	11	4.02	—	0.91	—	—	11th	19	—	—	—	—
	a Sevenoaks	— 509	47.4	38.4	42.9	—	57	4th	27	22nd	43.7	50.1	8	6.52	—	1.20	—	—	18th	24	—	—	—	—
14. ENGLAND, N.W.	a Tunbridge Wells	— 421	48.1	37.2	42.7	-0.2	57	4th	25	22nd	45.0	—	13	6.34	+3.01	1.14	—	—	11th	25	61	-7	23	-3
	a Matfield	— 320	48.5	38.2	43.4	—	58	4th	26	22nd	—	—	14	6.41	—	1.03	—	—	11th	22	—	—	—	—
	p Folkestone	— 121	49.6	41.3	45.5	—	58	5th	29	22nd	—	50.8	—	5.81	+2.57	1.16	—	—	12th	18	57	—	22	—
15. ENGLAND, N.W.	Littlestone	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	54	—	21	—
	a Bexhill	— 27	50.8	42.0	46.4	—	57	5th	27	22nd	48.9	—	2	5.56	—	1.15	—	—	11th	19	65	—	25	—
	Hove	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	62	—	24	—
16. ENGLAND, N.W.	a Worthing	— 36	50.6	39.3	45.0	+0.3	58	4th, 5th	28	22nd	46.7	52.3	10	7.68	+4.54	1.35	—	—	17th	19	74	—	28	—
	a Bognor	— 20	50.4	41.0	45.7	—	58	4th	29	22nd	—	53.2	15	6.80	—	1.30	—	—	17th	21	73	—	28	—
	Westbourne	— 30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	54	—	21	—
17. ENGLAND, N.W.	a Totland Bay	— 140	50.8	42.3	46.6	+0.9	58	1st, 4th	28	27th	—	—	8	5.07	+2.02	1.11	—	—	11th	16	34	—	32	—
	a Sandown	— 20	52.0	41.7	46.9	—	60	1st	30	22nd	—	—	—	6.50	—	1.25	—	—	11th	21	80	—	30	—
	p Bournemouth	— 145	50.5	39.1	44.3	—	57	1st, 5th	28	22nd	46.0	49.6	—	5.11	—	1.26	—	—	11th	21	86	—	33	—
18. ENGLAND, N.W.	p Oban	— 20	48.9	37.8	43.4	—	57	15th	30	10, 11, 12	—	—	10	6.59	—	0.93	—	—	4th	18	72			

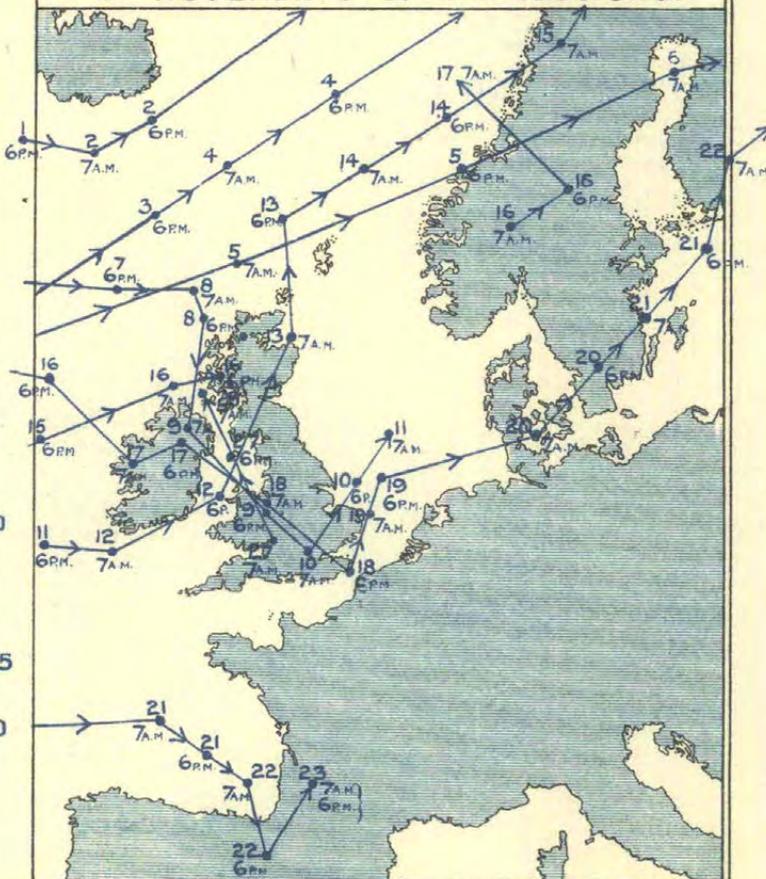
1. BAROMETER AND WIND AT 7 A.M.

The dotted lines indicate the normal distribution of pressure in November based on 35 years' observations, 1871-1905.



WIND ROSES. The arrows fly with wind and indicate frequency and force, thus:   
 LIGHT MODERATE STRONG   
 10 10 10   
 30 Obs. = 1 Inch

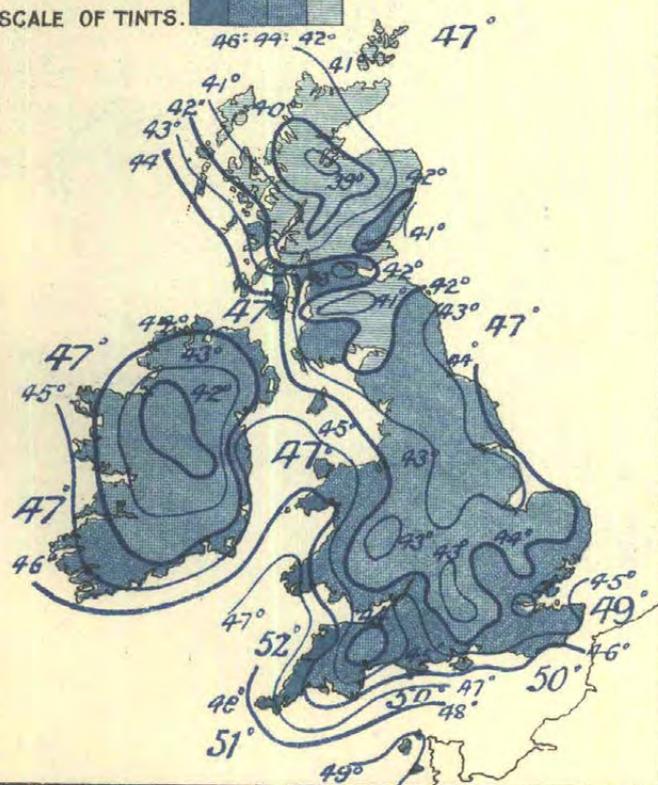
2. MOVEMENTS OF DEPRESSIONS.



3. DISTRIBUTION OF MEAN TEMPERATURE.

Reduced to sea level by a correction of 1° F for 300 ft.

SCALE OF TINTS.



Sea temperatures are indicated by large figures, thus— 44°

4. BRIGHT SUNSHINE, IN HOURS.

SCALE OF TINTS. 90 70 50 HRS

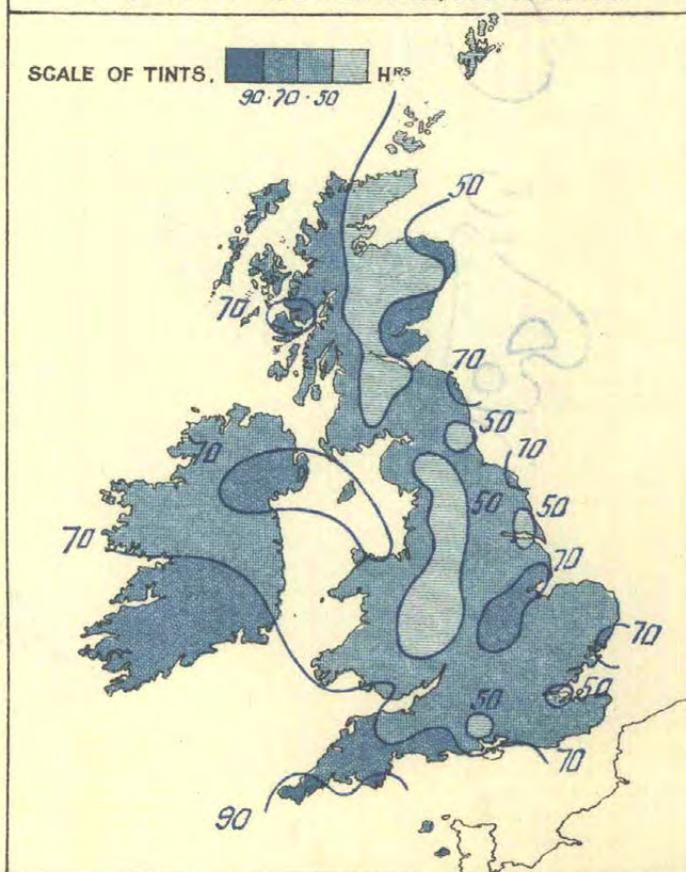




TABLE B (continued).—SUMMARY of the OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE at additional STATIONS, NOVEMBER, 1911.

DISTRICT.	STATION.	Height of Gauge above M.S.L.	AIR TEMPERATURE.								Earth Temperature		Gr'nd Frost.	RAIN AND OTHER FORMS OF PRECIPITATION.				BRIGHT SUNSHINE.				
			Mean of		Mean of A and B.	Diff. of Mean from Normal.	Absolute Maximum and Minimum.				At 1 foot depth.	At 4 feet depth.		No. of Nig'ts	Most in a day.		Num-ber of Days.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.	
			A	B			Max.	Day.	Min.	Day.			Total Fall.		Diff. from Normal.	Amt.						Day.
			Max.	Min.																		
8. ENGLAND, S.W.	§ p Aberystwyth	59	49.5	41.5	45.5	—	56	13th, 14th	30	22nd	—	—	—	lu. 5.62	lu. 1.09	12th	22	68	—	27	—	
	Haverfordwest	98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	85	—	33	—	
	Tenby	79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	74	+10	29	+4	
	Port Talbot	179	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	69	—	27	—	
	Forest of Dean	200	—	—	—	—	—	—	—	—	—	—	—	4.21	0.55	11th	22	—	—	—	—	
	"	900	—	—	—	—	—	—	—	—	—	—	—	4.47	0.55	7th	20	—	—	—	—	
	¶ p Cardiff	203	48.5	38.1	43.3	-1.5	55	1, 5, 16	29	22nd	44.0	50.2	7	6.00	+1.87	0.67	11th	24	71	—	27	—
	a Swansea	24	50.2	40.2	45.2	—	57	1st, 4th	30	27th	45.9	52.8	16	7.47	0.93	15th	21	77	—	30	—	
	¶ a Shaftesbury	722	47.1	37.2	42.2	-0.8	55	4th	27	22nd	44.5	—	—	2.61	-0.95	0.56	11th	17	—	—	—	—
	¶ a Arlington	618	47.9	38.0	43.0	-0.9	56	4th	27	22nd	—	—	—	8.06	+2.38	0.76	9th	21	—	—	—	—
	¶ a Cullompton	202	50.4	36.4	43.4	-0.4	59	4th	23	22nd	46.3	—	12	3.91	+0.27	0.60	11th	25	63	+7	24	+3
	Torquay	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	97	+31	37	+12
	a Weymouth	21	51.6	42.1	46.9	—	58	4th	29	27th	—	—	—	4.26	1.10	11th	19	81	—	31	—	
	p Paignton	11	50.9	39.7	45.3	—	58	14th	30	22nd	—	—	—	4.79	0.89	11th	24	88	—	33	—	
	p Sheepstor	740	48.1	34.0	41.1	—	55	5th	23	28th	—	—	—	7.89	1.01	11th	24	—	—	—	—	
Salcombe	300	51.2	41.6	46.4	—	58	4th	30	22nd	—	—	—	4.37	1.17	11th	22	95	—	36	—		
a Teignmouth	19	51.6	40.7	46.2	—	59	5th	30	28th	—	4	4.05	0.85	11th	21	86	—	33	—			
a Fowey	51	52.0	38.4	45.2	—	57	1st	26	27th	—	—	—	4.77	0.61	11th	22	97	—	37	—		
a Penzance	54	51.4	43.1	47.3	—	58	4th	31	22nd	—	—	—	4.95	0.81	7th	24	92	—	35	—		
9. IRELAND, N.	p Dunfanaghy	54	48.4	39.3	43.9	—	58	14th	34	8th, 11th	—	—	—	6.10	0.76	7th	22	—	—	—	—	
p Dublin (Glasnevin)	67	49.1	38.2	43.7	-0.4	57	5th	26	11th	—	16	3.32	+0.54	0.69	12th	23	—	—	—	—		
a Kingstown	42	49.5	40.7	45.1	—	60	4th	31	11th	—	—	—	2.65	0.40	12th	24	65	—	26	—		
p Clongowes Wood College	245	47.6	34.7	41.2	—	57	5th	22	22nd	—	14	5.09	1.26	13th	28	60	—	24	—			
a Mountmellick	233	47.2	35.8	41.5	—	56	4th	24	10th	—	—	—	6.13	1.18	12th	21	—	—	—	—		
10. IRELAND, S.	p Newcastle (Co. Wicklow)	256	48.3	38.3	43.3	—	58	5th	31	9th	—	—	—	4.70	0.62	12th	28	—	—	—	—	
a Kilkenny	212	48.2	35.8	42.0	-2.1	58	4th	25	11th	—	—	—	4.92	+1.87	0.86	12th	24	—	—	—	—	
a Cahir	199	47.9	36.2	42.1	-2.2	56	4th	28	28th	—	—	—	5.63	1.09	14th	23	—	—	—	—		
a Foynes	108	49.1	38.1	43.6	-1.4	58	4th, 14th	29	22nd, 27th	—	—	—	—	—	?	?	?	?	?	?	?	
a Ballinacurra	34	49.4	37.5	43.5	—	58	4th	28	9th, 29th	—	—	—	4.59	1.39	14th	18	75	—	29	—		
11. ENGLISH CHANNEL	§ a Guernsey (Villa Carey)	180	52.2	44.6	48.4	-0.3	59	1st, 4th	38	22nd, 27th	—	—	—	6.77	+2.00	1.31	11th	22	75	+13	28	+5

NOTES ON THE STATISTICAL TABLES.

**Hours of Observation.**—The following types are used to indicate the hours of observation at Stations included in Table A:—Clarendon, Normal Climatological Stations—I, 9 a.m. [II, 3 p.m.], III, 9 p.m. Black Capitals, telegraphic reporting normal climatological stations—I, 7 a.m., II, 1 p.m., III, 9 p.m. Roman, telegraphic reporting stations—I, 7 a.m., [II, 1 p.m.], III, 6 p.m. Italic, auxiliary climatological stations—I, 9 a.m. only, at *Balmoral, Colmonell* and *Ventnor* 3 p.m. also. The summaries are based on observations made three times a day wherever the data are available, except in the case of the element pressure (see below). At stations shown in clarendon type the maximum and minimum temperatures are read at 9 p.m.; at the remaining stations these observations are made at I. In Table B the letters *a* and *p* indicate whether the readings of the maximum and minimum are taken at the hours of morning or evening observation.

**Barometer.**—The correction for latitude has not been applied to the readings quoted in the Tables. It is applied to the readings at sea level from which the chart showing the mean monthly distribution of pressure is prepared. The values given in the tables are for station level. The values printed are (1) for stations shown in clarendon type, the means of observations at 9 a.m. and 9 p.m.; (2) for stations shown in Capitals, the means of observations at 7 a.m., 1 p.m., 9 p.m.; (3) for stations shown in Roman type, the means of observations at 7 a.m. and 6 p.m.; (4) for stations shown in italic type, the means of observations at 9 a.m. The column headed C gives the correction for diurnal variation required to reduce the means of observations at fixed hours to true diurnal means, based on the analysis of the values obtained at the four observatories for the period 1871-1905. The difference from normal is based upon the 7 a.m. readings only, except in the cases of Kew, Greenwich, Aberdeen, Valencia and Falmouth (see below).

**Rainfall.**—The amounts are those for the 24 hours commenced at the time of morning observation.

**Hygrometer.**—At certain stations the vapour pressure and the relative humidity are the results obtained from the daily values. These are entered in clarendon type. At other stations the calculations are made from the monthly means of the dry and wet bulb readings.

**Weather Phenomena.**—The number of days of Rain, Snow, Hail, Thunderstorm, Fog, Ground Frost, and Gale, are counted irrespective of the hours at which the phenomena occur. Except in the cases of rainfall (see above) and ground frost the day is the civil day. A day is reckoned as a day of "clear sky," if the mean of the estimates of the "amount of cloud" at the fixed hours of observation is less than 2, and as an "overcast" day if the mean is greater than 8. Days of Ground Frost.—A day is counted as a "Day of Ground Frost" if it follows a night on which the minimum has sunk to 30° or less.

**Wind Summaries.**—The results given under wind direction, and the number of observations of calms and of fresh or strong wind, are based on the observations at fixed hours. At Deerness, Aberdeen, Valencia, Falmouth, Kew, Glasgow, Stonyhurst and Armagh the wind observations are based on the records of a standard Robinson anemometer (factor 2.2). Velocities of between 13 and 38 miles in the hour have been entered as "fresh or strong winds," velocities of 39 miles in the hour, or above, as gales. (At Brighton, Plymouth and Southport the equivalent values are obtained from a Dines Pressure Tube Anemometer.)

**Averages.**—The normal averages used for stations are—Pressure, Temperature, and Rainfall for the 35 years 1871-1905; Bright Sunshine for the 25 years 1881-1905. The values are published in Appendix III to the Weekly Weather Report for 1906. For Greenwich and Oxford, averages for longer periods are used. (See Notes in Monthly Weather Reports for 1908.) Monthly averages of pressure at telegraphic reporting stations for the epoch 7 a.m. are published in Appendix I to the Daily Weather Report. In order to render these averages comparable with the data for the present month, a correction, based on the results for the four observatories as published in "Hourly Readings at the Observatories under the Meteorological Council," has been applied to each of them before the figures given in the column headed "Barometer—Difference from Normal" were computed.

**Aberdeen, Falmouth, Kew, Valencia, Oxford, Greenwich.**—The figures quoted in the second line assigned to these observatories in the columns for Barometer and Mean Temperature are the true daily means computed from the hourly tabulations of the traces of the photographic recording instruments. For Kew, Falmouth, Aberdeen and Valencia the divergences of the means of the readings at 9 a.m. and 9 p.m. from their normal averages are also given.

**Royal Observatory, Greenwich.**—The earth temperatures are taken at a depth of 3 ft. 2 ins. The daily rainfall amounts are those for the 24 hours comprising the civil day. The number of days in the month which were persistently overcast from midnight to midnight was 0, the number of persistently cloudless days was 0, the number of persistently foggy days was 0.

**Mean Values for Districts.**—The stations used in the Weekly Weather Report for the computation of "district values" of rainfall and temperature are distinguished by the sign ¶, those used for the computation of "district values of bright sunshine" by the sign §. These stations are distributed between Tables A and B. The monthly mean values for districts given in this Report for maximum, minimum and mean temperature, duration of bright sunshine, number of rain days and amount of rainfall, are computed from the data for these "representative" stations. The mean temperature for districts is computed in the manner shown in the preface to this and previous volumes of the Weekly Weather Report. The monthly mean values for districts for "amount of cloud" are computed from the data for all stations included in Table A. The extreme values of the various elements in each district are printed in distinctive type. In the lines devoted to district values, the columns referring to absolute highest and absolute lowest temperature and the maximum amount of rainfall in a day contain the extreme values for the district at any station included in either table of the Report. The averages for districts with which the current values are compared are for the 25 years 1881-1905, as in the case of the corresponding values published in the Weekly Weather Report.

**Meteorological Societies.**—Information for stations marked ¶ is supplied by the Royal Meteorological Society, and that for stations marked § is supplied by the Scottish Meteorological Society. Stations marked S are in connexion with the Scottish Meteorological Society and those marked M with the Royal Meteorological Society as well as with the Meteorological Office.



## MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

(Supplement to the Weekly Weather Report.)

SUMMARY OF OBSERVATIONS COMPILED FROM THE RETURNS OF OFFICIAL STATIONS AND VOLUNTEER OBSERVERS IN THE UNITED KINGDOM, WITH A CHART OF RAINFALL CONTRIBUTED BY THE BRITISH RAINFALL ORGANISATION.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE,

AND PUBLISHED FOR H.M. STATIONERY OFFICE BY WYMAN AND SONS, LTD., FETTER LANE, E.C.; OR OLIVER AND BOYD, EDINBURGH; OR E. PONSONBY, LTD., 116, GRAFTON STREET, DUBLIN.

THIRTY-SIXTH YEAR.  
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Weekly Weather Report. } No. XII.

DECEMBER, 1911.

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## SUMMARY OF OBSERVATIONS.

**Pressure, Winds and Weather.**—The very unsettled type of atmospheric conditions which set in as far back as October 19th was maintained throughout December which proved to be the most disturbed, the wettest and the stormiest month of the whole year. Wireless reports from numerous steamers showed that exceedingly boisterous weather prevailed over the northern half of the Atlantic throughout this period, under the influence of cyclonic systems, many of them of great depth. Some of these appear to have remained for several days practically stationary between the 50th parallel and Iceland, one from the 8th to the 13th, another from the 16th to the 22nd, and a third from the 25th to the 31st. In addition to independent depressions which arrived on our coasts from various parts of the ocean, these great disturbances threw off many secondaries, which affected all parts of the British Isles, and did much to keep up the unusually rainy weather. Frequently the disturbances, primaries and secondaries, which visited this country were of considerable depth and intensity, the barometer sinking below 29 in. in several localities on as many as eight days. The lowest readings reported were on the 5th, 28.76 in. at Malin Head; on the 10th, 28.67 in. at Holyhead and Pembroke; on the 11th, 28.64 in. at Shields; on the 13th, 28.54 in. at Birr Castle, the minimum pressure of the month; on the 18th, 28.78 in. at Blacksod Point; on the 21st, 28.90 at Scilly; also on the 24th at Aberdeen, and on the 25th, 28.95 in. at Lerwick. On the other hand, the high pressure systems of the month were found over Continental countries, between Russia and the Spanish Peninsula, or stretching out over the Atlantic in the Madeira-Azores region. It was not until the last day of the year that the central space of one of these anticyclones approached these islands from the neighbourhood of the Baltic. There was a considerable increase of pressure in all districts, the barometer rising above 30 in. in Shetland, and 30.5 in. at Jersey.

With such a large preponderance of low readings it is obvious that the mean pressures for the entire month were very much lower than usual. The deficiency was smallest at Yarmouth, 0.17 in. It exceeded  $\frac{1}{4}$  in. at the majority of stations, and amounting to 0.41 in. at Blacksod Point. Owing to the high readings on one day only the range of pressure was large, exceeding  $1\frac{1}{2}$  in. in most localities, and reaching  $1\frac{3}{4}$  in. at Birr Castle and Pembroke. The mean distribution of pressure was of a strongly marked South-Westerly type, with a steeper gradient than the normal, but it was very uniform, the values ranged from 29.93 in. at Paris, and 29.81 in. at Jersey to 29.41 in. at Blacksod Point, and 29.40 in. at Stornoway, the pressure minimum being out on the Atlantic, to the southward of Iceland, the barometer at Reykjavik averaging 29.03 in.

As a result of the almost uninterrupted succession of depressions the weather was in a boisterous state, and on every day from the 1st to the 26th the wind rose to the force of a gale (force 8) at one or more stations round our coasts, and on as many as nineteen of these days it reached a strong gale (force 9). Speaking broadly the gales were not of a very violent character, the only instances of more than a strong gale recorded at the telegraphic reporting stations being a whole gale (force 10) at Dungeness on the 10th, at Scilly on the 12th, and at Jersey on the 21st. A feature of these gales, however, was the great frequency of severe gusts, as registered by the automatic anemometers at many stations. Gusts equivalent in velocity to a strong gale (47–54 miles per hour) and a whole gale (55–63 miles) were too numerous to be referred to in detail. It will suffice to mention those of 70 miles per hour and upwards. On the 5th, gusts of 78 miles per hour were registered at Quilty; on the 6th, 71 miles at Dwyran (Anglesey), and 79 miles at Pendennis Castle; on the 10th and 12th, 77 miles at Pendennis; on the 13th, 73 miles at Scilly; on the 18th, 75 miles at Pendennis, and 88 miles at Roche's Point; and on the 25th, 70 miles at Scilly and Quilty. Occasionally the wind drew into the South-East quarter or a little to the north of West, but as a general rule the gales experienced were from points between South and West. At the end of the month much quieter conditions obtained, and from the 27th to the 31st there was no gale force felt anywhere.

More striking than the gales was the persistency of the rains brought by successive disturbances, so that in many localities precipitation was measured on every day of the month, while over an extensive region there were only two or three days on which no rain fell. Many observers note that both as regards frequency and quantity it was the wettest December in their experience, the records at Ross (Herefordshire) showing it to have been the wettest in 94 years. Locally there have been one or two Decembers with more rain. The rainstorm of the 6th affected practically the whole of the kingdom, falls of an inch or more being very numerous, up to 1.8 in. at Cruachan, 1.9 in. at Killarney, and 2 in. at Sheepstor. Consequent upon the heavy rain there was a flood at Uldale on

this occasion, and again after another downpour on the 10th, which was general, the amounts ranging up to 1.5 in. at Newton Rigg and Uldale, and 3.2 in. at Seathwaite. The 14th was another very wet day over the southern half of the kingdom, the Forest of Dean receiving  $1\frac{1}{2}$  in., and Abersychan 2 in. On the following day 2 in. fell at Crathes. At this period large falls were common daily in the western districts, bringing about disastrous floods in South Wales; also in the Thames Valley and other districts. At Abersychan there were seven days during the month each with from 1 in. to 2 in. of rain. During the remainder of the month the largest rainfall on any one day was 2.1 in. at Gruline (Mull), on the 23rd. From time to time there was snow or hail in a few places, but the falls were insignificant, the largest snowfalls reported being nearly 2 in. at West Linton on the 9th, and an inch at Cally on the 10th.

Notwithstanding this abnormal wetness, observers again note, as in the preceding two months, that though the month was rainy, most of the rain fell in the night, many days being sunny, and free from fog. The observer at Bucklebury, Berks, remarks "It is singular that most of the heavy rainfall has taken place during the night, and however heavy the rain, it soon disappeared, and the roads and gardens became quite free from water. The roads at present are like April."

As would have been expected in a winter month marked by persistent South-Westerly breezes, and as persistently damp weather, there was scarcely a sign of the cold which is normal to the season. Many of the observers refer to the unusual mildness of the period, and this is reflected in the mean temperature, which was everywhere in excess of the normal, and generally higher than the values for the preceding month, November. For the whole country the excess was about 3°, but at individual stations it was in numerous cases more than 4°, while in the South of England it exceeded 5° in several places, and at Eastbourne and Westminster it was nearly 6°. These remarkable figures, however, were due not so much to high day readings as to the almost entire absence of night frosts. As a rule the range of temperature was small, there being few records of maxima above 55°, but 58° was reached at Trinity College, Dublin, on the 18th, and at Hawarden Bridge on the next day. There were also unusually few night minima below 27°, the lowest registered being 21° at Balmoral on the 8th, and 23° on the 10th. As against the unimportant frosts there were several exceedingly mild nights, with large numbers of records of 48° and upwards, 52° at Barnstaple, Penzance and Teignmouth on the morning of the 17th or of the 18th.

Thunderstorms occurred on several days, but they were of a local character and comparatively unimportant, the only one described as severe being at Carrigrohane on the 16th.

Aurora was seen on the 6th, 11th, 12th (brilliant at Liverpool), 13th, 14th, 17th, 23rd, and 26th. At Isleworth, on the 7th, a meteor was observed travelling eastward.

Fog was uncommon inland and on the coasts until after Christmas Day, when it was noted daily at many places inland and on the eastern and western coasts, but not along the south coast of England.

On all coasts the temperature of the sea water was lower than during November, by as much as 5° locally in the east, but the water was nearly everywhere warmer than the air on shore, by 5° on the coast of County Down.

**Rainfall.**—Although the month was so abnormally wet over the country generally there were a few places in Scotland where the aggregate totals were less than the average, Strathpeffer and Cawdor returning 72 per cent., Wick 87 per cent., and Dunrobin Castle 88 per cent. In numerous instances, however, the figures showed more than double the usual records, up to 276 per cent. at Cheltenham, 277 at Reading, 285 at Worthing, 293 at Swarraton; 315 at Portsmouth, 332 at Hereford, and 351 at Wilton, Salisbury. Scores of stations, not only in the mountainous districts in the western regions, but in the low level parts of southern England, returned more than 10 in., the largest aggregates being 18 in. at Sheepstor, 18.1 in. at Burrator and Seward's Cross, Devon, 21.5 in. at Glenquoich, 24.2 in. at Treherbert, and 27 in. at Seathwaite. At Fortrose, Ross-shire, rain fell on 14 days, at Dursley, Gloucestershire, on 18 days, and at Tynemouth on 19 days, in all other localities on 20 or more days.

**Bright Sunshine.**—The duration of sunshine was variable, but in most places it exceeded the normal. Stornoway had 62 per cent., Stonyhurst 69 per cent., and Newcastle-on Tyne 71 per cent. against 152 per cent. at Deerness, 168 per cent. at Torquay, and 200 per cent. at Westminster. The totals ranged from 10 hours at Bunhill Row, 13 at Glasgow, and 15 at Fort Augustus and Stornoway to 65 at Paignton, 66 at Salcombe, 69 at Falmouth, and 89 at Torquay.

TABLE A.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at 9 a.m., 3 p.m. and 9 p.m. at NORMAL STATIONS in the BRITISH ISLANDS

Table with columns: DISTRICT, STATION, Height of Barometer, BAROMETER (Mean at 32° F., Diff. from Normal, C. Cor. for Diurnal Range), AIR TEMPERATURE (Mean of A, B; Mean of A and B; Diff. from Normal; Absolute Maximum and Minimum), and HYGROMETER (Observations at 9 a.m., 3 p.m., and 9 p.m., or at 7 a.m., 1 p.m., 6 p.m., or 9 p.m.; Dry Bulb, Dep. of Wet, Vap. Pressure, Humidity).

Continued on page cxxii.

For notes see p. cxxvii.

NOTE.—The Sunshine entered to Woburn is recorded at Aspley Guise, and that entered to Portsmouth at Southsea.



TABLE A. (continued).—Giving a Summary of the METEOROLOGICAL OBSERVATIONS made at 9 a.m., 3 p.m. and 9 p.m. at NORMAL STATIONS in the BRITISH ISLANDS

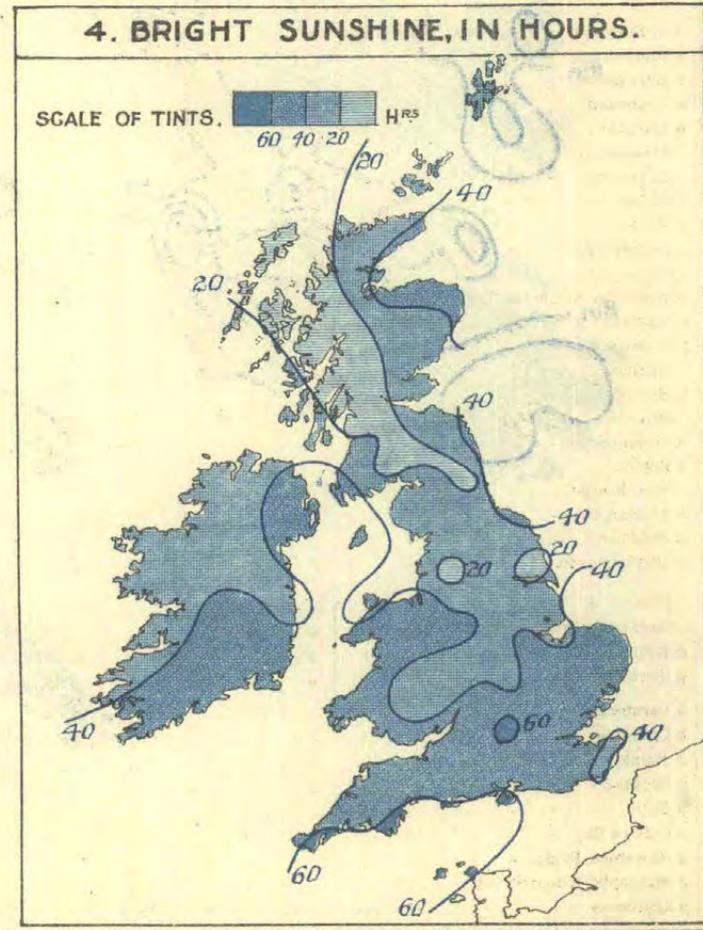
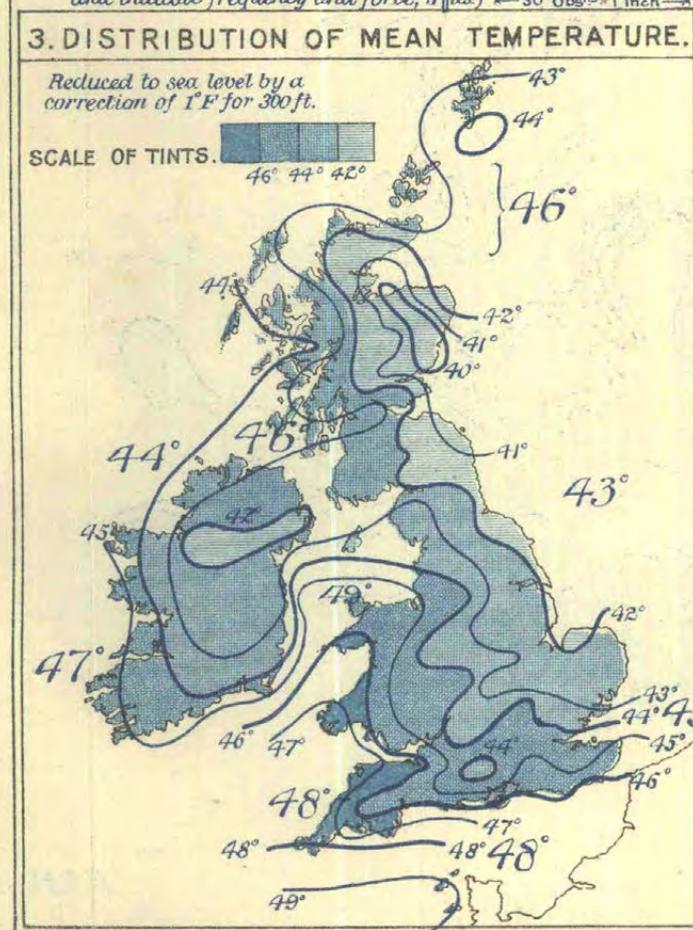
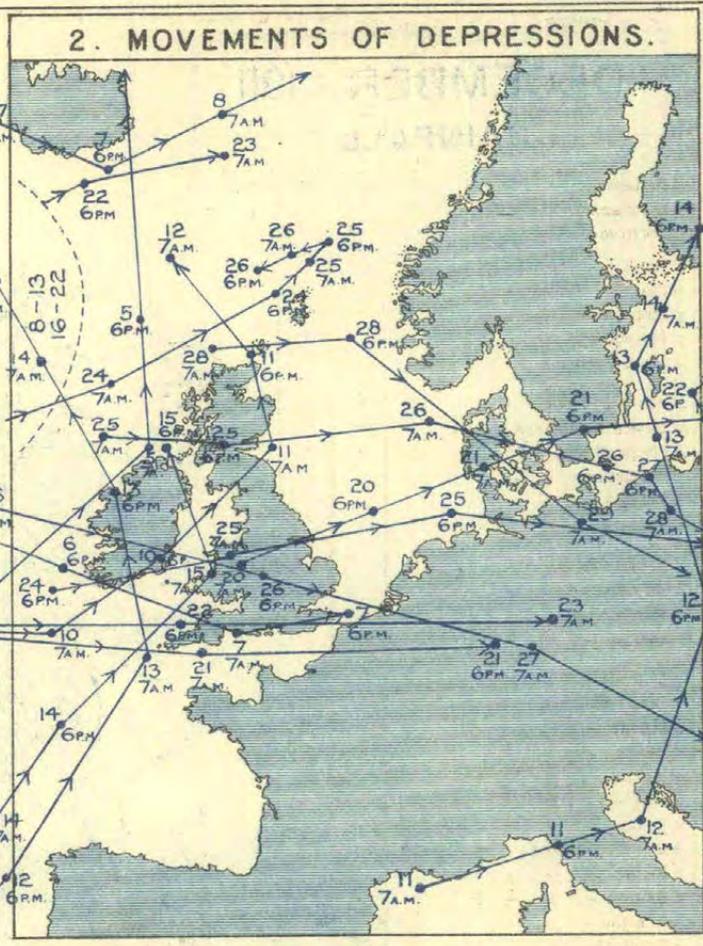
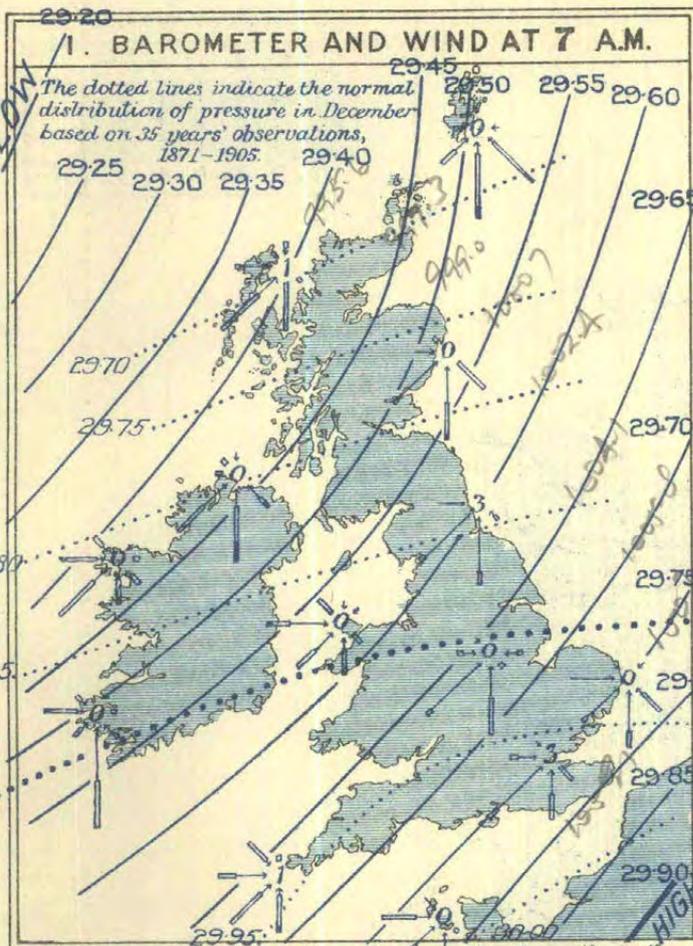
DISTRICT.	STATION.	Height of Barometer cistern above M.S.L.	BAROMETER.			AIR TEMPERATURE.								HYGROMETER.													
			Mean at 32° F. at Level and Latitude of Station.	Diff. from Normal.	Cor. for Diurnal Range.	Mean of		Mean of A and B.	Diff. from Normal.	Absolute Maximum and Minimum.				Observations at 9 a.m., 3 p.m. and 9 p.m., or at 7 a.m., 1 p.m., 6 p.m., or 9 p.m.													
						A	B			Max.	Day.	Min.	Day.	Dry Bulb.			Dep. of Wet.			Vap. Pressure.			Humidity.				
														I.	II.	III.	I.	II.	III.	I.	II.	III.	I.	II.	III.		
5. ENGLAND, S.E.—cont.	Eastbourne	36	29.748	—	-.009	50.2	42.3	46.3	+5.7	55	18th	31	8th	46.3	—	46.8	1.1	—	1.2	.291	In.	In.	In.	%	%	%	
	Dover	234	29.528	-.179	—	48.3	40.0	44.2	—	53	12th	42	8th, 9th	43.1	—	44.6	0.5	—	0.8	.267	—	.276	96	—	94		
	Dungeness	21	29.725	-.201	+.001	49.6	41.8	45.7	+4.8	53	17th	32	6, 7, 8	45.7	48.0	47.0	1.1	1.5	1.4	.282	.297	.289	93	90	90		
	Hastings	174	29.614	—	-.009	49.0	42.0	45.5	+4.7	52	17th	32	8th	45.0	—	45.8	1.1	—	1.5	.273	—	.274	91	—	89		
	Southampton	84	29.669	—	-.009	50.1	40.6	45.4	+4.7	54	3rd	30	8th	45.0	—	45.9	1.1	—	1.1	.276	—	.285	91	—	92		
Ventnor	80	29.649	—	—	50.7	43.2	47.0	+3.8	54	3rd	37	9th	47.1	—	—	1.2	—	—	.295	—	—	91	—	—			
	District Value					49.0	40.2	44.8	+4.1	56		24															
LONDON	Tottenham	55	29.680	—	-.009	48.4	41.0	44.7	+5.1	54	17th	31	6th	44.3	—	44.9	0.7	—	0.7	.281	—	.286	95	—	95		
	Hampstead	453	29.262	—	—	47.1	39.2	43.2	—	52	3rd, 17th	30	8th	43.1	—	43.6	0.9	—	1.0	.258	—	.261	93	—	92		
	Camden Square	123	29.621	—	-.009	49.3	39.5	44.4	+4.9	55	19th	28	8th	44.4	—	45.4	1.0	—	1.5	.269	—	.269	92	—	89		
	Westminster	—	—	—	—	50.2	40.7	45.5	+5.8	55	17th	30	8th	45.0	47.2	—	1.2	2.2	—	.271	.273	—	91	85	—		
	South Kensington	70	29.662	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Greenwich	159	29.577	—	-.009	48.6	39.7	44.1	+4.5	54	17th	29	8th	44.0	—	44.1	1.2	—	1.3	.261	—	.260	90	—	90		
	Dulwich*	190	29.552	-.212	-.009	49.2	40.1	44.7	+5.5	55	3rd	29	8th	43.9	—	44.5	1.4	—	1.7	.255	—	.255	89	—	87		
	Kew	34	29.718	-.209	-.009	48.6	40.3	44.5	+5.2	54	17th	29	8th	44.0	46.9	44.7	1.6	2.9	2.0	.252	.254	.251	87	80	86		
	Bunhill Row	—	29.714	-.205	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Plumstead	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
6. SCOTLAND, W.	Eskdalemuir	778	28.702	—	—	43.0	35.9	39.5	—	51	18th	24	25th	39.0	40.8	39.3	0.9	1.1	0.9	.222	.235	.224	92	91	92		
	Poltalloch	135	29.315	—	-.006	46.2	37.8	42.0	+2.5	52	18th	29	23rd	41.8	—	42.9	1.2	—	1.4	.240	—	.246	91	—	89		
	Glasgow	184	29.287	—	-.006	45.8	39.4	42.6	+3.8	54	18th	33	9th	42.3	—	42.7	1.5	—	1.6	.240	—	.243	88	—	88		
	Rothsay	76	29.404	—	-.006	46.8	39.0	42.9	+2.9	52	2nd, 18th	32	23rd	42.6	—	42.6	1.6	—	1.4	.238	—	.242	87	—	89		
	Colmonell	150	29.350	—	—	46.4	38.0	42.2	+2.0	52	18th, 31st	28	25th	42.4	44.1	—	1.8	2.1	—	.233	.243	—	86	83	—		
	Dumfries	155	29.384	—	-.006	46.2	37.9	42.1	+3.6	55	3rd	30	25th	41.1	—	42.1	1.2	—	1.6	.231	—	.234	90	—	88		
	Gully, Gatehouse	120	29.463	—	-.006	45.9	37.8	41.9	+3.2	50	1st, 19th	28	25th	41.4	—	42.2	1.2	—	1.3	.235	—	.241	91	—	90		
	Douglas	284	29.251	—	-.007	47.6	41.1	44.4	+2.6	52	18th	36	4th, 6th	44.1	—	44.2	1.3	—	1.1	.266	—	.268	91	—	92		
		District Value					46.5	38.6	42.8	+2.3	55		24														
	7. ENG. LAND, N.W.	Southport	42	29.576	—	-.008	47.3	39.4	43.4	+4.1	54	18th	32	8th	42.8	45.1	43.5	1.3	1.8	1.5	.247	.259	.249	90	87	89	
Manchester (City)		195	29.430	—	-.008	47.5	40.4	44.0	—	55	18th	34	9th	43.6	—	43.7	1.2	—	1.6	.262	—	.253	91	—	89		
„ (Whitworth Pk)		127	29.476	—	-.008	47.6	39.7	43.7	—	55	18th	31	6th	43.4	45.3	43.2	0.4	—	0.3	.271	—	.273	97	—	98		
Darwen		780	28.641	—	-.008	44.5	37.1	40.8	—	51	18th	32	8th	41.0	—	40.7	0.8	—	0.8	.242	—	.239	93	—	93		
Aspatria		254	29.277	—	-.007	47.0	38.9	43.0	+5.0	56	18th	31	23rd	42.9	—	43.2	1.2	—	1.6	.250	—	.245	91	—	88		
Newton Rigg		559	28.945	—	-.007	45.5	36.2	40.9	+4.0	55	18th	28	25th	40.7	—	41.2	0.7	—	0.9	.239	—	.240	94	—	93		
Stonyhurst		303	29.227	—	-.007	46.5	38.8	42.7	+4.4	53	18th	33	23rd	42.2	—	42.5	1.6	—	1.8	.238	—	.237	88	—	86		
Blackpool		M 73	29.531	—	-.007	46.9	38.5	42.7	+3.2	54	18th	32	8th	43.5	—	42.5	1.6	—	1.1	.248	—	.248	87	—	87		
M'ch't'r (Prestwich)		320	29.285	—	-.008	46.9	38.8	42.9	+4.5	54	18th	33	8th	42.8	—	43.1	1.4	—	1.6	.245	—	.244	89	—	91		
Liverp'l, Bidston Obs.		197	29.395	—	-.008	47.2	39.5	43.4	+3.2	53	18th	33	9th	42.8	—	42.8	1.7	—	1.5	.238	—	.243	37	—	88		
8. NORTH WALES	Llandudno	M 21	29.587	—	-.008	49.0	41.5	45.3	+3.0	56	17th	36	8th, 25th	45.3	—	45.5	1.6	—	1.6	.265	—	.268	88	—	88		
	HOLYHEAD	48	29.502	-.306	-.008	48.5	42.6	45.5	+2.4	52	17th, 18th	37	25th	45.8	47.0	45.6	0.7	1.1	0.5	.291	.296	.294	95	92	97		
	Bettws-y-Coed	100	29.478	—	-.008	48.4	39.2	43.8	+1.5	55	17th, 19th	31	6th	44.2	—	44.2	1.7	—	1.2	.253	—	.263	87	—	97		
	Dwyran†	30	29.570	—	-.008	48.9	41.7	45.3	—	54	18th	34	25th	45.8	—	45.4	0.8	—	0.6	.289	—	.290	94	—	96		
		District Value					47.6	39.4	43.7	+3.3	58		28														
9. SOUTH WALES	Llanymarch Wells	585	29.006	—	—	47.9	36.5	42.2	+2.1	53	16th, 17th	25	6th	41.6	—	—	0.6	—	—	.250	—	—	—	—	—		
	PEMBROKE	150	29.437	-.305	-.006	50.7	43.7	47.2	+3.0	53	2, 16, 18	39	12th, 25th	47.2	48.0	47.8	1.8	2.1	1.7	.278	.283	.291	86	85	88		
	Clifton	229	—	—	—	49.5	41.1	45.3	+4.7	54	17th	33	6, 7, 8	—	—	—	—	—	—	—	—	—	—	—	—		
	PORTLAND BILL	37	29.685	-.256	-.006	51.2	45.6	48.4	+5.0	54	3rd	37	25th	48.7	49.4	48.7	1.4	1.7	1.5	.309	.310	.306	90	89	89		
	Plymouth	116	29.593	—	-.009	51.3	43.4	47.4	+4.2	54	1st	32	6th	48.1	49.2	47.8	1.9	2.4	1.7	.289	.294	.293	86	84	88		
10. IRELAND, N.	Falmouth	183	29.527	-.229	-.009	51.1	44.2	47.7	+3.0	53	2nd	36	6th	47.1	49.1	47.9	2.0	2.4	1.8	.276	.290	.289	86	83	88		
	Newquay	161	29.510	-.274	—	50.7	43.3	47.0	+1.9	53	2, 16, 22	35	8th	47.2	—	48.4	1.6	—	1.8	.287	—	.295	91	—	89		
	Woolacombe	120	29.569	—	-.009	51.0	44.3	47.7	+3.2	55	2nd	36	8th	47.5	—	47.9	2.1	—	2.0	.278	—	.285	84	—	85		
		District Value					49.7	41.1	45.6	+3.3	56		28														
	Malin Head	230	29.117	-.367	+.003	46.8	38.9	42.9	+1.0	53	18th	34	5th	42.2	44.4	43.5	0.4	0.9	0.7	.261	.272	.267	96	93	94		
11. IRELAND, S.	BLACKSOD POINT	41	29.350	-.406	-.006	48.7	41.1	44.9	+1.6	56	27th	35	15th	45.8	46.4	45.7	1.6	2.0	1.7	.272	.269	.268	92	86	88		
	Markree Castle	127	29.321	—	-.007	47.7	35.1	4																			

CLIMATOLOGICAL STATIONS, at 7 a.m., 1 p.m. and 6 p.m. or 9 p.m. or at 7 a.m. and 6 p.m. at TELEGRAPHIC REPORTING during the Month of DECEMBER, 1911.

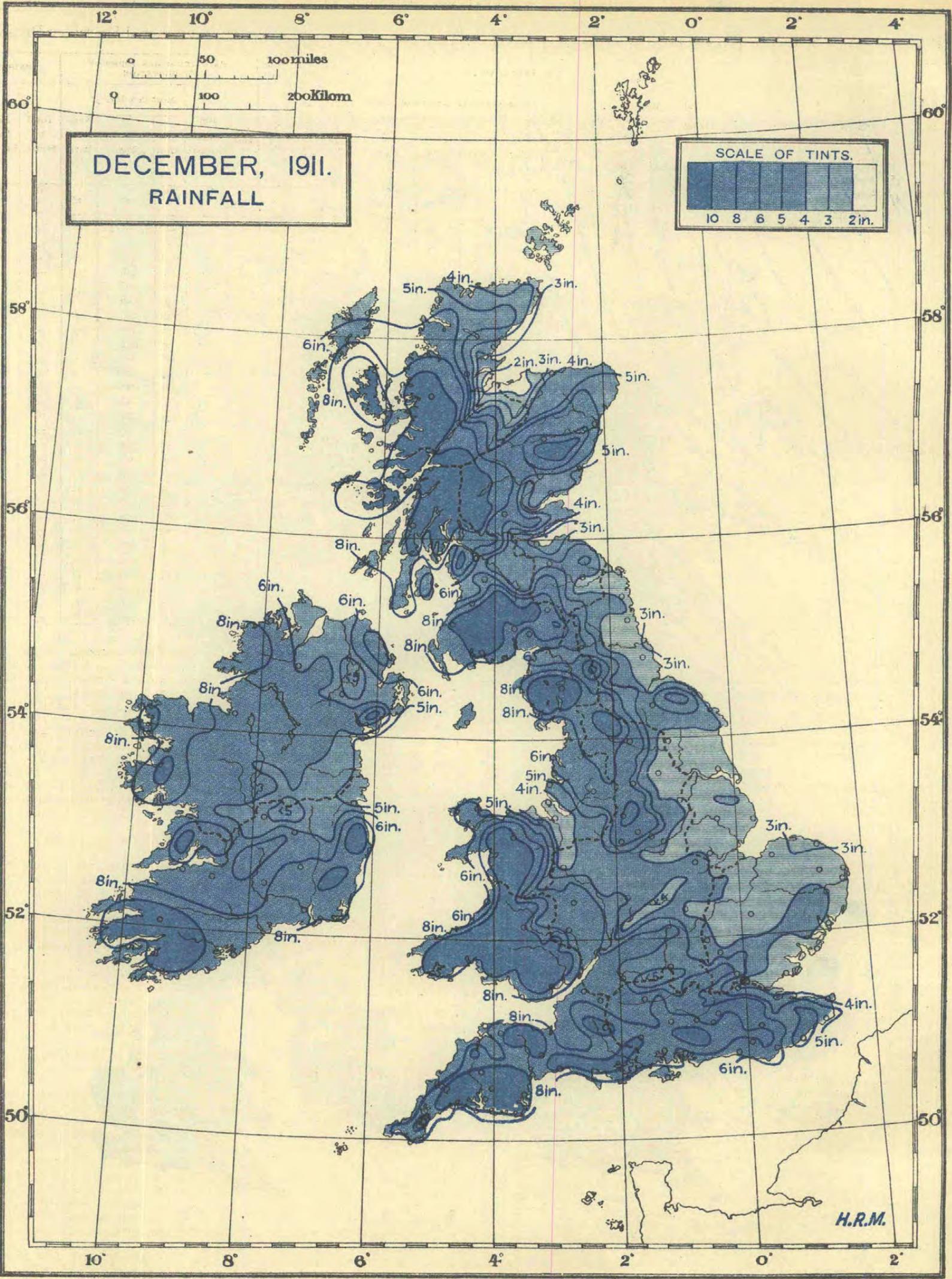
Earth Temperature.		BRIGHT SUNSHINE.			CLOUD (0-10).			RAIN AND OTHER FORMS OF PRECIPITATION.				WEATHER. No. of Days of						WIND.								STATIONS.									
At 1 foot depth.	At 4 feet depth.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.	Mean Amount.			Total Fall.	Diff. from Normal.	Most in a day.		Precipitation.	Snow.	Hail.	Thunderstorm.	Clear Sky.	Overcast.	Fog.	Ground Frost.	Wind-force 8 and above.	No. of Observations reduced to a total of 93 for the month.													
						I.	II.	III.			Amount.	Day.										Calm.	N.	N.E.	E.		S.E.	S.	S.W.	W.	N.W.				
45.3	48.5	41	-12	17	-5	8.6	—	5.8	6.96	+3.78	0.66	22nd	27	0	0	0	1	15	1	—	3	17	6	3	2	0	0	6	48	7	21	Eastbourne.			
44.5	48.2	47	—	20	—	7.7	—	6.3	3.95	—	0.38	7th, 20th	25	0	0	0	1	13	1	4	0	51	0	3	0	0	3	24	35	22	6	Dover.			
—	—	—	—	—	—	8.5	7.5	7.9	5.29	+3.05	0.81	7th	20	0	0	0	0	15	2	—	4	58	1	1	0	0	1	21	39	17	8	Dungness.			
43.7	47.5	47	-9	19	-4	8.3	—	6.3	5.11	+2.26	0.49	22nd	27	0	1	0	2	15	6	6	4	35	0	0	0	0	3	33	33	15	9	Hastings.			
—	—	50	+3	21	+2	7.6	—	6.4	8.74	+5.69	0.98	6th	24	0	1	0	0	12	2	8	0	21	0	2	0	0	21	1	45	15	9	Southampton.			
—	—	52	+4	21	+1	7.7	—	—	6.73	+3.88	0.83	22nd	29	0	1	0	1	15	0	—	3	33	5	1	0	1	1	21	30	29	5	Ventnor.			
43.8	47.1	48	0	19	0	8.0	—	6.5	6.39	+3.83	1.09	—	25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
—	47.4	20	—	8	—	9.5	—	7.1	4.35	—	0.49	20th	21	0	0	0	0	10	2	2	0	6	0	2	0	0	5	22	45	13	6	Tottenham.			
—	—	34	—	14	—	8.1	—	7.1	4.55	—	0.49	20th	25	0	0	0	0	16	3	16	0	11	14	0	0	1	10	20	33	12	3	Hampstead.			
42.7	46.4	19	—	8	—	8.5	—	—	4.22	+2.17	0.48	20th	23	0	0	0	0	22	2	3	—	—	18	0	0	3	15	18	30	6	3	Camden Square.			
—	—	26	+13	11	+6	—	—	—	3.93	+1.95	0.48	20th	22	0	0	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Westminster.		
—	—	25	—	11	—	8.4	—	—	—	—	—	—	—	0	0	0	1	20	0	3	0	15	0	3	0	3	3	24	33	27	0	South Kensington.			
—	46.3	41	+7	17	+3	7.8	—	6.4	4.02	+2.19	0.45	10th	23	0	0	0	0	14	6	11	0	19	3	3	0	0	5	25	38	18	1	Greenwich.			
42.8	—	—	—	—	—	7.8	—	6.0	4.42	+2.45	0.57	10th	24	0	0	0	1	12	3	—	2	15	4	0	0	0	6	38	19	20	6	Dulwich.			
42.6	46.7	43	+7	18	+3	7.7	6.5	6.8	4.45	+2.53	0.50	20th	26	0	0	0	0	13	2	14	0	22	10	1	0	1	6	33	31	9	2	Kew.			
—	—	10	+3	4	+1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Bunhill Row.		
—	—	36	—	15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Plumstead.		
—	—	16	—	7	—	8.4	9.5	8.2	9.01	—	1.37	18th	30	4	1	0	0	23	0	—	0	48	14	1	0	1	8	34	25	9	1	Eskdalemuir.			
—	—	—	—	—	—	8.5	—	7.9	11.38	+5.86	1.14	6th	31	0	0	0	0	16	0	—	2	26	8	0	0	0	7	24	24	28	2	Poitalloch.			
—	—	13	-2	6	-1	8.2	—	8.3	5.47	+1.48	0.86	8th	29	1	1	1	0	17	0	10	0	14	11	1	2	8	11	20	29	10	1	Glasgow.			
—	45.1	—	—	—	—	7.6	—	6.6	9.05	+4.16	1.15	6th	31	0	0	0	1	10	3	—	2	35	7	0	4	3	23	14	36	6	6	Rothsay.			
—	—	—	—	—	—	7.0	—	—	10.69	+5.79	1.69	6th	29	0	0	2	3	13	1	4	3	42	0	0	0	12	6	18	18	33	6	6	Colmonell.		
40.5	43.5	16	—	7	—	6.4	—	6.6	7.57	+3.43	1.02	10th	29	2	1	0	2	13	1	9	2	15	3	0	0	0	21	6	57	0	6	Dumfries.			
—	—	—	—	—	—	—	—	—	9.20	+3.97	1.14	8th	28	2	3	0	—	—	—	—	1	17	0	0	2	6	31	0	18	3	33	3	3	Cally.	
—	—	42	+1	19	+1	7.7	—	6.8	6.92	+2.33	1.17	10th	29	0	3	0	1	12	4	2	3	35	0	3	2	2	10	24	22	21	9	9	Douglas.		
40.7	43.4	41	+12	18	+5	6.5	7.3	7.1	5.06	+2.08	0.54	8th	28	1	3	0	1	10	1	4	2	56	0	2	1	2	26	28	15	17	2	2	Southport.		
41.6	45.8	14	—	6	—	6.1	—	6.2	5.59	+2.41	0.67	8th	29	0	1	0	1	4	0	1	0	11	0	1	1	6	24	33	18	8	2	2	Manchest. (City).		
—	—	27	—	12	—	8.6	8.9	7.5	5.00	—	0.66	8th	26	0	0	0	0	21	3	—	0	19	13	1	1	2	21	31	15	7	2	2	" (Whit. P'k).		
40.8	43.7	18	—	8	—	8.8	—	8.7	9.88	—	1.23	8th	30	3	3	0	0	21	0	4	1	30	0	2	3	2	12	46	13	15	0	0	0	Darwen.	
41.4	44.8	32	—	15	—	6.6	—	7.0	6.99	+3.18	0.79	10th	27	1	0	0	0	10	0	5	1	18	9	2	0	3	3	22	36	18	0	0	0	Aspatia.	
41.0	43.4	26	-7	12	-3	7.4	—	6.8	8.22	+4.50	1.47	10th	28	3	0	0	0	9	1	19	3	32	0	2	4	9	15	34	21	6	2	2	Newton Rigg.		
—	—	18	-8	8	-3	7.6	—	7.7	7.16	+2.73	0.77	10th	27	1	4	0	0	15	0	5	0	27	18	1	2	3	7	27	18	17	0	0	0	Stonyhurst.	
42.9	46.9	32	+5	14	+2	8.2	—	8.3	5.65	+2.65	0.78	8th	29	1	1	0	0	15	0	3	0	33	0	2	3	3	30	21	13	18	3	3	3	Blackpool.	
—	—	—	—	—	—	9.4	—	7.7	6.24	+2.82	0.68	8th	28	0	0	0	0	22	2	6	0	18	6	5	0	6	8	34	12	19	3	3	3	Manch'st'r (Frest).	
—	—	58	—	25	—	5.4	—	7.1	3.58	+1.12	0.39	8th	27	1	1	0	0	2	6	1	—	24	0	0	3	8	31	18	19	14	0	0	0	Liverpol, Bid. Obs.	
—	—	44	+7	19	+3	6.7	—	8.6	5.14	+2.27	0.69	6th	27	0	0	0	0	16	0	—	1	12	0	2	0	5	9	34	21	22	0	0	0	Llandudno.	
—	—	—	—	—	—	6.3	7.6	8.1	7.17	+3.37	1.21	10th	28	0	0	0	0	9	0	—	9	50	0	1	2	1	8	23	28	25	5	5	5	Holyhead.	
42.8	45.8	26	—	11	—	7.0	—	7.9	8.84	—	1.03	18th	30	2	1	0	0	7	0	1	10	41	0	2	3	0	5	4	43	27	9	9	9	9	Bettws-y-Coed.
44.4	46.5	35	—	15	—	7.3	—	6.5	6.84	—	0.88	18th	28	0	0	0	1	11	0	3	5	60	2	6	0	0	1	36	30	15	3	3	3	Dwyran.	
42.0	45.0	34	+2	15	+1	7.3	7.9	7.8	6.24	+2.88	1.47	—	28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
43.2	47.2	30	—	13	—	8.2	—	—	11.13	—	1.02	6th	30	0	1	0	3	21	1	14	0	21	27	0	3	0	3	15	18	21	6	6	6	Llangamm. Wells.	
—	—	50	+8	21	+3	6.7	7.2	7.3	9.52	+5.49	0.95	6th	31	0	1	0	0	9	2	—	8	72	0	1	2	2	7	26	26	25	4	4	4	Pembroke.	
—	—	54	—	23	—	—	—	—	6.92	+3.66	0.90	14th	26	—	—	—	—	—	—	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	Clifton.
—	—	—	—	—	—	6.8	6.7	6.0	4.21	—	0.64																								

TABLE B.—SUMMARY of the OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE at additional STATIONS, DECEMBER, 1911.

DISTRICT.	STATION.	Height of Gauge above M.S.L.	AIR TEMPERATURE.							Earth Temperature		Grnd Frost.		RAIN AND OTHER FORMS OF PRECIPITATION.						BRIGHT SUNSHINE.			
			Mean of			Absolute Maximum and Minimum.				At 1 foot depth.	At 4 feet depth.	No. of Nights	Total Fall.	Diff. from Normal.		Number of Days.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.			
			A	B	Mean of A and B.	Diff. of Mean from Normal.	Max.	Day.	Min.					Day.	Amt.						Day.		
			Max.	Min.																			
0. SCOTLAND, N.	p Baltasound	S 31	45.3	39.4	42.4	—	49	3, 18, 31	33	27th	41.0	—	—	5.52	—	0.61	24th	31	22	—	13	—	
	p Dunrossness	—	—	—	—	—	—	—	—	—	—	—	—	5.13	+0.68	0.96	24th	23	—	—	—	—	
	a Fortrose	—	45.8	37.3	41.6	—	55	18th	31	4th, 5th	—	—	—	1.70	—	0.37	29th	14	56	—	28	—	
1. SCOTLAND, E.	p Inch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	p Crathes	S 140	45.0	33.5	39.3	—	51	18th	25	5th, 8th	39.2	40.0	21	8.21	—	2.03	15th	26	35	—	17	—	
	p Stonehaven	? 86	42.0	35.9	39.0	—	49	17, 19th	30	5th	—	—	—	4.58	—	0.53	10th	28	40	—	20	—	
2. ENGLAND, N.E.	p Balruddery	S 276	44.0	34.2	39.1	—	52	18th	28	4th	—	—	—	4.32	—	0.60	15th	24	34	—	16	—	
	a West Linton	S 80	43.6	34.3	39.0	+ 2.7	52	12th	25	4th	—	—	—	4.30	—	0.46	10th	30	28	—	13	—	
	a Alnwick Castle	—	210	46.0	35.7	40.9	+ 2.6	53	18th	29	4th	—	—	—	3.87	+0.85	0.69	20th	23	—	—	—	—
	p Newcastle-on-Tyne	—	152	46.0	38.6	42.3	—	53	28th	33	8th	—	—	—	3.22	+0.71	0.47	13th	23	17	—	7	8
	a Chopwellwood	—	445	46.3	34.6	40.5	—	52	28th, 31st	28	8th, 25th	—	—	14	4.27	—	0.70	10th	21	44	—	—	20
3. ENGLAND, E.	p Ampleforth	—	349	45.1	36.1	40.6	—	51	18th	30	7th, 8th	—	—	—	4.89	—	0.66	13th	23	—	—	—	—
	a Fulbeck	—	180	46.6	37.4	42.0	+ 4.8	53	17th	31	8th, 31st	—	—	17	3.67	+1.81	0.49	10th	26	30	—	—	13
	a Rauceby	—	124	47.2	35.7	41.5	—	53	17th	29	8th	41.4	46.2	18	3.92	+1.89	0.48	10th	29	43	—	—	19
4. MIDLAND COUNTIES	a Felixstowe	—	10	46.8	38.9	42.9	+ 3.8	51	10th	32	6, 8, 31	—	—	—	3.62	—	0.67	20th	28	51	—	—	22
	a Rothamsted	—	424	48.1	37.0	42.6	+ 4.6	54	3rd	27	6th, 8th	—	—	—	5.76	+3.38	0.65	20th	27	49	+ 7	21	+ 3
	a Shoeburyness	—	13	48.3	40.0	44.2	+ 4.6	53	19th	34	8th	—	—	—	3.13	+1.49	0.49	20th	24	—	—	—	—
	a Southend-on-Sea	—	90	47.3	40.1	43.7	—	51	19th, 24th	32	8th	43.8	—	13	2.86	+1.25	0.52	20th	22	47	—	—	20
	a Harrogate	—	476	44.6	37.0	40.8	+ 3.4	51	17th, 18th	31	25th	40.7	42.9	8	4.55	+2.07	0.53	14th	24	29	—	—	13
	a Bradford	—	439	46.5	38.3	42.4	—	53	17th	32	8th	40.3	45.8	6	4.68	—	0.65	8th	26	13	—	—	8
	a Cheadle	—	646	45.5	35.4	40.5	+ 3.4	50	17th	29	31st	—	—	22	5.00	+2.09	0.70	14th	29	—	—	—	—
	a Bawtry	—	65	46.6	36.3	41.5	+ 3.7	56	24th	30	6th, 8th	—	—	—	4.01	+2.09	0.55	6th	25	—	—	—	—
	a Worksop	—	56	47.3	36.5	41.9	+ 4.2	53	17th	30	8th	40.6	43.9	18	4.36	+2.20	0.65	6th	24	30	0	13	0
	a Mayfield (Staffs.)	—	374	46.1	34.0	40.1	—	52	17th	24	8th	—	—	12	5.42	—	0.86	14th	27	—	—	—	—
5. ENGLAND, S.E.	a Belper	—	222	46.9	35.8	41.4	—	52	17th, 18th	26	6th	—	—	9	4.41	—	0.81	14th	22	—	—	—	—
	a Kingston-on-Soar	—	125	47.4	36.7	42.1	—	53	17th	26	7th	42.0	—	—	3.53	—	0.51	10th, 14th	23	—	—	—	—
	p Rugby	—	379	47.2	35.4	41.3	+ 3.8	54	17th	29	6, 8, 22	—	—	13	3.66	—	0.47	20th	25	—	—	—	—
	a Raunds	—	210	47.7	36.2	42.0	+ 4.3	54	19th	27	8th	41.8	—	14	3.88	—	0.48	20th	22	—	—	—	—
	a Winslow	—	379	47.2	37.0	42.1	—	53	17th	29	8th	—	—	8	4.85	—	0.53	20th	28	—	—	—	—
	a Hereford	—	291	47.7	37.7	42.7	+ 3.9	52	16th	29	8th	—	—	9	7.93	+5.54	1.14	14th	25	—	—	—	—
	a Cirencester	—	446	48.3	36.0	42.2	+ 4.4	54	18th	27	6, 7, 8	43.2	42.2	10	5.65	+2.97	0.61	22nd	27	49	+ 10	21	+ 5
	a Wokingham	—	216	48.5	36.3	42.4	—	54	3rd	24	8th	—	—	—	5.88	—	0.67	20th	26	—	—	—	—
	a Marlborough	—	424	47.7	37.6	42.7	+ 4.6	52	16th	24	6th	—	—	5	7.18	+4.22	0.68	22nd	26	45	+ 10	19	+ 4
	a Bucklebury	—	409	47.8	38.2	43.0	—	53	19th	30	8th	—	—	19	6.45	—	0.71	22nd	25	—	—	—	—
6. SCOTLAND, W.	a Swarraton	—	310	48.5	37.6	43.1	+ 4.9	52	19th	25	8th	—	—	—	8.90	+5.86	0.94	10th	27	—	—	—	—
	a Margate	—	85	49.0	41.1	45.1	+ 4.8	53	17, 19, 25	33	8th	43.7	46.0	?	3.80	+1.59	0.51	20th	25	40	—	6	17
	Broadstairs	—	140	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Ramsgate	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	a Eltham	—	200	48.7	40.1	44.4	—	54	3rd, 17th	31	8th	—	—	—	4.02	—	0.55	20th	22	—	—	—	—
	a Wisley	—	150	49.4	40.0	44.7	+ 5.2	53	17th	29	8th	42.9	46.3	14	6.21	—	0.72	10th	25	46	—	—	19
	a Basingstoke	—	289	48.6	39.0	43.8	—	53	3rd	29	6th, 8th	43.6	47.2	9	7.96	—	1.01	10th	26	—	—	—	—
	a Sevenoaks	—	509	47.2	38.7	43.0	—	52	19th	30	8th	41.9	46.2	11	6.24	—	0.79	20th	25	—	—	—	—
	a Tunbridge Wells	—	421	47.6	38.2	42.9	+ 4.5	52	17th	29	9th	42.4	—	14	7.53	+4.71	1.01	10th	25	50	+ 8	21	+ 3
	a Matfield	—	320	48.3	39.0	43.7	—	53	19th	28	9th	—	—	15	6.83	—	1.09	10th	25	—	—	—	—
7. ENGLAND, N.W.	p Folkestone	—	121	48.7	41.8	45.3	—	51	16, 18, 19	34	8th	—	48.0	—	4.63	+1.86	0.50	7th	24	43	—	—	18
	Littlestone	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	a Bexhill	—	27	48.7	42.9	45.8	—	52	19th	33	8th	46.2	—	2	5.58	—	0.58	22nd	26	45	—	—	19
	Hove	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	a Worthing	—	36	49.7	40.2	45.0	+ 4.8	53	17th	28	8th	44.6	48.2	10	6.90	+4.48	0.86	6th	26	48	—	—	20
	a Bognor	—	20	49.6	42.4	46.0	—	52	17th	31	8th	—	49.7	7	5.85	—	0.75	20th	28	56	—	—	23
	Westbourne	—	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	a Totland Bay	—	140	50.5	42.9	46.7	+ 5.3	55	17th	33	6th	—	—	4	6.68	+4.12	0.66	6th, 20th	25	59	—	—	24
	a Sandown	—	20	51.2	42.4	46.8	—	56	3rd	33	8th	—	—	—	7.51	—	0.72	6th	29	46	—	—	19
	p Bournemouth	—	145	50.7	41.3	46.0	—	54	3rd, 19th	29	6th	44.3	46.1	—	8.40	—	0.90	6th	26	63	—	—	26
6. SCOTLAND, W.	p Oban	—	20	48.8	40.0	44.4	—	55	1st	34	23rd	—	—	0	9.26	—	1.01	6th	31	17	—	—	8
	a Thorntonhall (Lanarkshire)	—	440	45.0	36.5	40.8	—	52	18th	30	4th, 23rd	—	—	9	5.55	—	0.80	8th	27	22	—	—	10
	a Kilmarnock	—	90	46.8	37.5	42.2	+ 3.0	53	2nd, 18th	28	23rd	—	—	—	4.62	—	0.69	8th	29	29	—	—	13
	p Ruthwell	S 67	46.1	36.4	41.3	—	54	18th	29	23rd	—	—	—	6.27	—	1.06	10th	25	27	—	—	12	
7. ENGLAND, N.W.	a Carnforth	—	174	47.4	38.2	42.8	—	55	17th	31													



Sea temperatures are shown in large figures, thus - 44°



DECEMBER, 1911.  
RAINFALL

SCALE OF TINTS.  
10 8 6 5 4 3 2 in.

Scale 1 : 5,000,000.

H.R.M.

TABLE B (continued).—SUMMARY of the OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE at additional STATIONS, DECEMBER, 1911.

DISTRICT.	STATION.	Height of Gauge above M.S.L.	AIR TEMPERATURE.								Earth Temperature		Grnd Frost.		RAIN AND OTHER FORMS OF PRECIPITATION.					BRIGHT SUNSHINE.				
			Mean of				Absolute Maximum and Minimum.				At 1 foot depth.	At 4 feet depth.	No. of Nig'ts	Total Fall.	Most in a day.		Number of Days.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.			
			A	B	Mean of A and B.	Diff. of Mean from Normal.	Max.	Day.	Min.	Day.					In.	Day.								
			Max.	Min.																				
8. ENGLAND, S.W.	p Aberystwyth	59	49.5	41.8	45.7	—	55	17th	36	31st	—	—	—	—	5.29	—	0.70	19th	28	44	—	19	—	
	Haverfordwest	93	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	60	—	25	—	
	Tenby	79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	52	+7	22	+3	
	Port Talbot	179	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	54	—	23	—	
	Forest of Dean	200	—	—	—	—	—	—	—	—	—	—	—	—	10.01	—	1.76	14th	27	—	—	—	—	
	"	900	—	—	—	—	—	—	—	—	—	—	—	—	10.76	—	1.44	14th	25	—	—	—	—	
	p Cardiff	208	48.3	39.5	43.9	+3.1	53	1st	30	6th	42.6	49.3	7	8.32	+3.78	0.68	22nd	31	57	—	—	24	—	
	a Swansea	24	50.0	41.4	45.7	—	53	1, 17, 18	32	6th	44.1	49.0	13	9.14	—	0.93	20th	26	48	—	—	20	—	
	a Shaftesbury	722	47.5	38.5	43.0	+4.5	50	16th, 19th	32	8th	43.2	—	—	6.66	+3.47	0.59	20th	26	—	—	—	—	—	
	a Arlington	613	48.5	39.9	44.2	+3.9	53	2nd	32	6th, 8th	—	—	—	9.44	+3.34	1.06	8th	29	—	—	—	—	—	
	a Cullompton	202	50.5	38.9	44.7	+5.2	54	19th	26	8th	45.0	—	10	9.83	+6.06	1.07	14th	30	49	+11	20	+5		
	Torquay	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	89	+36	37	+15
	a Weymouth	21	51.3	44.1	47.7	—	56	19th	32	8th	—	—	—	7.01	—	0.70	6th	27	59	—	—	24	—	
	p Paignton	11	51.4	42.5	47.0	—	56	31st	30	8th	—	—	—	11.97	—	1.39	6th	26	65	—	—	27	—	
	p Sheepstor	749	48.3	38.1	43.2	—	51	16th, 17th	25	6th	—	—	—	18.00	—	2.00	6th	30	—	—	—	—	—	
Salcombe	300	51.4	44.1	47.8	—	54	17th	32	8th	—	—	—	8.63	—	0.75	6th	27	66	—	—	27	—		
a Teignmouth	19	51.9	43.3	47.6	—	55	31st	32	6th	—	—	3	9.68	—	1.06	6th	25	64	—	—	26	—		
a Fowey	—	51.9	41.1	46.5	—	54	2, 12, 22	31	5, 6, 7	—	—	—	6.69	—	0.78	19th	26	60	—	—	24	—		
a Penzance	54	52.1	44.9	48.5	—	54	16, 17, 22	36	6th	—	—	—	7.86	—	0.86	6th	29	60	—	—	24	—		
9. IRELAND, N.	p Dunfanaghy	54	47.9	36.0	43.5	—	55	18th	33	6th	—	—	—	7.53	—	0.92	10th	29	—	—	—	—	—	
	p Dublin (Glasnevin)	67	49.3	37.4	43.4	+2.9	57	18th	28	6th	—	—	19	3.56	+1.27	0.72	14th	24	—	—	—	—	—	
	a Kingstown	42	49.7	39.5	44.6	—	55	18, 27, 31	31	27th	—	—	—	4.98	—	1.04	14th	24	51	—	—	22	—	
10. IRELAND, S.	p Clongowes Wood College	245	48.0	35.1	41.6	—	55	18th	28	6th	—	—	16	4.83	—	0.61	15th	29	39	—	—	17	—	
	a Mountmellick	233	46.8	35.7	41.3	—	55	27th	29	6th	—	—	—	7.00	—	1.06	14th	28	—	—	—	—	—	
	p Newcastle (Co. Wicklow)	256	48.7	38.6	43.7	—	55	28th	33	30th	—	—	—	9.38	—	1.39	14th	27	—	—	—	—	—	
	a Kilkenny	212	48.6	35.8	42.2	+1.4	53	17, 18, 27	26	6th	—	—	—	6.54	+3.27	1.09	14th	31	—	—	—	—	—	
	a Cahir	199	48.2	35.8	42.0	+0.2	53	17th	27	6th	—	—	—	7.43	—	0.82	17th	29	—	—	—	—	—	
11. ENGLISH CHANNEL	a Foynes	108	49.1	38.4	43.8	+1.7	55	17th, 27th	33	23rd	—	—	—	7.98	+3.54	0.77	22nd	29	—	—	—	—	—	
	a Ballinacutra	34	49.1	38.2	43.7	—	53	26th	27	6th	—	—	—	8.64	—	1.15	6th	29	45	—	—	19	—	
	a Guernsey (Villa Carey)	180	51.2	44.8	48.0	+3.2	56	19th	38	6th	—	—	—	8.16	+3.70	0.70	22nd	28	60	+16	24	+6		

NOTES ON THE STATISTICAL TABLES.

**Hours of Observation.**—The following types are used to indicate the hours of observation at Stations included in Table A:—Clarendon, Normal Climatological Stations—I, 9 a.m. [II, 3 p.m.], III, 9 p.m. Black Capitals, telegraphic reporting normal climatological stations—I, 7 a.m., II, 1 p.m., III, 9 p.m. Roman, telegraphic reporting stations—I, 7 a.m., [II, 1 p.m.], III, 6 p.m. Italic, auxiliary climatological stations—I, 9 a.m. only, at *Balmoral, Colmonell and Ventnor* 3 p.m. also. The summaries are based on observations made three times a day wherever the data are available, except in the case of the element pressure (see below). At stations shown in clarendon type the maximum and minimum temperatures are read at 9 p.m.; at the remaining stations these observations are made at 1. In Table B the letters *a* and *p* indicate whether the readings of the maximum and minimum are taken at the hours of morning or evening observation.

**Barometer.**—The correction for latitude has not been applied to the readings quoted in the Tables. It is applied to the readings at sea level from which the chart showing the mean monthly distribution of pressure is prepared. The values given in the tables are for station level. The values printed are (1) for stations shown in clarendon type, the means of observations at 9 a.m. and 9 p.m.; (2) for stations shown in Capitals, the means of observations at 7 a.m., 1 p.m., 9 p.m.; (3) for stations shown in Roman type, the means of observations at 7 a.m. and 6 p.m.; (4) for stations shown in italic type, the means of observations at 9 a.m. The column headed C gives the correction for diurnal variation required to reduce the means of observations at fixed hours to true diurnal means, based on the analysis of the values obtained at the four observatories for the period 1871-1905. The difference from normal is based upon the 7 a.m. readings only, except in the cases of Kew, Greenwich, Aberdeen, Valencia and Falmouth (see below).

**Rainfall.**—The amounts are those for the 24 hours commenced at the time of morning observation. These are entered in clarendon type.

**Hygrometer.**—At certain stations the vapour pressure and the relative humidity are the results obtained from the daily values. These are entered in clarendon type. At other stations the calculations are made from the monthly means of the dry and wet bulb readings.

**Weather Phenomena.**—The number of days of Rain, Snow, Hail, Thunderstorm, Fog, Ground Frost, and Gale, are counted irrespective of the hours at which the phenomena occur. Except in the cases of rainfall (see above) and ground frost the day is the civil day. A day is reckoned as a day of "clear sky," if the mean of the estimates of the "amount of cloud" at the fixed hours of observation is less than 2, and as an "overcast" day if the mean is greater than 8. Days of Ground Frost. A day is counted as a "Day of Ground Frost" if it follows a night on which the minimum has sunk to 30° or less.

**Wind Summaries.**—The results given under wind direction, and the number of observations of calms and of fresh or strong wind, are based on the observations at fixed hours. At Deerness, Aberdeen, Valencia, Falmouth, Kew, Glasgow, Stonyhurst and Armagh the wind observations are based on the records of a standard Robinson anemometer (factor 2.2). Velocities of between 13 and 38 miles in the hour have been entered as "fresh or strong winds," velocities of 39 miles in the hour, or above, as gales. (At Brighton, Plymouth and Southport the equivalent values are obtained from a Dines Pressure Tube Anemometer.)

**Averages.**—The normal averages used for stations are—Pressure, Temperature, and Rainfall for the 35 years 1871-1905; Bright Sunshine for the 25 years 1881-1905. The values are published in Appendix III. to the Weekly Weather Report for 1906. For Greenwich and Oxford, averages for longer periods are used. (See Notes in the Monthly Weather Reports for 1908.) Monthly averages of pressure at telegraphic reporting stations for the epoch 7 a.m. are published in Appendix I. to the Daily Weather Report. In order to render these averages comparable with the data for the present month, a correction, based on the results for the four observatories as published in "Hourly Readings at the Observatories under the Meteorological Council," has been applied to each of them before the figures given in the column headed "Barometer—Difference from Normal" were computed.

**Aberdeen, Falmouth, Kew, Valencia, Oxford, Greenwich.**—The figures quoted in the second line assigned to these observatories in the columns for Barometer and Mean Temperature are the true daily means computed from the hourly tabulations of the traces of the photographic recording instruments. For Kew, Falmouth, Aberdeen and Valencia the divergences of the means of the readings at 9 a.m. and 9 p.m. from their normal averages are also given.

**Royal Observatory, Greenwich.**—The earth temperatures are taken at a depth of 3 ft. 2 ins. The daily rainfall amounts are those for the 24 hours comprising the civil day. The number of days in the month which were persistently overcast from midnight to midnight was 0, the number of persistently cloudless days was 0, the number of persistently foggy days was 0.

**Mean Values for Districts.**—The stations used in the Weekly Weather Report for the computation of "district values" of rainfall and temperature are distinguished by the sign ¶, those used for the computation of "district values of bright sunshine" by the sign §. These stations are distributed between Tables A and B. The monthly mean values for districts given in this Report for maximum, minimum and mean temperature, duration of bright sunshine, number of rain days and amount of rainfall, are computed from the data for these "representative" stations. The mean temperature for districts is computed in the manner shown in the preface to this and previous volumes of the Weekly Weather Report. The monthly mean values for districts for "amount of cloud" are computed from the data for all stations included in Table A. The extreme values of the various elements in each district are printed in distinctive type. In the lines devoted to district values, the columns referring to absolute highest and absolute lowest temperature and the maximum amount of rainfall in a day contain the extreme values for the district at any station included in either table of the Report. The averages for districts with which the current values are compared are for the 25 years 1881-1905, as in the case of the corresponding values published in the Weekly Weather Report.

**Meteorological Societies.**—Information for stations marked ¶ is supplied by the Royal Meteorological Society, and that for stations marked § is supplied by the Scottish Meteorological Society. Stations marked S are in connexion with the Scottish Meteorological Society and those marked M with the Royal Meteorological Society as well as with the Meteorological Office.



## MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

(Supplement to the Weekly Weather Report.)

SUMMARY OF OBSERVATIONS COMPILED FROM THE RETURNS OF OFFICIAL STATIONS AND VOLUNTEER OBSERVERS IN THE UNITED KINGDOM, WITH  
A CHART OF RAINFALL CONTRIBUTED BY THE BRITISH RAINFALL ORGANISATION.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE,

AND PUBLISHED FOR H.M. STATIONERY OFFICE BY WYMAN AND SONS, LTD., FETTER LANE, E.C.; OR OLIVER AND BOYD, EDINBURGH; OR E. PONSONBY, LTD.,  
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Weekly Weather Report.

No. XIII.

ANNUAL SUMMARY, 1911.

[Price 6d.]

## CONSPICUOUS METEOROLOGICAL OCCURRENCES DURING THE YEAR 1911.

The following remarks on the most striking meteorological events of the year 1911 are based on numerous reports and records.

1. *Gales.*—The year witnessed a continuation of the comparatively quiet period which has been in the ascendant over the United Kingdom for several years past, storms of any great violence affecting the greater portion of the country being uncommon even in the winter months. An unsettled type of conditions marked the opening days of JANUARY, so that strong or high winds from almost all directions were experienced on nearly all coasts. On the 2nd the Northerly gradient over the North Sea was steep, resulting in severe weather off the east coast of Britain, the force of a strong gale (force 9) being felt in many localities between Shetland and Norfolk, and a whole gale (force 10) at the Outer Farne, Flamborough Head and Spurn Head, the duration of the gale at these three points being, respectively, 33, 36 and 24 hours. The gale was felt as far west as the Welsh coast. A large disturbance, which appeared off our north-western coasts on the evening of the 10th, made a rapid transit eastward across Scotland to and beyond southern Sweden. When its centre had reached the eastern side of the North Sea, on the evening of the 11th, a secondary was formed over the Irish Sea, and starting off on an unusual path it passed southward across Spain to Morocco. While these depressions were in our neighbourhood an extensive anticyclone occupied the eastern portion of the Atlantic, and a steep gradient for Northerly winds was thus formed, the result being a severe gale between the night of the 10th and the morning of the 13th. The strength of a whole gale was experienced at Malin Head, Rathlin Island, Bahama Bank, the North-West Lightship, Bardsey Island, Lundy, Trevose Head, the Owers, Spurn Head, the Outer Farne, and St. Abbs Head; and a storm (force 11) at Rathlin O'Beirne, Scilly and the Casquets. In several neighbourhoods the duration of the gale was 30 or 32 hours. From the middle of January till the middle of February there were only a few instances of the wind attaining the strength of a gale on any section of our coasts. The second half of FEBRUARY was very disturbed, and gale force was frequent. Between the 16th and 19th a South-Westerly to Westerly gale occurred on many coasts, but only in four isolated situations did it amount to a whole gale. Practically the whole country was involved in the South-Westerly to Westerly gale of the 22nd to the 24th, a whole gale at a number of places in the west, locally on the east coast; a storm at the North-West Lightship; a hurricane (force 12) at Loop Head. At Eagle Island, Mayo, the gale lasted 40 hours, and at Bardsey 42 hours. A Northerly gale on many parts of the English and Irish coasts between MARCH 12th and 14th occurred during the development of a shallow secondary disturbance which appeared beyond Ireland, and became a primary system as it moved along the south coast of England to Belgium. A whole gale blew at Dover, Spurn Head and Flamborough Head. An interesting feature of the North-Easterly gale of March 25th to 27th on the south and east coasts of England was that it resulted from the movement southward of an anticyclone from Iceland to Scotland, at the same time that a depression moved up from Italy to the north of France, so that the gradient between them became very steep. On the Kentish coast a whole gale to storm force was reported. The occasional gales of the SUMMER MONTHS were more local in their character, and in a few instances the force of a strong gale was attained. Towards the close of SEPTEMBER a shallow disturbance moved across the upper part of the Atlantic, and on the evening of the 29th, when its centre had arrived on the north-west coast of Ireland, the barometer was at about 30 in. Continuing its advance to the North of England, the system deepened rapidly and developed great energy. Next morning the barometer was down to 29.5 in. on the Yorkshire coast, and by evening, when the centre had reached Holland, pressure was still further reduced to less than 29.2 in. Rough weather became general, and the gale of September 30th was one of the worst of the year, especially over England and the North Sea, resulting in numbers of casualties on land and sea. Down the east coast of England the wind blew with the strength of a whole gale, and at the East Goodwin a storm. In the middle of October, a very unsettled South-Westerly type set in, and it was maintained until nearly the close of the following January. Gales were now frequent, and many of them severe. A strong or whole gale occurred almost every day between OCTOBER 21st and 31st, the most extensive being on the 29th and 30th, when a whole gale was felt on the northern, western and southern coasts, a storm at the Flannan Isles and at Malin Head. At Bardsey the gale lasted 45 hours, and at Cape Wrath 48 hours. Very severe weather ruled from NOVEMBER 3rd to 6th, the records of storm force alone, mainly on the north-western and north-eastern coasts, being too numerous to be detailed. Hurricane force was reported at Sule Skerry, the Maidens (coast of Down) and Bahama Bank. The duration of the gale was 51 hours at Bardsey and Smith's Knoll, 54 hours at Ardnamurchan, and 57 hours at Lundy. Several local gales or strong gales occurred during the remainder

of the month. Many parts of the English and Irish coasts had a gale between DECEMBER 4th and 7th, a whole gale at a considerable number of places, a storm at the Fastnet and at Rathlin Island. England generally suffered on the 10th and 11th, a whole gale on the Bristol and English Channels and off the Thames Estuary, a storm at Lundy, where the gale held through 45 hours. Ireland and western and southern England had another gale on the 13th, a whole gale on the western channels. Until Christmas, gales or strong gales were of daily occurrence. Anemometrical records at 33 stations show the following instances of mean hourly wind velocities of more than 60 miles in an hour:—

November 5th, Eskdalemuir, 62.  
December 6th–7th, Pendennis, 64.  
" 13th, Pendennis, 61.

The highest velocities per hour attained in gusts of short duration were 80 miles at Southport, and 90 miles at Eskdalemuir on NOVEMBER 5th, and 88 miles at Roche's Point on DECEMBER 18th. (For detailed records of velocities, see Appendix III. of the Weekly Weather Report; and for distribution and frequency of winds, see Map 1, p. cxxxv.)

Map 2, p. cxxxv., shows the mean paths of the classified low pressure systems which visited our neighbourhood within the year. In some cases the paths were so irregular that they could not be combined with the more regular ones.

2. *Rainfall.*—As a result of the unusually long period of dry weather, which lasted practically from JANUARY to the middle of OCTOBER, the precipitation for the whole year was nearly everywhere below the normal. In many parts of England and eastern Scotland the total fall was less than 20 in., 18 in. at Kingston-on-Soar, 17.4 in. at Shrewsbury, and 17.1 in. at Dundee, against 84.9 in. at Fort William, 87.6 in. at Glencarron, 91 in. at Bendauph, and 148.1 in. at Seathwaite. The Dundee record was only 59 per cent. of the normal, Malin Head had 21.9 in., or 68 per cent.; Guernsey (Brooklyn), 27.1 in., 72 per cent.; Cheadle, 23.8 in., 73 per cent.; and Birmingham, 20.4 in., 74 per cent. The relatively heaviest totals were Inverary, 83.6 in., 122 per cent.; Poltalloch, 63 in., 123 per cent.; and Dungeness, 28.9 in., 127 per cent. There was a marked decrease in the frequency of precipitation, the rain days numbering less than 200 in most localities. They ranged from 135 at Tottenham, 141 at Portsmouth and Dulwich, 142 at Teignmouth, Shoeburyness and Clacton, and 143 at Portland Bill, Brighton and Bexhill to 241 at Glencarron, 263 at Stornoway, and 286 at Baltasound. In all months there were rainfalls of 2 in. and upwards in a day. JANUARY 5th, Gruline, 2.1 in.; 10th, Cruachan, 2.1 in.; FEBRUARY 17th, Cruachan and Inverary, 2.4 in.; 18th, Seathwaite, 3.7 in.; 21st, Arncliffe, 2.1 in.; MARCH 1st, Seathwaite, 2.4 in.; APRIL 25th, Seathwaite, 2.2 in.; MAY 1st, Gruline, 2.1 in.; 2nd, Caragh Lake, 2.2 in.; 31st, Epsom, 2.9 in. (2.4 in. in 50 minutes); JUNE 23rd, St. Asaph, 2.3 in., Uldale 3.2 in.; 24th, Bethesda, 2 in., Cockle Park, 2.1 in., Tynemouth, 2.2 in., Leeds, 2.3 in., Alnwick and Shields, 2.6 in., and Marchmont, 2.7 in.; JULY 29th, Kilkenny, 2.2 in.; AUGUST 31st, Cruachan, 2.3 in., Inverary, 2.5 in.; SEPTEMBER 25th, Roche's Point, 3 in.; OCTOBER 13th, Jersey, 2.4 in.; 29th, Colmonell and Kirkby Lonsdale, 2 in., Inverary, 2.1 in., Graythwaite, 2.3 in., Eskdalemuir, 2.5 in., Caragh Lake, 2.8 in., Cruachan, 3.2 in., Ambleside, 4.2 in., and Seathwaite, 7 in.; NOVEMBER 3rd, Seathwaite, 3.3 in.; 5th, Cruachan, 2.1 in., and 8th, 2 in.; 14th, Caragh Lake, 2.5 in.; and DECEMBER 6th, Sheepstor, 2 in.; 10th, Seathwaite, 3.2 in.; 15th, Crathes, 2 in.; and 23rd, Gruline, 2.1 in. December was exceptionally wet, with from 28 to 31 rain days in many places, and locally (Portsmouth, Hereford and Salisbury) the rainfall was more than three times the normal. (See Rainfall Map, p. cxxxvi.)

3. *Snowstorms.*—The general mildness of the early and late months was not conducive to great falls of snow, and no storm of any importance occurred during the year. There were few occasions when observers considered the depth of snow worth measuring, the majority of those registered being about an inch. At Ardross Castle there was a fall of 3 in. on JANUARY 12th; at Mareham-le-Fen, 4 in. on MARCH 14th; at Heathfield (Sussex), 6 in. during a North-Easterly gale in the night of March 25th–26th, and 4 in. at the same place on APRIL 4th. On Midsummer Day, JUNE 24th, flakes of snow fell at Eskdalemuir Observatory. Deep snow fell at Sumburgh Head on OCTOBER 26th, the yield of water being 0.3 in. After a two days' fall at Ardross, NOVEMBER 16th and 17th, the depth was 6 in., yielding nearly 0.7 in. of water. Lampeter had a heavy fall on the 19th (0.9 in. of water). There was heavy snow at Carrigoran (Clare) on DECEMBER 22nd, rain gauge record 0.8 in.

4. *Thunderstorms.*—Considering the intense heat of the summer months electrical disturbances were not nearly so frequent as might have been expected. There were thunderstorms in all months, but as a rule they were of an unimportant character. From MAY 10th to 14th practically

TABLE A.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at TELEGRAPHIC REPORTING

Table with columns: DISTRICT, STATION, Height of Barometer, BAROMETER (Mean at Level, Diff. from Normal, Cor. for Diurnal Range), AIR TEMPERATURE (Mean of A, B; Mean of A and B; Diff. from Normal; Absolute Maximum and Minimum), and HYGROMETER (Observations at 9 a.m., 3 p.m., and 9 p.m., or at 7 a.m., 1 p.m., 6 p.m., or 9 p.m.; Dry Bulb, Dep. of Wet, Vap. Pressure, Humidity).

For notes see p. cxxxvii. NOTE.—The Sunshine entered to Woburn is recorded at Aspley Guise, and that entered to Portsmouth at Southsea.

STATIONS and NORMAL CLIMATOLOGICAL STATIONS in the BRITISH ISLANDS during the YEAR 1911.

Earth Temperature.		BRIGHT SUNSHINE.				CLOUD (0-10.)			RAIN AND OTHER FORMS OF PRECIPITATION.				WEATHER. No. of Days of							WIND.								STATIONS.					
At 1 foot depth.	At 4 feet depth.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.	Mean Amount.			Total Fall.	Diff. from Normal.	Most in a day.		Precipitation.	Snow.	Hail.	Thunderform.	Clear Sky.	Overcast.	Fog.	Ground Frost.	Wind-force 8 and above.	No. of Observations reduced to a total of 1,095 for the year.											
						I.	II.	III.			Amount.	Date.										Forces 4-7.	Calm.	N.	N.E.	E.	S.E.		S.	S.W.	W.	N.W.	
—	—	1538	—	35	—	7.7	7.5	6.6	35.9	—	1.05	Apr. 18th	235	9	32	2	18	175	7	—	23	569	27	110	109	122	94	112	158	204	159	Castlebay (Isd.)	
—	—	1278	+100	29	+2	6.8	—	6.6	34.0	-2.2	0.78	Nov. 7th	209	18	31	8	18	137	24	—	26	577	61	133	43	94	145	197	131	174	117	Deerness.	
—	—	—	—	—	—	7.5	7.0	7.4	41.2	—	1.15	Aug. 24th	225	31	8	7	3	132	26	—	44	518	46	145	77	65	150	184	180	126	122	Lerwick.	
—	—	1393	+122	31	+2	7.3	7.2	7.3	48.3	-0.3	1.03	July 24th	263	15	26	2	11	151	2	—	21	566	31	106	136	82	73	165	241	177	84	Stornoway.	
—	—	—	—	—	—	6.8	—	6.8	27.4	-1.9	1.18	Nov. 24th	228	24	6	5	6	105	25	—	33	285	27	167	49	115	91	158	161	207	120	Wick.	
—	—	1253	+65	28	+1	7.2	—	6.1	26.3	-5.9	0.86	Nov. 15th	215	24	0	2	23	123	0	—	6	295	423	34	47	68	43	74	180	155	71	Strathpeffer.	
—	—	—	—	—	—	7.5	—	6.3	87.6	-1.6	1.62	Feb. 21st	241	28	10	3	41	181	9	—	8	463	10	207	34	257	4	17	3	561	2	Glencarron.	
—	—	1046	+157	24	+4	7.5	—	6.8	44.8	+0.2	1.51	Nov. 16th	233	26	2	5	19	169	10	—	13	471	22	32	305	30	22	71	512	78	23	Fort Augustus.	
—	—	—	—	—	—	7.4	—	6.9	28.3	—	0.77	Nov. 1st	212	32	0	2	28	174	1	—	15	390	124	42	87	128	25	41	93	472	83	Kingussie.	
—	—	—	—	—	—	7.4	—	6.6	84.9	+6.3	1.84	Aug. 31st	222	28	7	10	27	160	12	—	7	275	294	4	169	58	26	55	401	78	10	Fort William.	
48.5	—	—	—	—	—	6.5	—	6.8	26.4	-5.2	0.93	Nov. 15th	166	14	0	2	35	140	1	—	3	152	123	81	51	260	43	66	124	230	107	Dunrobin Castle.	
—	—	1243	+131	28	+3	7.2	7.2	6.7	51.5	-1.2	1.84	—	232	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	7.6	—	7.8	17.1	-12.0	0.73	Dec. 10th	179	9	1	5	9	174	4	—	27	180	0	68	139	119	112	34	423	121	79	Dundee.	
—	—	1429	—	32	—	6.8	6.4	6.6	27.3	+2.6	1.64	Nov. 16th	213	12	0	4	19	89	8	—	0	69	262	42	67	161	24	28	110	365	36	Nairn.	
—	—	1450	—	33	—	7.1	—	6.3	27.0	-3.5	1.24	Nov. 16th	201	19	14	5	20	125	3	—	14	183	0	58	139	25	219	151	308	53	142	Gordon Castle.	
—	47.0	1518	+117	34	+2	6.1	6.5	6.0	27.5	-3.2	1.31	June 24th	206	19	22	9	33	103	15	—	0	220	124	92	64	60	115	211	175	115	139	Aberdeen.	
—	—	—	—	—	—	7.1	—	—	29.9	-0.1	1.02	Nov. 17th	163	30	1	8	56	176	0	145	46	204	0	51	51	57	63	57	237	435	174	Balmoral.	
—	—	—	—	—	—	7.0	—	6.4	35.6	-5.8	1.30	Oct. 29th	196	10	1	11	24	139	3	—	20	306	0	62	50	334	23	51	51	458	66	Crieff.	
—	—	—	—	—	—	6.7	—	6.7	19.9	-3.9	0.87	June 19th	192	11	5	1	16	138	11	—	3	209	34	57	112	126	93	86	242	259	86	Leith.	
46.6	—	1466	+135	33	+3	6.4	—	5.7	31.7	-2.7	2.71	June 24th	181	22	16	6	61	143	9	78	2	184	0	176	75	176	25	125	145	317	56	Marchmont.	
—	—	1479	+149	33	+3	6.9	—	6.5	29.6	-1.4	2.71	—	199	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	1637	—	37	—	6.3	—	6.1	24.9	-0.8	1.63	June 24th	158	9	6	10	54	132	23	—	3	39	34	42	141	2	195	43	386	31	221	Whitby.	
47.3	47.7	1608	—	36	—	6.3	—	5.8	27.4	-2.7	2.10	June 24th	210	15	13	12	10	101	10	96	18	379	41	74	116	81	86	127	129	272	169	Cockle Pk (Mor-Shields.)	
—	—	—	—	—	—	7.8	—	7.6	26.3	+1.3	2.57	June 24th	190	9	8	1	2	189	26	—	3	216	41	135	117	75	52	158	267	163	87	—	
—	—	1443	+126	33	+3	7.3	—	6.9	23.0	-4.2	1.21	June 24th	167	13	4	8	33	178	22	72	17	218	219	118	75	66	23	169	208	155	62	Durham.	
48.3	—	—	—	—	—	7.1	—	6.6	25.4	-1.2	1.27	June 24th	193	11	5	19	37	168	41	113	12	399	83	110	156	49	69	205	250	86	104	Rounton.	
—	50.5	1588	—	36	—	7.2	—	7.8	26.6	-0.7	1.35	June 24th	197	4	0	5	3	140	45	—	13	505	16	22	249	12	135	19	286	43	308	Scarborough.	
49.4	49.5	1411	+135	32	+3	6.1	—	6.0	25.1	-0.2	1.34	June 24th	173	10	3	9	52	122	17	—	0	50	3	209	84	63	37	286	86	222	105	105	York.
—	—	—	—	—	—	7.0	6.7	6.8	19.2	-0.4	1.33	June 24th	144	15	8	12	7	77	34	—	40	74	5	128	129	92	112	147	189	189	104	Spurn Head.	
48.8	49.2	—	—	—	—	6.2	—	4.3	18.9	-4.4	1.35	June 24th	166	11	4	9	77	99	13	—	11	178	63	57	82	183	37	49	205	287	132	Lincoln.	
—	—	1832	—	41	—	5.8	—	5.5	25.7	—	1.33	June 23rd	185	11	3	2	53	111	14	—	11	226	0	118	122	142	82	80	174	272	105	Skegness.	
49.0	48.9	1220	—	28	—	6.4	—	5.9	24.4	-1.4	1.05	Sept. 23rd	193	23	11	14	40	120	15	72	5	63	131	102	167	72	61	72	165	147	178	Hull.	
49.0	49.2	1597	+146	36	+3	6.7	—	6.3	23.8	-1.1	2.60	—	177	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
51.1	50.8	1936	—	44	—	5.9	—	5.0	21.6	-2.1	1.49	Nov. 18th	165	17	12	15	69	90	24	45	9	324	31	116	138	88	45	153	231	191	102	Lowestoft.	
—	—	1761	—	40	—	7.0	—	6.4	19.3	—	0.71	Nov. 18th	233	4	1	3	20	132	17	—	2	460	14	132	83	67	99	222	183	154	141	141	Cromer.
—	—	1687	+188	38	+4	7.5	—	6.1	32.0	+4.5	1.85	June 23rd	216	11	11	19	25	145	17	119	3	246	79	69	274	32	45	63	263	152	118	Hillington.	
—	—	—	—	—	—	—	—	—	26.7	—	0.97	Nov. 18th	197	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Norwich.
51.5	52.2	1795	—	41	—	6.1	5.8	5.1	20.4	-4.9	0.95	Nov. 18th	144	10	10	10	33	70	23	—	7	246	9	116	137	88	70	133	220	231	91	Yarmouth.	
—	—	1829	+208	41	+4	6.6	—	4.9	21.1	-2.7	1.23	Nov. 18th	177	12	15	19	71	119	12	—	2	52	38	131	132	101	52	131	224	203	83	Geldeston.	
51.2	51.6	1841	+281	42	+7	6.9	—	5.0	19.0	-3.7	0.90	June 23rd	150	15	14	14	53	127	20	93	13	163	143	213	35	32	103	152	225	111	81	Cambridge.	
51.4	51.8	1986	—	45	—	6.6	6.5	6.2	18.6	—	1.24	June 23rd	142	15	4	10	11	98	8	?	4	372	12	124	118	100	99	177	152	175	138	Clacton.	
—	—	1677	—	38	—	7.0	—	5.5	19.2	—	0.58	Nov. 11th																					

TABLE A. (continued).—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at TELEGRAPHIC REPORTING

Table with columns: DISTRICT, STATION, Height of Barometer, BAROMETER (Mean at 32° F., Diff. from Normal, Cor. for Diurnal Range), AIR TEMPERATURE (Mean of A, B, Mean of A and B, Diff. from Normal, Absolute Maximum and Minimum), and HYGROMETER (Observations at 9 a.m., 3 p.m., and 9 p.m., or at 7 a.m., 1 p.m., 6 p.m., or 9 p.m., Dry Bulb, Dep. of Wet, Vap. Pressure, Humidity).

\* Dulwich now takes the place of Norwood from which it is distant 1 mile E.

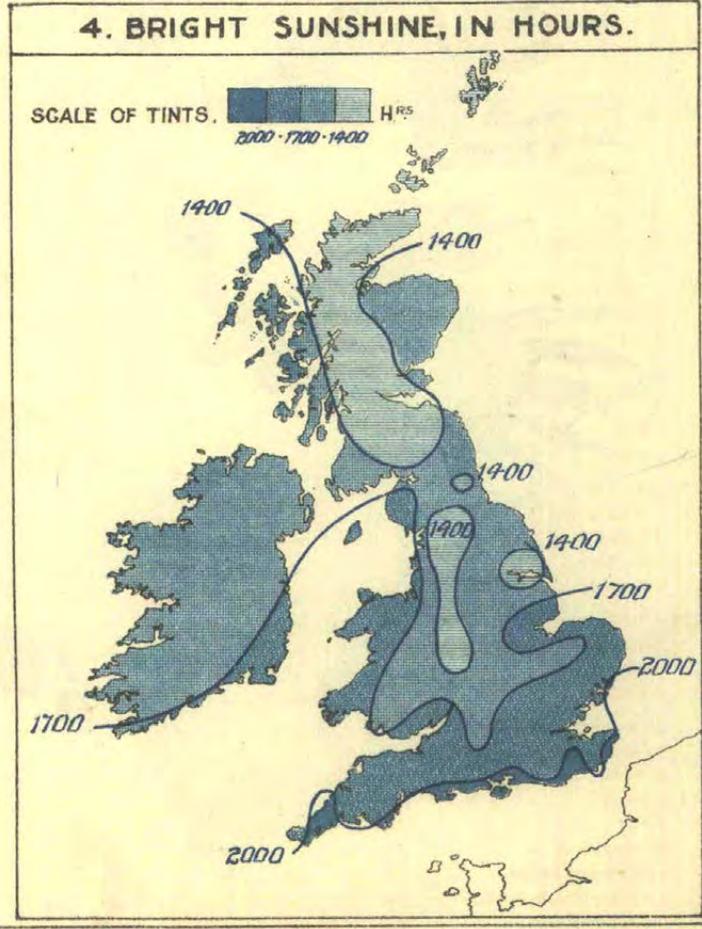
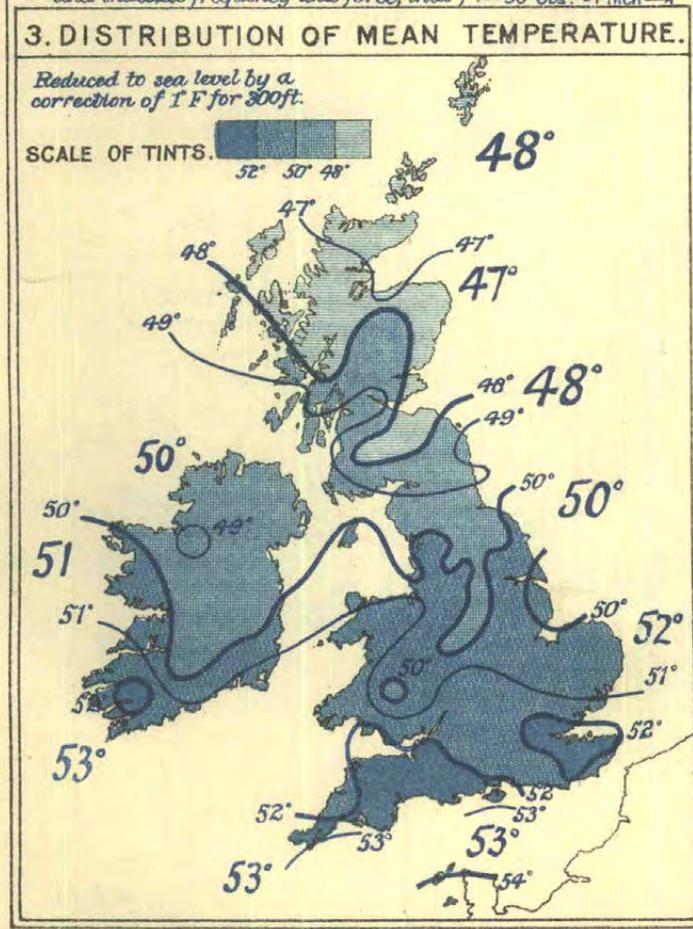
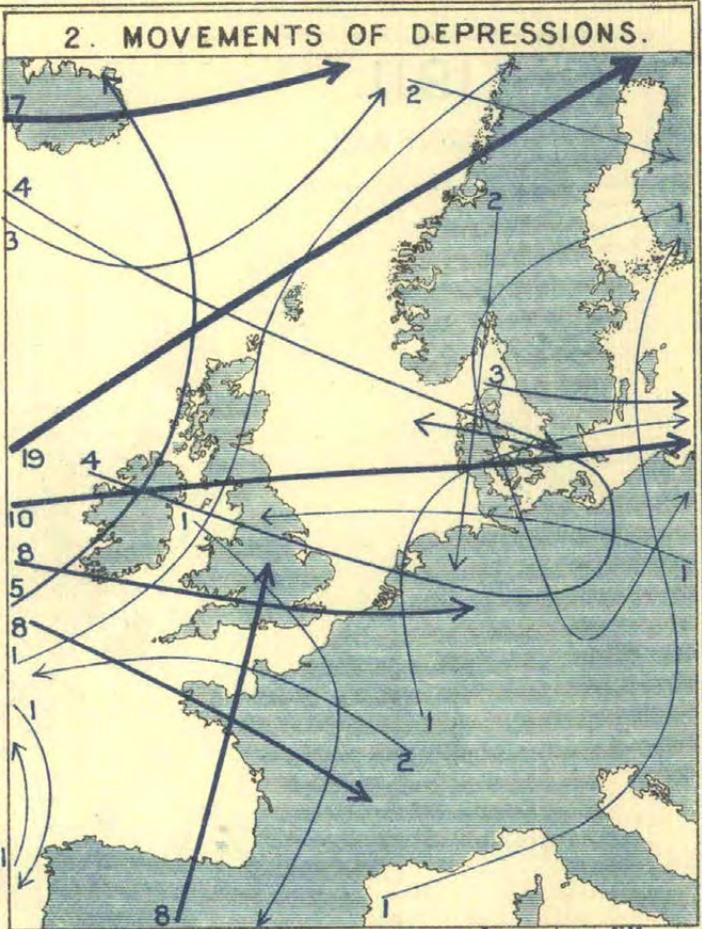
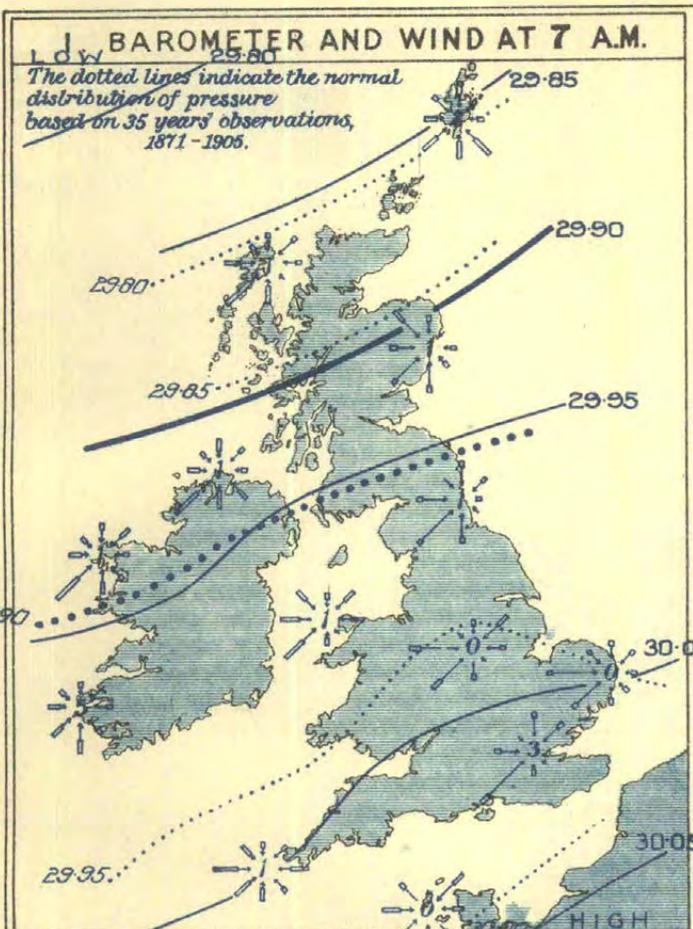
† Dwyran now takes the place of Llaneugrad.

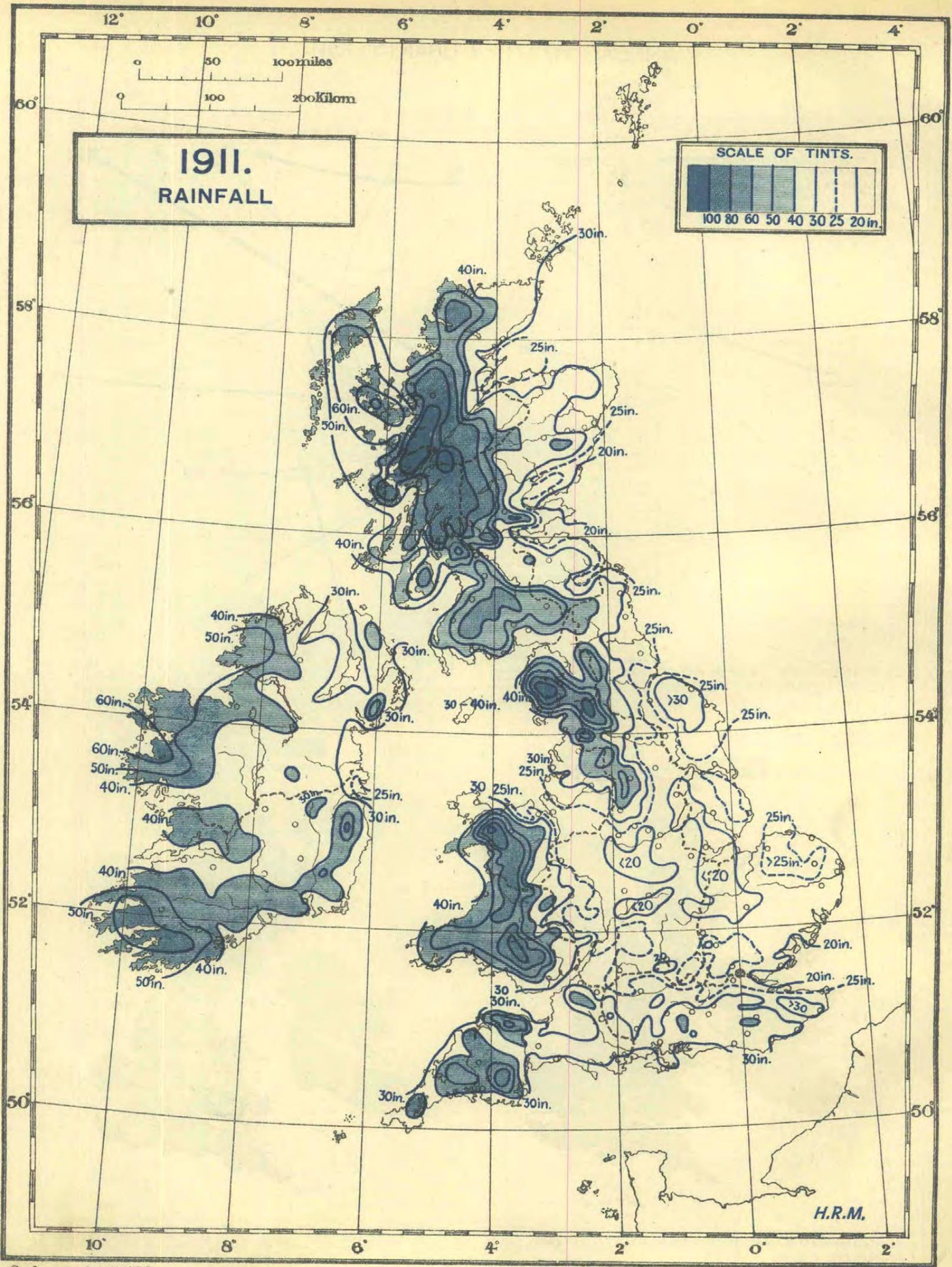
STATIONS and NORMAL CLIMATOLOGICAL STATIONS in the BRITISH ISLANDS during the YEAR 1911.

Earth Temperature.		BRIGHT SUNSHINE.				CLOUD (0-10).			RAIN AND OTHER FORMS OF PRECIPITATION.				WEATHER. No. of Days of								WIND. No. of Observations reduced to a total of 1095 for the year.								STATIONS.				
At 1 foot depth.	At 4 feet depth.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.	Mean Amount.			Total Fall.	Diff. from Normal.	Most in a day.		Precipitation.	Snow.	Hail.	Thunderstorm.	Clear Sky.	Overcast.	Fog.	Ground Frost.	Wind-force 8 and above.	No. of Observations reduced to a total of 1095 for the year.											
						I.	II.	III.			Amount.	Date.										Forces 4-7.	Calm.	N.	N.E.	E.	S.E.	S.		S.W.	W.	N.W.	
50.7	50.7	2090	—	47	—	5.7	7.0	5.2	27.3	—	1.03	Oct. 13th	166	16	5	15	61	108	24	—	19	48.0	24	150	145	53	39	83	342	112	147	Dover.	
—	—	—	—	—	—	7.3	7.0	7.2	27.3	—	0.99	Nov. 11th	152	16	7	9	0	86	49	—	31	47.8	5	126	174	109	40	115	285	152	89	Dungeness.	
52.5	52.5	2147	+364	49	+9	5.9	—	4.6	29.6	+0.5	1.31	Oct. 23rd	164	13	2	6	83	100	39	50	28	374	31	161	164	87	63	92	221	153	123	Hastings.	
—	—	1914	+249	43	+5	5.3	—	4.5	30.4	-0.5	1.16	Nov. 11th	154	9	5	11	106	95	16	82	0	205	3	6	307	11	138	4	375	45	205	Southampton.	
—	—	2070	+347	47	+3	5.9	—	—	29.3	-0.3	1.35	Nov. 11th	165	5	5	6	67	123	6	—	11	304	30	148	86	112	93	156	252	160	58	Ventnor.	
51.9	52.0	1935	+332	44	+8	6.0	—	8.2	28.1	+1.0	1.92	—	159	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Tottenham.	
—	53.0	1718	—	39	—	6.9	—	5.7	23.9	—	1.16	Oct. 24th	135	12	0	11	40	126	9	48	0	58	28	137	171	72	60	63	317	139	108	Hampstead.	
—	—	1756	—	40	—	6.6	—	5.5	24.0	—	1.21	Oct. 24th	164	16	4	14	52	129	0	100	6	119	161	91	201	64	38	71	246	151	72	Camden Square.	
51.2	50.8	1543	—	35	—	6.2	—	—	24.8	-0.4	1.10	Oct. 24th	155	7	3	8	93	179	11	53	—	—	99	222	150	36	45	102	171	153	117	Westminster.	
—	—	1592	+448	36	+10	—	—	—	22.3	-2.1	0.95	July 28th	145	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	South Kensington.	
—	—	1557	—	35	—	6.7	—	—	—	—	—	—	—	15	3	14	34	171	15	38	1	163	106	93	155	87	33	96	294	160	71	Greenwich.	
—	52.3	1789	+263	40	+6	6.7	—	5.7	23.7	-0.4	1.42	Oct. 24th	158	15	4	7	50	136	31	81	0	151	94	109	155	96	45	80	293	180	43	Dulwich.	
51.2	—	—	—	—	—	6.4	—	5.5	23.7	-1.2	1.24	Oct. 24th	141	14	0	14	59	132	34	—	3	113	173	114	135	77	25	153	183	169	66	Kew.	
50.7	50.9	1720	+253	39	+6	6.6	6.5	5.3	23.1	-0.9	1.13	Oct. 24th	158	13	0	12	39	118	24	90	0	265	148	139	139	73	25	134	237	133	62	Bunhill Row.	
—	—	1444	+304	33	+7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Plumstead.	
—	—	1426	—	32	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Eskdalemuir.	
—	—	1415	—	32	—	7.6	7.3	6.7	60.9	—	2.45	Oct. 29th	220	40	10	9	17	180	2	—	7	559	183	102	171	42	28	120	286	104	59	Poltalloch.	
—	—	—	—	—	—	7.0	—	6.3	63.0	+11.7	1.65	Feb. 17th	233	2	7	7	35	149	2	—	17	316	128	54	110	46	96	142	162	266	81	Glasgow.	
—	—	1215	+120	28	+3	7.8	—	7.4	36.3	-2.4	1.68	Feb. 17th	202	3	12	8	12	192	5	76	1	181	166	59	113	150	35	88	241	214	29	Rothesay.	
—	48.6	—	—	—	—	6.1	—	5.8	55.4	+7.2	1.57	Feb. 17th	222	3	13	12	64	123	37	—	17	299	164	82	27	237	21	100	62	324	78	Colonsay.	
—	—	—	—	—	—	6.2	—	—	44.2	-0.7	2.01	Oct. 29th	180	2	3	6	74	148	11	54	25	402	24	90	72	144	66	102	107	360	120	Dumfries.	
49.1	49.7	1557	—	35	—	7.0	—	6.8	37.3	-2.9	1.02	Dec. 10th	181	8	4	2	38	167	22	83	18	199	191	56	127	41	90	51	368	20	151	Cally.	
—	—	—	—	—	—	—	—	—	45.5	-3.8	1.72	Oct. 29th	171	5	13	7	—	—	—	—	9	133	0	50	189	74	246	42	173	41	280	Douglas.	
—	—	1873	+273	42	+6	6.7	—	5.8	37.6	-4.7	1.45	Oct. 29th	184	17	22	13	41	123	44	—	25	17	377	2	100	123	123	82	112	173	229	151	Southport.
—	—	1544	+180	38	+4	6.9	—	6.5	4.45	-4.0	2.45	—	194	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Manchester (City).	
50.1	50.6	1823	+357	41	+8	6.3	6.2	6.4	30.4	-2.5	1.75	Sept. 12th	168	5	7	13	38	120	11	80	9	580	28	88	82	142	125	127	177	180	146	83	" (Whit. Pk.).
49.7	51.0	1284	—	29	—	4.9	—	4.9	31.1	-4.1	1.44	Sept. 12th	179	7	3	6	43	25	12	19	0	106	16	104	127	107	122	194	198	144	73	—	
—	—	1276	—	29	—	7.1	6.8	5.5	29.4	—	1.26	Sept. 12th	165	8	0	6	40	160	27	—	0	188	197	63	120	102	70	177	141	152	73	Darwen.	
49.4	48.5	1362	—	31	—	7.6	—	7.4	53.6	—	1.39	June 24th	218	17	15	16	12	173	4	60	8	365	20	58	133	52	80	236	153	227	126	Aspatia.	
48.8	48.7	1724	—	39	—	6.2	—	5.8	40.3	+1.8	1.63	Oct. 29th	205	8	6	8	43	114	2	70	10	177	143	82	101	124	30	108	249	215	43	Newton Rigg.	
48.9	48.1	1613	+227	37	+6	6.4	—	5.7	37.9	+1.8	1.70	June 24th	193	15	2	9	45	101	22	133	17	276	125	80	46	81	117	206	224	152	64	Stonyhurst.	
—	—	1459	+103	33	+2	7.1	—	6.3	44.2	-2.6	1.24	Sept. 12th	195	13	25	23	35	154	4	56	1	174	253	76	61	21	105	230	177	35	Blackpool.		
49.7	49.9	1343	+434	42	+10	6.9	—	6.7	31.1	-2.7	1.24	June 24th	180	4	9	14	30	146	0	88	1	355	13	94	126	143	138	115	190	174	102	24	Manch's'r (Prest).
—	—	—	—	—	—	8.1	—	6.5	33.2	-3.8	1.47	Sept. 12th	188	7	1	10	28	192	6	60	8	251	126	131	121	113	21	185	139	235	124	Liver'ol, Bid. Obs.	
—	—	1767	—	40	—	5.9	—	6.5	25.3	-3.5	1.36	Sept. 12th	170	13	9	23	42	119	10	—	5	260	8	77	95	134	157	106	189	205	124	Llandudno.	
—	—	1817	+361	41	+8	6.3	—	6.9	30.5	-0.3	1.27	June 24th	168	2	1	12	44	152	2	—	4	134	64	46	25	261	48	233	138	242	33	Holyhead.	
—	—	—	—	—	—	6.9	6.4	6.5	33.4	-1.5	1.26	Aug. 4th	175	5	12	6	14	97	47	—	35	510	38	87	138	107	37	110	271	180	127	Bettws-y-Coed.	
49.3	49.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Dwyran.	
51.8	50.5	1843	—	42	—	6.5	—	5.6	40.2	—	1.58	Sept. 25th	176	2	1	16	61	123	5	29	31	521	141	103	98	125	14	211	219	129	55	Llangamm. Wells.	
49.8	49.6	1705	+318	38	+7	6.6	6.5	6.3	32.9	-2.1	2.30	Nov. 12th	181	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Pembroke.
49.2	49.5	1492	—	34	—	7.6	—	—	50.7	—	1.43	Nov. 9th	201	3	8	4	26	92	30	—	25	576	26	124	166	90	82	154	213	160	80	Clifton.	
—	—	1842	+200	42	+5	6.6	6.3	5.9	38.6	+3.5	1.46	—	160	—	—	—	—																

TABLE B.—ANNUAL SUMMARY of the OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE, at other STATIONS included in the MONTHLY SUMMARIES for the YEAR 1911.

DISTRICT.	STATION.	Height of Gauge above M.S.L.	AIR TEMPERATURE.								Earth Temperature		Gr'd Frost.	RAIN AND OTHER FORMS OF PRECIPITATION.					BRIGHT SUNSHINE.				
			Mean of		Mean of A and B.	Diff. of Mean from Normal.	Absolute Maximum and Minimum.				At 1 foot depth.	At 4 feet depth.		No. of Nig'ts.	Total Fall.	Diff. from Normal.	Most in a day.		Number of Days.	Total in Hours.	Diff. from Normal.	Per Cent.	Diff. from Normal.
			A Max.	B Min.			Max.	Date.	Min.	Date.			Amt.				Date.	Hr.					
O. SCOTLAND, N.	p Baltasound	31	49.5	41.2	45.4	—	67	Aug. 8th	24	Feb. 20th	45.9	—	—	41.0	—	0.90	Aug. 24th	286	1193	—	27	—	
	p Dunrossness	145	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	a Fortrose	69	53.1	41.7	47.4	—	79	June 3rd	26	Jan. 4th	—	—	—	23.7	—	1.12	June 24th	171	1510	—	34	—	
1. SCOTLAND, E.	p Insch	426	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	p Crathes	140	54.9	39.3	47.1	—	83	July 12th	19	Feb. 1st	46.9	46.7	138	29.0	—	2.03	Dec. 15th	186	1433	—	32	—	
	p Stonehaven	286	53.1	41.1	47.1	—	85	June 8th	24	Feb. 1st	—	—	—	24.0	—	1.23	June 24th	194	1588	—	36	—	
2. ENGLAND, N.E.	p Balraddery	276	55.7	40.0	47.9	—	87	July 12th	22	Feb. 2nd	—	—	—	19.2	—	0.60	Dec. 15th	199	1547	—	35	—	
	a West Linton	800	52.2	38.0	45.1	-0.1	84	July 12th	16	Jan. 31st	—	—	—	37.7	—	2.20	June 24th	231	1361	—	31	—	
	a Alnwick Castle	210	55.1	41.5	48.3	+1.7	82	July 28th	21	Feb. 1st	—	—	—	30.2	-1.4	2.60	June 24th	182	—	—	—	—	
3. ENGLAND, E.	p Newcastle-on-Tyne	152	54.9	43.8	49.4	—	89	Aug. 9th	27	Jan. 21st	—	—	—	24.5	-2.9	1.31	Aug. 21st	204	1189	+123	27	+3	
	a Chopwellwood	445	—	—	—	—	—	—	—	—	—	—	—	29.0	—	1.65	June 24th	188	—	—	—	—	
	p Ampleforth	349	—	—	—	—	—	—	—	—	—	—	—	27.2	—	—	—	—	—	—	—	—	
4. MIDLAND COUNTIES	a Fulbeck	180	57.8	42.4	50.1	+2.1	96	Aug. 9th	20	Feb. 1st	—	—	102	19.4	-4.3	0.97	June 23rd	184	—	—	—	—	—
	a Rauceby	124	57.7	41.9	49.8	—	96	Aug. 9th	19	Feb. 1st	51.2	50.9	103	20.0	-5.7	1.07	June 23rd	173	1701	—	39	—	
	a Felixstowe	10	56.2	44.7	50.5	+1.3	84	Aug. 18th	24	Feb. 1st, 2nd	—	—	—	21.5	—	1.72	June 23rd	171	2146	—	49	—	
5. ENGLAND, S.E.	a Rothamsted	424	57.9	41.9	49.9	+1.9	92	Aug. 9th	18	Feb. 1st, 2nd	—	—	—	27.6	-0.3	1.23	May 13th	183	1786	+253	41	+6	
	a Shoeburyness	18	57.5	44.8	51.2	+1.2	90	July 21st	24	Feb. 1st	—	—	—	18.7	-0.9	1.30	June 23rd	142	—	—	—	—	
	a Southend-on-Sea	90	58.0	45.7	51.9	—	91	July 22nd	26	Feb. 1st	53.2	—	79	19.1	-2.2	0.97	June 23rd	144	1901	—	43	—	
6. SCOTLAND, W.	a Harrogate	476	54.6	42.0	48.3	+1.6	87	Aug. 9th	21	Feb. 1st	47.9	48.3	71	27.9	-1.6	1.20	June 24th	181	1533	—	35	—	
	a Bradford	489	54.7	42.7	48.7	—	88	Aug. 9th	20	Feb. 1st	48.6	50.3	61	28.0	—	1.67	June 24th	174	1511	—	34	—	
	a Cheadle	646	55.8	41.1	48.5	+1.7	89	Aug. 9th	22	Feb. 1st	—	—	126	23.8	-9.0	0.74	June 17th	161	—	—	—	—	
7. ENGLAND, N.W.	a Bawtry	65	57.8	41.8	49.8	+1.7	94	Aug. 9th	16	Feb. 1st	—	—	—	18.2	-5.7	1.47	June 24th	156	—	—	—	—	
	a Workop	56	58.2	41.5	49.9	+1.9	94	Aug. 9th	16	Feb. 1st	49.3	49.3	123	19.3	-6.2	1.13	June 24th	160	1438	+186	33	+5	
	a Mayfield (Staffs.)	374	56.2	39.9	48.1	—	92	Aug. 9th	13	Feb. 1st	—	—	82	25.8	—	0.86	Dec. 14th	167	—	—	—	—	





**1911.**  
**RAINFALL**

SCALE OF TINTS.

100	80	60	50	40	30	25	20
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TABLE B—continued.—ANNUAL SUMMARY of the OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE at other STATIONS included in the MONTHLY SUMMARIES for the YEAR 1911.

DISTRICT.	STATION.	Height of Gauge above M.S.L.	AIR TEMPERATURE.								Earth Temperature		Grnd Frost.	RAIN AND OTHER FORMS OF PRECIPITATION.				BRIGHT SUNSHINE.				
			Mean of		Mean of A and B.	Diff. of Mean from Normal.	Absolute Maximum and Minimum.				At 1 foot depth.	At 4 feet depth.		No. of Nig'ts	Total Fall.	Diff. from Normal.	Most in a day.		Number of Days.	Total in Hours.	Diff. from Normal.	Per Cent.
			A	B			Max.	Date.	Min.	Date.			In.				In.					
8. ENGLAND, S.W.	p Aberystwyth	59	56.4	46.4	51.4	—	91	Aug. 13th	24	Feb. 1st	—	—	—	38.0	—	1.38	Sept. 12th	180	1797	—	41	—
	Haverfordwest	93	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1941	—	44	—
	Tenby	79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1879	+ 193	43	+ 5
	Port Talbot	179	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1695	—	38	—
	Forest of Dean	200	—	—	—	—	—	—	—	—	—	—	—	29.6	—	1.76	Dec. 14th	148	—	—	—	—
	"	900	—	—	—	—	—	—	—	—	—	—	—	33.2	—	1.44	Dec. 14th	161	—	—	—	—
	p Cardiff	203	57.3	43.8	50.6	+ 0.8	97	{ July 29, } { Aug. 13 }	23	Feb. 1st	51.0	51.3	59	37.6	- 5.1	1.28	Feb. 27th	187	1868	—	42	—
	a Swansea	24	58.1	46.3	52.2	—	87	Aug. 13th	25	Feb. 1, 2	53.3	53.1	84	45.2	—	0.97	April 1st	164	1751	—	40	—
	a Shaftesbury	722	56.6	42.9	49.8	+ 1.9	91	Aug. 9th	23	Apr. 6th	51.1	—	—	26.7	- 6.8	1.12	May 10th	160	—	—	—	—
	a Arlington	613	56.7	43.4	50.1	+ 1.7	87	{ July 29, } { Sept. 8 }	22	Feb. 2nd	—	—	—	53.4	+ 0.4	1.85	Feb. 27th	166	—	—	—	—
	a Cullompton	202	59.7	42.9	51.3	+ 1.8	90	July 8th	21	Feb. 2nd	52.9	—	68	35.0	- 0.7	1.24	Aug. 5th	200	1728	+ 240	39	+ 5
	Torquay	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2112	+ 381	48	+ 9
	a Weymouth	21	58.9	46.8	52.9	—	87	Aug. 10th	27	{ Feb. 2nd, } { Apr. 6th }	—	—	—	24.8	—	1.10	Nov. 11th	151	2090	—	47	—
	p Paignton	11	58.2	45.9	52.1	—	83	July 14th	25	Feb. 12th	—	—	—	34.0	—	1.39	Dec. 6th	159	2003	—	45	—
	p Sheepstor	749	56.7	40.7	48.7	—	85	{ July 8, } { Sept. 7 }	21	Apr. 8th	—	—	—	65.9	—	2.00	Dec. 6th	195	—	—	—	—
Salcombe	300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2075	—	47	—
a Teignmouth	19	58.6	46.9	52.8	—	83	July 14th	28	{ Jan. 15, Feb. } { 3, Apr. 6 }	—	—	32	28.8	—	1.06	Dec. 6th	142	1925	—	44	—	
a Fowey	51	58.9	44.7	51.8	—	80	{ June 9, July } { 15, Sept. 5 }	25	Feb. 2nd	—	—	—	30.7	—	0.96	Oct. 26th	164	1995	—	45	—	
a Penzance	54	58.6	48.5	53.6	—	84	July 8th	29	Apr. 6th	—	—	—	40.4	—	1.37	Aug. 4th	202	1933	—	44	—	
9. IRELAND, N.	p Dunfanaghy	54	—	—	—	—	79	Aug. 14th	26	Feb. 1st	—	—	—	39.3	—	1.19	Aug. 28th	227	—	—	—	—
p Dublin (Glasnevin)	67	56.9	42.7	49.8	+ 1.3	84	July 13th	21	Feb. 1st	—	—	120	24.9	- 3.9	1.16	July 29th	194	—	—	—	—	
a Kingstown	42	56.6	45.6	51.1	—	78	July 21st	29	Jan. 19, 21	—	—	—	21.7	—	1.04	Dec. 14th	168	1736	—	39	—	
p Clongowes Wood College	245	56.2	40.1	48.2	—	85	July 13th	19	Feb. 1st	—	—	—	29.7	—	1.26	Nov. 13th	214	1650	—	37	—	
a Mountmellick	233	56.6	41.5	49.1	—	87	July 13th	20	{ Jan. 4th } { Feb. 1st }	—	—	—	40.8	—	1.32	Oct. 29th	202	—	—	—	—	
p Newcastle (Co. Wicklow)	256	55.7	43.4	49.6	—	81	July 7th	26	Jan. 20th	—	—	—	36.4	—	1.39	Dec. 14th	183	—	—	—	—	
10. IRELAND, S.	a Kilkenny	212	57.1	42.2	49.7	+ 0.6	88	July 13th	23	Feb. 1, 2	—	—	—	36.3	+ 3.0	2.21	July 29th	216	—	—	—	—
a Cahir	199	57.4	42.4	49.9	+ 0.7	88	July 13th	21	Jan. 4th	—	—	—	42.3	—	1.94	July 29th	210	—	—	—	—	
a Foynes	108	56.9	44.3	50.6	+ 1.2	84	July 13th	24	Feb. 2nd	—	—	—	—	—	—	—	—	—	—	—	—	
a Ballinacurra	34	57.4	43.9	50.7	—	86	July 14th	26	Feb. 2nd	—	—	—	37.7	—	1.52	Sept. 25th	178	1699	—	39	—	
11. ENGLISH CHANNEL	a Guernsey (Villa Carey)	180	58.6	48.2	53.4	+ 1.6	80	Sept. 8th	29	April 6th	—	—	—	35.4	- 2.2	1.37	Oct. 27th	182	2121	+ 241	48	+ 5

NOTES ON THE STATISTICAL TABLES.

**Hours of Observation.**—The following types are used to indicate the hours of observation at Stations included in Table A:—Clarendon, Normal Climatological Stations—I, 9 a.m. [II, 3 p.m.], III, 9 p.m. Black Capitals, telegraphic reporting normal climatological stations—I, 7 a.m., II, 1 p.m., III, 9 p.m. Roman, telegraphic reporting stations—I, 7 a.m., [II, 1 p.m.], III, 6 p.m. Italic, auxiliary climatological stations—I, 9 a.m. only, at Balmoral, Colmonell and Ventnor 3 p.m. also. The summaries are based on observations made three times a day wherever the data are available, except in the case of the element pressure (see below). At stations shown in clarendon type the maximum and minimum temperatures are read at 9 p.m.; at the remaining stations these observations are made at I. In Table B the letters a and p indicate whether the readings of the maximum and minimum are taken at the hours of morning or evening observation.

**Barometer.**—The correction for latitude has not been applied to the readings quoted in the Tables. It is applied to the readings at sea level from which the chart showing the mean monthly distribution of pressure is prepared. The values given in the tables are for station level. The values printed are (1) for stations shown in clarendon type, the means of observations at 9 a.m. and 9 p.m.; (2) for stations shown in Capitals, the means of observations at 7 a.m., 1 p.m., 9 p.m.; (3) for stations shown in Roman type, the means of observations at 7 a.m. and 6 p.m.; (4) for stations shown in italic type, the means of observations at 9 a.m. The column headed C gives the correction for diurnal variation required to reduce the means of observations at fixed hours to true diurnal means, based on the analysis of the values obtained at the four observatories for the period 1871-1905. The difference from normal is based upon the 7 a.m. readings only, except in the cases of Kew, Greenwich, Aberdeen, Valencia and Falmouth (see below).

**Rainfall.**—The amounts are those for the 24 hours commenced at the time of morning observation.

**Hygrometer.**—At certain stations the vapour pressure and the relative humidity are the results obtained from the daily values. These are entered in clarendon type. At other stations the calculations are made from the monthly means of the dry and wet bulb readings.

**Weather Phenomena.**—The number of days of Rain, Snow, Hail, Thunderstorm, Fog, Ground Frost, and Gale, are counted irrespective of the hours at which the phenomena occur. Except in the cases of rainfall (see above) and ground frost the day is the civil day. A day is reckoned as a day of "clear sky," if the mean of the estimates of the "amount of cloud" at the fixed hours of observation is less than 2, and as an "overcast" day if the mean is greater than 8. Days of Ground Frost.—A day is counted as a "Day of Ground Frost" if it follows a night on which the minimum has sunk to 30° or less.

**Wind Summaries.**—The results given under wind direction, and the number of observations of calms and of fresh or strong wind, are based on the observations at fixed hours. At Deerness, Aberdeen, Valencia, Falmouth, Kew, Glasgow, Stonyhurst and Armagh the wind observations are based on the records of a standard Robinson anemometer (factor 2.2). Velocities of between 13 and 38 miles in the hour have been entered as "fresh or strong winds," velocities of 39 miles in the hour, or above, as gales. At Brighton, Plymouth and Southport the equivalent values are obtained from a Dines Pressure Tube Anemometer.)

**Averages.**—The normal averages used for stations are—Pressure, Temperature, and Rainfall for the 35 years 1871-1905; Bright Sunshine for the 25 years 1881-1905. The values are published in Appendix III. to the Weekly Weather Report for 1906. For Greenwich and Oxford, averages for longer periods are used. (See Notes in Monthly Weather Reports for 1908.) Monthly averages of pressure at telegraphic reporting stations for the epoch 7 a.m. are published in Appendix I. to the Daily Weather Report. In order to render these averages comparable with the data for the present month, a correction, based on the results for the four observatories as published in "Hourly Readings at the Observatories under the Meteorological Council," has been applied to each of them before the figures given in the column headed "Barometer—Difference from Normal" were computed.

**Aberdeen, Falmouth, Kew, Valencia, Oxford, Greenwich.**—The figures quoted in the second line assigned to these observatories in the columns for Barometer and Mean Temperature are the true daily means computed from the hourly tabulations of the traces of the photographic recording instruments. For Kew, Falmouth, Aberdeen and Valencia the divergences of the means of the readings at 9 a.m. and 9 p.m. from their normal averages are also given.

**Royal Observatory, Greenwich.**—The earth temperatures are taken at a depth of 3 ft. 2 ins. The daily rainfall amounts are those for the 24 hours comprising the civil day. The number of days in the year which were persistently overcast from midnight to midnight was 11, the number of persistently cloudless days was 1, the number of persistently foggy days was 0.

**Mean Values for Districts.**—The stations used in the Weekly Weather Report for the computation of "district values" of rainfall and temperature are distinguished by the sign ¶, those used for the computation of "district values of bright sunshine" by the sign §. These stations are distributed between Tables A and B. The monthly mean values for districts given in this Report for maximum, minimum and mean temperature, duration of bright sunshine, number of rain days and amount of rainfall, are computed from the data for these "representative" stations. The mean temperature for districts is computed in the manner shown in the preface to this and previous volumes of the Weekly Weather Report. The monthly mean values for districts for "amount of cloud" are computed from the data for all stations included in Table A. The extreme values of the various elements in each district are printed in distinctive type. In the lines devoted to district values, the columns referring to absolute highest and absolute lowest temperature and the maximum amount of rainfall in a day contain the extreme values for the district at any station included in either table of the report. The averages for districts with which the current values are compared are for the 25 years 1881-1905, as in the case of the corresponding values published in the Weekly Weather Report.

**Meteorological Societies.**—Information for stations marked ¶ is supplied by the Royal Meteorological Society, and that for stations marked § is supplied by the Scottish Meteorological Society. Stations marked S are in connexion with the Scottish Meteorological Society and those marked M with the Royal Meteorological Society well as with the Meteorological Office.

all parts of the kingdom were affected, in some cases noted as severe or terrific, causing much destruction of live stock and farm produce in Wiltshire on the 10th; structural and other damage in and around London on the 11th and 13th; and of farming stock at Kirkby Lonsdale on the 14th. In places the storms brought little or no rain, and at Sheepstor there were rainless thunderstorms on three successive days. Between MAY 25th and JUNE 4th severe storms were felt, mostly in English districts. During one in the night of the 25th-26th the barometer record at Epsom showed 1,797 flashes of lightning in 6 hours 50 minutes, the largest number in a minute being 22, in 5 minutes, 98, and in one hour, 581. The great storm of MAY 31st visited a wide area in England and extended into southern Scotland. In some of the southern counties it was of terrific violence, with torrential rain locally, rainless or nearly so in places. It burst over Epsom as the vast concourse of visitors to the Derby began to disperse. In 15 minutes there were 159 flashes of sheet and fork lightning; in 50 minutes there was 2½ in. of rain; and within a radius of 3 miles from the course three persons were killed, 14 injured, 4 horses killed, and 3 hayricks fired. On JUNE 1st Devon and Cornwall suffered from a very severe storm of thunder, lightning, rain and hail, many cattle being killed, and much other damage being done. At Fortrose, Ross-shire, on the same day, there was a terrific storm lasting 40 minutes, which produced only 0.1 in. of rain. The storms round Midsummer presented no unusual features, and it was not until JULY 28th that southern and eastern England had a sharp visitation, which was of excessive violence over some parts of the Metropolis. It was the prelude to the greatest thunderstorm of the year, which broke over the whole of England and Ireland on the 29th, while the only record in Scotland was thunder only at Kilmarnock. Rain fell heavily in many districts, railway traffic was suspended on two Irish lines, and a remarkable dust storm was experienced over South Wales—coming from the Bristol Channel—and in several of the southern English counties, as far east as Kent, while a severe line squall swept across the country from south-west to north-east, an unusual tidal disturbance was observed at some places. (Detailed discussions of the storms of May 31st and July 29th will appear in a future issue of the *Quarterly Journal* of the Royal Meteorological Society.) On the 30th the storm extended northward across Scotland, being severe and prolonged in Orkney and Shetland, where, however, the rainfall was very slight, 0.02 in. at Deerness, and 0.03 in. at Sumburgh Head. The experiences of the remaining five months of the year call for no special comment.

5. *Dry Periods.*—A long succession of rainless spells marked the year, dry weather being in the ascendant through a period of more than nine months (41 weeks). A little rain fell in the first ten days of JANUARY, then a drought set in over a considerable area, lasting more than three weeks in many localities, four weeks in Wicklow and at Mayfield (Staffs.), 29 days about Bath, the Forest of Dean, Birmingham and Colwyn Bay, and 37 days, JANUARY 12th to FEBRUARY 17th, at Dursley (Glos.). From about MARCH 13th a second drought occurred in the northern and north-western districts, lasting 29 days at Graythwaite (Lancs.) and 30 days at Gruline (Mull). Towards the end of March a third set in over south-eastern England, 19 rainless days at Brandon, Suffolk; 20 days at Beaconsfield. The fourth commenced early in MAY in the west of England, and held for three weeks or longer; 23 days at Sheepstor, and 26 at Fowey. About the middle of the month it spread over a great part of the kingdom, and was maintained through between three and five weeks, rainless for 30 days at Killiney, 31 at Barnstaple, 32 at Brighton and Eastbourne, and 34 at Newcastle, Wicklow. On the last day of JUNE or early in JULY the sixth dry spell set in over southern England, unbroken for four weeks in many localities, 29 days at Fowey, Torquay, Teignmouth, Portland Bill and Weymouth, 31 days at Bath. Several stations returned less than 0.1 in. of rain for the whole month. The seventh, and last, drought of the series was felt mainly over south-eastern England from the opening days of AUGUST, numerous stations returning no rain on 18 consecutive days, New Barnet on 19 days. There was no absolute drought in SEPTEMBER, but the month was of a dry character, and in various districts there were 10 to 12 rainless days in succession. Until about October 19th the rainfall continued to be deficient in frequency and in quantity. With the break-up of the droughty conditions the weather became extremely wet for the remainder of the year.

6. *Temperature.*—One of the most striking features of the year was the persistency of mildness in all seasons, and in particular the intense heat of the summer. Temperatures of 80° to 85° occurred in various localities between MAY 27th and JUNE 9th, but on July 5th a remarkable hot spell set in, and it was maintained, with some variations, through ten weeks. In Ireland and Scotland the maximum heat was attained on July 12th and 13th, 87° at Limerick and Mountmellick, 88° at Cahir, Kilkenny, Killarney, Balmoral and Colmonell, and 89° at Crieff. In England 90° was exceeded on several days, the hottest being AUGUST 9th, 97° at Camden Square, London, Wokingham and Hillington, 98° at Raunds, and 100° at Greenwich (in the Glaisher screen; the value recorded in the Stevenson screen was 97°), the highest ever recorded in this country. During a period of 70 consecutive days, JULY 5th to SEPTEMBER 12th, the mean of the daily maximum readings at Greenwich was 82°, or 9° above the 65 years' average for those days; the mean of the night minima being 56°, an excess of 3°. Temperature rose to 80° and upwards on as many as 42 days, and 90° and upwards on eight days. In the course of the year no station in the kingdom escaped frost, but there was comparative freedom from frosts of any great severity, the sharpest occurring over the country generally on FEBRUARY 1st or 2nd, when the shade minimum was below 20° at a considerable number of stations, 13° at Wokingham,

Mayfield and Llangammarch Wells; 11° at Balmoral, and 10° at Garforth. Much damage to vegetation was occasioned in several districts by a frost in the middle of JUNE, the shade temperature descending to between 28° and 31° in places. Similar damage was caused by severe cold on the afternoon of APRIL 5th, when the temperature was from 26° to 32° at several southern stations. The range of temperature for the year exceeded 70° over a great part of the country, 80° at Cambridge and Marlborough, 81° at Kingston-on-Soar and Rugby, and 84° at Raunds and Wokingham. At some coast stations it was less than 50°, at Baltasound 43°, and at Donaghadee 42°. The mean temperature was above the average, by 2° or more in several localities, just over 2½° at Cheltenham and Westminster. (For distribution of Mean Temperatures, see Map 3, p. cxxxv.)

7. *Bright Sunshine.*—Everywhere there was an excess of insolation, the percentages of duration ranging from 101 at Scilly, 103 at Phoenix Park, Dublin, 105 at Strathpeffer, and 108 at Deerness to 127 at Bunhill Row, London, 131 at Blackpool, and 139 at Westminster. The smallest total was 1,046 hours at Fort Augustus. Many southern stations exceeded 2,000 hours; Bournemouth, 2,142; Felixstowe, 2,146; Hastings, 2,147; and Eastbourne, 2,158 hours, this last being an excess of 419 hours, while Blackpool had an excess of 434, hours and Westminster of 448 hours. The SUMMER MONTHS were exceptionally brilliant. At Westminster, for instance, the total duration for the six months, April to September, was 1,326 hours, or 148 per cent. of the normal, the excess amounting to 433 hours. (For distribution of Bright Sunshine, see Map 4, p. cxxxv.)

8. *Fog.*—As in several previous years fog was again infrequent over the inland districts, and very rarely presented features worthy of special mention on the part of observers. Lincoln was visited by a dense, black fog on JANUARY 19th, regarded as the thickest seen in the city for over 20 years. The last week of MARCH was rather foggy generally, and from the 28th to 31st was dense over several counties. There was an increasing tendency for land fogs in the closing days of DECEMBER. Sea fogs along the coasts were neither so frequent nor so dense as in ordinary years, and no great shipping casualties due to fog were reported.

9. *Barometer.*—The mean pressure for the year was a little above the normal all round, by 0.02 in. at Dungeness and Portland Bill, 0.06 in. at Stornoway and Leith. The values indicated a low pressure area off the south-west of Iceland, below 29.7 in., increasing to 30 in. over southern England and slightly higher over France. In the south of England the highest pressure occurred on JANUARY 18th, 30.82 in. at Jersey and Newquay; in all other districts on FEBRUARY 1st, 30.85 in. at Donaghadee, and 30.86 in. at Castlebay. The lowest readings were 28.29 in. at Sumburgh Head on FEBRUARY 23rd, and 28.09 in. at Lerwick on NOVEMBER 5th. For the year the range of pressure varied between 2 in. in the south-western districts and 2½ in. at Stornoway.

10. *Floods.*—Consequent upon very heavy thunder rains on MAY 13th, mountain streams in Ayrshire and Wigtownshire became raging torrents, which damaged a railway, washed away a railway bridge, caused several landslips, and uprooted trees. In Northumberland the Hareshaw Burn overflowed, destroyed some houses and shops, flooded many others, and washed away a road. At Bromyard, Herefordshire, the Frome was in flood on the 26th, after a rainfall of 1.5 in. in eight hours. Next day Devon and Cornwall suffered from the flooded state of the rivers, following torrential thunderstorm rains. The western suburbs of London were flooded by the great downpour on the evening of the 31st, the railway lines being submerged in places, and the train services delayed. There was a great flood in the valley of the Bandon on NOVEMBER 15th. At Dunmanway 3.75 in. of rain had fallen in 40 hours. The persistent and heavy rains of DECEMBER caused floods in many districts—in Cumberland on the 6th and 10th, Herefordshire on the 15th, and subsequently extensive and destructive ones along the Shannon and in South Wales, more especially in the Swansea and Neath Valleys. There was also much flood water in the Nen (Northants) and Thames Valleys.

11. *Earthquake.*—At Mungret College, Limerick, an earthquake shock was recorded from AUGUST 16th, 11.1 p.m., to 17th, 1.20 a.m. (See the *Geophysical Journal* for records of seismic disturbances.)

12. *Aurora Borealis.*—Auroral displays were witnessed occasionally in the first three and the last three months, but as a rule they seem to have been of an ordinary character. At Baltasound, on JANUARY 24th, there was a very fine display, showing red, green and yellow streamers. On AUGUST 23rd it was very bright green at Sumburgh Head, and on DECEMBER 12th a brilliant display was reported at Bidston Observatory, Liverpool.

13. *Various.*—Buxton was visited by a curious gloom and darkness after midday on APRIL 2nd. Southport experienced a dust storm from S. by E. on April 19th. At Saffron Walden, from 5 p.m. to 6 p.m. on AUGUST 7th, Aquila, Vega and about 20 other stars were visible in a cloudless sky, and with brilliant sunshine. On OCTOBER 31st, at 3 p.m., there was great darkness at Norwich.

14. *Observations in the Upper Air.*—In the Weekly Weather Report details have been published of 103 ascents of kites or captive balloons, 39 pilot balloons, and 58 registering balloons. Of the latter 49 reached the advective region. The greatest heights attained were, with kites, 1,550 metres from Pyrton Hill on January 24th and December 4th; with pilot balloons, 16 kilometres from Pyrton Hill on June 8th; and with registering balloons, 25 kilometres from Manchester on August 3rd. The lowest temperature observed was 202° A. or — 71° C. at 13 kilometres on January 17th, and at 12.3 kms. on February 1st, in ascents from Pyrton Hill; this is the lowest hitherto recorded in the region of the British Isles. A summary of the results will be published in a special supplement.