

FOR OFFICIAL USE.

M.O. 302.

AIR MINISTRY.

METEOROLOGICAL OFFICE.

THE
MONTHLY WEATHER REPORT

FOR THE YEAR

1928

Published by the Authority of the Meteorological Committee.



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THE MONTHLY WEATHER REPORT, 1928

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PREFACE.

Up to 1921, the Monthly Weather Report was issued as a supplement to the Weekly Weather Report and included in the subscription to the latter. It is now treated as a separate publication. The Report gives a résumé of observations from stations in the British Isles, 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 former "Monthly Summary" to the Weekly Weather Report. The meteorological data in the Quarterly Reports of the Registrar-General for England and Wales, for Ireland, and those given in the Annual Report of the Registrar-General for Scotland, are compiled from data used in the Monthly Weather Report. Additional information as to rainfall is to be found in the annual volumes of "British Rainfall." Particulars of the methods adopted in taking the observations are given in the *Meteorological Observer's Handbook*, M.O. 191.

CHANGES IN 1928.

No changes of a general character were made in the Report for 1928.

INFORMATION FOR PREVIOUS YEARS.

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. The Monthly Weather Report commenced in 1884. The gap is bridged for telegraphic stations by a supplement to the Daily Weather Report and for other stations by tables in "Observations at Stations of the Second Order." A brief history of the development of the Monthly Weather Report will be found in the 1915 volume. Only the changes made in later years need be specified here.

In 1916, the absolute scale of temperature was introduced for the District Values of Table I, and in the text of the general description of the weather. For the first few months the Fahrenheit equivalents were given in brackets, subsequently a diagram to facilitate conversion was printed.

A table of sea temperatures was printed with the introduction to the Monthly Weather Report in each of the years 1916-1919.

From the beginning of 1917 the normals for the period 1881-1915 were taken into use for temperature, rainfall and sunshine. Table XVII (wind-rose data) was started in the Annual Summary for that year.

In 1918 the practice of indicating wind direction in Table II by the departure from north in degrees was adopted, and at the same time the headings of this table were changed so as to show that the wind distribution was reckoned according to speed and not according to the Beaufort equivalents, which are only relevant for an anemometer with a standard exposure.

A new table, Table V, "Rainfall at certain additional stations," was introduced at the beginning of the year 1920, but was discontinued from 1923, as the corresponding data are printed in the "Meteorological Magazine." Subsequently observations of river temperature (now Table III a) and of duration of starlight, of fog, and cloud, at Greenwich (now Table III b) were introduced. The practice of giving the terminal hours for the extremes of temperature and rainfall was also adopted in 1920.

In 1921 mean maximum and minimum temperatures at certain stations were, as from March or April, referred to intervals of less than 24 hours' duration in the day and night respectively. Particulars were indicated in Table III. During the year the definition of fog was adopted which prescribes that the horizontal range of vision is less than 1,100 yards.

In 1922 all temperatures in Table I were expressed in Fahrenheit degrees, instead of in the absolute scale.

In 1923 Table IV provided for summaries of visibility at each of the fixed hours of observation, and for separate summaries of wind at each hour of observation instead of a single summary from all the hours combined. Pressure at station level was omitted from Table IV but included in Table III (d) for stations at heights exceeding 600 feet. The summaries of cloud amount were amplified. Notes on the Tables were collected together and printed on the last page of each issue.

In 1924 the stations used for computing current district-values of earth temperature for Table I were limited to those for which normal-values were available.

In 1925 the data up to then printed in Tables III (a) and III (d) were incorporated in Tables III and IV, and summaries appeared in Table III from 20 new stations in connexion with the agricultural-meteorological scheme of the Ministry of Agriculture and Fisheries.

In 1926 the publication of maximum and minimum temperature referring to the intervals 9h-17h and 17h-9h respectively was discontinued: a symbol was introduced in the appropriate issues to indicate stations for which the possible record of sunshine was reduced by obstructions of over 3° by more than 5 per cent., the possible record being defined as the time during which the sun is at an altitude of over 3°. "Hygrometrical Tables" (M.O. Publication 265) were used for the determination of vapour pressure and relative humidity, previously these quantities were obtained from tables which were based on Glaisher's factors.

The following list gives the dates of various series in which monthly values of meteorological elements for British stations are incorporated:—

International Form B: published in "Observations at Stations of the Second Order" ..	1873—1907
and in "Daily Readings at Stations of the First and Second Orders": Annual Supplement	1914—1921
Monthly Weather Report (with Annual Summary from 1905)	1884—date
Weather Summaries: Working forms preserved at M.O.	1876—1902
International Form B: Working forms preserved at M.O.	1902—date
For Royal Engineers' Stations: Abstract by Col. Sir H. James, London 1865	1853—1858
For Observatories: Quarterly Weather Report 1869—1880; Hourly Readings 1881—1913	1869—1913
For Observatories: Monthly Summaries of Hourly Readings published in Hourly Values from Autographic Records	1914—1922
For Observatories: Hourly readings in M.S. preserved at M.O.	1914—1921
For Observatories: Hourly readings, published in "Observatories' Year Book" 1922 to 1925 (1927 in the press)	
For Telegraphic Stations; Q.W.R. 1876—1880; D.W.R. Supplement 1881—1888	1876—1888
For Royal Meteorological Society Stations: Meteorological Record	1881 1911
For Scottish Stations: Journal of the Scottish Meteorological Society	1856—1919
Registrar-General's Returns (England)	1849—date
Registrar-General's Returns (Scotland)	1856—date
Registrar-General's Returns (Ireland)	1864—date
British Rainfall	1860—date

GENERAL ARRANGEMENT OF THE REPORT.

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

a.—General remarks on the Weather over the British Islands, under a brief heading descriptive of the special characteristics of the month.

b.—Table I.—Summaries for the twelve Districts of the temperature of the air, of deviations from normal of earth temperature, of rainfall, and of duration of bright sunshine, based on observations at the "district value" stations (*See below.*)

The stations from which the district values of temperature and rainfall are computed are indicated in Table III by the symbol ¶ and the corresponding stations for sunshine by the symbol §. A list of these stations is printed below.

c.—Table II.—Summary of autographic records of wind.

All the records are obtained from instruments of the Dines Pressure Tube type except where otherwise stated.

d.—A plate of four maps showing :—

i. The monthly distribution of pressure and winds based on observations at telegraphic reporting stations ; also the normal distribution of pressure for the month for the period 1881–1915. Isobars are drawn for intervals of 2 millibars or 1 millibar.

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 in hours per day.

e.—A full page map showing by means of isohyetal lines the distribution of the month's precipitation. These maps are based on data from nearly 700 stations.

f.—Table III, giving summaries of the records of extreme and mean air temperature and of earth temperature at 1 foot and 4 feet, rainfall and sunshine, and of weather observations. In the case of air temperature, rainfall, and sunshine, differences from normal are given when available. The summaries refer to individual stations.

g.—Table III (a).—Temperature of the river Derwent at Belper, and of the river Trent at Attenborough near Nottingham.

h.—Table III (b).—Royal Observatory, Greenwich.—Observations of duration of starlight and of cloud and fog by day.

i.—Table IV, giving summaries of the observations of pressure, temperature, humidity, cloud, visibility, and wind, made at set hours. The hours, not being the same for all stations, are indicated in the Table.

j.—Notes on the Tables.

Tables III and IV together include the items comprised in the international form of monthly climatological summary, the Form B. of the Report of the International Meteorological Committee, 1874 ; and they give, in addition, information regarding the duration of bright sunshine, earth temperature at 1 foot and 4 feet (from 1906), the number of observations of winds of force 4–7 on the Beaufort Scale (from 1906), of winds of force 1–3 (from 1923), the number of days of fog (from 1906), the number of observations of different degrees of visibility (from 1923), the number of days of ground frost (minimum temperature on the grass, 30·4°F. and below (from 1908), and the pressure at mean sea level (from 1912).

DISTRICT VALUE STATIONS, 1928.

The following are the stations, summaries from which are used for the computation of the district values of temperature, rainfall, earth temperature and sunshine, Table I :—

TR, Temperature and Rainfall : E1, Earth Temperature at 1 foot : E4, Earth Temperature at 4 feet : S, Sunshine

DIST.	STATION.	ELEMENT.	DIST.	STATION.	ELEMENT.	DIST.	STATION.	ELEMENT.
0	Deerness ..	TR - - S	3	Cambridge ..	TR E1 E4 S	5	Bournemouth ..	- E1 E4 -
	Fort Augustus ..	TR - - S		Clacton ..	TR E1 E4 S		Brighton ..	- - E4 -
	Inverness ..	TR - - S		Lowestoft ..	- E1 E4 -		Camden Square ..	- E1 E4 -
	Lerwick ..	TR - - S		Rothamsted ..	TR - - S		Dover ..	- E1 E4 -
	Stornoway ..	TR - - S		Tottenham ..	TR - - S		Eastbourne ..	- E1 E4 -
1	Aberdeen ..	TR - - S		Yarmouth ..	TR E1 E4 S		Grayshott ..	- E1 - -
	Dundee ..	TR - - S	4	Belvoir Castle ..	- - E4 -		Margate ..	TR E1 E4 S
	Edinburgh ..	TR - - S		Birmingham ..	TR E1 E4 S		Marlborough ..	TR - - S
	Marchmont ..	TR - - S		Bradford ..	- E1 E4 -		Richmond	
	Nairn ..	TR - - S		Bromyard ..	- E1 E4 -		(Kew Obs.)	TR E1 E4 S
6	Dumfries ..	TR - E4 S		Buxton ..	- E1 E4 -		St. Leonards ..	TR E1 E4 S
	Eskdalemuir ..	TR - - S		Coventry ..	- E1 E4 -		Southampton ..	TR - - S
	Ford ..	TR - - S		Harrogate ..	TR E1 E4 S		Tottenham ..	- - E4 -
	Kilmarnock ..	TR - - S		Huddersfield ..	- E1 E4 -		Tunbridge Wells ..	- E1 - -
	Rothsay ..	TR - E4 S		Meltham ..	- E1 - -		Wisley ..	- E1 E4 -
2	Cockle Park ..	TR E1 E4 S		Nottingham ..	TR E1 E4 S	7	Aspatia ..	TR E1 E4 S
	Cranwell ..	TR - - S		Oxford ..	TR - - S		Bolton ..	- E1 E4 -
	Durham ..	TR - - S		Raunds ..	- E1 - -		Burnley ..	- E1 E4 -
	Hull ..	- E1 E4 -		Ross-on-Wye ..	TR - - S		Darwen ..	- E1 E4 -
	Lincoln ..	- E1 E4 -		Sheffield ..	- E1 E4 -		Holyhead ..	TR - - S
	Rounton ..	- E1 - -		Strelly ..	- E1 - -		Lancaster ..	- E1 E4 -
	Scarborough ..	TR - - S		Sutton Bonington ..	- E1 - -		Manchester (City)	- E1 E4 -
	West Witton ..	- E1 E4 -		Worksop ..	- E1 E4 -		Sealand ..	TR - - S
	York ..	TR E1 E4 S					Southport ..	TR E1 E4 S
							Stonyhurst ..	TR - - S

Dist.	STATION.	ELEMENT.	Dist.	STATION.	ELEMENT.	Dist.	STATION.	ELEMENT.
8	Bath	TR E1 E4 S	9	Armagh	TR E1 E4 S	10 <i>cont.</i>	Dublin (City) ..	TR - - -
	Cardiff	- E1 E4 -		Birr Castle	TR - - -		" (Phoenix Pk.)	- - - S
	Cullompton	TR E1 - S		Blacksod Point..	TR - - -		" (Trinity Coll.)	- E1 E4 -
	Falmouth	TR - - S		Malin Head	TR - - S	Roches Point ..	TR - - -	
	Newquay	- E1 - -		Mallarany	- - - S	Waterford	TR - - -	
	Plymouth	- E1 - -	Markree Castle ..	TR E1 E4 S				
	Rhayader	TR - - S			11	Guernsey	TR E1 E4 S	
	St. Ann's Head	TR - - S	10	Ballinacurra ..		- - - S	Jersey	TR - - S
Swansea	- E1 E4 -	Birr Castle	TR E1 E4 S	Scilly		TR - - S		
			Cahirciveen	- - - S				
			(Valentia Obs.)	TR - - S				

Compared with 1927 the following changes have been made.*

Dist.	Station.	1927.		1928.		Dist.	Station.	1927.		1928.	
		District Value for						District Value for			
0	Deerness	- - - S	TR - - S	5	Tunbridge Wells ..	TR E1 - S	- E1 - -				
	Inverness	- - - S	TR - - S		Wisley	TR E1 E4 S	- E1 E4 -				
	Lerwick	TR - - -	TR - - S								
1	Aberdeen	TR - - S	TR - E4 S	6	Dumfries	TR - E4 -	TR - E4 S				
	Dundee	- - - S	TR - - S		Eskdalemuir	- - - S	TR - - S				
	Edinburgh	- - - S	TR - - S		Kilmarnock	TR - - -	TR - - S				
2	Lincoln	TR E1 E4 -	- E1 E4 -	7	Holyhead	TR - - -	TR - - S				
	Rounton	TR E1 - -	- E1 - -		Sealand	TR - - -	TR - - S				
					Southport	- E1 E4 -	TR E1 E4 S				
4	Ross-on-Wye ..	- - - S	TR - - S	8	Cardiff	TR E1 E4 -	- E1 E4 -				
	Sheffield	- E1 E4 S	- E1 E4 -		Newquay	- E1 - S	- E1 - -				
	Workop	TR E1 E4 S	- E1 E4 -		Plymouth	TR E1 - S	- E1 - -				
				9	Malin Head	TR - - -	TR - - S				
					Mallarany	- - - -	- - - S				

LIST OF STATIONS.

A list of the climatological stations of Tables III and IV and of the anemograph stations of Table II is given below. For additional information regarding the anemograph stations, reference should be made to the Annual Summary, p.190.

In the Tables of the Monthly Weather Report the stations are arranged according to Districts and Counties. In the list printed herewith the alphabetical order is adopted. The latitude and longitude of each station are given, but not the height, as that is shown in the monthly issues.

Classification of stations.—Stations are classified as follows :—

- I. Normal Meteorological Observatory ; Station of the First Order.—Continuous records or hourly readings of pressure, temperature, wind, sunshine, and rain, with eye observations of the amount, form, and motion of the clouds, and notes on the weather. The principal " distributive " stations maintained on aerodromes as ancillary to the Royal Air Force or to civil aviation services are included.
- II. Normal Climatological Station.—Daily observations at least twice a day, generally at 9 h. (9 a.m.) and 21 h. (9 p.m.) local time of pressure, temperature (wet and dry-bulb), wind, amount of cloud, and weather, with the daily maximum and minimum of temperature, the daily rainfall, and remarks on the weather. Observations of the range of visibility and records of sunshine are commonly obtained at these stations also. In this category are included all the stations of the second order of the International Classification and a few stations of the third order.
- III. Auxiliary Climatological Station, at which observations similar to those of a normal climatological station are made once a day only, generally at 9 h. (9 a.m.) local time. This category includes most of the stations of the third order of the International Classification.
- T. Telegraphic Reporting Station.—Daily observations are made at 7 h. (7 a.m.), 13 h. (1 p.m.) and 18 h. (6 p.m.) G.M.T., similar in general character to those taken at Normal Climatological Stations, and reported to the Office each day by telegraph. At some telegraphic stations an additional observation is made at 1 h. (1 a.m.) G.M.T. and at a few of these stations there is an additional observation at 21 h. (9 p.m.)

* In addition to the changes shown in this table certain stations are no longer used to give district values for any element.

- II C.W. ; III C.W. Normal Climatological Station or Auxiliary Climatological Station which is also a Crop Weather Station.—Crop Weather stations are stations which participate in the scheme for the investigation of the relationship between weather and crops inaugurated by the Ministry of Agriculture and the Board of Agriculture for Scotland in co-operation with the Meteorological Office.
- II H. ; III H. Normal Climatological Station or Auxiliary Station which is also a Health Resort Station.—These Stations make special observations at 17 h. (5 p.m.) G.M.T. which are reported to this Office by telegram for communication to the newspaper press. Summaries of these special 17 h. (5 p.m.) observations are, however, not published in this volume.
- A. ; II A. ; III A. ; T.A. Anemometer Station (which may also be a Normal Climatological Station, Auxiliary Station or Telegraphic Station) for which summaries are published in Table II (Autographic Records of Wind) of the Monthly Weather Report.

The publications for which the returns are prepared are indicated by the following letters :—

- | | |
|--|--|
| <p>D. Daily Weather Report. Full return.</p> <p>d. Daily Weather Report. Abridged return.</p> <p>W. Weekly Weather Report. Temperature, rainfall, in most cases sunshine, and in some cases ground temperature.</p> <p>w. Weekly Weather Report. Sunshine only.</p> <p>W¹. Registrar-General's Weekly Summary.</p> <p>M. Monthly Weather Report. Table III (Temperature extremes, rainfall and weather) ; and Table IV (Pressure, humidity, &c.).</p> | <p>m. Monthly Weather Report. Table III, not Table IV.</p> <p>μ. Monthly Weather Report. Wind velocity.</p> <p>m₀. Monthly Weather Report. Sunshine only.</p> <p>O. The Observatories' Year Book.—This publication contains hourly values of meteorological and magnetic elements, diurnal inequalities for magnetism and for atmospheric electricity, absolute observations of magnetism and atmospheric electricity, seismological tables, upper air data, etc.</p> |
|--|--|

Normals.—Reference is made to publications of the Office containing average values for long periods by means of the following letters :—

- a. The Book of Normals of Meteorological Elements for the British Isles for Periods ending 1915. Section I.—Monthly normals of mean maximum, mean minimum and mean temperature, of rainfall (for 190 Stations) and of bright sunshine for the 35 years 1881–1915. Section II.—Weekly, monthly, quarterly, and seasonal normals for Districts. Section III.—Maps of the normal distribution of temperature, rainfall and sunshine for the British Isles. Section IV.—Range of variation of temperature and rainfall ; frequency tables for hail, thunder, snow, snow lying and ground frost. Section V.—Monthly normals of rainfall for 578 stations.
- 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 averages 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," 1866–1890. Official publications, Nos. 47 and 114. Monthly averages of rainfall.
- e. " Hourly Values from Autographic Records," Geophysical Section. Monthly normals of pressure, temperature, humidity, rainfall and sunshine for each hour of the day.

Royal Observatory, Greenwich.—Notes with regard to the statistics supplied by this Observatory will be found at the end of this preface.

STANDARDS OF TIME.

The Summer Time Act of 1925 fixes permanently the period in each year during which Summer Time is in force. In 1928 the period adopted was from April 22 to October 6. Between these dates the public clocks were one hour in advance of Greenwich Mean Time. Observers were recommended to make their observations at the same hours by Greenwich Time throughout the year. At nearly all stations this recommendation was adopted, but in a very few cases circumstances made it necessary to adhere to the same hour by clock time. The actual hours of observation are given in Table III of the monthly issues.

The stations at which the hours of observation are referred to Local Mean Time are given in the Notes to the Tables, printed on the last page of each monthly issue. Several Irish stations are included, but when the use of Dublin Time for civil purposes was discontinued in Ireland from October 1st, 1916, other stations advanced their observations by 25 minutes and adopted Greenwich Time.

SEA-TEMPERATURE.

Returns of sea-temperatures are received by the Meteorological Office from certain lightships and coast stations. The average temperatures of the seas round the British Isles for the months of the year 1928 are shown by large figures on the maps in the monthly issues of this report.

G. C. SIMPSON,
Director.

LIST OF STATIONS.

Station.	Dist.	County.	Lat.	Long.	Classification.	Publication.	Normals.	Authority.
Aber (Bangor)	7	Carnarvon	53 14	4 1W.	III C.W	m.	—	Prof. R. G. White, College Farm.
Aberdeen	1	Aberdeen	57 10	2 6W.	I	D,W,W ¹ ,M,O, μ	a, c, d, e.	Assistant-in-Charge, The Observatory, for M.O.
Aberystwyth	8	Cardigan	52 25	4 4W.	III H.	d,m.	a.	Town Clerk.
Aberystwyth	8	Cardigan	52 25	4 3W.	III C.W.	m.	—	Prof. R. G. Stapledon, M.A., Plant Breeding Station.
Achnashellach	0	Ross and Cromarty	57 29	5 16W.	II	m.	—	W. McClymont, for Forestry Commission (Scotland).
Addington	5	Surrey	51 22	0 4W.	III	m.	—	Borough Engineer, Croydon.
Aldergrove	9	Antrim	54 39	6 13W.	I	M, μ .	—	Meteorologist-in-Charge for M.O.
Aldershot	5	Hampshire	51 15	0 46W.	III	m.	—	Medical Officer of Health.
Ampleforth	2	Yorkshire (N.R.)	54 12	1 5W.	III	m.	a.	Rev. E. O. Vanheems, O.S.B.
Arbroath	1	Forfar	56 33	2 35W.	II	m.	d.	J. W. Robertson, for the Town Council.
Ardingly	5	Sussex	51 4	0 5W.	III	m.	—	G. W. E. Loder, J.P., M.A., D.L.
Ardornish	6	Argyll	56 34	5 45W.	III	m.	—	G. Craig Sellar.
Arlington Court	8	Devonshire	51 8	3 58W.	III	m.	a, c, d.	Miss Chichester.
Armagh	9	Armagh	54 21	6 39W.	II	W,M.	a, c, d.	Director, Armagh Observatory, for M.O.
Ascot (Heatherwood)	5	Berkshire	51 25	0 41W.	II	m.	—	Medical Superintendent, Heatherwood Hospital.
Ashburton	8	Devonshire	50 32	3 46W.	III	m.	a.	J. S. Amery.
Aspatria	7	Cumberland	54 46	3 13W.	II	W,M.	a.	Silloth and District Joint Water Board, for M.O.
Attenborough	4	Nottingham	52 55	1 13W.	III	m.	—	Messrs. Granger.
Balbriggan	10	Dublin	53 35	6 10W.	III	m.	—	Capt. E. R. Taylor.
Ballinacurra	10	Cork	51 52	8 10W.	III	w,m.	a.	John H. Bennett.
Balmakewan	1	Kincardine	56 48	2 33W.	A.	μ .	—	William Low, B.Sc.
Balmoral	1	Aberdeen	57 2	3 12W.	III	m.	a.	R. F. Chalmers.
Baltasound	0	Shetlands	60 44	0 48W.	III	m.	—	T. Edmonston Saxby, F.R.F.P.S. (Glas.) F.R.C.S., J.P.
Banff	1	Banff	57 40	2 31W.	II H.	m.	—	I. H. Gordon, for Town Council.
Bangour	1	Linlithgow	55 55	3 33W.	II	m.	—	The Medical Superintendent.
Bath	8	Somerset	51 23	2 21W.	III H.	d,W,M.	a.	Medical Officer of Health.
Belfast	9	Antrim	54 37	5 56W.	III	m.	—	Royal Academical Institution.
Bellingham	2	Northumberland	55 13	2 18W.	III	m.	—	Sir C. Morrison Bell, Bart.
Belper (School)	4	Derby	53 1	1 29W.	III	m.	—	Herbert Strutt Secondary School.
Belper (Quarry Bank)	4	Derby	53 2	1 29W.	II	m.	a.	John Hunter.
Belvoir Castle	4	Leicester	52 54	0 47W.	II	m.	a, d.	The Duke of Rutland, K.G.
Benington	3	Hertford	51 54	0 5W.	II	m.	a, c.	Miss Parker.
Berwick-on-Tweed	2	Northumberland	55 46	2 0W.	III H.	d,m.	—	Borough Surveyor.
Bidston Observatory	7	Cheshire	53 24	3 4W.	T.	D,M,W ¹ .	a, c, d.	W. E. Plummer, M.A., F.R.A.S., for Mersey Docks and Harbour Board, Liverpool.
Biggin Hill	5	Kent	51 19	0 2E.	T.	M.	—	Meteorologist-in-Charge, for M.O.
Birmingham (Edgbaston)	4	Warwick	52 28	1 53W.	T.A.	D,W,M,W, ¹ μ .	a, d.	A. J. Kelley, for the Midland Institute.
Birmingham (Sparkhill)	4	Worcester	52 27	1 51W.	III	m.	—	D. H. Owen.
Birr Castle	10	King's Co.	53 6	7 55W.	T.	D,W,M.	a, b, c, d.	The Earl of Rosse.
Blackford Hill	—	—	—	—	—	—	—	See Edinburgh.
Blackpool	7	Lancashire	53 49	3 3W.	III H.	d.	a, c.	Medical Officer of Health.
Blacksod Point	9	Mayo	54 6	10 4W.	T.	D,W,M.	a.	Sub-Postmistress, for M.O.
Blundellsands	7	Lancashire	53 29	3 2W.	III	m.	a.	Hugh Montgomery.
Boghall	1	Edinburgh	55 52	3 12W.	III C.W.	m.	—	Edinburgh and East of Scotland College of Agriculture.
Bognor	5	Sussex	50 47	0 41W.	III H.	d.	a.	Urban District Council.
Bolton	7	Lancashire	53 35	2 27W.	III	m.	—	Thomas Midgley.
Bournemouth	5	Hampshire	50 43	1 53W.	III H.	d,m.	a.	C. Dales, for the Corporation.
Bradford	4	Yorkshire (W.R.)	53 49	1 46W.	III	m,W ¹ .	a, d.	The Corporation.
Braemar	1	Aberdeen	57 0	3 24W.	II	M.	a, c, d.	A. M. Shirran and A. R. Clark.
Brighton	5	Sussex	50 49	0 8W.	III H.	d,M,W ¹ .	a, d.	Medical Officer of Health.
Bromley	5	Kent	51 24	0 1E.	III	m.	—	Borough Engineer.
Bromyard	4	Hereford	52 11	2 30W.	III	m.	—	T. V. Philpott, M.A.
Bucklebury Place	5	Berkshire	51 26	1 14W.	III	m.	—	Dr. Carl Langer.
Bude	8	Cornwall	50 50	4 33W.	III H.	d.	d.	Bude Publicity Association.
Bunhill Row	—	—	—	—	—	—	—	See London.
Burnley	7	Lancashire	53 48	2 15W.	III	m,W ¹ .	d	Medical Officer of Health.
Buxton	4	Derby	53 16	1 55W.	III H.	m.	a, b, d.	Town Clerk.
Bungay (Flixton)	3	Suffolk	52 25	1 23E.	III	m.	—	Sir Shafto Adair, Bart.
Cahirciveen (Val. Obs.)	10	Kerry	51 56	10 15W.	I	D,W,M,O, μ .	a, c, e.	Superintendent of the Observatory, for M.O.
Calshot	5	Hampshire	50 49	1 19W.	I	D,M, μ .	—	Meteorologist-in-Charge, for M.O.
Cambridge	3	Cambridge	52 12	0 8E.	II	W,M.	a, d.	Curator, Botanic Gardens.
Camden Square	—	—	—	—	—	—	—	See London.
Canterbury	5	Kent	51 17	1 5E.	III	m.	—	A. Lander.
Cardiff	8	Glamorgan	51 28	3 10W.	II	M,W ¹ .	a.	Medical Officer of Health.
Cardington	3	Bedford	52 07	0 25W.	II	M.	—	The Principal, Somerset Farm Institute.
Cardross	6	Dumbarton	55 58	4 38W.	III	m.	—	Claud A. Allan.
Cargen	6	Kirkcudbright	55 2	3 37W.	III	m.	a, c, d.	Col. R. F. Dudgeon, C.B., D.L.
Carnoustie	1	Forfar	56 30	2 42W.	III	m.	—	Burgh Surveyor.
Castleton	2	Yorkshire (N.R.)	54 28	0 56W.	III	m.	—	Miss Muriel H. Punch.
Cattewater	—	—	—	—	—	—	—	See Plymouth.
Chelmsford	3	Essex	51 44	0 27E.	III	m.	—	H. M. McCreath, B.Sc.
„ (Good Easter)	3	Essex	51 47	0 22E.	II C.W.	m.	—	East Anglian Institute of Agriculture.

Station.	Dist.	County.	Lat.	Long.	Classification.	Publication.	Normals.	Authority.
Cheltenham	4	Gloucester ..	51 54	2 3W.	II H.	d.M.	a, c.	Lt.-Cdr. Orgee, R.N., D.S.C., for the Corporation.
Chopwellwood ..	2	Durham ..	54 55	1 47W.	III	m.	—	Office of Woods.
Clacton-on-Sea ..	3	Essex ..	51 47	1 9E.	T.	D,W,m.	a.	Urban District Council.
Cleethorpes	2	Lincolnshire ..	53 33	0 1W.	III H.	d,m.	—	The Engineer and Surveyor, U.D.C.
Clifton	4	Gloucester ..	51 28	2 37W.	III	m.	a, d.	Clifton College.
Cockle Park	2	Northumberland	55 13	1 41W.	II C.W.	W,M.	a.	Northumberland County Council.
Colmonell	6	Ayr ..	55 8	4 53W.	II	m.	a.	A. Ogg, for Mrs. McConnell.
Colwyn Bay	7	Denbigh ..	53 16	3 44W.	III H.	d,m.	—	Borough Surveyor.
Copdock	3	Suffolk ..	52 2	1 5E.	III	m.	—	F. L. Bland.
Cork (Univ. Coll.) ..	10	Cork ..	51 54	8 29W.	III	m.	—	Prof. H. N. Walsh.
Coventry	4	Warwick ..	52 24	1 20W.	III	m.	a.	Medical Officer of Health.
Craibstone	1	Aberdeen ..	57 11	2 12W.	III C.W.	m.	—	Aberdeen and North of Scotland College of Agriculture.
Cranwell	2	Lincolnshire ..	53 2	0 31W.	I	D,W,M,μ.	—	Meteorologist-in-Charge, for M.O.
Crieff	1	Perth ..	56 22	3 50W.	II	* M.	a.	George Reid, for Dr. Gordon Meikle.
Cromer	3	Norfolk ..	52 56	1 17E.	III H.	M.	a.	Clerk to the Urban District Council.
Croydon (Addington) ..								See Addington.
Croydon* (Aerodrome)	5	Surrey ..	51 21	0 7W.	I	D,M,μ.	—	Meteorologist-in-Charge, for M.O.
Cullompton	8	Devonshire ..	50 51	3 23W.	III	W,m.	a, c.	Murray T. Foster.
Cupar	1	Fife ..	56 19	3 1W.	III	m.	—	Medical Superintendent, Fife and Kinross Asylum.
Darwen	7	Lancashire ..	53 41	2 28W.	II	m.	—	Medical Officer of Health.
Deal	5	Kent ..	51 13	1 24E.	III H.	d.	—	Town Clerk.
Dean Prior	8	Devonshire ..	50 27	3 47W.	II	m.	—	Rev. H. H. Breton, M.A.
Deerness	0	Orkney ..	58 56	2 45W.	II A.	W,M,μ.	a, b, c, d.	W. Delday and W. S. Moar, for M.O.
Donaghadee	9	Down ..	54 38	5 32W.	T.	D,M.	a, c, d.	Officer-in-Charge, Coastguard, for M.O.
Douglas	6	Isle of Man ..	54 10	4 28W.	III H.	d,M.	a, c, d.	Borough Surveyor.
Dover	5	Kent ..	51 7	1 19E.	III H.A.	d,m,μ.	—	Borough Engineer.
Dovercourt	3	Essex ..	51 57	1 16E.	III H.	d.	—	Borough Surveyor.
Dublin :—								
City	10	Dublin ..	53 20	6 15W.	II	W,m.	a, b, c, d.	Sir John W. Moore, M.D., D.Sc.
Glásnevin	10	Dublin ..	53 23	6 16W.	II	M.	a, c, d.	Curator, Botanic Gardens.
Phoenix Park	10	Dublin ..	53 22	6 21W.	II	w,m.	a, c.	Superintendent, Ordnance Survey Office.
Trin. Coll.	10	Dublin ..	53 21	6 16W.	II	m.	a.	Prof. Thrift.
Dumfries	6	Dumfries ..	55 4	3 36W.	II	W,m.	a.	C. C. Easterbrook, M.D., Crichton Royal Institution.
Dundee (E. Necropolis)	1	Forfar ..	56 28	2 56W.	II	W ¹ ,m.	a, c, d.	Alex. Macrae, Curator of Parks.
„ (Mayfield) ..	1	Forfar ..	56 28	2 56W.	III	W,m.	—	A. Davidson, for the Director of Studies.
Dunfanaghy	9	Donegal ..	55 11	7 58W.	A.	μ.	—	Londonderry and Lough Swilly and Letter Kenny Railway.
Dungavel	6	Lanark ..	55 37	4 8W.	III	m.	—	A. K. Foulis, for the Duke of Hamilton and Brandon.
Dungeness	5	Kent ..	50 55	0 58E.	T.	D,M.	a, c.	Lightkeeper for M.O.
Durham	2	Durham ..	54 46	1 35W.	II	W,M.	a, b, c, d.	F. Sargent, University Observatory.
Earls Colne	3	Essex ..	51 55	0 42E.	III	m.	—	Head Master, Grammar School.
Eastbourne	5	Sussex ..	50 46	0 17E.	II H.	d,m.	a, d.	Medical Officer of Health.
East Ham								See London.
East Malling	5	Kent ..	51 17	0 24E.	III C.W.	m.	—	East Malling Research Station.
Edgbaston								See Birmingham.
Edinburgh :—								
Blackford Hill ..	1	Edinburgh ..	55 55	3 11W.	II A.	W ¹ ,W,M,μ.	a.	Astronomer Royal for Scotland.
Boghall	1	Edinburgh ..	55 52	3 12W.	III C.W.	m.	—	Edinburgh and East of Scotland College of Agriculture.
Liberton	1	Edinburgh ..	55 55	3 10W.	III	m.	—	Edinburgh and East of Scotland College of Agriculture.
The University ..	1	Edinburgh ..	55 57	3 11W.	III	m.	a.	Professor Sir T. Hudson Beare, F.R.S.E.
Enfield								See London.
Eskdalemuir	6	Dumfries ..	55 19	3 12W.	I	D,W,M,μ,O.	—	Superintendent of the Observatory, for M.O.
Falmouth (Obs.) ..	8	Cornwall ..	50 9	5 5W.	II	m,W.	a, c, d.	Royal Cornwall Polytechnic Society.
„ (Pendennis) ..	8	Cornwall ..	50 8	5 3W.	T.A.	D,M,μ.	—	Coastguard, for M.O.
Felixstowe (Aerodrome)	3	Suffolk ..	51 57	1 20E.	I A.	D,M,μ.	—	Meteorologist-in-Charge, for M.O.
Fleetwood	7	Lancashire ..	53 56	3 1W.	A.	μ.	—	Urban District Council, for M.O.
Folkestone	5	Kent ..	51 5	1 11E.	III H.	d,m.	—	Borough Engineer.
Ford	6	Argyll ..	56 13	5 28W.	III	W,m.	—	H. Cameron.
Fort Augustus	0	Inverness ..	57 8	4 40W.	III	W,m.	a, c.	The Procurator, the Abbey.
Fortrose	0	Ross and Cromarty	57 35	4 8W.	III	m.	—	Archd. Thom, M.A.
Fowey	8	Cornwall ..	50 21	4 38W.	III	m.	—	Town Clerk.
Foynes	10	Limerick ..	52 37	9 7W.	III	m.	a, c.	Lord Monteagle.
Geldeston	3	Norfolk ..	52 28	1 31E.	III	m.	a, c, d.	Miss E. Dowson.
Gibraltar			36 6	5 21W.	II	M.	—	Chief Medical Officer.
Giggleswick	4	Yorkshire (W.R.)	54 4	2 17W.	III	m.	—	Head Master, Giggleswick School.
Glasgow University ..	6	Lanark ..	55 52	4 17W.	III	m.	—	Prof. J. R. Currie, M.D., D.P.H.
Glasnevin								See Dublin.
Glenbranter	6	Argyll ..	50 6	5 3W.	III	m.	—	Forestry Commission (Scotland).
Good Easter								See Chelmsford.
Gordon Castle	1	Elgin ..	57 37	3 5W.	II	m.	a, c, d.	C. Webster, for the Duke of Richmond and Gordon, K.G.
Gorleston	3	Norfolk ..	52 35	1 43E.	T.A.	D,M,W,μ.	a.	Coastguard, for M.O.
Grayshott	5	Hampshire ..	51 7	0 46W.	III	m.	a.	Mrs. Charlotte Lyndon.
Greenock	6	Renfrew ..	55 56	4 46W.	II	W ¹ ,m.	a, d.	J. MacAlister, M.Inst.C.E.
Greenwich								See London.

* The site of the anemometer was changed on May 1st, 1928 (see note at the end of the Preface).

Station.	Dist.	County.	Lat.	Long.	Classification.	Publication.	Normals.	Authority.
Guernsey (Fort George)	11	Channel Islands	49 27	2 32W.	T.	D.	—	Meteorologist-in-Charge for M.O.
Guernsey (St. Peter Port)	11	Channel Islands	49 26	2 30W.	II H.	M.W.	a.	States Meteorological Committee.
Gulval	8	Cornwall ..	50 8	5 32W.	III C.W.	m.	—	Cornwall County Council.
Halstead	3	Essex	51 57	0 38E.	III	m.	—	F. N. Adams.
Hampstead Res. ..	3	Essex	51 57	0 38E.	III	m.	—	See London.
Harrogate	4	Yorkshire (W.R.)	54 0	1 36W.	T.	D,W,M.	a.	Borough Engineer.
Haverfordwest ..	8	Pembroke ..	51 48	4 58W.	III	m.	a, d.	J. W. Phillips.
Hawarden Bridge ..	7	Flint	53 12	3 1W.	III	m.	a.	John Summers and Sons, Ltd.
Helensburgh	6	Dumbarton ..	56 0	4 45W.	III	m.	d.	Burgh Surveyor.
Hellingly	5	Sussex	50 55	0 14E.	II	m.	—	G. B. Hamlin.
Hereford (B'lm'ntAbb'y)	4	Hereford ..	52 5	2 45W.	III	m.	a.	The Prior, Belmont Abbey.
Hodsock	8	Dorset	50 43	2 5W.	II	M.	—	See Worksop.
Holton Heath	8	Dorset	50 43	2 5W.	II	M.	—	Superintendent, R.N. Cordite Factory.
Holyhead	7	Anglesey ..	53 18	4 39W.	I	D,W,M,μ.	a, c, d.	Meteorologist-in-Charge, for M.O.
Houghall	2	Durham	54 45	1 35W.	III C.W.	m.	—	County Education Committee.
Hoylake	7	Cheshire ..	53 23	3 12W.	III	m.	a.	Urban District Council.
Huddersfield	4	Yorkshire (W.R.)	53 38	1 45W.	II	m,W ¹ .	—	Dr. Woodhead, for the Corporation.
" (Oakes)	4	Yorkshire (W.R.)	53 39	1 50W.	II	m.	—	S. Morris Bower.
Hull	2	Yorkshire (E.R.)	53 45	0 16W.	II	m,W ¹ .	a, d.	H. B. Witty, for the Corporation.
Hunstanton	3	Norfolk ..	52 57	0 29W.	III H.	m.	—	Hunstanton Advancement Association.
Hutton	7	Lancashire ..	53 44	2 40W.	III	M.	—	Director of Education, for the Lancashire County Council.
Ifracombe	8	Devonshire ..	51 12	4 8W.	III H.	m.	a, d.	Urban District Council.
Ilkley	4	Yorkshire (W.R.)	53 55	1 50W.	III H.	d,m.	—	Urban District Council.
Inchkeith	1	Fife	56 2	3 8W.	T.	D.M.	—	Lightkeeper, for M.O.
Inverness	0	Inverness ..	57 26	4 13W.	II	W.M.	a.	A. Knowles, for the Town Council.
Jersey (St. Heliers) ..	11	Channel Islands	49 11	2 6W.	III H.	d,W,m.	a.	The Greffier.
Kensington	1	Roxburgh ..	55 36	2 25W.	III	m.	a.	See London.
Kelso (Broomlands) ..	1	Roxburgh ..	55 36	2 25W.	III	m.	a.	J. C. Scott.
Keswick	7	Cumberland ..	54 36	3 9W.	III	m.	—	Urban District Council.
Kettins	1	Forfar	56 33	3 15W.	III	m.	—	W. Andrew.
Kew Observatory	10	Kilkenny ..	52 39	7 14W.	III	m.	a, c.	See London.
Kilkenny	10	Kerry	52 4	9 30W.	III	m.	a, c.	The Earl of Ossory.
Killarney	10	Kerry	52 4	9 30W.	III	m.	a, c.	E. W. Griffin, M.D.
Killerton	8	Devonshire ..	50 44	3 32W.	II	m.	—	Rt. Hon. Sir F. D. Acland, Bart., P.C.
Kilmarnock	6	Ayr	55 37	4 36W.	III	W,m.	a.	Prof. R. A. Berry, for the Glasgow and West of Scotland College of Agriculture.
Kingstown Harbour ..	10	Dublin	53 17	6 8W.	A.	μ.	—	Captain A. F. Holmes, R.N., for the Office of Works.
Kirkcaldy	1	Fife	56 7	3 9W.	III	m.	—	F. Braid, for the Town Council.
Kirkwall	0	Orkney	58 59	2 57W.	III	m.	—	James Davidson.
Lancaster	7	Lancashire ..	54 3	2 47W.	III	m.	d.	Neville Holden, F.R.A.S., for the Storey Institute.
Larkhill *	5	Wilts	51 11	1 48W.	II A. *	M,μ.	—	Meteorologist-in-Charge, for M.O.
Leafield	4	Oxford	51 50	1 33W.	T.	D,m.	—	Meteorologist-in-Charge, for M.O.
Leamington Spa	4	Warwick	52 18	1 30W.	III H.	d.	—	Medical Officer of Health.
Leuchars	1	Fife	56 23	2 53W.	III	D,M.	—	Meteorologist-in-Charge, for M.O.
Lerwick Observatory ..	0	Shetlands ..	60 8	1 11W.	I	μ,O.	—	Meteorologist-in-charge, for M.O.
Lerwick (Fort Charlotte)	0	Shetlands ..	60 9	1 11W.	T.	D,W,M.	a, c.	Coastguard, for M.O.
Leyland	7	Lancashire ..	53 41	2 42W.	III	m.	—	H. Nowell ffrington.
Liberton	7	Lancashire ..	53 41	2 42W.	III	m.	—	See Edinburgh.
Lincoln	2	Lincolnshire ..	53 14	0 33W.	III	m.	a, d.	Medical Officer of Health.
Lisburn	9	Antrim	54 31	6 3W.	III	m.	—	J. Woolman.
Littlehampton	5	Sussex	50 48	0 32W.	III H.	d.	d.	Town Clerk.
Liverpool (Bidston Obs.)	7	Carnarvon ..	53 20	3 50W.	III H.	d,M.	a, b, c, d.	See Bidston Observatory.
Llandudno	7	Aberdeen ..	57 8	2 55W.	III	m.	a, d.	Urban District Council.
Logie Coldstone	1	Aberdeen ..	57 8	2 55W.	III	m.	a, d.	J. B. Anderson, M.A.
London:—								
Bunhill Row	Lon.	London ..	51 31	0 5W.	(Sunshine only).	d,m.	a.	T. De La Rue & Co., Ltd.
Camden Square	Lon.	London ..	51 33	0 8W.	III	d,m.	a, d.	Royal Meteorological Society.
East Ham	Lon.	Essex	51 32	0 4E.	III	m.	—	The Corporation.
Enfield	Lon.	Middlesex ..	51 40	0 10W.	III	m.	a, d.	Medical Officer of Health.
Greenwich	Lon.	London ..	51 28	0 0	I	d,M,W ¹ .	a, c, d.	Astronomer Royal.
Hampstead Res.	Lon.	London ..	51 34	0 11W.	III	d,m.	—	E. L. Hawke, M.A., for the Hampstead Scientific Society.
Kensington	Lon.	London ..	51 30	0 10W.	III	M,d.	—	H.M. Office of Works, for M.O.
Kew Observatory	Lon.	Surrey	51 28	0 19W.	I	D,W,M,O,μ.	a, c, d, e,	Superintendent of the Observatory, for M.O.
Regent's Park	Lon.	London ..	51 31	0 9W.	(Sunshine only).	d,m.	—	Royal Botanic Society.
Stroud Green	Lon.	Middlesex ..	51 35	0 6W.	III	M.	—	L. R. Bennett.
Tottenham	Lon.	Middlesex ..	51 36	0 5W.	II	W,m.	a.	Medical Officer of Health.
Westminster:—								
St. James's Park ..	Lon.	London ..	51 30	0 8W.	III	d,m.	a.	H.M. Office of Works, for M.O.
Training College ..	Lon.	London ..	51 30	0 8W.	(Sunshine only).	d,m.	a.	Rev. H. B. Workman, D.Lit.
Long Ashton	8	Somerset ..	51 26	2 40W.	III C.W.	m.	—	Agricultural and Horticultural Research Station.
Long Sutton	5	Hampshire ..	51 12	0 56W.	II C.W.	m.	—	The Lord Wandsworth Agricultural College.
Lowestoft	3	Suffolk	52 29	1 45E.	III H.	d,m.	a,	Town Clerk.
Luton	3	Bedford ..	51 54	0 25W.	III	m.	—	Borough Engineer.
Lympne	5	Kent	51 5	1 1E.	I	D,M,μ.	—	Meteorologist-in-Charge, for M.O.
Macclesfield	7	Cheshire ..	53 16	2 8W.	III	m.	a.	Borough and Waterworks Engineer.
Malin Head	9	Donegal ..	55 23	7 24W.	T.	D,W,M.	a, c.	Coastguard, for M.O.
Mallarany	9	Mayo	53 55	9 47W.	III	ω,m.	—	M. Forbes, for M.O.

* A test of the anemobiograph at Larkhill made in Sept., 1928, showed that the recorded velocities between 10 and 60 mi/hr. were too low by from 6 to 9 mi/hr. Publication was therefore discontinued after September.

Station.	Dist.	County.	Lat.	Long.	Classification.	Publication.	Normals.	Authority.
Malta	—	—	35 53	14 30E.	I	M.	—	Superintendent, Meteorological Office.
Malvern	4	Worcester ..	52 8	2 18W.	III H.	m.	d.	Borough Surveyor.
Manchester (City) ..	7	Lancashire ..	53 29	2 13W.	II	m.	a.	Medical Officer of Health.
„ (Swinton)	7	Lancashire ..	53 30	2 20W.	III	m.	—	Medical Officer of Health.
„ (Whitworth Park)	7	Lancashire ..	53 28	2 14W.	II	M,W ¹ .	a.	University of Manchester.
Mansfield	4	Nottingham ..	53 9	1 11W.	III	m.	—	The Borough Surveyor.
Marchmont	1	Berwick	55 44	2 25W.	II	W,m.	a, c, d.	P. Ross.
Margate	5	Kent	51 24	1 24E.	III H.	d,W,m.	a, c, d.	The Corporation.
Markree Castle	9	Sligo	54 11	8 27W.	II	W,M.	a, b, c.	J. R. Armstrong, for Major Cooper.
Marlborough	5	Wilts	51 25	1 44W.	III	W,m.	a, c.	W. F. Harling.
Mayfield	4	Stafford	53 0	1 46W.	III	m.	—	G. C. Lawson.
Meltham	4	Yorkshire (W.R.)	53 36	1 50W.	III	m.	—	C. L. Brook.
Montrose	1	Forfar	56 42	2 28W.	III	m.	d.	Burgh Surveyor.
Mountmellick	10	Queen's Co. ..	53 7	7 20W.	III	m.	—	W. A. Robinson.
Mursley	4	Buckingham ..	51 59	0 49W.	II	m.	—	Lady Beecham.
Nairn	1	Nairn	57 36	3 52W.	T.	D,W,M.	a, c, d.	Miss Penny, for M.O.
Newcastle	10	Wicklow	53 5	6 6W.	II	m.	—	Medical Officer, National Hospital for Consumption.
Newport	5	Isle of Wight ..	50 42	1 18W.	III	m.	—	Miss Morey.
Newport (Hospital) ..	8	Monmouth	51 35	3 0W.	III	m.	—	Medical Officer of Health.
Newport	4	Shropshire	52 47	2 36W.	III C.W.	m.	—	Harper Adams Agricultural College.
Newquay	8	Cornwall	50 25	5 4W.	III H.	M.	a, d.	C. C. Vigurs, B.A., M.D., for Urban District Council.
Newton Abbot	8	Devonshire	50 33	3 38W.	III C.W.	m.	—	Seale Hayne Agricultural College.
Newton Rigg	7	Cumberland	54 40	2 49W.	II C.W.	m.	a.	The Cumberland County Council.
Newtonbarry	10	Wexford	52 39	6 39W.	III	m.	—	G. T. Lewis.
Newtownforbes	9	Longford	53 46	7 51W.	II	m.	—	James Boyle, for the Earl of Granard.
North Berwick	1	Haddington	56 3	2 43W.	II H.	m.	—	Burgh Surveyor.
Norwich (Eaton)	3	Norfolk	52 37	1 16E.	III	m,W ¹ .	a, d.	A. W. Preston.
„ (Ipswich Rd.)	3	Norfolk	52 37	1 17E.	III	m.	—	J. H. Willis.
Nottingham	4	Nottingham	52 56	1 9W.	III	W,M,W ¹ .	a, d.	City Engineer.
Oban	6	Argyll	56 25	5 30W.	II H.	m.	—	Burgh Surveyor.
Oundle	4	Northampton ..	52 29	0 28W.	III	m.	—	Oundle School.
Osgodby	2	Yorkshire (E.R.)	53 47	1 2W.	III C.W.	m.	—	The Professor of Agriculture, University of Leeds.
Over Court Park	4	Gloucester	51 32	2 35W.	III	m.	—	J. Cann Lippincott.
Oxford	4	Oxford	51 46	1 16W.	III	W,M.	a, c, d.	Radcliffe Observer.
„ (Sandford)	4	Oxford	51 43	1 14W.	III C.W.	m.	—	Prof. Watson.
Paignton	8	Devonshire	50 26	3 34W.	III H.	d.	—	C. Bellinger, for Town Council.
Paisley	6	Renfrew	55 51	4 26W.	II A.	W ¹ ,m,μ.	a.	D. Maclean, F.R.A.S., for Coats Observatory Committee.
Pendennis Castle	8	Cornwall	50 7	5 32W.	III H.	d.	d.	See Falmouth.
Penzance	8	Cornwall	50 7	5 32W.	III H.	d.	d.	Borough Council.
Perth	1	Perth	56 24	3 27W.	III	W ¹ ,m.	a.	J. Ritchie, for Town Council.
Phoenix Park	1	Perth	56 24	3 27W.	III	W ¹ ,m.	a.	See Dublin.
Plymouth (The Hoe) ..	8	Devonshire	50 22	4 8W.	IIA.	m,W ¹ ,μ.	a, c, d.	H. Victor Prigg, A.M.I.C.E., for the Corporation.
„ (Cattewater)	8	Devonshire	50 22	4 8W.	I	D,M.	—	Meteorologist-in-Charge, for M.O.
Pontefract	4	Yorkshire(W.R.)	53 42	1 19W.	III	m.	—	Headmaster, The King's School.
Portland Bill	8	Dorset	50 32	2 27W.	T.	D,M.	a.	Lightkeeper, for M.O.
Porton	5	Wilts	51 7	1 42W.	II	m.	—	Supt. of Experiments, R.E.
Portsmouth	5	Hampshire	50 48	1 6W.	III H.	d,W ¹ .	a.	Medical Officer of Health.
Princetown	8	Devonshire	50 33	3 59W.	III	m.	a.	The Governor, H.M. Prison.
Quilty	10	Clare	52 50	9 28W.	A.	μ.	—	West and South Clare Railway Co.
Ramsgate	5	Kent	51 20	1 25E.	III H.	d.	a.	Borough Engineer.
Raunds	4	Northampton ..	52 20	0 31W.	III	m.	a.	The Headmaster.
Reading:—								
Shinfield	5	Berkshire	51 25	0 57W.	III	m.	—	Professor J. A. Crowther.
University College ..	5	Berkshire	51 27	0 58W.	III	m.	—	Professor J. A. Crowther.
Redruth	8	Cornwall	50 14	5 14W.	III	m.	—	A. P. Jenkin, J.P.
Regent's Park	1	London	51 30	0 15W.	III	m.	—	See London.
Renfrew	6	Renfrew	55 52	4 24W.	I	D,M.	—	Meteorologist-in-Charge, for M.O.
Rhayader	8	Radnor	52 1	3 31W.	III	W,M.	—	E. D. Prothero, for M.O.
Rhyl	7	Flint	53 19	3 29W.	III H.	d,m.	a, d.	Borough Surveyor.
Richmond (Kew Obs.) ..	1	London	51 28	0 27W.	III	m.	—	See London.
Roads	4	Northampton ..	52 9	0 53W.	III	m.	—	R. W. Janes.
Roche's Point	10	Cork	51 47	8 15W.	T.	D,W,M.	a, c, d.	M. Fitz Mahoney, Post Office, for M.O.
Roden (Wellington) ..	4	Shropshire	52 45	2 38W.	II	m.	—	J. W. Nowell.
Ross-on-Wye	4	Hereford	51 54	2 35W.	T.	D,W,M.	a, d.	F. J. Parsons, Mus.Bac.
Rothamsted	3	Hertford	51 48	0 22W.	II C.W.	W,M.	a, c, d.	Lawes Agricultural Trust.
Rothsay	6	Bute	55 50	5 4W.	II	W,M.	a, c, d.	J. Davidson and the Town Clerk.
Rounton	2	Yorkshire (N.R.)	54 24	1 18W.	II	m.	a, c.	Sir Hugh Bell, Bart.
Rugby	4	Warwick	52 22	1 15W.	III	m.	c, d.	Rugby School.
Ruthwell	6	Dumfries	55 0	3 26W.	III	m.	—	William Brown, for the Earl of Mansfield.
Ryde	5	Isle of Wight ..	50 44	1 10W.	III	m.	—	Borough Engineer.
St. Albans	3	Hertford	51 46	0 18W.	III	m.	—	The Principal, Oaklands Institute.
St. Andrews	1	Fife	56 20	2 47W.	III H.	m.	d.	Burgh Surveyor.
St. Ann's Head	8	Pembroke	51 41	5 11W.	T.	D,W,M.	a, c, d.	Lightkeeper, for M.O.
St. Heliers	1	Jersey	49 28	0 10W.	T.	D,W,M.	a, c, d.	See Jersey.
St. James's Park	1	London	51 30	0 15W.	III	m.	—	See London.
St. Leonards	5	Sussex	50 51	0 33E.	II H.	d,W,M.	a, c, d.	W. R. Butterfield, for the Corporation.

Station.	Dist.	County.	Lat.	Long.	Classification.	Publication.	Normals.	Authority.
Salcombe	8	Devonshire ..	50 14	3 46W.	III	m.	a.	The Town Association.
Sandown	5	Isle of Wight ..	50 39	1 9W.	III	m.	—	C. Orchard, for Sandown District Council.
Scaleby	7	Cumberland ..	54 54	2 52W.	III	m.	a.	Lady Allison.
Scarborough	2	Yorkshire(N.R.)	54 17	0 24W.	III H.	W.M.	a, c, d.	Medical Officer of Health.
Scilly	11	Cornwall	49 56	6 18W.	T.A.	D,W,M,μ.	a, c, d.	Coastguard for M.O.
Sealand*	7	Flint	53 13	3 0W.	I	D,W,M,μ.	—	Meteorologist-in-Charge, for M.O.
Selsey Bill	5	Sussex	50 43	0 47W.	III	m.	—	E. Heron Allen, F.R.S.
Seskin(Carrick-on-Suir)	10	Waterford	52 21	7 24W.	II	M.	—	L. Grubb.
Shaftesbury	8	Dorset	51 1	2 12W.	III	m.	a, d.	G. P. Barter, for M.O.
Sheffield	4	Yorkshire (W.R.)	53 23	1 29W.	III	W ¹ ,m.	a, c, d.	E. Howarth, F.R.A.S., for the Corporation.
Shinfield								See Reading.
Shoeburyness	3	Essex	51 32	0 47E.	T.A.	D,M,μ.	a, d.	Meteorologist-in-Charge, for M.O.
Sidmouth	8	Devonshire ..	50 41	3 15W.	III	m.	a.	Miss C. M. Radford.
Sidmouth	8	Devonshire ..	50 41	3 14W.	III	m.	—	The Borough Surveyor.
Skallary	0	Hebrides	56 57	7 28W.	III	m.	—	James Smith.
Skegness	2	Lincolnshire ..	53 9	0 21E.	III H.	d,m.	a.	Urban District Council.
Smeaton	1	Haddington ..	56 0	2 39W.	III	m.	—	Sir A. Buchan-Hepburn, Bart.
Southampton	5	Hampshire	50 55	1 24W.	II	W.M.	a, c, d.	Director General of Ordnance Survey.
South Farnborough **	5	Hampshire	51 15	0 45W.	I	D,M,μ.	—	Meteorologist-in-Charge, for M.O.
South Kensington ..								See London.
Southport	7	Lancashire ..	53 39	2 59W.	II H.A.	d,W,M,μ.	a.	J. Baxendell, for the Corporation.
South Shields	2	Durham	55 0	1 26W.	A.	μ.	—	Tyne Improvement Commission.
Sparkhill								See Birmingham.
Sprowston	3	Norfolk	52 40	1 20E.	III C.W.	m.	—	The Director, Norfolk Agricultural Station.
Spurn Head	2	Yorkshire(E.R.)	53 34	0 7E.	T.A.	D,M,μ.	a, c, d.	Lightkeeper, for M.O.
Stirling	6	Stirling	56 7	3 56W.	III	m.	—	J. Fyfe, C.S.I., for Town Council.
Stonyhurst	7	Lancashire ..	53 51	2 28W.	II	W.M.	a, c, d.	The Director of the Observatory.
Stornoway	0	Hebrides	58 11	6 22W.	T.	D,W,M.	a, c, d.	W. Grant, for M.O.
Strathpeffer Spa ..	0	Ross and Cromarty	57 37	4 28W.	III	m.	a.	W. P. Hutton.
Strelley	4	Nottingham ..	52 58	1 15W.	III	m.	a.	T. L. K. Edge, M.A.
Stroud Green								See London.
Sutton Bonington ..	4	Nottingham ..	52 50	1 15W.	III C.W.	m.	—	The Midland Agricultural and Dairy College.
Swansea	8	Glamorgan ..	51 37	3 55W.	III H.	m.	d.	The Corporation.
Swinton								See Manchester.
Tavistock	8	Devonshire ..	50 33	4 10W.	III	m.	—	W. J. Monk.
Teignmouth	8	Devonshire ..	50 33	3 29W.	III H.	m.	a.	Medical Officer of Health.
Tenbury (St. Michaels)	4	Worcester	52 18	2 36W.	III	m.	—	Frederick Lowe.
Thorntonhall	6	Lanark	55 46	4 15W.	III	m.	—	A. Henderson Bishop.
Tiree	6	Argyll	56 32	6 55W.	T.A.	D,M,μ.	—	D. O. Maclean, for M.O.
Torquay	8	Devonshire ..	50 28	3 31W.	III H.	d,m.	a, d.	The Corporation.
Totland Bay	5	Isle of Wight ..	50 41	1 33W.	III	m.	a.	J. Dover, M.A.
Tottenham								See London.
Tunbridge Wells ..	5	Kent	51 8	0 16E.	III H.	d,M.	a.	Medical Officer of Health.
Turnberry	6	Ayr	55 19	4 50W.	III	m.	—	B. McKinlay.
Tynemouth	2	Northumberland	55 1	1 25W.	T.	D,M,W ¹ .	a, c, d.	Coastguard, for M.O.
Ushaw	2	Durham	54 47	1 39W.	II ¹	m.	d.	Ushaw College.
Usk	8	Monmouth	51 42	2 55W.	III	m.	—	Monmouthshire Agricultural Institution.
Valentia Obs.								See Cahirciveen.
Ventnor (Hospital) ..	5	Isle of Wight ..	50 36	1 13W.	II	M.	a, c, d.	Royal National Hospital for Consumption.
Ventnor (Public Park)	5	Isle of Wight ..	50 36	1 13W.	III H.	d.	—	Urban District Council.
Wakefield	4	Yorkshire(W.R.)	53 40	1 30W.	III	m.	a.	Waterworks Engineer.
Wallasey	7	Cheshire	53 26	3 3W.	III H.	d.	—	Medical Officer of Health.
Walton-on-Naze	3	Essex	51 51	1 16E.	III H.	m.	—	Urban District Council.
Waterford (Gortmore)	10	Waterford	52 16	7 7W.	III	W,m.	a.	Mrs. N. H. White.
Weaver Point	10	Cork	51 48	8 17W.	A.	μ.	—	Cork Harbour Commissioners.
Wellington (Roden) ..								See Roden.
Welshpool	7	Montgomery ..	52 39	3 8W.	III	m.	—	County School.
West Kirby	7	Cheshire	53 23	3 11W.	III	m.	—	Rev. Eric F. Robson.
West Linton	1	Peebles	55 45	3 21W.	III	m.	a.	W. Mackie.
Westminster:—								
St. James's Park ..								} See London.
Training College ..								
Weston-super-Mare ..	8	Somerset	51 20	2 59W.	III H.	m.	a.	Urban District Council.
West Witton	2	Yorkshire(N.R.)	54 17	1 54W.	III	m.	—	J. B. Espiner.
Weymouth	8	Dorset	50 36	2 27W.	III H.	d.	—	Town Clerk.
Whitworth Park ..								See Manchester.
Wick	0	Caithness	58 27	3 6W.	T.	D,M.	a, c, d.	Coastguard, for M.O.
Winchester	5	Hampshire	51 7	1 19W.	I	D,M,μ.	—	Meteorologist-in-Charge, for M.O.
(Worthy Down)								
Wisbech	3	Cambridge	52 39	0 8E.	III C.W.	m.	—	Director of Education.
Wisley	5	Surrey	51 17	0 26W.	III C.W.	M.	a.	Royal Horticultural Society.
Wistanstow	4	Shropshire	52 28	2 50W.	II	m.	a.	J. W. Clarke.
Woburn	3	Bedford	52 1	0 35W.	III	m.	a.	Lawes Agricultural Trust.
Wolfelee	1	Roxburgh	55 23	2 39W.	III	m.	a, c, d.	P. J. Smith for Mrs. Browne.
Worcester (Perdiswell)	4	Worcester	52 13	2 13W.	III C.W.	m.	—	The Agricultural Organizer.
Worksop	4	Nottingham ..	53 22	1 5W.	II	m.	a, d.	Miss E. F. Mellish.
Worthing	5	Sussex	50 49	0 22W.	III H.	d.	a, c.	Medical Officer of Health.
Woolacombe	8	Devonshire ..	51 10	4 12W.	II	m.	a.	Miss Chichester.
Wye	5	Kent	51 11	0 57E.	III C.W.	m.	—	South Eastern Agricultural College.
Yarmouth	3	Norfolk	52 37	1 43E.	T.	†	a, c, d.	Medical Officer of Health.
York (Bootham)	2	Yorkshire (N.R.)	53 57	1 5W.	†	} W,M,W ¹ .	—	Meteorological Curator, Bootham School.
„ (Museum)	2	Yorkshire (N.R.)	53 57	1 5W.	II			a, c, d.

* Formerly known as Shotwick. † With the exception of sunshine values the data published for Yarmouth in the Daily Weather Report and in the climatological summaries now refer to Gorleston. ‡ Sunshine only. ** The ordinary rain gauge and the thermometers were moved to a new site on June 27, 1928. The ground on which these instruments stand is 237 feet above M.S.L. The height for the old site was 238 feet, not 230 feet as assumed previously.

MONTHLY WEATHER REPORT, 1928.—TABLE III. CORRECTIONS AND ADDITIONS.

MONTH	PAGE	STATION.	Terminal Hours	Height	AIR TEMPERATURE IN DEGREES FAHRENHEIT.								Earth Temperature		RAINFALL.				WEATHER. Number of Days.								BRIGHT SUNSHINE.				
					Means of		Mean of A and B	Deviation from Normal.	Absolute Maximum and Minimum.		1 ft. mean	4 ft. mean	Total Fall.	Deviation from Normal	Most in a day		Precipitation 0.2 mm. or more	Precipitation 1 mm. or more	Snow	Snow lying (morning obs.)	Hail	Thunderstorm	Fog (morning obs.)	Ground Frost	Gale (Force 8 or more)	Hours per day					
					A Max.	B Min.			Maximum	Date.					Minimum	Date.										Amount	Date	Daily Mean	Deviation from Normal	Percentage of Possible Duration	
January	5	Lerwick ..		Ft.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	in.	mm.	mm.	mm.								hr.	hr.	%					
"	5	Aberdeen ..																						0.62	-0.18	19					
"	5	Dundee (Mayfield)																													
"	5	Ardtornish			(46.0)	37.0	41.5		52	21st	24	26th	25.05	636		56	1st	31	31	6	2	10	5								
"	6	Wisbech ..	21 21 9																												
"	7	Hereford ..																													
"	8	Marlborough											5.90																		
"	8	Keswick ..							55	9th																					
"	8	Southport ..																													
"	8	Sealand ..																													
"	8	Colwyn Bay			49.6	39.9	44.7		57	7th	28	1st	4.77	121		13	21st	24	22	0	0	0	0	0	1.26	+0.57	15				
"	8	Rhayader ..																													
"	9	Arlington ..											11.85																		
"	9	Cahiriveen (Vals. Obs.)		*30			46.9																								
"	9	Malta ..		175																											
February	19	Lerwick ..																													
"	19	Aberdeen ..		44																											
"	19	Dundee (Mayfield)																													
"	19	Ardtornish			(37.0)	41.6					25	12th																			
"	20	Yarmouth ..											1.30	33	-5	6	13th														
"	20	Wisbech ..	21 21 9																												
"	20	Sheffield ..																													
"	20	Worksop ..																													
"	21	Newport ..		211																											
"	21	Worcester (Perdiswell)			(49.1)		(42.4)		(55	15th)																					
"	21	Hereford ..																													
"	21	Dungeness											0.91	23	-18																
"	22	Grayshott																													
"	22	Aspatia ..																													
"	22	Sealand ..																													
"	22	Colwyn Bay																													
"	22	Rhayader ..											4.67																		
"	23	Fowey ..											3.97	101																	
"	23	Gulval ..																													
"	23	Armagh ..											4.04	103	+47																
"	23	Malta ..		175																											
March	33	Lerwick ..																													
"	33	Dundee (Mayfield)																													
"	33	N. Berwick			(45.0)	37.0	41.0		55	17th	29	11th	1.39	35		5	5th	19	11	2	3	0	0	1	(9)	0	1.57		13		
"	33	Stirling ..			(45.0)	37.0	41.0		54	8th	27	11th																			
"	34	West Witton																													
"	34	Wisbech ..	21 21 9																												
"	34	Buxton ..			44.4	34.7	39.5		58	4th	23	12, 13	40.0	40.4	2.96	75	-30	15	29th	20	16	8	5	0	1	13	21	0	2.11		18
"	34	Worksop ..																													
"	35	Mursley ..																													
"	36	Sealand ..																													
April	47	Braemar ..																													
"	47	Wolfelee ..			(50.0)	37.0	43.5																								
"	48	Wisbech ..	21 21 9																												
"	49	Hampstead																													
"	49	Bournemouth											1.70	43	-2																
"	51	Malta ..																													
May	61	Braemar ..																													
"	62	Wisbech ..	21 21 9																												
"	63	Oxford ..																													
"	64	Grayshott																													
June	75	Kelso (Broomlands)																													
"	76	Wisbech ..	21 21 9																												
"	76	Strelley ..																													
"	77	Westminster																													
"	78	Haverfordwest																													
"	79	Dean Prior																													
July	89	Tiree ..																													
"	90	Wisbech ..	21 21 9																												
"	93	Teignmouth																													
"	93	Scilly ..			85.7	55.4	60.3	-0.2																							
"	93	Malta ..					79.6	+2.1																							
August	103	Wick ..																													
"	103	Ruthwell ..																													
"	104	Wisbech ..	21 21 9																												
"	104	Raunds ..			68.9	51.5	60.2	-0.7	78	11th	43	5, 31	61.4	1.24	31	-31	7	26th	12	8	0	0	0	0	0	5.99		41			
"	105	Rugby ..																													
"	106	Colwyn Bay																													
"	106	St. Ann's Head																													

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.

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JANUARY, 1928: Mild, stormy and extremely wet.

The outstanding feature of the weather of January, 1928, was its persistent and marked wetness, the general rainfall of the British Isles representing 202 per cent. of the normal for the period 1881-1915, which is the highest percentage value on record for January since at least 1870. The month on the whole was mild; in Scotland the month was the sixth mild January in succession, while in England and Wales and Ireland the mean temperature in January has not been appreciably below the normal since January, 1919.

In the central and eastern districts of Great Britain, temperature remained low on the 1st, severe frost occurring in several places during the night of December 31st-January 1st; amongst the low screen minimum temperatures recorded on the morning of the 1st, were 11° F. at Eskdalemuir and Chelmsford and 17° F. at Ross-on-Wye. On the 2nd, the mild conditions which had set in in the western and south-western districts on December 31st, spread gradually eastwards and by about the 5th had become general. The return to mild conditions was accompanied by heavy rain and strong winds and gales in southern England on the 1st (54 mm. at Dean Prior, Devon) and 2nd and widespread rain on the night of the 3rd-4th and on the 4th. Heavy rain in northern districts during the night of the 5th to 6th was associated with the passage of a deep depression across northern Scotland and in the rear of this depression, westerly to north-westerly gales occurred widely on the 6th, the wind in the afternoon of the 6th attaining in a gust a velocity of 84 m.p.h. at Spurn Head, 83 m.p.h. at Southport and 82 m.p.h. at Fleetwood. Shortly after midnight on January 7th, an abnormal rise of the Thames occurred, the tidal reaches of the river attaining their highest level for at least fifty years. Serious flooding resulted in the City, Southwark, Westminster, and as far west as Putney and Hammer-smith. In the low-lying areas fourteen people lost their lives, through being trapped in basements, and a very large amount of material damage was done by the water. The Thames was already in a swollen condition owing to the thaw which set in on January 1st and to the subsequent heavy rain, but the severity of the flood in London appears to have been due more to the circumstance that a spring tide coincided with high winds from the north-west in the North Sea than to the flood water of the river itself.

During the remainder of the month the frequent passage of depression across or in the neighbourhood of the British Isles maintained unsettled weather, with frequent rain and high winds and gales, very disturbed weather occurring from the 10th to the 12th and from the 23rd to the 26th. During the severe gales on the 10th, which were associated with an intense secondary depression off the Hebrides, the wind momentarily exceeded 70 m.p.h. at exposed stations in Scotland, a gust of 78 m.p.h. being recorded at Paisley on that date. On the 24th a very deep depression centred to the north of the Faroes, with a secondary trough extending southwards over Ireland and moving eastwards gave rise to widespread gales, the wind in a gust attaining a velocity of 87 m.p.h. at Lerwick. There were brief intervals of showery and sunny weather between the depression, notably on the 3rd, 5th, 8th-9th, 11th, 13th, about the 15th and on the 19th, 22nd and during the last week of the month.

Pressure and Winds.—The frequency with which depressions passed across or near the British Isles resulted in the monthly means of pressure being markedly below normal in all districts, the deficiency ranging from 13 millibars at Stornoway to 2 millibars at Scilly. The mean isobars trended from west-south-west to east-north-east, the prevailing winds being south-westerly. High winds and gales occurred frequently during the month, the gales on the 6th, about the 10th and on the 24th and 25th being notably severe in northern districts; at Lerwick on the morning of the 24th the wind attained in a gust a velocity of 87 m.p.h. At Fleetwood, on the afternoon of the 6th, the wind attained a mean hourly velocity of 60 m.p.h. and in a gust touched 82 m.p.h.

Temperature.—January, 1928, was almost throughout mild, and in all districts the mean temperature was above the normal, the deviations from normal ranging from 3.4° F. in the Midland Counties to 1.1° F. in Scotland N. At no time during the month was there a spell of really cold weather, although in the fair intervals between the depressions, frost in the screen, which was seldom severe, occurred at night. The coldest nights occurred generally in the 1st, 17th, 18th, 27th and 28th. There were frequent occurrences of ground frost and some low readings were recorded, e.g., 13° F. at Wisley on the 18th and at Hampstead (London) on the 28th.

The extreme temperatures for the month were:—(England and Wales) 59° F. at Wisley on the 6th and 11° F. at Chelmsford (Good Easter) on the 1st. (Scotland) 59° F. at Turnberry on the 5th and 8° F. at Braemar on the 1st. (Ireland) 60° F. at Dublin (Trinity College) on the 21st and 19° F. at Markree Castle, Sligo, on the 1st.

Precipitation.—The general precipitation of the British Isles expressed as a percentage of the normal for the period 1881-1915 was 202, the largest percentage value since 1870; the values for the constituent countries were:—England and Wales, 210; Scotland, 214; and Ireland, 166. The values for England and Wales and Scotland are the highest on record since comparable statistics first became available in 1870, but the value for Ireland has been exceeded in January on five occasions, including January, 1926.

Not only were totals for the month well in excess of the normal, but the number of days on which there was measurable precipitation was decidedly above the normal, and in general the month's precipitation was more remarkable for its persistency than for any very heavy daily falls; at the following widely distributed stations in the western districts of Great Britain and in Ireland there were 31 days of 0.2 mm. or more precipitation: Stornoway, Thornton Hall, Keswick, Rhayader, Dean Prior, Mallaranny, Foynes and Cahirciveen. There were several stations in Scotland with 30 days of 0.2 mm. or more precipitation.

Over the greater part of England and Wales there was more than twice the normal precipitation; over Cumberland, Westmorland, Lancashire, Snowdonia and the Peak district of Derbyshire, precipitation exceeded two and a half times the normal, while the month's totals just exceeded three times the normal at Manchester. January, 1928, was the wettest in records covering 135 years at least at Manchester, 97 years at Bolton, 81 years at Stonyhurst, and 57 years at Southport. At Ross-on-Wye there have been only two Januarys since 1818 with larger monthly totals, viz., 1869 (16.16 in.) and 1886 (5.10 in.). At Huddersfield it was the wettest January on record for over half a century. In the English Lake district and in Snowdonia more than 25 in. was measured, as much as London receives on the average in the course of a year.

Rainfall was everywhere excessive in Scotland and wide areas had considerably more than twice the normal. At Cargen, near Dumfries, the total was the heaviest recorded in any month since observations commenced there in 1860; at Greenock the month was much the wettest January for at least 60 years; and at Edinburgh it was the wettest January since 1877. In Central Perthshire, West Inverness-shire and Argyllshire, considerable areas had more than 20 in., with as much as 26.15 in. at Achaidh Burn in the Loch Katrine area, and 25.05 in. at Ardtornish on the Sound of Mull. Many places had rain on every day, and wide areas only one or two rainless days. The wettest periods were around 5th, from 9th to 12th, around 18th, and from 23rd to 27th. Falls of about 2 in. occurred at Ardtornish on 1st and at Kinlochquoich on 11th and 12th.

In Ireland, monthly totals exceeded twice the normal in the extreme north of Ireland, and were everywhere above the normal except in the Dublin district where, although rain fell on as many as 25 days, the total for the month was slightly below the normal.

Owing to the melting of the snow at the beginning of the month and the subsequent frequent rains, much flooding occurred in many districts; in Scotland, serious damage was caused by floods around the 22nd, notably in the Blairgowrie district and at Ballater, where the Dee burst its bank. Flooding was widespread in the Thames Valley in the early part of the month. Reference has already been made to the disastrous floods in London on the 7th.

Showers of hail and sleet or snow occurred on several occasions, while thunderstorms were experienced locally on various dates.

Sunshine.—Although the number of days of precipitation exceeded the normal in all districts, some sunshine was recorded on most days, there being seldom more than two consecutive days without bright sunshine in any district, while good records were obtained on several days, including the 3rd (e.g., 6.7 hr. at Ross-on-Wye and Weymouth, 6.5 hr. at Bath), 11th (7.0 hr. at Ross-on-Wye), 15th (7.0 hr. at Southsea and Brighton), 17th (7.5 hr. at Malvern), 19th (7.9 hr. at Southend) and 27th (8.1 hr. at Torquay). As a result monthly aggregates of bright sunshine were mostly about or above the normal; the general mean aggregate for a District expressed as a percentage of the normal ranging from 90 in Scotland N. to 146 in Ireland N. At Ross-on-Wye it was the sunniest January since records began 14 years ago, and at Totland Bay the sunniest January since 1908.

Fog.—Fog occurred locally mostly in districts in central, southern and eastern England during the first three days, on the 7th, 14th, round about the 18th, on the 20th, 23rd, 24th and 29th.

Miscellaneous Phenomena.—Halo phenomena were observed on various dates in many districts; paraselenae were observed at Durham Observatory on the evening of the 8th. The Zodiacal Light was observed at Oxford on the 16th, 17th, 19th, 22nd and 24th. Aurora was observed in Shetland on the 8th, 22nd, 26th, 27th and 28th, and at Aberdeen on the 26th and 27th.

TABLE I.—DISTRICT VALUES—JANUARY, 1928.

[1908, revised 1928.]

DISTRICTS.	AIR TEMPERATURE.			EARTH TEMPERATURE.		RAINFALL.		SUNSHINE.	
	High-est.	Low-est.	Devia-tion from Nor-mal. Daily Mean.	At 1 ft. Devia-tion from Nor-mal.	At 4 ft. Devia-tion from Nor-mal.	Per-cent- age of Nor-mal.	No. of Days. Devia-tion from Nor-mal.	Per-cent- age of Nor-mal.	Per-cent- age of Possible Duration.
o. SCOTLAND, N.	56	20	+1.1	—	—	194	—	90	12
Eastern.									
1. SCOTLAND, E.	56	8	+1.5	—	—	213	+9	105	22
2. ENGLAND, N.E.	56	15	+2.6	+0.5	-0.6	190	—	124	22
3. ENGLAND, E...	57	11	+3.0	+0.2	-0.6	195	—	107	22
4. MIDLAND COUNTIES	58	14	+3.4	-0.1	-1.3	226	+7	125	24
5. ENGLAND, S.E.	59	17	+2.8	+0.6	-0.9	201	+8	125	25

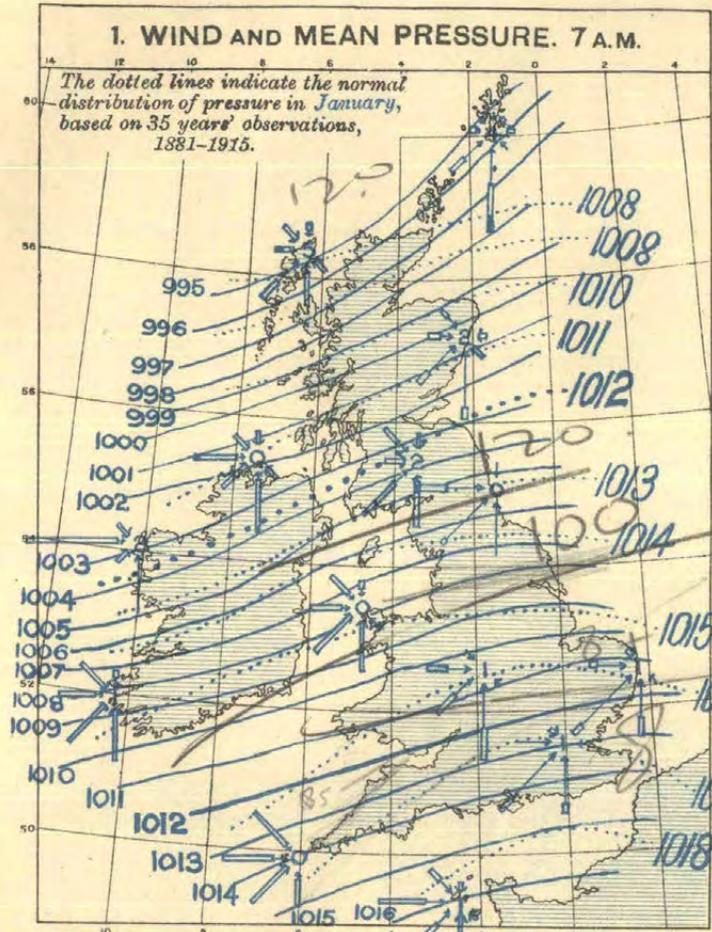
DISTRICTS.	AIR TEMPERATURE.			EARTH TEMPERATURE.		RAINFALL.		SUNSHINE.	
	High-est.	Low-est.	Devia-tion from Nor-mal. Daily Mean.	At 1 ft. Devia-tion from Nor-mal.	At 4 ft. Devia-tion from Nor-mal.	Per-cent- age of Nor-mal.	No. of Days. Devia-tion from Nor-mal.	Per-cent- age of Nor-mal.	Per-cent- age of Possible Duration.
Western.									
6. SCOTLAND, W. (& I. of Man)	59	11	+2.1	—	-0.5	268	—	111	16
7. ENGLAND, N.W. (& N. Wales)	58	22	+2.7	-0.1	-1.7	243	+8	109	19
8. ENGLAND, S.W. (& S. Wales)	55	15	+2.9	+0.4	-0.7	195	—	125	24
9. IRELAND, N...	56	19	+2.2	-0.5	-1.2	188	+8	146	25
10. IRELAND, S...	60	24	+2.2	-0.2	-0.6	121	+7	132	28
11. CHANNEL I. (& Scilly)	53	34	+2.8	0.0	-0.6	186	+6	109	26
Mean: DISTRICTS 1-10	60	8	+2.5	+0.1	-0.9	204	—	121	23

TABLE II.—SUMMARY OF AUTOGRAPHIC RECORDS OF WIND.—JANUARY, 1928.

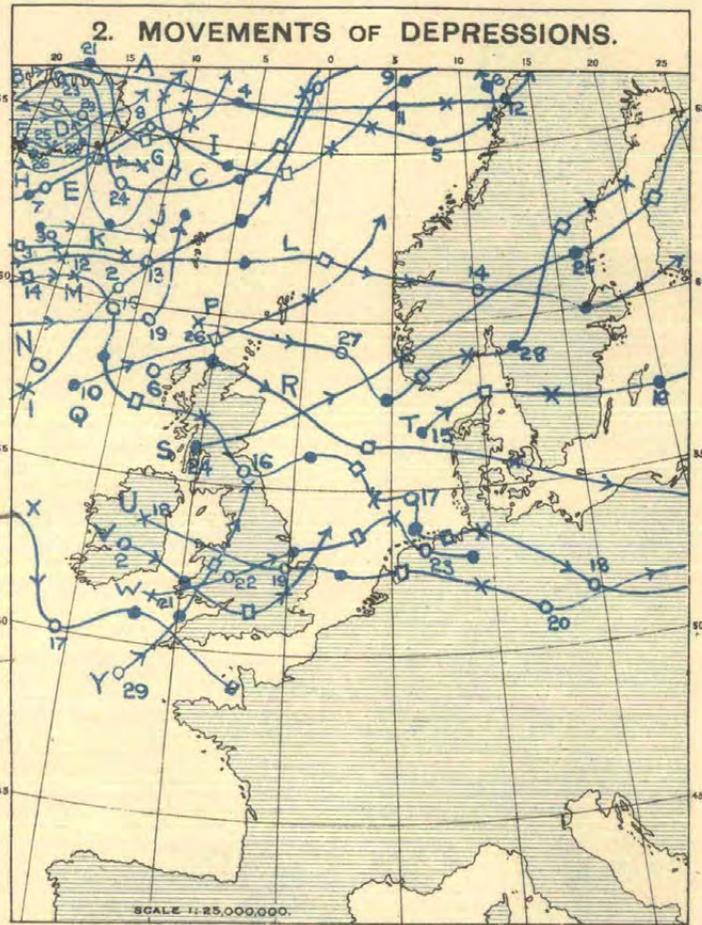
[1914.]

DISTRICT AND STATION.	Height.			Distribution of Wind.††								Extreme Velocities.									
	Above Mean Sea Level.	Above Ground.	Above Building.	More than 38 mi/hr.		25 to 38 mi/hr.		13 to 24 mi/hr.		4 to 12 mi/hr.		Less than 4 mi/hr.		No Record.		Highest Hourly Wind.			Highest Gust.		
				Dates of Occurrence.	Dura-tion.	No. of Days.	Dura-tion.	Dura-tion.	Dura-tion.	Dura-tion.	Dura-tion.	Dura-tion.	Dura-tion.	Veer from N.	Speed.	Mid Time.	Speed.	Time.			
																			hr.	hr.	hr.
o. SCOTLAND, N.	ft.	ft.	ft.		hr.		hr.	hr.	hr.	hr.	hr.	hr.	°	mi/hr.	m/s.	day. hr.	mi/hr.	m/s.	d. <td>h. <td>m.</td> </td>	h. <td>m.</td>	m.
Shetlands Lerwick ..	310	42	33†	1, 2, 8, 10, 11, 16, 18 to 21, 24, 25, 31	77	27	300	209	127	14	17	220	51	23	24	8	87	39	24	6	20
Orkneys Deerness (Cup Anr.)	188	16	5	1, 2, 8, 18, 19, 21, 31	26	26	202	321	186	9	0	180	53	24	1	24	—	—	—	—	—
1. SCOTLAND, E.																					
Aberdeen Aberdeen ..	70	42	33†	—	0	9	30	316	356	42	0	170	32	14	1	23	58	26	1	23	20
Kincardine Balmakewan ..	140	25	18	—	0	2	4	145	(408)	(164)	23	360	32	14	6	13	54	24	6	13	40
Edinburgh Edinburgh ..	485	39	31†	1, 2, 4, 10, 12, 20, 21, 23, 25, 31	22	21	140	358	196	28	0	210	46	21	10	10	71	32	10	9	45
6a. SCOTLAND, W.																					
Argyll Tiree ..	80	55	48†	1, 5, 6, 10, 12, 13, 21, 23, 25, 31	47	28	341	259	91	6	0	310	53	24	6	10	81	36	6	10	15
Renfrew Paisley ..	188	81	15	—	0	9	28	266	384	66	0	190	37	17	10	10	78	35	10	10	25
Dumfries Eskdalemuir ..	825	50	22	6, 10, 21, 25	13	18	165	293	190	83	0	190	45	20	10	10	75	33	10	9	5
2. ENGLAND, N.E.																					
Durham South Shields ..	62	46	20	6	2	4	20	259	373	90	0	310	44	20	6	15	78	35	6	14	10
York, E.R. Spurn Head ..	67	42	35†	6, 13, 24	9	24	201	399	130	5	0	280	59	26	6	13	84	38	6	12	20
Lincoln Cranwell ..	284	44	26†	6	5	15	92	370	246	31	0	290	50	22	6	15	77	34	6	11	50
3. ENGLAND, E.																					
Norfolk Gorleston ..	52	42	33†	6	1	13	62	290	325	50	16	300	39	17	6	17	61	27	6	16	50
Suffolk Felixstowe Aero. ..	55	40	25	6	4	14	65	400	(204)	(71)	0	260	40	18	6	15	60	27	6	14	50
Essex Shoeburyness ..	115	104	14†	6, 12	5	20	133	375	201	30	0	270	45	20	6	15	71	32	6	14	5
4. MIDLAND COUNTIES.																					
Warwick Birmingham ..	643	118	18	—	0	6	16	378	332	18	0	260	36	16	6	12	75	33	6	12	25
5. ENGLAND, S.E.																					
Surrey Richmond (KewObs)	82	65	22	—	0	4	12	275	369	88	0	220	29	13	25	22	53	24	6	12	35
Surrey Croydon ..	284	40	24	—	0	1	8	334	366	36	0	270	28	13	6	12	53	24	6	15	5
Kent Dover ..	61	32	22	—	0	20	149	365	223	7	0	—	36	16	6	14	56	25	6	13	40
Kent Lympne ..	409	70	55†	6	1	18	116	379	241	7	0	270	39	17	6	16	58	26	6	16	15
Hampshire S. Farnboro' Tower	444	160	14	6	1	10	42	406	256	39	0	280	40	18	6	12	61	27	6	12	20
Hampshire Calshot ..	55	45	31†	6	1	20	138	360	(210)	(35)	0	300	40	18	6	15	53	24	6	14	55
Hampshire Worthy Down ..	314	43	27†	—	0	7	19	321	322	82	0	270	32	14	6	14	63	28	6	12	35
Wiltshire Larkhill ..	526	51	34†	6	7	23	149	388	(181)	(19)	0	290	47	21	6	12	61	27	6	12	0
7a. ENGLAND, N.W.																					
Lancashire Fleetwood ..	112	50	12	1, 6, 24	15	23	177	421	116	15	0	300	60	27	6	14	82	37	6	12	40
Lancashire Southport ..	77	59	45†	6, 13, 24 to 26	23	21	164	390	153	14	0	310	57	25	6	14	83	37	6	14	5
7b. NORTH WALES.																					
Anglesey Holyhead ..	64	45	29†	1, 6, 24	14	27	242	375	103	10	0	290	52	23	6	12	74	33	24	15	20
Flint Sealand ..	81	65	49†	—	—	—	—	—	—	—	—	Defective.	—	—	—	—	—	—	—	—	—
8b. ENGLAND, S.W.																					
Devon Plymouth ..	185	88	2	2, 25	3	15	89	274	292	86	0	—	40	18	2	3	58	26	2	20	40
Cornwall Pendennis Castle ..	256	65	24	1, 2, 6, 10, 12, 14, 21, 24, 25, 31	61	25	175	298	186	24	0	—	49	22	25	19	64	29	25	19	55
9. IRELAND, N.																					
Donegal Dunfanaghy ..	180	47	39	3 to 7, 12, 13, 15, 23, 25, 31	26	26	220	264	204	30	0	—	50	22	6	8	78	35	6	7	50
Antrim Aldergrove ..	282	40	27†	—	0	10	45	391	258	50	0	160	38	17	1	18	65	29	1	19	25
10. IRELAND, S.																					
Dublin Kingstown (Cup Anr.)	49	27	16	1, 5 to 7, 10, 12, 13, 24, 25	30	26	252	308	143	11	0	260	54	24	6	10	—	—	—	—	—
Clare Quilty ..	100	40	32†	24, 31	3	24	241	391	87	7	15	—	47	21	24	11	73	33	24	10	55
Kerry Cahirciveen (Val. O.)	98	41	34†	10, 24, 25	3	19	198	387	137	19	0	210	40	18	25	13	69	31	24	11	40
Cork Weaver Pt. ..	160	30	21†	1, 10, 25, 26	9	18	97	342	268	25	3	—	45	20	25	14	73	33	26	5	45
11. SCILLY ISLES.																					
St. Mary's ..	160	42	35†	6, 15, 16, 24 to 27	32	29	351	304	52	5	0	280	50	22	24	14	71	32	24	13	55

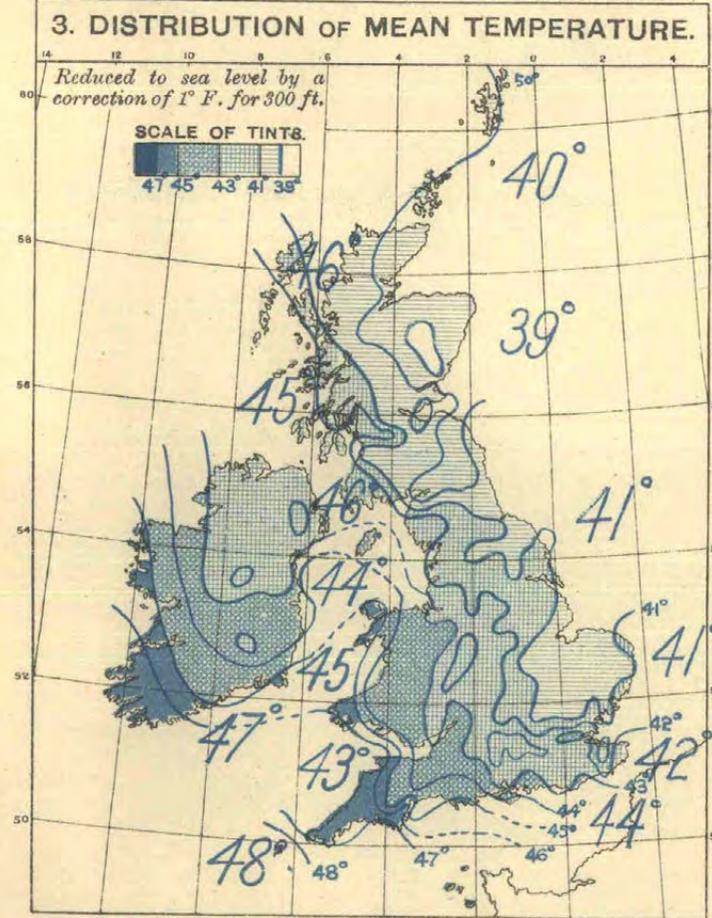
†† Brackets () indicate that the distribution as between winds above and below 4 mi/hr. is doubtful, but the total number of hours with winds below 12 mi/hr. is reliable.
 † Standard mounting.



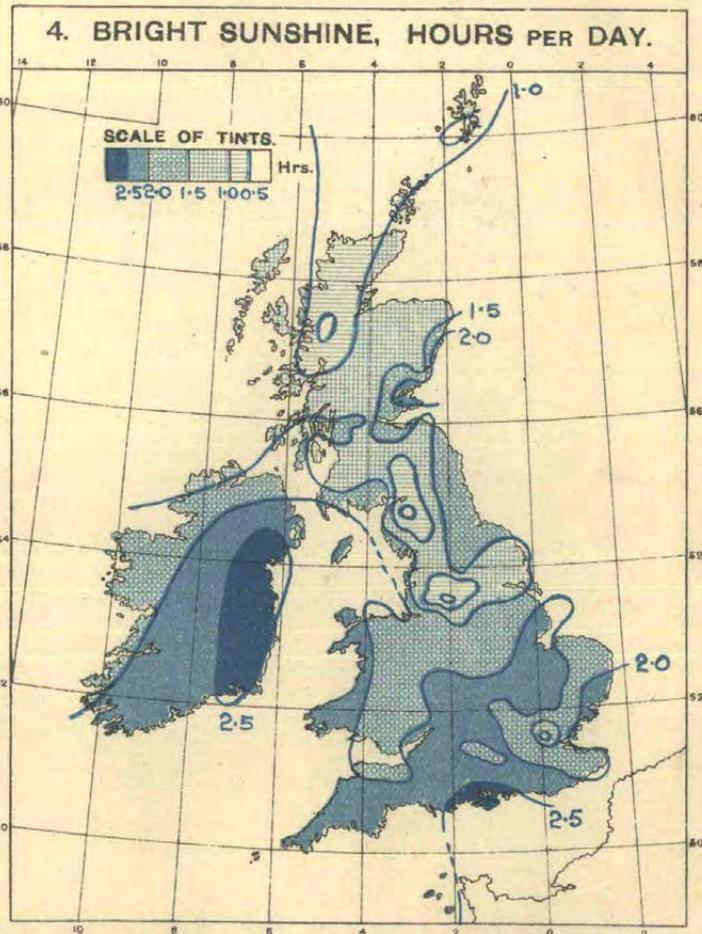
WIND ROSES. The arrows fly with the wind and indicate frequency and force, thus:
 LIGHT TO STRONG GALE
 30 OBS 1 inch



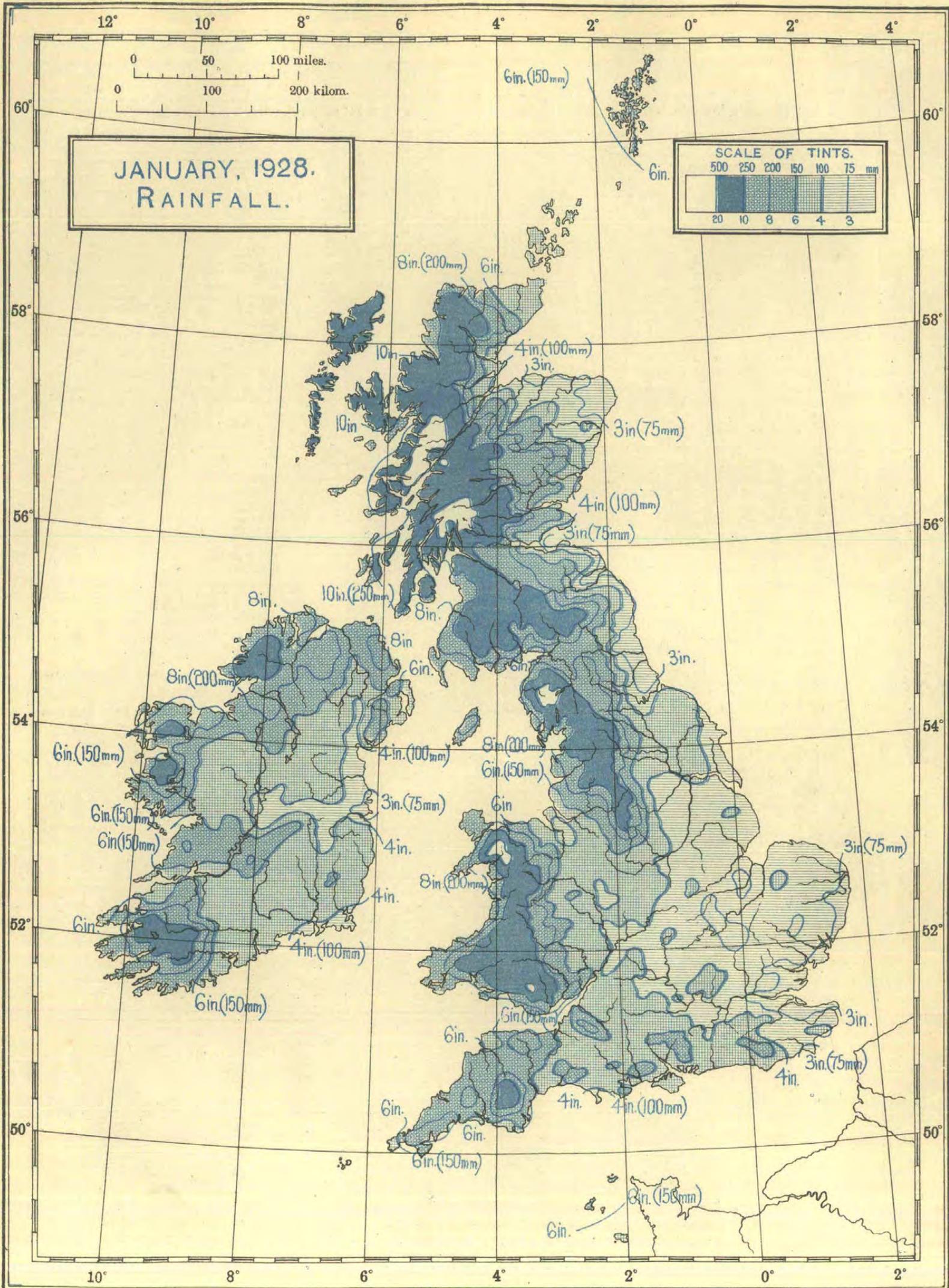
Positions of centres are shown thus: ○ at 1hr; ● at 7h; □ at 13h; X at 18h



Sea temperatures are shown in large figures, thus: 48



* The pressure is expressed in millibars.



Scale 1 : 5,000,000.

Ps. 315/1658 Wt. 122A. D. 26. 1/25. 2/28.

The equivalent values in mm. are given in round numbers. The exact relation is 10 in. = 254 mm.

TABLE III (continued).—SUMMARY OF THE RECORDS OF TEMPERATURE, RAINFALL and SUNSHINE, and of WEATHER OBSERVATIONS, JANUARY, 1928.

DISTRICT COUNTY AND PLACE.	Terminal Hours of Observation.			Height of Station above Mean Sea Level.	AIR TEMPERATURE IN DEGREES FAHRENHEIT.						Earth Temperature.		RAINFALL.				WEATHER. Number of days.								BRIGHT SUNSHINE.					
	Max.	Min.	Rain.		Means of		Deviation from Normal.	Absolute Maximum and Minimum.			1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Most in a day.		Precip'n. 0.2 mm. or more.	Precip'n. 1 mm. or more.	Snow.	Snow lying.	Hall.	Thunderstorm.	Fog (Morning Obs.).	Ground Frost.	Gale.	Hours per day.		Per Cent.		
					A	B		Maximum.	Date.	Minimum.					Date.	Amount.										Date.	Daily Mean.		Deviation from Normal.	
	G.M.T.	ft.	°F.		°F.	°F.	°F.	°F.	°F.	°F.	°F.	in.	mm.	mm.	mm.											hr.	hr.	%		
4. MID. COUNTIES—cont.																														
Warwick.	Birmingham	18-7 7	535	45.1	36.1	40.6	+2.8	54	6th 27	1st	40.4	44.0	4.81	122	+ 71	23	21st	24	18	1	2	2	0	0	9	1	1.74	+0.34	21	
	B'ham, Sparkhill	7 13 7	424	47.0	34.9	40.9	—	56	6th 27	1st	—	—	5.50	140	—	25	21st	26	20	1	1	3	0	1	17	3	—	—	—	
	Coventry	9 9 9	270	47.1	35.0	41.1	+3.2	55	6th 29	18th	38.2	43.0	4.11	105	+ 53	19	21st	25	17	1	2	0	0	1	15	0	1.53	+0.43	19	
	Rugby	2 12 1 9	390	(47.5)	33.0	(40.3)	—	55	21st 26	17th	—	—	3.76	95	—	14	1st	18	18	0	0	1	0	—	17	0	—	—	—	
Oxford.	Leafield	18-7 7	612	44.4	34.9	39.7	—	53	6th 25	1st	—	—	4.15	105	—	15	1st	25	19	2	3	0	0	2	14	1	2.29	—	28	
	Oxford	9 9 9	208	48.0	36.0	42.0	+3.6	56	6th 24	1st	38.7	42.4	3.83	97	+ 51	18	1st	23	16	0	2	3	0	3	13	2	2.26	+0.61	27	
	Oxford (Sandford)	9 9 9	210	47.8	35.1	41.5	—	56	6th 22	1st	—	—	2.91	74	—	9	21st	22	16	0	2	0	0	2	15	4	2.18	—	26	
Bucks.	Mursley	** 9 9 9	490	46.4	33.2	39.8	—	55	6th 22	1st	38.5	40.2	3.39	86	—	12	1, 2	19	16	1	0	0	0	—	16	1	1.95	—	24	
Stafford.	Mayfield	.. 9 9 9	374	46.0	33.8	39.9	—	53	6, 21 24	1st	—	—	7.78	198	—	24	1st	25	19	1	3	4	0	—	16	1	1.91	—	24	
Shropshire.	Roden, Well'n	9 9 9	207	47.1	33.4	40.3	—	56	7, 24 23	1st	—	—	3.55	90	—	22	21st	25	19	0	0	0	0	—	—	0	—	—	—	
	Wellington	.. 9 9 9	259	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Wistanstow	.. 2 12 1 9	481	(47.1)	(33.7)	(40.4)	+2.0	53	6th 22	1st	—	—	5.02	127	+ 68	18	21st	20	19	0	1	2	0	0	(13)	0	—	—	—	
Worcester.	Malvern	.. 9 9 9	377	47.3	36.6	41.9	—	55	5, 6 25	1st	37.7	40.8	4.41	112	+ 56	19	21st	22	20	1	1	1	0	0	14	2	2.38	—	29	
	Tenbury	.. 9 9 9	313	47.3	34.8	41.1	+3.2	55	6th 22	1st	38.9	—	4.15	105	+ 62	16	21st	22	18	1	2	0	0	—	22	—	—	—	—	
	Worcester (Perdiswell)	9 9 9	95	48.6	34.8	41.7	—	58	7th 26	4, 18	—	—	3.53	90	—	16	21st	18	18	2	0	0	0	—	18	2	2.25	—	27	
Hereford.	Bromyard	.. 9 9 9	392	47.6	32.8	40.2	—	56	6th 21	1st	37.4	41.0	4.98	127	—	18	21st	22	19	1	2	1	0	2	16	0	—	—	—	
	Hereford	.. 9 9 9	291	48.4	33.9	41.1	+3.0	55	5, 6 15	1st	—	—	3.19	81	+ 25	15	21st	21	17	1	1	0	0	1	31	3	—	—	—	
	Ross-on-Wye	18-7 7	223	47.5	37.3	42.4	+3.9	57	6th 17	1st	38.9	42.2	4.66	118	+ 56	16	21st	24	17	0	1	2	0	0	13	1	2.43	+0.96	30	
Gloucester.	Cheltenham	.. 2 12 1 9	214	48.3	35.9	42.1	+3.9	56	6th 24	1st	39.2	41.9	3.77	96	+ 43	17	21st	24	17	2	1	1	0	2	14	1	2.17	—	26	
	Clifton	.. 9 9 9	225	47.7	37.2	42.5	+3.0	53	21st 24	2nd	—	—	5.99	152	+ 80	20	12th	26	21	0	0	0	0	2	10	0	2.12	+0.73	25	
	Over Court	.. 9 9 9	147	49.7	36.7	43.2	—	54	20, 21 17	1st	—	—	5.13	130	—	23	1st	26	23	1	1	1	0	1	—	1	—	—	—	
5. ENGLAND, S.E.																														
London.	City, Bunhill Row	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.04	+0.56	12	
	Camden Square	9 9 9	110	47.4	36.8	42.1	+3.3	55	6th 25	1st	39.8	43.4	3.60	91	+ 44	17	2nd	21	18	0	2	0	0	—	10	—	—	—	—	
	East Ham	.. 9 9 9	15	48.2	37.1	42.7	—	56	6th 23	1st	—	—	3.04	77	—	14	2nd	20	16	—	—	—	—	—	—	—	—	—	—	
	Enfield	.. 9 9 9	148	47.5	34.7	41.1	—	55	6th 21	1st	—	—	4.24	3.47	88	+ 43	17	2nd	19	18	0	1	0	0	6	14	1	1.73	—	21
	Greenwich	.. 2 12 1 9	149	47.5	36.0	41.7	+3.2	56	6th 27	18th	41.5	43.6	3.02	77	+ 34	13	2nd	22	15	0	1	1	0	2	17	1	1.41	+0.17	17	
	Hampst'd Res.	9 9 9	450	46.2	33.0	39.6	—	54	6th 24	1st	—	—	4.20	107	—	21	2nd	26	18	1	2	0	0	—	28	—	1.65	—	20	
	Kensington	.. 18-9 9	80	46.8	38.5	42.7	—	56	6th 30	28th	39.4	42.4	3.77	96	—	17	2nd	23	19	0	—	0	0	6	?	1	—	—	—	
	Regent's Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.42	—	17	
	Richmond (Kew Obs.)	2 12 1 9	18	47.3	36.1	41.7	+2.8	55	6th 26	18th	39.6	43.0	3.10	79	+ 34	16	2nd	25	18	0	1	0	0	1	11	0	1.87	+0.48	22	
	Stroud Green	.. 18-7 7	212	46.4	37.5	41.9	—	55	6th 28	18th	—	—	3.65	93	—	20	2nd	23	18	0	0	0	0	4	4	2	—	—	—	
	Tottenham	†† 12 1 9	51	47.7	37.9	42.8	+3.5	55	6, 21 28	18th	—	—	4.38	3.66	93	+ 47	18	2nd	21	19	1	1	0	0	—	—	0	0.82	-0.50	10
	Westminster	.. 9 9 9	27	48.8	37.2	43.0	+3.4	56	6th 28	1st	—	—	3.32	84	+ 43	15	2nd	19	16	—	—	—	—	—	—	17	—	1.35	+0.67	16
Surrey.	Addington	.. 9 9 9	472	46.4	35.3	40.9	—	54	6th 25	1st	—	—	(3.68)	(93)	—	218	2nd	24	20	—	—	—	—	—	—	—	—	—	—	
	Croydon Aero.	18-7 7	244	46.3	37.8	42.1	—	55	6th 29	18, 28	—	—	3.60	91	—	20	2nd	23	17	1	2	0	0	3	10	0	1.97	—	24	
	Wisley	.. 9 9 9	150	48.2	36.1	42.1	+3.9	59	6th 24	1st	39.8	42.7	3.31	84	+ 39	18	2nd	22	15	1	1	0	0	0	18	3	1.89	+0.18	23	
Kent.	Biggin Hill	.. 18-7 7	597	44.3	36.6	40.5	—	52	6th 30	1, 4, 28	—	—	4.70	119	—	25	2nd	23	19	1	13	0	0	2	(7)	0	1.66	—	20	
	Bromley	.. 9 9 9	213	47.4	36.0	41.7	—	55	6th 21	1st	—	—	2.86	73	—	12	2nd	23	17	—	—	—	—	—	1	13	—	—	—	
	Canterbury	.. 9 9 9	124	47.3	36.0	41.7	—	57	6th 20	1st	41.1	43.9	3.19	81	—	15	26th	19	16	—	—	—	—	—	—	—	—	—	—	
	Dover	.. 9 9 9	22	46.6	38.5	42.5	—	56	6th 30	18th	39.8	42.6	3.87	98	—	16	2nd	21	17	0	0	0	0	2	4	1	2.16	—	26	
	Dungeness	.. 18-7 7	20	45.9	38.1	42.0	+2.7	52	6th 29	28th	—	—	2.67	68	+ 20	11	2nd	20	18	1	0	0	0	2	—	4	—	—	—	
	East Malling	.. 9 9 9	127	46.8	34.0	40.4	—	56	6th 22	1st	—	—	3.48	88	—	18	2nd	22	18	1	0	1	0	3	21	2	1.84	—	22	
	Folkestone	.. 9 9 9	101	47.1	37.2	42.1	—	56	6th 31	1, 18, 28	—	—	44.8	3.80	97	—	15	2nd	21	18	0	0	0	3	8	1	1.95	—	23	
	Lympne	.. 18-7 7	347	44.4	36.0	40.2	—	54	6th 26	28th	—	—	41.8	4.34	110	—	18	2nd	22	19	1	0	0	3	10	0	1.81	—	22	
	Margate	18-7 7	51	47.4	37.8	42.6	+3.4	56	6th 30	1st	40.2	42.8	2.58	65	+															

TABLE III (continued).—SUMMARY of the RECORDS of TEMPERATURE, RAINFALL and SUNSHINE and of WEATHER OBSERVATIONS, JANUARY, 1928.

DISTRICT, COUNTY AND PLACE.	Terminal Hours of Observation.	Height of Station above Mean Sea Level.	AIR TEMPERATURE IN DEGREES FAHRENHEIT.								Earth Temperature.		RAINFALL.				WEATHER. Number of days.								BRIGHT SUNSHINE.						
			Means of		Deviation from Normal.	Absolute Maximum and Minimum.			1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Most in a day.		Precip'n. 0.2 mm. or more.	1 mm. or more.	Snow.	Snow lying.	Hail.	Thunderstorm.	Fog (Morning Obs.)	Ground Frost.	Gale.	Daily Mean.	Deviation from Normal.	Per Cent.					
			A	B		Maximum.	Date.	Minimum.					Date.	Amount.													Date.	0.2 mm. or more.	1 mm. or more.	Hours per day.	
5. ENGLAND, S.E.—cont.																															
Hampshire	Calshot	18-7 7	8	46.9	38.2	42.5	—	55	6th	28	1st	—	—	5.07	129	—	24	2nd	21	19	0	1	2	0	1	11	6	2.62	—	31	
—cont.	Grayshott	9 9 9	661	45.9	34.3	40.1	+2.4	52	6th	26	1st	38.5	—	5.41	137	+68	25	2nd	24	18	2	3	1	0	3	14	8	2.06	+0.25	25	
	Long Sutton	9 9 9	479	47.0	35.2	41.1	—	52	6th	24	1st	—	—	5.08	129	—	19	2nd	19	18	0	8	0	1	12	0	1.58	—	19		
	Southamp'n	2121 9	64	48.8	36.4	42.6	+2.5	56	6th	25	1st	—	—	5.66	144	+76	21	2nd	23	16	0	1	1	0	2	11	4	2.38	+0.67	28	
	S. Farnboro'	18-7 7	230	46.6	35.8	41.2	—	54	6th	23	18th	—	—	3.52	89	—	19	2nd	19	17	0	3	0	0	2	12	1	2.12	—	25	
	Winchester (Worthy Down)	18-7 7	272	46.5	35.3	40.9	—	54	6th	22	1st	—	—	5.81	148	—	27	2nd	23	18	1	2	2	0	4	16	0	2.22	—	26	
I. of Wight.																															
	Newport	9 9 9	48	48.3	36.6	42.5	—	54	6th	26	1st	—	—	7.74	197	—	35	28th	24	18	0	0	1	0	1	11	2	—	—	—	
	Ryde	9 9 9	13	48.7	39.0	43.9	—	55	6th	31	1, 2	—	—	4.72	120	—	18	2nd	23	17	0	0	1	0	1	—	1	2.51	—	30	
	Sandown	9 9 9	13	48.7	37.2	42.9	—	55	6th	27	12th	—	—	5.39	137	—	22	2nd	29	19	0	0	9	0	0	—	0	2.76	—	33	
	Totland Bay	9 9 9	140	48.1	38.6	43.3	+3.0	52	6th	27	1st	—	—	5.66	144	+85	18	28th	20	16	0	0	0	0	1	8	4	2.68	+0.62	32	
	Ventnor (Hospital)	9 9 9	59	48.4	40.0	44.2	+2.5	53	6th	32	1, 2	—	—	5.30	135	+70	20	2nd	24	20	—	—	—	—	—	—	2	2.79	+0.85	33	
Wilts.																															
	Larkhill	9 9 9	440	47.3	34.1	40.7	—	53	5, 6	17	1st	—	—	3.75	95	—	13	28th	21	16	0	1	0	0	2	16	3	—	—	—	
	Marlboro'	9 9 9	424	46.6	33.7	40.1	+2.7	53	6th	17	1st	39.5	44.0	4.80	150	+86	21	12th	24	20	0	1	2	0	1	19	0	1.79	+0.40	21	
	Porton	9 9 9	363	47.7	33.4	40.5	—	54	6th	18	1, 2	39.0	—	4.45	113	—	15	1st	23	16	0	1	2	0	1	19	1	2.34	—	28	
7a. ENGLAND, N.W.																															
Cumberland.																															
	Aspatria (Mealsgate)	2121 9	487	44.6	35.5	40.1	+2.0	53	21st	26	1st	39.5	42.5	8.24	209	+127	17	18th	30	27	2	0	1	1	—	12	0	0.83	-0.62	11	
	Keswick	9 9 9	254	47.6	36.4	42.0	—	54	5, 6, 7	27	1st	39.6	42.2	12.16	309	—	43	21st	31	22	10	0	6	1	0	15	2	0.49	—	6	
	Newton Rigg	2121 9	559	44.7	34.8	39.7	+2.8	53	6th	19	1st	—	—	5.94	151	+69	13	31st	28	24	2	1	0	0	0	15	0	1.10	-0.19	14	
Lancashire.																															
	Blundellsands	9 9 9	34	46.6	37.9	42.3	—	56	21st	27	1st	37.8	41.4	5.53	140	—	20	23rd	26	19	0	1	0	0	—	18	3	—	—	—	
	Bolton	9 9 9	341	45.4	35.0	40.2	—	53	21st	28	27th	38.2	40.3	11.33	288	—	37	18th	29	26	1	1	0	1	—	12	0	0.76	—	9	
	Burnley	9 9 9	458	45.1	34.9	40.0	—	53	21st	26	1st	38.1	41.1	10.30	261	—	23	7, 12	27	25	2	1	1	0	1	12	1	0.49	—	68	
	Darwen	2121 9	724	43.5	34.6	39.1	—	51	21st	27	1st	37.8	40.0	13.36	339	—	36	12th	27	26	6	2	2	0	4	8	1	0.79	—	10	
	Hutton	9 9 9	82	46.1	35.4	40.7	—	55	21st	28	27th	38.4	41.6	8.77	223	—	26	12th	27	25	1	1	1	0	4	12	3	1.45	—	18	
	Lancaster	9 9 9	311	45.6	35.9	40.7	—	53	21st	29	1st	37.7	39.5	10.69	271	—	29	12th	28	26	1	0	2	0	0	11	0	1.34	—	17	
	Leyland	9 9 9	124	46.1	35.1	40.6	—	55	21st	26	27th	—	—	8.48	215	—	21	12th	28	26	1	1	0	0	3	19	2	1.39	—	17	
	Manchester (Whitworth Pk)	2121 9	125	46.6	37.0	41.8	+2.7	55	21st	31	1st	—	—	7.68	195	+131	26	23rd	27	22	1	1	0	0	6	—	0	0.90	+0.32	11	
	(Oldham Road)	2121 9	190	46.2	38.5	42.3	+2.8	54	21st	32	1st	38.3	42.0	8.88	226	—	28	23rd	27	25	1	0	3	0	—	0	2	0.44	-0.01	58	
	(Swinton)	9 9 9	253	46.3	34.2	40.3	—	54	21st	28	1st	—	—	39.7	8.29	211	—	27	18th	27	24	1	1	2	0	2	15	2	0.75	—	9
	Southport	9 9 9	37	46.0	37.5	41.7	+3.0	55	21st	30	1st	36.7	39.0	7.15	182	+117	24	18th	27	23	0	1	3	0	2	9	6	1.83	+0.28	23	
	Stonyhurst	9 9 9	377	45.0	35.0	40.0	+2.2	53	21st	27	1st	—	—	12.27	311	+202	41	12th	29	25	2	1	3	0	1	5	6	1.20	+0.14	158	
Cheshire.																															
	Hoylake	9 9 9	30	48.5	37.4	42.9	+3.0	55	23rd	27	1st	—	—	4.46	113	+55	16	18th	24	23	—	—	—	—	—	—	—	2	0.4	+0.36	25
	Liverpool (Bidston)	18-7 7	189	45.6	37.8	41.7	+2.4	56	21st	29	1st	—	—	4.57	116	+62	17	23rd	22	19	0	1	5	0	0	9	4	1.99	—	25	
	Macclesfield	9 9 9	500	44.9	34.0	39.5	+2.6	52	21st	26	1st	—	—	6.23	158	+89	22	23rd	26	20	1	0	1	1	2	—	1	—	—	—	
	West Kirby	9 9 9	25	47.4	37.0	42.2	—	55	21st	26	1st	—	—	4.12	105	—	13	23rd	24	19	3	1	9	0	0	11	6	2.08	—	26	
7b. NORTH WALES.																															
Flint.																															
	Hawarden B'ge	9 9 9	22	49.5	37.8	43.7	+3.8	58	21st	28	1st	—	—	3.37	85	+39	11	23rd	21	17	—	—	—	—	—	—	—	—	—	—	
	Rhyl	9 9 9	30	49.2	36.3	42.7	+2.3	56	20th	27	1st	—	—	4.06	103	+58	17	29th	25	20	0	0	0	0	0	—	0	1	0.83	-0.27	23
	Sealand	18-7 7	16	47.7	36.3	42.0	—	56	21st	29	1, 4, 31	38.8	41.3	3.49	89	+39	12	23rd	21	16	0	0	1	0	3	19	3	2.10	—	26	
Anglesey.																															
	Holyhead	18-7 7	26	47.2	41.1	44.1	+2.3	53	6th	31	1st	—	—	6.03	153	+79	17	12th	23	20	0	0	3	1	0	1	8	2.15	+0.71	27	
Denbigh.																															
	Colwyn Bay	9 9 9	81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Carnarvon.																															
	Aber (Bangor)	9 9 9	60	49.5	40.0	44.7	—	56	21st	30	1, 2	—	—	7.50	191	—	25	12th	23	23	0	0	3	0	—	4	0	0.61	—	88	
Montgomery.																															
	Llandudno	9 9 9	22	49.7	39.8	44.7	+3.3	58	21st	30	1st	—	—	4.25	108	+42	13	23rd	25	21	1	0	0	0	0	—	1	1.47	-0.37	18	
	Welshpool	9 9 9	254	48.3	34.6	41.5	—	55	21, 22	22	1st	—	—	6.43	163	—	16	21st	25	21	1	0	0	0	0	—	0	—	—	—	
8a. SOUTH WALES.																															
Cardigan.																															
	Aberystwyth	9 9 9	59	46.4	39.6	43.0	—	52	21, 23	31	1st	—	—	5.49	139	—	17	23rd	29	23	0	0	0	0	1	—	3	1.76	-0.11	21	
	„ P.B.S.†	9 9 9	452	46.7	37.5	42.1	—	54	21st	30	1st	—	—	7.44	189	—	25	23rd	30	22	1	0	5	0	4	6	1	—	—	—	
Pembroke.																															
	Haverfordwest	2121 9	250	4																											

TABLE III (continued).—SUMMARY OF THE RECORDS OF TEMPERATURE, RAINFALL and SUNSHINE, and of WEATHER OBSERVATIONS, JANUARY, 1928.

DISTRICT, COUNTY AND PLACE.	Terminal Hours of Observation.		Height of Station above Mean Sea Level.	AIR TEMPERATURE IN DEGREES FAHRENHEIT.						Earth Temperature.		RAINFALL.				WEATHER. Number of days.							BRIGHT SUNSHINE.							
	Max.	Min.		Means of		Deviation from Normal.	Absolute Maximum and Minimum.			1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Most in a day.		Precip'n.		Snow lying.	Hail.	Thunderstorm.	Fog (Morning Obs.)	Ground Frost.	Gale.	Hours per day.						
				A	B		Maximum.	Date.	Minimum.					Date.	Amount.	Date.	0.2 mm. or more.							1 mm. or more.	Snow.	Thunderstorm.	Fog (Morning Obs.)	Ground Frost.	Gale.	Daily Mean.
8b. ENGLAND, S.W.—cont.	G.M.T.	ft.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	in.	mm.	mm.	mm.										hr.	hr.	%				
Dorset— Shaftesbury ..	9 9 9	722	47.1	36.0	41.5	+3.9	54	6th	29	1st	—	—	3.67	93	+ 27	20	28th	20	15	1	3	0	0	—	—	0	—	—	—	
Devon.																														
Arlington ..	9 9 9	613	47.8	37.2	42.5	+3.3	52	21, 23	27	1st	—	—	12.06	301	+179	38	12th	26	26	0	0	4	1	—	6	0	—	—	—	
Ashburton ..	9 9 9	583	50.5	38.7	44.6	+3.6	55	6, 10	32	1st	—	—	10.13	257	+128	52	1st	28	24	0	0	0	0	1	0	—	0	—	—	—
Cullompton ..	9 9 9	202	50.1	35.9	43.0	+3.3	54	6th	24	1st	42.3	—	6.38	162	+ 80	28	28th	30	21	0	0	1	0	0	14	0	1.82	+0.30	22	
Dean Prior ..	2121	9	331	49.1	37.3	43.2	—	54	6th	25	1st	—	—	16.36	415	—	54	1st	31	27	2	2	2	1	—	14	—	—	—	
Ilfracombe ..	9 9 9	74	50.3	42.5	46.4	+3.1	55	20, 21	34	1st	44.2	47.0	6.45	164	+ 83	24	1st	29	22	0	0	0	0	0	1	0	1.30	—	16	
Killerton ..	9 9 9	159	50.3	36.0	43.1	—	54	6, 7, 21	24	1st	—	—	4.37	111	—	20	29th	22	17	0	0	0	0	—	24	—	—	—	—	
Newton Abbot	9 9 9	350	49.9	38.1	44.0	—	53	5, 10, 24	28	1st	—	—	5.64	143	—	25	1st	26	19	0	0	2	0	2	13	1.2.27	—	28		
Plymouth (Hoe)	2121	9	116	50.1	43.1	46.6	+4.4	55	6th	29	1st	43.3	46.6	7.27	185	+101	32	1st	27	23	0	0	3	0	2	1	2.2.17	+0.46	26	
Plymouth (Cattewater)	18-7	7	82	49.8	42.1	45.9	—	54	6th	29	1st	—	—	6.31	160	—	29	28th	27	24	0	0	3	0	2	6	11.2.18	—	26	
Salcombe ..	9 9 9	39	49.8	40.3	45.1	—	52	6, 23, 25	29	1st	—	—	76.82	173	—	23	1st	23	21	0	0	0	0	2	—	0	2.36	—	28	
Sidmouth ..	9 9 9	147	49.7	38.2	43.9	+2.9	55	5, 23	27	1st	—	—	4.67	119	+46	17	23rd	22	21	0	0	0	0	2	6	2	—	—	—	
Tavistock ..	9 9 9	458	48.7	37.3	43.0	—	52	6th	26	1st	—	—	44.1	9.62	244	—	45	1st	28	27	0	1	7	1	2	14	1	—	—	
Torquay ..	9 9 9	12	50.8	40.2	45.5	+3.2	54	5, 6	31	1st	—	—	43.5	5.36	136	+ 58	23	28th	24	19	0	0	3	0	1	8	6.2.47	+0.50	29	
Woolacombe ..	2121	9	59	49.6	42.0	45.8	+3.2	55	21st	35	1st	—	—	5.26	134	+ 71	17	21st	26	21	0	0	1	0	0	3	0	1.65	-0.16	20
Cornwall.																														
Falmouth Obs. (Pendennis)	9 9 9	167	50.6	41.2	45.9	+2.5	53	6, 8, 18	33	1, 2	44.5	47.1	8.63	219	+112	38	1st	30	24	0	0	2	0	2	7	12.25	+0.38	26		
Fowey ..	9 9 9	51	51.2	41.3	46.3	—	53	9, 19, 23	30	1st	—	—	6.24	158	—	24	28th	27	23	0	0	0	0	1	—	13	2.43	—	28	
Gulval ..	9 9 9	20	51.2	42.1	46.7	—	53	6, 9, 23	33	1st	—	—	8.62	219	—	40	1st	29	27	0	0	0	0	—	5	2.2.33	—	27		
Newquay ..	9 9 9	190	50.0	41.9	45.9	+2.5	54	21st	32	1st	44.6	46.3	6.02	153	+ 75	22	1st	29	20	0	0	4	0	—	0	2.10	+0.29	25		
Redruth ..	9 9 9	397	49.2	40.6	44.9	—	52	18, 21, 23	33	1st	—	—	8.88	225	+118	46	1st	29	26	0	0	5	0	3	7	5	—	—	—	
9. IRELAND, N.																														
Sligo. Markree Cas. ..	2121	9	122	49.3	34.9	42.1	+2.5	56	21st	19	1st	40.8	43.7	7.48	190	+ 90	19	25th	30	29	7	0	12	3	0	—	10	2.20	+0.85	28
Mayo. Blacksod Pt. ..	18-7	7	10	50.0	40.2	45.1	+2.4	54	1, 3, 19	32	25th	—	—	6.98	177	+ 48	14	19th	30	29	0	0	7	1	0	—	2	—	—	—
Mallary ..	9 9 9	120	50.2	38.8	44.5	—	56	5th	34	17, 26, 27, 31	—	—	12.67	322	—	25	25th	31	30	1	5	9	3	0	—	0	1.55	+0.29	19	
Donegal. Malin Head ..	18-7	7	51	46.2	38.3	42.3	+1.4	55	21st	32	24, 27	—	—	7.36	187	+121	16	5th	30	28	2	0	13	2	0	—	5	1.49	+0.27	19
Antrim. Aldergrove ..	18-7	7	238	45.6	35.2	40.4	—	54	21st	26	17th	—	—	5.14	130	—	13	14th	29	26	5	2	0	0	1	9	2.2.07	—	27	
Belfast ..	9 9 9	13	48.1	36.8	42.5	—	54	21, 23	30	1st	—	—	6.79	173	—	21	13th	27	26	—	—	—	—	—	—	—	—	—	—	
Lisburn ..	9 9 9	206	47.2	33.7	40.5	+2.2	54	21st	27	1st	—	—	5.05	128	+ 59	13	5th	29	26	4	0	0	0	4	—	1	—	—	—	
Down. Donaghadee ..	18-7	7	40	47.0	37.0	42.0	+1.4	54	6th	30	1st	—	—	5.47	139	+ 75	19	18th	27	25	1	0	0	0	1	—	2	—	—	—
Armagh. Armagh ..	2121	9	204	47.3	35.4	41.3	+1.9	54	21st	25	1st	39.4	42.3	4.84	123	+ 59	13	5th	29	26	5	3	2	0	0	7	0.2.54	+1.12	32	
Longford. Newtownforbes	2121	9	161	47.4	33.7	40.5	—	53	6, 21, 23	26	17th	39.3	42.4	6.00	153	—	15	31st	29	28	2	1	2	1	—	2	—	—	—	
10. IRELAND, S.																														
Dublin.																														
Balbriggan ..	9 9 9	203	48.2	35.8	42.0	+1.9	55	21st	29	1st	39.5	42.9	3.52	89	+ 29	13	18th	27	19	2	0	1	0	6	11	4	—	—	—	
City ..	2121	9	54	49.4	38.2	43.8	+2.0	57	21st	30	1st	—	—	2.23	57	—	7	25th	25	17	1	0	2	0	1	4	7	—	—	—
Glasnevin ..	2121	9	55	49.8	35.2	42.5	+1.9	57	21st	25	1, 17	—	—	2.52	64	+ 5	9	18th	25	17	2	0	0	0	—	13	1	—	—	—
Phoenix Pk. ..	2121	9	155	48.8	35.3	42.1	+1.9	55	20, 21	24	17th	—	—	2.85	72	+ 14	9	25th	25	19	0	0	1	0	0	15	4.2.79	+0.95	33	
Trin. Coll. ..	2121	9	12	50.3	38.5	44.4	+2.3	60	21st	29	1st	40.8	43.4	1.91	49	—	6	17th	24	15	0	0	1	0	—	7	1	—	—	
Wicklow. Newcastle ..	2121	9	256	48.7	37.1	42.9	—	55	23rd	30	17th	—	—	4.36	111	—	20	1st	26	22	2	0	0	0	1	—	3	—	—	—
King's Co. Birr Castle ..	18-7	7	175	48.0	37.0	42.5	+2.7	55	21st	29	1, 17	41.0	43.7	3.89	99	+ 27	9	25th	29	23	3	0	3	1	0	16	0.2.32	+0.71	29	
Queen's Co. Mountmellick ..	9 9 9	252	49.6	34.9	42.3	—	54	5, 22	28	17th	—	—	6.56	167	—	20	31st	29	26	—	—	—	—	—	—	—	—	—	—	
Wexford. Newtownbarry ..	9 9 9	153	50.0	36.6	43.3	—	55	6, 7, 23	26	1st	41.4	43.7	6.86	174	—	24	1st	28	26	0	0	3	0	2	—	1	—	—	—	
Kilkenny. Kilkenny ..	9 9 9	182	49.1	35.1	42.1	+2.2	54	5, 7, 20	25	1st	—	—	4.19	106	+ 25	9	25, 31	28	23	—	—	—	—	—	—	—	—	—	—	
Waterford. Seskin, Carrick-on-Suir	2121	9	542	47.7	36.7	42.2	—	53	6, 7, 23	31	1st	—	—	5.88	1															

TABLE IV (continued).—SUMMARY of the OBSERVATIONS of PRESSURE, TEMPERATURE, HUMIDITY, CLOUD, VISIBILITY, and WIND at fixed hours at certain Stations during the Month of JANUARY, 1928.

DISTRICT, COUNTY AND PLACE.	Hour of Observation.	Height of Barometer above Mean Sea Level.	MEAN PRESSURE.		TEMPERATURE AND HUMIDITY.				CLOUD AMOUNT.					VISIBILITY.									WIND, NUMBER OF OBSERVATIONS.													
			At Mean Sea Level.	Deviation from Normal.	Dry Bulb.	Depression of Wet Bulb.	Vapour Pressure.	Relative Humidity.	Mean Amount.	NO. OF OBSERVATIONS.					NUMBER OF OBSERVATIONS.									FORCE (0-12).				DIRECTION.								
										0	1 to 3	4 to 6	7 to 9	10	FOG.			Mist.	Poor Vis.	Mod. Vis.	GOOD VISIBILITY.			8 or more.	4 to 7	1 to 3	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	
			0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	10	11	12	
2. ENGLAND, N.E.—cont.																																				
Durham. Durham	9	352	1006.2	—	39.0	1.3	7.1	88	6.0	5	7	1	5	13	0	0	0	0	7	2	11	10	1	0	1	9	20	1	1	1	0	2	9	6	10	1
	21	352	1005.4	—	39.7	1.4	7.4	87	5.4	9	4	4	2	12	0	0	0	0	0	2	9	17	3	0	3	6	20	2	0	0	0	0	8	13	8	0
York, N. Riding. Scarborough	9	96	1007.2	—	40.0	1.4	7.4	87	5.5	9	1	6	7	8	0	1	0	1	5	2	15	5	2	0	1	1	29	0	1	0	0	1	7	10	5	7
	9	53	1008.0	—	39.3	1.5	7.0	86	6.0	10	2	1	1	17	—	—	—	—	—	—	—	—	—	—	0	1	30	0	3	1	0	2	14	2	7	2
21	53	1007.1	—	41.1	1.7	7.4	85	5.1	15	0	0	2	14	—	—	—	—	—	—	—	—	—	—	0	1	30	0	1	0	1	2	9	8	6	4	
E. Riding. Spurn Head	1	28	1008.3	—	39.6	0.8	7.8	93	5.9	9	2	2	6	12	0	1	1	0	3	2	11	13	0	0	0	23	7	1	0	0	0	1	6	10	11	2
	7	28	1008.0	—6.5	38.3	0.3	7.6	97	6.4	4	5	3	8	11	0	1	0	2	0	1	9	17	1	0	0	23	8	0	0	0	0	1	8	9	9	4
	13	28	1007.0	—	41.2	0.2	8.5	98	7.7	0	3	5	12	11	0	0	0	0	4	20	7	0	0	1	28	2	0	0	0	0	1	8	10	6	6	
	18	28	1006.9	—	41.6	1.3	8.1	89	6.5	2	5	4	12	8	0	0	0	1	1	2	17	9	1	0	1	26	4	0	0	0	1	9	6	10	5	
Lincoln. Cranwell H	1	240	1010.5	—	38.6	0.7	7.6	94	5.9	10	1	3	6	11	0	0	1	0	1	4	10	13	2	0	0	17	12	2	0	0	1	5	17	6	0	
	7	240	1010.2	—	38.1	0.8	7.4	93	6.5	3	6	3	6	13	0	2	0	1	2	2	15	8	1	0	0	17	14	0	0	0	2	9	12	7	1	
	13	240	1009.4	—	43.1	1.8	8.1	85	7.3	3	4	1	8	15	0	0	0	1	2	5	13	7	3	0	1	22	8	0	0	0	2	12	7	5	5	
	18	240	1009.6	—	41.4	1.5	7.9	88	6.7	3	6	3	4	15	0	0	1	0	3	4	16	7	0	0	0	21	10	0	0	0	2	7	11	8	3	
3. ENGLAND, E.																																				
Norfolk. Cromer	9	74	1010.6	—	39.5	1.0	7.3	91	6.6	4	3	3	12	9	0	0	0	0	2	1	19	5	4	0	0	10	21	0	1	0	0	2	10	8	8	2
Norfolk. Yarmouth	1	26	1011.2	—	40.2	1.4	7.4	87	6.4	8	1	3	4	15	0	0	1	0	0	5	10	13	2	0	0	10	21	0	0	0	1	7	10	13	0	
	7	26	1011.0	—4.8	39.1	1.1	7.2	90	6.9	2	6	5	2	16	0	0	1	0	5	14	7	3	0	0	0	10	21	1	0	0	1	9	12	7	1	
	13	26	1013.0	—	44.0	2.1	8.1	83	7.8	0	3	7	7	14	0	0	0	0	1	1	25	4	0	0	0	18	13	0	0	0	1	7	12	6	5	
	18	26	1013.0	—	42.4	1.4	8.0	88	7.5	4	3	2	4	18	0	0	0	1	1	20	6	2	0	0	19	11	1	0	0	1	11	8	6	4		
Suffolk. Felixstowe Aero.	7	20	1012.7	—	39.4	1.0	7.3	91	6.6	1	8	3	8	11	0	0	2	1	5	1	6	11	5	0	0	12	17	2	0	0	0	14	8	6	1	
	13	20	1012.2	—	43.6	2.2	8.0	82	7.0	1	7	3	9	11	0	0	1	0	1	5	12	6	6	0	0	20	10	1	1	0	1	14	7	4	2	
18	20	1012.4	—	42.0	1.7	7.7	85	6.8	4	5	2	4	16	0	0	0	0	1	2	11	17	0	0	1	20	9	1	0	0	2	14	6	5	3		
Cambridge. Cambridge H	9	43	1012.1	—5.0	40.8	1.5	7.7	88	6.0	8	3	2	5	13	—	—	—	—	—	—	—	—	—	—	0	7	24	0	0	0	2	4	10	10	5	
	21	43	1011.0	—5.8	40.9	1.3	7.9	89	5.1	10	0	4	5	12	—	—	—	—	—	—	—	—	—	—	0	11	18	2	0	0	1	4	13	6	5	
Hertford. Rothamsted	9	396	1012.4	—	39.4	0.8	7.5	93	6.8	4	5	1	5	16	0	1	0	1	0	15	14	0	0	0	0	9	19	3	0	0	2	12	6	7	1	
Essex. Shoeburyness H	7	14	1012.7	—	39.2	0.7	7.7	94	5.7	4	6	7	5	9	1	0	0	0	2	9	10	8	1	0	0	8	20	3	1	0	0	6	13	7	1	
	13	14	1012.6	—	44.9	1.7	8.8	86	6.8	0	7	6	7	11	0	0	0	0	3	3	10	8	7	0	0	15	16	0	2	0	1	6	11	6	5	
	18	14	1013.0	—	42.5	1.0	8.3	91	6.6	5	5	2	3	16	0	0	0	1	1	5	14	9	1	0	1	12	16	2	0	1	0	4	14	6	3	
4. MIDLAND COUNTIES.																																				
York, W. Riding. Harrogate	7	478	1007.9	—	37.6	1.0	7.0	91	6.5	1	9	2	7	12	0	1	0	0	3	5	3	16	3	0	0	11	18	2	0	0	0	10	13	5	1	
	13	478	1006.1	—	41.6	1.7	7.7	85	8.0	0	4	3	9	15	0	1	1	2	3	5	5	8	6	0	1	13	16	1	0	0	3	7	12	7	1	
	18	478	1006.7	—	40.4	1.3	7.4	88	5.7	4	10	0	6	11	0	0	0	0	0	9	4	17	1	0	0	17	13	1	1	0	1	6	15	6	1	
Nottingham. Nottingham	9	215	1009.3	—	40.4	1.7	7.1	85	7.5	0	7	2	9	13	0	1	4	8	3	1	12	2	0	0	1	12	18	0	1	0	2	5	6	16	1	
Warwick. Birmingham H	7	542	1010.9	—	39.6	1.4	7.3	87	7.2	1	7	1	10	12	0	0	0	0	2	1	8	6	14	0	0	12	18	1	0	0	2	12	8	6	2	
	13	542	1009.8	—	43.5	2.5	7.7	80	7.1	1	4	5	12	9	0	0	1	2	1	4	9	3	11	0	0	24	7	0	1	0	1	8	10	6	5	
	18	542	1010.5	—	41.9	1.9	7.7	84	5.8	6	6	1	7	11	0	0	0	0	4	6	7	6	8	0	0	13	18	0	0	0	2	6	13	6	4	
Oxford. Oxford	9	212	1012.8	—4.8	40.4	1.4	7.4	87	6.6	4	5	2	5	15	0	1	0	2	1	1	12	8	5	1	0	16	14	1	0	0	2	9	10	7	2	
Hereford. Ross-on-Wye H	7	226	1011.3	—	41.2	1.8	7.6	85	6.1	1	10	2	9	9	0	0	0	0	1	0	5	9	16	0	0	10	19	2	0	0	1	5	12	9	2	
	13	226	1010.4	—	45.6	2.9	8.5	77	7.3	0	7	2	9	13	0	0	0	1	0	1	7	7	14	1	1	19	10	1	2	0	0	1	4	10	9	4
	18	226	1010.9	—	43.3	2.2	7.9	82	5.8	4	8	4	3	12	0	0	0	1	0	2	9	4	14	1	0	12	17	2	0	0	1	4	8	15	1	
	21	226	1011.2	—	42.0	1.9	7.7	83	4.9	7	8	2	4	10	0	0	1	0	2	2	6	4	16	0	0	11	19	1	0	0	1	4	13	12	0	
Gloucester. Cheltenham H	9	230	1011.7	—	42.1	2.0	7.7	83	7.7	0	1	7	16	7	0	0	0	2	0	0	21	7	1	0	0	2	28	1	2	0	1	2	10	10	5	
	21	230	1010.8	—	42.0	1.7	7.9	85	5.8	9	2	5	1	14	0	0																				

TABLE IV (continued).—SUMMARY of the OBSERVATIONS of PRESSURE, TEMPERATURE, HUMIDITY, CLOUD, VISIBILITY, and WIND at fixed hours at certain Stations during the Month of January, 1928.

DISTRICT, COUNTY AND PLACE.	Hour of Observation.	Height of Barometer above Mean Sea Level.	MEAN PRESSURE.		TEMPERATURE AND HUMIDITY.				CLOUD AMOUNT.					VISIBILITY.									WIND, NUMBER OF OBSERVATIONS.														
			At Mean Sea Level.	Deviation from Normal.	Dry Bulb.	Depression of Wet Bulb.	Vapour Pressure.	Relative Humidity.	Mean Amount.	NO. OF OBSERVATIONS.					NUMBER OF OBSERVATIONS.									FORCE (0-12).				DIRECTION.									
										0	1 to 3	4 to 6	7 to 9	10	Fog.			Mist.	Poor Vis.	Mod. Vis.	GOOD VISIBILITY.			8 or more.	4 to 7	1 to 3	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		
			0	1	2	3	4	5	6	7	8	9	8	9	8	7	6	5	4	3	2	1	0	0	1	2	3	4	5	6	7	8	9				
5. ENGLAND, S.E.—cont.																																					
Kent.	Biggin Hill H	7	616	1012.9	—	38.7	0.5	7.7	95	6.5	6	4	2	4	15	0	1	0	0	1	1	26	2	0	0	0	16	14	1	0	0	0	0	2	22	5	1
		13	616	1012.2	—	43.3	2.0	8.0	83	7.9	0	4	6	5	16	0	0	0	1	3	4	12	11	0	0	0	21	10	0	2	0	0	2	17	7	1	
		18	616	1012.4	—	41.2	1.3	7.9	89	7.2	4	5	0	4	18	0	0	0	1	2	11	11	6	0	0	0	20	11	0	1	1	0	2	18	6	2	
Kent.	Dungeness ..	1	21	1014.0	—	41.1	0.9	8.1	92	6.0	8	3	2	8	10	0	0	1	1	2	6	8	11	0	2	11	18	0	3	1	0	1	3	11	7	5	
		7	21	1013.9	-2.9	41.7	0.7	8.5	94	6.5	1	5	9	8	8	0	0	1	1	0	1	7	11	10	0	10	20	1	2	0	0	2	13	10	1		
		13	21	1013.7	—	44.9	1.6	8.8	87	7.8	1	1	5	12	12	0	0	0	0	1	1	5	10	14	0	17	14	0	3	0	0	1	2	13	9	3	
		18	21	1013.3	—	43.1	1.3	8.4	89	6.5	4	4	6	4	13	0	0	0	0	2	8	12	9	0	0	19	11	1	3	0	0	0	4	12	8	3	
Kent.	Lympne H	1	343	1014.2	—	39.2	0.7	7.8	94	5.8	10	2	3	0	16	2	1	1	1	1	3	10	9	3	0	18	13	0	1	1	0	2	7	10	6	4	
		7	343	1014.2	—	38.9	0.7	7.6	93	6.8	1	5	6	10	9	0	2	0	1	3	3	9	12	1	0	15	16	0	0	1	1	6	16	2	4		
		13	343	1013.3	—	43.7	1.8	8.3	85	7.8	1	3	3	11	13	0	2	0	0	2	4	8	8	7	0	25	6	0	0	0	1	2	9	10	5	4	
18	343	1013.6	—	41.1	1.0	8.1	91	6.4	5	5	3	3	15	0	1	2	0	2	7	11	7	1	0	23	8	0	0	0	0	4	9	8	5	5			
Kent.	Tunbridge Wells	9	396	1014.6	—	40.4	0.6	7.9	94	6.9	5	4	2	4	16	0	0	0	0	4	9	9	9	0	0	5	26	0	1	1	0	0	6	18	4	1	
Sussex.	Brighton H	9	48	1015.1	—	42.8	0.7	8.8	93	6.2	10	0	3	3	15	0	0	0	1	0	3	10	7	10	0	2	25	4	1	0	0	3	4	16	0	3	
Sussex.	St. Leonards	9	174	1014.6	—	42.0	1.1	8.2	91	6.7	4	3	5	6	13	0	0	0	0	4	8	13	6	0	1	4	26	0	1	1	0	1	13	9	5		
		21	174	1014.1	—	42.4	1.3	8.1	89	6.3	8	2	2	7	12	0	0	1	1	0	1	5	17	6	0	1	11	19	0	1	1	0	1	15	7	6	
Hampshire.	Calshot ..	1	15	1014.4	—	40.9	1.1	7.9	91	5.5	9	4	2	6	10	0	0	1	1	0	0	4	15	10	0	17	13	1	1	0	0	3	9	12	5		
		7	15	1014.1	—	41.3	1.0	8.0	91	6.1	6	4	1	12	8	0	1	0	0	0	0	3	21	6	0	15	16	0	0	1	1	0	6	7	12	4	
		13	15	1013.8	—	46.0	2.6	8.4	80	7.3	0	5	5	8	13	0	0	0	0	2	1	6	15	7	0	1	27	2	1	2	0	1	5	11	6	4	
		18	15	1013.8	—	43.9	1.7	8.4	86	6.9	3	5	3	9	11	0	0	0	0	0	2	9	14	6	0	21	8	2	2	0	0	1	5	8	11	2	
Hampshire.	Southampton H	9	84	1014.6	-3.2	42.2	1.3	8.3	89	6.8	3	4	5	4	15	0	2	0	0	2	17	10	0	0	7	23	1	1	1	1	1	0	12	10	4		
		21	84	1014.2	-3.3	44.0	1.5	8.7	87	7.6	2	3	2	8	16	0	2	2	2	4	12	9	0	0	10	21	0	0	0	0	2	1	12	13	3		
Hampshire.	S. Farnborough	7	256	1013.2	—	39.3	0.9	7.4	92	6.5	4	7	1	4	15	0	0	2	0	2	1	11	9	6	0	12	18	1	1	0	0	1	10	7	10	1	
		13	256	1012.7	—	45.6	2.7	8.3	79	7.9	0	4	4	9	14	0	0	0	0	1	1	7	8	14	0	23	8	0	1	0	0	1	8	9	9	3	
		18	256	1012.8	—	42.5	1.6	8.1	87	6.2	4	8	1	4	14	0	0	0	0	0	3	13	6	9	0	16	15	0	1	0	0	1	9	6	10	4	
Hampshire.	Winchester (Worthy Down)	7	273	1013.5	—	38.9	0.7	7.5	93	6.8	3	4	5	6	13	0	0	2	2	1	1	7	14	4	0	12	18	1	0	0	1	4	10	6	9	0	
		13	273	1013.0	—	45.3	2.3	8.3	82	8.4	0	1	5	10	15	0	0	0	1	0	2	4	8	15	1	24	7	0	1	0	0	2	13	4	9	2	
		18	273	1013.2	—	42.0	1.2	8.1	90	6.7	2	6	3	8	12	0	0	0	0	0	3	7	15	6	0	17	14	0	1	0	0	2	11	6	9	2	
I. of Wight.	Ventnor (Hosp.)	9	80	1014.9	—	44.0	1.4	8.7	88	6.3	1	9	5	3	13	—	—	—	—	—	—	—	—	—	—	4	27	0	0	1	1	1	1	7	17	3	
		15	80	1013.9	—	45.9	2.2	8.7	83	6.8	0	8	4	6	13	—	—	—	—	—	—	—	—	—	—	8	23	0	1	0	2	0	1	9	14	4	
Wilts.	Larkhill H	9	444	1013.3	—	40.3	1.0	7.9	92	7.0	0	8	3	8	12	0	1	0	1	1	0	5	5	18	0	23	8	0	1	0	0	1	9	8	7	5	
		13	444	1012.3	—	44.7	2.2	8.3	82	7.7	1	4	3	8	15	0	1	0	0	1	0	2	5	22	0	27	1	1	2	0	0	1	8	8	7	4	
		15	444	1012.3	—	44.2	2.1	8.3	83	7.4	1	5	2	9	14	0	0	0	1	1	0	1	8	20	0	1	26	3	1	2	0	0	1	8	6	6	7
7a. ENGLAND, N.W.																																					
Cumberland.	Aspatria (Mealsgate)	9	485	1004.5	—	40.5	1.4	7.7	87	8.4	2	0	3	6	20	—	—	—	—	—	—	—	—	—	—	16	13	2	0	0	0	2	5	19	2	1	
		21	485	1005.3	—	39.7	1.3	7.4	88	6.6	5	3	5	2	16	—	—	—	—	—	—	—	—	—	—	9	20	2	0	0	0	1	5	20	2	1	
Lancashire.	Hutton ..	9	86	1008.0	—	40.2	0.9	7.7	92	8.1	1	2	4	7	17	—	—	—	—	—	—	—	—	—	9	11	11	0	0	0	3	8	5	3	1		
Lancashire.	Southport H	9	42	1008.1	-7.6	41.0	1.1	7.9	90	6.6	1	8	5	2	15	0	0	2	0	1	14	5	4	5	0	1	22	7	1	1	0	1	3	9	6	6	4
		13	42	1006.8	-8.6	43.7	1.6	8.5	87	6.5	2	8	3	2	16	0	0	0	0	1	12	7	1	10	0	1	27	2	1	1	0	0	2	8	6	10	3
		17	42	1007.3	-7.9	42.7	1.4	8.3	88	6.3	0	10	3	5	13	0	0	0	0	1	10	14	3	3	0	1	25	4	1	0	0	0	1	5	7	15	2
		21	42	1007.9	-7.7	41.8	1.4	8.0	88	7.4	0	5	7	4	15	0	0	1	0	2	19	8	1	0	0	1	25	5	0	0	0	3	1	15	9	3	
Lancashire.	Stonyhurst ..	9	381	1008.2	—	39.8	1.3	7.4	88	7.7	2	3	3	7	16	0	0	1	0	0	1	13	12	4	0	17	14	0	1	2	1	2	8	12	3	2	
		21	381	1008.0	—	40.4	1.4	7.4	87	8.3	2	2																									

TABLE I. DISTRICT VALUES.

The District Values of this Table are computed from the statistics for selected individual stations set out in Table III and Table IV.

The representative stations from which the District Values of rainfall and temperature are computed are indicated in Table III by the sign ¶ while the representative stations from which District Values of sunshine are computed are indicated by the sign §. The deviations from and percentages of normal for Air Temperature, Rainfall and Sunshine are the means of the corresponding deviations or percentages for the representative District Value stations. The deviations from normal of Earth Temperature are derived from the deviations for all the stations reporting in Table III for which normals of Earth Temperature are available. The highest and lowest temperatures for the District recorded during the month may refer to any station in Table III.

TABLE II. SUMMARY OF AUTOGRAPHIC RECORDS OF WIND.

The records used in the preparation of this Table are generally made by anemographs of the pressure-tube type. At a few stations the Robinson Cup Anemograph is utilised. The classification adopted for the "Distribution of Wind" is based on the specification of the Beaufort Scale of Wind Force (see *The Observer's Handbook*). For an anemograph complying with the specification "head 33 ft. above ground in the open" the several columns correspond with Force 8 and above (gales), Forces 6 and 7 (strong winds), Forces 4 and 5 (moderate winds), Forces 2 and 3 (light winds), Forces 1 and 0 (nearly calm). Some information as to the nature of the actual exposures may be gathered from the figures in the "Height" columns.

The "Highest Hourly Wind" is determined by the mean speed of the wind for a period of sixty minutes from 30 minutes before to 30 minutes after an exact hour by Greenwich Mean Time. Under the heading "Veer from N" the azimuth of the direction from which the wind was blowing is stated, the entry for an east wind being 90°, that for a south wind 180° and so on.

TABLE III. SUMMARY OF OBSERVATIONS AT TERMINAL HOURS.

Temperature.—The terminal hours of observation are given for each station. When the terminal hours for maximum and minimum temperature are stated independently the temperatures refer to intervals of 24 hours. If the maximum thermometer is read in the morning the reading is credited to the previous day. When the terminal hours for maximum and minimum are separated by a dash, thus, 18-7, the day-maximum for the period 7h. to 18h. and the night-minimum for the period 18h. to 7h. are reported and are utilised in determining the means for the month; in such cases the extreme temperatures for successive periods of 24 hours are also read by the observers, so that the absolute maximum and minimum temperatures for the month are obtained.

Except at the Royal Observatory, Greenwich, where a Glaisher stand is in use, the air temperature is obtained from thermometers placed in louvered screens. At Kew Observatory, Richmond, and Valentia Observatory these are north wall screens a few feet from the ground. At Aberdeen Observatory the north wall screen is at 41 feet. Otherwise the screens are in the open.

Rainfall.—The daily amounts are for the 24 hours beginning at the "terminal hour." "Rainfall" includes all forms of precipitation. The number of days of precipitation is counted with reference to the limit .01 inch or 0.2 mm. and also with reference to the limit .04 inch or 1 mm. The lower limit excludes mere "traces" of precipitation, but it is frequently passed on occasions when the precipitation is only dew.

Weather.—The numbers of days of Precipitation, Snow, Hail, Thunderstorms and Gale are counted irrespective of the hour at which the phenomena occur. Except for "Precipitation" the day is the civil day.

For the purpose of this summary "Snow" includes sleet (*i.e.*, snow with rain), "Hail" includes graupel (soft hail), "Snow lying" refers to occasions when at least one-half of the country surrounding the station is covered with snow at the morning observation. The entry of "fog" implies that regular observations of the range of vision are made on the scale set out below. Days of fog are those on which the range of vision is less than 1,100 yards at the hour of morning observation. That hour is given by the third entry of column 2 of the table and may be 7h. or 9h. G.M.T. The variability of the observation hour may exercise an important effect upon the statistics of fog frequency. "Thunderstorm" includes any day on which thunder is heard. "Gale" is a wind of Force 8 or upwards on the Beaufort Scale. A "ground frost" is entered when the reading of a "grass minimum" thermometer set the previous evening and read at the morning observation is 30° F. or lower.

Sunshine.—The percentage of possible sunshine is in all cases calculated with reference to the maximum duration possible in the latitude on the assumption of an unobstructed horizon, due allowance being

made for refraction (see *International Meteorological Tables* (Paris) pp. A17-A20 and 42-27). The sunshine recorder is generally insensitive to sunshine when the sun is at an altitude of 3° or less. The symbol § is entered against the percentage at some stations and indicates that obstructions of altitudes greater than 3° reduce the possible record of duration for the month by more than 5 per cent.

TABLE IV. SUMMARY OF OBSERVATIONS AT FIXED HOURS.

Mean Air Pressure is expressed in millibars. (1 millibar = 1,000 dynes per square centimetre = the pressure due to .029531 inch of mercury at 32° F. in Lat. 45°). The corrections for latitude, temperature and height have been applied to the barometer readings so as to obtain pressure at mean sea level. Barometric pressure is given at station level for a few stations at altitudes of 600 ft. or more in footnotes in Table IV.

Hygrometry.—The values given depend on the readings of the dry and wet bulb thermometers in Stevenson Screens (except at the Observatories, see above). The observations were formerly reduced by Glaisher's method; as from January, 1926 they are reduced by the new hygrometrical tables issued by the Office which are based on a formula of Regnault. In general the relative humidity and vapour pressure are derived from the monthly means of the dry and wet bulb readings. At certain stations the daily values of relative humidity and vapour pressure are found and the means are computed therefrom. These stations are indicated by the letter "H."

Cloud Amount.—The proportion of sky covered with cloud is estimated on the scale 0 to 10, the entry "0" being equivalent to clear sky "10" to overcast.

Visibility.—The observations are classified according to the following scheme—the distances, specified by international arrangement in metres, are given here in yards and miles:—

CODE.	RANGE OF VISION.
0	Less than 55 yards.
1	Exceeding 55 yards, less than 220 yards
2	" 220 " " 550 "
3	" 550 " " 1,100 "
4	" 1,100 " " 1½ miles.
5	" 1½ miles " 2½ "
6	" 2½ " " 6½ "
7	" 6½ " " 12½ "
8	" 12½ " " 31 "
9	" 31 " "

Wind Summaries.—The estimates of wind force refer to the Beaufort Scale, and in general to the wind experienced at the time of observation. At Deerness, Cahirciveen, Richmond, Armagh, Eskdalemuir, Southport, Greenwich and Oxford the analysis refers to tabulations of autographic records. For Oxford the mean wind speed for half-an-hour centred at the hour of observation is used for conversion to "force" on the Beaufort Scale; for the remaining observatories the mean wind speed used for each observation refers to a period of one hour. In these cases winds equivalent to Force 1 are counted with the calms, whilst Forces 2 and 3 are taken together in the preceding column of the Table.

INTERPOLATED VALUES.

When the observations for any station for a month are incomplete and relevant data (e.g. records from neighbouring stations) which make it practicable to interpolate approximate values for the missing observations are available, such approximate values may be used for completing summaries for stations published in Tables III and IV. Parts of a summary obtained in this way are shown in brackets thus—(52.4).

STANDARD OF TIME.

As a rule observations are made in all parts of the British Islands according to Greenwich Mean Time, but at the following stations Local Mean Time is used for the observations summarised in Tables III and IV. The number of minutes after Greenwich Time is shown in brackets—Darwen (10), Rhayader (15), Ashburton (15), Tavistock (17), Plymouth (15), Douglas (20), Armagh (26), Balbriggan (25), Lisburn (30), Newcastle, Co. Wicklow (30), Ballinacurra (30), Cork (34).

"Summer Time" is not used in the Monthly Weather Report, but at certain stations the hours of observation vary in the course of the year. For such stations all time entries are converted to G.M.T. before they are printed and the winter hours are given as the terminal hours in the annual tables. For the summer hours reference should be made to the appropriate months.

NORMALS.

In Table III the normals used are those for the 35 years 1881-1915. The normals of temperature and sunshine are published in the Book of Normals, Section I, those for rainfall in the Book of Normals, Section V.

The normals for pressure with which comparison is made in Table IV also refer to the period 1881-1915.

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.

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

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ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE.

FEBRUARY, 1928: First half wet and unsettled with severe gales 10th—11th; then mainly sunny and relatively dry.

The first half of February, 1928, was very unsettled and mild with frequent precipitation, and notably severe gales on the 10th to 11th; the second half of the month was relatively dry and sunny with frost on several nights and much fog.

Unsettled weather with strong winds and bright periods, frequent rain and, in northern districts, showers of hail and sleet prevailed during the first three days of February. Snow lying was reported from a few places, especially in Scotland where measurements were recorded of 6 to 7½ in. at West Linton and 2 to 3½ in. at Balmoral on the 2nd, 3rd and 4th, and 2½ in. at Edinburgh on the 3rd. Strong winds on the 1st and 2nd attained gale force in several districts, and at Lerwick on the afternoon of the 1st the wind attained a mean hourly velocity of 55 m.p.h. and in a gust reached 77 m.p.h.

On the 4th relatively warm air from southerly latitudes spread over the British Isles and temperature rose rapidly, maximum temperature on the 4th reaching or exceeding 50° F. in most districts; at Dublin (City) the maximum temperature on the 4th was 11° F. higher than the maximum temperature on the previous day, while at Nairn the corresponding increase amounted to 10° F. From the 4th until the 16th the passage of depressions and associated secondaries across or in the neighbourhood of the British Isles maintained unsettled weather with strong winds between south-west and north-west which often attained gale force, changeable temperature and frequent showers. The stormiest weather of the month occurred on the 10th and 11th and was associated with the passage of a deep depression across the British Isles to the North Sea. During the afternoon of the 10th a line squall passed over England, its passage being accompanied locally by a sharp fall in temperature amounting to about 10° F. in many places, with hail, sleet or snow and in several places thunderstorms. In the evening a secondary depression developed off the north-west of Ireland, and with the parent depression moved eastwards causing strong gales over the greater part of the country (*see* Section on Pressure and Winds).

After the 17th an anticyclone centred over Northern Spain spread northwards over the British Isles and the weather became quiet and mainly fine with winds between south and east. The diurnal range of temperature varied considerably, day temperatures being above the normal for the time of year while frost occurred at night. Much fog developed locally. During this period little or no rain was experienced generally, the only rainfall of importance falling during the night of the 28th to 29th and on the 29th when unsettled weather was renewed again in the western districts.

Pressure and Winds.—The tracks of the main depression lay between Iceland and the north of Scotland. Monthly means of pressure were below the normal in the north of Scotland, about normal in the north of Ireland and elsewhere above the normal. The prevailing winds were south-westerly; a notable feature was the paucity of northerly winds. During the unsettled weather which prevailed during the first 17 days of the month strong winds, often reaching gale force, occurred frequently, particularly during the second week and early part of the third week. During a south-westerly gale on the night of the 6th to 7th the wind at Dunfanaghy (Donegal) attained a mean hourly velocity of 54 m.p.h. and in a gust reached 91 m.p.h. During the gale on the night of the 10th to the 11th mean velocities between 50 m.p.h. and 60 m.p.h. were recorded at many well-exposed stations in England and Wales; at Southport the wind at midnight on the 10th attained a mean hourly velocity of 60 m.p.h. and in a gust a velocity of 84 m.p.h. At Holyhead the wind in a gust reached near midnight on the 10th a velocity of 86 m.p.h. The observer at Bidston Observatory (Liverpool) reports that about midnight on the 10th a maximum wind velocity in a gust of 104 m.p.h. was recorded by an Osler swinging plate anemometer.

Temperature.—February, 1928, was mild, the mean temperature being appreciably above the normal, as in the previous month, in all districts. Maximum temperatures on most days were above the normal the highest readings occurring on various dates, mostly about the middle of the month and during the last week of the month. Unusually mild nights occurred during the first half of the month notably on the nights of the 7th to 8th, 8th to 9th and 15th to 16th when screen minimum temperatures in the neighbourhood of 50° F. were recorded. Low temperatures in the screen and ground frost occurred early in the month and frequently after the 16th; the coldest nights occurred generally at the beginning of the month, about the 22nd and from the 25th to the 28th.

The extreme temperatures for the month were:—(England and Wales) 60° F. at Colwyn Bay on the 15th, 22° F. at Castleton on the 26th and 28th and at Durham on the 28th. (Scotland) 59° F. at Inverness on the 9th, at Gordon Castle on the 21st and at Turnberry on the 24th, 17° F. at Braemar on the 23rd. (Ireland) 61° F. at Killarney on the 15th, 29° F. at Mallaranny on the 11th.

Precipitation.—The general precipitation of the British Isles expressed as a percentage of the normal was 120; the values for the constituent countries were England and Wales 119, Scotland 115, Ireland 128. Most of the month's precipitation fell during the first half of the month, most districts experiencing no rain or only trifling falls from the 17th to the 28th inclusive.

In England and Wales precipitation was below the normal in the eastern and south-eastern districts; at Margate the month's total represented 64 per cent. of the normal. In the western and north-western districts there was a well marked excess, and in parts of Montgomeryshire and Cardiganshire more than twice the normal was recorded.

In Scotland precipitation was rather below the normal in South Ayrshire and decidedly below in the north east; but elsewhere there was, as a rule, a slight to fairly large excess. Moderate rain or snow during the first three or four days was followed by very heavy rains in the west from 5th to 8th, and in the west wet weather continued until 17th or 18th whilst in the east precipitation during the second week was intermittent. From 4th to 8th Kinlochquoich has fully 9 in., with as much as 3.70 in. (94 mm.) on 7th. From 16th or 18th onwards many districts were rainless, though in some there were trifling falls on 21st, and in the extreme south-west rather heavy falls on the 29th. At Aberdeen three-quarters of the month's small total was accounted for on the 10th and 11th.

In Ireland precipitation was below the normal locally in some south-eastern, southern and western districts, but in general there was a well-marked excess particularly in the northern districts where monthly totals generally exceeded one and a half times the normal.

Heavy flooding occurred in some districts. In Scotland many rivers were in flood on the 4th and later days and on the 9th flooding in the Spey Valley was very extensive, the river bursting its banks at Garmouth. The observer at Southport reported the greatest flooding for over 50 years.

Snow or sleet fell in many districts during the first half of the month; in Scotland snow fell rather widely early in the month, and in some districts about the 10th and 17th. Hail showers were of fairly frequent occurrence. Thunderstorms occurred locally on various days during the first two weeks and widely on the 10th.

Sunshine.—The mean daily duration of sunshine in each of the twelve Meteorological Districts was normal or above the normal, the largest excess relative to the normal occurring in England S.E., where the mean daily duration represented 138 per cent. of the normal.

Sunny periods were experienced widely during the first three days of the month, good sunshine records being obtained in most districts on the 3rd. Sunshine values varying between 7 and 8½ hours were recorded at a number of stations in southern and south-eastern England on the 6th (8.5 hr. at Ventnor, 8.4 hr. at Bognor, 8.3 hr. at Littlehampton and Jersey). In all districts most of the month's sunshine occurred after the 16th, abundant sunshine being recorded widely on the 17th and around the 21st and in England and Wales from the 25th to the 28th inclusive, when between 9 and 10 hrs. sunshine was recorded at several stations (9.2 hr. at Dover on the 25th, 9.7 hr. at Margate on the 26th and 9.9 hr. at Eastbourne, 9.8 hr. at Croydon, Bath and Jersey on the 27th and 9.5 hr. at Bath, Cheltenham and Harwich on the 28th).

Fog.—Fog occurred locally on the 10th, 13th and 14th, widely about the 21st and in Great Britain, notably in the eastern and central districts, on most days during the periods 22nd to 27th inclusive.

Miscellaneous Phenomena.—Halo phenomena, mostly halos of 22°, were observed at many stations on various dates. A mock sun was seen at Clacton on the 18th and at Marlborough on the 25th. Aurora was observed at Arbroath on the 3rd, in Shetland on the 5th, 12th, 13th, 14th, 16th, 17th, 21st and 22nd, at Aberdeen on the 12th, at Gordon Castle on the 12th, 15th and 20th and in Orkney on the 20th.

TABLE I.—DISTRICT VALUES—FEBRUARY, 1928.

[1908, revised 1928.]

DISTRICTS.	AIR TEMPERATURE.			EARTH TEMPERATURE.		RAINFALL.		SUNSHINE.	
	High-est.	Low-est.	Devia-tion from Nor-mal. Daily Mean.	At 1 ft. Devia-tion from Nor-mal.	At 4 ft. Devia-tion from Nor-mal.	Per-cent-age of Nor-mal.	No. of Days. Devia-tion from Nor-mal.	Per-cent-age of Nor-mal.	Per-cent-age of Possible Duration.
o. SCOTLAND, N.	°F. 59	°F. 25	°F. +1.9	°F. —	°F. —	% 151	—	% 102	% 23
Eastern.									
1. SCOTLAND, E.	59	17	+1.7	—	—	107	+1	108	30
2. ENGLAND, N.E.	59	22	+3.1	+1.5	+0.7	82	—	121	31
3. ENGLAND, E...	57	23	+3.8	+1.7	+0.9	86	—	118	31
4. MIDLAND COUNTIES	58	25	+3.4	+1.5	+0.3	119	-2	111	28
5. ENGLAND, S.E.	58	24	+3.7	+2.3	+1.0	90	-2	138	36

DISTRICTS.	AIR TEMPERATURE.			EARTH TEMPERATURE.		RAINFALL.		SUNSHINE.	
	High-est.	Low-est.	Devia-tion from Nor-mal. Daily Mean.	At 1 ft. Devia-tion from Nor-mal.	At 4 ft. Devia-tion from Nor-mal.	Per-cent-age of Nor-mal.	No. of Days. Devia-tion from Nor-mal.	Per-cent-age of Nor-mal.	Per-cent-age of Possible Duration.
Western.									
6. SCOTLAND, W. (& I. of Man)	°F. 59	°F. 23	°F. +2.6	°F. —	°F. +0.5	% 136	—	% 128	% 27
7. ENGLAND, N.W. (& N. Wales)	60	25	+3.1	+1.5	+0.3	155	0	111	28
8. ENGLAND, S.W. (& S. Wales)	58	26	+3.4	+1.5	+0.7	123	—	116	30
9. IRELAND, N...	57	29	+3.2	+1.3	-0.1	143	-1	100	23
10. IRELAND, S...	61	31	+3.3	+1.5	+0.3	113	-1	103	27
11. CHANNEL I. (& Scilly)	58	36	+3.3	+1.8	+1.1	147	-2	127	39
Mean: DISTRICTS I—10	61	17	+3.1	+1.6	+0.5	115	—	115	29

TABLE II.—SUMMARY OF AUTOGRAPHIC RECORDS OF WIND.—FEBRUARY, 1928.

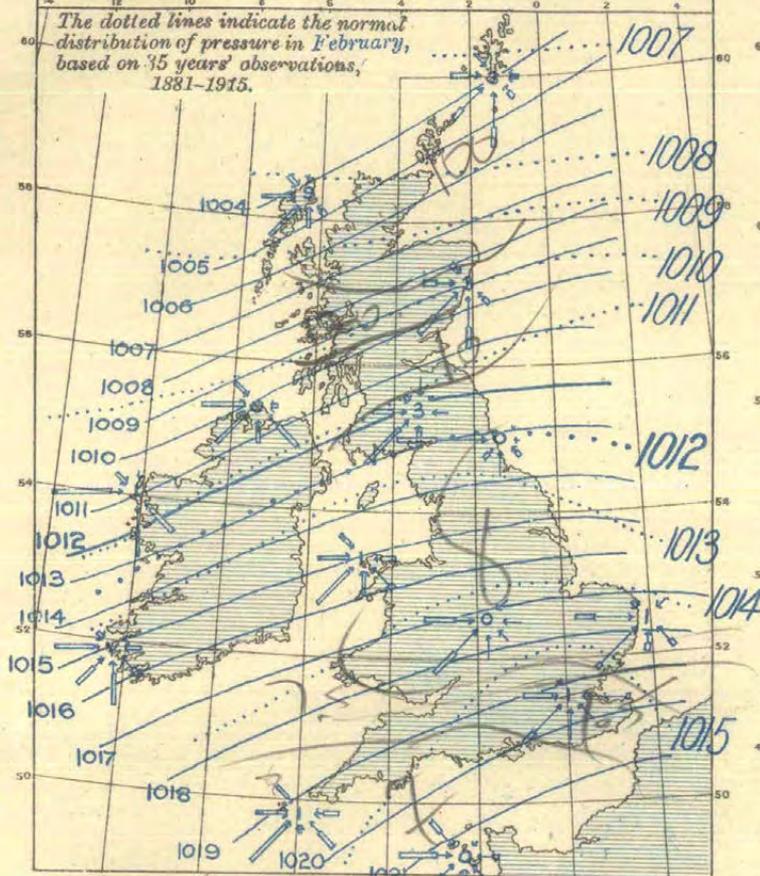
[1914.]

DISTRICT AND STATION.	Height.			Distribution of Wind.††								Extreme Velocities.								
	Above Mean Sea Level.	Above Ground.	Above Building.	More than 38 mi/hr.		25 to 38 mi/hr.		13 to 24 mi/hr.	4 to 12 mi/hr.	Less than 4 mi/hr.	No Record.	Highest Hourly Wind.			Highest Gust.					
				Dates of Occurrence.	Duration.	No. of Days.	Duration.	Duration.	Duration.	Duration.	Duration.	Veer from N.	Speed.	Mid Time.	Speed.	Time.				
o. SCOTLAND, N.	ft.	ft.	ft.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	°	mi/hr.	m/s.	day. hr.	mi/hr.	m/s.	d.	h.	m.	
Shetlands Lerwick ..	310	42	33†	1, 2, 4 to 11, 15 to 18,	72	24	256	250	83	35	0	220	55	24	1 16	77	35	1	16	15
Orkneys Deerness (Cup Anr.)	188	16	5	1, 9, 10, 15, 17	25	20	172	299	169	21	10	260	53	24	15 20	—	—	—	—	—
1. SCOTLAND, E.																				
Aberdeen Aberdeen ..	70	42	33†	—	0	7	25	262	366	43	0	260	30	13	9 1	57	26	9	12	20
Kincardine Balmakewan ..	140	25	18	—	0	5	16	131	(370)	(179)	0	250	32	14	8 21	56	25	8	21	20
Edinburgh Edinburgh ..	485	39	31†	4, 6 to 8, 15	8	11	113	269	185	121	0	230	44	20	8 19	70	31	8	19	15
6a. SCOTLAND, W.																				
Argyll Tiree ..	80	55	48†	1, 6 to 10, 15, 17	56	25	284	261	90	5	0	230	49	22	15 13	79	35	8	23	55
Renfrew Paisley ..	188	81	15	—	0	6	24	211	352	109	0	270	31	14	15 16	74	33	15	15	20
Dumfries Eskdalemuir ..	825	50	22	6 to 8	5	15	117	276	221	77	0	230	45	20	6 23	68	31	9	0	15
2. ENGLAND, N.E.																				
Durham South Shields ..	62	46	20	—	0	7	45	275	275	101	0	270	33	15	9 3	72	32	9	2	35
York, E.R. Spurn Head ..	67	42	35†	9, 11, 17	18	19	198	304	169	7	0	270	52	23	11 3	71	32	11	2	50
Lincoln Cranwell ..	284	44	26†	11	3	12	105	264	232	92	0	260	40	18	11 3	67	30	11	5	10
3. ENGLAND, E.																				
Norfolk Gorleston ..	52	42	33†	—	0	5	25	214	367	82	8	200	33	15	2 20	55	25	11	3	55
Suffolk Felixstowe Aero. ..	55	40	25	—	0	8	56	276	(259)	(105)	0	210	36	16	11 1	52	23	17	1	35
Essex Shoeburyness ..	115	104	14†	2	2	11	71	307	230	86	0	190	44	19	2 19	68	30	11	2	45
4. MIDLAND COUNTIES.																				
Warwick Birmingham ..	643	118	18	10, 11	4	5	26	283	354	29	0	270	43	19	11 2	78	35	11	2	10
5. ENGLAND, S.E.																				
Surrey Richmond (KewObs)	82	65	22	—	0	4	16	221	370	89	0	210	28	13	2 18	60	27	10	16	20
Surrey Croydon ..	284	40	24	—	0	4	14	238	302	142	0	240	28	13	10 24	52	23	11	10	15
Kent Dover ..	61	32	22	11	1	9	74	315	238	44	24	—	39	17	11 1	64	29	11	0	25
Kent Lympne ..	409	70	55†	5, 10	2	12	124	298	254	18	0	210	39	17	10 17	61	27	10	23	45
Hampshire S. Farnboro' (Tower)	444	160	14	—	0	10	59	275	305	57	0	270	35	16	11 11	63	28	11	3	5
Hampshire Calshot ..	55	45	31†	2, 10, 11	5	16	113	366	(188)	(22)	2	270	39	17	11 13	65	29	10	16	20
Hampshire Worthy Down ..	314	43	27†	—	0	8	35	223	338	100	0	260	37	17	11 12	67	30	11	3	45
Wiltshire Larkhill ..	526	51	34†	10, 11	18	15	98	354	(192)	(34)	0	280	48	21	11 12	72	32	11	10	5
7a. ENGLAND, N.W.																				
Lancashire Fleetwood ..	112	50	12	2, 9 to 11, 16, 17	33	19	158	322	154	29	0	290	56	25	11 2	78	35	11	0	20
Lancashire Southport ..	77	59	45†	1, 7, 9 to 11, 16, 17	43	18	194	263	187	9	0	270	60	27	10 24	84	38	11	0	0
7b. NORTH WALES.																				
Anglesey Holyhead ..	64	45	29†	2, 10, 11, 16, 17	33	15	146	312	160	45	0	260	57	25	10 23	86	38	10	23	10
Flint Sealand ..	81	65	49†	10, 11	13	12	63	275	261	49	35	260	46	21	10 24	81	36	10	22	40
8b. ENGLAND, S.W.																				
Devon Plymouth ..	185	88	2	—	0	13	67	372	213	44	0	—	38	17	2 14	61	27	11	2	50
Cornwall Pendennis Castle ..	256	65	24	1, 2, 4, 5, 8, 10, 11, 13, 15, 16, 24	37	23	232	208	63	0	156	—	48	21	{ 5 6 } { 10 21 }	74	33	10	21	10
9. IRELAND, N.																				
Donegal Dunfanaghy ..	180	47	39	1, 4, 6 to 9, 11, 15,	41	18	197	206	203	49	0	—	54	24	7 2	91	41	6	21	40
Antrim Aldergrove ..	282	40	27†	—	0	8	36	358	285	17	0	210	33	15	8 19	71	32	10	20	40
10. IRELAND, S.																				
Dublin Kingstown (Cup Anr.)	49	27	16	2, 8 to 11, 15	34	21	199	224	204	35	0	{ 240 } { 250 } { 250 }	49	22	10 21 } 10 22 } 10 23 }	—	—	—	—	—
Clare Quilty ..	100	40	32†	10, 11, 16	16	18	226	320	92	27	15	—	49	22	10 20	77	34	10	20	50
Kerry Cahirciveen (Val. O.)	98	41	34†	10	4	15	146	378	134	34	0	260	48	22	10 17	83	37	10	16	50
Cork Weaver Pt. ..	160	30	21†	—	0	12	98	370	212	16	0	—	38	17	10 10	66	29	10	10	5
11. SCILLY ISLES.																				
St. Mary's ..	160	42	35†	10 to 13, 16, 17	49	22	296	245	81	25	0	270	59	26	10 21	75	33	10	20	45

†† Brackets () indicate that the distribution as between winds above and below 4 mi/hr. is doubtful, but the total number of hours with winds below 12 mi/hr. is reliable.

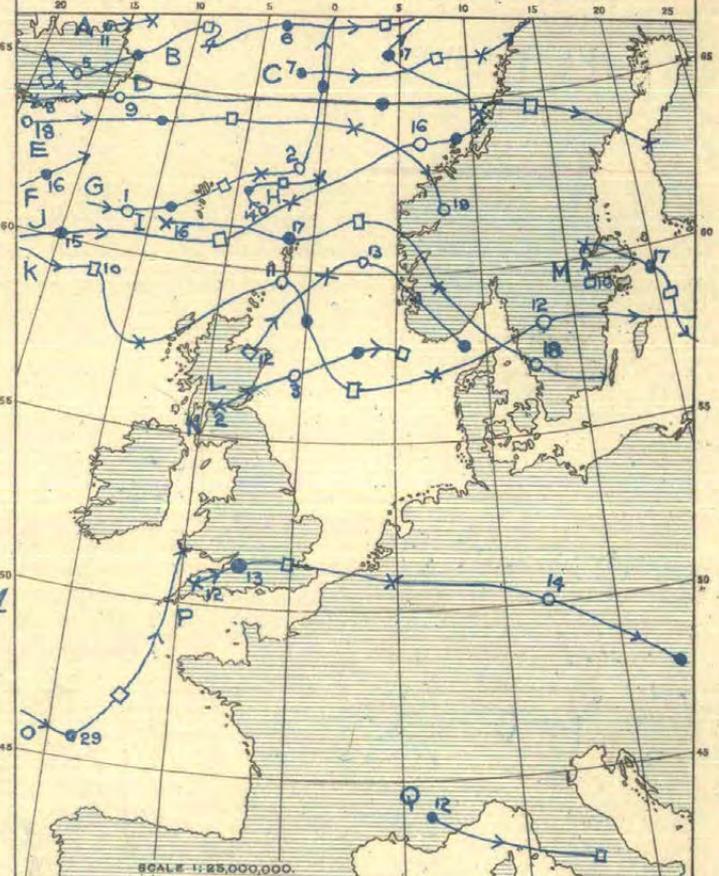
† Standard mounting.

1. WIND AND MEAN PRESSURE. 7 A.M.



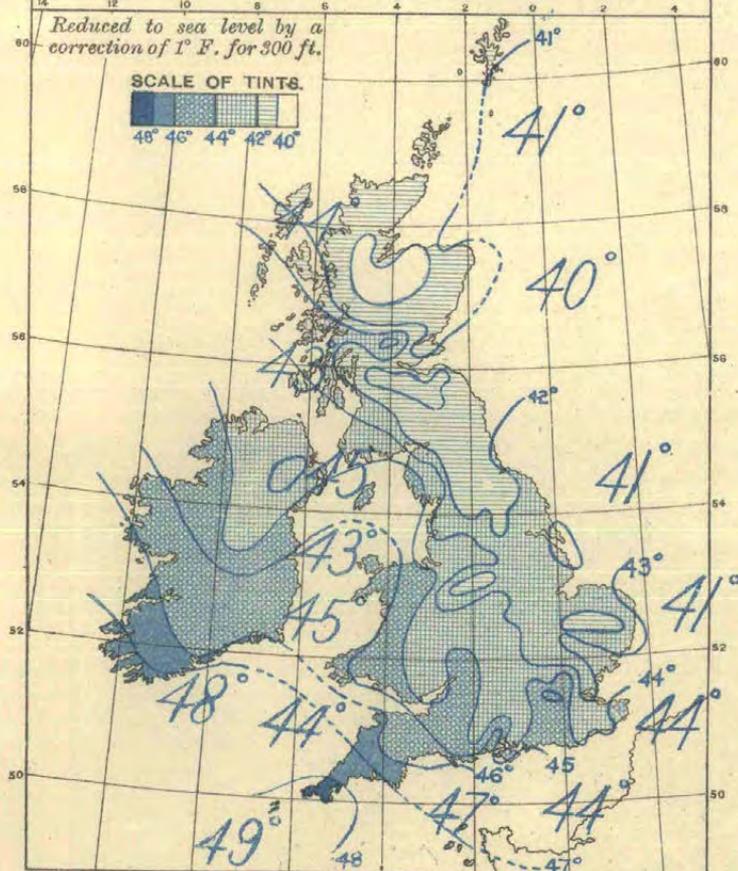
WIND ROSES. The arrows fly with the wind and indicate frequency and force, thus:
 LIGHT TO STRONG GALE
 30 0 6 5 1 1 inch

2. MOVEMENTS OF DEPRESSIONS.



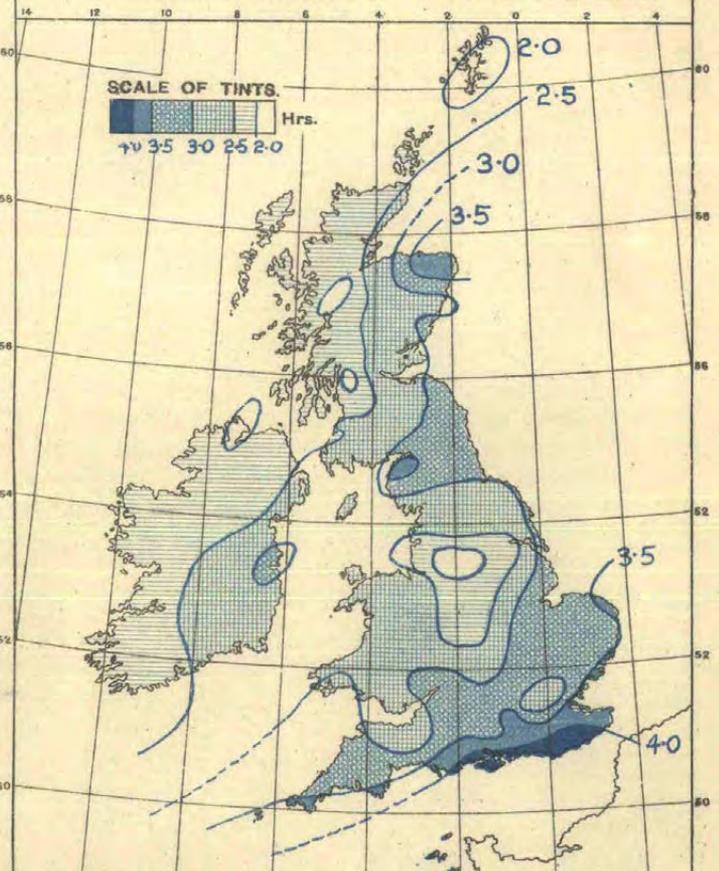
Positions of centres are shown thus: O at 1h; ● at 7h; □ at 13h; X at 18h.

3. DISTRIBUTION OF MEAN TEMPERATURE.

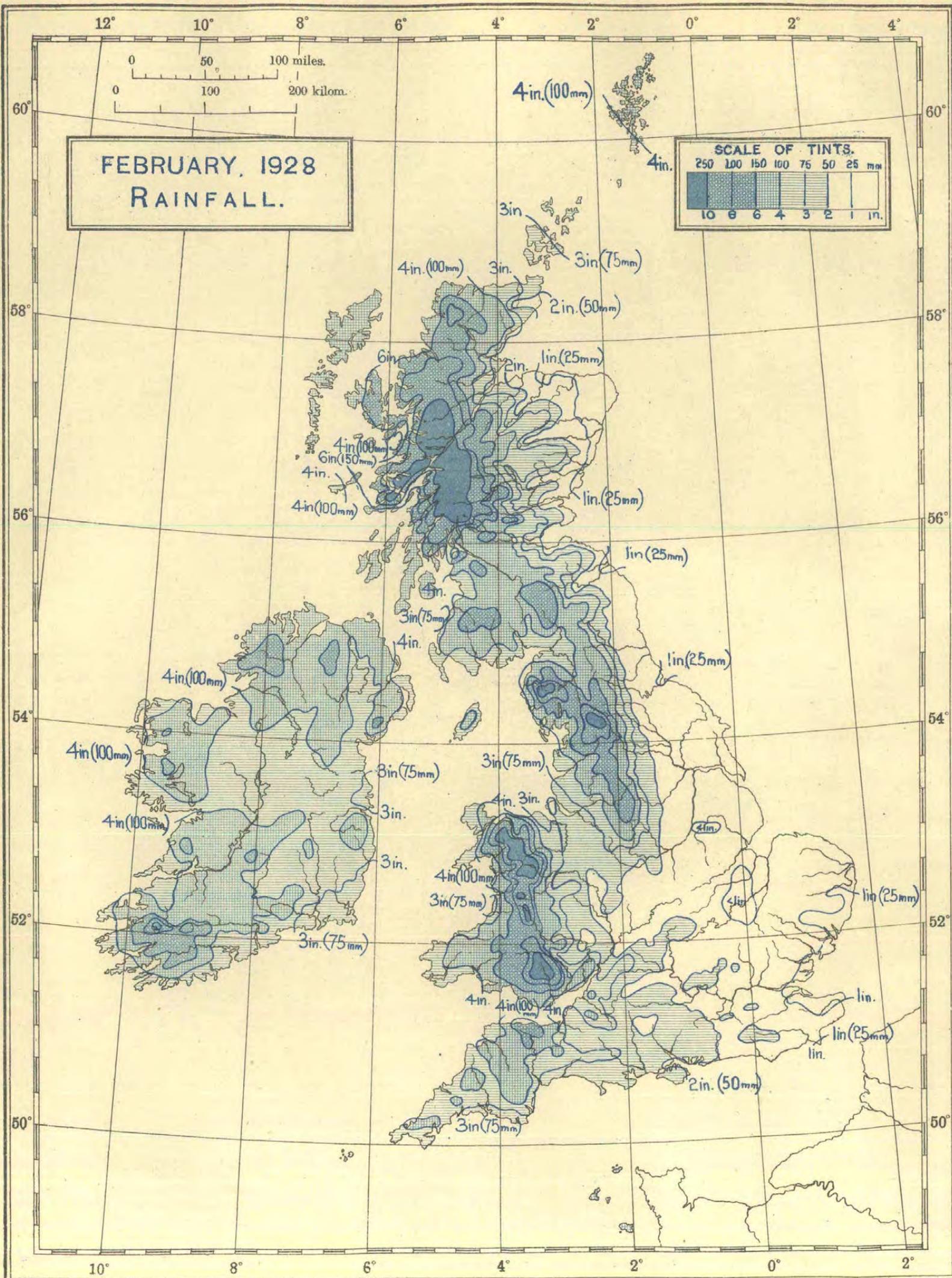


Sea temperatures are shown in large figures, thus: 47°

4. BRIGHT SUNSHINE, HOURS PER DAY.



* The pressure is expressed in millibars.



Scale 1 : 5,000,000.

No. 316/1678. Wt. 122A. D. 28. 1125 3/28.

The equivalent values in mm. are given in round numbers. The exact relation is 10 in. = 254 mm.

TABLE III.—SUMMARY OF THE RECORDS OF TEMPERATURE, RAINFALL AND SUNSHINE, and of WEATHER OBSERVATIONS, FEBRUARY, 1928.

DISTRICT, COUNTY AND PLACE.	Terminal Hours of Observation.	Height of Station above Mean Sea Level.	AIR TEMPERATURE IN DEGREES FAHRENHEIT.								Earth Temperature.		RAINFALL.				WEATHER. Number of days.							BRIGHT SUNSHINE.							
			Means of				Absolute Maximum and Minimum.				1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Most in a day.		Precip'n.	Snow.	Snow lying.	Hail.	Thunderstorm.	Fog (Morning Obs.)	Ground Frost.	Gale.	Hours per day.						
			A	B	Mean of A and B.	Deviation from Normal.	Maximum.	Date.	Minimum.	Date.					Amount.	Date.									0.2 mm. or more.	1 mm. or more.	0.2 in.	0.4 in.	0.6 in.	0.8 in.	1 in.
0. SCOTLAND, N.																															
Shetlands.	Baltasound	9 9 9	31	44.1	36.6	40.3	—	49	7, 8	28	13th	38.7	—	4.30	109	—	13	15th	21	16	4	1	5	2	0	—	9	1.87	—	21	
	Lerwick	18-7 7	54	44.1	38.2	41.1	+2.8	49	8, 9, 22	31	13th	—	—	5.37	136	+ 56	30	7th	18	15	1	0	8	1	0	—	4	1.59	—	18	
Orkneys.	Deerness	9 9 9	160	44.0	36.2	40.1	+1.6	51	8th	31	14th	—	—	3.40	86	+ 9	13	6th	18	16	10	1	3	2	3	—	5	2.05	+0.14	22	
	Kirkwall	9 9 9	151	43.8	35.9	39.9	—	52	8th	32	12, 13, 14	—	—	3.78	96	—	17	6th	19	18	4	1	5	2	2	5	10	2.16	—	24	
Hebrides.	Stornoway	9 9 9	30	45.4	35.7	40.5	+1.3	52	8, 15	28	26th	—	—	5.48	139	+ 26	22	8th	21	18	7	0	8	1	0	—	2	2.12	+0.06	23	
Caithness.	Wick	18-7 7	81	43.8	35.9	39.9	+2.1	53	8th	28	13th	—	—	1.69	43	— 15	9	6th	17	12	10	1	0	0	0	1	—	4	—	—	—
	Achnashellach	9 9 9	225	46.1	35.0	40.5	+3.4	56	27th	28	3, 13, 25	—	—	9.19	233	+ 46	29	18th	20	19	3	1	2	0	0	13	1	—	—	—	—
Cromarty.	Fortrose	9 9 9	69	46.0	34.7	40.3	—	53	8th	29	27th	—	—	2.67	68	—	13	4th	17	12	8	2	0	0	2	—	2	2.54	—	27	
	Strathpeffer	9 9 9	125	45.7	32.4	39.1	+1.5	56	8th	25	27th	—	—	4.67	119	+ 51	17	8th	19	16	6	1	2	1	—	—	—	—	—	—	
Inverness.	Ft. Augustus	9 9 9	68	45.9	33.6	39.7	+2.0	53	19, 21, 28	26	3rd	—	—	9.65	245	+ 139	46	6th	19	18	8	6	3	0	3	—	1	1.53	-0.03	16	
	Inverness	9 9 9	242	46.4	34.7	40.5	+1.7	59	9th	25	27th	—	—	2.60	66	+ 11	14	4th	19	14	8	3	0	0	1	10	1	2.68	-0.03	29	
1. SCOTLAND, E.																															
Nairn.	Nairn	9 9 9	82	43.6	34.5	39.1	+1.5	54	8th	27	28th	—	—	2.26	57	+ 11	13	4th	17	11	7	4	1	0	0	—	3	2.57	-0.09	28	
Elgin.	Gordon Castle	2121 9	104	47.2	34.3	40.7	+2.1	59	21st	27	26th	—	—	0.91	23	- 26	6	6th	13	7	2	0	0	0	0	—	0	3	3.52	—	38
	Banff	9 9 9	130	45.7	34.9	40.3	—	56	8th	30	13, 23, 26	—	—	1.10	28	—	7	10th	13	10	5	0	0	0	0	16	0	3.50	—	38	
Aberdeen.	Aberdeen	242424	46	44.6	35.8	40.2	—	54	8th	27	23rd	—	39.4	0.64	16	- 36	9	10th	9	4	3	1	2	0	1	13	0	2.97	+0.38	32	
	Balmoral	9 9 9	927	44.1	30.0	37.1	—	53	8, 19	19	23rd	—	—	1.99	51	- 15	8	5th	18	10	6	6	0	0	—	19	1	—	—	—	
Kincardine.	Braemar	2121 9	1120	43.2	28.8	36.0	+1.6	55	26th	17	23rd	—	—	1.42	36	- 36	11	6th	9	9	6	9	0	0	—	22	0	—	—	—	
	Craibstone	9 9 9	300	44.7	33.3	39.0	—	54	8th	27	23rd	36.6	38.4	0.66	17	—	10	10th	9	5	5	2	0	0	—	17	2	3.45	—	37	
Forfar.	Logie Coldstone	9 9 9	608	45.0	31.1	38.1	—	55	8th	20	27th	—	—	1.16	29	- 24	6	6th	15	8	3	4	0	0	9	26	0	—	—	—	
	Stonehaven	9 9 9	93	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Perth.	Arbroath	2121 9	93	46.3	34.4	40.3	—	57	19th	27	26th	—	—	0.93	24	—	8	2nd	9	7	2	1	0	0	4	16	0	2.96	—	31	
	Carnoustie	9 9 9	39	45.7	33.7	39.7	—	56	19th	28	26th	—	—	1.46	37	—	8	2nd	16	9	3	0	0	0	—	—	0	2.70	—	29	
Fife.	Dundee (E. Nec.)	2121 9	198	44.1	34.6	39.3	+1.8	53	22nd	28	26th	—	—	1.83	47	- 1	8	10th	16	9	2	1	0	0	0	—	2	—	—	—	
	Mayfield	9 9 9	147	45.1	34.7	39.9	—	55	19th	28	26th	35.3	—	1.72	44	- 3	8	10th	13	9	1	1	0	0	—	16	0	2.82	+0.11	30	
Perth.	Kirkcaldy	9 9 9	218	45.5	33.3	39.4	—	55	19th	26	23, 26	37.1	—	2.10	53	—	12	10th	13	11	3	3	0	0	1	18	1	—	—	—	
	Montrose	9 9 9	16	45.1	34.7	39.9	—	55	19th	23	26th	—	—	0.98	25	—	7	10th	13	6	2	0	0	0	1	—	1	2.78	—	30	
Fife.	Crieff	2121 9	478	44.7	36.3	40.5	+2.6	54	19th	28	11th	—	—	3.54	90	+ 1	15	4th	20	16	6	6	1	0	—	—	3	—	—	—	
	Perth	9 9 9	76	45.9	34.4	40.1	+2.5	56	19, 22	26	26th	—	—	2.28	58	0	8	10th	18	12	6	1	1	0	—	—	6	2.71	—	29	
Linlithgow.	Cupar	9 9 9	210	45.7	33.5	39.6	—	55	19th	25	23, 26	—	—	1.98	50	—	11	10th	15	12	6	4	0	0	—	—	0	—	—	—	
	Inchkeith	18-7 7	190	45.2	37.4	41.3	—	54	15th	33	2nd	—	—	1.41	36	- 6	6	2nd	10	9	10	7	0	0	2	5	7	2.92	—	31	
Linlithgow.	Kirkcaldy	9 9 9	66	46.4	35.2	40.8	—	55	8, 15, 16, 22	29	25, 26	—	—	2.62	67	—	9	1, 4	17	12	—	—	—	—	—	—	—	—	—	—	
	Leuchars	18-7 7	40	45.3	35.0	40.1	—	56	19th	27	26th	—	—	1.62	41	—	12	10th	14	9	4	0	0	0	2	16	4	2.87	—	30	
Edinburgh.	St. Andrews	9 9 9	20	45.6	34.8	40.2	—	56	19th	29	13, 25	37.8	39.7	1.55	39	—	12	2nd	14	8	0	0	0	0	1	13	0	2.64	—	28	
	Bangour	2121 9	587	43.4	33.6	38.5	—	52	15, 22	25	25th	—	—	2.98	76	—	11	2nd	21	14	10	7	2	0	4	—	4	—	—	—	
Edinburgh.	Blackford Hill	2121 9	441	44.9	35.1	40.0	+1.7	55	15th	28	26th	—	—	2.57	65	+ 25	14	1st	20	11	4	3	0	0	—	14	6	2.92	+0.15	31	
	Boghall	9 9 9	645	44.6	35.1	39.9	—	53	15th	28	26th	37.2	38.6	2.81	71	—	9	4th	16	12	7	4	1	0	—	—	4	2.89	—	30	
Haddington.	Edin. Univ.	9 9 9	227	46.3	36.2	41.3	—	56	15th	31	26th	38.0	40.4	3.01	77	+ 35	16	1st	16	11	—	—	—	—	—	—	—	—	—	—	
	Liberton	9 9 9	190	45.8	—	—	—	55	15th	—	—	—	—	2.74	70	—	16	1st	18	12	4	0	1	0	—	—	2	—	—	—	
Berwick.	N. Berwick	9 9 9	152	46.0	35.8	40.9	—	55	15th	29	25th	—	—	1.26	32	—	7	3rd	12	9	4	1	0	0	2	10	2	3.00	—	32	
	Smeaton	9 9 9	100	47.2	34.0	40.6	—	56	15th	26	25th	38.3	—	1.59	40	+ 3	12	3rd	12	9	4	1	0	0	2	16	0	—	—	—	
Peebles.	Marchmont	9 9 9	498	45.3	32.8	39.1	+1.9	55	19th	26	4th	—	—	2.56	65	+ 12	18	2nd	21	11	6	5	0	0	—	—	1	2.78	+0.40	29	
	West Linton	9 9 9	770	44.6	31.9	38.3	+2.9	54	26, 27	19	4th	—	—	3.88	99	—	15	4th	21	14	10	9	2	0	—	14	7	—	—	—	
Roxburgh.	Kelso (Br/ml'ds)	9 9 9	195	47.4	33.3	40.3	—	58	19th	26	25, 26, 27	—	—	1.47	37	- 6	9	4th	14	11	3	0	0	0	0	—	2	—	—	—	
	Wolfelee	9 9 9	537	45.4	31.9	38.7	—	56	16th	22	28th	—	—	3.36	85	+ 2	17	2nd	18	12	10	2	0	0	—	—	0	—	—	—	
6a. SCOTLAND, W.																															
Argyll.	Ardtornish	2121 9	48	46.2	—	—	—	54	27th	—	—	—	—	1																	

TABLE III (continued).—SUMMARY of the RECORDS of TEMPERATURE, RAINFALL and SUNSHINE and of WEATHER OBSERVATIONS, FEBRUARY, 1928.

DISTRICT, COUNTY AND PLACE.	Terminal Hours of Observation.	Height of Station above Mean Sea Level.	AIR TEMPERATURE IN DEGREES FAHRENHEIT.								Earth Temperature.		RAINFALL.				WEATHER. Number of days.								BRIGHT SUNSHINE.							
			Means of		Deviation from Normal.	Absolute Maximum and Minimum.				1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Most in a day.		Precip'n. 0.2 mm. or more.	1 mm. or more.	Snow.	Snow lying.	Fog.	Thunderstorm.	Fog (Morning Obs.).	Ground Frost.	Gale.	Daily Mean.	Deviation from Normal.	Per Cent.					
			A	B		Maximum.	Date.	Minimum.	Date.					Amount.	Date.																	
5. ENGLAND, S.E.—cont.																																
Hampshire	Calshot	18-7 7	ft.	°F.	°F.	°F.	°F.	°F.	°F.			in.	mm.	mm.	mm.																	
—cont.	Grayshott	9 9 9	661	48.4	39.8	44.1	—	55	13th	31	20, 22	1.75	45	—	10	2nd	12	9	0	0	2	0	2	8	4	0.9	—	41				
	Long Sutton	9 9 9	479	48.9	35.5	42.2	+3.4	55	25, 26	29	4th	2.56	65	0	13	2nd	14	10	2	1	5	0	2	20	3	0.88	+1.08	39				
	Southamp'n	2121 9	64	50.4	39.4	44.9	+3.6	55	13, 25	29	22nd	—	—	—	19	2nd	14	10	0	0	1	0	2	10	2	3.94	+1.21	40				
	S. Farnboro'	18-7 7	230	50.5	35.8	43.1	—	58	25th	24	22nd	—	—	—	17	2nd	12	8	3	0	1	0	7	14	0	3.63	—	37				
	Winchester (Worthy Down)	18-7 7	272	49.5	37.2	43.3	—	55	25th	26	22nd	—	—	—	15	2nd	12	9	1	0	2	0	2	15	2	3.88	—	39				
I. of Wight.																																
	Newport	9 9 9	48	49.9	37.4	43.7	—	55	13th	27	20th	—	—	—	15	12th	13	9	0	0	3	1	2	12	4	—	—	—				
	Ryde	9 9 9	13	49.1	40.0	44.5	—	55	13th	30	20th	—	—	—	13	12th	12	9	1	0	0	1	—	—	2	4.07	—	41				
	Sandown	9 9 9	13	49.4	39.3	44.3	—	55	13th	27	22nd	—	—	—	12	12th	19	11	0	0	1	1	0	—	—	0	4.15	—	42			
	Totland Bay	9 9 9	140	49.3	39.5	44.4	+3.6	53	25th	30	22nd	—	—	—	18	12th	11	8	0	0	1	2	2	5	4	4.17	+1.08	42				
	Ventnor (Hospital)	9 9 9	59	49.9	41.6	45.7	+3.6	53	13, 26	37	3, 4, 20	—	—	—	17	12th	14	9	—	—	—	—	—	—	—	4.25	+1.20	46				
Wilts.																																
	Larkhill	9 9 9	440	48.7	35.7	42.2	—	54	25, 26	25	22nd	—	—	—	12	12th	12	9	0	0	2	0	3	15	4	—	—	—				
	Marlboro'	9 9 9	424	48.8	35.5	42.1	+3.6	53	25, 26	26	20th	41.5	45.3	2.34	59	—	3	10	12th	13	11	0	0	0	17	4	3.08	+0.95	31			
	Porton	9 9 9	363	49.2	35.0	42.1	—	55	25th	25	22nd	40.6	—	1.69	43	—	—	12	12th	10	8	1	0	3	17	3	3.71	—	37			
7a. ENGLAND, N.W.																																
Cumberland.																																
	Aspatria (Mealsgate)	2121 9	487	46.4	36.6	41.5	+2.9	57	27th	29	25th	40.4	42.3	4.17	106	—	30	16	2nd	16	13	3	—	2	1	—	14	0	3.59	+1.21	37	
	Keswick	9 9 9	254	50.0	37.0	43.5	—	56	21, 27, 28	26	25th	40.8	42.1	5.95	151	—	—	37	10th	19	12	5	1	2	1	0	15	4	2.52	—	26	
	Newton Rigg	2121 9	559	47.7	35.2	41.5	+4.4	56	15th	28	25th	—	—	—	83	—	5	18	10th	18	13	4	4	0	0	10	0	3.09	+0.86	32		
Lancashire.																																
	Blundellsands	9 9 9	34	48.1	38.5	43.3	—	55	27th	31	26th	41.1	42.8	2.67	68	—	—	17	4th	14	11	1	0	1	0	—	9	4	—	—		
	Bolton	9 9 9	341	46.7	36.7	41.7	—	54	15th	30	26th	39.6	41.2	5.37	137	—	39	4th	16	13	1	1	3	2	—	4	0	1.16	—	12		
	Burnley	9 9 9	458	46.0	35.5	40.7	—	55	15th	29	20, 25, 27	39.4	41.5	5.53	141	—	—	27	4th	18	14	2	0	5	2	2	8	0	1.23	—	13	
	Darwen	2121 9	724	45.7	35.7	40.7	—	52	15, 27	29	25th	39.3	40.5	5.83	148	—	—	41	4th	16	16	4	2	5	2	4	8	0	1.69	—	17	
	Hutton	9 9 9	82	48.0	37.2	42.6	—	56	15th	27	26th	40.4	42.3	3.76	95	—	—	27	4th	14	11	1	0	3	2	3	9	0	2.03	—	21	
	Lancaster	9 9 9	311	47.5	37.1	42.3	—	55	26th	29	25th	39.7	40.4	5.64	143	—	—	49	4th	17	13	0	0	1	1	8	0	2.66	—	28		
	Leyland	9 9 9	124	48.0	36.6	42.3	—	57	15th	25	26th	—	—	—	91	—	—	24	4th	14	11	1	0	1	1	3	9	1	2.15	—	22	
	Manchester (Whitworth Pk)	2121 9	125	48.9	38.3	43.6	+3.5	55	26th	30	20th	—	—	—	87	—	38	24	4th	13	12	1	0	0	2	5	—	3	1.88	+0.46	19	
	(Oldham Road)	2121 9	190	48.2	40.3	44.3	+3.9	54	15, 26, 27	34	26th	40.3	43.1	4.72	120	—	64	32	4th	14	13	4	0	5	2	—	2	0	1.02	-0.26	11	
	(Swinton)	9 9 9	253	47.7	36.2	41.9	—	57	15th	29	20th	—	—	—	113	—	—	28	4th	14	13	2	0	5	2	3	9	2	1.13	—	12	
	Southport	9 9 9	37	47.6	38.4	43.0	+3.4	57	27th	30	26th	39.6	40.7	3.31	84	—	31	22	4th	15	9	1	0	4	2	4	6	7	2.31	-0.24	24	
	Stonyhurst	9 9 9	377	45.7	36.2	40.9	+2.4	53	15th	30	25th	—	—	—	159	—	74	37	4th	17	14	2	1	2	2	3	8	4	1.99	-0.10	20	
Cheshire.																																
	Hoylake	9 9 9	30	49.1	38.3	43.7	+3.0	57	15th	31	21, 28	—	—	—	57	—	14	9	4th	13	10	—	—	—	—	—	—	2	7.3	+0.32	28	
	Liverpool (Bidston)	18-7 7	189	46.9	39.4	43.1	+3.2	55	15th	32	26th	—	—	—	49	—	6	9	4th	14	11	0	0	5	0	3	4	3	2.60	—	27	
	Macclesfield	9 9 9	500	46.7	35.9	41.3	+3.3	53	26th	27	25th	—	—	—	84	—	29	22	15th	15	13	4	0	2	2	2	—	1	—	—		
	West Kirby	9 9 9	25	48.1	37.9	43.0	—	55	15th	32	28th	—	—	—	57	—	—	11	4th	15	9	2	0	10	2	0	6	9	2.74	—	28	
7b. NORTH WALES.																																
Flint.																																
	Hawarden	9 9 9	22	49.0	38.8	43.9	+3.3	56	15th	31	20, 28	—	—	—	51	—	15	10	29th	16	10	—	—	—	—	—	—	—	—	—		
	B'ge	9 9 9	30	50.2	38.9	44.5	+3.6	60	21st	32	20th	—	—	—	69	—	32	13	15th	17	11	0	0	3	1	0	—	2	2.97	+0.20	30	
	Rhyl	9 9 9	16	48.9	38.7	43.8	—	57	15th	25	28th	41.0	42.3	4.23	52	—	12	6	10th	16	12	1	0	6	1	4	7	4	2.61	—	27	
	Sealand	18-7 7	16	48.9	38.7	43.8	—	57	15th	25	28th	41.0	42.3	4.23	52	—	12	6	10th	16	12	1	0	6	1	4	7	4	2.61	—	27	
Anglesey.																																
	Holyhead	18-7 7	26	48.3	41.8	45.1	+3.4	56	27th	36	20, 25	—	—	—	91	—	29	18	29th	16	13	0	0	5	1	0	3	9	2.98	+0.21	31	
Denbigh.																																
	Colwyn Bay	9 9 9	81	50.6	39.3	44.9	—	60	15th	32	25th	—	—	—	77	—	—	17	15th	13	11	1	0	1	0	0	—	0	2.50	—	26	
Carnarvon.																																
	Aber (Bangor)	9 9 9	60	49.9	40.1	45.0	—	57	26th	34	11th	—	—	—	6.03	153	—	47	4th	13	13	0	0	2	0	—	5	2	2.40	—	25	
	Llandudno	9 9 9	22	50.1	40.1	45.1	+3.4	57	15, 21	35	11, 20, 21	—	—	—	3.33	85	—	32	20	4th	13	10	1	0	3	2	0	—	2	2.79	+0.31	29
Montgomery.																																
	Welshpool	9 9 9	254	48.2	35.3	41.7	—	56	19th	29	20, 27, 28	—	—	—	2.75	70	—	—	13	10th	12	12	0	0	0	0	5	—	0	—	—	
8a. SOUTH WALES.																																
Cardigan.																																
	Aberystwyth	9 9 9	59	48.7	41.1	44.9	—	58	21st	33	20th	—	—	—	2.66	68	—	17	4th	16	10	0	0	2	0	2	—	4	2.91	+0.39	30	
	P.B.S.†	9 9 9	452	47.7	39.4	43.5	—	57	21st	33	20th	—	—	—	3.84	97	—	23	14th	18	12	0	0</									

TABLE III (continued).—SUMMARY OF THE RECORDS OF TEMPERATURE, RAINFALL AND SUNSHINE, and of WEATHER OBSERVATIONS, FEBRUARY, 1928.

DISTRICT, COUNTY AND PLACE.	Terminal Hours of Observation.	Height of Station above Mean Sea Level.	AIR TEMPERATURE IN DEGREES FAHRENHEIT.							Earth Temperature.		RAINFALL.				WEATHER. Number of days.							BRIGHT SUNSHINE.								
			Means of		Deviation from Normal.	Absolute Maximum and Minimum.			1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Most in a day.		Precip'n. 0.2 mm. or more.	Precip'n. 1 mm. or more.	Snow.	Snow lying.	Hail.	Thunderstorm.	Fog (Morning Obs.)	Ground Frost.	Gale.	Hours per day.							
			A	B		Maximum.	Date.	Minimum.					Date.	Amount.										Date.	Daily Mean.	Deviation from Normal.	Per Cent.				
8b. ENGLAND, S.W.—cont.		G.M.T.	ft.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	in.	mm.	mm.	mm.								hr.	hr.	%						
Dorset—cont.	Shaftesbury	9 9 9	722	47.7	37.1	42.4	+3.8	53	13, 22	32	4th	—	—	1.98	50	—	9	17	12th	14	9	0	0	0	0	0	—	—	—		
Devon.	Arlington	9 9 9	613	49.1	38.4	43.7	+4.1	54	21, 22, 25	32	22, 24	—	—	5.94	151	+ 52	30	12th	16	16	0	0	7	1	—	6	2	—	—		
	Ashburton	9 9 9	583	50.4	39.1	44.7	+3.1	55	13, 22, 23	33	3rd	—	—	4.97	126	+ 6	21	4th	16	15	2	0	0	0	2	—	0	—	—		
	Cullompton	9 9 9	202	51.0	37.5	44.3	+3.7	55	28th	31	4, 6	43.8	—	3.50	89	+ 18	22	12th	18	12	0	0	3	0	0	1	17	2	2.88	+0.43	29
	Dean Prior	21 21 9	331	49.7	38.6	44.1	—	54	13, 21, 22	29	22nd	—	—	8.49	216	—	44	4th	19	16	3	1	3	2	—	14	—	—	—		
	Ilfracombe	9 9 9	74	50.3	43.0	46.7	+3.4	57	21st	37	24th	45.1	47.4	2.96	75	+ 8	19	12th	17	13	0	0	0	1	0	0	1	2.50	—	25	
	Killerton	9 9 9	159	51.4	38.0	44.7	—	56	22, 29	31	18th	—	—	3.04	77	—	22	12th	12	12	0	0	0	0	0	0	20	—	—	—	
	Newton Abbot	9 9 9	350	49.8	39.5	44.7	—	54	13, 14	32	22nd	—	—	3.07	78	—	17	12th	16	11	0	0	1	1	3	8	0	3.0	—	31	
	Plymouth (Hoe)	21 21 9	116	51.3	42.0	46.7	+4.2	55	22nd	34	3rd	44.2	46.2	3.31	84	+ 9	25	12th	15	12	0	0	0	0	3	4	13.51	+0.71	35		
	Plymouth (Cattewater)	18-7 7	82	50.7	43.0	46.9	—	55	22nd	33	3rd	—	—	3.23	82	—	21	12th	15	14	1	0	4	0	0	1	10	3.52	—	35	
	Salcombe	9 9 9	39	50.0	41.1	45.5	—	52	13, 15, 16	33	3rd	—	—	3.68	93	—	14	2nd	18	17	0	0	0	0	1	—	0	3.50	+0.45	35	
	Sidmouth	9 9 9	147	50.4	39.7	45.1	+3.5	56	14th	31	4th	—	—	2.81	71	+ 7	20	12th	14	11	0	0	4	1	0	1	1	—	—	—	
	Tavistock	9 9 9	458	50.6	39.5	45.1	—	58	22nd	32	3rd	—	—	45.1	3.94	100	—	22	12th	16	14	1	0	6	0	0	9	1	—	—	
	Torquay	9 9 9	12	50.9	41.8	46.3	+3.6	57	13, 14	35	1, 3	—	—	44.6	2.85	72	+ 2	15	12th	15	13	0	0	2	2	1	4	6	3.32	+0.20	33
	Woolacombe	21 21 9	59	50.1	41.8	45.9	+3.1	57	21st	34	24th	—	—	3.06	78	+ 21	20	12th	17	15	0	0	4	1	0	2	1	3.08	+0.28	31	
Cornwall.	Falmouth Obs.	9 9 9	167	50.7	43.4	47.1	+3.7	54	21st	36	4th	46.3	47.5	4.64	118	+ 24	32	12th	17	17	0	0	4	3	0	3	2	3.21	+0.23	32	
	„ (Pendennis)	18-7 7	200	51.0	44.5	47.7	—	54	13th	38	3rd	—	—	3.57	91	—	24	12th	17	16	0	0	3	0	1	—	11	3.57	—	35	
	Fowey	9 9 9	51	51.4	42.5	46.9	—	54	14, 15, 16	33	3rd	—	—	3.56	90	—	33	12th	16	14	0	0	1	0	1	1	—	4	3.12	—	31
	Gulval	9 9 9	20	51.6	43.8	47.7	—	56	22nd	38	3, 4, 6	—	—	4.34	110	—	33	12th	18	17	0	0	0	1	1	0	—	2	3.74	—	37
	Newquay	9 9 9	190	50.1	43.0	46.5	+3.2	53	15th	37	3rd	45.6	46.8	3.19	81	+ 16	29	12th	17	16	0	0	4	0	0	—	2	3.30	+0.50	33	
	Redruth	9 9 9	397	49.6	42.0	45.8	—	56	21st	36	3rd	—	—	4.04	103	+ 7	31	12th	20	17	0	0	1	1	1	4	—	—	—		
9. IRELAND, N.																															
Sligo.	Markree Cas.	21 21 9	122	50.7	37.6	44.1	+3.8	56	15, 26, 27	31	23rd	42.5	43.8	3.93	100	+ 11	18	2nd	18	16	6	0	7	2	0	—	6	2.49	+0.29	26	
Mayo.	Blacksod Pt.	18-7 7	10	49.5	41.0	45.3	+2.9	55	15th	34	3rd	—	—	3.13	79	—	11	10th	21	17	1	0	4	4	0	—	3	—	—	—	
	Mallaryny	9 9 9	120	50.1	39.6	44.9	—	55	21st	29	11th	—	—	6.21	158	—	24	14th	21	20	1	0	8	0	0	—	0	2.05	-0.05	21	
Donegal.	Malin Head	18-7 7	51	46.9	39.6	43.3	+2.4	53	8, 15	32	2nd	—	—	4.61	117	+ 56	28	29th	17	17	6	0	11	1	0	—	5	1.81	-0.53	19	
Antrim.	Aldergrove	18-7 7	238	46.4	37.6	42.0	—	53	15th	32	2nd	—	—	3.32	84	—	20	29th	18	15	6	3	2	0	1	5	1	2.12	—	22	
	Belfast	9 9 9	13	48.4	39.1	43.7	—	57	15th	33	2nd	—	—	4.83	123	—	31	29th	19	15	—	—	—	—	—	—	—	—	—	—	
	Lisburn	9 9 9	206	47.9	36.7	42.3	+3.1	56	8, 15	31	2nd	—	—	3.56	91	+ 30	25	29th	19	14	6	0	1	0	1	—	1	—	—	—	
Down.	Donaghadee	18-7 7	40	46.9	39.2	43.1	+2.2	57	15th	32	2nd	—	—	3.11	79	+ 20	23	29th	16	12	6	0	1	1	1	—	7	—	—	—	
Armagh.	Armagh	21 21 9	204	48.4	37.6	43.0	+2.9	56	15th	33	1, 3, 10, 17, 26	41.0	42.5	3.57	91	+ 35	28	10th	16	14	8	3	1	0	1	1	1	12.28	+0.05	24	
Longford.	Newtownforbes	21 21 9	161	49.0	37.0	43.0	—	55	26, 27	32	2, 3, 12	41.7	42.5	3.23	82	—	10	10th	17	14	2	1	7	2	—	2	—	—	—		
10. IRELAND, S.																															
Dublin.	Balbriggan	9 9 9	203	48.9	38.7	43.8	+3.1	58	15th	33	2, 3	41.3	42.9	2.90	74	+ 26	20	29th	16	13	2	0	2	0	11	2	1	—	—	—	
	City	21 21 9	54	50.0	40.0	45.0	+2.7	59	15th	34	3rd	—	—	2.46	63	+ 15	12	10th	13	13	5	0	2	0	2	0	3	—	—	—	
	Glasnevin	21 21 9	55	50.7	37.5	44.1	+2.9	60	15th	32	2, 23	—	—	2.54	65	+ 17	12	29th	15	12	2	0	3	0	—	4	1	—	—	—	
	Phoenix Pk.	21 21 9	155	50.1	37.1	43.6	+3.0	59	15th	31	21, 23	—	—	2.43	62	+ 17	10, 15	14	12	3	0	1	0	1	0	10	3	3.19	+0.57	33	
	Trin. Coll.	21 21 9	12	50.4	39.8	45.1	+2.6	60	15th	35	2, 3, 12	42.5	43.8	2.35	60	+ 16	11	10th	13	13	4	0	2	0	—	9	4	—	—	—	
Wicklow.	Newcastle	21 21 9	256	49.7	39.0	44.3	—	60	15th	34	1, 3, 10	—	—	3.79	96	—	31	29th	14	12	2	0	1	1	0	—	2	—	—	—	
King's Co.	Birr Castle	18-7 7	175	49.4	40.1	44.7	+4.1	57	15th	33	3, 10	42.7	43.6	3.89	99	+ 41	13	4th	16	14	4	1	4	2	1	5	1	2.62	+0.21	27	
Queen's Co.	Mountmellick	9 9 9	252	49.2	38.6	43.9	—	58	15th	39	12th	—	—	4.81	122	—	19	15th	20	18	—	—	—	—	—	—	—	—	—	—	
Wexford.	Newtownbarry	9 9 9	153	50.1	39.8	44.9	—	60	15th	34	2, 3	42.4	43.7	3.90	99	—	18	29th	15	14	0	0	0	0	0	—	0	—	—	—	
Kilkenny.	Kilkenny	9 9 9	182	50.1	39.2	44.7	+3.7	60	15th	32	2, 3	—	—	3.11	79	+ 14	12	10th	18	17	—	—	—	—	—	—	—	—	—	—	
Waterford.	Seskin, Carrick-on-Suir	21 21 9	542	48.0	38.8	43.4	—	58	15th	32	2nd	—	—	4.23	107	—	19	29th	18	13	3	1	1	0	3	2	6.285	—	29		
	Waterford	9 9 9	137	49.7	40.2	44.9	+2.9	56	15th	33	2nd																				

TABLE IV.—SUMMARY of the OBSERVATIONS of PRESSURE, TEMPERATURE, HUMIDITY, CLOUD, VISIBILITY and WIND at fixed hours at certain Stations during the Month of FEBRUARY, 1928.

DISTRICT, COUNTY AND PLACE.	Hour of Observation.	Height of Barometer above Mean Sea Level.	MEAN PRESSURE.		TEMPERATURE AND HUMIDITY.				CLOUD AMOUNT.					VISIBILITY.									WIND, NUMBER OF OBSERVATIONS.																
			At Mean Sea Level.	Deviation from Normal.	Dry Bulb.	Depression of Wet Bulb.	Vapour Pressure.	Relative Humidity.	Mean Amount.	NO. OF OBSERVATIONS.					NUMBER OF OBSERVATIONS.									FORCE (0-12).			DIRECTION.												
										0	1 to 3	4 to 6	7 to 9	10	FOG.			Mist.	Poor Vis.	Mod. Vis.	GOOD VISIBILITY.			8 or more.	4 to 7	1 to 3	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.				
			0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	8 or more.	4 to 7	1 to 3	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.					
0. SCOTLAND, N.																																							
Shetlands. Lerwick	1	59	1003.3	—	40.9	0.9	8.1	92	7.2	0	5	5	9	10	0	0	0	0	0	0	0	0	0	17	12	0	2	7	17	3	1	0	0	0	9	11	3	2	
	7	59	1003.7	-3.4	40.6	1.1	8.0	90	8.0	0	3	3	10	13	0	0	0	0	0	0	0	0	0	15	14	0	1	9	16	3	0	0	1	2	9	7	5	2	
	13	59	1005.2	—	42.5	1.4	8.3	88	8.2	0	2	4	9	14	0	0	0	0	0	0	0	0	1	11	17	0	1	11	17	0	1	1	0	4	10	6	4	3	
	18	59	1004.4	—	41.9	1.2	8.1	90	8.6	0	0	4	11	14	0	0	0	0	0	0	0	0	1	0	12	16	0	1	7	19	2	0	1	0	4	8	9	2	3
Orkneys. Deerness	9	165	1005.2	—	39.6	1.4	7.4	87	7.6	0	2	6	10	11	0	0	2	1	0	0	0	1	2	22	1	22	5	1	22	5	1	1	1	0	2	10	6	6	2
	21	165	1006.5	—	40.4	1.6	7.2	86	6.6	0	7	6	5	11	0	0	0	1	0	0	0	0	5	23	0	1	19	8	1	1	1	0	3	8	5	8	2		
Hebrides. Stornoway	7	41	1004.5	-3.3	39.5	0.9	7.4	91	7.2	2	1	6	10	10	0	0	0	0	0	0	0	22	7	0	0	1	16	3	9	1	0	0	2	3	7	5	2		
	13	41	1005.4	—	44.1	1.6	8.5	87	7.7	1	1	4	13	10	0	0	0	0	0	0	0	15	14	0	0	1	15	9	4	0	1	0	3	6	5	6	4		
	18	41	1005.7	—	41.7	0.8	8.4	93	7.8	2	1	2	12	12	0	0	0	0	0	0	1	15	13	0	0	0	16	7	6	0	2	0	2	3	5	8	3		
	21	41	1005.9	—	39.9	1.0	7.6	91	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Caithness. Wick	1	97	1006.2	—	38.7	0.5	7.7	95	6.3	0	6	10	6	7	0	0	0	0	0	0	1	0	2	26	0	0	8	21	0	0	1	0	1	0	1	11	9	2	
	7	97	1006.1	-2.0	39.2	0.5	7.7	95	7.8	0	1	7	10	11	0	0	1	0	0	0	1	5	22	0	0	10	19	0	0	1	0	1	0	1	0	10	13	4	1
	13	97	1006.9	—	42.6	0.7	8.8	94	7.7	0	0	10	11	8	0	0	0	0	0	0	1	0	3	25	0	3	11	15	0	0	1	0	0	10	13	4	1		
	18	97	1007.1	—	40.6	0.8	8.1	93	7.8	0	1	8	12	8	0	0	0	1	0	0	1	7	20	0	0	9	20	0	0	1	0	2	7	8	7	4			
Inverness. Inverness	9	250	1007.6	—	39.3	2.0	6.6	81	4.3	2	8	13	5	1	0	0	1	0	0	0	1	3	5	19	0	15	8	6	1	1	1	0	4	12	4	0			
	17	250	1008.0	—	41.1	2.4	6.9	79	5.1	2	5	12	7	3	0	1	0	0	0	0	1	1	4	10	12	0	14	15	0	1	3	0	5	3	13	4	0		
1. SCOTLAND, E.																																							
Nairn. Nairn	7	82	1006.9	-2.0	37.1	1.5	6.4	85	6.8	0	2	6	19	2	0	0	0	0	2	0	1	8	18	0	0	3	19	7	1	0	0	1	1	3	15	1			
	13	82	1006.8	—	42.9	2.3	7.6	81	6.5	0	0	16	12	1	0	0	0	0	1	0	2	6	20	0	1	5	15	8	1	0	2	1	1	5	13	2			
	18	82	1007.9	—	40.0	1.8	7.1	84	7.1	0	0	9	17	3	0	0	0	2	0	0	0	9	18	0	1	4	18	6	1	0	2	1	1	5	9	0			
Aberdeen. Aberdeen	7	88	1008.9	-1.6	38.7	2.0	6.5	81	6.6	1	8	1	10	9	0	0	0	1	1	3	7	3	14	0	0	13	13	3	0	0	0	2	8	7	8	1			
	13	88	1009.2	-1.3	43.3	3.2	7.0	74	5.7	0	9	7	9	4	0	0	0	0	1	2	6	5	15	0	0	18	11	0	1	0	0	4	10	4	8	2			
	18	88	1009.8	-0.8	41.2	2.6	6.8	78	4.6	4	12	2	3	8	0	0	0	1	2	3	9	4	10	0	0	13	14	2	0	0	0	4	7	7	7	2			
	21	88	1010.1	-0.6	39.9	2.1	6.8	81	4.9	6	7	4	4	8	0	0	0	1	3	2	8	5	10	0	0	8	16	5	0	0	0	3	6	9	5	1			
	88*	1009.4	-1.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
Aberdeen. Braemar	9	1114	1009.5	—	35.9	2.2	5.5	78	—	—	—	—	—	—	0	0	3	1	0	4	21	0	0	0	0	7	22	0	3	2	0	1	0	17	6	0			
Perth. Crieff	9	482	1010.1	—	38.6	1.7	6.8	84	8.5	0	1	5	6	17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
21	482	1011.2	—	38.7	1.8	6.8	83	7.5	4	2	2	5	16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
Fife. Inchkeith	1	184	1009.9	—	39.9	1.3	7.4	88	5.7	4	8	0	9	8	0	2	0	0	0	0	0	5	22	0	2	10	17	0	0	1	3	2	2	11	8	2			
	7	184	1009.7	—	39.7	1.0	7.6	91	7.1	1	5	4	8	11	0	2	0	0	0	1	0	6	20	0	1	12	16	0	0	2	4	1	2	12	7	1			
	13	184	1010.7	—	42.6	2.0	7.8	83	7.3	2	3	3	11	10	0	1	0	1	0	0	4	6	16	1	1	15	13	0	2	2	5	0	1	9	10	0			
	18	184	1010.2	—	41.4	1.6	7.5	86	6.8	0	7	5	7	10	0	0	1	1	0	0	7	7	13	0	3	9	16	1	2	2	5	1	0	8	10	0			
Fife. Leuchars	7	36	1010.2	—	37.4	1.0	7.0	91	7.2	2	4	3	8	12	0	1	1	0	0	3	6	8	10	0	0	12	12	5	0	1	1	2	2	12	6	0			
	13	36	1010.7	—	43.7	2.6	7.7	79	7.2	1	4	4	9	11	0	0	0	0	4	4	7	13	1	0	16	12	1	1	2	2	4	2	8	8	1				
	18	36	1010.9	—	40.5	1.7	7.4	85	6.3	1	7	5	5	11	0	1	0	0	1	1	6	8	12	0	1	16	11	1	3	2	1	3	1	11	7	0			
Edinburgh. Blackford Hill	9	441	1011.7	—	39.5	1.8	6.8	83	7.0	3	1	8	3	14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
	21	441	1012.2	—	39.5	1.9	6.7	83	6.0	6	4	3	5	11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
6a. SCOTLAND, W.																																							
Argyll. Tiree	7	36	1007.9	—	43.0	1.6	8.1	87	6.8	1	7	4	7	10	0	0	0	0	0	0	7	5	16	1	1	26	2	0	0	0	1	6	5	5	8	4			
	13	36	1008.9	—	44.5	1.8	8.7	85	7.4	2	4	4	5	14	0	0	0	0	0	4	5	5	13	2	4	21	4	0	1	0	1	5	6	5	10	1			
	18	36	1009.2	—	43.6	1.3	8.8	89	7.6	3	0	6	5	15	0	0	0	0	1	1	5	7	14	1	2	18	9	0	1	0	2	4	8	5	7	2			
Bute. Rothesay	9	187	1011.6	—	41.0	1.2	7.8	89	8.8	0	0																												

TABLE IV (continued).—SUMMARY of the OBSERVATIONS of PRESSURE, TEMPERATURE, HUMIDITY, CLOUD, VISIBILITY, and WIND at fixed hour at certain Stations during the Month of FEBRUARY, 1928.

Table with columns: DISTRICT, COUNTY AND PLACE; Hour of Observation; Height of Barometer above Mean Sea Level; MEAN PRESSURE (At Mean Sea Level, Deviation from Normal); TEMPERATURE AND HUMIDITY (Dry Bulb, Depression of Wet Bulb, Vapour Pressure, Relative Humidity, Mean Amount); CLOUD AMOUNT (No. of Observations); VISIBILITY (Fog, Mist, Poor Vis., Mod. Vis., Good Visibility); WIND, NUMBER OF OBSERVATIONS (Force (0-12), Direction).

* Mean of hourly readings.

TABLE I. DISTRICT VALUES.

The District Values of this Table are computed from the statistics for selected individual stations set out in Table III and Table IV.

The representative stations from which the District Values of rainfall and temperature are computed are indicated in Table III by the sign ¶ while the representative stations from which District Values of sunshine are computed are indicated by the sign §. The deviations from and percentages of normal for Air Temperature, Rainfall and Sunshine are the means of the corresponding deviations or percentages for the representative District Value stations. The deviations from normal of Earth Temperature are derived from the deviations for all the stations reporting in Table III for which normals of Earth Temperature are available. The highest and lowest temperatures for the District recorded during the month may refer to any station in Table III.

TABLE II. SUMMARY OF AUTOGRAPHIC RECORDS OF WIND.

The records used in the preparation of this Table are generally made by anemographs of the pressure-tube type. At a few stations the Robinson Cup Anemograph is utilised. The classification adopted for the "Distribution of Wind" is based on the specification of the Beaufort Scale of Wind Force (see *The Observer's Handbook*). For an anemograph complying with the specification "head 33 ft. above ground in the open" the several columns correspond with Force 8 and above (gales), Forces 6 and 7 (strong winds), Forces 4 and 5 (moderate winds), Forces 2 and 3 (light winds), Forces 1 and 0 (nearly calm). Some information as to the nature of the actual exposures may be gathered from the figures in the "Height" columns.

The "Highest Hourly Wind" is determined by the mean speed of the wind for a period of sixty minutes from 30 minutes before to 30 minutes after an exact hour by Greenwich Mean Time. Under the heading "Veer from N" the azimuth of the direction from which the wind was blowing is stated, the entry for an east wind being 90°, that for a south wind 180° and so on.

TABLE III. SUMMARY OF OBSERVATIONS AT TERMINAL HOURS.

Temperature.—The terminal hours of observation are given for each station. When the terminal hours for maximum and minimum temperature are stated independently the temperatures refer to intervals of 24 hours. If the maximum thermometer is read in the morning the reading is credited to the previous day. When the terminal hours for maximum and minimum are separated by a dash, thus, 18-7, the day-maximum for the period 7h. to 18h. and the night-minimum for the period 18h. to 7h. are reported and are utilised in determining the means for the month; in such cases the extreme temperatures for successive periods of 24 hours are also read by the observers, so that the absolute maximum and minimum temperatures for the month are obtained.

Except at the Royal Observatory, Greenwich, where a Glaisher stand is in use, the air temperature is obtained from thermometers placed in louvred screens. At Kew Observatory, Richmond, and Valentia Observatory these are north wall screens a few feet from the ground. At Aberdeen Observatory the north wall screen is at 41 feet. Otherwise the screens are in the open.

Rainfall.—The daily amounts are for the 24 hours beginning at the "terminal hour." "Rainfall" includes all forms of precipitation. The number of days of precipitation is counted with reference to the limit .01 inch or 0.2 mm. and also with reference to the limit .04 inch or 1 mm. The lower limit excludes mere "traces" of precipitation, but it is frequently passed on occasions when the precipitation is only dew.

Weather.—The numbers of days of Precipitation, Snow, Hail, Thunderstorms and Gale are counted irrespective of the hour at which the phenomena occur. Except for "Precipitation" the day is the civil day.

For the purpose of this summary "Snow" includes sleet (*i.e.*, snow with rain), "Hail" includes graupel (soft hail), "Snow lying" refers to occasions when at least one-half of the country surrounding the station is covered with snow at the morning observation. The entry of "fog" implies that regular observations of the range of vision are made on the scale set out below. Days of fog are those on which the range of vision is less than 1,100 yards at the hour of morning observation. That hour is given by the third entry of column 2 of the table and may be 7h. or 9h. G.M.T. The variability of the observation hour may exercise an important effect upon the statistics of fog frequency. "Thunderstorm" includes any day on which thunder is heard. "Gale" is a wind of Force 8 or upwards on the Beaufort Scale. A "ground frost" is entered when the reading of a "grass minimum" thermometer set the previous evening and read at the morning observation is 30° F. or lower.

Sunshine.—The percentage of possible sunshine is in all cases calculated with reference to the maximum duration possible in the latitude on the assumption of an unobstructed horizon, due allowance being

made or refraction (see *International Meteorological Tables* (Paris) pp. A17-A20 and 42-27). The sunshine recorder is generally insensitive to sunshine when the sun is at an altitude of 3° or less. The symbol § is entered against the percentage at some stations and indicates that obstructions of altitudes greater than 3° reduce the possible record of duration for the month by more than 5 per cent.

TABLE IV. SUMMARY OF OBSERVATIONS AT FIXED HOURS.

Mean Air Pressure is expressed in millibars. (1 millibar = 1,000 dynes per square centimetre = the pressure due to .029531 inch of mercury at 32° F. in Lat. 45°). The corrections for latitude, temperature and height have been applied to the barometer readings so as to obtain pressure at mean sea level. Barometric pressure is given at station level for a few stations at altitudes of 600 ft. or more in footnotes in Table IV.

Hygrometry.—The values given depend on the readings of the dry and wet bulb thermometers in Stevenson Screens (except at the Observatories, see above). The observations were formerly reduced by Glaisher's method; as from January, 1926 they are reduced by the new hygrometrical tables issued by the Office which are based on a formula of Regnault. In general the relative humidity and vapour pressure are derived from the monthly means of the dry and wet bulb readings. At certain stations the daily values of relative humidity and vapour pressure are found and the means are computed therefrom. These stations are indicated by the letter "H."

Cloud Amount.—The proportion of sky covered with cloud is estimated on the scale 0 to 10, the entry "0" being equivalent to clear sky "10" to overcast.

Visibility.—The observations are classified according to the following scheme—the distances, specified by international arrangement in metres, are given here in yards and miles:—

CODE.	RANGE OF VISION.
0	Less than 55 yards.
1	Exceeding 55 yards, less than 220 yards
2	" 220 " " 550 "
3	" 550 " " 1,100 "
4	" 1,100 " " 1½ miles.
5	" 1½ miles " " 2½ "
6	" 2½ " " 6½ "
7	" 6½ " " 12½ "
8	" 12½ " " 31 "
9	" 31 " "

Wind Summaries.—The estimates of wind force refer to the Beaufort Scale, and in general to the wind experienced at the time of observation. At Deerness, Cahirciveen, Richmond, Armagh, Eskdalemuir, Southport, Greenwich and Oxford the analysis refers to tabulations of autographic records. For Oxford the mean wind speed for half-an-hour centred at the hour of observation is used for conversion to "force" on the Beaufort Scale; for the remaining observatories the mean wind speed used for each observation refers to a period of one hour. In these cases winds equivalent to Force 1 are counted with the calms, whilst Forces 2 and 3 are taken together in the preceding column of the Table.

INTERPOLATED VALUES.

When the observations for any station for a month are incomplete and relevant data (e.g. records from neighbouring stations) which make it practicable to interpolate approximate values for the missing observations are available, such approximate values may be used for completing summaries for stations published in Tables III and IV. Parts of a summary obtained in this way are shown in brackets thus—(52.4).

STANDARD OF TIME.

As a rule observations are made in all parts of the British Islands according to Greenwich Mean Time, but at the following stations Local Mean Time is used for the observations summarised in Tables III and IV. The number of minutes after Greenwich Time is shown in brackets—Darwen (10), Rhayader (15), Ashburton (15), Tavistock (17), Plymouth (15), Douglas (20), Armagh (26), Balbriggan (25), Lisburn (30), Newcastle, Co. Wicklow (30), Ballinacurra (30), Cork (34).

"Summer Time" is not used in the Monthly Weather Report, but at certain stations the hours of observation vary in the course of the year. For such stations all time entries are converted to G.M.T. before they are printed and the winter hours are given as the terminal hours in the annual tables. For the summer hours reference should be made to the appropriate months.

NORMALS.

In Table III the normals used are those for the 35 years 1881-1915. The normals of temperature and sunshine are published in the Book of Normals, Section I, those for rainfall in the Book of Normals, Section V.

The normals for pressure with which comparison is made in Table IV also refer to the period 1881-1915.

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.

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ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE.

**MARCH, 1928: Wet, and on the whole, mild with bright periods. Cold spell 8th to 13th.
 Unusual frequency of winds with easterly component.**

March was on the whole mild, but there was a notable spell of cold weather extending from about the 8th to the 13th, when decidedly low temperatures and snowstorms were experienced in most districts. There was a marked predominance of winds from an easterly point. Wind force was mainly moderate and there were few severe gales. The general precipitation of each of the constituent countries of the British Isles was above the normal, and although bright periods were frequent sunshine aggregates were nearly everywhere below the normal.

Associated with a trough of low pressure extending south-eastwards over the British Isles rain or drizzle occurred in most districts on the 1st, the largest falls occurring in the east of Scotland (23 mm. at Aberdeen on the 1st). A large anticyclone centred over the Baltic area and southwest Russia extended its influence over the British Isles, and in Scotland and Ireland on the 2nd, and more generally on the 3rd, the weather was mainly fair and warm with, however, some local rain or drizzle. The 4th was fine and warm in most parts of England and Ireland and temperature was abnormally high for the time of year, the day temperature exceeding 65° F. at many stations in south-eastern England.

Fine warm weather continued in south-eastern England on the 5th, but the establishment of high pressure over Iceland caused an influx of cold air from North Russia; by the 6th temperature had fallen decidedly even in southeast England, and from the 8th to the 13th a spell of wintry weather with easterly winds, sleet or snow, and severe frost was experienced over the whole country. Bright periods occurred frequently during the spell, notable sunshine records being 10.3 hr. at Tiree on the 9th and at St. Mary's (Scilly Isles) on the 10th.

A change to southerly winds and relatively mild unsettled conditions began in the southwest on the 14th, with strong winds reaching gale force locally. There was much rain in Scotland, Ireland and the west districts of England and Wales from the 16th to the 21st. Apart from a brief interval of fairly generally sunny weather, with local showers, on the 26th, associated with the passage eastwards over the British Isles of a wedge of high pressure, conditions continued unsettled to the end of the month, with frequent rain and strong winds or gales in the south-west of England on the 23rd, and more widely on the 29th. There were, however, many bright periods, notably on the 28th, 30th and 31st.

Pressure and Wind.—Monthly means of pressure were below the normal at all stations except at stations in the north and east of Scotland. The general trend of the isobars over the greater part of the British Isles differed considerably from the normal trend as may be seen from inspection of chart 1. During the greater part of the month winds were from an easterly point and mainly moderate to light. The observer at Southport reports that the aggregate duration of winds with an easterly component exceeded all previous March records since 1880. Westerly winds were infrequent and occurred almost entirely during the last week of the month. Gales occurred in exposed places in the north of Scotland on the 16th and 17th and widely between the 19th and 23rd and on the 29th. Gusts of 60 m.p.h. and over were recorded at exposed places in the extreme south-west of England and in Ireland during the gales on the 19th. During the gales on the 29th, associated with the passage of the depression, track F, gusts of between 50 m.p.h. and 60 m.p.h. were recorded in several exposed places; at Pendennis a gust of 69 m.p.h. was recorded in the afternoon of the 29th.

Temperature.—The mean temperature for March was about normal in Scotland and Ireland and in the north-east of England, and above the normal elsewhere. Day temperature generally exceeded the normal during the first few days of the month and in southern England attained or exceeded 60° F. on the 3rd, 4th and 5th; the 4th was unusually warm in most parts of England and the maximum of 64° F. at Richmond (Kew Observatory) and Ross-on-Wye exceeded all previous records at these stations for the early part of March. The influx of cold air from Russia caused a sharp fall in temperature, which remained at a low level until the 14th. At Richmond (Kew Observatory) a record low maximum for the time of year, 32° F., was recorded on the 11th, just a week after the record high temperature. Screen minima of 20° F. and below were recorded at many places during the cold spell on the 11th, 12th and 13th; at Rhyader a screen minimum of 11° F.

was recorded on the morning of the 13th and a grass minimum temperature of 7° F. on the morning of the 14th. Reports from observers state the occurrence of a screen minimum of 11° F. on the morning of the 13th at E. Anstey (N. Devon) and a screen minimum of 12° F. and a grass minimum of 3° F. at Stogursey (near Bridgwater) where serious damage was done to apricot and peach blossoms. Apart from low temperature about the 21st and a decided drop in temperature in Scotland on the 29th, temperature after the 15th was above the normal.

The extreme temperatures for the month were:—(England and Wales) 67° at Westminster on the 4th, and 11° F. at Rhyader on the 13th. (Scotland) 59° at Ford on the 4th and Gordon Castle on the 17th, and 16° at West Linton on the 13th. (Ireland) 59° at Dublin (Phoenix Park) on the 17th and 14° at Mountmellick on the 13th and 14th.

Precipitation.—The general precipitation of the British Isles expressed as a percentage of the normal was 127; the values for the constituent countries were:—England and Wales 118, Scotland 125, Ireland 153.

In the south-west of England, the Severn Basin, Southern Wales, North-east England and parts of East Anglia there was a well defined excess of precipitation; in the remaining districts of England and Wales monthly totals were below the normal.

In Scotland precipitation was below the normal in Midlothian, and markedly so in the north-west and north, but elsewhere there was in general a moderate to fairly large excess, and at Balmoral, Blair Atholl and Dundee aggregates were more than twice the normal; at Dundee the month was decidedly the wettest March for at least 60 years. From the 16th to the 21st there were some heavy rains, at first in the west and then more generally. At Arrochar the aggregate for the period, 16th to 20th, was 7½ in. with nearly 2½ in. on the 19th and again on the 20th and in Perthshire, especially on the 19th and 20th, there were some heavy falls (3.40 in. at Glengyle on Loch Katrine and 2.66 in. at Aberfeldy on the 20th). There was heavy flooding of many rivers, notably in Perthshire, about the 21st.

In Ireland precipitation was below the normal in the north-west and north and above the normal in the remaining districts, monthly totals exceeding twice the normal along a coastal strip extending from Donaghadee to Cork.

Snow and sleet fell in many places during the cold period from the 8th to the 13th. Many districts were visited by severe snowstorms from the 10th to the 12th, roads often being blocked with snow drifts. On the evening of the 10th to 11th snow occurred as far south as the Scilly Isles and Roches Point. Glasgow had 6 in. snow on the 11th and Guernsey 1 in. on the 12th. On the 12th the depth of "snow lying" was 8 in. at Margate, 6 in. at Durham and Copdock, 5 in. at Glasgow and 3 in. in many other places. Thunderstorms occurred on one or two days in several districts.

Sunshine.—Monthly aggregates of bright sunshine were below the normal in all districts, representative totals for Districts ranging from 90 per cent. of the normal in Ireland N. and the Channel Isles, to 46 per cent. of the normal in Scotland E. There were, however, frequent bright intervals and on several days good sunshine records were obtained, notably in the south and east of England and in southern Ireland on the 4th (10 hrs. at several stations in southern England), in south-eastern England on the 5th, over a wide area on the 9th, 10th and 18th, in many parts of England on the 26th (10.9 hr. at Ventnor and 10.3 hr. at Cranwell) and in many places on the 28th, 30th and 31st (10.1 hr. at Tiree and 10.0 hr. at Malin Head on the 31st).

Fog.—Much fog was experienced in many parts of the British Isles during the period from the 2nd to the 6th, and again on the 14th and around the 23rd.

Miscellaneous Phenomena.—Aurora was observed at Aberdeen on the 11th, at Lerwick on the 12th and at Baltasound on the 13th. The zodiacal light was seen at Deerness on the 9th and 10th and at Oxford on the 10th. Halos of 22°, accompanied in a few cases by parhelia, were observed at some stations during the second half of the month.

TABLE I.—DISTRICT VALUES—MARCH, 1928. [1908, revised 1928.]

DISTRICTS.	AIR TEMPERATURE.			EARTH TEMPERATURE.		RAINFALL.		SUNSHINE.	
	High-est.	Low-est.	Deviation from Normal. Daily Mean.	At 1 ft. Deviation from Normal.	At 4 ft. Deviation from Normal.	Per-cent- age of Normal.	No. of Days. Deviation from Normal.	Per-cent- age of Normal.	Per-cent- age of Possible Duration.
o. SCOTLAND, N.	°F. 57	°F. 25	°F. +1.2	°F. —	°F. —	% 86	—2	% 60	% 17
Eastern.									
1. SCOTLAND, E.	59	16	+0.1	—	—	139	+5	46	14
2. ENGLAND, N.E.	61	15	+0.4	+0.9	+0.7	127	+6	57	18
3. ENGLAND, E...	66	21	+1.9	+1.2	+0.7	93	+2	81	27
4. MIDLAND COUNTIES	65	14	+1.8	+1.1	+0.7	124	+6	60	19
5. ENGLAND, S.E.	67	17	+2.1	+1.8	+0.9	112	+2	89	29

DISTRICTS.	AIR TEMPERATURE.			EARTH TEMPERATURE.		RAINFALL.		SUNSHINE.	
	High-est.	Low-est.	Deviation from Normal. Daily Mean.	At 1 ft. Deviation from Normal.	At 4 ft. Deviation from Normal.	Per-cent- age of Normal.	No. of Days. Deviation from Normal.	Per-cent- age of Normal.	Per-cent- age of Possible Duration.
Western.	°F.	°F.	°F.	°F.	°F.	%		%	%
6. SCOTLAND, W. (& I. of Man)	59	17	+0.6	—	+0.3	128	+3	57	16
7. ENGLAND, N.W. (& N. Wales)	64	19	+1.2	+0.5	0.0	93	+3	69	24
8. ENGLAND, S.W. (& S. Wales)	64	11	+1.5	+0.9	+0.9	140	+5	73	25
9. IRELAND, N...	56	23	+0.6	+0.3	+0.3	107	-1	90	27
10. IRELAND, S...	59	14	+0.7	+1.3	+0.7	176	+5	81	27
11. CHANNEL I. (& Scilly)	62	27	+1.4	+1.5	+1.4	135	0	90	36
Mean: DISTRICTS 1-10	67	11	+1.1	+1.0	+0.6	124	+4	70	23

TABLE II.—SUMMARY OF AUTOGRAPHIC RECORDS OF WIND.—MARCH, 1928.

[1914.]

DISTRICT AND STATION.	Height.			Distribution of Wind.††									Extreme Velocities.							
	Above Mean Sea Level.	Above Ground.	Above Building.	More than 38 mi/hr.		25 to 38 mi/hr.		13 to 24 mi/hr.	4 to 12 mi/hr.	Less than 4 mi/hr.	No Record.	Highest Hourly Wind.			Highest Gust.					
				Dates of Occurrence.	Duration.	No. of Days.	Duration.	Duration.	Duration.	Duration.	Duration.	Year from N.	Speed.	Mid Time.	Speed.	Time.				
o. SCOTLAND, N.	ft.	ft.	ft.		hr.		hr.	hr.	hr.	hr.	hr.	°	mi/hr.	m/s.	day. hr.	mi/hr.	m/s.	d.	h.	m.
Shetlands Lerwick	310	42	33‡	16, 17, 20, 21, 30	28	15	185	317	196	18	0	150	44	19	21 12	61	27	21	15	25
Orkneys Deerness (Cup Anr.)	188	16	5	20, 21, 29, 30	31	13	150	296	234	33	0	80	48	21	29 24	—	—	—	—	—
1. SCOTLAND, E.																				
Aberdeen Aberdeen	70	42	33‡	29	0	7	45	355	256	85	0	110	41	18	29 18	56	25	29	17	45
Kincardine Balmakewan ..	140	25	18	—	0	—	0	78	(447)	(195)	24	120	17	8	29 17	37	17	29	17	15
Edinburgh Edinburgh	485	39	31‡	—	0	2	18	200	364	162	0	200	36	16	17 9	56	25	17	15	25
6a. SCOTLAND, W.																				
Argyll Tiree	80	55	48‡	19	2	12	148	331	225	38	0	160	39	17	19 22	53	24	19	21	15
Renfrew Paisley	188	81	15	—	0	4	11	108	518	107	0	190	30	13	17 11	58	26	17	12	55
Dumfries Eskdalemuir	825	50	22	—	0	3	10	333	322	70	9	200	30	13	17 9	44	20	17	8	30
2. ENGLAND, N.E.																				
Durham South Shields	62	46	20	—	0	6	42	262	326	114	0	80	32	14	11 24	50	22	10	5	5
York, E.R. Spurn Head	67	42	35‡	20, 21, 29	11	11	90	419	210	14	0	120	42	19	21 9	53	24	21	8	30
Lincoln Cranwell	284	44	26‡	—	0	4	16	205	386	137	0	130	29	13	20 14	46	21	(10 16 45)	(29 12 30)	
3. ENGLAND, E.																				
Norfolk Gorleston	52	42	33‡	—	0	4	41	279	273	149	2	120	37	17	21 8	48	21	29	12	40
Suffolk Felixstowe Aero. ..	55	40	25	—	0	4	35	283	(251)	(175)	0	180	35	16	29 15	43	19	29	13	40
Essex Shoeburyness	115	104	14‡	—	0	5	32	246	266	200	0	170	38	17	29 13	48	21	29	12	35
4. MIDLAND COUNTIES.																				
Warwick Birmingham	643	118	18	—	0	1	1	194	478	71	0	140	25	11	20 13	42	19	20	12	20
5. ENGLAND, S.E.																				
Surrey Richmond (Kew Obs)	82	65	22	—	0	—	0	124	471	149	0	210	23	11	29 20	37	17	29	20	30
Surrey Croydon	284	40	24	—	0	—	0	129	481	134	0	120	23	10	20 15	39	17	20	15	20
Kent Dover	61	32	22	—	0	5	44	219	375	102	4	—	37	17	29 15	52	23	29	22	50
Kent Lympne	409	70	55‡	—	0	3	26	322	360	36	0	180	37	17	29 23	52	23	29	23	30
Hampshire S. Farnboro' (Tower)	444	160	14	—	0	1	2	(160)	(491)	(91)	0	190	25	11	29 11	45	20	29	10	45
Hampshire Calshot	55	45	31‡	—	0	10	62	391	(272)	(19)	0	230	34	15	29 19	45	20	29	18	10
Hampshire Worthy Down ..	314	43	27‡	—	0	1	2	201	447	94	0	160	26	12	29 9	42	19	29	10	35
Wiltshire Larkhill	526	51	34‡	—	0	4	14	349	(325)	(56)	0	220	29	13	29 18	39	17	29	18	20
7a. ENGLAND, N.W.																				
Lancashire Fleetwood	112	50	12	—	0	7	45	360	294	45	0	150	31	14	16 24	48	21	30	2	50
Lancashire Southport	77	59	45‡	—	0	6	29	364	325	26	0	230	32	14	30 4	48	21	30	7	10
7b. NORTH WALES.																				
Anglesey Holyhead	64	45	29‡	—	0	10	89	370	219	66	0	160	34	15	19 19	55	25	19	18	10
Flint Sealand	81	65	49‡	—	0	5	14	225	365	140	0	150	30	13	29 9	48	21	29	9	35
8b. ENGLAND, S.W.																				
Devon Plymouth	185	88	2	—	0	8	58	250	352	84	0	—	34	15	19 16	51	23	29	16	5
Cornwall Peadennis Castle ..	256	65	24	19, 23, 29	17	16	160	306	214	47	0	—	47	21	29 14	69	31	29	14	30
9. IRELAND, N.																				
Donegal Dunfanaghy	180	47	39	—	0	4	15	220	337	172	0	—	32	14	29 13	52	23	30	3	50
Antrim Aldergrove	282	40	27‡	—	0	4	31	259	369	85	0	160	35	16	19 20	62	28	19	20	10
10. IRELAND, S.																				
Dublin Kingstown (Cup Anr.)	49	27	16	—	0	14	111	370	203	60	0	170	37	17	19 19	—	—	—	—	—
Clare Quilty	100	40	32‡	—	0	7	64	278	342	60	0	—	35	15	14 14	51	23	30	11	45
Kerry Cahirciveen (Val. O.)	98	41	34‡	—	0	10	95	323	246	80	0	160	36	16	19 15	63	28	18	21	25
Cork Weaver Pt.	160	30	21‡	19	3	10	71	323	278	69	0	—	43	19	19 16	60	27	19	15	35
11. SCILLY ISLES.																				
St. Mary's	160	42	35‡	19, 29	6	14	166	309	195	68	0	240	42	19	29 14	60	27	19	14	50

†† Brackets () indicate that the distribution as between winds above and below 4 mi/hr. is doubtful, but the total number of hours with winds below 12 mi/hr. is reliable.
‡ Standard mounting.

TABLE III.—SUMMARY OF the RECORDS OF TEMPERATURE, RAINFALL AND SUNSHINE, and of WEATHER OBSERVATIONS, MARCH, 1928.

DISTRICT, COUNTY AND PLACE.	Terminal Hours of Observation.	Height of Station above Mean Sea Level.	AIR TEMPERATURE IN DEGREES FAHRENHEIT.								Earth Temperature.		RAINFALL.				WEATHER. Number of days.								BRIGHT SUNSHINE.							
			Means of		Deviation from Normal.	Absolute Maximum and Minimum.			1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Most in a day.		Precip'n.	Snow.	Snow lying.	Hail.	Thunderstorm.	Fog (Morning Obs.)	Ground Frost.	Gale.	Hours per day.		Per Cent.							
			A	B		Maximum.	Date.	Minimum.					Date.	Amount.									Date.	0.2 mm. or more.		1 mm. or more.	Daily Mean.	Deviation from Normal.				
			Max.	Min.	Rain.	Max.	Min.	Mean of A and B.	Max.	Min.	Date.	Max.	Min.	Date.	0.2 mm. or more.	1 mm. or more.	Snow.	Snow lying.	Hail.	Thunderstorm.	Fog (Morning Obs.)	Ground Frost.	Gale.	Daily Mean.	Deviation from Normal.	Per Cent.						
0. SCOTLAND, N.																																
Shetlands.	Baltsound	9 9 9	31	44.4	38.5	41.5	—	52	19th	32	11th	40.4	—	2.21	56	—	7	26th	20	15	3	0	4	1	0	—	3	1.41	—	12		
	Lerwick	18-7 7	54	43.5	39.2	41.3	+2.6	50	19th	34	8, 10, 11, 13	—	—	2.38	60	—	20	9	20th	20	17	2	0	5	0	1	—	4	1.44	—	12	
Orkneys.	Deerness	2121 9	160	43.1	37.3	40.2	+1.0	48	17, 19	31	11th	—	—	2.35	60	—	11	22	29th	21	13	4	1	4	0	5	—	4	1.87	-1.32	16	
	Kirkwall	9 9 9	151	43.6	36.8	40.2	—	50	2, 17	26	3rd	—	—	2.52	64	—	21	29th	22	11	5	0	1	0	4	4	5	1.88	—	16		
Hebrides.	Stornoway	18-7 7	30	45.7	37.4	41.5	+1.6	53	17th	29	3rd	—	—	3.48	88	—	16	16	18th	20	17	1	0	3	0	0	—	1	2.99	-0.40	26	
Caithness.	Wick	18-7 7	81	43.2	38.1	40.7	+1.3	49	2, 17	30	3rd	—	—	1.69	43	—	15	19	29th	20	11	4	0	4	0	2	—	6	—	—		
	Achnashellach	9 9 9	225	46.8	36.0	41.4	+3.0	57	17, 20	26	9, 12	—	—	4.16	106	—	86	26	17th	16	15	0	0	0	0	0	13	1	—	—		
Ross & Cromarty.	Fortrose	9 9 9	69	47.2	36.1	41.7	—	56	18, 20	28	11th	—	—	1.37	35	—	11	5th	18	10	1	0	0	0	2	—	0	2.63	—	22		
	Strathpeffer	9 9 9	125	46.3	34.8	40.5	+1.1	57	17, 20	28	3, 10, 11, 22	—	—	2.40	61	—	6	13	29th	20	13	2	0	0	0	—	—	—	—	—		
Inverness.	Ft. Augustus	9 9 9	68	45.5	36.3	40.9	+1.2	55	17, 19, 20	26	3rd	—	—	2.60	66	—	27	13	24th	19	14	3	1	0	0	1	—	0	1.58	-1.07	13	
	Inverness	9 9 9	242	44.9	35.5	40.2	-0.4	56	17, 18	25	11th	—	—	2.45	62	+	8	17	30th	17	9	5	3	1	0	3	14	2	2.11	-1.73	18	
1. SCOTLAND, E.																																
Nairn.	Nairn	18-7 7	82	45.0	35.3	40.1	+0.6	58	17th	26	11th	—	—	1.57	40	—	8	9	5th	17	10	6	2	3	0	0	—	2	2.28	-1.62	19	
Elgin.	Gordon Castle	2121 9	104	45.7	34.8	40.3	+0.2	59	17th	25	11th	—	—	1.66	42	—	17	17	29th	17	9	4	4	2	0	—	—	1	1.95	—	17	
Banff.	Banff	9 9 9	130	44.7	36.2	40.5	—	55	2nd	28	11th	—	—	1.70	43	—	18	29th	17	10	6	0	1	0	0	9	0	1.56	—	13		
Aberdeen.	Aberdeen	2424 24	46	43.3	36.9	40.1	+0.4	51	27th	29	11th	—	—	40.5	3.57	91	+	30	21	1st	25	14	8	1	5	0	3	4	1	1.52	-2.25	13
	Balmoral	9 9 9	927	41.0	30.9	35.9	—	52	17th	18	11th	—	—	6.12	155	+	83	32	20th	31	19	8	9	0	0	—	20	0	—	—		
Kincardine.	Braemar	2121 9	1120	41.0	30.8	35.9	-0.1	50	26th	20	12th	—	—	4.93	125	+	49	34	20th	19	18	9	9	0	0	—	21	0	—	—		
	Craibstone	9 9 9	300	42.9	35.0	38.9	—	52	2nd	28	11th	38.5	39.2	3.69	94	+	20	20	1st	23	16	8	7	5	0	—	9	0	1.79	—	15	
Forfar.	Logie Coldstone	9 9 9	608	42.5	32.9	37.7	—	53	17th	23	11th	—	—	3.06	78	+	12	19	29th	24	17	8	9	0	0	—	26	0	—	—		
	Stonehaven	9 9 9	93	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Perth.	Arbroath	2121 9	93	44.3	35.9	40.1	—	53	26th	27	11th	—	—	3.04	77	—	15	1st	22	15	4	0	4	0	7	14	0	1.72	—	15		
	Carnoustie	9 9 9	39	43.7	35.5	39.6	—	52	26th	27	11th	—	—	3.92	99	—	16	1, 24	24	19	4	1	1	0	—	—	0	1.47	—	13		
Fife.	Dundee (E. Nec.)	2121 9	198	42.9	35.5	39.2	-0.6	51	26th	27	11th	—	—	4.67	119	+	67	20	24th	24	17	3	2	0	1	—	—	0	—	—		
	Mayfield	9 9 9	147	44.2	35.8	40.0	—	52	26, 27	28	11th	36.7	—	4.13	105	+	58	19	24th	24	17	5	5	0	1	—	9	0	1.29	-2.29	11	
Perth.	Kettins	9 9 9	218	45.0	34.5	39.7	—	53	2nd	21	11th	39.3	—	5.56	141	—	28	20th	26	16	6	5	1	0	4	12	0	—	—	—		
	Montrose	9 9 9	16	46.2	36.5	41.3	—	53	26th	29	11th	—	—	3.71	94	—	17	1st	23	15	4	0	0	0	1	—	1	1.72	—	15		
Fife.	Crieff	2121 9	478	43.1	38.5	40.8	+0.7	51	2, 20	28	11, 13	—	—	6.39	162	+	81	21	20th	26	19	7	3	0	0	—	0	—	—	—		
	Cupar	9 9 9	76	45.5	36.0	40.7	+0.6	53	2, 19, 26	23	11th	—	—	4.53	115	+	52	21	29th	26	16	5	4	1	0	—	2	1.54	—	13		
Linlithgow.	Inchkeith	18-7 7	210	44.9	36.4	40.7	—	57	28th	30	9th	—	—	4.29	109	—	15	24th	24	17	5	5	5	0	—	—	0	—	—	—		
	Kirkcaldy	9 9 9	190	44.0	37.9	40.9	—	54	17th	29	11th	—	—	1.54	39	—	8	5th	21	13	6	5	5	0	4	6	0	—	—	—		
Edinburgh.	Leuchars	18-7 7	40	44.2	36.4	40.3	—	53	27th	29	11th	—	—	2.27	58	—	8	24th	23	17	—	—	—	—	—	—	—	—	—	—		
	St. Andrews	9 9 9	20	43.9	36.3	40.1	—	53	2nd	28	11th	39.7	40.5	3.41	81	—	15	29th	22	19	2	0	0	0	3	8	0	1.62	—	14		
Haddington.	Bangor	2121 9	587	42.8	34.3	38.5	—	55	20th	23	13th	—	—	1.92	49	—	5	5th	22	19	7	6	1	0	4	—	0	—	—	—		
	Blackford Hill	9 9 9	441	44.2	35.5	39.9	0.0	55	17th	24	13th	—	—	1.48	38	—	7	5	24th	23	14	4	4	0	0	—	9	1	1.88	-1.80	16	
Berwick.	Boghall	9 9 9	645	42.5	35.1	38.8	—	52	17, 20	21	13th	38.3	38.2	1.93	49	—	6	29th	24	15	7	5	2	1	—	—	1	1.60	—	14		
	Edin. Univ.	9 9 9	227	45.0	37.4	41.2	—	57	17th	27	13th	39.8	41.2	1.84	47	—	1	6	12th	21	16	—	—	—	—	—	—	—	—	—		
Peebles.	Liberton	9 9 9	190	44.8	—	—	—	57	17th	—	—	—	—	1.74	44	—	6	12th	23	15	6	4	1	0	—	—	—	—	—	—		
	N. Berwick	9 9 9	152	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Roxburgh.	Smeaton	9 9 9	100	45.6	35.7	40.7	—	55	17th	24	13th	40.1	—	2.09	53	+	8	10	29th	18	14	6	1	3	0	2	10	0	—	—		
	Marchmont	9 9 9	498	43.8	34.4	39.1	+0.1	52	17, 19, 26, 27	23	13th	—	—	4.12	105	+	38	20	5th	27	23	5	9	2	0	—	—	0	1.49	-1.96	13	
6a. SCOTLAND, W.	West Linton	9 9 9	770	43.3	32.2	37.7	+0.8	52	19, 20	16	13th	—	—	2.15	55	—	6	29th	29	14	10	8	3	0	—	16	0	—	—	—		
	Kelso (Br'ml'ds)	9 9 9	195	46.4	34.9	40.7	—	55	18, 27	22	13th	—	—	2.71	69	+	19	18	5th	26	17	7	6	0	0	4	—	0	—	—		
Argyll.	Wolfelee	9 9 9	537	44.5	33.2	38.9	—	57	4th	19	13th	—	—	5.34	136	+	51	33	29th	30	22	10	5	2	0	—	0	—	—	—		
	Ardtornish	2121 9	48	46.4	35.5	40.9	—	55	24, 25	27	10th	—	—	10.31	262	—	51	19th	18	16	3	0										

TABLE III (continued).—SUMMARY of the RECORDS of TEMPERATURE, RAINFALL and SUNSHINE, and of WEATHER OBSERVATIONS, MARCH, 1928.

DISTRICT, COUNTY AND PLACE.	Terminal Hours of Observation.	Height of Station above Mean Sea Level.	AIR TEMPERATURE IN DEGREES FAHRENHEIT.								Earth Temperature.		RAINFALL.			WEATHER. Number of days.										BRIGHT SUNSHINE.					
			Means of		Deviation from Normal.	Absolute Maximum and Minimum.			1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Most in a day.		Precip'n.	Snow lying.	Fog (Morning Obs.)	Thunderstorm.	Ground Frost.	Gale.	Daily Mean.	Deviation from Normal.	Per Cent.								
			A	B		Maximum.	Date.	Minimum.					Date.	Amount.										Date.	0.2 mm. or more.	1 mm. or more.	Snow.	Hail.	Fog (Morning Obs.)	Ground Frost.	Gale.
2. ENGLAND, N.E.																															
Northumberland.		G.M.T.	ft.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	in.	mm.	mm.	mm.	5th	25	15	5	2	4	0	0	7	0	1.94	—	19		
	Berwick-on-T.	9 9 9	76	44.4	36.8	40.6	—	53	17,25,26	29	11th	—	2.37	60	—	15	29th	26	20	—	—	—	—	—	—	—	—	—	—	—	
	Bellingham	9 9 9	848	43.9	32.8	38.3	—	58	4, 18	23	13th	—	4.50	114	—	18	29th	26	20	—	—	—	—	—	—	—	—	—	—	—	—
	Cockle Park	9 9 9	324	45.0	34.5	39.7	+0.7	53	26th	27	10, 11	38.9	40.7	2.65	67	+ 8	8	12th	23	20	5	4	2	1	11	24	1	1.72	-2.34	15	
Durham.																															
	Chopwellwood	9 9 9	445	46.1	33.4	39.7	—	59	4th	25	13th	—	3.52	89	—	27	12th	24	17	6	7	1	0	2	24	0	1.89	—	19		
	Durham	9 9 9	336	45.1	34.1	39.6	-0.5	55	20, 26	20	13th	—	2.22	56	+ 9	13	29th	26	11	8	6	2	0	6	10	0	1.55	-2.10	13		
	Houghall	9 9 9	160	46.2	34.6	40.4	—	56	20, 26	15	13th	—	2.65	67	—	17	29th	24	15	6	8	0	0	3	19	0	1.82	—	15		
	Ushaw College	9 9 9	594	44.5	34.8	39.7	—	55	26th	24	13th	—	3.00	76	+ 20	16	29th	24	16	8	8	3	0	12	—	—	—	—	—		
York, N. Riding.																															
	Ampleforth	9 9 9	350	46.1	35.6	40.9	+1.0	55	4, 19, 20	26	11, 12	—	2.53	64	+ 12	18	29th	21	14	7	7	1	1	1	9	0	2.30	—	20		
	Castleton	9 9 9	425	45.9	33.2	39.5	—	57	3rd	19	13th	42.0	—	3.57	91	—	28	29th	23	18	8	8	1	1	11	2	—	—	—		
	Rounton	9 9 9	249	46.7	34.5	40.6	+0.6	57	20th	24	13th	40.2	—	1.73	44	—	3	25th	21	10	7	5	1	1	3	18	0	—	—	—	
	Scarborough†	9 9 9	118	46.7	36.5	41.6	0.0	58	27th	28	11, 12	—	42.2	2.85	72	+ 26	15	29th	25	15	5	4	5	1	2	8	2	2.35	-1.52	20	
	West Witton	9 9 9	605	44.8	34.5	39.7	—	56	4, 20	22	13th	39.7	40.1	4.51	115	—	42	29th	27	19	8	8	2	0	11	—	—	—	—		
	York	9 9 9	56	48.1	37.1	42.6	+1.1	60	20th	27	11, 12	41.5	42.3	1.97	50	+ 7	17	29th	22	15	4	4	2	0	—	—	0.2.38	-0.88	20		
York, E. Riding.																															
	Hull	9 9 9	188	48.5	37.7	42.6	+1.6	58	18, 19	26	12, 13	41.5	42.6	2.97	75	+ 29	18	11th	23	16	7	5	3	2	12	19	0	1.69	—	14	
	Osgodby	9 9 9	30	47.8	35.4	41.6	—	58	20th	22	13th	—	—	2.13	54	—	13	29th	19	16	5	6	2	1	14	0	1.94	—	16		
	Spurn Head	9 9 9	29	45.6	38.4	42.0	+1.0	57	18th	28	11th	—	—	1.91	49	+ 6	10	10th	15	12	7	0	1	0	2	—	1.2.95	—	25		
Lincoln.																															
	Cranwell	9 9 9	236	48.9	34.5	41.7	+0.7	63	4th	18	12th	41.7	42.4	1.82	46	+ 10	8	29th	17	12	5	5	3	1	7	13	0	2.67	-1.27	23	
	Cleethorpes	9 9 9	23	47.8	36.6	42.2	—	58	18, 19	26	13th	—	—	2.04	52	—	13	10th	16	11	5	4	1	0	0	—	0.2.76	—	23		
	Lincoln	9 9 9	58	49.6	37.1	43.3	+1.8	61	19th	25	12th	41.2	42.5	1.66	42	+ 3	9	10th	18	11	4	5	1	0	3	10	0	—	—	—	
	Skegness	9 9 9	12	47.5	38.3	42.9	+2.1	57	5, 18	27	12th	—	—	1.26	32	- 10	11	29th	16	10	4	2	3	0	0	—	0.3.52	-0.74	30		
3. ENGLAND, E.																															
Norfolk.																															
		Cromer	9 9 9	150	49.5	37.7	43.6	+2.4	66	4th	26	11th	—	—	1.10	28	- 15	7	29th	13	9	4	3	3	1	0	—	0.4.18	+0.02	36	
		Geldeston	9 9 9	37	49.3	36.0	42.7	+1.1	61	18th	26	11th	—	—	1.24	31	- 13	6	29th	14	11	4	4	1	1	8	—	0.3.37	-0.63	29	
		Hunstanton	9 9 9	105	49.8	38.3	44.1	—	65	4th	25	12th	—	—	1.20	31	—	8	29th	17	12	5	4	0	1	1	—	0.3.82	—	32	
		Norwich	9 9 9	98	50.1	36.5	43.3	+1.6	63	4th	26	11th	40.3	—	1.68	43	- 6	8	10, 11	18	11	5	5	2	1	—	9	—	3.52	—	30
		Sprowston	9 9 9	93	49.2	36.2	42.7	—	61	4th	26	11th	—	—	1.33	34	—	8	29th	13	10	5	4	2	1	0	12	—	0.3.77	—	32
	Yarmouth	9 9 9	5	45.8	38.2	42.0	+1.4	54	26th	27	11th	42.7	43.9	1.16	29	- 15	7	29th	17	10	5	0	4	1	0	4	0	0.3.39	-0.96	29	
Suffolk.																															
	Bungay (Flix'n)	9 9 9	79	49.5	36.3	42.9	—	61	4th	22	12th	—	—	1.89	48	—	14	11th	17	11	4	6	3	1	1	21	0	—	—	—	
	Copdock	9 9 9	164	49.1	36.8	42.9	—	61	4th	21	12th	42.1	43.2	2.48	63	—	19	31st	15	13	4	4	1	1	0	9	0	0.3.30	—	28	
	Felixstowe	9 9 9	15	46.3	38.6	42.5	—	57	26th	25	11th	—	—	1.93	49	—	12	31st	18	10	5	6	1	0	5	10	—	0.3.80	—	32	
	Lowestoft	9 9 9	83	46.4	37.8	42.1	+0.9	54	30th	27	11, 12	41.5	42.7	1.32	34	- 7	8	29th	18	12	5	4	0	1	1	—	1.3.54	-0.85	30		
Cambridge.																															
	Cambridge (Bot. Gdns.)	9 9 9	41	51.6	36.5	44.1	+2.3	65	4th	25	11, 12, 16	43.1	44.0	1.08	27	- 10	12	31st	15	7	4	1	2	0	—	13	0	0.3.19	-0.71	27	
Bedford.																															
	Wisbech	9 9 9	10	49.9	36.1	43.0	—	64	4th	22	11th	—	—	1.38	35	—	5	5, 29	19	14	5	3	7	1	4	13	0	—	—	—	
	Luton	9 9 9	390	49.5	36.8	43.1	—	63	4th	24	11, 12	43.2	42.2	1.93	49	—	19	31st	18	12	3	2	0	2	1	11	0	0.2.82	—	24	
	Woburn	9 9 9	291	49.8	35.6	42.7	+1.6	63	4th	21	11th	42.8	44.6	1.56	40	- 4	14	31st	18	11	5	4	0	1	0	—	0.2.84	—	24		
Hertford.																															
	Benington	9 9 9	405	49.7	36.9	43.3	+2.1	65	4th	24	11th	42.7	43.3	1.79	45	- 1	13	31st	20	10	4	3	1	0	0	12	0	0.2.99	—	25	
	Rothamsted	9 9 9	420	48.0	36.1	42.1	+1.0	60	4th	25	11, 12	41.3	—	2.16	55	+ 4	17	31st	16	12	4	2	2	1	0	14	0	0.2.99	-0.72	25	
	St. Albans	9 9 9	272	49.6	36.4	43.0	—	62	4.5	25	11, 12, 13	43.1	—	2.05	52	—	13	31st	17	12	2	1	1	1	0	11	0	—	—	—	
Essex.																															
	Clacton-on-S.	9 9 9	55	46.5	39.5	43.0	+2.0	56																							

TABLE III (continued).—SUMMARY of the RECORDS of TEMPERATURE, RAINFALL and SUNSHINE and of WEATHER OBSERVATIONS, MARCH, 1928.

Table with columns for District, County and Place; Terminal Hours of Observation; Height of Station; Air Temperature in Degrees Fahrenheit (Means of A and B, Deviation from Normal, Absolute Maximum and Minimum); Earth Temperature; Rainfall (Total Fall, Deviation from Normal, Most in a day); Weather (Precip'n., Snow, Snow lying, Hail, Thunderstorm, Fog, Ground Frost, Gale); and Bright Sunshine (Hours per day, Deviation from Normal, Per Cent).

† Plant breeding station, established 1924.

§ See paragraph headed "Sunshine" in Notes on Tables on last page of this issue.

TABLE III (continued).—SUMMARY OF THE RECORDS OF TEMPERATURE, RAINFALL AND SUNSHINE, and of WEATHER OBSERVATIONS, MARCH, 1928.

DISTRICT, COUNTY AND PLACE.	Terminal Hours of Observation.	Height of Station above Mean Sea Level.	AIR TEMPERATURE IN DEGREES FAHRENHEIT.							Earth Temperature.		RAINFALL.				WEATHER. Number of days.							BRIGHT SUNSHINE.									
			Means of		Deviation from Normal.	Absolute Maximum and Minimum.			1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Most in a day.		Precip'n. 0.2 mm. or more.	1 mm. or more.	Snow.	Snow lying.	Hail.	Thunderstorm.	Fog (Morning Obs.).	Ground Frost.	Gale.	Hours per day.								
			A	B		Maximum.	Date.	Minimum.					Date.	Amount.										Date.	Daily Mean.	Deviation from Normal.	Per Cent.					
			Max.	Min.	Max.	Min.	Mean of A and B.	Maximum.	Date.	Minimum.	Date.	1 ft.	4 ft.	in.	mm.	mm.	mm.	0.2 mm. or more.	1 mm. or more.	Snow.	Snow lying.	Hail.	Thunderstorm.	Fog (Morning Obs.).	Ground Frost.	Gale.	Daily Mean.	Deviation from Normal.	Per Cent.			
8b. ENGLAND, S.W.—cont.																																
Dorset—	Shaftesbury	9 9 9	722	48.6	37.5	43.1	+2.3	60	4th	22	12th	—	—	2.23	57	—	3	11	20th	19	14	3	0	1	0	—	—	0	—	—	—	
Devon.																																
Arlington	9 9 9	613	48.0	37.6	42.8	+1.5	61	4th	18	13th	—	—	4.65	118	+16	20	29th	24	23	3	1	1	0	—	7	0	—	—	—	—		
Ashburton	9 9 9	583	50.2	38.5	44.3	+0.7	56	1st	22	12th	—	—	6.35	161	+48	23	20th	22	21	2	0	0	0	2	—	0	—	—	—	—		
Cullompton	9 9 9	202	50.6	37.7	44.1	+1.4	61	4th	18	13th	45.4	—	3.75	95	+25	16	29th	25	21	3	1	0	0	1	13	0	2.69	-1.15	23	—		
Dean Prior	2121	9	331	49.2	36.8	43.0	—	59	4th	19	12, 13	—	—	8.40	213	—	34	29th	25	21	3	0	0	0	—	212	—	—	—	—		
Ilfracombe	9 9 9	74	49.6	41.9	45.7	+1.3	61	4th	28	13th	46.4	48.0	3.12	79	+9	14	21st	23	18	1	0	0	0	0	6	0	2.98	—	25	—		
Killerton	9 9 9	159	50.6	38.2	44.4	—	59	4th	20	13th	—	—	2.92	74	—	14	20th	19	17	0	0	0	0	—	14	—	—	—	—			
Newton Abbot	9 9 9	350	49.1	39.3	44.2	—	56	6th	25	11th	—	—	4.29	109	—	19	20th	24	20	2	2	1	0	1	8	0	3.29	—	28	—		
Plymouth (Hoe)	2121	9	116	50.1	40.7	45.4	+1.4	59	4th	23	12th	45.7	47.1	4.72	120	+46	17	20th	21	20	0	0	1	0	1	4	1	3.73	-0.56	32	—	
Plymouth (Cattewater)	18-7	7	82	49.5	41.6	45.5	—	57	4th	25	12th	—	—	4.24	108	—	13	21st	19	18	1	0	2	1	0	5	4	3.61	—	31	—	
Salcombe	9 9 9	39	49.7	40.8	45.3	—	54	5, 18, 26	25	12th	—	—	3.28	83	—	14	29th	14	13	0	0	0	0	—	0	4	12	-0.46	34	—		
Sidmouth	9 9 9	147	48.8	38.7	43.7	+0.8	54	24th	22	12th	—	—	3.07	78	+16	14	20th	21	17	1	0	1	0	0	6	0	—	—	—	—		
Tavistock	9 9 9	458	49.4	38.7	44.1	—	60	4th	21	12th	—	—	46.3	6.27	159	—	22	20th	24	22	1	0	1	1	0	9	0	—	—	—		
Teignmouth	9 9 9	20	50.0	40.9	45.5	+1.3	57	26th	25	13th	—	—	3.58	91	+25	23	20th	23	18	3	0	1	1	0	6	0	3.97	—	34	—		
Torquay	9 9 9	12	50.2	41.4	45.8	+1.7	57	26th	26	12, 13	—	—	46.5	3.34	85	+15	18	20th	19	15	0	0	1	1	0	6	0	4.00	-0.48	34	—	
Woolacombe	2121	9	59	49.4	41.2	45.3	+1.1	61	4th	26	13th	—	—	3.20	81	+24	13	21st	21	17	0	0	0	0	6	0	3.00	-1.32	25	—		
Cornwall.																																
Falmouth Obs.	9 9 9	167	50.7	42.1	46.4	+2.1	56	26th	24	12th	48.1	48.8	6.22	158	+70	27	14th	21	19	2	0	2	0	1	6	0	3.69	-0.76	31	—		
„ (Pendennis)	18-7	7	200	48.4	42.6	45.5	—	54	26th	28	11, 12	—	—	5.02	128	—	24	14th	20	17	1	0	4	1	2	—	44.02	—	34	—		
Fowey	9 9 9	51	51.5	40.8	46.1	—	58	2, 6	25	12th	—	—	4.86	123	—	22	20th	19	18	1	0	1	0	—	—	43.71	—	31	—			
Gulval	9 9 9	20	50.9	42.2	46.5	—	57	4th	27	12th	—	—	5.65	143	—	25	14th	22	19	0	0	0	0	—	4	0	3.85	—	33	—		
Newquay	9 9 9	190	49.2	41.2	45.2	+1.0	56	4th	24	12th	46.3	47.3	4.53	115	+53	17	20th	19	18	1	0	1	0	0	—	0	3.76	-0.56	32	—		
Redruth	9 9 9	397	49.0	40.1	44.5	—	55	4, 17	25	12th	—	—	7.51	191	+100	24	14th	23	18	3	0	4	0	2	8	1	—	—	—	—		
9. IRELAND, N.																																
Sligo.	Markree Cas.	2121	9	122	49.2	35.5	42.3	+0.6	56	17th	25	12, 13	43.6	44.6	3.57	91	+3	15	29th	21	18	2	0	4	0	2	—	13.21	-0.21	27	—	
Mayo.	Blacksod Pt.	18-7	7	10	48.2	39.9	44.1	+0.8	56	16th	29	13th	—	—	2.50	63	-41	17	19th	22	16	2	0	3	0	0	—	0	—	—	—	
	Mallarany	9 9 9	120	48.5	38.0	43.3	—	55	24th	28	13th	—	—	3.31	84	—	12	28th	20	18	1	0	2	0	0	—	0	3.59	-0.13	31	—	
Donegal.	Malin Head	18-7	7	51	45.7	39.1	42.4	+0.5	55	17th	29	13th	—	—	2.32	59	0	17	17th	15	11	3	0	3	0	1	—	0	3.13	-0.85	27	—
Antrim.	Aldergrove	18-7	7	238	46.7	36.6	41.7	—	54	25th	27	13th	—	—	3.10	79	—	17	20th	21	16	6	1	5	0	4	11	13.12	—	26	—	
	Belfast	9 9 9	13	48.4	39.1	43.7	—	55	3, 15, 25	30	13th	—	—	3.63	92	—	17	20th	23	15	—	—	—	—	—	—	—	—	—	—	—	
	Lisburn	9 9 9	206	47.2	36.3	41.7	+0.7	55	26th	27	13th	—	—	3.39	86	+25	10	20th	20	16	1	1	1	0	10	—	0	—	—	—	—	
Down.	Donaghadee	18-7	7	40	46.3	39.5	42.9	+0.8	54	25, 26	30	13th	—	—	4.44	113	+57	21	20th	22	16	4	0	2	1	3	—	4	—	—	—	
Armagh.	Armagh	2121	9	204	46.9	36.9	41.9	+0.2	55	17th	25	13th	42.2	43.3	3.17	81	+21	10	19th	20	15	5	3	4	0	1	10	0	3.19	-0.16	27	—
Longford.	Newtownforbes	2121	9	161	48.0	35.3	41.7	—	54	16, 18, 25	23	11, 13	42.8	43.9	3.36	85	—	26	17th	22	16	3	1	5	0	—	0	—	—	—	—	
10. IRELAND, S.																																
Dublin.	Balbriggan	9 9 9	203	47.8	38.0	42.9	+1.0	55	5, 18	23	13th	43.3	44.6	4.18	106	+57	13	28th	24	18	4	3	5	1	7	5	2	—	—	—	—	
	City	2121	9	54	48.5	39.7	44.1	+0.4	57	17th	21	13th	—	—	3.99	101	+52	19	23rd	25	16	4	2	6	0	3	5	0	—	—	—	
	Glasnevin	2121	9	55	48.6	37.0	42.8	+0.4	57	18th	17	13th	—	—	4.21	107	+57	14	30th	25	18	4	—	4	0	—	4	0	—	—	—	
	Phenix Pk.	2121	9	155	48.8	36.3	42.5	+0.7	59	17th	16	13th	—	—	4.05	103	+54	15	23rd	23	19	4	0	2	0	1	11	0	2.91	-1.06	25	—
	Trin. Coll.	2121	9	12	48.8	39.5	44.1	+0.5	57	17th	20	13th	44.4	45.3	4.00	102	+55	19	23rd	22	17	3	4	4	0	—	6	2	—	—	—	
Wicklow.	Newcastle	2121	9	256	47.7	37.6	42.7	—	56	18th	22	13th	—	—	8.59	218	—	25	16th	23	19	3	3	0	0	4	—	0	—	—	—	
King's Co.	Birr Castle	18-7	7	175	48.4	37.3	42.9	+1.0	54	6, 17, 19, 21	19	13th	44.2	44.7	3.24	82	+21	21	17th	19	12	4	1	6	0	4	12	0	2.97	-0.58	25	—
Queen's Co.	Mountmellick	9 9 9	252	47.9	36.5	42.2	—	55	25th	14	13, 14	—	—	4.03	102	—	23	28th	24	17	—	—	—	—	—	—	—	—	—	—	—	
Wexford.	Newtownbarry	9 9 9	153	51.8	38.0	44.9	—	55	5, 6, 25	19	13th	45.0	45.2	8.29	211	—	33	19th	23	22	2	0	1	0	0	—	0	—	—	—	—	
Kilkenny.	Kilkenny	9 9 9	182	49.9	38.0	43.9	+1.4	57	18th	23	13th	—	—	4.38	111	+53	23	19th	21	17	—	—	—	—	—	—	—	—	—	—	—	
Waterford.	Seskin, Carrick-on-Suir	2121	9	542	47.4	37.5	42.5	—	54	5, 6	25	12th	—	—																		

TABLE IV.—SUMMARY of the OBSERVATIONS of PRESSURE, TEMPERATURE, HUMIDITY, CLOUD, VISIBILITY and WIND at fixed hours at certain Stations during the Month of MARCH, 1928.

Table with columns: DISTRICT, COUNTY AND PLACE; Hour of Observation; Height of Barometer; MEAN PRESSURE; TEMPERATURE AND HUMIDITY; CLOUD AMOUNT; VISIBILITY; WIND, NUMBER OF OBSERVATIONS. Rows include stations like Shetlands, Orkneys, Hebrides, Caithness, Inverness, Nairn, Aberdeen, Perth, Fife, Edinburgh, Argyll, Bute, Renfrew, Dumfries, Isle of Man, Northumberland, and Tynemouth.

* Mean of hourly readings.

† Mean at Station level.

‡ The mean values at Station level are 979.6mb. at 7h., 979.3mb. at 13h., 979.2mb. at 18h., and 979.7mb. at 21h.

TABLE IV (continued).—SUMMARY of the OBSERVATIONS of PRESSURE, TEMPERATURE, HUMIDITY, CLOUD, VISIBILITY, and WIND at fixed hours at certain Stations during the Month of MARCH, 1928.

DISTRICT, COUNTY AND PLACE.	Hour of Observation.	Height of Barometer above Mean Sea Level.	MEAN PRESSURE.		TEMPERATURE AND HUMIDITY.				CLOUD AMOUNT.					VISIBILITY.									WIND, NUMBER OF OBSERVATIONS.															
			At Mean Sea Level.	Deviation from Normal.	Dry Bulb.	Depression of Wet Bulb.	Vapour Pressure.	Relative Humidity.	Mean Amount.	NO. OF OBSERVATIONS.					NUMBER OF OBSERVATIONS.									FORCE (0-12).				DIRECTION.										
										0	1 to 3	4 to 6	7 to 9	10	FOG.			MIST.	POOR VIS.	MED. VIS.	GOOD VISIBILITY.			8 or more.	4 to 7	1 to 3	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.			
			0	1	2	3	4	5	6	7	8	9	8 or more.	4 to 7	1 to 3	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.														
2. ENGLAND, N.E.—cont.																																						
Durham. Durham ..	9	352	1009.7	—	39.9	1.0	7.6	91.9	2	0	2	1	3	25	0	0	1	5	5	7	9	4	0	0	0	1	28	2	3	0	10	3	8	0	4	1		
	21	352	1009.6	—	39.3	1.3	7.1	88.7	6	0	5	5	3	18	0	0	1	1	1	9	9	9	1	0	0	0	6	21	4	3	1	7	3	6	4	1	2	
York, N. Riding. Scarborough	9	96	1010.4	—	42.0	1.6	7.8	86.6	9	1	3	8	11	8	0	1	1	0	2	1	16	6	4	0	0	0	2	29	0	3	4	1	10	6	2	4	1	
	21	53	1009.7	—	41.5	1.8	7.4	84.8	3	0	4	1	23	—	—	—	—	—	—	—	—	—	—	—	—	—	0	1	30	0	6	5	2	6	9	0	2	1
E. Riding. Spurn Head	1	28	1009.4	—	40.1	0.8	7.8	93.6	4	6	2	4	8	11	0	0	1	0	2	3	11	11	3	0	0	0	23	8	0	0	3	5	11	5	2	3	2	
	7	28	1009.3	—1.5	39.7	0.9	7.7	92.8	0	1	1	5	9	15	0	1	0	1	3	6	12	6	2	0	0	0	25	5	1	1	2	5	12	6	0	2	2	
	13	28	1009.0	—	44.1	2.0	8.2	84.7	4	2	2	2	16	9	0	0	0	0	1	1	16	9	4	0	1	21	8	1	0	3	6	10	3	4	1	3		
	18	28	1008.5	—	41.7	1.1	8.2	91.8	5	0	3	2	10	16	0	0	0	0	0	0	8	11	7	5	0	0	21	10	0	2	3	5	13	2	2	1	3	
Lincoln. Cranwell H	1	240	1010.6	—	37.5	0.6	7.2	94.6	5	2	8	2	7	12	0	0	0	0	1	4	23	2	1	0	0	0	5	24	2	2	3	6	9	2	4	1	2	
	7	240	1010.3	—	37.3	0.4	7.4	96.8	4	0	3	3	10	15	0	0	4	3	2	4	15	2	1	0	0	0	5	22	4	4	1	6	10	2	2	1	1	
	13	240	1009.7	—	46.5	3.3	8.6	79.8	7	0	1	2	15	13	0	0	0	0	0	5	14	7	5	0	0	0	12	18	1	2	2	7	7	5	2	3	2	
	18	240	1009.4	—	43.7	1.9	8.4	85.8	0	0	2	4	14	11	0	0	1	0	1	5	13	7	4	0	0	0	11	20	0	2	5	5	9	3	2	2	3	
3. ENGLAND, E.																																						
Norfolk. Cromer ..	9	74	1010.4	—	43.5	2.1	7.7	82.6	8	1	5	5	11	9	0	0	0	0	0	1	20	3	7	0	0	0	2	29	0	0	2	4	10	10	0	3	2	
Norfolk. Yarmouth ..	1	26	1010.7	—	40.8	1.0	8.0	91.6	1	9	2	2	3	15	0	0	0	0	0	6	14	11	0	0	0	0	13	15	3	0	1	5	7	6	4	2	3	
	7	26	1010.4	—1.3	39.5	1.1	7.3	90.7	0	2	3	8	7	11	0	0	0	0	1	3	23	4	0	0	0	0	11	16	4	1	3	4	6	7	3	2	1	
	13	26	1010.2	—	43.8	1.8	8.4	85.7	2	2	3	7	7	12	0	0	0	0	0	5	22	4	0	0	0	0	17	9	5	2	1	5	4	12	0	0	2	
	18	26	1009.6	—	42.5	1.6	8.1	87.7	1	2	1	9	8	11	0	0	0	0	0	6	15	10	0	0	0	0	13	17	1	2	3	5	8	9	2	0	1	
Suffolk. Felixstowe Aero.	7	20	1010.8	—	40.5	1.1	7.9	91.7	5	2	1	5	15	8	0	0	1	4	1	4	8	8	5	0	0	0	8	20	3	4	3	5	6	8	0	0	2	
	13	20	1010.7	—	45.0	2.6	8.0	79.7	0	3	2	3	17	6	0	0	0	0	1	3	8	7	12	0	0	0	16	12	3	1	5	6	6	7	1	1	1	
18	20	1010.2	—	42.9	1.7	8.0	85.7	1	1	6	4	6	14	0	0	0	0	0	5	2	8	8	8	0	0	0	10	18	3	3	3	7	6	6	1	1	1	
Cambridge. Cambridge H	9	43	1009.6	—3.3	44.6	2.3	8.4	82.7	2	5	1	2	11	12	—	—	—	—	—	—	—	—	—	—	—	—	0	3	26	2	3	4	1	9	8	2	2	0
21	43	1009.3	—3.7	42.6	1.9	8.1	85.5	7	11	1	2	4	13	—	—	—	—	—	—	—	—	—	—	—	—	0	1	26	4	3	6	2	7	3	1	2	3	
Hertford. Rothamsted	9	396	1009.3	—	42.7	1.7	8.0	85.7	7	0	5	3	11	12	0	0	0	0	2	13	16	0	0	0	0	0	5	18	8	4	2	5	6	1	2	2	1	
Essex. Shoeburyness H	7	14	1010.1	—	40.4	1.0	8.0	92.8	0	2	1	2	15	11	1	0	0	0	2	5	13	5	5	0	0	0	9	22	0	5	4	0	6	8	2	2	4	
	13	14	1010.3	—	47.8	3.9	8.3	73.7	0	1	6	4	10	10	0	0	0	0	1	2	4	10	14	0	0	0	15	16	0	4	3	4	7	7	4	0	2	
	18	14	1009.7	—	43.2	1.6	8.4	86.7	2	0	6	4	9	12	0	0	0	0	0	4	7	10	10	0	0	0	6	25	0	3	6	3	5	7	5	0	2	
4. MIDLAND COUNTIES.																																						
York, W. Riding. Harrogate ..	7	478	1009.6	—	37.6	0.8	7.2	92.9	0	0	2	1	10	18	0	3	5	2	1	10	0	8	2	0	0	0	2	26	3	4	2	3	5	7	6	1	0	
	13	478	1008.9	—	43.3	2.6	7.3	79.8	4	0	3	1	16	11	0	1	2	1	2	9	2	7	6	1	0	0	3	25	3	4	2	4	7	3	5	1	2	
	18	478	1008.9	—	41.9	2.1	7.4	82.8	1	0	4	1	13	13	0	2	3	2	0	9	3	8	4	0	0	0	2	25	4	5	2	2	6	4	7	1	0	
Nottingham. Nottingham	9	215	1008.6	—	42.1	2.3	7.3	80.8	5	0	2	3	10	16	0	0	5	10	6	4	4	2	0	0	0	0	9	22	0	6	3	8	1	7	0	5	1	
Warwick. Birmingham H	7	542	1009.2	—	39.6	1.2	7.5	89.8	7	0	2	1	12	16	0	1	2	3	1	6	11	2	5	0	0	0	5	26	0	2	6	3	7	6	4	0	3	
	13	542	1008.4	—	46.3	3.9	7.7	72.7	8	0	1	6	19	5	0	0	0	4	4	2	12	3	6	0	0	0	14	16	1	1	5	3	6	6	3	4	2	
	18	542	1008.5	—	44.9	3.5	7.5	72.7	6	0	3	4	19	5	0	0	0	0	2	11	6	4	8	0	0	0	10	21	0	2	4	4	8	5	2	4	2	
Oxford. Oxford ..	9	212	1009.4	—4.1	43.0	2.3	7.6	80.7	5	1	5	2	10	13	0	0	0	2	8	1	12	1	7	0	0	0	3	24	4	4	4	2	6	7	3	1	0	
Hereford. Ross-on-Wye H	7	226	1008.3	—	39.5	1.2	7.6	89.8	7	1	1	2	7	20	0	2	2	2	3	4	8	5	5	0	0	0	2	27	2	5	2	6	3	4	5	3	1	
	13	226	1007.8	—	47.3	4.1	8.0	70.8	2	0	2	4	15	10	0	0	0	1	5	4	8	4	7	2	0	11	20	0	2	5	6	4	4	4	3	3		
	18	226	1007.8	—	45.0	3.5	7.6	73.7	4	1	4	4	11	11	0	0	0	1	2	3	10	8	3	4	0	0	5	26	0	2	3	6	6	5	3	4	2	
	21	226	1008.3	—	42.3	2.3	7.6	81.6	3	3	7	4	5	12	0	0	1	1	5	4	10	4	6	0	0	0	5	24	2	1	6	4	6	5	5	1	1	
Gloucester. Cheltenham H	9	230	1008.7	—	43.5	2.6	7.7	78.7	6	1	3	7	5	15	0	0	0	1	0	5	12	5	8	0	0	0	1	25	5	0	4	3	6	6	4	3	0	
21	230																																					

TABLE I. DISTRICT VALUES.

The District Values of this Table are computed from the statistics for selected individual stations set out in Table III and Table IV.

The representative stations from which the District Values of rainfall and temperature are computed are indicated in Table III by the sign ¶ while the representative stations from which District Values of sunshine are computed are indicated by the sign §. The deviations from and percentages of normal for Air Temperature, Rainfall and Sunshine are the means of the corresponding deviations or percentages for the representative District Value stations. The deviations from normal of Earth Temperature are derived from the deviations for all the stations reporting in Table III for which normals of Earth Temperature are available. The highest and lowest temperatures for the District recorded during the month may refer to any station in Table III.

TABLE II. SUMMARY OF AUTOGRAPHIC RECORDS OF WIND.

The records used in the preparation of this Table are generally made by anemographs of the pressure-tube type. At a few stations the Robinson Cup Anemograph is utilised. The classification adopted for the "Distribution of Wind" is based on the specification of the Beaufort Scale of Wind Force (see *The Observer's Handbook*). For an anemograph complying with the specification "head 33 ft. above ground in the open" the several columns correspond with Force 8 and above (gales), Forces 6 and 7 (strong winds), Forces 4 and 5 (moderate winds), Forces 2 and 3 (light winds), Forces 1 and 0 (nearly calm). Some information as to the nature of the actual exposures may be gathered from the figures in the "Height" columns.

The "Highest Hourly Wind" is determined by the mean speed of the wind for a period of sixty minutes from 30 minutes before to 30 minutes after an exact hour by Greenwich Mean Time. Under the heading "Veer from N" the azimuth of the direction from which the wind was blowing is stated, the entry for an east wind being 90°, that for a south wind 180° and so on.

TABLE III. SUMMARY OF OBSERVATIONS AT TERMINAL HOURS.

Temperature.—The terminal hours of observation are given for each station. When the terminal hours for maximum and minimum temperature are stated independently the temperatures refer to intervals of 24 hours. If the maximum thermometer is read in the morning the reading is credited to the previous day. When the terminal hours for maximum and minimum are separated by a dash, thus, 18-7, the day-maximum for the period 7h. to 18h. and the night-minimum for the period 18h. to 7h. are reported and are utilised in determining the means for the month; in such cases the extreme temperatures for successive periods of 24 hours are also read by the observers, so that the absolute maximum and minimum temperatures for the month are obtained.

Except at the Royal Observatory, Greenwich, where a Glaisher stand is in use, the air temperature is obtained from thermometers placed in louvered screens. At Kew Observatory, Richmond, and Valentia Observatory these are north wall screens a few feet from the ground. At Aberdeen Observatory the north wall screen is at 41 feet. Otherwise the screens are in the open.

Rainfall.—The daily amounts are for the 24 hours beginning at the "terminal hour." "Rainfall" includes all forms of precipitation. The number of days of precipitation is counted with reference to the limit .01 inch or 0.2 mm. and also with reference to the limit .04 inch or 1 mm. The lower limit excludes mere "traces" of precipitation, but it is frequently passed on occasions when the precipitation is only dew.

Weather.—The numbers of days of Precipitation, Snow, Hail, Thunderstorms and Gale are counted irrespective of the hour at which the phenomena occur. Except for "Precipitation" the day is the civil day.

For the purpose of this summary "Snow" includes sleet (*i.e.*, snow with rain), "Hail" includes graupel (soft hail), "Snow lying" refers to occasions when at least one-half of the country surrounding the station is covered with snow at the morning observation. The entry of "fog" implies that regular observations of the range of vision are made on the scale set out below. Days of fog are those on which the range of vision is less than 1,100 yards at the hour of morning observation. That hour is given by the third entry of column 2 of the table and may be 7h. or 9h. G.M.T. The variability of the observation hour may exercise an important effect upon the statistics of fog frequency. "Thunderstorm" includes any day on which thunder is heard. "Gale" is a wind of Force 8 or upwards on the Beaufort Scale. A "ground frost" is entered when the reading of a "grass minimum" thermometer set the previous evening and read at the morning observation is 30° F. or lower.

Sunshine.—The percentage of possible sunshine is in all cases calculated with reference to the maximum duration possible in the latitude on the assumption of an unobstructed horizon, due allowance being

made or refraction (see *International Meteorological Tables* (Paris) pp. A17-A20 and 42-27). The sunshine recorder is generally insensitive to sunshine when the sun is at an altitude of 3° or less. The symbol S is entered against the percentage at some stations and indicates that obstructions of altitudes greater than 3° reduce the possible record of duration for the month by more than 5 per cent.

TABLE IV. SUMMARY OF OBSERVATIONS AT FIXED HOURS.

Mean Air Pressure is expressed in millibars. (1 millibar = 1,000 dynes per square centimetre = the pressure due to .029531 inch of mercury at 32° F. in Lat. 45°). The corrections for latitude, temperature and height have been applied to the barometer readings so as to obtain pressure at mean sea level. Barometric pressure is given at station level for a few stations at altitudes of 600 ft. or more in footnotes in Table IV.

Hygrometry.—The values given depend on the readings of the dry and wet bulb thermometers in Stevenson Screens (except at the Observatories, see above). The observations were formerly reduced by Glaisher's method; as from January, 1926 they are reduced by the new hygrometrical tables issued by the Office which are based on a formula of Regnault. In general the relative humidity and vapour pressure are derived from the monthly means of the dry and wet bulb readings. At certain stations the daily values of relative humidity and vapour pressure are found and the means are computed therefrom. These stations are indicated by the letter "H."

Cloud Amount.—The proportion of sky covered with cloud is estimated on the scale 0 to 10, the entry "0" being equivalent to clear sky "10" to overcast.

Visibility.—The observations are classified according to the following scheme—the distances, specified by international arrangement in metres, are given here in yards and miles:—

CODE.	RANGE OF VISION.
0	Less than 55 yards.
1	Exceeding 55 yards, less than 220 yards
2	" 220 " " 550 "
3	" 550 " " 1,100 "
4	" 1,100 " " 1½ miles.
5	" 1½ miles " " 2½ "
6	" 2½ " " 6½ "
7	" 6½ " " 12½ "
8	" 12½ " " 31 "
9	" 31 " " "

Wind Summaries.—The estimates of wind force refer to the Beaufort Scale, and in general to the wind experienced at the time of observation. At Deerness, Cahirciveen, Richmond, Armagh, Eskdalemuir, Southport, Greenwich and Oxford the analysis refers to tabulations of autographic records. For Oxford the mean wind speed for half-an-hour centred at the hour of observation is used for conversion to "force" on the Beaufort Scale; for the remaining observatories the mean wind speed used for each observation refers to a period of one hour. In these cases winds equivalent to Force 1 are counted with the calms, whilst Forces 2 and 3 are taken together in the preceding column of the Table.

INTERPOLATED VALUES.

When the observations for any station for a month are incomplete and relevant data (e.g. records from neighbouring stations) which make it practicable to interpolate approximate values for the missing observations are available, such approximate values may be used for completing summaries for stations published in Tables III and IV. Parts of a summary obtained in this way are shown in brackets thus—(52.4).

STANDARD OF TIME.

As a rule observations are made in all parts of the British Islands according to Greenwich Mean Time, but at the following stations Local Mean Time is used for the observations summarised in Tables III and IV. The number of minutes after Greenwich Time is shown in brackets—Darwen (10), Rhayader (15), Ashburton (15), Tavistock (17), Plymouth (15), Douglas (20), Armagh (26), Balbriggan (25), Lisburn (30), Newcastle, Co. Wicklow (30), Ballinacurra (30), Cork (34).

"Summer Time" is not used in the Monthly Weather Report, but at certain stations the hours of observation vary in the course of the year. For such stations all time entries are converted to G.M.T. before they are printed and the winter hours are given as the terminal hours in the annual tables. For the summer hours reference should be made to the appropriate months.

NORMALS.

In Table III the normals used are those for the 35 years 1881-1915. The normals of temperature and sunshine are published in the Book of Normals, Section I, those for rainfall in the Book of Normals, Section V.

The normals for pressure with which comparison is made in Table IV also refer to the period 1881-1915.

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

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

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APRIL, 1928: Changeable and showery with considerable fine periods. Wintry spell 14th to 21st.

The weather during April was on the whole changeable and showery with considerable fair periods. There were two periods of warm sunny weather from about the 4th to the 10th and around the 26th, with an intervening spell of wintry weather from the 14th to the 21st. Monthly totals of precipitation were mostly below the normal, although a well marked excess occurred in the south-east of England, the south of Ireland and locally in the west and south-west of Scotland. Sunshine totals were deficient except in the north of Ireland and the north-west of Scotland, where they exceeded slightly the normal.

During the first few days of the month the weather was unsettled with day temperature rather below the normal; much rain occurred widely on the night of the 2nd-3rd, 3rd, 4th and 5th. In the west of Scotland there were some heavy falls on the 2nd (30 mm. at Inveraray). By the 6th high pressure became established over Germany while pressure was low over the eastern Atlantic, and warm southerly winds from the western Mediterranean spread over the British Isles. There was a gradual rise in temperature, culminating on the 9th and 10th, when day temperature exceeded 65° F. in many places; at this time the nights were also mild, that of the 9th-10th being unusually warm, temperature not falling below 50° F. at several stations. Thunderstorms occurred locally on the 10th and in many parts on the 11th.

By the 12th the winds had backed to the east, the change being accompanied by a marked fall in temperature at first in eastern districts and subsequently over the country generally, cold conditions with severe ground frost continuing until the 21st. Strong winds, reaching gale force at exposed places, and heavy rain, associated with a secondary depression over the English Channel, occurred in southern districts on the 14th, rainfall amounts exceeding 60 mm. in the neighbourhood of Cork, and 50 mm. in the Scilly Isles. There were some heavy falls in southern districts on the 15th and 16th, and in Scotland on the 18th and 19th. Precipitation frequently took the form of snow or sleet. By the 19th the winds had backed to north and from then until the 21st bright cold weather with showers of rain or hail were experienced in all districts.

On the 22nd the winds changed to south-west and temperature rose above the normal, reaching its highest point on the 26th, when temperatures exceeding 70° F. were registered locally in England and as far north as Kelso. Strong winds with moderate rain occurred at times in the western districts of Ireland and Scotland and the south-west of England from the 24th to the 27th. There were, however, considerable fine periods, abundant sunshine being recorded widely on the 28th and in western districts on the 29th and 30th.

Pressure and Winds.—Monthly means of atmospheric pressure were everywhere below the normal. Pressure was relatively low to the west of Ireland and high to the east of Great Britain. Isobars trended from south to north over Ireland and the western districts of Great Britain, the prevailing winds being southerly and mainly light to moderate in force. Over the greater part of England pressure was more uniform and winds were variable and mostly moderate to light. Gales occurred in a few places on the 8th and 9th and around the 15th, the highest wind velocity recorded in a gust at an anemograph station being 69 m.p.h at Pendennis Castle during a gale on the 14th.

Temperature.—Monthly mean temperatures were generally about or above the normal in Great Britain and about or slightly below the normal in Ireland. Day temperatures were mostly above the normal between the 4th and the 11th and exceeded 65° F. in many places on the 9th and 10th (68° F. at Tottenham and at Greenwich, London, on the 9th). The night of the 9th-10th was unusually warm, the screen minimum of 55° F. at Richmond (Kew Observatory) constituting a record there for April. From the 11th to the 21st cold weather prevailed widely with severe ground frosts. During the period 14th to the 17th day temperatures not exceeding 40° F. occurred in some places in the inland and eastern districts of Great Britain. Frost in the screen and severe frost on the ground occurred widely at night during the period 16th to the 21st. A grass minimum temperature of 13° F. was recorded at Rhayader on the 17th, 18th and 20th and at Huddersfield on the 18th. After the 22nd temperature rose and in most districts remained about or above the normal until the end of the

month reaching its highest point on the 26th when the maximum temperature exceeded 70° F. in many districts and reached 76° F. at Worksop, 75° F. at Southport and Cranwell and 74° F. at Richmond (Kew Observatory) Manchester and Hoyle.

The extreme temperatures for the month were:—(England and Wales) 76° F. at Worksop on the 26th and 22° F. at Luton and Woburn on the 18th. (Scotland) 73° F. at Kelso on the 26th and 18° F. at Braemar on the 16th. (Ireland) 68° F. at Birr Castle on the 29th and at Kilkenny and Killarney on the 30th and 25° F. at Markree and Newtownforbes on the 21st and at Markree on the 22nd.

Precipitation.—The general precipitation of the British Isles expressed as a percentage of the normal was 83, the lowest value recorded in April since 1921. The values for the constituent countries were:—England and Wales 81, Scotland 72, Ireland 102.

In England and Wales monthly aggregates of precipitation exceeding the normal were mostly confined to the south-eastern districts, more than one and a half times the normal being recorded in parts of Sussex and Kent. At Brighton the total precipitation for the month amounted to 234 per cent. of the normal. In the northern districts monthly totals did not generally exceed 50 per cent. and at Holyhead only 38 per cent. of the normal was recorded. Heavy falls were recorded in southern England on the 14th, 15th and 16th and at Scilly rather less than half the month's total of 114 mm. (233 per cent. of the normal) fell on the 14th.

In Scotland precipitation was fully equal to the normal in one or two areas, as in Wigtownshire and around Loch Katrine, and Aberdeen had an appreciable excess. In general, however, there was a well-marked deficiency, notably in Fife and Midlothian which had less than half the normal. At Edinburgh the month was the driest April since 1912. Heavy rain fell in the west on the 2nd (30 mm. at Inveraray) and in the north-west about the 9th (61 mm. at Ardtornish on the 9th). After the 12th many areas had only trifling falls but in the north-east and north there were rather heavy falls, partly accounted for by snow from the 17th to 20th.

In Ireland precipitation exceeded the normal in the south, south-east and west and was deficient in the northern, eastern and central districts. In the neighbourhood of Cork precipitation exceeded twice the normal, heavy falls, exceeding 60 mm., occurring on the 14th.

During the wintry conditions which prevailed during the third week of the month snow and hail fell on several days in most districts.

Thunderstorms occurred in one or two days in most districts.

Sunshine.—Monthly totals of sunshine were below the normal except in northern Ireland, the Hebrides and the north-west coast of Scotland. Representative totals for Districts expressed as a percentage of the normal ranged from 103 in Ireland N. to 76 in Scotland E. Although monthly totals were generally deficient there were many bright periods when good sunshine records were obtained, notably about the 5th, on the 8th, 11th, from the 17th to 22nd and on the 24th and 28th. The 19th, 24th and 28th were the sunniest days in the month when between 12 and 14 hours of bright sunshine were recorded in many southern districts, e.g. 14.0 hr. at Bude and 13.9 hr. at Hastings and Ilfracombe on the 28th.

Fog.—Fog occurred on a few days only, mostly at coastal stations.

Miscellaneous Phenomena.—Halo phenomena were observed at various stations on several days. A solar halo with lower contact arc was observed at Oxford on the 26th, and a solar halo with upper contact arc on the 27th and 29th. A solar halo was observed at Purley (near London) on the 24th, 25th, 26th and 27th. Aurora was observed at Baltasound, Shetland, on the 15th, at Lerwick on the 16th and at Aberdeen on the 15th, 16th and 17th. The Zodiacal Light was seen at Ross-on-Wye on the 8th and 18th and at Deerness on the 16th and 22nd.

An observer of Barcombe (near Lewes) reported that at 7.50 p.m. on April 27th he saw what appeared to be a small waterspout reaching about a quarter of the way to earth. After about ten minutes it suddenly broke up and disappeared. The weather was very thundery at the time and a heavy shower had just fallen.

TABLE I.—DISTRICT VALUES—APRIL, 1928.

[1908, revised 1928.]

DISTRICTS.	AIR TEMPERATURE.			EARTH TEMPERATURE.		RAINFALL.		SUNSHINE.	
	High-est.	Low-est.	Devia-tion from Nor-mal. Daily Mean.	At 1 ft. Devia-tion from Nor-mal.	At 4 ft. Devia-tion from Nor-mal.	Per-cent- age of Nor-mal.	No. of Days. Devia-tion from Nor-mal.	Per-cent- age of Nor-mal.	Per-cent- age of Possible Duration.
o. SCOTLAND, N.	66	24	+0.9	—	—	68	—3	86	29
Eastern.									
1. SCOTLAND, E.	73	18	+0.5	—	—	72	0	76	27
2. ENGLAND, N.E.	75	25	+0.4	-0.5	+0.3	66	0	89	31
3. ENGLAND, E...	75	22	+0.5	-0.1	0.0	78	+1	79	33
4. MIDLAND COUNTRIES	76	24	+0.9	-0.1	+0.4	56	0	82	30
5. ENGLAND, S.E.	74	27	+0.6	+1.1	+1.1	121	0	87	36

DISTRICTS.	AIR TEMPERATURE.			EARTH TEMPERATURE.		RAINFALL.		SUNSHINE.	
	High-est.	Low-est.	Devia-tion from Nor-mal. Daily Mean.	At 1 ft. Devia-tion from Nor-mal.	At 4 ft. Devia-tion from Nor-mal.	Per-cent- age of Nor-mal.	No. of Days. Devia-tion from Nor-mal.	Per-cent- age of Nor-mal.	Per-cent- age of Possible Duration.
Western.									
6. SCOTLAND, W. (& I. of Man)	71	22	+0.8	—	-0.2	73	0	97	32
7. ENGLAND, N.W. (& N. Wales)	75	25	+1.6	0.0	-0.1	59	-1	93	36
8. ENGLAND, S.W. (& S. Wales)	73	24	+1.3	+0.3	0.0	68	0	89	36
9. IRELAND, N...	67	25	-0.2	-0.9	-0.2	75	-1	103	38
10. IRELAND, S...	68	26	-0.6	+0.2	+0.4	113	0	90	35
11. CHANNEL I. (& Scilly)	68	35	+0.6	+1.7	+1.6	166	+2	90	42
Mean : DISTRICTS 1-10	76	18	+0.6	0.0	+0.2	78	0	89	33

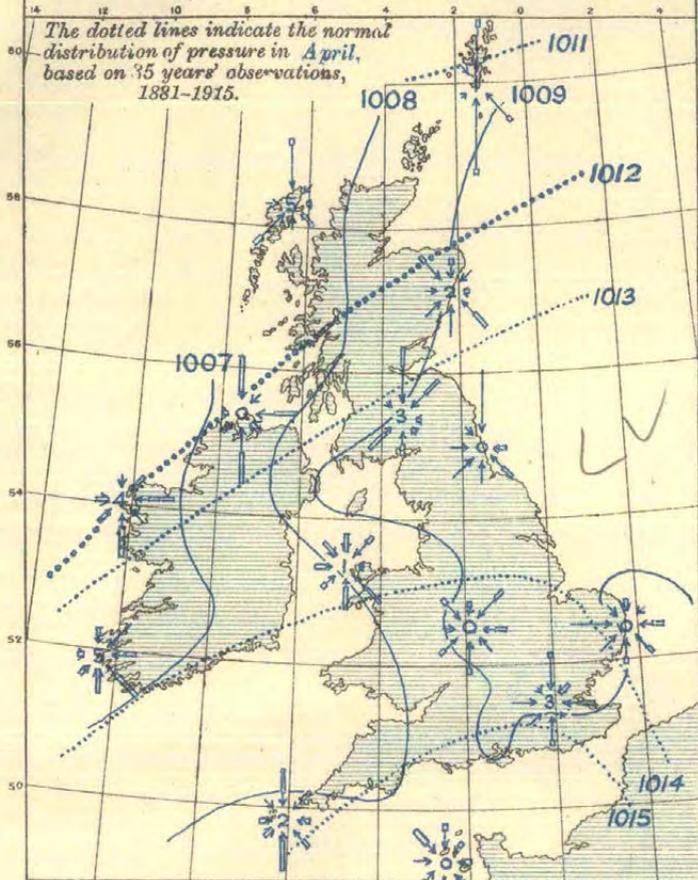
TABLE II.—SUMMARY OF AUTOGRAPHIC RECORDS OF WIND.—APRIL, 1928.

[1914.]

DISTRICT AND STATION.	Height.			Distribution of Wind.††								Extreme Velocities.										
	Above Mean Sea Level.	Above Ground.	Above Building.	More than 38 mi/hr.		25 to 38 mi/hr.		13 to 24 mi/hr.	4 to 12 mi/hr.	Less than 4 mi/hr.	No Record.	Highest Hourly Wind.			Highest Gust.							
				Dates of Occurrence.	Dura-tion.	No. of Days.	Dura-tion.	Dura-tion.	Dura-tion.	Dura-tion.	Dura-tion.	Veer from N.	Speed.	Mid Time.	Speed.	Time.						
	ft.	ft.	ft.		hr.		hr.	hr.	hr.	hr.	hr.	°	mi/hr.	m/s.	day. hr.	mi/hr.	m/s.	d.	h.	m.		
o. SCOTLAND, N.																						
Shetlands Lerwick ..	310	42	33†	18	3	14	140	341	200	36	0	20	40	18	18 15	58	26	18	14	35		
Orkneys Deerness (Cup Anr.)	188	16	5	—	0	11	112	302	279	9	18	140	35	16	13 9	—	—	—	—	—		
1. SCOTLAND, E.																						
Aberdeen Aberdeen ..	70	42	33†	—	0	3	30	214	417	59	0	110	29	13	13 11	46	21	17	9	35		
Kincardine Balmakewan ..	140	25	18	—	0	2	8	116	(439)	(151)	6	350	32	14	18 10	57	25	19	1	10		
Edinburgh Edinburgh ..	485	39	31†	—	0	4	14	223	344	139	0	200	34	15	3 1	53	24	2	21	25		
6a. SCOTLAND, W.																						
Argyll Tiree ..	80	55	48†	—	0	17	143	399	164	14	0	140	39	17	8 14	55	25	3	3	25		
Renfrew Paisley ..	188	81	15	—	0	1	1	140	452	127	0	140	25	11	24 15	49	22	24	15	40		
Dumfries Eskdalemuir ..	825	50	22	—	0	12	42	358	225	95	0	200	31	14	2 23	60	27	3	15	55		
2. ENGLAND, N.E.																						
Durham South Shields ..	62	46	20	—	0	6	45	216	339	120	0	330	34	15	18 15	53	24	18	14	35		
York, E.R. Spurn Head ..	67	42	35†	—	0	14	133	385	185	7	0	320	37	17	18 18	51	23	18	18	20		
Lincoln Cranwell ..	284	44	26†	—	0	4	13	294	368	45	0	290	29	13	19 14	47	21	19	16	5		
3. ENGLAND, E.																						
Norfolk Gorleston ..	52	42	33†	—	0	4	62	202	389	67	0	70	34	15	15 4	43	19	14	17	40		
Suffolk Felixstowe Aero. ..	55	40	25	—	0	6	54	318	(260)	(68)	20	60	33	15	15 3	43	19	15	0	55		
Essex Shoeburyness ..	115	104	14†	—	0	4	38	186	404	92	0	60	36	16	15 2	47	21	15	1	30		
4. MIDLAND COUNTIES.																						
Warwick Birmingham ..	643	118	18	—	0	2	8	211	462	39	0	330	26	12	19 14	45	20	15	2	50		
5. ENGLAND, S.E.																						
Surrey Richmond (KewObs)	82	65	22	—	0	14	9	159	449	103	0	70	26	12	14 19	45	20	14	23	15		
Surrey Croydon ..	284	40	24	—	0	1	2	145	494	79	0	60	25	11	14 18	41	18	14	21	45		
Kent Dover ..	61	32	22	—	0	7	85	207	343	52	33	0	37	17	16 11	54	24	16	11	45		
Kent Lympe ..	409	70	55†	16	1	7	61	309	329	20	0	360	39	17	16 17	53	24	16	15	45		
Hampshire S. Farnboro' (Tower)	444	160	14	—	0	—	0	165	483	72	0	220	24	11	3 14	43	19	14	17	25		
Hampshire Calshot ..	55	45	31†	—	0	6	37	342	(321)	(20)	0	130	30	13	7 14	40	18	4	17	15		
Hampshire Worthy Down ..	314	43	27†	—	0	—	0	214	380	126	0	50	23	10	14 20	46	21	14	19	45		
Wiltshire Larkhill ..	526	51	34†	—	0	5	23	305	(344)	(48)	0	90	31	14	14 20	42	19	14	19	40		
7a. ENGLAND, N.W.																						
Lancashire Fleetwood ..	112	50	12	—	0	7	54	332	297	37	0	320	35	16	19 8	50	22	18	17	30		
Lancashire Southport ..	77	59	45†	—	0	7	61	351	288	20	0	320	35	16	18 18	53	24	14	18	30		
7b. NORTH WALES.																						
Anglesey Holyhead ..	64	45	29†	14, 15	16	9	65	375	232	32	0	90	45	20	58 26	14	17	15	4	30		
Flint Sealand ..	81	65	49†	—	0	5	20	226	370	104	0	300	30	13	19 13	48	21	10	11	10		
8b. ENGLAND, S.W.																						
Devon Plymouth ..	185	88	2	—	0	6	44	238	309	129	0	—	35	16	8 24	49	22	14	17	30		
Cornwall Pendennis Castle ..	256	65	24	8, 9, 14, 15	31	13	81	268	250	75	15	—	51	23	14 17	69	31	14	19	40		
9. IRELAND, N.																						
Donegal Dunfanaghy ..	180	47	39	—	0	3	19	199	345	133	24	—	32	14	2 21	51	23	2	20	35		
Antrim Aldergrove ..	282	40	27†	—	0	5	25	266	304	65	0	100	30	13	14 2	56	25	14	8	5		
10. IRELAND, S.																						
Dublin Kingstown (CupAnr.)	49	27	16	—	0	10	91	270	285	74	0	90	38	17	14 19	—	—	—	—	—		
Clare Quilty ..	100	40	32†	—	0	9	71	250	320	79	0	—	34	15	8 17	46	21	24	12	15		
Kerry Cahirciveen (Val. O.)	98	41	34†	—	0	10	46	353	262	59	0	100	38	17	15 3	57	25	15	0	40		
Cork Weaver Pt. ..	160	30	21†	—	0	6	55	285	320	60	0	—	34	15	8 21	58	26	14	22	20		
11. SCILLY ISLES.																						
St. Mary's ..	160	42	35†	8	1	12	93	362	244	20	0	150	42	19	8 20	57	25	8	20	25		

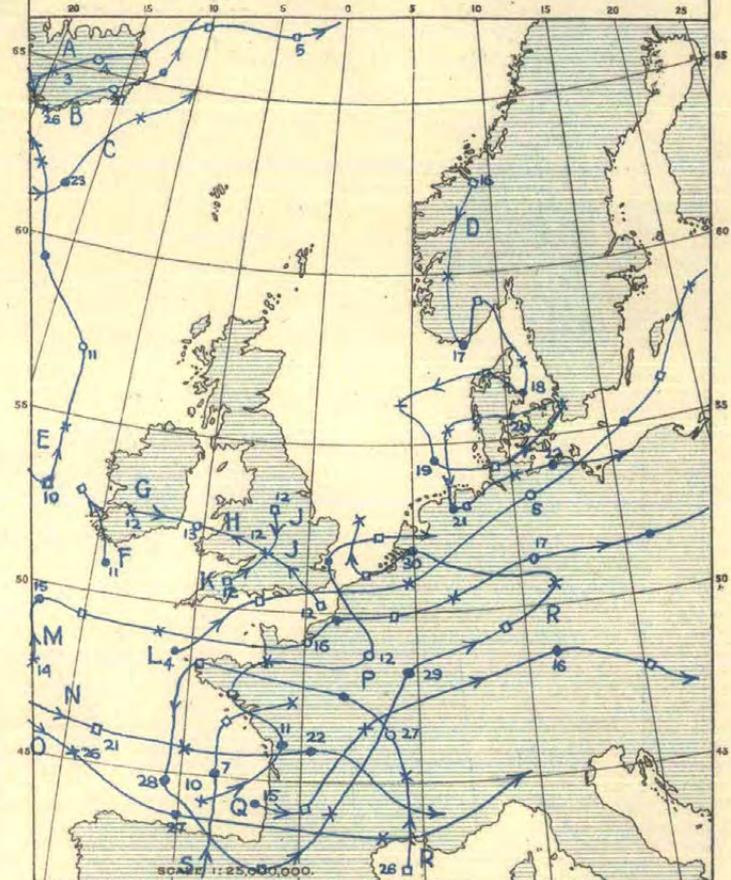
†† Brackets () indicate that the distribution as between winds above and below 4 mi/hr. is doubtful, but the total number of hours with winds below 12 mi/hr. is reliable.
 † Standard mounting.

1. WIND AND MEAN PRESSURE. 7 A.M.



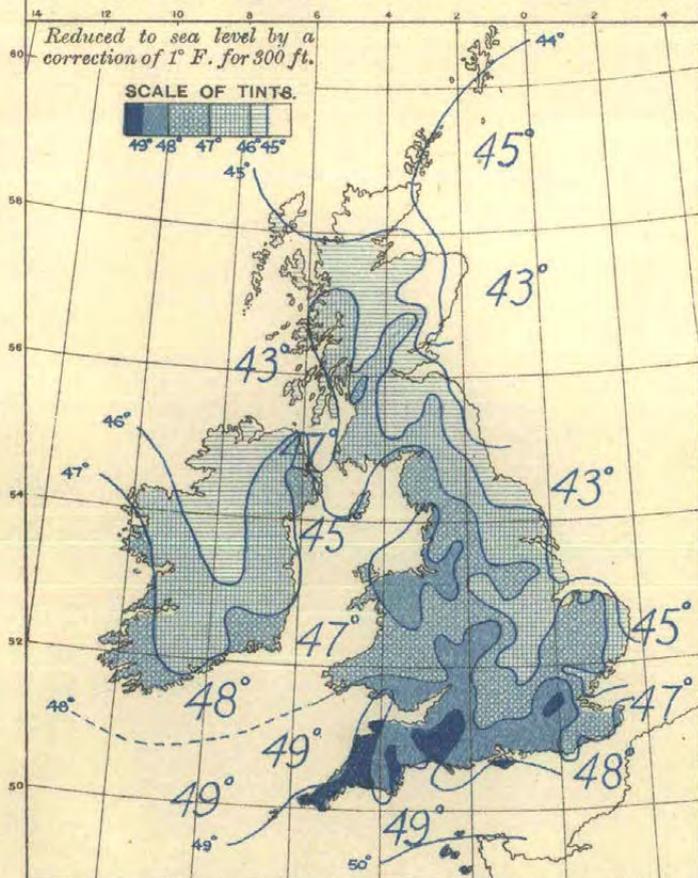
WIND ROSES. The arrows fly with the wind and indicate frequency and force, thus:
 LIGHT TO STRONG GALE
 30 Obs. 1 Inch

2. MOVEMENTS OF DEPRESSIONS.



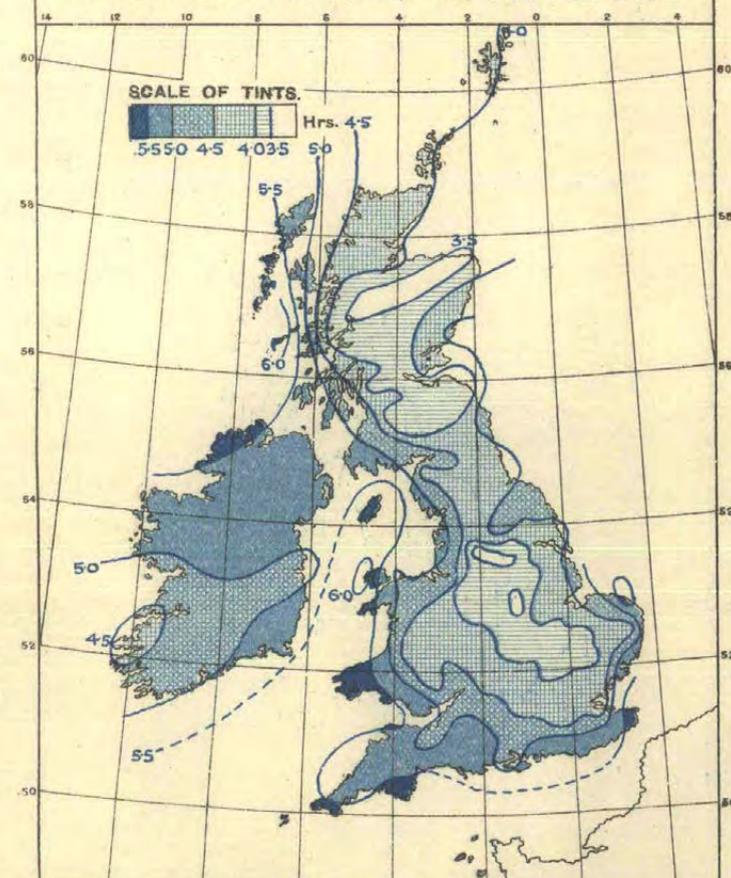
Positions of centres are shown thus: ○ at 1hr; ● at 7h; □ at 13h; X at 18h.

3. DISTRIBUTION OF MEAN TEMPERATURE.

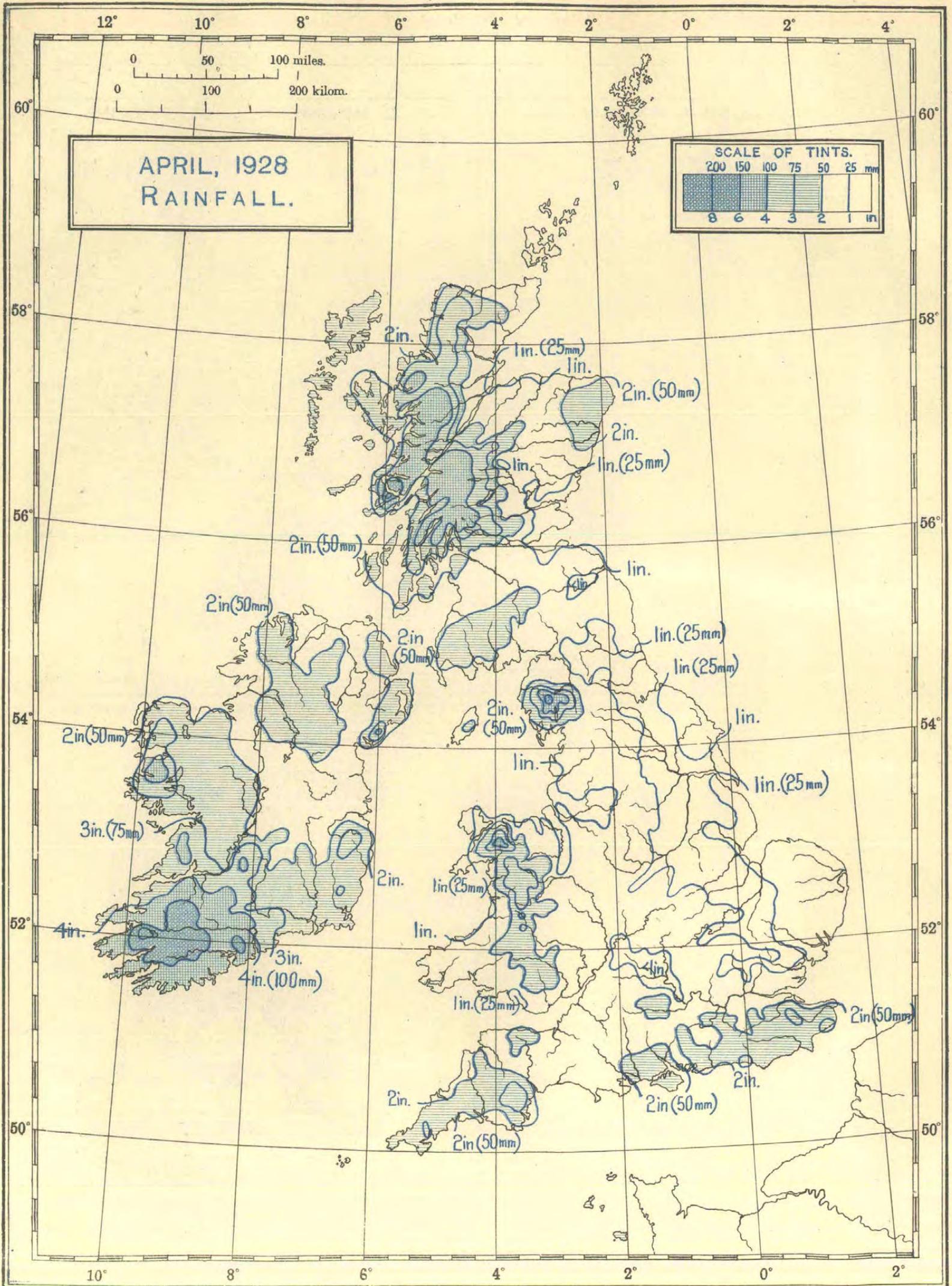


Sea temperatures are shown in large figures, thus: 45

4. BRIGHT SUNSHINE, HOURS PER DAY.



* The pressure is expressed in millibars.



Scale 1 : 5,000,000.

Ps. 1365/1703. W. 1014. D. 25. 1125. 5/28

The equivalent values in mm. are given in round numbers. The exact relation is 10 in. = 254 mm.

TABLE III.—SUMMARY OF THE RECORDS OF TEMPERATURE, RAINFALL AND SUNSHINE, and of WEATHER OBSERVATIONS, APRIL, 1928.

DISTRICT, COUNTY AND PLACE.	Terminal Hours of Observation.			Height of Station above Mean Sea Level.	AIR TEMPERATURE IN DEGREES FAHRENHEIT.							Earth Temperature.		RAINFALL.				WEATHER. Number of days.								BRIGHT SUNSHINE.				
	Max.	Min.	Rain.		Means of		Deviation from Normal.	Absolute Maximum and Minimum.			1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Most in a day.		Precip'n.	Snow.	Snow lying.	Hail.	Thunderstorm.	Fog (Morning Obs.)	Ground Frost.	Gale.	Hours per day.					
					A	B		Maximum.	Date.	Minimum.					Date.	Amount.									Date.	0.2 mm. or more.	1 mm. or more.	Daily Mean.	Deviation from Normal.	Per Cent.
	°F.	°F.	°F.		°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	in.	mm.	mm.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	hr.	hr.	%	
0. SCOTLAND, N.																														
Shetlands.	Baltasound	9 9 9	31	48.5	39.5	44.0	—	57	30th	29	17th	43.0	—	1.95	49	—	11	19th	20	11	4	1	6	0	0	—	0	3.54	—	24
	Lerwick	18-7 7	54	47.2	40.2	43.7	+2.2	56	30th	30	17th	—	—	1.58	40	—	11	11th	10	10	4	0	2	0	1	—	2	4.15	-0.75	29
Orkneys.	Deerness	2121 9	160	47.2	39.0	43.1	+0.8	53	23,26,30	30	17th	—	—	1.61	41	—	10	10th	16	9	4	1	3	0	2	—	0	3.98	-0.89	28
	Kirkwall	9 9 9	151	47.7	39.6	43.7	—	56	26, 30	31	17, 18	—	—	1.48	38	—	9	2nd	16	9	5	1	2	0	1	2	0	4.16	—	29
Hebrides.	Stornoway	18-7 7	30	49.7	38.3	44.0	+0.5	62	30th	29	17, 22	—	—	2.44	62	—	10	9th	20	16	4	0	3	0	0	—	1	5.24	+0.11	37
	Wick	18-7 7	81	46.6	39.6	43.1	+0.1	55	25, 26	31	17, 18	—	—	1.60	41	—	8	10th	16	10	5	0	1	0	2	—	0	—	—	—
Ross & Cromarty.	Achnashellach	9 9 9	225	51.7	38.5	45.1	+2.4	66	30th	27	16, 17	—	—	3.46	88	—	13	2nd	16	15	3	1	1	0	0	11	1	—	—	—
	Fortrose	9 9 9	69	51.2	38.6	44.9	—	60	10th	30	16th	—	—	0.94	24	—	8	26th	13	7	2	0	0	0	0	—	0	4.19	—	29
Inverness.	Strathpeffer	9 9 9	125	52.1	38.1	45.1	+1.1	62	24, 26	29	16, 17	—	—	1.22	31	—	8	19th	14	6	3	0	0	0	—	—	—	—	—	
	Ft. Augustus	9 9 9	68	51.2	39.1	45.1	+1.2	62	24th	24	16th	—	—	1.36	35	—	9	3rd	14	11	3	0	1	0	0	—	0	3.18	-0.62	22
Inverness.	Inverness	9 9 9	242	50.0	38.7	44.3	-0.2	61	24th	28	16th	—	—	0.96	25	—	8	26th	13	10	3	0	1	0	0	5	0	3.84	-1.19	27
	1. SCOTLAND, E.																													
Nairn.	Nairn	18-7 7	82	50.8	38.9	44.9	+1.0	63	24th	27	16th	—	—	0.88	22	—	6	26th	11	10	5	0	3	0	0	—	0	3.56	-1.52	25
	Gordon Castle	2121 9	104	51.5	38.4	44.9	+0.7	65	26th	26	16th	—	—	0.81	21	—	5	3rd	12	7	5	0	1	0	—	—	0	3.52	—	25
Banff.	Banff	9 9 9	130	49.2	39.4	44.3	—	62	25th	32	16, 17, 18	—	—	1.36	35	—	8	18th	13	8	2	0	2	0	0	5	0	3.01	—	21
	Aberdeen	2424 24	44	48.0	39.0	43.5	+0.2	56	25th	29	16th	—	—	42.7	2.57	65	+ 17	22	19th	17	15	8	0	8	0	1	5	0	4.00	-1.27
Aberdeen.	Balmoral	9 9 9	927	47.7	34.2	40.9	—	60	26th	20	16th	—	—	1.52	39	—	16	8	10th	19	12	8	4	0	0	—	15	0	—	—
	Braemar	2121 9	1120	48.2	34.2	41.2	+0.5	62	26th	18	16th	—	—	0.59	15	—	45	4	10th	7	6	1	0	2	—	15	0	—	—	
Kincardine.	Craibstone	9 9 9	300	48.0	37.5	42.7	—	58	25, 26	29	16th	41.9	41.2	2.29	58	—	16	18th	18	11	6	2	5	0	—	7	0	4.30	—	30
	Logie Coldstone	9 9 9	608	49.5	35.8	42.7	—	61	26th	22	16th	—	—	1.23	31	—	20	4	12, 18	17	11	1	1	0	0	7	22	0	—	—
Forfar.	Stonehaven	9 9 9	93	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Arbroath	2121 9	93	50.9	38.0	44.5	—	62	26, 28, 29	29	16th	—	—	0.65	17	—	3	2, 18	12	9	1	0	0	1	1	10	0	4.55	—	32
Perth.	Carnoustie	9 9 9	39	49.5	37.9	43.7	—	57	23, 25, 26	30	16th	—	—	0.78	20	—	2	3rd	19	10	1	0	0	0	—	—	0	3.72	—	26
	Dundee (E. Nec.)	2121 9	198	50.4	38.1	44.3	+0.2	59	25th	30	16th	—	—	1.01	26	—	17	5	12th	17	11	0	0	1	1	—	2	—	—	
Perth.	Mayfield	9 9 9	147	51.0	38.9	44.9	+0.1	60	25, 30	31	16th	40.9	—	0.84	21	—	20	4	12th	16	11	0	0	0	—	9	0	4.17	-1.33	29
	Kettins	9 9 9	218	52.1	37.3	44.7	—	64	26th	26	16th	44.1	—	1.18	30	—	7	12th	14	9	1	0	1	1	1	9	0	—	—	
Perth.	Montrose	9 9 9	16	49.1	38.5	43.8	—	59	28th	29	16th	—	—	0.96	25	—	10	18th	13	8	4	1	1	0	1	—	0	4.35	—	31
	Crieff	2121 9	478	50.6	38.0	44.3	-0.4	62	28th	30	15, 16, 17, 18	—	—	1.58	40	—	16	8	10th	15	8	2	0	0	1	—	0	—	—	
Fife.	Perth	9 9 9	76	52.8	38.8	45.8	+1.3	64	28, 30	28	16th	—	—	0.65	17	—	28	5	3rd	14	4	0	0	3	0	—	0	4.34	—	31
	Cupar	9 9 9	210	51.0	37.8	44.4	—	59	25th	30	16th	—	—	0.79	20	—	3	21st	11	9	1	0	3	0	—	—	0	—	—	
Fife.	Inchkeith	18-7 7	190	49.9	40.2	45.1	—	61	9th	34	17th	—	—	0.53	13	—	4	11th	11	5	1	2	2	0	2	3	0	4.26	—	30
	Kirkcaldy	9 9 9	66	51.4	39.0	45.2	—	60	25th	33	16, 17, 18, 20	—	—	0.88	22	—	4	11th	16	8	—	—	—	—	—	—	—	—	—	
Linlithgow.	Leuchars	18-7 7	40	50.2	38.2	44.2	—	60	25th	31	16, 20	—	—	0.80	20	—	4	1st	13	8	1	0	5	1	0	9	0	4.16	—	29
	St. Andrews	9 9 9	20	50.4	38.6	44.5	—	63	25th	31	18th	44.2	42.9	0.72	18	—	4	10th	11	6	1	0	0	0	0	7	0	4.02	—	28
Edinburgh.	Bangour	2121 9	587	49.0	36.7	42.9	—	60	10th	28	18th	—	—	1.01	26	—	7	11th	17	9	5	2	2	1	3	—	1	—	—	
	Blackford Hill	2121 9	441	49.8	38.9	44.3	+0.5	62	10th	31	15th	—	—	0.56	14	—	21	4	10th	15	3	1	0	0	0	7	0	3.82	-0.78	27
Haddington.	Boghall	9 9 9	645	49.2	37.6	43.4	—	63	26th	30	15, 18	42.4	42.1	0.91	23	—	5	10th	16	7	3	0	3	2	—	9	13.41	—	24	
	Edin. Univ.	9 9 9	227	51.0	40.7	45.9	—	64	10th	33	15th	44.1	43.6	0.50	13	—	24	3	10th	13	6	—	—	—	—	—	—	—		
Berwick.	Liberton	9 9 9	190	51.8	—	—	—	64	10th	—	—	—	—	0.58	15	—	5	10th	14	5	1	0	1	0	—	—	0	—	—	
	N. Berwick	9 9 9	152	51.4	39.6	45.5	—	62	9, 24, 25	31	6th	—	—	0.49	12	—	4	20th	12	4	1	0	1	0	2	5	0	3.96	—	28
Peebles.	Smeaton	9 9 9	100	52.6	37.8	45.2	—	62	9, 25	30	18, 20	45.2	—	0.68	17	—	16	5	20th	11	7	2	0	1	0	2	9	0	—	—
	Marchmont	9 9 9	498	50.6	37.0	43.8	+0.5	68	26th	28	18th	—	—	1.45	37	—	14	6	10th	19	10	4	0	2	0	—	0	3.65	-1.18	26
Roxburgh.	West Linton	9 9 9	770	49.0	36.2	42.6	+1.3	63	26th	26	16th	—	—	1.03	26	—	5	10th	23	10	4	1	6	2	—	11	0	—	—	
	Kelso (Br/ml'ds)	9 9 9	195	53.2	37.5	45.3	—	73	26th	29	18th	—	—	0.87	22	—	18	5	10th	15	10	4	0	0	2	—	0	—	—	
Wolfelee	Wolfelee	9 9 9	537	—	—	—	—	—	—	—	—	—	—	1.05	27	—	30	—	—	—	—	—	—	—	—	—	—	—		
	6a. SCOTLAND, W.																													
Argyll.	Ardornish	2121 9	48	53.2	39.7	46.5	—	7																						

TABLE IV (continued).—SUMMARY of the OBSERVATIONS of PRESSURE, TEMPERATURE, HUMIDITY, CLOUD, VISIBILITY, and WIND at fixed hours at certain Stations during the Month of APRIL, 1928.

DISTRICT, COUNTY AND PLACE.	Hour of Observation.	Height of Barometer above Mean Sea Level.	MEAN PRESSURE.		TEMPERATURE AND HUMIDITY.				CLOUD AMOUNT.					VISIBILITY.									WIND, NUMBER OF OBSERVATIONS.													
			At Mean Sea Level.	Deviation from Normal.	Dry Bulb.	Depression of Wet Bulb.	Vapour Pressure.	Relative Humidity.	Mean Amount.	NO. OF OBSERVATIONS.					NUMBER OF OBSERVATIONS.									FORCE (0-12).				DIRECTION.								
										0	1 to 3	4 to 6	7 to 9	10	FOG.			MIST.	POOR VIS.	MOD. VIS.	GOOD VISIBILITY.			8 or more.	4 to 7	1 to 3	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	
			0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	8	7	6	5	4	3	2	1	0	N.	N.E.	E.	S.E.	S.
2. ENGLAND, N.E.—cont.																																				
Durham. Durham ..	9	352	1009.6	—	44.8	2.5	8.1	80	7.4	1	5	5	5	14	0	1	1	1	2	8	5	9	3	0	0	5	23	2	4	3	5	1	7	3	3	2
	21	352	1010.2	—	42.1	1.9	7.6	83	6.3	6	5	2	1	16	0	0	0	1	1	5	13	9	1	0	0	3	24	3	6	4	6	0	5	2	3	1
York, N. Riding. Scarborough	9	96	1010.0	—	46.5	3.3	8.3	75	5.0	5	5	9	8	3	0	0	1	0	0	0	15	7	7	0	0	4	26	0	5	2	0	4	6	5	2	6
	9	53	1009.2	—	47.3	3.5	8.1	73	7.5	3	3	3	3	18	—	—	—	—	—	—	—	—	—	—	—	0	0	30	0	8	3	4	3	8	1	1
21	53	1010.0	—	45.0	2.5	8.1	80	4.6	14	3	0	0	13	—	—	—	—	—	—	—	—	—	—	—	0	0	30	0	4	7	5	1	8	2	1	2
E. Riding. Spurn Head	1	28	1008.7	—	42.4	0.7	8.5	94	5.4	5	6	6	5	8	1	0	0	0	0	2	15	9	3	0	0	18	12	0	6	0	5	6	2	5	1	5
	7	28	1008.7	—4.7	42.6	1.0	8.6	91	7.5	2	2	2	16	8	0	0	1	0	0	2	18	7	2	0	0	25	5	0	5	2	5	4	4	3	2	5
	13	28	1008.7	—	47.6	2.7	9.1	79	7.6	0	0	8	15	7	0	0	0	1	0	0	7	18	4	0	0	23	7	0	7	2	6	5	3	3	2	2
18	28	1008.7	—	44.5	1.4	9.0	89	7.8	0	1	5	20	4	0	0	0	0	0	1	11	15	3	0	0	22	8	0	9	4	6	6	2	3	2	1	0
Lincoln. Cranwell H	1	240	1009.9	—	40.2	0.6	8.1	95	5.4	7	5	4	4	10	0	0	1	1	3	18	6	0	0	0	7	23	0	5	4	3	4	1	8	4	1	
	7	240	1009.9	—	41.6	0.8	8.4	93	7.5	0	5	4	10	11	0	1	0	0	1	5	17	3	3	0	0	9	21	0	4	3	3	5	2	7	4	2
	13	240	1009.5	—	51.8	4.0	9.9	75	8.6	0	0	3	15	12	0	0	0	0	0	0	10	12	8	0	0	21	9	0	2	7	2	4	7	3	1	4
	18	240	1009.4	—	47.8	2.2	9.7	84	8.2	0	1	4	16	9	0	0	0	0	0	1	13	12	4	0	0	15	15	0	6	4	4	6	3	3	2	2
3. ENGLAND, E.																																				
Norfolk. Cromer ..	9	74	1009.4	—	47.5	2.9	8.6	78	6.2	0	6	9	8	7	0	1	0	0	0	0	16	4	9	0	0	5	25	0	5	3	3	3	7	2	3	4
Norfolk. Yarmouth ..	1	26	1008.8	—	43.2	0.9	8.7	93	5.4	6	4	7	5	8	0	0	0	0	0	1	11	18	0	0	0	10	19	1	3	2	5	5	2	4	6	2
	7	26	1008.9	—4.8	42.8	1.4	8.3	88	6.9	1	2	11	6	10	0	0	0	0	0	1	21	8	0	0	0	7	23	0	2	3	4	4	4	4	7	2
	13	26	1008.9	—	47.6	2.0	9.7	85	7.4	1	1	10	10	8	0	0	1	0	0	0	21	8	0	0	0	12	17	1	5	5	3	7	2	1	2	4
18	26	1008.6	—	46.2	2.4	8.6	81	7.1	0	4	6	13	7	0	0	1	0	0	0	23	6	0	0	0	9	20	1	4	5	6	3	5	2	1	3	
Suffolk. Felixstowe Aero.	7	20	1009.4	—	44.5	1.5	8.7	88	5.9	5	6	3	9	7	0	0	1	0	1	4	11	12	1	0	14	15	1	5	5	1	4	4	4	3	3	
	13	20	1009.5	—	49.5	3.3	9.4	76	7.8	1	2	4	12	11	0	0	0	0	0	1	9	7	13	0	0	23	6	1	4	8	1	5	5	2	2	
18	20	1009.1	—	47.1	1.2	19.2	84	7.4	0	6	2	10	12	0	0	1	0	2	2	6	12	7	0	0	15	15	0	4	9	5	2	4	2	0	4	
Cambridge. Cambridge H	9	43	1009.1	—5.3	49.3	3.7	9.0	74	7.5	2	1	5	10	12	—	—	—	—	—	—	—	—	—	—	0	7	23	0	6	2	5	2	6	5	2	2
	21	43	1009.1	—5.1	45.1	2.1	8.8	84	6.0	10	0	1	5	14	—	—	—	—	—	—	—	—	—	—	0	2	25	3	3	1	6	1	6	4	2	4
Hertford. Rothamsted	9	396	1008.8	—	47.3	3.5	8.1	73	7.0	0	8	3	9	10	0	0	0	0	1	5	24	0	0	0	0	8	20	2	4	3	3	5	4	3	1	5
Essex. Shoeburyness H	7	14	1009.3	—	45.0	1.3	9.3	90	5.6	5	5	4	10	6	0	0	0	0	0	3	11	13	3	0	0	9	19	2	4	4	3	3	4	3	3	4
	13	14	1008.9	—	51.3	3.3	10.2	78	7.3	0	4	7	10	9	0	0	0	0	0	0	5	11	14	0	0	18	12	0	3	5	5	2	6	1	2	6
	18	14	1008.7	—	45.3	1.9	10.1	85	7.6	1	3	4	9	13	0	0	0	0	0	1	9	8	12	0	0	14	16	0	4	5	3	3	4	5	1	5
4. MIDLAND COUNTIES.																																				
York, W. Riding. Harrogate ..	7	478	1009.5	—	41.5	1.6	7.5	86	7.2	0	8	2	6	14	0	2	0	0	1	13	1	10	3	0	0	5	25	0	5	1	2	3	6	6	5	2
	13	478	1009.0	—	49.4	4.8	7.8	65	7.5	0	3	7	12	8	0	0	0	0	1	4	6	12	6	1	0	12	17	1	5	2	4	3	6	6	1	2
	18	478	1009.4	—	47.3	4.1	7.6	69	7.0	0	5	5	14	6	0	0	0	1	0	6	4	11	7	1	0	3	26	1	6	1	5	3	4	8	0	2
Nottingham. Nottingham	9	215	1009.3	—	47.5	4.4	7.4	67	7.5	0	6	4	8	12	0	0	0	1	9	6	9	5	0	0	0	14	16	0	7	4	2	1	5	2	7	2
Warwick. Birmingham H	7	542	1009.5	—	42.9	2.2	7.9	82	7.1	1	6	2	13	8	0	0	1	2	1	6	10	2	8	0	0	8	22	0	2	6	4	3	6	3	2	4
	13	542	1008.7	—	51.3	6.0	8.0	61	6.8	0	2	10	15	3	0	0	0	0	1	5	8	3	13	0	0	13	17	0	3	4	4	4	5	5	1	4
	18	542	1008.9	—	49.6	5.2	7.9	65	7.3	0	4	4	18	4	0	0	0	1	3	4	7	1	14	0	0	9	20	1	3	5	3	5	5	2	2	4
Oxford. Oxford ..	9	212	1009.6	—5.3	47.6	3.8	8.2	72	7.2	1	4	7	4	14	0	0	0	0	0	2	12	4	12	0	0	10	18	2	4	3	4	2	7	3	1	4
Hereford. Ross-on-Wye H	7	226	1008.8	—	44.0	2.2	8.2	81	7.4	2	4	2	9	13	0	0	0	2	2	3	7	9	7	0	0	7	22	1	2	4	7	1	5	6	2	2
	13	226	1008.3	—	52.5	6.1	8.2	61	7.6	0	2	7	14	7	0	0	0	0	1	1	6	6	13	3	0	11	19	0	4	3	5	1	4	5	3	5
	18	226	1008.1	—	51.1	5.2	8.5	65	7.5	1	3	3	13	10	0	0	0	0	0	3	7	2	16	2	0	6	24	0	4	3	6	3	5	3	3	3
	21	226	1009.1	—	46.3	3.1	8.4	76	5.7	1	11	3	6	9	0	0	0	0	2	3	11	4	9	1	0	3	24	3	3	2	7	4	2	5	3	1
Gloucester. Cheltenham H	9	230	1009.2	—	49.1	4.3	8.3	69	6.8	1	3	11	5	10	0	0	0	0	0	1	9	8	12	0	0	3										

TABLE IV (continued).—SUMMARY of the OBSERVATIONS of PRESSURE, TEMPERATURE, HUMIDITY, CLOUD, VISIBILITY, and WIND at fixed hours at certain Stations during the Month of APRIL, 1928.

DISTRICT, COUNTY AND PLACE.	Hour of Observation.	Height of Barometer above Mean Sea Level.	MEAN PRESSURE.		TEMPERATURE AND HUMIDITY.				CLOUD AMOUNT.					VISIBILITY.									WIND, NUMBER OF OBSERVATIONS.															
			At Mean Sea Level.	Deviation from Normal.	Dry Bulb.	Depression of Wet Bulb.	Vapour Pressure.	Relative Humidity.	Mean Amount.	NO. OF OBSERVATIONS.					NUMBER OF OBSERVATIONS.									FORCE (0-12).				DIRECTION.										
										0	1 to 3	4 to 6	7 to 9	10	FOC.			MIST.	POOR VIS.	MOD. VIS.	GOOD VISIBILITY.			8 or more.	4 to 7	1 to 3	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.			
			0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	8 or more.	4 to 7	1 to 3	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.				
5. ENGLAND, S.E.—cont.																																						
Kent.	Biggin Hill H	G.M.T.	ft.	mb.	mb.	°F.	°F.	mb.	%																													
		7	616	1008.7	—	42.6	1.3	8.4	89.7	3	0	6	3	8	13	0	0	1	4	1	4	13	5	2	0	0	0	7	20	3	5	5	2	3	3	7	2	0
		13	616	1008.5	—	50.4	4.5	8.8	71.8	6	0	1	2	15	12	0	0	0	0	0	0	3	15	8	4	0	0	0	14	16	0	3	8	1	2	4	2	2
18	616	1008.2	—	48.4	3.1	9.2	79.8	0	1	4	1	10	14	0	0	0	0	0	0	1	4	16	5	4	0	0	10	20	0	1	8	0	6	2	4	8	0	5
Kent.	Dungeness ..	1	21	1008.3	—	44.8	1.3	9.1	89.4	8	9	4	5	4	8	0	0	0	0	0	0	3	14	13	0	1	3	26	0	5	2	5	6	2	3	4	3	3
		7	21	1008.8	—4.9	45.5	1.6	8.8	87.7	0	2	4	3	12	9	0	0	0	0	0	0	6	18	6	0	0	7	22	1	5	4	3	4	3	3	4	3	1
		13	21	1008.9	—	50.4	3.2	9.4	77.8	1	1	0	6	11	12	0	0	0	0	0	0	5	12	13	0	0	11	19	0	4	2	5	4	6	5	3	1	0
		18	21	1008.5	—	48.5	2.6	9.6	81.7	9	0	1	6	13	10	0	0	0	0	0	0	4	11	14	1	0	10	20	0	4	4	5	5	2	3	4	0	0
Kent.	Lympne H	1	343	1008.5	—	43.1	1.6	8.4	88.5	2	10	3	2	4	11	0	1	0	0	1	4	7	17	0	0	0	13	17	0	5	5	5	3	2	2	3	5	0
		7	343	1008.8	—	43.7	1.9	8.4	85.6	7	3	4	3	12	8	0	0	0	0	1	11	10	7	1	0	15	15	0	6	4	3	4	3	2	3	5	0	
		13	343	1008.7	—	49.9	4.2	8.8	72.7	7	1	2	5	13	9	0	0	0	0	1	2	11	8	6	2	0	16	14	0	3	4	4	6	4	5	1	3	0
18	343	1008.3	—	48.3	3.5	8.8	76.6	8	1	6	1	14	8	0	0	0	0	1	5	7	8	9	0	1	12	16	1	6	4	7	2	2	3	2	3	0		
Kent.	Tunbridge Wells	9	396	1009.3	—	48.8	3.4	8.9	75.7	1	1	4	5	9	11	0	0	0	0	0	7	6	13	4	0	0	1	29	0	3	6	2	3	8	3	1	4	0
Sussex.	Brighton H	9	48	1009.5	—	49.3	2.8	9.7	80.5	9	3	4	11	3	9	0	0	0	0	0	7	8	7	8	0	0	0	25	5	2	7	0	6	2	3	0	5	0
Sussex.	St. Leonards	9	174	1009.1	—	48.4	3.2	8.6	76.6	6	1	5	7	9	8	0	0	0	0	0	4	21	5	0	0	7	23	0	3	8	4	4	2	4	2	3	0	
		21	174	1009.1	—	47.2	2.4	9.0	81.5	5	4	9	2	6	9	0	0	0	0	0	4	18	8	0	0	5	25	0	4	7	2	7	1	3	2	4	0	
Hampshire.	Calshot ..	1	15	1008.7	—	44.8	1.5	8.9	88.5	1	9	3	5	5	8	0	0	0	0	0	10	10	10	0	0	8	22	0	5	4	2	7	0	2	5	5	0	
		7	15	1009.0	—	44.6	1.5	8.7	87.6	8	3	3	5	10	9	0	0	0	0	1	2	15	8	4	0	0	16	13	1	8	1	5	4	3	3	1	4	0
		13	15	1008.9	—	51.6	4.3	9.2	71.7	7	0	3	4	13	10	0	0	0	0	0	0	9	12	9	0	0	20	10	0	4	2	4	7	1	6	1	5	0
		18	15	1008.5	—	49.9	3.6	9.1	74.7	4	0	3	7	15	5	0	0	0	0	0	0	11	11	8	0	0	20	10	0	5	3	4	7	1	5	3	2	0
Hampshire.	Southampton	9	84	1009.2	—5.7	48.6	3.1	9.2	77.6	5	3	2	10	4	11	0	0	0	0	1	17	12	0	0	0	6	24	0	3	4	4	7	1	4	2	6	0	
		21	84	1009.3	—5.4	48.9	3.1	9.3	78.7	8	1	1	6	9	13	0	0	1	0	9	16	4	0	0	0	7	23	0	3	2	5	7	1	5	3	4	0	
Hampshire.	S. Farnborough	7	256	1009.0	—	42.3	1.2	8.2	90.7	1	1	5	2	12	10	0	0	1	0	2	6	11	10	0	0	4	23	3	4	3	3	1	7	3	1	5	0	
		13	256	1008.7	—	53.1	5.8	8.5	64.7	9	0	2	4	13	11	0	0	0	0	0	10	11	9	0	0	16	14	0	5	1	3	3	6	3	3	6	0	
		18	256	1008.5	—	50.6	4.5	8.6	69.7	9	0	6	3	8	13	0	0	0	0	0	11	14	5	0	0	5	24	1	5	3	3	7	3	0	4	4	0	
Hampshire.	Winchester (Worthy Down)	7	273	1009.0	—	42.6	1.2	8.3	90.6	9	2	4	4	10	10	0	0	2	1	4	11	4	8	0	0	9	15	6	4	4	3	5	2	0	1	5	0	
		13	273	1008.6	—	51.6	4.9	8.7	67.7	7	0	2	5	14	9	0	0	0	0	0	6	7	17	0	0	18	12	0	8	2	3	5	5	1	3	3	0	
		18	273	1008.4	—	50.1	4.2	8.3	70.7	6	0	3	6	13	8	0	0	0	0	0	5	9	16	0	0	10	19	1	6	3	2	7	3	0	6	2	0	
I. of Wight.	Ventnor (Hosp.)	9	80	1008.8	—	48.8	2.8	9.4	79.6	5	0	8	7	4	11	—	—	—	—	—	—	—	—	—	—	0	9	21	0	6	2	7	1	4	8	1	1	
		15	80	1008.2	—	52.1	4.3	9.4	71.6	9	1	7	3	8	11	—	—	—	—	—	—	—	—	—	—	0	5	25	0	4	1	11	4	0	3	5	2	
Wilts.	Larkhill H	9	444	1008.8	—	47.8	3.1	8.9	78.6	8	0	5	9	6	10	0	0	0	0	2	7	4	16	1	0	17	12	1	7	2	4	5	4	2	2	3	0	
		13	444	1008.4	—	51.7	5.1	8.8	67.7	4	0	3	6	12	9	0	0	0	0	2	3	2	21	2	0	22	7	1	5	3	3	6	4	2	2	4	0	
		15	444	1008.1	—	51.9	5.4	8.6	65.7	7	0	2	7	11	10	0	0	0	0	1	3	3	20	3	0	17	13	0	6	2	4	5	5	2	1	5	0	
7a. ENGLAND, N.W.																																						
Cumberland.	Aspatria (Mealsgate)	9	485	1008.8	—	45.9	3.3	7.9	75.8	2	0	1	4	12	13	—	—	—	—	—	—	—	—	—	—	0	5	22	3	0	6	2	4	4	8	2	1	
		21	485	1009.7	—	43.4	2.7	7.3	78.6	5	5	3	4	3	15	—	—	—	—	—	—	—	—	—	—	0	5	18	7	0	3	0	10	6	4	0	0	
Lancashire.	Hutton ..	9	86	1007.7	—	48.2	2.5	9.3	81.6	1	1	6	10	6	7	—	—	—	—	—	—	—	—	—	1	9	7	13	0	2	2	3	5	1	3	1	0	
Lancashire.	Southport H	9	42	1008.9	—5.4	48.3	3.4	8.9	75.7	0	0	6	8	3	13	0	0	0	0	0	18	2	2	8	0	0	18	12	0	2	2	8	5	5	2	4	2	0
		13	42	1008.6	—5.6	53.2	5.7	8.9	64.6	2	1	4	11	7	7	0	0	0	0	0	7	7	0	16	0	0	22	7	1	2	1	6	3	4	3	4	6	0
		17	42	1008.5	—5.1	51.7	5.2	8.7	66.7	1	0	4	8	8	10	0	0	0	0	0	7	6	1	16	0	0	21	9	0	3	3	5	3	2	3	5	6	0
		21	42	1009.5	—4.7	46.2	2.9	8.5	78.6	1</																												

TABLE I. DISTRICT VALUES.

The District Values of this Table are computed from the statistics for selected individual stations set out in Table III and Table IV.

The representative stations from which the District Values of rainfall and temperature are computed are indicated in Table III by the sign ¶ while the representative stations from which District Values of sunshine are computed are indicated by the sign §. The deviations from and percentages of normal for Air Temperature, Rainfall and Sunshine are the means of the corresponding deviations or percentages for the representative District Value stations. The deviations from normal of Earth Temperature are derived from the deviations for all the stations reporting in Table III for which normals of Earth Temperature are available. The highest and lowest temperatures for the District recorded during the month may refer to any station in Table III.

TABLE II. SUMMARY OF AUTOGRAPHIC RECORDS OF WIND.

The records used in the preparation of this Table are generally made by anemographs of the pressure-tube type. At a few stations the Robinson Cup Anemograph is utilised. The classification adopted for the "Distribution of Wind" is based on the specification of the Beaufort Scale of Wind Force (see *The Observer's Handbook*). For an anemograph complying with the specification "head 33 ft. above ground in the open" the several columns correspond with Force 8 and above (gales), Forces 6 and 7 (strong winds), Forces 4 and 5 (moderate winds), Forces 2 and 3 (light winds), Forces 1 and 0 (nearly calm). Some information as to the nature of the actual exposures may be gathered from the figures in the "Height" columns.

The "Highest Hourly Wind" is determined by the mean speed of the wind for a period of sixty minutes from 30 minutes before to 30 minutes after an exact hour by Greenwich Mean Time. Under the heading "Veer from N" the azimuth of the direction from which the wind was blowing is stated, the entry for an east wind being 90°, that for a south wind 180° and so on.

TABLE III. SUMMARY OF OBSERVATIONS AT TERMINAL HOURS.

Temperature.—The terminal hours of observation are given for each station. When the terminal hours for maximum and minimum temperature are stated independently the temperatures refer to intervals of 24 hours. If the maximum thermometer is read in the morning the reading is credited to the previous day. When the terminal hours for maximum and minimum are separated by a dash, thus, 18-7, the day-maximum for the period 7h. to 18h. and the night-minimum for the period 18h. to 7h. are reported and are utilised in determining the means for the month; in such cases the extreme temperatures for successive periods of 24 hours are also read by the observers, so that the absolute maximum and minimum temperatures for the month are obtained.

Except at the Royal Observatory, Greenwich, where a Glaisher stand is in use, the air temperature is obtained from thermometers placed in louvered screens. At Kew Observatory, Richmond, and Valentia Observatory these are north wall screens a few feet from the ground. At Aberdeen Observatory the north wall screen is at 41 feet. Otherwise the screens are in the open.

Rainfall.—The daily amounts are for the 24 hours beginning at the "terminal hour." "Rainfall" includes all forms of precipitation. The number of days of precipitation is counted with reference to the limit .01 inch or 0.2 mm. and also with reference to the limit .04 inch or 1 mm. The lower limit excludes mere "traces" of precipitation, but it is frequently passed on occasions when the precipitation is only dew.

Weather.—The numbers of days of Precipitation, Snow, Hail, Thunderstorms and Gale are counted irrespective of the hour at which the phenomena occur. Except for "Precipitation" the day is the civil day.

For the purpose of this summary "Snow" includes sleet (*i.e.*, snow with rain), "Hail" includes graupel (soft hail), "Snow lying" refers to occasions when at least one-half of the country surrounding the station is covered with snow at the morning observation. The entry of "fog" implies that regular observations of the range of vision are made on the scale set out below. Days of fog are those on which the range of vision is less than 1,100 yards at the hour of morning observation. That hour is given by the third entry of column 2 of the table and may be 7h. or 9h. G.M.T. The variability of the observation hour may exercise an important effect upon the statistics of fog frequency. "Thunderstorm" includes any day on which thunder is heard. "Gale" is a wind of Force 8 or upwards on the Beaufort Scale. A "ground frost" is entered when the reading of a "grass minimum" thermometer set the previous evening and read at the morning observation is 30° F. or lower.

Sunshine.—The percentage of possible sunshine is in all cases calculated with reference to the maximum duration possible in the latitude on the assumption of an unobstructed horizon, due allowance being

made for refraction (see *International Meteorological Tables* (Paris) pp. A17-A20 and 42-27). The sunshine recorder is generally insensitive to sunshine when the sun is at an altitude of 3° or less. The symbol § is entered against the percentage at some stations and indicates that obstructions of altitudes greater than 3° reduce the possible record of duration for the month by more than 5 per cent.

TABLE IV. SUMMARY OF OBSERVATIONS AT FIXED HOURS.

Mean Air Pressure is expressed in millibars. (1 millibar = 1,000 dynes per square centimetre = the pressure due to .029531 inch of mercury at 32° F. in Lat. 45°). The corrections for latitude, temperature and height have been applied to the barometer readings so as to obtain pressure at mean sea level. Barometric pressure is given at station level for a few stations at altitudes of 600 ft. or more in footnotes in Table IV.

Hygrometry.—The values given depend on the readings of the dry and wet bulb thermometers in Stevenson Screens (except at the Observatories, see above). The observations were formerly reduced by Glaisher's method; as from January, 1926 they are reduced by the new hygrometrical tables issued by the Office which are based on a formula of Regnault. In general the relative humidity and vapour pressure are derived from the monthly means of the dry and wet bulb readings. At certain stations the daily values of relative humidity and vapour pressure are found and the means are computed therefrom. These stations are indicated by the letter "H."

Cloud Amount.—The proportion of sky covered with cloud is estimated on the scale 0 to 10, the entry "0" being equivalent to clear sky "10" to overcast.

Visibility.—The observations are classified according to the following scheme—the distances, specified by international arrangement in metres, are given here in yards and miles:—

CODE.	RANGE OF VISION.
0	Less than 55 yards.
1	Exceeding 55 yards, less than 220 yards
2	" 220 " " 550 "
3	" 550 " " 1,100 "
4	" 1,100 " " 1½ miles.
5	" 1½ miles " " 2½ "
6	" 2½ " " 6½ "
7	" 6½ " " 12½ "
8	" 12½ " " 31 "
9	" 31 " "

Wind Summaries.—The estimates of wind force refer to the Beaufort Scale, and in general to the wind experienced at the time of observation. At Deerness, Cahirciveen, Richmond, Armagh, Eskdalemuir, Southport, Greenwich and Oxford the analysis refers to tabulations of autographic records. For Oxford the mean wind speed for half-an-hour centred at the hour of observation is used for conversion to "force" on the Beaufort Scale; for the remaining observatories the mean wind speed used for each observation refers to a period of one hour. In these cases winds equivalent to Force 1 are counted with the calms, whilst Forces 2 and 3 are taken together in the preceding column of the Table.

INTERPOLATED VALUES.

When the observations for any station for a month are incomplete and relevant data (e.g. records from neighbouring stations) which make it practicable to interpolate approximate values for the missing observations are available, such approximate values may be used for completing summaries for stations published in Tables III and IV. Parts of a summary obtained in this way are shown in brackets thus—(52.4).

STANDARD OF TIME.

As a rule observations are made in all parts of the British Islands according to Greenwich Mean Time, but at the following stations Local Mean Time is used for the observations summarised in Tables III and IV. The number of minutes after Greenwich Time is shown in brackets—Darwen (10), Rhayader (15), Ashburton (15), Tavistock (17), Plymouth (15), Douglas (20), Armagh (26), Balbriggan (25), Lisburn (30), Newcastle, Co. Wicklow (30), Ballinacurra (30), Cork (34).

"Summer Time" is not used in the Monthly Weather Report, but at certain stations the hours of observation vary in the course of the year. For such stations all time entries are converted to G.M.T. before they are printed and the winter hours are given as the terminal hours in the annual tables. For the summer hours reference should be made to the appropriate months.

NORMALS.

In Table III the normals used are those for the 35 years 1881-1915. The normals of temperature and sunshine are published in the Book of Normals, Section I, those for rainfall in the Book of Normals, Section V.

The normals for pressure with which comparison is made in Table IV also refer to the period 1881-1915.

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, 1928

SUMMARY OF OBSERVATIONS COMPILED FROM RETURNS OF OFFICIAL STATIONS AND VOLUNTEER OBSERVERS.
 PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE. To be purchased directly from H.M. STATIONERY OFFICE at the following addresses: ADAMSTAL HOUSE, KINGSWAY, LONDON, W.C.2; 120, GEORGE STREET, EDINBURGH; YORK STREET, MANCHESTER; 1, ST. ANDREW'S CRESCENT, CARDIFF; 15, DONEGALL SQUARE WEST, BELFAST; or through any Bookseller.

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ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE.

MAY, 1928: Relatively dry. Sunny and warm at commencement and end of month; intervening period cool and mainly dull in central and eastern Great Britain.

A prominent feature of the weather of May, 1928, was its relative dryness, rainfall amounts being decidedly below the normal except around the upper Moray Firth, East Anglia, south-east England and in the neighbourhood of Cork where they were about or above the normal. Warm sunny weather prevailed generally during the first week of the month, and at the end of the month, with cool northerly winds from the 7th to about the 22nd and much cloud in the eastern and central districts of Great Britain from the 11th to the 23rd.

During the first two days of the month, winds were easterly and the weather dull and cool in eastern districts, and mainly quiet and fair elsewhere with occasional light rain or showers and coastal fog. From the 3rd to the 6th the weather was generally fine and warm, day temperatures exceeding 70° F. in most districts on each of the four days 3rd to 6th, while over 13 hr. bright sunshine were reported from several stations (15·0 hr. at Deerness and 14·5 hr. at Lerwick on the 3rd and 13·9 hr. at Portsmouth and Calshot on the 6th). Thunderstorms occurred at many places in the south and south-west on the 3rd, 4th and 5th, and were associated in a few places with heavy rain.

Meanwhile, pressure had become high to the westwards and low to the eastwards of the British Isles, this distribution continuing unchanged in its main features from the 7th to the 22nd. Northerly winds prevailed and temperature on the whole was low, notably about the 9th and from the 16th to the 23rd, while severe ground frost occurred in inland districts from the 7th to the 10th and about the 19th. Good sunshine records continued to be experienced in several districts up to the 11th, including 13·4 hr. at Southend on the 7th, 14·8 hr. at Tieve on the 9th, 14·1 hr. at Aberystwyth on the 10th, and 13·8 hr. at Deal on the 11th. Precipitation, which so far had been light and scattered, occurred widely from the 14th to the 23rd, with heavy falls locally on the 17th, 18th and 19th. Thunder occurred in many places, especially in the south, from the 18th to the 21st.

With the development of a depression to the south-west of the British Isles about the 24th, light to moderate southerly winds gradually spread over the western districts, and by the 26th had extended to the whole of the British Isles. Temperature rose, and from the 27th to 30th day temperatures exceeding 70° F. were recorded in many parts of England, and on the 28th and 29th approached or slightly exceeded 80° F. in a few places in the south of England. Heavy rain occurred in Scotland, Ireland, and some western districts of England and Wales on the 26th, 27th and 28th. Good sunshine records were obtained in many districts on the 24th and 25th, in the south and east of England during the period 24th to 28th, in the west of Scotland and south-west of Ireland on the 29th, and widely on the 30th.

Meanwhile, a large anticyclone to the north of the British Isles was extending southwards and winds became easterly. The weather continued mainly fine with only slight precipitation, but on the 31st had become generally cooler.

Pressure and Winds.—The mean pressure for the month was relatively high to the north-west and low to the south-east of the British Isles. A few depressions passed across England and Wales from north to south, but in general the tracks of depressions which affected the weather of the month lay to the south and east of the British Isles; at stations in Scotland and Ireland monthly means of pressure were above the normal and at most stations in England and Wales below the normal. Winds were mostly between north and east and light to moderate in force. Strong winds occurred however in most districts on the 15th (when gale force was reached at some exposed stations in the west), 16th, 17th, 18th and in the south-east of England on the 30th.

The highest wind velocity recorded in a gust during the month was 59 miles per hour at Weaver Point during the afternoon of the 17th. The observer at Southport states that the duration of easterly winds has only twice been even slightly exceeded in May during 57 years, viz., in May, 1915 and 1917.

Temperature.—The mean temperature for the month was somewhat below the normal in the eastern districts of Great Britain and slightly above the normal in the western districts and in Ireland.

Temperature was moderate to fairly high during the first week and the last few days of the month and decidedly low around the 9th and the 23rd. Day temperatures of 70° F. and above were recorded in the south-east of England on the 3rd and 4th, and in several English districts on the 5th and 6th. As northerly winds spread over the British Isles, temperature fell to a low level about the 9th, day temperatures varying from about 45° F. to 55° F. (43° F. at Lerwick, 45° F.

at Tynemouth, 52° F. at Richmond, Kew Observatory), while night temperature fell below freezing point at many stations (29° F. at Leafeld and Renfrew during the night of 8th–9th and 24° F. at Eskdalemuir, 29° F. at Winchester and S. Farnborough during the night of 9th to 10th). Severe ground frost occurred in many places during the nights of the 7th, 8th, 9th and 10th, a minimum temperature on the grass of 19° F. being recorded, at Renfrew on the morning of the 9th and at Eskdalemuir on the morning of the 10th, and one of 18° F. at Winchester on the morning of the 10th. Decidedly low day temperatures were recorded again on the 22nd and 23rd, the day maximum temperature of 47° F. at Richmond (Kew Observatory) on the 23rd being the lowest value recorded there for the last ten days of May since 1891. After the 24th a decided recovery in temperature took place and on the 28th and 29th temperatures in the neighbourhood of 80° F. occurred in a few places in the south of England.

The extreme temperatures for the month were:—(England and Wales) 81° F. at Camden Square on the 28th and at Over Court, near Bristol, on the 30th, and 24° F. at Chelmsford (Good Easter) on the 10th. (Scotland) 76° F. at Ardtornish on the 31st and 24° F. at Eskdalemuir on the 10th. (Ireland) 79° F. at Killarney on the 31st and 28° F. at Markree Castle on the 22nd.

Precipitation.—The general precipitation of the British Isles expressed as a percentage of the normal for the period 1881–1915 was 69; the values for the constituent countries were:—England and Wales 74, Scotland 66, Ireland 60.

In England and Wales rainfall totals approximated to or exceeded the normal in East Anglia, the south-east of England, the Channel Isles and parts of the West Riding of Yorkshire, monthly rainfall amounting to 185 per cent. of the normal at St. Leonards and to 276 per cent. of the normal at St. Heliers, Jersey. Elsewhere there was a deficiency which was most pronounced in central and western districts; thus the month's total at Birmingham amounted to only 22 per cent. of the normal, at Buxton to 23 per cent., at Rhayader to 27 per cent., and at Oxford to 31 per cent.

In Scotland rainfall was fully equal to the normal at some places around the upper Moray Firth, but in general was decidedly deficient. Considerable areas had only two-thirds or less of the normal; at Fort William the total for the month was only 21 per cent. of the normal and the lowest recorded in May for at least 40 years. Amounts were slight until the 12th and moderate in various districts until 20th or 21st, precipitation occurring generally on 18th and 19th. Thereafter dry conditions were interrupted only on 26th and 27th when rain was almost continuous in some districts and accounted for a large part of the months' total.

In Ireland monthly totals were decidedly below the normal except in the neighbourhood of Cork, where the month's rainfall was normal. Little rain occurred during the first half of the month, most of the month's rainfall being accounted for by heavy falls on the 17th, 26th and 27th.

Thunderstorms occurred locally in several districts on various dates.

Sunshine.—Sunshine aggregates were mostly below the normal except in Ireland and the west of Scotland, where they slightly exceeded the normal. Representative totals for Districts relative to the normal varied from 71 per cent. in the Midland Counties to 106 per cent. in Ireland N. There were some very sunny periods, particularly between the 3rd and the 11th, during the week ending 26th May and at the end of the month. In the west of Scotland the monthly aggregate of 249 hours at Tieve and of 218 hours at Oban contrasted with 124 hours at Aberdeen in the east. The observer at Totland Bay states that the sunshine amount recorded on 6th May, viz., 13·8, has been exceeded only once in 27 years so early in the year, viz., on 5th May, 1909, when 13·9 hours were recorded.

Fog.—Fog occurred in many districts during the first four or five days of the month and from the 25th to the 29th.

Miscellaneous Phenomena.—Halo phenomena were observed at several stations during the month. A solar halo was observed at Oxford with upper and lower contact arcs and at Stonyhurst with upper contact arc on the 8th. The observer at Stonyhurst reports having seen a solar halo on the 10th, with particularly vivid colours in its top portion. The Zodiacal Light was observed at Deerness on the 16th. Aurora was observed at Aberdeen on the 10th, at Gordon Castle on the 19th and as far south as Waterford on the 20th.

TABLE I.—DISTRICT VALUES—MAY, 1928. [1908, revised 1928.]

DISTRICTS.	AIR TEMPERATURE.			EARTH TEMPERATURE.		RAINFALL.		SUNSHINE.	
	High-est.	Low-est.	Daily Mean. Deviation from Normal.	At 1 ft. Deviation from Normal.	At 4 ft. Deviation from Normal.	Per-centage of Normal.	No. of Days. Deviation from Normal.	Per-centage of Normal.	Per-centage of Possible Duration.
o. SCOTLAND, N.	°F. 71	°F. 28	°F. 0.0	°F. —	°F. —	% 77	—3	% 77	% 26
Eastern.									
1. SCOTLAND, E.	70	27	-0.8	—	—	73	-2	76	25
2. ENGLAND, N.E.	77	25	-1.1	-1.5	-0.2	73	+1	77	29
3. ENGLAND, E...	77	24	-1.0	-1.6	-1.1	119	-1	84	37
4. MIDLAND COUNTIES	81	28	-0.5	-1.3	-0.1	52	-2	71	28
5. ENGLAND, S.E.	81	26	-0.4	-0.2	+0.5	108	-1	87	39

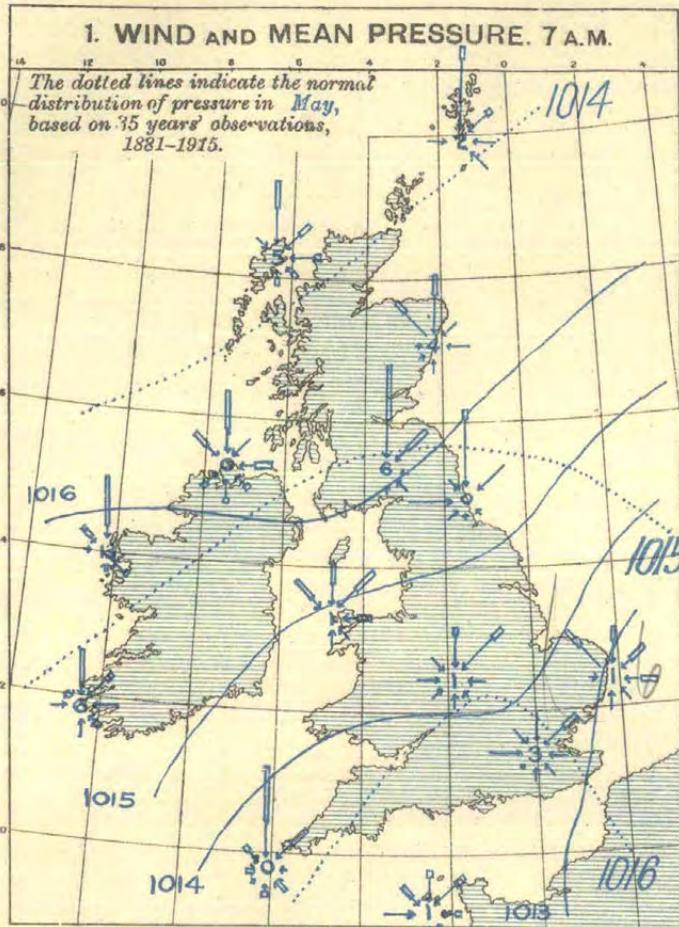
DISTRICTS.	AIR TEMPERATURE.			EARTH TEMPERATURE.		RAINFALL.		SUNSHINE.	
	High-est.	Low-est.	Daily Mean. Deviation from Normal.	At 1 ft. Deviation from Normal.	At 4 ft. Deviation from Normal.	Per-centage of Normal.	No. of Days. Deviation from Normal.	Per-centage of Normal.	Per-centage of Possible Duration.
Western.									
6. SCOTLAND, W. (& I. of Man)	°F. 76	°F. 24	°F. +0.4	°F. —	°F. -0.5	% 61	-7	% 101	% 38
7. ENGLAND, N.W. (& N. Wales)	78	29	+0.2	-0.5	+0.3	67	-5	91	37
8. ENGLAND, S.W. (& S. Wales)	78	27	+0.9	+0.1	+0.1	65	-4	86	37
9. IRELAND, N...	74	28	+0.8	+0.2	+0.1	55	-8	106	40
10. IRELAND, S...	79	29	+0.9	+0.1	+0.1	82	-5	103	42
11. CHANNEL I. (& Scilly)	75	39	-0.2	+1.1	+1.4	199	0	94	48
Mean : DISTRICTS 1-10	81	24	-0.1	-0.5	-0.1	75	-3	88	35

TABLE II.—SUMMARY OF AUTOGRAPHIC RECORDS OF WIND.—MAY, 1928.

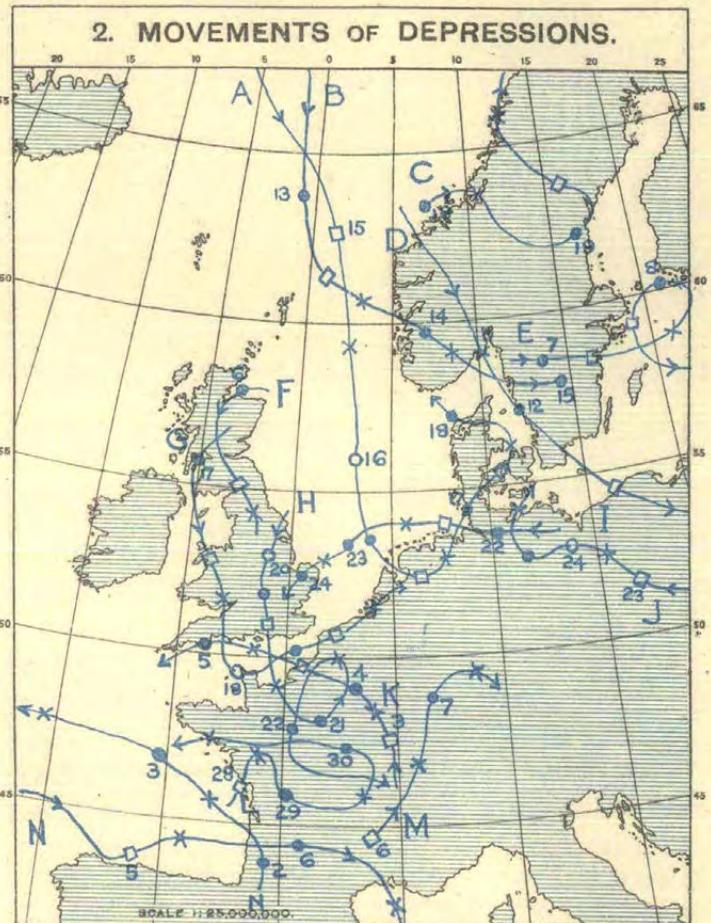
[1914.]

DISTRICT AND STATION.	Height.			Distribution of Wind.††								Extreme Velocities.								
	Above Mean Sea Level.	Above Ground.	Above Building.	More than 38 mi/hr.		25 to 38 mi/hr.		13 to 24 mi/hr.	4 to 12 mi/hr.	Less than 4 mi/hr.	No Record.	Highest Hourly Wind.			Highest Gust.					
				Dates of Occurrence.	Duration.	No. of Days.	Duration.	Duration.	Duration.	Duration.	Duration.	Veer from N.	Speed.	Mid Time.	Speed.	Time.				
o. SCOTLAND, N.	ft.	ft.	ft.		hr.	hr.	hr.	hr.	hr.	hr.	°	mi/hr.	m/s.	day. hr.	mi/hr.	m/s.	d.	h.	m.	
Shetlands Lerwick ..	310	42	33†	—	0	5	20	310	327	87	0	10	27	12	15 14	41	19	8	2	45
Orkneys Deerness (Cup Anr.)	188	16	5	—	0	7	27	370	328	19	0	340	32	14	15 13	—	—	—	—	—
1. SCOTLAND, E.																				
Aberdeen Aberdeen ..	72	42	33†	—	0	8	1	169	491	83	0	360	25	11	8 13	40	18	9	10	30
Kincardine Balmakewan ..	140	25	18	—	0	—	0	77	(476)	(191)	0	360	21	9	8 9	35	16	16	8	40
Edinburgh Edinburgh ..	485	39	31†	—	0	1	1	60	538	145	0	310	25	11	15 13	42	19	16	9	40
6a. SCOTLAND, W.																				
Argyll Tiree ..	80	55	48†	—	0	8	47	339	304	54	0	360	34	15	15 23	49	22	15	23	0
Renfrew Paisley ..	188	81	15	—	0	—	0	76	442	226	0	260	21	9	15 15	42	19	3	14	20
Dumfries Eskdalemuir ..	825	50	22	—	0	5	14	278	316	136	0	30	30	13	16 12	44	20	16	13	10
2. ENGLAND, N.E.																				
Durham South Shields ..	62	46	20	—	0	3	14	220	321	189	0	350	33	15	8 12	44	20	8	12	55
York, E.R. Spurn Head ..	67	42	35†	—	0	10	86	324	321	13	0	350	36	16	8 15	45	20	8	10	20
Lincoln Cranwell ..	284	44	26†	—	0	1	2	192	440	110	0	360	25	11	8 15	43	19	16	13	55
3. ENGLAND, E.																				
Norfolk Gorleston ..	52	42	33†	—	0	2	7	236	408	92	1	20	27	12	16 17	39	17	16	18	30
Suffolk Felixstowe Aero. ..	55	40	25	—	0	—	0	284	(283)	(177)	0	360	24	11	8 18	35	16	9	11	45
Essex Shoeburyness ..	115	104	14†	—	0	—	0	126	340	255	23	—	22	10	18 13	33	15	19	15	30
4. MIDLAND COUNTIES.																				
Warwick Birmingham ..	643	118	18	—	0	1	2	199	474	69	0	340	26	12	16 14	41	18	16	8	40
5. ENGLAND, S.E.																				
Surrey Richmond (KewObs)	82	65	22	—	0	—	0	104	458	182	0	80	20	9	30 17	33	15	30	17	40
Surrey Croydon ..	284	40	24	—	0	—	0	173	419	152	0	70	23	10	30 17	43	19	16	15	10
Kent Dover ..	61	32	22	—	0	6	22	312	351	56	3	—	35	16	30 17	46	21	30	17	15
Kent Lympne ..	409	70	55†	—	0	2	4	271	442	27	0	20	27	12	22 1	39	17	22	1	15
Hampshire S. Farnboro' (Tower)	444	160	14	—	0	—	0	96	528	120	0	350	20	9	16 10	40	18	16	10	25
Hampshire Calshot ..	55	45	31†	—	0	1	4	251	(394)	(95)	0	320	29	13	16 8	39	17	16	8	40
Hampshire Worthy Down ..	314	43	27†	—	0	1	1	123	448	172	0	320	25	11	16 9	46	21	16	8	40
Wiltshire Larkhill ..	526	51	34†	—	0	5	10	220	(381)	(133)	0	350	29	13	16 8	39	17	16	8	25
7a. ENGLAND, N.W.																				
Lancashire Fleetwood ..	112	50	12	—	0	2	24	167	405	148	0	310	36	16	15 23	45	20	15	23	5
Lancashire Southport ..	77	59	45†	—	0	4	35	328	338	43	0	310	36	16	15 19	46	21	15	19	10
7b. NORTH WALES.																				
Anglesey Holyhead ..	64	45	29†	—	0	7	66	303	305	70	0	350	36	16	16 5	53	24	16	2	45
Flint Sealand ..	81	65	49†	—	0	2	19	153	412	160	0	320	33	15	16 2	53	24	16	3	0
8b. ENGLAND, S.W.																				
Devon Plymouth ..	185	88	2	—	0	2	5	209	394	136	0	—	26	12	16 12	53	24	16	14	45
Cornwall Pendennis Castle ..	256	65	24	—	0	5	25	304	320	87	8	—	36	16	31 12	57	25	17	13	40
9. IRELAND, N.																				
Donegal Dunfanaghy ..	180	47	39	—	0	—	0	151	445	148	0	—	24	11	16 5	41	18	16	6	5
Antrim Aldergrove ..	282	40	27†	—	0	1	5	203	447	89	0	330	27	12	16 8	47	21	16	8	30
10. IRELAND, S.																				
Dublin Kingstown (Cup Anr.)	49	27	16	—	0	6	29	213	382	120	0	340	34	15	16 9	—	—	—	—	—
Clare Quilty ..	100	40	32†	—	0	4	34	211	394	105	0	—	34	15	17 12	45	20	17	12	20
Kerry Cahirciveen (Val. O.)	98	41	34†	—	0	5	44	274	302	124	0	350	33	15	17 14	50	22	17	17	25
Cork Weaver Pt. ..	160	30	21†	—	0	4	34	220	377	113	0	—	33	15	17 18	59	26	17	15	30
11. SCILLY ISLES.																				
St. Mary's..	160	42	35†	17	1	10	116	361	247	19	0	300	39	17	17 17	58	26	17	17	40

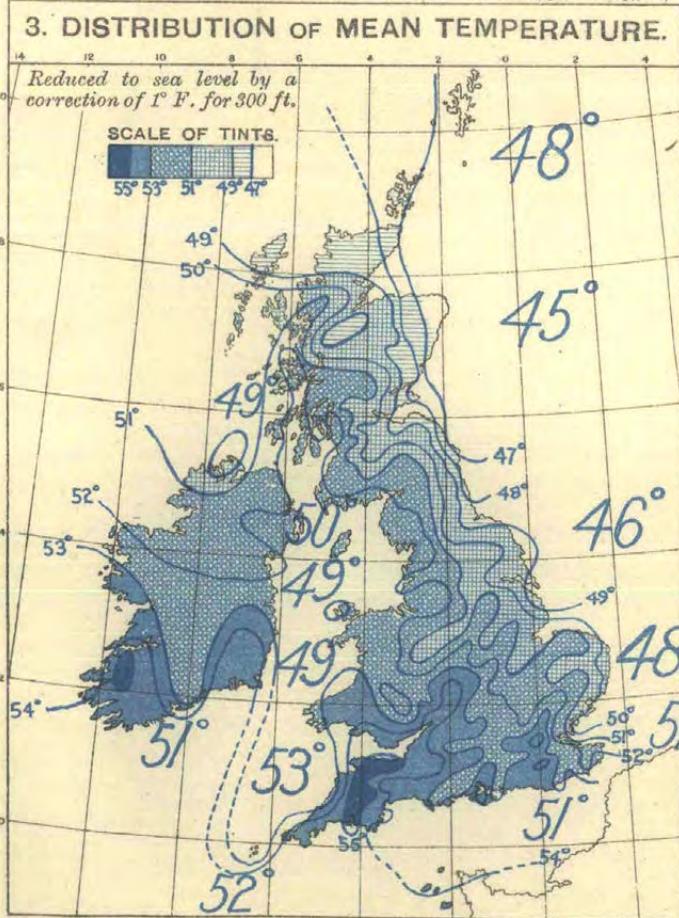
†† Brackets () indicate that the distribution as between winds above and below 4 mi/hr. is doubtful, but the total number of hours with winds below 12 mi/hr. is reliable.
 † Standard mounting.



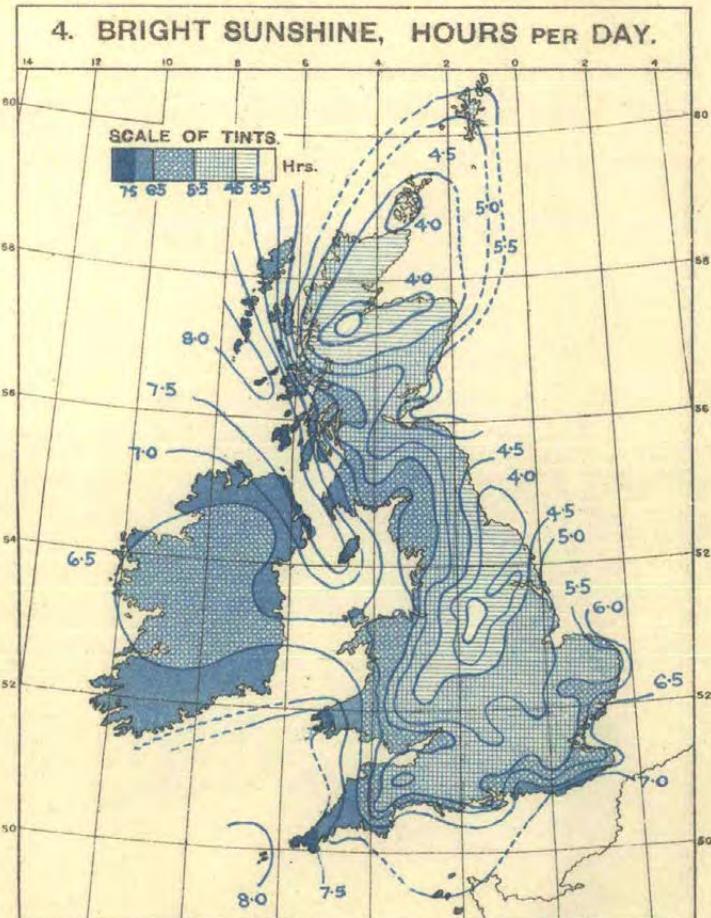
WIND ROSES. The arrows fly with the wind and indicate frequency and force, thus: LIGHT MODERATE GALE
30 OBS. 1 INCH



Positions of centres are shown thus: - O at 1h; ● at 7h; □ at 13h; X at 18h.



Sea temperatures are shown in large figures, thus:



* The pressure is expressed in millibars.

TABLE III.—SUMMARY OF THE RECORDS OF TEMPERATURE, RAINFALL AND SUNSHINE, and of WEATHER OBSERVATIONS, MAY, 1928.

DISTRICT, COUNTY AND PLACE.	Terminal Hours of Observation.	Height of Station above Mean Sea Level.	AIR TEMPERATURE IN DEGREES FAHRENHEIT.								Earth Temperature.		RAINFALL.				WEATHER. Number of days.								BRIGHT SUNSHINE.						
			Means of				Absolute Maximum and Minimum.				1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Most in a day.		Precip'n. 0.2 mm. or more.	1 mm. or more.	Snow.	Snow lying.	Hail.	Thunderstorm.	Fog (Morning Obs.).	Ground Frost.	Gale.	Hours per day.		Per Cent.			
			A	B	Deviation from Normal.	Maximum.	Date.	Minimum.	Date.	Amount.					Date.																
			Max.	Min.							Max.	Min.																			
0. SCOTLAND, N.																															
Shetlands.	Baltasound	9 9 9	31	51.6	41.4	46.5	—	58	2, 3,	35	8,9,10	48.2	—	1.54	39	—	10	28th	17	11	3	0	5	0	1	—	0	5.53	—	32	
	Lerwick	18-7 7	54	50.0	42.6	46.3	+1.1	58	2nd	36	8, 10	—	—	1.22	31	—	14	28th	10	8	2	0	1	0	0	—	0	4.76	-1.74	28	
Orkneys.	Deerness	2121 9	160	50.6	41.4	46.0	-0.3	54	20, 29	34	10th	—	—	1.52	39	-12	10	27th	16	7	2	0	1	1	0	—	0	4.05	-1.69	24	
	Kirkwall	9 9 9	151	50.5	42.4	46.5	—	56	1, 3	36	10th	—	—	1.31	33	—	9	27th	13	6	2	0	1	1	0	4	0	3.88	—	23	
Hebrides.	Skallary	9 9 9	20	55.6	46.2	50.9	—	67	3rd	37	9th	—	—	1.20	31	—	11	27th	10	9	0	0	0	0	0	—	0	—	—	—	
	Stornoway	18-7 7	30	54.3	42.7	48.5	+1.0	63	3rd	33	23rd	—	—	1.81	46	-19	13	27th	15	11	0	0	0	0	0	—	0	6.04	-0.12	36	
Caithness.	Wick	18-7 7	81	49.0	42.8	45.9	-1.2	55	29th	37	10th	—	—	1.44	37	-16	5	28th	18	14	0	0	1	0	0	—	0	—	—	—	
	Achnashellach	9 9 9	225	58.3	43.2	50.7	+2.7	71	29th	30	9th	—	—	1.90	48	-67	8	27th	13	12	0	0	0	0	0	4	0	—	—	—	
Ross & Cromarty.	Fortrose	9 9 9	69	55.2	43.6	49.4	—	65	28, 29	28	9th	—	—	1.73	44	—	10	18th	13	9	0	0	0	0	2	—	0	4.11	—	25	
	Strathpeffer	9 9 9	125	56.5	43.0	49.7	+0.6	64	29th	35	9th	—	—	1.44	37	-10	16	17th	15	7	0	0	0	0	—	—	—	—	—		
Inverness.	Ft. Augustus	9 9 9	68	54.3	41.6	47.9	-0.8	66	3rd	33	9th	—	—	1.64	42	-19	9	19th	14	12	0	0	0	1	0	—	0	3.58	-0.77	22	
	Inverness	9 9 9	242	53.5	42.8	48.1	-1.1	63	3, 4	37	9, 23	—	—	2.06	52	+6	10	18th	15	9	0	0	0	0	1	1	0	3.44	-2.44	21	
1. SCOTLAND, E.																															
Nairn.	Nairn	18-7 7	82	54.1	43.3	48.7	-0.1	66	28th	35	23rd	—	—	1.85	47	+1	8	20th	14	11	0	0	0	0	1	—	0	3.88	-1.81	24	
Elgin.	Gordon Castle	2121 9	104	56.0	42.0	49.0	0.0	68	29th	32	11th	—	—	1.38	35	-19	7	18th	15	9	0	0	0	0	—	0	4.23	—	26		
Banff.	Banff	9 9 9	130	51.9	42.6	47.3	—	64	29th	36	10th	—	—	1.30	33	—	5	19th	17	10	0	0	1	0	0	—	0	3.60	—	22	
Aberdeen.	Aberdeen	2424 24	44	50.5	41.9	46.2	-1.5	59	28th	35	11th	—	—	1.60	41	-18	12	17th	18	12	0	0	3	0	2	1	0	4.00	-2.03	24	
	Hourly*	44																													
	Balmoral	9 9 9	927	54.4	37.2	45.8	—	65	28, 29	27	11th	—	—	2.17	55	-4	20	15th	16	12	1	0	1	0	—	5	0	—	—	—	
	Braemar	2121 9	1120	54.7	36.8	45.7	-0.5	65	2, 26	27	11th	—	—	—	—	—	—	—	11	10	0	0	1	0	—	6	0	—	—		
	Craibstone	9 9 9	300	51.7	40.3	46.0	—	61	28th	33	11th	47.1	45.0	1.70	43	—	15	17th	16	10	2	0	4	0	—	3	0	4.58	—	28	
	Logie Coldstone	9 9 9	608	55.5	38.6	47.1	—	68	26th	28	11th	—	—	1.39	35	-28	8	15th	20	11	0	0	1	0	8	—	0	—	—		
Kincardine.	Stonehaven	9 9 9	93																												
Forfar.	Arbroath	2121 9	93	55.3	40.9	48.1	—	62	15, 29	32	11, 22	—	—	1.34	34	—	7	27th	9	9	0	0	0	0	2	7	0	5.55	—	34	
	Carnoustie	9 9 9	39	54.0	40.8	47.4	—	63	15th	35	11th	—	—	1.24	32	—	6	27th	12	9	0	0	0	0	—	—	0	4.94	—	30	
	Dundee (E. Nec.)	2121 9	198	55.1	41.2	48.1	-1.3	64	25th	34	11th	—	—	1.36	35	-18	6	16th	9	8	0	0	0	0	—	—	0	—	—		
	Mayfield	9 9 9	147	55.8	41.6	48.7	-1.4	63	25, 28	35	11th	46.5	—	1.41	36	-15	7	27th	10	8	0	0	0	0	—	4	0	4.72	-1.17	29	
	Kettins	9 9 9	218	57.4	39.8	48.6	—	66	6, 26	30	10, 11	51.3	—	1.75	44	—	8	18th	10	8	0	0	2	0	0	7	0	—	—		
	Montrose	9 9 9	16	52.1	41.1	46.6	—	60	28th	32	25th	—	—	1.20	31	—	7	27th	11	8	0	0	1	1	0	—	0	5.19	—	32	
Perth.	Crieff	2121 9	478	57.5	41.0	49.3	-0.8	66	25th	32	10th	—	—	2.18	55	-8	19	27th	13	10	0	0	1	0	—	—	0	—	—		
Fife.	Perth	9 9 9	76	58.9	41.6	50.3	+0.5	68	25th	30	9, 11	—	—	1.63	41	-15	9	27th	12	8	0	0	0	0	—	—	0	5.29	—	32	
	Cupar	9 9 9	210	54.7	40.8	47.7	—	65	25th	32	11th	—	—	1.43	36	—	10	16th	11	6	0	0	0	0	—	—	0	—	—		
	Inchkeith	18-7 7	190	52.8	42.9	47.9	—	60	15th	37	10th	—	—	1.22	31	—	7	17th	11	7	0	0	0	0	—	5	3	0	5.52	—	34
	Kirkcaldy	9 9 9	66	55.2	41.9	48.5	—	63	15th	32	10th	—	—	1.37	35	—	8	27th	10	7	—	—	—	—	—	—	—	—	—		
	Leuchars	18-7 7	40	53.4	40.7	47.1	—	62	15th	31	11th	—	—	1.37	35	—	7	27th	11	8	0	0	0	0	1	8	0	4.97	—	31	
	St. Andrews	9 9 9	20	53.2	41.3	47.3	—	64	15th	30	11th	50.6	46.8	1.28	32	—	8	18th	10	6	0	0	1	0	0	2	0	4.66	—	29	
Linlithgow.	Bangour	2121 9	587	54.4	39.4	46.9	—	67	25th	29	9, 11	—	—	1.96	50	—	16	27th	11	10	0	0	0	0	3	—	0	—	—		
Edinburgh.	Blackford Hill	2121 9	441	53.1	42.0	47.5	-1.0	65	6, 28	35	9, 10	—	—	1.43	36	-12	9	27th	13	8	0	0	0	—	4	0	4.44	-1.14	21		
	Boghall	9 9 9	645	54.0	40.8	47.4	—	65	28th	33	9, 10	49.4	46.8	1.57	40	—	8	27th	13	7	0	0	1	0	—	5	0	4.33	—	26	
	Edin. Univ.	9 9 9	227	54.4	43.8	49.1	—	64	28th	38	10, 11	49.7	47.7	1.28	33	-18	8	27th	11	8	—	—	—	—	—	—	—	—	—		
	Liberton	9 9 9	190	55.2	—	—	—	64	25th	—	—	—	—	1.42	36	—	7	16, 27	11	7	0	0	1	0	—	—	0	—	—		
Haddington.	N. Berwick	9 9 9	152	54.3	41.9	48.1	—	64	29th	32	11th	—	—	1.21	31	—	9	27th	11	9	0	0	0	0	1	2	0	5.40	—	33	
	Smeaton	9 9 9	100	55.6	40.3	47.9	—	63	25, 28	30	11th	50.2	—	1.07	27	-25	5	16th	11	9	0	0	0	0	2	3	0	—	—		
Berwick.	Marchmont	9 9 9	498	55.3	41.0	48.1	-0.2	67	26th	33	11th	—	—	1.13	29	-34	5	27th	13	9	0	0	0	0	—	—	0	4.75	-0.90	29	
Peebles.	West Linton	9 9 9	770	54.6	38.5	46.5	-0.2	66	6, 29	27	10th	—	—	1.70	43	—	13	27th	15	9	0	0	0	0	—	9	0	—	—		
Roxburgh.	Kelso (Br'ml'ds)	9 9 9	195	57.7	40.6	49.1	—	68	25, 28	30	11th	—	—	1.10	28	-21	6	13th	12	9	0	0	0	0	2	—	0	—	—		
	Wolfelee	9 9 9	537	59.8	39.1	49.5	—	70	29th	27	11th	—	—	2.13	54	-6	11	16th	11	11	0	0	0	0	—	—	0	—	—		

TABLE III (continued).—SUMMARY OF THE RECORDS OF TEMPERATURE, RAINFALL AND SUNSHINE, and of WEATHER OBSERVATIONS, MAY, 1928.

DISTRICT COUNTY AND PLACE.	Terminal Hours of Observation.			Height of Station above Mean Sea Level.	AIR TEMPERATURE IN DEGREES FAHRENHEIT.							Earth Temperature.		RAINFALL.				WEATHER. Number of days.							BRIGHT SUNSHINE.						
	Max.	Min.	Rain.		Means of		Deviation from Normal.	Absolute Maximum and Minimum.			1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Most in a day.		Precip'n. 0.2 mm. or more.	Precip'n. 1 mm. or more.	Snow.	Snow lying.	Hail.	Thunderstorm.	Fog (Morning Obs.).	Ground Frost.	Gale.	Hours per day.					
					A	B		Maximum.	Date.	Minimum.					Date.	Amount.										Date.	0.2 mm. or more.	1 mm. or more.	Daily Mean.	Deviation from Normal.	Per Cent
	G.M.T.	ft.	°F.		°F.	°F.	°F.	°F.	°F.	°F.	°F.	in.	mm.	mm.	mm.											hr.	hr.	%			
4. MID. COUNTIES—cont.																															
Warwick.	Birmingham	18-7 7	535	58.9	43.8	51.3	-0.5	75	28th	35	10th	48.1	46.5	0.46	12	-42	3	17th	9	4	0	0	0	1	2	1	6	0	3.74	-1.66	24
	B'ham, Sparkhill	7 13 7	424	61.4	42.3	51.9	—	79	28th	30	10th	—	—	0.43	11	—	3	19th	10	5	0	0	0	1	2	11	0	—	—	—	
	Coventry	9 9 9	270	61.1	43.8	52.5	-0.2	77	28th	34	9, 10	52.5	49.3	0.52	13	-38	3	23rd	11	7	0	0	1	0	0	3	0	4.31	-1.53	27	
	Rugby	2 12 1 9	390	60.5	41.6	51.1	—	77	28th	29	9th	—	—	0.83	21	—	8	14th	10	6	0	0	0	0	—	(7)	0	—	—	—	
Oxford.	Leafield	18-7 7	612	59.4	41.6	50.5	—	75	28th	29	9th	—	—	0.81	21	—	7	17th	10	7	0	0	2	0	1	8	0	5.39	—	35	
	Oxford	9 9 9	208	61.6	43.6	52.6	-0.2	77	28th	32	10th	54.1	50.5	0.57	15	-33	4	3, 12	6	0	0	2	2	0	6	0	5.41	-0.85	35		
	Oxford (Sandford)	9 9 9	210	61.6	42.4	52.0	—	77	28, 29	29	10th	—	—	0.92	23	—	4	20th	13	9	0	0	0	2	0	10	0	5.10	—	33	
Bucks.	Mursley	** 9 9 9	490	59.5	41.6	50.5	—	74	28, 29	30	9th	50.0	49.8	1.61	41	—	8	21st	13	11	0	0	0	2	—	7	0	5.53	—	35	
Stafford.	Mayfield	9 9 9	374	58.4	41.0	49.7	—	73	28th	28	9th	—	—	0.56	14	—	5	19th	11	4	0	0	1	0	—	3	0	4.30	—	27	
Shropshire.	Roden, Well'n	9 9 9	207	59.9	40.5	50.2	—	74	30th	28	9, 10	—	—	0.79	20	—	9	19th	10	8	0	0	0	0	—	1	—	—	—		
	Newport	9 9 9	211	59.5	42.2	50.9	—	75	28th	28	9, 10	—	—	1.23	31	—	11	19th	10	5	0	0	0	0	—	7	0	4.73	—	30	
	Wistanstow	2 12 1 9	481	59.5	42.3	50.9	-0.7	74	28, 29	29	9th	—	—	1.43	36	-23	15	17th	10	7	0	0	1	0	0	3	0	—	—	—	
Worcester.	Malvern	9 9 9	377	60.3	45.2	52.7	—	77	28th	36	9, 10	53.1	49.9	1.13	29	-26	10	19th	12	6	0	0	0	3	0	1	0	4.96	—	32	
	Tenbury	9 9 9	313	61.7	43.6	52.7	+0.8	76	28, 29	30	10th	52.7	—	1.14	29	-13	13	17th	10	7	1	0	2	4	1	7	0	—	—	—	
	Worcester (Perdiswell)	9 9 9	95	60.0	42.6	51.3	—	72	5, 6	28	10th	—	—	0.72	18	—	7	20th	8	4	0	0	3	2	—	9	0	4.43	—	28	
Hereford.	Bromyard	9 9 9	392	60.4	42.7	51.5	—	76	28, 29	29	9, 10	53.1	49.2	1.00	25	—	11	17th	11	5	0	0	2	3	1	8	0	—	—	—	
	Hereford	9 9 9	291	61.0	42.7	51.9	-0.5	76	28th	30	10th	—	—	1.38	35	-20	4	3rd	7	5	0	0	0	1	0	—	0	—	—	—	
	Ross-on-Wye	18-7 7	223	60.8	43.9	52.3	-1.0	77	28th	31	10th	53.6	50.7	0.73	19	-35	4	17th	10	7	0	0	1	4	1	8	0	4.68	-1.88	30	
Gloucester.	Cheltenham	2 12 1 9	214	62.1	45.0	53.5	+1.0	77	28th	33	9, 10	54.6	51.7	0.72	18	-29	5	3rd	10	6	0	0	0	2	0	2	0	4.79	—	31	
	Over Court	9 9 9	147	63.2	44.6	53.9	—	81	30th	33	10th	—	—	0.89	23	—	9	23rd	9	5	0	0	0	1	0	—	0	—	—	—	
5. ENGLAND, S.E.																															
London.	City, Bunhill Row	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.04	-0.70	32		
	Camden Square	9 9 9	110	63.0	45.8	54.4	-0.7	81	28th	36	9th	52.7	49.0	1.81	46	+ 1	9	17th	11	11	0	0	2	4	—	—	—	—	—	—	
	East Ham	9 9 9	15	61.2	45.2	53.2	—	77	28th	36	9, 15	—	—	1.92	49	—	8	3rd	11	10	—	—	—	—	—	—	—	—	—	—	
	Enfield	9 9 9	148	62.1	44.0	53.1	—	77	28th	34	9th	—	—	49.6	1.97	50	+ 5	14	21st	12	11	0	0	2	4	0	2	1	5.44	—	35
	Greenwich	2 12 1 9	149	62.4	43.7	53.1	-0.9	80	28th	35	9th	50.0	48.3	2.49	63	+ 19	15	17th	13	10	0	0	2	5	0	12	0	5.02	-1.45	32	
	Hampst'd Res.	9 9 9	450	59.4	41.3	50.3	—	75	28th	29	9th	—	—	2.39	61	—	14	18th	16	10	2	0	2	5	—	13	0	4.86	—	31	
	Kensington	18-9 9	80	61.8	45.6	53.7	—	79	28th	36	9th	53.3	51.5	2.03	51	—	10	17th	12	10	0	0	0	3	0	2	0	—	—	—	
	Regent's Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.33	—	34		
	Richmond (Kew Obs.)	2 12 1 9	18	60.8	45.1	52.9	-0.5	76	28th	35	9th	53.4	50.7	1.76	45	+ 1	11	18th	9	8	0	0	2	5	1	5	0	5.31	-1.17	34	
	Stroud Green	18-7 7	212	62.1	44.3	53.2	—	77	28th	35	9, 15	—	—	1.68	43	—	8	21st	10	10	0	0	3	5	1	0	0	—	—	—	
	Tottenham	2 12 1 9	51	61.9	45.1	53.5	-0.5	78	28th	39	9th	—	—	50.5	1.97	50	+ 8	9	21st	12	12	0	0	0	3	—	1	0	—	—	
	Westminster	9 9 9	27	62.2	46.9	54.5	+0.4	76	28th	37	9th	—	—	2.15	55	+ 14	11	18th	11	10	—	—	—	—	—	—	0	5.25	-0.36	34	
Surrey.	Addington	9 9 9	472	60.1	42.7	51.4	—	75	28th	32	9th	—	—	2.80	71	—	16	3rd	11	9	—	—	—	—	—	—	—	—	—	—	
	Croydon Aero.	18-7 7	244	60.5	44.7	52.6	—	76	28th	33	9th	—	—	2.17	55	—	11	18th	12	8	0	0	2	3	2	0	0	5.25	—	34	
	Wislej	9 9 9	150	62.6	43.1	52.9	+0.2	77	28, 29	31	9th	53.7	50.2	2.49	63	+ 24	20	17th	11	8	0	0	0	3	0	10	0	5.09	-1.56	33	
Kent.	Biggin Hill	18-7 7	597	57.7	40.3	49.0	—	73	28th	32	9th	—	—	3.08	78	—	24	3rd	15	10	0	0	1	2	2	5	0	5.59	—	36	
	Bromley	9 9 9	213	60.3	43.8	52.1	—	75	28th	35	9, 10, 19	—	—	2.36	60	—	11	3rd	12	9	—	—	—	—	—	0	2	—	—	—	
	Canterbury	9 9 9	124	59.8	43.0	51.4	—	76	28th	35	26th	53.7	50.5	2.79	71	—	15	21st	13	13	—	—	—	—	—	—	—	—	—	—	
	Dover	9 9 9	22	58.5	46.0	52.3	—	72	28, 29	38	9, 10	54.3	51.6	2.22	57	—	22	21st	13	11	0	0	1	1	0	0	0	6.33	—	41	
	Dungeness	18-7 7	20	57.0	45.0	51.0	-1.0	67	3rd	31	10th	—	—	1.85	47	+ 14	10	21st	13	10	0	0	0	2	2	0	0	—	—	—	
	East Malling	9 9 9	127	60.1	42.6	51.3	—	75	28th	31	10th	—	—	2.01	51	—	22	14th	13	10	0	0	1	3	1	9	0	5.85	—	38	
	Folkestone	9 9 9	101	59.6	45.4	52.5	—	71	3, 28	35	10th	—	—	51.7	2.93	74	—	23	21st	14	13	0	0	2	3	1	0	6.49	—	42	
	Lympe	18-7 7	347	57.4	43.9	50.7	—	74	29th	31	10th	—	—	50.1	2.60	66	—	20	21st	15	13	0	0	1	3	1	5	0	6.62	—	43
	Margate	9 9 9	51	55.9	46.6	51.3	-1.3	70	28th	41	9, 10, 11	53.7	52.0	2.37	60	+ 20	11	17th	11	10	0	0	1	3	0	0					

TABLE IV (continued).—SUMMARY of the OBSERVATIONS of PRESSURE, TEMPERATURE, HUMIDITY, CLOUD, VISIBILITY, and WIND at fixed hours at certain Stations during the Month of MAY, 1928.

Main data table with columns for District, County and Place; Hour of Observation; Mean Pressure; Temperature and Humidity; Cloud Amount; Visibility; and Wind, Number of Observations. Includes sub-sections for 2. ENGLAND, N.E., 3. ENGLAND, E., 4. MIDLAND COUNTIES, and 5. ENGLAND, S.E.

* Mean of hourly readings.

g Temperature from thermometers in a Glaisher stand.

TABLE I. DISTRICT VALUES.

The District Values of this Table are computed from the statistics for selected individual stations set out in Table III and Table IV.

The representative stations from which the District Values of rainfall and temperature are computed are indicated in Table III by the sign ¶ while the representative stations from which District Values of sunshine are computed are indicated by the sign §. The deviations from and percentages of normal for Air Temperature, Rainfall and Sunshine are the means of the corresponding deviations or percentages for the representative District Value stations. The deviations from normal of Earth Temperature are derived from the deviations for all the stations reporting in Table III for which normals of Earth Temperature are available. The highest and lowest temperatures for the District recorded during the month may refer to any station in Table III.

TABLE II. SUMMARY OF AUTOGRAPHIC RECORDS OF WIND.

The records used in the preparation of this Table are generally made by anemographs of the pressure-tube type. At a few stations the Robinson Cup Anemograph is utilised. The classification adopted for the "Distribution of Wind" is based on the specification of the Beaufort Scale of Wind Force (see *The Observer's Handbook*). For an anemograph complying with the specification "head 33 ft. above ground in the open" the several columns correspond with Force 8 and above (gales), Forces 6 and 7 (strong winds), Forces 4 and 5 (moderate winds), Forces 2 and 3 (light winds), Forces 1 and 0 (nearly calm). Some information as to the nature of the actual exposures may be gathered from the figures in the "Height" columns.

The "Highest Hourly Wind" is determined by the mean speed of the wind for a period of sixty minutes from 30 minutes before to 30 minutes after an exact hour by Greenwich Mean Time. Under the heading "Veer from N" the azimuth of the direction from which the wind was blowing is stated, the entry for an east wind being 90°, that for a south wind 180° and so on.

TABLE III. SUMMARY OF OBSERVATIONS AT TERMINAL HOURS.

Temperature.—The terminal hours of observation are given for each station. When the terminal hours for maximum and minimum temperature are stated independently the temperatures refer to intervals of 24 hours. If the maximum thermometer is read in the morning the reading is credited to the previous day. When the terminal hours for maximum and minimum are separated by a dash, thus, 18-7, the day-maximum for the period 7h. to 18h. and the night-minimum for the period 18h. to 7h. are reported and are utilised in determining the means for the month; in such cases the extreme temperatures for successive periods of 24 hours are also read by the observers, so that the absolute maximum and minimum temperatures for the month are obtained.

Except at the Royal Observatory, Greenwich, where a Glaisher stand is in use, the air temperature is obtained from thermometers placed in louvered screens. At Kew Observatory, Richmond, and Valentia Observatory these are north wall screens a few feet from the ground. At Aberdeen Observatory the north wall screen is at 41 feet. Otherwise the screens are in the open.

Rainfall.—The daily amounts are for the 24 hours beginning at the "terminal hour." "Rainfall" includes all forms of precipitation. The number of days of precipitation is counted with reference to the limit .01 inch or 0.2 mm. and also with reference to the limit .04 inch or 1 mm. The lower limit excludes mere "traces" of precipitation, but it is frequently passed on occasions when the precipitation is only dew.

Weather.—The numbers of days of Precipitation, Snow, Hail, Thunderstorms and Gale are counted irrespective of the hour at which the phenomena occur. Except for "Precipitation" the day is the civil day.

For the purpose of this summary "Snow" includes sleet (*i.e.*, snow with rain), "Hail" includes graupel (soft hail), "Snow lying" refers to occasions when at least one-half of the country surrounding the station is covered with snow at the morning observation. The entry of "fog" implies that regular observations of the range of vision are made on the scale set out below. Days of fog are those on which the range of vision is less than 1,100 yards at the hour of morning observation. That hour is given by the third entry of column 2 of the table and may be 7h. or 9h. G.M.T. The variability of the observation hour may exercise an important effect upon the statistics of fog frequency. "Thunderstorm" includes any day on which thunder is heard. "Gale" is a wind of Force 8 or upwards on the Beaufort Scale. A "ground frost" is entered when the reading of a "grass minimum" thermometer set the previous evening and read at the morning observation is 30° F. or lower.

Sunshine.—The percentage of possible sunshine is in all cases calculated with reference to the maximum duration possible in the latitude on the assumption of an unobstructed horizon, due allowance being

made for refraction (see *International Meteorological Tables* (Paris) pp. A17-A20 and 42-27). The sunshine recorder is generally insensitive to sunshine when the sun is at an altitude of 3° or less. The symbol § is entered against the percentage at some stations and indicates that obstructions of altitudes greater than 3° reduce the possible record of duration for the month by more than 5 per cent.

TABLE IV. SUMMARY OF OBSERVATIONS AT FIXED HOURS.

Mean Air Pressure is expressed in millibars. (1 millibar = 1,000 dynes per square centimetre = the pressure due to .029531 inch of mercury at 32° F. in Lat. 45°). The corrections for latitude, temperature and height have been applied to the barometer readings so as to obtain pressure at mean sea level. Barometric pressure is given at station level for a few stations at altitudes of 600 ft. or more in footnotes in Table IV.

Hygrometry.—The values given depend on the readings of the dry and wet bulb thermometers in Stevenson Screens (except at the Observatories, see above). The observations were formerly reduced by Glaisher's method; as from January, 1926 they are reduced by the new hygrometrical tables issued by the Office which are based on a formula of Regnault. In general the relative humidity and vapour pressure are derived from the monthly means of the dry and wet bulb readings. At certain stations the daily values of relative humidity and vapour pressure are found and the means are computed therefrom. These stations are indicated by the letter "H."

Cloud Amount.—The proportion of sky covered with cloud is estimated on the scale 0 to 10, the entry "0" being equivalent to clear sky "10" to overcast.

Visibility.—The observations are classified according to the following scheme—the distances, specified by international arrangement in metres, are given here in yards and miles:—

CODE.	RANGE OF VISION.
0	Less than 55 yards.
1	Exceeding 55 yards, less than 220 yards
2	" 220 " " 550 "
3	" 550 " " 1,100 "
4	" 1,100 " " 1½ miles.
5	" 1½ miles " " 2½ "
6	" 2½ " " 3½ "
7	" 3½ " " 12½ "
8	" 12½ " " 31 "
9	" 31 " "

Wind Summaries.—The estimates of wind force refer to the Beaufort Scale, and in general to the wind experienced at the time of observation. At Deerness, Cahirciveen, Richmond, Armagh, Eskdalemuir, Southport, Greenwich and Oxford the analysis refers to tabulations of autographic records. For Oxford the mean wind speed for half-an-hour centred at the hour of observation is used for conversion to "force" on the Beaufort Scale; for the remaining observatories the mean wind speed used for each observation refers to a period of one hour. In these cases winds equivalent to Force 1 are counted with the calms, whilst Forces 2 and 3 are taken together in the preceding column of the Table.

INTERPOLATED VALUES.

When the observations for any station for a month are incomplete and relevant data (e.g. records from neighbouring stations) which make it practicable to interpolate approximate values for the missing observations are available, such approximate values may be used for completing summaries for stations published in Tables III and IV. Parts of a summary obtained in this way are shown in brackets thus—(52.4).

STANDARD OF TIME.

As a rule observations are made in all parts of the British Islands according to Greenwich Mean Time, but at the following stations Local Mean Time is used for the observations summarised in Tables III and IV. The number of minutes after Greenwich Time is shown in brackets—Darwen (10), Rhayader (15), Ashburton (15), Tavistock (17), Plymouth (15), Douglas (20), Armagh (26), Balbriggan (25), Lisburn (30), Newcasttle, Co. Wicklow (30), Ballinacurra (30), Cork (34).

"Summer Time" is not used in the Monthly Weather Report, but at certain stations the hours of observation vary in the course of the year. For such stations all time entries are converted to G.M.T. before they are printed and the winter hours are given as the terminal hours in the annual tables. For the summer hours reference should be made to the appropriate months.

NORMALS.

In Table III the normals used are those for the 35 years 1881-1915. The normals of temperature and sunshine are published in the Book of Normals, Section I, those for rainfall in the Book of Normals, Section V.

The normals for pressure with which comparison is made in Table IV also refer to the period 1881-1915.

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.

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

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JUNE, 1928: Unsettled, cool, and wet.

Apart from a few days of fine, warm weather at the beginning of the month, the weather during June, 1928, was unsettled, cool and wet. In nearly all districts, the mean temperature for the month was below the normal, and in Scotland the month was, on the whole, decidedly cold. There were frequent rainy periods, particularly in Scotland, Ireland, the north-west of England and in Wales, and unusually heavy falls were recorded in several districts. Sunshine aggregates were below the normal in the south-west of England and Wales, and in southern Ireland, and appreciably above the normal in many eastern districts of England; elsewhere they approached the normal.

At the beginning of the month a ridge of high pressure over Scotland gave brilliant weather in the north on the 1st, and as the anticyclone extended its influence further south similarly fine, warm weather was experienced in most districts on the 2nd and 3rd. With the approach of a depression off our south-west coasts, rain fell in the south of England on the 4th and conditions began to deteriorate, a rapid fall in temperature which had occurred in Scotland on the 4th extending to all districts on the 5th. Thereafter a succession of depressions and associated secondaries travelling across or in the neighbourhood of the British Isles maintained unsettled weather with frequent rainy periods, occasional thunderstorms but many bright intervals.

Amongst some notably heavy falls were 49 mm. at Harrogate, which fell on the 7th and during the night of the 7th to 8th, and 57mm. at Baltasound on the 10th. Widespread heavy rain accompanied the passage of a depression across the British Isles on the 12th-14th. Measurements amounted to 48 mm. at Roches Point during the 24 hours commencing 7h. on the 12th and to 47mm. at Brighton during the 16 hours commencing 17 h. on the 13th. In many districts of England, mostly in the south-east, the temperature on the 13th rose to about 75° F. or slightly higher, but in Scotland and the northern districts of England, easterly winds which had come from northerly latitudes maintained cool conditions, day temperature on the 13th generally not exceeding 55° F. As the depression passed away north-eastwards, an anticyclone to the south-west of the British Isles extended its influence over the country and sunny weather with cool north-westerly winds were experienced from the 15th to the 17th. In England the lowest day readings were experienced generally during this period, slight ground frost occurred locally on several mornings, and in a few places some fairly sharp frosts were reported on 17th. Unsettled wet weather was renewed on the 18th and persisted until the end of the month with intervals of fine weather, notably on the 20th, during the period 22nd to 25th and on the 29th and 30th. Strong winds reaching gale force locally occurred frequently during the last few days of the period, notably on the 26th, when gales were reported from many coastal stations in the western districts of England and Wales. On the 28th more than 60 mm. of rain fell in several parts of Wales and northern England, and as much as 102 mm. at Festiniog, in Merioneth, and 110 mm. at Rosthwaite, Borrowdale.

Pressure and Winds.—After the first five or six days of the month pressure remained almost continuously low owing to the frequent passage of depressions and their associated secondaries across or in the neighbourhood of the British Isles, and in all districts monthly means of atmospheric pressure were below the normal. Winds were mostly from between south-west and north-west and were frequently strong, particularly in western districts. Gales occurred in the north of Scotland on the 11th, when a gust of 60 m.p.h. was recorded at Lerwick, and at exposed places in north-west and south-west of England and Wales on the 9th, 26th, 28th and 29th. On the 9th, Pendennis reported a wind velocity in a gust of 66 m.p.h., and St. Mary's, Scilly, one of 64 m.p.h.

Temperature.—The mean temperature for the month was below the normal in nearly all districts; the deficit was considerable in Scotland, the north-west of England and northern Ireland, and slight in eastern and southern England. For Scotland as a whole the month was almost as cold as June, 1927, which was much the coldest June for at least 60 years. Day temperatures of 70° F. and above were recorded widely on the 3rd and in England on the 4th, but on the latter date a marked fall in temperature occurred in Scotland, maximum temperature on the 4th being as much as 20° F. lower than on the 3rd. On the 5th the fall in temperature had extended to the whole of the country; at Harrogate a day maximum temperature of 49° F. on the 5th contrasted with a day maximum temperature of 70° F. on the 3rd. Fairly sharp ground frost occurred widely on the 2nd and 3rd and in Scotland on the 4th and 5th. Amongst the lowest grass minimum temperatures recorded were 24° F. at Birmingham on the 3rd and 21° F. at Renfrew on the 5th. In many parts of England temperature exceeded 70° F. on the 13th (which in most districts in eastern central and southern England was the warmest day of the month), during the period 22nd to

25th and in a few places on the 29th and 30th, but with these exceptions day temperatures generally remained below the normal, while fairly low screen minimum were recorded about the 11th and the 15th.

The extreme temperatures for the month were:—(England and Wales) 80° F. at London (Camden Square), on the 13th and 30° F. at Castleton on the 2nd, and at Marlborough on the 11th. (Scotland) 77° F. at Stirling on the 1st, and 28° F. at Balmoral, Braemar, Logie Coldstone and Thorntonhall on the 5th. (Ireland) 76° F. at Killarney on the 1st, and 35° F. at Aldergrove on the 18th, and at Markree Castle on the 20th.

Precipitation.—June, 1928, was decidedly wet and except over a few scattered districts in England, monthly totals and days of precipitation exceeded the normal. The general rainfall of the British Isles expressed as a percentage of the normal for the period 1881-1915 was 166; the values for the constituent countries were:—England and Wales, 145; Scotland, 184; Ireland, 196.

A comparison between these values and the corresponding values for previous years extending back to 1871 indicates that over the British Isles as a whole, June, 1928, was the wettest June since 1912. Over England and Wales, June, 1927, was wetter. Over Scotland the month was the wettest June since 1907, and over Ireland the month was as wet as June, 1912, being exceeded in wetness by June, 1872, and June, 1877.

In England and Wales a deficiency occurred in some eastern and central areas and in Devon and Cornwall and around the upper part of the Bristol Channel; elsewhere there was an excess which was most pronounced in western Wales and in the north and north-west of England, where more than twice the normal rainfall was recorded, largely accounted for by the heavy rain between the 6th and the 9th and about the 13th and 28th. Rather more than three and a half times the normal was recorded at Ampleforth and rather less than three and a half times the normal at Strelley during the month. The observer at Blundellsands states that with the exception of June, 1907, June, 1928, is the wettest June since records were started there in 1876.

In Scotland precipitation was everywhere above the normal; in Orkney the excess was trifling but in many districts the excess was large, and considerable areas along the Forth-Clyde belt and in the eastern and southern counties had more than twice the normal. Practically no rain fell in Scotland until the 6th and little in the north-west and north until the 9th, when heavy continuous rain became general. On the 9th many districts had more than 25 mm., and Portree, Kinlochquoich and locally in the Loch Katrine area more than 50 mm. This rain-storm lasted through a great part of the 10th. On the 13th heavy falls occurred in the south-east and south (50 mm. at Langholm), Kinlochquoich had 53 mm. on the 22nd, Inveraray 26 mm. on the 28th, and Glen Etive 51 mm. on the 30th.

In Ireland precipitation was everywhere above the normal; more than twice the normal fell over a wide belt stretching across the middle of the island and in the west extending as far north as Malin Head and over a wide strip along the south-east coast. Rain fell on most days after the 4th. In most parts of Ireland the heaviest rain was experienced on the 12th and 13th.

Snow fell on high ground in Scotland during the second week.

Few districts were free from thunderstorms, and in the east and west of Scotland and the north and east of England they occurred on several days, mostly during the second and third weeks and about the 28th.

Sunshine.—Monthly aggregates of bright sunshine were appreciably below the normal in the western and southern districts of England and Wales and in southern Ireland; elsewhere they were about or above the normal. Representative totals for district expressed as a percentage of the normal varied from 111 in England S.E. and 110 in England E. to 88 in England S.W. Considerable bright periods were experienced at fairly frequent intervals during the month. The sunniest days of the month occurred at the beginning of the month, daily amounts of sunshine exceeding 15 hr. in many places during the first four days; 16.3 hr. bright sunshine were recorded at Tiree on the 2nd. At Ross-on-Wye, the 2nd, with a record of 15.1 hr. was the sunniest day since July 11th, 1921, when a similar amount was recorded. Copdock recorded a total of 30.6 hr. on the 2nd and 3rd, which exceeds that of any two consecutive days in any month since records were started in 1913. Good sunshine records were obtained during the periods 11th to 17th, on the 19th and 20th (16.3 hr. at Tiree on the 19th), during the period 22nd-25th and on the 29th and 30th.

Fog.—Some fog was reported during the month; it occurred locally in Great Britain, mostly in coastal districts, during the first week, on the 21st, 22nd and 26th.

Miscellaneous Phenomena.—Halo phenomena were observed in many districts on various dates; solar halos were observed at Oxford on as many as 20 days and at Mayfield on 13 days.

TABLE I.—DISTRICT VALUES—JUNE, 1928. [1908, revised 1928.]

DISTRICTS	AIR TEMPERATURE.			EARTH TEMPERATURE.		RAINFALL.		SUNSHINE.	
	High-est.	Low-est.	Daily Mean. Deviation from Normal.	At 1 ft. Deviation from Normal.	At 4 ft. Deviation from Normal.	Per-centage of Normal.	No. of Days. Deviation from Normal.	Per-centage of Normal.	Per-centage of Possible Duration.
o. SCOTLAND, N.	°F. 73	°F. 32	°F. -3.1	°F. —	°F. —	% 161	+4	% 103	% 32
Eastern.									
1. SCOTLAND, E.	75	28	-3.3	—	—	223	+5	97	34
2. ENGLAND, N.E.	75	30	-2.4	-2.5	-1.0	190	+6	105	37
3. ENGLAND, E...	76	33	-1.1	-1.5	-1.5	128	+2	110	46
4. MIDLAND COUNTIES	77	33	-1.9	-1.9	-0.8	125	+5	103	39
5. ENGLAND, S.E.	80	30	-1.3	-0.6	+0.1	117	+5	111	47

DISTRICTS	AIR TEMPERATURE.			EARTH TEMPERATURE.		RAINFALL.		SUNSHINE.	
	High-est.	Low-est.	Daily Mean. Deviation from Normal.	At 1 ft. Deviation from Normal.	At 4 ft. Deviation from Normal.	Per-centage of Normal.	No. of Days. Deviation from Normal.	Per-centage of Normal.	Per-centage of Possible Duration.
Western.	°F.	°F.	°F.	°F.	°F.	%		%	%
6. SCOTLAND, W. (& I. of Man)	77	28	-4.1	—	-1.9	206	+7	98	33
7. ENGLAND, N.W. (& N. Wales)	78	33	-2.7	-2.3	-1.3	204	+9	92	37
8. ENGLAND, S.W. (& S. Wales)	75	32	-0.7	-1.2	-0.6	137	+6	88	36
9. IRELAND, N...	73	35	-2.5	-1.1	-0.3	193	+7	105	35
10. IRELAND, S...	76	36	-1.8	-0.5	-0.6	212	+8	91	33
11. CHANNEL I. (& Scilly)	75	43	-0.8	+1.1	+0.5	120	0	101	49
Mean : DISTRICTS 1-10	80	28	-2.2	-1.5	-0.9	173	+6	100	38

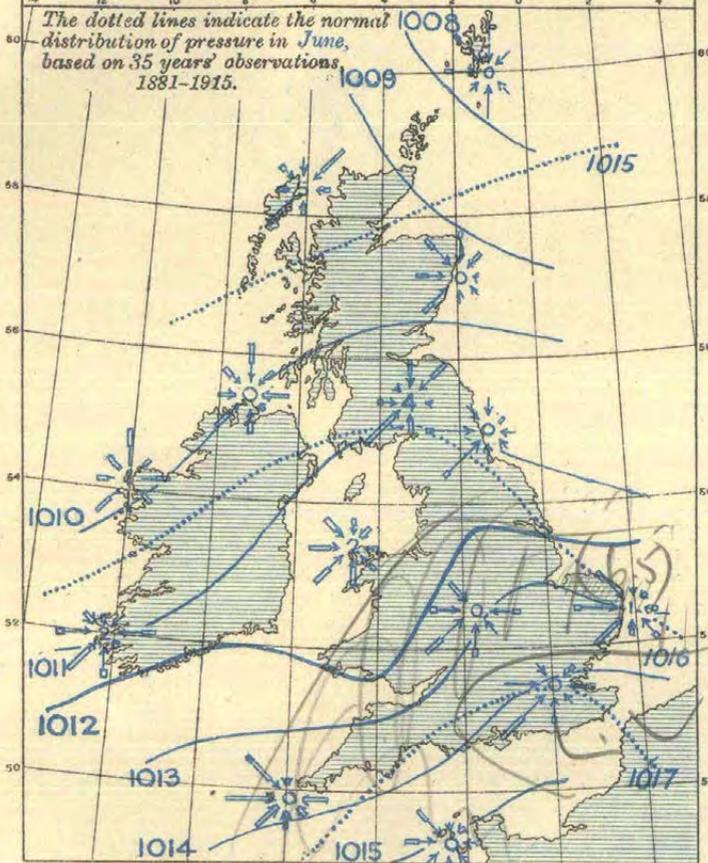
TABLE II.—SUMMARY OF AUTOGRAPHIC RECORDS OF WIND.—JUNE, 1928. [1914.]

DISTRICT AND STATION.	Height.			Distribution of Wind.††								Extreme Velocities.									
	Above Mean Sea Level.	Above Ground.	Above Building.	More than 38 mi/hr.		25 to 38 mi/hr.		13 to 24 mi/hr.	4 to 12 mi/hr.	Less than 4 mi/hr.	No Record.	Highest Hourly Wind.			Highest Gust.						
				Dates of Occurrence.	Duration.	No. of Days.	Duration.	Duration.	Duration.	Duration.	Duration.	Veer from N.	Speed.	Mid Time.	Speed.	Time.					
o. SCOTLAND, N.	ft.	ft.	ft.		hr.	hr.	hr.	hr.	hr.	hr.	°	mi/hr.	m/s.	day. hr.	mi/hr.	m/s.	d. h. m.				
Shetlands Lerwick ..	310	42	33†	11	3	6	70	279	309	48	11	300	40	18	11	10	60	27	11	9	0
Orkneys Deerness (Cup Anr.)	188	16	5	—	0	7	40	344	297	39	0	250	34	15	30	18	—	—	—	—	—
1. SCOTLAND, E.																					
Aberdeen Aberdeen ..	70	42	33†	—	0	—	0	244	400	76	0	300	22	10	16	12	40	18	16	11	25
Kincardine Balmakewan ..	140	25	18	—	0	—	0	83	(409)	(228)	0	250	24	11	29	15	42	19	29	15	0
Edinburgh Edinburgh ..	485	39	31†	—	0	4	15	289	304	112	0	260	27	12	30	7	48	21	29	4	5
6a. SCOTLAND, W.																					
Argyll Tiree ..	80	55	48†	—	0	9	94	401	196	29	0	270	35	16	30	1	55	25	30	3	20
Renfrew Paisley ..	188	81	15	—	0	—	0	139	432	149	0	210	20	9	23	3	46	21	22	13	30
Dumfries Eskdalemuir ..	825	50	22	—	0	8	72	295	247	106	0	240	32	15	30	1	48	21	30	0	25
2. ENGLAND, N.E.																					
Durham South Shields ..	62	46	20	—	0	4	17	249	331	123	0	10	36	16	14	9	49	22	10	16	35
York, E.R. Spurn Head ..	67	42	35†	—	0	14	95	423	184	18	0	350	38	17	14	14	56	25	26	19	35
Lincoln Cranwell ..	284	44	26†	—	0	4	16	281	330	93	0	230	27	12	9	17	48	21	9	20	20
3. ENGLAND, E.																					
Norfolk Gorleston ..	52	42	33†	—	0	6	28	269	379	44	0	210	30	13	29	16	47	21	29	16	40
Suffolk Felixstowe Aero. ..	55	40	25	—	0	6	30	319	(282)	(89)	0	220	33	15	26	13	45	20	26	13	10
Essex Shoeburyness ..	115	104	14†	—	0	3	13	152	289	266	0	—	27	12	26	12	40	18	29	16	35
4. MIDLAND COUNTIES.																					
Warwick Birmingham ..	643	118	18	—	0	2	5	269	398	48	0	300	25	11	26	19	50	22	9	19	55
5. ENGLAND, S.E.																					
Surrey Richmond (KewObs)	82	65	22	—	0	3	5	187	406	122	0	90	27	12	2	11	45	20	29	15	40
Surrey Croydon ..	284	40	24	—	0	7	37	348	286	49	0	220	34	15	29	15	56	25	29	14	55
Kent Dover ..	61	32	22	—	0	7	63	298	289	70	0	—	37	17	26	16	56	25	26	13	30
Kent Lympne ..	409	70	55†	—	0	6	30	272	395	22	1	220	33	15	26	14	51	23	26	12	15
Hampshire S. Farnboro' (Tower)	444	160	14	—	0	4	9	238	(416)	57	0	220	27	12	29	15	47	21	9	17	50
Hampshire Calshot ..	55	45	31†	—	0	10	83	374	(243)	(20)	0	220	35	16	26	10	49	22	26	12	35
Hampshire Worthy Down ..	314	43	27†	—	0	2	5	226	395	94	0	200	27	12	9	16	54	24	9	16	15
Wiltshire Larkhill ..	526	51	34†	—	0	5	49	356	(271)	(44)	0	210	38	17	9	19	49	22	9	15	40
7a. ENGLAND, N.W.																					
Lancashire Fleetwood ..	112	50	12	—	0	12	56	336	247	81	0	310	35	16	26	19	46	21	26	18	50
Lancashire Southport ..	77	59	45†	26	2	15	149	328	219	22	0	320	40	18	26	20	51	23	29	17	40
7b. NORTH WALES.																					
Anglesey Holyhead ..	64	45	29†	—	0	13	83	358	225	54	0	70	37	17	4	18	54	24	9	19	40
Flint Sealand ..	81	65	49†	—	0	3	19	246	361	94	0	300	36	16	26	19	56	25	26	16	15
8b. ENGLAND, S.W.																					
Devon Plymouth ..	185	88	2	—	0	7	46	259	317	84	14	—	38	17	9	17	53	24	2	11	45
Cornwall Pendennis Castle ..	256	65	24	2, 9, 28	17	13	146	325	199	33	0	—	52	23	9	17	66	29	9	17	10
9. IRELAND, N.																					
Donegal Dunfanaghy ..	180	47	39	—	0	6	64	236	299	121	0	—	37	17	29	9	57	25	22	13	25
Antrim Aldergrove ..	282	40	27†	—	0	1	2	236	408	74	0	210	25	11	22	15	46	21	10	12	40
10. IRELAND, S.																					
Dublin Kingstown (Cup Anr.)	49	27	16	—	0	8	57	381	246	36	0	—	32	14	26	12	44	19	26	9	5
Clare Quilty ..	100	40	32†	—	0	8	63	375	252	29	0	350	39	17	26	4	58	26	26	3	45
Kerry Cahirciveen (Val. O.)	98	41	34†	—	0	10	48	367	269	36	0	—	35	16	26	7	58	26	26	5	55
Cork Weaver Pt. ..	160	30	21†	—	0	10	48	367	269	36	0	—	35	16	26	7	58	26	26	5	55
11. SCILLY ISLES.																					
St. Mary's ..	160	42	35†	9, 26	14	18	170	450	84	2	0	220	47	21	9	15	64	29	9	14	45

†† Brackets () indicate that the distribution as between winds above and below 4 mi/hr. is doubtful, but the total number of hours with winds below 12 mi/hr. is reliable.
 † Standard mounting.

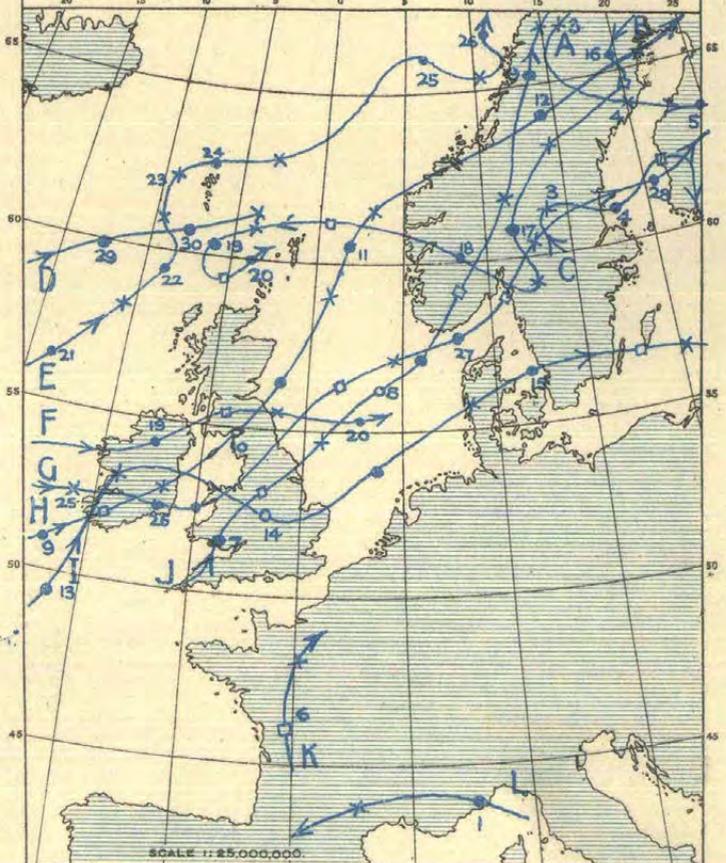
LV A.M.L. 46.

1. WIND AND MEAN PRESSURE. 7 A.M.



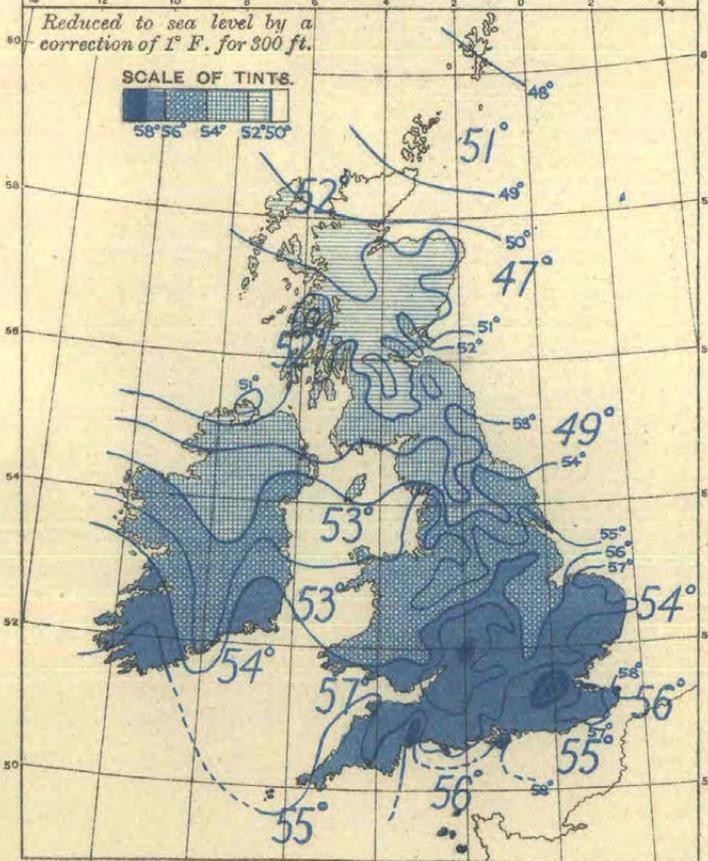
WIND ROSES. The arrows fly with the wind and indicate frequency and force, thus:
 LIGHT TO BRISK GALE
 30 OBS. 1 INCH

2. MOVEMENTS OF DEPRESSIONS.



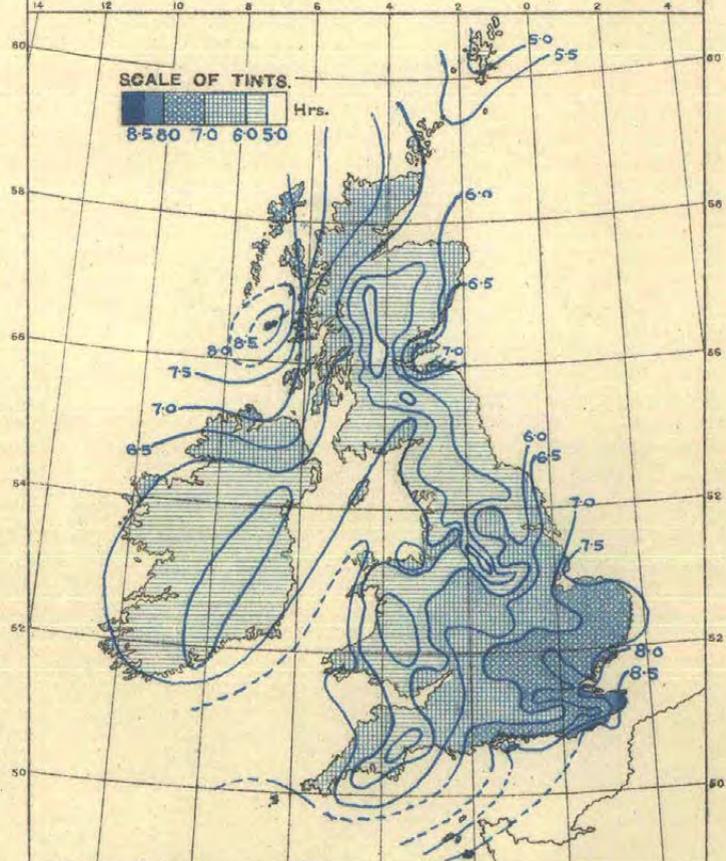
Positions of centres are shown thus: -O at 1hr; ● at 7h; □ at 13h; X at 18h.

3. DISTRIBUTION OF MEAN TEMPERATURE.

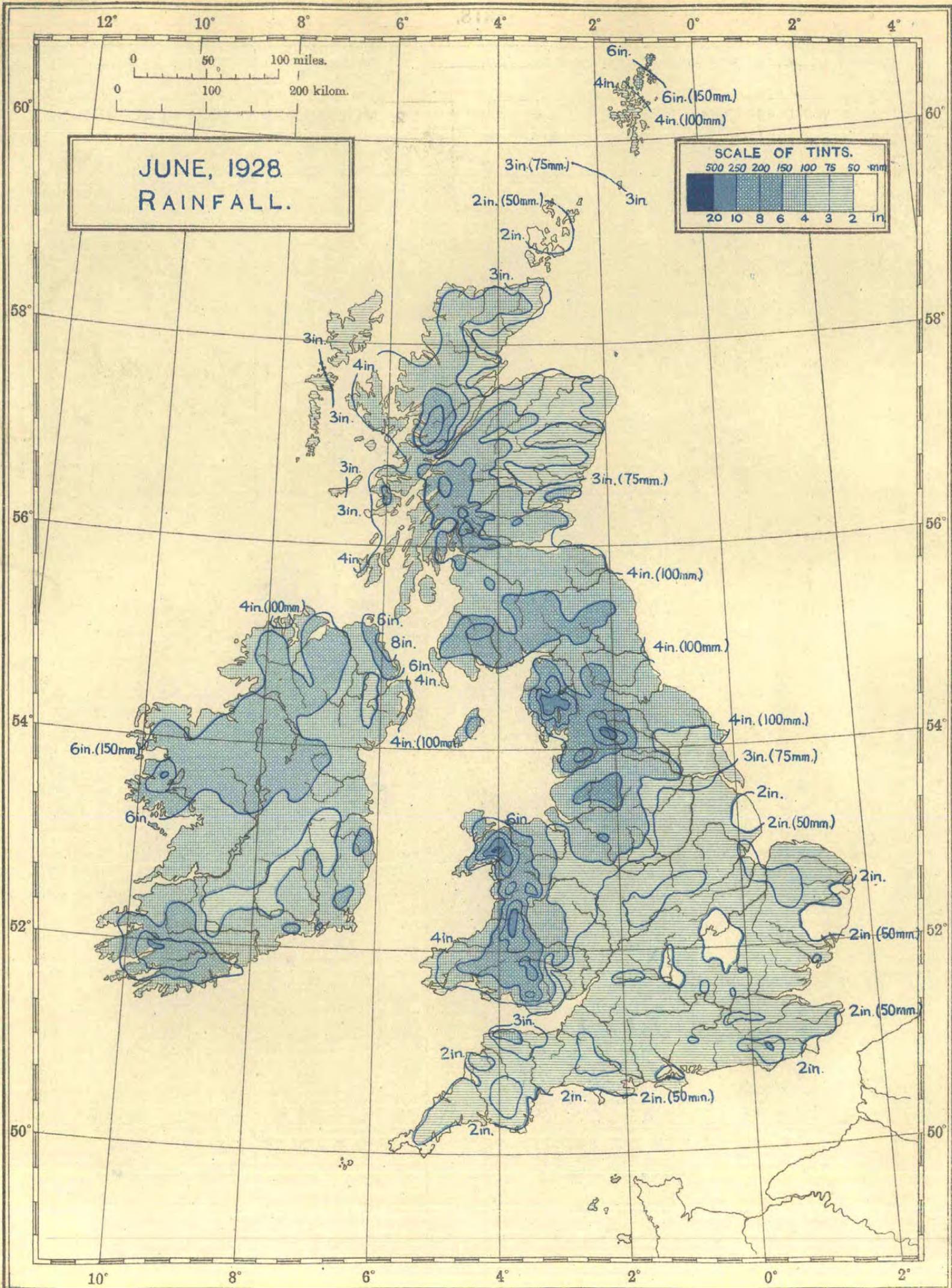


Sea temperatures are shown in large figures, thus 55°

4. BRIGHT SUNSHINE, HOURS PER DAY.



* The pressure is expressed in millibars.



Scale 1 : 5,000,000.

Ps. 1371/1732. No. 101A. D. 25. 1125. 7/28.

The equivalent values in mm. are given in round numbers. The exact relation is 10 in. = 254 mm.

TABLE III.—SUMMARY OF THE RECORDS OF TEMPERATURE, RAINFALL AND SUNSHINE, and of WEATHER OBSERVATIONS, JUNE, 1928.

DISTRICT, COUNTY AND PLACE.	Terminal Hours of Observation.			Height of Station above Mean Sea Level.	AIR TEMPERATURE IN DEGREES FAHRENHEIT.								Earth Temperature.		RAINFALL.				WEATHER. Number of days.							BRIGHT SUNSHINE.				
	Max.	Min.	Rain.		Means of		Deviation from Normal.	Absolute Maximum and Minimum.			1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Most in a day.		Precip'n.		Snow lying.	Hail.	Thunderstorm.	Fog (Morning Obs.)	Ground Frost.	Gale.	Hours per day.					
					A	B		Maximum.	Date.	Minimum.					Date.	Amount.	Date.	0.2 mm. or more.							1 mm. or more.	Daily Mean.	Deviation from Normal.	Per Cent.		
	°F.	°F.	°F.		°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	in.	mm.	mm.	mm.	10th	25	19	0	0	3	1	2	—	—	hr.	hr.	%	
0. SCOTLAND, N.																														
Shetlands.	Baltasound	9 9 9	31	52.2	43.1	47.7	—	58	23rd	37	5th	49.9	—	6.32	161	—	57	10th	18	8	0	0	0	0	1	—	1	4.61	—	24
	Lerwick	18-7 7	54	52.2	43.9	48.1	-1.4	61	2nd	39	5, 9, 13, 14	—	—	8.69	94	+ 49	27	11th	21	13	0	0	2	0	1	—	1	5.48	-0.35	29
Orkneys.	Deerness	2121 9	160	52.6	43.5	48.1	-2.6	59	22nd	38	14th	—	—	1.90	48	+ 1	16	10th	18	8	0	0	0	0	1	—	0	5.75	+0.45	32
	Kirkwall	9 9 9	151	52.3	43.5	47.9	—	62	22nd	37	5th	—	—	1.90	48	—	13	10th	16	12	0	0	1	0	0	0	2	6.00	—	33
Hebrides.	Skallary	9 9 9	20	55.6	46.1	50.9	—	65	1st	41	12th	—	—	2.25	57	—	11	28th	19	13	0	0	0	0	—	—	—	—	—	
	Stornoway	18-7 7	30	55.0	43.2	49.1	-3.3	61	1, 2	34	13th	—	—	3.30	84	+ 25	11	9th	22	16	0	0	1	0	0	—	0	7.12	+1.19	40
Caithness.	Wick	18-7 7	81	52.2	43.3	47.7	-4.1	64	22nd	35	13th	—	—	3.19	81	+ 35	22	10th	23	14	0	0	1	0	0	—	0	—	—	
	Achnashellach	9 9 9	225	56.9	42.5	49.7	-3.6	71	2nd	32	12th	—	—	6.01	153	+ 48	27	9th	20	19	0	0	0	0	0	9	0	6.10	—	34
Ross & Cromarty.	Fortrose	9 9 9	69	58.2	44.3	51.3	—	66	24th	35	12th	—	—	2.61	66	—	33	9th	21	11	0	0	0	0	0	—	0	—	—	
	Strathpeffer	9 9 9	125	59.2	43.4	51.3	-3.5	73	3rd	36	5th	—	—	2.57	65	+ 19	21	9th	18	13	0	0	0	0	—	—	—	—		
Inverness.	Ft. Augustus	9 9 9	68	56.9	43.4	50.1	-4.2	72	3rd	35	20th	—	—	3.44	87	+ 35	32	9th	16	12	0	0	1	0	0	—	0	4.34	-0.26	25
	Inverness	9 9 9	242	56.3	44.3	50.3	-4.2	68	21st	35	5th	—	—	3.42	87	+ 40	38	9th	20	12	0	0	1	0	0	1	0	5.81	-0.22	33
1. SCOTLAND, E.																														
Nairn.	Nairn	18-7 7	82	57.1	43.7	50.4	-3.8	67	2nd	34	12th	—	—	2.90	74	+ 29	26	9th	17	14	1	0	2	0	0	—	1	5.54	-0.31	31
Elgin.	Gordon Castle	2121 9	104	58.4	43.5	50.9	-3.6	70	1st	34	12th	—	—	3.57	91	+ 39	31	9th	19	11	0	0	0	0	—	—	0	5.94	—	33
Banff.	Banff	9 9 9	130	55.3	45.1	50.2	—	67	22nd	39	12th	—	—	2.71	69	—	15	10th	20	12	0	0	0	0	0	0	0	6.11	—	34
Aberdeen.	Aberdeen	242424	44	55.9	45.1	50.5	-2.4	65	24th	40	5th	—	—	48.7	3.28	83	+ 40	25	26th	16	14	0	0	1	0	0	0	6.36	+0.23	36
	Balmoral	9 9 9	927	55.5	39.7	47.6	—	71	2nd	28	5th	—	—	2.88	73	+ 30	23	9th	20	15	0	0	0	0	—	2	0	—	—	
Braemar.	Braemar	2121 9	120	55.5	38.4	46.9	-5.7	71	2, 3	28	5th	—	—	2.96	75	+ 25	24	9th	22	18	0	0	0	1	—	4	0	—	—	
	Craibstone	9 9 9	300	55.7	43.1	49.4	—	66	2nd	37	5, 15	51.6	48.6	3.04	77	—	14	9th	17	16	0	0	1	0	0	0	6.86	—	39	
Kincardine.	Logie Coldstone	9 9 9	608	57.2	41.0	49.1	—	72	2nd	28	5th	—	—	2.60	66	+ 16	13	9th	19	13	0	0	0	0	6	9	0	—	—	
	Stonehaven	9 9 9	93	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Forfar.	Arbroath	2121 9	93	58.1	43.3	50.7	—	67	2nd	32	5th	—	—	4.60	117	—	21	9th	17	14	0	0	3	3	0	5	0	6.51	—	37
	Carnoustie	9 9 9	39	57.9	43.2	50.5	—	68	2nd	34	5th	—	—	4.20	107	—	22	9th	21	18	0	0	3	1	—	—	0	5.97	—	34
Dundee (E. Nec.).	Dundee (E. Nec.)	2121 9	198	58.0	44.1	51.1	-4.3	73	2nd	36	5th	—	—	4.08	104	+ 58	21	9th	20	18	0	0	0	1	—	—	—	—	—	
	Mayfield	9 9 9	147	59.4	44.3	51.9	-3.8	73	2nd	37	5th	51.4	—	4.11	104	+ 61	21	9th	19	19	0	0	1	2	—	0	1	5.99	-0.57	34
Kettins.	Kettins	9 9 9	218	58.5	42.3	50.4	—	73	2nd	32	5th	54.5	—	3.08	78	—	23	9th	17	12	0	0	1	0	1	0	0	—	—	
	Montrose	9 9 9	16	56.9	43.2	50.1	—	69	2nd	35	19th	—	—	2.85	73	—	18	9th	19	14	0	0	0	2	0	—	0	6.16	—	35
Perth.	Crieff	2121 9	478	57.4	42.2	49.8	-6.2	74	3rd	33	5th	—	—	4.46	113	+ 46	38	9th	19	15	0	0	0	0	—	—	—	—	—	
	Perth	9 9 9	76	60.2	43.9	52.1	-3.6	75	2nd	31	5th	—	—	3.68	93	+ 43	32	9th	20	16	0	0	2	0	—	—	1	6.53	—	37
Fife.	Cupar	9 9 9	210	58.3	43.8	51.1	—	71	2nd	32	5th	—	—	4.93	125	—	21	9th	21	16	0	0	2	0	—	—	0	—	—	
	Inchkeith	18-7 7	190	55.8	46.7	51.3	—	69	2nd	41	18th	—	—	4.05	103	—	19	9th	17	14	0	0	2	2	2	0	1	6.95	—	40
Kirkcaldy.	Kirkcaldy	9 9 9	66	59.1	45.4	52.3	—	74	2nd	37	5th	—	—	5.24	133	—	27	9th	20	15	—	—	—	—	—	—	—	—	—	
	Leuchars	18-7 7	40	57.6	43.4	50.5	—	70	2nd	32	5th	—	—	3.75	95	—	24	9th	21	16	0	0	1	2	0	1	0	6.31	—	36
St. Andrews.	St. Andrews	9 9 9	20	58.2	44.4	51.3	—	72	2nd	35	5th	53.0	50.2	3.93	100	—	22	9th	18	15	0	0	1	1	0	0	0	6.13	—	35
	Bangour	2121 9	587	57.1	42.1	49.6	—	71	6th	29	5th	—	—	5.17	131	—	23	13th	22	16	0	0	1	3	0	—	—	—	—	
Linlithgow.	Blackford Hill	2121 9	441	57.4	44.4	50.9	-3.1	70	3rd	38	5th	—	—	5.18	131	+ 84	22	13th	21	17	0	0	1	1	—	2	2	6.33	+0.20	36
	Boghall	9 9 9	645	56.8	43.4	50.1	—	71	3rd	34	5th	52.3	50.8	5.35	136	—	29	13th	19	16	0	0	1	2	—	1	3	6.27	—	36
Edinburgh.	Edin. Univ.	9 9 9	227	58.9	46.8	52.9	—	69	2nd	41	5, 18	53.2	51.0	4.36	111	+ 62	21	13th	20	15	—	—	—	—	—	—	—	—	—	
	Liberton	9 9 9	190	58.7	—	—	—	71	2nd	—	—	—	—	4.98	127	—	22	13th	19	15	0	0	1	1	—	—	—	—	—	
Haddington.	N. Berwick	9 9 9	152	58.8	44.9	51.9	—	71	3rd	40	5, 18	—	—	3.78	96	—	16	13th	16	13	0	0	0	1	0	0	3	7.16	—	41
	Smeaton	9 9 9	100	61.0	43.2	52.1	—	73	2nd	36	18th	53.0	—	4.34	110	+ 65	22	13th	18	16	0	0	1	2	1	0	0	—	—	
Berwick.	Marchmont	9 9 9	498	58.0	43.3	50.7	-3.2	70	2nd	36	18th	—	—	5.39	137	+ 78	33	13th	21	16	0	0	0	3	—	—	0	5.58	-0.65	32
	West Linton	9 9 9	770	57.3	40.2	48.7	-3.8	70	3rd	29	5th	—	—	4.88	124	—	19	22nd	24	21	0	0	4	5	—	3	3	—	—	
Peebles.	West Linton	9 9 9	770	57.3	40.2	48.7	-3.8	70	3rd	29	5th	—	—	4.88	124	—	19	22nd	24	21	0	0	4	5	—	3	3	—	—	
	Roxburgh.	Kelso (Br/ml'ds)	9 9 9	195	60.2	44.6	52.4	—	74	3rd	37	6, 18	—	—	2.93	74	+ 20	10	9th	19	15	0								

TABLE III (continued).—SUMMARY OF THE RECORDS OF TEMPERATURE, RAINFALL and SUNSHINE and of WEATHER OBSERVATIONS, JUNE, 1928.

DISTRICT, COUNTY AND PLACE.	Terminal Hours of Observation.	Height of Station above Mean Sea Level.	AIR TEMPERATURE IN DEGREES FAHRENHEIT.								Earth Temperature.		RAINFALL.				WEATHER. Number of days.								BRIGHT SUNSHINE.					
			Means of				Absolute Maximum and Minimum.				1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Most in a day.		Precip'n. 0.2 mm. or more.	1 mm. or more.	Snow.	Snow lying.	Hail.	Thunderstorm.	Fog (Morning Obs.)	Ground Frost.	Gale.	Hours per day.		Per Cent.		
			A	B	Mean of A and B.	Deviation from Normal.	Maximum.	Date.	Minimum.	Date.					Amount.	Date.										0.2 mm. or more.	1 mm. or more.		Daily Mean.	Deviation from Normal.
			Max.	Min.	Rain.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	
5. ENGLAND, S.E.—cont.			G.M.T.	ft.	°F.	F°.	°F.	°F.	°F.	F.	°F.	°F.	in.	mm.	mm.	mm.											hr.	hr.	%	
Hampshire	Calshot	18-7 7	8	64.4	50.6	57.5	—	71	6th	43	15th	—	—	1.93	49	—	17	13th	17	9	0	0	1	1	0	1	1	7.61	—	46
<i>—cont.</i>	Grayshott	9 9 9	661	63.0	47.0	55.0	-1.5	72	13, 25	39	15th	54.5	—	2.85	73	+ 16	17	13th	17	12	0	0	0	1	0	0	2	7.71	+0.58	47
	Long Sutton	9 9 9	479	64.8	46.7	55.7	—	72	13th	36	3rd	58.5	—	2.65	67	—	17	13th	15	13	0	0	1	0	0	0	2	5.54	—	34
	Southamp'n	2121 9	64	65.1	50.2	57.7	-2.1	72	13th	42	12th	—	—	2.33	59	+ 8	15	13th	19	10	0	0	0	0	0	0	1	7.30	+0.23	44
	S. Farnboro'	18-7 7	230	65.9	46.8	56.3	—	75	13th	33	17th	—	—	2.30	59	—	13	13th	17	10	0	0	2	1	0	0	7.54	—	46	
	Winchester	18-7 7	272	64.3	47.0	55.7	—	72	13th	36	12th	—	—	2.70	69	—	14	8th	16	13	0	0	0	0	0	4	6.73	—	41	
	(Worthy Down)																													
I. of Wight.	Newport	9 9 9	48	66.8	48.9	57.9	—	75	25th	38	12th	—	—	2.68	68	—	27	13th	15	13	0	0	0	1	0	0	0	—	—	—
	Ryde	9 9 9	13	64.1	52.0	58.1	—	69	13, 20, 25	45	12, 17	—	—	1.99	51	—	23	13th	14	7	0	0	0	0	0	0	2	7.91	—	49
	Sandown	9 9 9	13	63.1	50.5	56.8	—	69	20th	36	12th	—	—	2.55	65	—	29	13th	18	10	0	0	0	0	0	0	0	8.02	—	49
	Totland Bay	9 9 9	140	62.2	50.6	56.4	-1.4	69	20th	43	17th	—	—	2.00	51	+ 4	17	13th	12	9	0	0	0	1	0	0	1	7.13	-0.40	44
	Ventnor																													
	(Hospital)	9 9 9	59	62.5	51.9	57.2	-1.4	67	13, 25	44	15th	—	—	2.37	60	+ 13	26	13th	14	9	—	—	—	—	—	—	7.69	+0.59	47	
Wilts.	Larkhill	9 9 9	440	63.5	47.0	55.3	—	73	13th	37	12th	—	—	1.94	49	—	9	8th	18	12	0	0	0	0	0	3	2	—	—	
	Marlboro'	9 9 9	424	64.3	45.9	55.1	-1.7	74	13th	30	11th	58.1	54.3	2.09	53	- 8	16	13th	16	9	0	0	0	0	0	2	6.88	+0.75	42	
	Porton	9 9 9	363	64.1	46.2	55.1	—	71	25th	37	12, 15	57.2	—	2.75	70	—	15	19th	17	12	0	0	1	0	0	2	6.82	—	42	
7a. ENGLAND, N.W.																														
Cumberland.	Aspatria																													
	(Mealsgate)	2121 9	487	57.5	43.9	50.7	-5.3	68	2nd	36	18th	53.1	50.2	5.26	134	+ 69	28	13th	24	18	0	0	1	0	—	3	5.76	-1.07	34	
	Keswick	9 9 9	254	59.6	46.0	52.8	—	71	2nd	36	18th	53.8	50.5	6.64	169	—	56	28th	20	16	0	0	5	0	0	3	5.46	—	32	
	Newton Rigg	2121 9	559	59.5	43.4	51.5	-4.2	71	1, 3	33	5th	—	—	5.40	137	+ 81	38	13th	23	19	0	0	0	0	0	7	5.85	-1.02	34	
Lancashire.	Blundellsands	9 9 9	34	61.6	51.3	56.5	—	70	2, 3, 6	44	2nd	56.9	53.5	4.88	124	—	24	13th	20	12	0	0	0	1	—	0	1	—	—	
	Bolton	9 9 9	341	61.5	43.5	52.5	—	73	3rd	37	15th	55.1	51.8	6.58	167	—	37	28th	23	16	0	0	0	2	—	0	5.23	—	31	
	Burnley	9 9 9	458	60.1	45.7	52.9	—	73	3rd	34	15th	54.5	50.8	6.01	153	—	23	28th	23	20	0	0	1	2	0	2	5.43	—	32	
	Darwen	2121 9	724	60.3	45.8	53.1	—	73	3rd	39	15th	54.9	50.5	7.31	186	—	43	28th	23	17	0	0	1	2	0	0	5.34	—	32	
	Hutton	9 9 9	82	61.3	46.8	54.1	—	70	3rd	36	15th	55.3	51.9	6.01	153	—	28	28th	21	18	0	0	0	2	0	0	6.11	—	36	
	Lancaster	9 9 9	311	60.5	48.4	54.5	—	71	3rd	41	15th	56.1	52.8	7.48	190	—	51	28th	23	18	0	0	0	2	0	0	5.77	—	34	
	Leyland	9 9 9	124	61.2	46.4	53.8	—	71	3rd	35	15th	—	—	5.48	139	—	26	28th	22	16	0	0	0	2	0	0	5.90	—	35	
	Manchester																													
	(Whitworth Pk)	2121 9	125	62.4	48.1	55.3	-3.1	74	3rd	39	15th	—	—	5.32	135	+ 68	21	7th	21	18	—	—	—	—	—	—	5.67	+0.24	34	
	(Oldham Road)	2121 9	190	63.5	49.1	56.3	-2.8	77	3rd	42	15th	56.0	53.7	5.81	148	+ 80	25	7th	22	16	0	0	1	1	—	0	5.01	-0.69	30	
	(Swinton)	9 9 9	253	61.9	46.5	54.2	—	73	3rd	38	17th	—	53.5	5.67	144	—	24	29th	20	17	0	0	2	3	0	0	—	—	—	
	Southport	9 9 9	37	60.6	49.2	54.9	-1.9	69	2nd	42	3rd	59.1	56.4	4.86	123	+ 68	28	28th	21	13	0	0	1	1	0	0	1	6.47	-0.76	38
	Stonyhurst	9 9 9	377	59.5	46.4	52.9	-3.4	71	3rd	37	15th	—	—	7.47	190	+112	34	28th	22	19	0	0	2	3	1	0	1	6.04	-0.13	36
Cheshire.	Hoylake	9 9 9	30	62.5	48.6	55.5	-2.3	69	3rd	41	3rd	—	—	4.76	121	+ 68	35	13th	17	16	—	—	—	—	—	—	6.71	-0.02	40	
	Liverpool	18-7 7	189	60.2	49.5	54.9	-2.4	69	3rd	43	17th	—	—	4.12	105	+ 49	21	13th	17	12	0	0	0	1	0	0	0	6.24	—	37
	(Bidston)																													
	Macclesfield	9 9 9	500	62.3	46.4	54.3	-2.0	74	3rd	37	15th	—	—	5.05	128	+ 58	25	29th	20	16	0	0	0	4	0	—	0	—	—	
	West Kirby	9 9 9	25	62.4	48.6	55.5	—	69	1, 2	41	3rd	—	—	4.52	115	—	30	13th	19	14	0	0	3	3	0	0	2	6.82	—	41
7b. NORTH WALES.																														
Flint.	Hawarden B'ge	9 9 9	22	63.3	49.6	56.5	-1.5	73	3rd	42	2nd	—	—	3.83	97	+ 47	22	7th	20	16	—	—	—	—	—	—	—	—	—	
	Rhyl	9 9 9	30	62.2	48.6	55.4	-1.6	71	3, 4	37	17th	—	—	3.78	96	+ 47	21	13th	22	16	0	0	0	2	0	—	0	6.50	-0.57	38
	Sealand	18-7 7	16	62.5	47.8	55.1	-1.6	72	3rd	35	17th	56.3	53.5	3.44	87	+ 33	19	7th	19	15	0	0	0	1	0	3	1	5.90	-0.29	35
Anglesey.	Holyhead	18-7 7	26	58.3	50.8	54.5	-1.3	66	6th	47	17th	—	—	4.06	103	+ 48	17	13th	23	17	0	0	0	0	0	0	2	6.68	-0.47	40
Denbigh.	Colwyn Bay	9 9 9	81	61.3	50.4	55.9	—	69	2nd	44	17th	—	—	4.28	109	—	19	9, 13	22	15	0	0	0	0	0	—	0	5.62	—	33
Carnarvon.	Aber (Bangor)	9 9 9	60	60.7	49.7	55.2	—	71	3rd	44	21st	—	—	7.53	191	—	53	28th	21	20	0	0	0	0	—	0	1	5.62	—	33
	Llandudno	9 9 9	22																											

TABLE IV.—SUMMARY of the OBSERVATIONS of PRESSURE, TEMPERATURE, HUMIDITY, CLOUD, VISIBILITY and WIND at fixed hours at certain Stations during the Month of JUNE, 1928.

DISTRICT, COUNTY AND PLACE.	Hour of Observation.	Height of Barometer above Mean Sea Level.	MEAN PRESSURE.		TEMPERATURE AND HUMIDITY.				CLOUD AMOUNT.					VISIBILITY.									WIND, NUMBER OF OBSERVATIONS.																
			At Mean Sea Level.	Deviation from Normal.	Dry Bulb.	Depression of Wet Bulb.	Vapour Pressure.	Relative Humidity.	Mean Amount.	NO. OF OBSERVATIONS.					NUMBER OF OBSERVATIONS.									FORCE (0-12).				DIRECTION.											
										0	1 to 3	4 to 6	7 to 9	10	FOG.			MIST.	POOR VIS.	MOD. VIS.	GOOD VISIBILITY.			8 or more.	4 to 7	1 to 3	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.				
			0	1	2	3	4	5	6	7	8	9	8 or more.	4 to 7	1 to 3	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.															
0. SCOTLAND, N.																																							
Shetlands. Lerwick	G.M.T.	ft.	mb.	mb.	°F.	°F.	mb.	%																															
	1	59	1008.1	—	45.4	1.5	8.9	87	7.6	0	4	3	18	5	0	0	0	0	0	0	0	0	0	5	25	0	0	6	20	4	9	2	1	2	1	5	2	4	6
	7	59	1007.2	—	47.4	2.6	8.8	80	7.9	0	2	6	12	10	0	0	0	1	1	0	0	0	5	23	0	1	1	28	0	6	3	0	3	5	2	5	6	4	
	13	59	1007.1	—	50.2	3.3	9.4	77	7.4	0	4	2	20	4	0	0	0	0	0	0	0	0	6	24	0	1	4	24	1	4	4	0	2	4	4	2	9	2	
18	59	1006.8	—	49.4	3.2	9.0	77	7.7	0	2	3	21	4	0	0	0	0	0	0	0	0	9	21	0	0	6	23	1	7	3	0	1	6	4	2	6	6		
Orkneys. Deerness	9	165	1008.8	—	49.0	2.6	9.6	81	7.6	0	2	7	13	8	0	0	1	0	0	0	0	1	14	14	0	22	7	1	6	2	2	2	3	2	4	8	8		
	21	165	1008.8	—	46.8	1.3	9.9	90	6.5	0	4	12	7	7	0	0	0	0	1	0	4	18	7	0	13	14	3	6	2	0	2	3	1	6	7	7			
Hebrides. Stornoway	7	41	1009.3	-5.2	49.1	2.5	9.7	82	7.3	3	0	5	16	6	0	0	0	0	0	5	19	6	0	0	13	12	5	3	7	2	0	2	6	2	3	3			
	13	41	1009.2	—	52.8	3.9	10.2	75	7.5	2	2	1	18	7	0	0	0	0	1	2	11	13	3	0	14	13	3	4	5	4	1	2	2	4	5	7			
	18	41	1009.2	—	51.9	4.1	9.5	72	6.7	3	1	6	15	5	0	0	0	0	2	6	20	2	0	17	12	1	3	8	2	1	1	2	5	7	7				
	21	41	1009.1	—	47.4	2.1	9.2	83	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
Caithness. Wick	1	97	1009.6	—	45.3	0.4	9.9	97	8.0	0	2	4	16	8	0	0	0	0	0	0	0	30	0	0	2	28	0	3	1	2	1	1	6	6	10	10			
	7	97	1008.9	-6.1	47.6	1.1	10.4	91	7.7	0	1	7	14	8	0	0	0	0	0	2	28	0	0	5	24	1	2	3	1	1	3	4	5	10	8				
	13	97	1008.9	—	50.8	1.7	11.2	87	7.8	0	1	9	13	7	0	1	0	0	0	0	1	28	0	0	9	21	0	1	3	1	3	4	6	4	8	8			
18	97	1008.7	—	49.5	1.4	10.6	89	7.3	0	2	7	15	6	0	0	0	0	0	2	28	0	0	9	21	0	2	2	1	4	4	3	5	9	9					
Inverness. Inverness	9	250	1009.4	—	50.4	3.7	9.0	73	5.1	0	6	16	6	2	0	0	0	0	1	1	9	19	0	13	17	0	2	11	0	0	1	8	5	3	3				
	17	250	1008.8	—	53.3	5.1	9.1	66	5.1	0	7	14	7	2	0	0	0	0	0	1	14	15	0	14	14	2	3	10	1	0	2	4	5	3	3				
1. SCOTLAND, E.																																							
Nairn. Nairn	7	82	1009.4	-5.6	49.5	2.9	9.3	79	6.2	0	3	14	12	1	0	0	0	0	0	0	6	24	0	0	4	15	11	0	3	7	0	0	0	7	2	2			
	13	82	1008.8	—	55.5	5.0	10.1	69	5.7	0	2	21	7	0	0	0	0	0	0	0	6	24	0	0	8	20	2	1	3	12	0	0	2	7	3	3			
	18	82	1008.9	—	53.2	4.2	9.9	72	6.0	0	2	16	12	0	0	0	0	0	0	0	4	26	0	0	3	25	2	2	1	12	0	0	2	8	3	3			
Aberdeen. Aberdeen	7	85	1009.8	-5.8	50.4	3.6	9.3	75	6.5	2	5	5	13	5	0	0	0	0	10	2	18	0	0	10	16	4	6	2	1	0	4	2	5	6	6				
	13	85	1009.8	-5.9	53.2	4.7	9.5	70	6.8	0	5	5	13	7	0	0	0	0	5	7	18	0	0	19	11	0	3	4	2	6	3	2	3	7	7				
	18	85	1009.5	-6.0	53.2	4.8	9.4	69	6.6	1	6	5	10	8	0	0	0	1	6	8	15	0	0	10	19	1	4	2	0	5	7	1	3	7	7				
	21	85	1009.9	-6.1	50.0	3.4	9.3	77	6.1	1	7	5	12	5	0	0	0	0	7	8	15	0	0	4	21	5	5	1	1	1	4	3	8	2	2				
	h.*	85	1009.7	-6.0	50.6	3.8	9.4	75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
Aberdeen. Braemar	9	1114	1009.8	—	49.3	4.7	7.8	66	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
Perth. Crieff	9	482	1010.6	—	51.8	4.2	9.4	71	7.3	1	3	6	8	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21	482	1009.9	—	48.6	3.4	8.9	75	6.9	3	6	1	8	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
Fife. Inchkeith	1	184	1010.1	—	48.5	1.6	10.4	88	6.6	1	7	4	7	11	0	1	0	0	0	1	2	23	3	0	10	20	0	1	3	6	2	1	8	7	2	2			
	7	184	1009.8	—	48.8	1.9	10.2	86	7.1	0	6	6	12	0	0	0	1	1	0	2	4	20	2	0	14	16	0	2	5	4	1	0	8	6	4	0			
	13	184	1009.4	—	53.4	3.7	10.3	75	7.6	0	3	6	12	9	0	0	0	0	2	6	20	2	1	16	13	0	1	4	9	0	2	5	9	0	0				
	18	184	1009.4	—	52.6	3.0	10.9	79	6.7	0	5	7	10	8	0	0	0	0	1	7	18	4	0	12	18	0	3	3	7	2	1	6	6	2	2				
Fife. Leuchars	7	36	1010.1	—	50.6	3.2	9.8	79	7.0	1	6	5	6	12	0	0	0	1	3	2	24	0	0	9	18	3	1	6	1	0	1	7	8	3	3				
	13	36	1009.8	—	55.2	4.4	10.1	69	7.9	0	2	5	12	11	0	0	0	0	4	5	19	2	0	14	16	0	1	4	9	1	2	4	6	3	3				
	18	36	1009.7	—	53.5	4.2	10.1	73	6.9	2	3	6	9	10	0	0	0	0	4	2	23	1	0	11	19	0	2	2	8	3	1	5	5	4	4				
Edinburgh. Blackford Hill	9	441	1010.9	—	50.6	3.2	9.9	77	8.1	2	2	4	5	17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
	21	441	1010.9	—	49.1	2.5	9.7	81	6.2	5	4	3	8	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
6a. SCOTLAND, W.																																							
Argyll. Tiree	7	40	1009.9	—	50.8	2.8	10.3	81	6.0	5	5	4	9	7	0	0	0	0	0	8	14	8	0	18	12	0	4	5	3	4	2	3	4	5	5				
	13	40	1010.5	—	54.6	4.6	10.4	71	5.5	3	7	8	5	7	0	0	0	0	1	0	6	10	13	0	21	9	0	7	6	0	3	2	2	6	4				
	18	40	1010.4	—	53.4	3.6	10.4	75	5.1	4	6	10	6	4	0	0	0	0	0	4	13	13	0	20	10	0	11	4	1	0	1	2	8	3	3				
Bute. Rothesay	9	187	1010.9	—	51.5	2.2	10.7	85	8.3	2	1	3	5	19	0	0	0	0	7	7	11	5	0	19	11	0	0	12	0	2	1	1	4						

TABLE IV (continued).—SUMMARY of the OBSERVATIONS of PRESSURE, TEMPERATURE, HUMIDITY, CLOUD, VISIBILITY, and WIND at fixed hours at certain Stations during the Month of JUNE, 1928.

Table with columns: DISTRICT, COUNTY AND PLACE; Hour of Observation; Height of Barometer above Mean Sea Level; MEAN PRESSURE (At Mean Sea Level, Deviation from Normal); TEMPERATURE AND HUMIDITY (Dry Bulb, Depression of Wet Bulb, Vapour Pressure, Relative Humidity); CLOUD AMOUNT (No. of Observations); VISIBILITY (Fog, Mist, Poor Vis., Mod. Vis., Good Visibility); WIND, NUMBER OF OBSERVATIONS (Force 0-12, Direction).

TABLE I. DISTRICT VALUES.

The District Values of this Table are computed from the statistics for selected individual stations set out in Table III and Table IV.

The representative stations from which the District Values of rain-fall and temperature are computed are indicated in Table III by the sign ¶ while the representative stations from which District Values of sunshine are computed are indicated by the sign §. The deviations from and percentages of normal for Air Temperature, Rainfall and Sunshine are the means of the corresponding deviations or percentages for the representative District Value stations. The deviations from normal of Earth Temperature are derived from the deviations for all the stations reporting in Table III for which normals of Earth Temperature are available. The highest and lowest temperatures for the District recorded during the month may refer to any station in Table III.

TABLE II. SUMMARY OF AUTOGRAPHIC RECORDS OF WIND.

The records used in the preparation of this Table are generally made by anemographs of the pressure-tube type. At a few stations the Robinson Cup Anemograph is utilised. The classification adopted for the "Distribution of Wind" is based on the specification of the Beaufort Scale of Wind Force (see *The Observer's Handbook*). For an anemograph complying with the specification "head 33 ft. above ground in the open" the several columns correspond with Force 8 and above (gales), Forces 6 and 7 (strong winds), Forces 4 and 5 (moderate winds), Forces 2 and 3 (light winds), Forces 1 and 0 (nearly calm). Some information as to the nature of the actual exposures may be gathered from the figures in the "Height" columns.

The "Highest Hourly Wind" is determined by the mean speed of the wind for a period of sixty minutes from 30 minutes before to 30 minutes after an exact hour by Greenwich Mean Time. Under the heading "Veer from N" the azimuth of the direction from which the wind was blowing is stated, the entry for an east wind being 90°, that for a south wind 180° and so on.

TABLE III. SUMMARY OF OBSERVATIONS AT TERMINAL HOURS.

Temperature.—The terminal hours of observation are given for each station. When the terminal hours for maximum and minimum temperature are stated independently the temperatures refer to intervals of 24 hours. If the maximum thermometer is read in the morning the reading is credited to the previous day. When the terminal hours for maximum and minimum are separated by a dash, thus, 18-7, the day-maximum for the period 7h. to 18h. and the night-minimum for the period 18h. to 7h. are reported and are utilised in determining the means for the month; in such cases the extreme temperatures for successive periods of 24 hours are also read by the observers, so that the absolute maximum and minimum temperatures for the month are obtained.

Except at the Royal Observatory, Greenwich, where a Glaisher stand is in use, the air temperature is obtained from thermometers placed in louvered screens. At Kew Observatory, Richmond, and Valentia Observatory these are north wall screens a few feet from the ground. At Aberdeen Observatory the north wall screen is at 41 feet. Otherwise the screens are in the open.

Rainfall.—The daily amounts are for the 24 hours beginning at the "terminal hour." "Rainfall" includes all forms of precipitation. The number of days of precipitation is counted with reference to the limit .01 inch or 0.2 mm. and also with reference to the limit .04 inch or 1 mm. The lower limit excludes mere "traces" of precipitation, but it is frequently passed on occasions when the precipitation is only dew.

Weather.—The numbers of days of Precipitation, Snow, Hail, Thunderstorms and Gale are counted irrespective of the hour at which the phenomena occur. Except for "Precipitation" the day is the civil day.

For the purpose of this summary "Snow" includes sleet (*i.e.*, snow with rain), "Hail" includes graupel (soft hail), "Snow lying" refers to occasions when at least one-half of the country surrounding the station is covered with snow at the morning observation. The entry of "fog" implies that regular observations of the range of vision are made on the scale set out below. Days of fog are those on which the range of vision is less than 1,100 yards at the hour of morning observation. That hour is given by the third entry of column 2 of the table and may be 7h. or 9h. G.M.T. The variability of the observation hour may exercise an important effect upon the statistics of fog frequency. "Thunderstorm" includes any day on which thunder is heard. "Gale" is a wind of Force 8 or upwards on the Beaufort Scale. A "ground frost" is entered when the reading of a "grass minimum" thermometer set the previous evening and read at the morning observation is 30° F. or lower.

Sunshine.—The percentage of possible sunshine is in all cases calculated with reference to the maximum duration possible in the latitude on the assumption of an unobstructed horizon, due allowance being

made for refraction (see *International Meteorological Tables* (Paris) pp. A17-A20 and 42-27). The sunshine recorder is generally insensitive to sunshine when the sun is at an altitude of 3° or less. The symbol § is entered against the percentage at some stations and indicates that obstructions of altitudes greater than 3° reduce the possible record of duration for the month by more than 5 per cent.

TABLE IV. SUMMARY OF OBSERVATIONS AT FIXED HOURS.

Mean Air Pressure is expressed in millibars. (1 millibar = 1,000 dynes per square centimetre = the pressure due to .029531 inch of mercury at 32° F. in Lat. 45°). The corrections for latitude, temperature and height have been applied to the barometer readings so as to obtain pressure at mean sea level. Barometric pressure is given at station level for a few stations at altitudes of 600 ft. or more in footnotes in Table IV.

Hygrometry.—The values given depend on the readings of the dry and wet bulb thermometers in Stevenson Screens (except at the Observatories, see above). The observations were formerly reduced by Glaisher's method; as from January, 1926 they are reduced by the new hygrometrical tables issued by the Office which are based on a formula of Regnault. In general the relative humidity and vapour pressure are derived from the monthly means of the dry and wet bulb readings. At certain stations the daily values of relative humidity and vapour pressure are found and the means are computed therefrom. These stations are indicated by the letter "H."

Cloud Amount.—The proportion of sky covered with cloud is estimated on the scale 0 to 10, the entry "0" being equivalent to clear sky "10" to overcast.

Visibility.—The observations are classified according to the following scheme—the distances, specified by international arrangement in metres, are given here in yards and miles:—

CODE.	RANGE OF VISION.	
	Less than 55 yards.	Exceeding 55 yards, less than 220 yards
2	" 220 "	" 550 "
3	" 550 "	" 1,100 "
4	" 1,100 "	" 1½ miles.
5	" 1½ miles	" 2½ "
6	" 2½ "	" 6½ "
7	" 6½ "	" 12½ "
8	" 12½ "	" 31 "
9	" 31 "	

Wind Summaries.—The estimates of wind force refer to the Beaufort Scale, and in general to the wind experienced at the time of observation. At Deerness, Cahirciveen, Richmond, Armagh, Eskdalemuir, Southport, Greenwich and Oxford the analysis refers to tabulations of autographic records. For Oxford the mean wind speed for half-an-hour centred at the hour of observation is used for conversion to "force" on the Beaufort Scale; for the remaining observatories the mean wind speed used for each observation refers to a period of one hour. In these cases winds equivalent to Force 1 are counted with the calms, whilst Forces 2 and 3 are taken together in the preceding column of the Table.

INTERPOLATED VALUES.

When the observations for any station for a month are incomplete and relevant data (e.g. records from neighbouring stations) which make it practicable to interpolate approximate values for the missing observations are available, such approximate values may be used for completing summaries for stations published in Tables III and IV. Parts of a summary obtained in this way are shown in brackets thus—(52.4).

STANDARD OF TIME.

As a rule observations are made in all parts of the British Islands according to Greenwich Mean Time, but at the following stations Local Mean Time is used for the observations summarised in Tables III and IV. The number of minutes after Greenwich Time is shown in brackets—Darwen (10), Rhayader (15), Ashburton (15), Tavistock (17), Plymouth (15), Douglas (20), Armagh (26), Balbriggan (25), Lisburn (30), Newcastle, Co. Wicklow (30), Ballinacurra (30), Cork (34).

"Summer Time" is not used in the Monthly Weather Report, but at certain stations the hours of observation vary in the course of the year. For such stations all time entries are converted to G.M.T. before they are printed and the winter hours are given as the terminal hours in the annual tables. For the summer hours reference should be made to the appropriate months.

NORMALS.

In Table III the normals used are those for the 35 years 1881-1915. The normals of temperature and sunshine are published in the Book of Normals, Section I, those for rainfall in the Book of Normals, Section V.

The normals for pressure with which comparison is made in Table IV also refer to the period 1881-1915.

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.

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

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VOL. 45. No. 7.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE.

JULY, 1928 : Mainly dry, sunny and very warm, but wet and cool at the beginning and end of the month.

The weather of July, 1928, was remarkable for the long period of heat and drought, with abundant sunshine, which set in after the first week over most of England, Eastern Scotland and a large part of Ireland.

During the first three days of the month a deep depression moved N.E. from the Atlantic across the Hebrides to southern Norway, and generally cool unsettled weather with strong south-westerly winds was experienced. There were some heavy falls of rain in the North: 33 mm. at Eskdalemuir and 55 mm. at Sawrey (Lancs.) on the 1st, 30 mm. at Balmoral and 21 mm. at Hampstead on the 3rd.

A wedge of high pressure passed across the country early on the 4th, to be followed by a new depression which by the morning of the 5th was centred near the Hebrides. Rain became general for a time: 81 mm. fell at Bettws Garmon (Carnarvon), 43 mm. at Lancaster and 38 mm. at Aber, on the 4th, and 32 mm. at Foynes (Limerick) and 22 mm. at Birr Castle on the same day.

Another wedge passed across on the 7th, but although further depressions approached from the Atlantic between that date and the 26th they kept far to the west and north. In consequence, during this period pressure was always high in the South, and became high even in the North around the 17th, when an anticyclone occupied a central position over the British Isles. These conditions were associated over most of England and Ireland with dry weather, abundant sunshine and a rising temperature, and Eastern Scotland shared in the drought. Twenty successive days without rain was experienced at many places from East Anglia across to the borders of Wales, south-westwards into Devon and even locally in Southern Ireland. In Eastern Scotland some places had practically no rain between the 2nd and the 25th. Among the most notable periods of absolute drought were: 26 days at Llanthony Lock (Glos.), 22 days at Sheffield, Chatteris (Cambridge), Felsted (Essex) and Melbury House (Dorset).

Temperature as a rule reached its highest point on the 15th, when 90° was recorded in London, but in many places, especially in Scotland, Ireland and south-west England, the warmest time was around the 22nd, when readings of about 90° occurred again in south-east England. Generally unsettled and cool weather was eventually brought about by a depression which moved east-south-east from Iceland to Scandinavia between the 24th and 26th. On the night of the 26th rain fell generally in the South, and thunderstorms occurred in the South-west. Thunderstorms occurred more generally in the South on the 27th and extended to parts of Scotland and Ireland on the 28th and 29th. Secondary depressions maintained unsettled weather until the end of the month, although there were some fine periods. Some notably heavy falls of rain towards the close of the month were: 54 mm. at Ventnor on the 27th and 39 mm. at Swansea on the 31st.

The contrast between the temperature before and after the weather changed was very great. On the 30th-31st with northerly winds, snow fell on the upper reaches of Ben Nevis, the Cairngorms and other Scottish mountains.

Pressure and Winds.—Pressure exceeded the normal by over 5 millibars in the south-west of England, but was below normal in Central and Northern Scotland; in the Shetlands it was nearly 4 millibars below the normal. Winds were mainly westerly over England and Ireland and south-westerly in Scotland. They were frequently strong in Scotland, Northern Ireland and Northern England. There was a gale at Tiree on the 2nd, with 60 m.p.h. in a gust; at Dunfanaghy on the same date, with 75 m.p.h. in a gust; and at Lerwick on the 14th a gale reaching 65 m.p.h. momentarily.

Temperature.—The mean temperature for the month was above the normal generally over England except in the North-west. It was rather below the normal in the North and West of Scotland and in Ireland. After the cool first week a period of increasing warmth set in: 85° was reached at Cleethorpes on the 12th, 87° at Cromer and 88° at Bungay on the 14th. On the 15th, 90° was reported from Stroud Green and Tottenham, and 91° from Newport (Isle of Wight) and Camden Square (London). Very high readings were also reported on the 22nd:

86° at Newton Abbot, 87° at Shoeburyness and 89° at Wisley. At a fairly large number of places this was the warmest day of the month. In Scotland the highest temperatures mostly came between the 11th and the 22nd: Logie Coldstone reached 76° on the 11th and Banff the same reading on the 14th. At Oban, Tiree and locally in the Hebrides, temperature never exceeded 60°. The coldest night in Scotland was that of the 30th-31st, with a minimum of 36° at West Linton and many minima below 40°. In Ireland 80° was exceeded on the 21st and 22nd and the night of the 30th-31st as in Scotland, yielded minima below 40°. The extreme temperatures for the month were:—(England and Wales) 91° F. at London (Camden Square) and Newport, I. of Wight, on the 15th, and 33° F. at Welshpool on the 13th. (Scotland) 76° F. at Logie Coldstone on the 11th, and at Banff on the 14th, and 36° F. at West Linton on the 31st. (Ireland) 83° F. at Killarney on the 22nd and 35° F. at Markree Castle (Sligo) on the 31st.

Precipitation.—The month was a dry one, in spite of the heavy falls of rain that occurred near the beginning and end of the month. The general rainfall of the British Isles expressed as a percentage of the normal for the period 1881-1915 was 74; the values for the constituent countries were: England and Wales 71; Scotland 91, Ireland 63. The greatest deficiencies at individual stations occurred in south-east Ireland, the midlands of England and eastern Scotland: Kilkenny and Waterford both had slightly less than half the normal, as did Harrogate and Wakefield, and, in Scotland, Perth. Some of the smallest totals were 9 mm. at Wakefield, 11 mm. at Osgodby and Pontefract, and 12 mm. at Spurn Head and Worksop. At St. Heliers (Jersey), the total was 13 mm.—only 60 per cent. of the normal. From Ireland the lowest total reported was 19 mm. at Newcastle and Kilkenny. Totals appreciably above the average occurred at Bath (22 per cent. excess) Ventnor (25 per cent.) and Aspatria (33 per cent.), but were very rare outside Western Scotland. In western Inverness-shire, Glenquoich had twice the average, the total of 326 mm. being the largest recorded there in July for at least 50 years. At that station 78 mm. fell on the 10th alone, and on the same day Ardgour had 64 mm. and Glenelg 53 mm. Over most of England and Wales except the north-west the largest daily falls came between the 26th and the 30th, but in north-west England and North Wales the 4th was generally the wettest day—43 mm. at Lancaster, 38 mm. at Aber and 37 mm. at Aberystwyth. In southern Ireland the 4th was also outstanding: the fall of 32 mm. at Foynes on that day accounted for more than half of the month's total at that station; but for north-east Ireland the 26th, when 20 mm. fell at Belfast, was the wettest day.

Sunshine.—The month was a very sunny one in Eastern and Central England, but there was a considerable deficiency in western and northern Scotland and a moderate deficiency in Northern Ireland. Representative totals for districts expressed as a percentage of the normal ranged from 137 in England N.E. and S.E. to 83 in Scotland W. and 73 in Scotland N. The mean daily amount exceeded ten hours locally on the coasts of Sussex, Kent and Essex, but at Fort Augustus (Inverness) and Oban was only a little over two hours. In the sunny area many daily totals of over 15 hours were obtained. Ross-on-Wye measured 15.5 hours on the 14th—a "record" for that station for July. The same amount was measured at Jersey on the 12th and at Harrogate on the 15th. At Birmingham (Edgbaston) the total of 15.3 for the 14th was the largest there for 41 years. At many places in Eastern England there was more sunshine even than in July of the exceptional summer of 1921.

Fog.—Owing to the unusually low humidity prevailing during a large part of the hot weather, coastal fog, which is so frequently found to accompany heat, was very rare: it occurred once or twice, however, during the hot weather, on the west and south coasts of Ireland, along the south coast of England, in the Scilly Isles and at St. Ann's Head.

Miscellaneous Phenomena.—A mirage was seen at sea off Aberdeen on the 12th.

TABLE I.—DISTRICT VALUES—JULY, 1928. [1908, revised 1928.]

DISTRICTS.	AIR TEMPERATURE.			EARTH TEMPERATURE.		RAINFALL.		SUNSHINE.	
	High-est.	Low-est.	Daily Mean. Deviation from Normal.	At 1 ft. Deviation from Normal.	At 4 ft. Deviation from Normal.	Per-centage of Normal.	No. of Days. Deviation from Normal.	Per-centage of Normal.	Per-centage of Possible Duration.
o. SCOTLAND, N.	70	40	-1.2	—	—	94	+4	73	19
Eastern.									
1. SCOTLAND, E.	76	36	+0.2	—	—	64	-3	99	31
2. ENGLAND, N.E.	88	35	+1.0	+0.4	-0.1	45	-6	137	47
3. ENGLAND, E...	89	39	+2.5	+1.2	-0.3	96	-6	133	57
4. MIDLAND COUNTIES	88	38	+1.3	+0.5	-0.3	53	-6	131	48
5. ENGLAND, S.E.	91	40	+2.0	+2.8	+1.5	80	-5	137	59

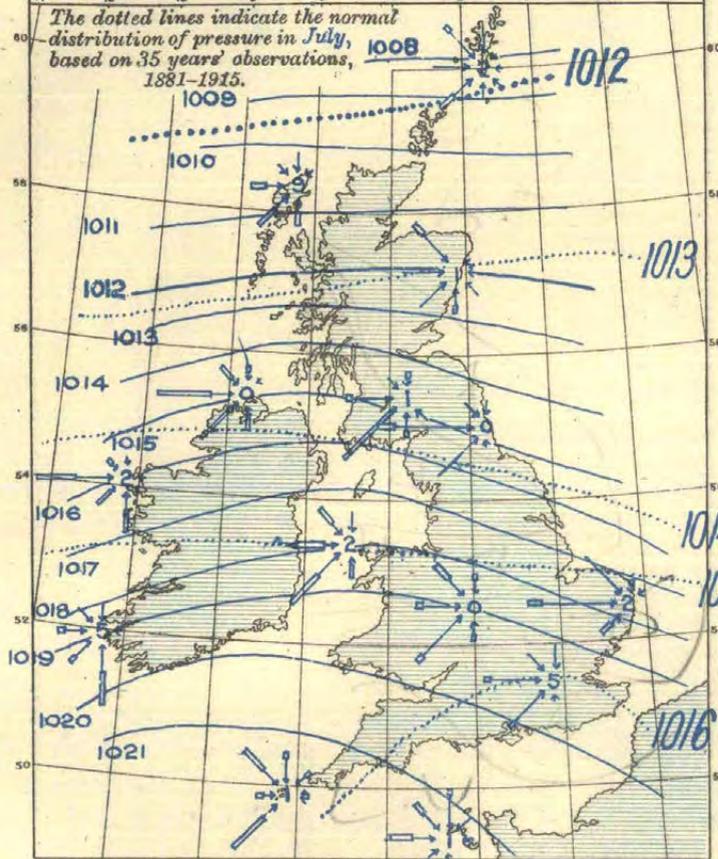
DISTRICTS.	AIR TEMPERATURE.			EARTH TEMPERATURE.		RAINFALL.		SUNSHINE.	
	High-est.	Low-est.	Daily Mean. Deviation from Normal.	At 1 ft. Deviation from Normal.	At 4 ft. Deviation from Normal.	Per-centage of Normal.	No. of Days. Deviation from Normal.	Per-centage of Normal.	Per-centage of Possible Duration.
Western.	°F.	°F.	°F.	°F.	°F.	%		%	%
6. SCOTLAND, W. (& I. of Man)	72	37	-1.9	—	-2.9	107	+2	83	25
7. ENGLAND, N.W. (& N. Wales)	81	33	-1.1	-0.6	-1.1	87	-3	108	40
8. ENGLAND, S.W. (& S. Wales)	86	37	+0.9	+0.7	-0.4	89	-3	115	47
9. IRELAND, N...	78	35	-0.7	-1.4	-1.0	73	0	92	26
10. IRELAND, S...	83	39	-0.2	-0.1	-0.7	51	-4	105	34
11. CHANNEL I. (& Scilly)	79	50	+0.6	+4.8	+2.5	32	-6	125	61
Mean: DISTRICTS 1-10	91	33	+0.4	+0.4	-0.6	74	-3	114	41

TABLE II.—SUMMARY OF AUTOGRAPHIC RECORDS OF WIND.—JULY, 1928. [1914.]

DISTRICT AND STATION.	Height.			Distribution of Wind.††								Extreme Velocities.								
	Above Mean Sea Level.	Above Ground.	Above Building.	More than 38 mi/hr.		25 to 38 mi/hr.		13 to 24 mi/hr.		4 to 12 mi/hr.		Less than 4 mi/hr.	No Record.	Highest Hourly Wind.			Highest Gust.			
				Dates of Occurrence.	Duration.	No. of Days.	Duration.	Duration.	Duration.	Duration.	Veer from N.			Speed.	Mid Time.	Speed.	Time.			
o. SCOTLAND, N.	ft.	ft.	ft.		hr.	hr.	hr.	hr.	hr.	hr.	hr.	°	mi/hr.	m/s.	day. hr.	mi/hr.	m/s.	d.	h.	m.
Shetlands Lerwick ..	310	42	33†	14	7	13	105	208	306	28	0	220	46	21	14 22	65	29	14	22	15
Orkneys Deerness (Cup Anr.)	188	16	5	—	0	10	34	339	333	38	0	250	31	14	14 22	—	—	—	—	—
1. SCOTLAND, E.																				
Aberdeen Aberdeen ..	72	42	33†	—	0	—	0	198	464	82	0	230	24	11	14 16	43	19	14	16	0
Kincardine Balmakewan ..	140	25	18	—	0	1	5	105	(446)	(188)	0	250	29	13	2 17	56	25	2	16	55
Edinburgh Edinburgh ..	485	39	31†	—	0	8	34	447	239	24	0	260	31	14	2 21	53	24	2	15	25
6a. SCOTLAND, W.																				
Argyll Tiree ..	80	55	48†	2	4	13	103	448	167	22	0	240	40	18	2 10	60	27	2	8	0
Renfrew Paisley ..	188	81	15	—	0	—	0	124	566	54	0	180	23	10	2 16	55	25	10	12	40
Dumfries Eskdalemuir ..	825	50	22	—	0	10	56	375	259	54	0	230	35	16	2 2	48	22	2	22	30
2. ENGLAND, N.E.																				
Durham South Shields ..	62	46	20	—	0	2	3	285	391	65	0	280	27	12	18 15	48	21	10	15	35
York, E.R. Spurn Head ..	67	42	35†	—	0	7	34	402	284	24	0	290	31	14	18 16	42	19	18	10	30
Lincoln Cranwell ..	284	44	26†	—	0	—	0	235	433	76	0	310	23	10	18 15	40	18	6	10	35
3. ENGLAND, E.																				
Norfolk Gorleston ..	52	42	33†	—	0	—	0	135	527	82	0	220	23	10	5 14	37	17	5	13	25
Suffolk Felixstowe Aero. ..	55	40	25	—	0	1	4	186	(402)	(152)	0	200	26	12	5 17	34	15	5	15	20
Essex Shoeburyness ..	115	104	14†	—	0	1	4	126	494	120	0	210	28	13	5 16	37	17	5	13	50
4. MIDLAND COUNTIES.																				
Warwick Birmingham ..	643	118	18	—	0	—	0	255	455	34	0	290	21	9	18 13	39	17	29	10	45
5. ENGLAND, S.E.																				
Surrey Richmond (KewObs)	82	65	22	—	0	—	0	76	475	193	0	220	20	9	5 12	34	15	5	13	50
Surrey Croydon ..	284	40	24	—	0	1	3	239	467	35	0	220	27	12	5 9	39	17	5	10	58
Kent Dover ..	61	32	22	—	0	2	2	274	390	72	6	—	26	12	6 14	41	18	29	12	40
Kent Lympne ..	409	70	55†	—	0	—	0	155	534	55	0	190	24	11	5 13	36	16	5	12	25
Hampshire S. Farnboro' (Tower)	444	160	14	—	0	—	0	144	527	73	0	230	22	10	5 15	39	17	5	15	35
Hampshire Calshot ..	55	45	31†	—	0	1	6	294	(359)	(85)	0	230	29	13	5 11	38	17	5	11	0
Hampshire Worthy Down ..	314	43	27†	—	0	—	0	122	491	131	0	280	19	9	24 17	35	16	30	16	30
Wiltshire Larkhill ..	526	51	34†	—	0	1	2	258	(421)	(63)	0	230	25	11	5 10	33	15	5	10	5
7a. ENGLAND, N.W.																				
Lancashire Fleetwood ..	112	50	12	—	0	9	35	442	242	25	0	260	30	13	6 10	48	21	10	17	10
Lancashire Southport ..	77	59	45†	—	0	13	103	452	176	13	0	270	37	17	6 9	47	21	6	9	50
7b. NORTH WALES.																				
Anglesey Holyhead ..	64	45	29†	—	0	8	40	419	258	27	0	200	28	13	1 19	45	20	1	17	5
Flint Sealand ..	81	65	49†	—	0	2	4	262	394	84	0	310	27	12	18 11	44	20	11	7	10
8b. ENGLAND, S.W.																				
Devon Plymouth ..	185	88	2	—	0	—	0	85	403	221	35	—	24	11	30 15	36	16	30	12	5
Cornwall Pendennis Castle ..	256	65	24	—	0	5	39	187	361	157	0	—	37	17	1 17	49	22	1	17	20
9. IRELAND, N.																				
Donegal Dunfanaghy ..	180	47	39	2	6	9	49	317	321	51	0	—	49	22	2 11	75	33	2	10	30
Antrim Aldergrove ..	282	40	27†	—	0	1	1	196	455	92	0	200	25	11	2 9	46	21	2	9	35
10. IRELAND, S.																				
Dublin Kingstown (Cup Anr.)	49	27	16	—	0	9	33	339	336	36	0	{ 210 } 260	28	13	{ 10 11 } 24 10	—	—	—	—	—
Clare Quilty ..	100	40	32†	—	0	3	8	319	364	53	0	—	27	12	{ 10 8 } 10 8	37	17	1	19	0
Kerry Cahirciveen (Val. O.)	98	41	34†	—	0	3	11	319	351	63	0	200	31	14	1 11	42	19	10	11	15
Cork Weaver Pt. ..	160	30	21†	—	0	4	9	183	479	73	0	—	28	13	1 16	48	21	1	15	50
11. SCILLY ISLES.																				
St. Mary's..	160	42	35†	—	0	5	37	318	346	43	0	200	29	13	30 13	43	19	30	7	40

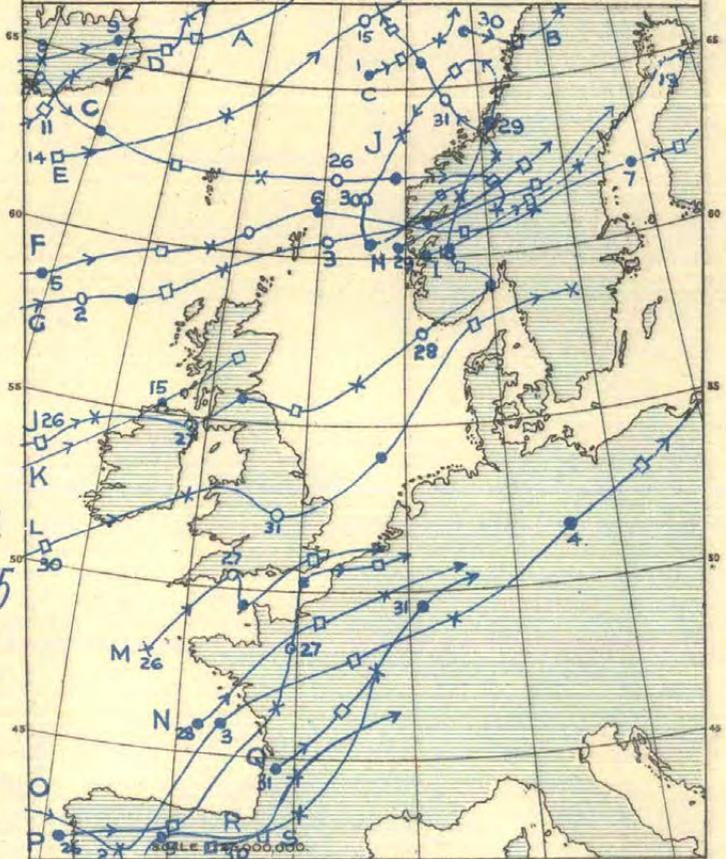
†† Brackets () indicate that the distribution as between winds above and below 4 mi/hr. is doubtful, but the total number of hours with winds below 12 mi/hr. is reliable.
 † Standard mounting.

1. WIND AND MEAN PRESSURE. 7 A.M.



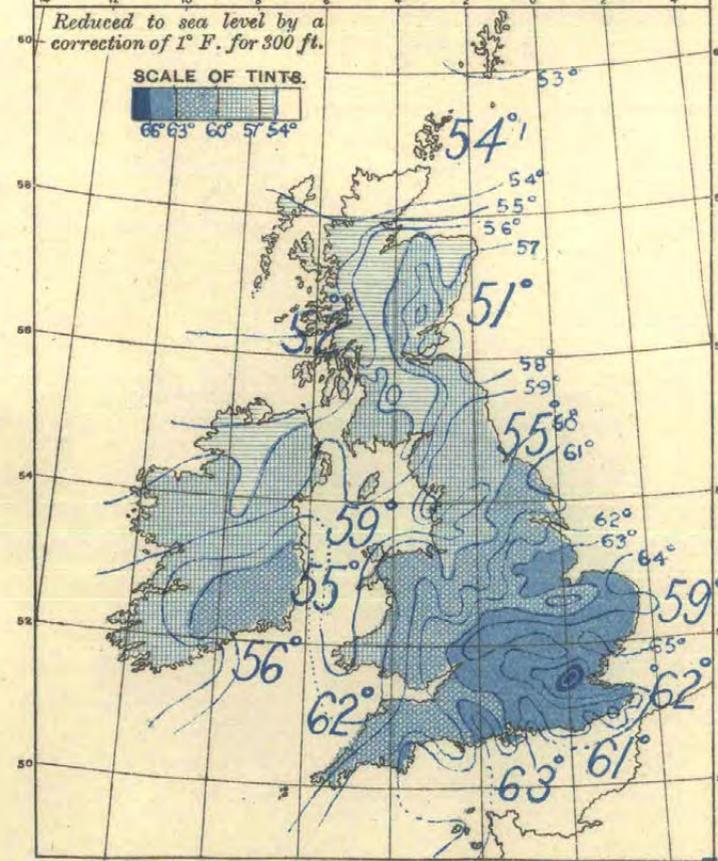
WIND ROSES. The arrows fly with the wind and indicate frequency and force, thus: LIGHT TO STRONG GALE 30 Observations = 1 inch

2. MOVEMENTS OF DEPRESSIONS.



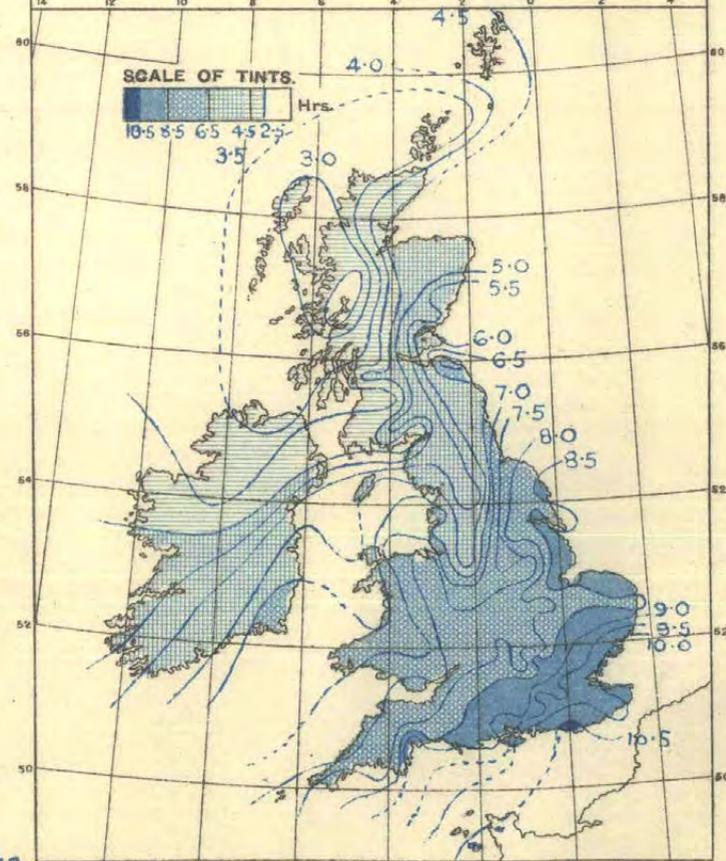
Positions of centres are shown thus: ○ at 1hr; ● at 7h; □ at 13h; X at 18h.

3. DISTRIBUTION OF MEAN TEMPERATURE.

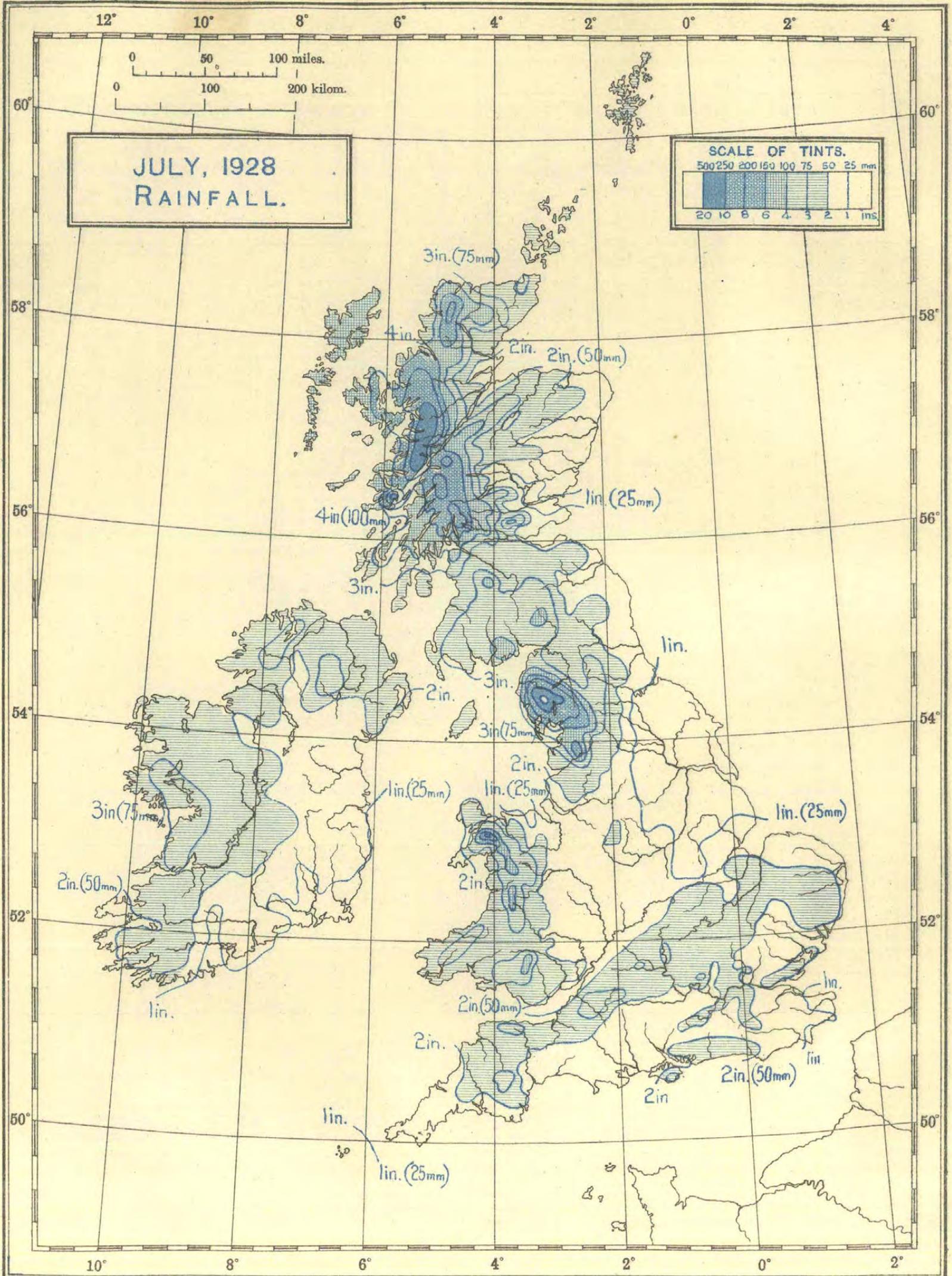


Sea temperatures are shown in large figures, thus: 54°

4. BRIGHT SUNSHINE, HOURS PER DAY.



* The pressure is expressed in millibars.



Scale 1 : 5,000,000.

Pa. 1372/1746. Wt. 101A. D. 25 1125. 8/22.

The equivalent values in mm. are given in round numbers. The exact relation is 10 in. = 254 mm.

TABLE III.—SUMMARY OF THE RECORDS OF TEMPERATURE, RAINFALL AND SUNSHINE, and of WEATHER OBSERVATIONS, JULY, 1928.

DISTRICT, COUNTY AND PLACE.	Terminal Hours of Observation.	Height of Station above Mean Sea Level.	AIR TEMPERATURE IN DEGREES FAHRENHEIT.								Earth Temperature.		RAINFALL.			WEATHER. Number of days.							BRIGHT SUNSHINE.										
			Means of		Deviation from Normal.	Absolute Maximum and Minimum.				1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Most in a day.		Precip'n.	Snow.	Snow lying.	Hail.	Thunderstorm.	Fog (Morning Obs.)	Ground Frost.	Gale.	Hours per day.	Per Cent.								
			A	B		Maximum.	Date.	Minimum.	Date.					Amount.	Date.											0.2 mm. or more.	1 mm. or more.	Daily Mean.	Deviation from Normal.				
0. SCOTLAND, N.																																	
Shetlands.	Baltasound	9 9 9	31	56.2	47.5	51.9	—	69	21st	42	2, 8, 23	53.1	—	2.97	75	—	13	2nd	25	18	0	0	0	0	0	0	0	0	2	3.99	—	22	
	Lerwick	18-7 7	54	55.9	48.0	51.9	-0.7	62	13th	43	4th	—	—	2.03	51	-7	7	25th	21	13	0	0	0	0	0	0	0	0	0	2	4.25	-0.65	24
Orkneys.	Deerness	2121 9	160	57.1	48.3	52.7	-0.8	63	13th	41	31st	—	—	2.31	59	-6	11	29th	27	14	0	0	0	0	0	0	0	0	0	3.24	-1.21	18	
	Kirkwall	9 9 9	151	56.7	48.2	52.5	—	64	14th	40	23, 31	—	—	2.35	60	—	10	29th	24	15	0	0	0	0	0	0	0	0	0	2	3.42	—	19
Hebrides.	Skallary	9 9 9	20	57.4	50.5	53.9	—	60	21st	44	31st	—	—	2.81	71	—	16	1st	25	19	0	0	0	0	0	0	0	0	0	—	—	—	
	Stornoway	18-7 7	30	58.1	49.2	53.7	-0.9	64	11th	40	31st	—	—	3.05	77	0	19	17th	26	15	0	0	0	0	0	0	0	0	0	2.64	-2.04	15	
Caithness.	Wick	18-7 7	81	56.8	48.9	52.9	-1.6	67	12th	43	31st	—	—	2.17	55	-12	8	5th	25	18	0	0	0	0	0	0	0	0	0	—	—	—	
	Achnashellach	9 9 9	225	58.3	49.3	53.8	-1.0	70	22nd	40	29th	—	—	8.19	208	+72	26	13th	24	24	0	0	0	0	0	0	0	0	0	—	—	—	
Ross & Cromarty.	Fortrose	9 9 9	69	62.4	50.7	56.5	—	69	24, 25	42	31st	—	—	1.45	37	—	13	3rd	20	9	0	0	0	0	0	0	0	0	0	4.57	—	26	
	Strathpeffer	9 9 9	125	62.6	50.4	56.5	-0.4	70	22nd	41	31st	—	—	1.62	41	-25	5	26th	20	14	0	0	0	0	0	0	0	0	0	—	—	—	
Inverness.	Ft. Augustus	9 9 9	68	59.8	49.8	54.8	-1.9	70	22nd	41	31st	—	—	3.36	85	+14	12	5th	19	16	0	0	0	0	0	0	0	0	0	2.34	-1.21	14	
	Inverness	9 9 9	242	60.5	50.1	55.3	-1.8	68	11th	42	31st	—	—	1.80	46	-19	23	3rd	15	8	0	0	0	0	0	0	0	0	0	4.49	-0.85	26	
1. SCOTLAND, E.																																	
Nairn.	Nairn	18-7 7	82	62.7	50.5	56.6	-0.1	72	11th	42	31st	—	—	1.86	47	-21	14	3rd	19	12	0	0	0	0	0	0	0	0	0	1	4.65	-0.47	27
Elgin.	Gordon Castle	2121 9	104	63.5	50.9	57.2	+0.4	75	11th	39	31st	—	—	2.71	69	-12	20	28th	16	11	0	0	0	0	0	0	0	0	0	0	4.60	—	27
	Banff	9 9 9	130	61.2	50.7	55.9	—	76	14th	42	31st	—	—	1.85	47	—	8	28th	18	15	0	0	0	0	0	0	0	0	0	0	4.56	—	26
Aberdeen.	Aberdeen	2424 4	44	63.1	51.6	57.4	+1.3	73	11th	43	31st	—	51.6	2.09	53	-18	13	28th	12	10	0	0	0	0	0	0	0	0	0	4.97	-0.16	29	
	Balmoral	9 9 9	927	61.7	47.8	54.7	—	70	11, 20	39	28, 31	—	—	2.46	63	-2	30	3rd	13	9	0	0	0	0	0	0	0	0	0	—	—	—	
Kincardine.	Braemar	2121 9	1120	60.6	46.6	53.6	-1.2	70	11th	37	31st	—	—	1.69	43	-22	9	15th	13	11	0	0	0	0	0	0	0	0	0	—	—	—	
	Craibstone	9 9 9	300	62.7	48.9	55.8	—	72	11th	40	31st	—	—	1.67	42	—	11	3rd	13	12	0	0	0	0	0	0	0	0	0	5.73	—	33	
Forfar.	Logie Coldstone	9 9 9	608	64.3	49.5	56.9	—	76	11th	40	31st	—	—	1.93	49	-26	17	3rd	14	8	0	0	0	0	0	0	0	0	0	—	—	—	
	Stonehaven	9 9 9	93	64.9	50.3	57.6	—	72	20th	43	7, 8, 31	—	—	1.36	35	—	6	30th	10	10	0	0	0	0	0	0	0	0	0	5.65	—	33	
Perth.	Arbroath	2121 9	93	65.1	49.5	57.3	—	74	21, 24	42	7, 31	—	—	1.55	39	—	13	28th	12	9	0	0	0	0	0	0	0	0	0	5.21	—	31	
	Carnoustie	9 9 9	39	65.1	49.5	57.3	—	74	21, 24	42	7, 31	—	—	1.09	28	-41	8	28th	11	8	0	0	0	0	0	0	0	0	0	—	—	—	
Dundee (E. Nec.).	Dundee	2121 9	198	65.9	51.2	58.5	+0.1	73	21, 24	43	29, 31	—	—	1.11	28	-37	10	28th	9	7	0	0	0	0	0	0	0	0	0	1	5.18	-0.67	30
	Mayfield	9 9 9	147	66.5	50.7	58.6	-0.2	75	24th	43	29, 30, 31	57.8	—	1.11	28	-37	10	28th	9	7	0	0	0	0	0	0	0	0	0	—	—	—	
Kettins.	Kettins	9 9 9	218	65.0	49.5	57.3	—	73	24th	39	29, 31	58.9	—	0.65	17	—	6	1st	10	4	0	0	0	0	0	0	0	0	0	—	—	—	
	Montrose	9 9 9	16	64.7	50.7	57.7	—	74	20th	42	8th	—	—	1.86	47	—	20	3rd	10	8	0	0	0	0	0	0	0	0	0	1	5.55	—	33
Fife.	Crieff	2121 9	478	62.6	49.1	55.9	-2.5	69	21st	39	31st	—	—	1.55	39	-36	12	27th	14	9	0	0	0	0	0	0	0	0	0	—	—	—	
	Perth	9 9 9	76	66.0	50.2	58.1	-0.3	73	21st	41	31st	—	—	0.83	21	-52	6	1st	15	5	0	0	0	0	0	0	0	0	0	1	5.87	—	35
Linlithgow.	Cupar	9 9 9	210	64.6	50.3	57.5	—	72	21st	41	29th	—	—	0.82	21	—	6	27th	14	7	0	0	0	0	0	0	0	0	0	—	—	—	
	Inchkeith	18-7 7	190	61.3	51.4	56.3	—	68	11, 15	45	31st	—	—	1.70	43	—	14	27th	8	7	0	0	0	0	0	0	0	0	0	0	6.07	—	36
Edinburgh.	Kirkcaldy	9 9 9	66	65.3	50.9	58.1	—	72	15, 21	43	31st	—	—	1.81	46	—	12	27th	12	7	—	—	—	—	—	—	—	—	—	—	—		
	Leuchars	18-7 7	40	65.1	50.2	57.7	—	72	21st	41	7th	—	—	0.68	17	—	6	27th	12	6	0	0	0	0	0	0	0	0	0	1	6.05	—	36
Haddington.	St. Andrews	9 9 9	20	66.3	50.3	58.3	—	73	24th	40	8th	—	—	57.9	53.1	1.31	33	10	21st	12	7	0	0	0	0	0	0	0	0	0	5.96	—	35
	Bangour	2121 9	587	61.3	48.8	55.1	—	70	15th	39	31st	—	—	2.30	58	—	15	26th	17	11	0	0	0	0	0	0	0	0	0	—	—	—	
Berwick.	Blackford Hill	2121 9	441	63.1	50.8	56.9	0.0	72	15th	42	31st	—	—	2.11	54	-13	19	26th	12	8	0	0	0	0	0	0	0	0	0	5.69	+0.30	34	
	Boghall	9 9 9	645	66.1	49.3	57.7	—	70	15th	41	31st	—	—	2.48	63	—	25	26th	14	9	0	0	0	0	0	0	0	0	0	1	5.56	—	33
Roxburgh.	Edin. Univ.	9 9 9	227	64.7	53.0	58.9	—	73	14th	45	31st	—	—	2.00	51	-20	19	27th	12	8	—	—	—	—	—	—	—	—	—	—	—		
	Liberton	9 9 9	190	64.9	—	—	—	73	15th	—	—	—	—	2.12	54	—	25	26th	10	7	0	0	0	0	0	0	0	0	0	—	—	—	
Peebles.	N. Berwick	9 9 9	152	65.5	50.7	58.1	—	73	14th	43	8th	—	—	1.74	44	—	16	27th	10	8	0	0	0	0	0	0	0	0	0	0	7.02	—	41
	Smeaton	9 9 9	100	66.9	49.0	57.9	—	75	14th	42	29, 30	58.5	—	2.15	55	-15	17	26th	10	10	0	0	0	0	0	0	0	0	0	—	—	—	
Wolfelee.	Marchmont	9 9 9	498	64.3	49.0	56.7	0.0	72	15th	43	4, 8, 29	—	—	1.58	40	-38	13	26th	11	7	0	0	0	0	0	0	0	0	0	0	6.01	+0.59	36
	West Linton	9 9 9	770	60.0	47.6	53.8	-1.2	71	15th	3																							

TABLE IV (continued).—SUMMARY OF THE OBSERVATIONS OF PRESSURE, TEMPERATURE, HUMIDITY, CLOUD, VISIBILITY, and WIND at fixed hours at certain Stations during the Month of July, 1928.

DISTRICT, COUNTY AND PLACE.	Hour of Observation.	Height of Barometer above Mean Sea Level.	MEAN PRESSURE.		TEMPERATURE AND HUMIDITY.				CLOUD AMOUNT.					VISIBILITY.									WIND, NUMBER OF OBSERVATIONS.														
			At Mean Sea Level.	Deviation from Normal.	Dry Bulb.	Depression of Wet Bulb.	Vapour Pressure.	Relative Humidity.	Mean Amount.	NO. OF OBSERVATIONS.					NUMBER OF OBSERVATIONS.									FORCE (0-12).				DIRECTION.									
										0	1 to 3	4 to 6	7 to 9	10	FOG.			Mist.	Poor Vis.	Mod. Vis.	GOOD VISIBILITY.			8 or more.	4 to 7	1 to 3	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		
			0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	8 or more.	4 to 7	1 to 3	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.			
5. ENGLAND, S.E.—cont.																																					
Kent.	Biggin Hill H	7	616	1019.3	—	59.2	3.1	14.1	82	5.4	6	6	4	8	7	0	0	0	0	1	1	13	11	5	0	0	6	24	1	4	2	0	0	0	17	4	3
		13	616	1018.7	—	70.1	8.9	14.7	59	6.2	3	4	7	12	5	0	0	0	0	0	0	5	14	12	0	0	11	20	0	2	4	0	0	0	15	7	3
		18	616	1018.2	—	68.2	7.5	15.3	65	5.2	6	4	6	12	3	0	0	0	0	0	0	5	12	14	0	0	9	22	0	2	0	1	1	0	15	8	4
Kent.	Dungeness ..	1	23	1019.7	—	59.0	1.5	15.5	91	4.3	10	5	6	5	5	0	0	0	1	1	0	3	9	14	3	0	3	27	1	6	3	0	0	0	7	11	3
		7	23	1019.8	+ 4.2	61.5	3.3	14.8	81	6.1	2	5	8	9	7	0	0	0	0	1	7	12	10	1	0	3	28	0	9	4	1	0	0	4	6	7	
		13	23	1020.2	—	66.4	4.6	16.6	76	5.9	3	3	10	13	2	0	0	0	0	0	0	3	14	13	1	0	7	24	0	2	1	2	0	4	18	4	0
Kent.	Lympe H	18	23	1019.3	—	64.1	3.7	16.2	79	4.9	4	5	13	6	3	0	0	0	0	0	3	13	12	3	0	10	21	0	1	1	3	0	0	18	8	0	
		1	343	1019.5	—	56.4	1.9	13.7	88	4.2	11	5	4	7	4	0	3	0	0	0	4	15	8	1	0	2	29	0	7	2	0	1	3	6	7	5	
		7	343	1019.7	—	59.6	3.1	14.3	82	5.9	3	6	3	15	4	0	1	0	0	0	3	11	7	5	4	0	7	24	0	9	1	1	0	1	6	4	9
Sussex.	Brighton H	13	343	1019.5	—	67.9	7.4	14.9	64	5.4	3	7	6	13	2	0	0	0	0	0	6	10	11	4	0	10	21	0	1	2	4	6	13	1	2		
		18	343	1019.0	—	65.3	5.7	15.1	71	4.2	5	12	3	9	2	0	0	0	0	0	7	7	12	5	0	7	23	1	0	3	1	3	6	13	3	1	
		9	396	1019.7	—	65.7	6.5	14.5	67	4.0	6	10	5	7	3	0	0	0	0	1	7	11	12	0	0	4	27	0	3	1	0	0	1	13	7	6	
Sussex.	St. Leonards	9	48	1020.5	—	64.4	4.8	15.4	74	3.8	10	6	7	6	2	0	0	0	0	0	8	15	18	0	0	1	25	4	3	1	0	0	3	12	5	3	
		9	174	1019.8	—	66.7	6.4	15.2	67	4.2	9	4	9	8	1	0	0	0	0	0	0	21	10	0	0	5	26	0	3	5	1	2	0	7	5	8	
		21	174	1019.7	—	61.6	3.6	15.1	80	3.4	11	8	4	4	4	0	0	0	0	0	1	16	14	0	0	0	31	0	1	3	0	3	0	9	7	8	
Hampshire.	Calshot ..	1	15	1020.0	—	58.2	2.3	14.2	86	4.6	11	2	6	6	6	0	0	0	1	1	3	8	18	0	0	6	22	3	1	0	0	2	0	6	11	8	
		7	15	1020.1	—	59.4	3.0	14.2	82	5.3	7	3	6	14	1	0	1	1	0	0	6	15	8	0	0	9	21	1	6	0	1	0	0	3	10	10	
		13	15	1020.1	—	71.8	10.1	14.3	55	5.3	5	4	9	11	2	0	0	0	0	0	1	5	25	0	0	17	13	1	3	0	1	2	17	1	6		
		18	15	1019.3	—	68.5	7.6	14.9	64	4.9	5	8	5	8	5	0	0	0	0	0	3	6	22	0	0	22	9	0	2	0	0	2	1	14	5	7	
Hampshire.	Southampton	9	84	—	—	62.4	4.3	14.7	76	4.4	7	5	8	8	3	0	0	0	1	3	27	0	0	0	0	0	27	4	2	1	1	0	0	6	9	8	
		21	84	—	—	66.5	7.2	14.3	66	4.4	10	4	4	8	5	0	0	0	0	4	27	0	0	0	0	3	22	6	0	1	0	1	0	8	9	6	
Hampshire.	S. Farnborough	7	256	1019.6	—	59.4	3.2	14.0	81	5.3	5	6	5	11	4	0	0	0	1	1	7	9	13	0	0	4	24	3	1	0	0	1	0	5	13	8	
		13	256	1019.3	—	73.4	12.6	12.6	48	5.7	4	5	6	10	6	0	0	0	0	0	1	9	21	0	0	12	19	0	1	1	0	0	0	7	16	5	
		18	256	1018.7	—	70.0	9.9	13.3	56	5.3	4	9	3	8	7	0	0	0	0	2	10	19	0	0	9	22	0	2	0	0	2	1	10	12	4		
Hampshire.	Winchester (Worthy Down)	7	273	1019.9	—	57.9	2.2	14.1	86	6.5	4	5	2	14	6	0	0	0	1	1	2	2	13	12	0	0	4	24	3	5	1	0	1	3	6	7	5
		13	273	1019.5	—	71.1	9.9	14.1	54	5.6	4	4	8	12	3	0	0	0	0	1	3	27	0	0	11	19	1	4	1	0	1	5	7	8	4		
		18	273	1019.1	—	68.5	8.5	13.9	59	5.8	6	3	5	10	7	0	0	0	0	0	1	4	20	6	0	10	21	0	2	0	0	1	9	4	12	3	
I. of Wight.	Ventnor (Hosp.)	9	80	1020.5	—	64.9	5.0	15.5	73	4.6	8	5	7	7	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
		15	80	1020.2	—	67.6	6.1	16.2	69	4.7	5	9	8	3	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Wilts.	Larkhill H	9	444	1020.0	—	63.4	6.1	13.4	68	6.1	1	8	6	9	7	0	0	0	0	0	1	3	27	0	0	9	20	2	5	2	0	0	0	7	8	7	
		13	444	1019.5	—	69.3	9.8	13.2	55	6.4	3	6	2	12	8	0	0	0	0	0	1	2	25	3	0	12	19	0	4	1	1	0	1	7	11	6	
		15	444	1019.2	—	69.8	10.3	13.0	54	5.7	5	4	7	9	6	0	0	0	0	0	0	2	23	6	0	15	16	0	3	1	1	0	1	7	11	7	
7a. ENGLAND, N.W.																																					
Cumberland.	Aspatria (Mealsgate)	9	485	1016.4	—	55.7	2.3	13.1	85	8.2	0	1	9	4	17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
		21	485	1016.6	—	54.1	1.4	12.9	91	7.1	3	3	6	5	14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Lancashire.	Hutton ..	9	86	1016.8	—	60.1	1.6	16.0	90	6.5	0	5	10	12	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Lancashire.	Southport H	9	42	1018.1	+ 2.8	59.7	3.7	13.8	78	6.1	1	9	5	6	10	0	0	0	0	3	0	0	28	0	0	23	8	0	1	0	0	0	1	5	18	6	
		13	42	1018.3	+ 3.0	61.7	4.5	14.1	75	5.8	3	7	5	7	9	0	0	0	0	3	0	0	26	2	0	24	7	0	0	0	0	0	0	6	18	7	
		17	42	1017.9	+ 3.0	61.7	4.8	13.8	74	6.0	3	8	3	6	11	0	0	0	0	1	2	1	1	21	5	0	24	6	1	0	0	0	1	7	16	6	
		21	42	1017.9	+ 2.6	57.9	2.4	14.1	85	6.2	1	12	1	3	14	0	0	0	0	1	6	6	18	0	0	22	6	3	2	0	0	0	3	8	9	6	
Lancashire.	Stonyhurst ..	9	381	1017.8	—	58.9	4.2	12.8	75	7.7	1	3	4	10	13	0	0	0	0	1	2	9	19	0	0	11	20	0	1	0	0	0	1	19	10	0	
		21	381	1017.8	—	56.1	6.3	9.4																													

TABLE I. DISTRICT VALUES.

The District Values of this Table are computed from the statistics for selected individual stations set out in Table III and Table IV.

The representative stations from which the District Values of rainfall and temperature are computed are indicated in Table III by the sign ¶ while the representative stations from which District Values of sunshine are computed are indicated by the sign §. The deviations from and percentages of normal for Air Temperature, Rainfall and Sunshine are the means of the corresponding deviations or percentages for the representative District Value stations. The deviations from normal of Earth Temperature are derived from the deviations for all the stations reporting in Table III for which normals of Earth Temperature are available. The highest and lowest temperatures for the District recorded during the month may refer to any station in Table III.

TABLE II. SUMMARY OF AUTOGRAPHIC RECORDS OF WIND.

The records used in the preparation of this Table are generally made by anemographs of the pressure-tube type. At a few stations the Robinson Cup Anemograph is utilised. The classification adopted for the "Distribution of Wind" is based on the specification of the Beaufort Scale of Wind Force (see *The Observer's Handbook*). For an anemograph complying with the specification "head 33 ft. above ground in the open" the several columns correspond with Force 8 and above (gales), Forces 6 and 7 (strong winds), Forces 4 and 5 (moderate winds), Forces 2 and 3 (light winds), Forces 1 and 0 (nearly calm). Some information as to the nature of the actual exposures may be gathered from the figures in the "Height" columns.

The "Highest Hourly Wind" is determined by the mean speed of the wind for a period of sixty minutes from 30 minutes before to 30 minutes after an exact hour by Greenwich Mean Time. Under the heading "Veer from N" the azimuth of the direction from which the wind was blowing is stated, the entry for an east wind being 90°, that for a south wind 180° and so on.

TABLE III. SUMMARY OF OBSERVATIONS AT TERMINAL HOURS.

Temperature.—The terminal hours of observation are given for each station. When the terminal hours for maximum and minimum temperature are stated independently the temperatures refer to intervals of 24 hours. If the maximum thermometer is read in the morning the reading is credited to the previous day. When the terminal hours for maximum and minimum are separated by a dash, thus, 18-7, the day-maximum for the period 7h. to 18h. and the night-minimum for the period 18h. to 7h. are reported and are utilised in determining the means for the month; in such cases the extreme temperatures for successive periods of 24 hours are also read by the observers, so that the absolute maximum and minimum temperatures for the month are obtained.

Except at the Royal Observatory, Greenwich, where a Glaisher stand is in use, the air temperature is obtained from thermometers placed in louvered screens. At Kew Observatory, Richmond, and Valentia Observatory these are north wall screens a few feet from the ground. At Aberdeen Observatory the north wall screen is at 41 feet. Otherwise the screens are in the open.

Rainfall.—The daily amounts are for the 24 hours beginning at the "terminal hour." "Rainfall" includes all forms of precipitation. The number of days of precipitation is counted with reference to the limit .01 inch or 0.2 mm. and also with reference to the limit .04 inch or 1 mm. The lower limit excludes mere "traces" of precipitation, but it is frequently passed on occasions when the precipitation is only dew.

Weather.—The numbers of days of Precipitation, Snow, Hail, Thunderstorms and Gale are counted irrespective of the hour at which the phenomena occur. Except for "Precipitation" the day is the civil day.

For the purpose of this summary "Snow" includes sleet (*i.e.*, snow with rain), "Hail" includes graupel (soft hail), "Snow lying" refers to occasions when at least one-half of the country surrounding the station is covered with snow at the morning observation. The entry of "fog" implies that regular observations of the range of vision are made on the scale set out below. Days of fog are those on which the range of vision is less than 1,100 yards at the hour of morning observation. That hour is given by the third entry of column 2 of the table and may be 7h. or 9h. G.M.T. The variability of the observation hour may exercise an important effect upon the statistics of fog frequency. "Thunderstorm" includes any day on which thunder is heard. "Gale" is a wind of Force 8 or upwards on the Beaufort Scale. A "ground frost" is entered when the reading of a "grass minimum" thermometer set the previous evening and read at the morning observation is 30° F. or lower.

Sunshine.—The percentage of possible sunshine is in all cases calculated with reference to the maximum duration possible in the latitude on the assumption of an unobstructed horizon, due allowance being

made for refraction (see *International Meteorological Tables* (Paris) pp. A17-A20 and 42-27). The sunshine recorder is generally insensitive to sunshine when the sun is at an altitude of 3° or less. The symbol § is entered against the percentage at some stations and indicates that obstructions of altitudes greater than 3° reduce the possible record of duration for the month by more than 5 per cent.

TABLE IV. SUMMARY OF OBSERVATIONS AT FIXED HOURS.

Mean Air Pressure is expressed in millibars. (1 millibar = 1,000 dynes per square centimetre = the pressure due to .029531 inch of mercury at 32° F. in Lat. 45°). The corrections for latitude, temperature and height have been applied to the barometer readings so as to obtain pressure at mean sea level. Barometric pressure is given at station level for a few stations at altitudes of 600 ft. or more in footnotes in Table IV.

Hygrometry.—The values given depend on the readings of the dry and wet bulb thermometers in Stevenson Screens (except at the Observatories, see above). The observations were formerly reduced by Glaisher's method; as from January, 1926 they are reduced by the new hygrometrical tables issued by the Office which are based on a formula of Regnault. In general the relative humidity and vapour pressure are derived from the monthly means of the dry and wet bulb readings. At certain stations the daily values of relative humidity and vapour pressure are found and the means are computed therefrom. These stations are indicated by the letter "H."

Cloud Amount.—The proportion of sky covered with cloud is estimated on the scale 0 to 10, the entry "0" being equivalent to clear sky "10" to overcast.

Visibility.—The observations are classified according to the following scheme—the distances, specified by international arrangement in metres, are given here in yards and miles:—

CODE.	RANGE OF VISION.
	Less than 55 yards.
2	Exceeding 55 yards, less than 220 yards
3	" 220 " " 550 "
4	" 550 " " 1,100 "
5	" 1,100 " " 1½ miles.
6	" 1½ miles " " 2½ "
7	" 2½ " " 6½ "
8	" 6½ " " 12½ "
9	" 12½ " " 31 "

Wind Summaries.—The estimates of wind force refer to the Beaufort Scale, and in general to the wind experienced at the time of observation. At Deerness, Cahirciveen, Richmond, Armagh, Eskdalemuir, Southport, Greenwich and Oxford the analysis refers to tabulations of autographic records. For Oxford the mean wind speed for half-an-hour centred at the hour of observation is used for conversion to "force" on the Beaufort Scale; for the remaining observatories the mean wind speed used for each observation refers to a period of one hour. In these cases winds equivalent to Force 1 are counted with the calms, whilst Forces 2 and 3 are taken together in the preceding column of the Table.

INTERPOLATED VALUES.

When the observations for any station for a month are incomplete and relevant data (e.g. records from neighbouring stations) which make it practicable to interpolate approximate values for the missing observations are available, such approximate values may be used for completing summaries for stations published in Tables III and IV. Parts of a summary obtained in this way are shown in brackets thus—(52.4).

STANDARD OF TIME.

As a rule observations are made in all parts of the British Islands according to Greenwich Mean Time, but at the following stations Local Mean Time is used for the observations summarised in Tables III and IV. The number of minutes after Greenwich Time is shown in brackets—Darwen (10), Rhayader (15), Ashburton (15), Tavistock (17), Plymouth (15), Douglas (20), Armagh (26), Balbriggan (25), Lisburn (30), Newcastle, Co. Wicklow (30), Ballinacurra (30), Cork (34).

"Summer Time" is not used in the Monthly Weather Report, but at certain stations the hours of observation vary in the course of the year. For such stations all time entries are converted to G.M.T. before they are printed and the winter hours are given as the terminal hours in the annual tables. For the summer hours reference should be made to the appropriate months.

NORMALS.

In Table III the normals used are those for the 35 years 1881-1915. The normals of temperature and sunshine are published in the Book of Normals, Section I, those for rainfall in the Book of Normals, Section V.

The normals for pressure with which comparison is made in Table IV also refer to the period 1881-1915.

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

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

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ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE.

AUGUST, 1928: Mainly fair in the south, unsettled in the north and west but with bright periods.

Fair, sunny weather prevailed generally in the south-east of England but in the west and north the weather was mainly unsettled with, however, considerable sunny periods. Thunderstorms and heavy rain within short periods were frequent and occurred in most districts.

Fine weather prevailed on the 1st in Ireland and Scotland, and on the 2nd extended over most of the British Isles. In southern England heavy rain occurred on the night of the 3rd to 4th and in the south-east on the 4th. Elsewhere on the 4th the weather was cloudy to fine and on the 5th sunshine amounts were almost everywhere good, while day temperatures about 70° F. or over were recorded in inland districts (78° F. at Ross-on-Wye, 76° F. at Birmingham, 75° F. at Renfrew, Sealand and S. Farnborough).

Associated with the passage along our north-west coasts of a vigorous secondary to a depression centred south of Iceland, heavy rain which began in the west of Ireland on the night of the 5th-6th spread to most districts except those in the south-east on the 6th and 7th; from about 3h. 30m. on the 6th to 7h. on the 7th, 62 mm. rain had fallen at Cahirciveen, 41 mm. fell at Douglas (I. of Man) during the 24 hours commencing 17h. on the 6th and 56 mm. at Borrowdale on the 7th. A temporary improvement followed and from the 8th to the 10th the weather was of the westerly type with bright intervals and showers. From the 11th to the 14th the weather was very unsettled. Rain fell generally at first and later the precipitation was of a more showery type. During the four days 11th-14th, Eskdalemuir registered 88 mm. of rain. Subsequently a ridge of high pressure spread over the country and was accompanied by a temporary improvement, 10 hours or more sunshine being recorded in many English districts on the 15th.

From the 19th to the 29th a belt of low pressure extended from the Atlantic across the British Isles to the North Sea; there was a renewal of unsettled weather, rain occurring in the south-west of Ireland on the 18th and spreading later to all districts; heavy falls occurred on the 20th, notably in the north of England, on the 22nd and 23rd and from the 25th to the 27th. Thunderstorms were of frequent occurrence. There were, however, many sunny periods and on several days very good sunshine records were obtained, notably over a wide area on the 25th, in southern districts on the 27th, in England and Ireland on the 28th and widely on the 29th. On the 30th an anticyclone moved eastwards across the British Isles and by September 1st was almost stationary over the southern half of the North Sea; mainly fine, quiet weather with some slight showers prevailed generally, over 12 hours' sunshine being recorded in many English districts on August 30th.

Pressure and Winds.—Monthly means of pressure at fixed hours were almost everywhere below the normal, low pressure continuing over the country generally from the 7th to the 15th and from the 19th to the 29th. The prevailing winds were between south and west and mainly light to moderate in force. A gale was recorded at Pendennis Castle on the 27th, during which the wind attained a velocity in a gust of 59 mi/hr.

Temperature.—Mean temperatures for August approximated to the normal, representative values for Districts in no case differing from the normal by more than 0.5° F. Days on which the maximum temperature rose well above the normal occurred in general between the 5th and 7th and about the 11th and 24th. The hottest day in most districts of Scotland and Ireland was the 5th and in most parts of England the 5th or 11th. The coolest day occurred generally about the 3rd, 16th and 21st. Minimum temperatures were usually more often above the normal than below; the coldest nights occurred generally at the beginning and end of the month and about the 19th.

The extreme temperatures for the month were:—England and Wales: 82° F. at London (Camden Square) on the 11th and 36° F. at Castleton (Yorks) on the 5th. Scotland: 79° F. at Perth on the 5th and 33° F. at Braemar on the 1st. Ireland: 77° F. at Lisburn (Antrim) on the 5th and 36° F. at Dublin (Phoenix Park) on the 1st.

Precipitation.—The general precipitation of the British Isles expressed as a percentage of the normal for the period 1881-1915 was 112; the values for the constituent countries were:—England and Wales, 100; Scotland, 120; Ireland, 132.

In England and Wales, precipitation in general was above the normal in the northern and western districts and below the normal in the central, southern and eastern districts. Large areas in the north had more than one and a half times the normal. Heavy falls occurred on individual days, notably in the south-east on the 3rd, in the north and north-west on the 20th, when many places had from 40 to 50 mm. and over and in the south-west on the 26th. Amongst the heaviest falls were 59 mm. at Rounton, 54 mm. at Aspatria and 52 mm. at Burnley on the 20th.

In Scotland precipitation was much below the normal in the extreme north-west and north, but elsewhere there was in general an excess, slight to moderate in the west but considerable in some eastern and southern areas. Heavy rain set in in the south of Scotland on the 6th and during the next two or three days the rain area gradually spread northwards. At Eskdalemuir the aggregate amount for the 5th and 6th was about 50 mm., while on the 7th Inveraray had 47 mm. On the 19th and 20th there were again rather heavy falls in the south-east and south, fairly widespread rains on the 23rd and some heavy falls from the 25th to the 29th, often due to thunderstorms and somewhat local in their greatest intensity; 39 mm. fell at Kingsbarns in a sharp thunderstorm on the 29th, but only about 25 mm. at St. Andrews, six miles distant. Flooding occurred at times, especially in the Border districts, and various heavy rains within short periods were locally destructive—as on the railway line between Brora and Loth in Sutherlandshire on the 12th.

Precipitation was above the normal in Ireland except along a short strip on the east coast, where there was a moderate deficiency. Heavy falls were recorded in many places on the 6th, about the 19th and on the 26th. Amongst the heaviest daily falls were 44 mm. at Cahirciveen on the 6th and 42 mm. at Armagh on the 29th, where the total for the month amounted to almost twice the normal.

Thunderstorms were of frequent occurrence, particularly from the 11th to 15th and from the 23rd to 29th. The observer at Barnstaple reports the occurrence of a severe storm on the 24th, when for 10 minutes frozen ice of various shapes, some as large as a sixpence and half-inch thick, fell with great violence, breaking vegetation and cutting off the stalks of corn, etc. Drifts were still visible under walls four hours after the storm. A violent thunderstorm occurred at Armagh on the 29th from 2.30 to 3.30 G.M.T. The rain and hail amounted to 42 mm. and the storm was followed by floods. The observer remarks that "the phenomenal character of the hailstorm of August 29th can be realized when it is stated that a good deal of hail was still lying on September 1st." The south and west of Scotland were visited by a severe storm on the 29th, which caused structural damage in the Dumfries area.

Sunshine.—Sunshine aggregates for August were in general above the normal in Ireland and in the central and eastern district of England and below the normal elsewhere, the most pronounced deficiency occurring in the Shetlands, where the mean daily duration of sunshine as recorded at Lerwick was 2.04 hr. below the normal and represented only 14 per cent. of the astronomically possible duration. Representative totals for Districts varied from 82 per cent. of the normal in Scotland E. to 119 per cent. in Ireland S. Good sunshine records were obtained on several days, notably from the 1st to the 4th, except in the south-east, widely on the 5th, when over 13 hours were recorded in many parts of England, in northern districts and in Ireland on the 8th, in the south-east of England on the 11th, in many parts on the 12th, in the south and east from the 13th to 15th, in many parts of England on the 25th and from the 27th to the 29th, and widely on the 30th.

Fog.—Fog was of relatively infrequent occurrence; it occurred in many eastern districts of Scotland on the 5th and in various places on the 10th, 11th, 22nd and 23rd.

Miscellaneous Phenomena.—Solar halos of 22° were observed at several stations; at Grayshott on as many as 13 days. Aurora was observed at Baltasound on the 26th. The Zodiacal Light was observed at Deerness on the 29th.

TABLE I.—DISTRICT VALUES—AUGUST, 1928. [1908, revised 1928.]

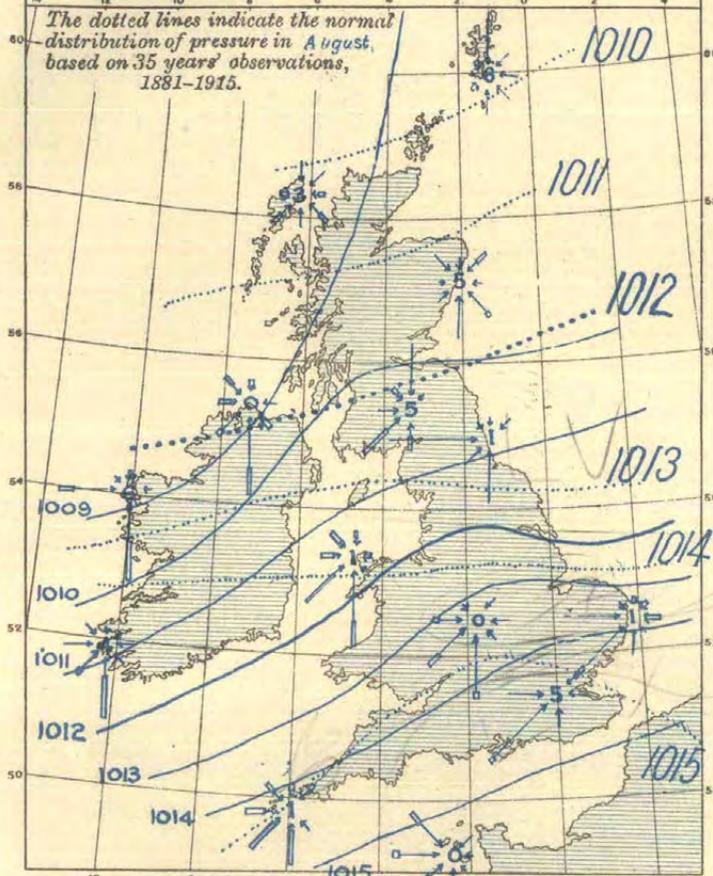
DISTRICTS.	AIR TEMPERATURE.			EARTH TEMPERATURE.		RAINFALL.		SUNSHINE.	
	High-est.	Low-est.	Daily Mean. Deviation from Normal.	At 1 ft. Deviation from Normal.	At 4 ft. Deviation from Normal.	Per-centage of Normal.	No. of Days. Deviation from Normal.	Per-centage of Normal.	Per-centage of Possible Duration.
o. SCOTLAND, N.	°F. 75	°F. 36	°F. -0.4	°F. —	°F. —	% 94	-3	% 85	% 22
Eastern.									
1. SCOTLAND, E.	79	33	-0.1	—	—	134	+3	82	26
2. ENGLAND, N.E.	78	36	+0.4	-1.0	0.0	120	+2	104	37
3. ENGLAND, E...	80	39	+0.3	-0.6	-0.6	90	-1	100	43
4. MIDLAND COUNTIES	79	38	+0.3	-0.4	+0.1	85	-2	104	39
5. ENGLAND, S.E.	82	37	+0.3	+0.8	+1.6	84	+1	107	47
Western.									
6. SCOTLAND, W. (& I. of Man)	76	35	+0.2	—	-1.9	131	+2	96	29
7. ENGLAND, N.W. (& N. Wales)	79	40	+0.2	-0.7	-0.8	114	+1	98	35
8. ENGLAND, S.W. (& S. Wales)	77	38	+0.3	-0.7	-0.2	90	+1	98	41
9. IRELAND, N...	77	37	-0.1	-1.0	-0.7	140	-1	110	33
10. IRELAND, S...	76	36	-0.5	-0.9	-0.9	134	+3	119	41
11. CHANNEL I. (& Scilly)	77	51	+0.5	+2.0	+2.3	88	-2	99	52
Mean: DISTRICTS 1-10	82	33	+0.1	-0.6	-0.6	112	+1	102	37

TABLE II.—SUMMARY OF AUTOGRAPHIC RECORDS OF WIND.—AUGUST, 1928. [1914.]

DISTRICT AND STATION.	Height.			Distribution of Wind.††								Extreme Velocities.									
	Above Mean Sea Level.	Above Ground.	Above Building.	More than 38 mi/hr.		25 to 38 mi/hr.		13 to 24 mi/hr.	4 to 12 mi/hr.	Less than 4 mi/hr.	No Record.	Highest Hourly Wind.			Highest Gust.						
				Dates of Occurrence.	Duration.	No. of Days.	Duration.	Duration.	Duration.	Duration.	Duration.	Veer from N.	Speed.	Mid Time.	Speed.	Time.					
o. SCOTLAND, N.	ft.	ft.	ft.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	°	mi/hr.	m/s.	day. hr.	mi/hr.	m/s.	d.	h.	m.		
Shetlands Lerwick ..	310	42	33†	—	0	4	41	177	437	89	0	220	37	17	8	14	53	24	8	18	30
Orkneys Deerness (Cup Anr.)	188	16	5	—	0	4	31	204	418	91	0	260	33	15	8	13	—	—	—	—	—
1. SCOTLAND, E.																					
Aberdeen Aberdeen ..	70	42	33†	—	0	—	0	148	497	99	0	20	21	10	21	2	34	15	8	11	50
Kincardine Balmakewan ..	140	25	18	—	0	—	0	61	(419)	(241)	23	270	17	8	8	14	34	15	8	14	5
Edinburgh Edinburgh ..	485	39	31†	—	0	1	3	197	335	209	0	200	25	11	7	12	45	20	7	17	0
6a. SCOTLAND, W.																					
Argyll Tiree ..	80	55	48†	—	0	2	8	392	282	62	0	190	26	12	6	15	39	17	8	16	5
Renfrew Paisley ..	188	81	15	—	0	—	0	62	476	206	0	140	24	11	7	12	49	22	7	13	40
Dumfries Eskdalemuir ..	825	50	22	—	0	5	22	260	278	184	0	200	38	17	7	12	53	24	7	11	30
2. ENGLAND, N.E.																					
Durham South Shields ..	62	46	20	—	0	—	0	163	365	216	0	320	22	10	20	21	38	17	14	11	35
York, E.R. Spurn Head ..	67	42	35†	—	0	7	28	419	290	7	0	250	35	16	20	13	51	23	20	12	50
Lincoln Cranwell ..	284	44	26†	—	0	2	3	211	411	119	0	260	25	11	20	13	45	20	13	12	55
3. ENGLAND, E.																					
Norfolk Gorleston ..	52	42	33†	—	0	2	14	248	447	35	0	20	28	13	4	14	47	21	20	3	30
Suffolk Felixstowe Aero. ..	55	40	25	—	0	2	12	331	(290)	(108)	3	200	29	13	13	13	38	17	13	13	10
Essex Shoeburyness ..	115	104	14†	—	0	3	13	251	376	104	0	200	29	13	13	14	41	18	27	16	25
4. MIDLAND COUNTIES.																					
Warwick Birmingham ..	643	118	18	—	0	—	0	150	566	28	0	190	23	10	13	14	42	19	13	13	50
5. ENGLAND, S.E.																					
Surrey Richmond (KewObs)	82	65	22	—	0	—	0	118	440	186	0	210	21	10	27	15	38	17	27	15	10
Surrey Croydon ..	284	40	24	—	0	4	11	279	420	34	0	230	29	13	27	16	46	21	27	16	30
Kent Dover ..	61	32	22	—	0	8	26	341	314	53	10	—	34	15	4	14	51	23	4	16	0
Kent Lympne ..	409	70	55†	—	0	5	31	238	454	21	0	10	31	14	4	14	44	20	4	14	25
Hampshire S. Farnboro' (Tower)	444	160	14	—	0	1	1	201	465	77	0	190	27	12	27	14	43	19	27	13	50
Hampshire Calshot ..	55	45	31†	—	0	5	24	337	(327)	(56)	0	220	31	14	13	12	42	19	25	14	5
Hampshire Worthy Down ..	314	43	27†	—	0	—	0	141	471	132	0	190	22	10	27	14	43	19	27	13	40
Wiltshire Larkhill ..	526	51	34†	—	0	—	—	Instru-ment	under	repair.											
7a. ENGLAND, N.W.																					
Lancashire Fleetwood ..	112	50	12	—	0	8	38	275	393	38	0	290	33	15	20	10	43	19	20	10	0
Lancashire Southport ..	77	59	45†	—	0	10	96	284	353	11	0	280	34	15	20	9	46	21	13	17	30
7b. NORTH WALES.																					
Anglesey Holyhead ..	64	45	29†	—	0	5	32	391	280	41	0	200	33	15	13	16	51	23	13	16	10
Flint Sealand ..	81	65	49†	—	0	—	0	149	497	98	0	310	23	10	16	11	39	17	13	16	20
8b. ENGLAND, S.W.																					
Devon Plymouth ..	185	88	2	—	0	1	2	223	338	181	0	—	25	11	27	18	37	17	27	16	40
Cornwall Pendennis Castle ..	256	65	24	27	5	12	90	259	304	77	9	—	44	20	27	14	59	26	27	14	55
9. IRELAND, N.																					
Donegal Dunfanaghy ..	180	47	39	—	0	3	13	131	380	220	0	—	30	13	8	17	45	20	8	17	40
Antrim Aldergrove ..	282	40	27†	—	0	—	0	118	430	196	0	210	23	10	7	11	43	19	8	15	25
10. IRELAND, S.																					
Dublin Kingstown (CupAnr.)	49	27	16	—	0	5	13	316	331	84	0	260	28	13	8	18	—	—	—	—	—
Clare Quilty ..	100	40	32†	—	0	3	5	239	415	85	0	—	26	12	13	3	39	17	12	16	25
Kerry Cahirciveen (Val. O.)	98	41	34†	—	0	3	20	308	334	82	0	190	29	13	7	4	48	21	12	20	25
Cork Weaver Pt. ..	160	30	21†	—	0	—	—	Instru-ment	under	repair.											
11. SCILLY ISLES.																					
St. Mary's ..	160	42	35†	—	0	9	85	415	221	23	0	250	34	15	13	3	47	21	13	13	40

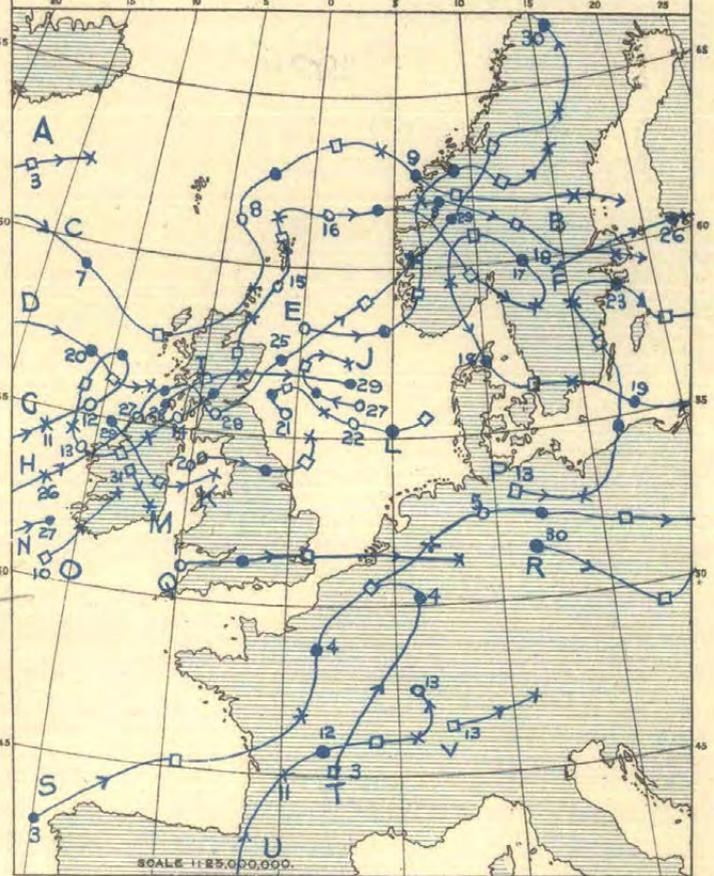
†† Brackets () indicate that the distribution as between winds above and below 4 mi/hr. is doubtful, but the total number of hours with winds below 12 mi/hr. is reliable.
 † Standard mounting.

1. WIND AND MEAN PRESSURE. 7 A.M.



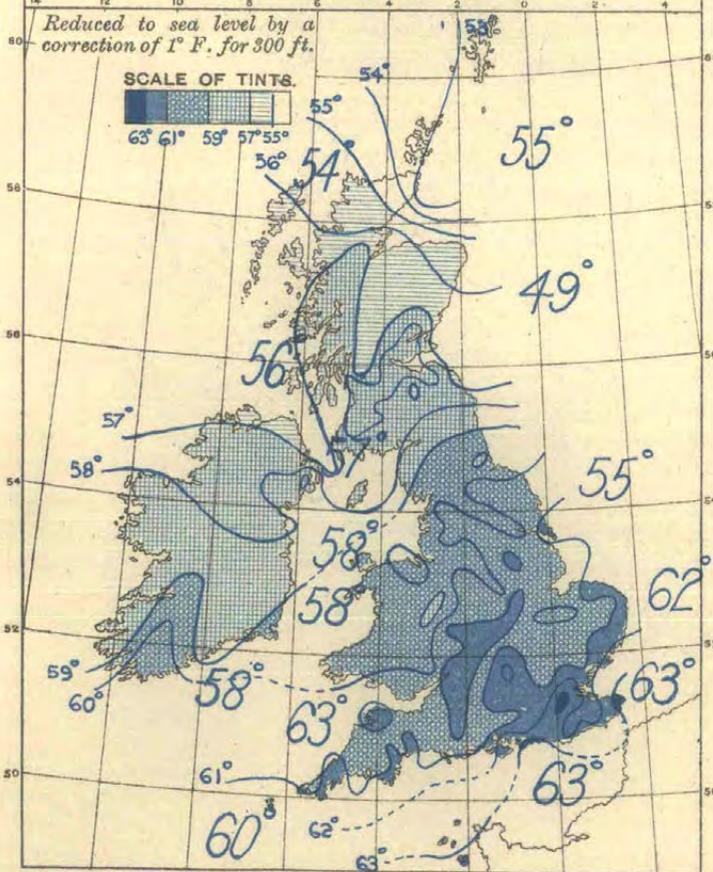
WIND ROSES. The arrows fly with the wind and indicate frequency and force, thus:
 LIGHT TO SPRING GALE
 30 Obs. = 1 Inch

2. MOVEMENTS OF DEPRESSIONS.



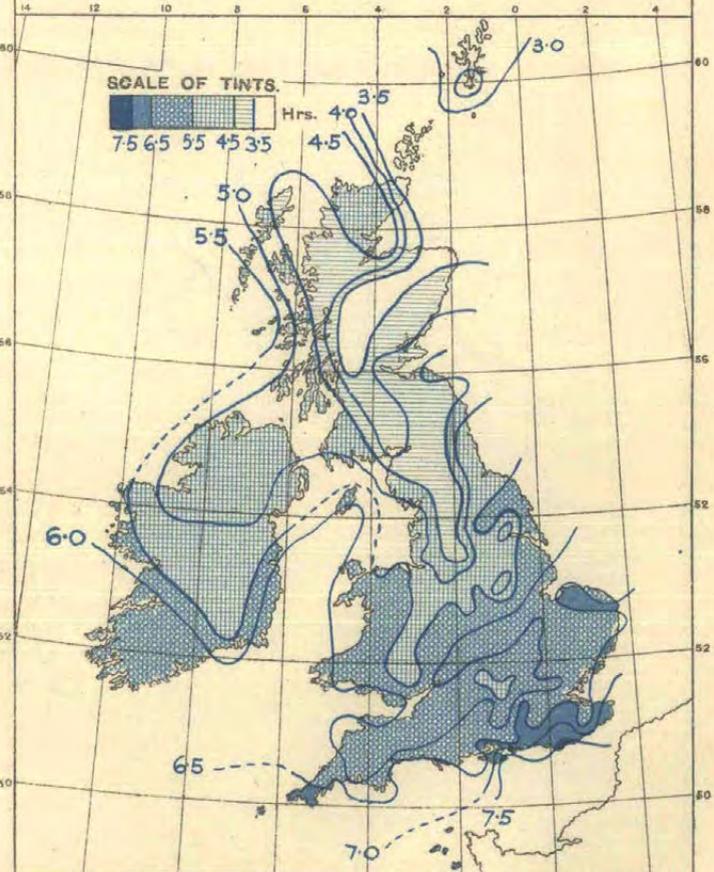
Positions of centres are shown thus: - O at 1hr; ● at 7h; □ at 13h; X at 18h.

3. DISTRIBUTION OF MEAN TEMPERATURE.



Sea temperatures are shown in large figures, thus: 60°

4. BRIGHT SUNSHINE, HOURS PER DAY.



* The pressure is expressed in millibars.

TABLE III (continued).—SUMMARY of the RECORDS of TEMPERATURE, RAINFALL and SUNSHINE, and of WEATHER OBSERVATIONS, AUGUST, 1928.

DISTRICT, COUNTY AND PLACE.	Terminal Hours of Observation.	Height of Station above Mean Sea Level.	AIR TEMPERATURE IN DEGREES FAHRENHEIT.										Earth Temperature.		RAINFALL.				WEATHER. Number of days.							BRIGHT SUNSHINE.						
			Means of		Deviation from Normal.	Absolute Maximum and Minimum.			1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Most in a day.		Precip'n.	Snow.	Snow lying.	Hail.	Thunderstorm.	Fog (Morning Obs.)	Ground Frost.	Gale.	Daily Mean.	Deviation from Normal.	Per Cent.							
			A	B		Maximum.	Date.	Minimum.					Date.	Amount.												Date.	0.2 mm. or more.	1 mm. or more.	Hours per day.			
2. ENGLAND, N.E.																																
Northumberland.	Berwick-on-T.	9 9 9	76	62.1	50.5	56.3	—	75	7th	44	31st	—	—	3.42	87	—	15	28th	19	17	0	0	0	3	0	0	0	0	0	4.31	—	29
	Bellingham	9 9 9	84	63.6	48.1	55.9	—	74	5th	40	1, 2	—	—	3.48	89	—	20	11th	22	15	—	—	—	2	0	0	0	0	0	—	—	—
	Cockle Park	2121 9	324	65.8	48.7	57.3	+1.3	73	11th	42	1st	56.4	55.2	2.94	75	—	5	21	20th	18	14	0	0	0	5	2	0	0	0	4.99	-0.14	33
	Tynemouth	18-7 7	67	64.3	53.5	58.9	+1.2	74	11th	49	30th	—	—	3.35	85	+15	17	20th	20	16	0	0	0	4	1	0	0	0	0	—	—	—
Durham.	Chopwellwood	9 9 9	445	66.8	48.4	57.6	—	74	5th	43	2, 18	—	—	4.58	116	—	22	20th	23	15	0	0	0	—	0	2	0	0	0	5.24	—	35
	Durham	2121 9	336	65.7	49.8	57.7	-0.2	73	10th	44	2, 4	—	—	2.54	65	+2	21	20th	21	14	0	0	0	2	0	0	0	0	0	5.14	+0.37	35
	Houghall	9 9 9	160	67.3	49.0	58.1	—	74	5th	40	5th	—	—	2.72	69	—	22	20th	19	12	0	0	0	3	0	1	0	0	5.14	—	35	
	Ushaw College	9 9 9	594	66.3	50.3	58.3	—	73	10th	46	1, 2, 31	—	—	3.48	88	+14	29	10th	20	18	0	0	0	2	1	—	0	0	—	—	—	
York, N. Riding.	Ampleforth	9 9 9	350	66.1	51.9	59.0	+1.0	73	5th	46	30th	—	—	3.43	87	+6	25	20th	14	12	0	0	0	6	0	0	0	0	—	—	—	
	Castleton	9 9 9	425	66.5	48.2	57.3	—	73	11th	36	5th	56.4	—	4.74	120	—	44	20th	20	13	0	0	0	5	1	—	0	—	—	—		
	Rounton	2121 9	249	67.5	49.6	58.5	+1.1	74	10, 19	42	4th	57.5	—	4.16	106	+34	59	20th	16	13	0	0	0	2	0	0	0	0	—	—	—	
	Scarborough	9 9 9	118	67.0	53.2	60.1	+1.2	75	11th	49	4th	—	—	59.6	95	+24	38	20th	17	13	0	0	0	2	0	0	0	0	5.84	+0.52	39	
York, E. Riding.	West Witton	9 9 9	605	65.7	50.7	58.2	—	74	5th	42	4, 31	58.8	54.8	5.36	136	—	35	20th	21	19	0	0	0	4	—	0	0	—	—	—		
	York	2121 9	56	68.0	52.2	60.1	+0.4	76	11th	44	5th	59.5	57.3	3.76	95	+31	31	20th	15	11	0	0	0	5	—	0	0	0	4.98	+0.11	34	
	Hull	2121 9	86	69.2	52.6	60.9	+1.5	78	11th	44	2, 5, 31	60.8	57.0	3.71	94	+20	43	20th	14	10	0	0	0	6	1	0	0	0	5.67	—	38	
	Osgodby	2121 9	30	68.2	49.8	59.0	—	75	5th	39	5th	—	—	3.74	95	—	28	20th	17	10	0	0	0	4	0	0	0	0	5.21	—	35	
Spurn Head	18-7 7	29	66.0	55.0	60.5	+0.7	74	11th	50	2nd	—	—	1.64	42	-23	12	20th	16	11	0	0	0	6	0	—	1	5.90	—	40			
Lincoln.	Cranwell	18-7 7	236	67.9	51.1	59.5	-0.5	76	11th	42	3rd	60.6	59.1	3.28	83	+14	20	11th	16	13	0	0	1	5	0	0	0	0	2.61	+0.17	42	
	Cleethorpes	9 9 9	23	68.1	52.4	60.3	—	78	11th	45	2nd	—	—	2.38	61	—	17	19th	14	11	0	0	0	5	0	0	0	0	5.95	—	40	
	Lincoln	9 9 9	58	69.0	52.5	60.7	+0.4	76	6, 11	42	2nd	60.3	58.6	4.32	110	+48	27	24th	15	14	0	0	1	7	0	0	0	0	—	—	—	
	Skegness	9 9 9	12	67.3	53.8	60.5	+1.4	75	11th	45	2, 5	—	—	1.72	44	-18	14	19th	12	11	0	0	0	4	0	—	0	6.25	+0.02	43		
3. ENGLAND, E.																																
Norfolk.	Cromer	9 9 9	150	69.5	53.6	61.5	+1.4	80	11th	49	6, 21, 30	—	—	1.90	48	-13	8	4th	17	11	0	0	0	4	0	0	0	0	6.34	+0.31	43	
	Geldeston	9 9 9	37	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Hunstanton	9 9 9	105	68.0	54.6	61.3	—	77	11th	47	3rd	—	—	1.74	44	—	13	19th	16	11	0	0	0	6	0	—	10	6.53	—	44		
	Norwich	9 9 9	98	69.5	52.7	61.1	+0.4	78	11th	45	31st	62.4	—	1.80	46	-14	8	1, 4	17	12	0	0	0	3	—	0	0	0	6.72	—	46	
	Sprowston	9 9 9	93	68.9	52.2	60.5	—	77	11th	42	31st	—	—	1.53	39	—	7	1st	13	11	0	0	0	3	0	0	0	0	6.70	—	46	
	Yarmouth	18-7 7	14	67.9	54.5	61.2	+0.9	75	11th	45	31st	61.5	58.3	1.79	45	-18	15	4th	14	11	0	0	0	3	0	0	0	0	6.48	-0.17	44	
Suffolk.	Bungay (Flix'n)	9 9 9	79	69.2	52.4	60.8	—	77	11th	43	6th	—	—	1.82	46	—	13	5th	13	10	0	0	0	5	0	0	0	0	—	—	—	
	Copdock	9 9 9	164	69.4	52.7	61.1	—	77	11th	45	31st	61.5	59.7	2.59	63	—	21	4th	13	7	0	0	0	3	0	0	0	0	5.49	—	38	
	Felixstowe	18-7 7	15	68.4	56.2	62.3	—	72	12, 25	47	31st	—	—	1.76	45	—	21	4th	11	9	0	0	0	3	0	0	0	0	6.50	—	45	
Cambridge.	Lowestoft	9 9 9	83	68.3	54.8	61.5	+1.3	74	11th	48	5th	62.8	60.4	1.87	48	-8	14	4th	13	9	0	0	1	3	0	0	0	0	6.65	-0.09	46	
	Cambridge (Bot. Gdns.)	2121 9	41	69.5	51.7	60.6	-0.5	79	11th	42	31st	62.0	59.7	1.89	48	-12	9	4th	14	11	0	0	0	2	—	0	0	0	6.04	-0.02	41	
Bedford.	Wisbech	9 9 9	10	68.7	50.6	59.7	—	78	11th	41	31st	—	—	1.23	131	—	5	13th	14	10	0	0	1	7	0	0	0	0	6.14	—	42	
	Cardington	18-7 7	100	68.9	52.1	60.5	—	78	11th	43	5th	—	—	1.66	42	—	8	22nd	16	10	0	0	0	5	1	0	0	0	—	—	—	
	Luton	9 9 9	390	67.8	50.5	59.1	—	77	11th	39	5th	62.7	57.7	2.10	53	—	11	19th	15	11	0	0	0	5	0	0	0	0	5.85	—	40	
Hertford.	Woburn	9 9 9	291	67.4	51.0	59.2	-0.7	75	11th	40	5th	60.5	55.7	2.77	70	+11	12	26th	20	13	0	0	0	3	0	—	0	0	5.72	—	39	
	Benington	9 9 9	405	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
	Rothamsted	2121 9	420	66.5	51.8	59.1	-0.8	75	11th	44	19th	60.3	—	2.02	51	-12	12	19th	11	10	0	0	0	2	0	0	0	0	6.23	+0.26	43	
St. Albans	9 9 9	272	68.4	51.2	59.8	—	78	11th	41	19th	62.8	—	1.79	45	—	16	3rd	13	8	0	0	0	3	0	0	0	0	—	—	—		
Essex.	Clacton-on-S.	18-7 7	55	68.1	56.6	62.3	+1.1	72	12th	46	5th	63.0	61.3	1.92	149	+3	23	4th	11	8	0	0	0	3	0	0	0	0	6.72	-0.15	46	
	Chelmsford	9 9 9	134	69.6	50.3	59.9	—	80	11th	42	19, 31	—	—	2.72	69	+14	19	3rd	12	10	—	—	—	—	—	—	—	—	—	—		
	Chelmsford (Good Easter)	9 9 9	185	69.1	51.1	60.1	—	79	11th	40	19, 31	—	—	2.04	52	—	16	3rd	11	9	0	0	0	4	0	0	0	0	6.14	—	42	
	Earls Colne	9 9 9	168	70.6	52.4	61.5	—	80	11th	43	31st	—	—	2.30	58	—	13	4th	11	7	0	0	0	1	—	0	—	—	—			
	Halstead	9 9 9	139	70.7	52.5	61.6	—	79	11th	42	31st	—	—	2.13	54	—	15	4th	11	8	0	0	0	3	0	—	0	—	—	—		
Shoeburyness	18-7 7	11	70.4	54.2	62.3	-0.1	78																									

TABLE III (continued).—SUMMARY OF THE RECORDS OF TEMPERATURE, RAINFALL AND SUNSHINE, and of WEATHER OBSERVATIONS, AUGUST, 1928.

DISTRICT, COUNTY AND PLACE.	Terminal Hours of Observation.	Height of Station above Mean Sea Level.	AIR TEMPERATURE IN DEGREES FAHRENHEIT.								Earth Temperature.		RAINFALL.				WEATHER. Number of days.							BRIGHT SUNSHINE.									
			Means of				Absolute Maximum and Minimum.				1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Most in a day.		Precip'n.	Snow.	Snow lying.	Hail.	Thunderstorm.	Fog (Morning Obs.).	Ground Frost.	Gale.	Hours per day.								
			A	B	Mean of A and B.	Deviation from Normal.	Maximum.	Date.	Minimum.	Date.					Amount.	Date.									0.2 mm. or more.	1 mm. or more.	Daily Mean.	Deviation from Normal.	Per Cent.				
			Max.	Min.	Rain.	Max.	Min.	Mean of A and B.	Deviation from Normal.	Maximum.	Date.	Minimum.	Date.	1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Amount.	Date.	0.2 mm. or more.	1 mm. or more.	Snow.	Snow lying.	Hail.	Thunderstorm.	Fog (Morning Obs.).	Ground Frost.	Gale.	Daily Mean.	Deviation from Normal.	Per Cent.		
4. MID. COUNTIES—cont.			G.M.T.	ft.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	in.	mm.	mm.	mm.												hr.	hr.				
Warwick.	Birmingham	¶§	18-7 7	535	67.3	52.4	59.9	+0.4	76	5th	48	4th	55.8	53.9	1.79	45	-24	11	26th	14	10	0	0	0	4	0	0	0	6.18	+0.98	42		
	B'ham, Sparkhill	¶§	7 13 7	424	69.8	50.9	60.3	—	77	5th	45	5, 19, 31	—	—	1.82	46	—	9	26th	12	10	0	0	0	5	0	0	0	—	—	—		
	Coventry	¶	9 9 9	270	69.1	52.7	60.9	+0.4	76	5th	47	19th	60.8	57.7	1.73	44	-24	10	22nd	12	10	0	0	0	3	0	0	0	6.05	+0.53	41		
	Rugby	¶	2 12 1 9	390	67.7	52.3	(60.0)	—	74	11, 19	(46)	(19, 31)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
Oxford.	Leafield	¶	18-7 7	612	66.0	50.6	58.3	—	73	11th	45	5th	—	—	1.92	49	—	14	25th	19	11	0	0	0	4	0	0	0	5.39	—	37		
	Oxford	¶§	9 9 9	208	68.4	53.0	60.7	-0.2	76	11th	45	5, 19, 31	62.8	60.0	1.29	33	-25	6	14, 27	13	9	0	0	0	4	0	0	0	5.33	-0.61	37		
	Oxford (Sandford)	¶	9 9 9	210	68.7	51.8	60.3	—	77	11th	42	5th	—	—	2.40	61	—	15	27th	13	9	0	0	0	3	0	0	0	15.59	—	38		
Bucks.	Mursley	**	9 9 9	490	66.8	51.9	59.3	—	75	11th	43	5th	58.3	—	2.48	63	—	14	22nd	15	12	0	0	0	4	—	—	0	5.61	—	38		
Stafford.	Mayfield	¶	9 9 9	374	67.0	49.3	58.1	—	75	5th	40	2, 3, 5	—	—	3.50	89	—	20	19th	18	13	0	0	1	8	—	0	0	5.48	—	37		
Shropshire.	Newport	¶	9 9 9	211	67.1	49.8	58.5	—	77	5th	41	5th	—	—	2.69	68	—	12	22nd	18	14	0	0	0	6	0	0	0	5.72	—	39		
	Roden, Well'n	¶	9 9 9	207	67.7	48.7	58.2	—	78	5th	40	19th	—	—	3.12	79	—	15	22nd	19	13	0	0	0	1	—	—	—	—	—	—		
	Wistanstow	¶	2 12 1 9	481	67.5	—	—	—	76	5th	40	26th	—	—	3.55	90	+13	15	22nd	14	11	0	0	0	0	0	0	—	—	—	—		
Worcester.	Malvern	¶	9 9 9	377	68.4	53.6	61.0	—	77	5th	49	31st	61.7	60.0	1.91	49	-24	13	22nd	11	8	0	0	0	1	0	0	0	6.32	—	43		
	Tenbury	¶	9 9 9	313	68.8	51.9	60.3	+0.4	79	5th	43	5th	59.8	—	2.54	65	-10	13	22nd	14	10	0	0	0	3	1	0	0	—	—	—		
	Worcester (Perdiswell)	¶	9 9 9	95	69.7	51.5	60.6	—	78	5th	42	5, 19	—	—	1.45	37	—	11	26th	11	9	0	0	0	2	—	4	0	6.55	—	45		
Hereford.	Bromyard	¶	9 9 9	392	67.8	50.8	59.3	—	77	5th	40	5, 19	60.4	58.0	1.87	47	—	14	26th	14	11	0	0	0	1	1	0	0	—	—	—		
	Hereford	¶	9 9 9	291	67.8	51.3	59.5	-0.5	77	5th	44	5, 31	—	—	2.11	53	-13	19	26th	12	8	0	0	0	0	0	0	0	—	—	—		
	Ross-on-Wye	¶§	18-7 7	223	67.8	53.0	60.4	-0.5	78	5th	44	5th	61.5	59.8	1.93	49	-16	14	26th	12	8	0	0	1	2	0	0	0	6.13	+0.52	42		
Gloucester.	Cheltenham	¶	2 12 1 9	214	68.6	53.8	61.2	+0.8	77	5th	46	5th	62.8	61.8	2.71	69	+2	12	22nd	12	9	0	0	0	3	0	0	0	5.50	—	38		
	Over Court	¶	9 9 9	147	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
5. ENGLAND, S.E.																																	
London.	City, Bunhill Row	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.95	+0.63	41
	Camden Square	¶	9 9 9	110	71.1	54.8	62.9	-0.3	82	11th	47	5th	61.4	58.9	2.60	66	+10	24	3rd	19	14	0	0	0	1	—	—	—	—	—	—	—	
	East Ham	¶	9 9 9	15	70.3	54.9	62.6	—	80	11th	47	19th	—	—	2.44	62	—	20	3rd	16	11	—	—	—	—	—	—	—	—	—	—	—	
	Enfield	¶	9 9 9	148	71.1	53.7	62.4	—	81	11th	44	19th	—	—	59.9	1.91	49	-12	17	3rd	15	11	0	0	0	3	0	0	0	5.92	—	41	
	Greenwich	g	2 12 2 9	149	72.9	52.5	62.7	+0.1	84	11th	45	19th	59.2	57.1	2.82	72	+16	29	3rd	20	12	0	0	1	3	0	0	0	6.46	+0.26	45		
	Hampst'd Res.	¶	9 9 9	450	68.1	51.6	59.9	—	78	11th	44	5th	—	—	2.71	69	—	20	3rd	19	13	0	0	0	5	—	0	0	0	6.16	—	42	
	Kensington	¶	18-9 9	80	70.2	54.4	62.3	—	80	11th	46	5th	62.7	62.0	2.74	70	—	21	3rd	20	15	0	0	0	2	0	0	0	—	—	—		
	Regent's Park	¶	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Richmond	¶	2 12 2 24	18	69.3	54.0	61.7	+0.1	79	11th	46	5th	62.2	59.9	2.59	66	+9	23	4th	16	12	0	0	0	3	0	0	0	6.47	+0.44	45		
	(Kew Obs.)	¶§	Hourly*	18	—	—	61.3	+0.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Stroud Green	¶	18-7 7	212	70.4	53.9	62.1	—	80	11th	47	19th	—	—	2.46	63	—	14	3rd	15	10	0	0	(0)	—	—	—	—	—	—	—	—	
	Tottenham	††	2 12 1 9	51	71.0	55.5	63.3	+0.8	81	11th	48	5th	—	—	61.8	2.25	57	+5	24	3rd	14	10	0	0	0	0	0	0	—	—	—	—	
	Westminster	¶	9 9 9	27	70.0	55.8	62.9	+0.4	79	11th	47	5th	—	—	2.51	64	+6	24	3rd	18	12	—	—	—	—	—	—	(0)	—	6.22	+0.74	43	
Surrey.	Addington	¶	9 9 9	472	68.3	52.6	60.5	—	78	11th	45	5th	—	—	2.84	72	—	27	3rd	16	11	—	—	—	—	—	—	—	—	—	—		
	Croydon Aero.	¶	18-7 7	244	68.9	54.0	61.5	—	79	11th	45	5th	—	—	2.92	74	—	26	26th	13	10	0	0	0	4	0	0	0	6.40	—	44		
	Wisley	¶	9 9 9	150	70.5	52.2	61.3	+0.4	81	11th	42	19th	62.8	60.5	2.64	67	+14	25	3rd	18	11	0	0	0	1	0	0	0	5.83	-0.40	40		
Kent.	Biggin Hill	¶	18-7 7	597	67.0	52.9	59.9	—	77	11th	47	31st	—	—	3.68	94	—	19	3rd	18	14	0	0	0	1	0	0	0	6.93	—	48		
	Bromley	¶	9 9 9	213	69.4	52.8	61.1	—	79	11th	43	19th	—	—	2.58	65	—	26	3rd	14	11	—	—	—	—	—	—	—	—	—	—		
	Canterbury	¶	9 9 9	124	68.9	53.2	61.1	—	77	24th	41	31st	62.2	60.2	1.66	42	—	14	4th	13	10	—	—	—	—	—	—	—	—	—	—		
	Dover	¶	9 9 9	22	67.4	56.8	62.1	—	73	24th	47	6th	65.2	62.9	1.41	36	—	9	3rd	14	10	0	0	0	2	0	0	0	7.06	—	49		
	Dungeness	¶	18-7 7	20	67.5	57.1	62.3	+0.9	71	11th	46	5th	—	—	1.37	35	-15	8	4th	11	7	0	0	0	4	0	0	0	—	—	—		
	East Malling	¶	9 9 9	127	69.7	51.9	60.8	—	79	11th	41	19th	—	—	2.25	57	—	17	3rd	16	11												

TABLE IV (continued).—SUMMARY of the OBSERVATIONS of PRESSURE, TEMPERATURE, HUMIDITY, CLOUD, VISIBILITY, and WIND at fixed hours at certain Stations during the Month of AUGUST, 1928.

Table with columns: DISTRICT, COUNTY AND PLACE; Hour of Observation; Height of Barometer above Mean Sea Level; MEAN PRESSURE (At Mean Sea Level, Deviation from Normal); TEMPERATURE AND HUMIDITY (Dry Bulb, Depression of Wet Bulb, Vapour Pressure, Relative Humidity, Mean Amount); CLOUD AMOUNT (No. of Observations); VISIBILITY (Fog, Mist, Poor Vis., Mod. Vis., Good Visibility); WIND, NUMBER OF OBSERVATIONS (Force (0-12), Direction).

TABLE IV (continued).—SUMMARY of the OBSERVATIONS of PRESSURE, TEMPERATURE, HUMIDITY, CLOUD, VISIBILITY, and WIND at fixed hours at certain Stations during the Month of AUGUST, 1928.

Main data table with columns for District, County and Place; Hour of Observation; Mean Pressure; Temperature and Humidity; Cloud Amount; Visibility; and Wind, Number of Observations. Includes stations like South Wales, England, S.W., Ireland, N., and Ireland, S.

* Mean of hourly readings.

TABLE I. DISTRICT VALUES.

The District Values of this Table are computed from the statistics for selected individual stations set out in Table III and Table IV.

The representative stations from which the District Values of rainfall and temperature are computed are indicated in Table III by the sign ¶ while the representative stations from which District Values of sunshine are computed are indicated by the sign §. The deviations from and percentages of normal for Air Temperature, Rainfall and Sunshine are the means of the corresponding deviations or percentages for the representative District Value stations. The deviations from normal of Earth Temperature are derived from the deviations for all the stations reporting in Table III for which normals of Earth Temperature are available. The highest and lowest temperatures for the District recorded during the month may refer to any station in Table III.

TABLE II. SUMMARY OF AUTOGRAPHIC RECORDS OF WIND.

The records used in the preparation of this Table are generally made by anemographs of the pressure-tube type. At a few stations the Robinson Cup Anemograph is utilised. The classification adopted for the "Distribution of Wind" is based on the specification of the Beaufort Scale of Wind Force (see *The Observer's Handbook*). For an anemograph complying with the specification "head 33 ft. above ground in the open" the several columns correspond with Force 8 and above (gales), Forces 6 and 7 (strong winds), Forces 4 and 5 (moderate winds), Forces 2 and 3 (light winds), Forces 1 and 0 (nearly calm). Some information as to the nature of the actual exposures may be gathered from the figures in the "Height" columns.

The "Highest Hourly Wind" is determined by the mean speed of the wind for a period of sixty minutes from 30 minutes before to 30 minutes after an exact hour by Greenwich Mean Time. Under the heading "Veer from N" the azimuth of the direction from which the wind was blowing is stated, the entry for an east wind being 90°, that for a south wind 180° and so on.

TABLE III. SUMMARY OF OBSERVATIONS AT TERMINAL HOURS.

Temperature.—The terminal hours of observation are given for each station. When the terminal hours for maximum and minimum temperature are stated independently the temperatures refer to intervals of 24 hours. If the maximum thermometer is read in the morning the reading is credited to the previous day. When the terminal hours for maximum and minimum are separated by a dash, thus, 18-7, the day-maximum for the period 7h. to 18h. and the night-minimum for the period 18h. to 7h. are reported and are utilised in determining the means for the month; in such cases the extreme temperatures for successive periods of 24 hours are also read by the observers, so that the absolute maximum and minimum temperatures for the month are obtained.

Except at the Royal Observatory, Greenwich, where a Glaisher stand is in use, the air temperature is obtained from thermometers placed in louvered screens. At Kew Observatory, Richmond, and Valentia Observatory these are north wall screens a few feet from the ground. At Aberdeen Observatory the north wall screen is at 41 feet. Otherwise the screens are in the open.

Rainfall.—The daily amounts are for the 24 hours beginning at the "terminal hour." "Rainfall" includes all forms of precipitation. The number of days of precipitation is counted with reference to the limit .01 inch or 0.2 mm. and also with reference to the limit .04 inch or 1 mm. The lower limit excludes mere "traces" of precipitation, but it is frequently passed on occasions when the precipitation is only dew.

Weather.—The numbers of days of Precipitation, Snow, Hail, Thunderstorms and Gale are counted irrespective of the hour at which the phenomena occur. Except for "Precipitation" the day is the civil day.

For the purpose of this summary "Snow" includes sleet (*i.e.*, snow with rain), "Hail" includes graupel (soft hail), "Snow lying" refers to occasions when at least one-half of the country surrounding the station is covered with snow at the morning observation. The entry of "fog" implies that regular observations of the range of vision are made on the scale set out below. Days of fog are those on which the range of vision is less than 1,100 yards at the hour of morning observation. That hour is given by the third entry of column 2 of the table and may be 7h. or 9h. G.M.T. The variability of the observation hour may exercise an important effect upon the statistics of fog frequency. "Thunderstorm" includes any day on which thunder is heard. "Gale" is a wind of Force 8 or upwards on the Beaufort Scale. A "ground frost" is entered when the reading of a "grass minimum" thermometer set the previous evening and read at the morning observation is 30° F. or lower.

Sunshine.—The percentage of possible sunshine is in all cases calculated with reference to the maximum duration possible in the latitude on the assumption of an unobstructed horizon, due allowance being

made for refraction (see *International Meteorological Tables* (Paris) pp. A17-A20 and 42-27). The sunshine recorder is generally insensitive to sunshine when the sun is at an altitude of 3° or less. The symbol § is entered against the percentage at some stations and indicates that obstructions of altitudes greater than 3° reduce the possible record of duration for the month by more than 5 per cent.

TABLE IV. SUMMARY OF OBSERVATIONS AT FIXED HOURS.

Mean Air Pressure is expressed in millibars. (1 millibar = 1,000 dynes per square centimetre = the pressure due to .029531 inch of mercury at 32° F. in Lat. 45°). The corrections for latitude, temperature and height have been applied to the barometer readings so as to obtain pressure at mean sea level. Barometric pressure is given at station level for a few stations at altitudes of 600 ft. or more in footnotes in Table IV.

Hygrometry.—The values given depend on the readings of the dry and wet bulb thermometers in Stevenson Screens (except at the Observatories, see above). The observations were formerly reduced by Glaisher's method; as from January, 1926 they are reduced by the new hygrometrical tables issued by the Office which are based on a formula of Regnault. In general the relative humidity and vapour pressure are derived from the monthly means of the dry and wet bulb readings. At certain stations the daily values of relative humidity and vapour pressure are found and the means are computed therefrom. These stations are indicated by the letter "H."

Cloud Amount.—The proportion of sky covered with cloud is estimated on the scale 0 to 10, the entry "0" being equivalent to clear sky "10" to overcast.

Visibility.—The observations are classified according to the following scheme—the distances, specified by international arrangement in metres, are given here in yards and miles:—

CODE.	RANGE OF VISION.
	Less than 55 yards.
2	Exceeding 55 yards, less than 220 yards
3	" 220 " " 550 "
4	" 550 " " 1,100 "
5	" 1,100 " " 1½ miles.
6	" 1½ miles " " 2½ "
7	" 2½ " " 6½ "
8	" 6½ " " 12½ "
9	" 12½ " " 31 "
	" 31 " "

Wind Summaries.—The estimates of wind force refer to the Beaufort Scale, and in general to the wind experienced at the time of observation. At Deerness, Cahirciveen, Richmond, Armagh, Eskdalemuir, Southport, Greenwich and Oxford the analysis refers to tabulations of autographic records. For Oxford the mean wind speed for half-an-hour centred at the hour of observation is used for conversion to "force" on the Beaufort Scale; for the remaining observatories the mean wind speed used for each observation refers to a period of one hour. In these cases winds equivalent to Force 1 are counted with the calms, whilst Forces 2 and 3 are taken together in the preceding column of the Table.

INTERPOLATED VALUES.

When the observations for any station for a month are incomplete and relevant data (e.g. records from neighbouring stations) which make it practicable to interpolate approximate values for the missing observations are available, such approximate values may be used for completing summaries for stations published in Tables III and IV. Parts of a summary obtained in this way are shown in brackets thus—(52.4).

STANDARD OF TIME.

As a rule observations are made in all parts of the British Islands according to Greenwich Mean Time, but at the following stations Local Mean Time is used for the observations summarised in Tables III and IV. The number of minutes after Greenwich Time is shown in brackets—Darwen (10), Rhyader (15), Ashburton (15), Tavistock (17), Plymouth (15), Douglas (20), Armagh (26), Balbriggan (25), Lisburn (30), Newcastle, Co. Wicklow (30), Ballinacurra (30), Cork (34).

"Summer Time" is not used in the Monthly Weather Report, but at certain stations the hours of observation vary in the course of the year. For such stations all time entries are converted to G.M.T. before they are printed and the winter hours are given as the terminal hours in the annual tables. For the summer hours reference should be made to the appropriate months.

NORMALS.

In Table III the normals used are those for the 35 years 1881-1915. The normals of temperature and sunshine are published in the Book of Normals, Section I, those for rainfall in the Book of Normals, Section V.

The normals for pressure with which comparison is made in Table IV also refer to the period 1881-1915.

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.

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

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ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE.

SEPTEMBER, 1928: Sunny generally. Dry in England and Wales and in eastern and central Ireland.

Outstanding features of September were the excess of sunshine recorded in all districts and the marked deficiency of rainfall in England and Wales and in eastern and central Ireland.

The month opened with quiet anticyclonic weather over the whole country, from 10 to 12 hours' sunshine being recorded widely on the 1st and 2nd. In the east and south-east of England fine settled weather, with only occasional trifling falls of rain, continued until the 9th, while day temperatures exceeding 75°F. were recorded on the 4th, 5th and 8th (85°F. in London, Camden Square, and 83°F. at Tottenham on the 8th and 82°F. at Hull on the 5th). Meanwhile, associated with secondaries to a main depression over Iceland rain commenced in the west of Ireland and Scotland on the 2nd, and by the 5th had extended to most districts except those in the east and south-east of England; 45 mm. fell at Mallaranny on the 3rd and 28 mm. at Inverness and 20 mm. at Aberystwyth on the 5th. A ridge of high pressure moving eastwards across the British Isles caused a temporary improvement on the 6th, but on the 7th a very deep depression in the north-east Atlantic caused a renewal of unsettled weather with strong winds in western districts. The low pressure extended to the whole country thus temporarily interrupting the fine weather in the south and east of England; thunderstorms, accompanied by moderately heavy rain, occurred widely on the 9th.

Subsequently pressure became high and a period of anticyclonic weather with much sunshine and high temperatures was widely experienced in most districts. In Scotland the highest temperatures of the month were generally recorded on the 13th. These settled conditions persisted in the south and east with little change until the 19th, when the anticyclone withdrew northwards and temperature fell, although the weather continued generally fair and sunny until the 27th. There were some rather heavy falls in Irish districts on the 14th, and in Scotland and Ireland between the 16th and 19th. Moderate rain occurred in many districts on the 23rd, 24th and 27th. On the evening of the 27th and on the 28th much rain was experienced in most parts of England and Ireland. On the 30th an anticyclone to the west of Ireland extended its influence over the country, and, apart from trifling falls at some eastern coastal stations, the weather was generally dry and sunny.

Pressure and Winds.—Over the greater part of England and Wales, conditions were mostly anticyclonic, these conditions extending to most of the British Isles at the beginning of the month, from the 12th to the 16th, about the 22nd and at the end of the month. Monthly means of pressure were above the normal at all stations. Winds were mostly between south and west over Ireland, the greater part of Scotland and the north of England; elsewhere winds were variable. Except in coastal districts where strong winds were recorded on many days, wind force was usually light to moderate. Gales of brief duration were recorded by anemometers at Tیره on the 17th and at Kingstown on the 28th. The highest velocity attained in a gust was 56 mi/hr at Tیره in the afternoon of the 17th. Owing to persistent strong northerly or north-easterly winds at the end of the month high seas were running along the eastern coasts of Great Britain.

Temperature.—Day temperatures as a rule were above the normal during the first half of the month, the highest readings being recorded on the 4th and 5th in England and Wales, widely on the 8th and 9th, and in Scotland on the 13th. Subsequently temperature reached an unusually low level for the time of year, notably about the 23rd and during the last few days of the month. The nights were frequently cool, and during the last ten days of the month minimum temperatures well below the normal were recorded. At Edinburgh the mean temperature of the last week was nearly 10°F. below that of the first week. For the month as a whole the mean temperature was generally below the normal, although the deficit was not large, and in a few districts, mostly in the north-east of England and in the Channel Isles, there was even a small excess. Ground frost occurred on several days during the second half of the month.

The extreme temperatures for the month were:—England and Wales: 85°F. in London (Camden Square) on the 8th, and 27°F. at Roden (Shropshire) on the 30th. Scotland: 73°F. at Liberton (Edinburgh) on the 13th and 23°F. at Braemar on the 30th. Ireland: 75°F. at Dublin (Trinity College) on the 4th; and 29°F. at Markree Castle (Sligo) on the 23rd and 26th.

Precipitation.—The general precipitation for the British Isles expressed as a percentage of the normal for the period 1881–1915 was 73; the values for the constituent countries were England and Wales, 47; Scotland, 110; Ireland, 92. Thus, the general rainfall over England and Wales amounted to less than half the normal, and is the smallest value recorded for September since 1910, when the general rainfall amounted to only 25 per cent. of the normal. September, 1928, shows a marked contrast with September, 1927, when the general precipitation over England and Wales amounted to 233 per cent. of the normal and over the British Isles to 209 per cent.

In England and Wales monthly totals were everywhere below the normal, and in only a few districts, mostly in the south and extreme south-west of England, exceeded three-quarters of the normal. In many eastern districts, notably in the north-east, less than one-quarter of the normal was recorded; Spurn Head had 11 per cent. of the normal, Lincoln and Worksop 13 per cent., Meltham (Yorkshire, West Riding) 14 per cent., and Dungeness 15 per cent. At Copdock the month's total was the smallest recorded since observations commenced in 1913. Precipitation was either absent or slight on most days, the only rains of importance occurring on the 8th, 9th, 24th and 28th.

In Scotland precipitation was below the normal in the extreme north-western and northern districts, but in general there was an excess, moderate as a rule but exceeding 50 per cent. at, e.g., Blair Atholl and Grantown-on-Spey. Rain commenced in the west on the 2nd and gradually spread to all districts with an almost continuous fall in some areas on the 4th and 5th. Heavy falls occurred from the 7th to 9th or 10th and in western districts between 16th and 19th. From the 20th onwards some districts were rainless or nearly so, but in others moderate rain occurred on the 23rd and 24th and on the 27th.

In Ireland rainfall totals were above the normal in the north and west and below the normal in the south and east. The greatest deficiency occurred in eastern coastal areas where locally less than half the normal was recorded. The greatest excess occurred in the north-west of Ireland, where more than one and a-half times the normal was recorded. Heavy falls occurred on the 4th, 5th, 7th, 14th and 28th. In most districts the period 20th to 26th was rainless.

Thunderstorms were fairly general on the 9th. On the 28th snow fell on the Cairngorms and other northern mountains.

Sunshine.—A prominent feature of the weather of the month was the excess of sunshine recorded in all districts, particularly in those in the east and south-east of England. Representative aggregates for Districts, expressed as a percentage of the normal for the period 1881–1915, ranged from 146 in England S.E. to 112 in England N.E. and England S.W. At several stations in the east and south-east of England aggregates exceeded those normally recorded in the sunniest months of the year in these districts, viz., June or July. At Margate and Ventnor the excess over the normal amounted on the average to just over 3 hours per day. At Edinburgh the month was the sunniest September since 1906. At Richmond (Kew Observatory) the month's aggregate was the largest recorded there since 1911. The sunniest periods occurred generally on the 1st and 2nd, from the 3rd to the 6th in central and southern England, on the 7th and 8th in south-eastern England, on the 11th and 12th over the greater part of England, widely on the 13th and 14th, in various districts from the 18th to the 22nd and widely on the 30th.

Fog.—Fog occurred at night or in the early morning fairly frequently during the month, mostly during the first few days of the month, from the 12th to the 16th, about the 22nd and at the end of the month. Dense fog occurred in the Firth of Clyde on the 22nd and 23rd.

Miscellaneous Phenomena.—A brilliant display of aurora was observed over a wide area in Scotland on the 19th; at Aberdeen on the 7th, 8th, 20th, 21st and 23rd, at Armagh on the 7th, at Deerness on the 8th, and at Baltasound on the 9th. The Zodiacal Light was observed at Deerness on the 8th. Halo phenomena were observed at a number of stations.

TABLE I.—DISTRICT VALUES—SEPTEMBER, 1928. [1908, revised 1928.]

DISTRICTS	AIR TEMPERATURE.			EARTH TEMPERATURE.		RAINFALL.		SUNSHINE.	
	High-est.	Low-est.	Daily Mean. Deviation from Normal.	At 1 ft. Deviation from Normal.	At 4 ft. Deviation from Normal.	Per-cent- age of Normal.	No. of Days. Deviation from Normal.	Per-cent- age of Normal.	Per-cent- age of Possible Duration.
o. SCOTLAND, N.	°F. 69	°F. 29	°F. -0.9	°F. —	°F. —	% 99	0	% 117	% 33
Eastern.									
1. SCOTLAND, E.	73	23	-0.9	—	—	111	+1	122	38
2. ENGLAND, N.E.	82	28	-0.4	0.0	+0.2	36	-2	112	39
3. ENGLAND, E...	82	28	+0.2	+0.5	+0.2	46	-7	139	57
4. MIDLAND COUNTIES	82	27	-0.3	-0.2	+0.4	33	-6	124	44
5. ENGLAND, S.E.	85	31	-0.4	+0.5	+1.5	45	-7	146	61

DISTRICTS.	AIR TEMPERATURE.			EARTH TEMPERATURE.		RAINFALL.		SUNSHINE.	
	High-est.	Low-est.	Daily Mean. Deviation from Normal.	At 1 ft. Deviation from Normal.	At 4 ft. Deviation from Normal.	Per-cent- age of Normal.	No. of Days. Deviation from Normal.	Per-cent- age of Normal.	Per-cent- age of Possible Duration.
Western.									
6. SCOTLAND, W. (& I. of Man)	°F. 72	°F. 25	°F. -1.4	°F. —	°F. -0.3	% 109	-2	% 122	% 37
7. ENGLAND, N.W. (& N. Wales)	78	29	-0.6	+0.2	-0.2	62	-1	118	42
8. ENGLAND, S.W. (& S. Wales)	78	28	-0.3	+0.1	+0.1	60	-6	123	49
9. IRELAND, N...	71	29	-0.8	-0.9	-0.5	119	-2	112	35
10. IRELAND, S...	75	31	-0.6	-0.7	-0.6	75	-3	113	39
11. CHANNEL I. (& Scilly)	78	48	+0.8	+1.5	+1.1	84	-8	137	64
Mean : DISTRICTS I-10	85	23	-0.5	-0.1	+0.1	70	-3	123	44

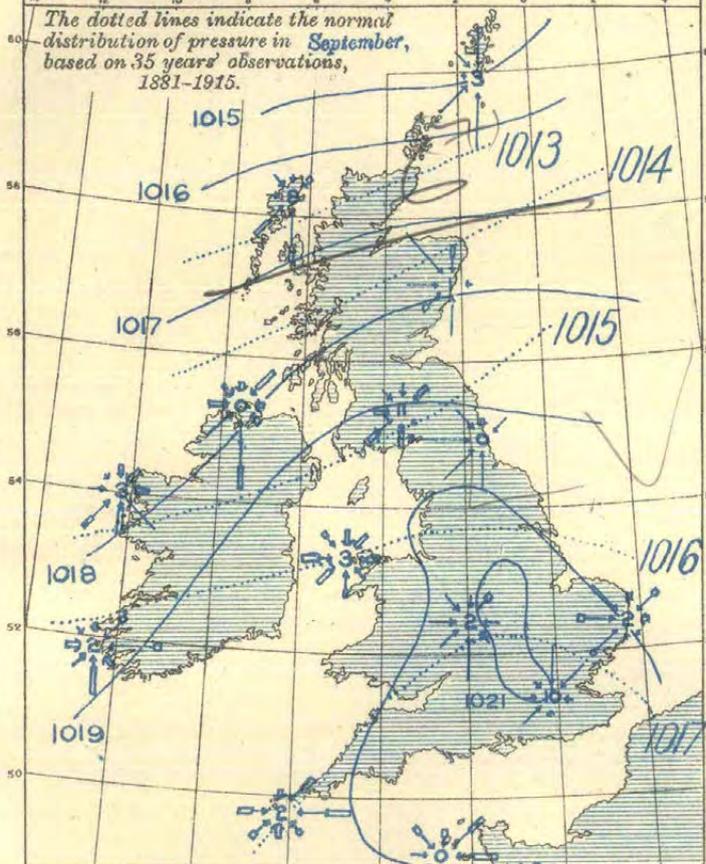
TABLE II.—SUMMARY OF AUTOGRAPHIC RECORDS OF WIND.—SEPTEMBER, 1928.

[1914.]

DISTRICT AND STATION.	Height.			Distribution of Wind.††								Extreme Velocities.								
	Above Mean Sea Level.	Above Ground.	Above Building.	More than 38 mi/hr.		25 to 38 mi/hr.		13 to 24 mi/hr.	4 to 12 mi/hr.	Less than 4 mi/hr.	No Record.	Highest Hourly Wind.			Highest Gust.					
				Dates of Occurrence.	Duration.	No. of Days.	Duration.	Duration.	Duration.	Duration.	Duration.	Veer from N.	Speed.	Mid Time.	Speed.	Time.				
o. SCOTLAND, N.	ft.	ft.	ft.		hr.		hr.	hr.	hr.	hr.	hr.	°	mi/hr.	m/s.	day. hr.	mi/hr.	m/s.	d.	h.	m.
Shetlands Lerwick ..	310	42	33†	—	0	8	33	255	356	76	0	240	33	15	10 16	50	22	10	15	55
Orkneys Deerness (Cup Anr.)	188	16	5	—	0	5	21	213	427	59	0	250	32	14	18 6	—	—	—	—	—
1. SCOTLAND, E.																				
Aberdeen Aberdeen ..	70	42	33†	—	0	—	0	140	493	87	0	40	24	11	27 24	36	16	17	22	30
Kincardine Balmakewan ..	140	25	18	—	0	—	0	80	(412)	(228)	0	230	20	9	17 19	40	18	17	18	55
Edinburgh Edinburgh ..	485	39	31†	—	0	6	19	194	351	156	0	210	29	13	7 22	50	22	10	1	45
6a. SCOTLAND, W.																				
Argyll Tieve ..	80	55	48†	17	1	10	60	310	289	60	0	250	40	18	17 16	56	25	17	16	15
Renfrew Paisley ..	188	81	15	—	0	1	1	74	399	246	0	140	26	12	9 23	49	22	9	23	30
Dumfries Eskdalemuir ..	825	50	22	—	0	7	44	214	243	219	0	220	32	14	17 14	50	22	10	1	45
2. ENGLAND, N.E.																				
Durham South Shields ..	62	46	20	—	0	2	2	192	355	171	0	20	26	12	28 13	39	17	17	16	45
York, E.R. Spurn Head ..	67	42	35†	—	0	5	22	436	238	21	3	290	36	16	6 8	46	21	6	8	5
Lincoln Cranwell ..	284	44	26†	—	0	—	0	145	445	130	0	230	24	11	4 9	36	16	4	9	35
3. ENGLAND, E.																				
Norfolk Gorleston ..	52	42	33†	—	0	2	8	215	453	44	0	50	26	12	29 11	35	16	29	11	20
Suffolk Felixstowe Aero. ..	55	40	25	—	0	1	2	181	(427)	(110)	0	50	25	11	28 11	36	16	22	16	20
Essex Shoeburyness ..	115	104	14†	—	0	—	0	123	430	167	0	—	22	10	28 15	35	15	6	8	10
4. MIDLAND COUNTIES.																				
Warwick Birmingham ..	643	118	18	—	0	—	0	80	556	84	0	290	21	9	6 4	39	17	6	4	0
5. ENGLAND, S.E.																				
Surrey Richmond (KewObs)	82	65	22	—	0	—	0	58	385	277	0	60	16	7	28 11	29	13	6	3	50
Surrey Croydon ..	284	40	24	—	0	—	0	196	380	144	0	290	23	10	6 6	39	17	6	5	40
Kent Dover ..	61	32	22	—	0	1	8	234	331	43	104	—	28	13	28 18	37	17	22	20	30
Kent Lympne ..	409	70	55†	—	0	1	1	186	501	32	0	20	25	11	22 10	35	16	22	9	10
Hampshire S. Farnboro' (Tower)	444	160	14	—	0	—	0	82	487	151	0	230	19	9	5 17	35	16	6	2	55
Hampshire Calshot ..	55	45	31†	—	0	1	1	204	(460)	(55)	0	230	25	11	6 15	34	15	28	15	0
Hampshire Worthy Down ..	314	43	27†	—	0	—	0	65	445	210	0	250	19	9	6 4	34	15	6	4	25
Wiltshire Larkhill ..	526	51	34†	—	0	—	0	Instru- ment under repair.												
7a. ENGLAND, N.W.																				
Lancashire Fleetwood ..	112	50	12	—	0	4	16	236	309	69	0	300	32	14	6 3	43	19	10	0	45
Lancashire Southport ..	77	59	45†	—	0	7	37	251	412	20	0	300	31	14	6 3	41	18	10	5	5
7b. NORTH WALES.																				
Anglesey Holyhead ..	64	45	29†	—	0	7	30	371	222	97	0	70	35	16	28 16	46	21	17	11	30
Flint Sealand ..	81	65	49†	—	0	—	0	98	441	181	0	290	23	10	6 2	36	16	9	23	35
8b. ENGLAND, S.W.																				
Devon Plymouth ..	185	88	2	—	0	1	1	98	367	197	57	—	25	11	5 20	32	14	5	19	50
Cornwall Pendennis Castle ..	256	65	24	—	0	—	0	Instru- ment dismo- unted.												
9. IRELAND, N.																				
Donegal Dunfanaghy ..	180	47	39	—	0	4	11	139	334	234	2	—	29	13	10 2	54	24	9	12	50
Antrim Aldergrove ..	282	40	27†	—	0	—	0	127	365	228	0	200	22	10	17 15	42	19	9	23	20
10. IRELAND, S.																				
Dublin Kingstown(CupAnr.)	49	27	16	28	1	4	30	256	359	56	18	70	39	17	28 19	—	—	—	—	—
Clare Quilty ..	100	40	32†	—	0	4	30	275	379	36	0	—	28	13	17 7	42	19	9	17	35
Kerry Cahirciveen (Val. O.)	98	41	34†	—	0	6	41	313	292	74	0	60	33	15	29 5	49	22	17	13	20
Cork Weaver Pt. ..	160	30	21†	—	0	—	0	Instru- ment under repair.												
11. SCILLY ISLES.																				
St. Mary's..	160	42	35†	—	0	2	8	305	328	79	0	310	32	14	5 21	51	23	5	20	0

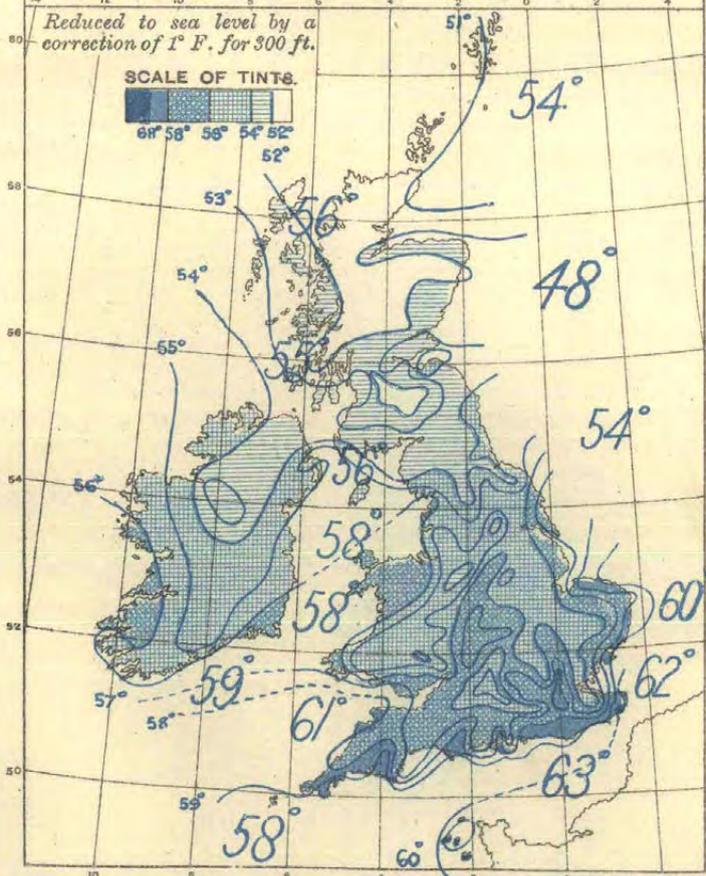
†† Brackets () indicate that the distribution as between winds above and below 4 mi/hr. is doubtful, but the total number of hours with winds below 12 mi/hr. is reliable.
 † Standard mounting.

1. WIND AND MEAN PRESSURE. 7 A.M.*



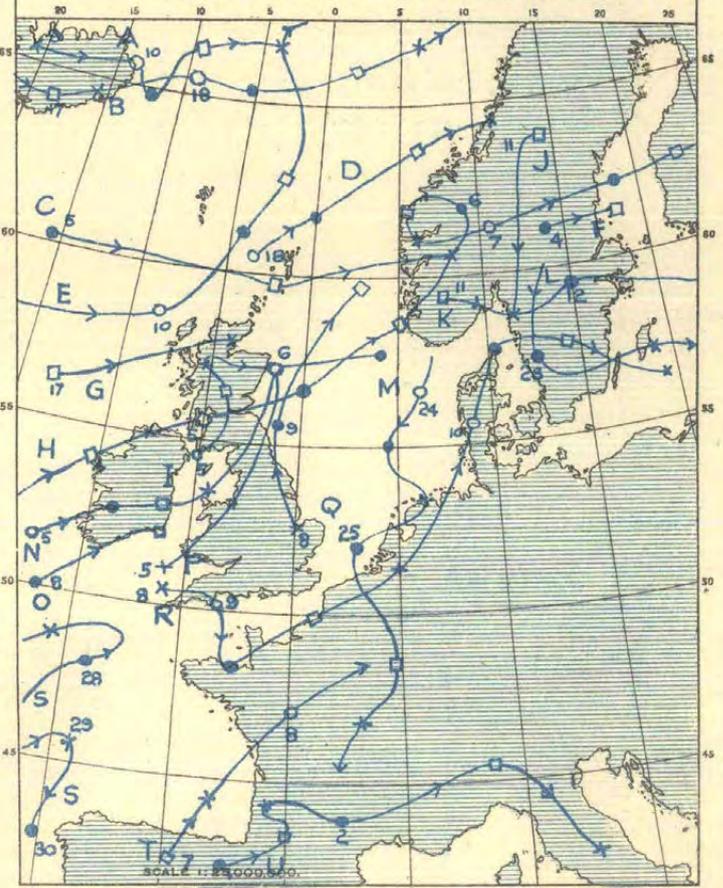
WIND ROSES. The arrows fly with the wind and indicate frequency and force, thus:
 LIGHT TO MODERATE GALE
 30 OBS. = 1 inch

3. DISTRIBUTION OF MEAN TEMPERATURE.



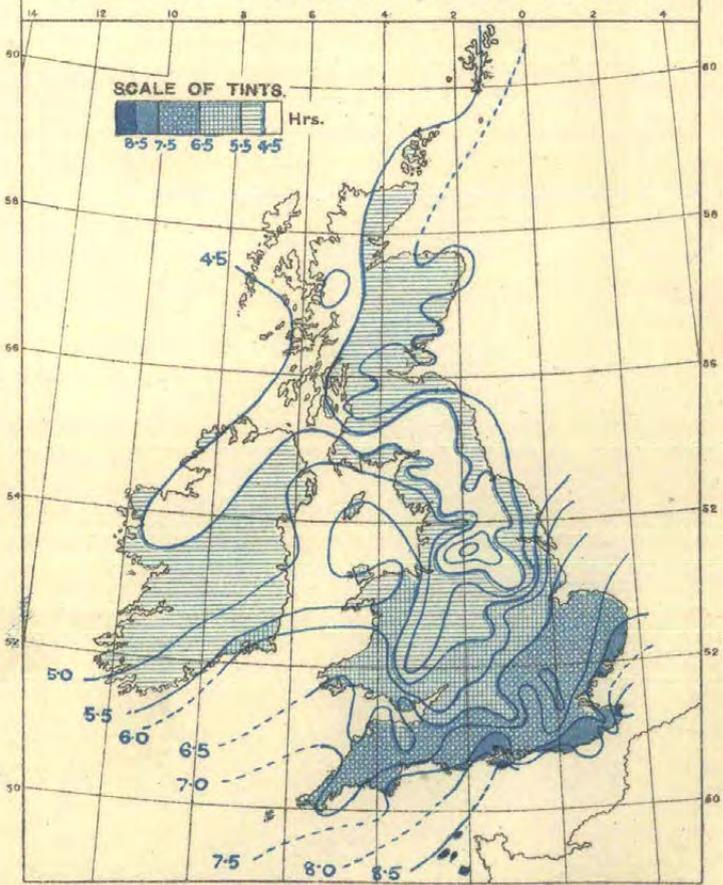
Sea temperatures are shown in large figures, thus: 58°

2. MOVEMENTS OF DEPRESSIONS.

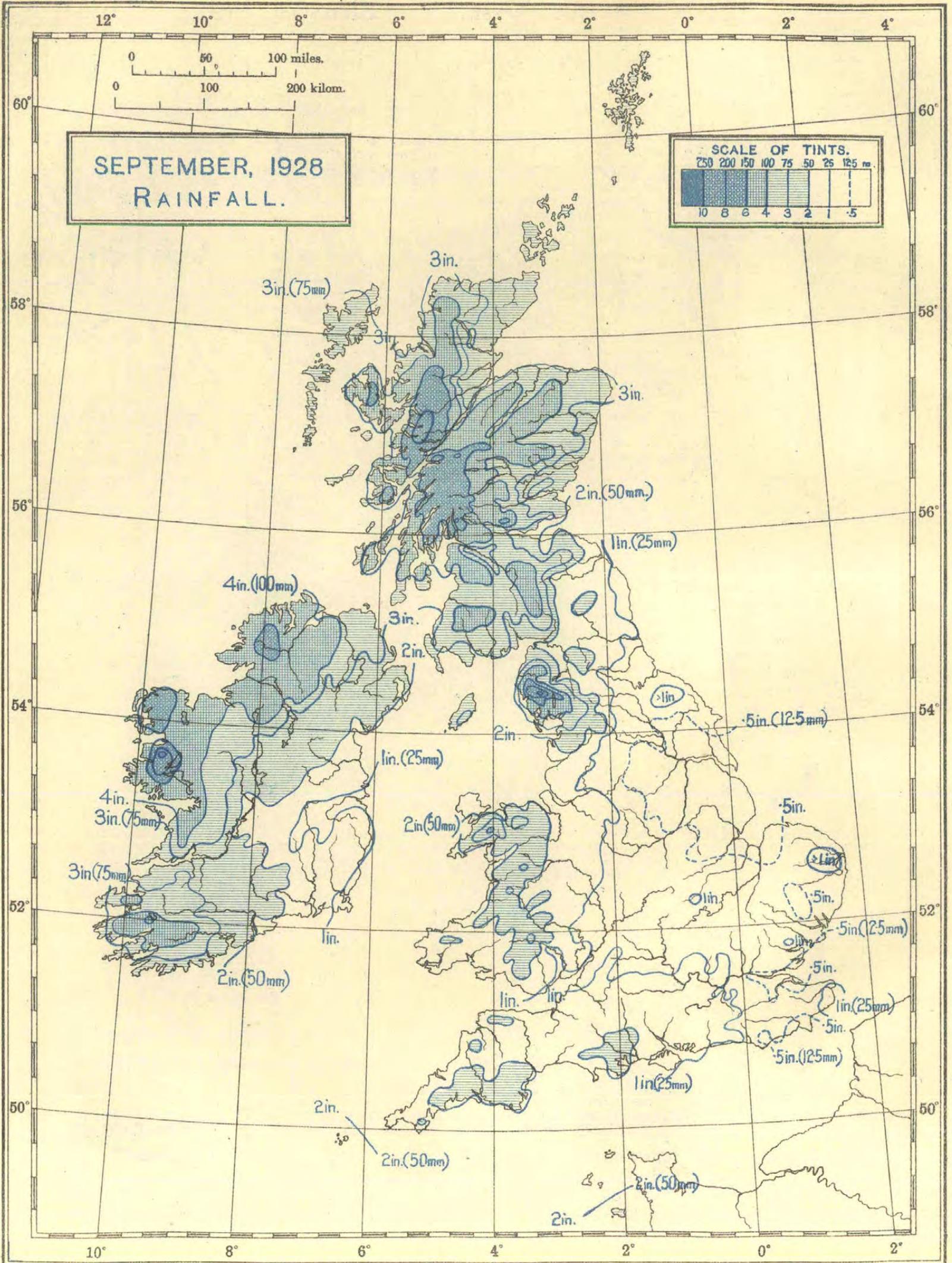


Positions of centres are shown thus: ○ at 1h; ● at 7h; □ at 13h; X at 18h.

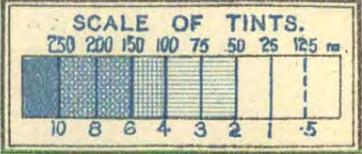
4. BRIGHT SUNSHINE, HOURS PER DAY.



* The pressure is expressed in millibars.



SEPTEMBER, 1928
RAINFALL.



Scale 1 : 5,000,000.

Pr. 1376/1777. No. 1014. D. 25. 1/25 10/23.

The equivalent values in mm. are given in round numbers. The exact relation is 10 in. = 254 mm.

TABLE III.—SUMMARY OF the RECORDS of TEMPERATURE, RAINFALL AND SUNSHINE, and of WEATHER OBSERVATIONS, SEPTEMBER, 1928.

DISTRICT, COUNTY AND PLACE.	Terminal Hours of Observation.	Height of Station above Mean Sea Level.	AIR TEMPERATURE IN DEGREES FAHRENHEIT.								Earth Temperature.		RAINFALL.				WEATHER. Number of days.								BRIGHT SUNSHINE.						
			Means of				Absolute Maximum and Minimum.				1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Most in a day.		Precip'n. 0.2 mm. or more.	1 mm. or more.	Snow.	Snow lying.	Hail.	Thunderstorm.	Fog (Morning Obs.)	Ground Frost.	Gale.	Hours per day.		Per Cent.			
			A	B	Mean of A and B.	Deviation from Normal.	Maximum.	Date.	Minimum.	Date.					Amount.	Date.										0.2 mm. or more.	1 mm. or more.		Daily Mean.	Deviation from Normal.	
			Max.	Min.	Rain.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	in.	mm.	mm.	mm.	0.2 mm. or more.	1 mm. or more.	Snow.	Snow lying.	Hail.	Thunderstorm.	Fog (Morning Obs.)	Ground Frost.	Gale.	hr.	hr.	%		
0. SCOTLAND, N.																															
Shetlands.	Baltasound	9 9 9	31	55.0	46.3	50.7	—	63	8th	39	28, 30	51.4	—	2.82	72	—	13	2nd	24	16	1	0	0	0	2	—	0	4.67	—	36	
	Lerwick	18-7 7	54	54.8	47.9	51.3	+0.7	63	8th	40	26, 29	—	—	2.52	64	—	12	10	9th	18	17	0	0	0	0	2	—	0	4.38	+0.38	34
Orkneys.	Deerness	2121 9	160	55.2	46.7	50.9	-0.5	63	8th	39	28th	—	—	2.22	56	—	18	5	17th	22	17	0	0	0	0	2	—	0	4.55	+1.05	35
	Kirkwall	9 9 9	151	55.6	46.8	51.2	—	64	9th	37	29th	—	—	2.77	70	—	8	2nd	23	20	0	0	0	1	0	2	—	1	4.73	—	37
Hebrides.	Skallary	9 9 9	20	57.5	49.7	53.6	—	61	2, 8	40	29th	—	—	3.61	92	—	17	7th	20	16	0	0	0	0	0	—	0	—	—	—	
	Stornoway	18-7 7	30	57.0	45.0	51.0	-1.0	64	13th	34	29th	—	—	3.03	77	—	23	9	9th	23	15	0	0	0	0	—	0	4.12	+0.29	32	
Caithness.	Wick	18-7 7	81	55.0	46.2	50.6	-1.3	63	9th	35	29th	—	—	2.39	61	—	3	11	5th	20	13	0	0	0	2	—	0	—	—	—	
Ross & Cromarty.	Achnashellach	9 9 9	225	57.6	43.8	50.7	-1.0	69	13, 14	29	29th	—	—	6.12	155	—	37	25	17th	17	16	0	0	0	0	5	—	0	—	—	
	Fortrose	9 9 9	69	58.9	46.2	52.5	—	68	13th	35	29th	—	—	2.06	52	—	14	5th	13	6	0	0	0	0	0	—	0	4.88	—	38	
	Strathpeffer	9 9 9	125	59.3	43.3	51.3	-1.5	69	2nd	32	29th	—	—	2.31	59	—	3	16	5th	16	9	0	0	0	—	—	—	—	—		
Inverness.	Ft. Augustus	9 9 9	68	58.3	43.4	50.9	-1.8	68	13th	29	29th	—	—	4.18	106	—	20	19	17th	15	14	0	0	0	0	—	0	3.83	+0.76	30.8	
	Inverness	9 9 9	242	57.8	45.7	51.7	-2.0	68	13th	35	29th	—	—	3.07	78	—	20	28	5th	13	7	0	0	0	0	3	—	0	4.53	+0.47	35
1. SCOTLAND, E.																															
Nairn.	Nairn	18-7 7	82	57.9	45.2	51.5	-1.2	67	2, 14	34	29th	—	—	2.98	76	—	24	5th	18	11	0	0	0	0	—	0	4.78	+0.88	37		
Elgin.	Gordon Castle	2121 9	104	59.3	45.4	52.3	-0.9	71	8, 13	34	23, 29	—	—	3.55	90	—	26	25	5th	19	12	0	0	0	0	—	0	5.00	—	39.8	
Banff.	Banff	9 9 9	130	57.9	47.0	52.5	—	70	2nd	38	29th	—	—	2.86	73	—	26	5th	20	11	0	0	0	0	—	0	4.67	—	37		
Aberdeen.	Aberdeen	242424	44	57.3	46.2	51.7	-0.8	64	3, 12	36	29th	—	53.3	2.66	68	—	12	9	5th	18	13	0	0	0	0	1	2	0	4.89	+0.76	38
	Balmoral	9 9 9	927	56.8	40.2	48.5	—	66	3, 8, 13	26	29th	—	—	3.55	90	—	29	29	5th	16	15	0	0	0	0	—	7	0	—	—	
	Braemar	2121 9	1120	56.4	38.2	47.3	-2.6	65	2, 13	23	29th	—	—	3.82	97	—	33	28	5th	15	14	0	0	0	0	—	7	0	—	—	
	Craibstone	9 9 9	300	57.4	44.8	51.1	—	67	12th	34	29th	52.8	52.8	2.78	71	—	13	5th	17	14	0	0	0	0	—	0	1.5.20	—	41		
	Logie Coldstone	9 9 9	608	57.3	41.0	49.1	—	69	13th	28	21st	—	—	3.30	84	—	25	26	5th	19	14	0	0	0	4	8	0	—	—		
Kincardine.	Stonehaven	9 9 9	93	59.7	45.0	52.3	—	65	3, 6, 8	31	29th	—	—	2.37	60	—	11	5th	12	11	0	0	0	0	0	8	0	5.39	—	42	
Forfar.	Arbroath	2121 9	93	59.7	44.7	52.1	—	65	2, 6, 8, 13	34	29th	—	—	2.28	58	—	9	5th	17	11	0	0	0	0	—	—	0	5.17	—	41	
	Carnoustie	9 9 9	39	59.5	44.7	52.1	—	65	2, 6, 8, 13	34	29th	—	—	2.28	58	—	9	5th	17	11	0	0	0	0	—	—	0	5.17	—	41	
	Dundee (E. Nec.)	2121 9	198	59.7	44.8	52.3	-1.2	69	8th	32	29th	—	—	2.52	64	—	11	11	5th	13	12	0	0	0	0	—	0	—	—		
	Mayfield	9 9 9	147	61.0	43.3	52.1	-2.2	70	2, 8, 13	29	29th	56.2	—	2.41	61	—	10	11	5th	13	12	0	0	0	0	2	0	4.84	+0.96	38	
	Kettins	9 9 9	218	60.1	41.8	50.9	—	68	6, 13	27	29th	54.1	—	2.61	66	—	15	5th	13	11	0	0	0	0	6	0	—	—			
	Montrose	9 9 9	16	58.6	45.4	52.0	—	66	6th	34	29th	—	—	2.18	55	—	9	5th	12	11	0	0	0	0	—	0	4.91	—	38		
Perth.	Crieff	2121 9	478	59.8	42.7	51.3	-2.3	68	13th	29	29th	—	—	3.67	93	—	25	25	5th	14	11	0	0	0	0	—	0	—	—		
	Perth	9 9 9	76	61.8	42.3	52.1	-1.2	70	8th	25	29th	—	—	2.84	72	—	15	15	5th	14	10	0	0	0	0	—	0	1.5.03	—	39	
Fife.	Cupar	9 9 9	210	60.0	44.7	52.3	—	68	13th	31	29th	—	—	2.40	61	—	9	5th	13	11	0	0	0	0	—	0	—	—			
	Inchkeith	18-7 7	190	58.6	49.1	53.9	—	66	8th	39	29th	—	—	2.06	52	—	10	10	8th	15	9	0	0	0	3	1	0	5.53	—	43	
	Kirkcaldy	9 9 9	66	60.9	46.3	53.6	—	69	2nd	35	29th	—	—	2.80	71	—	11	10	15th	15	11	—	—	—	—	—	—	—			
	Leuchars	18-7 7	30	60.3	44.5	52.4	—	69	13th	31	29th	—	—	2.27	58	—	9	5th	15	11	0	0	0	0	1	5	0	5.35	—	42	
	St. Andrews	9 9 9	20	59.8	44.8	52.3	—	68	13th	30	29th	54.5	54.3	2.35	60	—	9	5th	15	11	0	0	0	0	5	0	4.93	—	39		
Linlithgow.	Bangour	2121 9	587	58.3	42.5	50.4	—	69	13th	29	29th	—	—	2.97	75	—	11	16th	16	13	0	0	0	1	1	0	2	—	—		
Edinburgh.	Blackford Hill	2121 9	441	59.1	47.4	53.3	0.0	70	13th	35	29th	—	—	2.17	55	—	7	11	8th	15	11	0	0	0	1	0	0	5.30	+1.30	42	
	Boghall	9 9 9	645	58.1	45.2	51.7	—	68	13th	34	29th	52.1	53.5	2.24	57	—	10	10	8th	15	12	0	0	0	1	3	0	5.10	—	40	
	Edin. Univ.	9 9 9	227	60.2	49.3	54.7	—	71	13th	38	29th	54.5	55.1	2.07	53	—	3	10	8th	15	10	—	—	—	—	—	—	—			
	Liberton	9 9 9	190	60.9	—	—	—	73	13th	—	—	—	—	2.05	52	—	10	10	8th	15	13	0	0	0	1	0	0	—	—		
Haddington.	N. Berwick	9 9 9	152	61.0	46.7	53.9	—	72	13th	36	23rd	—	—	2.14	54	—	13	8th	13	10	0	0	0	1	0	0	2.5.46	—	43		
	Smeaton	9 9 9	100	60.9	44.7	52.8	—	70	5th	33	23rd	54.9	—	2.13	54	—	4	19	8th	14	11	0	0	0	1	0	4	0	—	—	
Berwick.	Marchmont	9 9 9	498	59.4	44.7	52.1	-0.5	71	13th	35	29th	—	—	1.51	38	—	23	8	24th	15	11	0	0	0	—	0	4.35	+0.32	34		
Peebles.	West Linton	9 9 9	770	57.4	40.2	48.8	-1.3	68	13th	24	23rd	—	—	3.22	82	—	12	3rd	19	17	0	0	0	1	6	0	—	—			
Roxburgh.	Kelso (Br'ml'ds)	9 9 9	195	61.8	44.4	53.1	—	71	13, 14	31	29th	—	—	1.18	30	—	18	7	10th	12	8	0	0	0	0	—	0	—	—		
	Wolfelee	9 9 9	537	58.9	41.9	50.4	—	72	13th	26																					

TABLE III (continued).—SUMMARY of the RECORDS of TEMPERATURE, RAINFALL and SUNSHINE, and of WEATHER OBSERVATIONS, SEPTEMBER, 1928.

DISTRICT, COUNTY AND PLACE.	Terminal Hours of Observation.			Height of Station above Mean Sea Level.	AIR TEMPERATURE IN DEGREES FAHRENHEIT.								Earth Temperature.		RAINFALL.				WEATHER. Number of days.							BRIGHT SUNSHINE.				
	Max.	Min.	Rain.		Means of		Deviation from Normal.	Absolute Maximum and Minimum.				1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Most in a day.		Precip'n.	Snow.	Snow lying.	Hail.	Thunderstorm.	Fog (Morning Obs.)	Ground Frost.	Gale.	Hours per day.				
					A	B		Maximum.	Date.	Minimum.	Date.					Amount.	Date.									0.2 mm. or more.	1 mm. or more.	Daily Mean.	Deviation from Normal.	Per Cent.
	ft.	°F.	°F.		°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	in.	mm.	mm.	mm.									hr.	hr.	%		
4. MID. COUNTIES—cont.				G.M.T.																										
Warwick.	Birmingham	18-7 7	535	63.4	47.5	55.5	-0.2	79	5th	37	30th	54.0	54.1	0.65	17	-29	5	5th	8	4	0	0	0	0	7	2	0	5.17	+1.07	41
	B'ham, Sparkhill	7 13 7	424	66.0	44.9	55.5	—	81	5th	34	30th	—	—	0.67	17	—	5	28th	7	5	0	0	0	0	7	11	0	—	—	—
	Coventry	9 9 9	270	65.3	46.7	56.0	-0.4	80	5th	36	30th	56.4	57.1	0.66	17	-29	7	28th	8	5	0	0	0	0	1	0	0	5.41	+1.01	43
	Rugby	21 21 9	390	65.4	45.3	55.3	—	79	5.8	35	30th	—	—	0.51	13	—	5	28th	6	4	0	0	0	0	—	3	0	—	—	—
Oxford.	Leafield	18-7 7	612	62.9	45.0	53.9	—	78	5th	34	27th	—	—	0.78	20	—	8	9th	7	4	0	0	0	0	7	2	0	6.37	—	51
	Oxford	9 9 9	208	66.5	46.2	56.3	-0.3	81	5.8	37	23,26,27	59.1	58.8	0.62	16	-27	8	9th	7	3	0	0	0	0	0	3	0	6.83	+1.90	54
	Oxford (Sandford)	9 9 9	210	65.7	44.3	55.0	—	81	8th	53	20, 23	—	—	0.71	18	—	10	9th	4	3	0	0	0	0	4	6	0	6.62	—	53
Bucks.	Mursley	9 9 9	490	64.2	45.4	54.8	—	79	8th	35	30th	54.5	—	0.59	15	—	8	9th	4	3	0	0	0	0	—	—	0	—	—	—
Stafford.	Mayfield	9 9 9	374	62.8	41.9	52.3	—	78	5th	31	30th	—	—	0.56	14	—	9	5th	6	4	0	0	0	1	1	0	5.15	—	41	
Shropshire.	Newport	9 9 9	211	63.3	42.0	52.7	—	76	4.5	27	30th	—	—	1.21	31	—	10	5th	10	7	0	0	0	0	—	—	0	—	—	—
	Roden, Well'n	9 9 9	207	63.3	43.8	53.5	—	77	5th	29	23rd	—	—	1.10	26	—	9	5th	10	7	0	0	0	0	3	6	0	4.71	—	37
	Wistanstow	21 21 9	481	63.2	44.2	53.7	-1.1	75	5th	31	30th	—	—	1.72	44	-5	13	24th	12	9	0	0	0	0	1	3	0	—	—	—
Worcester.	Malvern	9 9 9	377	63.6	48.3	55.9	—	78	5th	41	27, 30	58.3	55.5	0.68	17	-32	6	24th	8	4	0	0	0	0	0	0	0	5.85	—	47
	Tenbury	9 9 9	313	64.7	44.6	54.7	-0.5	77	5th	33	27th	56.1	—	1.22	31	-6	8	24th	10	9	0	0	0	0	3	5	0	—	—	—
	Worcester (Perdiswell)	9 9 9	95	66.0	42.8	54.4	—	80	5th	28	23rd	—	—	0.52	13	—	7	28th	4	3	0	0	0	0	—	9	0	5.47	—	43
Hereford.	Bromyard	9 9 9	392	63.8	43.4	53.6	—	78	5th	32	27th	55.4	56.8	0.83	21	—	9	24th	8	5	0	0	0	0	2	1	0	—	—	—
	Hereford	9 9 9	291	64.8	43.7	54.3	-1.3	76	4.5	32	23, 27	—	—	0.92	23	-24	10	29th	7	5	0	0	0	0	1	2	0	—	—	—
	Ross-on-Wye	18-7 7	223	64.3	45.9	55.1	-1.4	78	5th	34	27th	57.2	58.3	0.93	24	-25	9	24th	8	5	0	0	0	0	7	2	0	5.52	+0.98	44
Gloucester.	Cheltenham	21 21 9	214	65.1	47.8	56.5	+0.5	80	5th	36	27th	58.8	60.7	0.77	20	-27	7	24th	8	5	0	0	0	0	0	0	0	5.90	—	47
	Clifton	9 9 9	225	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Over Court	9 9 9	147	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
5. ENGLAND, S.E.																														
London.	City, Bunhill Row	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.42	+2.45	51
	Camden Square	9 9 9	110	68.9	49.0	58.9	+0.3	85	8th	40	27th	57.3	57.5	0.69	17	-29	10	9th	5	3	0	0	0	0	—	—	—	—	—	—
	East Ham	9 9 9	15	64.1	48.2	56.1	—	82	5.8	36	27th	—	—	0.69	17	—	10	9th	6	4	—	—	—	—	—	—	—	—	—	—
	Enfield	9 9 9	148	68.0	46.7	57.3	—	83	8th	38	20th	—	58.3	0.75	19	-28	10	9th	5	3	0	0	0	0	1	—	0	6.98	—	55
	Greenwich	24 24 9	149	68.3	46.0	57.1	-0.9	83	5.8	34	27th	56.5	56.5	0.68	17	-28	8	9th	6	5	0	0	0	0	1	8	0	7.03	+2.08	56
	Hampst'd Res.	9 9 9	450	65.4	46.7	56.1	—	82	8th	39	26, 30	—	—	0.91	23	—	13	9th	10	3	0	0	0	1	—	3	0	7.14	—	57
	Kensington	18-9 9	80	67.6	48.8	58.2	—	82	5.8	41	21, 27	58.4	60.0	0.55	14	—	12	9th	4	2	0	0	0	0	2	0	0	—	—	—
	Regent's Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.77	—	46	
	Richmond (Kew Obs.)	24 24 24	18	65.5	46.6	56.1	-1.0	80	8th	35	27th	57.4	58.5	1.03	26	-22	15	9th	6	3	0	0	0	1	11	4	0	6.67	+1.84	53
	Stroud Green	18-7 7	212	67.0	48.2	57.6	—	81	5.8	40	27th	—	—	0.69	17	—	10	9th	4	3	0	0	0	0	3	0	0	—	—	—
	Tottenham	21 21 9	51	68.1	49.2	58.7	+0.7	83	8th	41	26, 27	—	60.7	0.75	19	-24	13	9th	3	3	0	0	0	0	—	0	0	6.85	+2.09	54
	Westminster	9 9 9	27	67.5	50.4	58.9	+0.7	83	8th	43	21st	—	—	0.67	17	-25	11	9th	3	3	—	—	—	—	—	0	0	6.64	+2.41	53
Surrey.	Addington	9 9 9	472	65.6	47.4	56.5	—	80	8th	38	26th	—	—	0.86	22	—	9	28th	5	3	—	—	—	—	—	—	—	—	—	—
	Croydon Aero.	18-7 7	244	66.0	47.5	56.7	—	81	8th	36	26, 27	—	—	0.75	19	—	8	9th	5	3	0	0	0	0	4	2	0	6.85	—	54
	Wisley	9 9 9	150	66.6	43.9	55.3	-1.1	81	5th	34	21,26,27	57.5	58.3	1.07	27	-26	13	9th	5	3	0	0	0	1	3	7	0	6.39	+1.32	51
Kent.	Biggin Hill	18-7 7	597	64.3	47.1	55.7	—	77	5th	37	22nd	—	—	0.75	19	—	8	28th	5	3	0	0	0	0	6	3	0	7.73	—	61
	Bromley	9 9 9	213	66.8	45.5	56.1	—	81	8th	33	27th	—	—	0.70	18	—	9	9th	6	3	—	—	—	—	2	4	—	—	—	
	Canterbury	9 9 9	124	67.1	44.7	55.9	—	78	8th	31	27th	59.1	59.3	0.80	20	—	13	28th	5	3	—	—	—	—	—	4	—	—	—	
	Dover	9 9 9	22	65.6	52.1	58.9	—	76	8th	45	21, 24	62.3	62.7	1.15	29	—	15	22nd	5	5	0	0	0	0	0	0	0	8.15	—	65
	Dungeness	18-7 7	20	65.6	51.0	58.3	+0.1	74	8th	39	21st	—	—	0.30	8	-44	7	28th	3	1	0	0	0	0	4	—	0	—	—	—
	East Malling	9 9 9	127	66.9	43.9	55.4	—	81	8th	32	27th	—	—	0.34	9	—	6	28th	4	2	0	0	0	0	0	4	0	7.31	—	58
	Folkestone	9 9 9	101	67.5	52.0	59.7	—	79	8th	44	24th	—	60.6	0.62	16	—	8	28th	4	3	0	0	0	0	0	0	0	7.78	—	62
	Lympne	18-7 7	347	65.4	47.9	56.7	—	78	8th	40	24th	—	58.0	0.30	8	—	5	28th	7	1	0	0								

TABLE III (continued).—SUMMARY of the RECORDS of TEMPERATURE, RAINFALL and SUNSHINE, and of WEATHER OBSERVATIONS, SEPTEMBER, 1928.

DISTRICT, COUNTY AND PLACE.	Terminal Hours of Observation.		Height of Station above Mean Sea Level.	AIR TEMPERATURE IN DEGREES FAHRENHEIT.								Earth Temperature.		RAINFALL.				WEATHER. Number of days.								BRIGHT SUNSHINE.							
	Max.	Min.		Means of		Mean of A and B.	Deviation from Normal.	Absolute Maximum and Minimum.				1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Most in a day.		Precip'n. 0.2 mm. or more.	1 mm. or more.	Snow.	Snow lying.	Hall.	Thunderstorm.	Fog (Morning Obs.)	Ground Frost.	Gale.	Hours per day.						
				A	B			Maximum.	Date.	Minimum.	Date.					Amount.	Date.										Daily Mean.	Deviation from Normal.	Per Cent.				
	°F.	°F.		°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	in.	mm.	mm.	mm.										hr.	hr.	%				
5. ENGLAND, S.E.—cont.																																	
Hampshire	Calshot	18-7	7	8	66.3	50.6	58.5	—	77	5th	42	23rd	—	—	1.16	30	—	15	28th	4	3	0	0	0	0	3	0	0	8.04	—	64		
—cont.	Grayshott	9	9	661	64.9	47.2	56.1	+0.2	77	5, 8	39	23rd	57.2	—	1.53	39	—	22	14	7	4	0	0	0	1	2	1	07.26	+1.96	58			
	Long Sutton	9	9	479	65.5	45.3	55.4	—	77	8th	33	27th	58.2	—	1.29	33	—	15	28th	6	4	0	0	0	1	2	5	17.30	—	58			
	Southamp'n	21	21	9	64	66.6	47.9	57.3	-1.1	78	5, 8	41	21st	—	1.17	30	—	25	13	5	4	0	0	0	2	0	0	07.81	+2.34	62			
	S. Farnboro'	18-7	7	237	67.0	42.6	54.8	—	81	5th	31	27th	—	—	1.28	33	—	12	9th	6	3	0	0	0	1	6	11	06.73	—	53			
	Winchester (Worthy Down)	18-7	7	272	65.8	44.6	55.2	—	78	5th	35	27th	—	—	1.34	34	—	14	28th	5	4	0	0	0	0	4	3	07.38	—	59			
I. of Wight.																																	
	Newport	9	9	9	48	68.3	44.7	56.5	—	80	5th	35	21st	—	—	1.17	30	—	9	28th	5	4	0	0	0	0	0	0	—	—	—		
	Ryde	9	9	9	13	65.4	52.0	58.7	—	78	5th	45	23rd	—	—	1.29	33	—	12	9th	4	4	0	0	0	0	0	0	0	0	0	0	
	Sandown	9	9	9	13	65.3	47.3	56.3	—	72	5th	36	21st	—	—	0.97	25	—	7	9, 27	8	4	0	0	0	0	0	0	0	0	0	0	
	Totland Bay	9	9	9	140	64.8	49.1	56.9	-1.0	70	5, 8	41	23rd	—	—	1.33	34	—	23	11	5	4	0	0	0	0	0	0	0	0	0	0	
	Ventnor (Hospital)	9	9	9	59	65.6	53.3	59.5	+0.1	72	5th	47	21, 24, 25	—	—	1.03	26	—	37	10	4	4	—	—	—	—	—	—	—	—	—	—	
Wilts.																																	
	Larkhill	9	9	9	440	64.7	45.2	54.9	—	77	5, 8	37	21, 23	—	—	1.28	32	—	15	28th	6	5	0	0	0	0	1	4	0	—	—	—	
	Marlboro'	9	9	9	424	65.0	41.0	53.0	-1.6	78	5, 7	31	21, 23, 27	56.1	57.0	1.42	36	—	17	19	7	6	0	0	0	0	1	6	07.17	+2.67	57		
	Porton	9	9	9	363	65.7	43.9	54.8	—	78	8th	33	20, 21	57.2	—	1.98	50	—	23	28th	7	6	0	0	0	0	0	4	07.37	—	59		
7a. ENGLAND, N.W.																																	
Cumberland.																																	
	Aspatria (Mealsgate)	21	21	9	487	58.0	46.5	52.3	-2.0	68	13th	34	29th	54.7	54.3	3.07	78	—	10	27	3rd	16	12	0	0	0	0	0	0	0	0	0	0
	Keswick	9	9	9	254	61.4	46.1	53.7	—	71	13th	33	30th	55.8	55.9	3.56	90	—	19	17th	17	12	0	0	0	1	0	5	04.48	—	35		
	Newton Rigg	21	21	9	559	59.5	44.3	51.9	-1.3	69	13th	32	29th	—	—	2.03	52	—	17	15	10th	14	9	0	0	0	0	0	0	0	0	0	0
Lancashire.																																	
	Blundellsands	9	9	9	34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Bolton	9	9	9	341	62.3	47.1	54.7	—	75	5th	36	20th	56.1	56.2	0.84	21	—	6	7th	12	7	0	0	0	0	0	0	0	0	0	0	0
	Burnley	9	9	9	458	61.3	44.7	53.0	—	75	5th	29	30th	55.4	55.6	0.83	21	—	6	10th	15	6	0	0	0	0	3	5	04.01	—	32		
	Darwen	21	21	9	724	61.5	45.5	53.5	—	73	5th	34	30th	55.8	55.3	1.48	38	—	6	5th	14	11	0	0	0	0	1	1	04.42	—	35		
	Hutton	9	9	9	82	62.3	46.0	54.1	—	73	5th	29	30th	55.9	56.4	1.41	36	—	9	10th	13	9	0	0	0	0	0	3	4	04.77	—	38	
	Lancaster	9	9	9	311	62.9	48.6	55.7	—	72	5, 13	36	30th	55.6	55.4	3.03	77	—	38	3rd	14	10	0	0	0	0	0	0	0	0	0	0	0
	Leyland	9	9	9	124	62.6	46.1	54.3	—	75	5th	30	30th	—	—	1.30	33	—	6	5th	13	9	0	0	0	0	2	4	05.02	—	39		
	Manchester (Whitworth Pk)	21	21	9	125	62.4	47.3	54.9	-1.5	76	5th	36	30th	—	—	1.01	26	—	34	7	27th	11	6	—	—	—	7	—	—	—	—	—	
	(Oldham Road)	21	21	9	190	62.8	50.2	56.5	-0.7	77	5th	39	30th	56.7	58.4	0.79	20	—	47	6	27th	10	5	0	0	0	0	0	0	0	0	0	0
	(Swinton)	9	9	9	253	62.7	47.0	54.9	—	76	5th	36	23rd	—	—	0.76	19	—	5	27th	9	6	0	0	0	0	5	2	04.24	—	33		
	Southport	9	9	9	37	61.8	48.3	55.1	-0.4	72	5, 13	34	30th	57.6	59.3	1.31	33	—	37	10	5th	12	8	0	0	0	0	0	4	05.54	+0.84	44	
	Stonyhurst	9	9	9	377	60.3	47.1	53.7	-0.6	71	5th	35	30th	—	—	1.65	42	—	55	10	3rd	10	8	0	0	0	0	3	0	05.63	+1.40	44	
Cheshire.																																	
	Hoylake	9	9	9	30	63.8	49.5	56.7	0.0	75	5th	35	30th	—	—	1.19	30	—	32	7	5th	14	13	—	—	—	—	—	—	—	—	—	
	Liverpool (Bidston)	18-7	7	189	60.7	50.1	55.4	-0.7	74	5th	39	30th	—	—	1.22	31	—	30	8	5th	13	8	0	0	0	0	3	1	05.25	—	41		
	Macclesfield	9	9	9	500	62.3	45.8	54.1	-0.5	76	5th	31	30th	—	—	1.18	30	—	34	8	25th	10	7	0	0	0	1	0	0	—	—	—	
	West Kirby	9	9	9	25	63.9	48.7	56.3	—	74	5th	33	30th	—	—	1.18	30	—	6	5th	12	8	0	0	0	0	0	2	05.64	—	45		
7b. NORTH WALES.																																	
Flint.																																	
	Hawarden B'ge	9	9	9	22	63.6	48.9	56.3	-0.1	78	5th	38	23, 27	—	—	1.67	42	—	5	8	8th	15	11	—	—	—	—	—	—	—	—	—	
	Rhyl	9	9	9	30	62.7	48.7	55.7	-0.2	75	5th	34	23rd	—	—	1.41	36	—	17	11	5th	13	7	0	0	0	0	0	2	05.51	+0.54	43	
	Sealand	18-7	7	16	63.5	46.1	54.8	-0.5	76	5th	32	23rd	56.5	56.5	1.51	38	—	14	9	8th	15	8	0	0	0	0	7	4	04.92	+0.89	39		
Anglesey.																																	
	Holyhead	18-7	7	26	60.9	52.6	56.7	+0.3	68	2, 13	44	27th	—	—	1.51	38	—	30	9	3rd	11	7	0	0	0	1	0	0	05.54	+0.74	44		
Denbigh.																																	
	Colwyn Bay	9	9	9	81	62.8	51.2	57.0	—	76	5th	39	23rd	—	—	1.26	32	—	6	5th	11	9	0	0	0	0	0	0	05.26	—	41		
Carnarvon.																																	
	Aber (Bangor)	9	9	9	60	61.7	50.1	55.9	—	73	5th	42	23rd	—	—	1.53	39	—	8	8th	10	10	0	0	0	0	0	0	05.07	—	40		
	Llandudno	9	9	9	22	62.2	50.7	56.5	-0.5	72	5th	38	30th	—	—	1.28	32	—	26	7	8th	12	7	0	0	0	0	0	0	05.44	+0.51	43	
Montgomery.																																	
	Welshpool	9	9	9	254	64.7	42.2	53.5	—	76	5th	29	23rd	—	—	1.60	41	—	15	7th	8	4	0	0	0	0	1	0	0	—	—	—	
8a. SOUTH WALES.																																	
Cardigan.																																	
	Aberystwyth	9	9	9	59	61.8	49.6	55.7	—	69	2nd	37	30th	—	—	1.40	36	—	11	8th	11	8	0	0	0	0	0	0	06.26	+1.19	49		

TABLE IV.—SUMMARY of the OBSERVATIONS of PRESSURE, TEMPERATURE, HUMIDITY, CLOUD, VISIBILITY and WIND at fixed hours at certain Stations during the Month of SEPTEMBER, 1928.

Main data table with columns for District, County and Place; Hour of Observation; Mean Pressure; Temperature and Humidity; Cloud Amount; Visibility; and Wind, Number of Observations. Includes sub-sections for Scotland (North, East, West) and Isle of Man/England (North-East).

* Mean of hourly readings. † Mean at Station level. ‡ The mean values at Station level are 990.5mb. at 7h., 990.6mb. at 13h., 990.3mb. at 18h., and 990.5mb. at 21h.

TABLE IV (continued).—SUMMARY OF THE OBSERVATIONS OF PRESSURE, TEMPERATURE, HUMIDITY, CLOUD, VISIBILITY, and WIND at fixed hours at certain Stations during the Month of SEPTEMBER, 1928.

DISTRICT, COUNTY AND PLACE.	Hour of Observation.	Height of Barometer above Mean Sea Level.	MEAN PRESSURE.		TEMPERATURE AND HUMIDITY.				CLOUD AMOUNT.					VISIBILITY.									WIND, NUMBER OF OBSERVATIONS.													
			At Mean Sea Level.	Deviation from Normal.	Dry Bulb.	Depression of Wet Bulb.	Vapour Pressure.	Relative Humidity.	Mean Amount.	NO. OF OBSERVATIONS.					NUMBER OF OBSERVATIONS.									FORCE (0-12).			DIRECTION.									
										0	1 to 3	4 to 6	7 to 9	10	Fog.	Mist.	Poor Vis.	Mod. Vis.	Good Visibility.	8 or more.	4 to 7	1 to 3	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.					
2. ENGLAND, N.E.—cont.																																				
Durham. Durham ..	9	352	1019.9	—	54.0	3.3	11.2	79.5	5.6	4	8	3	6	9	0	0	0	1	3	5	8	8	5	0	0	4	22	4	2	3	0	0	9	4	4	4
	21	352	1019.7	—	50.7	2.1	10.8	85.5	5.6	8	4	2	3	13	0	0	0	1	1	1	12	15	0	0	0	0	2	25	3	5	2	0	0	9	7	2
York, N. Riding. Scarborough	9	96	1020.1	—	57.4	3.8	12.1	77.4	2.2	7	8	6	3	6	0	0	0	0	1	0	9	10	10	0	0	2	28	0	4	2	0	0	5	10	5	4
	York ..	9	53	1020.2	—	54.9	3.2	11.7	79.5	5.5	9	5	1	1	14	—	—	—	—	—	—	—	—	—	—	0	0	30	0	8	2	0	3	8	0	7
	21	53	1020.1	—	54.0	3.3	11.2	79.3	4.4	18	1	1	1	9	—	—	—	—	—	—	—	—	—	—	0	0	30	0	6	2	2	2	11	2	1	4
York, E. Riding. Spurn Head	1	28	1019.6	—	54.1	1.8	12.5	88.5	5.1	1	10	10	5	4	0	0	0	0	0	0	7	21	2	0	0	16	14	0	4	1	3	1	8	7	2	4
	7	28	1019.7	+ 3.8	54.4	2.1	12.2	86.6	4.4	0	2	10	15	1	0	0	1	0	0	1	10	16	2	0	0	16	14	0	4	3	1	2	8	3	5	4
	13	28	1019.8	—	60.8	4.9	13.2	72.6	6.3	1	2	11	15	1	0	0	0	0	0	0	9	18	3	0	0	20	10	0	7	1	3	5	3	3	3	5
	18	28	1019.5	—	57.4	3.2	12.7	80.6	6.0	1	6	9	12	2	0	0	0	0	0	0	7	23	0	0	0	21	9	0	8	2	3	8	1	5	1	2
Lincoln. Cranwell H	1	240	1020.9	—	48.3	0.6	11.2	96.3	3.3	10	11	2	1	6	0	2	1	2	0	3	13	9	0	0	0	3	23	4	5	0	1	2	5	6	5	2
	7	240	1020.8	—	49.3	0.6	11.5	96.6	6.6	1	7	2	12	8	0	3	1	1	2	2	14	5	2	0	0	4	24	2	5	2	0	1	8	3	4	5
	13	240	1020.6	—	62.8	5.3	13.9	71.7	1.0	0	5	5	14	6	0	0	0	0	0	0	7	10	13	0	0	14	16	0	6	4	0	3	6	5	2	4
	18	240	1020.3	—	57.3	2.4	13.8	85.6	6.1	2	7	5	7	9	0	0	0	0	0	0	10	9	11	0	0	3	26	1	4	5	4	1	5	5	2	3
3. ENGLAND, E.																																				
Norfolk. Cromer H	9	74	1020.2	—	60.3	5.5	12.3	69.4	9.0	0	12	10	7	1	0	0	0	0	0	0	3	3	18	8	0	5	25	0	5	3	5	2	5	4	1	5
	1	26	1020.2	—	55.5	2.3	12.6	85.2	2.4	13	7	8	1	1	0	0	0	0	0	0	1	5	24	0	0	0	7	20	3	4	2	2	3	2	7	4
Norfolk. Yarmouth ..	7	26	1020.0	+ 3.6	52.6	1.8	12.1	87.4	7.5	5	5	9	8	3	0	0	0	0	0	0	7	15	8	0	0	5	23	2	2	5	1	1	1	6	6	0
	13	26	1020.2	—	62.7	5.6	13.6	69.5	5.3	1	7	13	7	2	0	0	0	0	0	1	16	13	0	0	0	15	15	0	6	6	4	3	4	2	3	2
	18	26	1019.9	—	60.5	4.9	13.2	72.5	3.3	2	7	11	5	5	0	0	0	0	0	0	16	14	0	0	0	10	16	4	5	8	2	2	4	3	1	1
Suffolk. Felixstowe Aero.	7	20	1020.5	—	54.2	2.1	12.1	80.4	4.3	3	12	7	7	1	0	0	0	0	2	3	13	8	4	0	0	5	23	2	10	5	1	1	2	5	2	2
	13	20	1020.4	—	64.1	7.7	12.1	59.5	0.2	2	9	7	11	1	0	0	0	0	0	0	0	11	17	2	0	11	19	0	2	9	3	4	4	1	4	3
Cambridge. Cambridge H	18	20	1020.2	—	59.5	4.7	12.5	72.5	5.1	2	12	3	8	5	0	0	0	0	0	0	5	10	12	3	0	5	23	2	3	10	3	1	4	2	3	2
	9	43	1020.6	+ 3.3	58.1	3.5	13.2	80.4	7.8	3	10	1	8	—	—	—	—	—	—	—	—	—	—	—	0	5	24	1	4	8	2	2	6	4	1	
	21	43	1020.3	+ 3.1	53.2	2.5	12.1	84.3	3.1	19	0	2	3	6	—	—	—	—	—	—	—	—	—	—	0	0	19	11	0	4	2	3	1	4	3	2
Bedford. Cardington	7	187	1020.6	—	49.1	1.3	10.7	91.5	5.3	2	12	3	4	9	0	2	2	1	1	7	12	5	0	0	0	3	14	13	2	4	0	0	2	3	3	3
	13	187	1020.2	—	64.7	8.6	11.7	55.5	7.2	2	5	6	15	2	0	0	0	0	0	0	3	17	10	0	0	16	12	2	5	4	2	3	3	5	3	3
	18	187	1019.9	—	59.4	5.6	11.4	67.5	5.7	1	9	7	8	5	0	0	0	0	0	0	7	20	3	0	0	5	23	2	1	9	1	3	2	6	1	5
Hertford. Rothamsted	21	187	1020.5	—	53.1	2.8	11.1	81.3	3.5	10	9	3	3	5	0	0	0	0	0	0	0	0	0	0	0	4	20	6	3	7	2	2	3	5	1	1
	9	396	1020.3	—	56.4	3.7	11.7	77.4	7.7	2	12	5	4	7	0	0	0	0	0	8	22	0	0	0	0	1	23	6	5	4	2	0	7	1	2	3
Essex. Shoeburyness H	7	14	1020.5	—	53.0	1.1	13.0	93.4	4.4	5	8	7	6	4	0	0	0	1	1	6	6	13	3	0	0	1	27	2	6	2	2	2	2	4	3	7
	13	14	1020.4	—	65.4	6.2	14.8	69.4	2.4	4	11	8	4	3	0	0	0	0	0	0	4	9	17	0	0	11	19	0	5	4	6	2	4	4	2	3
	18	14	1020.1	—	58.3	2.5	14.3	84.4	4.9	3	8	7	9	3	0	0	0	0	0	0	6	14	10	0	0	3	24	3	4	4	6	2	3	2	4	2
4. MIDLAND COUNTIES.																																				
York, W. Riding. Harrogate ..	7	478	1020.2	—	50.0	1.8	10.7	87.6	6.7	0	9	0	15	6	0	3	0	3	1	3	4	7	9	0	0	4	19	7	5	0	0	1	3	12	2	0
	13	478	1019.8	—	59.2	6.3	10.8	63.6	6.6	0	5	8	12	5	0	0	0	0	2	2	1	15	4	6	0	10	19	1	4	2	3	4	3	10	2	1
	18	478	1019.8	—	55.0	3.7	11.2	76.6	6.4	0	9	5	11	5	0	0	0	1	1	4	4	13	7	0	0	3	24	3	4	2	2	1	6	11	1	0
Nottingham. Nottingham	9	215	1020.1	—	55.0	3.7	11.2	76.6	6.4	0	9	5	8	8	0	2	2	2	7	5	8	2	2	0	0	13	17	0	6	1	1	0	6	2	14	0
Warwick. Birmingham H	7	542	1021.1	—	50.5	2.1	10.8	86.4	4.8	8	4	7	5	6	0	2	2	3	3	6	5	2	7	0	0	1	27	2	2	3	2	2	7	3	5	4
	13	542	1020.4	—	61.1	7.5	10.9	59.6	6.5	1	4	7	16	2	0	0	0	0	1	0	11	3	15	0	0	5	25	0	5	2	2	3	7	6	3	2
	18	542	1020.2	—	58.7	6.2	10.9	65.5	5.5	3	8	3	13	3	0	0	0	0	4	9	4	1	12	0	0	2	28	0	6	3	3	1	7	3	1	6
Oxford. Oxford ..	9	212	1021.3	+ 3.5	56.6	4.0	11.9	75.3	3.7	5	13	4	1	7	0	0	0	0	1	0	16	7	5	1	0	2	19	9	4	5	0	0	4	4	3	1
Hereford. Ross-on-Wye H	7	226	1020.6	—	48.9	1.5	10.8	90.6	6.3	4	5	2	10	9	0	2	3	2	1	4	8	3	7	0	0	1	22	7	4	3	1	0	0	6	6	3
	13	226	1019.9	—	61.9	6.8																														

TABLE IV (continued).—SUMMARY of the OBSERVATIONS of PRESSURE, TEMPERATURE, HUMIDITY, CLOUD, VISIBILITY, and WIND at fixed hours at certain Stations during the Month of SEPTEMBER, 1928.

DISTRICT, COUNTY AND PLACE.	Hour of Observation.	Height of Barometer above Mean Sea Level.	MEAN PRESSURE.		TEMPERATURE AND HUMIDITY.				CLOUD AMOUNT.					VISIBILITY.									WIND, NUMBER OF OBSERVATIONS.																
			At Mean Sea Level.	Deviation from Normal.	Dry Bulb.	Depression of Wet Bulb.	Vapour Pressure.	Relative Humidity.	Mean Amount.	NO. OF OBSERVATIONS.					NUMBER OF OBSERVATIONS.									FORCE (0-12).				DIRECTION.											
										0	1 to 3	4 to 6	7 to 9	10	FOG.			MIST.	POOR VIS.		MOD. VIS.		GOOD VISIBILITY.			8 or more.	4 to 7	1 to 3	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		
			0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
5. ENGLAND, S.E.—cont.																																							
Kent.	Biggin Hill H	7	616	1020.5	—	50.7	1.0	11.9	93	5.7	5	6	4	5	10	0	1	4	2	4	2	10	6	1	0	0	0	2	27	1	5	6	3	2	3	9	1	0	
		13	616	1019.9	—	62.2	5.7	13.3	69	6.2	3	3	5	15	4	0	0	0	0	0	0	2	10	15	3	0	0	0	8	22	0	4	9	1	4	2	6	3	1
		18	616	1019.9	—	56.7	3.4	12.7	79	5.0	5	6	6	10	3	0	0	0	0	0	2	9	14	5	0	0	0	3	25	2	5	6	4	1	1	8	2	1	
Kent.	Dungeness ..	1	23	1020.1	—	55.4	2.5	12.4	84	3.1	14	4	5	5	2	1	0	0	1	0	0	6	9	13	0	0	3	26	1	5	5	6	3	2	3	2	3	0	
		7	23	1020.3	+ 3.4	54.8	2.0	12.8	87	5.9	3	4	7	12	4	0	1	1	2	1	1	7	9	8	0	0	5	24	1	8	3	5	3	1	2	3	4	1	
		13	23	1020.3	—	64.8	6.0	14.4	69	5.4	4	3	10	11	2	0	0	0	0	0	0	2	12	16	0	0	0	8	22	0	4	4	8	1	3	7	2	4	1
Kent.	Lympe H	13	23	1019.9	—	60.3	3.8	13.7	78	5.6	3	3	13	9	2	0	0	0	0	0	0	2	11	17	0	0	8	21	1	3	6	8	0	1	4	4	3	0	
		18	23	1019.9	—	60.3	3.8	13.7	78	5.6	3	3	13	9	2	0	0	0	0	0	0	2	11	17	0	0	8	21	1	3	6	8	0	1	4	4	3	0	
		1	343	1020.4	—	52.0	1.8	11.7	87	2.5	17	4	3	4	2	1	0	0	0	1	3	9	14	2	0	0	2	28	0	7	6	7	2	1	3	3	1	0	
Kent.	Tunbridge Wells	7	343	1020.2	—	52.9	1.8	11.9	88	4.7	5	8	5	8	4	0	1	0	0	2	0	16	2	3	0	0	8	22	0	8	7	6	1	1	2	2	3	0	
		13	343	1020.0	—	63.3	8.4	11.2	56	5.0	4	8	5	12	1	0	0	0	0	2	3	11	14	0	0	0	11	19	0	5	5	6	4	3	2	2	3	0	
		18	343	1020.0	—	57.0	4.5	11.6	73	3.7	6	10	6	6	2	0	0	0	0	1	0	10	11	8	0	0	0	8	22	0	6	7	6	1	2	3	4	1	
Sussex.	Brighton H	9	48	1020.8	—	58.7	3.2	13.8	81	3.7	14	1	6	5	4	0	0	0	0	0	2	15	7	6	0	0	0	28	2	5	8	0	2	2	5	1	5	0	
Sussex.	St. Leonards	9	174	1020.5	—	60.6	4.9	13.2	72	4.2	6	8	7	6	3	0	0	0	0	0	0	3	23	4	0	0	6	24	0	3	10	4	4	1	3	4	1	0	
		21	174	1020.4	—	55.4	3.1	11.8	80	3.4	13	5	3	6	3	0	0	0	0	0	0	0	22	8	0	0	2	28	0	3	10	4	2	2	2	4	3	0	
Hampshire.	Calshot ..	1	15	1020.4	—	53.9	1.9	12.4	87	2.5	16	6	2	2	4	0	0	0	0	0	0	9	16	5	0	0	4	26	0	7	9	3	0	0	4	3	4	0	
		7	15	1020.5	—	52.8	1.8	12.1	88	5.1	5	8	2	12	3	0	0	1	1	0	1	16	10	1	0	0	6	23	1	11	5	3	0	1	3	2	4	0	
		13	15	1020.4	—	64.7	7.6	12.6	61	4.7	2	9	11	6	2	0	0	0	0	0	0	6	16	8	0	0	18	12	0	7	4	4	4	0	9	0	2	0	
		18	15	1020.0	—	60.9	5.2	12.9	71	4.4	5	10	5	9	1	0	0	0	0	0	0	11	18	1	0	0	11	19	0	5	4	6	2	0	7	4	2	0	
Hampshire.	Southampton H	9	84	1020.3	+ 2.4	54.8	2.7	12.3	82	3.3	10	6	7	5	2	0	0	0	2	7	12	9	0	0	0	0	0	30	0	2	11	4	2	3	3	3	2	0	
		21	84	1020.2	+ 2.5	57.7	3.7	12.7	78	3.7	9	6	6	7	2	0	0	0	2	8	15	5	0	0	0	0	1	29	0	4	4	5	3	1	7	4	2	0	
Hampshire.	S. Farnborough	7	256	1020.6	—	47.8	0.8	10.6	95	6.4	4	5	3	4	14	0	4	2	0	3	5	8	7	1	0	0	1	21	8	4	4	0	2	3	3	5	1	0	
		13	256	1020.0	—	65.5	9.3	11.3	55	5.6	1	7	8	11	3	0	0	0	0	0	1	3	19	7	0	0	8	22	0	5	5	4	2	4	4	3	3	0	
		18	256	1019.9	—	59.3	5.2	11.8	70	4.6	1	14	5	8	2	0	0	0	0	1	1	6	18	4	0	0	2	24	4	6	3	3	2	2	4	3	3	0	
Hampshire.	Winchester (Worthy Down)	7	273	1020.7	—	48.6	0.8	11.0	94	5.3	5	6	6	5	8	0	1	1	2	1	4	9	6	6	0	0	3	19	8	12	1	1	1	2	1	2	2	0	
		13	273	1020.1	—	63.8	7.8	11.9	59	5.8	1	4	12	10	3	0	0	0	0	0	1	3	10	16	0	0	7	23	0	6	6	2	4	2	5	2	3	0	
		18	273	1020.0	—	58.1	4.4	12.1	73	5.3	2	10	3	12	3	0	0	0	0	0	1	1	14	14	0	0	1	27	2	8	2	2	2	6	2	3	3	0	
I. of Wight.	Ventnor (Hosp.)	9	80	1020.7	—	59.1	3.3	13.7	80	3.9	3	16	4	3	4	—	—	—	—	—	—	—	—	—	—	—	0	15	15	0	7	3	9	2	1	1	7	0	
		15	80	1020.1	—	64.1	5.6	14.2	70	3.9	5	10	8	3	4	—	—	—	—	—	—	—	—	—	—	—	0	11	19	0	2	2	11	2	0	1	12	0	
Wilts.	Larkhill H	9	444	1020.8	—	56.5	3.6	12.3	78	4.4	4	12	3	5	6	0	0	1	0	0	0	3	20	6	0	0	12	17	1	3	8	6	2	4	1	3	2	0	
		13	444	1020.1	—	63.0	7.8	11.6	60	5.9	3	2	13	8	4	0	0	0	0	0	2	1	10	17	0	0	14	16	0	3	7	5	3	3	3	3	3	0	
		15	444	1019.7	—	63.1	7.9	11.5	59	5.9	1	3	12	9	5	0	0	0	0	0	1	0	9	20	0	0	17	12	1	5	6	3	3	3	5	2	2	0	
7a. ENGLAND, N.W.																																							
Cumberland.	Aspatria (Mealsgate)	9	485	1019.8	—	53.1	2.5	11.4	83	6.5	6	3	4	5	12	—	—	—	—	—	—	—	—	—	—	—	0	2	22	6	4	4	0	1	2	8	5	0	
		21	485	1019.8	—	50.4	1.7	10.7	87	5.2	7	7	2	3	11	—	—	—	—	—	—	—	—	—	—	—	0	6	21	3	4	1	0	5	6	11	0	0	
Lancashire.	Hutton ..	9	86	1019.0	—	54.3	2.4	12.1	85	5.6	5	5	6	8	6	—	—	—	—	—	—	—	—	—	—	—	0	1	7	22	0	1	1	2	2	1	1	0	
Lancashire.	Southport H	9	42	1020.4	+ 3.5	55.4	3.1	12.2	80	5.2	0	11	7	5	7	0	0	0	0	2	10	5	2	11	0	0	15	13	2	3	2	2	7	6	1	6	1	0	
		13	42	1020.1	+ 3.4	60.6	5.7	12.4	68	6.1	0	6	11	5	8	0	0	0	0	0	4	3	5	18	0	0	17	12	1	2	3	2	2	4	4	8	4	0	
		17	42	1019.7	+ 3.5	59.0	4.9	12.4	71	6.3	1	7	7	3	12	0	0	0	0	1	5	7	3	13	1	0	14	15	1	4	5	2	2	2	5	6	3	0	
		21	42	1020.1																																			

TABLE I. DISTRICT VALUES.

The District Values of this Table are computed from the statistics for selected individual stations set out in Table III and Table IV.

The representative stations from which the District Values of rainfall and temperature are computed are indicated in Table III by the sign ¶ while the representative stations from which District Values of sunshine are computed are indicated by the sign §. The deviations from and percentages of normal for Air Temperature, Rainfall and Sunshine are the means of the corresponding deviations or percentages for the representative District Value stations. The deviations from normal of Earth Temperature are derived from the deviations for all the stations reporting in Table III for which normals of Earth Temperature are available. The highest and lowest temperatures for the District recorded during the month may refer to any station in Table III.

TABLE II. SUMMARY OF AUTOGRAPHIC RECORDS OF WIND.

The records used in the preparation of this Table are generally made by anemographs of the pressure-tube type. At a few stations the Robinson Cup Anemograph is utilised. The classification adopted for the "Distribution of Wind" is based on the specification of the Beaufort Scale of Wind Force (see *The Observer's Handbook*). For an anemograph complying with the specification "head 33 ft. above ground in the open" the several columns correspond with Force 8 and above (gales), Forces 6 and 7 (strong winds), Forces 4 and 5 (moderate winds), Forces 2 and 3 (light winds), Forces 1 and 0 (nearly calm). Some information as to the nature of the actual exposures may be gathered from the figures in the "Height" columns.

The "Highest Hourly Wind" is determined by the mean speed of the wind for a period of sixty minutes from 30 minutes before to 30 minutes after an exact hour by Greenwich Mean Time. Under the heading "Veer from N" the azimuth of the direction from which the wind was blowing is stated, the entry for an east wind being 90°, that for a south wind 180° and so on.

TABLE III. SUMMARY OF OBSERVATIONS AT TERMINAL HOURS.

Temperature.—The terminal hours of observation are given for each station. When the terminal hours for maximum and minimum temperature are stated independently the temperatures refer to intervals of 24 hours. If the maximum thermometer is read in the morning the reading is credited to the previous day. When the terminal hours for maximum and minimum are separated by a dash, thus, 18-7, the day-maximum for the period 7h. to 18h. and the night-minimum for the period 18h. to 7h. are reported and are utilised in determining the means for the month; in such cases the extreme temperatures for successive periods of 24 hours are also read by the observers, so that the absolute maximum and minimum temperatures for the month are obtained.

Except at the Royal Observatory, Greenwich, where a Glaisher stand is in use, the air temperature is obtained from thermometers placed in louvered screens. At Kew Observatory, Richmond, and Valentia Observatory these are north wall screens a few feet from the ground. At Aberdeen Observatory the north wall screen is at 41 feet. Otherwise the screens are in the open.

Rainfall.—The daily amounts are for the 24 hours beginning at the "terminal hour." "Rainfall" includes all forms of precipitation. The number of days of precipitation is counted with reference to the limit .01 inch or 0.2 mm. and also with reference to the limit .04 inch or 1 mm. The lower limit excludes mere "traces" of precipitation, but it is frequently passed on occasions when the precipitation is only dew.

Weather.—The numbers of days of Precipitation, Snow, Hail, Thunderstorms and Gale are counted irrespective of the hour at which the phenomena occur. Except for "Precipitation" the day is the civil day.

For the purpose of this summary "Snow" includes sleet (*i.e.*, snow with rain), "Hail" includes graupel (soft hail), "Snow lying" refers to occasions when at least one-half of the country surrounding the station is covered with snow at the morning observation. The entry of "fog" implies that regular observations of the range of vision are made on the scale set out below. Days of fog are those on which the range of vision is less than 1,100 yards at the hour of morning observation. That hour is given by the third entry of column 2 of the table and may be 7h. or 9h. G.M.T. The variability of the observation hour may exercise an important effect upon the statistics of fog frequency. "Thunderstorm" includes any day on which thunder is heard. "Gale" is a wind of Force 8 or upwards on the Beaufort Scale. A "ground frost" is entered when the reading of a "grass minimum" thermometer set the previous evening and read at the morning observation is 30° F. or lower.

Sunshine.—The percentage of possible sunshine is in all cases calculated with reference to the maximum duration possible in the latitude on the assumption of an unobstructed horizon, due allowance being

made for refraction (see *International Meteorological Tables* (Paris) pp. A17-A20 and 42-27). The sunshine recorder is generally insensitive to sunshine when the sun is at an altitude of 3° or less. The symbol § is entered against the percentage at some stations and indicates that obstructions of altitudes greater than 3° reduce the possible record of duration for the month by more than 5 per cent.

TABLE IV. SUMMARY OF OBSERVATIONS AT FIXED HOURS.

Mean Air Pressure is expressed in millibars. (1 millibar = 1,000 dynes per square centimetre = the pressure due to .029531 inch of mercury at 32° F. in Lat. 45°). The corrections for latitude, temperature and height have been applied to the barometer readings so as to obtain pressure at mean sea level. Barometric pressure is given at station level for a few stations at altitudes of 600 ft. or more in footnotes in Table IV.

Hygrometry.—The values given depend on the readings of the dry and wet bulb thermometers in Stevenson Screens (except at the Observatories, see above). The observations were formerly reduced by Glaisher's method; as from January, 1926 they are reduced by the new hygrometrical tables issued by the Office which are based on a formula of Regnault. In general the relative humidity and vapour pressure are derived from the monthly means of the dry and wet bulb readings. At certain stations the daily values of relative humidity and vapour pressure are found and the means are computed therefrom. These stations are indicated by the letter "H."

Cloud Amount.—The proportion of sky covered with cloud is estimated on the scale 0 to 10, the entry "0" being equivalent to clear sky "10" to overcast.

Visibility.—The observations are classified according to the following scheme—the distances, specified by international arrangement in metres, are given here in yards and miles:—

CODE.	RANGE OF VISION.	
	Less than 55 yards.	
2	Exceeding 55 yards, less than 220 yards	
3	" 220 "	" 550 "
4	" 550 "	" 1,100 "
5	" 1,100 "	" 1½ miles.
6	" 1½ miles "	" 2½ "
7	" 2½ "	" 6½ "
8	" 6½ "	" 12½ "
9	" 12½ "	" 31 "

Wind Summaries.—The estimates of wind force refer to the Beaufort Scale, and in general to the wind experienced at the time of observation. At Deerness, Cahirciveen, Richmond, Armagh, Eskdalemuir, Southport, Greenwich and Oxford the analysis refers to tabulations of autographic records. For Oxford the mean wind speed for half-an-hour centred at the hour of observation is used for conversion to "force" on the Beaufort Scale; for the remaining observatories the mean wind speed used for each observation refers to a period of one hour. In these cases winds equivalent to Force 1 are counted with the calms, whilst Forces 2 and 3 are taken together in the preceding column of the Table.

INTERPOLATED VALUES.

When the observations for any station for a month are incomplete and relevant data (e.g. records from neighbouring stations) which make it practicable to interpolate approximate values for the missing observations are available, such approximate values may be used for completing summaries for stations published in Tables III and IV. Parts of a summary obtained in this way are shown in brackets thus—(52.4).

STANDARD OF TIME.

As a rule observations are made in all parts of the British Islands according to Greenwich Mean Time, but at the following stations Local Mean Time is used for the observations summarised in Tables III and IV. The number of minutes after Greenwich Time is shown in brackets—Darwen (10), Rhayader (15), Ashburton (15), Tavistock (17), Plymouth (15), Douglas (20), Armagh (26), Balbriggan (25), Lisburn (30), Newcastle, Co. Wicklow (30), Ballinacurra (30), Cork (34).

"Summer Time" is not used in the Monthly Weather Report, but at certain stations the hours of observation vary in the course of the year. For such stations all time entries are converted to G.M.T. before they are printed and the winter hours are given as the terminal hours in the annual tables. For the summer hours reference should be made to the appropriate months.

NORMALS.

In Table III the normals used are those for the 35 years 1881-1915. The normals of temperature and sunshine are published in the Book of Normals, Section I, those for rainfall in the Book of Normals, Section V.

The normals for pressure with which comparison is made in Table IV also refer to the period 1881-1915.

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.

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

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ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE.

OCTOBER, 1928. Mild and wet but with considerable fair periods. Frequent strong winds and gales during second half of month.

Apart from rather cold weather at the beginning and end of the month and about the 11th, 13th and 22nd, October was mild. Rain fell frequently and monthly totals were decidedly above the normal, except in some extreme northern and eastern districts of Great Britain where there was a deficiency. There were, however, considerable bright periods and in most districts in England monthly aggregates of bright sunshine exceeded the normal.

During the first few days of the month, mainly fair anticyclonic conditions prevailed generally, 10 hours sunshine being recorded at stations in the south and east of England on the 1st, and between 9 hours and 10 hours sunshine in many parts of the country on the 4th. The last few days of September had been unseasonably cold and very low temperatures were recorded in the screen on the morning of the 1st (21°F. at Eskdalemuir and West Linton).

Associated with a depression centred off north-west Ireland, rain commenced to fall in the western districts of Ireland on the 4th and by the 5th had extended to the whole country. Temperature had risen and for a week the weather continued mild and unsettled. The highest temperature of the month in all districts was recorded during this period: at Shoeburyness the temperature on the 8th reached 69°F. There were frequent heavy falls of rain with intervening bright periods; 44 mm. fell at Eskdalemuir during the 24 hrs. commencing at 7h. on the 6th. Heavy rain fell in Ireland and in the south and west of England and Wales during the night of the 10-11th, widely on the 11th and in the south of England on the 12th. Much rain fell in Ireland and in the western district of Great Britain on the 14th, the rain spreading to the eastern districts during the night of the 14th-15th (15 mm. were measured on the morning of the 15th at Kew Observatory and Croydon). Thunderstorms occurred locally on several days.

In Scotland, associated with northerly to easterly winds, the days became somewhat cold after the 9th, and from the 10th to the 14th low minimum temperatures were recorded in the screen in eastern districts. This temporary interruption of the mild weather extended to nearly all districts on the 13th and during the nights of the 12th-13th and 13th-14th minimum temperatures in the screen were low for the time of year while severe ground frost occurred widely. Sunny periods, however, occurred in many districts between the 10th and 15th.

Mild and unsettled conditions with fair periods were renewed in the west on the 14th and, apart from generally fair weather on the 28th, persisted until the end of the month. Strong winds and local gales were frequent and some very heavy local rain occurred at times, notably on the 26th. Heavy rain and strong winds, reaching gale force in many places, occurred from the 18th to the 20th, 23rd to 24th and on the 26th.

Pressure and Wind.—Conditions during the month were mostly cyclonic, high pressure occurring chiefly during the first few days and on the 13th. Monthly means of atmospheric pressure were below the normal and at Stornoway the mean monthly pressure at 7h. G.M.T. was as much as 7 millibars below the normal. Winds were mostly between south and south-west and frequently strong in force. Gales occurred in exposed situations in Ireland and the western coastal districts of Great Britain on the 18th-19th and 19th-20th, in the south-west of England on the 24th and 26th and in Northern Ireland and north-west England on the 31st. Gusts exceeding 70 m.p.h. were recorded at Cahirciveen on the 19th (85 mi/hr), at Dunfanaghy (76 mi/hr), Aldergrove (73 mi/hr), and Holyhead (81 mi/hr) on the 20th and at Tírree (74 mi/hr) on the 31st. A small secondary depression which moved across southern England on the 22nd was accompanied in its passage by heavy rain and local destructive squalls of wind. Between 18h. and 21h. rain fell heavily in London while locally in the west-end the wind attained destructive force, a sudden squall, reported to have lasted no longer than 30 seconds, causing structural damage estimated at upwards of £15,000.

Temperature.—October 1928 was on the whole mild. Rather low temperatures were recorded generally at the commencement and end of the month and about the 13th, and in northern districts about the 11th and 22nd, but during the greater part of the month temperature both by day and by night exceeded the normal for the time of year. In most places the mean temperature for the month was above the normal, but in Scotland and in the north of England and Wales the excess in general was slight. The mildest days occurred during the period 5th to 8th and on the 16th and 17th. Low minimum temperatures in the screen and severe ground frost were recorded in many places on the mornings of the 1st, 12th, 13th, 22nd and 29th (23°F. in the screen and 17°F. on the grass at Renfrew and 29°F. in the screen and 17°F. on the grass at S. Farnborough on the 1st, 30°F. in the screen and 21°F. on the grass at Aberdeen on the 22nd and 33°F. in the screen and 25°F. on the grass at Winchester and S. Farnborough on the 29th.

The extreme temperatures for the month were:—(England and Wales) 69°F. at Selsey Bill on the 7th and at Shoeburyness on the 8th, and 22°F. at Mayfield (Staffs.) on the 1st. Scotland, 67°F. at Smeaton (Haddington) on the 8th and 21°F. at West Linton (Peebles) and Eskdalemuir (Dumfries) on the 1st. Ireland 68°F. at Belfast on the 5th and 28°F. at Dublin (Phoenix Park) and Mountmellick (Queen's Co.) on the 1st.

Precipitation.—October 1928 was predominantly wet, and, except in some north-eastern and extreme northern districts of Scotland and in some north-eastern and eastern districts of England, monthly totals of precipitation exceeded the normal. The general precipitation of the British Isles expressed as a percentage of the normal for the period 1881-1915 was 150; the values for the constituent countries were:—England and Wales 147, Scotland 145, Ireland 165.

In a few districts in the north-east and east of England precipitation was below the normal, but elsewhere in England and Wales there was a decided excess, more than one and a half times the normal being recorded in several districts and in the south of England more than twice the normal. At Eastbourne the month's total of 201 mm. has been exceeded in only two previous months, October, 1889 (207 mm.) and December 1915 (213 mm.). At Tenbury the month was the wettest October since 1907. The month's total at Shanklin (Isle of Wight) was the highest recorded in any month since observations commenced there in January, 1906. Amongst some notably heavy falls recorded during the month were 61 mm. at Petersfield, 56 mm. at Guernsey (St. Peters Port) 50 mm. at Holton Heath on the 26th and 45 mm. at Ashburton and 41 mm. at Dean Prior on the 19th.

In Scotland precipitation in general was in excess except in some north-eastern and extreme northern districts where there was a deficiency. In the south and west the excess was pronounced, some areas having appreciably more than twice the normal. At Rothesay the total of 262 mm. was the largest total in any month since December 1919 (282 mm.) and during the last 120 years a larger total has been recorded in October only in 1917 (267 mm.). After some fine days, rain was general from 5th to 10th or 11th with some heavy falls, chiefly in southern districts, on 7th, 9th, and 11th (65 mm. at Monreith in Wigtownshire on the 11th). On 16th heavy rain commenced in the west, and on 18th and 19th very heavy falls were widespread, with a two days' aggregate exceeding 75 mm. over wide areas; at Kinlochquoich as much as 76 mm. on 18th followed by 38 mm. on 19th; and at Corrie, Arran, 64 mm. on 19th. There were further rather heavy falls on 20th and 21st, whilst the period from 23rd to 30th was almost continuously wet in some western districts, with many daily falls exceeding 25 mm. and at Glenquoich as much as 55 mm. on 24th. Northern and eastern coastal districts were relatively free from really heavy falls.

Except in the neighbourhood of Dublin, where precipitation was about normal, monthly totals in Ireland greatly exceeded the normal in all districts and in a few reached or exceeded twice the normal. Amongst some notable heavy daily falls were 33 mm. at Waterford on the 7th and 31 mm. at Blacksod Point on the 7th and at Markree on the 10th.

Sunshine.—Bright intervals occurred frequently during the month and in most districts of England monthly aggregates of bright sunshine were above the normal. Representative aggregates for districts ranged from 123 per cent. of the normal in the Channel Isles and 112 per cent. in England S.W. to 89 per cent. in Scotland W. and 81 per cent. in Ireland N. Abundant sunshine was recorded in many districts on the 1st, 3rd, 4th, about the 13th, on the 25th and 28th; outstanding daily records were 10.4 hr. at Calshot and 10.2 hr. at Clacton and Lympne on the 1st, 9.5 hr. at Cahirciveen on the 3rd, 10.1 hr. at Lympne on the 4th, 9.1 hr. at Tírree and 9.3 hr. at Nairn on the 12th, 10.0 hr. at Scilly on the 13th, 9.1 hr. at Felixstowe on the 14th, 8.4 hr. at Liverpool on the 25th and 7.8 hr. at Cattewater on the 28th.

Fog.—The mild cyclonic conditions accompanied by much wind which prevailed during the greater part of the month were in general unfavourable to the development of fog; it occurred, however, in many districts, mostly during the first three days and from about the 13th to the 16th.

Miscellaneous Phenomena.—Observations of solar halos of 22° with parheliion were made at a few places during the month. A portion of the halo of 46° was observed at Oxford on the 19th. A lunar cross was seen at Woking on the night of 25-26th. Aurora was observed at Lerwick on as many as 14 occasions. A display on the 25th was fairly widely observed and others on 18th and 20th were seen as far south as Durham on the former date and as far south as Eskdalemuir on the latter date. Ball lightning is reported to have been observed at Smallfield, Horley (Surrey) on the afternoon of October, 25th.

TABLE I.—DISTRICT VALUES—OCTOBER, 1928.

[1908, revised 1928.]

DISTRICTS.	AIR TEMPERATURE.			EARTH TEMPERATURE.		RAINFALL.		SUNSHINE.	
	High-est.	Low-est.	Daily Mean. Deviation from Normal.	At 1 ft. Deviation from Normal.	At 4 ft. Deviation from Normal.	Per-centage of Normal.	No. of Days. Deviation from Normal.	Per-centage of Normal.	Per-centage of Possible Duration.
o. SCOTLAND, N.	°F. 65	°F. 28	°F. +1.0	°F. —	°F. —	% 127	0	% 108	% 28
Eastern.									
1. SCOTLAND, E.	67	21	+0.1	—	—	109	+3	99	29
2. ENGLAND, N.E.	68	23	+0.9	-1.1	-0.8	110	+1	108	31
3. ENGLAND, E...	69	23	+1.9	-1.3	-0.5	109	+1	117	36
4. MIDLAND COUNTIES	68	22	+1.9	-1.2	-1.1	147	+3	119	32
5. ENGLAND, S.E.	69	25	+1.6	-0.1	+0.4	158	+5	109	34

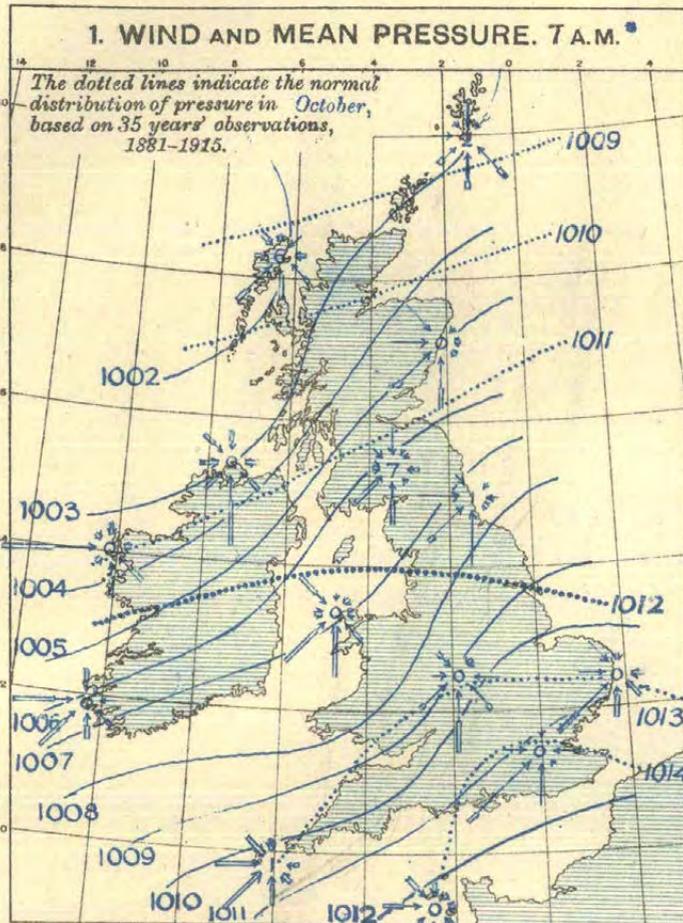
DISTRICTS.	AIR TEMPERATURE.			EARTH TEMPERATURE.		RAINFALL.		SUNSHINE.	
	High-est.	Low-est.	Daily Mean. Deviation from Normal.	At 1 ft. Deviation from Normal.	At 4 ft. Deviation from Normal.	Per-centage of Normal.	No. of Days. Deviation from Normal.	Per-centage of Normal.	Per-centage of Possible Duration.
Western.	°F.	°F.	°F.	°F.	°F.	%		%	%
6. SCOTLAND, W. (& I. of Man)	63	21	+0.9	—	-1.0	201	+6	89	24
7. ENGLAND, N.W. (& N. Wales)	67	25	+1.3	-1.3	-1.6	135	+6	103	29
8. ENGLAND, S.W. (& S. Wales)	68	23	+2.0	-0.1	-0.6	145	+5	112	34
9. IRELAND, N...	68	29	+2.4	-0.5	-0.9	190	+5	81	23
10. IRELAND, S...	66	28	+1.9	-0.5	-1.0	165	+6	99	30
11. CHANNEL I. (& Scilly)	67	40	+1.6	0.0	+0.3	163	+2	123	46
Mean: DISTRICTS 1-10	69	21	+1.5	-0.8	-0.8	147	+4	104	30

TABLE II.—SUMMARY OF AUTOGRAPHIC RECORDS OF WIND.—OCTOBER, 1928.

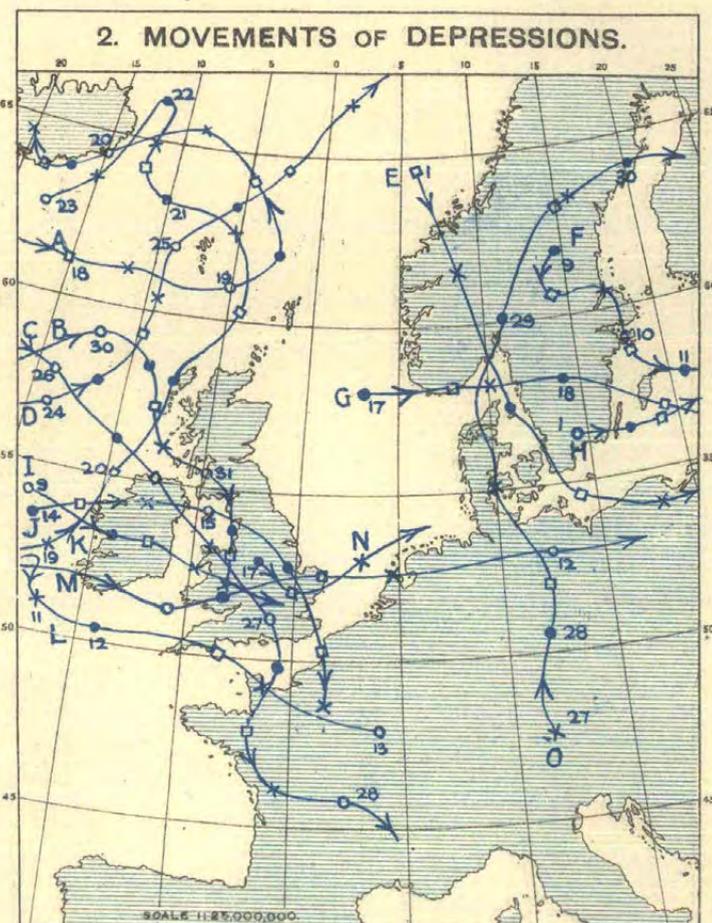
[1914.]

DISTRICT AND STATION.	Height.			Distribution of Wind.††								Extreme Velocities.								
	Above Mean Sea Level.	Above Ground.	Above Building.	More than 38 mi/hr.		25 to 38 mi/hr.		13 to 24 mi/hr.	4 to 12 mi/hr.	Less than 4 mi/hr.	No Record.	Highest Hourly Wind.			Highest Gust.					
				Dates of Occurrence.	Duration.	No. of Days.	Duration.	Duration.	Duration.	Duration.	Duration.	Veer from N.	Speed.	Mid Time.	Speed.	Time.				
o. SCOTLAND, N.	ft.	ft.	ft.		hr.		hr.	hr.	hr.	hr.	hr.	°	mi/hr.	m/s.	day. hr.	mi/hr.	m/s.	d.	h.	m.
Shetlands Lerwick	310	42	33‡	20	11	9	75	312	276	70	0	190	48	22	20 17	72	32	20	17	20
Orkneys Deerness (Cup Anr.)	188	16	5	20	6	11	98	288	285	67	0	230	43	19	20 16	—	—	—	—	—
1. SCOTLAND, E.																				
Aberdeen Aberdeen	70	42	33‡	—	0	2	14	202	472	56	0	140	35	15	20 1	59	27	20	9	25
Kincardine Balmakewan ..	140	25	18	—	0	1	7	79	(438)	(220)	0	210	30	13	20 12	58	26	20	9	15
Edinburgh Edinburgh	485	39	31‡	20	6	8	39	317	303	79	0	210	45	20	20 5	75	33	20	5	35
6a. SCOTLAND, W.																				
Argyll Tiree	80	55	48‡	18, 20, 31	21	19	200	336	173	14	0	20	50	22	31 5	74	33	31	4	15
Renfrew Paisley	188	81	15	—	0	2	7	173	413	151	0	140	38	17	20 4	69	31	20	4	15
Dumfries Eskdalemuir	825	50	22	20	5	10	96	238	229	176	0	180	47	21	20 3	73	33	20	3	20
2. ENGLAND, N.E.																				
Durham South Shields	62	46	20	—	0	3	7	186	438	113	0	10	27	12	31 24	49	22	20	3	50
York, E.R. Spurn Head	67	42	35‡	11	5	16	96	445	173	9	16	90	44	20	11 11	58	26	11	11	40
Lincoln Cranwell	284	44	26‡	—	0	4	10	306	353	75	0	210	29	13	24 15	52	23	18	16	0
3. ENGLAND, E.																				
Norfolk Gorleston	52	42	33‡	—	0	12	60	338	333	13	0	180	32	14	19 23	45	20	20	3	20
Suffolk Felixstowe Aero. ..	55	40	25	—	0	12	56	424	(211)	(53)	0	200	33	15	20 2	48	21	20	3	15
Essex Shoeburyness	115	104	14‡	—	0	9	39	352	328	25	0	—	38	17	20 1	55	24	20	0	40
4. MIDLAND COUNTIES.																				
Warwick Birmingham	643	118	18	—	0	—	0	256	453	35	0	190	24	11	24 12	58	26	18	14	50
5. ENGLAND, S.E.																				
Surrey Richmond (KewObs)	82	65	22	—	0	24	1	172	435	136	0	210	25	11	24 12	51	23	19	23	20
Surrey Croydon	313	105	49	—	0	9	30	408	252	54	0	220	34	15	19 24	59	26	20	1	50
Kent Dover	61	32	22	—	0	19	125	360	251	8	0	—	38	17	{ 19 24 } { 22 23 }	56	25	20	0	5
Kent Lympne	409	70	55‡	—	0	10	37	307	394	6	0	230	35	16	18 16	52	23	18	16	45
Hampshire S. Farnboro' (Tower)	444	160	14	—	0	4	9	(292)	(371)	(72)	0	190	30	13	19 33	55	25	19	23	5
Hampshire Calshot	55	45	31‡	—	0	12	57	396	(264)	(27)	0	230	38	17	18 14	52	23	20	0	45
Hampshire Worthy Down	314	43	27‡	—	0	4	13	159	430	142	0	170	33	15	19 24	55	25	20	0	20
7a. ENGLAND, N.W.																				
Lancashire Fleetwood	112	50	12	20	1	10	31	381	296	35	0	200	39	17	20 4	63	28	20	2	15
Lancashire Southport	77	59	45‡	—	0	12	57	420	258	9	0	260	34	15	18 17	48	21	24	13	15
7b. NORTH WALES.																				
Anglesey Holyhead	64	45	29‡	19, 20, 31	11	16	129	385	189	30	0	210	47	21	20 1	81	36	20	0	30
Flint Sealand	81	65	49‡	—	0	3	6	199	443	96	0	160	27	12	19 21	50	22	24	12	30
8b. ENGLAND, S.W.																				
Devon Plymouth	185	88	2	19, 22, 26	10	12	66	315	245	80	28	—	47	21	19 21	61	28	26	11	40
Cornwall Pendennis Castle ..	256	65	24	—	—	—	—	Instr	ument	dismo	unted.									
9. IRELAND, N.																				
Donegal Dunfanaghy	180	47	39	20	4	8	66	276	310	88	0	—	52	23	20 4	76	34	20	3	55
Antrim Aldergrove	282	40	27‡	20	4	6	21	284	340	95	0	210	42	19	20 3	73	33	20	3	30
10. IRELAND, S.																				
Dublin Kingstown (CupAnr.)	49	27	16	19, 20	6	19	117	350	249	22	0	220	53	24	20 1	—	—	—	—	—
Clare Quilty	100	40	32‡	19, 20, 26, 30	11	21	154	394	122	9	54	—	59	26	19 23	79	35	19	23	15
Kerry Cahirciveen (Val. O.)	98	41	34‡	19, 26	6	16	133	391	173	41	0	240	54	24	19 21	85	38	19	20	10
Cork Weaver Pt.	160	30	21‡	19	3	12	88	291	322	40	0	—	50	22	19 21	76	34	19	21	10
11. SCILLY ISLES.																				
St. Mary's.. ..	160	42	35‡	9, 19, 27	17	21	213	366	139	9	0	350	44	20	27 8	66	29	19	20	35

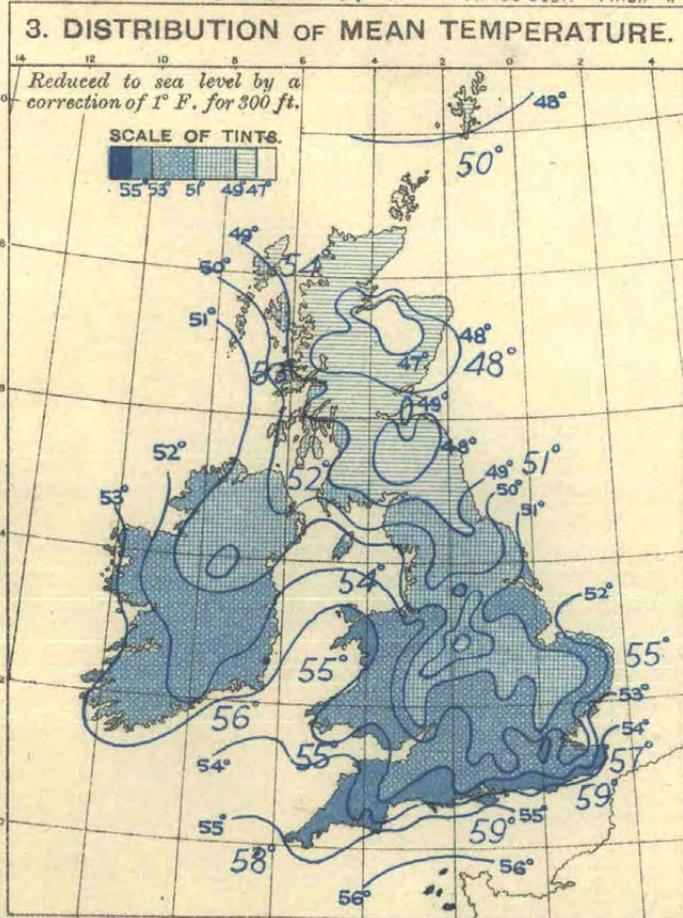
†† Brackets () indicate that the distribution as between winds above and below 4 mi/hr. is doubtful, but the total number of hours with winds below 12 mi/hr. is reliable.
‡ Standard mounting.



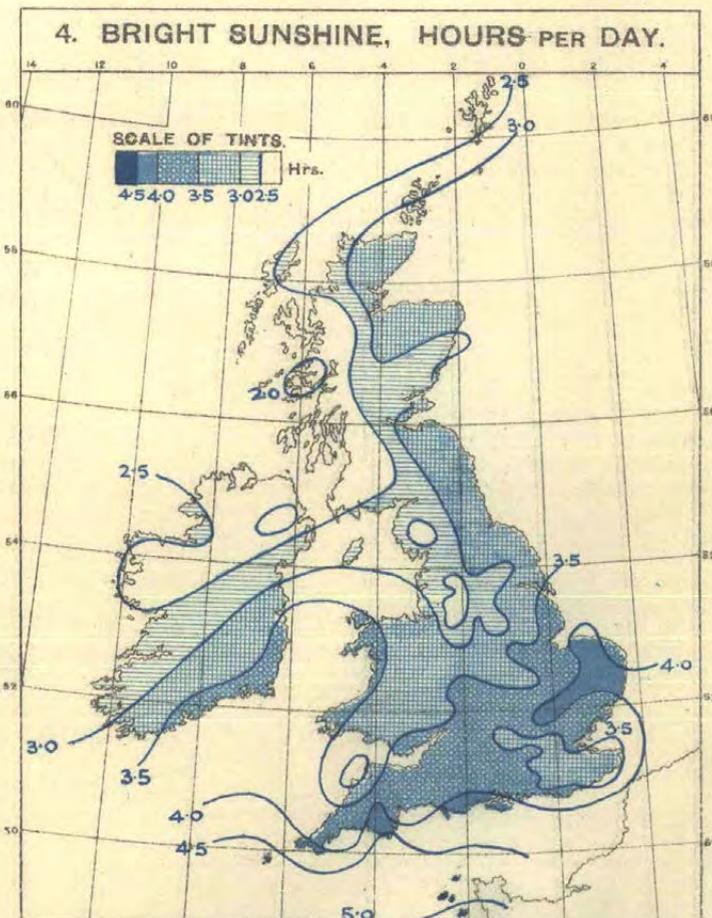
WIND ROSES. The arrows fly with the wind and indicate frequency and force, thus:
 LIGHT MODERATE GALE
 30 0 30 1 inch



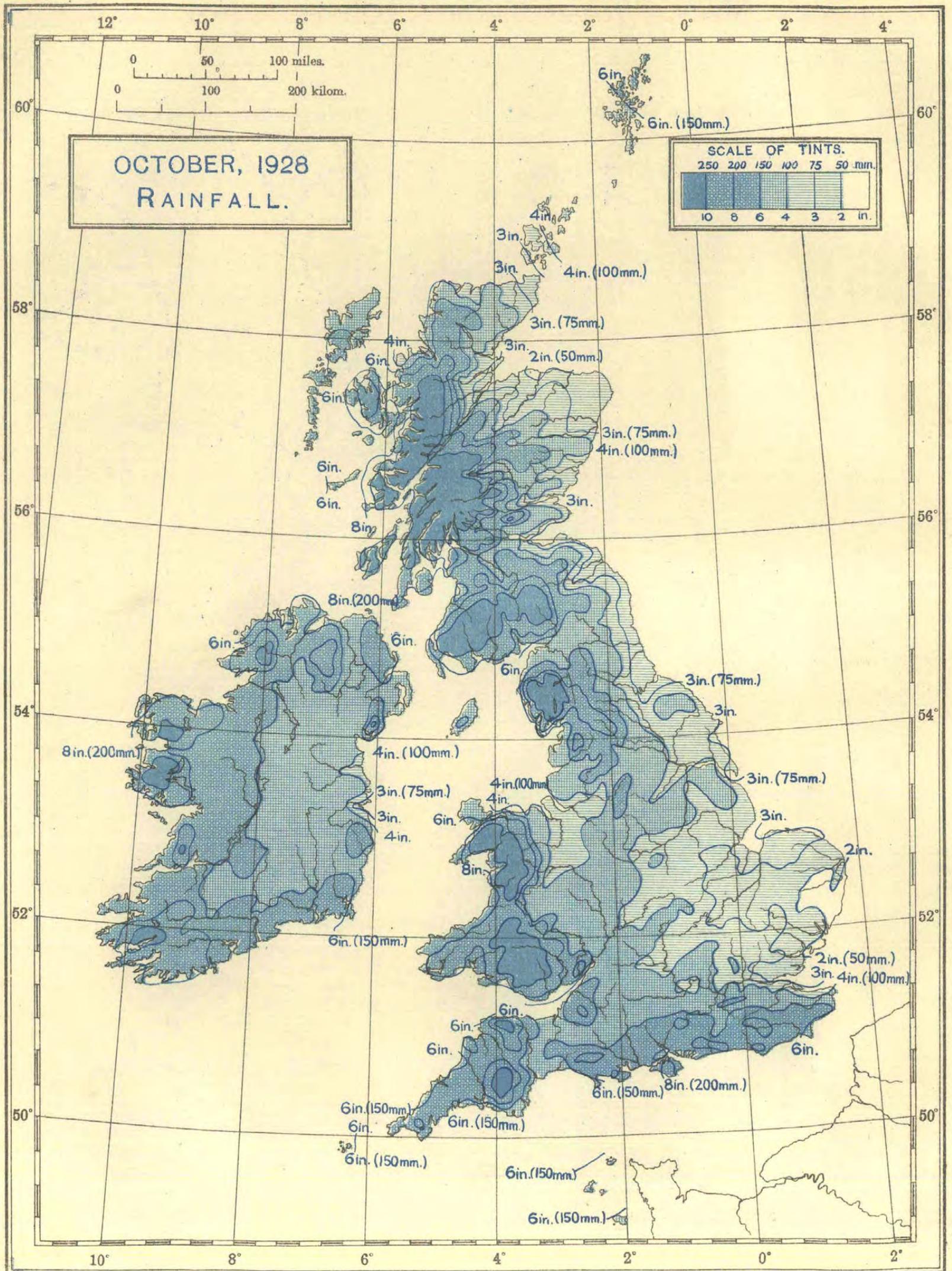
Positions of centres are shown thus: ○ at 1h; ● at 7h; □ at 13h; X at 18h.



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



* The pressure is expressed in millibars.



Scale 1 : 5,000,000.

Ps. 1375/1737. W. 101A. D. 25. 1125 11/28.

The equivalent values in mm. are given in round numbers. The exact relation is 10 in. = 254 mm.

TABLE III.—SUMMARY OF the RECORDS OF TEMPERATURE, RAINFALL AND SUNSHINE, and of WEATHER OBSERVATIONS, OCTOBER, 1928.

DISTRICT, COUNTY AND PLACE.	Terminal Hours of Observation.		Height of Station above Mean Sea Level.	AIR TEMPERATURE IN DEGREES FAHRENHEIT.						Earth Temperature.		RAINFALL.				WEATHER. Number of days.							BRIGHT SUNSHINE.								
	Max.	Min.		Means of		Deviation from Normal.	Absolute Maximum and Minimum.			1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Most in a day.		Precip'n.	Snow.	Snow lying.	Hail.	Thunderstorm.	Fog (Morning Obs.)	Ground Frost.	Gale.	Hours per day.							
				A	B		Maximum.	Date.	Minimum.					Date.	Amount.									Date.	0.2 mm. or more.	1 mm. or more.	Daily Mean.	Deviation from Normal.	Per Cent.		
0. SCOTLAND, N.																															
Shetlands.	Baltasound	9 9 9		31	51.3	43.7	47.5	—	58	8th	37	30th	47.2	—	5.33	135	—	19	16th	26	17	0	0	0	0	0	0	—	12.06	—	20
	Lerwick	18-7 7	54	51.2	45.4	48.3	+2.1	57	8th	41	1, 10, 12, 13	—	—	5.79	147	+ 47	35	18th	21	19	0	0	0	0	0	0	—	22.21	-0.20	22	
Orkneys.	Deerness	2121 9	160	51.7	43.9	47.8	+0.9	57	8th	38	13th	—	—	3.78	96	0	19	29th	24	15	1	0	0	0	0	0	—	13.03	+0.58	30	
	Kirkwall	9 9 9	151	51.2	44.1	47.7	—	58	8th	37	1st	—	—	4.00	102	—	17	18, 19	23	14	0	0	2	1	0	0	—	23.17	—	31	
Hebrides.	Skallary	9 9 9	20	54.3	47.7	51.0	—	59	8th	41	23rd	—	—	6.99	177	—	21	19th	25	21	0	0	0	0	0	—	0	—	—		
	Stornoway	18-7 7	30	53.3	43.5	48.4	+1.7	59	6, 8	34	23rd	—	—	5.07	129	- 3	19	23rd	23	21	0	0	0	0	0	—	32.98	+0.21	29		
Caithness.	Wick	18-7 7	81	51.9	43.9	47.9	+1.3	62	8th	33	1, 14, 23	—	—	2.54	64	- 11	10	18th	23	15	0	0	0	0	0	—	6	—	—		
	Achnashellach	9 9 9	225	53.3	41.1	47.2	+1.5	60	4, 8	29	1st	—	—	10.07	256	+ 45	34	18th	21	21	0	0	0	0	0	11	0	—	—		
Ross & Cromarty.	Fortrose	9 9 9	69	54.4	41.8	48.1	—	62	8th	33	1st	—	—	2.46	63	—	10	18th	17	12	0	0	0	0	0	—	03.99	—	39		
	Strathpeffer	9 9 9	125	53.4	38.2	45.8	-0.4	63	8th	30	12, 14, 22, 23	—	—	3.48	89	+ 24	15	30th	18	18	0	0	0	0	0	—	—	—	—		
Inverness.	Ft. Augustus	9 9 9	68	53.1	40.5	46.8	+0.1	62	8th	28	1st	—	—	6.79	173	+ 73	33	18th	21	20	0	0	0	0	1	—	02.14	+0.01	21		
	Inverness	9 9 9	442	53.6	41.6	47.6	+0.2	64	7th	33	12, 14	—	—	2.74	70	+ 10	12	30th	17	11	0	0	0	0	0	5	23.80	+0.68	37		
1. SCOTLAND, E.																															
Nairn.	Nairn	18-7 7	82	52.6	40.3	46.5	+0.4	62	8, 16	30	12th	—	—	2.31	59	- 1	11	30th	17	13	0	0	0	0	0	—	13.63	+0.47	35		
Elgin.	Gordon Castle	2121 9	104	54.1	40.9	47.5	+0.4	63	7th	29	12th	—	—	1.89	48	- 32	8	30th	19	14	0	0	0	0	—	—	13.65	—	35		
Banff.	Banff	9 9 9	130	53.3	42.8	48.1	—	65	8th	34	14, 23	—	—	1.87	48	—	11	16th	18	11	0	0	0	1	0	1	03.48	—	34		
Aberdeen.	Aberdeen	242424	44	52.3	42.1	47.2	+0.1	62	8th	33	23rd	—	—	2.83	72	- 4	14	18th	24	18	0	0	1	0	0	8	02.78	-0.28	27		
	Hourly*	44				47.8	+0.6																								
Balmoral.	Balmoral	9 9 9	927	51.1	35.8	43.5	—	61	7th	23	23rd	—	—	4.26	108	+ 17	30	19th	23	15	0	0	0	0	—	12	0	—	—		
	Braemar	2121 9	1120	50.2	36.0	43.1	-0.4	59	16th	24	1st	—	—	4.83	123	+ 27	37	19th	21	19	0	0	0	0	—	11	0	—	—		
Craigstone.	Craigstone	9 9 9	300	52.1	40.6	46.3	—	62	8th	31	23rd	—	—	2.46	63	—	17	19th	22	12	0	0	2	0	—	7	23.18	—	31		
	Logie Coldstone	9 9 9	608	51.8	36.4	44.1	—	62	8th	25	23rd	—	—	2.72	69	- 13	15	31st	23	15	0	0	0	0	3	?	0	—	—		
Kincardine.	Stonehaven	9 9 9	93	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Forfar.	Arbroath	2121 9	93	53.8	41.1	47.5	—	63	8th	27	1st	—	—	3.11	79	—	11	19th	19	14	0	0	0	1	0	?	13.10	—	30	
Carnoustie.	Carnoustie	9 9 9	39	53.7	41.0	47.3	—	64	8th	31	1st	—	—	3.42	87	—	10	18th	20	16	0	0	0	0	—	—	02.77	—	27		
	Dundee (E. Nec.)	2121 9	198	52.3	41.3	46.8	+0.1	63	8th	29	1st	—	—	3.80	97	+ 29	12	18th	22	17	0	0	0	0	—	—	1	—	—		
Kettins.	Mayfield	9 9 9	147	53.7	40.3	47.0	-0.6	64	7th	28	1st	—	—	47.4	—	—	—	—	—	—	—	—	—	—	—	8	22.73	-0.17	26		
	Montrose	9 9 9	218	54.2	39.3	46.7	—	64	14, 28	25	1st	—	—	46.9	—	—	—	—	—	—	—	—	—	—	—	10	1	—	—		
Perth.	Crieff	9 9 9	16	53.6	41.9	47.7	—	63	8th	25	23rd	—	—	3.15	80	—	14	18th	18	13	0	0	0	0	—	—	13.04	—	29		
	Perth	2121 9	478	53.1	40.6	46.9	0.0	61	8, 16	30	1st	—	—	6.17	157	+ 57	22	18th	23	21	0	0	0	0	—	—	1	—	—		
Fife.	Cupar	9 9 9	70	55.0	39.1	47.1	+0.7	64	2, 8	25	1st	—	—	3.74	95	+ 20	13	19th	22	16	0	0	0	0	—	—	22.73	—	26		
	Inchkeith	9 9 9	210	53.3	40.7	47.0	—	63	8th	29	1st	—	—	4.15	105	—	24	26th	19	17	0	0	0	0	—	—	0	—	—		
Kirkcaldy.	Kirkcaldy	18-7 7	190	53.3	45.6	49.5	—	62	8th	38	1st	—	—	2.73	69	—	12	8th	18	14	0	0	0	0	1	0	13.45	—	33		
	Leuchars	9 9 9	66	54.5	42.3	48.4	—	64	8th	33	1st	—	—	3.21	81	—	14	30th	21	14	—	—	—	—	—	—	—	—	—		
St. Andrews.	St. Andrews	18-7 7	30	53.6	41.5	47.5	—	65	6th	29	1st	—	—	3.57	91	—	18	26th	20	16	0	0	0	1	0	7	13.15	—	30		
	Bangour	9 9 9	20	53.3	41.9	47.6	—	63	8th	29	1st	—	—	47.5	49.9	3.81	97	—	18	18th	19	16	0	0	0	0	7	02.90	—	28	
Linlithgow.	Bangour	2121 9	587	52.2	39.6	45.9	—	62	8th	27	1st	—	—	4.00	102	—	13	18th	24	19	0	0	0	0	—	—	1	—	—		
	Blackford Hill	2121 9	441	53.1	43.3	48.2	+0.8	64	8th	32	1st	—	—	3.00	76	+ 10	12	18th	22	17	0	0	0	0	—	—	3	23.55	+0.36	34	
Edinburgh.	Boghall	9 9 9	645	52.1	40.7	46.4	—	60	7, 8, 9	28	1st	—	—	45.8	48.4	3.20	81	—	11	18th	19	17	0	0	0	—	4	13.05	—	29	
	Edin. Univ.	9 9 9	227	54.1	44.8	49.5	—	65	8th	35	1st	—	—	47.8	50.6	2.86	73	+ 4	11	18th	18	15	—	—	—	—	—	—	—		
Liberton.	Liberton	9 9 9	190	54.4	—	—	—	66	8th	—	—	—	—	3.06	78	—	12	18th	21	17	0	0	0	0	—	—	1	—	—		
	N. Berwick	9 9 9	152	54.4	41.9	48.1	—	65	8th	31	1st	—	—	2.67	68	—	17	30th	17	14	0	0	0	0	0	5	13.03	—	29		
Smeaton.	Smeaton	9 9 9	100	54.5	39.7	47.1	—	67	8th	28	1st	—	—	48.4	—	—	6	15	30th	16	16	0	0	0	0	?	2	—	—		
	Marchmont	9 9 9	498	52.6	39.6	46.1	-0.1	60	8, 16	32	1st	—	—	3.86	98	+ 1	18	31st	25	18	0	0	0	0	—	—	12.22	-0.46	21		
Peebles.	West Linton	9 9 9	770	52.5	36.6	44.5	+0.4	60	8-11	21	1st	—	—	4.27	109	—	15	29th	25	18	0	0	0	0	—	13	3	—	—		
	Kelso (Br'nd's)	9 9 9	195	54.4	39.7	47.1	—	62	8th	26	1st	—	—	2.89	73	- 1	12	18th	25	18	0	0	0	1	0	—	0	—	—		
Roxburgh.	Wolfelee	9 9 9	537	52.5	38.5	45.5	—	60	8, 18	24	1st	—	—	6.09	155	+ 57	20	19th	20	20	0	0	0	0	—	—	0	—	—		
6a. SCOTLAND, W.																															
Argyll.																															

TABLE III (continued).—SUMMARY of the RECORDS of TEMPERATURE, RAINFALL and SUNSHINE, and of WEATHER OBSERVATIONS, OCTOBER, 1928.

DISTRICT, COUNTY AND PLACE.	Terminal Hours of Observation.	Height of Station above Mean Sea Level.	AIR TEMPERATURE IN DEGREES FAHRENHEIT.								Earth Temperature.		RAINFALL.				WEATHER. Number of days.								BRIGHT SUNSHINE.					
			Means of		Deviation from Normal.	Absolute Maximum and Minimum.				1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Most in a day.		Precip'n. 0.2 mm. or more.	1 mm. or more.	Snow.	Snow lying.	Hail.	Thunderstorm.	Fog (Morning Obs.)	Ground Frost.	Gale.	Daily Mean.	Deviation from Normal.	Per Cent.			
			A	B		Maximum.	Date.	Minimum.	Date.					Amount.	Date.															
			Max.	Min.	Max.	Min.	Mean of A and B.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	in.	mm.	mm.	mm.	0.2 mm. or more.	1 mm. or more.	Snow.	Snow lying.	Hail.	Thunderstorm.	Fog (Morning Obs.)	Ground Frost.	Gale.	hr.	hr.	%
5. ENGLAND, S.E.—cont.																														
Hampshire																														
Calshot	18-7	7	8	58.7	48.8	53.7	—	64	6, 8, 17	38	1st	—	—	5.56	141	—	24	26th	22	20	0	0	1	2	0	3	23.86	—	36	
Grayshott	9	9	661	56.8	44.1	50.5	+0.5	63	5, 7, 8	32	1st	50.9	—	7.35	187	+ 84	46	26th	23	19	0	0	0	2	0	5	03.69	+0.08	35	
Long Sutton	9	9	479	57.9	44.2	51.1	—	65	8th	30	1st	52.1	—	5.39	137	—	39	26th	21	19	0	0	0	1	0	6	03.83	—	36	
Southamp'n	2121	9	64	58.6	46.2	52.4	+0.9	65	8th	33	1st	—	—	7.27	185	+ 85	34	22nd	26	22	0	0	0	0	2	2	53.73	+0.25	35	
S. Farnboro'	18-7	7	237	59.0	43.7	51.3	—	67	17th	29	1st	—	—	4.79	122	—	32	26th	21	19	0	0	0	0	2	9	03.95	—	37	
Winchester (Worthy Down)	18-7	7	272	58.5	43.8	51.1	—	66	8, 17	29	2nd	—	—	6.04	153	—	34	26th	23	21	0	0	0	0	2	8	03.79	—	35	
I. of Wight.																														
Newport	9	9	48	60.3	46.2	53.3	—	68	6th	30	1st	—	—	8.84	205	—	41	11th	24	21	0	0	5	3	1	4	2	—	—	
Ryde	9	9	13	59.5	49.1	54.3	—	65	6, 8	39	14th	—	—	6.83	173	—	42	26th	24	19	0	0	2	3	0	—	14.24	—	40	
Sandown	9	9	13	59.7	48.4	54.1	—	65	6, 10	34	1st	—	—	8.42	214	—	37	22nd	26	21	0	0	0	0	0	—	04.20	—	39	
Totland Bay	9	9	140	59.0	48.7	53.9	+2.1	65	10th	38	1, 13	—	—	7.08	180	+ 76	30	26th	24	20	0	0	0	1	0	1	34.20	+0.36	39	
Ventnor (Hospital)	9	9	59	59.6	50.8	55.2	+1.9	64	6, 7, 10	39	1st	—	—	8.96	227	+127	44	26th	24	20	—	—	—	—	—	—	4.31	+0.60	40	
Larkhill	9	9	440	57.5	44.0	50.7	—	65	8th	33	1, 2	—	—	4.56	116	—	25	26th	22	20	0	0	0	0	0	6	0	—	—	
Marlboro'	9	9	424	57.3	41.9	49.6	+1.7	65	8th	25	1st	50.8	53.9	4.36	111	+ 22	23	26th	20	15	0	0	0	0	0	7	13.89	+0.92	36	
Porton	9	9	363	58.3	42.9	50.6	—	66	17th	29	1st	50.8	—	5.28	134	—	31	26th	23	19	0	0	2	0	0	6	03.72	—	35	
7a. ENGLAND, N.W.																														
Cumberland.																														
Aspatria (Mealsgate)	2121	9	487	53.3	42.9	48.1	+0.5	60	8th	32	1st	49.3	51.2	5.85	149	+ 38	16	23rd	26	20	0	0	3	2	—	5	02.81	-0.45	27	
Keswick	9	9	254	54.9	43.4	49.1	—	62	8, 16	29	1st	49.8	52.8	9.16	233	—	29	24th	24	20	0	0	5	3	0	6	12.11	—	20	
Newton Rigg	2121	9	559	53.5	41.3	47.4	+0.7	65	20th	25	1st	—	—	6.48	165	+ 71	23	24th	26	20	0	0	0	0	0	9	02.55	-0.22	24	
Lancashire.																														
Blundellsands	9	9	34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Bolton	9	9	341	55.0	43.1	49.1	—	67	8th	30	1st	49.8	51.7	6.09	155	—	28	9th	24	20	0	0	0	2	—	4	02.13	—	20	
Burnley	9	9	458	54.3	42.6	48.5	—	65	8th	26	1st	49.0	51.5	5.48	139	—	34	26th	26	18	0	0	0	0	1	6	02.28	—	23	
Darwen	2121	9	724	53.5	42.6	48.1	—	63	8th	32	1st	48.5	50.8	7.08	180	—	33	26th	24	23	0	0	2	2	1	4	02.41	—	23	
Hutton	9	9	82	56.1	43.1	49.6	—	65	8th	27	1st	49.7	52.3	4.51	115	—	15	10th	23	19	0	0	0	1	1	5	02.71	—	26	
Lancaster	9	9	311	55.7	44.7	50.2	—	63	8th	35	1st	48.0	50.1	5.83	148	—	22	24th	25	23	0	0	0	2	1	2	02.97	—	28	
Leyland	9	9	124	56.0	43.5	49.7	—	66	8th	26	1st	—	—	4.11	104	—	11	26th	23	20	0	0	0	2	1	4	23.07	—	29	
Manchester (Whitworth Pk)	2121	9	125	55.8	44.7	50.3	+0.5	66	8th	29	1st	—	—	3.94	100	+ 16	19	10th	26	21	—	—	—	—	4	—	2.58	+0.52	25	
(Oldham Road)	2121	9	190	55.9	46.8	51.3	+0.8	64	8th	34	1st	49.9	54.0	4.36	111	+ 22	21	10th	25	21	0	0	0	0	—	2	02.15	-0.01	20	
(Swinton)	9	9	253	55.9	42.6	49.3	—	65	8th	29	1st	—	—	51.5	4.49	114	—	22	10th	24	20	0	0	0	2	2	4	02.57	—	24
Southport	9	9	37	55.7	44.5	50.1	+0.9	65	8th	31	1st	48.9	52.4	5.57	141	+ 51	20	31st	22	20	0	0	1	0	4	4	03.13	+0.07	30	
Stonyhurst	9	9	377	53.9	43.4	48.7	+0.9	63	8th	31	1st	—	—	6.12	155	+ 41	18	10th	24	21	0	0	2	2	1	3	12.98	+0.27	28	
Cheshire.																														
Hoylake	9	9	30	57.6	47.4	52.5	+2.2	67	8th	34	1st	—	—	3.30	84	— 1	16	10th	18	17	—	—	—	—	—	—	—	3.25	+0.28	31
Liverpool (Bidston)	18-7	7	189	54.7	46.7	50.7	+1.2	63	8th	40	14, 23	—	—	3.35	85	+ 2	15	10th	21	15	0	0	0	0	0	0	0	03.22	—	30
Macclesfield	9	9	500	54.4	41.9	48.1	+0.5	63	8th	28	1st	—	—	3.96	101	+ 15	15	26th	24	21	0	0	2	1	1	—	0	—	—	
West Kirby	9	9	25	57.4	46.0	51.7	—	65	8th	34	1st	—	—	3.23	82	—	13	10th	23	16	0	0	0	2	0	1	03.20	—	30	
7b. NORTH WALES.																														
Flint.																														
Hawarden B'ge	9	9	22	58.1	46.0	52.1	+2.1	66	8th	32	1st	—	—	3.35	85	+ 11	18	10th	22	15	—	—	—	—	—	—	—	—	—	
Rhyl	9	9	30	57.9	46.0	51.9	+1.9	63	6, 8, 9	34	1st	—	—	3.39	86	+ 4	12	7th	20	15	0	0	0	0	0	5	12.94	-0.45	28	
Sealand	18-7	7	16	57.5	43.8	50.7	+1.8	67	8th	27	1st	50.7	52.4	3.12	79	+ 2	15	10th	23	13	0	0	0	1	2	5	02.88	+0.21	27	
Anglesey.																														
Holyhead	18-7	7	26	56.8	50.2	53.5	+2.5	62	4th	42	14, 23	—	—	5.84	148	+ 47	19	10th	23	19	0	0	0	2	0	0	63.54	+0.34	33	
Denbigh.																														
Colwyn Bay	9	9	81	57.7	48.5	53.1	—	66	16th	39	13th	—	—	5.09	129	—	19	7th	22	19	0	0	0	0	0	—	02.55	—	24	
Carnarvon.																														
Aber (Bangor)	9	9	60	58.1	48.4	53.3	—	64	16th	39	1, 13, 14, 23	—	—	5.06	129	—	13	24th	22	21	0	0	1	3	—	5	42.29	—	22	
Llandudno	9	9	22	58.2	48.0	53.1	+2.1	65	8th	37	23rd	—	—	3.76	95	+ 4	13	10th	21	19	0	0	0	1	0	—	13.16	-0.19	30	
Montgomery.																														
Welshpool	9	9	254	58.3	41.3	49.8	—	64	8, 17	28	1st	—	—	2.55	65	—	9	18th	20	15	0	0	0	0	1	—	0	—	—	
8a. SOUTH WALES.																														
Cardigan.																														
Aberystwyth	9	9	59	56.6	48.2	52.4	—	62	5th	34	1st	—	—	4.88	124	—	15	14th	23	21	0	0	2	1	0	—	13.64	+0.19	34	
" P.B.S.†	9	9	452	55.7	46.1	50.9	—	62	8th	34	1st	—	—	6.62	168	—	19	14th	27	20	0	0	2	3	0	3	03.60	—	34	
Pembroke.																														
Haverfordwest	2121	9	250	56.7	46.0	51.3	—	61	5, 6, 8, 10	34	1, 23	—	—	9.02	229	+ 92	23													

TABLE III (continued).—SUMMARY OF THE RECORDS OF TEMPERATURE, RAINFALL and SUNSHINE, and of WEATHER OBSERVATIONS, OCTOBER, 1928.

DISTRICT, COUNTY AND PLACE.	Terminal Hour of Observation.		Height of Station above Mean Sea Level.	AIR TEMPERATURE IN DEGREES FAHRENHEIT.						Earth Temperature.		RAINFALL.				WEATHER. Number of days.							BRIGHT SUNSHINE.							
	Max.	Min.		Means of		Deviation from Normal.	Absolute Maximum and Minimum.			1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Most in a day.		Precip'n. 0.2 mm. or more.	1 mm. or more.	Snow.	Snow lying.	Hail.	Thunderstorm.	Fog (Morning Obs.)	Ground Frost.	Gale.	Hours per day.					
				A	B		Maximum.	Date.	Minimum.					Date.	Amount.										Date.	Daily Mean.	Deviation from Normal.	Per Cent.		
8b. ENGLAND, S.W.—cont.	G.M.T.	ft.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	in.	mm.	mm.	mm.										hr.	hr.	%				
Dorset—cont.	Shaftesbury	9 9 9	722	56.7	45.5	51.1	+1.9	65	8th	37	1, 2, 23	—	—	5.12	130	+ 31	20	26th	23	20	0	0	1	0	—	—	—			
Devon.	Arlington	9 9 9	613	56.5	45.6	51.1	+1.7	64	8th	35	1st	—	—	10.09	256	+ 94	19	26th	24	23	0	0	3	2	—	6	0	—	—	
	Ashburton	9 9 9	583	59.3	46.4	52.9	+1.3	66	5, 17	39	1, 23	—	—	11.03	280	+126	45	19th	26	24	0	0	0	0	0	0	0	—	—	
	Cullompton	9 9 9	202	59.7	43.6	51.7	+1.8	68	8th	30	1, 2	52.8	—	4.74	120	+ 15	18	26th	22	18	0	0	0	2	0	9	0	3.67	+0.73	34
	Dean Prior	2121 9	331	58.7	45.9	52.3	—	65	5th	34	1, 2	—	—	13.42	341	—	41	19th	27	25	0	0	1	0	0	0	0	—	—	
	Ilfracombe	9 9 9	74	58.5	50.3	54.4	+1.1	64	7th	42	13th	54.4	56.7	5.48	170	+ 58	17	20th	22	22	0	0	1	1	0	0	0	2.70	—	25
	Killerton	9 9 9	159	59.4	43.5	51.5	—	67	8th	30	1, 2	—	—	5.17	131	—	29	11th	22	20	0	0	0	0	0	0	0	—	—	
	Newton Abbot	9 9 9	350	58.8	46.9	52.9	—	65	5, 8, 10, 17	34	2nd	—	—	6.99	177	—	26	19th	24	21	0	0	1	0	0	1	0	4.19	—	39
	Plymouth (Hoe)	2121 9	116	59.7	49.3	54.5	+2.7	65	5th	35	2nd	54.3	56.5	5.87	149	+ 48	22	4th	25	21	0	0	0	0	0	0	0	3.98	+0.46	37
	Plymouth (Cattewater)	18-7 7	82	59.1	50.1	54.6	—	64	8th	36	2nd	—	—	4.98	127	—	15	4th	23	22	0	0	2	0	0	1	0	9.3.84	—	36
	Princetown	7.30 7.30	1359	53.5	44.0	48.7	—	55	17th	38	1st	—	—	14.72	374	—	48	26th	26	25	0	0	1	1	6	—	—	—	—	
	Salcombe	9 9 9	39	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Sidmouth	9 9 9	147	58.9	47.5	53.2	+2.0	65	8th	36	2nd	—	—	5.74	146	+ 51	22	26th	22	20	0	0	1	1	0	0	0	—	—	
	Tavistock	9 9 9	458	57.4	45.8	51.6	—	63	5, 6, 8	30	2nd	56.4	—	8.47	215	—	26	4th	25	23	0	0	1	2	2	6	2	—	—	
	Teignmouth	9 9 9	20	60.0	49.0	54.5	+2.4	67	17th	36	2nd	—	—	5.52	140	+ 42	19	26th	23	20	0	0	1	1	0	0	0	6.4.35	—	41
	Torquay	9 9 9	12	60.5	50.3	55.4	+3.1	67	8th	40	2, 23	56.7	—	5.05	128	+ 25	26	26th	22	22	0	0	0	0	0	0	0	5.4.70	+1.22	44
	Woolacombe	2121 9	59	58.6	50.1	54.3	+1.6	64	7th	41	1st	—	—	4.67	119	+ 18	11	26th	24	23	0	0	1	0	0	0	0	0.2.91	+0.51	27
Cornwall.	Falmouth Obs.	9 9 9	167	58.9	49.6	54.3	+2.3	65	6th	40	2nd	55.7	58.2	7.44	189	+ 63	24	19th	25	23	0	0	3	2	3	1	23.99	+0.25	37	
	(Pendennis)	18-7 7	200	58.6	50.9	54.7	—	64	6th	41	2nd	—	—	6.29	160	—	18	4th	23	23	0	0	1	2	0	—	2.4.08	—	38	
	Fowey	9 9 9	51	60.3	48.5	54.4	—	67	6th	30	2nd	—	—	5.25	133	—	22	4th	24	23	0	0	1	0	0	0	4.3.55	—	33	
	Guilval	9 9 9	20	59.6	48.8	54.2	—	65	6, 8	37	2nd	—	—	7.34	186	—	19	22nd	26	24	0	0	1	1	0	0	2.4.49	—	42	
	Newquay	9 9 9	190	58.4	48.9	53.7	+1.2	64	8th	35	2nd	54.9	55.7	5.82	148	+ 47	17	4th	24	22	0	0	0	1	1	—	1.3.97	+0.26	37	
	Redruth	9 9 9	397	58.0	48.0	53.0	—	64	8th	38	2nd	—	—	8.30	211	+ 78	30	19th	27	26	0	0	4	1	1	1	7	—	—	
9. IRELAND, N.																														
Sligo.	Markree Cas.	2121 9	122	57.0	43.6	50.3	+2.4	64	7, 8	30	13th	52.4	53.7	7.56	192	+ 88	31	10th	25	25	0	0	1	0	0	—	2.2.56	+0.28	24	
Mayo.	Blacksod Pt.	18-7 7	10	56.2	49.9	53.1	+2.7	61	6th	43	13th	—	—	9.73	247	+120	31	7th	27	27	1	0	3	1	0	0	—	2	—	
	Mallary	9 9 9	120	56.3	47.7	52.0	—	61	6th	40	22nd	—	—	9.70	246	—	30	25th	26	25	0	0	0	0	0	0	0	2.3.39	+0.31	23
Donegal.	Malin Head	18-7 7	51	54.5	47.8	51.1	+1.7	63	7th	39	22nd	—	—	6.26	159	+ 84	20	19th	25	19	0	0	4	0	0	0	2.2.15	+0.93	21	
Antrim.	Aldergrove	18-7 7	238	54.0	44.6	49.3	—	63	5th	31	13th	—	—	5.61	142	—	19	14th	24	21	0	0	0	0	1	4	2.1.96	—	19	
	Belfast	9 9 9	13	53.0	46.2	49.6	—	68	5th	37	13, 23	—	—	5.57	141	—	30	10th	25	21	—	—	—	—	—	—	—	—	—	
	Lisburn	9 9 9	206	56.0	43.4	49.7	+1.9	65	5th	32	1, 13	—	—	4.68	119	+ 38	17	10th	24	22	0	0	0	0	0	0	0	—	—	
Down.	Donaghadee	18-7 7	40	55.4	46.3	50.9	+1.6	64	8th	37	23rd	—	—	5.59	142	+ 69	15	19th	22	18	0	0	0	0	0	0	0	5	—	
Armagh.	Armagh	2121 9	204	56.1	44.6	50.3	+2.3	64	5th	34	1st	50.9	52.5	4.70	119	+ 50	27	10th	24	20	0	0	0	0	0	2	0.2.10	+0.77	20	
Longford.	Newtownrorbess	2121 9	161	55.5	42.5	49.0	—	62	7th	29	1, 13	50.1	52.6	5.10	130	—	22	10th	23	22	0	0	1	0	—	—	—	—		
10. IRELAND, S.																														
Dublin.	Balbriggan	9 9 9	203	56.2	45.1	50.7	+1.8	63	8th	36	1st	50.7	53.6	3.72	95	+ 24	27	10th	22	18	0	0	0	0	0	2	4	—	—	
	City	2121 9	54	57.2	46.7	51.9	+1.9	65	8th	34	1st	—	—	2.60	66	+ 2	19	10th	21	14	0	0	0	0	0	1	3	—	—	
	Glasnevin	2121 9	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Phoenix Pk.	2121 9	155	57.6	43.7	50.7	+2.4	66	5, 8	28	1st	—	—	2.85	73	+ 6	13	10th	24	18	0	0	0	0	0	7	2	—	—	
	Trin. Coll.	2121 9	12	58.0	47.6	52.8	+2.6	66	8, 16	35	1, 23	51.8	53.2	2.39	61	+ 3	19	10th	20	14	0	0	2	0	0	1	0	3.61	+0.26	34
Wicklow.	Newcastle	2121 9	256	57.4	45.8	51.6	—	66	16th	36	1st	—	—	5.72	145	—	21	10th	23	18	0	0	0	0	0	0	0	—	—	
King's Co.	Birr Castle	18-7 7	173	56.3	45.2	50.7	+2.8	64	5, 8	29	1st	52.4	53.9	5.43	138	+ 64	15	18th	24	22	0	0	0	1	1	5	1.2.65	+0.51	25	
Queen's Co.	Mountmellick	9 9 9	252	56.9	44.0	50.5	—	65	5th	28	1st	—	—	5.41	137	—	15	25th	26	24	—	—	—	—	—	—	—	—	—	
Wexford.	Newtownbarry	9 9 9	153	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Kilkenny.	Kilkenny	9 9 9	182	57.8	43.0	50.4	+1.9	65	6, 16	29	1st	—	—	5.22	133	+ 53	13	25th	27	22	—	—	—	—	—	—	—	—	—	
Waterford.	Seskin, Carrick-on-Suir	2121 9	542	55.7	45.2	50.5	—	64	16th	35	1st	—	—																	

TABLE IV (continued).—SUMMARY of the OBSERVATIONS of PRESSURE, TEMPERATURE, HUMIDITY, CLOUD, VISIBILITY, and WIND at fixed hours at certain Stations during the Month of OCTOBER, 1928.

Main data table with columns for District, County and Place; Hour of Observation; Mean Pressure; Temperature and Humidity; Cloud Amount; Visibility; and Wind, Number of Observations. Includes sub-sections for 2. ENGLAND, N.E., 3. ENGLAND, E., 4. MIDLAND COUNTIES, and 5. ENGLAND, S.E.

* Mean of hourly readings.

g Temperature from thermometers in a Glaisher stand.

TABLE I. DISTRICT VALUES.

The District Values of this Table are computed from the statistics for selected individual stations set out in Table III and Table IV.

The representative stations from which the District Values of rainfall and temperature are computed are indicated in Table III by the sign ¶ while the representative stations from which District Values of sunshine are computed are indicated by the sign §. The deviations from and percentages of normal for Air Temperature, Rainfall and Sunshine are the means of the corresponding deviations or percentages for the representative District Value stations. The deviations from normal of Earth Temperature are derived from the deviations for all the stations reporting in Table III for which normals of Earth Temperature are available. The highest and lowest temperatures for the District recorded during the month may refer to any station in Table III.

TABLE II. SUMMARY OF AUTOGRAPHIC RECORDS OF WIND.

The records used in the preparation of this Table are generally made by anemographs of the pressure-tube type. At a few stations the Robinson Cup Anemograph is utilised. The classification adopted for the "Distribution of Wind" is based on the specification of the Beaufort Scale of Wind Force (see *The Observer's Handbook*). For an anemograph complying with the specification "head 33 ft. above ground in the open" the several columns correspond with Force 8 and above (gales), Forces 6 and 7 (strong winds), Forces 4 and 5 (moderate winds), Forces 2 and 3 (light winds), Forces 1 and 0 (nearly calm). Some information as to the nature of the actual exposures may be gathered from the figures in the "Height" columns.

The "Highest Hourly Wind" is determined by the mean speed of the wind for a period of sixty minutes from 30 minutes before to 30 minutes after an exact hour by Greenwich Mean Time. Under the heading "Veer from N" the azimuth of the direction from which the wind was blowing is stated, the entry for an east wind being 90°, that for a south wind 180° and so on.

TABLE III. SUMMARY OF OBSERVATIONS AT TERMINAL HOURS.

Temperature.—The terminal hours of observation are given for each station. When the terminal hours for maximum and minimum temperature are stated independently the temperatures refer to intervals of 24 hours. If the maximum thermometer is read in the morning the reading is credited to the previous day. When the terminal hours for maximum and minimum are separated by a dash, thus, 18-7, the day-maximum for the period 7h. to 18h. and the night-minimum for the period 18h. to 7h. are reported and are utilised in determining the means for the month; in such cases the extreme temperatures for successive periods of 24 hours are also read by the observers, so that the absolute maximum and minimum temperatures for the month are obtained.

Except at the Royal Observatory, Greenwich, where a Glaiser stand is in use, the air temperature is obtained from thermometers placed in louvered screens. At Kew Observatory, Richmond, and Valentia Observatory these are north wall screens a few feet from the ground. At Aberdeen Observatory the north wall screen is at 41 feet. Otherwise the screens are in the open.

Rainfall.—The daily amounts are for the 24 hours beginning at the "terminal hour." "Rainfall" includes all form of precipitation. The number of days of precipitation is counted with reference to the limit .01 inch or 0.2 mm. and also with reference to the limit .04 inch or 1 mm. The lower limit excludes mere "traces" of precipitation, but it is frequently passed on occasions when the precipitation is only dew.

Weather.—The numbers of days of Precipitation, Snow, Hail, Thunderstorms and Gale are counted irrespective of the hour at which the phenomena occur. Except for "Precipitation" the day is the civil day.

For the purpose of this summary "Snow" includes sleet (*i.e.*, snow with rain), "Hail" includes graupel (soft hail), "Snow lying" refers to occasions when at least one-half of the country surrounding the station is covered with snow at the morning observation. The entry of "fog" implies that regular observations of the range of vision are made on the scale set out below. Days of fog are those on which the range of vision is less than 1,100 yards at the hour of morning observation. That hour is given by the third entry of column 2 of the table and may be 7h. or 9h. G.M.T. The variability of the observation hour may exercise an important effect upon the statistics of fog frequency. "Thunderstorm" includes any day on which thunder is heard. "Gale" is a wind of Force 8 or upwards on the Beaufort Scale. A "ground frost" is entered when the reading of a "grass minimum" thermometer set the previous evening and read at the morning observation is 30° F. or lower.

Sunshine.—The percentage of possible sunshine is in all cases calculated with reference to the maximum duration possible in the latitude on the assumption of an unobstructed horizon, due allowance being

made for refraction (see *International Meteorological Tables* (Paris pp. A17-A20 and 42-27). The sunshine recorder is generally insensitive to sunshine when the sun is at an altitude of 3° or less. The symbol § is entered against the percentage at some stations and indicates that obstructions of altitudes greater than 3° reduce the possible record of duration for the month by more than 5 per cent.

TABLE IV. SUMMARY OF OBSERVATIONS AT FIXED HOURS.

Mean Air Pressure is expressed in millibars. (1 millibar = 1,000 dynes per square centimetre = the pressure due to .029531 inch of mercury at 32° F. in Lat. 45°). The corrections for latitude, temperature and height have been applied to the barometer readings so as to obtain pressure at mean sea level. Barometric pressure is given at station level for a few stations at altitudes of 600 ft. or more in footnotes in Table IV.

Hygrometry.—The values given depend on the readings of the dry and wet bulb thermometers in Stevenson Screens (except at the Observatories, see above). The observations were formerly reduced by Glaisher's method; as from January, 1926 they are reduced by the new hygrometrical tables issued by the Office which are based on a formula of Regnault. In general the relative humidity and vapour pressure are derived from the monthly means of the dry and wet bulb readings. At certain stations the daily values of relative humidity and vapour pressure are found and the means are computed therefrom. These stations are indicated by the letter "H."

Cloud Amount.—The proportion of sky covered with cloud is estimated on the scale 0 to 10, the entry "0" being equivalent to clear sky "10" to overcast.

Visibility.—The observations are classified according to the following scheme—the distances, specified by international arrangement in metres, are given here in yards and miles:—

CODE.	RANGE OF VISION.
0	Less than 55 yards.
1	Exceeding 55 yards, less than 220 yards
2	" 220 " " " 550 "
3	" 550 " " " 1,100 "
4	" 1,100 " " " 1½ miles.
5	" 1½ miles " " 2½ "
6	" 2½ " " " 6½ "
7	" 6½ " " " 12½ "
8	" 12½ " " " 31 "
9	" 31 " " "

Wind Summaries.—The estimates of wind force refer to the Beaufort Scale, and in general to the wind experienced at the time of observation. At Deerness, Cahirciveen, Richmond, Armagh, Eskdalemuir, Southport, Greenwich and Oxford the analysis refers to tabulations of autographic records. For Oxford the mean wind speed for half-an-hour centred at the hour of observation is used for conversion to "force" on the Beaufort Scale; for the remaining observatories the mean wind speed used for each observation refers to a period of one hour. In these cases winds equivalent to Force 1 are counted with the calms, whilst Forces 2 and 3 are taken together in the preceding column of the Table.

INTERPOLATED VALUES.

When the observations for any station for a month are incomplete and relevant data (e.g. records from neighbouring stations) which make it practicable to interpolate approximate values for the missing observations are available, such approximate values may be used for completing summaries for stations published in Tables III and IV. Parts of a summary obtained in this way are shown in brackets thus—(52.4).

STANDARD OF TIME.

As a rule observations are made in all parts of the British Islands according to Greenwich Mean Time, but at the following stations Local Mean Time is used for the observations summarised in Tables III and IV. The number of minutes after Greenwich Time is shown in brackets—Darwen (10), Rhayader (15), Ashburton (15), Tavistock (17), Plymouth (15), Douglas (20), Armagh (26), Balbriggan (25), Lisburn (30), Newcastle, Co. Wicklow (30), Ballinacurra (30), Cork (34).

"Summer Time" is not used in the Monthly Weather Report, but at certain stations the hours of observation vary in the course of the year. For such stations all time entries are converted to G.M.T. before they are printed and the winter hours are given as the terminal hours in the annual tables. For the summer hours reference should be made to the appropriate months.

NORMALS.

In Table III the normals used are those for the 35 years 1881-1915. The normals of temperature and sunshine are published in the Book of Normals, Section I, those for rainfall in the Book of Normals, Section V.

The normals for pressure with which comparison is made in Table IV also refer to the period 1881-1915.

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

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

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VOL. 45. No. 11.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE.

NOVEMBER, 1928. Quiet and rather cold at first with occasional slight rain, from 10th onwards unusually mild and stormy.

The outstanding features of the weather of November were the unusual mildness, which lasted from the 10th to the 26th, and the widespread destructive gales during the second half of the month.

During the early part of the month, pressure was high to the north-west and relatively low over the British Isles; winds, in consequence, were from between north and east and the weather was cloudy and rather cold with occasional and, in general, slight precipitation. A remarkable exception, however, to the general slight precipitation occurred in the south-east of England, where heavy rain fell on the night of the 1st-2nd, on the 2nd and during the night of the 2nd-3rd; during the 40 hours ending 9h. on the 3rd, 96 mm. were measured at Deal and 78 mm. at Dover. Sunny periods were experienced in northern and western districts on the 1st and 2nd (8.2 hr. at Cahirciveen, 7.0 hr. at Renfrew on the 1st, 6.8 hr. at Pembroke on the 2nd) and in many districts on the 3rd, 4th, 5th and 6th. In northern districts, anticyclonic conditions prevailed on the 8th, and on the 9th extended to the whole of the British Isles. Excellent sunshine records were obtained in northern districts and in Ireland on the 8th and widely on the 9th. Much mist and fog occurred from the 4th to the 7th, notably on the 6th. Day temperatures during these nine days were mostly moderate to rather low and night minimum temperatures frequently well below the normal, unusually low screen and grass minimum temperatures being recorded widely on the mornings of the 4th, 5th, 9th and 10th.

The change to mild unsettled conditions began in the extreme north of Scotland on the 9th, when rain fell at Lerwick during the day, widely in Ireland and Scotland during the night of the 9th to 10th and in all districts on the 10th. Air temperature rose well above the normal and on the 12th maximum temperatures of 60° F. and above were recorded in several districts. Rain was widespread and frequent, heavy falls occurring in northern and western districts on the 10th and 11th, widely on the 14th, 15th and 16th, during the night of the 18th to 19th and on the 19th in many parts of Scotland and Ireland, and widely from the 21st to the 23rd. Strong winds with local gales at times were frequently experienced, the most notable gales being associated with the deep depressions which passed across England on the 16th, southern Scotland on the 23rd and northern Scotland on the 25th. These gales, in which wind speeds and gusts in the neighbourhood of 90 mi/hr. were recorded, occasioned much material damage and some loss of life.

In the rear of the depression of the 25th, northerly winds of polar origin flowed over the country and temperature fell considerably: the 27th and 28th were decidedly cold and on the 28th the day maximum temperature failed to exceed 37° F. at Aspatria and 39° F. at Nairn and Eskdalemuir. Showers of rain, hail and snow occurred locally. Temperature, however, quickly recovered and by the 30th was again above the normal. The unsettled weather was relieved by many bright periods, notably on the 13th, 14th, 17th, 18th, 20th and from the 26th to the 28th.

Pressure and Winds.—Conditions were cyclonic during the greater part of the month, the barometer frequently falling to low levels during the period of disturbed weather from about the 10th to the 26th; at all stations monthly means of atmospheric pressure were markedly below the normal, the deficiencies ranging from 2 to 8 millibars. At Edinburgh, pressure fell to 950.7 mb. on the 23rd, the lowest value noted there since December, 1886. There is a record of a pressure of 930 mb. at Edinburgh in January, 1884. Winds were mainly from between north and east and light to moderate in force during the first ten days; thereafter they varied from south-west to north-west and were generally strong in force with local gales at times. The most severe gales were those associated with the intense depressions which crossed the country on the 16th, 23rd and 25th. The first of these developed off south-west Ireland and moved north-east across England. Gusts exceeding 70 mi/hr. occurred on the 16th in many places in southern England and Ireland; 93 mi/hr. was recorded in a gust at Cardington (anemometer head 150 ft. above ground), 86 mi/hr. at Cahirciveen, 81 mi/hr. at Croydon and 79 mi/hr. at Lympne. These values are so far the highest recorded values at these stations, except at Cahirciveen, where the highest on record is 96 mi/hr. on February 7th, 1923. As a result of the gale numerous telephone lines were down. The second of these depressions crossed southern Scotland on the 23rd and was accompanied by gales over the entire country; amongst the highest recorded velocities in gusts were 87 mi/hr. at Eskdalemuir, South Shields and Southport, 84 mi/hr. at Aldergrove and 83 mi/hr. at St. Mary's, Scilly. The third of these depressions passed to the north of Scotland on the 25th. Gales were again widespread, the wind attaining a velocity in a gust of 88 mi/hr. at Sealand and 84 mi/hr. at Dunfanaghy. The gales caused much structural damage, some loss of life and much interference to cross-channel steamship services.

Temperature.—November, 1928, was on the whole unusually mild and at all stations in the British Isles the mean temperature for the month exceeded the normal. Rather low temperatures with severe ground frost occurred during the first ten days and on the 27th and 28th, but during the remaining days temperature both by day and by night was decidedly above the normal. The observer at Copdock reports that on the night of the 12th the thermometer failed to fall below 54° F., a minimum temperature which has only been equalled or exceeded in November once at that station in the last 55 years. The average minimum temperature was as much as 3.9° F. above the normal and

equals the previous highest in November, 1906. The observer at Totland Bay reports that the mean maximum temperature of 53.1° F. is the highest for November since 1899 and adds that raspberries were gathered in an open garden until November 28th. At Eastbourne the mean values of daily maximum and minimum temperature were the highest recorded in November since 1913. At Belper the month was the mildest November since 1921. Amongst the low temperature readings recorded during the cold period in the early part of the month were 28° F. in the screen and 14° F. on the grass at Birr on the morning of the 2nd, 21° F. in the screen and 15° F. on the grass at Eskdalemuir on the morning of the 9th, and 20° F. in the screen and 15° F. on the grass at South Farnborough on the morning of the 10th.

The extreme temperatures for the month were:—England and Wales, 66° F. at Wakefield on the 12th, 20° F. at Roden Wellington on the 9th, and at St. Albans and South Farnborough on the 10th. Scotland, 63° F. at Liberton on the 12th and 16° F. at Braemar on the 9th; Ireland, 64° F. at Dublin (Trinity College) on the 12th, 22° F. at Markree Castle on the 9th.

Precipitation.—Precipitation in nearly all districts was slight during the first 9 days, but thereafter was both heavy and frequent. The general precipitation for the British Isles expressed as a percentage of the normal for the period 1881-1915 was 132; the values for the constituent countries were:—England and Wales, 126; Scotland, 134; Ireland, 142.

In England and Wales rainfall totals were below the normal along the north-east coast of England and in Cornwall, and over a large area which included London, parts of Surrey and Kent, and the greater part of the eastern counties; in the remaining districts there was in general an excess which was most pronounced in the central districts and the north-west and in Wales. The month was the wettest November at Belper since 1914 and at Eastbourne since 1919; at Bradford more than twice the normal rainfall fell during the month, including a heavy fall of 48 mm. on the 23rd and at Dungeness the month's total amounted to nearly two and a half times the normal. Amongst notable heavy daily falls were 46 mm. at Princetown on the 23rd and 24th, and 40 mm. at Keswick on the 23rd.

In Scotland, precipitation was appreciably above the normal in nearly all districts, notably in the south and west, but here and there, as at Balmoral, Logie Coldstone, Perth, and Kelso, there was a trifling deficiency. At Rothesay, during the last 120 years, the aggregate of 233 mm. has been exceeded in November only in 1917, with 265 mm. From 1st-8th slight rain occurred in the east, but little or none in the west. On 9th rain commenced in west and north, with rain on every day thereafter in many districts, and some extremely wet periods notably from 21st to 24th. Amounts exceeding 25 mm. were recorded over limited or wide areas on each day from 9th to 14th and from 16th to 26th, and in the far north on 29th and 30th. On 23rd the whole of Scotland was involved in a considerable rainstorm, with more than 50 mm. at e.g. Carsphairn, Arrochar and Inveraray; and at Arrochar the aggregate rainfall from 21st to 24th exceeded 150 mm. At Cargen, near Dumfries, the wettest year on record is 1887 with 1,613 mm.: the aggregate for the first eleven months of 1928, 1,629 mm., exceeds that amount.

In Ireland, monthly totals of precipitation were everywhere well above the normal, amounting to or exceeding one and a half times the normal in some central and north-eastern districts.

Sleet or snow fell in the north-east of Scotland on a few days but in general there were no important falls. Hail showers occurred on several days in various parts and thunderstorms on a few days.

Sunshine.—Sunshine aggregates were in general above the normal in the central and eastern districts of Great Britain and in the west of Scotland, and below the normal elsewhere. Representative totals for districts expressed as a percentage of the normal, 1881-1915, varied from 118 per cent. in England N.E. to 77 per cent. in the Channel Isles. There were many sunny days on which excellent sunshine records were obtained, notably in the north-west on the 1st and 2nd (8.2 hr. at Cahirciveen and 7.0 hr. at Renfrew on the 1st, 6.8 hr. at Pembroke on the 2nd), in many scattered districts on the 3rd, in English districts on the 5th (8.2 hr. at Lympne), in Scotland, Ireland and northern districts of England on the 8th, widely on the 9th (8.2 hr. at South Farnborough and Calshot, 8.1 hr. at Winchester), 13th, 14th, 17th, 18th, 20th and from the 26th to the 28th. The observer at Copdock states that on the 18th, 7.4 hrs. sunshine were recorded, "an amount which eclipses anything in my record at a corresponding period of the year except in the wonderful November of 1920".

Fog.—Fog occurred in the early part of the month and on the 29th and was widespread from the 4th to the 7th. Dense fog occurred in the Clyde area on the 8th-9th.

Miscellaneous Phenomena.—Halo phenomena, mostly halos of 22°, were observed at a few stations. Aurora was frequently observed; at Lerwick on 13 nights and at Aberdeen on 9. A display on the 15th was observed as far south as Dublin. The Zodiacal light was observed at Deerness on the 6th, 26th and 27th and at Oxford on the 15th.

TABLE I.—DISTRICT VALUES—NOVEMBER, 1928. [1908, revised 1928.]

DISTRICTS.	AIR TEMPERATURE.			EARTH TEMPERATURE.		RAINFALL.		SUNSHINE.	
	High-est.	Low-est.	Daily Mean. Deviation from Normal.	At 1 ft. Deviation from Normal.	At 4 ft. Deviation from Normal.	Per-cent- age of Normal.	No. of Days. Deviation from Normal.	Per-cent- age of Normal.	Per-cent- age of Possible Duration.
o. SCOTLAND, N.	°F. 60	°F. 25	°F. +1.1	°F. —	°F. —	% 126	+2	% 94	% 16
Eastern.									
1. SCOTLAND, E.	63	16	+1.9	—	—	126	+4	101	23
2. ENGLAND, N.E.	63	22	+2.5	+1.7	+0.3	110	+2	118	25
3. ENGLAND, E...	61	20	+3.0	+2.1	+1.1	103	+1	106	25
4. MIDLAND COUNTIES	66	20	+2.9	+1.7	+0.1	129	+4	104	22
5. ENGLAND, S.E.	62	20	+3.4	+2.9	+1.5	119	+2	103	24

DISTRICTS.	AIR TEMPERATURE.			EARTH TEMPERATURE.		RAINFALL.		SUNSHINE.	
	High-est.	Low-est.	Daily Mean. Deviation from Normal.	At 1 ft. Deviation from Normal.	At 4 ft. Deviation from Normal.	Per-cent- age of Normal.	No. of Days. Deviation from Normal.	Per-cent- age of Normal.	Per-cent- age of Possible Duration.
Western.	°F. 61	°F. 21	°F. +2.1	°F. —	°F. +0.5	% 148	+2	% 115	% 20
6. SCOTLAND, W. (& I. of Man)									
7. ENGLAND, N.W. (& N. Wales)	64	23	+2.1	+1.7	-0.4	157	+4	90	19
8. ENGLAND, S.W. (& S. Wales)	62	22	+2.9	+2.5	+0.9	125	+2	85	20
9. IRELAND, N...	63	22	+1.6	-0.5	-0.5	135	+3	95	22
10. IRELAND, S...	64	24	+1.9	+0.9	-0.5	132	+4	91	23
11. CHANNEL I. (& Scilly)	60	36	+1.9	+1.3	+0.9	108	+3	77	20
Mean: DISTRICTS I-10	66	16	+2.4	+1.6	+0.3	128	+3	101	22

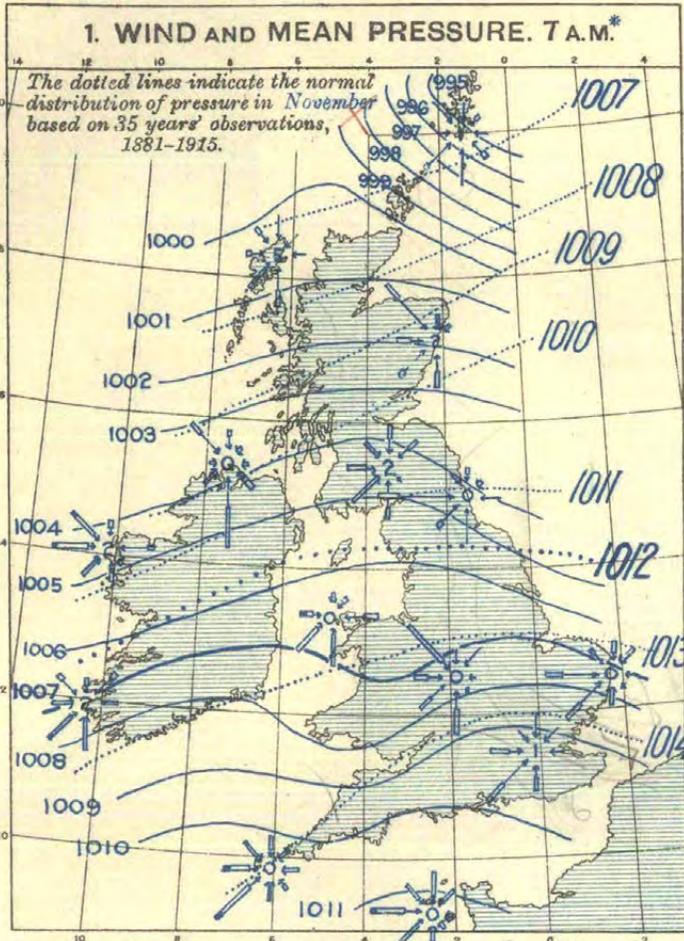
TABLE II.—SUMMARY OF AUTOGRAPHIC RECORDS OF WIND.—NOVEMBER, 1928.

[1914.]

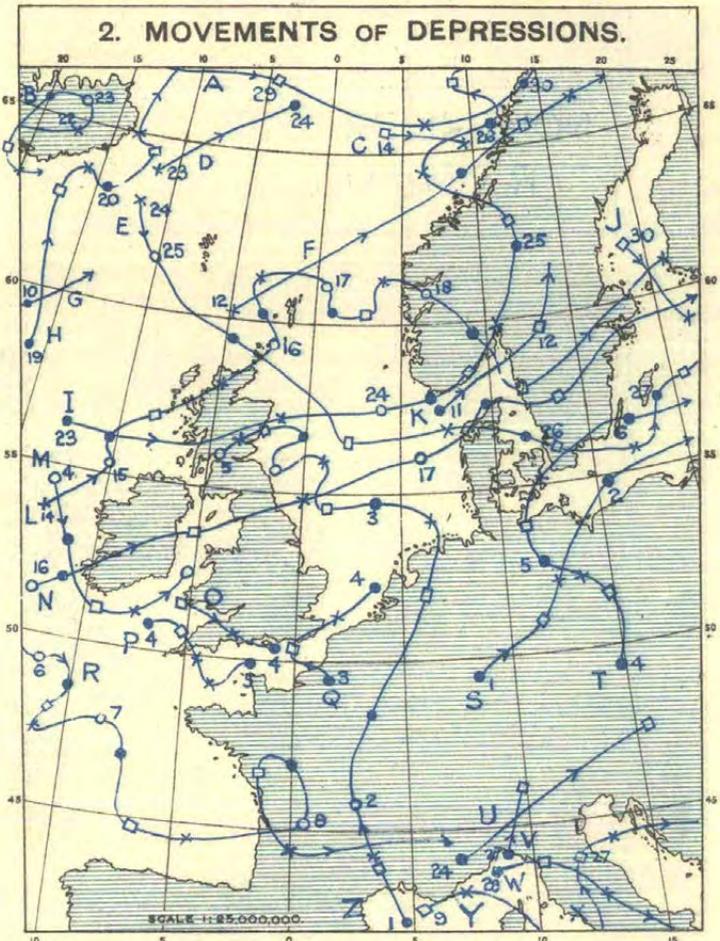
DISTRICT AND STATION.	Height.			Distribution of Wind.††								Extreme Velocities.								
	Above Mean Sea Level.	Above Ground.	Above Building.	More than 38 mi/hr.		25 to 38 mi/hr.		13 to 24 mi/hr.	4 to 12 mi/hr.	Less than 4 mi/hr.	No Record.	Highest Hourly Wind.			Highest Gust.					
				Dates of Occurrence.	Dura- tion.	No. of Days.	Dura- tion.	Dura- tion.	Dura- tion.	Dura- tion.	Dura- tion.	Veer from N.	Speed.	Mid Time.	Speed.	Time.				
o. SCOTLAND, N.	ft.	ft.	ft.		hr.		hr.	hr.	hr.	hr.	hr.	°	mi/hr.	m/s.	day. hr.	mi/hr.	m/s.	d.	h.	m.
Shetlands Lerwick ..	310	42	33†	12, 13	5	9	62	361	219	73	0	220	47	21	12 22	68	30	12	22	30
Orkneys Deerness (Cup Anr.)	188	16	5	12	1	12	57	394	227	35	6	250	42	19	12 21	—	—	—	—	—
i. SCOTLAND, E.																				
Aberdeen Aberdeen ..	70	42	33†	—	0	2	8	264	420	28	0	90	33	15	23 14	49	22	23	13	50
Kincardine Balmakewan ..	140	25	18	—	0	1	4	108	(454)	(154)	0	240	29	13	12 19	53	24	12	18	45
Edinburgh Edinburgh ..	485	39	31†	20	1	14	96	413	172	38	0	250	39	17	20 6	57	25	23	16	15
6a. SCOTLAND, W.																				
Argyll Tiree ..	80	55	48†	12, 20, 23 to 25	21	20	218	319	140	22	0	320	47	21	24 9	74	33	25	06	05
Renfrew Paisley ..	188	81	15	—	0	4	10	205	421	84	0	260	30	13	25 14	61	27	23	15	20
Dumfries Eskdalemuir ..	825	50	22	11, 23	5	18	134	311	200	70	0	270	51	23	23 16	87	39	23	15	05
2. ENGLAND, N.E.																				
Durham South Shields ..	62	46	20	23	2	6	55	297	321	45	0	270	44	20	23 17	87	39	23	16	40
York, E.R. Spurn Head ..	67	42	35†	16, 23, 24, 25	31	17	165	406	101	17	0	260	49	22	23 18	73	33	23	17	16
Lincoln Cranwell ..	284	44	26†	16, 23	5	9	69	341	217	88	0	280	42	19	16 20	73	33	23	20	35
3. ENGLAND, E.																				
Norfolk Gorleston ..	52	42	33†	—	0	12	100	294	284	42	0	230	34	15	16 19	66	29	16	19	10
Suffolk Felixstowe Aero. ..	55	40	25	16	2	11	89	384	(178)	(67)	0	230	42	19	16 18	64	29	16	18	30
Essex Shoeburyness ..	115	104	14†	—	0	9	89	285	261	85	0	240	38	17	16 19	68	30	25	15	10
4. MIDLAND COUNTIES.																				
Warwick Birmingham ..	643	118	18	—	0	7	43	298	327	52	0	300	38	17	25 16	72	32	16	15	20
5. ENGLAND, S.E.																				
Surrey Richmond (KewObs)	82	65	22	—	0	3	20	256	376	68	0	230	35	15	16 16	65	29	16	16	10
Surrey Croydon ..	313	105	49	16, 23, 25	16	13	90	351	225	38	0	260	49	22	16 17	81	36	16	18	10
Kent Dover ..	61	32	22	—	0	—	—	Defective.												
Kent Lympne ..	409	70	55†	16, 23, 25	14	13	99	364	217	26	0	240	54	24	16 17	79	35	16	15	05
Hampshire S. Farnboro' (Tower)	444	160	14	16, 23	6	8	69	332	(261)	(52)	0	250	44	20	16 17	74	33	16	16	50
Hampshire Calshot ..	55	45	31†	16, 23 to 25	16	13	112	362	208	22	0	260	50	22	16 16	70	31	16	17	05
Hampshire Worthy Down ..	314	43	27†	—	0	7	49	245	349	77	0	200	38	17	16 14	71	32	16	16	15
7a. ENGLAND, N.W.																				
Lancashire Fleetwood ..	112	50	12	17, 23 to 26	56	16	112	262	258	32	0	290	59	26	25 15	80	36	23	13	55
Lancashire Southport ..	77	59	45†	16, 17, 23 to 27	65	17	137	288	217	13	0	270	61	27	23 15	87	39	23	15	10
7b. NORTH WALES.																				
Anglesey Holyhead ..	64	45	29†	10, 23 to 27	76	20	189	326	116	13	0	290	60	27	25 14	82	37	23	17	10
Flint Sealand ..	81	65	49†	16, 23 to 26	30	9	61	202	323	104	0	300	55	25	25 15	88	39	25	14	25
8b. ENGLAND, S.W.																				
Devon Plymouth ..	185	88	2	14 to 16, 19, 23	12	14	108	332	201	67	0	—	47	21	16 13	73	33	16	13	55
Cornwall Pendennis Castle ..	256	65	24	—	0	—	—	Instru- ment dismo- unted.												
9. IRELAND, N.																				
Donegal Dunfanaghy ..	180	47	39	11, 12, 20, 23 to 25	34	15	120	218	192	156	0	—	57	25	25 10	84	38	25	09	40
Antrim Aldergrove ..	282	40	27†	23	1	4	34	262	316	107	0	260	44	20	23 13	84	37	23	12	25
10. IRELAND, S.																				
Dublin Kingstown (CupAnr.)	49	27	16	23, 25	23	21	170	326	184	17	0	240	53	24	23 12	—	—	—	—	—
Clare Quilty ..	100	40	32†	23 to 25	31	17	150	292	221	26	0	—	46	20	23 10	70	31	23	10	00
Kerry Cahirciveen (Val. O.)	98	41	34†	22, 23	8	15	122	298	217	75	0	230	44	20	23 7	69	31	23	21	25
Cork Weaver Pt. ..	160	30	21†	16, 23	4	14	107	301	291	17	0	—	51	23	16 9	86	38	16	09	00
11. SCILLY ISLES.																				
St. Mary's ..	160	42	35†	15 to 17, 22 to 25	62	22	240	307	105	6	0	240	58	26	16 12	83	37	23	13	20

†† Brackets () indicate that the distribution as between winds above and below 4 mi/hr. is doubtful, but the total number of hours with winds below 12 mi/hr. is reliable.
 † Standard mounting.

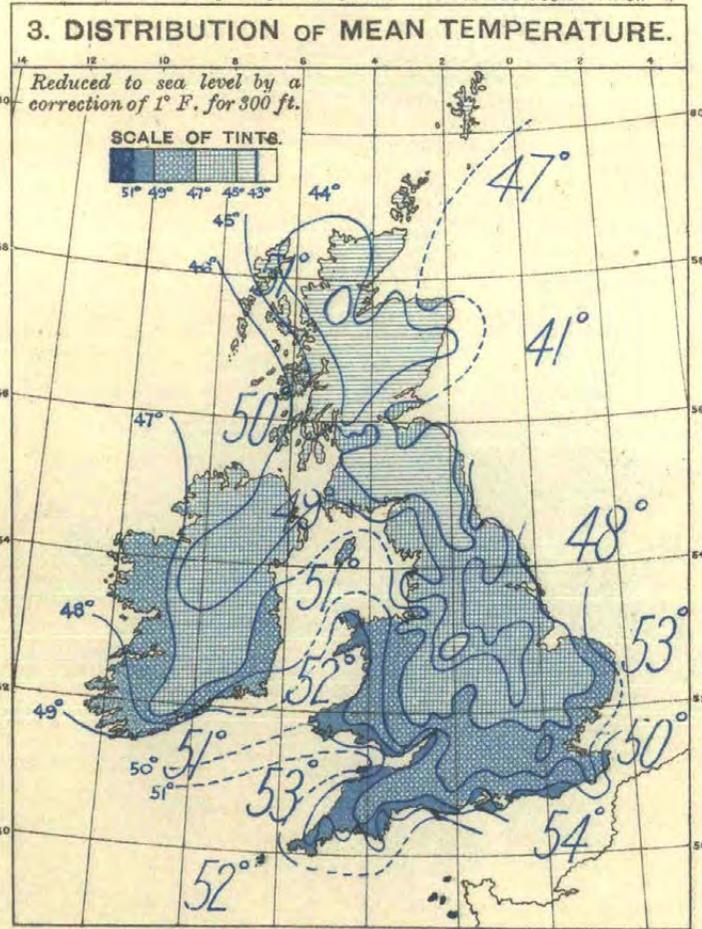
X Increased
see Table IV



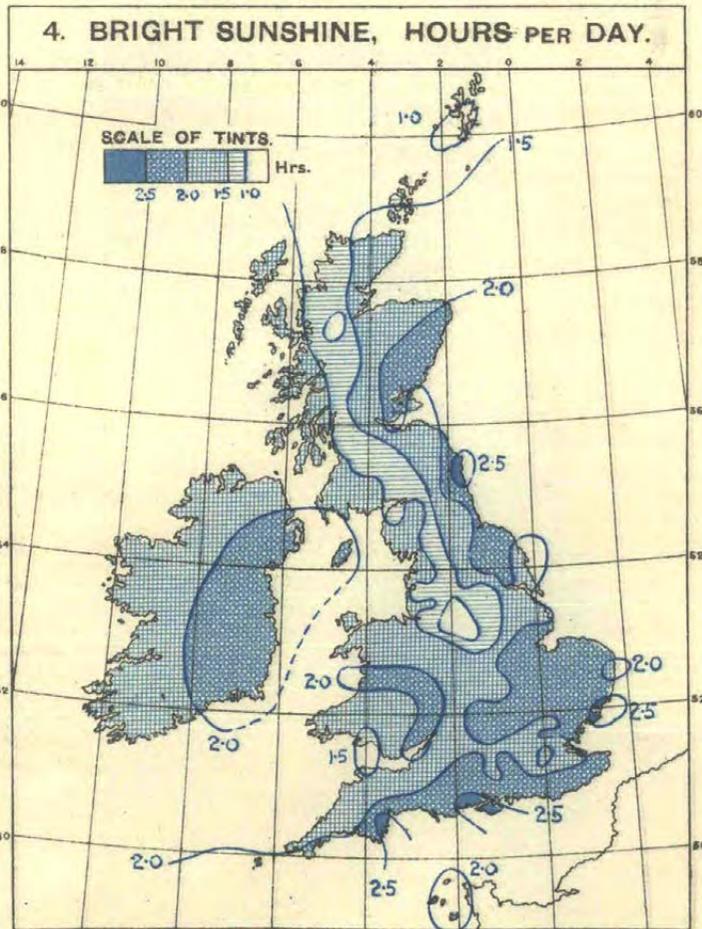
WIND ROSES. The arrows fly with the wind and indicate frequency and force, thus:
 LIGHT MODERATE GALE
 30 OBS. 1 inch



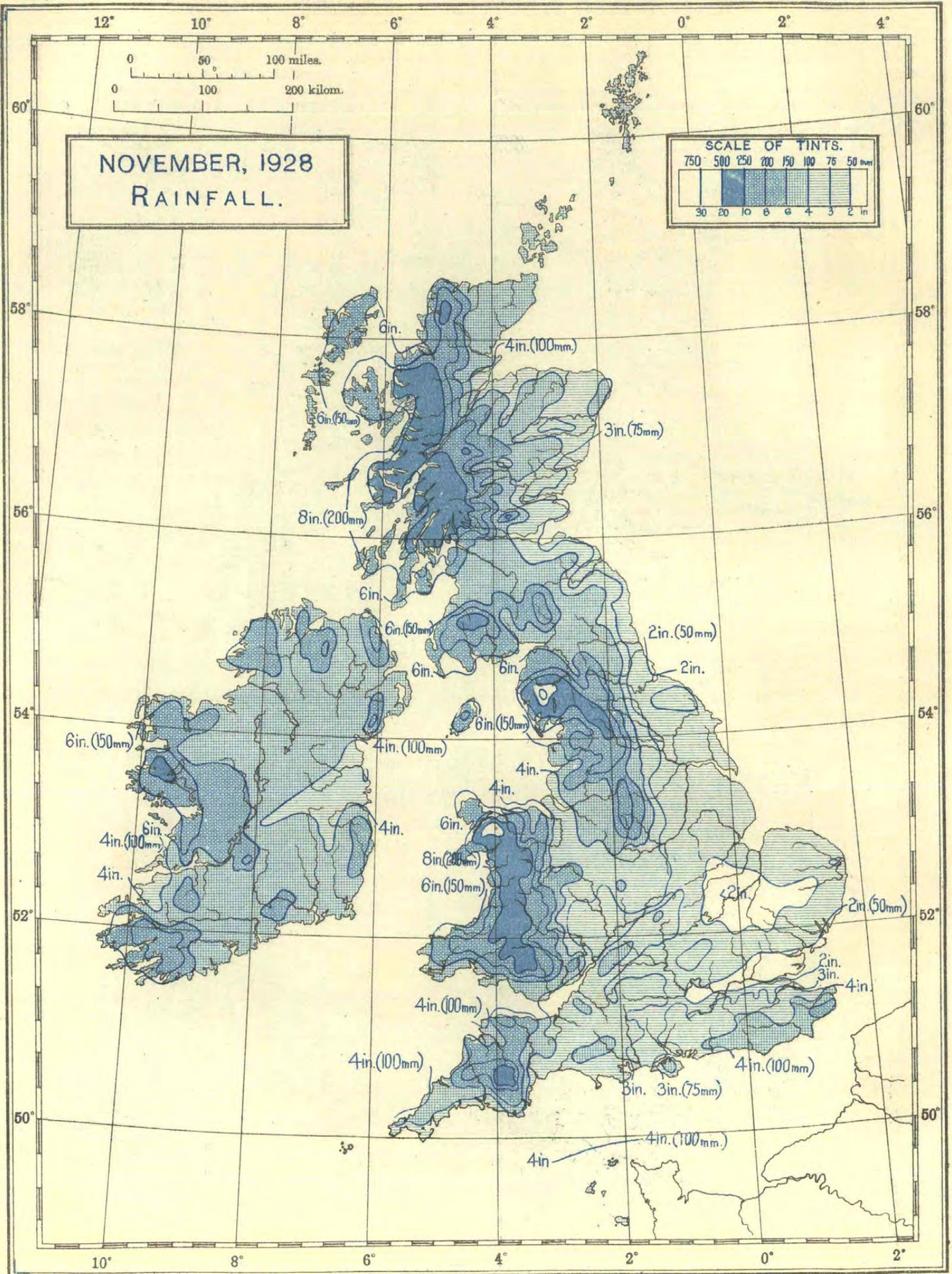
Positions of centres are shown thus: ○ at 1h; ● at 7h; □ at 13h; X at 18h.



Sea temperatures are shown in large figures, thus: 50°



* The pressure is expressed in millibars.



Scale 1 : 5,000,000.

Ps. 1376/1812. Wt. 101A. D. 25. 1125. 12/28.

The equivalent values in mm. are given in round numbers. The exact relation is 10 in. = 254 mm.

TABLE III.—SUMMARY OF the RECORDS of TEMPERATURE, RAINFALL AND SUNSHINE, and of WEATHER OBSERVATIONS, NOVEMBER, 1928.

DISTRICT, COUNTY AND PLACE.	Terminal Hours of Observation.		Height of Station above Mean Sea Level.	AIR TEMPERATURE IN DEGREES FAHRENHEIT.						Earth Temperature.		RAINFALL.				WEATHER. Number of days.							BRIGHT SUNSHINE.							
	Max.	Min.		Means of		Deviation from Normal.	Absolute Maximum and Minimum.			1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Most in a day.		Precip'n. 0.2 mm. or more.	Snow.	Snow lying.	Hail.	Thunderstorm.	Fog (Morning Obs.)	Ground Frost.	Gale.	Hours per day.						
				A	B		Maximum.	Date.	Minimum.					Date.	Amount.									Date.	Daily Mean.	Deviation from Normal.	Per Cent.			
0. SCOTLAND, N.																														
Shetlands.	Baltasound	9 9 9	31	47.0	38.8	42.9	—	52	12,13,19	33	25th	43.0	—	5.41	137	—	21	26th	26	20	2	0	6	0	0	—	2	0.81	—	11
	Lerwick	18-7 7	54	46.9	41.3	44.1	+1.5	54	13th	35	8, 9	—	—	5.33	135	+ 27	26	9th	25	19	0	0	1	0	0	—	1	0.89	-0.31	12
Orkneys.	Deerness	2121 9	160	47.1	40.5	43.8	+1.0	53	19th	35	8th	—	—	4.28	109	+ 9	21	9th	27	20	2	0	0	0	2	—	1	1.43	+0.23	19
	Kirkwall	9 9 9	151	47.4	40.6	44.0	—	56	12, 19	34	9th	—	—	4.50	114	—	22	9th	27	18	0	0	2	0	0	3	2	1.67	—	22
Hebrides.	Skallary	9 9 9	20	50.4	43.2	46.8	—	53	12th	37	8, 28	—	—	6.59	167	—	19	23rd	27	23	0	0	0	1	—	0	—	—	—	
	Stornoway	18-7 7	30	47.7	39.6	43.7	+0.9	55	12, 19	27	8th	—	—	6.75	171	+ 23	18	16th	26	24	0	0	3	0	0	—	1	1.57	+0.14	20
Caithness.	Wick	18-7 7	81	47.4	40.1	43.7	+1.7	54	12,13,19	30	9th	—	—	4.58	116	+ 36	22	23rd	26	20	2	0	0	0	0	—	0	—	—	—
Ross & Cromarty.	Achnashellach	9 9 9	225	47.7	37.8	42.7	+1.7	60	19th	25	9th	—	—	10.69	272	+ 31	21	19th	23	23	0	0	2	2	0	11	0	—	—	—
	Fortrose	9 9 9	69	48.6	38.9	43.7	—	59	12th	31	9th	—	—	2.70	69	—	11	23rd	23	18	0	0	0	0	0	—	1	1.72	—	22
	Strathpeffer	9 9 9	125	48.0	36.8	42.4	+0.9	58	12th	27	9th	—	—	4.82	122	+ 45	14	25th	25	21	0	0	0	0	—	—	—	—	—	
Inverness.	Ft. Augustus	9 9 9	68	48.0	—	—	—	57	12th	—	—	—	—	6.51	165	+ 49	24	22nd	22	22	0	0	0	0	0	—	0	0.71	-0.16	9
	Inverness	9 9 9	42	47.9	38.9	43.4	+1.1	60	19th	31	9th	—	—	3.42	87	+ 23	14	23rd	20	19	0	0	0	0	0	3	1	1.57	-0.23	20
1. SCOTLAND, E.																														
Nairn.	Nairn	18-7 7	82	46.4	39.1	42.7	+1.5	58	19th	29	9th	—	—	3.37	86	+ 26	14	23rd	24	20	0	0	0	0	0	—	1	1.71	-0.04	21
Elgin.	Gordon Castle	2121 9	104	48.2	42.2	45.2	+3.0	59	12th	30	9th	—	—	3.87	98	+ 25	31	23rd	24	19	0	0	0	0	—	—	0	1.82	—	23
Banff.	Banff	9 9 9	130	47.9	40.0	43.9	—	57	13th	33	9th	—	—	3.62	92	—	28	23rd	24	21	1	0	2	0	0	2	0	1.76	—	22
Aberdeen.	Aberdeen	242424	44	47.8	39.8	43.8	+1.5	57	29th	27	9th	—	47.1	3.93	100	+ 25	27	23rd	24	19	5	0	1	0	0	6	0	2.11	+0.28	26
	Balmoral	9 9 9	927	45.5	34.9	40.2	—	56	12th	19	9th	—	—	3.12	79	- 15	21	23rd	28	19	2	1	0	0	—	12	1	—	—	—
	Braemar	2121 9	1120	44.5	34.3	39.4	+1.0	57	12th	16	9th	—	—	3.49	89	+ 9	23	23rd	20	19	3	2	0	0	—	9	0	—	—	—
	Craibstone	9 9 9	300	47.2	37.6	42.4	—	57	12th	28	9th	42.3	45.2	3.65	93	—	31	23rd	24	17	1	0	0	0	—	5	0	2.11	—	26
Kincardine.	Logie Coldstone	9 9 9	608	47.0	35.6	41.3	—	56	29th	19	9th	—	—	2.56	65	- 13	13	23rd	25	16	0	0	0	0	5	—	0	—	—	—
	Stonehaven	9 9 9	93	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Forfar.	Arbroath	2121 9	93	50.1	38.7	44.4	—	59	12, 13	26	9th	—	—	2.72	69	—	19	23rd	18	15	0	0	1	0	0	—	0	2.47	—	30
	Carnoustie	9 9 9	39	49.3	38.4	43.9	—	59	12th	29	9, 10	—	—	2.61	66	—	17	23rd	20	17	1	0	0	0	—	—	0	1.99	—	24
	Dundee (E. Nec.)	2121 9	198	47.5	38.6	43.1	+1.8	57	29th	27	9th	—	—	3.26	83	+ 21	40	23rd	18	14	0	0	0	0	—	—	0	—	—	—
	Mayfield	9 9 9	147	49.2	38.6	43.9	+1.6	58	12th	28	9th	43.1	—	2.39	61	+ 2	21	23rd	18	14	0	0	0	0	—	5	0	2.12	0.00	26
	Kettins	9 9 9	218	49.6	36.7	43.1	—	58	12th	24	9th	41.8	—	3.35	85	—	26	23rd	19	16	0	0	0	0	14	—	0	—	—	—
	Montrose	9 9 9	16	48.9	40.0	44.5	—	59	12th	28	9th	—	—	2.17	55	—	17	23rd	18	10	0	0	0	0	—	—	0	2.48	—	31
Perth.	Crieff	2121 9	478	48.2	37.4	42.8	+1.4	59	12th	28	9th	—	—	5.02	127	+ 18	22	23rd	21	18	0	0	0	0	—	—	0	—	—	—
	Perth	9 9 9	76	50.2	37.5	43.9	+2.8	61	12th	22	9th	—	—	2.73	69	- 4	19	23rd	22	16	0	0	0	0	—	—	0	2.09	—	26
Fife.	Cupar	9 9 9	210	49.1	38.1	43.6	—	60	12th	27	9th	—	—	3.25	83	—	24	23rd	20	16	0	0	0	0	—	—	0	—	—	—
	Inchkeith	18-7 7	190	49.3	42.6	45.9	—	60	12th	33	9th	—	—	2.25	57	—	17	23rd	19	12	0	0	0	0	1	1	2	2.19	—	27
	Kirkcaldy	9 9 9	66	50.4	40.2	45.3	—	61	12th	31	9th	—	—	3.10	79	—	24	23rd	21	16	—	—	—	—	—	—	—	—	—	—
	Leuchars	18-7 7	30	49.0	39.0	44.0	—	60	12th	27	9th	—	—	2.72	69	—	19	23rd	21	14	0	0	0	0	6	—	0	2.09	—	26
	St. Andrews	9 9 9	20	49.7	39.6	44.7	—	59	12th	26	9th	43.3	46.3	3.39	86	—	23	23rd	19	16	0	0	0	0	6	—	0	1.84	—	22
Linlithgow.	Bangour	2121 9	587	47.3	37.0	42.1	—	59	12th	27	9th	—	—	3.13	79	—	16	23rd	24	17	0	0	0	1	1	—	—	—	—	—
Edinburgh.	Blackford Hill	2121 9	441	49.1	40.4	44.7	+2.5	61	12th	32	9th	—	—	2.97	75	+ 20	22	23rd	19	14	0	0	0	0	—	4	1	2.10	+0.07	25
	Boghall	9 9 9	645	48.3	37.8	43.1	—	59	12th	26	9th	41.5	44.4	3.50	89	—	19	23rd	21	16	1	0	0	0	—	6	2	1.97	—	24
	Edin. Univ.	9 9 9	227	50.0	41.3	45.7	—	61	12th	33	9th	43.1	47.0	2.60	66	+ 8	21	23rd	20	12	—	—	—	—	—	—	—	—	—	—
	Liberton	9 9 9	190	50.8	—	—	—	63	12th	—	—	—	—	3.68	93	—	19	23rd	19	15	0	0	0	0	—	—	1	—	—	—
Haddington.	N. Berwick	9 9 9	152	50.0	39.9	44.9	—	61	12th	30	9th	—	—	2.41	61	—	14	23rd	20	13	0	0	0	0	3	3	1.59	—	19	
	Smeaton	9 9 9	100	49.4	38.1	43.7	—	61	12th	26	9th	44.6	—	2.92	74	+ 18	17	2nd	19	17	0	0	0	0	—	—	0	—	—	—
Berwick.	Marchmont	9 9 9	498	48.5	37.7	43.1	+2.2	56	12th	30	9th	—	—	3.42	87	+ 11	27	23rd	21	17	0	0	0	0	—	—	1	1.55	-0.15	19
Peebles.	West Linton	9 9 9	770	46.9	35.7	41.3	+3.4	55	11th	18	9th	—	—	3.61	92	—	14	22nd	25	15	3	0	0	0	—	10	2	—	—	—
Roxburgh.	Kelso (Br'ml'ds)	9 9 9	195	50.0	37.3	43.7	—	58	12th	25	9th	—	—	2.28	58	- 1	11	23rd	22	11	0	0	0	0	—	—	0	—	—	—
	Wolfelee	9 9 9	537	48.7	36.8	42.7	—	56	12th	23	9th	—	—	4.57	116	+ 18	14	23rd	18	16	0	0	0	1	—	—	0	—	—	—

TABLE III (continued).—SUMMARY OF THE RECORDS OF TEMPERATURE, RAINFALL and SUNSHINE, and of WEATHER OBSERVATIONS, NOVEMBER, 1928.

DISTRICT, COUNTY AND PLACE.	Terminal Hours of Observation.	Height of Station above Mean Sea Level.	AIR TEMPERATURE IN DEGREES FAHRENHEIT.								Earth Temperature.		RAINFALL.				WEATHER. Number of days.								BRIGHT SUNSHINE.							
			Means of				Absolute Maximum and Minimum.				1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Most in a day.		Precip'n. 0.2 mm. or more.	Precip'n. 1 mm. or more.	Snow.	Snow lying.	Hail.	Thunderstorm.	Fog (Morning Obs.)	Ground Frost.	Gale.	Hours per day.		Per Cent.				
			A	B	Mean of A and B.	Deviation from Normal.	Maximum.	Date.	Minimum.	Date.					Amount.	Date.																
			Max.	Min.	Rain.	Max.	Min.	Mean of A and B.	Deviation from Normal.	Maximum.	Date.	Minimum.	Date.	1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Amount.	Date.	0.2 mm. or more.	1 mm. or more.	Snow.	Snow lying.	Hail.	Thunderstorm.	Fog (Morning Obs.)	Ground Frost.	Gale.	Daily Mean.	Deviation from Normal.	Per Cent.	
2. ENGLAND, N.E.			G.M.T.	ft.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	in.	mm.	mm.	mm.												hr	hr.	%	
Northumberland.	Berwick-on-T.	9 9 9	76	49.9	41.0	45.5	—	59	12th	30	9th	—	—	2.62	66	—	17	3rd	17	9	0	0	0	0	0	0	1	0	2.34	—	28	
	Bellingham	9 9 9	848	47.1	36.5	41.8	—	56	12th	28	9th	—	—	4.06	103	—	16	16th	24	19	0	0	0	0	0	0	10	2	2.71	+0.58	32	
	Cockle Park	2121 9	324	49.6	38.4	44.0	+2.5	60	12th	32	5.9	42.0	45.6	2.64	67	+ 1	12	23rd	18	12	0	0	0	0	0	0	0	0	0	—	—	—
	Tynemouth	18-7 7	67	50.2	42.7	46.5	+3.2	61	12th	34	9th	—	—	2.42	61	+ 7	15	16th	22	13	0	0	0	0	0	0	5	0	—	—	—	
Durham.	Chopwellwood	9 9 9	445	49.7	37.0	43.3	—	61	12th	26	28th	—	—	3.78	96	—	15	16th	22	16	0	0	0	0	0	—	2	2.64	—	31		
	Durham	2121 9	336	49.4	38.7	44.1	+2.1	59	12th	29	9th	—	—	2.24	57	— 1	11	16th	20	15	0	0	0	0	0	1	4	4	2.02	+0.19	24	
	Houghall	9 9 9	160	50.5	38.3	44.4	—	60	12th	22	9th	—	—	2.41	61	—	11	16th	18	14	0	0	0	0	0	0	12	0	1.97	—	23	
	Ushaw College	9 9 9	594	49.1	39.2	44.1	—	59	12th	32	28th	—	—	3.09	79	+ 14	17	16th	21	16	0	0	0	0	0	7	2	—	—	—		
York, N. Riding.	Ampleforth	9 9 9	350	49.9	39.5	44.7	+2.8	60	12th	29	4th	—	—	2.82	72	+ 5	18	16th	19	14	0	0	0	0	0	0	7	1	2.02	—	24	
	Castleton	9 9 9	425	50.4	38.6	44.5	—	60	12th	27	4.10	45.0	—	3.40	86	—	17	16th	24	17	0	0	1	0	0	—	3	—	—	—		
	Rounton	2121 9	249	49.5	38.3	43.9	+2.0	59	12th	28	9th	45.4	—	2.39	61	+ 4	10	16th	21	14	0	0	0	0	0	0	13	1	—	—	—	
	Scarborough†	9 9 9	118	51.8	42.5	47.1	+3.0	62	12th	33	4th	—	—	48.2	2.35	60	— 3	13	16th	21	15	0	0	1	0	1	—	1	1.84	+0.14	22	
York, E. Riding.	West Witton	9 9 9	605	48.9	39.5	44.2	—	59	12th	24	10th	43.3	46.5	4.71	120	—	22	23rd	22	17	0	0	1	1	—	7	2	—	—	—		
	York	2121 9	56	51.2	40.3	45.7	+2.7	63	12th	25	4th	45.8	48.9	2.93	74	+ 21	20	16th	21	16	0	0	1	1	—	—	0	1.92	+0.49	22		
	Hull	2121 9	8	51.5	40.7	46.1	+3.2	62	12th	27	4th	45.5	49.3	2.44	62	+ 6	10	16th	25	17	0	0	0	0	15	10	0	1.59	—	19		
	Osgodby	2121 9	30	51.1	38.8	44.9	—	63	12th	25	4th	—	—	2.85	72	—	7	14th	23	20	0	0	0	0	1	2	8	12.07	—	24		
Lincoln.	Spurn Head	18-7 7	29	50.7	44.0	47.3	+2.8	60	12th	37	10,29	—	—	2.15	55	— 2	9	16th	21	15	0	0	0	1	0	—	5	2.13	—	25		
	Cranwell	18-7 7	236	50.6	39.2	44.9	+2.2	62	12th	26	4th	45.5	48.6	2.11	53	+ 6	10	16th	20	14	0	0	0	0	3	7	2	2.14	+0.21	25		
	Cleethorpes	9 9 9	23	51.5	41.6	46.5	—	63	12th	30	4th	—	—	1.98	60	—	11	28th	19	15	1	0	1	1	4	—	0	1.92	—	22		
	Lincoln	9 9 9	58	52.1	39.3	45.7	+3.0	62	12th	28	4th	44.5	49.6	2.55	65	+ 17	12	16th	21	15	0	0	0	0	3	5	4	—	—	—		
3. ENGLAND, E.	Skegness	9 9 9	12	51.5	40.6	46.1	+2.8	60	12th	33	6th	—	—	2.66	68	+ 13	10	16th	19	16	0	0	0	0	1	—	0	2.43	+0.16	28		
	Norfolk.																															
	Cromer	9 9 9	150	51.8	42.8	47.3	+3.0	59	12,13	34	10th	—	—	2.54	65	+ 5	12	23rd	21	15	0	0	2	2	0	2	3	2.30	+0.27	26		
	Geldeston	9 9 9	37	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Suffolk.	Hunstanton	9 9 9	105	51.6	41.6	46.6	—	61	12th	31	10th	—	—	2.52	64	—	12	23rd	20	15	0	0	0	0	2	—	—	2.12	—	24		
	Norwich	9 9 9	98	52.8	41.0	46.9	+3.8	60	12,13	29	10th	44.9	—	2.94	75	+ 10	13	23rd	24	18	0	0	2	1	4	5	2	2.20	—	25		
	Sproston	9 9 9	93	52.6	40.1	46.3	—	59	12,13	28	4th	—	—	2.73	69	—	11	23rd	21	18	0	0	3	1	1	6	2	2.39	—	27		
	Yarmouth	18-7 7	14	51.9	42.5	47.2	+3.1	59	12th	32	7, 10	47.4	52.0	2.87	73	+ 12	10	27th	23	18	1	0	2	2	1	1	1	1.99	-0.07	23		
Cambridge.	Bungay (Flix'n)	9 9 9	79	52.1	40.2	46.1	—	59	12, 13,	28	10th	—	—	2.24	57	—	14	23rd	21	16	0	0	1	0	1	9	1	—	—	—		
	Copdock	9 9 9	164	51.9	40.8	46.3	—	58	12,13,23	29	10th	46.2	50.2	2.17	55	—	13	16th	20	16	0	0	0	0	1	2	5	2.04	—	23		
	Felixstowe	18-7 7	15	51.8	43.2	47.5	—	58	16, 23	29	10th	—	—	1.88	48	—	7	16th	21	13	0	0	0	0	2	1	4	2.56	—	30		
	Lowestoft	9 9 9	83	52.0	42.0	47.0	+2.5	59	12, 13	32	6, 10	45.9	51.0	2.77	70	+ 10	14	23rd	23	17	0	0	0	1	1	3	3	2.33	+0.06	27		
Bedford.	Cambridge (Bot. Gdns.)	2121 9	41	52.2	39.8	46.0	+2.9	60	12th	26	10th	46.5	51.1	1.26	32	— 17	7	11th	11	9	0	0	0	0	—	7	2	2.46	+0.39	28		
	Wisbech	9 9 9	10	52.1	39.5	45.8	—	61	12th	28	4, 10	—	—	2.55	65	—	13	23rd	21	14	0	0	0	0	5	3	4	2.45	—	28		
	Cardington	18-7 7	100	51.3	40.4	45.9	—	60	12th	25	10th	—	—	1.99	43	—	8	21st	15	10	0	0	0	0	3	5	4	2.40	—	27		
	Luton	9 9 9	390	51.5	39.3	45.4	—	59	12, 13	21	10th	46.6	49.2	2.22	56	—	9	16th	17	13	0	0	0	0	2	6	0	2.02	—	23		
Hertford.	Woburn	9 9 9	291	51.1	38.2	44.7	—	59	12th	22	10th	45.6	50.3	2.35	60	+ 3	12	21st	21	12	0	0	0	0	2	—	3	2.26	—	26		
	Benington	9 9 9	405	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Rothamsted	9 9 9	420	50.3	39.8	45.1	+2.4	58	13th	25	10th	45.2	—	2.92	74	+ 9	11	22nd	16	13	1	0	0	0	2	6	4	2.40	—	27		
	St. Albans	9 9 9	272	51.7	39.0	45.3	—	60	13th	20	10th	46.7	—	2.62	67	—	12	16th	15	11	0	0	0	0	2	4	3	—	—	—		
Essex.	Clacton-on-S.	18-7 7	55	51.2	43.2	47.2	+3.1	57	16, 23	33	10th	47.6	51.7	2.38	61	+ 13	7	16th	19	16	0	0	0	0	1	(1)	4	2.18	-0.15	25		
	Chelmsford	9 9 9	134	53.0	40.0	46.5	—	59	12,13,23	24	10th	—	—	2.13	54	— 4	15	16th	16	10	0	0	0	0	—	—	2	—	—	—		
	Chelmsford (Good Easter)	9 9 9	185	52.3	39.7	46.0	—	59	23rd	24	10th	—	—	1.97	50	—	10	16th	15	9	0	0	0	0	2	6	3	2.09	—	24		
	Earls Colne	9 9 9	168	53.4	40.8	47.1	—	60	13, 16	26	10th	—	—																			

TABLE III (continued).—SUMMARY of the RECORDS of TEMPERATURE, RAINFALL and SUNSHINE, and of WEATHER OBSERVATIONS, NOVEMBER, 1928.

Table with columns: DISTRICT, COUNTY AND PLACE; Terminal Hours of Observation; Height of Station above Mean Sea Level; AIR TEMPERATURE IN DEGREES FAHRENHEIT (Means of A and B, Deviation from Normal, Absolute Maximum and Minimum); Earth Temperature (1 ft., 4 ft.); RAINFALL (Total Fall, Deviation from Normal, Most in a day); WEATHER (Number of days: Snow, Snow lying, Hail, Thunderstorm, Fog, Ground Frost, Gale); BRIGHT SUNSHINE (Hours per day: Daily Mean, Deviation from Normal, Per Cent.).

* Mean of hourly readings.

†† Tottenham is used as a "district value" station for England, E., and not for England, S.E.

g Temperature from thermometers on a Glaisher Stand.

** At Mursley the earth thermometers are at depths of 1 ft. and 2 ft.

TABLE IV (continued).—SUMMARY of the OBSERVATIONS of PRESSURE, TEMPERATURE, HUMIDITY, CLOUD, VISIBILITY, and WIND at fixed hours at certain Stations during the Month of NOVEMBER, 1928.

DISTRICT, COUNTY AND PLACE.	Hour of Observation.	Height of Barometer above Mean Sea Level.	MEAN PRESSURE.		TEMPERATURE AND HUMIDITY.				CLOUD AMOUNT.					VISIBILITY.									WIND, NUMBER OF OBSERVATIONS.																			
			At Mean Sea Level.	Deviation from Normal.	Dry Bulb.	Depression of Wet Bulb.	Vapour Pressure.	Relative Humidity.	Mean Amount.	NO. OF OBSERVATIONS.					NUMBER OF OBSERVATIONS.									FORCE (0-12).				DIRECTION.														
										0	1	4	7	10	FOG.			Mist.	Poor Vis.	Mod. Vis.	GOOD VISIBILITY.			8 or more.	4	1	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.							
			3	6	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
2. ENGLAND, N.E.—cont.																																										
Durham. Durham ..	9	352	1004.8	—	44.6	1.9	8.6	85.7	3	2	4	4	17	0	0	0	1	3	4	9	9	4	0	1	9	20	0	1	3	2	0	10	3	8	3							
	21	352	1005.2	—	44.0	2.2	8.0	82.6	5	4	3	3	15	0	0	0	1	1	4	9	12	3	0	2	10	15	3	0	2	1	0	6	3	11	4							
York, N. Riding. Scarborough	9	96	1005.1	—	46.8	2.2	9.1	83.6	3	6	5	6	10	0	0	0	0	0	9	17	4	0	0	2	28	0	7	1	0	3	3	9	1	6								
	York ..	9	53	1005.8	—	44.7	2.1	8.4	83.6	3	4	5	2	16	—	—	—	—	—	—	—	—	—	—	0	1	29	0	5	1	0	11	2	4	6							
	21	53	1006.3	—	44.4	2.0	8.2	84.4	15	3	0	1	11	—	—	—	—	—	—	—	—	—	—	0	2	28	0	6	1	1	0	6	10	5	1							
York, E. Riding. Spurn Head	1	28	1005.7	—	45.9	1.5	9.3	88.6	1	3	10	11	5	0	0	0	0	0	12	18	0	0	0	0	24	6	0	1	3	2	1	3	9	7	4							
	7	28	1005.5	-6.7	45.8	1.3	9.5	90.7	0	1	8	12	9	0	0	0	0	0	12	18	0	0	0	0	25	5	0	2	3	2	0	5	8	6	4							
	13	28	1004.4	—	49.2	2.2	9.9	83.7	0	1	10	14	5	0	0	0	1	8	21	0	0	0	0	3	21	6	0	2	4	2	0	4	8	5	5							
	18	28	1004.3	—	47.9	1.7	9.9	87.6	0	5	12	7	6	0	0	0	0	1	11	18	0	0	0	2	22	6	0	1	4	2	0	5	5	7	6							
Lincoln. Cranwell H	1	240	1007.9	—	42.8	1.0	8.7	91.6	5	3	5	8	9	0	1	1	2	1	3	12	9	1	0	0	15	12	3	5	1	0	0	3	6	10	2							
	7	240	1007.7	—	42.4	0.9	8.8	92.6	1	7	3	10	9	0	2	1	0	0	1	15	6	5	0	0	15	13	2	2	2	0	2	4	7	7	4							
	13	240	1006.4	—	49.1	2.2	10.1	84.8	0	3	4	13	10	0	0	2	0	0	0	14	10	4	0	0	20	9	1	5	3	1	0	4	8	5	3							
	18	240	1006.7	—	45.9	1.3	9.6	89.6	0	10	3	9	8	0	0	2	1	1	0	14	9	3	0	0	18	8	4	0	4	1	0	4	6	7	4							
3. ENGLAND, E.																																										
Norfolk. Cromer H	9	74	1006.9	—	47.5	1.8	9.7	86.7	0	5	4	16	5	0	0	0	0	0	10	11	9	0	0	11	19	0	3	3	1	1	7	6	5	4								
	1	26	1007.3	—	45.9	1.1	9.6	91.6	3	5	9	2	11	1	1	0	0	1	1	9	17	0	0	0	13	15	2	1	2	1	0	2	6	12	4							
Norfolk. Yarmouth ..	7	26	1007.4	-5.7	45.1	1.1	9.3	91.7	0	2	9	10	9	0	1	0	0	0	2	15	12	0	0	0	14	16	0	2	3	1	1	3	8	8	4							
	13	26	1006.4	—	50.1	1.8	10.7	87.7	0	1	11	8	10	0	1	0	0	0	1	22	6	0	0	0	23	6	1	4	3	1	1	4	7	4	5							
	18	26	1006.4	—	48.2	1.5	10.1	89.6	3	5	4	8	10	0	1	0	0	0	3	11	15	0	0	1	14	14	1	4	1	1	1	4	9	3	6							
Suffolk. Felixstowe Aero.	7	20	1008.6	—	45.4	1.3	9.1	89.6	2	6	2	9	11	0	1	0	1	4	6	11	6	0	0	14	15	1	4	4	0	0	4	8	5	4								
	13	20	1007.8	—	50.6	2.9	10.2	79.7	0	2	8	9	11	0	0	1	0	1	5	15	8	0	0	22	5	3	3	2	1	0	5	7	5	4								
	18	20	1008.1	—	48.2	1.8	9.7	85.6	5	4	2	7	12	0	0	1	0	1	7	18	2	0	1	16	11	2	5	3	0	0	4	9	5	2								
Cambridge. Cambridge H	9	43	1008.2	-6.1	46.6	2.1	9.2	84.6	3	5	4	4	14	—	—	—	—	—	—	—	—	—	—	11	17	2	5	3	0	0	2	7	5	6								
	21	43	1008.8	-5.5	45.2	1.7	8.8	87.4	10	3	4	4	9	—	—	—	—	—	—	—	—	—	—	0	6	22	2	1	5	1	0	1	7	9	4							
Bedford. Cardington	7	187	1008.3	—	43.6	1.3	8.8	89.7	0	5	3	9	13	0	2	1	0	2	1	6	12	6	0	0	15	11	4	2	4	0	1	3	9	4	3							
	13	187	1007.4	—	50.2	3.3	9.4	77.7	0	4	7	11	8	0	0	0	1	0	1	10	8	10	0	0	21	8	1	1	5	2	0	2	11	4	4							
	18	187	1007.7	—	46.9	2.0	9.3	85.6	1	7	2	7	13	0	0	1	0	0	10	9	9	0	1	21	7	1	1	6	1	0	3	10	5	3								
	21	187	1008.7	—	45.4	1.9	8.6	85.6	6	2	5	7	10	0	0	2	1	1	0	5	10	11	0	0	19	8	3	2	4	0	0	2	9	7	3							
Hertford. Rothamsted	9	396	1008.6	—	45.6	1.7	9.1	87.0	1	3	4	11	11	0	1	0	1	1	9	18	0	0	0	15	13	2	4	0	0	3	7	5	5	2								
Essex. Shoeburyness H	7	14	1008.9	—	45.5	0.4	10.3	97.7	0	5	3	6	16	1	1	0	0	3	10	10	5	0	0	12	14	4	6	1	0	1	3	8	5	2								
	13	14	1008.2	—	51.5	1.6	11.6	89.6	0	6	4	14	6	0	0	0	1	0	0	4	6	19	0	0	20	10	0	3	6	0	0	1	11	4	5							
	18	14	1008.0	—	48.1	0.5	11.2	96.5	2	9	4	6	9	0	0	0	0	0	6	4	10	10	0	2	13	13	2	4	5	0	0	1	11	6	1							
4. MIDLAND COUNTIES.																																										
York, W. Riding. Harrogate ..	7	478	1006.0	—	42.9	1.4	8.3	88.6	0	13	0	6	11	0	1	0	2	1	0	9	6	11	0	0	17	12	1	6	0	1	1	6	10	5	0							
	13	478	1004.6	—	47.3	2.4	9.0	81.7	0	6	1	13	10	0	0	0	3	1	2	7	5	12	0	1	14	14	1	2	2	1	2	4	12	4	2							
	18	478	1005.1	—	45.0	1.9	8.6	85.4	3	16	0	3	8	0	0	0	0	2	4	7	16	1	0	1	12	15	2	3	1	1	1	4	12	5	1							
Nottingham. Nottingham	9	215	1006.5	—	45.5	2.1	8.4	83.7	0	4	3	8	15	0	3	2	3	10	1	11	0	0	0	0	16	14	0	4	3	0	1	2	4	15	1							
Warwick. Birmingham H	7	542	1008.4	—	43.6	1.3	8.8	89.7	2	4	4	8	12	0	2	1	2	2	4	3	3	13	0	0	13	17	0	2	4	1	1	7	6	3	6							
	13	542	1007.1	—	48.4	3.0	9.2	78.7	1	1	5	15	8	0	0	2	0	4	8	3	3	10	0	0	17	13	0	4	4	1	1	3	10	4	3							
	18	542	1008.1	—	46.2	2.2	9.0	82.7	4	2	3	10	11	0	1	1	2	3	4	6	3	10	0	0	16	13	1	1	4	1	0	4	5	8	6							
Oxford. Oxford ..	9	212	1009.1	-5.9	45.6	1.9	9.0	85.7	2	6	2	7	13	0	0	1	3	0	3	11	3	9	0	0	13	15	2	5	2	1	0	8	6	4	2							
Hereford. Ross-on-Wye H	7	226	1008.8	—	44.8	1.5	9.2	89.7	1	5	2	8	14	0	1	0	1	2	5	3	10	8	0	1	10	17	2	1	4	2	0	4	8	8	1							
	13	226	1007.5	—	49.6	3.1	9.6	78.8	0	2	4	11	13	0	0	0	1	1	4	6	8																					

TABLE IV (continued).—SUMMARY of the OBSERVATIONS of PRESSURE, TEMPERATURE, HUMIDITY, CLOUD, VISIBILITY, and WIND at fixed hours at certain Stations during the Month of NOVEMBER, 1928.

Main data table with columns for District, County and Place, Hour of Observation, Mean Pressure, Temperature and Humidity, Cloud Amount, Visibility, and Wind, Number of Observations. Includes sub-sections for South Wales, England, Ireland, and Channel I. & Scilly.

* Mean of hourly readings.

TABLE I. DISTRICT VALUES.

The District Values of this Table are computed from the statistics for selected individual stations set out in Table III and Table IV.

The representative stations from which the District Values of rainfall and temperature are computed are indicated in Table III by the sign ¶ while the representative stations from which District Values of sunshine are computed are indicated by the sign §. The deviations from and percentages of normal for Air Temperature, Rainfall and Sunshine are the means of the corresponding deviations or percentages for the representative District Value stations. The deviations from normal of Earth Temperature are derived from the deviations for all the stations reporting in Table III for which normals of Earth Temperature are available. The highest and lowest temperatures for the District recorded during the month may refer to any station in Table III.

TABLE II. SUMMARY OF AUTOGRAPHIC RECORDS OF WIND.

The records used in the preparation of this Table are generally made by anemographs of the pressure-tube type. At a few stations the Robinson Cup Anemograph is utilised. The classification adopted for the "Distribution of Wind" is based on the specification of the Beaufort Scale of Wind Force (see *The Observer's Handbook*). For an anemograph complying with the specification "head 33 ft. above ground in the open" the several columns correspond with Force 8 and above (gales), Forces 6 and 7 (strong winds), Forces 4 and 5 (moderate winds), Forces 2 and 3 (light winds), Forces 1 and 0 (nearly calm). Some information as to the nature of the actual exposures may be gathered from the figures in the "Height" columns.

The "Highest Hourly Wind" is determined by the mean speed of the wind for a period of sixty minutes from 30 minutes before to 30 minutes after an exact hour by Greenwich Mean Time. Under the heading "Veer from N" the azimuth of the direction from which the wind was blowing is stated, the entry for an east wind being 90°, that for a south wind 180° and so on.

TABLE III. SUMMARY OF OBSERVATIONS AT TERMINAL HOURS.*

Temperature.—The terminal hours of observation are given for each station. When the terminal hours for maximum and minimum temperature are stated independently the temperatures refer to intervals of 24 hours. If the maximum thermometer is read in the morning the reading is credited to the previous day. When the terminal hours for maximum and minimum are separated by a dash, thus, 18-7, the day-maximum for the period 7h. to 18h. and the night-minimum for the period 18h. to 7h. are reported and are utilised in determining the means for the month; in such cases the extreme temperatures for successive periods of 24 hours are also read by the observers, so that the absolute maximum and minimum temperatures for the month are obtained.

Except at the Royal Observatory, Greenwich, where a Glaisher stand is in use, the air temperature is obtained from thermometers placed in louvred screens. At Kew Observatory, Richmond, and Valentia Observatory these are north wall screens a few feet from the ground. At Aberdeen Observatory the north wall screen is at 41 feet. Otherwise the screens are in the open.

Rainfall.—The daily amounts are for the 24 hours beginning at the "terminal hour." "Rainfall" includes all forms of precipitation. The number of days of precipitation is counted with reference to the limit .01 inch or 0.2 mm. and also with reference to the limit .04 inch or 1 mm. The lower limit excludes mere "traces" of precipitation, but it is frequently passed on occasions when the precipitation is only dew.

Weather.—The numbers of days of Precipitation, Snow, Hail, Thunderstorms and Gale are counted irrespective of the hour at which the phenomena occur. Except for "Precipitation" the day is the civil day.

For the purpose of this summary "Snow" includes sleet (*i.e.*, snow with rain), "Hail" includes graupel (soft hail), "Snow lying" refers to occasions when at least one-half of the country surrounding the station is covered with snow at the morning observation. The entry of "fog" implies that regular observations of the range of vision are made on the scale set out below. Days of fog are those on which the range of vision is less than 1,100 yards at the hour of morning observation. That hour is given by the third entry of column 2 of the table and may be 7h. or 9h. G.M.T. The variability of the observation hour may exercise an important effect upon the statistics of fog frequency. "Thunderstorm" includes any day on which thunder is heard. "Gale" is a wind of Force 8 or upwards on the Beaufort Scale. A "ground frost" is entered when the reading of a "grass minimum" thermometer set the previous evening and read at the morning observation is 30° F. or lower.

Sunshine.—The percentage of possible sunshine is in all cases calculated with reference to the maximum duration possible in the latitude on the assumption of an unobstructed horizon, due allowance being

made for refraction (see *International Meteorological Tables* (Paris) pp. A17-A20 and 42-27). The sunshine recorder is generally insensitive to sunshine when the sun is at an altitude of 3° or less. The symbol § is entered against the percentage at some stations and indicates that obstructions of altitudes greater than 3° reduce the possible record of duration for the month by more than 5 per cent.

TABLE IV. SUMMARY OF OBSERVATIONS AT FIXED HOURS.*

Mean Air Pressure is expressed in millibars. (1 millibar = 1,000 dynes per square centimetre = the pressure due to .029531 inch of mercury at 32° F. in Lat. 45°). The corrections for latitude, temperature and height have been applied to the barometer readings so as to obtain pressure at mean sea level. Barometric pressure is given at station level for a few stations at altitudes of 600 ft. or more in footnotes in Table IV.

Hygrometry.—The values given depend on the readings of the dry and wet bulb thermometers in Stevenson Screens (except at the Observatories, see above). The observations were formerly reduced by Glaisher's method; as from January, 1926 they are reduced by the new hygrometrical tables issued by the Office which are based on a formula of Regnault. In general the relative humidity and vapour pressure are derived from the monthly means of the dry and wet bulb readings. At certain stations the daily values of relative humidity and vapour pressure are found and the means are computed therefrom. These stations are indicated by the letter "H."

Cloud Amount.—The proportion of sky covered with cloud is estimated on the scale 0 to 10, the entry "0" being equivalent to clear sky "10" to overcast.

Visibility.—The observations are classified according to the following scheme—the distances, specified by international arrangement in metres, are given here in yards and miles:—

CODE.	RANGE OF VISION.
0	Less than 55 yards.
1	Exceeding 55 yards, less than 220 yards.
2	" 220 " " 550 "
3	" 550 " " 1,100 "
4	" 1,100 " " 1½ miles.
5	" 1½ miles " 2½ "
6	" 2½ " " 6½ "
7	" 6½ " " 12½ "
8	" 12½ " " 31 "
9	" 31 "

Wind Summaries.—The estimates of wind force refer to the Beaufort Scale, and in general to the wind experienced at the time of observation. At Deerness, Cahirciveen, Richmond, Armagh, Eskdalemuir, Southport, Greenwich and Oxford the analysis refers to tabulations of autographic records. For Oxford the mean wind speed for half-an-hour centred at the hour of observation is used for conversion to "force" on the Beaufort Scale; for the remaining observatories the mean wind speed used for each observation refers to a period of one hour. In these cases winds equivalent to Force 1 are counted with the calms, whilst Forces 2 and 3 are taken together in the preceding column of the Table.

INTERPOLATED VALUES.

When the observations for any station for a month are incomplete and relevant data (e.g. records from neighbouring stations) which make it practicable to interpolate approximate values for the missing observations are available, such approximate values may be used for completing summaries for stations published in Tables III and IV. Parts of a summary obtained in this way are shown in brackets thus—(52.4).

STANDARD OF TIME.

As a rule observations are made in all parts of the British Islands according to Greenwich Mean Time, but at the following stations Local Mean Time is used for the observations summarised in Tables III and IV. The number of minutes after Greenwich Time is shown in brackets—Darwen (10), Rhayader (15), Ashburton (15), Tavistock (17), Plymouth (15), Douglas (20), Armagh (26), Balbriggan (25), Lisburn (30), Newcastle, Co. Wicklow (30), Ballinacurra (30), Cork (34).

"Summer Time" is not used in the Monthly Weather Report, but at certain stations the hours of observation vary in the course of the year. For such stations all time entries are converted to G.M.T. before they are printed and the winter hours are given as the terminal hours in the annual tables. For the summer hours reference should be made to the appropriate months.

NORMALS.

In Table III the normals used are those for the 35 years 1881-1915. The normals of temperature and sunshine are published in the Book of Normals, Section I, those for rainfall in the Book of Normals, Section V.

The normals for pressure with which comparison is made in Table IV also refer to the period 1881-1915

* In addition to the frequencies published in this Report (Tables III and IV), the Meteorological Office has issued since January, 1927, in the form approved by the International Commission for Air Navigation, monthly frequency tables of height of base of low cloud, and speed and direction of surface and upper winds.

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE. 2 FEB 1929

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

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DECEMBER, 1928. Changeable. Sharp frost about 9th and from 14th-16th.

The weather during December was very variable with occasional sharp contrasts in temperature from one day to the next and unusually severe frost on the 9th, 14th, 15th and at the end of the month. Precipitation occurred frequently but most of the monthly totals occurred after the 14th. Rainfall totals were mostly about or below the normal. There were a few exceptionally sunny days, notably the 7th, 8th and 9th.

Anticyclonic conditions prevailed generally during the first few days and the weather was mainly cloudy with light north-westerly to westerly winds and slight precipitation. Temperature was moderate. These conditions continued over most of England and Wales up to the 6th but in Scotland rain fell on the 4th and 5th and the wind increased in force, a gale occurring at Nairn during the night of the 4th-5th. On the 6th a depression passing eastwards across the north of Scotland with a trough extending southwards caused rain in most districts with bright periods in Scotland and the north of England. In the rear of this depression northerly winds and cold bright weather were experienced generally with wintry showers in northern districts. In the north of Scotland there was a marked fall in temperature amounting to about 8° F. at Aberdeen: the day temperature on the 7th, viz. 34° F., was 9° F. lower than that on the 6th. Severe frost both in the screen and on the ground occurred widely on the 7th and 8th. Good sunshine records were obtained on the 7th, 8th and 9th in many districts; more than 7 hours sunshine were recorded on the 7th at stations in the south-east of England and at Richmond (Kew Observatory) the 6th with a sunshine record of 6.6 hours was the sunniest December day since 1881. Rain fell in Scotland and Ireland on the 9th (38 mm. at Blacksod on the 9th) and except in eastern districts, mild cloudy weather with heavy local falls in the south-west and west prevailed generally on the 10th; 50 mm. fell at Pendennis (Cornwall) during the day of the 10th. By the 12th the wind had become easterly and during the next few days temperature was low, severe frost occurring widely on the 14th and 15th. At several inland stations in England the day temperature on the 15th failed to exceed 30° F. Fog occurred widely in England on the 14th and 15th.

On the 16th a trough of low pressure crossed the British Isles and southerly winds veering to the north-west spread over the country; there was a rapid rise in temperature, a maximum temperature of 45° F. at Winchester on the 16th contrasting with 28° F. at the same place on the 15th. Rain fell heavily during the night of the 15-16th in the West (30 mm. at Birr Castle) and widely on the 16th. The 17th was fine with more than 5 hours sunshine in several districts. Apart from widespread rain on the 19th-20th associated with a trough of low pressure, conditions were mainly anticyclonic with cloudy weather and fog in several districts on the 18th, 19th and 21st. Associated with a trough of low pressure off our western coasts mild rainy conditions spread eastwards to all districts on the 22nd. Bright periods associated with the passage of a wedge of high pressure occurred in many English districts on the 23rd but in the north-west strong winds approaching gale force at times were experienced. Heavy rain fell in northern and western districts during the night of the 23rd to 24th and in nearly all districts mild weather with continuous light rain or drizzle was experienced on the 24th. Heavy rain fell locally in Ireland on the 25th but in the south-east of England bright periods were enjoyed. Unsettled weather with strong winds, local gales and occasional heavy precipitation, notably in the east and south of England on the 27th, continued until nearly the end of the month when the northern part of the country and Ireland came under the influence of an anticyclone to the north and west of the British Isles; on the 31st, 5.8 hours sunshine were recorded at Cahirciveen and 5.1 hours at Tieve. In the south-east a depression developed on the 29th; heavy rain fell in the south and east on the 29th followed by snow or sleet and lower temperature on the 30th and 31st.

Pressure and Winds.—Pressure was frequently high during the month. In all districts monthly means of atmospheric pressure were above the normal, the excess above normal ranging from 4 to 7 millibars. Strong winds occurred frequently in western and north-western districts and in exposed places reached gale force on the 6th, 7th, 10th and about the 25th. A gust of 77 mi/hr. was recorded at Sealand early on the morning of the 26th, the highest mean hourly velocity on this occasion being 34 mi/hr. Gusts of 69 mi/hr. were recorded in a north-westerly gale at Tieve on the 6th and in a south south-westerly gale at Edinburgh on the 23rd.

Temperature.—Monthly mean temperatures were in general somewhat above the normal in the north-west of Scotland and about 1° F. to 2° F. below the normal in the central and southern parts of England; elsewhere they were about normal. Temperature was at a fairly high level during the first few days and around about the 25th. In the north of Scotland day temperatures generally reached their highest level during the first few days when temperatures in the neighbourhood of 50° F. were recorded. In most other districts the 25th and 26th were the warmest days of the month. There was a sharp fall in temperature on the 7th and 8th, low temperatures occurring widely around the 9th and again during a spell of easterly winds from the 14th to the 16th. During these periods unusually severe frost occurred over a wide area; amongst the lowest readings recorded were 18° F. in the screen and 13° F. on the grass at Burnley, 24° F. in the screen and 14° F. on the grass at Greenwich (London) on the 9th, 25° F. in the screen and 18° F. on the grass at Sealand, 26° F. in the screen and 17° F. on the grass at Birmingham on the 14th, 21° F. in the screen and 13° F. on the grass at Renfrew, 19° F. in the screen and 12° F. at Winchester, and 21° F. in the screen and 11° F. on the grass at Rhayader on the 15th. There was a rapid fall in temperature after the 26th and during the last few days of the month low readings occurred in many districts (20° F. in the screen at Cardross on the 31st).

The extreme temperatures for the month were:—England and Wales, 58° F. at Ventnor on the 1st and Torquay on the 5th, and 15° F. at Castleton (Yorks) on the 15th. Scotland, 55° F. at Perth on the 1st, and 14° F. at Braemar on the 28th. Ireland, 57° F. at Roches Point on the 2nd, Dublin (Phoenix Park) on the 16th, Dublin (City and Trinity College) on the 16th and at Belfast on the 23rd, and 23° F. at Birr Castle on the 9th.

Precipitation.—The general precipitation of the British Isles expressed as a percentage of the normal for the period 1881-1915 was 92: the values for the several countries were: England and Wales 88, Scotland 96, Ireland 96.

In England and Wales precipitation exceeded the normal in the east and south-east and locally in south Wales and south-west England; elsewhere there was a deficiency which was greatest in the north and north-east. Heavy falls occurred frequently during the last week of the month, notably in southern districts on the 27th (62mm. at Dean Prior and 53 mm. at Princetown and Ashburton). Heavy falls occurred in many districts about the 10th (33 mm. at Ardtornish on the 9th, 40 mm. at Haverfordwest and 33 at St. Anne's Head on the 10th and 30 mm. at Skegness on the 11th).

In Scotland rainfall totals were slightly above the normal in some northern districts and more notably over the Firth of Clyde area but in most districts there was a slight deficiency. The period 22nd to 25th was particularly wet with heavy falls in the north-western and Loch Fyne areas (58 mm. at Glenquoich on the 23rd and 46 mm. at Inveraray on the 22nd).

In Ireland rainfall totals in excess of the normal occurred mostly in southern and eastern districts; in the north-west and west there was in general a deficiency which was most marked in inland districts.

Sunshine.—Sunshine aggregates exceeded the normal in the eastern districts of England and the south and east of Scotland; in the north-west of Scotland, Ireland and in most districts in the west and south-west of England they were below the normal. Representative values for districts expressed as a percentage of the normal ranged from 161 per cent. of the normal in Scotland W. to 84 per cent. in Ireland N. Abundant sunshine was recorded in various districts on the 5th, 7th to 9th, 14th, 17th, 20th, 21st and 29th.

Fog.—Fog occurred fairly frequently during the month mostly on the 4th, 12th, 14th to 15th, 18th to 19th, 21st, 23rd and on the 28th.

Miscellaneous Phenomena.—Aurora was observed in Shetland on the 5th, 6th, 7th, 11th, 12th, 13th and 14th, at Orkney on the 5th and 6th, at Gordon Castle and Stornoway on the 5th and at Aberdeen on the 6th.

TABLE I.—DISTRICT VALUES—DECEMBER, 1928.

[1908, revised 1928.]

DISTRICTS	AIR TEMPERATURE.			EARTH TEMPERATURE.		RAINFALL.		SUNSHINE.	
	High-est.	Low-est.	Daily Mean. Deviation from Normal.	At 1 ft. Deviation from Normal.	At 4 ft. Deviation from Normal.	Per-cent- age of Normal.	No. of Days. Deviation from Normal.	Per-cent- age of Normal.	Per-cent- age of Possible Duration.
o. SCOTLAND, N.	°F. 53	°F. 22	°F. +0.7	°F. —	°F. —	% 95	0	% 86	% 9
Eastern.									
1. SCOTLAND, E.	55	14	-0.2	—	—	84	-1	103	18
2. ENGLAND, N.E.	56	15	-0.9	-1.3	0.0	69	-1	120	19
3. ENGLAND, E...	58	19	-0.7	-1.3	0.0	117	0	117	21
4. MIDLAND COUNTIES	57	18	-1.2	-1.8	-0.5	74	-2	92	16
5. ENGLAND, S.E.	58	16	-1.1	-1.1	+0.3	105	+1	108	20

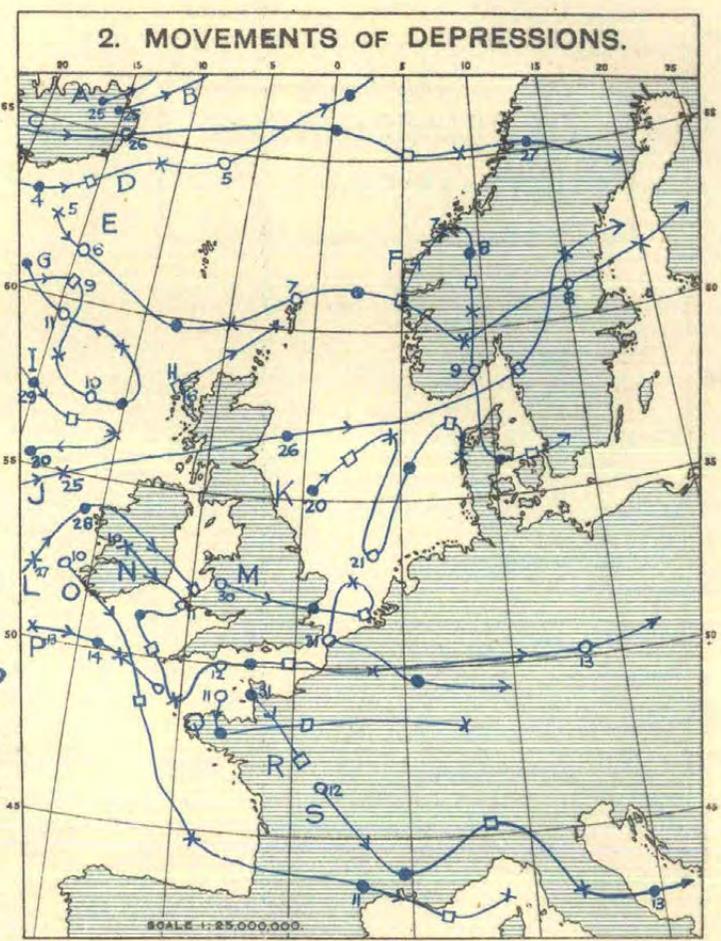
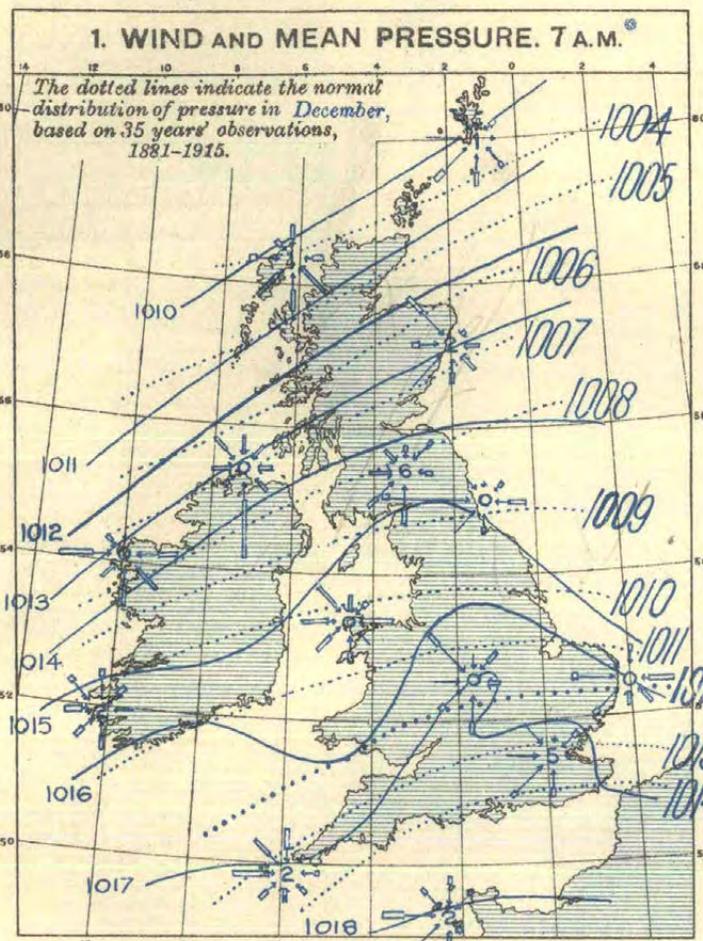
DISTRICTS.	AIR TEMPERATURE.			EARTH TEMPERATURE.		RAINFALL.		SUNSHINE.	
	High-est.	Low-est.	Daily Mean. Deviation from Normal.	At 1 ft. Deviation from Normal.	At 4 ft. Deviation from Normal.	Per-cent- age of Normal.	No. of Days. Deviation from Normal.	Per-cent- age of Normal.	Per-cent- age of Possible Duration.
Western.									
6. SCOTLAND, W. (& I. of Man)	°F. 53	°F. 20	°F. -0.4	°F. —	°F. +0.7	% 97	-2	% 161	% 18
7. ENGLAND, N.W. (& N. Wales)	57	18	-0.9	-1.3	-0.5	82	+1	107	15
8. ENGLAND, S.W. (& S. Wales)	58	18	-1.4	-1.1	+0.5	90	+1	95	16
9. IRELAND, N...	57	27	+0.6	+0.7	-0.3	100	0	84	13
10. IRELAND, S...	57	23	-0.1	+0.3	+0.5	103	+1	90	17
11. CHANNEL I. (& Scilly)	56	30	-0.3	-1.6	+0.4	97	+1	93	21
Mean: DISTRICTS 1-10	58	14	-0.6	-0.9	+0.1	92	0	108	17

TABLE II.—SUMMARY OF AUTOGRAPHIC RECORDS OF WIND.—DECEMBER, 1928.

[1914.]

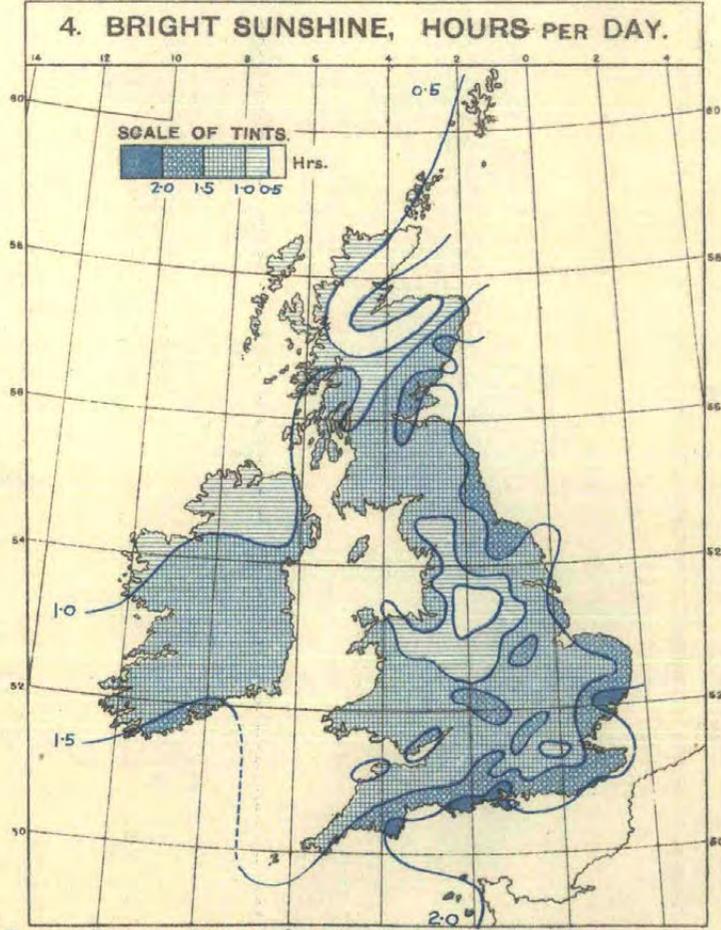
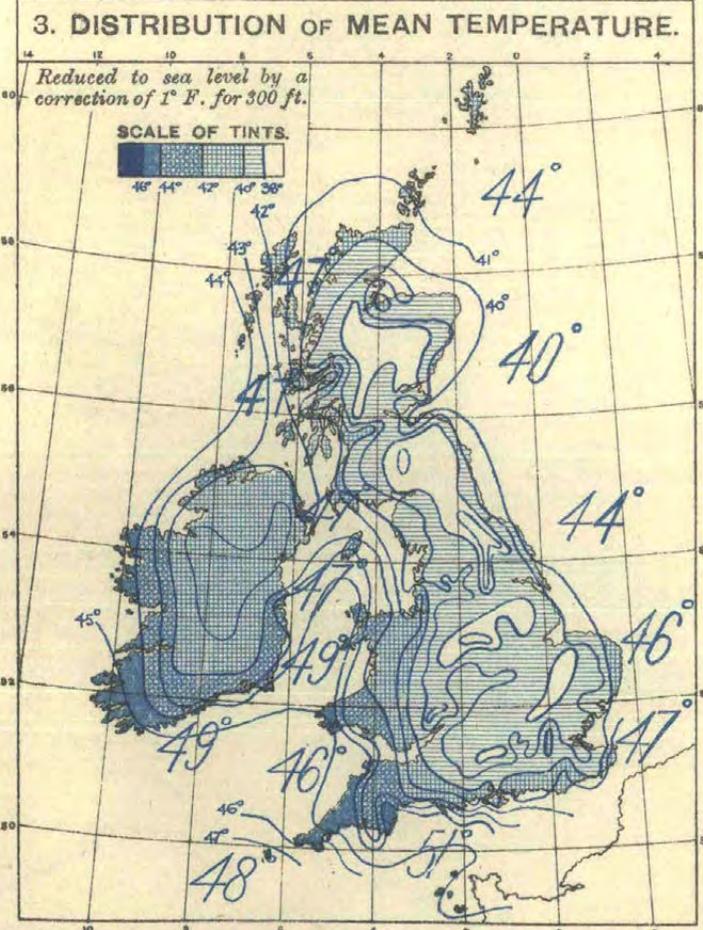
DISTRICT AND STATION.	Height.			Distribution of Wind.††									Extreme Velocities.							
	Above Mean Sea Level.	Above Ground.	Above Building.	More than 38 mi/hr.		25 to 38 mi/hr.		13 to 24 mi/hr.	4 to 12 mi/hr.	Less than 4 mi/hr.	No Record.	Highest Hourly Wind.			Highest Gust.					
				Dates of Occurrence.	Duration.	No. of Days.	Duration.	Duration.	Duration.	Duration.	Duration.	Veer from N.	Speed.	Mid Time.	Speed.	Time.				
o. SCOTLAND, N.	ft.	ft.	ft.		hr.		hr.	hr.	hr.	hr.	hr.	°	mi/hr.	m/s.	day. hr.	mi/hr.	m/s.	d.	h.	m.
Shetlands Lerwick ..	310	42	33†	16, 23	3	19	209	299	168	65	0	220	40	17	23 23	58	26	5	3	25
Orkneys Deerness (Cup Anr.)	188	16	5	7, 10, 16	8	20	161	335	212	9	19	150	47	21	16 9	—	—	—	—	—
1. SCOTLAND, E.																				
Aberdeen Aberdeen ..	70	42	33†	—	0	7	45	328	324	47	0	110	35	16	29 12	50	22	7	6	20
Kincardine Balmakewan ..	140	25	18	—	0	1	2	111	(452)	(179)	0	340	30	13	7 6	60	27	7	6	20
Edinburgh Edinburgh ..	485	39	31†	23, 25	3	12	87	310	288	56	0	200	45	20	23 21	69	31	23	20	25
6a. SCOTLAND, W.																				
Argyll Tiree ..	80	55	48†	6, 10, 16, 23	15	23	280	293	134	22	0	320	46	20	6 20	69	31	6	17	55
Renfrew Paisley ..	188	81	15	—	0	4	9	152	478	105	0	140	30	14	24 8	61	27	24	8	00
Dumfries Eskdalemuir ..	825	50	22	23, 24	2	12	82	275	244	141	0	210	40	18	24 1	57	25	23	23	10
2. ENGLAND, N.E.																				
Durham South Shields ..	62	46	20	—	0	5	26	233	384	101	0	270	34	15	26 3	61	27	26	3	05
York, E.R. Spurn Head ..	67	42	35†	26	2	13	121	391	211	19	0	260	39	17	26 4	62	28	26	4	10
Lincoln Cranwell ..	284	44	26†	—	0	6	21	170	474	79	0	250	34	15	26 3	60	27	26	3	40
3. ENGLAND, E.																				
Norfolk Gorleston ..	52	42	33†	31	1	8	89	210	412	23	9	60	40	18	31 9	54	24	31	8	45
Suffolk Felixstowe Aero. ..	55	40	25	—	0	6	29	258	(366)	(91)	0	40	31	14	31 15	42	19	31	15	10
Essex Shoeburyness ..	115	104	14†	—	0	7	44	244	394	62	0	190	38	17	26 1	50	22	31	17	25
4. MIDLAND COUNTIES.																				
Warwick Birmingham† ..	643	118	18	—	0	2	2	183	498	61	0	200	26	12	25 22	49	22	26	2	00
5. ENGLAND, S.E.																				
Surrey Richmond(KewObs)	82	65	22	—	0	2	2	102	385	255	0	210	25	11	26 1	44	19	25	22	00
Surrey Croydon ..	313	105	49	—	0	3	19	250	368	107	0	220	34	15	25 23	56	25	25	22	55
Kent Dover ..	61	32	22	—	0	8	53	288	372	23	8	—	36	16	31 19	49	22	31	19	05
Kent Lympne ..	409	70	55†	—	0	6	38	269	400	37	0	210	35	16	26 2	51	23	26	1	45
Hampshire S. Farnboro'(Tower)	444	160	14	—	0	4	15	(143)	(441)	(108)	37	240	31	14	26 1	50	22	26	0	40
Hampshire Calshot ..	55	45	31†	—	0	8	53	207	396	88	0	240	33	15	25 23	47	21	26	0	35
Hampshire Worthy Down ..	314	43	27†	—	0	3	7	118	384	235	0	220	28	13	26 1	51	23	26	0	50
7a. ENGLAND, N.W.																				
Lancashire Fleetwood ..	112	50	12	7	1	11	66	294	331	52	0	260	39	17	7 5	51	23	7	0	35
Lancashire Southport ..	77	59	45†	6, 7, 26	6	12	65	352	309	12	0	240	49	22	26 1	64	29	26	1	05
7b. NORTH WALES.																				
Anglesey Holyhead ..	64	45	29†	6, 26	4	20	167	387	172	14	0	270	43	19	6 24	62	28	26	1	25
Flint Sealand ..	81	65	49†	—	0	4	12	220	402	110	0	260	34	15	26 1	77	34	26	1	10
8b. ENGLAND, S.W.																				
Devon Plymouth ..	185	88	2	10, 16	19	9	70	176	318	151	10	—	47	21	10 11	59	26	10	11	25
Cornwall Pendennis Castle ..	256	65	24	—	0	—	—	Instr	ument	dismo	unted.									
9. IRELAND, N.																				
Donegal Dunfanaghy ..	180	47	39	—	0	7	37	253	328	126	0	—	37	17	25 21	58	26	25	21	35
Antrim Aldergrove ..	282	40	27†	—	0	7	13	243	413	75	0	200	29	13	25 22	53	24	25	22	40
10. IRELAND, S.																				
Dublin Kingstown(CupAnr.)	49	27	16	16, 25, 26	7	18	115	383	210	29	0	230	53	24	25 23	—	—	—	—	—
Clare Quilty ..	100	40	32†	—	0	10	59	372	270	43	0	—	38	17	25 20	55	24	25	20	10
Kerry Cahirciveen (Val. O.)	98	41	34†	25	1	9	47	327	264	105	0	220	39	17	25 19	59	27	25	19	40
Cork Weaver Pt. ..	160	30	21†	25	3	10	63	233	387	58	0	—	43	19	25 20	63	28	25	21	40
11. SCILLY ISLES.																				
St. Mary's..	160	42	35†	—	0	17	159	320	196	69	0	230	38	17	26 1	54	24	10	6	45

†† Brackets () indicate that the distribution as between winds above and below 4 mi/hr. is doubtful, but the total number of hours with winds below 12 mi/hr. is reliable.
 † Standard mounting.



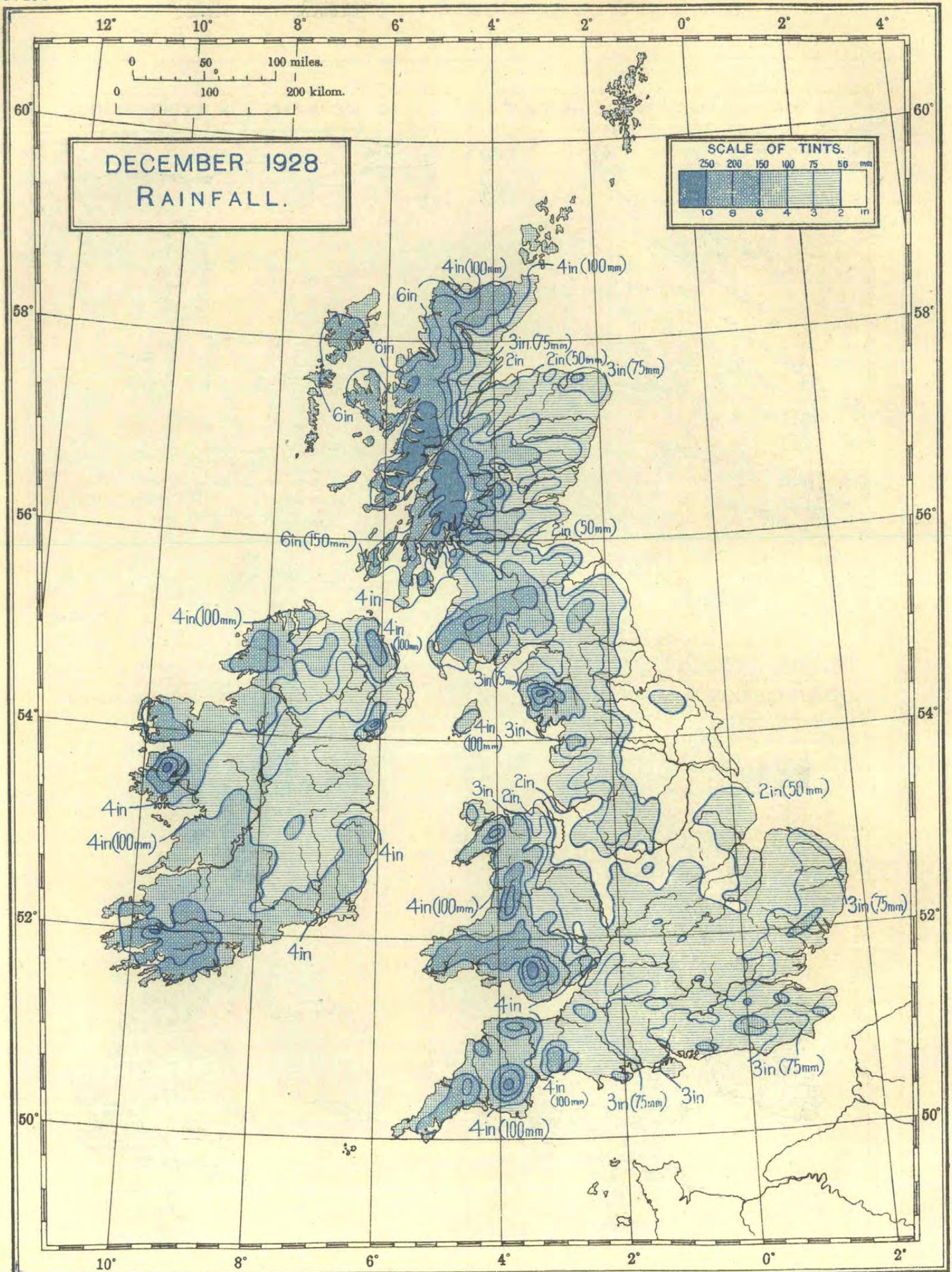
WIND ROSES. The arrows fly with the wind and indicate frequency and force, thus: $\left\{ \begin{array}{l} \text{LIGHT} \\ \text{MODERATE} \\ \text{TO APPROX.} \\ \text{GALE} \end{array} \right. \frac{1}{30} \text{Obs.} \frac{1}{\text{inch}}$

Positions of centres are shown thus: ○ at 1hr; ● at 7h; □ at 13h; X at 18h.

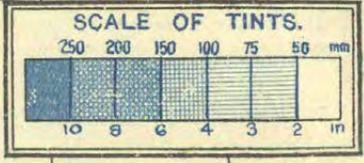


Sea temperatures are shown in large figures, thus: 43°

* The pressure is expressed in millibars.



DECEMBER 1928
RAINFALL.



Scale 1 : 5,000,000.

The equivalent values in mm. are given in round numbers. The exact relation is 10 in. = 254 mm.

Ps. 1317/1828. No. 101A. D. 25. 1/25. 1/29

TABLE III.—SUMMARY OF THE RECORDS OF TEMPERATURE, RAINFALL AND SUNSHINE, and of WEATHER OBSERVATIONS, DECEMBER, 1928.

DISTRICT, TOWN AND PLACE.	Terminal Hours of Observation.			Height of Station above Mean Sea Level.	AIR TEMPERATURE IN DEGREES FAHRENHEIT.								Earth Temperature.		RAINFALL.				WEATHER. Number of days.							BRIGHT SUNSHINE.			
	Max.	Min.	Rain.		Means of		Deviation from Normal.	Absolute Maximum and Minimum.				1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Most in a day.		Precip'n.		Snow lying.	Thunderstorm.	Fog (Morning Obs.)	Ground Frost.	Gale.	Hours per day.				
					A	B		Maximum.	Date.	Minimum.	Date.					Amount.	Date.	0.2 mm. or more.	1 mm. or more.						Snow.	Thunder.	Daily Mean.	Deviation from Normal.	Per Cent.
0. SCOTLAND, N.																													
Shetlands.	Baltasound	9 9 9	31	44.2	37.5	40.9	—	50	4th	28	14th	40.6	—	5.98	152	—	23	6th	29	24	6	1	7	0	0	—	20.31	—	5
	Lerwick	18-7 7	54	44.0	39.1	41.5	+1.4	51	1, 5	31	7th	—	—	5.88	149	+ 27	23	17th	25	22	5	1	8	0	0	—	10.36	-0.14	6
Orkneys.	Deerness	2121 9	160	43.9	37.3	40.6	+0.6	51	1, 4	31	7th	—	—	4.05	103	- 3	13	16th	28	19	10	2	2	0	0	—	10.48	-0.17	8
	Kirkwall	9 9 9	151	43.1	37.3	40.2	—	50	4th	31	7, 8	—	—	4.12	105	—	11	16th	25	22	5	2	9	2	0	4	80.54	—	9
Hebrides.	Skallary	9 9 9	20	46.7	42.0	44.3	—	53	4th	31	7th	—	—	6.18	157	—	18	23rd	25	20	0	0	1	0	—	0	—	—	
	Stornoway	18-7 7	30	43.8	37.4	40.6	+0.7	51	4th	28	15, 28	—	—	5.54	141	-18	14	9th	25	22	3	0	9	0	—	50.70	-0.04	11	
Caithness.	Wick	18-7 7	81	43.2	37.9	40.5	+1.5	51	1st	30	7th	—	—	3.47	88	+ 10	13	7th	27	22	7	1	5	0	—	4	—	—	
Ross & Cromarty.	Achnashellach	9 9 9	225	42.1	34.7	38.4	+0.7	51	4th	25	15th	—	—	8.56	217	- 49	33	23rd	24	20	4	4	0	0	—	16	1	—	—
	Fortrose	9 9 9	69	43.3	34.4	38.9	—	51	5th	26	15, 17	—	—	1.80	46	—	7	16, 25	21	13	5	3	0	0	—	00.86	—	13	
	Strathpeffer	9 9 9	125	41.7	32.4	37.1	-0.5	52	4th	22	15th	—	—	3.80	97	+ 9	14	16th	24	18	6	2	0	0	—	—	—	—	
Inverness.	Ft. Augustus	9 9 9	68	43.0	(34.0)	(38.5)	(+0.3)	50	4th	—	—	—	—	4.95	126	- 22	27	23rd	22	18	3	3	0	0	1	—	20.48	+0.09	7
	Inverness	9 9 9	242	43.0	35.3	39.1	+0.3	51	3rd	25	15th	—	—	2.21	56	- 10	8	16th	19	16	4	4	1	0	—	13	00.74	-0.35	11
1. SCOTLAND, E.																													
Nairn.	Nairn	18-7 7	82	41.2	34.7	37.9	+0.3	51	1, 4	24	15th	—	—	1.83	47	- 9	11	16th	20	11	6	1	2	0	—	40.67	-0.42	10	
Elgin.	Gordon Castle	2121 9	104	43.5	34.6	39.1	+0.5	52	1, 4, 5, 6	25	15, 31	—	—	2.12	54	- 14	11	16th	23	15	7	0	3	0	—	00.70	—	11	
Banff.	Banff	9 9 9	130	42.7	35.5	39.1	—	52	4th	30	15th	—	—	2.43	62	—	12	16th	20	14	7	0	2	1	0	20	00.48	—	7
Aberdeen.	Aberdeen	2424 24	44	43.2	35.1	39.1	+0.2	54	1st	31	28th	—	43.9	2.80	71	- 11	20	16th	20	12	8	2	5	0	0	16	01.37	+0.21	20
	Balmoral	9 9 9	927	39.5	29.5	34.5	—	49	4th	16	28th	—	—	2.49	63	- 23	12	25th	21	13	10	14	0	0	—	26	0	—	—
	Braemar	2121 9	1120	38.9	27.8	33.3	-1.5	52	1st	14	28th	—	—	2.99	76	- 14	19	26th	15	15	11	8	0	1	—	25	1	—	—
	Craibstone	9 9 9	300	41.4	33.6	37.5	—	51	23, 24	29	8, 9, 15	37.9	41.3	2.80	71	—	17	16th	22	12	6	7	6	0	—	18	21.50	—	22
	Logie Coldstone	9 9 9	608	40.6	29.4	35.0	—	51	4th	17	15th	—	—	2.22	56	- 15	11	29th	25	12	6	5	0	0	—	1	0	—	—
Kincardine.	Stonehaven	9 9 9	93	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forfar.	Arbroath	2121 9	93	43.6	33.7	38.7	—	53	1st	26	2nd	—	—	2.23	57	—	12	28th	18	12	3	0	4	0	—	01.45	—	21	
	Carnoustie	9 9 9	39	43.7	32.9	38.3	—	52	1, 23, 24	28	28th	—	—	2.21	56	—	9	16th	17	13	3	0	1	0	—	01.23	—	18	
	Dundee (E. Nec.)	2121 9	198	41.7	32.3	37.0	-0.6	51	24th	27	28th	—	—	2.30	58	- 10	9	16th	16	12	3	0	0	0	—	2	—	—	
	„ Mayfield	9 9 9	147	42.6	33.9	38.3	-0.4	52	23, 24	29	28th	—	—	2.29	58	- 6	17	16th	14	12	3	2	1	0	—	21	01.51	+0.14	22
	Kettins	9 9 9	218	41.7	30.9	36.3	—	52	1, 23, 24	22	28th	30.5	—	3.09	79	—	13	28th	18	15	5	3	0	0	—	23	0	—	—
	Montrose	9 9 9	16	43.6	34.3	38.9	—	54	1st	29	28th	—	—	2.48	63	—	16	16th	15	13	4	0	3	0	—	01.70	—	25	
Perth.	Crieff	2121 9	478	41.9	31.9	36.9	-0.6	53	1st	24	31st	—	—	4.68	119	+ 5	26	25th	22	14	6	6	1	0	—	1	—	—	
	Perth	9 9 9	76	43.0	31.1	37.1	-0.4	55	1st	23	28th	—	—	3.11	79	- 3	11	16, 28	20	13	9	4	0	0	—	—	11.28	—	19
Fife.	Cupar	9 9 9	210	42.8	31.7	37.3	—	52	1, 23, 25	24	28th	—	—	3.50	89	—	19	28th	18	14	6	6	1	0	—	0	—	—	
	Inchkeith	18-7 7	190	44.1	37.6	40.3	—	52	24, 26	31	11th	—	—	1.92	49	—	12	16th	14	9	7	0	0	0	—	7	11.35	—	19
	Kirkcaldy	9 9 9	66	44.0	34.0	39.0	—	52	23, 24, 25	27	15th	—	—	2.78	71	—	12	28th	21	13	—	—	—	—	—	—	—	—	
	Leuchars	18-7 7	30	41.7	33.9	37.8	—	52	24th	25	28th	—	—	2.70	69	—	13	16th	17	12	6	0	4	0	—	18	21.61	—	23
	St. Andrews	9 9 9	20	43.5	33.4	38.5	—	52	1, 23, 24	25	28th	37.7	42.5	3.24	82	—	17	15th	17	14	4	0	4	0	—	15	01.31	—	19
Linlithgow.	Bangour	2121 9	587	41.4	30.9	36.1	—	50	26th	21	15th	—	—	2.64	67	—	12	29th	21	10	6	5	3	0	—	3	—	—	
Edinburgh.	Blackford Hill	2121 9	441	43.1	34.4	38.7	-0.2	52	26th	26	15th	—	—	1.85	47	- 7	10	25th	14	11	5	0	0	—	15	21.48	+0.09	21	
	Boghall	9 9 9	645	41.9	32.4	37.1	—	50	25th	25	15th	36.8	40.7	2.30	58	—	9	25th	18	11	10	3	1	0	—	16	11.55	—	22
	Edin. Univ.	9 9 9	227	44.0	36.1	40.1	—	53	24, 25	29	15th	38.1	43.2	1.93	49	- 7	10	25th	13	10	—	—	—	—	—	—	—	—	
	Liberton	9 9 9	190	43.6	—	—	—	52	23, 24, 25	—	—	—	—	1.96	50	—	9	25th	15	11	2	0	1	0	—	1	—	—	
Haddington.	N. Berwick	9 9 9	152	43.3	34.1	38.7	—	52	23, 24	27	15th	—	—	1.75	44	—	9	16th	15	9	0	0	6	0	—	17	20.79	—	11
	Sneaton	9 9 9	100	42.6	31.5	37.1	—	54	24th	24	15th	39.8	—	1.48	38	- 17	9	15th	14	10	3	0	2	0	—	0	—	—	
Berwick.	Marchmont	9 9 9	498	41.5	30.5	36.0	-1.0	53	1st	21	15, 16	—	—	1.99	51	- 20	11	28th	21	11	6	7	1	0	—	01.33	+0.23	19	
Peebles.	West Linton	9 9 9	770	39.7	29.3	34.5	-0.3	50	1st	20	15th	—	—	3.50	89	—	13	23rd	25	17	8	8	1	0	—	20	3	—	—
Roxburgh.	Kelso (Br'ml'ds)	9 9 9	195	43.0	30.3	36.7	—	53	1st	23	28, 29	—	—	1.39	35	- 24	6	29th	17	11	3	3	0	0	—	1	—	—	
	Wolfelee	9 9 9	537	41.1	30.1	35.6	—	50	2, 25	20	28th	—	—	2.29	58	- 48	15	25th	9	9	6	2	0	0	—	0	—	—	
6a. SCOTLAND, W.																													
Argyll.	Ardornish	2121 9	48	43.0	33.7	38.3	—	51	4th	23	31st	—	—	9.39	239	—	33	9th	23	22	6	0	1	1	—	0	—	—	
	Ford	9 9 9	149	44.7																									

TABLE III (continued).—SUMMARY of the RECORDS of TEMPERATURE, RAINFALL and SUNSHINE, and of WEATHER OBSERVATIONS, DECEMBER, 1928.

DISTRICT, COUNTY AND PLACE.	Terminal Hours of Observation.			Height of Station above Mean Sea Level.	AIR TEMPERATURE IN DEGREES FAHRENHEIT.							Earth Temperature.		RAINFALL.				WEATHER. Number of days.							BRIGHT SUNSHINE.					
	Max.	Min.	Ran.		Means of		Deviation from Normal.	Absolute Maximum and Minimum.			1 ft.	4 ft.	Total Fall.	Deviation from Normal.	Most in a day.		Precip'n.		Snow lying.	Hail.	Thunderstorm.	Fog (Morning Obs.)	Ground Frost.	Gale.	Hours per day.		Per Cent.			
					A	B		Max.	Min.	Max.					Date.	Min.	Date.	Amount.							Date.	0.2 mm. or more.		1 mm. or more.	Snow.	Thunder.
8b. ENGLAND, S.W.—cont.	G.M.T.	ft.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	in.	mm.	mm.	mm.									hr.	hr.	%				
Dorset— Shaftesbury ..	9 9 9	722	44.0	32.3	38.1	-1.2	52	2, 3	23	15th	—	—	2.33	59	-33	22	27th	14	12	1	0	0	0	—	—	—	—			
Devon.																														
Arlington ..	9 9 9	613	45.6	34.6	40.1	-0.9	52	16, 25	26	15th	—	—	7.87	200	+32	52	27th	21	19	1	2	6	0	—	—	—	—	—		
Ashburton ..	9 9 9	583	48.1	36.8	42.5	-0.2	54	3, 19	29	15th	—	—	6.49	165	-26	42	27th	18	16	1	0	0	0	—	—	—	—	—		
Cullompton ..	9 9 9	202	47.2	32.5	39.9	-1.3	55	25th	22	9th	43.0	—	3.87	98	-14	33	27th	19	13	1	0	1	0	3	23	0	1.26	+0.03	16	
Dean Prior ..	2121 9	331	47.0	34.4	40.7	—	54	1st	23	15th	—	—	10.01	254	—	62	27th	19	19	3	1	0	0	—	—	—	—	—		
Ilfracombe ..	9 9 9	74	48.5	40.5	44.5	-0.8	54	16, 25	31	15th	45.1	49.7	5.06	128	+10	43	27th	23	15	1	0	2	0	0	1	0	0.67	—	9	
Killerton ..	9 9 9	159	46.9	33.5	40.2	—	54	25th	23	9th	—	—	3.00	76	—	32	27th	17	13	1	0	0	0	—	—	—	—	—		
Newton Abbot ..	9 9 9	350	47.6	35.3	41.5	—	56	5th	27	15th	—	—	4.61	117	—	32	27th	19	15	2	1	0	0	0	9	0	1.90	—	24	
Plymouth (Hoe) ..	2121 9	116	48.7	39.3	44.0	-0.1	54	1, 5	30	9th	45.3	50.1	4.07	103	-24	28	27th	19	15	0	0	0	0	3	5	4	1.51	-0.07	18	
Plymouth (Cattewater) ..	18-7 7	82	48.5	40.4	44.5	—	55	5th	30	9th	—	—	3.80	97	—	28	27th	19	14	2	0	1	0	0	5	6	1.56	—	19	
Princetown ..	9 9 9	1359	43.1	33.7	38.4	—	50	16, 25, 26	26	15th	—	—	12.52	318	—	53	27th	27	22	0	0	0	0	—	—	—	—	—		
Salcombe ..	9 9 9	39	48.8	37.4	43.1	—	56	1st	29	8, 9	—	—	6.27	159	—	31	27th	20	15	0	0	0	0	—	—	—	—	—		
Sidmouth ..	9 9 9	25	48.9	35.2	42.1	—	56	1st	27	8, 9	—	—	2.57	65	—	25	27th	18	12	1	0	1	0	—	—	—	—	—		
Tavistock ..	9 9 9	458	47.0	35.4	41.2	—	53	25, 26	23	10th	—	—	46.9	6.39	162	—	29	10th	25	20	3	1	4	0	2	16	0	—	—	
Teignmouth ..	9 9 9	20	49.0	37.7	43.3	-0.6	57	5th	29	9th	—	—	3.16	98	-4	26	27th	18	12	1	0	0	0	2	7	2	1.87	—	23	
Torquay ..	9 9 9	12	49.3	38.8	44.1	-0.1	58	5th	31	15th	—	—	48.2	3.31	84	-30	26	27th	18	13	1	0	1	0	2	9	2	2.00	+0.06	25
Woolacombe ..	2121 9	59	48.0	40.0	44.0	-0.5	54	18, 25	30	15th	—	—	3.85	98	-2	37	27th	19	14	1	0	4	0	0	3	0	0.99	-0.59	13	
Cornwall.																														
Falmouth Obs (Pendennis) ..	9 9 9	167	49.3	39.5	44.4	-0.8	55	3, 5	30	8th	45.9	49.9	6.72	171	+12	48	10th	25	20	0	0	4	2	1	11	0	1.42	-0.37	17	
" (Pendennis) ..	18-7 7	200	49.0	42.5	45.7	—	55	25th	30	7th	—	—	5.50	140	—	51	10th	23	16	0	0	4	2	0	—	—	—	—	—	
Fowey ..	9 9 9	51	49.9	38.8	44.3	—	55	5, 25	32	8, 9, 18	—	—	4.14	105	—	30	27th	21	19	0	0	1	0	0	—	—	—	—	—	
Gulval ..	9 9 9	20	50.5	39.8	45.1	—	56	5th	31	8th	—	—	5.79	147	—	31	27th	26	21	0	0	0	0	—	—	—	—	—	—	
Newquay ..	9 9 9	190	48.2	39.6	43.9	-1.5	54	16th	32	15th	45.8	49.1	5.20	132	+22	31	10th	24	19	0	0	3	0	0	—	—	—	—	—	
Redruth ..	9 9 9	397	47.5	39.1	43.3	—	53	16, 25, 26	31	15th	—	—	6.19	157	-2	30	10th	25	22	2	0	5	0	2	9	0	—	—	—	
9. IRELAND, N.																														
Sligo. Markree Cas. ..	2121 9	122	45.9	34.8	40.3	0.0	53	16, 26	27	30th	42.9	47.2	4.85	123	+3	23	15th	23	20	3	1	3	0	0	—	—	—	—	—	
Mayo. Blacksod Pt. ..	18-7 7	10	47.5	41.7	44.6	+0.9	55	25th	34	7, 11	—	—	6.93	176	+21	38	9th	27	21	2	0	9	0	0	—	—	—	—	—	
Mallarany ..	9 9 9	120	46.8	38.7	42.7	—	53	2nd	30	11th	—	—	7.99	203	—	27	15th	26	21	2	0	2	0	0	—	—	—	—	—	
Donegal. Malin Head ..	18-7 7	51	45.3	40.3	42.8	+0.6	52	4, 25	34	15, 30	—	—	3.43	87	+2	16	23rd	22	16	1	0	5	0	0	—	—	—	—	—	
Antrim. Aldergrove ..	18-7 7	238	43.2	36.2	39.7	—	52	26th	29	30th	—	—	3.24	82	—	18	15th	21	17	4	0	2	0	1	16	0	0.82	—	11	
Belfast ..	9 9 9	13	47.2	37.6	42.4	—	57	23rd	29	22nd	—	—	3.89	99	—	19	15th	18	17	2	2	0	0	6	—	—	—	—	—	
Lisburn ..	9 9 9	206	45.2	34.7	39.9	+0.6	53	16, 25	29	9th	—	—	2.48	63	-23	11	10th	23	16	2	0	0	0	1	—	—	—	—	—	
Down. Donaghadee ..	18-7 7	40	44.9	38.5	41.7	+0.1	54	25th	32	30th	—	—	3.45	88	+7	18	10th	21	15	1	0	1	0	0	—	—	—	—	—	
Armagh. Armagh ..	2121 9	204	45.6	36.6	41.1	+1.1	54	25, 26	30	8, 31	42.8	45.3	2.45	62	-18	10	15th	24	16	4	3	0	0	1	11	0	0.97	-0.22	13	
Longford. Newtownforbes ..	2121 9	161	45.9	33.9	39.9	—	53	26th	27	31st	41.3	45.7	2.75	70	—	20	15th	22	15	3	2	1	0	—	—	—	—	—	—	
10. IRELAND, S.																														
Dublin. Balbriggan ..	9 9 9	203	45.6	36.2	40.9	0.0	54	16, 25	29	9th	41.1	45.5	3.80	97	+24	33	15th	21	15	1	0	0	0	1	13	4	—	—	—	
City ..	2121 9	54	47.3	38.0	42.7	+0.1	57	26th	31	8th	—	—	2.62	67	+4	12	10th	21	16	2	0	1	1	4	8	0	—	—	—	
Glacnevin ..	2121 9	55	46.8	38.4	42.7	—	53	2nd	30	11th	—	—	7.99	203	—	27	15th	26	21	2	0	2	0	0	—	—	—	—	—	
Phoenix Pk. ..	2121 9	155	46.6	34.6	40.6	-0.3	57	16th	27	7, 9	—	—	2.50	64	-1	11	15th	22	16	2	1	1	1	5	13	0	1.30	-0.25	18	
Trin. Coll. ..	2121 9	12	48.0	38.4	43.2	+0.5	57	25, 26	31	8th	42.7	46.0	2.55	65	+5	11	15th	19	15	1	0	0	1	—	—	—	—	—	—	
Wicklow. Newcastle ..	2121 9	256	46.6	36.5	41.5	—	56	26th	30	31st	—	—	4.65	118	—	37	15th	17	15	1	1	0	0	0	—	—	—	—	—	
King's Co. Birr Castle ..	18-7 7	173	45.2	36.6	40.9	+0.3	53	15, 16, 23, 24	29	9th	44.2	47.2	3.52	89	+5	30	15th	21	15	1	0	1	0	1	16	0	1.23	-0.16	16	
Queen's Co. Mountmellick ..	9 9 9	252	45.3	34.9	40.1	—	56	25th	29	30th	—	—	3.18	106	—	42	15th	23	18	—	—	—	—	—	—	—	—	—	—	
Wexford. Newtownbarry ..	9 9 9	153	46.5	35.3	40.9	—	53	1, 15, 16	27	9th	44.3	47.3	4.55	116	—	49	15th	18	15	0	0	0	0	0	—	—	—	—	—	
Kilkenny. Kilkenny ..	9 9 9	182	45.9	34.6																										

TABLE IV.—SUMMARY of the OBSERVATIONS of PRESSURE, TEMPERATURE, HUMIDITY, CLOUD, VISIBILITY and WIND at fixed hours at certain Stations during the Month of DECEMBER, 1928.

DISTRICT, COUNTY AND PLACE.	Hour of Observation.	Height of Barometer above Mean Sea Level.	MEAN PRESSURE.		TEMPERATURE AND HUMIDITY.				CLOUD AMOUNT.					VISIBILITY.									WIND, NUMBER OF OBSERVATIONS.																
			At Mean Sea Level.	Deviation from Normal.	Dry Bulb.	Depression of Wet Bulb.	Vapour Pressure.	Relative Humidity.	Mean Amount.	NO. OF OBSERVATIONS.					NUMBER OF OBSERVATIONS.									FORCE (0-12).				DIRECTION.											
										0	1 to 3	4 to 6	7 to 9	10	FOG.			MIST.	POOR VIS.	MOD. VIS.	GOOD VISIBILITY.			8 or more.	4 to 7	1 to 3	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.				
			0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	8 or more.	4 to 7	1 to 3	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.					
0. SCOTLAND, N.																																							
Shetlands. Lerwick	G.M.T.	ft.	mb.	mb.	°F.	°F.	mb.	%																															
	1	59	1009.0	—	41.8	1.8	7.7	84	7.8	0	3	5	13	10	0	0	0	0	0	0	0	0	0	0	13	18	0	0	11	18	2	1	1	1	4	6	10	4	2
	7	59	1009.3	+ 5.7	41.6	2.2	7.3	81	7.5	0	3	9	11	8	0	0	0	0	0	0	0	0	0	1	11	19	0	0	10	20	1	2	2	1	4	5	7	5	4
	13	59	1009.7	—	42.8	2.5	7.4	79	7.9	0	1	5	16	9	0	0	0	0	0	0	0	0	0	1	11	19	0	0	10	20	1	1	0	2	4	10	5	4	2
18	59	1009.0	—	42.1	2.1	7.4	82	7.6	0	3	6	12	10	0	0	0	0	0	0	0	0	0	2	14	15	0	1	8	20	2	2	1	2	2	10	5	5	2	4
Orkneys. Deerness	9	165	1011.6	—	40.4	1.8	7.1	84	7.1	0	3	11	7	10	0	0	0	0	0	0	0	0	0	0	5	20	6	1	24	6	0	0	2	3	3	8	6	3	6
	21	165	1011.2	—	41.0	2.0	7.2	83	6.4	0	6	10	5	10	0	0	0	0	0	0	0	0	1	6	21	3	0	22	7	2	2	0	3	4	4	5	6	5	5
Hebrides. Stornoway	7	41	1010.3	+ 6.2	41.3	1.7	7.4	85	7.5	0	0	10	11	10	0	0	0	0	0	0	0	0	8	23	0	0	0	19	11	1	2	0	3	5	6	6	5	3	6
	13	41	1010.1	—	42.7	1.9	7.9	84	7.4	1	1	8	14	7	0	0	0	0	0	0	0	1	10	16	4	0	0	18	11	2	1	0	1	5	6	7	3	6	
	18	41	1010.0	—	41.1	1.5	7.6	87	7.8	1	2	6	8	14	0	0	0	0	0	0	0	2	13	13	2	1	1	18	7	5	2	0	2	5	4	3	5	5	
	21	41	1010.4	—	40.5	1.3	7.7	89	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Caithness. Wick	1	97	1011.1	—	40.5	2.1	7.1	81	7.1	0	3	10	10	8	0	0	0	0	0	0	0	0	0	0	0	31	0	1	12	18	0	2	0	2	2	5	6	9	5
	7	97	1011.3	+ 6.9	40.3	2.1	6.8	81	7.3	0	3	9	8	11	0	0	0	0	0	0	0	0	1	30	0	2	12	17	0	2	1	1	3	5	8	7	4	4	
	13	97	1010.9	—	41.7	2.1	7.4	82	8.7	0	0	4	11	16	0	0	0	0	0	0	0	0	0	0	0	31	0	2	15	14	0	1	1	2	3	8	7	5	4
18	97	1010.8	—	40.4	1.9	7.0	83	7.5	0	3	9	4	15	0	0	0	0	0	0	0	0	1	30	0	2	15	14	0	2	0	1	4	7	5	7	5	5		
Inverness. Inverness	9	250	1012.4	—	38.6	2.1	6.5	81	4.6	0	8	20	2	1	0	0	0	0	0	0	0	0	0	0	2	11	18	0	10	19	2	0	1	3	3	5	13	3	1
	17	250	1011.6	—	39.9	3.0	6.1	73	4.5	0	8	17	6	0	0	0	0	0	0	0	0	1	1	8	21	0	13	14	4	0	4	0	2	8	9	4	0		
1. SCOTLAND, E.																																							
Nairn. Nairn	7	82	1011.9	+ 6.7	37.3	1.8	6.2	83	6.5	0	1	12	16	2	0	0	0	0	0	0	0	0	0	10	21	0	0	2	16	13	0	0	2	0	0	0	13	3	
	13	82	1011.2	—	40.5	2.3	7.0	79	6.6	0	0	13	18	0	0	0	0	0	0	0	0	0	0	7	24	0	0	2	23	6	1	0	5	0	2	3	12	2	
	18	82	1011.6	—	38.2	1.9	6.4	82	6.4	0	2	13	13	3	0	0	0	0	0	0	0	0	0	0	7	24	0	0	2	23	6	0	0	6	1	1	2	13	2
Aberdeen. Aberdeen	7	85	1013.1	+ 6.5	37.9	2.1	6.2	80	5.7	0	12	3	7	9	0	0	0	0	0	0	0	11	12	8	0	0	12	15	4	0	1	3	2	5	5	7	4		
	13	85	1012.9	+ 6.1	40.5	2.7	6.5	76	6.5	0	8	4	12	7	0	0	0	0	0	0	1	3	10	4	13	0	0	19	10	2	1	1	4	2	3	7	6	5	
	18	85	1012.8	+ 5.6	39.7	2.5	6.4	77	5.7	3	11	0	7	10	0	0	0	0	0	0	1	3	6	13	8	0	0	14	16	1	0	0	4	2	6	7	7	4	
	21	85	1012.8	+ 5.6	39.5	2.6	6.3	77	5.8	3	9	2	5	12	0	0	0	0	0	0	1	0	2	12	10	6	0	0	16	14	1	0	1	2	3	6	4	9	5
	h.*	85	1012.9	+ 6.0	39.3	2.3	6.4	78	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Aberdeen. Braemar	9	1114	—	—	34.3	1.7	5.4	82	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0	3	28	0	2	1	6	2	0	14	2	4	
Perth. Crieff	9	482	1013.7	—	36.5	1.4	6.5	87	7.3	0	7	4	7	13	—	—	—	—	—	—	—	—	—	—	—	—	—	0	7	24	0	1	0	9	0	0	3	16	2
21	482	1013.5	—	36.9	1.3	6.6	87	5.5	9	6	0	2	14	—	—	—	—	—	—	—	—	—	—	—	—	—	0	9	22	0	1	0	10	0	1	1	15	3	
Fife. Inchkeith	1	184	1012.9	—	40.3	1.7	7.1	85	5.8	0	12	4	7	8	0	0	0	0	0	0	2	0	1	6	21	1	1	14	16	0	0	0	5	4	0	12	9	1	
	7	184	1013.2	—	39.5	1.7	6.8	85	6.1	0	9	8	7	7	0	0	0	0	0	0	1	2	0	2	24	2	0	16	15	0	0	1	4	3	3	7	12	1	
	13	184	1013.6	—	41.2	2.3	6.9	79	7.8	0	6	2	11	12	0	0	0	0	0	0	1	6	2	3	18	1	0	16	15	0	1	1	2	5	1	10	10	1	
	18	184	1013.3	—	40.6	2.1	7.1	81	6.0	0	11	7	3	10	0	0	0	0	0	0	2	1	2	8	18	0	0	16	15	0	0	2	2	4	3	11	8	1	
Fife. Leuchars	7	36	1013.5	—	36.8	1.7	6.3	84	6.0	0	11	2	11	7	0	0	0	0	0	0	1	2	10	18	0	0	11	18	2	0	2	3	3	1	11	8	1		
	13	36	1013.6	—	40.5	2.3	6.8	80	7.5	1	6	0	9	15	0	0	0	0	0	0	1	2	6	8	14	0	0	15	16	0	1	2	3	3	1	10	8	3	
	18	36	1013.4	—	38.4	1.8	6.6	83	6.0	3	9	3	4	12	0	0	0	0	0	0	1	7	7	16	0	0	12	18	1	0	2	0	5	2	9	9	3		
Edinburgh. Blackford Hill	9	441	1014.7	—	38.6	2.3	6.3	79	7.4	0	5	6	5	15	—	—	—	—	—	—	—	—	—	—	—	—	—	0	12	19	0	0	1	3	1	6	6	12	2
	21	441	1014.0	—	39.0	2.5	6.2	77	6.9	3	5	4	1	18	—	—	—	—	—	—	—	—	—	—	—	—	—	2	15	11	3	0	2	2	3	6	3	11	1
6a. SCOTLAND, W.																																							
Argyll. Tiree	7	40	1012.1	—	42.9	1.6	8.1	87	7.6	0	6	2	10	13	0	0	0	0	0	0	0	1	14	14	2	0	26	5	0	3	2	1	2	8	5	3	7		
	13	40</																																					

TABLE I. DISTRICT VALUES.

The District Values of this Table are computed from the statistics for selected individual stations set out in Table III and Table IV.

The representative stations from which the District Values of rainfall and temperature are computed are indicated in Table III by the sign ¶ while the representative stations from which District Values of sunshine are computed are indicated by the sign §. The deviations from and percentages of normal for Air Temperature, Rainfall and Sunshine are the means of the corresponding deviations or percentages for the representative District Value stations. The deviations from normal of Earth Temperature are derived from the deviations for all the stations reporting in Table III for which normals of Earth Temperature are available. The highest and lowest temperatures for the District recorded during the month may refer to any station in Table III.

TABLE II. SUMMARY OF AUTOGRAPHIC RECORDS OF WIND.

The records used in the preparation of this Table are generally made by anemographs of the pressure-tube type. At a few stations the Robinson Cup Anemograph is utilised. The classification adopted for the "Distribution of Wind" is based on the specification of the Beaufort Scale of Wind Force (see *The Observer's Handbook*). For an anemograph complying with the specification "head 33 ft. above ground in the open" the several columns correspond with Force 8 and above (gales), Forces 6 and 7 (strong winds), Forces 4 and 5 (moderate winds), Forces 2 and 3 (light winds), Forces 1 and 0 (nearly calm). Some information as to the nature of the actual exposures may be gathered from the figures in the "Height" columns.

The "Highest Hourly Wind" is determined by the mean speed of the wind for a period of sixty minutes from 30 minutes before to 30 minutes after an exact hour by Greenwich Mean Time. Under the heading "Veer from N" the azimuth of the direction from which the wind was blowing is stated, the entry for an east wind being 90°, that for a south wind 180° and so on.

TABLE III. SUMMARY OF OBSERVATIONS AT TERMINAL HOURS.*

Temperature.—The terminal hours of observation are given for each station. When the terminal hours for maximum and minimum temperature are stated independently the temperatures refer to intervals of 24 hours. If the maximum thermometer is read in the morning the reading is credited to the previous day. When the terminal hours for maximum and minimum are separated by a dash, thus, 18-7, the day-maximum for the period 7h. to 18h. and the night-minimum for the period 18h. to 7h. are reported and are utilised in determining the means for the month; in such cases the extreme temperatures for successive periods of 24 hours are also read by the observers, so that the absolute maximum and minimum temperatures for the month are obtained.

Except at the Royal Observatory, Greenwich, where a Glaisher stand is in use, the air temperature is obtained from thermometers placed in louvered screens. At Kew Observatory, Richmond, and Valentia Observatory these are north wall screens a few feet from the ground. At Aberdeen Observatory the north wall screen is at 41 feet. Otherwise the screens are in the open.

Rainfall.—The daily amounts are for the 24 hours beginning at the "terminal hour." "Rainfall" includes all forms of precipitation. The number of days of precipitation is counted with reference to the limit .01 inch or 0.2 mm. and also with reference to the limit .04 inch or 1 mm. The lower limit excludes mere "traces" of precipitation, but it is frequently passed on occasions when the precipitation is only dew.

Weather.—The numbers of days of Precipitation, Snow, Hail, Thunderstorms and Gale are counted irrespective of the hour at which the phenomena occur. Except for "Precipitation" the day is the civil day.

For the purpose of this summary "Snow" includes sleet (*i.e.*, snow with rain), "Hail" includes graupel (soft hail), "Snow lying" refers to occasions when at least one-half of the country surrounding the station is covered with snow at the morning observation. The entry of "fog" implies that regular observations of the range of vision are made on the scale set out below. Days of fog are those on which the range of vision is less than 1,100 yards at the hour of morning observation. That hour is given by the third entry of column 2 of the table and may be 7h. or 9h. G.M.T. The variability of the observation hour may exercise an important effect upon the statistics of fog frequency. "Thunderstorm" includes any day on which thunder is heard. "Gale" is a wind of Force 8 or upwards on the Beaufort Scale. A "ground frost" is entered when the reading of a "grass minimum" thermometer set the previous evening and read at the morning observation is 30° F. or lower.

Sunshine.—The percentage of possible sunshine is in all cases calculated with reference to the maximum duration possible in the latitude on the assumption of an unobstructed horizon, due allowance being

made for refraction (see *International Meteorological Tables* (Paris) pp. A17-A20 and 42-27). The sunshine recorder is generally insensitive to sunshine when the sun is at an altitude of 3° or less. The symbol § is entered against the percentage at some stations and indicates that obstructions of altitudes greater than 3° reduce the possible record of duration for the month by more than 5 per cent.

TABLE IV. SUMMARY OF OBSERVATIONS AT FIXED HOURS.*

Mean Air Pressure is expressed in millibars. (1 millibar = 1,000 dynes per square centimetre = the pressure due to .029531 inch of mercury at 32° F. in Lat. 45°). The corrections for latitude, temperature and height have been applied to the barometer readings so as to obtain pressure at mean sea level. Barometric pressure is given at station level for a few stations at altitudes of 600 ft. or more in footnotes in Table IV.

Hygrometry.—The values given depend on the readings of the dry and wet bulb thermometers in Stevenson Screens (except at the Observatories, see above). The observations were formerly reduced by Glaisher's method; as from January, 1926 they are reduced by the new hygrometrical tables issued by the Office which are based on a formula of Regnault. In general the relative humidity and vapour pressure are derived from the monthly means of the dry and wet bulb readings. At certain stations the daily values of relative humidity and vapour pressure are found and the means are computed therefrom. These stations are indicated by the letter "H."

Cloud Amount.—The proportion of sky covered with cloud is estimated on the scale 0 to 10, the entry "0" being equivalent to clear sky "10" to overcast.

Visibility.—The observations are classified according to the following scheme—the distances, specified by international arrangement in metres, are given here in yards and miles:—

CODE.	RANGE OF VISION.
0	Less than 55 yards.
1	Exceeding 55 yards, less than 220 yards.
2	" 220 " " 550 "
3	" 550 " " 1,100 "
4	" 1,100 " " 1½ miles.
5	" 1½ miles " " 2½ "
6	" 2½ " " 6½ "
7	" 6½ " " 12½ "
8	" 12½ " " 31 "
9	" 31 " "

Wind Summaries.—The estimates of wind force refer to the Beaufort Scale, and in general to the wind experienced at the time of observation. At Deerness, Cahirciveen, Richmond, Armagh, Eskdalemuir, Southport, Greenwich and Oxford the analysis refers to tabulations of autographic records. For Oxford the mean wind speed for half-an-hour centred at the hour of observation is used for conversion to "force" on the Beaufort Scale; for the remaining observatories the mean wind speed used for each observation refers to a period of one hour. In these cases winds equivalent to Force 1 are counted with the calms, whilst Forces 2 and 3 are taken together in the preceding column of the Table.

INTERPOLATED VALUES.

When the observations for any station for a month are incomplete and relevant data (e.g. records from neighbouring stations) which make it practicable to interpolate approximate values for the missing observations are available, such approximate values may be used for completing summaries for stations published in Tables III and IV. Parts of a summary obtained in this way are shown in brackets thus—(52.4).

STANDARD OF TIME.

As a rule observations are made in all parts of the British Islands according to Greenwich Mean Time, but at the following stations Local Mean Time is used for the observations summarised in Tables III and IV. The number of minutes after Greenwich Time is shown in brackets—Darwen (10), Rhayader (15), Ashburton (15), Tavistock (17), Plymouth (15), Douglas (20), Armagh (26), Balbriggan (25), Lisburn (30), Newcastle, Co. Wicklow (30), Ballinacurra (30), Cork (34).

"Summer Time" is not used in the Monthly Weather Report, but at certain stations the hours of observation vary in the course of the year. For such stations all time entries are converted to G.M.T. before they are printed and the winter hours are given as the terminal hours in the annual tables. For the summer hours reference should be made to the appropriate months.

NORMALS.

In Table III the normals used are those for the 35 years 1881-1915. The normals of temperature and sunshine are published in the Book of Normals, Section I, those for rainfall in the Book of Normals, Section V.

The normals for pressure with which comparison is made in Table IV also refer to the period 1881-1915.

* In addition to the frequencies published in this Report (Tables III and IV), the Meteorological Office has issued since January, 1927, in the form approved by the International Commission for Air Navigation, monthly frequency tables of height of base of low cloud, and speed and direction of surface and upper winds.

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.



SUMMARY FOR THE YEAR 1928, INCLUDING MONTHLY AND ANNUAL TABLES OF WIND BASED UPON THE RECORDS OF AUTOGRAPHIC INSTRUMENTS, PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE. To be purchased directly from H.M. STATIONERY OFFICE at the following addresses:—ADAMSON HOUSE, KINGSWAY, LONDON, W.C.2; 120, GEORGE STREET, EDINBURGH; YORK STREET, MANCHESTER; 1, ST. ANDREW'S CRESCENT, CARDIFF; 15, DONEGALL SQUARE WEST, BELFAST; or through any Bookseller.

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SUMMARY FOR THE YEAR 1928.

Climatological Section.

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A Wet Year but with much Sunshine in Central and Eastern England during the period July to September.

General.—Although in a statistical survey the predominant feature of the year was the excess of rainfall over the British Isles as a whole and especially in Scotland and Ireland, 1928 will be remembered chiefly for the dry, warm and sunny periods which were experienced in central and eastern England in July and August and in most parts of the British Isles in September. Mean temperatures for the year were about normal in Scotland and above the normal in England and Wales and Ireland, where the deviations from normal amounted on the average to 0.9° F. and 0.6° F. respectively. Sunshine aggregates for the year exceeded the normal in the eastern district of England and were below the normal in the western district and in Wales; they were about normal in Ireland and decidedly deficient in Scotland. Other notable meteorological features of 1928 were the persistent wetness of January and October and the dryness of September, the disastrous floods in London on January 7th, the severe gales in January, the first half of February and the second half of November, the severe frost during the periods March 8th–13th and December 14th–16th, the high temperatures recorded during July in central and eastern England and the severe thunderstorms in August.

JANUARY was mild, stormy and decidedly wet, monthly totals exceeding twice the normal over the greater part of Great Britain. Although rain fell frequently, sunshine was recorded on most days and as a result, monthly aggregates were above the normal. FEBRUARY was mild with frequent rain and floods and severe gales on 10th–11th. There was, however, an excess of sunshine, the second half of the month being relatively dry and sunny with frequent severe frosts. MARCH was wet and on the whole mild with bright periods, but from the 8th to the 13th cold easterly winds and wintry weather was experienced over the whole country. The weather during APRIL was on the whole changeable and showery with considerable fair periods. Warm sunny weather occurred between the 4th and 10th and around the 26th, when temperatures exceeded 70° F. locally in England and as far north as Kelso. During an intervening spell of wintry weather from the 14th to the 21st severe frost and snow, sleet or hail occurred in most districts. MAY was dry; warm sunny weather prevailed generally during the first week and at the end of the month, with cold northerly winds from the 7th to the 22nd and much cloud in the eastern and central districts of Great Britain from the 11th to the 23rd. JUNE was unsettled, dull, cool and wet, heavy rain occurring from the 6th to the 10th and about the 13th and 28th. During the first four days daily amounts of sunshine exceeding 15 hours were recorded in many places. Most districts reported thunderstorms. Although wet and cool at the beginning and end of the month, JULY was on the whole mainly dry, and in most English districts warm and sunny, especially in eastern and central England. AUGUST was mainly fair, sunny and rather dry in the south-east of the British Isles and unsettled with much rain but considerable fair periods elsewhere. Thunderstorms occurred frequently. Anticyclonic conditions prevailed frequently during SEPTEMBER, especially over England and Wales, and in consequence mainly fair weather prevailed generally, sunshine aggregates being above the normal in all districts. Over England and Wales there was a pronounced deficiency of rainfall. Apart from rather cold weather at the beginning and end of the month and about the 11th, 13th and 22nd, OCTOBER was mild and, except in some extreme northern and eastern districts of Great Britain, wet. Considerable bright periods occurred, however, and in most parts of England monthly aggregates of sunshine exceeded the normal. NOVEMBER was quiet and rather cold at first with, in general, occasional slight precipitation; after the 10th the weather was unusually mild, wet and stormy. The weather during DECEMBER was variable and, apart from a few sunny days, dull with considerable fluctuation in temperature and some unusually severe frost on the 9th, 14th, 15th and at the end of the month. Although there was frequent precipitation, particularly during the last week, monthly totals were mostly below the normal except in the east and south-east of England where there was an excess.

Pressure and Winds.—The mean for the year was below the normal in all districts. An exceptionally low sea level pressure, viz., 951 mb., the lowest observed locally since 1886, occurred at Edinburgh on November 23rd.

Owing to the frequency with which depressions passed across or near the British Isles pressure in JANUARY was decidedly below the normal, the deficiency ranging from 13 millibars at Stornoway to 2 millibars at Scilly. The prevailing winds were south-westerly. Severe gales occurred in northern districts on the 6th, about the 10th and on the 24th and 25th. In FEBRUARY

pressure was below the normal in the north of Scotland, about normal in the north of Ireland and above normal elsewhere. A notable feature was the paucity of northerly winds; south-westerly to westerly winds occurred most frequently. Severe gales occurred about the 7th and on the 10th–11th. Except in the north and east of Scotland pressure during MARCH was below the normal. During the greater part of the month winds were from an easterly point and mainly moderate to light. Westerly winds were infrequent and occurred almost entirely during the last week of the month. Although gales occurred on several occasions in exposed places during the second half of the month none were of remarkable severity. Pressure was everywhere below the normal in APRIL. Winds were variable in direction and mainly light to moderate in force. Pressure during MAY was relatively high to the north-west and low to the south-east of the British Isles. Winds were mostly between north and east and light to moderate in force. After the first five or six days of JUNE, pressure remained almost continuously low. Gales occurred in the north of Scotland on the 11th and in exposed places in the north-west and south-west of England and Wales on the 9th, 26th, 28th and 29th. Pressure during JULY exceeded the normal by over 5 millibars in the south-west of England but was below normal in central and northern Scotland; in the Shetlands it was nearly 4 millibars below the normal. Winds were mainly westerly over England and Ireland and south-westerly in Scotland, and were frequently strong in northern districts. Pressure was almost everywhere below normal in AUGUST, low pressure continuing over the country generally from the 7th to the 15th and from the 19th to the 29th. The prevailing winds were between south and west and mainly light to moderate in force. Over the greater part of England and Wales conditions were mostly anticyclonic during SEPTEMBER, these conditions extending to the greater part of the British Isles at the beginning of the month, about the 22nd and at the end of the month. Monthly means of pressure exceeded the normal everywhere. Winds were mostly between south and west over Ireland, the greater part of Scotland and the north of England; elsewhere they were variable. Except in coastal districts where strong winds were recorded on many days, wind force was as a rule light to moderate. Conditions during OCTOBER were mostly cyclonic, high pressure occurring chiefly during the first few days and on the 13th. Monthly means of pressure were below the normal—at Stornoway the deficit was as much as 7 millibars. Winds were mostly between south and south-west and frequently strong in force. Gales in which the winds in gusts exceeded 70 miles per hour occurred on the 19th–20th in Scotland, Ireland and North Wales. On the 22nd the passage of a tornado caused structural damage in the west end of London, estimated at upwards of £15,000. During the greater part of NOVEMBER cyclonic conditions prevailed, the barometer falling frequently to low levels from about the 10th to the 26th and at all stations the mean pressure was decidedly below the normal, the deficiency ranging from 2 to 8 millibars. Winds were mainly from between north and east and light to moderate in force during the first ten days, thereafter strong winds between south-west and north-west reaching gale force locally occurred frequently. Severe gales in which the wind in gusts exceeded locally 80 miles per hour occurred on the 16th, 23rd and 25th. Pressure was frequently high during DECEMBER and everywhere monthly means of pressure exceeded the normal, the excess ranging from 4 to 7 millibars. Strong winds occurred frequently in the west and north-west and in exposed places reached gale force on the 6th, 7th, 10th and about the 25th.

Noteworthy Gales.—The dates of occurrence of the most outstanding gales of 1928 are given below. The tracks followed by the depressions associated with these gales are indicated by letters which are those assigned to them on the track charts published in the separate monthly issues.

Date.	Track.	Area Affected.
January 6	R	British Isles.
10	Q	Scotland, Ireland, Wales and S.W. England.
24	C	Scotland, Ireland, Wales and the north and south-west of England.
February 6-9	B, C, D,	Northern Districts.
10-11	K	British Isles.
October 19-20	K	Scotland, Ireland, Wales and S.W. England.
November 16	N	Southern England and Ireland.
23	I	British Isles.
25	E	" "

Westerly to north-westerly gales occurred widely on January 6th in the rear of a depression which had crossed northern Scotland. Maximum wind velocities attained in a gust amounted to 84 mi/hr. at Spurn, the highest on record at this place, 83 mi/hr. at Southport, and 82 mi/hr. at Fleetwood. Associated with an intense secondary depression off the Hebrides severe gales occurred on January 10th in which the wind momentarily attained a velocity exceeding 70 mi/hr. at exposed stations in Scotland, a gust of 78 mi/hr. being recorded at Paisley on that date. On January 24th a very deep depression centred to the north of the Faroes with a secondary trough extending southwards over Ireland gave rise to severe gales, the wind in gusts attaining a velocity of 87 mi/hr. at Lerwick. Severe gales occurred in Scotland and Ireland during the period February 6th-9th; 91 mi/hr. was recorded on the 6th and 89 mi/hr. on the 7th at Dunfanaghy and 79 mi/hr. at Tiree on the 8th. Associated with the passage of a deep depression across the British Isles to the North Sea very stormy weather occurred over most of the British Isles on February 10th-11th; amongst the highest gusts recorded were 86 mi/hr. at Holyhead, 81 mi/hr. at Sealand, and 83 mi/hr. at Scotland, on the 10th, and 84 mi/hr. at Southport and 78 mi/hr. at Birmingham on the 11th. The observer at Liverpool reported the occurrence about midnight on February 10th of a gust of 104 mi/hr., the highest ever recorded in this region. During the severe gales on October 19-20th gusts exceeding 70 mi/hr. were recorded at Cahirciveen on the 19th (83 mi/hr.) and at Dunfanaghy (70 mi/hr.), Aldergrove (73 mi/hr.), and Holyhead (81 mi/hr.) on the 20th. Very stormy weather prevailed widely during the second half of November. The most severe gales were those associated with intense depressions which crossed the country on the 16th, 23rd and 25th. Gusts exceeding 70 mi/hr. occurred in many places in southern England and Ireland; 93 mi/hr. was recorded in a gust at a height of 150 ft. above the ground at Cardington (near Bedford), 86 mi/hr. at Cahirciveen, 81 mi/hr. at Croydon and 70 mi/hr. at Calshot. The velocities recorded at Croydon and Calshot are the highest velocities so far recorded since the anemometers were erected there in 1922 and 1917 respectively. At Lympne, also, the wind velocity of 79 mi/hr. in a gust on the 16th exceeded all previous records since the erection of the anemometer there in 1922. As a result numerous telephone wires were blown down. Gales in which the wind in gusts exceeded 80 mi/hr. in places occurred over the entire country on November 23rd and 25th causing much structural damage, loss of life and much interference to cross channel steamship and air services. A gust of 87 mi/hr. recorded at South Shields on the afternoon of the 23rd is the highest recorded in that area since at least 1909.

Temperature.—A notable feature of 1928 was the mildness of the winter months January, February, March, October and November. It is of interest to recall that 1928 is the third year in succession in which the first three months of the year have been mild and the fifth year in which January has been mild in all districts. May and September were rather cool and June cold, decidedly so in Scotland, where it is reported to have been the coldest June for at least 60 years and probably for a much longer period. July was warm in the central and eastern districts of Great Britain while in April and August mean temperature exceeded the normal slightly in most districts. Annual mean temperatures were in general about normal in Scotland and exceeded the normal in England and Wales, and Ireland, the excess amounting to 0.9° F. over England and Wales and to 0.6° F. over Ireland.

The hottest days occurred generally during the periods July 11th-15th and August 5th-6th, when day temperatures between 80° F. and 90° F. were recorded in several districts in England. In most parts of England July 15th was the hottest day of the year, the temperature rising to 91° F. at Camden Square (London) and Newport (Isle of Wight) and to 90° F. at Stroud Green. Very high readings were also reported on July 22nd (92° F. at Greenwich*, 89° F. at Wisley, and 87° F. at Shoeburyness). Unusually high temperatures were recorded also towards the end of April and May and in some parts of the north-west of England and the west of Scotland the temperatures recorded on April 26th and May 30th and 31st were as high or higher than those recorded subsequently in July and August. Thus, the highest temperature recorded in the year at Aspatria and Stonyhurst occurred on April 26th, and at Ardnornish and Tiree the temperature recorded on May 31st equalled that recorded subsequently on August 5th and was the highest recorded during the year. Many warm nights occurred during July, August and the first half of September; in southern England the night of July 24th-25th was exceptionally warm, temperature not falling below 69° F. at Oxford and 66° F. in London.

Short spells of cold weather, distinguished by unusually severe frost in the screen and on the ground, occurred in March (8th to 13th), April (14th-16th), November (about the 4th and 9th on the 27th-28th) and about the middle and at the end of December. Screen minima of 20° F. and below were recorded at many places on March 11th, 12th and 13th and on December 9th, 14th and 15th. Reports from observers state the occurrence of a screen minimum of 11° F. on the morning of the 13th at E. Anstey (N. Devon) and a screen minimum of 12° F. and a grass minimum of 3° F. at Stogursey (near Bridgewater, Somerset), where serious damage was done to apricot and peach blossoms. At the beginning of the year the cold spell which was the most outstanding feature of December, 1927, still continued over the central and eastern district of Great Britain and on the morning of January 1st exceptionally low readings in the screen and on the grass were recorded at many places. Amongst the lowest screen readings were 8° F. at Braemar, 10° F. at Wolflee, 11° F. at Chelmsford, and 15° F. at Usk.

The extreme temperatures for the year were.—(England and Wales) 91° F. in London (Camden Square) and Newport (Isle of Wight) on July 15th and 11° F. at Chelmsford (Good Easter) on January 1st, and at Rhayader on March 13th. (Scotland) 79° F. at Perth on August 5th, and 8° F. at Braemar on January 1st. (Ireland) 83° F. at Killarney on July 22nd, and 14° F. at Mountmellick (Queen's Co.) on March 13th and 14th.

JANUARY was almost throughout mild and at no time during the month was there a spell of really cold weather, although in the fair intervals between the passage of depressions, frost, which was seldom severe, occurred at night. FEBRUARY was mild. Unusually mild nights were the 7th to 8th, 8th to 9th, and 15th to 16th, when screen minima in the neighbourhood of 50° F. were recorded. Ground frost occurred early in the month and frequently after the 16th. MARCH was on the whole mild, but there was a notable spell of cold weather from about the 8th to the 13th, when decidedly low temperatures were recorded. Monthly mean temperatures in APRIL were generally above

the normal in Great Britain and about or slightly below the normal in Ireland. From the 11th to the 21st cold weather occurred widely with severe ground frost. Unusually high temperatures were recorded on the 9th, 10th and 26th (68° F. at Tottenham and Greenwich, London, on the 9th, and 76° F. at Worksop, 75° F. at Southport and Cranwell, and 74° F. at Richmond, Surrey, Manchester and Hoyle on the 26th). MAY was rather cold on the whole in the eastern districts of Great Britain but in the western districts and in Ireland mean temperatures slightly exceeded the normal. Day temperatures between 70° F. and 80° F. were recorded in England in the south-east on the 3rd and 4th, in many districts on the 5th and 6th, and in the south on the 28th and 29th. Low day temperatures occurred about the 9th and from the 16th to the 23rd, with severe ground frost in inland districts from the 7th to the 10th and about the 19th. JUNE was cold, decidedly so in Scotland, and in nearly all districts the highest temperature recorded during the month was below that normally recorded in June. The warmest days of the month when day temperatures exceeded 70° F. occurred at the beginning of the month, on the 13th, during the period 22nd to 25th and on the 29th and 30th. JULY was very warm in the east and north-east of England. The mean temperature for the month exceeded the normal generally over England except in the north-west, and was rather below the normal in the north and west of Scotland and in Ireland. Mean temperature for AUGUST approximated to the normal. The warmest days occurred in general between the 5th and 7th and about the 11th and 24th. Day temperatures in the neighbourhood of 80° F. were recorded in several districts in England on the 5th and 11th. The mean temperature for SEPTEMBER was about or below the normal. Day temperatures were as a rule above the normal during the first half of the month, but subsequently reached an unusually low level for the time of year, notably about the 23rd and during the last few days of the month. Ground frost occurred on many nights during the second half of the month. OCTOBER was mild apart from rather low temperatures at the commencement and end of the month and about the 13th, and in northern districts about the 11th and 22nd. Rather low temperatures with severe ground frosts locally occurred during the first ten days of NOVEMBER and again on the 27th and 28th, but during the remaining days conditions were unusually mild. A prominent feature of the weather of DECEMBER was the unusually severe frost which occurred widely about the 9th and during a spell of easterly winds from the 14th to the 16th. Mild conditions prevailed during the first few days and around the 25th. Monthly mean temperatures were in general somewhat above the normal in the north-west of Scotland and from about 1° F. to 2° F. below the normal in central and southern England; elsewhere they were about normal.

Precipitation.—The annual general precipitation for the British Isles for 1928, expressed as a percentage of the normal for the period 1881-1915, was 118; the values for the constituent countries were:—England and Wales 113, Scotland 124, Ireland 125.

For the sixth year in succession the general precipitation over the British Isles has exceeded the normal and since comparable statistics became available in 1868 there have been only four wetter years—1872, 1877, 1882 and 1903. Over England and Wales 1924 and 1927 were wetter, but over Ireland the rainfall of 1928 has been exceeded only once in 60 years, in 1872 with 128 per cent., while in Scotland only the three years 1872, 1877 and 1903 were wetter with 134, 131 and 129 per cent.

In comparison, however, with the very wet summers of recent years the summer of 1928 was dry, although the deficiency amounted only to 4 per cent. It is of interest to note that out of the previous 12 summers only 1919 and 1921 with deficiencies of 17 and 27 per cent. received less than the normal.

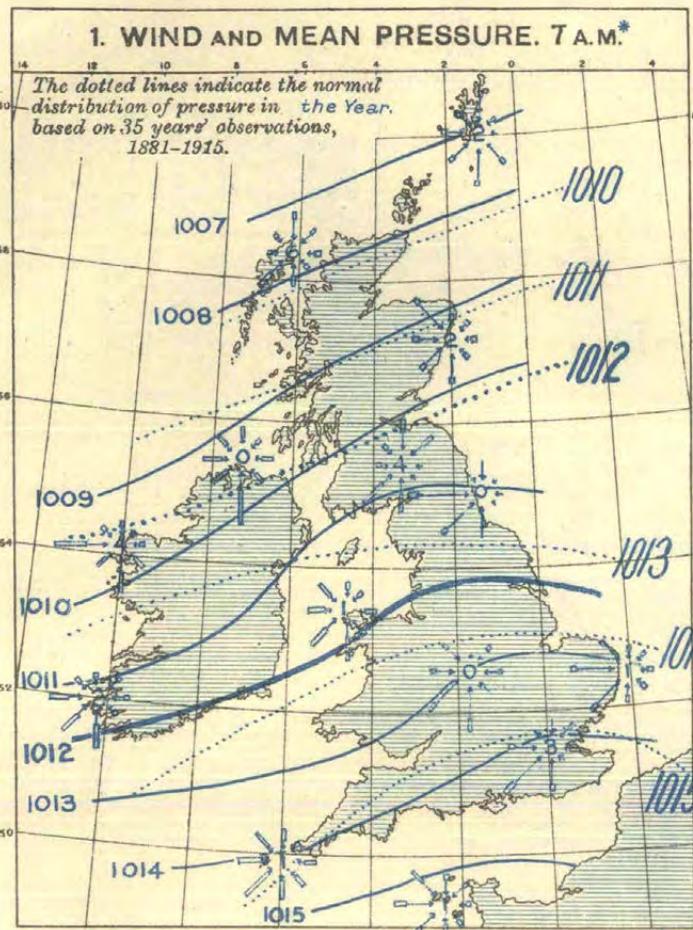
The most prominent feature of the rainfall of 1928 was the large area with an excess in Ireland and in the western half of Great Britain, especially in the English Lake District and in the Southern Uplands of Scotland, where the excess amounted to 50 per cent. Locally in both districts 1928 was the wettest year in the 60 years of comparable data. The rainfall appears to have exceeded 90 per cent. of the average everywhere and only about one-twentieth of the total area recorded less than the average. Deficiencies were confined almost entirely to stations in the east of England, occurring over an area in the neighbourhood of the Wash, including most of Suffolk and Norfolk and stretching from the coast as far west as Bedford and Lincoln and along a narrow coastal strip as far north as Berwick-on-Tweed. Less than the average was recorded in the neighbourhood of Keith in Banffshire and at Llandudno.

Over England and Wales more than 130 per cent. was recorded between Ventnor and Brighton, round Bala and Lake Vyrnwy and over a large area in the north-west. In Scotland more than 130 per cent. occurred over most of the south-west and more than 140 per cent. was recorded over two large areas, the western half of the Southern Uplands and from the Isle of Mull to the Grampians. The fall exceeded 150 per cent. only in the former region and reached 160 per cent. locally near Langholm. In Ireland falls of 120 per cent. were widespread and more than 130 per cent. was recorded in the neighbourhood of Cork, in Kerry and Connemara, to the north of the Mourne Mountains and between the mountains of Donegal and Londonderry. The rainfall in Ireland was remarkable in that it exceeded the average everywhere and we have to go back to 1903 to find a similar year of so widespread an excess.

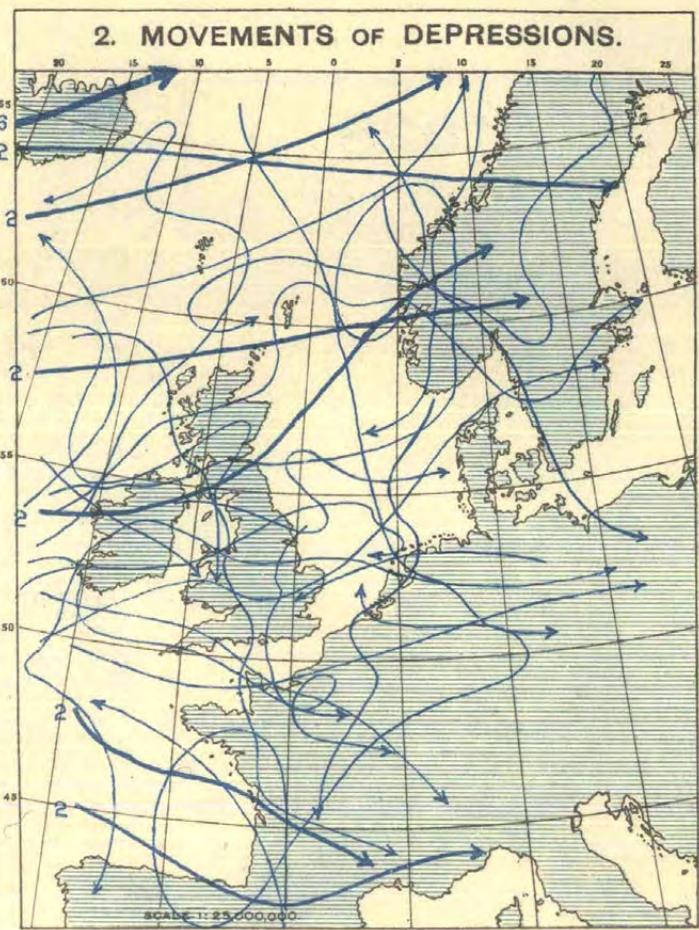
April, May, July and September were dry over the British Isles as a whole, September markedly so. The general fall over England and Wales for September was rather less than half the normal and it was the driest September since 1910, when the general fall was only a quarter of the normal. Apart from December when there was a small deficiency, the rainfall of the other months exceeded the normal. January was the wettest month of the year, with more than twice the normal amount. Over the country generally it was the wettest January since comparable statistics became available in 1870. At several stations all previous records for wetness were exceeded; it was the wettest January in records covering 97 years at Bolton, 81 years at Stonyhurst, 57 years at Southport, 69 years at Cargen (near Dumfries), and, as far as can be ascertained, 135 years at Manchester. A memorable incident of the weather of 1928 was the disastrous floods which occurred in London shortly after midnight on January 7th following an abnormal rise of the Thames, already in a swollen condition; in low-lying areas fourteen people lost their lives through being trapped in basements and a considerable amount of material damage was done by the water.

JANUARY was extremely wet, the general precipitation exceeding twice the normal in Great Britain and more than one-and-a-half times the normal

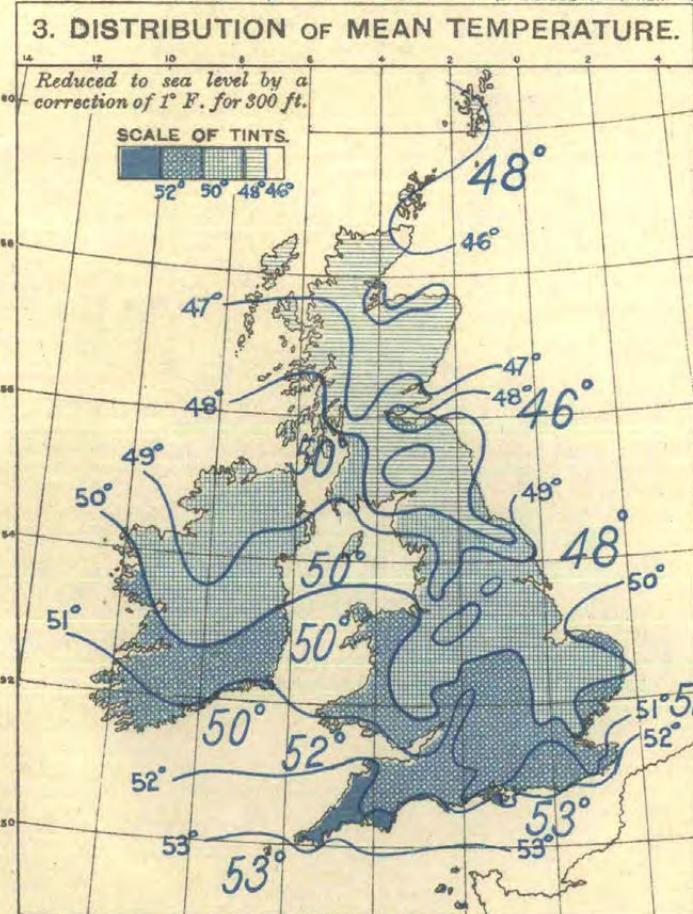
* Glaisher Stand.



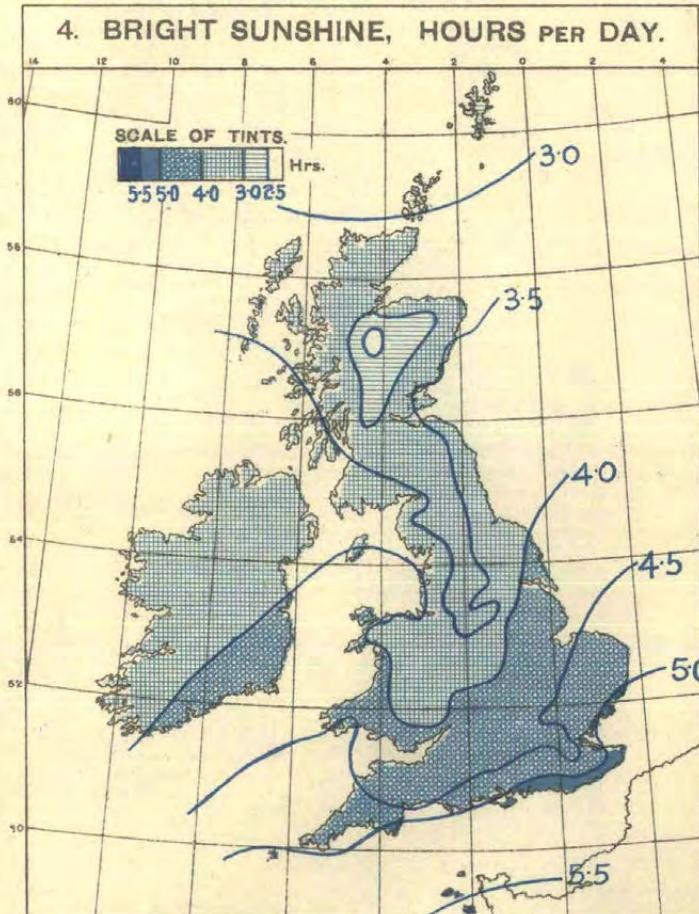
WIND ROSES. The arrows fly with the wind and indicate mean monthly frequency and force thus:
 LIGHT TO STRONG GALE
 30 Obs. = 1 Inch.



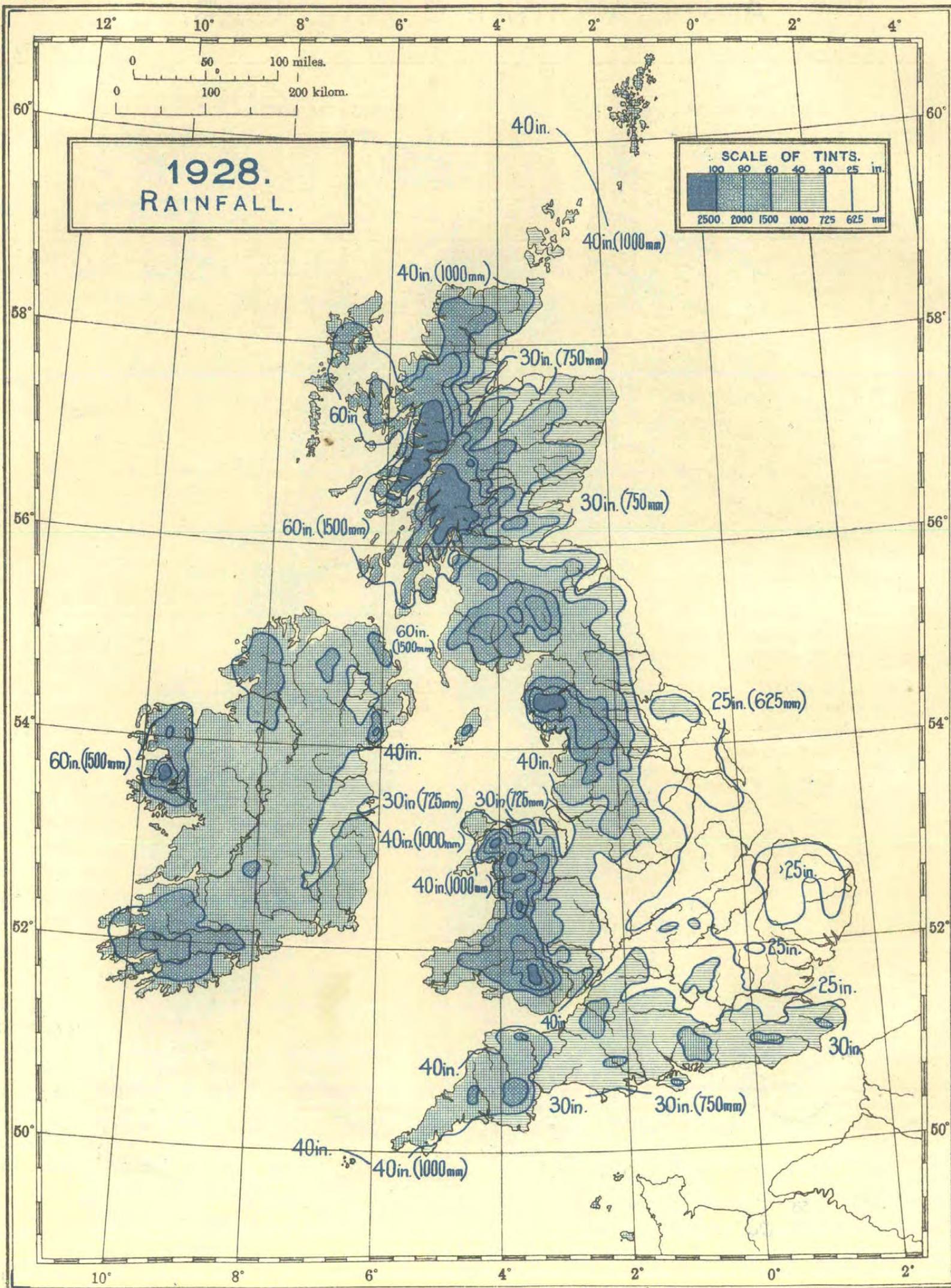
The figures indicate the number of depressions following each track. A number of tracks have been omitted.



Sea temperatures are shown in large figures, thus:



* Pressure in millibars.



in Ireland. At several places in Great Britain it was the wettest January on record for over half a century. Owing to the melting of the snow at the beginning of the month and the subsequent frequent rains much flooding occurred in many districts. The first half of FEBRUARY was wet and, although most districts experienced little or no rain from the 17th to the 28th, the general precipitation for the month in England and Wales, Scotland and Ireland exceeded the normal. Totals were below the normal, however, in the east and south-east of England, north-east Scotland and south Ayrshire, and locally in the south and west of Ireland. Heavy flooding occurred in some districts; the observer at Southport reported the greatest flooding for over 50 years. The general precipitation exceeded the normal in each of the three countries in MARCH. In some areas there was a well-marked excess, for example at Balmoral, Blair Atholl and Dundee, and along a coastal strip extending from Donaghadee to Cork, where more than twice the normal rainfall occurred. At Dundee it was decidedly the wettest March for at least 60 years. There were, however, large areas with a deficiency, notably in the north-western districts of the British Isles and in the east of England. APRIL was a relatively dry month, although in the south-east of England and southern Ireland there was an appreciable excess. MAY was a dry month with a pronounced deficiency in central and western England, south Wales and Ireland. JUNE was decidedly wet and, except over a few scattered districts in England, monthly totals and days of precipitation exceeded the normal. JULY was dry in spite of the heavy falls which occurred near the beginning and end of the month. In AUGUST the general precipitation exceeded the normal in Scotland and Ireland and was normal in England and Wales. Large areas, however, in the north of England had more than one-and-a-half times the normal; very heavy falls exceeding 40 mm. on the 20th were reported in many places. Flooding occurred at times, especially in the Border districts and various heavy rains were locally destructive. SEPTEMBER was dry over England and Wales, the extreme north-west and north of Scotland and over central Ireland. OCTOBER was predominantly wet and, except in some north-eastern and extreme northern districts of Scotland and in some north-eastern and eastern districts of England, monthly totals exceeded the normal. Precipitation was slight during the first 9 days of NOVEMBER but thereafter was both frequent and heavy, the general precipitation in each country exceeding the normal. Some unusually heavy falls occurred in several districts during the period 21st to 24th, notably in Scotland on the 23rd, where more than 50 mm. was recorded in some places (e.g., Carphairn, Arrochar and Inveraray). There was a deficiency of precipitation in DECEMBER, the deficiency being slight in Scotland and Ireland and moderate in England and Wales.

Snow.—During the period March 10th to 12th many districts were visited by severe snowstorms, roads often being blocked with snow drifts. On the evening of the 10th to 11th snow occurred as far south as the Scilly Isles and Roches Point. Glasgow had 6 in. snow on the 11th and Guernsey 1 in. on the 12th, while the depth of "snow lying" on the 12th was 8 in. at Margate, 6 in. at Durham and Copdock, and 3 in. in many other places. Snow occurred also in Scotland and northern districts during January and the first half of February and in most districts during the third week of April and in December, but falls as a rule were unimportant. Snow fell on the Cairngorms and other northern mountains in Scotland on September 28th.

Thunder.—Thunderstorms occurred in each month of the year in some part of the British Isles; they occurred most frequently in the south of England in May and widely during August: mention may be made of two unusually severe storms, both of which occurred in August. The first occurred at Gunn to the east of Barnstaple on the 28th when for 10 minutes frozen ice of various shapes fell with great violence destroying vegetation and cutting off the stalks of corn. Two hours after the storm a large number of pieces as large as a sixpence and half an inch thick were found. The second occurred at Armagh on the afternoon of the 29th when 42 mm. rain and hail fell in 50 minutes, of which 25 mm. fell in 20 minutes. The hailstones were as big as nuts or marbles and choked up the gutters and drains so that much flooding occurred. So intense a fall is a rare occurrence in Ireland.

Sunshine.—An outstanding feature of 1928 was the excess of sunshine recorded in central and eastern England during the summer months, July to September inclusive, and, in spite of an excessive rainfall, the excess of sunshine recorded in nearly all districts in January and February. In September sunshine amounts exceeded the normal everywhere, decidedly so

in the south-east of England, where totals ranged locally from 65 to 70 per cent. of the astronomically possible totals. Monthly totals were generally deficient in March, April, May (except in Ireland and the west of Scotland), and except in eastern districts and parts of Scotland in November and December. Sunshine totals for the year exceeded the normal in central and eastern England, especially in the south-east and in the Channel Isles. There was a decided deficiency in Scotland and in Ireland a slight excess.

Although JANUARY was excessively wet and the wettest month of the year, there was a notable excess of sunshine in all districts, some sunshine being recorded on most days while excellent records were obtained on several days including the 3rd, 11th, 15th, 17th, 19th and 27th. At Ross-on-Wye the month, although the wettest January since 1886, was the sunniest January since sunshine records commenced there 14 years ago. At Totland Bay it was the sunniest January since 1908. Following the wet weather of the first half of FEBRUARY sunny periods occurred frequently and in all districts totals for the month exceeded the normal. In the south of England between 9 and 10 hours' sunshine were recorded during the days 25th-28th inclusive. Sunshine amounts were decidedly below the normal everywhere in MARCH, notably in the East of Scotland. There were, however, many sunny periods, notably over a wide area on the 9th, 10th and 18th and in many places on the 28th, 30th and 31st. Monthly totals of sunshine were below the normal in APRIL except in northern Ireland, the Hebrides and the north-west coast of Scotland. In MAY totals were mostly deficient except in Ireland and the west of Scotland where there was a slight excess. There were, however, some very sunny periods, particularly between the 3rd and 11th, during the week ending May 26th and at the end of the month. Monthly totals in JUNE were appreciably below the normal in the western and southern districts of England and Wales and in southern Ireland, and about or above the normal elsewhere. The sunniest days occurred at the beginning of the month, daily amounts exceeding 15 hours in many places during the first four days. Good records were also obtained during the periods 11th to 17th, on the 19th and 20th, during the periods 22nd-25th, and on the 29th and 30th. JULY was a very sunny month in eastern and central England, but there was a considerable deficiency in western and northern Scotland and a moderate deficiency in northern Ireland. The mean daily amount exceeded ten hours locally on the coasts of Sussex, Kent and Essex, but at Fort Augustus and Oban in Scotland was only a little over two hours. At many places in eastern England there was more sunshine even than in July of the exceptional summer of 1921. Totals for AUGUST were in general above the normal in Ireland and in the central and eastern districts of England and below the normal elsewhere, the most pronounced deficiency occurring in the Shetlands where the mean daily duration, as recorded at Lerwick, was 2.04 hr. below the normal. An excess of sunshine was recorded in all districts in SEPTEMBER. The month was the sunniest September at Edinburgh since 1906 and at Richmond (Surrey) since 1911. Bright intervals occurred frequently in OCTOBER and in most districts of England totals exceeded the normal. In the north of Ireland and the west of Scotland there was a decided deficiency. NOVEMBER totals exceeded the normal generally in the central and eastern districts of Great Britain and in the west of Scotland and were below the normal elsewhere. Totals in DECEMBER exceeded the normal in the eastern districts of England and the south and east of Scotland; in Ireland, the north-west of Scotland and in most districts in the west and south-west of England they were below the normal.

Fog.—Fog occurred locally in each month of the year; it occurred most frequently and widely during the third week of February the first week of March, during September, the early part of November and in December.

Miscellaneous Phenomena.—Aurora was observed in each month except June and July, most frequently in the north of Scotland; it was seen as far south as Waterford in May, as far south as Durham in October and as far south as Dublin in November. A brilliant display of aurora was observed over a wide area in Scotland on the 19th. Observations of the Zodiacal Light were made in one or two places in January, March, April, May, August, September and November. A mirage was seen at sea off Aberdeen on July 12th. An observer of Barcombe (near Lewes) reported the occurrence of what appeared to be a small waterspout reaching about quarter of the way from a cloud to the earth and persisting for about 10 minutes on the evening of April 27th. Ball lightning was reported as having been observed at Smallfield, Horley (Surrey) on the afternoon of October 25th.

TABLE I.—DISTRICT VALUES FOR THE WHOLE YEAR, 1928. [1908, REVISED 1928].

DISTRICTS.	AIR TEMPERATURE.			EARTH TEMPERATURE.		RAINFALL.		SUNSHINE.	
	High-est.	Low-est.	Daily Mean. Deviation from Normal.	At 1 ft. Deviation from Normal.	At 4 ft. Deviation from Normal.	Per-centage of Normal.	No. of Days. Deviation from Normal.	Per-centage of Normal.	Per-centage of Possible Duration.
o. SCOTLAND, N.	°F. 75	°F. 20	°F. +0.2	°F. —	°F. —	% 117	+5	% 88	% 23
Eastern.									
1. SCOTLAND, E.	79	8	+0.1	—	—	119	+24	89	28
2. ENGLAND, N.E.	88	15	+0.5	-0.2	0.0	102	+14	102	32
3. ENGLAND, E...	89	11	+1.2	0.0	-0.2	106	-7	107	39
4. MIDLAND COUNTIES	88	14	+1.0	-0.2	-0.2	104	+3	101	33
5. ENGLAND, S.E.	92	16	+1.1	+0.9	+0.8	114	+10	112	40

DISTRICTS.	AIR TEMPERATURE.			EARTH TEMPERATURE.		RAINFALL.		SUNSHINE.	
	High-est.	Low-est.	Daily Mean. Deviation from Normal.	At 1 ft. Deviation from Normal.	At 4 ft. Deviation from Normal.	Per-centage of Normal.	No. of Days. Deviation from Normal.	Per-centage of Normal.	Per-centage of Possible Duration.
Western.									
6. SCOTLAND, W. (& I. of Man)	°F. 77	°F. 10	°F. +0.2	°F. —	°F. -0.5	% 141	+20	% 97	% 28
7. ENGLAND, N.W. (& N. Wales)	81	18	+0.6	-0.2	-0.7	123	+21	97	32
8. ENGLAND, S.W. (& S. Wales)	86	11	+1.1	+0.3	+0.1	115	+16	99	35
9. IRELAND, N...	78	19	+0.6	-0.3	-0.3	129	+9	102	30
10. IRELAND, S...	83	14	+0.6	+0.1	-0.2	122	+21	101	33
11. CHANNEL I. (& Scilly)	79	27	+1.0	+1.2	+1.1	126	-4	107	45
Mean: DISTRICTS 1-10	92	8	+0.7	+0.1	-0.1	117	+13	101	33

TABLE II.—SUMMARY OF AUTOGRAPHIC RECORDS OF WIND—THE YEAR 1928. [1914].

The Summary showing the duration of Gales, Fresh and Moderate Breezes, and Calms and Light Airs, with Extreme Velocities, at anemograph stations, will be found as Table XI, p. 191, in the Wind Section.

TABLE III (continued).—SUMMARY OF THE RECORDS OF TEMPERATURE, RAINFALL and SUNSHINE, and of WEATHER OBSERVATIONS, YEAR 1928.

DISTRICT, COUNTY AND PLACE.	Terminal Hours of Observation.	Height of Station above Mean Sea Level.	AIR TEMPERATURE IN DEGREES FAHRENHEIT.							Earth Temperature.		RAINFALL.				WEATHER. Number of days.								BRIGHT SUNSHINE.						
			Means of		Deviation from Normal.	Absolute Maximum and Minimum. For Dates see Table V.	r ft.	4 ft.	Total Fall.	Deviation from Normal.	Most in a day.		Precipitation.	Precipitation 1 mm. or more.	Snow.	Snow lying.	Hail.	Thunderstorm.	Fog.	Ground Frost.	Gale.	Hours per day.								
			A	B							Amount.	Date.										Daily Mean.	Deviation from Normal.	Per cent.						
8b. ENGLAND, S.W.—cont.	G.M.T.	ft.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	in.	mm.	mm.	mm.											hr.	hr.	%			
Dorset— Shaftesbury ..	9 9 9	722	56.1	42.7	49.4	+1.2	82	22	—	—	30.30	769	—	57	30	3 Aug.	175	131	8	5	3	4	—	—	—	—	—	—	—	
Devon.																														
Arlington ..	9 9 9	613	55.7	43.5	49.6	+1.3	75	18	—	—	65.81	1671	+305	52	27 Dec.	210	198	5	3	28	11	—	—	49	6	—	—	—		
Ashburton ..	9 9 9	583	58.1	44.5	51.3	+0.9	85	22	—	—	62.53	1588	+275	52	1 Jan.	216	190	5	0	1	0	5	—	—	—	—	—	—	—	
Cullompton ..	9 9 9	202	59.3	42.3	50.8	+1.2	86	18	52.3	—	37.40	950	+54	33	27 Dec.	219	161	4	1	6	6	8	100	4	4.00	—0.06	33	—	—	
Dean Prior ..	21 21 9	116	57.3	42.5	49.9	—	83	19	—	—	89.55	2275	—	62	27 Dec.	240	204	14	5	9	12	—	—	—	—	—	—	—	—	
Ilfracombe ..	9 9 9	74	56.6	48.2	52.4	+0.9	73	28	53.0	53.2	40.35	1025	+111	43	27 Dec.	209	160	2	0	4	2	3	9	1	4.18	—	34	—	—	
Killerton ..	9 9 9	159	58.7	42.6	50.7	—	85	20	—	—	31.59	803	—	32	27 Dec.	168	148	1	0	0	0	—	—	—	—	—	—	—	—	
Newton Abbot ..	9 9 9	350	57.9	44.3	51.1	—	86	25	—	—	41.44	1053	—	32	27 Dec.	206	154	5	3	9	7	10	52	1	4.35	—	36	—	—	
Plymouth (Hoe) ..	21 21 9	116	57.9	46.9	52.4	+1.4	80	23	52.7	52.8	40.10	1019	+86	32	1 Jan.	200	163	0	0	4	1	16	21	20	4.71	+0.15	39	—	—	
Plymouth (Cattewater) ..	18-7 7	82	57.0	47.3	52.1	—	78	25	—	—	36.27	921	—	29	28 Jan.	200	160	4	0	17	5	7	24	56	4.55	—	37	—	—	
Salcombe ..	9 9 9	39	57.1	46.1	51.6	—	79	25	—	—	43.22	1098	—	37	15 April	188	159	0	0	0	3	4	—	6	5.03	+0.17	41	—	—	
Sidmouth ..	9 9 9	25	—	—	—	—	—	—	—	—	32.21	818	—	5	27 Dec.	185	152	—	—	—	—	—	—	—	—	—	—	—	—	
Tavistock ..	9 9 9	458	56.8	43.9	50.3	—	82	21	—	52.3	57.06	1449	—	45	1 Jan.	234	198	5	2	29	7	9	88	14	—	—	—	—	—	
Teignmouth ..	9 9 9	20	58.1	46.4	52.3	+1.1	83	25	—	—	34.67	881	+77	26	27 Dec.	190	143	4	0	10	9	7	22	34	4.96	—	41	—	—	
Torquay ..	9 9 9	12	58.4	47.2	52.8	+1.7	85	26	—	52.6	35.73	907	+67	26	27 Dec.	188	152	1	0	9	10	5	33	29	5.04	+0.22	41	—	—	
Woolacombe ..	21 21 9	59	56.6	47.4	52.0	+0.9	73	26	—	—	34.12	867	+75	37	27 Dec.	204	162	1	0	13	4	2	18	3	4.17	—0.37	34	—	—	
Cornwall.																														
Falmouth Ob ..	9 9 9	167	57.7	47.3	52.5	+1.5	81	24	54.2	54.6	49.28	1252	+144	48	10 Dec.	206	167	2	0	20	11	12	42	9	4.74	—0.08	39	—	—	
.. (Pendennis) ..	18-7 7	200	56.1	48.5	52.3	—	78	28	—	—	39.73	1009	—	51	10 Dec.	194	153	2	0	—	10	10	—	43	4.98	—	41	—	—	
Fowey ..	9 9 9	51	58.6	46.4	52.5	—	81	25	—	—	39.27	997	—	43	27 Sept.	(193)	(169)	—	—	—	—	—	—	—	—	4.49	—	37	—	—
Gulval ..	9 9 9	20	57.8	47.1	52.5	—	78	27	—	—	47.10	1196	—	40	1 Jan.	219	180	0	0	5	2	—	23	21	4.97	—	41	—	—	
Newquay ..	9 9 9	190	56.3	46.8	51.5	+0.5	76	24	52.5	52.3	39.00	991	+146	31	10 Dec.	209	166	1	0	14	4	4	—	8	4.72	+0.09	39	—	—	
Redruth ..	9 9 9	397	56.2	45.9	51.1	—	75	25	—	—	52.70	1339	+190	46	1 Jan.	230	187	5	0	24	5	19	48	25	—	—	—	—	—	
9. IRELAND, N.																														
Sligo. Markree Cas. ..	21 21 9	122	55.8	40.8	48.3	+0.6	76	19	50.1	49.9	54.87	1394	+288	45	13 June	253	216	18	1	40	8	3	—	25	3.59	+0.13	29	—	—	
Mayo. Blacksod Pt. ..	18-7 7	10	54.5	46.3	50.4	+1.0	72	29	—	—	58.93	1497	+235	42	7 Sept.	267	217	6	0	32	8	1	—	21	—	—	—	—	—	
Mallarsay ..	9 9 9	120	55.2	44.5	49.9	—	75	28	—	—	73.56	1868	—	33	6 Aug.	257	227	5	5	21	4	0	—	—	—	3.55	+0.02	29	—	—
Donegal. Malin Hd. ..	18-7 7	51	52.0	44.6	48.3	+0.2	73	29	—	—	47.16	1198	+386	34	19 Aug.	237	190	14	0	54	6	2	—	16	3.65	—0.13	30	—	—	
Antrim. Aldergrove ..	18-7 7	238	53.6	41.7	47.7	—	73	26	—	—	41.00	1042	—	25	19 Aug.	233	188	25	6	21	6	9	92	9	3.85	—	32	—	—	
Belfast ..	9 9 9	13	(55.1)	(43.9)	(49.5)	—	75	29	—	—	45.94	1167	—	30	29 Feb.	234	183	—	—	—	—	—	—	—	—	—	—	—	—	
Lisburn ..	9 9 9	206	55.7	41.1	48.4	+0.9	78	25	—	—	39.12	994	+128	25	29 Feb.	235	189	—	—	—	—	—	—	—	—	—	—	—	—	
Down. Donaghadee ..	18-7 7	40	53.4	43.9	48.7	+0.4	71	30	—	—	43.32	1100	+305	23	29 Feb.	229	171	16	0	10	6	7	—	31	—	—	—	—		
Armagh. Armagh ..	21 21 9	204	54.9	42.0	48.5	+0.4	74	25	49.3	49.3	40.80	1036	+230	28	10 Feb.	230	184	24	12	17	7	6	63	1	36.4	+0.10	30	—	—	
Longford. Newtownforbes ..	21 21 9	161	54.9	40.4	47.7	—	76	23	48.9	49.4	46.38	1178	—	29	8 June	236	192	10	5	26	9	—	—	9	—	—	—	—	—	
10. IRELAND, S.																														
Dublin. Balbriggan ..	9 9 9	203	54.7	43.1	48.9	+0.7	76	23	49.4	50.3	34.95	888	+157	33	15 Dec.	227	168	10	3	12	6	40	48	27	—	—	—	—	—	
City ..	21 21 9	54	56.1	44.7	50.4	+0.4	77	21	—	—	28.70	729	+34	25	13 June	217	152	13	2	20	5	21	23	20	—	—	—	—	—	
Glasnevin ..	21 21 9	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Phoenix Pk. ..	21 21 9	155	56.1	41.1	48.6	+0.6	77	16	—	—	31.12	791	+89	27	13 June	213	159	10	1	9	5	11	98	12	4.17	+0.04	34	—	—	
Trin. Coll. ..	21 21 9	12	56.7	44.7	50.7	+0.8	79	20	50.3	50.1	27.30	693	+33	27	13 June	203	146	8	4	14	2	—	38	11	—	—	—	—	—	
Wicklow. Newcastle ..	21 21 9	256	55.5	43.1	49.3	—	78	22	—	—	47.66	1211	—	37	15 Dec.	213	165	9	4	4	2	7	—	10	—	—	—	—		
King's Co. Birr Castle ..	18-7 7	173	55.6	42.5	49.1	+0.8	81	19	50.5	50.5	40.00	1016	+189	30	15 Dec.	227	177	13	2	25	5	19	109	3	3.84	+0.16	31	—	—	
Queen's Co. Mountmellick ..	9 9 9	252	56.0	41.8	48.9	—	81	14	—	—	47.74	1213	—	42	15 Dec.	237	198	—	—	—	—	—	—	—	—	—	—	—	—	
Wexford. Newtownbarry ..	9 9 9	153	57.2	42.9	50.1	—	77	19	51.6	51.2	56.09	1425	—	49	15 Dec.	213	186	2	0	4	2	—	—	2	—	—	—	—	—	
Kilkenny. Kilkenny ..	9 9 9	182	57.0	42.1	49.5	+0.8	81	23	—	—	38.97	990	+148	28	15 Dec.	234	183	—	—	—	—									

TABLE IV.—SUMMARY of the OBSERVATIONS of PRESSURE, TEMPERATURE, HUMIDITY, CLOUD, VISIBILITY, and WIND at fixed hours at certain Stations during the Year 1928.

DISTRICT, COUNTY AND PLACE.	Hour of Observation.	Height of Barometer above Mean Sea Level.	MEAN PRESSURE.		TEMPERATURE AND HUMIDITY.				CLOUD AMOUNT.					VISIBILITY.									WIND, NUMBER OF OBSERVATIONS.														
			At Mean Sea Level.	Deviation from Normal.	Dry Bulb.	Depression of Wet Bulb.	Vapour Pressure.	Relative Humidity.	Mean Amount.	NO OF OBSERVATIONS.					NUMBER OF OBSERVATIONS.									FORCE (0-12).													
										0	1 to 3	4 to 6	7 to 9	10	0	1	2	3	4	5	6	7	8	9	8 or more.	4 to 7	1 to 3	Caln.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	
0. SCOTLAND, N.																																					
Shetlands. Lerwick	1	59	1006.5	—	45.1	1.7	8.9	86	7.8	0	39	54	140	133	1	1	1	1	2	1	6	139	214	0	10	75	236	45	51	23	13	46	67	63	22	36	
	7	59	1006.8	-2.5	45.4	1.7	9.0	86	8.1	0	24	51	162	129	0	2	2	2	1	2	7	118	232	0	7	57	274	28	57	23	14	44	82	50	34	34	
	13	59	1007.3	—	47.5	2.4	9.2	82	7.9	0	26	42	191	107	0	0	0	1	0	1	12	99	253	0	8	65	286	7	51	27	19	48	87	55	31	41	
	18	59	1006.9	—	46.4	2.1	9.1	84	8.0	0	22	54	179	111	0	1	0	1	0	2	15	114	233	0	7	65	276	18	53	29	19	53	72	60	27	35	
Orkneys. Deerness	9	165	1008.4	—	45.7	1.9	9.0	85	7.5	0	36	85	125	120	0	6	9	3	1	4	20	36	211	76	4	232	117	13	45	27	26	38	87	42	42	46	
	21	165	1008.5	—	44.8	1.6	8.8	87	7.0	3	69	79	92	123	0	6	1	4	2	3	13	54	246	37	5	180	149	32	35	23	30	40	63	50	45	48	
Hebrides. Stornoway	7	41	1007.4	-2.5	45.6	1.4	9.4	89	7.6	9	30	66	134	127	0	0	0	1	2	8	88	216	51	0	3	125	162	76	40	29	20	28	54	68	29	22	
	13	41	1007.7	—	49.7	2.6	10.1	82	7.5	6	33	56	154	117	0	0	0	0	10	72	192	78	14	14	2	152	175	37	36	34	26	38	85	78	34	42	
	18	41	1007.7	—	47.6	1.9	9.8	85	7.6	10	29	64	130	133	0	0	0	0	1	7	94	159	87	18	1	151	165	49	37	45	24	28	46	50	40	47	
Caithness. Wick	1	97	1008.6	—	44.1	0.9	9.2	93	7.4	0	33	92	130	111	0	3	2	2	1	1	2	24	331	0	5	70	288	3	22	16	19	32	56	87	62	69	
	7	97	1008.4	-1.8	44.7	1.1	9.3	91	7.9	0	17	84	120	145	0	8	2	0	1	1	7	36	310	1	6	76	282	2	26	19	15	31	71	78	50	74	
	13	97	1008.7	—	47.7	1.6	10.1	88	8.2	0	14	72	147	139	0	5	1	1	2	1	28	327	0	6	92	267	1	26	32	21	37	85	78	34	52		
	18	97	1008.4	—	46.3	1.3	9.7	89	7.8	0	8	85	140	127	0	5	0	1	1	1	3	43	311	1	5	90	268	3	31	28	21	42	71	60	47	63	
Inverness. Inverness	9	250	1008.7	—	46.1	2.6	8.6	79	5.2	8	72	185	73	28	0	0	1	3	4	5	18	29	121	185	0	120	195	51	20	53	7	13	60	114	36	12	
	17	250	1008.4	—	48.0	3.2	9.0	76	5.2	7	79	177	79	24	0	1	2	0	5	2	15	20	138	183	0	153	184	29	35	69	9	19	63	90	35	17	
1. SCOTLAND, E.																																					
Nairn. Nairn	7	82	1008.6	-2.1	44.3	2.0	8.5	84	7.6	1	18	136	200	11	0	0	0	1	2	3	17	89	254	0	1	29	177	159	15	16	34	5	6	19	94	18	
	13	82	1008.2	—	50.2	3.5	9.5	75	6.3	0	10	202	150	4	0	0	0	2	0	9	78	276	1	3	44	252	67	16	26	71	11	16	36	95	28		
	18	82	1008.5	—	47.4	2.7	9.1	80	6.6	1	15	141	199	10	0	0	0	4	0	7	93	261	1	2	41	235	88	15	23	66	13	10	32	97	22		
Aberdeen. Aberdeen H	7	85	1009.7	-1.9	44.8	2.2	8.5	83	6.7	6	85	37	139	99	0	1	2	5	12	21	103	84	138	0	0	113	204	49	30	15	14	23	76	43	58	58	
	13	85	1009.6	-2.1	48.9	3.5	9.0	75	7.0	1	64	62	148	91	0	0	0	10	28	81	81	166	0	0	186	175	53	29	36	40	79	47	44	49			
	18	85	1009.6	-2.1	47.5	2.9	8.9	78	6.5	12	90	41	122	101	0	2	1	6	7	29	102	84	135	0	1	128	215	22	38	24	24	32	87	46	49	44	
	21	85	1009.9	-2.1	45.7	2.3	8.7	82	6.1	30	93	41	91	111	0	1	5	6	9	26	115	107	97	0	0	91	233	42	23	18	19	23	70	58	60	53	
Aberdeen. Braemar	9	1114	—	—	43.3	2.9	7.4	76	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0	52	314	0	24	49	50	15	27	164	16	21	
Perth. Crieff	9	482	1009.9	—	46.2	2.7	8.7	80	7.8	4	43	57	87	175	—	—	—	—	—	—	—	—	—	—	—	1	142	223	0	28	21	91	6	17	37	136	30
	21	482	1010.0	—	44.9	2.3	8.6	82	7.2	43	38	37	72	176	—	—	—	—	—	—	—	—	—	—	—	1	110	255	0	35	12	89	13	14	25	150	28
Fife. Inchkeith	1	184	1009.7	—	47.2	1.6	9.3	87	5.9	25	101	59	70	111	0	10	2	2	6	1	11	52	256	26	3	111	247	5	22	39	51	23	22	105	84	15	
	7	184	1009.7	—	45.3	1.5	9.2	88	7.4	5	52	64	118	127	0	13	3	5	6	9	24	72	220	14	4	132	227	3	16	43	49	20	22	101	97	15	
	13	184	1009.6	—	49.1	3.0	9.4	78	7.6	2	37	68	147	112	0	4	2	2	3	9	31	64	227	24	3	153	206	4	14	37	74	23	20	103	87	4	
	18	184	1009.5	—	48.1	2.5	9.5	81	7.1	1	59	77	108	121	0	3	1	3	3	3	29	74	231	19	3	132	230	1	16	38	70	31	23	103	73	11	
Fife. Leuchars H	7	36	1010.1	—	44.6	1.7	9.0	87	7.2	13	60	48	119	126	0	2	4	0	6	26	47	88	190	3	1	97	227	41	23	34	31	21	15	106	73	22	
	13	36	1009.9	—	50.4	3.7	9.6	75	7.7	2	36	55	151	122	0	0	0	0	3	15	61	74	194	19	0	156	198	12	17	34	60	39	28	76	75	25	
	18	36	1009.9	—	47.6	2.5	9.5	82	7.1	11	56	56	119	124	0	1	0	0	5	9	62	75	205	9	1	132	212	21	21	31	56	41	25	86	66	19	
Edinburgh. Blackford Hill	9	441	1011.1	—	46.5	2.6	8.8	80	7.6	25	24	66	62	189	—	—	—	—	—	—	—	—	—	—	—	19	147	163	37	19	32	31	23	44	49	96	35
	21	441	1010.9	—	45.7	2.3	8.8	82	6.9	36	47	47	72	164	—	—	—	—	—	—	—	—	—	—	—	5	147	160	54	10	21	40	24	41	80	79	17
6a. SCOTLAND, W.																																					
Argyll. Tiree	7	40	1008.7	—	47.4	1.5	10.0	88	6.9	16	57	76	102	115	0	1	0	0	1	4	38	105	161	56	2	248	112	4	46	28	29	47	75	44	52	41	
	13	40	1009.0	—	50.5	2.4	10.7	83	6.9	13	50	90	97	116	0	0	0	0	0	9	46	70	153	88	10	254	102	0	57	29	15	44	70	42	73	36	
	18	40	1008.9	—	49.1	1.9	10.4	86	6.6	19	59	94	86	108	0	0	1	0	1	11	33	80	157	83	8	229	126	3	75	19	18	41	62	40	70	38	
Bute. Rothesay	9	187	1010.7	—	47.4	2.1	9.5	84	8.4	2	15	59	81	209	0	0	0	14	14	17	93	66	140	22	1	213	152	0	16	87	19	47	38	27	46	86	
	21	187	1010.7	—	46.7	1.9	9.4																														

TABLE IV (continued).—SUMMARY of the OBSERVATIONS of PRESSURE, TEMPERATURE, HUMIDITY, CLOUD, VISIBILITY, and WIND at fixed hours at certain Stations during the Year 1928.

DISTRICT, COUNTY AND PLACE.	Hour of Observation.	Height of Barometer above Mean Sea Level.	MEAN PRESSURE.		TEMPERATURE AND HUMIDITY.				CLOUD AMOUNT.					VISIBILITY.									WIND, NUMBER OF OBSERVATIONS.													
			At Mean Sea Level.	Deviation from Normal.	Dry Bulb.	Depression of Wet Bulb.	Vapour Pressure.	Relative Humidity.	Mean Amount.	NO. OF OBSERVATIONS.				NUMBER OF OBSERVATIONS.									FORCE (0-12).				N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		
										0	1 to 3	4 to 6	7 to 9	10	FOG.			MIST.	POOR VIS.	MOD. VIS.	GOOD VISIBILITY.	8 or more.	4 to 7	1 to 3	Calm.											
			0	1	2	3	4	5	6	7	8	9	0	1	2	3	4									5	6	7	8	9						
2. ENGLAND, N.E.—cont.																																				
Durham. Durham	9	352	1011.8	—	47.3	2.6	9.2	81	6.7	32	66	49	53	166	0	3	6	17	43	48	99	102	48	0	4	68	269	25	26	23	32	10	92	45	83	30
	21	352	1011.9	—	45.6	1.9	9.1	86	6.5	65	54	32	30	185	0	1	3	6	13	49	135	140	19	0	7	54	256	49	30	23	25	9	75	66	68	21
York, N. Riding. Scarborough	9	96	1012.3	—	49.6	3.2	9.7	78	4.8	68	83	86	72	57	0	2	4	4	11	10	115	121	99	0	1	21	344	0	45	24	3	33	57	82	54	68
	9	53	1012.5	—	48.6	3.1	9.3	79	6.7	64	39	38	32	193	—	—	—	—	—	—	—	—	—	—	0	5	359	2	64	26	16	34	97	29	61	37
York, E. Riding. Spurn Head	21	53	1012.4	—	48.0	2.6	9.4	81	5.3	148	19	10	8	181	—	—	—	—	—	—	—	—	—	—	0	5	357	4	46	34	33	20	93	45	65	26
	1	28	1012.0	—	47.0	1.3	10.1	90	6.1	40	54	87	90	95	2	4	2	1	6	16	122	193	20	0	1	237	126	2	25	19	31	37	51	81	75	45
Lincoln. Cranwell H	7	28	1012.0	-1.4	47.2	1.5	10.0	89	7.1	16	36	76	138	100	0	3	2	8	5	19	149	167	13	0	1	263	101	1	28	21	34	30	64	63	71	54
	13	28	1011.7	—	51.6	3.1	10.6	80	7.3	9	22	83	170	82	0	1	0	2	4	9	140	190	20	0	9	253	103	1	44	26	39	47	40	63	63	43
	18	28	1011.7	—	49.7	3.3	10.5	84	7.1	12	38	76	149	91	0	0	0	3	21	120	200	19	0	5	252	109	0	42	29	43	56	44	53	64	35	
	1	240	1013.6	—	44.3	0.8	9.6	94	5.3	73	85	33	71	104	0	3	9	9	7	35	189	91	23	0	1	99	241	25	29	20	21	27	41	84	89	30
Norfolk. Cromer H	7	240	1013.6	—	45.1	1.1	9.7	92	7.1	23	71	33	117	122	0	15	14	9	13	27	172	80	36	0	0	122	226	18	29	18	25	33	48	77	85	33
	13	240	1013.1	—	53.9	4.3	10.9	75	7.6	15	28	45	160	118	0	0	3	3	9	18	126	106	101	0	1	212	148	5	36	32	22	28	57	78	69	39
	18	240	1013.1	—	50.6	2.7	10.7	83	6.9	16	68	41	109	132	0	1	5	5	7	21	148	101	78	0	0	155	199	12	28	33	33	39	41	79	63	38
3. ENGLAND, E.																																				
Norfolk. Yarmouth	9	74	1013.3	—	50.8	3.2	10.1	79	6.3	11	69	81	132	73	0	2	0	1	4	5	119	74	147	14	0	75	289	2	32	23	31	34	76	57	52	59
	1	26	1013.4	—	47.8	1.4	10.3	89	5.4	92	47	63	37	127	1	3	4	1	1	24	106	218	8	0	0	109	243	14	20	18	28	31	46	90	81	38
Suffolk. Felixstowe Aero	7	26	1013.3	-0.9	47.1	1.6	9.8	88	6.3	32	50	93	73	118	0	5	1	2	2	27	210	116	3	0	0	110	243	13	22	27	24	29	44	81	79	47
	13	26	1013.2	—	53.1	3.4	11.0	79	6.8	19	28	124	91	104	0	2	2	0	2	16	230	114	0	0	0	193	161	12	40	38	35	35	58	59	54	35
	18	26	1012.7	—	51.3	3.0	10.5	81	6.7	33	40	77	93	123	0	2	2	1	1	20	200	137	3	0	1	148	199	18	35	35	29	39	70	68	59	33
Cambridge. Cambridge H	7	20	1014.1	—	48.3	1.8	10.2	87	6.1	28	88	46	106	98	1	1	4	11	19	33	100	134	63	0	0	135	211	20	40	41	20	19	58	73	50	45
	13	20	1014.1	—	54.1	4.5	10.4	72	6.8	21	52	59	144	90	0	0	2	3	6	20	72	90	163	10	0	200	152	14	22	46	33	25	83	57	52	34
	18	20	1013.9	—	51.6	3.3	10.4	79	6.3	39	62	49	103	113	0	2	5	0	13	19	67	124	122	14	2	160	186	18	31	53	36	21	80	57	41	29
Hertford. Rothamsted	9	43	1013.6	-1.4	51.3	3.3	10.5	79	6.5	56	29	55	92	134	—	—	—	—	—	—	—	—	—	—	0	96	261	9	35	43	24	23	44	78	67	43
	21	43	1013.6	-1.3	48.2	2.0	10.2	86	4.9	140	26	23	50	127	—	—	—	—	—	—	—	—	—	—	0	45	273	48	31	37	31	21	46	69	51	32
Essex. Shoeburyness H	9	396	1013.7	—	49.5	3.0	9.7	80	6.4	21	72	67	105	101	2	4	4	6	8	89	253	0	0	0	0	74	224	68	25	32	16	25	70	50	49	31
	7	14	1014.3	—	48.1	1.1	11.0	92	6.1	44	69	48	109	96	4	5	0	4	10	34	113	135	61	0	1	89	258	18	34	30	19	21	43	86	60	55
	13	14	1014.1	—	55.5	3.7	12.1	78	6.1	26	79	70	116	75	0	0	0	2	6	8	61	99	190	0	1	167	194	4	26	34	43	25	43	85	53	53
Suffolk. Felixstowe Aero	18	14	1013.9	—	51.9	2.1	11.9	87	6.2	37	70	57	91	111	1	2	0	2	3	25	88	117	128	0	4	107	236	19	28	35	40	29	38	88	49	40
	4. MIDLAND COUNTIES.																																			
	York, W. Riding. Harrogate	7	478	1012.4	—	44.8	1.7	9.0	87	6.9	5	94	23	113	131	0	20	10	12	12	63	40	117	90	2	0	85	258	23	38	8	13	24	69	141	37
13		478	1011.8	—	50.9	4.2	9.3	72	7.4	0	64	40	148	114	0	5	5	14	12	55	42	116	98	19	3	128	222	13	33	14	25	36	52	136	40	17
Nottingham. Nottingham	18	478	1012.0	—	48.8	3.2	9.3	78	6.5	16	94	31	112	113	0	4	6	6	11	75	38	142	74	10	2	90	250	24	35	16	18	34	58	144	28	9
	9	215	1012.5	—	49.0	3.3	9.3	77	7.6	0	56	49	105	156	4	17	23	48	75	28	98	49	24	0	1	145	220	0	45	33	30	7	38	40	150	23
Warwick. Birmingham H	7	542	1013.8	—	46.2	2.0	9.3	85	6.9	29	48	54	126	109	1	12	10	16	24	56	74	36	137	0	0	90	272	4	20	36	30	29	77	73	52	45
	13	542	1013.1	—	53.1	5.3	9.5	68	7.0	15	29	77	191	54	0	2	3	14	23	38	87	27	172	0	0	180	184	2	25	31	23	35	64	85	54	47
Oxford. Oxford	18	542	1013.2	—	51.5	4.6	9.4	71	6.4	28	66	54	140	81	0	2	4	9	29	64	64	33	161	0	0	130	232	4	29	36	25	35	68	64	60	45
	9	212	1014.4	-1.2	49.8	3.4	9.6	77	6.3	34	78	41	94	119	1	4	6	13	17	16	109	60	129	11	0	93	229	44	32	31	21	16	63	80	49	30
Hereford. Ross-on-Wye H	7	226	1013.5	—	46.8	2.1	9.6	85	7.1	20	64	31	117	134	0	14	8	10	13	28	79	88	122	4	1	73	267	25	26	25	37	7	32	110	79	25
	13	226	1012.9	—	54.7	5.4	10.0	68	7.4	8	44	63	136	115	0	0	0	7	12	19	75	86	132	35	5	138	221	2	34	27	46	17	30	91	75	44
	18	226	1012.9	—	52.4	4.4																														

TABLE IV (continued).—SUMMARY of the OBSERVATIONS of PRESSURE, TEMPERATURE, HUMIDITY, CLOUD, VISIBILITY, and WIND at fixed hours at certain Stations during the Year 1928.

DISTRICT, COUNTY AND PLACE.	Hour of Observation.	Height of Barometer above Mean Sea Level.	MEAN PRESSURE.		TEMPERATURE AND HUMIDITY.				CLOUD AMOUNT.					VISIBILITY.									WIND, NUMBER OF OBSERVATIONS.														
			At Mean Sea Level.	Deviation from Normal.	Dry Bulb.	Depression of Wet Bulb.	Vapour Pressure.	Relative Humidity.	Mean Amount.	NO. OF OBSERVATIONS.					NUMBER OF OBSERVATIONS.									FORCE (0-12).													
										0	1 to 3	4 to 6	7 to 9	10	0	1	2	3	4	5	6	7	8	9	0 or more.	1 to 3	4 to 6	7 to 9	10 to 12.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.
			0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0 or more.	1 to 3	4 to 6	7 to 9	10 to 12.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	
5. ENGLAND, S.E.—cont.																																					
Kent. Biggin Hill H. . .	G.M.T.	ft.	mb.	mb.	°F.	°F.	mb.	%																													
	7	596	1014.0	—	46.3	1.2	10.1	91	6.6	40	56	40	80	150	1	8	10	9	17	38	178	87	18	5	1	110	233	22	24	44	17	28	29	145	37	20	
	13	596	1013.6	—	53.6	4.1	10.8	75	7.5	17	30	53	142	124	0	3	4	2	10	37	120	139	51	0	2	164	195	5	27	54	10	28	23	143	54	22	
18	596	1013.6	—	50.6	2.9	10.6	82	6.8	44	42	45	109	126	1	2	0	6	18	48	140	94	57	0	2	125	226	13	23	48	16	38	13	146	45	24		
Kent. Dungeness . . .	1	23	1014.2	—	49.0	1.6	10.8	89	5.4	91	45	61	73	96	4	1	1	7	8	13	42	112	171	7	7	98	256	5	51	27	37	39	24	69	76	38	
	7	23	1014.4	-0.3	49.6	1.8	10.8	87	6.9	22	39	82	112	111	0	5	3	7	11	5	63	141	130	1	2	114	244	6	54	34	28	31	29	75	69	40	
	13	23	1014.5	—	54.5	3.5	11.6	78	7.2	15	25	83	129	114	0	2	1	4	4	5	46	136	164	4	4	146	123	3	31	29	39	27	36	116	61	24	
18	23	1014.1	—	52.2	2.6	11.3	83	6.8	21	32	94	108	111	0	2	1	2	6	5	51	132	163	4	6	139	210	11	30	34	41	33	20	110	69	18		
Kent. Lympne H . . .	1	343	1014.3	—	46.6	1.4	10.0	89	5.3	101	55	31	61	118	4	9	6	4	6	36	104	148	48	1	0	125	240	1	56	33	38	33	32	70	60	43	
	7	343	1014.3	—	47.3	1.6	10.2	88	6.5	26	74	41	125	100	0	8	4	7	14	52	133	106	36	6	0	144	220	2	57	40	26	30	38	72	50	51	
	13	343	1014.1	—	53.9	4.5	10.5	73	7.0	24	45	59	149	98	0	2	1	4	11	30	96	93	113	16	3	210	153	0	37	30	30	43	52	101	35	38	
18	343	1014.1	—	50.6	3.0	10.4	81	6.1	41	80	35	105	105	0	6	3	6	13	42	102	104	81	9	2	155	203	6	47	35	37	33	46	90	44	28		
Kent. Tunbridge Wells	9	396	1015.0	—	50.9	2.9	10.4	81	6.4	40	61	55	82	128	0	1	4	5	39	93	87	98	39	0	1	62	303	0	35	47	16	28	54	110	33	43	
Sussex. Brighton H . .	9	48	1015.1	—	51.9	2.6	11.3	83	5.8	75	30	84	76	101	0	0	1	2	9	30	158	93	73	0	1	28	300	37	31	56	10	35	35	101	23	38	
Sussex. St. Leonards . .	9	174	1014.7	—	52.1	3.1	10.9	80	6.2	39	48	84	101	94	0	0	3	0	0	19	44	233	67	0	6	77	283	0	22	66	20	44	9	97	47	61	
	21	174	1014.6	—	50.2	2.3	10.7	84	5.6	81	52	46	67	120	0	2	1	1	1	5	47	228	81	0	7	65	292	2	23	66	18	44	10	96	59	48	
Hampshire. Calshot . .	1	15	1014.5	—	48.5	1.8	10.3	87	5.5	89	43	56	85	93	2	1	5	1	4	11	75	168	99	0	0	136	214	16	44	35	33	21	14	55	95	53	
	7	15	1014.5	—	48.6	1.9	10.3	86	6.4	39	58	46	137	86	0	3	4	3	2	17	122	160	55	0	0	163	195	8	57	31	40	14	24	60	71	61	
	13	15	1014.4	—	55.7	4.9	10.8	71	6.7	18	40	89	147	72	0	1	0	2	3	10	88	126	136	0	6	256	99	5	40	22	33	42	20	122	42	40	
18	15	1014.1	—	53.2	3.8	10.7	77	6.4	26	72	53	142	73	0	0	2	0	0	7	111	134	111	1	3	201	155	7	36	27	39	35	15	87	84	36		
Hampshire. Southampton H	9	84	—	—	50.4	2.6	10.5	81	6.1	45	52	73	75	121	0	4	6	15	29	144	166	2	0	0	0	48	309	9	25	54	26	31	13	78	81	49	
	21	84	—	—	51.9	3.3	10.6	79	6.7	38	45	53	87	143	2	5	12	13	59	148	127	0	0	0	0	72	285	9	13	34	34	43	6	92	90	45	
Hampshire. S. Farnborough	7	256	1014.2	—	46.0	1.4	9.7	89	6.7	31	71	32	90	142	0	14	10	6	23	30	98	107	78	0	1	67	261	37	26	27	25	23	52	65	76	35	
	13	256	1013.9	—	56.4	6.1	10.0	66	7.2	14	40	64	137	111	0	2	4	2	5	12	82	124	135	0	0	178	186	2	28	26	29	23	51	86	73	48	
	18	256	1013.8	—	52.5	4.2	10.0	75	6.2	28	89	41	93	115	0	4	0	3	11	26	94	113	114	1	0	103	248	15	35	23	26	34	49	67	79	38	
Hampshire. Winchester (Worthy Down)	7	273	1014.3	—	46.0	1.3	9.8	90	6.8	30	60	39	112	125	0	5	7	9	12	27	80	130	96	0	0	81	241	44	54	21	23	34	63	43	47	37	
	13	273	1014.0	—	55.0	5.0	10.4	70	7.4	15	28	53	172	98	0	3	1	2	4	13	45	96	201	1	0	177	186	3	49	25	21	37	79	60	57	35	
	18	273	1014.0	—	51.8	3.6	10.2	77	6.6	30	62	39	136	99	0	1	4	3	2	14	48	107	181	6	0	108	243	15	42	22	25	32	79	50	72	29	
I. of Wight. Ventnor . .	9	80	1014.9	—	52.6	2.9	11.2	81	6.1	23	88	68	79	108	—	—	—	—	—	—	—	—	—	—	—	0	113	252	1	36	31	60	20	14	56	126	22
	15	80	1014.3	—	55.1	3.9	11.5	76	6.0	24	94	64	82	102	—	—	—	—	—	—	—	—	—	—	—	0	97	269	0	22	8	75	21	10	53	149	28
Wilts. Larkhill H . . .	9	444	1014.2	—	49.8	2.8	10.2	82	6.7	24	57	66	107	112	0	9	3	5	7	11	53	87	189	2	1	171	178	16	38	40	31	31	56	59	55	40	
	13	444	1013.7	—	54.5	5.0	10.3	71	7.3	16	39	53	129	129	0	4	1	2	8	8	33	67	235	8	3	230	125	8	33	39	26	35	55	72	57	41	
	15	444	1013.4	—	54.3	4.9	10.2	71	7.2	15	38	66	133	114	0	1	1	5	7	6	19	86	227	14	3	216	138	9	37	34	27	35	56	67	56	45	
7a. ENGLAND, N.W.																																					
Cumberland. Aspatria (Mealsgate)	9	485	1011.4	—	47.5	2.3	9.4	83	7.8	26	25	45	67	203	—	—	—	—	—	—	—	—	—	—	—	0	72	252	42	20	49	5	30	49	129	35	7
	21	485	1011.6	—	45.8	1.7	9.2	86	6.5	66	36	47	43	174	—	—	—	—	—	—	—	—	—	—	—	0	66	250	50	26	23	2	69	47	113	28	8
Lancashire. Hutton . . .	9	86	1011.4	—	48.9	1.9	10.5	87	6.7	24	46	90	91	115	—	—	—	—	—	—	—	—	—	—	—	1	59	101	205	1	13	15	24	32	29	36	11
Lancashire. Southport H. . .	9	42	1012.5	-2.0	49.1	2.5	10.1	82	6.8	7	80	67	63	149	0	7	2	10	16	149	29	16	137	0	5	224	126	11	19	21	41	57	58	43	82	34	
	13	42	1012.1	-2.2	52.9	4.0	10.4	75																													

TABLE IV (continued).—SUMMARY of the OBSERVATIONS of PRESSURE, TEMPERATURE, HUMIDITY, CLOUD, VISIBILITY, and WIND at fixed hours at certain Stations during the Year 1928.

DISTRICT, COUNTY AND PLACE.	Hour of Observation.	Height of Barometer above Mean Sea Level.	MEAN PRESSURE.		TEMPERATURE AND HUMIDITY.				CLOUD AMOUNT.					VISIBILITY.									WIND, NUMBER OF OBSERVATIONS.														
			At Mean Sea Level.	Deviation from Normal.	Dry Bulb.	Depression of Wet Bulb.	Vapour Pressure.	Relative Humidity.	Mean Amount.	NO OF OBSERVATIONS.					NUMBER OF OBSERVATIONS.									FORCE (0-12).				N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		
										0	1 to 3	4 to 6	7 to 9	10	0	1	2	3	4	5	6	7	8	9	8 or more.	4 to 7	1 to 3									Calm.	
8a. SOUTH WALES—cont.																																					
Radnor. Rhayader ..	9	—	—	—	48.8	2.5	9.9	82	7.0	2	57	100	93	114	0	2	1	2	4	15	99	71	172	0	0	5	21	325	15	7	31	52	23	49	72	92	25
Glamorgan. Cardiff ..	9	216	1014.1	—	50.3	2.7	10.3	82	6.5	42	60	46	66	152	0	4	3	9	24	58	155	78	35	0	0	1	36	326	3	13	37	74	21	16	49	112	41
	21	216	1013.9	—	48.8	1.9	10.3	86	5.3	78	62	59	97	70	0	0	2	3	6	75	188	54	38	0	0	0	24	342	0	12	35	42	33	8	79	121	36
8b. ENGLAND, S.W.																																					
Somerset. Bath ..	9	113	1013.8	—	51.0	3.3	10.2	78	6.5	40	41	92	60	133	0	4	9	16	13	36	161	77	50	0	0	0	18	334	14	22	40	49	17	32	62	100	30
Dorset. Holton Heath H	9	58	1015.0	—	51.7	3.1	10.8	80	6.3	53	58	44	68	143	0	3	0	4	7	39	69	244	0	0	0	4	124	216	22	39	49	16	30	22	98	50	40
	15	58	1014.2	—	55.5	4.8	11.0	72	6.6	31	52	79	64	140	0	1	0	2	9	24	54	276	0	0	0	5	146	198	17	35	27	27	40	11	123	53	33
Dorset. Portland Bill ..	1	37	1013.6	—	51.4	2.6	10.9	82	5.9	47	85	41	58	135	0	1	2	1	3	10	111	1	237	—	7	187	167	5	40	50	32	20	27	78	79	35	35
	7	37	1013.6	-1.0	51.5	2.6	10.8	82	7.1	10	75	31	115	135	0	3	0	1	5	19	134	—	204	—	3	200	154	9	44	61	30	15	32	78	67	30	
	13	37	1013.7	—	54.2	3.5	11.3	77	7.4	6	59	33	146	122	0	0	1	1	7	18	137	—	202	—	7	218	133	8	14	48	43	15	43	111	59	25	
	18	37	1013.5	—	52.9	3.0	11.1	80	7.4	9	67	41	109	140	0	0	2	1	3	20	145	—	195	—	5	207	145	9	29	40	41	12	36	103	70	26	
Devon. Plymouth H (Cattewater)	7	27	1014.2	—	49.7	1.8	10.9	87	6.4	12	100	35	117	102	0	2	1	4	2	15	82	160	92	8	4	148	184	30	37	40	61	22	26	55	51	44	
	13	27	1014.2	—	54.8	3.9	11.3	75	7.0	3	78	49	128	108	0	0	2	1	5	7	65	99	171	16	8	231	121	6	26	16	33	41	54	95	52	43	
	18	27	1014.2	—	53.1	3.2	11.2	79	6.4	12	95	35	120	104	0	0	0	0	3	9	80	127	125	22	3	218	141	4	36	21	35	32	38	76	66	58	
Cornwall. Pendennis Castle	1	238	1014.3	—	50.4	1.5	11.3	89	6.3	23	68	98	71	106	3	0	0	0	1	46	202	108	6	5	157	170	34	43	34	21	18	27	56	79	54		
	7	238	1014.0	—	50.6	1.5	11.3	89	7.0	1	40	119	99	107	4	5	0	1	0	1	51	142	161	1	6	164	165	31	49	31	22	28	23	69	66	47	
	13	238	1014.1	—	54.5	3.1	11.8	79	7.3	2	32	103	115	114	1	0	0	0	5	4	59	96	194	7	21	205	131	9	33	17	33	46	40	70	59	59	
	18	238	1014.1	—	52.9	2.5	11.6	83	7.1	1	31	120	108	106	1	2	1	0	1	0	44	151	155	11	13	190	148	15	45	21	24	30	29	63	75	64	
Cornwall. Newquay ..	9	161	1013.9	—	52.7	2.5	11.4	83	6.4	13	78	81	91	103	0	0	3	1	1	16	61	88	169	27	4	164	188	10	39	14	27	66	51	59	67	33	
9. IRELAND, N.																																					
Sligo. Markree Castle..	9	127	1010.6	—	47.9	2.0	9.8	85	6.8	23	34	101	103	105	0	0	0	3	1	48	79	70	165	—	5	58	218	85	37	14	13	49	46	50	24	48	
	21	127	1010.8	—	49.0	2.3	10.0	83	6.8	17	49	95	110	95	0	0	0	0	0	26	75	73	192	—	4	45	241	76	52	14	14	34	41	57	28	50	
Mayo. Blacksod Point..	7	30	1009.3	—	49.7	2.3	10.2	83	7.3	9	33	81	130	113	0	1	0	0	3	6	55	144	113	44	8	197	119	42	30	8	33	40	68	30	92	23	
	18	30	1010.1	—	51.9	3.2	10.3	78	7.1	9	35	90	138	94	0	0	0	0	2	6	36	131	115	76	10	220	115	21	41	18	28	35	54	52	86	31	
Donegal. Malin Head ..	1	83	1009.8	—	47.6	1.3	10.2	90	6.2	9	106	64	117	70	0	0	1	3	11	51	163	134	3	0	228	137	1	39	19	32	42	92	44	63	34		
	7	83	1009.3	-1.9	47.7	1.4	10.2	90	7.0	6	62	61	160	77	0	0	2	0	3	16	54	140	133	18	6	237	123	0	38	20	36	38	55	59	49	40	
	13	83	1009.7	—	50.3	2.0	10.8	86	7.1	5	54	63	178	66	0	0	2	0	4	18	56	115	141	30	7	249	110	0	47	21	47	30	59	54	65	43	
	18	83	1009.6	—	49.5	1.9	10.5	86	6.7	5	69	64	178	50	0	0	1	0	1	22	47	139	137	19	1	221	144	0	50	23	49	33	53	45	71	42	
Antrim. Aldergrove H ..	7	245	1010.9	—	45.7	1.3	9.7	90	7.4	7	52	54	115	138	0	1	4	3	6	12	87	145	104	4	0	126	225	15	21	30	42	46	100	56	36	20	
	13	245	1010.8	—	51.6	3.5	10.3	77	7.7	4	32	55	153	122	0	0	1	1	5	15	47	97	172	28	1	174	182	9	25	24	39	35	74	82	48	30	
	18	245	1010.9	—	49.7	2.8	10.1	81	6.9	4	80	49	134	99	0	0	0	0	2	20	47	134	144	19	0	137	213	16	23	23	48	37	75	61	38	45	
Down. Donaghadee ..	7	26	1011.3	-1.6	47.1	1.8	9.7	87	6.3	13	50	110	143	50	0	1	0	6	5	16	29	101	208	0	11	105	232	18	21	23	26	32	31	74	103	38	
	13	26	1011.3	—	51.3	3.3	10.1	77	6.3	9	30	147	148	32	0	0	0	2	7	10	47	89	209	2	9	136	216	5	39	26	35	43	40	71	72	35	
	18	26	1011.3	—	49.8	2.7	10.0	81	6.0	15	51	126	146	28	0	1	0	3	6	12	39	111	194	3	6	120	226	14	42	25	27	31	44	66	82	35	
	21	26	1011.7	—	47.8	2.1	9.8	84	5.7	25	55	135	122	29	0	0	0	3	6	9	25	127	196	0	11	98	235	22	42	22	27	21	44	64	90	34	
Armagh. Armagh H ..	9	209	1010.9	-2.1	48.9	2.6	10.0	82	6.6	38	53	63	76	136	0	1	4	1	5	13	37	55	220	30	0	71	220	75	25	26	16	26	116	45	26	11	
	21	209	1011.2	-1.9	46.8	1.9	9.7	85	5.5	66	74	54	67	105	0	1	0	1	2	15	26	38	264	19	0	51	194	121	14	14	22	26	101	48	16	4	
10. IRELAND, S.																																					
Dublin. Glasnevin H ..	9	56	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	21	56	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
King's Co. Birr Castle ..	7	173	1010.8	-2.8	46.3	1.0	10.0	92	7.7	2	38	52	182	92																							

TABLE I. DISTRICT VALUES.

The District Values of this Table are computed from the statistics for selected individual stations set out in Table III and Table IV.

The representative stations from which the District Values of rainfall and temperature are computed are indicated in Table III by the sign ¶ while the representative stations from which District Values of sunshine are computed are indicated by the sign §. The deviations from and percentages of normal for Air Temperature, Rainfall and Sunshine are the means of the corresponding deviations or percentages for the representative District Value stations. The deviations from normal of Earth Temperature are derived from the deviations for all the stations reporting in Table III for which normals of Earth Temperature are available. The highest and lowest temperatures for the District recorded during the month may refer to any station in Table III.

TABLE II. SUMMARY OF AUTOGRAPHIC RECORDS OF WIND.

The records used in the preparation of this Table are generally made by anemographs of the pressure-tube type. At a few stations the Robinson Cup Anemograph is utilised. The classification adopted for the "Distribution of Wind" is based on the specification of the Beaufort Scale of Wind Force (see *The Observer's Handbook*). For an anemograph complying with the specification "head 33 ft. above ground in the open" the several columns correspond with Force 8 and above (gales), Forces 6 and 7 (strong winds), Forces 4 and 5 (moderate winds), Forces 2 and 3 (light winds), Forces 1 and 0 (nearly calm). Some information as to the nature of the actual exposures may be gathered from the figures in the "Height" columns.

The "Highest Hourly Wind" is determined by the mean speed of the wind for a period of sixty minutes from 30 minutes before to 30 minutes after an exact hour by Greenwich Mean Time. Under the heading "Veer from N" the azimuth of the direction from which the wind was blowing is stated, the entry for an east wind being 90°, that for a south wind 180° and so on.

TABLE III. SUMMARY OF OBSERVATIONS AT TERMINAL HOURS.*

Temperature.—The terminal hours of observation are given for each station. When the terminal hours for maximum and minimum temperature are stated independently the temperatures refer to intervals of 24 hours. If the maximum thermometer is read in the morning the reading is credited to the previous day. When the terminal hours for maximum and minimum are separated by a dash, thus, 18-7, the day-maximum for the period 7h. to 18h. and the night-minimum for the period 18h. to 7h. are reported and are utilised in determining the means for the month; in such cases the extreme temperatures for successive periods of 24 hours are also read by the observers, so that the absolute maximum and minimum temperatures for the month are obtained.

Except at the Royal Observatory, Greenwich where a Glaisher stand is in use, the air temperature is obtained from thermometers placed in louvered screens. At Kew Observatory, Richmond, and Valentia Observatory these are north wall screens a few feet from the ground. At Aberdeen Observatory the north wall screen is at 41 feet. Otherwise the screens are in the open.

Rainfall.—The daily amounts are for the 24 hours beginning at the "terminal hour." "Rainfall" includes all forms of precipitation. The number of days of precipitation is counted with reference to the limit .01 inch or 0.2 mm. and also with reference to the limit 0.4 inch or 1.0 mm. The lower limit excludes mere "traces" of precipitation, but it is frequently passed on occasions when the precipitation is only dew.

Weather.—The numbers of days of Precipitation, Snow, Hail, Thunderstorms and Gale are counted irrespective of the hour at which the phenomena occur. Except for "Precipitation" the day is the civil day.

For the purpose of this summary "Snow" includes sleet (*i.e.*, snow with rain), "Hail" includes graupel (soft hail), "Snow lying" refers to occasions when at least one-half of the country surrounding the station is covered with snow at the morning observation. The entry of "fog" implies that regular observations of the range of vision are made on the scale set out below. Days of fog are those on which the range of vision is less than 1,100 yards at the hour of morning observation. That hour is generally given by the third entry of column 2 of the table and may be 7, 8 or 9h. G.M.T. The variability of the observation hour may exercise an important effect upon the statistics of fog frequency. "Thunderstorms" include any day on which thunder is heard. "Gale" is a wind of Force 8 or upwards on the Beaufort Scale. A "ground frost" is entered when the reading of a "grass minimum" thermometer set the previous evening and read at the morning observation is 30°F. or lower.

Sunshine.—The percentage of possible sunshine is in all cases calculated with reference to the maximum duration possible in the latitude on the assumption of an unobstructed horizon, due allowance being

made for refraction (see *International Meteorological Tables* (Paris) pp. A17-A20 and 42-47). The sunshine recorder is generally insensitive to sunshine when the sun is at an altitude of 3° or less. The symbol § is entered against the percentage at some stations and indicates that obstructions of altitudes greater than 3° reduce the possible record of duration for the year by more than 5 per cent.

TABLE IV. SUMMARY OF OBSERVATIONS AT FIXED HOURS.*

Mean Air Pressure is expressed in millibars. (1 millibar = 1,000 dynes per square centimetre = the pressure due to .029531 inch of mercury at 32°F. in Lat. 45°). The corrections for latitude, temperature and height have been applied to the barometer readings so as to obtain pressure at mean sea level. Barometric pressure is given at station level for a few stations at altitudes of 600 ft. or more in footnotes in Table IV.

Hygrometry.—The values given depend on the readings of the dry and wet bulb thermometers in Stevenson Screens (except at the Observatories, see above). The observations were formerly reduced by Glaisher's method; as from January, 1926 they are reduced by the new hygrometrical tables issued by the Office which are based on a formula of Regnault. In general the relative humidity and vapour pressure are derived from the monthly means of the dry and wet bulb readings. At certain stations the daily values of relative humidity and vapour pressure are found and the means are computed therefrom. These stations are indicated by the letter "H."

Cloud Amount.—The proportion of sky covered with cloud is estimated on the scale 0 to 10, the entry "0" being equivalent to clear sky "10" to overcast.

Visibility.—The observations are classified according to the following scheme—the distances, specified by international arrangement in metres are given here in yards and miles:—

CODE.	RANGE OF VISION.
0	Less than 55 yards.
1	Exceeding 55 yards, less than 220 yards.
2	" 220 " " 550 "
3	" 550 " " 1,100 "
4	" 1,100 " " 1½ miles "
5	" 1½ miles " " 2½ " "
6	" 2½ " " 6½ " "
7	" 6½ " " 12½ " "
8	" 12½ " " 31 " "
9	" 31 " "

Wind Summaries.—The estimates of wind force refer to the Beaufort Scale, and in general to the wind experienced at the time of observation. At Deerness, Cahirciveen, Richmond, Armagh, Eskdalemuir, Southport, Greenwich and Oxford the analysis refers to tabulations of autographic records. For Oxford the mean wind speed for half-an-hour centred at the hour of observation is used for conversion to "force" on the Beaufort Scale; for the remaining observatories the mean wind speed used for each observation refers to a period of one hour. In these cases winds equivalent to Force 1 are counted with the calms, whilst Forces 2 and 3 are taken together in the preceding column of the Table.

STANDARD OF TIME.

As a rule observations are made in all parts of the British Islands according to Greenwich Mean Time, but at the following stations Local Mean Time is used for the observations summarised in Tables III and IV. The number of minutes after Greenwich Time is shown in brackets—Darwen (10), Rhayader (15), Ashburton (15), Tavistock (17), Plymouth (15), Armagh (26), Balbriggan (25), Lisburn (30), Newcastle, Co. Wicklow (30), Ballinacurra (30), Cork (34).

"Summer Time" is not used in the Monthly Weather Report, but at certain stations the hours of observation vary in the course of the year. For such stations all time entries are converted to G.M.T. before they are printed and the winter hours are given as the terminal hours in the annual tables. For the summer hours reference should be made to the appropriate months.

NORMALS.

In Table I the normals of temperature, rainfall and sunshine for districts, used for the computation of the columns headed "Deviation from Normal," are those given in the Book of Normals, Section II, Table 6, and refer to the period 1881-1915. In the case of earth temperatures, the deviations for districts are computed as the mean of the corresponding deviations for the individual stations from their (as yet unpublished) normals.

In Table III the normals used are those for the 35 years 1881-1915. The normals of temperature and sunshine are published in the Book of Normals, Section I, those for rainfall in the Book of Normals, Section V.

The normals for pressure with which comparison is made in Table IV also refer to the period 1881-1915.

* In addition to the frequencies published in this Report (Tables III and IV), the Meteorological Office has issued since January, 1927, in the form approved by the International Commission for Air Navigation, monthly frequency tables of height of base of low cloud, and speed and direction of surface and upper winds.

TABLE V [1913].—WARMEST DAY and NIGHT and COLDEST DAY and NIGHT in the YEAR at each STATION.

DISTRICT, COUNTY AND PLACE.	Terminal Hours of Observation.			Height of Station above M.S.L.	Warmest Day.		Warmest Night.		Coldest Day.		Coldest Night.	
	Max.	Min.	Rain.		Highest Maximum and Date.	°F.	Highest Minimum and Date.	°F.	Lowest Maximum and Date.	°F.	Lowest Minimum and Date.	
0. SCOTLAND, N.												
Shetlands. Baltasound ..	9	9	9	31	July 21	69	July 12, Aug. 7, 14, 15 Sept. 8	53	Feb. 12	36	Feb. 13, Dec. 14	28
Lerwick ..	18	7	7	54	September 8	63	Aug. 7, 8, 14, 15 Sept. 3, 8, 13	53	Feb. 12, Dec. 7	37	Apr. 17	30
Orkneys. Deerness ..	21	21	9	160	July 13, Sept. 8	63	Sept. 13, 14	53	Mar. 11	37	Apr. 17	30
Kirkwall ..	9	9	9	151	July 14, Sept. 9	64	July 12, Aug. 8, 24, Sept. 3	53	Mar. 11, Dec. 13	38	Mar. 3	26
Hebrides. Skallary ..	9	9	9	20	May 3	67	Aug. 9, 25, 26, September 3, 8, 13	56	—	—	—	—
Stornoway ..	18	7	7	30	August 5	66	Aug. 23, Sept. 14	55	Jan. 26, Dec. 7	36	Nov. 8	27
Caithness. Wick ..	18	7	7	81	July 12	67	September 3	55	Dec. 7	35	Feb. 13	28
Ross and Cromarty. Achnashellach ..	9	9	9	225	August 5	73	Aug. 24, Sept. 3	56	Jan. 30, Mar. 10, Dec. 20	35	Nov. 9, Dec. 15	25
Fortrose ..	9	9	9	69	August 12	70	September 13	58	Dec. 7	35	Dec. 15, 17	26
Strathpeffer ..	9	9	9	125	August 5	74	September 3	58	Dec. 14	34	Jan. 1	20
Inverness. Fort Augustus ..	9	9	9	68	August 5	75	August 7	56	Dec. 7	34	—	—
Inverness ..	9	9	9	242	August 6	73	Aug. 7, Sept. 3	58	Mar. 11	35	Feb. 27, Mar. 11, Dec. 15	25
1. SCOTLAND, E.												
Nairn. Nairn ..	18	7	7	82	July 11, Aug. 5	72	July 11	58	Dec. 7	33	Dec. 15	24
Elgin. Gordon Castle ..	21	21	9	104	July 11	75	July 11, Aug. 16	61	Dec. 8, 13, 15	27	Mar. 11, Dec. 15, 31	25
Banff. Banff ..	9	9	9	130	July 14	76	July 11, 12	57	Jan. 1	36	Mar. 11	28
Aberdeen. Aberdeen ..	24	24	24	46	July 11	73	July 11	61	Mar. 11	36	Feb. 23, Nov. 9	27
Balmoral ..	9	9	9	927	June 2	71	July 14, 24	56	Mar. 11	30	Jan. 1	12
Braemar ..	21	21	9	1120	August 5	73	July 23, 24, Aug. 7	54	Jan. 1	21	Jan. 1	8
Craibstone ..	9	9	9	300	July 11	72	July 14	56	Dec. 7	33	Jan. 1, Feb. 23	27
Logie Coldstone ..	9	9	9	608	July 11	76	July 14	57	Mar. 11, Dec. 14	32	Jan. 1	16
Forfar. Arbroath ..	21	21	9	93	July 20	72	July 11, 24	59	Jan. 19	33	Jan. 1	23
Carnoustie ..	9	9	9	39	July 21, 24	74	July 12, 15, Sept. 4	56	Mar. 12, Dec. 7	36	Jan. 1	24
Dundee (E. Nec.) ..	21	21	9	198	June 2, July 21, 24	73	July 11	59	Jan. 1, Mar. 12	34	Jan. 1	21
Mayfield ..	9	9	9	147	July 24	75	July 15	58	Mar. 10, 12, Dec. 7, 14, 16	36	Jan. 1, 2	24
Kettins ..	9	9	9	218	August 5	74	July 15	57	Dec. 14	33	Jan. 1	18
Montrose ..	9	9	9	16	July 20	74	July 11	59	Dec. 7	35	Jan. 1, Feb. 26	23
Perth. Crieff ..	21	21	9	478	August 5	75	July 11	57	Jan. 1, Mar. 11, 12	33	Jan. 1	20
Perth ..	9	9	9	76	August 5	79	July 15	59	Jan. 5	29	Jan. 1	18
Fife. Cupar ..	9	9	9	210	July 21, Aug. 5	72	July 15	58	Mar. 11	35	Jan. 1, 2	20
Inchkeith ..	18	7	7	190	June 2	69	September 3	58	Jan. 1, Mar. 12	35	Jan. 1	26
Kirkcaldy ..	9	9	9	66	June 2	74	September 5	60	Mar. 12	36	Jan. 1	21
Leuchars ..	18	7	7	30	July 21	72	July 11	59	Jan. 1	33	Jan. 1	21
St. Andrews ..	9	9	9	20	July 24	73	July 15	59	Mar. 12	35	Jan. 1	22
Linlithgow. Bangour ..	21	21	9	587	August 5	74	July 11	57	Mar. 11, 12	32	Jan. 1	15
Edinburgh. Blackford Hill ..	21	21	9	441	July 15	72	July 11	60	Dec. 15	34	Jan. 1	22
Boghall ..	9	9	9	645	June 3, Aug. 5	71	August 7	56	Mar. 12	30	Jan. 1	18
Edinburgh Univ. ..	9	9	9	227	July 14	73	August 7	60	Mar. 11	34	Jan. 1	25
Liberton ..	9	9	9	190	July 15, Aug. 5, Sept. 13	73	—	—	Mar. 12	33	—	—
Haddington. North Berwick ..	9	9	9	152	July 14	73	July 21	59	Mar. 12	34	Jan. 1	23
Smeaton ..	9	9	9	100	July 14	75	July 14	57	Mar. 12	34	Jan. 1	18
Berwick. Marchmont ..	9	9	9	498	August 5	74	July 13, Sept. 5	57	Mar. 12	32	Jan. 1	15
Peebles. West Linton ..	9	9	9	770	July 15	71	August 7	56	Mar. 12, Dec. 14	31	Mar. 13	16
Roxburgh. Kelso (Br'lands) ..	9	9	9	195	June 3	74	August 12	58	Feb. 11, Mar. 12	34	Jan. 1, 2	13
Wolfelee ..	9	9	9	537	June 3, Aug. 6	73	September 4	57	Mar. 11, 12, Dec. 1, 7, 14	34	Jan. 1	10
6. SCOTLAND, W.												
Argyll. Ardtornish ..	21	21	9	48	May 31, Aug. 5	76	September 12	58	Oct. 10	32	Dec. 31	23
Ford ..	9	9	9	149	May 30, Aug. 5	73	August 16, 17,	59	Dec. 27	37	Mar. 7, 9	21
Tiree ..	18	7	7	22	May 31, Aug. 5	68	July 11, 23, Aug. 6, 10, Sept. 3, 8, Oct. 8	55	Mar. 11, 12	38	Jan. 26, 27, Mar. 11, Apr. 16, Nov. 9	31
Glenbranter ..	9	9	9	188	August 5	75	August 7	57	Mar. 11	36	Oct. 1	22
Oban ..	9	9	9	21	May 30	74	August 6, 20	58	Mar. 12	38	Mar. 9, 11, 12, Apr. 16	28
Bute. Rothesay ..	21	21	9	200	June 3	70	September 3	56	Mar. 13	38	Mar. 11, 12	27
Dumbarton. Cardross ..	9	9	9	130	August 5	75	July 15, Aug. 7, Sept. 4	55	Mar. 12	34	Dec. 31	20
Helensburgh ..	9	9	9	21	August 5	75	August 7	57	Mar. 11, 12	35	Jan. 1, 2, Mar. 9, 11, 13, Dec. 9, 15, 31	27
Stirling. Stirling ..	9	9	9	151	June 1	77	July 14, 15, Aug. 7	57	Dec. 15	35	Jan. 1	20
Renfrew. Greenock ..	9	9	9	199	August 5	74	August 7	58	Mar. 11	34	Jan. 1, 2, Mar. 11, 13,	27
Paisley ..	21	21	9	106	August 5	76	July 11, Sept. 3	58	Mar. 11, 12	34	Jan. 1	21
Renfrew ..	18	7	7	36	August 5	75	July 11, Aug. 7, Sept. 3	58	Mar. 11, 12	34	Jan. 1	16
Lanark. Dungavel ..	9	9	9	798	August 5	75	August 7	55	Mar. 12	31	Jan. 1	18
Glasgow (Univ.) ..	9	9	9	139	August 5	71	August 7	59	Mar. 11, 12	34	Jan. 1	23
Thorntonhall ..	9	9	9	440	August 5	74	Aug. 7, Sept. 3	56	Mar. 12	31	Jan. 1, 2	16
Ayr. Colmonell ..	9	9	9	170	May 29, Aug. 5	74	July 11, 14, Aug. 7	58	Mar. 12	35	Nov. 4, Dec. 16	23
Kilmarnock ..	9	9	9	90	June 2	74	August 12	60	Mar. 12	35	Jan. 1, Nov. 9	24
Dumfries. Dumfries ..	21	21	9	140	May 30, Aug. 4, 5	73	September 4	59	Mar. 12, Dec. 15	34	Jan. 1	16
Eskdalemuir ..	24	24	24	794	August 5	70	September 4	57	Mar. 12	30	Jan. 1	11
Ruthwell ..	21	21	9	67	May 30, Aug. 4	74	September 4	58	Dec. 15	34	Jan. 1	15
Kirkcudbright. Cargen ..	9	9	9	85	May 30, Aug. 5	73	—	—	—	—	—	—
6. ISLE OF MAN.												
Isle of Man. Douglas ..	9	9	9	284	May 30, Aug. 5	69	September 3	58	Mar. 12	35	Jan. 1	25
2. ENGLAND, N.E.												
Northumberland. Berwick-on-Tweed ..	9	9	9	76	August 7	75	July 12, 14, 24, Sept. 4, 8	57	Mar. 11, 12	35	Jan. 1	20
Bellingham ..	9	9	9	848	August 5	74	Aug. 7, Sept. 4	55	Mar. 11	32	Jan. 1	15
Cockle Park ..	21	21	9	324	July 15	75	July 11, 20, Sept. 4	58	Jan. 1, Mar. 12	33	Jan. 1	24
Tynemouth ..	18	7	7	67	July 14	75	September 4	60	Mar. 12	33	Dec. 9	29
Durham. Chopwellwood ..	9	9	9	445	July 15	78	Aug. 12, Sept. 4	57	Mar. 11, 12	32	Feb. 28	23
Durham ..	21	21	9	336	July 15	76	September 4	59	Mar. 11	31	Mar. 13	20
Houghall ..	9	9	9	160	July 17	80	July 14	60	Mar. 11	32	Mar. 13	15
Ushaw College ..	9	9	9	594	July 15	77	July 14	58	Mar. 11, 12	31	Mar. 13	24
York, N. Riding. Ampleforth ..	9	9	9	350	July 12, 15	77	August 12	61	Mar. 11	31	Mar. 11, 12	26
Castleton ..	9	9	9	425	July 15	81	August 12	60	Dec. 15	22	Dec. 15	15
Rounton ..	21	21	9	249	July 15	81	Aug. 7, 24, Sept. 4	58	Mar. 11	31	Dec. 15	21
Scarborough ..	9	9	9	118	July 12, 14	80	July 24, Aug. 12	60	Mar. 11	34	Mar. 11, 12	28

TABLE V [1913] (continued).—WARMEST DAY and NIGHT and COLDEST DAY and NIGHT in the YEAR at each STATION.

DISTRICT, COUNTY AND PLACE.	Terminal Hours of Observation.			Height of Station above M.S.L. ft.	Warmest Day. Highest Maximum and Date.		Warmest Night. Highest Minimum and Date.		Coldest Day. Lowest Maximum and Date.		Coldest Night. Lowest Minimum and Date.		
	Max.	Min.	Rain.		°F.	°F.	°F.	°F.	F.°	F.°			
2. ENGLAND, N.E.—cont.													
York, N. Riding.	West Witton ..	9	9	9	605	July 15, 17, Aug. 5, Sept. 5	74	July 27, Aug. 7, 24	58	Mar. 11	29	Mar. 13	22
	York ..	21	21	9	56	July 12, 14, 15	80	July 23, Aug. 12	60	Dec. 15	34	Nov. 4, Dec. 9	25
York, E. Riding.	Hull ..	21	21	9	8	July 15	85	July 24	61	Mar. 11	32	Mar. 12, 13	26
	Osgodby ..	21	21	9	30	July 15	83	July 24	59	Mar. 11	31	Mar. 13	22
	Spurn Head ..	18	—	7	29	July 12	83	July 23, 24, 25, Aug. 12, 24	60	Mar. 11	33	Mar. 11	28
Lincoln.	Cranwell ..	18	—	7	236	July 15	85	July 24	60	Mar. 11	31	Mar. 12	18
	Cleethorpes ..	9	9	9	23	July 12	85	July 24	61	Mar. 11	32	Dec. 9	25
	Lincoln ..	9	9	9	58	July 15	88	August 12	61	Dec. 14	33	Jan. 1, Dec. 9	23
	Skegness ..	9	9	9	12	July 11	83	July 23, Aug. 12	62	Dec. 9	30	Dec. 9	24
3. ENGLAND, E.													
Norfolk.	Cromer ..	9	9	9	150	July 14	87	July 15	63	Mar. 11	33	Mar. 11	26
	Hunstanton ..	9	9	9	105	July 15	84	July 24, 25, Aug. 12	62	Mar. 11, 12, 13	36	Mar. 12	25
	Norwich ..	9	9	9	98	July 15	88	July 27, Sept. 6	62	Mar. 11	33	Jan. 1	18
	Sprowston ..	9	9	9	93	July 15	86	August 28	62	Mar. 11	31	Jan. 1	15
	Yarmouth ..	18	—	7	5	July 22	85	Aug. 12, Sept. 6	62	Mar. 11	33	Dec. 9	25
Suffolk.	Bungay (Flixton)	9	9	9	79	July 14	88	July 24, 25, 27, Aug. 7, 12	60	Mar. 11	33	Jan. 1, Mar. 12	22
	Copdock ..	9	9	9	164	July 15	87	July 24, 25	61	Mar. 11	32	Mar. 12	21
	Felixstowe ..	18	—	7	15	July 18	82	July 24, 25	64	Mar. 11	32	Mar. 11	25
	Lowestoft ..	9	9	9	83	July 22	85	August 12	62	Mar. 11	35	Dec. 9	24
Cambridge.	Cambridge (Bot. Gdns.)	21	21	9	41	July 15	87	July 24	61	Mar. 11	33	Dec. 9	19
	Wisbech ..	21	21	9	10	July 15	86	July 24	61	Mar. 11	33	Jan. 1	19
Bedford.	Luton ..	9	9	9	390	July 15	86	July 25	60	Dec. 15	29	Dec. 9, 15	20
	Woburn ..	9	9	9	291	July 15	86	July 25	62	Mar. 11	33	Mar. 11, Dec. 14	21
Hertford.	Rothamsted ..	9	9	9	420	July 15, 22	84	July 25	63	Mar. 11	30	Jan. 1	22
	St. Albans ..	9	9	9	272	July 15	87	July 25	63	Dec. 14	31	Jan. 8	18
Essex.	Clacton-on-Sea ..	18	—	7	55	July 18	83	August 12	65	Mar. 11	32	Dec. 9	25
	Chelmsford ..	9	9	9	134	July 15	88	July 24	60	Mar. 11	34	Jan. 1	14
	Chelmsford (Good Easter)	9	9	9	185	July 15, 22	85	July 25, Aug. 12	60	Mar. 11	33	Jan. 1	11
	Earls Colne ..	9	9	9	168	July 15	89	July 25	63	Mar. 11	34	Mar. 12	21
	Halstead ..	9	9	9	139	July 15	89	July 25	63	Mar. 11	33	Jan. 1	16
	Shoeburyness ..	18	—	7	11	July 22	87	July 25	62	Mar. 11	34	Jan. 18	22
4. MIDLAND COUNTIES.													
York, W. Riding.	Bradford ..	9	9	9	439	July 12, 14, 15	76	August 7	59	Mar. 11	30	Jan. 1	20
	Giggleswick ..	9	9	9	575	June 3, July 11, Aug. 5, Sept. 5	72	August 24	58	Mar. 11	29	Dec. 9	18
	Harrogate ..	18	—	7	478	July 12, Sept. 5	76	September 4	59	Mar. 11	30	Mar. 13	22
	Huddersfield ..	21	21	9	325	July 15	81	July 23, Aug. 7, 24, Sept. 8	59	Mar. 11	30	Jan. 1	21
	„ (Oakes)	21	21	9	761	July 15	78	July 23, Aug. 24, Sept. 8	57	Mar. 11	28	Mar. 13	22
	Meltham ..	9	9	9	513	July 15	79	July 23, Aug. 7, Sept. 4	59	Mar. 11	30	Jan. 1	18
	Pontefract ..	9	9	9	189	July 12	84	July 13, 23, 24, Aug. 12, 24, Sept. 4, 9	59	Mar. 11	30	Jan. 1	18
	Sheffield ..	21	21	9	428	July 15	82	July 23, Aug. 24	60	Mar. 11	28	Mar. 12, 13	25
	Wakefield ..	9	9	9	124	July 15	84	August 12	60	Mar. 11	32	Jan. 1	19
Derby.	Belper (School) ..	9	9	9	222	July 15	83	July 25, 27, Aug. 24	59	Mar. 11	32	Dec. 9	23
	Belper (Q. Bank) ..	9	9	9	280	July 15	83	July 25, 27	59	Mar. 11	32	Jan. 1, Dec. 9	21
	Buxton ..	9	9	9	1007	July 15	76	August 24	58	Mar. 11	29	Dec. 15	19
Nottingham.	Attenborough ..	7	7	7	89	July 15	85	July 24, 25, 26	60	Mar. 16	32	Dec. 16	19
	Mansfield ..	9	9	9	357	July 15	83	September 9	60	Mar. 11	30	Jan. 1	18
	Nottingham ..	9	9	9	192	July 15	84	August 12	61	Mar. 11	31	Jan. 1, Dec. 9	23
	Strelley ..	9	9	9	377	July 15	84	Aug. 12, Sept. 9	60	Mar. 11	31	Jan. 1	22
	Sutton Bonington	9	9	9	157	July 15	84	July 24, 25, 27, Aug. 7, 12, 24, Sept. 9	59	Mar. 11, Dec. 14	32	Jan. 1	20
	Worksop ..	9	9	9	56	July 15	86	July 24	60	Mar. 11	32	Jan. 1	15
Leicester.	Belvoir Castle ..	21	21	9	259	July 15	84	July 24, 25	60	(Mar. 12)	(24)	(Dec. 15)	(32)
Northampton.	Oundle ..	9	9	9	147	July 15	85	July 25, 27, Aug. 12	60	Mar. 11	31	Jan. 1	14
	Raunds ..	9	9	9	213	July 15	88	July 24, 25	61	Mar. 11	32	Jan. 1	17
	Roads ..	9	9	9	394	July 15, 17	85	July 25	63	Mar. 11	32	Jan. 1	20
Warwick.	Birmingham ..	18	—	7	535	July 15	83	July 25	63	Mar. 12	30	Dec. 15	21
	„ Sparkhill	7	13	7	424	July 15	87	July 25	63	Mar. 12	32	Dec. 15	18
	Coventry ..	9	9	9	270	July 15	85	July 25	64	Mar. 12	33	Dec. 15, 16	20
	Rugby ..	21	21	9	390	July 15	86	July 24, 25, 26, Aug. 5	59	Mar. 11	34	Dec. 15	22
Oxford.	Leafield ..	18	—	7	612	July 15	83	July 25	63	Dec. 15	28	Dec. 14	22
	Oxford ..	9	9	9	208	July 15	87	July 25	64	Dec. 14	29	Dec. 15	20
	„ (Sandford)	9	9	9	210	July 15	87	July 25	69	Dec. 14	29	Dec. 15	21
	Mursley ..	9	9	9	490	July 15	85	July 25	62	Mar. 11	31	Jan. 1, Mar. 12	22
Bucks.	Mayfield ..	9	9	9	374	July 15	81	August 24	59	Mar. 11	30	Dec. 9	18
Stafford.	Newport ..	9	9	9	211	July 15	80	July 25, Aug. 24	59	(Dec. 14)	(28)	(Mar. 13)	(16)
Shropshire.	Roden, Wellington	9	9	9	207	July 15	85	July 25	60	Mar. 12, 13, Dec. 31	33	Dec. 15	18
	Wistanstow ..	21	21	9	481	July 15	80	July 25	61	Dec. 15	29	Mar. 13	19
Worcester.	Malvern ..	9	9	9	377	July 15	82	July 25	63	Mar. 12	31	Mar. 13, Dec. 15	23
	Tenbury ..	9	9	9	313	July 15	82	July 27, Aug. 24, 25	60	(Mar. 12)	(34)	(Mar. 13)	(20)
	Worcester (Perdiswell)	9	9	9	95	July 15	82	July 25	65	—	—	Mar. 13	20
Hereford.	Bromyard ..	9	9	9	392	July 15	82	July 25	63	Mar. 12	31	Mar. 13	16
	Hereford ..	9	9	9	291	July 15	83	July 25	63	Mar. 12	32	Mar. 13	14
	Ross-on-Wye ..	18	—	7	223	July 15	83	July 25	65	Dec. 15	29	Jan. 1, Mar. 13	17
Gloucester.	Cheltenham ..	21	21	9	214	July 15	84	July 25	66	Mar. 12	32	Mar. 13	22

TABLE V [1913] (continued).—WARMEST DAY and NIGHT and COLDEST DAY and NIGHT in the YEAR at each STATION.

DISTRICT, COUNTY AND PLACE.		Terminal Hours of Observation.			Height of Station above M.S.L. ft.	Warmest Day. Highest Maximum and Date.		Warmest Night. Highest Minimum and Date.		Coldest Day. Lowest Maximum and Date.		Coldest Night. Lowest Minimum and Date.	
		Max.	Min.	Rain.		°F	°F	°F	°F				
5. ENGLAND, S.E.													
London.	Camden Square ..	9	9	9	110	July 15	91	July 25	66	Mar. 11	33	Jan. 1, Dec. 15	25
	East Ham ..	9	9	9	15	July 15	88	July 25	67	Mar. 11	34	Jan. 1	23
	Enfield ..	9	9	9	148	July 15	89	July 24, 25	63	Dec. 14	33	Jan. 1	21
	Greenwich ..	24	24	9	149	July 22	92	July 24	63	Dec. 15	31	Dec. 9, 15	24
	Hampstead Res. ..	9	9	9	450	July 15	87	July 15, 25	62	Dec. 15	30	Mar. 11, Dec. 15	22
	Kensington ..	18	9	9	80	July 15	89	July 25	66	Dec. 15	32	Dec. 9, 15	26
	Richmond (Kew Obs.)	24	24	24	18	July 15	87	July 24, 25	63	Dec. 15	32	Dec. 9, 15	25
	Stroud Green ..	18	7	7	212	July 15	90	July 25	65	Mar. 11	33	Mar. 11	25
	Tottenham ..	21	21	9	51	July 15	90	July 25	67	Mar. 11	34	Dec. 9, 15	26
	Westminster ..	9	9	9	27	July 15	88	July 25	66	Mar. 11	32	Dec. 9	25
Surrey.	Addington ..	9	9	9	472	July 15	88	July 25	62	Mar. 11	31	Dec. 15	22
	Croydon Aero. ..	18	7	7	244	July 15	87	July 25	64	Dec. 15	30	Dec. 15	23
	Wisley ..	9	9	9	150	July 22	89	July 25	63	Dec. 14	31	Dec. 15	22
Kent.	Biggin Hill ..	18	7	7	597	July 15	88	July 15	66	Mar. 11	28	Mar. 11	21
	Bromley ..	9	9	9	213	July 15	88	July 25	65	Mar. 11	32	Jan. 1	21
	Canterbury ..	9	9	9	124	July 15	87	July 25	65	Mar. 11	35	Mar. 12	17
	Dover ..	9	9	9	22	July 15	79	July 25	66	Mar. 11	34	Mar. 12	20
	Dungeness ..	18	7	7	20	July 13, 14, 15	76	July 25, Aug. 12	63	Mar. 11, Dec. 15	35	Mar. 12	22
	East Malling ..	9	9	9	127	July 15	88	July 25	64	Mar. 11	33	Mar. 12, Dec. 9	20
	Folkestone ..	9	9	9	101	July 15	84	July 25	65	Mar. 11	37	Mar. 12	22
	Lympne ..	18	7	7	347	July 15	82	July 25	62	Mar. 11	33	Mar. 12	19
	Margate ..	9	9	9	51	July 15	83	July 25	66	Mar. 11	36	Mar. 12	23
	Tunbridge Wells ..	9	9	9	354	July 15	88	July 25	62	Mar. 11	33	Mar. 12	20
	Wye ..	9	9	9	164	July 15	87	July 25	65	Dec. 8	34	Mar. 12, Dec. 9	18
Sussex.	Ardingly ..	9	9	9	437	July 15	88	July 25	62	Mar. 11	32	Mar. 12	22
	Brighton ..	9	9	9	31	July 16	81	July 25	64	Mar. 15	31	Mar. 12	23
	Eastbourne ..	21	21	9	35	July 15	85	July 15	65	Dec. 15	35	Mar. 12	23
	Hellingly ..	18	7	7	209	July 15	88	July 25	62	Dec. 15	32	Mar. 12	18
	St. Leonards ..	21	21	9	178	July 15	80	July 15	67	Mar. 11	34	Mar. 12	25
	Selsey Bill ..	9	9	9	21	July 15	82	July 25	64	Mar. 11	36	Mar. 12	21
Berkshire.	Ascot (Heatherwood)	21	21	9	320	July 15	87	July 25	63	Dec. 15	29	Dec. 15	20
	Bucklebury Pl. ..	9	9	9	409	July 15, 22	86	July 25	62	Mar. 12	34	Mar. 12, Dec. 15	22
	Reading (Shinfield)	9	9	9	200	July 15, 16	88	July 25	64	Mar. 11	32	Dec. 9, 15	22
	(Univ. Coll.) ..	9	9	9	152	July 15	88	July 25	64	Mar. 11	34	Dec. 15	23
Hampshire.	Aldershot ..	9	9	9	231	July 15	86	July 25	63	Dec. 14	31	Dec. 8	21
	Bournemouth ..	9	9	9	145	July 15	87	July 25	63	Mar. 12, Dec. 14	36	Mar. 12, Dec. 15	21
	Calshot ..	18	7	7	8	July 15	88	July 25	63	Dec. 15	31	Mar. 12, Dec. 15	25
	Grayshott ..	9	9	9	661	July 15	85	July 25	62	Mar. 11	32	Dec. 15	22
	Long Sutton ..	9	9	9	479	July 15, 22	86	July 25	61	Dec. 14	30	Mar. 12, Dec. 15	22
	Southampton ..	21	21	9	64	July 15	88	July 25	64	Dec. 15	31	Mar. 12, Dec. 15	22
	S. Farnborough ..	18	7	7	230	July 15	88	July 25	62	Dec. 15	29	Dec. 9	19
	Winchester (Worthy Down)	18	7	7	272	July 15	86	July 25	63	Dec. 15	28	Dec. 9, 15	19
Isle of Wight.	Newport ..	9	9	9	48	July 15	91	July 25, 26	63	Mar. 12	37	Dec. 9	21
	Ryde ..	9	9	9	13	July 15	88	July 25	65	Mar. 11, 12	35	Mar. 14	26
	Sandown ..	9	9	9	13	July 15	85	July 25, Aug. 14	64	Mar. 11	35	Mar. 12, 14	23
	Totland Bay ..	9	9	9	140	July 15	84	July 25	63	Mar. 12	34	Mar. 12, Dec. 18	24
	Ventnor (Hospital)	9	9	9	59	July 15	84	July 25	64	Mar. 12	37	Mar. 12	25
Wilts.	Larkhill ..	9	9	9	440	July 15	83	July 25	62	Mar. 12	33	Dec. 15	16
	Marlborough ..	9	9	9	424	July 15	84	July 25	(62)	Mar. 12	32	Jan. 1	17
	Porton ..	9	9	9	363	July 15	85	July 25	61	Mar. 12	35	Jan. 1, 2	18
7a. ENGLAND, N.W.													
Cumberland.	Aspatria ..	21	21	9	487	April 26, May 30, Aug. 5	71	September 4	58	March 12	31	March 13, Dec. 23	23
	(Mealsgate)					Aug. 5							
	Keswick ..	9	9	9	254	August 5	75	September 5	60	March 11, 12	34	December 15	24
Lancashire.	Newton Rigg ..	21	21	9	559	August 5	73	May 28, Sept. 4	58	March 11	31	January 1	19
	Bolton ..	9	9	9	341	July 14	77	August 24	60	March 11	34	December 15	24
	Burnley ..	9	9	9	458	July 11, Aug. 5, Sept. 5	75	August 24	60	March 11	31	December 9	18
	Darwen ..	21	21	9	724	July 12, 15, Aug. 5, May 30, Aug. 5	77	July 23	57	March 11	30	March 12	24
	Hutton ..	9	9	9	82	May 30, Aug. 5	75	July 11, Aug. 24 Sept. 4	59	March 11	34	December 15	22
	Lancaster ..	9	9	9	311	May 30	77	July 27, Aug. 7	58	March 12, Dec. 30	37	March 11	25
	Leyland ..	9	9	9	124	Aug. 5, Sept. 5	75	August 24	60	March 11, 12, Dec. 14	35	December 15	20
	Manchester— (Whit. Park) ..	21	21	9	125	July 14	79	September 4	60	March 11	33	December 15	22
	(Oldham Rd.) ..	21	21	9	190	July 14	81	September 4	61	March 12	34	March 12	25
	(Swinton) ..	9	9	9	253	July 15	78	July 22, Aug. 24	59	March 10, 11	33	December 15	19
	Southport ..	9	9	9	37	April 26	75	September 4	60	December 14	35	December 15	21
	Stonyhurst ..	9	9	9	377	July 11, 12, Aug. 5, 6, July 11	72	July 23	58	March 11	32	December 9, 15	24
Cheshire.	Hoylake ..	9	9	9	30	July 11	78	September 4	61	December 14	34	December 15	21
	Liverpool (Bidston)	18	7	7	189	May 30, Sept. 5	74	September 4	60	Dec. 15	31	Dec. 15	25
	Macclesfield ..	9	9	9	500	July 15	81	July 23, Aug. 24	58	March 11	30	December 9	20
	West Kirby ..	9	9	9	25	May 29, 30, July 12, 14, Aug. 5, 11	75	September 4	62	December 14	33	December 15	21
7b. NORTH WALES.													
Flint.	Hawarden Bridge	9	9	9	22	July 14, Sept. 5	78	September 4	62	March 11	36	March 13, Dec. 15	21
	Rhyl ..	9	9	9	30	May 30, Sept. 5	75	September 4	61	March 12	35	December 15	22
	Sealand ..	18	7	7	16	July 12, 14	77	September 4	62	Dec. 15	30	Dec. 15	18
Anglesey.	Holyhead ..	18	7	7	26	May 30, Aug. 5	69	September 3	60	Mar. 11, 12	36	Mar. 13	28
Denbigh.	Colwyn Bay ..	9	9	9	81	September 5	76	Aug. 7, Sept. 4	62	March 11, 12	35	March 13	24
Carnarvon.	Aber (Bangor) ..	9	9	9	60	May 30	74	August 7	62	March 12	34	March 13	25
	Llandudno ..	9	9	9	22	August 11	74	Aug. 7, Sept. 4	61	March 12	35	March 13	23
Montgomery.	Welshpool ..	9	9	9	254	July 15	80	July 25	62	March 12 Dec. 11, 12, 31	39	March 13, Dec. 15	19

TABLE V. [1913] (continued).—WARMEST DAY and NIGHT and COLDEST DAY and NIGHT in the YEAR at each STATION.

DISTRICT, COUNTY AND PLACE.	Terminal Hours of Observation.			Height of Station above M.S.L.	Warmest Day. Highest Maximum and Date.		Warmest Night. Highest Minimum and Date.		Coldest Day. Lowest Maximum and Date.		Coldest Night. Lowest Minimum and Date.		
	Max.	Min.	Rain.										
8a. SOUTH WALES.													
Cardigan.	Aberystwyth	9	9	9	59	May 30	78	August 7	61	March 12	35	March 12	23
	P.B.S.	9	9	9	452	May 30	76	August 7	60	March 12	33	March 12	21
Pembroke.	Haverfordwest	21	21	9	250	May 30	73	August 23	60	March 12, 13	34	March 13	22
	St. Ann's Head	18	7	7	150	May 30	72	September 8	61	March 12	36	March 12	26
Radnor.	Rhayader	9	9	9	757	July 17, Aug. 5	75	July 25	60	March 12	30	March 13	11
Glamorgan.	Cardiff	21	21	9	202	July 15, 17, 21, September 4	77	July 24, 25	61	March 12	31	March 13	18
	Swansea	9	9	9	27	July 17	76	July 24, 25, 26	61	March 12	36	March 13	25
8b. ENGLAND, S.W.													
Monmouth.	Newport	9	9	9	265	July 15	80	July 25	62	March 12	62	January 1, 2	17
	Usk	9	9	9	70	July 16	82	July 25	65	(March 12)	(32)	March 13	13
Somerset.	Bath	9	9	9	66	July 15	81	July 25	65	December 14	32	January 1	20
	Long Ashton	9	9	9	162	July 15	80	July 25	63	March 12	32	March 13	18
Dorset.	Holton Heath	9	15	9	64	July 15, 22	85	July 25, 26	63	Dec. 14	36	Dec. 15	18
	Portland Bill	18	7	7	32	July 16	76	July 15, 25	62	Mar. 11, 12	37	Mar. 12	26
	Shaftesbury	9	9	9	722	July 22	82	July 25	61	December 14	32	March 12	22
Devon.	Arlington	9	9	9	613	May 30	75	May 30, July 23, 24, 25, Aug. 7, 24	59	March 12	33	March 13	18
	Ashburton	9	9	9	583	July 22	85	July 25	62	March 12, April 15, Dec. 13, 30	38	March 12	22
	Cullompton	9	9	9	202	July 15	86	July 25	64	March 11, 12	36	March 13	18
	Dean Prior	21	21	9	331	July 17, 22	83	July 25	63	March 11	35	March 12, 13	19
	Ilfracombe	9	9	9	74	Aug. 11, Sept. 5	73	August 7	63	March 12	36	March 13	28
	Killerton	9	9	9	159	July 22	85	July 25	63	March 12	35	March 13	20
	Newton Abbot	9	9	9	350	July 15, 22	86	July 24, 25	63	March 11, 12	37	March 11	25
	Plymouth— (The Hoe)	21	21	9	116	July 15, 18, 22	80	July 25	63	March 12	39	March 12	23
	(Cattewater)	18	7	7	82	July 18	78	July 23, 24, 25	62	Mar. 12	38	Mar. 12	25
	Princetown	9	9	9	1359	July 14, 22	76	July 25	58	—	—	—	—
	Salcombe	9	9	9	39	July 16, 18	79	July 23, 25	62	(Mar. 11, 12)	(38)	(Mar. 12)	(25)
	Sidmouth	9	9	9	147	July 18	82	July 25	62	—	—	—	—
	Tavistock	9	9	9	458	July 22	82	July 24, 25	61	March 12	37	March 12	21
	Teignmouth	9	9	9	20	July 18	83	July 24	65	(Mar. 11)	(37)	(Mar. 13)	(25)
	Torquay	9	9	9	12	July 22	85	July 24	65	March 11, 12	37	March 12, 13	26
	Woolacombe	21	21	9	59	August 11	73	August 23	62	March 12	35	March 13	26
Cornwall.	Falmouth Obs.	9	9	9	167	July 20	81	July 24, 25, 26, Aug. 7	62	March 12	40	March 12	24
	(Pendennis)	18	7	7	200	July 22	78	July 24, 25, 26, Aug. 7, 23, Sept. 8	61	Mar. 11, 12	37	Mar. 11, 12	28
	Fowey	9	9	9	51	July 18	81	July 24, 25	62	March 12	40	March 12	25
	Gulval	9	9	9	20	July 22	78	July 25	62	March 12	39	March 12	27
	Newquay	9	9	9	190	September 4	76	July 25, Aug. 7	61	March 12	36	March 12	24
	Redruth	9	9	9	397	July 22	75	August 7	61	March 12	36	March 12	25
9. IRELAND, N.													
Sligo.	Markree Castle	21	21	9	122	July 21	76	July 11	58	Dec. 30	38	Jan. 1	19
Mayo.	Blacksod Point	18	7	7	10	June 3, July 21	72	August 6	60	Mar. 13	39	Mar. 13	29
	Mallarany	9	9	9	120	July 21	75	August 6	60	Dec. 7	38	Mar. 13	28
Donegal.	Malin Head	18	7	7	51	August 5	73	July 11, Sept. 3	58	Mar. 11, 12	37	Mar. 13	29
Antrim.	Aldergrove	18	7	7	238	July 14, Aug. 5	73	July 11	60	Mar. 12, Dec. 29	36	Jan. 17, Nov. 4	26
	Belfast	9	9	9	13	July 11	75	September 3	60	Mar. 12	37	Dec. 22	29
	Lisburn	9	9	9	206	July 14	78	July 12, 14, Aug. 7, Sept. 3	57	Mar. 12	36	Nov. 4	25
Down.	Donaghadee	18	7	7	40	July 14	71	July 11	61	Mar. 11, 12, Dec. 29	37	Jan. 1, Mar. 13	30
Armagh.	Armagh	21	21	9	204	July 14, Aug. 5	74	July 11	59	Mar. 12	36	Jan. 1, Mar. 13	25
Longford.	Newtownforbes	21	21	9	161	July 21	76	July 22, Sept. 3	58	Mar. 12	37	Mar. 11, 13	23
10. IRELAND, S.													
Dublin.	Balbriggan	9	9	9	210	July 14	76	July 12, Sept. 4	60	March 12, Dec. 8	38	March 13	23
	City	21	21	9	54	July 14	77	July 12, Sept. 4	61	March 12	36	March 13	21
	Phoenix Park	21	21	9	155	July 14	77	July 11, Sept. 4	60	March 12	35	March 13	16
	Trinity College	21	21	9	12	July 14	79	July 12, Sept. 4	62	March 12	36	March 13	20
Wicklow.	Newcastle	21	21	9	256	July 14	78	September 4	61	March 12, 13	37	March 13	22
King's Co.	Birr Castle	18	7	7	175	July 21	81	July 11, Sept. 4	60	March 7	35	March 13	19
Queen's Co.	Mountmellick	9	9	9	252	July 21	81	July 22, 25	60	March 12	30	March 13, 14	14
Wexford.	Newtownbarry	9	9	9	153	July 24	77	September 4	60	March 12	35	March 13	19
Kilkenny.	Kilkenny	9	9	9	182	July 21	81	July 25	61	March 12	35	March 13	23
Waterford.	Seskin, Carrick-on-Suir.	21	21	9	542	July 21	76	July 25, Sept. 4	59	March 12, 13, Dec. 30	35	March 12	25
	Waterford	9	9	9	137	July 24	77	July 25	63	March 12	37	March 11, 12	27
Limerick.	Foynes	9	9	9	50	July 22	80	July 11	63	December 30	37	November 9	24
Kerry.	Cahiriveen	24	24	24	30	July 21	71	July 25, 26, Sept. 4	61	March 12	37	March 13	25
	(Valentia Obs.)												
	Killarney	9	9	9	174	July 22	83	July 22, 24	62	December 31	39	March 12	24
Cork.	Ballinacurra	9	9	9	24	July 24	78	July 24	62	December 30	38	March 13	26
	Cork (Univ. Coll.)	9	9	9	57	July 24	78	July 24, 25	62	December 30	37	March 12, 13, Nov. 9	27
	Roche's Point	18	7	7	22	July 24	75	July 25, Aug. 6, 7, Sept. 3, 4	60	Dec. 30	39	Mar. 12, 13	29
11. CHANNEL ISLES AND SCILLY.													
Scilly.	St. Mary's	18	7	7	165	July 21	72	August 7	62	March 12	40	March 13	31
Guernsey.	St. Peter Port	21	21	9	173	September 4	76	July 24, 28	62	March 12	38	March 13	27
Jersey.	(St. Heliers)	9	9	9	28	July 12, 15	79	May 28, July 23	63	December 14	38	March 12	29
GIBRALTAR		18	7	7	43	July 27	99	July 23	78	December 9	54	January 1	42
MALTA		18	7	7	175	July 30	95	August 31	80	February 26	48	Feb. 24, Dec. 16	44

TABLE VI [1913].—MONTHLY FREQUENCIES OF SUNSHINE FOR 20 STATIONS.—NUMBER OF DAYS in each MONTH on which the DURATION of SUNSHINE

STATION.	January.					February.					March.					April.					May.					June.				
	Sunless.	0-3 hours.	3-6 hours.	6-9 hours.	Λ	Sunless.	0-3 hours.	3-6 hours.	6-9 hours.	Λ	Sunless.	0-3 hours.	3-6 hours.	6-9 hours.	Λ	Sunless.	0-3 hours.	3-6 hours.	6-9 hours.	Λ	Sunless.	0-3 hours.	3-6 hours.	6-9 hours.	Λ	Sunless.	0-3 hours.	3-6 hours.	6-9 hours.	Λ
Deerness	13	14	4	0	0	10	11	2	6	0	15	8	5	3	0	4	9	7	7	3	2	11	12	4	2	2	8	5	6	9
Aberdeen	11	12	7	1	0	2	15	8	4	0	11	13	5	2	0	4	10	7	6	3	1	12	11	5	2	4	6	2	10	8
Cockle Park	10	11	7	3	0	7	8	9	5	0	12	11	6	2	0	4	8	8	7	3	3	9	8	6	5	4	6	7	5	8
Cambridge	12	8	9	2	0	6	8	8	6	1	8	10	5	8	0	7	9	7	4	3	3	5	3	6	8	4	4	4	4	13
Birmingham	13	12	4	2	0	9	13	2	5	0	9	14	4	3	1	4	8	8	8	2	15	3	4	4	3	8	6	6	4	9
Richmond Kew (Obs.)	13	6	11	1	0	5	13	4	7	0	6	11	9	5	0	7	6	6	8	3	3	9	9	2	8	1	7	4	7	11
Southampton	13	5	11	2	0	7	7	3	11	1	7	9	8	6	1	5	9	4	7	5	1	8	9	6	7	0	7	5	6	12
Rothsay	14	12	5	0	0	11	9	6	3	0	11	13	4	2	1	6	4	8	8	4	3	5	5	8	10	6	6	5	3	10
Renfrew	11	14	5	1	0	8	14	4	3	0	14	10	5	2	0	5	10	4	8	3	2	7	6	11	5	7	4	9	6	6
Eskdalemuir	14	15	0	2	0	10	8	7	4	0	10	13	6	2	0	11	8	7	7	2	1	9	9	4	5	6	6	7	3	10
Douglas	11	9	7	4	0	7	12	6	4	0	4	11	9	2	5	4	6	4	8	8	2	5	3	4	16	6	4	7	4	10
Southport	13	9	7	2	0	4	17	5	3	0	7	12	5	6	1	3	7	7	6	7	1	11	4	5	10	4	6	8	0	12
Stonyhurst	15	11	4	1	0	8	14	4	3	0	6	14	5	6	0	2	9	6	11	2	2	10	7	3	9	3	10	4	4	9
Holyhead	9	12	7	3	0	8	8	9	3	1	6	8	10	7	0	2	5	8	5	10	3	5	5	4	14	3	8	3	5	11
Falmouth	11	9	8	3	0	6	10	6	7	0	7	8	6	10	0	4	8	4	6	8	2	4	7	10	8	3	6	6	3	12
Markree Castle	6	15	10	0	0	7	13	7	2	0	9	7	7	8	0	2	8	5	10	5	4	5	6	5	11	5	8	4	6	7
Armagh	6	13	11	1	0	8	12	6	2	1	12	4	8	4	3	5	4	9	8	4	2	7	6	4	12	4	9	4	4	9
Dublin (Phoenix Park)	7	9	12	3	0	4	13	6	6	0	7	10	9	5	0	3	9	7	6	5	1	9	6	5	10	2	11	4	4	7
Birr Castle	9	10	12	0	0	7	10	9	3	0	10	5	11	5	0	3	5	7	13	2	4	4	5	9	9	4	6	9	4	9
Cahirciveen (Valentia Obs.)	8	14	9	0	0	10	10	6	2	1	5	10	8	7	1	3	8	11	3	5	2	7	5	3	14	4	5	10	5	6

TABLE VII [1913].—COLDEST DAY and WARMEST NIGHT in each month for 20 STATIONS. Date on which the lowest reading

STATION.	January.				February.				March.				April.				May.				June.			
	Coldest Day.		Warmest Night.		Coldest Day.		Warmest Night.		Coldest Day.		Warmest Night.		Coldest Day.		Warmest Night.		Coldest Day.		Warmest Night.		Coldest Day.		Warmest Night.	
	Date.	Max.	Date.	Min.																				
Deerness ..	1, 6, 17, 24	40	21st	41	11, 12	40	8th	43	11th	37	17, 20	42	17, 18	41	10, 24, 26	44	9th	44	29th	47	10th	47	25th	49
Aberdeen ..	1st	39	21st	41	13th	38	8th	46	11th	36	20th	42	17th	40	24th	47	8, 10,	45	28th	46	9th	48	29th	51
Cockle Park ..	1st	33	13, 14	39	11th	39	8th	47	12th	33	5, 17, 25	41	14th	40	24th	47	3, 8, 19	48	27, 28	49	13, 14	50	29th	51
Cambridge ..	1st	36	13, 21	42	24th	40	15th	50	11th	33	20th	46	16th	40	26, 27	52	23rd	47	29, 30	55	16th	56	22nd	57
Birmingham ..	1st	32	24th	45	24th	37	16th	50	12th	30	20th	49	15th	40	10th	52	23rd	48	29th	58	5, 14, 17	57	25th	54
Richmond (Kew Obs.) ..	1st	39	21st	47	24th	43	15th	52	11th	33	20th	49	16th	41	26th	52	23rd	47	29th	58	16th	58	9th	56
Southampton ..	1st	39	8, 13	42	3rd	45	15th	51	12th	34	20th	49	16th	42	27th	54	18, 22	52	30th	59	10, 17, 28	61	7, 20, 29	55
Rothsay ..	1st	39	21, 31	42	3, 13	41	8th	47	13th	38	20th	46	15th	42	27th	46	17th	51	29th	50	6, 10, 15	52	22nd	50
Renfrew ..	1st	35	13th	43	13th	35	8th	46	11, 12	34	20th	50	15th	42	10th	51	3rd	49	28th	53	13th	50	22, 23	51
Eskdalemuir ..	1st	35	13th	40	2nd	36	8th	43	12th	30	20th	43	14th	38	9th	45	19th	46	28, 29	52	13th	47	22nd	50
Douglas ..	29, 30, 31	41	21, 24	43	24th	41	8, 16	46	12th	35	4, 5	45	15th	42	27, 29	48	19th	49	29, 30	56	14th	52	7th	52
Southport ..	1, 17	41	8th	42	24th	41	16th	47	11th	36	20th	49	15th	44	10th	53	20th	50	28th	54	14th	53	7, 26	53
Stonyhurst ..	19, 27, 30	39	22nd	41	24th	39	18th	46	11th	32	5, 20	47	14, 15	40	10th	52	16, 19, 23	49	28, 29	55	14th	53	22nd	52
Holyhead ..	1st	42	13, 16, 24	45	3rd	43	8, 15, 16	47	11, 20	36	20th	49	15, 16	44	9th	51	19th	50	27, 29,	53	14th	52	7th	55
Falmouth ..	27, 30	47	21st	49	2, 11	47	15, 16	50	12th	40	17, 19, 20	49	15th	45	9, 26,	51	16th	54	31st	57	10th	56	21, 26, 29	55
Markree Castle ..	17, 26	42	8th	46	2nd	42	15th	47	12th	39	24th	46	15th	44	10, 23, 30	44	17th	52	31st	55	14th	54	8th	53
Armagh ..	30th	38	20th	44	2nd	41	8th	49	12th	36	20th	47	15th	42	24th	48	17th	53	27th	54	26th	54	7, 22	53
Dublin (Phoenix Pk.) ..	26, 30	41	21st	46	2nd	42	15th	49	12th	35	17th	48	15th	43	9, 24,	48	17th	51	27th	53	5th	54	22nd	53
Birr Castle ..	26th	39	20th	47	3, 12	42	15th	51	7th	35	17th	52	16th	44	24th	48	17th	51	31st	58	14, 17	55	6th	55
Cahirciveen (Val. Obs.) ..	30th	45	20th	48	2nd	45	15th	52	12th	37	16th	50	16th	45	23rd	51	17th	52	31st	56	14th	55	25, 26	61

TABLE VIII [1914].—NUMBER OF DAYS in the YEAR with RAINFALL between given limits.

STATION.	STATION.								STATION.	STATION.							
	0 in. or 0.1 mm.	0.01-0.04 in. or 0.2-1.0 mm.	0.05-0.20 in. or 1.1-5.0 mm.	0.21-0.40 in. or 5.1-10.0 mm.	0.41-0.60 in. or 10.1-15.0 mm.	0.61-0.80 in. or 15.1-20.0 mm.	0.81-1.00 in. or 20.1-25.0 mm.	Λ 1.00 in. or 25 mm.		0 or 0.1 in. or 0 or 1 mm.	0.01-0.04 in. or 0.2-1.0 mm.	0.05-0.20 in. or 1.1-5.0 mm.	0.21-0.40 in. or 5.1-10.0 mm.	0.41-0.60 in. or 10.1-15.0 mm.	0.61-0.80 in. or 15.1-20.0 mm.	0.81-1.00 in. or 20.1-25.0 mm.	Λ 1.00 in. or 25 mm.
Deerness ..	108	94	106	40	11	5	2	0	Douglas ..	127	60	80	46	28	13	6	6
Aberdeen ..	140	69	106	35	8	3	4	1	Southport ..	157	62	73	45	16	7	4	2
Cockle Park ..	154	81	96	23	7	3	1	1	Stonyhurst ..	152	46	73	47	11	7	10	10
Cambridge ..	217	51	56	22	8	2	1	0	Holyhead ..	162	55	76	40	19	11	1	2
Birmingham ..	176	60	77	38	11	2	2	0	Falmouth ..	160	40	88	39	18	9	5	7
Richmond (Kew Obs.) ..	191	54	76	33	7	2	2	1	Markree Castle ..	113	51	103	65	19	9	4	2
Southampton ..	167	72	67	35	10	9	3	3	Armagh ..	136	50	110	54	11	0	0	5
Rothsay ..	98	39	87	78	32	20	7	5	Dublin (Phoenix Park) ..	152	58	102	37	13	3	0	1
Renfrew ..	148	59	77	47	21	9	3	2	Birr Castle ..	139	56	98	50	15	4	2	2
Eskdalemuir ..	128	41	69	38	30	26	19	15	Cahirciveen (Valentia Obs.) ..	95	48	100	58	31	16	9	9

was (1) nil, (2) 3 hours or less, (3) more than 3 hours but not more than 6 hours, (4) more than 6 hours but not more than 9 hours, (5) more than 9 hours.

July.					August.				September.				October.				November.				December.				Year.					STATION.						
Sunless.	0-3 hours.	3-6 hours.	6-9 hours.	> 9 hours.	Sunless.	0-3 hours.	3-6 hours.	6-9 hours.	> 9 hours.	Sunless.	0-3 hours.	3-6 hours.	6-9 hours.	> 9 hours.	Sunless.	0-3 hours.	3-6 hours.	6-9 hours.	> 9 hours.	Sunless.	0-3 hours.	3-6 hours.	6-9 hours.	> 9 hours.	Sunless.	0-3 hours.	3-6 hours.	6-9 hours.	> 9 hours.							
1	15	10	5	0	9	8	8	4	2	5	7	8	6	4	3	13	11	4	0	0	12	11	6	1	0	21	8	2	0	0	97	123	80	46	20	Deerness.
2	8	9	6	0	6	10	8	6	1	4	6	6	10	4	6	11	11	10	4	0	11	8	9	2	0	12	12	7	0	0	74	123	89	56	24	Aberdeen.
0	7	5	9	10	1	13	4	7	6	12	3	3	12	2	5	8	10	5	0	0	5	5	0	13	10	8	8	0	0	0	70	113	83	66	34	Cockle Park.
1	6	6	7	15	2	7	4	9	9	11	9	5	11	9	8	7	10	1	10	1	6	14	7	3	0	16	8	6	1	0	71	92	73	71	59	Cambridge.
0	6	6	5	13	2	6	6	11	6	2	9	5	7	7	6	8	12	5	0	12	9	8	1	0	16	11	4	0	0	80	119	70	55	42	Birmingham.	
0	4	4	9	16	1	5	8	8	9	2	3	5	15	6	5	9	11	5	1	8	14	6	2	0	18	6	5	2	0	68	91	82	73	52	Richmond (Kew Obs.).	
0	5	3	5	18	0	8	6	8	7	2	2	2	10	14	6	5	9	8	6	2	11	7	9	3	17	5	8	1	0	69	81	76	71	69	Southampton.	
10	11	4	4	2	5	9	5	3	3	7	5	6	8	4	4	9	11	8	3	0	8	13	8	1	16	10	5	0	0	106	108	73	45	34	Rothesay.	
2	14	6	5	4	2	10	7	1	7	7	2	6	12	3	8	14	6	3	0	11	13	5	1	0	16	10	3	2	0	93	122	67	59	25	Renfrew.	
4	9	7	6	5	2	12	10	6	1	4	9	8	6	3	10	11	6	4	0	14	13	6	0	0	15	8	7	1	0	90	121	82	45	25	Eskdalemuir.	
2	9	3	6	11	1	11	5	4	10	4	5	3	11	7	7	10	7	7	0	9	13	6	2	0	16	8	7	0	0	73	106	63	57	67	Douglas.	
1	8	3	7	12	1	11	6	4	9	4	3	7	10	5	7	10	7	7	0	8	16	5	1	0	18	7	6	0	0	71	117	71	51	56	Southport.	
1	9	3	6	12	3	5	10	8	5	3	7	8	10	3	8	10	8	5	0	9	12	8	1	0	20	5	4	2	0	80	116	70	60	40	Stonyhurst.	
2	10	7	2	10	1	10	9	2	9	3	7	6	8	6	4	10	11	5	1	9	15	3	3	0	17	10	2	2	0	67	108	80	49	62	Holyhead.	
4	4	3	3	17	1	7	5	4	13	3	2	5	11	9	5	5	7	10	1	9	12	6	3	0	10	15	6	0	0	66	93	69	70	68	Falmouth.	
4	12	6	6	3	1	11	9	5	5	3	5	8	7	3	3	3	16	9	3	0	5	19	4	2	0	18	5	0	0	69	130	79	54	34	Markree Castle.	
3	9	10	6	3	5	6	9	5	6	6	7	6	6	6	6	7	8	10	1	0	15	6	2	0	18	9	4	0	0	84	107	89	42	44	Armagh.	
0	9	7	6	9	4	5	9	4	10	1	9	8	6	6	7	8	12	2	2	11	8	9	2	0	16	9	6	0	0	62	109	95	49	51	Dublin (Phoenix Park).	
5	7	8	5	6	3	7	7	6	7	6	6	2	14	2	2	9	10	8	4	0	8	14	6	2	0	12	7	0	0	81	96	91	65	33	Birr Castle.	
7	8	4	5	7	1	5	11	5	9	4	8	7	5	6	8	10	8	4	1	10	12	4	4	0	11	17	3	0	0	73	114	86	43	50	Cahirciveen (Valentia Obs.).	

for the month of the maximum thermometer and the highest reading of the minimum thermometer were recorded.

July.				August.				September.				October.				November.				December.				Year.				STATION.
Coldest Day.		Warmest Night.		Coldest Day.		Warmest Night.																						
Date.	Max.	Date.	Min.	Date.	Max.	Date.	Min.																					
22, 30	52	11, 12	52	1st	52	23, 24	52	28th	48	13, 14	53	29th	47	5, 6, 8	50	28th	41	30th	48	7th	40	1st	45	Mar. 11	37	Sept. 13,	53	Deerness.
31	54	13, 17	61	29th	53	24th	55	28th	49	3rd	54	22nd	44	8th	53	28th	40	30th	50	8th	37	1st	41	Mar. 11	36	July 11	61	Aberdeen.
27th	54	11th	61	29th	53	24th	55	28th	49	3rd	54	22nd	44	8th	53	28th	40	30th	50	8th	37	1st	41	Mar. 11	36	July 11	61	Aberdeen.
1st	56	11, 20	58	20th	58	24th	56	28, 30	51	4th	58	11th	47	8th	51	28th	41	30th	47	15th	35	1, 17	37	Jan. 1	33	{ July 11, 20 } { Sept. 4 }	58	Cockle Park.
6, 28	66	24th	61	4th	59	7, 23	58	29, 30	56	6, 9	57	13, 15	53	8th	54	6, 28	42	13th	55	15th	35	22, 24	46	Mar. 12	33	July 24	61	Cambridge.
29	66	24th	61	4th	59	7, 23	58	29, 30	56	6, 9	57	13, 15	53	8th	54	6, 28	42	13th	55	15th	35	1st	46	Mar. 12	33	July 24	61	Cambridge.
6th	59	25th	63	1st	54	24th	60	29th	50	9th	59	26th	50	17th	56	28th	40	13th	53	15th	32	1st	48	Mar. 12	30	July 25	63	Birmingham.
6th	65	24, 25	63	3, 4	61	12, 23	60	30th	53	6th	54	13th	52	8th	53	28th	42	12th	54	15th	32	1st	46	Dec. 15	32	July 24, 25	63	Richmond (Kew Obs.).
5th	63	25th	64	26th	64	1, 23	62	30th	54	6th	55	26th	53	8th	56	28th	38	13th	52	15th	31	1st	50	Dec. 15	31	July 25	64	Southampton.
1st	55	12, 13	54	30th	56	17, 29	55	23rd	50	3rd	56	22, 29	47	8th	53	28th	42	30th	48	9, 14,	41	1, 4,	40	Mar. 13	38	Sept. 3	56	Rothesay.
1, 27	56	11th	58	31st	58	7th	58	23, 28	50	3rd	58	11th	44	8th	56	3, 28	42	22, 30	50	15th	35	1st	48	Mar. 11, 12	34	{ July 11 } { Aug. 7 } { Sept. 3 }	58	Renfrew.
1st	53	11th	54	31st	56	12th	53	28th	48	4th	57	11th	43	8th	50	28th	39	30th	48	15th	33	19th	37	Mar. 12	30	Sept. 4	57	Eskdalemuir.
1st	56	23rd	56	20th	56	7th	57	28, 29	53	3rd	58	13, 22	52	8th	55	27th	44	12th	50	14th	40	1st	48	Mar. 12	35	Sept. 3	58	Douglas.
31st	58	11th	59	16th	60	24th	58	30th	53	4th	60	11th	49	8th	54	9th	43	13th	51	14th	35	1st	48	Dec. 14	35	Sept. 4	60	Southport.
5th	58	23rd	58	20th	55	7th	57	29, 30	52	4th	57	10, 22	50	8th	53	28th	41	13th	49	14th	36	1st	47	Mar. 11	32	July 23	58	Stonyhurst.
1st	57	25th	59	22nd	59	7th	59	30th	52	3rd	60	31st	53	8th	57	4, 27	47	12th	54	11th	40	1st	50	Mar. 11, 12	36	Sept. 3	60	Holyhead.
3, 5	60	24, 25	62	10, 11	64	7th	62	29th	57	8th	61	31st	53	8th	58	3rd	48	12th	53	31st	42	1st	50	Mar. 12	40	{ July 24, } { 25, 26 } { Aug. 7 }	62	Falmouth.
2, 4,	59	11th	58	15th	60	6th	57	28, 29	55	3rd	56	31st	51	8th	54	9th	45	30th	48	30th	38	22nd	42	Dec. 30	38	July 11	58	Markree Castle.
29	58	11th	59	22nd	58	6th	57	29th	51	13th	51	31st	49	8th	53	4th	40	12th	49	8, 30	39	1st	43	Mar. 12	36	July 11	59	Armagh.
28th	58	11th	59	22nd	58	6th	57	29th	51	13th	51	31st	49	8th	53	4th	40	12th	49	7, 8,	31	1st	44	Mar. 12	35	July 11	60	Dublin (Phoenix Park).
31st	58	11th	60	29th	61	11th	57	29, 30	54	4th	60	31st	48	8th	56	2, 3,	45	12th	50	30, 31	38	1st	49	Mar. 12	35	Sept. 4	60	Birr Castle.
4th	58	11th	60	14, 19	60	6, 7	58	28th	53	4th	60	31st	49	8th	55	4th	44	12th	53	8, 29,	38	1st	49	Mar. 7	35	Sept. 4	60	Birr Castle.
4th	58	25, 26	61	15th	60	6th	59	28th	54	4th	61	31st	51	7th	58	4th	45	11th	54	30, 31	39	1st	50	Mar. 12	37	July 25, 26	61	Cahirciveen (Valentia Obs.).

TABLE IX [1913].—NUMBER OF DAYS IN THE YEAR WITH MAXIMUM AND MINIMUM TEMPERATURES BETWEEN GIVEN LIMITS.

STATION.	MAXIMUM TEMPERATURE.							MINIMUM TEMPERATURE.						STATION.	MAXIMUM TEMPERATURE.							MINIMUM TEMPERATURE.					
	32° or less.	33° to 41°.	42° to 50°.	51° to 59°.	60° to 68°.	69°																					

Wind Section.

TABLE X.—PARTICULARS OF ANEMOGRAPHS.

District and Station.	Type*	Anemograph in action from	"Analysis" published from	Height of Vane or Cups.			NOTES.
				Above Mean Sea Level.	Above Ground.	Above Building.	
o. SCOTLAND, N.				Ft.	Ft.	Ft.	
Lerwick ..	D †	1923	1923	310	42	33 †	An anemograph was erected at Sandwick Manse in 1862, and remained in operation until June, 1869, when it was replaced by the instrument now at Deerness, which was at Sandwick until 1885; it was at Swanbister, 1886-1890, at Stenness, 1890-1891, and was erected at Deerness in April, 1891.
Deerness ..	R †	1862	1909	188	16	5	
1. SCOTLAND, E.							
Aberdeen ..	R †	1868	1909	119	75	12	The Record ceased February, 1920. The anemograph is situated in a field about ¼ mile east of the Observatory.
" ..	d	1907	1909	153	105	52	
" ..	D †	1922	1922	70	42	33 †	
Balmakewan ..	D	1915	1915	140	25	18	
Edinburgh ..	D	1915	1915	485	39	31 †	
6a. SCOTLAND, W.							
Tiree ..	D	1926	1927	80	55	48 †	Instrument replaced by one with direction-recorder attached in 1914.
Paisley ..	D	1914	1914	188	81	15	
Eskdalemuir ..	d †	1911	1911	825	50	22	
" ..	D †	1914	1914	825	50	22	
2. ENGLAND, N.E.							
South Shields ..	D †	1909	1911	62	46	20	On 22nd April, 1927, the instrument was removed from Groyne Lighthouse and re-erected on the South Pier. A Robinson cup-anemograph was in action on the High Lighthouse at N. Shields from September, 1886 to 1910. From 1916 to 1927, an anemograph, type A, was in operation.
Spurn Head ..	D	1913	1914	67	41	35 †	
Cranwell ..	D †	1927	1927	284	44	26 †	
3. ENGLAND, E.							
Gorleston ..	D	1920	1920	52	42	33 †	From 1908 to 1920 an anemograph, type d, was in operation. From 1869 to May 1919, an anemograph, type R, was in operation at the Sailors' Home, Yarmouth. This instrument was also in operation 1918 to April, 1922, analysis published from May, 1920 to March 1922.
Felixstowe ..	A †	1925	1925	55	40	25	
Shoeburyness ..	D	1902	1909	115	104	14 †	
4. MIDLAND COUNTIES.							
Birmingham ..	D	1923	1924	643	118	18	
5. ENGLAND, S.E.							
Richmond (Kew Obs.) ..	R †	1868	1909	82	65	22	From 1896 to 1914, an anemograph, typed, was in operation.
" ..	D †	1914	1914	82	65	22	
Croydon ..	D †	1922	1922	313	105	49	Records from a new instrument on a new site have been used since May 1928 (See Introduction). The particulars given refer to this instrument.
Dover ..	d	1923	1924	61	32	22	A similar instrument was in operation at Dover on a different site from 1914 to 1917. Record defective November, 1928.
Lympne ..	D †	1922	1922	409	70	55 †	The anemograph is erected on the top of a chimney stack about 150 feet high.
S. Farnboro' (Pyestock Tower)	D †	1921	1922	444	160	—	
Calshot ..	A †	1917	1920	55	45	31	From 1922 to October, 1926, an anemobiograph was in operation at Andover.
Worthy Down ..	D †	1926	1926	314	43	27	
Larkhill (Salisbury Plain)	A	1920	1920	526	51	34 †	
7a. ENGLAND, N.W.							
Fleetwood ..	D	1923	1923	112	50	12	A Robinson cup-anemograph was in operation at Fleetwood from 1886 to November, 1923. The present Dines Anemograph, for which the record commenced 14th December, 1923, is erected on the same building.
Southport ..	D †	1897	1909	77	59	45 †	
7b. N. WALES.							
Holyhead ..	R †	1870	1909	50	25	—	An anemobiograph is also in operation at this station. From 1895 to 1920, an instrument, type d, was in operation. The height of the vane of this instrument was 44 feet above ground and 63 feet above sea level, not 40 feet and 60 feet, as stated in most of the relevant issues of the Weekly and Monthly Weather Reports.
" ..	D †	1920	1920	64	45	29 †	
Sealand ..	D †	1927	1927	81	65	49 †	From 1924 to February, 1927, an anemograph, type A, was in operation. Record defective January, 1928.
8b. ENGLAND, S.W.							
Plymouth ..	d	1908	1909	185	88	2	The position of the observatory at Falmouth was changed in May, 1885. Instrument out of action October, 1924 to November, 1926, and after August, 1928.
Falmouth ..	R †	1868	1909	208	41	13	
Pendennis Castle	d	1902	1909	256	65	24	
9. IRELAND, N.							
Dunfanaghy ..	d	1926	1927	180	47	39	
Aldergrove ..	D †	1927	1927	282	40	27 †	
Armagh ..	R †	1868	1909	246	50	—	
10. IRELAND, S.							
Kingstown ..	R †	1900	1909	49	27	16	A Robinson cup-anemograph of the original pattern was in operation at Kingstown from 1856 to 1895.
Quilty ..	d	1911	1911	100	40	32 †	
Cahiriveen (Valentia Obs.)	R †	1868	1909	75	45	7	Prior to March, 1892, the site of the Observatory was on Valentia Island.
" ..	D †	1917	1917	98	41	34 †	
Weaver Point ..	d	1905	1909	160	30	21 †	
11. SCILLY ISLES.							
St. Mary's ..	R ¹ †	1879	1909	150	19	—	A Robinson cup-anemograph of the original pattern was in operation at Kingstown from 1856 to 1895. Prior to March, 1892, the site of the Observatory was on Valentia Island. Prior to July, 1914, the anemograph was at Roches Point. Instrument under repair August and September, 1928. Instrument dismantled November, 1927. Records ceased March, 1925. Instrument installed 12th September, 1924. Records defective after 25th September, 1927. Erected at Telegraph Station in November, 1926. From February, 1928 onwards this instrument has been adopted as standard.
" ..	d	1895	1909	150	32	†	
" ..	D	1924	1925	160	42	35 †	
" ..	D	1927	—	230	65	17	
" ..	D †	1927	—	230	65	17	

* A Anemobiograph with direction recorder. R Robinson cup-anemograph: standard size, 9-in. cups, 2-ft. arms; factor used, 2.2. R¹ Robinson cup-anemograph: smaller size, 5-in. cups, 1-ft. arms; factor used, 2.8. D Dines tube-anemograph and direction recorder. d Dines tube-anemograph without direction recorder. † Standard mounting. † Hourly values are available. Hourly readings or hourly means have been published for varying periods for Deerness, Aberdeen, Eskdalemuir, Richmond, Southport, Falmouth, Armagh and Cahirciveen.

TABLE XI* [FIRST Published 1914]. DISTRIBUTION OF WINDS of stated speeds at anemograph-stations, and Maximum Speeds for the year. The distribution of wind is not given if the record failed for 500 hours or more.

District and Station.	Distribution of Wind. †									Extreme Velocities.									
	More than 38 mi/hr.			25 to 38 mi/hr.		13 to 24 mi/hr.	4 to 12 mi/hr.	Less than 4 mi/hr.	No Record.	Highest Hourly Wind.				Highest Gust.					
	No. of Days.	Duration 1928.	Average. ‡	No. of Days.	Duration.	Duration.	Duration.	Duration.	Duration.	Direction and Speed.	Mid. Time.	Speed.	Date.	Speed.	Date.				
o. Lerwick ..	40	209	224	153	1,496	3,408	3,004	639	28	220	55	24	Feb. 1	16	87	39	Jan. 24	6	20
Deerness (Cup Anr.)	21	97	97	146	1,105	3,705	3,395	429	53	260	53	24	Feb. 15	20	—	—	—	—	—
1. Aberdeen ..	1	3	3†	38	198	2,840	4,956	787	0	110	41	18	Mar. 29	18	59	27	Oct. 20	9	25
Balmakewan ..	0	0	0.9	13	46	1,174	(5,170)	(2,318)	76	350	32	14	Apr. 18	10	60	27	Dec. 7	6	20
Edinburgh ..	19	40	25	92	579	3,277	3,619	1,269	0	210	46	21	Jan. 10	10	75	33	Oct. 20	5	35
6a. Tiree ..	33	167	124	186	1,926	4,088	2,255	348	0	310	53	24	Jan. 6	10	81	36	Jan. 6	10	15
Paisley ..	0	0	0.9	31	91	1,730	5,333	1,630	0	140	38	17	Oct. 20	4	78	35	Jan. 10	10	25
Eskdalemuir ..	12	30	45	123	854	3,506	2,974	1,411	9	270	51	23	Nov. 23	16	87	39	Nov. 23	15	5
2. South Shields ..	2	4	17	48	276	2,837	4,219	1,448	0	270	44	20	Nov. 23	17	87	39	Nov. 23	16	40
Spurn Head ..	15	76	46	157	1,269	4,763	2,496	161	19	280	59	26	Jan. 6	13	84	38	Jan. 6	12	20
Cranwell ..	4	13	5	61	347	3,014	4,335	1,075	0	290	50	22	Jan. 6	15	77	34	Jan. 6	11	50
3. Gorleston ..	2	2	13	70	496	2,930	4,597	723	36	60	40	18	Dec. 31	9	66	29	Nov. 16	19	10
Felixstowe ..	2	6	4	71	432	3,644	(3,413)	(1,266)	23	230	42	19	Nov. 16	18	64	29	Nov. 16	18	30
Shoeburyness ..	3	7	18	72	476	4,013	1,492	273	23	270	45	20	Jan. 6	15	71	32	Jan. 6	14	5
4. Birmingham ..	2	4	1	26	103	2,756	5,353	568	0	270	43	19	Feb. 11	2	78	35	Feb. 11	2	10
5. Richmond (Kew Obs.)	0	0	0.1	18	65	1,852	5,019	1,848	0	230	35	15	Nov. 16	16	65	29	Nov. 16	16	10
Croydon ..	3	16	3	43	214	3,090	4,460	1,004	0	260	49	22	Nov. 16	17	81	36	Nov. 16	18	10
Lympne ..	7	18	20	83	567	3,370	4,521	307	1	240	54	24	Nov. 16	17	79	35	Nov. 16	15	5
S. Farnboro' (Pye's Tr.)	3	7	11	42	206	2,534	(5,031)	(969)	37	250	44	20	Nov. 16	17	74	33	Nov. 16	16	50
Calshot ..	8	22	18	103	690	3,884	(3,642)	(544)	2	260	50	22	Nov. 16	16	70	31	Nov. 16	17	5
Worthy Down ..	0	0	1	33	131	2,158	4,900	1,595	0	200	38	17	Nov. 16	14	71	32	Nov. 16	16	15
7a. Fleetwood ..	16	106	90	128	812	3,828	3,432	606	0	300	60	27	Jan. 6	14	82	37	Jan. 6	12	40
Southport ..	23	139	120	142	1,127	4,071	3,235	212	0	270	61	27	Nov. 23	15	87	39	Nov. 23	15	10
7b. Holyhead ..	21	154	91	157	1,278	4,372	2,481	499	0	290	60	27	Nov. 25	14	82	37	Nov. 23	17	10
8b. Plymouth ..	12	44	48	88	556	2,831	3,749	1,460	144	—	47	21	Nov. 16	13	73	33	Nov. 16	13	55
9. Dunfanaghy ..	27	111	111	103	811	2,610	3,698	1,528	26	—	57	25	Nov. 25	10	91	41	Feb. 6	21	40
Aldergrove ..	2	5	5	47	213	2,943	4,450	1,173	0	260	44	20	Nov. 23	13	84	38	Nov. 23	11	25
10. Kingstown (Cup Anr.)	23	101	65	167	1,220	3,717	3,127	601	18	260	54	24	Jan. 6	10	—	—	—	—	—
Quilty ..	12	61	54	128	1,099	3,722	3,252	566	84	—	59	26	Oct. 19	23	79	35	Oct. 19	23	15
Cahiriveen (Val. Obs.)	10	23	18	120	966	4,046	2,964	785	0	240	54	24	Oct. 19	21	85	38	Oct. 19	20	10
11. Scilly, St. Mary's	29	182	121	181	1,934	4,062	2,238	368	0	270	59	26	Feb. 10	21	83	37	Nov. 23	13	20

* A similar Table for Cup-Anemographs only was first published in 1909. † This average is for a period from the first year of analysis to 1928. ‡ Analysis Column " in Table X. † Brackets () indicate that the distribution as between winds above and below 4 mi/hr. is doubtful, but the total number of hours with winds below 12 mi/hr. is reliable. ‡ This average is for a period 1923 onwards. Formerly, it was computed by the inclusion of the Cup Anemograph readings for the period 1909 to 1922 (inclusive).

TABLE XII [FIRST Published 1914].—DISTRIBUTION OF DAYS on which maximum hourly wind (a) exceeded 38 mi/hr. (17.1 m/s) and (b) exceeded 24 mi/hr. (10.7 m/s).

District and Station.	† More than 38 mi/hr. or 17.1 m/s.												† More than 24 mi/hr. or 10.7 m/s.													
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
	Number of Days.												Number of Days.													
o. Lerwick ..	13	14	5	1	0	1	1	0	0	1	2	2	40	27	24	15	14	5	6	13	4	8	9	9	19	153
Deerness ..	7	5	4	0	0	0	0	0	0	1	1	3	21	26	20	13	11	7	7	10	4	5	11	12	20	146
1. Aberdeen ..	0	0	1	0	0	0	0	0	0	0	0	0	1	9	7	7	3	1	0	0	0	0	2	2	7	38
Balmakewan ..	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	0	2	0	0	1	0	0	1	1	1	13
Edinburgh ..	10	5	0	0	0	0	0	0	0	1	1	2	19	21	11	2	4	1	4	8	1	6	8	14	12	92
6a. Tiree ..	10	8	1	0	0	1	0	1	3	5	4	33	28	25	12	17	8	9	13	2	10	19	20	23	186	
Paisley ..	0	0	0	0	0	0	0	0	0	0	0	0	0	9	6	4	1	0	0	0	0	1	2	4	4	31
Eskdalemuir ..	4	3	0	0	0	0	0	0	0	1	2	2	12	18	15	3	12	5	8	10	5	7	10	18	12	123
2. South Shields ..	1	0	0	0	0	0	0	0	0	0	1	0	2	4	7	6	6	3	4	2	0	2	3	6	5	48
Spurn Head ..	3	3	3	0	0	0	0	0	0	1	4	1	15	24	19	11	14	10	14	7	7	5	16	17	13	157
Cranwell ..	1	1	0	0	0	0	0	0	0	2	0	4	15	12	4	4	4	1	4	0	2	0	4	9	6	61
3. Gorleston ..	1	0	0	0	0	0	0	0	0	0	1	0	2	13	5	4	4	2	6	0	2	2	12	12	8	70
Felixstowe ..	1	0	0	0	0	0	0	0	0	1	0	2	14	8	4	6	0	6	1	2	1	12	11	6	71	
Shoeburyness ..	2	1	0	0	0	0	0	0	0	0	0	3	20	11	5	4	0	3	1	3	0	9	9	7	72	
4. Birmingham ..	0	2	0	0	0	0	0	0	0	0	0	2	6	5	1	2	1	2	0	0	0	0	7	2	26	
5. Richmond ..	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0	1	0	1	0	3	0	0	1	3	2	18
Croydon ..	0	0	0	0	0	0	0	0	0	0	0	3	1	4	0	1	0	1	0	7	1	4	0	9	13	43
§ Dover ..	0	1	0	0	0	0	0	0	0	0	0	0	20	9	5	7	6	7	2	8	1	19	—	3	8	—
Lympne ..	1	2	0	1	0	0	0	0	0	3	0	7	18	12	3	7	2	6	0	5	1	10	13	6	83	
S. Farnboro' ..	1	0	0	0	0	0	0	0	0	2	0	3	10	10	1	0	0	4	0	1	0	4	8	4	42	
Calshot ..	1	3	0	0	0	0	0	0	0	4	0	8	20	16	10	6	1	10	1	5	1	12	13	8	103	
Worthy Down ..	0	0	0	0	0	0	0	0	0	0	0	0	7	8	1	0	1	2	0	0	0	4	7	3	33	
§ Larkhill ..	1	2	0	0	0	0	0	0	0	0	0	0	23	15	4	5	5	5	1	—	—	—	—	—	—	—
7a. Fleetwood ..	3	6	0	0	0	0	0	0	1	5	1	16	23	19	7	7	2	12	9	8	4	10	16	11	128	
Southport ..	5	7	0	0	1	0	0	0	0	7	3	23	21	18	6	7	4	15	13	10	7	12	17	12	142	
7b. Holyhead ..	3	5	0	2	0	0	0	0	3	6	2	21	27	15	10	9	7	13	8	5	7	16	20	20	157	
§ Sealand ..	—	2	0	0	0	0	0	0	0	5	0	—	—	12	5	5	2	3	2	0	0	3	9	4	—	
8b. Plymouth ..	2	0	0	0	0	0	0	0	3	5	2	12	15	13	8	6	2	7	0	1	1	12	14	9	88	
§ Pendennis ..	10	11	3	4	0	3	0	1	—	—	—	—	25	23	16	13	5	13	5	12	—	—	—	—	—	
9. Dunfanaghy ..	11	8	0	0	0	1	0	0	1	6	0	27	26	18	4	3	0	6	9	3	4	8	15	7	103	
Aldergrove ..	0	0	0	0	0	0	0	0	1	1	0	2	10	8	4	5	1	1	1	0	0	6	4	7	47	
10. Kingstown ..	9	6	0	0	0	0	0	1																		

TABLE XIII [First Published 1900†].—OCCASIONS ON WHICH THE MEAN HOURLY WIND WAS 47 mi/hr. (20·8 m/s.) or more.

For an anemograph at 33 ft. above ground in the open the limit corresponds with that of Force 9 (Strong Gale) on the Beaufort Scale. Upon a plate exposed normally to it, a wind of 47 mi/hr. exerts pressure on the front and suction on the back, of which the resultant is about 3·2 mb. (6½ lb. weight per sq ft.).

The pressure equivalents of winds of stated velocities are given in the *Meteorological Observer's Handbook*.

[The highest Mean Velocity measured in this way which has been recorded at M.O. stations in the British Isles is 78 mi/hr. (35 m/s.) at Fleetwood on 22nd December, 1894, corresponding with a pressure of about 8·8 mb. (18 lb. weight per square foot).]

District and Station.	Date.	Maximum Hourly Wind.			Maximum Speed in a gust during the day.		Hours for which mean speed exceeded 38 mi/hr.			
		Hour.	Direction.	Speed.	Time.	Speed.				
0 Lerwick ..	January 1 ..	24	°	mi/hr. 49	m/s. 22	h. m. 23 40	mi/hr. 65	m/s. 29	21h. 1st to 11h. 2nd.	
	" 2 ..	1		170	51	23	1 50	69	31	21h. 1st to 11h. 2nd.
	" 8 ..	16		200	47	21	15 55	74	33	13h. to 22h.
	" 24 ..	8		220	51	23	6 20	87	39	1h. to 10h.
	February 1 ..	16		220	55	24	16 15	77	35	13h. 1st to 2h. 2nd.
	" 7 ..	2		210	49	22	7 45	72	32	1h. to 3h.; 5h. to 11h.; 13h. to 14h.
	" 9 ..	18		280	47	21	17 50	75	34	5h. to 6h.; 8h. to 19h.
	" 11 ..	4		60	50	22	3 45	67	30	2h. to 6h.
	October 20 ..	17		190	48	22	17 20	72	32	5h. to 6h.; 16h. to 23h.
	November 12 ..	22		220	47	21	22 30	68	30	21h. 12th to 1h. 13th.
Deerness	January 18 ..	{ 21 } 22	150	48	21	—	—	—	—	13h. 18th to 2h. 19th.
	February 9 ..	2	260	52	23	—	—	—	—	3h. to 4h.; 8h. to 9h.; 11h. to 14h.
	March 29 ..	24	80	48	21	—	—	—	—	22h. 29th to 7h. 30th.
	December 16 ..	9	150	47	21	—	—	—	—	9h. to 11h.
6a. Tiree ..	January 1 ..	18	170	52	23	17 30	73	33	14h. to 22h.	
	" 6 ..	10	310	53	24	10 15	81	36	10h. to 12h.	
	" 23 ..	21	200	47	21	20 30	76	34	21h. to 23h.	
	February 7 ..	4	200	47	21	4 0	71	32	1h. to 7h.	
	" 8 ..	22	210	47	21	23 55	79	35	13h. 8th to 1h. 9th.	
	" 15 ..	13	240	49	22	12 55	75	33	8h. to 18h.	
	October 31 ..	5	20	50	22	4 15	74	33	1h. to 13h.; 15h. to 18h.	
November 24 ..	9	330	47	21	9 50	68	30	6h. to 16h.		
Eskdalemuir	October 20 ..	3	180	47	21	3 20	73	33	2h. to 6h.	
	November 23 ..	16	270	51	23	15 5	87	39	13h. to 17h.	
2. Spurn Head	January 6 ..	13	280	59	26	12 20	84	38	11h. to 17h.	
	February 11 ..	3	270	52	23	2 50	71	32	2h. to 4h.; 17h. to 18h.	
	November 23 ..	18	260	49	22	17 15	73	33	16h. to 23h.	
2. Cranwell	January 6 ..	15	290	50	22	11 50	77	34	12h. to 16h.	
5. Croydon	November 16 ..	17	260	49	22	18 10	81	36	12h.; 14h. to 20h.	
	Lympne	November 16 ..	17	240	54	24	15 5	79	35	14h. to 20h.
	Calshot	November 16 ..	16	260	50	22	17 5	70	31	13h. to 18h.
§ Larkhill	January 6 ..	12	290	47	21	12 0	61	27	7h.; 8h.; 11h. to 15h.	
	February 11 ..	12	280	48	21	10 5	72	32	1h. to 16h.	
7a. Fleetwood	January 6 ..	14	300	60	27	12 40	82	37	10h. to 16h.	
	February 10 ..	24	280	53	24	12 50	76	34	13h.; 23h. 10th to 8h. 11th.	
	" 11 ..	2	290	56	25	0 20	78	35	23h. 10th to 8h. 11th; 12h. to 15h.	
	" 17 ..	3	270	49	22	6 40	64	39	24h. 16th to 13h. 17th.	
Southport	January 6 ..	14	310	57	25	14 5	83	37	9h. to 15h.	
	" 24 ..	17	260	53	24	16 35	69	31	16h. to 23h.	
	February 10 ..	24	270	60	27	23 50	80	36	13h.; 15h. to 19h.; 22h. 10th to 9h. 11th.	
	" 11 ..	1	270	58	26	0 5	84	38	22h. 10th to 9h. 11th; 12h. to 14h.	
	" 17 ..	5	280	49	22	7 5	62	28	22h. 16th to 15h. 17th.	
	November 16 ..	18	310	47	21	18 15	59	26	18h.; 19h.	
	" 23 ..	15	270	61	27	15 10	87	39	13h. 23rd to 18h. 24th.	
	" 24 ..	14	290	53	24	13 55	73	33	13h. 23rd to 18h. 24th.	
	" 25 ..	13	290	59	26	13 15	86	38	8h. to 21h.	
	December 26 ..	1	240	49	22	1 5	64	29	1h. to 2h.	

†For the years 1900 to 1914 the table of "Strong Gales" was given in the Annual Report of the Meteorological Council, and for 1905, 1906 in the Annual Summary of the Monthly Weather Report for those years. Prior to 1908 the limit of velocity was taken to be 44 miles per hour. §See Table X (Notes column).

TABLE XIII (continued).—OCCASIONS ON WHICH THE MEAN HOURLY WIND was 47 mi/hr. (20·8 m/s.) or more.

District and Station.	Date.	Maximum Hourly Wind.			Maximum Speed in a gust during the day.		Hours for which mean speed exceeded 38 mi/hr.	
		Hour.	Direction.	Speed.	Time.	Speed.		
7b. Holyhead	January 6 ..	12	°	mi/hr. 52	m/s. 23	11 30	70 31	9h. to 14h.
	" 24 ..	{ 15 16	290	49	22	15 20	74 33	15h. to 18h.
	February 10 ..	23	260	57	25	23 10	86 38	12h. to 14h.; 20h. 10th to 16h. 11th.
	" 11 ..	6	260	55	25	9 15	81 36	20h. 10th to 16h. 11th; 18h.
	October 20 ..	1	210	47	21	0 30	81 36	1h. to 3h.
	November 23 ..	17	270	56	25	17 10	82 37	10h. to 12h.; 13h. 23rd to 17h. 24th.
	" 24 ..	13	280	52	23	0 5	71 32	13h. 23rd. to 17h. 24th.
" 25 ..	14	290	60	27	13 35	81 36	6h. 25th to 6h. 26th.	
§ Sealand	November 25 ..	15	300	55	25	14 25	88 39	10h. 25th to 1h. 26h.
8b. Plymouth	October 19 ..	21	—	47	21	20 15	59 26	18h. to 22h.
	November 16 ..	13	—	47	21	13 55	73 33	11h. to 15h.
	December 10 ..	11	—	47	21	11 25	59 26	3h. to 15h.; 17h. to 19h.
§ Pendennis	January 25 ..	19	—	49	22	19 55	64 29	14h. to 20h.
	February 5 ..	6	—	48	21	6 40	65 29	3h. to 6h.
	" 10 ..	21	—	48	21	21 10	74 33	11h. to 14h.; 20h. 10th to 3h. 11th.
	March 29 ..	14	—	47	21	14 30	69 31	10h. to 16h.
	April 14 ..	17	—	51	23	19 40	69 31	11h. to 23h.
	June 9 ..	17	—	52	23	17 10	66 29	9h. 11h. to 19h.
9. Dunfanaghy	January 6 ..	8	—	50	22	7 50	78 35	1h. to 2h.; 5h. to 10h.
	" 15 ..	12	—	49	22	11 35	75 33	10h. to 14h.
	February 6 ..	21	—	49	22	21 40	91 41	20h. 6th to 13h. 7th.
	" 7 ..	2	—	54	24	2 30	89 40	20h. 6th to 13h. 7th; 15 h.
	" 8 ..	21	—	48	21	20 45	73 33	17h.; 20h. to 24h.
	July 2 ..	11	—	49	22	10 30	75 33	8h. to 12h.; 14h.
	October 20 ..	4	—	52	23	3 55	76 34	3h. to 6h.
	November 12 ..	15	—	50	22	14 45	75 33	13h. to 16h.
	" 23 ..	12	—	51	23	12 5	76 34	10h. to 16h.
	" 24 ..	8	—	49	22	8 30	78 35	2h. to 13h.
" 25 ..	10	—	57	25	9 40	84 38	6h. to 12h.	
10. Kingstown	January 6 ..	10	260	54	24	—	—	24h. 5th to 12h. 6th.
	" 10 ..	10	240	48	21	—	—	9h. to 13h.
	" 24 ..	14	240	48	21	—	—	14h. to 15h.
	February 10 ..	{ 21 22 23	240 250 250	49	22	—	—	20h. 10th to 14h. 11th.
	October 20 ..	1	220	53	24	—	—	1h. to 3h.; 5h.
	November 23 ..	12	240	53	24	—	—	10h. to 6h.; 22h. to 23h.
	" 25 ..	12	270	47	21	—	—	8h. to 15h.
December 25 ..	23	230	53	24	—	—	21h. 25th to 2h. 26th.	
Quilty ..	January 24 ..	11	—	47	21	10 55	73 33	11h.
	February 10 ..	20	—	49	22	20 50	77 34	9h.; 14h.; 16h. 10th to 4h. 11th.
	October 19 ..	23	—	59	26	23 15	79 35	20h. 19th to 2h. 20th.
Cahiriveen	February 10 ..	17	260	48	22	16 50	83 37	17h.
	October 19 ..	19	240	54	24	20 10	85 38	19h. to 22h.
§ Weaver Point	October 19 ..	21	—	50	22	21 10	76 34	20h. to 22h.
	November 16 ..	9	—	51	23	9 0	86 38	9h.
11. Scilly ..	January 24 ..	14	280	50	22	13 55	71 32	9h. to 23h.
	February 10 ..	21	270	59	26	20 45	75 33	12h. 10th to 10h. 11th.
	" 11 ..	3	290	54	24	3 40	70 31	12h. 10th to 10h. 11th; 14h.; 20h.
	" 13 ..	7	260	51	23	6 15	64 29	4h. to 13h.
	June 9 ..	15	220	47	21	14 45	64 29	11h. to 17h.
	November 16 ..	12	240	58	26	12 10	81 36	7h. to 18h.
" 23 ..	13	250	53	24	13 20	83 37	7h. 23rd to 13h. 24th.	

§ See Table X (Notes column.)

TABLE XIV [First Published 1908].—DATES on which GUSTS of 55 mi/hr. (24.5 m/s.) or more occurred.

For an anemograph at 33 ft. above ground in the open the limit corresponds with that of Force 10 (Whole Gale) on the Beaufort Scale.

Upon a plate exposed normally to it, a wind of 55 mi/hr. exerts pressure on the front and suction on the back, of which the resultant is about 4.4 mb. (9 lb. weight per square foot).

Up to 1916 fuller details were given in this table. The time of occurrence of the maximum gust each month can be found by reference to the *Monthly Weather Report*.

0	Lerwick	Jan. 1, 2, 5, 8, 10, 11, 16, 18, 19, 21, 24, 25, 31; Feb. 1, 2, 4 to 9, 11, 15 to 18; Mar. 20, 21; Apr. 18; June 11; July 14; Oct. 20; Nov. 12, 20; Dec. 5, 16.
1	Aberdeen	Jan. 1; Feb. 9; Mar. 29; Oct. 20.
	Balmakewan	Feb. 8, 15; Apr. 19; July 2; Oct. 20; Dec. 7.
	Edinburgh	Jan. 1, 2, 4, 6, 10, 12, 20, 21, 23, 25, 31; Feb. 4, 6 to 9, 15; Mar. 16, 17; Oct. 20; Nov. 12, 20, 23; Dec. 7, 9, 23 to 25.
6a	Tiree	Jan. 1, 4 to 13, 15, 19, 21, 23 to 25, 28, 31; Feb. 1, 2, 4 to 10, 13 to 17; Apr. 3; June 30; July 2; Sept. 17; Oct. 18 to 20, 31; Nov. 12, 17, 20, 22 to 25, 27; Dec. 5 to 7, 10, 16.
	Paisley	Jan. 5, 6, 8 to 10, 12, 13, 21, 25, 31; Feb. 1, 7 to 10, 15; Mar. 17; July 10; Oct. 20, 24; Nov. 12, 20, 23, 25; Dec. 23, 24.
	Eskdalemuir	Jan. 6, 10, 21, 25; Feb. 6 to 9; Apr. 3; Oct. 20; Nov. 19, 23, 24; Dec. 23, 24.
2	South Shields	Jan. 6, 13; Feb. 7 to 9, 15; Nov. 23, 25; Dec. 26.
	Spurn Head	Jan. 6, 24, 25; Feb. 9, 11, 16, 17; June 26; Oct. 11; Nov. 16, 17, 23 to 25; Dec. 26.
	Cranwell	Jan. 6, 10, 24, 25; Feb. 10, 11; Nov. 16, 17, 19, 23 to 25; Dec. 25, 26.
3	Gorleston	Jan. 6; Feb. 11; Nov. 16, 25.
	Felixstowe	Jan. 6; Nov. 16, 25.
	Shoeburyness	Jan. 6, 24; Feb. 2, 11, 17; Nov. 16, 23, 25.
4	Birmingham	Jan. 6, 24, 25; Feb. 1, 10, 11; Oct. 18; Nov. 16, 23, 25.
5	Richmond	Feb. 10; Nov. 16.
	Croydon	June 29; Oct. 20; Nov. 15, 16, 23, 25; Dec. 25, 26.
	§Dover	Jan. 6, 25; Feb. 11; June 26; Oct. 20.
	Lympne	Jan. 6; Feb. 2, 5, 10, 11; Nov. 16, 23, 25.
	South Farnborough	Jan. 6, 25; Feb. 10, 11; Oct. 19; Nov. 15, 16, 23, 25.
	Calshot	Feb. 10, 11; Nov. 16, 23 to 25.
	Worthy Down	Jan. 6; Feb. 2, 10, 11, 17; Oct. 20; Nov. 15, 16, 23 to 25.
7a	Fleetwood	Jan. 6, 24; Feb. 2, 10, 11, 16, 17; Oct. 20; Nov. 17, 22 to 26.
	Southport	Jan. 6, 24 to 26; Feb. 1, 9 to 11; 16, 17; Nov. 16, 17, 22 to 27; Dec. 6, 7, 26.
7b	Holyhead	Jan. 1, 6, 10, 24, 25; Feb. 1, 2, 9 to 11, 16, 17; Mar. 19; Apr. 14, 15; Oct. 18 to 20, 24, 26; Nov. 14, 16, 22 to 27; Dec. 6, 10, 16, 25, 26.
	§Sealand	Feb. 2, 9, 10, 11, 15, 16; June 26; Nov. 16, 22 to 27; Dec. 25, 26.
8b	Plymouth	Jan. 25; Feb. 2, 10, 11; Oct. 19, 22, 26; Nov. 15, 16, 19, 23; Dec. 10.
	§Pendennis Castle	Jan. 1, 6, 10, 12, 21, 24 to 26; Feb. 1, 2, 5, 10 to 13, 16, 17; Mar. 23, 29; Apr. 14, 15; May 16, 17; June 9, 26, 28; Aug. 27.
9	Dunfanaghy	Jan. 3, 6 to 8, 10, 12, 13, 15, 20, 21, 23, 25, 31; Feb. 1, 4 to 11, 15 to 17; June 22, 29; July 2; Oct. 20, 25, 30, 31; Nov. 11, 12, 20, 22 to 27; Dec. 6, 24, 25.
	Aldergrove	Jan. 1, 6, 10, 21, 25; Feb. 8, 10, 15; Mar. 19; Apr. 14; Oct. 19, 20, 24; Nov. 12, 23 to 25.
10	Quilty	Jan. 1, 24, 25, 27, 31; Feb. 1, 2, 10, 16, 17; Oct. 19, 20, 26, 30; Nov. 12, 19, 23 to 27.
	Cahiriveen	Jan. 1, 10, 12, 21, 24 to 26, 31; Feb. 1 to 3, 10, 16, 17, 28; Mar. 18, 19; Apr. 14, 15; June 26; Oct. 19, 24, 26, 27, 30, 31; Nov. 18, 23, 24; Dec. 25.
	§Weaver Point	Jan. 1, 10, 21, 24 to 26, 31; Feb. 1, 10, 11, 16; Mar. 19; Apr. 14, 15; May 17; June 26; Oct. 19, 23, 24; Nov. 14, 16, 19, 22 to 24; Dec. 25.
11	Scilly	Jan. 15, 16, 24 to 26; Feb. 1, 2, 10 to 13, 16, 17; Mar. 19, 29, 31; Apr. 8; May 17; June 9, 26; Oct. 18, 19, 24, 27; Nov. 14 to 17, 19, 23 to 25, 27.

§ See "Notes" column of Table X.

NOTE.

A short list of the noteworthy gales of the year is to be found on page 169.

TABLE XV [1912]. MAXIMUM SPEED in a Gust recorded by Tube Anemographs during each Month of 1928, and the HIGHEST SPEED in a Gust on record for each station. Unit, metre per second†.

District and Station and date of first appearance in this Table.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	G. (Mean of Monthly Maxima.)	Highest Gust on Record.	
	m/s.	m/s.	m/s.	m/s.	m/s.	m/s.	m/s.	m/s.	m/s.	m/s.	m/s.	m/s.	m/s.	Speed.	Date.
o. Lerwick .. 1923	39	35	27	26	19	27	29	24	22	32	30	26	28	43	Jan. 14 1925
1. Aberdeen .. 1912	26	26	25	21	18	18	19	15	16	27	22	22	21	37	Oct. 25 1917
Balmakewan 1915	24	25	17	25	16	19	25	15	18	26	24	27	22	37	Dec. 3 1920
Edinburgh .. 1915	32	31	25	24	19	21	24	20	22	33	25	31	26	38	Jan. 28 1927
6a. Tiree .. 1927	36	35	24	25	22	25	27	17	25	33	33	31	28	48	Jan. 28 1927
Paisley .. 1914	35	33	26	22	19	21	25	22	22	31	27	27	26	47	Jan. 28 1927
Eskdalemuir 1912	33	31	20	27	20	21	22	24	22	33	39	25	26	40	Oct. 25 1917
2. South Shields 1912	35	32	22	24	20	22	21	17	17	22	39	27	25	39	Nov. 23 1928
Spurn Head .. 1913	38	32	24	23	20	25	19	23	21	26	33	28	26	38	Jan. 6 1928
Cranwell .. 1921	34	30	21	21	19	21	18	20	16	23	33	27	24	36	Oct. 29 1927
3. Gorleston .. 1912	27	25	21	19	17	21	17	21	16	20	29	24	21	35	Nov. 6 1921
Felixstowe .. 1925	27	23	19	19	16	20	15	17	16	21	29	19	20	29	Nov. 6 1921
Shoeburyness 1912	32	30	21	21	15	18	17	18	15	24	30	22	22	35	Feb. 11 1925
4. Birmingham 1924	33	35	19	20	18	22	17	19	17	26	32	22	23	35	Feb. 9 1925
5. Richmond .. 1912	24	27	17	20	15	20	15	17	13	23	29	19	20	32	Feb. 11 1928
Croydon .. 1922	24	23	17	18	19	25	17	21	17	26	36	25	22	36	Mar. 28 1916
§ Dover .. 1924	25	29	23	24	21	25	18	23	17	25	—	22	—	29	Nov. 16 1928
Lympne .. 1923	26	27	23	24	17	23	16	20	16	23	35	23	23	35	Jan. 2 1925
S. Farnborough 1922	27	28	20	19	18	21	17	19	16	25	33	22	22	37	Nov. 16 1928
Calshot .. 1921	24	29	20	18	17	22	17	19	15	23	31	21	21	31	Jan. 2 1925
Worthy Down 1923	28	30	19	21	21	24	16	19	15	25	32	23	23	32	Nov. 16 1928
§ Larkhill .. 1921	27	32	17	19	17	22	15	—	—	—	—	—	—	35	Jan. 18 1921
7a. Fleetwood .. 1924	37	35	21	22	20	21	21	19	19	28	36	23	25	38	May 10 1926
Southport .. 1912	37	38	21	24	21	23	21	21	18	21	39	29	26	43	Oct. 29 1927
7b. Holyhead .. 1912	33	38	25	26	24	24	20	23	21	36	37	28	28	39	Feb. 16 1916
§ Sealand .. 1925	—	36	21	21	24	25	20	17	16	22	39	34	25	39	Nov. 25 1928
8b. Plymouth .. 1912	26	27	23	22	24	24	16	17	14	28	33	26	23	43	Mar. 8 1922
§ Pendennis .. 1912	29	33	31	31	25	29	22	26	—	—	—	—	—	46	Mar. 14 1905
9. Dunfanaghy 1927	35	41	23	23	18	25	33	20	24	34	38	26	28	49	Mar. 8 1922
Aldergrove .. 1927	29	32	28	25	21	21	21	19	19	33	38	24	26	38	Jan. 28 1927
10. Quilty .. 1912	33	34	23	21	20	19	17	17	19	35	31	24	24	50	Nov. 23 1928
Cahiriveen .. 1917	31	37	28	25	22	26	19	21	22	38	31	27	27	53	Jan. 27 1920
§ Weaver Point 1914	33	29	27	26	26	26	21	—	—	34	38	28	—	40	Feb. 7 1923
11. Scilly .. 1912	32	33	27	25	26	29	19	21	23	29	37	24	27	48	Oct. 28 1927
															Mar. 8 1922

† For the equivalent speeds in miles per hour reference should be made to the monthly issues.

§ See note in Table X.

TABLE XVI [1912].—MAXIMUM VALUE of the MEAN SPEED for an Hour measured as in Table XII during each Month of 1928. Unit, metre per second.†

District and Station.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	H (Mean of Monthly Maxima.)	Gust Ratio G./H. (For G., see Table XV.)
	m/s.	m/s.	m/s.	m/s.	m/s.	m/s.	m/s.	m/s.	m/s.	m/s.	m/s.	m/s.	m/s.	
o. Lerwick D ..	23	24	19	18	12	18	21	17	15	22	21	17	19	1.5
Deerness R ..	24	24	21	16	14	15	14	15	14	19	19	21	18	—
1. Aberdeen D ..	14	13	18	13	11	10	11	10	11	15	15	16	13	1.6
Balmakewan D ..	14	14	8	14	9	11	13	8	9	13	13	13	12	1.8
Edinburgh D ..	21	20	16	15	11	12	14	11	13	20	17	20	16	1.6
6a. Tiree D ..	24	22	17	17	15	16	18	12	18	22	21	20	19	1.5
Paisley D ..	17	14	13	11	9	9	10	11	12	17	13	14	13	2.0
Eskdalemuir D ..	20	20	13	14	13	15	16	17	14	21	23	18	17	1.5
2. South Shields D ..	20	15	14	15	15	16	12	10	12	12	20	15	15	1.7
Spurn Head D ..	26	23	19	17	16	17	14	16	16	20	22	17	19	1.4
Cranwell D ..	22	18	13	13	11	12	10	11	11	13	19	15	14	1.7
3. Gorleston D ..	17	15	17	15	12	13	10	13	12	14	15	18	14	1.5
Felixstowe A ..	18	16	16	15	11	15	12	13	11	15	19	14	15	1.3
Shoeburyness D ..	20	19	17	16	10	12	13	13	10	17	17	17	15	1.5
4. Birmingham D ..	16	19	11	12	12	11	9	10	9	11	17	12	12	1.9
5. Richmond D ..	13	13	11	12	9	12	9	10	7	11	15	11	11	1.8
Croydon D ..	13	13	10	11	10	15	12	13	10	15	22	15	13	1.7
§ Dover d ..	16	17	17	17	16	17	12	15	13	17	—	16	—	—
Lympne D ..	17	17	17	17	12	15	11	14	11	16	24	16	16	1.4
South Farnborough D ..	18	16	11	11	9	12	10	12	9	13	20	14	13	1.7
Calshot A ..	18	17	15	13	13	16	13	14	11	17	22	15	15	1.4
Worthy Down D ..	14	17	12	10	11	12	9	10	9	15	17	13	12	1.9
§ Larkhill A ..	21	21	13	14	13	17	11	—	—	—	—	—	—	—
7a. Fleetwood D ..	27	25	14	16	16	16	13	15	14	17	26	17	18	1.4
Southport D ..	25	27	14	16	16	18	17	14	15	27	22	19	19	1.4
7b. Holyhead D ..	23	25	15	20	16	17	13	15	16	21	27	19	19	1.5
§ Sealand D ..	—	21	13	13	15	16	12	10	10	12	25	15	—	—
8b. Plymouth d ..	18	17	15	16	12	17	11	11	11	21	21	21	16	1.4
Falmouth R ..	—	13	11	8	10	10	9	10	7	11	16	11	—	—
§ Pendennis d ..	22	21	21	23	16	23	17	20	—	—	—	—	—	—
9. Dunfanaghy d ..	22	24	14	14	11	17	22	13	13	23	25	17	18	1.6
Aldergrove D ..	17	15	16	13	12	11	11	10	10	19	20	13	14	1.9
Armagh R ..	15	13	12	11	9	8	9	9	10	16	14	13	12	—
10. Kingstown R ..	24	22	17	17	15	15	13	13	17	24	24	24	19	—
Quilty d ..	21	22	15	15	15	14	12	12	13	26	20	17	17	1.4
Cahiriveen D ..	18	22	16	17	15	17	14	13	15	24	20	17	17	1.6
§ Weaver Point d ..	20	17	19	15	15	16	13	—	—	22	23	19	—	—
11. Scilly D ..	22	26	19	19	17	21	13	15	14	20	26	17	19	1.4

Note.—The highest mean speed recorded at M.O. Stations in the British Isles is 78 mi/hr., 35 m/s. This was recorded at Fleetwood on 22nd December, 1894.

§ See note in Table X.

† For the equivalent speeds in miles per hour reference should be made to the monthly issues.

D Dines tube-anemograph and direction recorder.

R Robinson cup-anemograph.

A Anemobiograph with direction recorder.

d Dines tube-anemograph without direction recorder.

TABLE XVII [1917].—"WIND ROSE" DATA for TELEGRAPHIC STATIONS.—Frequency of winds of various strengths from different directions at 7h.

The following Tables incorporate the material used for drawing the "Wind-roses" shown on the Monthly Weather Report charts of mean pressure.

The tables show only eight possible directions for the wind. Observations at intermediate points are "thrown" alternately forward and backward. The categories Light Winds, Strong Winds and Gales are equivalent to the Beaufort Forces 1 to 3, 4 to 7, 8 to 12, respectively.

The instructions to observers for estimating wind-force on the Beaufort Scale are published in the *Meteorological Observer's Handbook* where the conventional equivalents of the scale in terms of wind-speed at 10 metres above ground will also be found.

Wind-roses have been published in the Monthly Weather Report since 1884, but the present form of wind rose, which indicates the strength as well as the direction of the winds, was not adopted until 1905.

LERWICK.

Months.	N.			NE.			E.			SE.			S.			SW.			W.			NW.			ALL DIRECTIONS.			CALMS.
	Light.	Strong.	Gale.	Light.	Strong.	Gale.																						
January ..	1	0	0	0	1	0	0	1	0	1	0	0	6	5	2	4	3	0	1	1	0	1	0	0	14	11	2	4
February ..	0	0	0	0	0	0	0	0	0	1	1	1	6	3	0	5	2	0	2	3	0	2	0	0	16	9	1	3
March ..	1	0	0	3	1	0	1	0	0	4	4	1	9	2	1	1	0	0	0	0	0	0	0	0	19	7	2	3
April ..	7	1	0	0	0	0	0	0	0	5	1	0	11	1	0	1	0	0	0	0	0	2	0	0	26	3	0	1
May ..	11	2	0	4	1	0	4	0	0	4	0	0	0	0	0	0	0	0	3	0	0	0	0	0	26	3	0	2
June ..	6	0	0	3	0	0	0	0	0	3	0	0	5	0	0	2	0	0	4	1	0	5	0	1	28	1	1	0
July ..	3	0	0	1	0	0	1	0	0	2	0	0	2	0	0	5	2	0	6	0	0	6	1	0	26	3	0	2
August ..	9	0	0	3	0	0	3	0	0	3	0	0	4	0	0	0	1	0	1	0	0	0	1	0	23	2	0	6
September ..	5	1	0	0	0	0	0	0	0	0	0	0	9	0	0	6	0	0	1	0	0	5	0	0	26	1	0	3
October ..	4	0	0	2	1	0	0	0	0	5	1	1	5	1	0	3	1	0	4	0	0	1	0	0	24	4	1	2
November ..	3	0	0	1	1	0	2	0	0	2	1	0	6	0	0	5	1	0	2	0	0	5	0	0	26	3	0	1
December ..	0	1	0	1	1	0	1	0	0	3	1	0	3	2	0	5	2	0	6	0	0	1	3	0	20	10	0	1
Year ..	50	5	0	18	6	0	12	1	1	33	9	2	66	14	3	37	12	0	30	5	0	28	5	1	274	57	7	28

STORNOWAY.

January ..	1	1	0	0	0	0	0	0	0	0	2	0	1	6	0	5	4	0	1	1	1	0	3	0	8	17	1	5
February ..	1	0	0	0	0	0	0	0	0	1	1	0	0	3	0	1	6	0	0	4	1	0	2	0	3	16	1	9
March ..	2	0	1	3	1	0	3	0	0	4	2	0	4	2	0	2	0	0	0	0	0	0	0	0	18	5	1	7
April ..	7	1	0	2	0	0	0	1	0	0	3	0	2	0	0	5	2	0	2	0	0	0	0	0	18	7	0	5
May ..	6	4	0	3	2	0	4	1	0	1	1	0	1	1	0	0	0	0	0	0	0	2	0	0	17	9	0	5
June ..	3	0	0	2	5	0	1	1	0	0	0	0	1	1	0	2	4	0	1	1	0	2	1	0	12	13	0	5
July ..	3	0	0	1	0	0	0	0	0	0	0	0	2	2	0	3	4	0	3	2	0	2	0	0	14	8	0	9
August ..	3	0	0	4	0	0	1	1	0	2	2	0	3	0	0	1	2	0	0	1	0	0	0	0	14	6	0	11
September ..	1	0	0	1	1	0	0	0	0	0	0	0	6	2	0	4	3	0	2	0	0	2	0	0	16	6	0	8
October ..	0	1	0	2	0	0	0	2	0	3	1	0	1	4	0	6	2	0	1	1	0	1	0	0	14	11	0	6
November ..	4	0	0	2	0	0	2	0	0	0	0	0	4	2	0	1	4	0	2	1	0	2	1	0	17	8	0	5
December ..	1	2	0	0	0	0	1	2	0	0	5	0	3	3	0	1	5	0	4	1	0	1	1	0	11	19	0	1
Year ..	32	9	1	20	9	0	12	8	0	11	17	0	28	26	0	31	36	0	16	12	2	12	8	0	162	125	3	76

TABLE XVII (continued).—" WIND ROSE " DATA for TELEGRAPHIC STATIONS.—Frequency of Winds of various strengths from different directions at 7h.

ABERDEEN.

Months.	N.			NE.			E.			SE.			S.			SW.			W.			NW.			ALL DIRECTIONS.			CALMS.
	Light.	Strong.	Gale.	Light.	Strong.	Gale.																						
January ..	0	0	0	0	0	0	0	1	0	0	2	0	9	2	0	6	2	0	2	2	0	2	1	0	19	10	0	2
February ..	0	0	0	0	0	0	0	0	0	1	1	0	5	3	0	5	4	0	3	2	0	1	1	0	15	11	0	3
March ..	1	0	0	1	2	0	0	3	0	4	6	0	3	2	0	1	0	0	1	0	0	3	0	0	14	13	0	4
April ..	2	1	0	2	0	0	0	1	0	3	3	0	5	0	0	4	0	0	2	0	0	4	1	0	22	6	0	2
May ..	6	3	0	3	0	0	4	0	0	0	0	0	2	0	0	1	0	0	1	0	0	5	2	0	22	5	0	4
June ..	4	1	0	1	2	0	1	0	0	2	0	0	2	0	0	4	2	0	3	2	0	4	2	0	21	9	0	0
July ..	0	0	0	1	0	0	1	0	0	3	0	0	3	1	0	6	0	0	7	0	0	6	2	0	27	3	0	1
August ..	2	0	0	2	2	0	1	0	0	4	1	0	7	0	0	2	0	0	1	0	0	4	0	0	23	3	0	5
September ..	2	2	0	0	0	0	1	0	0	0	0	0	6	0	0	3	1	0	5	0	0	9	0	0	26	3	0	1
October ..	0	0	0	1	0	0	0	1	0	0	1	0	5	3	0	7	1	0	6	0	0	6	0	0	25	6	0	0
November ..	0	2	0	0	1	0	0	0	0	0	0	0	3	2	0	5	1	0	2	2	0	7	3	0	17	11	0	2
December ..	0	0	0	0	1	0	0	2	0	0	3	0	2	2	0	7	0	0	3	1	0	5	3	0	17	12	0	2
Year ..	17	9	0	11	8	0	8	8	0	17	17	0	52	15	0	51	11	0	36	9	0	56	15	0	248	92	0	26

ESKDALEMUIR.

January ..	0	2	0	0	0	0	0	0	0	0	0	0	1	7	0	3	7	1	0	3	0	2	3	0	6	22	1	2
February ..	3	0	0	1	0	0	2	0	0	0	0	0	1	3	0	2	8	0	2	3	0	0	1	0	11	15	0	3
March ..	3	2	0	3	6	0	0	1	0	3	3	0	2	3	0	3	0	0	0	0	0	1	0	0	15	15	0	1
April ..	6	3	0	3	3	0	0	1	0	0	1	0	2	2	0	1	4	0	0	0	0	1	0	0	13	14	0	3
May ..	6	8	0	2	5	0	1	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	12	13	0	6
June ..	2	2	0	3	3	0	1	0	0	0	0	0	1	2	0	1	7	0	2	1	0	1	0	0	11	15	0	4
July ..	1	1	0	0	0	0	0	0	0	2	0	0	3	1	0	1	11	0	7	1	0	2	0	0	16	14	0	1
August ..	8	0	0	1	0	0	0	0	0	0	0	0	2	2	0	3	5	0	3	0	0	1	1	0	18	8	0	5
September ..	2	0	0	1	2	0	0	0	0	1	0	0	1	3	0	3	2	0	0	2	0	2	0	0	10	9	0	11
October ..	4	0	0	0	1	0	1	1	0	1	0	0	3	4	0	1	5	0	0	1	0	2	0	0	12	12	0	7
November ..	2	2	0	2	2	0	0	0	0	1	1	0	4	2	0	0	6	0	1	3	0	0	3	0	10	18	0	2
December ..	1	1	0	4	1	0	1	1	0	0	0	0	4	2	0	1	3	0	0	4	0	0	2	0	11	14	0	6
Year ..	38	21	0	20	23	0	6	4	0	10	4	0	25	31	0	19	58	1	15	18	0	12	10	0	145	169	1	51

TYNEMOUTH.

January ..	2	0	0	0	0	0	0	0	0	0	0	0	8	0	0	9	1	0	6	5	0	0	0	0	25	6	0	0
February ..	0	0	0	1	0	0	1	0	0	1	1	0	4	0	0	6	1	0	8	6	0	0	0	0	21	8	0	0
March ..	2	0	0	1	0	0	4	2	0	4	1	0	8	1	0	1	1	0	3	0	0	1	0	0	24	5	0	2
April ..	10	0	0	0	0	0	1	1	0	3	1	0	4	0	0	5	0	0	3	0	0	2	0	0	28	2	0	0
May ..	10	2	0	6	0	0	0	0	0	1	0	0	1	0	0	2	0	0	7	0	0	2	0	0	29	2	0	0
June ..	3	0	0	0	1	0	2	0	0	2	0	0	3	0	0	7	1	0	7	1	0	3	0	0	27	3	0	0
July ..	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	9	0	0	13	3	0	3	0	0	28	3	0	0
August ..	1	0	0	2	0	0	0	0	0	0	0	0	8	0	0	4	0	0	14	0	0	1	0	0	30	0	0	1
September ..	0	1	0	3	0	0	0	0	0	0	0	0	5	0	0	7	0	0	9	1	0	4	0	0	28	2	0	0
October ..	0	0	0	1	0	0	2	0	0	0	1	0	9	0	0	7	1	0	7	0	0	2	0	0	28	2	0	1
November ..	1	1	0	0	1	0	3	0	0	0	0	0	5	0	0	4	1	0	9	3	0	2	0	0	24	6	0	0
December ..	1	0	0	1	1	0	2	2	0	0	0	0	2	1	0	5	0	0	13	1	0	2	0	0	26	5	0	0
Year ..	32	4	0	15	3	0	15	5	0	11	4	0	58	2	0	66	6	0	99	20	0	22	0	0	318	44	0	4

TABLE XVII (continued).—"WIND ROSE" DATA for TELEGRAPHIC STATIONS.—Frequency of Winds of various strengths from different directions at 7h.

YARMOUTH (GORLESTON).

Months.	N.			NE.			E.			SE.			S.			SW.			W.			NW.			ALL DIRECTIONS.			CALMS.
	Light.	Strong.	Gale.	Light.	Strong.	Gale.																						
January ..	0	0	0	0	0	0	0	0	0	1	0	0	6	3	0	11	2	0	5	1	0	0	1	0	23	7	0	1
February ..	0	0	0	2	0	0	0	0	0	3	1	0	2	1	0	8	1	0	6	3	0	0	1	0	21	7	0	1
March ..	1	0	0	1	2	0	3	1	0	1	4	0	4	3	0	3	1	0	2	0	0	1	0	0	16	11	0	4
April ..	0	2	0	2	0	0	2	3	0	3	1	0	3	1	0	4	0	0	7	0	0	2	0	0	23	7	0	0
May ..	4	2	0	2	3	0	2	3	0	2	0	0	3	0	0	0	0	1	0	0	5	3	0	19	11	0	1	
June ..	1	0	0	0	1	0	1	1	0	3	1	0	1	1	0	1	5	0	6	1	0	4	2	0	17	12	0	1
July ..	1	1	0	1	0	0	0	0	0	0	0	0	0	0	2	2	0	12	2	0	8	0	0	24	5	0	2	
August ..	0	1	0	0	1	0	0	2	0	1	0	0	4	0	0	9	2	0	9	0	0	1	0	0	24	6	0	1
September ..	1	1	0	4	1	0	0	1	0	1	0	0	1	0	0	5	1	0	5	1	0	6	0	0	23	5	0	2
October ..	0	1	0	0	0	0	0	2	0	0	3	0	1	4	0	7	4	0	4	0	0	5	0	0	17	14	0	0
November ..	1	2	0	0	3	0	1	0	0	1	0	0	0	3	0	5	3	0	6	2	0	2	1	0	16	14	0	0
December ..	2	1	0	0	0	0	1	4	0	1	2	0	0	2	0	5	1	0	6	1	0	5	0	0	20	11	0	0
Year ..	11	11	0	12	11	0	10	17	0	17	12	0	25	18	0	60	22	0	69	11	0	39	8	0	243	110	0	13

BIRMINGHAM (EDGBASTON).

January ..	0	0	0	0	0	0	0	0	0	1	0	0	7	5	0	4	4	0	4	3	0	2	0	0	18	12	0	1
February ..	0	0	0	2	0	0	3	0	0	2	0	0	4	0	0	5	5	0	3	5	0	0	0	0	19	10	0	0
March ..	2	0	0	5	1	0	2	0	0	7	1	0	3	3	0	4	0	0	0	0	3	0	0	26	5	0	0	
April ..	1	1	0	4	2	0	2	2	0	3	0	0	4	1	0	3	1	0	2	0	0	3	1	0	22	8	0	0
May ..	5	1	0	7	2	0	3	0	0	1	0	0	2	0	0	2	0	0	4	0	0	3	0	0	27	3	0	1
June ..	0	0	0	0	0	0	4	1	0	3	0	0	4	1	0	5	3	0	4	1	0	1	3	0	21	9	0	0
July ..	2	1	0	0	0	0	0	0	0	0	0	0	2	1	0	9	1	0	6	1	0	5	3	0	24	7	0	0
August ..	0	0	0	2	0	0	3	0	0	2	0	0	9	1	0	6	2	0	4	1	0	1	0	0	27	4	0	0
September ..	2	0	0	2	1	0	2	0	0	2	0	0	7	0	0	4	0	0	4	0	0	4	0	0	27	1	0	2
October ..	0	0	0	0	1	0	4	0	0	4	1	0	5	5	0	5	1	0	2	0	0	2	1	0	22	9	0	0
November ..	2	0	0	4	0	0	1	0	0	1	0	0	3	4	0	3	2	0	2	2	0	1	5	0	17	13	0	0
December ..	2	0	0	2	2	0	0	2	0	0	0	0	4	2	0	4	1	0	4	0	0	6	2	0	22	9	0	0
Year ..	16	3	0	28	9	0	24	5	0	26	2	0	54	23	0	54	20	0	39	13	0	31	15	0	272	90	0	4

RICHMOND (KEW OBSERVATORY).

January ..	0	0	0	0	0	0	1	0	0	0	0	0	8	1	0	10	3	0	6	0	0	0	1	0	25	5	0	1
February ..	0	0	0	0	0	0	7	1	0	1	0	0	5	0	0	6	2	0	1	4	0	1	0	0	21	7	0	1
March ..	4	0	0	5	0	0	5	1	0	2	0	0	7	1	0	0	1	0	2	0	0	1	0	0	26	3	0	2
April ..	5	1	0	0	2	0	3	2	0	1	0	0	4	1	0	3	0	0	4	0	0	1	0	0	21	6	0	3
May ..	5	0	0	4	3	0	3	0	0	2	0	0	2	0	0	1	0	0	5	0	0	3	0	0	25	3	0	3
June ..	0	0	0	1	1	0	3	1	0	2	0	0	3	1	0	5	5	0	6	0	0	2	0	0	22	8	0	0
July ..	4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	7	1	0	8	1	0	4	0	0	24	2	0	5
August ..	0	0	0	3	0	0	2	0	0	0	0	0	3	0	0	12	1	0	5	0	0	0	0	0	25	1	0	5
September ..	6	0	0	5	0	0	1	0	0	0	0	0	1	0	0	4	0	0	2	0	0	1	0	0	20	0	0	10
October ..	1	0	0	0	0	0	3	1	0	1	0	0	7	0	0	12	2	0	4	0	0	0	0	0	28	3	0	0
November ..	4	0	0	3	0	0	2	0	0	0	0	0	2	2	0	5	4	0	2	3	0	2	0	0	20	9	0	1
December ..	1	0	0	2	1	0	1	0	0	0	0	0	3	1	0	7	1	0	5	0	0	4	0	0	23	3	0	5
Year ..	30	1	0	23	7	0	31	6	0	9	0	0	46	7	0	72	20	0	50	8	0	19	1	0	280	50	0	36

TABLE XVII (continued).—"WIND ROSE" DATA for TELEGRAPHIC STATIONS.—Frequency of Winds of various strengths from different directions at 7h.

HOLYHEAD.

Months.	N.			NE.			E.			SE.			S.			SW.			W.			NW.			ALL DIRECTIONS.			CALMS.
	Light.	Strong.	Gale.	Light.	Strong.	Gale.																						
January ..	1	1	0	0	0	0	0	0	0	1	1	0	0	8	0	0	8	0	1	5	0	1	4	0	4	27	0	0
February ..	0	0	0	0	0	0	1	2	0	4	1	0	0	4	0	1	7	0	0	4	1	1	1	1	7	19	2	1
March ..	0	0	0	0	1	0	5	7	0	2	2	0	2	3	0	0	2	0	1	3	0	1	1	0	11	19	0	1
April ..	0	3	0	3	2	0	0	0	1	3	3	0	1	4	0	2	1	0	1	2	0	0	3	0	10	18	1	1
May ..	3	3	0	4	4	0	2	2	0	4	0	0	2	0	0	0	0	0	0	0	0	2	4	0	17	13	0	1
June ..	1	1	0	0	2	0	1	1	0	2	1	0	1	3	0	3	3	0	1	4	0	1	3	0	10	18	0	2
July ..	3	0	0	0	0	0	0	0	0	0	0	0	1	2	0	5	6	0	2	5	0	2	3	0	13	16	0	2
August ..	1	1	0	0	0	0	0	1	0	1	0	0	8	4	0	2	6	0	1	2	0	1	2	0	14	16	0	1
September ..	0	2	0	0	3	0	1	2	0	2	0	0	4	1	0	1	3	0	2	3	0	2	1	0	12	15	0	3
October ..	1	0	0	0	1	0	0	1	0	2	2	0	0	8	0	2	7	0	0	1	0	2	4	0	7	24	0	0
November ..	0	1	0	1	1	0	3	2	0	2	0	0	1	5	0	1	5	0	1	1	1	0	4	1	9	19	2	0
December ..	0	2	0	1	1	0	0	5	0	3	0	0	2	2	0	2	3	0	1	4	0	1	4	0	10	21	0	0
Year ..	10	14	0	9	15	0	13	23	1	26	10	0	22	44	0	19	51	0	11	34	2	14	34	2	124	225	5	12

BLACKSOD POINT.

January ..	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	2	0	1	15	0	0	2	0	1	28	0	2	
February ..	1	0	0	0	0	0	0	0	0	1	5	0	4	3	1	0	0	0	2	8	1	0	2	0	8	18	2	1
March ..	0	2	0	0	1	0	1	5	0	1	3	0	2	2	0	0	1	0	1	3	0	0	1	0	5	18	0	8
April ..	2	0	0	1	2	0	2	4	0	3	0	0	2	5	0	1	1	1	0	2	0	0	0	0	11	14	1	4
May ..	2	8	0	0	0	0	0	0	0	2	1	0	0	1	0	0	0	0	1	0	0	1	1	1	6	11	1	13
June ..	3	3	0	1	1	0	2	2	0	1	2	0	2	1	0	2	3	0	1	2	0	0	3	0	12	17	0	1
July ..	1	0	0	0	0	0	1	0	0	1	0	0	3	4	0	1	4	0	6	6	0	1	1	0	14	15	0	2
August ..	0	1	0	0	0	0	1	0	0	1	0	0	6	6	0	0	0	0	7	2	0	1	0	0	16	9	0	6
September ..	1	1	0	0	2	0	0	2	0	6	0	0	1	4	0	4	1	1	3	0	0	1	0	0	16	10	1	3
October ..	0	1	1	0	0	0	0	1	0	2	3	0	2	4	0	0	1	0	7	8	0	0	1	0	11	19	1	0
November ..	1	1	0	0	0	0	4	1	0	0	1	0	1	2	0	0	4	0	1	5	1	1	4	1	8	18	2	2
December ..	1	0	0	0	0	0	3	3	0	0	5	0	3	3	0	0	3	0	3	5	0	1	1	0	11	20	0	0
Year ..	12	17	1	2	6	0	14	18	0	18	20	0	26	44	1	8	20	2	33	56	2	6	16	2	119	197	8	42

MALIN HEAD.

January ..	0	2	0	0	0	0	0	0	0	0	2	0	1	8	1	0	5	0	1	7	1	0	3	0	2	27	2	0
February ..	0	0	0	0	0	0	0	1	0	2	5	0	1	3	0	0	7	0	0	7	0	1	2	0	4	25	0	0
March ..	1	2	0	0	2	0	3	7	0	3	3	0	2	2	0	2	1	0	1	1	0	0	1	0	12	19	0	0
April ..	1	6	0	2	0	0	3	4	0	0	2	0	4	5	0	1	1	0	0	1	0	0	0	0	11	19	0	0
May ..	4	6	0	4	0	0	2	3	0	2	1	0	3	1	0	0	0	0	0	0	0	2	3	0	17	14	0	0
June ..	3	3	0	1	2	0	0	4	0	0	1	0	2	2	0	2	3	0	0	3	0	2	2	0	10	20	0	0
July ..	1	1	0	1	0	0	0	0	0	0	0	0	1	3	0	1	7	0	4	8	0	1	3	0	9	22	0	0
August ..	1	1	0	0	0	0	2	0	0	1	2	0	7	5	0	4	1	0	1	2	0	2	2	0	18	13	0	0
September ..	0	1	0	1	4	0	0	1	0	1	1	0	8	3	0	5	0	0	0	3	0	0	2	0	15	15	0	0
October ..	1	1	1	0	0	0	0	2	0	2	2	0	4	7	0	1	3	0	0	2	1	2	2	0	10	19	2	0
November ..	2	1	0	0	1	0	0	1	0	1	3	0	5	6	0	0	3	0	0	1	0	0	4	2	8	20	2	0
December ..	0	3	0	0	2	0	0	2	0	1	2	0	3	9	0	1	1	0	0	3	0	2	2	0	7	24	0	0
Year ..	14	27	1	9	11	0	10	25	0	13	24	0	41	54	1	17	32	0	7	38	2	12	26	2	123	237	6	0

TABLE XVII (continued).—"WIND ROSE" DATA for TELEGRAPHIC STATIONS.—Frequency of Winds of various strengths from different directions at 7h.

CAHIRCIVEEN (VALENTIA OBS.).

Months.	N.			NE.			E.			SE.			S.			SW.			W.			NW.			ALL DIRECTIONS.			CALMS.
	Light.	Strong.	Gale.	Light.	Strong.	Gale.																						
January ..	1	1	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	0	1	6	0	0	5	0	2	28	0	1
February ..	0	0	0	1	0	0	0	2	0	2	2	0	2	5	0	2	4	0	1	6	0	0	1	0	8	20	0	1
March ..	0	2	0	4	3	0	2	2	0	2	4	0	1	1	0	0	2	0	1	3	0	0	0	0	10	17	0	4
April ..	1	1	0	5	0	0	2	2	0	2	5	0	0	4	0	1	1	0	0	1	0	0	0	0	11	14	0	5
May ..	1	6	0	4	1	0	4	0	0	1	2	0	3	0	0	0	0	0	2	0	0	0	1	0	15	10	0	6
June ..	0	1	0	2	0	0	4	2	0	0	1	0	4	1	0	1	5	0	4	1	0	0	2	0	15	13	0	2
July ..	2	0	0	0	0	0	1	0	0	0	0	0	5	5	0	4	1	0	4	1	0	3	0	0	19	7	0	5
August ..	1	0	0	1	0	0	2	0	0	2	0	0	3	7	0	4	1	0	4	0	0	2	0	0	19	8	0	4
September ..	0	1	0	4	1	0	7	1	0	0	2	0	2	4	0	3	0	0	0	2	0	1	0	0	17	11	0	2
October ..	1	2	0	1	0	0	3	0	0	2	1	0	2	2	0	2	6	0	3	6	0	0	0	0	14	17	0	0
November ..	1	1	0	4	1	0	1	2	0	0	0	0	0	5	0	1	4	1	0	3	0	3	1	0	10	17	1	2
December ..	3	1	0	2	1	0	3	0	0	1	1	0	2	2	0	2	2	0	1	3	0	4	1	0	18	11	0	2
Year ..	11	16	0	28	7	0	29	11	0	12	18	0	24	44	0	20	34	1	21	32	0	13	11	0	158	173	1	34

SCILLY.

January ..	0	0	0	0	0	0	0	0	0	0	0	0	1	4	0	0	8	0	2	8	0	1	7	0	4	27	0	0
February ..	0	0	0	0	0	0	1	3	0	2	3	0	0	1	0	1	8	0	0	3	2	1	3	0	5	21	2	1
March ..	1	2	0	0	3	0	3	2	0	0	4	0	1	2	0	0	2	0	2	4	0	1	1	0	8	20	0	3
April ..	2	4	0	2	2	0	1	1	0	2	2	0	1	5	0	0	2	0	1	1	0	2	0	0	11	17	0	2
May ..	6	8	0	4	3	0	1	0	0	0	2	0	1	1	0	1	0	0	0	1	0	2	1	0	15	16	0	0
June ..	0	1	0	0	0	0	0	4	0	0	2	0	0	3	0	0	5	0	0	8	0	2	4	1	2	27	1	0
July ..	4	1	0	2	1	0	0	1	0	0	0	0	0	0	0	3	7	0	2	1	0	4	4	0	15	15	0	1
August ..	1	1	0	2	1	0	0	0	0	2	0	0	1	6	0	2	5	0	2	3	0	2	2	0	12	18	0	1
September ..	0	1	0	3	2	0	5	4	0	2	1	0	0	2	0	3	1	0	2	2	0	0	0	0	15	13	0	2
October ..	0	1	1	0	0	0	1	1	0	0	2	0	1	4	0	0	8	0	1	6	0	0	4	0	3	26	1	1
November ..	1	2	0	0	2	0	0	2	0	1	1	0	0	2	0	2	7	1	1	3	1	0	3	1	5	22	3	0
December ..	2	3	0	1	0	0	2	1	0	1	1	0	0	1	1	2	2	0	1	6	0	2	3	0	11	17	1	2
Year ..	17	24	1	14	14	0	14	19	0	10	18	0	6	31	1	14	55	1	14	46	3	17	32	2	106	239	8	13

GUERNSEY (WIRELESS STATION).

January ..	0	1	0	0	0	0	0	0	0	0	1	0	0	4	0	3	5	0	4	7	0	3	2	0	10	20	0	1
February ..	0	0	0	1	0	0	2	1	0	3	3	0	0	1	0	2	3	0	2	6	0	3	2	0	13	16	0	0
March ..	1	1	0	2	2	0	0	1	0	2	2	0	0	7	0	3	3	0	4	0	0	2	0	0	14	16	0	1
April ..	3	1	0	1	1	0	1	1	0	2	1	0	5	3	0	2	1	0	3	0	0	2	3	0	19	11	0	0
May ..	4	1	0	7	2	0	2	1	0	2	0	0	2	0	0	0	0	0	5	0	0	2	2	0	24	6	0	1
June ..	1	0	0	0	1	0	2	1	0	2	0	0	3	1	0	6	3	0	3	2	0	3	2	0	20	10	0	0
July ..	5	1	0	3	0	0	0	1	0	0	0	0	1	0	0	4	2	0	4	3	0	4	2	0	21	9	0	1
August ..	0	0	0	2	0	0	1	0	0	1	0	0	4	0	0	3	5	0	7	1	0	5	2	0	23	8	0	0
September ..	1	1	0	4	3	0	3	4	0	1	0	0	1	1	0	4	0	0	3	0	0	3	1	0	20	10	0	0
October ..	0	2	0	0	1	0	0	1	0	1	1	0	1	0	0	2	12	0	3	3	0	2	2	0	9	22	0	0
November ..	1	3	0	1	2	0	0	1	0	0	1	0	0	2	0	1	6	0	3	4	1	1	3	0	7	22	1	0
December ..	3	1	0	3	1	0	0	0	0	0	1	0	1	2	0	5	0	0	5	3	0	3	1	0	20	9	0	2
Year ..	19	12	0	24	13	0	11	12	0	14	10	0	18	21	0	35	40	0	46	29	1	33	22	0	200	159	1	6