

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

## JANUARY 1891.

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

ISSUED BY THE METEOROLOGICAL OFFICE, 63, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.  
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; JOHN MENZIES & Co., 12, HANOVER STREET, EDINBURGH, and 90, WEST NILE STREET, GLASGOW; AND HODGES, FIGGIS, & Co., 134, GRAFTON STREET, DUBLIN.

**General Summary.**—The severe frost which set in over England at the close of November continued until about the 19th of January, after which the conditions became mild and unsettled, with gales from the South-Westward or Westward in most parts of the kingdom. The mean pressure of the month was in excess of the average; temperature was below the normal, especially over England; the winds were mainly Westerly or South-Westerly; and rainfall was less than the average in all districts excepting the east and south-east of England. The amount of bright sunshine was unusually large, especially over England and Ireland.

**Pressure.**—*Mean for the Month at 8 a.m.* varied from 30·15 ins. and upwards over the Channel and South of England to a little below 29·85 ins. in the Shetlands. The values were everywhere in excess of the average,\* the difference ranging between 0·10 in. and 0·15 in. over Great Britain, but amounting to 0·20 in. in the south of Ireland. The relative distribution of pressure and the mean gradient were, however, fairly normal. *Highest* readings were observed very generally on the 14th, when the barometer ranged from about 30·6 ins. in the south-east of England to 30·9 ins. and upwards, in Ireland; at Belmullet the reading at 2 p.m. and 6 p.m. on the 14th was as high as 30·97 ins. *Lowest* readings were recorded in most places on the 23rd, when the barometer fell below 29·0 ins. in the north of Scotland, and below 29·7 ins. in all other parts of the kingdom. *Range* was somewhat large in the west and north, but slight in the south.

**Depressions.**—The only depression observed during the earlier half of the month was a "V shaped" system which spread over our islands on the 8th, and which ultimately filled up. After the 18th, however, numerous depressions skirted our extreme north-western and western coasts in about the direction shown by the arrow marked "A" on Map 2, Plate I., the systems being in many cases of considerable size and depth. At the close of the month a well-marked secondary disturbance of diminishing intensity travelled eastwards across the south of England to the North Sea, where it rapidly dispersed.

**Anticyclones** were very numerous and persistent during the earlier part of the month, the systems advancing in most cases from the westward or north-westward. During the latter part of the time, however, the central portions of the anticyclones lay at a considerable distance to the southward or south-eastward of our islands, the distribution of pressure over the United Kingdom became mainly cyclonic.

**Winds.**—Over the northern districts the winds were chiefly from the Westward or South-westward, but in the south-east of England there was a somewhat large proportion of breezes from the Northward and North-eastward, while in the south-western parts of our islands winds from the latter quarters were quite as numerous as those from South-west. Gales were somewhat frequent in the north and north-west; at Aberdeen and Mullaghmore there were 12 in number, and at Stornoway 14. In the east and south-east, however, such occurrences were comparatively rare.

**Temperature.**—*Mean at sea level* ranged within a trifle of 43° on our extreme south-west coasts to 38° or less over central Ireland, to 35° or less over the inland parts of the north of Scotland, and to 32° or less in the west of Norfolk. The winter type of distribution was (as in December) unusually marked, and the values were everywhere below the average,\* the deficit varying from less than a degree and a half in most parts of Scotland to between 4° and 6° over all the eastern, central, and southern parts of England. *Highest* readings were observed as a rule between the 28th and 31st, but in Scotland they occurred in many instances on the 12th or 13th. *Lowest* readings were observed on the 6th or 7th in Ireland, on the 18th or 19th over the greater part of England, and between the 21st and 23rd in the north of Scotland. At some of the eastern and southern stations in England, however, the weather was coldest on the 10th or 11th. Minima below 10° were recorded at many of the English stations, the lowest readings of all being 1° at Stamford, 5° at Hillington and 7° at Geldeston, Cambridge, Loughborough, and Llandoverly. *Range* was large at the inland stations; at Hillington, it amounted to 45°, at Cambridge and Loughborough to 46°, and at Stamford to 51°. *Vapour Tension* was less than 0·18 in. over England and the east of Scotland, and as low as 0·15 in. at Oxford. In the Shetlands and Hebrides, however, it amounted to 0·23 in., at Valencia to 0·24 in., and at Scilly to 0·26 in. *Relative Humidity* ranged from 83 per cent. at Jersey, 84 at Mullaghmore, and 85 at Leith and in London, to 96 at Hurst Castle and Dungeness, and 97 at Hawes Junction.

**Rainfall** amounted to less than an inch in the east of Ireland and some of the north-eastern parts of Great Britain, and was as small as 0·34 in. at Leith. On the south-east coast of England, however, there was more than 3 ins., and in the south-west of Ireland more than 4 ins., while in the west of Scotland the amounts varied between 5 and 9 ins. At a large majority of our stations the values were considerably less than the average,\* but in some parts of the east and south-east of England there was a slight excess. The number of rainy days was large in the extreme north, but elsewhere it did not differ greatly from the average.

**Bright Sunshine** was, upon the whole, considerably in excess of the average.\* At Fort William the per-centage of the possible amount of duration was only 11, and at Fort Augustus it was as low as 7, but in many parts of England and Ireland it exceeded 30; the highest values of all being 39 at Jersey, 37 at Dublin, 36 at Southampton, and 35 at Llandudno.

\* The averages employed are—*Pressure* and *Temperature* for the 20 years, 1871–90; *Rainfall* for the 25 years, 1866–90; *Bright Sunshine* for the 10 years, 1881–90.



TABLE I.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at TELEGRAPHIC  
Observations are made at 8 a.m. daily, but the Number of Days of Rain, Snow, Hail, &c.  
(The Stations are grouped in Districts, and then arranged in order of Latitude,

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit and Mean Sea Level) from Observations made at 8 a.m.	Difference from Average.	AIR TEMPERATURE.								
				At 8 a.m.	Means of				Absolute Extremes.			
					Minima.	Maxima.	Min. and Max. combined.	Difference from Average.	Minimum.	Date.	Maximum.	Date.
0. SCOTLAND, N.	Sumburgh Head	ins. 29° 8'19	ins. +0° 1'44	39° 1'	35° 5'	42° 3'	38° 9'	-0° 4'	27	21st	48	11th, 12th, 13th
	Wick	29° 8'71	+ 1° 52	37° 5'	32° 2'	41° 5'	36° 9'	-1° 0'	20	7th, 23rd	53	12th
	Stornoway	29° 8'36	+ 1° 54	40° 3'	34° 5'	43° 6'	39° 1'	+0° 2'	25	21st, 22nd	52	11th, 12th
1. SCOTLAND, E.	Nairn	29° 8'90	+ 1° 45	37° 8'	31° 9'	42° 3'	37° 1'	-0° 5'	20	23rd	53	12th, 28th
	Aberdeen	29° 9'45	+ 1° 58	35° 3'	31° 9'	40° 7'	36° 3'	-1° 5'	21	7th, 8th	54	12th
	Leith	29° 9'74	+ 1° 49	37° 9'	32° 6'	42° 7'	37° 7'	-1° 4'	21	8th	52	28th
2. ENGLAND, N.E.	Shields	30° 0'19	+ 1° 38	35° 4'	30° 2'	41° 3'	35° 8'	-2° 8'	15	19th	50	30th
	York	30° 0'85	+ 1° 53	32° 9'	28° 2'	40° 0'	34° 1'	-3° 5'	10	18th	50	28th, 29th
	Spurn Head	30° 0'67	+ 1° 41	34° 3'	30° 9'	38° 5'	34° 7'	-3° 4'	22	19th	48	31st
3. ENGLAND, E.	Yarmouth	30° 0'99	+ 1° 20	32° 9'	28° 5'	37° 4'	33° 0'	-4° 7'	19	11th	47	30th
	Cambridge	30° 1'37	+ 1° 44	31° 2'	25° 4'	39° 5'	32° 5'	-5° 0'	7	11th	53	28th
4. MIDLAND COUNTIES	Loughborough	30° 1'27	+ 1° 60	32° 2'	27° 6'	40° 7'	34° 2'	-3° 5'	7	19th	53	28th
	Oxford	30° 1'57	+ 1° 58	31° 3'	27° 1'	39° 6'	33° 4'	-5° 0'	12	11th, 19th, 20th	52	27th, 28th
5. ENGLAND, S.	London	30° 1'47	+ 1° 41	33° 3'	29° 2'	40° 1'	34° 7'	-4° 3'	14	11th	53	30th, 31st
	Dungeness	30° 1'22	+ 1° 10	34° 0'	28° 9'	38° 8'	33° 9'	-5° 8'	12	10th	49	25th
	Hurst Castle	30° 1'60	+ 1° 58	34° 3'	30° 0'	40° 2'	35° 1'	-5° 6'	19	20th	48	28th
6. SCOTLAND, W.	Ardrossan	29° 9'86	+ 1° 48	40° 1'	35° 5'	43° 4'	39° 5'	-0° 8'	26	6th, 18th	49	12th, 13th
7. ENGLAND, N.W.	Hawes Junction*	28° 7'93	?	31° 6'	27° 2'	36° 6'	31° 9'	?	10	18th	46	29th
	Liverpool	30° 0'95	+ 1° 71	35° 7'	32° 5'	41° 7'	37° 1'	-2° 3'	20	18th, 19th	52	23rd, 26th
	Holyhead	30° 0'80	+ 1° 78	40° 5'	37° 0'	44° 1'	40° 6'	-1° 6'	26	1st, 18th	48	22nd, 23rd, 27th, 28th, 30th
8. ENGLAND S.W.	Pembroke	30° 1'25	+ 1° 89	39° 6'	35° 7'	43° 6'	39° 7'	-2° 9'	22	1st	48	20th, 22nd, 23rd, 27th, 30th
	Prawle Point	30° 1'66	+ 1° 60	38° 2'	33° 7'	43° 3'	38° 5'	-3° 4'	22	19th	50	30th, 31st
9. IRELAND, N.	Malin Head	29° 9'49	+ 1° 29	40° 0'	36° 0'	43° 4'	39° 7'	-0° 6'	30	8th, 18th	49	12th, 28th
	Donaghadee	30° 0'26	+ 1° 70	39° 2'	34° 8'	44° 5'	39° 7'	-0° 6'	23	7th	52	28th
	Mullaghmore	30° 0'05	+ 1° 91	40° 9'	36° 4'	44° 9'	40° 7'	-1° 4'	26	7th	51	28th
	Belmullet	30° 0'20	+ 1° 80	41° 1'	36° 7'	45° 4'	41° 1'	-1° 8'	26	7th	50	13th
10. IRELAND, S.	Parsonstown	30° 0'75	+ 1° 80	35° 8'	30° 4'	43° 6'	37° 0'	-2° 9'	17	7th	53	28th
	Valencia	30° 1'09	+ 2° 22	42° 8'	37° 4'	48° 2'	42° 8'	-2° 2'	28	2nd	53	28th
	Roche's Point	30° 1'12	+ 2° 04	40° 8'	36° 5'	46° 7'	41° 6'	-2° 0'	27	7th	53	28th
CHANNEL ISLANDS	Scilly (St. Mary's)	30° 1'25	+ 1° 56	43° 6'	39° 5'	46° 7'	43° 1'	-2° 8'	29	17th, 18th	53	26th, 27th, 30th
	Jersey	30° 1'90	+ 1° 68	39° 7'	34° 9'	44° 4'	39° 7'	-2° 4'	12	18th	53	30th

\* Hawes Junction is 1,135 feet above Mean Sea Level, and the barometrical



## SUMMARY OF OBSERVATIONS, JANUARY 1891.

iii

REPORTING STATIONS in the BRITISH ISLANDS during the Month of JANUARY 1891.

Thunderstorms, and Gales are counted irrespective of the Hours at which they occurred.  
beginning in each case with the Station lying furthest North.)

TENSION OF VAPOUR.	RELATIVE HUMIDITY.	AMOUNT OF CLOUD.	RAINFALL.				Date.	WEATHER. No. of Days of							WIND. No. of Observations of								
			Total Fall in the Month.	Difference from Average.	Maximum Fall in One Day.	Rain.		Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.	
in.	%		ins.	ins.	in.																		
0'227	95	8'7	3'22	-0'50	0'53	11th	29	3	0	0	0	23	5	3	0	0	2	5	4	8	1	8	
'200	89	7'6	1'57	-0'48	0'28	20th	24	4	0	0	3	17	7	2	2	0	1	12	3	2	9	0	
'229	92	8'4	4'67	-0'63	1'00	19th	27	5	0	0	0	18	14	5	0	0	3	1	10	7	5	0	
'197	87	7'2	1'40	-0'59	0'43	20th	18	2	0	0	0	13	0	2	0	1	1	0	15	4	1	7	
'178	86	7'0	1'00	-1'31	0'13	10th	20	10	1	0	0	12	12	2	1	0	3	7	7	7	4	0	
'193	85	6'3	0'34	-1'59	0'15	3rd	9	1	0	0	2	6	2	4	1	2	1	2	6	11	1	3	
'186	90	7'1	0'68	-1'07	0'10	4th, 20th	16	8	0	0	1	9	0	1	1	0	0	8	10	5	6	0	
'173	92	5'1	0'85	-1'02	0'15	24th	15	3	0	0	13	10	0	7	2	0	1	12	1	6	1	1	
'182	92	6'2	1'35	0'00	0'33	31st	21	7	2	0	3	8	5	2	4	1	0	9	7	4	3	1	
'175	93	6'3	1'78	-0'17	0'22	20th	22	10	3	0	3	9	7	5	2	3	2	0	8	7	2	2	
'166	95	6'6	1'19	-0'35	0'21	7th	17	6	0	0	4	16	0	9	1	2	1	6	9	1	1	1	
'163	89	6'9	1'98	-0'06	0'81	31st	14	6	2	0	4	13	2	3	1	2	2	3	5	5	5	5	
'154	88	5'3	1'61	-0'65	0'36	23rd	15	8	1	0	15	12	0	6	3	0	2	6	5	4	2	3	
'162	85	5'6	1'75	-0'37	0'31	30th	18	9	1	0	13	13	4	6	1	2	0	5	6	3	4	4	
'188	96	7'6	3'81	+1'23	0'62	17th	22	6	0	0	1	13	7	6	5	3	2	2	7	4	2	0	
'190	96	5'4	2'37	-0'59	0'51	29th	15	1	0	0	4	6	9	4	10	2	0	1	8	5	1	0	
'223	90	7'5	2'62	-1'63	0'43	21st	19	3	2	0	1	16	1	2	2	1	1	8	5	4	3	5	
'174	97	7'3	4'62	?	0'82	26th	18	5	0	0	0	19	0	1	5	2	3	7	9	4	0	0	
'183	87	6'6	1'16	-1'06	0'30	20th	14	2	2	0	5	12	1	3	1	2	9	3	6	4	3	0	
'235	94	7'0	1'77	-1'61	0'41	26th	20	1	0	0	0	12	4	4	2	2	1	6	7	5	1	3	
'217	89	6'7	3'08	-0'67	0'67	8th	17	1	0	0	0	9	5	3	3	6	3	6	6	2	2	0	
'216	94	6'0	2'05	-1'04	0'52	24th	16	2	0	0	1	8	7	9	4	2	0	3	6	3	4	0	
'220	90	7'6	1'61	?	0'23	21st	17	1	5	0	1	16	4	2	3	0	1	11	8	2	4	0	
'218	91	6'6	0'97	-2'01	0'17	22nd	22	2	0	0	0	7	2	2	5	1	1	3	7	11	1	0	
'212	84	6'4	2'12	-2'27	0'29	20th, 26th	22	1	3	0	5	6	12	2	3	1	1	7	9	5	2	1	
'230	89	6'3	2'82	?	0'23	22nd	24	0	3	0	6	14	7	5	0	3	2	4	5	8	4	0	
'191	91	6'2	1'64	-1'48	0'24	22nd	16	1	1	0	4	14	0	0	0	0	2	1	4	0	0	24	
'238	87	7'2	4'31	-2'38	0'78	7th	23	0	2	1	1	13	9	5	4	2	3	4	5	3	2	3	
'221	88	5'6	2'81	-2'69	0'40	7th, 20th	16	0	1	0	0	8	2	9	4	1	1	1	5	7	3	0	
'256	89	7'6	2'35	-1'38	0'47	8th	16	2	1	1	0	13	6	4	4	7	1	3	6	4	2	0	
'203	83	5'8	2'21	-1'00	0'46	29th	19	5	3	0	5	7	0	5	5	4	2	5	3	5	2	0	

observations at this station are not reduced from 1000 ft.

observations at this station are not reduced for altitude.



TABLE II.

OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE, obtained from the VALUES supplied for use in the WEEKLY WEATHER REPORT, for the Month of JANUARY 1891.

STATIONS.	AIR TEMPERATURE.								RAINFALL.				BRIGHT SUNSHINE.				
	Means of				Absolute Extremes.				No. of Rainy Days.	Total Fall in the Month.	Difference from Average.	Maximum Fall in One Day.	Date.	No. of Hours recorded.	Difference from Average.	Percentage of possible Duration.	Difference from Average.
	Minima.	Maxima.	Min. and Max. combined.	Difference from Average.	Minimum.	Date.	Maximum.	Date.									
STORNOWAY	°	°	°	°	°	*	°	*	*	Ins.	Ins.	Ins.	*	34'5	+ 7'5	16	+ 4
LAIRG	27'6	39'9	33'8	-2'4	9	7th	53	12th	25	3'15	-0'35	0'71	19th	—	—	—	—
GLENCARRON	31'0	40'9	36'0	-1'3	19	22nd	49	11th	26	9'32	-0'73	2'05	19th	—	—	—	—
FORT AUGUSTUS	32'2	42'0	37'1	-1'5	16	23rd	52	12th	20	5'80	+1'17	0'91	19th	16'3	?	7	?
FORT WILLIAM	34'2	43'1	38'7	-0'7	23	6th	52	20th	23	7'89	-2'04	1'94	19th	24'3	?	11	?
ABERDEEN	*	*	*	*	*	*	*	*	*	*	*	*	*	58'9	+ 4'0	26	+ 2
BRAEMAR	28'0	38'1	33'1	-1'5	8	7th	50	12th	16	2'13	-0'97	0'42	20th	33'2	?	15	?
EDINBURGH	—	—	—	—	—	—	—	—	—	—	—	—	—	29'4	?	13	?
OCHTERTYRE	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MARCHMONT	29'4	39'7	34'6	-1'8	16	18th	47	12th, 13th, 29th	20	1'96	-0'78	0'35	26th	51'8	?	22	?
ALNWICK CASTLE	30'1	40'0	35'1	-2'6	17	17th	50	12th	16	1'32	-0'79	0'27	3rd	—	—	—	—
DURHAM	28'9	40'2	34'6	-2'2	9	18th	48	12th, 28th, 29th	16	1'01	-1'03	0'23	15th	49'7	+ 7'3	21	+ 3
SCARBOROUGH	31'1	39'7	35'4	-3'2	16	19th	49	29th	20	1'03	-0'91	0'19	15th	—	—	—	—
OSWALDKIRK	—	—	—	—	—	—	—	—	—	—	—	—	—	45'2	?	19	?
YORK	*	*	*	*	*	*	*	*	*	*	*	*	*	37'3	+11'7	15	+ 4
HILLINGTON	25'0	37'5	31'3	-5'7	5	18th	50	31st	21	2'44	+0'53	0'31	31st	61'5	+19'0	25	+ 8
GELDESTON	26'9	38'8	32'9	-5'3	7	10th, 11th	51	31st	22	1'78	+0'20	0'24	20th	56'8	+ 3'7	23	+ 2
CAMBRIDGE	*	*	*	*	*	*	*	*	*	*	*	*	*	75'8	+28'6	30	+11
ROTHAMSTED	27'0	38'9	33'0	-4'1	10	9th, 11th, 18th, 19th	52	31st	19	2'10	-0'52	0'40	30th	82'0	?	33	?
BAWTRY	28'5	39'7	34'1	-3'3	9	18th	50	29th	13	1'10	-0'80	0'28	20th	—	—	—	—
WORKSOP	—	—	—	—	—	—	—	—	—	—	—	—	—	46'0	+10'6	19	+ 5
STAMFORD (KETTON HALL).	26'0	40'1	33'1	-4'3	1	18th	52	28th	22	1'45	?	0'41	31st	—	—	—	—
THURCASTON	—	—	—	—	—	—	—	—	—	—	—	—	—	70'7	+38'1	29	+16
CHEADLE	28'5	38'9	33'7	-2'9	14	19th	49	29th, 30th	16	2'26	-0'43	0'68	20th	—	—	—	—
CHURCHSTOKE	28'3	40'8	34'6	-3'3	9	18th	52	23rd	15	2'48	-0'38	0'51	31st	63'4	+19'5	26	+ 8
HEREFORD	27'7	40'9	34'3	-4'3	10	18th	53	28th	14	1'58	-0'95	0'37	20th	—	—	—	—
CIRENCESTER	26'3	40'1	33'2	-4'3	10	19th, 20th	51	28th	13	2'91	-0'26	0'95	23rd	76'6	+32'1	31	+13
OXFORD	*	*	*	*	*	*	*	*	*	*	*	*	*	76'0	+34'7	30	+14
LONDON	*	*	*	*	*	*	*	*	*	*	*	*	*	42'2	+17'8	16	+ 6
STRATHFIELD TURGIS-	26'4	39'5	33'0	-4'8	11	11th, 19th	52	31st	14	1'83	-0'67	0'32	29th	—	—	—	—
HASTINGS	30'6	39'4	35'0	-4'9	20	10th	49	31st	23	3'58	+0'71	0'57	20th	87'3	+31'3	34	+11
EASTBOURNE	—	—	—	—	—	—	—	—	—	—	—	—	—	81'7	?	32	?
SOUTHAMPTON	30'0	41'1	35'6	-4'1	16	19th	53	31st	18	3'11	-0'23	0'62	29th	92'6	+47'1	36	+18
STOWELL	28'5	39'8	34'2	-4'2	12	19th	50	27th, 28th, 30th, 31st.	16	2'23	?	0'38	29th	62'8	?	24	?
LAUDALE	34'4	43'8	39'1	-1'1	23	21st	53	12th	27	8'20	-0'80	1'38	19th	—	—	—	—
GLASGOW	33'6	41'4	37'5	-0'9	24	18th	49	28th	17	2'68	-1'55	0'35	31st	26'8	+ 6'8	12	+ 3
GLENLEE	32'0	40'7	36'4	-0'8	15	18th	49	13th, 28th	20	5'50	-2'37	1'02	20th	—	—	—	—
DOUGLAS	34'6	43'3	39'0	-1'5	23	8th	49	23rd	18	1'84	-2'87	0'29	22nd	77'6	+35'8	32	+15
NEWTON REIGNY	28'4	39'6	34'0	-2'9	13	18th	48	29th	14	2'72	-1'13	0'69	20th	45'6	+ 4'6	19	+ 2
STONYHURST	30'2	39'6	34'9	-2'9	12	18th, 19th	50	29th	15	3'09	-1'09	0'61	24th	51'1	+19'9	21	+ 8
BLACKPOOL	31'3	39'7	35'5	-2'7	19	18th	49	29th	14	1'79	-1'23	0'32	27th	68'1	+36'1	28	+15
MANCHESTER	30'1	39'4	34'8	-3'0	16	18th, 19th	49	29th	16	2'59	-0'65	0'61	20th	—	—	—	—
LLANDUDNO	34'8	44'0	39'4	-2'1	20	18th	53	26th	14	1'64	-1'20	0'51	24th	85'3	+49'0	35	+20
LLANDOVERY	26'6	41'1	33'9	-6'4	7	18th	50	28th, 29th	16	5'22	-0'16	1'21	23rd	—	—	—	—
PEMBROKE	*	*	*	*	*	*	*	*	*	*	*	*	*	62'1	+12'7	25	+ 5
ARLINGTON	29'7	41'5	35'6	-3'8	14	19th	49	27th, 29th, 30th	14	4'45	+0'03	1'09	23rd	—	—	—	—
CULLOMPTON	28'4	42'1	35'3	-4'5	10	19th	53	27th	19	2'76	-0'67	0'42	8th	68'7	+32'7	27	+13
TORQUAY	—	—	—	—	—	—	—	—	—	—	—	—	—	90'3	?	34	?
PALMOUTH	36'0	44'4	40'2	-3'6	23	18th	52	30th	16	3'49	-1'99	0'58	28th	82'4	+35'6	31	+13
PLYMOUTH	32'1	43'4	37'8	-4'3	20	19th	51	23rd, 30th, 31st	15	3'00	-1'02	0'62	29th	76'6	+33'6	29	+13
JERSEY	*	*	*	*	*	*	*	*	*	*	*	*	*	104'2	+36'1	39	+14
LONDONERRY	33'9	42'4	38'2	-1'8	24	6th	51	28th	23	2'72	-1'32	0'72	21st	—	—	—	—
MARKREE CASTLE	31'2	42'9	37'1	-2'5	13	7th	52	28th	24	2'83	-0'62	0'45	26th	49'7	+ 7'5	21	+ 4
BROOKEBOROUGH	30'9	41'9	36'4	-2'0	14	7th	50	26th, 28th	16	2'13	-1'75	0'31	20th, 21st	—	—	—	—
ARMAGH	32'2	42'7	37'5	-1'4	20	6th, 10th	52	28th	19	1'32	-1'58	0'29	20th	66'6	+24'5	28	+11
ARLEY COTTAGE (COUNTY CAVAN).	—	—	—	—	—	—	—	—	—	—	—	—	—	69'9	?	29	?
EDGEWORTHSTOWN	30'9	42'1	36'5	-2'4	17	7th	52	28th	20	1'50	-1'49	0'21	24th	—	—	—	—
DUBLIN	35'6	44'5	40'1	-1'6	24	7th	54	23rd, 26th, 28th	14	0'67	-1'51	0'18	20th	90'7	+35'7	37	+15
PARSONSTOWN	*	*	*	*	*	*	*	*	*	*	*	*	*	71'2	+21'0	29	+ 9
KILKENNY CASTLE	30'4	43'6	37'0	-4'1	15	7th, 8th	54	28th	17	2'19	-1'33	0'42	20th	—	—	—	—
WATERFORD	33'7	44'8	39'3	-3'2	17	7th	52	28th	17	1'87	-2'74	0'30	7th	—	—	—	—
VALENCIA	*	*	*	*	*	*	*	*	*	*	*	*	*	81'5	+25'8	32	+10
KILLARNEY	34'4	46'5	40'5	-3'1	17	6th	54	23rd	21	4'17	?	0'72	20th	—	—	—	—
FOYNES	34'3	44'4	39'4	-2'9	21	6th	52	22nd, 26th, 28th	21	2'38	?	0'55	20th	—	—	—	—

\* For information, see Table I.

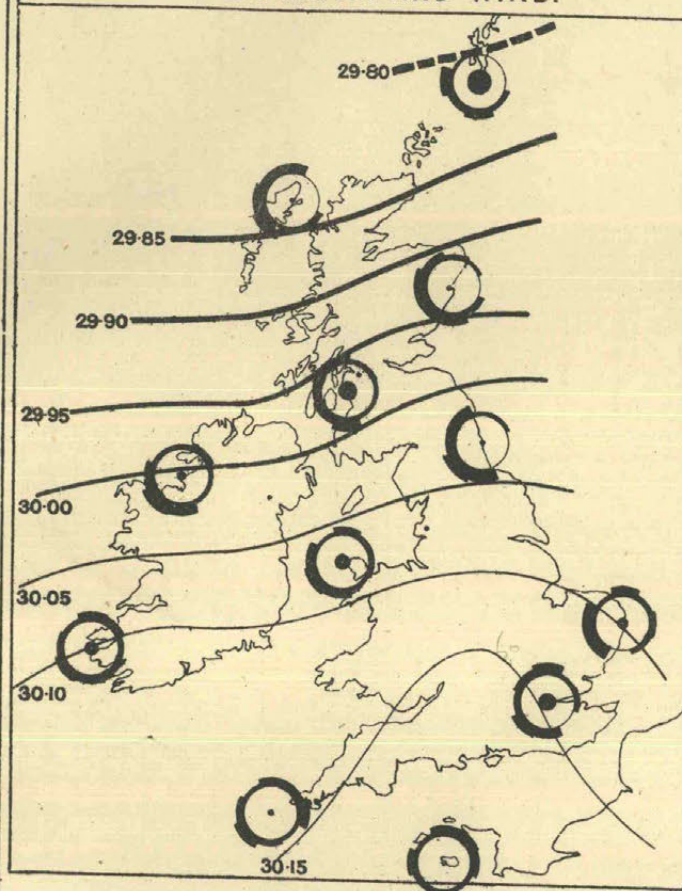


# MONTHLY WEATHER CHART JANUARY, 1891.

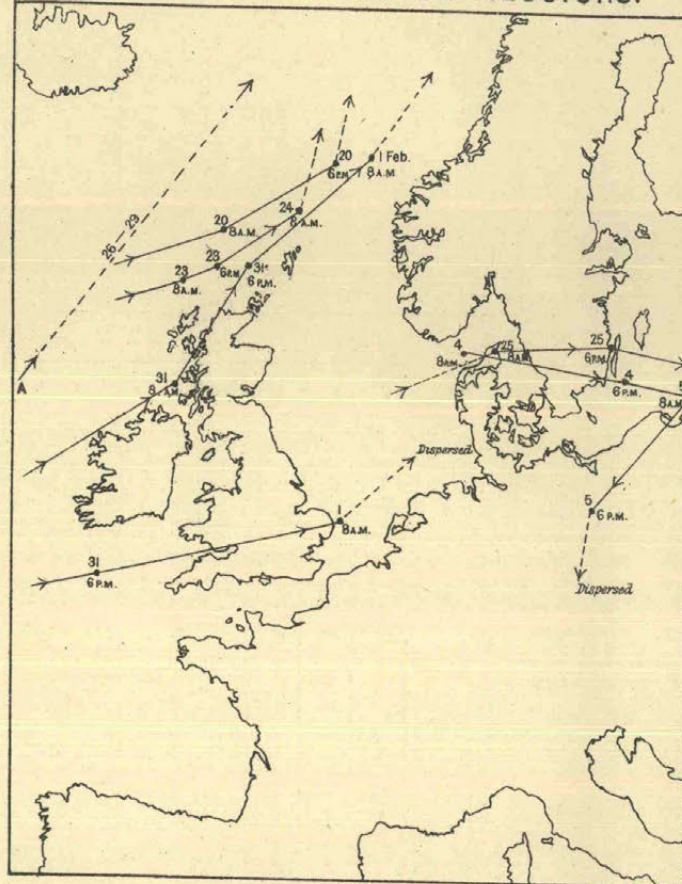
Monthly Summary.

Plate 1.

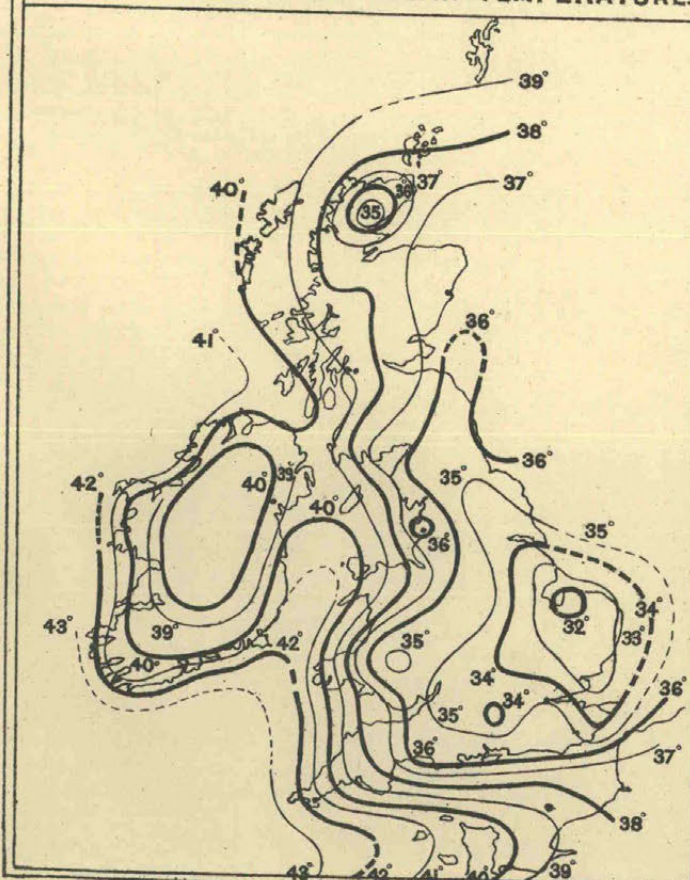
## 1. BAROMETER AND WIND.



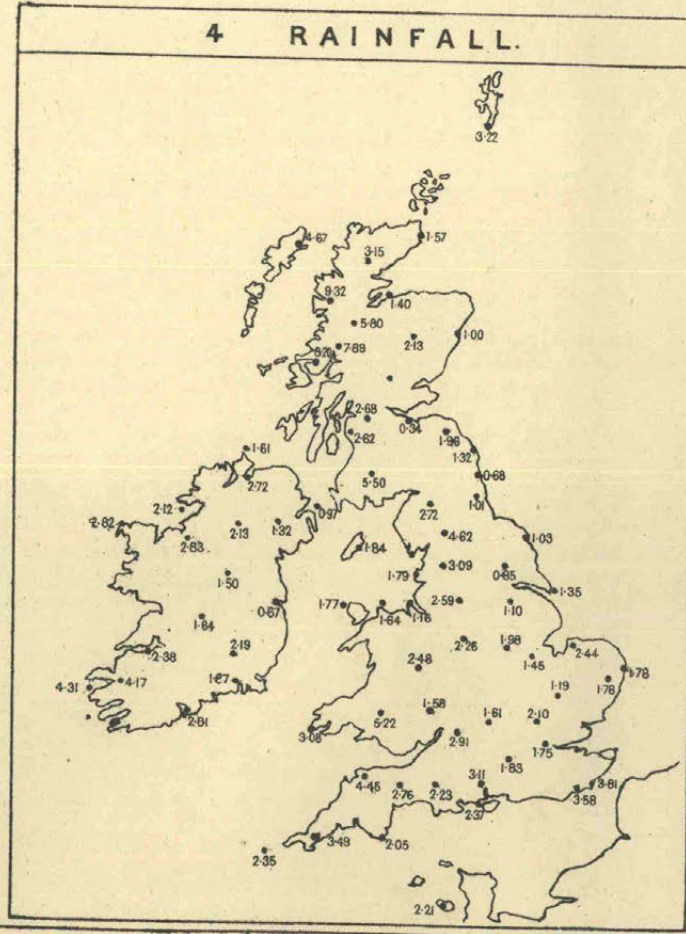
## 2. MOVEMENTS OF DEPRESSIONS.



## 3. DISTRIBUTION OF MEAN TEMPERATURE.



## 4. RAINFALL.



To face p. IV.







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

## FEBRUARY 1891.

(Issued as a Supplement to the Weekly Weather Report, 1891.)

ISSUED BY THE METEOROLOGICAL OFFICE, 63, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.  
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; JOHN MENZIES & Co., 12, HANOVER ST., EDINBURGH, and 90, WEST NILE STREET, GLASGOW; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

**General Summary.**—The weather of February was exceptionally dry, but over England a large amount of fog prevailed, especially during the third week. Pressure was abnormally high; temperature was also above the average; the winds were mainly anticyclonic, being Easterly in the south, but South-westerly or Westerly in the north; and rainfall was remarkably deficient, the total amount over England generally being less than a tenth of an inch. Bright sunshine was very abundant, especially on our south and south-west coasts.

**Pressure.**—*Mean for the month at 8 a.m.* varied from 30·45 ins. and upwards over the southern half of England, to 30·15 ins. or a little less in the Shetlands, and was everywhere greatly in excess of the average.\* Over England, where the mean distribution was of an anticyclonic type, the values were nearly half an inch above the normal; over the greater part of Ireland and Scotland the excess amounted to more than 0·4 in., while even in the Shetlands and Hebrides it was more than 0·35 in. *Highest* readings were observed very generally on the 4th, when the values exceeded 30·5 ins. over nearly the whole of the United Kingdom, and rose above 30·7 ins. over the southern parts of Ireland and England. *Lowest* readings were observed over the northern parts of the country either on the 11th or 28th, but in the south they occurred mostly on the 26th. In no case, however, did the barometer fall below 29·5 ins., so that the extreme *Range* for the month was unusually small.

**Depressions.**—No depressions appeared immediately over our Islands. During the early part of the month a series of large disturbances travelled south-eastwards across the northern parts of Scandinavia to Russia, while on the 22nd and 25th some depressions moved outside our western coasts in the direction shown by the generalized arrow A. in Map 2, Plate II.

**Anticyclones.**—During nearly the whole of the month the weather over our Islands was under the influence of a large anticyclone which advanced in the first instance from the south-westward. The central portion of the system was occasionally forced southwards by depressions which appeared in the far north, and on two occasions (*viz.*, the 22nd and 25th) it moved temporarily to the eastward owing to the advance of depressions over our western coasts. In each case, however, the anticyclone quickly re-asserted itself.

**Winds** were very variable in the south-east, but mainly Easterly in the south, Southerly in the west, and South-westerly in the north; in the Hebrides the South-westerly wind blew on no fewer than 17 days. Calms were very frequent over England, ten being reported in London and nine at Oxford and Holyhead. There were no gales on the English coasts and very few in the east of Ireland, but at Aberdeen there were 6, at Mullaghmore 7, and at Stornoway 9.

**Temperature.**—*Mean at Sea Level* ranged from between 46° and 47° in the Scilly Islands and the extreme west and south of Ireland to about 42° in the east of Scotland, 40° or less over a considerable portion of England, and to only 36°·5 at Yarmouth. The winter type of distribution was less strongly marked than is usual in February, and the actual values were considerably above the average except over the east and south-east of England, where there was a slight deficiency. *Highest* readings were recorded on the 23rd or 24th in Ireland, Scotland, and the north of England, but on the 27th or 28th over our eastern, midland, and southern counties. On one or other of these dates the thermometer exceeded 60° in nearly all districts, the highest reading of all being 67° at Cambridge and Llandudno. *Lowest* values were recorded on very irregular dates,—mostly on the 9th or 10th in Ireland, but during the last week of the month in Great Britain. *Range* was large, especially at the inland stations; in many parts of the kingdom it amounted to over 40°, and at Cambridge to 45°. *Vapour Tension* ranged from 0·17 in. at Oxford and 0·20 in. or less over the greater part of England and the east of Scotland to 0·26 in. at Stornoway, Belmullet, and Scilly, and to 0·27 in. at Valencia. *Relative Humidity* amounted to less than 90 per cent. at many of our western stations, and was as low as 80 per cent. at Mullaghmore; at Donaghadee, however, the per-centage was as high as 95, while at Hurst Castle it reached 97.

**Rainfall** was unusually deficient, the total amount being less than one tenth of an inch over nearly the whole of England and also at Dublin; at some stations in our eastern, midland, and southern counties there was an entire absence of precipitation, while in many other localities the trifling amounts collected in the gauge were due entirely to wet fogs or heavy dews. In the north-west of England and in the west and south of Ireland the total fall amounted to between half an inch and an inch, while in the north-west of Scotland the aggregate varied from 3·3 ins. in the Hebrides to 12·1 ins. at Glencarron. With the exception, however, of the north-west of Scotland, the rainfall of the month was everywhere greatly below the average.\*

**Bright Sunshine.**—The amount of bright sunshine was upon the whole very large, especially over England, where the per-centage of the possible quantity was in some places nearly twice as much as the average.\* At Jersey the per-centage was as high as 60, at Hastings 49, and at Plymouth 48; even at Braemar it amounted to 43. At Fort Augustus, however, the value was as low as 16, in London 15, and at Glasgow 13.

\* The averages employed are—*Pressure* and *Temperature* for the 20 years, 1871–90; *Rainfall* for the 25 years, 1866–90; *Bright Sunshine* for the 10 years 1881–90.



TABLE III.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at TELEGRAPHIC  
Observations are made at 8 a.m. daily, but the numbers of days of Rain, Snow, Hail,  
(The Stations are grouped in Districts, and then arranged in order of

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit and Mean Sea Level) from Observations made at 8 a.m.	Difference from Average.	AIR TEMPERATURE.								
				At 8 a.m.	Means of				Absolute Extremes.			
					Minima.	Maxima.	Min. and Max. combined.	Difference from Average.	Minimum.	Date.	Maximum.	Date.
0. SCOTLAND, N.	Sumburgh Head	ins. 30°136	+0°361	42°4	38°7	46°5	42°6	+4°1	25	13th	51	and
	Wick	30°227	+°403	40°8	35°4	48°8	42°1	+3°9	23	13th, 14th	54	17th
	Stornoway	30°152	+°379	44°0	37°8	48°8	43°3	+4°2	25	21st	55	24th
1. SCOTLAND, E.	Nairn	30°211	+°397	41°5	35°7	51°1	43°4	+5°0	24	21st	64	24th
	Aberdeen	30°288	+°440	38°0	34°5	49°1	41°8	+3°3	29	9th, 20th, 27th	58	28th
	Leith	30°333	+°463	39°2	34°3	48°9	41°6	+1°6	26	27th	56	24th
2. ENGLAND, N.E.	Shields	30°374	+°468	38°3	33°1	48°7	40°9	+1°4	27	21st	58	24th
	York	30°434	+°495	35°5	31°3	47°4	39°4	+0°1	20	26th	56	28th
	Spurn Head	30°418	+°484	37°7	34°6	43°9	39°3	+0°2	29	19th	57	28th
3. ENGLAND, E.	Yarmouth	30°433	+°469	35°6	31°6	41°4	36°5	-2°1	25	18th, 23rd	50	16th
	Cambridge	30°465	+°486	34°9	30°4	49°0	39°7	+0°5	22	23rd, 24th	67	27th
4. MIDLAND COUNTIES	Loughborough	30°460	+°497	33°9	31°9	48°8	40°4	+0°8	20	26th	64	27th
	Oxford	30°478	+°493	33°1	31°2	48°3	39°8	-0°2	23	19th, 23rd, 24th, 25th, 26th, 27th.	64	28th
5. ENGLAND, S.	London	30°469	+°480	35°1	32°3	46°9	39°6	-0°9	28	23rd, 24th, 25th.	62	27th, 28th
	Dungeness	30°446	+°461	36°3	31°5	44°9	38°2	-2°1	22	24th	53	17th, 28th
	Hurst Castle	30°468	+°482	36°5	33°4	46°4	39°9	-1°3	27	10th	55	27th
6. SCOTLAND, W.	Ardrossan	30°345	+°472	41°4	38°0	48°5	43°3	+2°8	31	9th	56	23rd
7. ENGLAND, N.W.	Hawes Junction*	29°137	?	36°3	31°5	44°7	38°1	?	21	21st	56	19th, 23rd, 24th, 27th.
	Liverpool	30°436	+°502	38°2	35°9	48°1	42°0	+1°6	28	20th, 21st	56	27th
	Holyhead	30°414	+°500	42°9	40°4	49°7	45°1	+3°0	34	9th, 10th	59	22nd
8. ENGLAND, S.W.	Pembroke	30°447	+°510	42°1	40°0	47°2	43°6	+1°1	35	20th	52	18th
	Prawle Point	30°465	+°472	41°9	38°4	48°0	43°2	+0°7	32	10th	57	28th
9. IRELAND, N.	Malin Head	30°272	+°422	43°7	40°4	48°8	44°6	+2°2	34	10th	59	24th
	Donaghadee	30°377	+°493	39°8	35°6	49°9	42°8	+1°6	22	9th	55	24th
	Mullaghmore	30°314	+°460	45°1	41°5	51°3	46°4	+3°8	32	9th	63	24th
	Belmullet	30°299	+°448	45°3	41°7	50°4	46°1	+3°8	34	1st, 9th, 10th	61	24th
10. IRELAND, S.	Parsonstown	30°383	+°477	39°9	34°8	51°4	43°1	+1°8	24	9th, 10th	59	24th
	Valencia	30°367	+°448	46°6	42°4	51°6	47°0	+1°8	33	20th	58	23rd
	Roche's Point	30°408	+°492	45°4	42°4	50°3	46°4	+2°4	36	9th	54	23rd
CHANNEL ISLANDS	Scilly (St. Mary's)	30°410	+°451	45°8	42°3	49°2	45°8	-0°1	37	10th	53	22nd, 23rd, 28th.
	Jersey	30°467	+°460	40°2	35°9	50°0	43°0	-0°1	29	10th, 15th	62	27th

\* Hawes Junction is 1,135 feet above Mean Sea Level, and the barometric observations



## SUMMARY OF OBSERVATIONS, FEBRUARY 1891.

vii

REPORTING STATIONS in the BRITISH ISLANDS, during the Month of FEBRUARY 1891.

Thunderstorms, and Gales are counted irrespective of the hours at which they occurred.

Latitude, beginning in each case with the Station lying furthest North.)

TENSION OF VAPOUR.	RELATIVE HUMIDITY.	AMOUNT OF CLOUD.	RAINFALL.				WEATHER.							WIND.								
			Total Fall in the Month.	Difference from Average.	Maximum Fall in One Day.	Date.	No. of Days of							No. of Observations of								
							Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calm.
in.	%		ins.	ins.	in.																	
0.243	90	8.8	2.30	-0.89	0.54	28th	19	2	0	0	0	20	3	2	2	0	1	3	3	8	2	7
227	90	4.9	2.50	+0.46	1.10	11th	12	0	0	0	12	8	1	0	0	0	0	8	6	5	4	5
261	90	8.5	3.32	-0.54	1.00	11th	20	1	0	0	0	17	9	2	1	0	0	1	17	5	1	1
213	82	5.6	2.10	+0.62	1.09	2nd	8	2	0	0	5	6	0	0	0	2	0	1	13	5	0	7
194	85	5.5	0.26	-2.09	0.11	11th	7	3	0	0	1	5	6	0	0	0	0	11	9	6	2	0
214	89	7.1	0.13	-1.32	0.07	3rd	3	0	1	0	1	7	2	0	1	1	0	0	6	13	1	6
203	88	7.5	0.05	-1.45	0.03	13th	3	0	0	0	0	9	1	0	1	0	0	6	11	4	5	1
194	93	6.7	0.08	-1.62	0.07	28th	1	0	0	0	8	15	0	2	0	1	4	5	2	9	2	3
202	90	6.0	0.08	-1.28	0.03	8th	2	0	0	0	4	12	0	2	1	0	3	5	6	5	2	4
195	94	5.8	0.14	-1.68	0.04	14th	4	1	0	0	9	10	0	1	0	1	1	2	4	4	7	8
189	93	6.5	0.00	-1.46	—	—	0	1	0	0	7	17	0	3	0	3	3	4	5	1	5	4
183	93	7.1	0.08	-1.70	0.08	8th	1	0	0	0	4	14	0	1	1	5	3	0	4	4	3	7
172	91	6.5	0.01	-1.91	—	—	1	0	0	0	10	16	0	1	1	6	0	0	3	7	1	9
185	90	8.0	10.04	-1.69	—	—	1	1	0	0	5	20	0	1	1	1	3	0	5	4	3	10
201	94	7.9	10.05	-1.90	—	—	0	0	0	0	0	11	0	4	4	7	1	0	2	5	1	4
208	97	6.9	0.06	-2.24	0.03	1st	2	0	0	0	4	9	0	2	7	7	0	1	2	4	2	3
238	91	6.9	0.51	-2.53	0.20	28th	8	0	0	0	3	15	2	0	3	4	2	5	6	2	0	6
190	89	5.6	0.94	?	0.49	3rd	9	0	0	0	9	14	0	0	4	6	2	6	8	1	0	1
202	88	7.2	0.12	-1.57	0.03	8th, 13th	5	0	0	0	3	11	0	0	0	4	9	3	6	4	2	0
239	87	6.4	0.28	-2.32	0.22	13th	5	0	0	0	0	10	0	1	0	0	1	7	7	2	1	9
246	92	5.7	0.16	-2.66	0.03	2nd, 3rd	8	0	0	0	1	3	0	2	1	9	4	4	3	2	3	0
244	92	5.0	10.02	-2.00	—	—	1	0	0	0	7	5	0	5	8	5	0	1	2	3	4	0
243	85	7.5	0.30	?	0.07	11th	10	0	0	0	4	18	3	1	1	0	3	14	6	1	2	0
230	95	6.8	0.13	-2.29	0.03	3rd, 21st, 28th	5	0	0	0	0	7	2	0	1	0	3	3	12	8	1	0
240	80	6.5	0.49	-2.60	0.18	3rd	9	0	0	0	7	12	7	2	1	2	5	7	9	1	1	0
263	87	6.8	1.17	?	0.38	25th	12	0	0	0	6	17	2	0	0	3	3	6	11	5	0	0
221	91	7.0	0.19	-2.01	0.09	7th	4	0	0	0	3	15	0	0	0	0	5	1	2	0	0	20
271	85	7.5	0.73	-4.22	0.21	7th	12	0	0	0	3	17	4	0	1	1	12	6	3	1	1	3
258	86	6.7	0.68	-3.75	0.36	21st	5	0	0	0	0	8	0	4	1	1	9	3	4	4	2	0
263	86	6.3	10.02	-2.69	—	—	2	0	0	0	0	4	0	4	5	6	6	2	2	1	2	0
205	82	4.1	0.07	-2.48	0.03	12th	2	0	0	0	12	7	0	2	6	8	4	1	1	3	3	0

at this station are not corrected for altitude.

‡ Mainly dew or fog.



TABLE IV.

OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE, obtained from the VALUES supplied for use in the WEEKLY WEATHER REPORT for the Month of FEBRUARY 1891.

STATIONS.	AIR TEMPERATURE.								RAINFALL.					BRIGHT SUNSHINE.			
	Means of				Absolute Extremes.				No. of Rainy Days.	Total Fall in the Month.	Difference from Average.	Maximum Fall in One Day.	Date.	No. of Hours recorded.	Difference from Average.	Percentage of possible Duration.	Difference from Average.
	Minima.	Maxima.	Min. and Max. combined.	Difference from Average.	Minimum.	Date.	Maximum.	Date.									
STORNOWAY	°	°	°	°	*	*	°	*	*	Ins.	Ins.	Ins.	*	66.5	+ 6.1	26	+ 3
LAIRG	33.6	50.9	42.3	+ 5.6	22	21st	64	24th	13	3.76	+ 0.78	1.46	11th	—	—	—	—
GLENCARRON	37.2	49.4	43.3	+ 5.8	28	12th, 13th	64	24th, 25th	17	12.14	+ 5.39	3.73	10th	—	—	—	—
FORT AUGUSTUS	36.5	49.0	42.8	+ 4.2	26	21st	60	24th	12	3.99	+ 0.26	1.12	2nd	40.3	?	16	?
FORT WILLIAM	38.6	47.7	43.2	+ 4.0	29	27th	55	24th	17	7.42	- 0.53	2.15	2nd	55.7	?	21	?
ABERDEEN	—	—	—	—	*	*	*	*	*	*	*	*	*	91.6	+ 22.1	35	+ 10
BRAEMAR	32.5	47.6	40.1	+ 4.8	19	27th	61	24th	6	0.23	- 2.72	0.08	11th	112.8	?	43	?
EDINBURGH	—	—	—	—	—	—	—	—	—	—	—	—	—	56.3	?	21	?
OCHTERTYRE	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MARCHMONT	33.6	49.1	41.4	+ 3.9	23	21st	61	23rd	3	0.21	- 2.11	0.09	11th	100.5	?	38	?
ALNWICK CASTLE	34.8	46.4	40.6	+ 2.1	26	8th	61	24th	3	0.10	- 1.99	0.06	12th	—	—	—	—
DURHAM	32.0	48.7	40.4	+ 2.2	23	20th	59	15th	4	0.08	- 1.52	0.02	11th, 13th	91.6	+ 31.0	35	+ 12
SCARBOROUGH	34.6	46.0	40.3	+ 0.8	26	20th, 23rd	55	27th	5	0.16	- 1.55	0.10	28th	—	—	—	—
OSWALDKIRK	—	—	—	—	—	—	—	—	—	—	—	—	—	99.5	?	37	?
YORK	—	—	—	—	*	*	*	*	*	*	*	*	*	69.0	+ 15.4	26	+ 6
HILLINGTON	30.5	47.2	38.9	+ 0.1	22	19th	63	27th	2	0.09	- 1.71	0.02	8th	104.1	+ 38.6	39	+ 15
GELDESTON	29.7	47.0	38.4	- 0.9	20	26th	64	28th	2	0.05	- 1.52	—	—	100.1	+ 30.7	37	+ 12
CAMBRIDGE	—	—	—	—	*	*	*	*	*	*	*	*	*	103.0	+ 40.0	38	+ 15
ROTHAMSTED	30.2	47.4	38.8	+ 0.2	21	24th	65	28th	0	0.05	- 2.01	—	—	99.6	?	36	?
BANTRY	32.1	47.7	39.9	+ 0.5	22	25th	63	28th	1	0.02	- 1.54	—	—	—	—	—	—
WORKSOP	—	—	—	—	—	—	—	—	—	—	—	—	—	76.4	+ 20.3	28	+ 7
STAMFORD (KETTON HALL).	30.3	47.7	39.0	- 0.8	19	24th, 26th	63	27th, 28th	2	0.09	?	0.05	8th	—	—	—	—
THURCASTON	—	—	—	—	—	—	—	—	—	—	—	—	—	98.2	+ 46.1	36	+ 17
CHEADLE	33.9	47.2	40.6	+ 2.7	25	20th	59	28th	3	0.06	- 2.41	0.03	3rd	—	—	—	—
CHURCHSTOKE	31.5	49.6	40.6	+ 1.5	22	26th	62	28th	2	0.06	- 2.19	0.04	11th	115.1	+ 53.7	43	+ 20
HEREFORD	32.0	46.3	39.2	- 1.0	20	26th	64	28th	1	0.07	- 2.02	—	—	—	—	—	—
CIRENCESTER	29.3	47.6	38.5	- 0.2	22	24th	61	27th, 28th	0	0.04	- 2.46	—	—	123.5	+ 55.5	45	+ 20
OXFORD	—	—	—	—	*	*	*	*	*	*	*	*	*	95.4	+ 33.8	35	+ 13
LONDON	—	—	—	—	*	*	*	*	*	*	*	*	*	41.9	+ 3.0	15	+ 1
STRATHFIELD TURGISS	30.0	47.9	39.0	- 0.8	23	27th	64	28th	4	0.11	- 1.88	0.05	28th	—	—	—	—
HASTINGS	34.3	47.1	40.7	+ 0.1	29	21st	56	27th	3	0.08	- 1.96	0.02	7th, 14th	134.8	+ 57.1	49	+ 21
EASTBOURNE	—	—	—	—	—	—	—	—	—	—	—	—	—	118.3	?	43	?
SOUTHAMPTON	32.4	49.8	41.1	- 0.1	27	10th, 11th, 16th, 24th.	66	28th	1	0.03	- 2.49	—	—	123.0	+ 56.0	45	+ 21
STOWELL	32.2	47.8	40.0	+ 0.6	24	10th	62	27th, 28th	3	0.05	?	—	—	117.6	?	43	?
LAUDALE	38.5	50.7	44.6	+ 4.3	32	12th, 27th	60	25th	15	2.64	- 4.03	0.62	28th	—	—	—	—
GLASGOW	36.8	46.9	41.9	+ 2.7	29	20th, 27th	56	23rd	9	0.54	- 2.80	0.18	5th	34.3	- 11.5	13	- 4
GLENLEE	33.6	47.5	40.6	+ 2.3	19	9th	55	20th	14	0.78	- 4.04	0.38	28th	—	—	—	—
DOUGLAS	36.4	48.1	42.3	+ 1.4	29	9th, 10th, 27th	55	24th	7	0.30	- 3.13	0.07	13th	81.0	+ 12.4	30	+ 5
NEWTON REIGNY	32.2	50.0	41.1	+ 3.7	23	9th	63	24th	7	0.24	- 2.56	0.10	3rd	101.9	+ 47.4	38	+ 18
STONYHURST	34.7	46.9	40.8	+ 1.7	26	20th	54	27th	7	0.60	- 2.83	0.20	28th	73.7	+ 15.7	28	+ 6
BLACKPOOL	36.4	46.9	41.7	+ 2.1	30	20th	59	24th	3	0.12	- 2.15	0.08	14th	?	?	?	?
MANCHESTER	35.1	48.4	41.8	+ 2.9	25	20th	58	27th	7	0.42	- 1.75	0.13	28th	—	—	—	—
LLANDUDNO	38.8	50.8	44.8	+ 2.9	32	21st	67	22nd	3	0.16	- 2.02	0.10	3rd	119.6	+ 55.2	44	+ 20
LLANDOVERY	31.6	52.0	41.8	+ 0.3	24	16th, 17th	66	23rd	7	0.30	- 3.76	0.10	2nd	—	—	—	—
PEMBROKE	—	—	—	—	*	*	*	*	*	*	*	*	*	124.9	+ 51.0	46	+ 19
ARLINGTON	34.3	49.0	41.7	+ 1.5	26	10th	60	28th	4	0.16	- 3.94	0.05	2nd	—	—	—	—
CULLOMPTON	29.9	49.5	39.7	- 1.1	23	11th	62	28th	2	0.07	- 2.88	0.03	12th	119.7	+ 56.6	44	+ 21
TORQUAY	—	—	—	—	—	—	—	—	—	—	—	—	—	122.3	?	44	?
FALMOUTH	39.7	47.2	43.5	+ 0.2	32	10th, 17th	50	11th, 18th, 23rd, 26th, 28th.	2	0.06	- 4.00	0.05	11th	126.3	+ 50.2	46	+ 19
PLYMOUTH	35.9	49.0	42.5	- 0.4	30	10th	57	27th	1	0.01	- 2.97	—	—	133.8	+ 59.2	48	+ 21
JERSEY	—	—	—	—	*	*	*	*	*	*	*	*	*	166.6	+ 79.5	60	+ 29
LONDONERRY	39.3	50.8	45.1	+ 3.9	31	9th	59	24th	7	0.20	- 2.64	0.07	7th	—	—	—	—
MARKREE CASTLE	35.6	50.1	42.9	+ 2.2	20	9th	59	24th	9	0.27	- 2.50	0.09	7th	71.4	+ 12.0	27	+ 5
BROOKBOROUGH	34.7	49.4	42.1	+ 2.4	20	9th	58	24th	4	0.41	- 2.68	0.15	21st	—	—	—	—
ARMAGH	35.8	50.0	42.9	+ 2.8	24	19th, 20th	59	24th	8	0.19	- 2.12	0.06	21st	72.7	+ 12.3	27	+ 5
ARLEY COTTAGE (COUNTY CAVAN).	—	—	—	—	—	—	—	—	—	—	—	—	—	74.2	?	28	?
EDGEWORTHSTOWN	34.2	49.7	42.0	+ 2.1	23	9th	58	24th	11	0.22	- 2.58	0.05	22th, 28th	—	—	—	—
DUBLIN	38.3	51.0	44.7	+ 2.2	30	9th	62	23rd	2	0.04	- 2.07	0.02	13th	90.9	+ 22.4	34	+ 9
PARSONSTOWN	—	—	—	—	*	*	*	*	*	*	*	*	*	75.4	+ 8.7	28	+ 3
KILKENNY CASTLE	34.9	51.4	43.2	+ 0.9	25	5th	61	28th	7	0.31	- 2.40	0.16	21st	—	—	—	—
WATERFORD	37.0	49.9	43.9	+ 0.4	27	5th	55	24th	6	0.33	- 3.21	0.19	21st	—	—	—	—
VALENCIA	—	—	—	—	*	*	*	*	*	*	*	*	*	76.2	+ 3.0	28	+ 1
KILLARNEY	40.2	52.7	46.5	+ 2.1	29	12th	64	23rd	11	0.44	?	0.17	21st	—	—	—	—
FOYNES	37.8	51.6	44.7	+ 1.4	30	8th	60	24th	5	0.26	?	0.12	13th	—	—	—	—

\* For information see Table III.

† Mainly dew or fog.

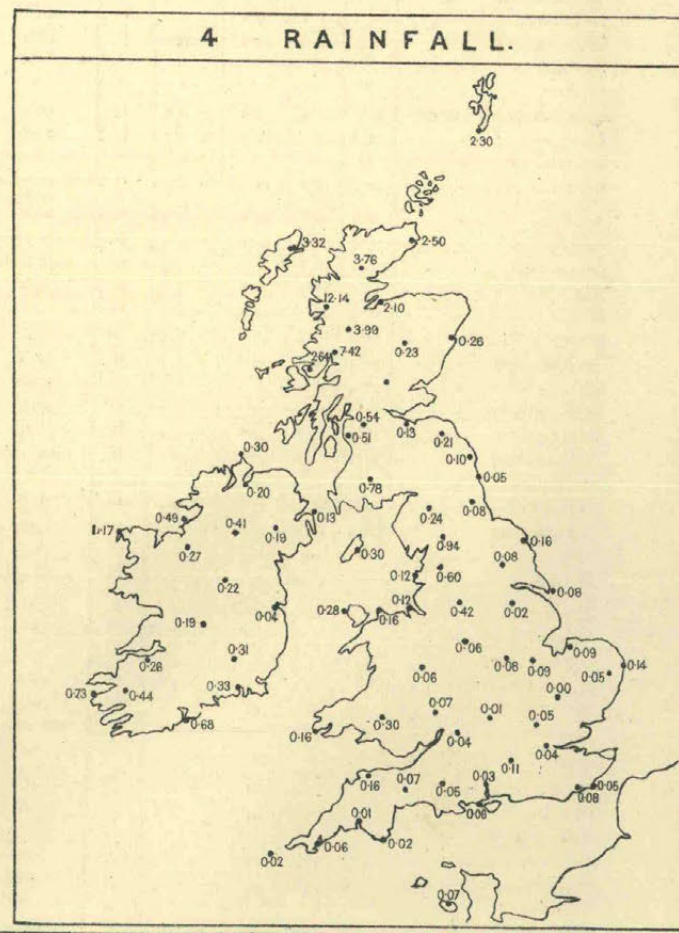
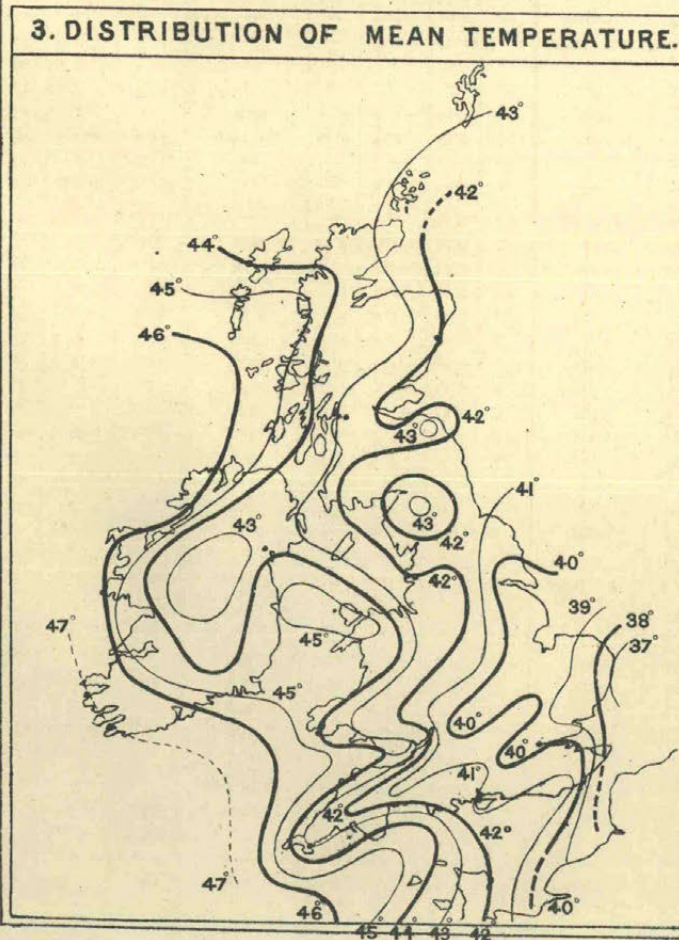
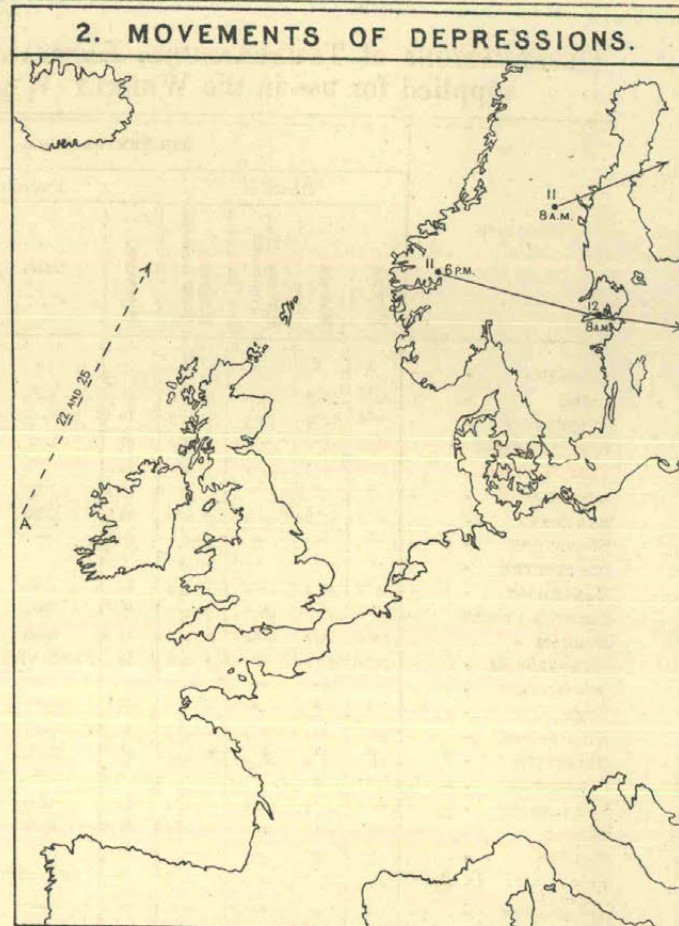
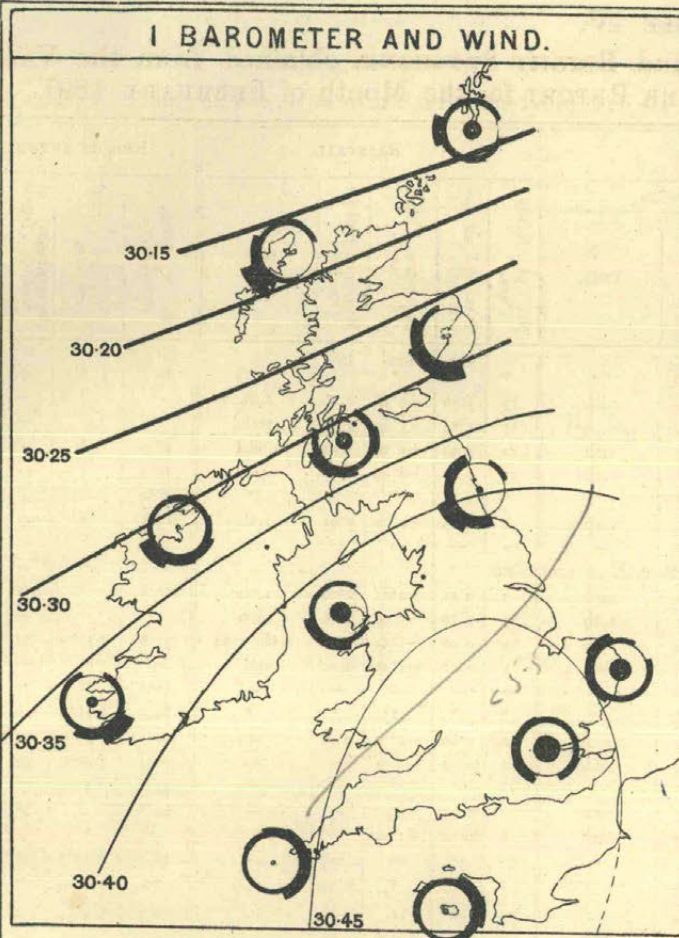
† Sunshine recorder out of action after the middle of the month.



# MONTHLY WEATHER CHART, FEBRUARY, 1891.

Monthly Summary.

Plate II.









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

**MARCH 1891.**

*(Issued as a Supplement to the Weekly Weather Report, 1891.)*

ISSUED BY THE METEOROLOGICAL OFFICE, 63, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.  
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; JOHN MENZIES & Co., 12, HANOVER  
STREET, EDINBURGH, and 80, WEST NILE STREET, GLASGOW; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

**General Summary.**—The weather of March was cold and changeable, with frequent snow showers and occasional thunderstorms. Between the 9th and 11th strong Easterly gales were experienced over the south of England with heavy falls of snow, the storms, both of wind and snow, being of unusual violence over the south-west of England. Pressure was below the average on all but our south-west coasts; temperature was everywhere low; the winds were mostly from the North-westward; and rainfall, although slight over the central parts of the kingdom, was in excess of the normal over the northern and extreme southern districts. Bright sunshine was below the average over a considerable portion of England, but above it in Ireland and Scotland.

**Pressure.**—Mean for the month varied from a little below 29·55 ins. in the Shetlands to a little above 29·75 ins. in the east of England, and to rather above 29·90 ins. in the south of Ireland, the distribution being favourable for winds from the North-westward. In the south-west of our Islands the values did not differ materially from the average,\* but in all other districts there was a somewhat decided deficit; and as the departure from the normal was greatest in the north, the mean gradient was considerably steeper than usual. *Highest* values were recorded over the southern portions of the kingdom between the 3rd and 5th, when the barometer rose to between 30·3 ins. and 30·6 ins. In the north, however, the maximum values were observed on the 18th, and were not much above 30·1 ins. *Lowest* values were registered in most cases on the 15th, when the barometer fell to a little below 28·9 ins. in Ireland and to below 29·4 ins. in most parts of Great Britain. *Range* was moderate.

**Depressions** were numerous and moved in all kinds of directions, but there were no cases in which the centres of disturbances passed immediately over the United Kingdom. The most important systems were those which travelled along the English Channel between the 9th and 11th, each of which occasioned heavy snowstorms over the west and south of England.

**Anticyclones.**—Two only were observed over our islands, and these were both of very moderate height. One of these extended over our western and northern coasts from the northward between the 17th and 20th, while the other spread over the United Kingdom from the westward at the close of the month.

**Winds.**—On our northern and eastern coasts the prevailing winds were mainly Westerly or North-westerly, but in the west and south there was a considerable admixture of breezes from the North-eastward. At Valencia Island the per-centage of winds from North-east was unusually high for the locality. Gales were very frequent, the numbers varying from 8 or 9 in the Channel to 14 at Spurn Head, 15 at Mullaghmore, and 17 at Aberdeen.

**Temperature.**—*Mean at Sea Level* varied from a little below 44° on our extreme south-west coasts to rather below 40° in some parts of central England, and the northern portion of central Ireland, and to a little below 35° in the north of Scotland. The general distribution was not widely different from that usually observed in March, but the actual values were everywhere below the average,\* the deficit varying from rather less than 2° over the north of Ireland and the inland parts of England to about 3° in South Wales, and to between three and a half and five degrees in the north of Scotland. *Highest* readings were recorded mostly on the 1st, when the thermometer exceeded 60° in many parts of Great Britain; at Aberdeen it rose to 66° and at Loughboro to 67°. *Lowest* values were registered between the 9th and 12th when hard frost prevailed in most districts. At Glenlee the thermometer fell to 12°, at Cirencester and Strathfield Turgiss to 10°, and at Lairg to 1°. *Range* was in most cases very large, amounting as it did to 45° or more at several of the inland stations, to 47° at Durham and Cirencester, to 48° at Strathfield Turgiss and to 55° at Lairg. *Vapour Tension* varied from rather less than 0·18 in. in the Shetlands and east of Scotland to 0·23 in. at Valencia and to 0·24 in. at Scilly. *Relative Humidity* was above 85 per cent. in most places, but was little above 80 per cent. in London and the south of Scotland, and as low as 77 per cent. at Aberdeen.

**Rainfall** was less than an inch and a half over Wales, the central part of England, and the eastern and central parts of Ireland, but exceeded two inches and a half in the south of England. At Falmouth, where the heavy snowstorms of the 9th to 11th prevailed with exceptional severity, the total for the month was about four inches and a quarter. Over the western parts of Ireland and Scotland the amounts exceeded three inches, the largest of all being 8·1 ins. at Glencarron. Compared with the average\* the values showed an excess in nearly all the more northern parts of the United Kingdom as well as in the extreme south of England, but a considerable deficiency elsewhere. The number of rainy days ranged between 15 and 20 in most districts, but in the north of Scotland there were from 25 to 27. At Blackpool the rainfall was locally very slight and infrequent, the total amount being only 0·47 in., which fell on 5 days.

**Bright Sunshine** was in excess of the average\* over Ireland, Scotland, and the north of England, but was less than the normal in the south. At Douglas (Isle of Man) the per-centage of the possible duration was as high as 45, at Dublin 42, and at Valencia 40; over the eastern, central, and southern parts of England, however, the values were mostly below 30, and in London the per-centage was only 22.

\* The averages employed are—*Pressure* and *Temperature* for 20 years, 1871–90; *Rainfall* for 20 years, 1866–85; *Bright Sunshine* for 10 years, 1881–90.



## SUMMARY OF OBSERVATIONS, MARCH 1891.

TABLE V.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at TELEGRAPHIC  
Observations are made at 8 a.m. daily, but the Numbers of Days of Rain, Snow, Hail,  
(The Stations are grouped in Districts, and then arranged in order of Latitude,

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit and Mean Sea Level) from Observations made at 8 a.m.	Difference from Average.	AIR TEMPERATURE.								
				At 8 a.m.	Means of				Absolute Extremes.			
					Minima.	Maxima.	Min. and Max. combined.	Difference from Average.	Minimum.	Date	Maximum.	Date.
0. SCOTLAND, N.	Sumburgh Head	ins. 29°542	ins. -0°209	35°9	31°0	40°4	35°7	-2°6	19	9th	50	1st
	Wick	29°668	-0°125	35°5	30°0	41°9	36°0	-3°4	15	7th, 9th	59	1st
	Stornoway	29°714	-0°064	36°0	29°5	41°5	35°5	-4°2	16	11th, 12th, 13th	54	1st
1. SCOTLAND, E.	Nairn	29°708	-0°102	35°3	30°7	43°1	36°9	-2°9	19	12th, 13th	61	1st
	Aberdeen	29°711	-0°114	36°8	32°6	43°5	38°1	-1°8	22	9th	66	1st
	Leith	29°744	-0°109	37°3	32°0	45°4	38°7	-2°6	21	9th	56	1st
2. ENGLAND, N.E.	Shields	29°725	-0°155	37°7	32°0	44°2	38°1	-2°5	19	9th, 10th	59	1st
	York	29°773	-0°135	38°3	31°7	45°6	38°7	-2°4	15	11th	57	1st
	Spurn Head	29°744	-0°152	39°1	35°5	43°8	39°7	-1°0	29	12th	53	1st
3. ENGLAND, E.	Yarmouth	29°759	-0°161	38°7	33°7	43°5	38°6	-1°5	26	22nd	58	1st
	Cambridge	29°811	-0°130	39°4	32°7	48°8	40°8	-0°8	22	12th, 22nd	64	1st
4. MIDLAND COUNTIES	Loughborough	29°817	-0°115	37°5	33°0	47°5	40°3	-1°6	21	12th	67	1st
	Oxford	29°845	-0°106	36°8	32°4	46°2	39°3	-2°7	15	12th	59	1st
5. ENGLAND, S.	London	29°828	-0°122	39°2	34°5	46°8	40°7	-2°0	23	12th	58	2nd
	Dungeness	29°805	-0°133	38°9	34°5	45°5	40°0	-1°7	25	22nd	54	5th
	Hurst Castle	29°858	-0°096	38°9	35°2	45°3	40°3	-2°2	26	23rd	55	29th
6. SCOTLAND, W.	Ardrossan	29°769	-0°096	38°6	33°4	44°8	39°1	-2°2	18	9th	54	1st
7. ENGLAND, N.W.	Hawes Junction*	28°521	?	33°2	28°8	38°6	33°7	?	18	9th	48	1st
	Liverpool	29°816	-0°095	38°9	35°5	45°5	40°5	-1°4	26	9th	56	1st
	Holyhead	29°835	-0°072	41°2	38°1	45°8	42°0	-1°1	31	9th, 12th	54	5th
8. ENGLAND, S.W.	Pembroke	29°865	-0°064	40°9	37°4	45°2	41°3	-1°6	28	10th	49	4th, 5th, 18th
	Prawle Point	29°874	-0°091	40°5	35°8	45°4	40°6	-2°3	28	12th	53	1st, 28th
9. IRELAND, N.	Malin Head	29°790	-0°075	39°0	36°0	43°1	39°6	?	29	8th	51	1st
	Donaghadee	29°818	-0°064	39°5	35°8	46°9	41°4	-0°8	28	9th, 12th	60	1st
	Mullaghmore	29°852	-0°020	40°0	36°3	45°4	40°9	-2°3	25	11th	54	1st
	Belmullet	29°875	0°000	40°9	36°7	46°2	41°5	?	26	10th	52	1st, 4th, 5th
10. IRELAND, S.	Parsonstown	29°891	-0°034	36°2	31°6	47°8	39°7	-2°7	18	11th	54	1st, 4th, 5th
	Valencia	29°930	+0°005	42°9	38°3	49°0	43°7	-2°0	27	11th	54	6th
	Roche's Point	29°904	-0°023	41°5	37°0	48°6	42°8	-1°9	28	11th	58	1st
CHANNEL ISLANDS	Scilly (St. Mary's)	29°868	-0°079	44°0	40°1	46°9	43°5	-2°5	30	11th	53	25th
	Jersey	29°893	-0°068	43°1	38°5	48°4	43°5	-1°2	30	12th	54	18th

\* Hawes Junction is 1,135 feet above Mean Sea Level, and the barometer at this station is not reduced for altitude. Owing to the drifting



## SUMMARY OF OBSERVATIONS, MARCH 1891.

xi

REPORTING STATIONS in the BRITISH ISLANDS during the Month of MARCH 1891.

Thunderstorms, and Gales are counted irrespective of the Hours at which they occurred.

beginning in each case with the Station lying furthest North.)

TENSION OF VAPOUR.	RELATIVE HUMIDITY.	AMOUNT OF CLOUD.	RAINFALL.				WEATHER, No. of Days of							WIND, No. of Observations of								
			Total Fall in the Month.	Difference from Average.	Maximum Fall in One Day.	Date.	Rain.	Show.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
in.	%		ins.	ins.	ins.																	
0.178	84	6.8	2.98	+0.19	0.60	25th	27	12	0	0	0	12	4	14	2	1	1	2	1	5	4	1
189	91	7.0	3.42	+1.40	0.40	26th	22	12	2	0	5	17	13	9	0	2	0	4	0	3	12	1
195	92	8.1	4.49	+0.70	1.05	10th	26	11	0	0	0	18	9	6	2	2	0	0	3	6	8	4
179	87	6.1	1.44	-0.24	0.28	5th	18	11	1	0	1	6	1	1	2	2	1	0	8	7	7	3
169	77	6.0	2.60	+0.27	0.75	29th	20	13	4	0	0	8	17	2	2	1	0	3	4	9	10	0
179	81	6.2	2.71	+1.30	1.61	16th	10	7	0	0	2	9	1	2	1	3	1	1	6	12	3	2
190	83	7.6	3.07	+1.32	1.12	15th	21	11	5	1	0	13	5	2	2	0	2	0	2	9	14	0
192	83	5.5	1.09	-0.64	0.25	10th	21	2	0	0	10	9	0	8	2	2	2	0	1	10	5	1
202	85	7.0	1.18	-0.04	0.21	15th	19	10	5	0	0	10	14	4	4	1	0	3	4	9	6	0
204	87	6.4	1.65	-0.17	0.27	7th, 15th, 27th	20	10	6	0	3	4	5	3	4	3	2	1	2	10	6	0
208	87	6.8	1.70	+0.30	0.24	15th	21	11	2	0	4	14	0	8	2	1	1	2	11	2	4	0
188	84	7.3	1.24	-0.40	0.21	6th, 15th	20	11	3	0	5	15	5	4	3	2	1	1	5	9	4	2
189	87	6.8	1.38	-0.21	0.35	7th	14	8	0	1	7	15	0	3	5	1	1	1	9	5	4	2
193	81	6.6	1.95	+0.46	0.47	7th	13	10	1	1	7	14	3	4	3	3	1	1	7	8	4	0
211	90	7.2	2.78	+0.95	0.69	10th	15	9	2	1	0	8	8	6	4	3	1	0	4	9	4	0
219	93	6.3	2.68	+0.84	0.74	7th	16	5	3	0	1	5	9	4	8	3	0	0	5	9	2	0
190	81	5.6	1.86	-0.58	0.30	15th	13	5	4	0	5	9	8	2	8	3	1	0	5	6	2	4
176	93	7.0	3.70	?	0.48	4th	17	8	0	0	1	16	0	6	5	3	2	3	6	4	1	1
198	84	7.5	0.68	-1.04	0.13	28th	14	2	2	0	2	11	7	2	6	4	2	0	2	10	5	0
217	85	6.9	1.18	-1.09	0.45	15th	14	1	0	0	0	9	4	6	3	5	0	1	4	6	4	2
222	87	6.4	0.94	-1.46	0.20	7th	15	5	2	0	0	8	4	4	7	3	1	2	3	6	5	0
224	90	6.6	2.60	+0.65	?	?	?	6	1	1	2	12	5	3	4	5	0	2	1	7	9	0
205	86	8.2	1.75	?	0.23	24th	18	9	6	0	2	21	7	4	6	2	1	3	4	4	7	0
216	90	5.2	1.63	-0.42	0.39	15th	17	2	0	0	1	3	2	1	7	5	0	0	3	7	8	0
200	81	6.2	2.10	-0.77	0.44	14th	19	3	7	1	7	7	15	5	3	4	1	2	5	4	5	2
222	87	6.0	3.76	?	0.65	14th	21	1	3	0	9	15	9	5	2	7	2	3	1	7	4	0
193	90	6.3	1.31	-1.02	0.43	14th	13	3	0	0	5	11	0	0	2	0	0	0	6	1	1	21
229	83	7.5	3.15	-1.05	0.87	31st	19	1	4	0	1	14	5	5	8	2	1	0	1	6	6	2
209	80	5.3	1.20	-2.51	0.40	15th	10	2	2	0	0	4	4	8	4	2	1	1	0	8	7	0
244	84	7.5	3.44	+1.04	1.45	9th	19	2	1	0	0	9	9	5	7	4	0	1	4	6	4	0
224	80	6.9	2.33	0.00	0.70	9th	?	1	3	0	3	14	2	3	4	3	2	2	4	8	5	0

character of the snow between the 9th and 11th the Rainfall measurements at several of our south-western stations are only approximate.



TABLE VI.

OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE, obtained from the VALUES supplied for use in the WEEKLY WEATHER REPORT for the Month of MARCH 1891.

STATIONS.	AIR TEMPERATURE.								RAINFALL.					BRIGHT SUNSHINE.			
	Means of				Absolute Extremes.				No. of Rainy Days.	Total Fall in the Month.	Difference from Average.	Maximum Fall in One Day.	Date.	No. of Hours recorded.	Difference from Average.	Percentage of possible Duration.	Difference from Average.
	Minima.	Maxima.	Min and Max. combined.	Difference from Average.	Minimum.	Date.	Maximum.	Date.									
STORNOWAY	*	*	*	*	*	*	*	*	*	*	*	*	*	111'7	+13'1	31	+ 4
LAIRG	25'1	41'3	33'2	- 5'1	1	12th	56	1st	25	5'57	+2'61	0'78	4th	—	—	—	—
GLENCARRON	28'1	41'3	34'7	- 3'8	14	9th	50	1st, 4th	20	8'07	+1'82	1'05	3rd	—	—	—	—
FORT AUGUSTUS	29'2	43'4	36'3	- 3'3	13	9th	57	1st	18	3'19	+0'22	0'55	4th	96'1	?	27	?
FORT WILLIAM	31'2	43'7	37'5	- 3'0	18	9th, 10th, 12th	54	1st, 2nd	18	4'37	-1'72	1'01	5th	122'2	?	34	?
ABERDEEN	*	*	*	*	*	*	*	*	*	*	*	*	*	144'6	+33'0	40	+ 9
BRAEMAR	27'7	38'5	33'1	- 3'4	14	13th	55	1st	18	2'53	+0'04	0'53	15th	110'7	?	31	?
EDINBURGH	—	—	—	—	—	—	—	—	—	—	—	—	—	85'8	?	24	?
OCHTERTYRE	28'7	46'7	37'7	- 1'7	15	8th	61	1st, 4th	13	2'66	-0'13	1'28	15th	—	—	—	—
MARCHMONT	30'7	43'0	36'9	- 2'1	15	9th	56	1st	18	4'95	+2'48	1'03	16th	109'5	?	30	?
ALNWICK CASTLE	33'4	42'1	37'8	- 2'1	21	8th	53	1st, 4th	20	3'95	+1'60	0'95	14th	—	—	—	—
DURHAM	31'8	44'1	38'0	- 2'1	15	10th	62	1st	22	2'72	+0'56	0'69	15th	111'5	+ 7'2	31	+ 2
SCARBOROUGH	34'3	43'4	38'9	- 2'1	29	12th, 30th	57	1st	22	2'66	+0'77	0'74	15th	—	—	—	—
OSWALDKIRK	—	—	—	—	—	—	—	—	—	—	—	—	—	115'0	?	32	?
YORK	*	*	*	*	*	*	*	*	*	*	*	*	*	109'0	+10'5	30	+ 3
HILLINGTON	33'5	47'1	40'3	- 1'1	23	13th, 22nd	59	1st	19	1'44	-0'22	0'29	15th	99'1	- 7'4	27	- 2
GELDESTON	33'4	46'8	40'1	- 1'5	24	22nd	62	1st, 2nd	19	1'51	-0'06	0'27	15th	119'9	- 4'2	33	- 1
CAMBRIDGE	*	*	*	*	*	*	*	*	*	*	*	*	*	112'4	- 5'7	31	- 1
ROTHAMSTED	33'4	46'8	40'1	- 0'8	17	12th	59	6th	19	1'68	-0'05	0'56	7th	99'8	?	27	?
BAWTRY	33'0	46'4	39'7	- 1'5	20	8th	58	1st	19	1'40	-0'31	0'40	7th	—	—	—	—
WORKSOP	—	—	—	—	—	—	—	—	—	—	—	—	—	98'8	+ 0'7	27	0
STAMFORD (KETTON HALL).	33'2	47'0	40'1	- 1'7	21	19th	63	1st	20	1'21	?	0'22	16th	—	—	—	—
THURCASTON	—	—	—	—	—	—	—	—	—	—	—	—	—	102'4	+15'9	28	+ 4
CHEADLE	32'1	44'5	38'3	- 1'7	22	12th	59	1st	18	1'74	-0'57	0'42	15th	—	—	—	—
CHURCHSTOKE	31'7	44'8	38'3	- 2'1	15	12th	59	1st	21	1'33	-0'68	0'28	15th	89'9	-15'3	25	- 4
HEREFORD	33'8	46'4	40'1	- 2'2	15	12th	60	1st	15	1'42	-0'32	0'50	9th	—	—	—	—
CIRENCESTER	31'5	45'5	38'5	- 2'1	10	12th	57	2nd	15	1'78	-0'31	0'58	9th	84'6	-25'6	23	- 7
OXFORD	*	*	*	*	*	*	*	*	*	*	*	*	*	95'4	-16'2	26	- 5
LONDON	*	*	*	*	*	*	*	*	*	*	*	*	*	81'3	- 3'6	22	- 1
STRATHFIELD TURGIS	32'6	47'2	39'9	- 2'2	10	12th	58	5th	15	2'07	+0'51	0'37	7th, 10th	—	—	—	—
HASTINGS	34'7	45'4	40'1	- 2'7	28	12th	57	5th	19	2'93	+0'99	0'47	10th	105'4	-30'3	29	- 8
EASTBOURNE	—	—	—	—	—	—	—	—	—	—	—	—	—	108'1	?	30	?
SOUTHAMPTON	34'5	47'7	41'1	- 2'1	25	12th	62	1st	17	2'69	+0'67	0'57	9th	91'5	-34'7	25	- 10
STOWELL	33'0	44'1	38'6	- 3'0	19	12th	55	5th	17	3'60	?	0'57	10th	88'2	?	24	?
LAUDALE	31'4	44'3	37'9	- 3'2	18	9th	57	1st	18	6'64	+0'05	1'84	5th	—	—	—	—
GLASGOW	32'2	43'2	37'7	- 2'6	20	9th	55	1st	14	3'02	+0'54	0'64	15th	105'1	+24'4	29	+ 7
GLENLEE	30'4	44'4	37'4	- 2'0	12	9th	55	2nd	17	4'45	+0'54	0'72	5th	—	—	—	—
DOUGLAS	34'9	45'4	40'2	- 1'4	25	12th	55	1st	13	1'38	-1'47	0'38	15th	164'2	+43'8	45	+ 12
NEWTON REIGNY	30'7	43'4	37'1	- 2'3	16	9th	57	1st	15	1'86	-0'36	0'42	15th	98'3	- 2'1	27	- 1
STONYHURST	32'8	43'2	38'0	- 2'6	23	12th	51	2nd	12	1'89	-1'55	0'33	3rd	92'7	- 4'8	25	- 2
BLACKPOOL	33'3	43'3	38'3	- 2'8	24	9th	50	18th	5	0'47	-1'78	0'23	25th	?	?	?	?
MANCHESTER	33'5	44'3	38'9	- 2'1	21	12th	55	2nd	16	1'89	-0'57	0'30	6th	—	—	—	—
LLANDUDNO	36'8	45'6	41'2	- 1'9	26	12th	55	1st, 2nd	15	1'55	-0'44	0'40	15th	115'3	+24'1	32	+ 7
LLANDOVERY	31'9	47'3	39'6	- 3'1	14	12th	55	1st	23	2'49	-1'11	0'55	15th, 25th	—	—	—	—
PEMBROKE	*	*	*	*	*	*	*	*	*	*	*	*	*	130'9	+ 1'1	36	0
ARLINGTON	33'6	43'5	38'6	- 2'8	22	12th	50	25th	17	2'37	+0'24	1'50	9th	—	—	—	—
CULLOMPTON	33'7	46'7	40'2	- 2'4	16	12th	62	1st	17	1'85	-0'62	0'39	15th	95'2	-24'0	26	- 7
TORQUAY	—	—	—	—	—	—	—	—	—	—	—	—	—	115'6	?	32	?
FALMOUTH	37'2	46'1	41'7	- 2'1	29	11th	56	1st	14	4'24	+0'83	1'35	9th	122'0	- 7'8	34	- 2
PLYMOUTH	36'3	47'4	41'9	- 2'3	26	11th	57	5th	11	1'83	-0'80	?	?	101'5	-29'9	28	- 8
JERSEY	*	*	*	*	*	*	*	*	*	*	*	*	*	137'2	-11'9	38	- 3
LONDONDERRY	33'9	47'1	40'5	- 2'0	24	10th	55	1st	24	3'71	+0'94	0'43	14th	—	—	—	—
MARKREE CASTLE	31'4	46'9	39'2	- 2'8	14	13th	57	1st	19	2'53	+0'04	0'38	14th	124'6	+23'3	34	+ 6
BROOKBOROUGH	30'5	46'1	38'3	- 2'5	16	10th, 11th	58	1st	18	2'53	-0'29	0'47	14th	—	—	—	—
ARMAGH	31'6	47'0	39'3	- 1'9	19	11th	59	1st	18	1'56	-0'54	0'41	14th	130'5	+37'4	36	+ 10
ARLEY COTTAGE (COUNTY CAVAN).	—	—	—	—	—	—	—	—	—	—	—	—	—	139'7	?	38	?
EDGEWORTHSTOWN	31'6	47'2	39'4	- 1'7	21	13th	57	1st	16	1'17	-1'64	0'35	14th	—	—	—	—
DUBLIN	35'8	47'5	41'7	- 1'8	27	12th	58	1st	17	0'94	-1'17	0'22	14th	151'9	+37'0	42	+ 10
PARSONSTOWN	*	*	*	*	*	*	*	*	*	*	*	*	*	101'5	-12'1	28	- 3
KILKENNY CASTLE	33'5	47'9	40'7	- 2'5	19	14th	58	1st	15	1'24	-0'94	0'31	14th	—	—	—	—
WATERFORD	34'7	48'6	41'7	- 2'5	23	14th, 31st	61	1st	12	1'42	-1'59	0'44	14th	—	—	—	—
VALENCIA	*	*	*	*	*	*	*	*	*	*	*	*	*	147'0	+14'4	40	+ 4
KILLARNEY	33'6	48'4	41'0	- 3'5	17	12th	59	1st	18	2'54	?	0'61	15th	—	—	—	—
FOYNES	35'4	47'6	41'5	- 2'1	22	8th	56	1st	17	2'19	?	0'60	15th	—	—	—	—

\* For information see Table V.

† Sunshine recorder out of action.

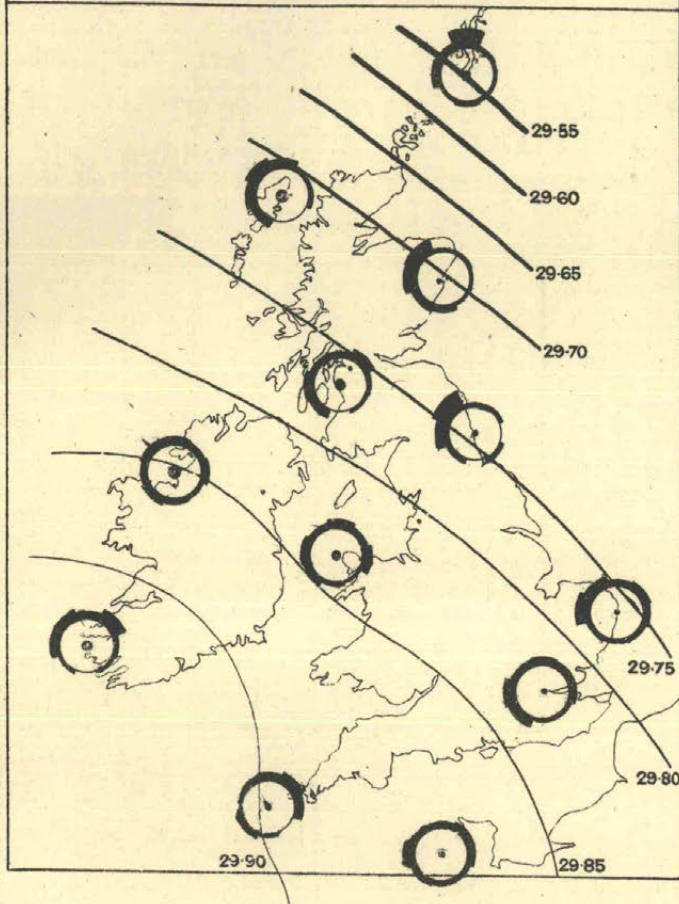


# MONTHLY WEATHER CHART, MARCH, 1891.

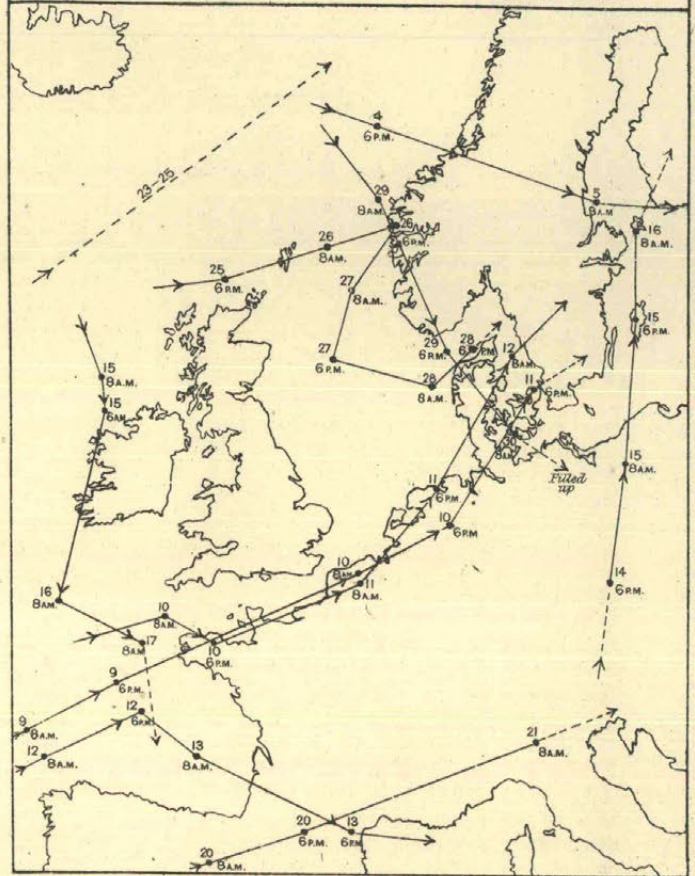
Monthly Summary.

Plate III.

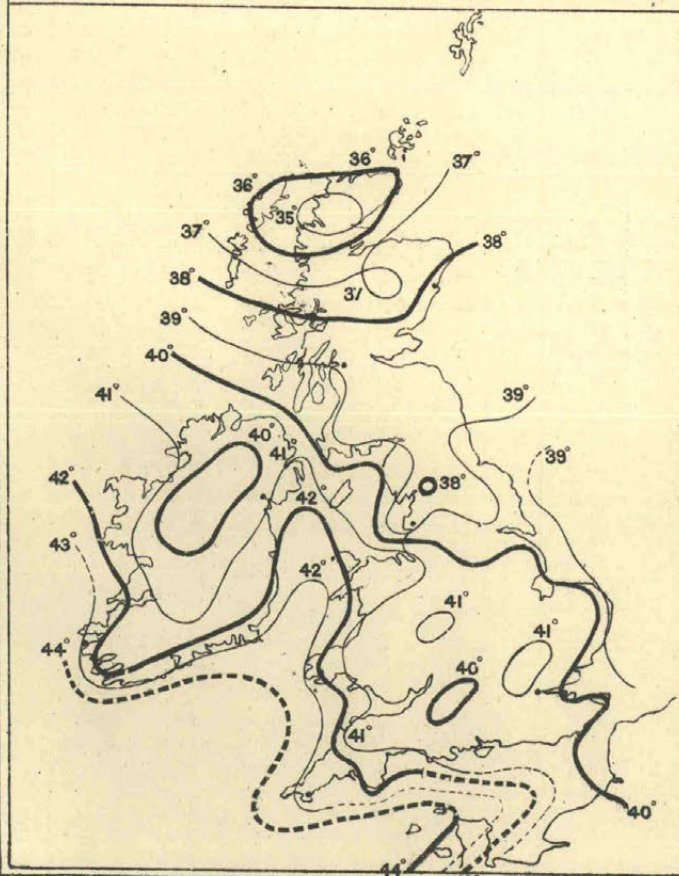
## 1. BAROMETER AND WIND.



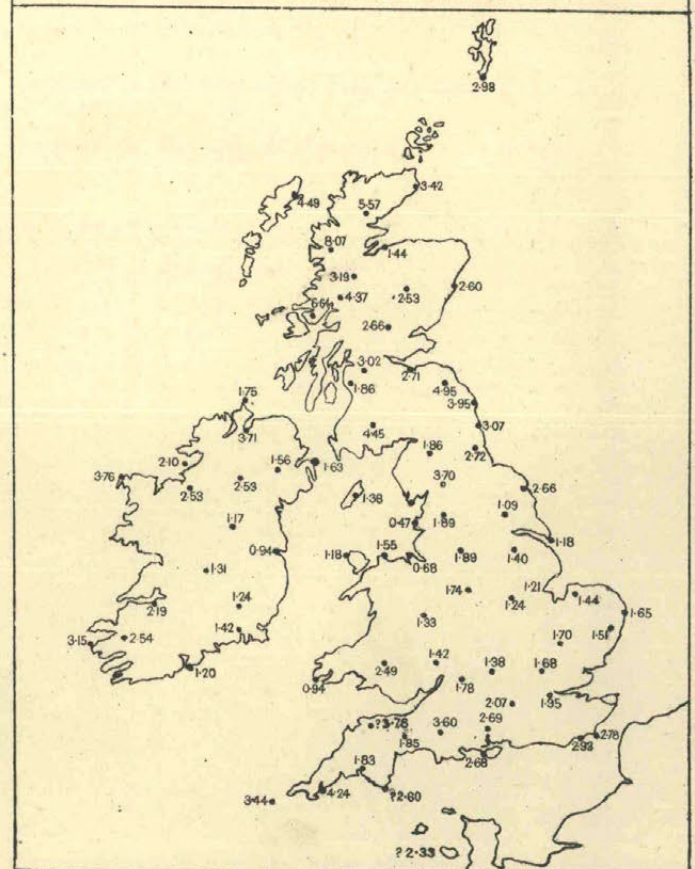
## 2. MOVEMENTS OF DEPRESSIONS.



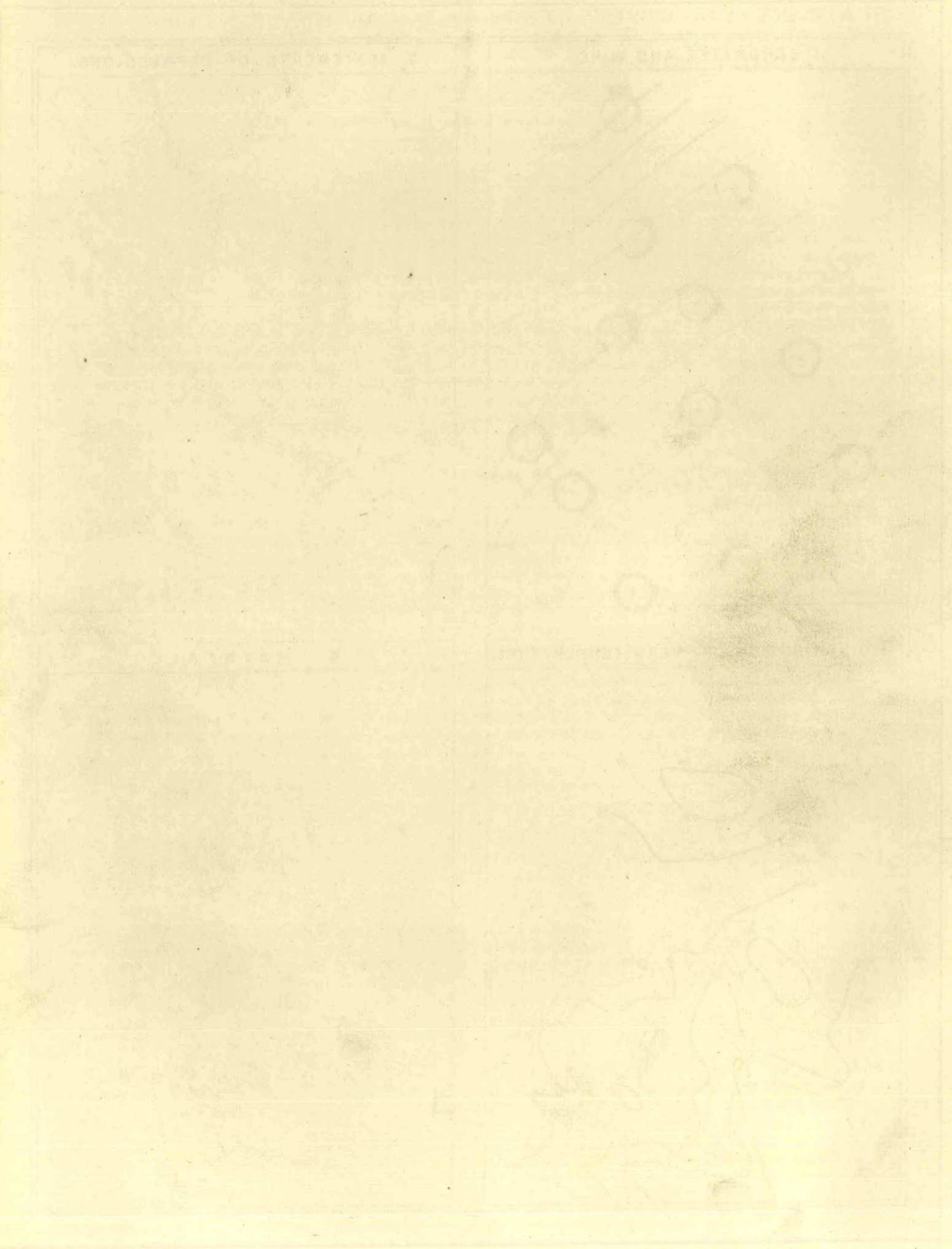
## 3. DISTRIBUTION OF MEAN TEMPERATURE.



## 4. RAINFALL.









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

## APRIL 1891.

(Issued as a Supplement to the Weekly Weather Report, 1891.)

ISSUED BY THE METEOROLOGICAL OFFICE, 63, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.  
PUBLISHED BY RYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; JOHN MENZIES & Co., 12, HANOVER STREET, EDINBURGH, and 90, WEST NILE STREET, GLASGOW; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

**General Summary.**—The weather of April was mostly fair and dry excepting during the first week and the closing days of the month; thunderstorms occurred in many places between the 4th and 6th. Pressure was considerably in excess of the average; temperature was low, especially over the northern and eastern parts of Great Britain; the winds, though somewhat variable, were usually from some Easterly quarter; and rainfall was very deficient in most districts. Over England the predominance of anticyclonic weather was marked by very little sunshine, and in most other parts of the kingdom the amount of bright weather was less than usual.

**Pressure.**—Mean for the month at 8 a.m. varied from between 30·00 ins. and 30·05 ins. over Scotland and the north of England to about 29·92 ins. on our extreme south-west coasts, the values being in excess of the average\* over the entire kingdom. In the south of Ireland and the south-west of England the excess was less than 0·1 in., but in the north and north-east of Scotland the difference amounted to about 0·2 in. The distribution of pressure also was abnormal, for in place of a slight gradient for South-westerly winds, there was a gradient for Easterly winds in the south and for Southerly winds in the west and north. *Highest* readings were recorded in most places on the 20th, when the barometer rose to between 30·3 ins. and 30·4 ins. in all but our south-western districts. *Lowest* values were observed over the western parts of our Islands on the 3rd, but in the more northern and eastern districts on the 29th or 30th, the barometer in each case falling below 29·5 ins., and in the extreme west and north to below 29·3 ins. *Range* was moderate.

**Depressions** were comparatively rare, and although the systems which appeared over Western Europe skirted our Islands on every hand, there were (as in March) no instances in which the centre of any important cyclonic system passed directly over us.

**Anticyclones.**—Three such systems were observed in our neighbourhood, the most persistent being that which spread over our Islands from the northward between the 18th and 20th, and which remained with us until the 25th. The height of the anticyclones was at no time very great.

**Winds.**—The most prevalent were North-easterly in the south-east, Easterly in the west, and South-easterly in the north, but at individual stations great variability was shown. At Valencia the proportion of calm weather was unusually large. Gales were somewhat numerous on our north-east coasts, there being as many as six at Aberdeen and five at Shields and Spurn Head. On the western coasts of Great Britain, however, there were none at all, and at the Irish stations the number did not exceed four.

**Temperature.**—*Mean at Sea Level* varied from a little below 41° over the inland portions of the north and north-east of Scotland to slightly below 48° on the extreme south-west coast of our Islands and to a little above that point in the Channel Islands. The general distribution was of a somewhat wintery character, and the actual values were below the average\* in all parts of the kingdom, the deficit being greatest (two and a half to three and a half degrees) in the north and east of Great Britain and least (one degree or less) on our extreme south-west coasts. *Highest* readings were recorded mostly on the 28th and 30th, when the thermometer rose to 65° or a little more at several of the English and Irish stations. *Lowest* values were recorded on the 1st over England, but mainly between the 8th and 10th over Ireland and the west and north of Scotland. Sharp frost occurred in most districts, the lowest readings of all being 17° at Braemar and 21° at Lairg and Cirencester. *Range* was moderate generally, but large at some of the inland stations; at Strathfield Turgiss it amounted to 41°, at Loughborough to 42°, and at Stamford to 43°. *Vapour Tension* ranged from 0·19 in. at Hawes Junction, and from less to than 0·22 in. in nearly all the more northern parts of Great Britain to 0·26 in. and upwards on our south-west coasts generally, and to 0·29 in. at Scilly. *Relative Humidity* varied from 74 per cent. at Aberdeen and 77 per cent. in London, and at Valencia to 89 per cent. at Yarmouth, and to 90 per cent. at Pembroke.

**Rainfall** amounted to less than an inch on the east and south coasts of England and to less than half an inch at several of the coast stations in Scotland, the lowest value of all being 0·19 in. at Leith. In the south of Ireland, however, and in some parts of Wales the fall ranged between two and a half and three inches, while at Edgworthstown it amounted to 3·6 ins. Compared with the average\* the values showed a considerable deficiency in all localities except at some few stations in the northern parts of England and Ireland, where there was a slight excess. The number of rainy days also was small, being less than 15 in most places, and as few as 7 at Leith and Hastings and 6 at Ardrrossan.

**Bright Sunshine.**—The amount of bright sunshine was much less than the average\* generally, but considerably in excess of the normal in the extreme north and west of Scotland, and slightly in excess in the south of Ireland. The per-centage of the possible amount of duration was below 30° in nearly all the more eastern, central, and southern parts of England, but was as high as 42° at Fort William, Valencia, and Jersey, and 48° at Stornoway.

\* The averages employed are—*Pressure* and *Temperature* for 20 years, 1871–90; *Rainfall* for the 25 years, 1866–91; *Bright Sunshine* for the 10 years, 1881–90.



TABLE VII.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at TELEGRAPHIC  
Observations are made at 8 a.m. daily, but the Number of Days of Rain, Snow, Hail,  
(The Stations are grouped in Districts, and then arranged in order of Latitude,

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 39° Fahrenheit and Mean Sea Level) from Observations made at 8 a.m.	Difference from Average.	AIR TEMPERATURE.									
				At 8 a.m.	Means of				Absolute Extremes.				
					Minima.	Maxima.	Min. and Max. combined.	Difference from Average.	Minimum.	Date.	Maximum.	Date.	
0. SCOTLAND, N.	Sumburgh Head	ins. 30°043	ins. +0°203	41°6	36°0	45°7	40°9	-0°5	29	29th	50	18th	
	Wick	30°038	+°190	41°5	35°8	48°5	42°2	-0°7	28	19th	53	25th, 30th	
	Stornoway	29°994	+°170	42°8	34°0	47°4	40°7	-2°4	25	8th	51	25th	
1. SCOTLAND, E.	Nairn	30°015	+°167	40°4	32°2	49°3	40°8	-3°3	25	9th	60	30th	
	Aberdeen	30°054	+°196	42°2	35°6	47°3	41°5	-2°2	30	1st, 14th	60	30th	
	Leith	30°026	+°163	42°9	35°6	50°0	42°8	-2°2	25	1st	61	30th	
2. ENGLAND, N.E.	Shields	30°014	+°148	41°6	35°8	47°2	41°5	-2°3	27	1st	57	30th	
	York	30°009	+°134	41°1	33°3	50°2	41°8	-3°8	22	1st	60	30th	
	Spurn Head	29°975	+°112	42°6	38°5	46°1	42°3	-2°1	34	1st, 8th	61	30th	
3. ENGLAND, E.	Yarmouth	29°966	+°094	42°3	38°0	45°9	42°0	-2°5	31	1st	63	30th	
	Cambridge	29°986	+°106	43°2	53°6	53°8	43°7	-2°9	27	1st, 27th	67	28th, 30th	
4. MIDLAND COUNTIES	Loughborough	30°002	+°123	40°5	35°0	51°7	43°4	-3°2	23	1st	65	30th	
	Oxford	29°991	+°107	42°1	35°7	52°3	44°0	-2°5	26	1st	62	30th	
5. ENGLAND, S.	London	29°984	+°106	43°6	37°2	52°8	45°0	-2°9	28	1st	64	28th, 30th	
	Dungeness	29°956	+°092	43°2	37°7	49°4	43°6	-2°7	29	13th, 14th	59	28th	
	Hurst Castle	29°978	+°107	44°1	39°4	51°1	45°3	-1°3	32	1st	61	28th	
6. SCOTLAND, W.	Ardrossan	30°005	+°148	43°2	36°0	49°2	42°6	-2°9	30	18th	57	18th	
7. ENGLAND, N.W.	Hawes Junction*	28°747	?	37°2	31°3	44°1	37°7	?	24	1st	52	27th	
	Liverpool	29°992	+°125	42°0	37°6	49°2	43°4	-3°1	32	1st	60	30th	
	Holyhead	29°975	+°118	43°9	40°1	49°6	44°9	-1°8	34	1st	55	4th	
8. ENGLAND, S.W.	Pembroke	29°950	+°098	44°0	40°6	48°9	44°8	-1°4	37	8th, 9th, 24th	54	23rd	
	Prawle Point	29°961	+°085	44°7	39°9	49°4	44°7	-1°6	35	12th, 14th	61	28th	
9. IRELAND, N.	Malin Head	29°956	+°116	42°2	39°0	47°0	43°0	?	34	1st	54	27th	
	Donaghadee	30°002	+°143	43°4	40°5	49°2	44°9	-0°6	35	2nd	55	30th	
	Mullaghmore	29°955	+°116	43°2	39°5	49°7	44°6	-2°5	32	8th	55	30th	
	Belmullet	29°939	+°104	45°6	40°7	51°1	45°9	?	36	14th, 21st, 25th	55	25th	
10. IRELAND, S.	Parsonstown	29°953	+°089	43°1	36°5	53°0	44°8	-1°5	27	8th, 9th	63	30th	
	Valencia	29°926	+°072	48°1	41°7	53°4	47°6	-0°8	33	8th	57	19th, 24th	
	Roche's Point	29°942	+°091	46°4	42°0	51°6	46°8	-1°1	35	8th	57	29th	
CHANNEL ISLANDS	Scilly	29°915	+°059	47°4	44°3	50°5	47°4	-1°0	41	10th, 14th	56	30th	
	Jersey	29°968	+°096	47°0	42°0	53°0	47°5	-1°4	36	11th, 14th, 18th	63	27th	

\* Hawes Junction is 1,135 feet above mean sea level, and the



## SUMMARY OF OBSERVATIONS, APRIL 1891.

xv

REPORTING STATIONS in the BRITISH ISLANDS during the Month of APRIL 1891.

Thunderstorms, and Gales are counted irrespective of the Hours at which they occurred,  
beginning in each case with the Station lying furthest North.)

TENSION OF VAPOUR.	RELATIVE HUMIDITY.	AMOUNT OF CLOUD.	RAINFALL.				WEATHER.							WIND.								
			Total Fall in the Month.	Difference from Average.	Maximum Fall in One Day.	Date.	Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calm.
in.	%		ins.	ins.	ins.																	
0°220	84	7'2	1'07	-1'00	0'26	17th	15	4	0	0	2	14	2	2	7	1	6	3	2	3	1	
'222	85	4'6	1'19	-0'49	0'22	30th	15	2	4	0	9	6	4	0	1	4	5	10	1	2	5	2
'232	85	6'2	0'41	-2'24	0'10	27th	10	1	0	0	5	10	1	0	1	5	9	2	3	4	2	4
'213	85	5'4	0'44	-0'82	0'12	17th	10	0	0	0	4	6	0	0	1	5	4	1	7	5	0	7
'198	74	6'2	0'49	-1'67	0'18	20th	12	1	4	0	0	6	6	3	3	4	8	4	1	4	3	0
'211	77	6'8	0'19	-1'38	0'07	30th	7	0	1	0	3	13	0	2	6	7	5	0	0	5	2	3
'212	81	7'9	1'19	-0'61	0'36	5th	10	0	0	0	0	11	5	5	3	6	3	1	3	3	4	2
'214	83	6'8	2'17	+0'42	0'60	4th	19	1	0	0	9	16	0	8	4	7	2	1	0	3	3	2
'230	85	6'6	0'82	-0'63	0'25	29th	11	1	0	0	2	11	5	4	9	5	3	0	2	3	2	2
'240	89	5'6	0'79	-0'91	0'23	4th	14	0	1	0	5	3	1	6	11	3	3	2	1	1	3	0
'238	85	7'1	1'00	-0'69	0'30	4th	10	0	1	2	3	17	0	9	8	4	2	2	2	1	2	0
'218	87	7'7	2'33	+0'55	0'91	4th	14	0	0	1	4	18	0	3	10	3	3	0	1	2	4	4
'224	84	6'4	0'93	-0'85	0'40	4th	9	1	1	1	9	15	0	4	12	3	2	2	3	1	1	2
'219	77	6'7	0'74	-1'10	0'41	4th	8	0	2	0	8	17	0	4	7	5	5	0	6	1	2	0
'236	84	6'6	0'37	-1'40	0'09	4th	8	0	0	0	1	8	0	6	10	5	2	1	3	2	0	1
'256	88	6'4	0'99	-0'84	0'39	4th	12	0	0	0	3	9	3	2	10	5	2	2	4	4	1	0
'228	82	6'3	0'96	-1'18	0'50	30th	6	0	0	0	6	14	0	0	9	10	1	2	1	1	4	2
'193	87	6'1	2'92	?	0'51	30th	17	4	2	1	1	13	0	2	9	11	3	4	0	0	0	1
'216	82	7'8	1'83	+0'28	0'37	1st, 4th	12	1	0	0	4	17	0	0	6	10	6	0	1	5	2	0
'237	82	7'4	1'73	-0'17	0'52	4th	15	0	0	1	0	14	0	3	3	10	4	5	1	2	2	0
'261	90	6'6	2'30	+0'36	0'55	2nd	10	0	0	0	2	10	0	3	4	7	8	3	2	1	2	0
'262	88	6'8	0'87	-1'20	0'31	2nd	12	0	2	0	3	15	0	1	10	7	2	2	3	3	2	0
'229	86	7'0	0'69	?	0'16	3rd	12	0	1	0	5	19	2	2	2	1	13	6	1	1	2	2
'247	87	6'2	2'15	+0'23	0'89	1st	15	0	0	1	0	7	3	1	4	7	8	3	2	3	2	0
'228	82	6'6	1'43	-0'62	0'43	1st	11	0	0	0	5	8	4	1	3	14	4	2	1	1	2	2
'254	83	7'4	1'68	?	0'45	12th	16	0	0	0	4	20	0	1	3	10	4	5	2	2	3	0
'245	88	7'0	1'70	-0'34	0'36	1st	11	0	0	0	3	14	0	0	2	1	7	0	2	0	1	17
'260	77	7'0	3'45	-0'38	0'78	12th	14	0	0	0	1	12	3	2	3	8	4	1	1	2	3	6
'260	83	6'2	2'89	-0'35	0'50	12th	14	0	0	0	0	9	1	3	1	7	6	3	1	3	6	0
'291	89	7'3	1'57	-0'70	0'32	30th	12	0	0	0	0	11	3	4	2	11	4	3	1	2	3	0
'251	78	6'8	0'79	-1'29	0'32	4th	8	1	0	0	3	13	1	4	5	6	5	0	5	1	4	0

barometer at this station is not reduced for altitude.



1891 TABLE VIII.

OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE obtained from the VALUES supplied for use in the WEEKLY WEATHER REPORT, during the Month of APRIL 1891.

STATIONS.	AIR TEMPERATURE.								RAINFALL.					BRIGHT SUNSHINE.			
	Means of				Absolute Extremes.				No. of Rainy Days.	Total Fall in the Month.	Difference from Average.	Maximum Fall in One Day.	Date.	No. of Hours recorded.	Difference from Average.	Per-centages of possible Duration.	Difference from Average.
	Minima.	Maxima.	Min. and Max. combined.	Difference from Average.	Minimum.	Date.	Maximum.	Date.									
STORNOWAY	*	*	*	°	*	*	*	*	*	Ins.	Ins.	Ins.	*	206°0	+53°7	48	+12
LAIBG	30°5	47°7	39°1	-3°5	21	8th	54	14th, 20th	15	1°12	-1°14	0°22	15th	—	—	—	—
GLENCARRON	32°4	48°4	40°4	-2°5	24	8th	55	19th	15	1°63	-2°63	0°39	15th	—	—	—	—
FORT AUGUSTUS	34°0	49°6	41°8	-2°2	24	9th	57	20th	9	0°76	-1°28	0°31	30th	114°3	?	27	?
FORT WILLIAM	35°0	49°6	42°3	-2°8	28	9th	54	10th, 11th, 19th	9	1°41	-2°13	0°67	30th	158°9	?	38	?
ABERDEEN	*	*	*	*	*	*	*	*	*	*	*	*	*	178°3	+35°3	42	+8
BRAEMAR	30°5	44°0	37°3	-3°6	17	1st	54	30th	10	1°63	-0°73	0°32	3rd	133°5	?	32	?
EDINBURGH	—	—	—	—	—	—	—	—	—	—	—	—	—	131°9	?	31	?
OCHTERTYRE	34°0	50°0	42°5	-1°6	25	19th	61	17th, 30th	10	2°06	-0°28	0°69	4th	—	—	—	—
MARCHMONT	33°6	46°7	40°2	-2°8	25	1st	58	30th	12	1°40	-1°01	0°46	5th	133°5	?	32	?
ALNWICK CASTLE	37°2	45°1	41°2	-1°6	30	13th	57	30th	11	0°90	-1°38	0°26	4th	—	—	—	—
DURHAM	34°2	48°0	41°1	-2°8	27	1st	63	30th	18	1°65	-0°47	0°56	7th	107°5	-5°2	26	-1
SCARBOROUGH	37°1	46°4	41°8	-2°8	30	1st	61	30th	15	1°75	-0°20	0°52	5th	—	—	—	—
OSWALDKIRK	—	—	—	—	—	—	—	—	—	—	—	—	—	112°7	?	27	?
YORK	*	*	*	*	*	*	*	*	*	*	*	*	*	96°3	-32°3	23	-8
HILLINGTON	35°2	50°9	43°1	-2°8	26	1st	65	30th	11	0°75	-1°00	0°17	4th	124°4	-21°6	30	-5
GELDESTON	35°3	49°0	42°2	-3°5	25	1st, 27th	65	28th, 30th	13	0°88	-0°64	0°35	4th	112°5	-50°9	27	-13
CAMBRIDGE	*	*	*	*	*	*	*	*	*	*	*	*	*	96°6	-51°2	23	-13
ROTHAMSTED	34°4	50°9	42°7	-2°8	25	1st	64	28th	13	1°42	-0°71	0°64	6th	109°7	?	26	?
BAWTRY	34°0	51°6	42°8	-3°2	25	25th	65	30th	14	1°25	-0°43	0°47	4th	—	—	—	—
WORKSOP	—	—	—	—	—	—	—	—	—	—	—	—	—	86°4	-36°3	21	-9
STAMFORD (KETTON HALL).	33°7	51°4	42°6	-4°1	22	1st	65	30th	15	1°11	?	0°46	4th	—	—	—	—
THURCASTON	—	—	—	—	—	—	—	—	—	—	—	—	—	99°4	-16°0	24	-4
CHEADLE	35°0	48°4	41°7	-2°8	28	8th	63	30th	16	2°60	+0°49	0°69	4th	—	—	—	—
CHURCHSTOKE	34°1	49°7	41°9	-2°4	25	1st	62	30th	13	2°47	+0°61	0°54	21st	97°9	-37°8	24	-9
HEREFORD	36°5	52°1	44°3	-2°0	26	1st	65	30th	12	1°41	-0°38	0°31	3rd	—	—	—	—
CIRENCESTER	34°4	50°6	42°5	-2°7	21	1st	59	27th, 28th	11	1°13	-1°00	0°37	4th	110°3	-31°9	27	-8
OXFORD	*	*	*	*	*	*	*	*	*	*	*	*	*	110°4	-30°8	27	-7
LONDON	*	*	*	*	*	*	*	*	*	*	*	*	*	104°4	-19°9	25	-5
STRATHFIELD TURGISS	34°6	53°9	44°3	-2°5	26	1st	67	28th	12	1°09	-0°75	0°35	4th	—	—	—	—
HASTINGS	38°4	50°1	44°3	-3°1	33	1st, 8th, 13th	63	28th	7	0°64	-1°38	0°35	4th	134°9	-31°7	33	-8
EASTBOURNE	—	—	—	—	—	—	—	—	—	—	—	—	—	138°5	?	34	?
SOUTHAMPTON	38°2	53°6	45°9	-1°9	28	1st	67	28th	9	1°00	-1°13	0°64	4th	138°2	-24°4	34	-6
STOWELL	36°2	51°2	43°7	-2°5	28	1st	60	27th	10	0°73	?	0°18	2nd	111°7	?	27	?
LAUDALE	35°0	50°7	42°6	-2°9	29	8th	60	20th	9	1°80	-2°18	0°54	30th	—	—	—	—
GLASGOW	36°2	48°5	42°4	-2°3	29	1st	55	30th	11	1°48	-0°71	0°49	30th	122°8	-3°7	29	-1
GLENLEE	32°5	49°6	41°1	-2°7	22	1st	57	17th	11	1°98	-0°93	0°53	3rd	—	—	—	—
DOUGLAS	37°0	48°6	42°8	-2°4	26	1st	56	30th	12	2°68	+0°34	0°82	1st	160°7	-17°4	38	-5
NEWTON REIGNY	32°7	48°2	40°5	-3°1	22	1st	60	30th	12	1°61	-0°27	0°42	2nd	109°0	-31°5	26	-8
STONYHURST	35°4	48°0	41°7	-3°6	30	1st, 18th	55	27th, 30th	11	2°07	-0°33	0°66	29th	101°4	-34°5	24	-9
BLACKPOOL	36°7	48°8	42°8	-2°9	30	2nd	57	27th	6	1°63	-0°07	0°53	30th	†	†	†	†
MANCHESTER	35°8	49°2	42°5	-3°0	30	1st, 8th	59	30th	14	2°40	+0°42	0°46	3rd	—	—	—	—
LLANDUDNO	38°6	49°2	43°9	-3°0	31	1st	58	4th, 30th	11	1°42	-0°39	0°30	5th	128°5	-9°6	31	-2
LLANDOVERY	34°6	53°2	43°9	-1°4	25	1st	62	18th	11	3°04	+0°25	0°93	30th	—	—	—	—
PEMBROKE	*	*	*	*	*	*	*	*	*	*	*	*	*	134°4	-48°5	33	-11
ARLINGTON	36°7	50°3	43°5	-1°6	28	1st	59	18th	12	2°73	-0°14	0°56	4th	—	—	—	—
CULLOMPTON	36°3	52°3	44°3	-2°1	25	1st	62	29th, 30th	10	1°42	-1°16	0°47	4th	126°0	-19°4	31	-4
TORQUAY	—	—	—	—	—	—	—	—	—	—	—	—	—	144°8	?	35	?
FALMOUTH	41°8	50°5	46°2	-1°3	38	8th, 10th, 14th	56	30th	13	2°35	-0°68	0°37	30th	152°8	-20°2	37	-5
PLYMOUTH	40°6	54°3	47°5	-0°9	34	1st	66	17th	11	1°19	-1°22	0°52	2nd	144°3	-24°8	35	-6
JERSEY	*	*	*	*	*	*	*	*	*	*	*	*	*	181°1	-6°5	44	-2
LONDONDERRY	36°7	52°2	44°5	-2°2	31	9th	60	20th	15	1°58	-0°70	0°46	30th	—	—	—	—
MARKREE CASTLE	35°7	51°2	43°5	-2°3	25	9th	57	18th	13	1°02	-0°54	0°39	1st	129°7	-20°0	31	-5
BROOKBOROUGH	34°9	49°6	42°3	-2°7	26	8th, 9th	56	18th	14	2°94	+0°40	0°68	3rd	—	—	—	—
ARMAGH	35°0	49°7	42°4	-2°8	28	8th	56	30th	15	1°84	-0°30	0°51	3rd	124°8	-14°2	30	-3
ARLEY COTTAGE (COUNTY CAVAN).	—	—	—	—	—	—	—	—	—	—	—	—	—	107°8	?	26	?
EDGEWORTHSTOWN	35°2	51°4	43°3	-1°6	28	8th	61	30th	13	3°60	+1°30	0°71	1st	—	—	—	—
DUBLIN	40°0	51°3	45°7	-1°3	33	10th	66	30th	14	1°55	-0°48	0°48	3rd	136°6	-25°5	33	-6
PARSONSTOWN	*	*	*	*	*	*	*	*	*	*	*	*	*	118°9	-41°0	29	-10
KILKENNY CASTLE	36°7	52°5	44°6	-1°1	28	12th	65	30th	10	2°24	+0°09	0°57	4th	—	—	—	—
WATERFORD	38°3	52°7	45°5	-2°1	30	10th	61	29th	10	2°35	-0°28	0°52	3rd	—	—	—	—
VALENCIA	*	*	*	*	*	*	*	*	*	*	*	*	*	174°9	+5°4	42	+1
KILLARNEY	37°3	54°4	45°9	-1°9	25	8th	60	3rd, 29th, 30th	16	1°80	?	0°47	12th	—	—	—	—
FOYNES	39°7	53°7	46°7	-0°4	29	7th	61	30th	11	2°27	?	0°56	12th	—	—	—	—

\* For information see Table VII.

† Records incomplete.

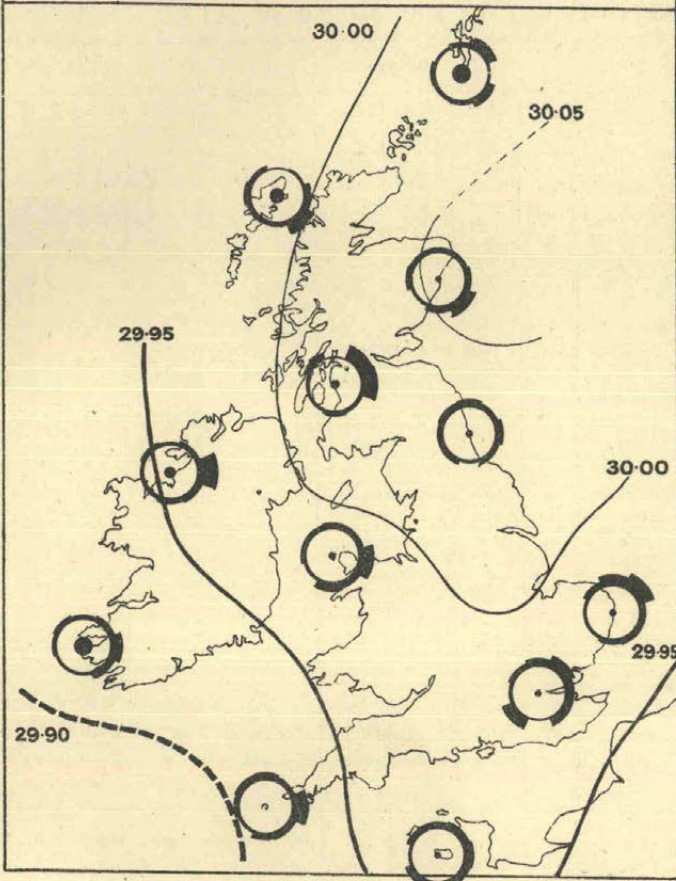


# MONTHLY WEATHER CHART, APRIL, 1891.

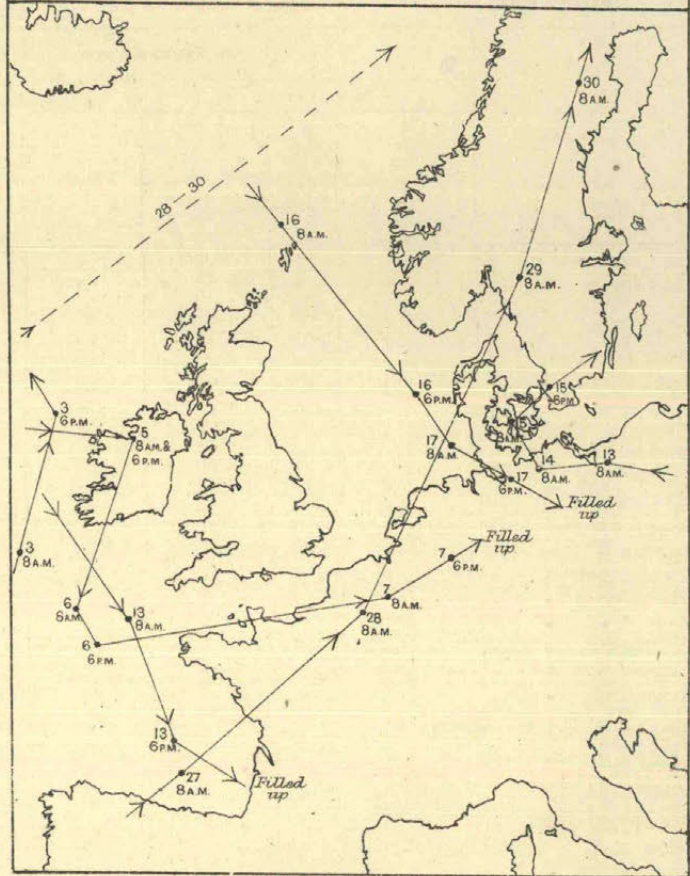
Monthly Summary.

Plate IV.

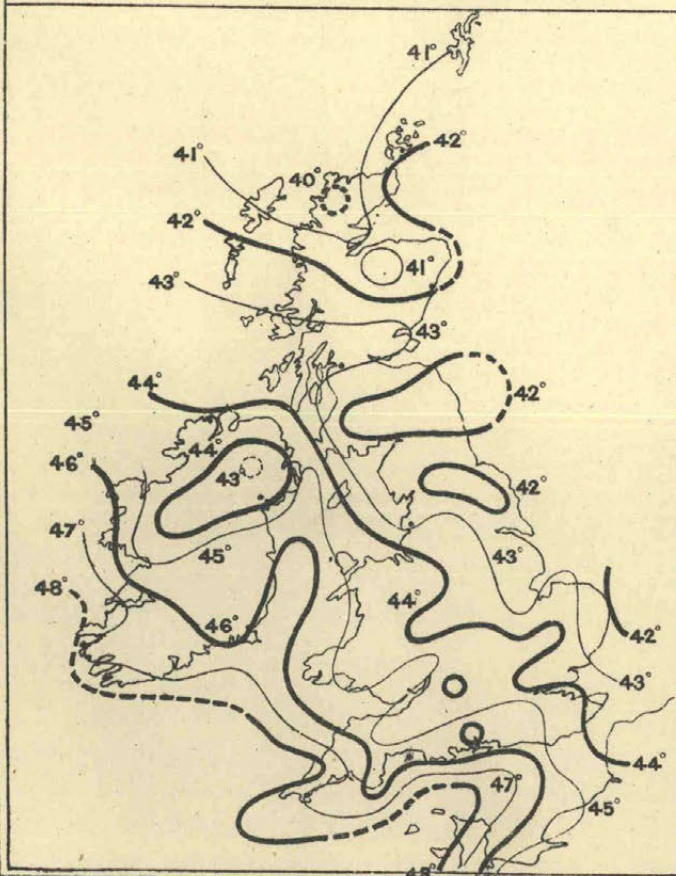
## 1. BAROMETER AND WIND.



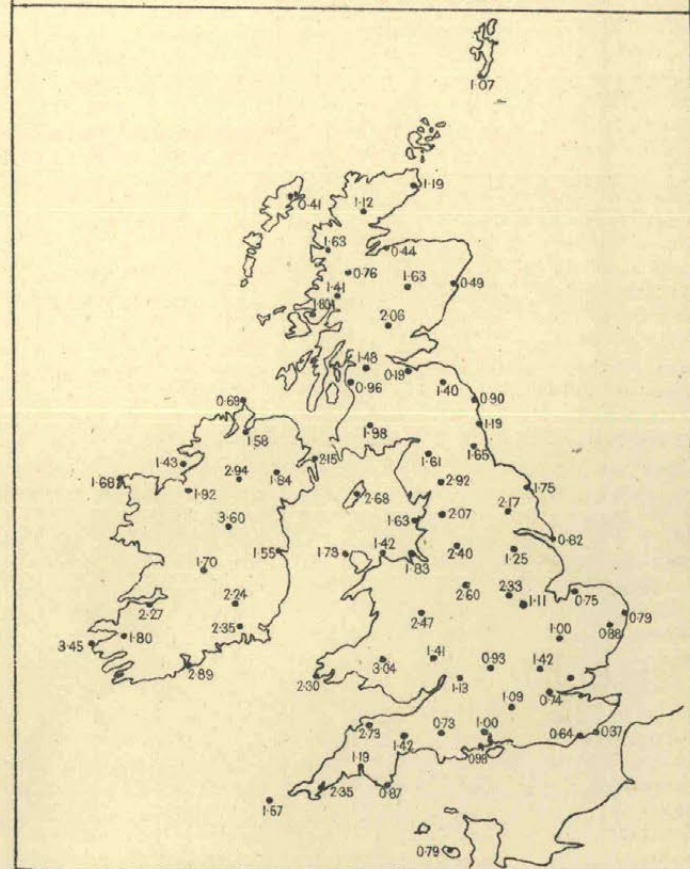
## 2. MOVEMENTS OF DEPRESSIONS.



## 3. DISTRIBUTION OF MEAN TEMPERATURE.



## 4. RAINFALL.



To face p. xvi.







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

## MAY 1891.

(Issued as a Supplement to the Weekly Weather Report, 1891.)

ISSUED BY THE METEOROLOGICAL OFFICE, 63, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.  
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; JOHN MENZIES & Co., 12, HANOVER STREET, EDINBURGH, and 90, WEST NILE STREET, GLASGOW; AND HODGES, FIGGIS, & Co., 194, GRAFTON STREET, DUBLIN.

**General Summary.**—The weather of May was changeable and inclement, especially about the middle of the month, when sharp frosts and snow showers were reported over nearly the entire kingdom. Pressure and temperature were each below the average; the winds were variable in direction, but gales were somewhat numerous on our north and east coasts; rainfall was mostly in excess of the normal; and bright sunshine was very deficient, especially over the northern and central parts of England. Thunderstorms were somewhat frequent over England.

**Pressure.**—*Mean for the Month at 8 a.m.* ranged from between 29·80 ins. and 29·83 ins. in the south-west of our Islands to very little above 29·75 ins. on our extreme north-east and north-west coasts and to about 29·76 ins. in the Shetlands. The distribution was therefore abnormal and very uniform, the greatest difference between the mean values at any two stations being less than one-tenth of an inch. A deficiency from the average\* was reported in all places, its amount varying from about 0·10 in. in the north of Scotland and about 0·15 in. on our extreme south-west coasts to little short of 0·20 in. in the east of England. *Highest* values were recorded on the 12th, when the barometer rose to between 30·2 ins. and 30·3 ins. in nearly all parts of the kingdom. *Lowest* readings were observed mainly on the 1st, when the barometer fell to 29·1 ins., or less, in some of the northern districts and to 29·5 ins. or less in the south. In the extreme south and south-east of England, however, the mercury fell a little lower on the 18th. *Range* was moderate.

**Depressions** were very numerous for the time of year, their centres travelling as a rule in an easterly direction over France or the southern parts of our Islands, and then passing in a north-easterly or northerly course over the North Sea. Between the 23rd and the 29th, however, a shallow disturbance made a complete circuit round Ireland and England, passing first in an easterly direction over our southern counties and afterwards travelling in a westerly course over the northern parts of England and Ireland to the position from which it originally advanced.

**Anticyclones.**—On the 11th a large anticyclone extended over our Islands from the northward, but by the night of the 14th it had travelled away to the westward of Ireland. No other anticyclones were observed in our neighbourhood during the month.

**Winds** were very variable. In the south and east of England there was a somewhat large proportion of breezes from the Westward, and in the extreme north of Scotland an undue prevalence of North-easterly and Northerly breezes, but in the more central districts there was no marked predominance of winds from any particular quarter. Gales were rather frequent for the time of year on our north-west, north, and east coasts: at Mullaghmore there were as many as 9, at Stornoway 7, and at Spurn Head 6. In the south and south-west, however, there were very few.

**Temperature.**—*Mean at sea level* ranged from a little above 52° in the Channel Islands and in some parts of our extreme southern counties to 47°, or a little less, over Central Ireland, and to 45°, or less, in the Shetlands and Hebrides. The general distribution was of a fairly normal character, but the actual values were everywhere below the average,\* the deficit being least (one to two degrees) in the south of England, and greatest (three to four degrees) over Central Ireland. *Highest* readings were recorded between the 11th and 13th, when the thermometer rose above 75° in many of the inland parts of Great Britain, the highest values of all being 82° at Southampton and Llandoverly and 81° at Loughborough. *Lowest* readings were observed mostly between the 17th and 19th, when sharp frost occurred in nearly all places; at Durham the thermometer fell to 23° and at York and Newton Reigny to 24°. *Range* was very large, being more than 45° at many of the inland stations, 51° at Durham, Strathfield Turgiss, and Southampton, 52° at York, and 55° at Llandoverly. *Vapour Tension* ranged from a little below 0·26 in. in the north of England and the east of Scotland to between 0·30 in. and 0·32 in. over our southern counties. *Relative Humidity* varied from 74 per cent. at Liverpool and 77 per cent. in London to 90 per cent. at Stornoway, and to very little below that point on the south coasts of England.

**Rainfall** was least heavy in the south of Scotland and the northern parts of England and Wales, the smallest amounts of all being 0·8 in. at Holyhead and 1·4 in. at Shields and Newton Reigny. In the north of Scotland and the south of England the fall was mostly in excess of 2·5 ins., while at many of the Irish stations it exceeded 3 ins., the largest of all being 4·6 ins. at Killarney. At Glencarron an aggregate of 5·3 ins. was recorded, but at other stations in the same neighbourhood the amount was much smaller. Compared with the average\* the values showed a deficit in several of the more northern parts of Great Britain, but an excess in other portions of the United Kingdom. The number of days with rain was somewhat large, excepting in the north of England.

**Bright Sunshine.**—The amount recorded was below the average\* in most places, but a little above it in the north of Scotland, as well as at one or two of the Irish stations. The per-centage of the possible duration was below 35 at most of the northern and central stations, and as low as 25 at Fort Augustus and 27 at Edinburgh and Blackpool. On our south and south-west coasts, however, there was more than 40 per cent. of the possible amount, the highest values of all being 50 at Jersey and 46 at Falmouth and Valencia.

\* The averages employed are—*Pressure and Temperature* for the 20 years, 1871–90; *Rainfall* for the 25 years, 1866–91; *Bright Sunshine* for the 10 years, 1881–90.



TABLE IX.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at TELEGRAPHIC  
Observations are made at 8 a.m. daily, but the Number of Days of Rain, Snow, Hail,  
(The Stations are grouped in Districts, and then arranged in order of Latitude,

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit and Mean Sea Level) from Observations made at 8 a.m.	Difference from Average.	AIR TEMPERATURE.								
				At 8 a.m.	Means of				Absolute Extremes.			
					Minima.	Maxima.	Min. and Max. combined.	Difference from Average.	Minimum.	Date.	Maximum.	Date.
0. SCOTLAND, N.	Sumburgh Head	ins. 29°763	ins. -0°116	45°3	38°9	49°4	44°2	-1°1	31	16th	59	12th
	Wick	29°779	-0°122	46°4	38°5	52°4	45°5	-1°8	30	17th	71	12th
	Stornoway	29°771	-0°115	46°5	37°5	51°5	44°5	-2°7	29	17th	63	11th, 12th
1. SCOTLAND, E.	Nairn	29°758	-0°150	46°5	39°1	54°8	47°0	-2°3	30	17th	72	12th
	Aberdeen	29°781	-0°137	46°3	40°0	51°1	45°6	-2°9	29	17th	69	12th
	Leith	29°769	-0°163	48°1	40°1	55°5	47°8	-2°3	32	17th	72	12th
2. ENGLAND, N.E.	Shields	29°753	-0°190	47°1	39°7	51°7	45°7	-3°0	29	17th, 18th	69	13th
	York	29°773	-0°189	48°7	39°5	57°5	48°5	-2°4	24	18th	76	13th
	Spurn Head	29°754	-0°202	47°6	43°2	51°9	47°6	-2°1	34	18th	61	13th
3. ENGLAND, E.	Yarmouth	29°775	-0°192	48°5	42°3	52°4	47°4	-2°8	32	17th	65	13th
	Cambridge	29°787	-0°189	50°2	40°6	59°8	50°2	-1°8	30	17th, 19th	80	13th
4. MIDLAND COUNTIES	Loughborough	29°788	-0°185	47°7	41°6	59°0	50°3	-1°9	32	17th, 19th	81	12th
	Oxford	29°795	-0°186	48°1	42°4	57°6	50°0	-2°0	30	17th	76	12th, 13th
5. ENGLAND, S.	London	29°792	-0°189	50°2	43°5	59°7	51°6	-1°8	31	17th	78	12th, 13th
	Dungeness	29°775	-0°195	50°2	44°5	55°7	50°1	-1°8	31	17th	68	12th
	Hurst Castle	29°799	-0°183	50°2	44°6	57°6	51°1	-1°1	33	18th	77	13th
6. SCOTLAND, W.	Ardrossan	29°761	-0°174	48°9	41°2	56°0	48°6	-1°6	35	5th, 17th	64	10th, 12th
7. ENGLAND, N.W.	Hawes Junction*	28°531	?	44°2	37°4	51°9	44°7	?	22	18th	72	12th
	Liverpool	29°784	-0°177	48°8	43°4	56°0	49°7	-1°8	31	18th	69	31st
	Holyhead	29°781	-0°175	49°0	43°6	54°1	48°9	-2°3	38	18th, 20th	68	31st
8. ENGLAND, S.W.	Pembroke	29°796	-0°165	48°3	44°1	52°9	48°5	-2°0	37	17th, 21st	67	11th
	Prawle Point	29°808	-0°184	50°4	43°9	55°3	49°6	-1°4	35	17th, 19th	74	13th
9. IRELAND, N.	Malin Head	29°754	-0°171	46°6	43°4	51°6	47°5	-3°7	35	17th, 18th	61	12th
	Donaghadee	29°783	-0°164	47°8	44°8	54°3	49°6	-0°5	35	17th	62	12th, 13th
	Mullaghmore	29°779	-0°150	48°0	43°4	53°5	48°5	-3°0	36	21st	63	10th, 11th
	Belmullet	29°786	-0°139	48°6	43°3	52°9	48°1	-4°0	37	21st	69	11th
10. IRELAND, S.	Parsonstown	29°808	-0°150	47°8	39°9	56°6	48°3	-2°8	29	18th	75	12th
	Valencia	29°822	-0°141	50°4	44°1	55°5	49°8	-2°4	37	20th	67	12th
	Roche's Point	29°807	-0°152	49°8	44°3	55°5	49°9	-2°7	38	17th, 18th	65	11th
CHANNEL ISLANDS	Scilly (St. Mary's)	29°802	-0°172	50°6	46°6	53°9	50°3	-2°0	40	17th	59	30th
	Jersey	29°830	-0°159	51°8	46°1	57°5	51°8	-1°5	41	5th	74	13th

\* Hawes Junction is 1,135 feet above Mean Sea Level, and the



## SUMMARY OF OBSERVATIONS, MAY 1891.

xix

REPORTING STATIONS in the BRITISH ISLANDS during the Month of MAY 1891.

Thunderstorms, and Gales are counted irrespective of the Hours at which they occurred.  
beginning in each case with the Station lying furthest North.)

TENSION OF VAPOUR.	RELATIVE HUMIDITY.	AMOUNT OF CLOUD.	RAINFALL.				WEATHER. No. of Days of							WIND. No. of Observations of								
			Total Fall in the Month.	Difference from Average.	Maximum Fall in One Day.	Date.	Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
in. 0.263	% 87	8.1	ins. 2.18	ins. +0.46	in. 0.53	26th	19	2	0	0	0	19	0	7	12	1	3	4	0	1	0	3
273	87	6.7	2.60	+0.91	0.55	26th	18	3	0	0	4	13	5	8	4	2	4	7	0	1	2	3
286	90	7.2	1.54	-1.07	0.22	27th	21	2	0	0	3	15	7	5	6	6	4	3	2	2	1	2
266	84	5.8	2.77	+1.16	0.74	1st	21	2	0	0	4	8	0	2	1	11	3	0	3	2	4	5
249	80	7.1	2.46	+0.47	0.47	8th	22	3	3	0	1	11	5	4	4	2	9	3	1	3	5	0
256	76	7.1	1.54	-0.13	0.53	2nd	13	2	2	0	4	15	0	4	6	9	0	1	3	5	2	1
252	79	7.5	1.38	-0.31	0.53	26th	11	2	0	1	1	10	1	2	2	1	5	3	2	6	8	2
268	78	5.2	1.87	+0.02	0.31	25th	17	1	3	3	11	10	0	5	4	5	1	5	1	7	2	1
272	83	6.1	2.60	+1.12	0.71	9th	15	1	1	4	2	11	6	5	6	3	1	5	3	6	2	0
287	84	5.7	2.58	+0.72	0.62	17th	18	2	3	2	7	7	1	3	5	3	1	1	7	5	4	2
298	83	6.8	2.97	+1.07	0.82	17th	17	1	1	4	2	12	0	10	2	2	0	7	6	0	4	0
269	82	7.4	2.41	+0.32	0.32	21st	19	2	1	1	2	15	0	4	3	3	3	3	4	6	5	0
271	81	6.5	2.55	+0.60	0.56	17th	19	1	2	0	7	12	0	5	4	1	2	4	5	5	4	1
278	77	7.3	2.59	+0.73	0.56	24th	17	1	2	2	4	16	1	6	3	3	1	3	8	2	4	1
317	88	6.8	2.87	+1.08	0.78	20th	18	0	1	0	0	7	2	6	5	3	1	1	6	7	1	1
320	89	5.5	2.16	+0.38	0.38	17th	17	1	2	0	1	3	4	4	6	2	2	0	5	7	5	0
286	83	6.9	1.62	-0.72	0.38	14th	10	2	4	1	2	15	0	1	6	5	3	2	2	4	6	2
244	84	7.3	3.15	?	0.50	1st	19	2	1	1	2	17	0	6	7	5	4	4	5	0	0	0
257	74	6.7	1.94	+0.10	0.40	15th	18	1	2	0	4	13	0	6	3	2	5	3	3	7	2	0
278	80	6.5	0.82	-1.08	0.34	7th	16	0	2	0	1	7	1	5	4	2	2	3	6	2	5	1
299	89	6.2	2.60	+0.57	0.57	8th	19	0	1	0	1	7	1	7	5	2	3	5	3	2	4	0
315	86	6.0	1.55	-0.01	0.29	1st	12	0	2	2	2	7	1	3	4	2	2	4	6	7	3	0
269	86	7.0	2.05	?	0.66	7th	15	1	5	1	2	16	1	8	1	3	6	4	2	2	5	0
277	84	6.5	2.43	+0.17	0.64	7th	18	1	0	1	0	8	2	2	9	2	2	5	5	3	3	0
265	80	6.8	2.51	+0.09	0.51	7th	20	0	6	1	3	9	9	3	5	2	3	4	4	3	6	1
295	87	7.0	3.44	?	0.34	1st	25	0	0	0	6	17	3	10	4	1	1	2	3	8	2	0
267	81	7.7	2.92	+0.68	0.65	28th	20	0	3	0	1	12	0	0	0	0	2	0	5	0	3	21
294	81	7.5	3.80	+0.60	1.03	30th	21	0	2	0	1	11	4	12	3	0	2	1	6	1	3	3
282	79	4.6	3.99	+0.85	0.60	7th, 17th, 31st.	15	0	3	2	0	7	2	9	2	0	1	2	4	3	10	0
308	83	6.4	2.25	+0.52	0.60	7th	16	0	1	1	0	5	0	7	2	1	2	3	4	5	7	0
308	80	6.7	3.22	+1.35	0.69	20th	17	0	1	0	1	11	0	3	4	1	1	3	5	8	6	0

Barometer at this station is not reduced for altitude.



TABLE X.

OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE, obtained from the VALUES supplied for use in the WEEKLY WEATHER REPORT, for the Month of MAY 1891.

STATIONS.	AIR TEMPERATURE.								RAINFALL.				BRIGHT SUNSHINE.				
	Means of				Absolute Extremes.				No. of Rainy Days.	Total Fall in the Month.	Difference from Average.	Maximum Fall in One Day.	Date.	No. of Hours recorded.	Difference from Average.	Per-centage of possible Duration.	Difference from Average.
	Minima.	Maxima.	Min. and Max. combined.	Difference from Average.	Minimum.	Date.	Maximum.	Date.									
STORNOWAY	°	°	°	°	°	*	°	*	*	ins.	ins.	ins.	*	201'8	+15'5	40	+3
LAIRG	37'0	53'0	45'0	-2'8	25	17th	71	11th	21	2'52	+0'37	0'51	14th	—	—	—	—
GLENCARRON	37'9	54'0	46'0	-1'4	28	17th	70	11th	21	5'32	+0'70	0'77	14th	—	—	—	—
FORT AUGUSTUS	39'9	54'2	47'1	-1'2	30	17th	71	12th	16	2'39	+0'30	0'60	1st	125'5	?	25	?
FORT WILLIAM	40'3	55'8	48'1	-1'6	32	17th	70	11th	18	2'20	-1'42	0'83	1st	182'1	?	36	?
ABERDEEN	*	*	*	*	*	*	*	*	*	*	*	*	*	195'8	+2'5	39	+1
BRAEMAR	35'8	52'0	43'9	-2'3	26	16th	68	12th	15	2'12	-0'14	0'47	1st	162'2	?	32	?
EDINBURGH	—	—	—	—	—	—	—	—	—	—	—	—	—	136'0	?	27	?
OCHTERTYRE	37'9	57'9	47'9	-0'7	29	16th	76	12th	17	2'70	+0'25	0'88	1st	—	—	—	—
MARCHMONT	38'9	53'6	46'3	-1'8	28	17th	74	12th	15	2'40	+0'04	0'60	28th	171'5	?	34	?
ALNWICK CASTLE	40'2	50'9	45'6	-2'2	32	16th	64	13th	10	2'24	+0'08	0'89	25th	—	—	—	—
DURHAM	38'4	55'7	47'1	-1'6	23	18th	74	13th	14	1'45	-0'60	0'36	25th, 26th	161'5	-15'6	33	-3
SCARBOROUGH	40'9	51'9	46'4	-3'1	28	18th	63	13th	18	2'02	+0'97	0'67	24th	—	—	—	—
OSWALDKIRK	—	—	—	—	—	—	—	—	—	—	—	—	—	159'7	?	33	?
YORK	*	*	*	*	*	*	*	*	*	*	*	*	*	166'8	-20'3	34	-4
HILLINGTON	40'6	56'9	48'8	-2'4	28	19th	76	13th	14	3'19	+1'34	0'70	17th	177'8	-32'9	37	-7
GELDESTON	40'3	56'8	48'6	-2'4	28	17th	76	13th	18	2'47	+0'76	0'68	17th	197'5	-31'6	41	-7
CAMBRIDGE	*	*	*	*	*	*	*	*	*	*	*	*	*	154'6	-45'2	32	-9
ROTHAMSTED	41'1	57'9	49'5	-1'3	30	17th, 19th	76	13th	18	3'33	+1'14	0'86	24th	161'5	?	33	?
BAWTRY	39'3	57'6	48'5	-2'7	26	17th	76	12th	16	3'20	+1'14	0'54	21st	—	—	—	—
WORKSOP	—	—	—	—	—	—	—	—	—	—	—	—	—	150'3	-24'3	31	-5
STAMFORD (KETTON HALL).	40'5	58'4	49'5	-2'9	29	19th	79	13th	20	2'88	?	0'53	17th	—	—	—	—
THURCASTON	—	—	—	—	—	—	—	—	—	—	—	—	—	163'8	-11'9	34	-2
CHEADLE	40'1	54'9	47'5	-2'0	31	18th	74	12th	19	2'91	+0'52	0'64	21st	—	—	—	—
CHURCHSTOKE	39'0	59'8	49'4	0'0	28	17th	77	12th	20	3'24	+1'08	0'73	27th	160'5	-25'5	33	-6
HEREFORD	40'8	59'4	50'1	-1'8	28	17th	77	12th, 13th	19	2'87	+0'78	0'75	21st	—	—	—	—
CIRENCESTER	39'9	57'3	48'6	-2'0	27	17th, 19th	75	12th, 13th, 14th	19	3'88	+1'67	0'66	21st	180'5	-16'4	37	-4
OXFORD	*	*	*	*	*	*	*	*	*	*	*	*	*	170'2	-22'2	35	-5
LONDON	*	*	*	*	*	*	*	*	*	*	*	*	*	143'6	-41'2	30	-9
STRATHFIELD TURGIS	40'9	60'5	50'7	-1'5	29	17th	80	12th, 13th	21	3'18	+1'39	0'45	17th	—	—	—	—
HASTINGS	44'3	56'8	50'6	-1'9	32	17th	76	12th	18	2'74	+0'93	0'63	17th	215'3	-22'0	45	-5
EASTBOURNE	—	—	—	—	—	—	—	—	—	—	—	—	—	216'1	?	45	?
SOUTHAMPTON	43'5	60'7	52'1	-0'9	31	17th	82	13th	19	2'50	+0'47	0'39	17th	204'7	-5'9	43	-1
STOWELL	40'8	56'5	48'7	-2'5	31	6th, 19th	75	12th	16	2'72	?	0'52	27th	170'2	?	36	?
LAUDALE	40'6	57'0	48'8	-1'1	32	16th, 17th	68	10th, 12th, 13th	20	1'82	-2'12	0'37	1st	—	—	—	—
GLASGOW	41'0	55'2	48'1	-1'7	33	17th	70	12th	19	2'57	+0'18	0'52	2nd	146'8	-12'8	30	-2
GLENLEE	39'0	56'6	47'8	-1'0	26	18th	74	12th	19	2'71	-0'26	0'60	27th	—	—	—	—
DOUGLAS	40'8	55'0	47'9	-1'9	28	18th	72	12th	16	1'57	-0'60	0'46	7th	218'7	-5'6	45	-1
NEWTON REIGNY	39'1	55'5	47'3	-0'5	24	18th	72	12th	18	1'36	-0'68	0'25	19th	171'5	-30'8	35	-6
STONYHURST	41'1	55'0	48'1	-2'4	26	18th	72	12th	18	3'05	+0'42	0'45	1st	159'3	-33'3	32	-7
BLACKPOOL	43'5	55'5	49'5	-1'1	35	17th	72	11th	10	1'72	-0'33	0'43	1st	132'3	-68'7	27	-14
MANCHESTER	41'5	55'6	48'6	-1'7	30	17th, 18th	73	12th	20	2'67	+0'26	0'37	22nd	—	—	—	—
LLANDUDNO	43'1	54'7	48'9	-2'7	32	18th	68	31st	17	1'98	+0'17	0'43	28th	158'8	-33'6	33	-7
LLANDOVERY	39'8	59'3	49'6	-1'7	27	19th	82	12th	19	3'42	+0'59	0'71	27th	—	—	—	—
PEMBROKE	*	*	*	*	*	*	*	*	*	*	*	*	*	211'7	-3'6	44	-1
ARLINGTON	40'1	56'0	48'1	-1'9	30	19th	72	11th, 13th	19	4'03	+1'07	0'65	17th	—	—	—	—
CULLOMPTON	40'6	58'2	49'4	-2'0	29	19th	77	13th	19	2'94	+0'76	0'64	17th	184'6	-8'3	39	-1
TORQUAY	—	—	—	—	—	—	—	—	—	—	—	—	—	193'4	?	41	?
FALMOUTH	43'8	55'7	49'8	-2'1	37	17th, 19th, 21st	67	11th, 13th	18	2'75	-0'01	0'65	7th	218'9	+2'6	46	0
PLYMOUTH	44'2	60'7	52'5	-1'1	36	19th	72	13th	14	3'12	+1'07	0'68	23rd	194'6	-12'1	41	-3
JERSEY	*	*	*	*	*	*	*	*	*	*	*	*	*	234'2	-8'9	50	-2
LONDONDERRY	41'5	57'5	49'5	-1'9	34	17th	73	12th	19	3'17	+0'81	0'77	7th	—	—	—	—
MARKREE CASTLE	38'9	55'1	47'0	-2'6	28	18th, 21st	70	11th	20	3'32	+1'29	0'80	28th	195'1	+8'3	40	+2
BROOKEBOROUGH	38'4	55'4	46'9	-2'9	29	18th, 21st	73	12th	20	3'83	+1'31	0'85	28th	—	—	—	—
ARMAGH	39'7	56'2	48'0	-2'4	30	18th	75	12th	20	2'63	+0'59	0'55	1st	158'4	-26'1	32	-6
ARLEY COTTAGE (COUNTY CAVAN).	—	—	—	—	—	—	—	—	—	—	—	—	—	154'9	?	32	?
EDGEWORTHSTOWN	37'1	55'8	46'5	-3'6	30	18th, 25th	74	12th	18	2'71	+0'27	0'55	6th	—	—	—	—
DUBLIN	42'8	56'4	49'6	-2'3	33	18th	68	12th	17	2'79	+0'80	0'60	28th	189'2	-23'5	39	-5
PARSONSTOWN	*	*	*	*	*	*	*	*	*	*	*	*	*	138'9	-49'1	29	-10
KILKENNY CASTLE	40'7	56'3	48'5	-3'0	33	17th, 18th, 21st, 23rd, 21st	75	12th	21	3'26	+1'26	0'61	7th	—	—	—	—
WATERFORD	41'0	57'8	49'4	-2'8	32	21st	71	11th, 12th	18	3'79	+1'40	0'77	7th	—	—	—	—
VALENCIA	*	*	*	*	*	*	*	*	*	*	*	*	*	222'3	+12'6	46	+2
KILLARNEY	40'2	55'8	48'0	-3'6	33	20th, 21st, 27th	73	12th	24	4'63	?	1'18	30th	—	—	—	—
FOYNES	43'1	56'6	49'9	-1'4	34	26th	71	11th	20	2'09	?	0'22	21st	—	—	—	—

\* For information, see Table IX.



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

## JUNE 1891.

(Issued as a Supplement to the Weekly Weather Report, 1891.)

ISSUED BY THE METEOROLOGICAL OFFICE, 63, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.  
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; JOHN MENZIES & Co., 12, HANOVER ST., EDINBURGH, and 90, WEST NILE STREET, GLASGOW; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

**General Summary.**—The weather of June, although somewhat changeable, was for the most part fair and dry, especially in the north-east of Great Britain. Thunderstorms occurred at varying times in nearly all districts, and in some few cases the accompanying rainfall was heavy. Pressure and temperature were above the average generally; the winds were rather variable, but mostly from some Easterly quarter; rainfall was less than the average in all but the extreme south-western parts of the kingdom; and the amount of bright sunshine showed no great divergence from the normal.

**Pressure.**—*Mean for the month at 8 a.m.* varied from between 30·05 ins. and 30·10 ins. over the north of England and the north and east of Scotland to very little above 29·95 ins. in the west of Ireland. The distribution of pressure was therefore abnormal; instead of a slight general gradient for South-westerly and Westerly winds, there was a trifling one for South-easterly and Southerly breezes except over Great Britain, where the values were exceedingly uniform. Compared with the average\* the readings showed a slight deficit in the extreme south-west, but an excess in all other districts, the variation amounting to as much as 0·2 in. in the extreme north of Scotland. *Highest* readings were observed as a rule on the 12th, when the barometer rose to between 30·3 ins. and 30·4 ins. in all parts of the kingdom. *Lowest* values were recorded either on the 26th or 29th, when the barometer fell a little below 29·3 ins. on our extreme western coasts and below 29·7 ins. in most other districts. *Range* was small in the eastern parts of the country, and only moderate in the west.

**Depressions** were very few in number and of no great depth. On the evening of the 26th a disturbance of considerable intensity appeared to be advancing towards our south-west coasts, but in the course of the ensuing night the system passed away again over the Atlantic.

**Anticyclones.**—The distribution of pressure over our Islands was anticyclonic throughout the greater part of the month, two well-marked systems, each of great persistence, being observed in our neighbourhood. The first of these spread over from Scandinavia between the 1st and 8th, and afterwards passed away to the Atlantic. The second advanced from the westward between the 11th and 13th, and after receding temporarily to the south-westward, ultimately changed its course and travelled very slowly across our Islands to Scandinavia.

**Winds** varied greatly in direction, especially at the more southern stations. In the northern districts there was a somewhat decided preponderance of breezes from the Eastward and North-eastward, while at Valencia the proportion of calms was abnormally large. Scarcely any gales were experienced on the British coasts, but at Valencia there were as many as 8 and at Mullaghmore 5.

**Temperature.**—*Mean at Sea Level* ranged from a little below 50° in the Shetlands to 58° or more over Central Scotland, to 59° or more over the inland parts of Ireland and to between 60° and 62° over a considerable portion of the English midland and southern counties. The summer type of distribution was more clearly marked than usual, and the mean values were above the average\* at all but the northern coast stations, the excess being greatest in Ireland. *Highest* readings were observed mostly between the 19th and 23rd, when the thermometer exceeded 80° in many inland parts of the United Kingdom, the highest readings of all being 84° at Llandovery and 83° at Londonderry. *Lowest* values were recorded as a rule between the 9th and 12th, the absolute minima being below 40° over the northern and inland parts of our Islands and at Dungeness, and slightly below the freezing-point at some of the Scotch stations. *Range* was large, being over 40° in many places and as high as 50° at Llandovery and 49° at Lairg. *Vapour Tension* ranged from about 0·31 in. in the Shetlands to a little above 0·42 in. on the south coast of England and in the extreme west of Ireland. *Relative Humidity* was less than 80 per cent. in the east and south of Scotland and the northern and central parts of England, but was as high as 89 per cent. in the Shetlands and as high as 92 per cent. at Stornoway and Prawle Point.

**Rainfall.**—The total fall was less than an inch in the east and south-east of Scotland and the north-east of England, the smallest aggregates of all being 0·16 in. at Durham and 0·4 in. at Scarborough; at the inland stations in the south-east of England the amount was less than 1·5 in. and in the north of Scotland less than 2 ins., but on the south-west coasts of our Islands, in North Wales, and over several parts of our west-midland counties, the fall was much greater; Loughborough reported 4·8 ins., Cheadle 3·8 ins., Liverpool Observatory 4·3 ins., Falmouth 3·4 ins., Roche's Point 4·2 ins., and Valencia Island 4·6 ins. In the regions last mentioned the rainfall was in excess of the average\*; elsewhere there was a marked deficit. The number of rainy days was less than 10 at many of our northern, central, and eastern stations, and as low as 2 at Shields.

**Bright Sunshine.**—The amount varied greatly in different parts of the kingdom, but upon the whole there was no wide departure from the average\*. The per-centage of the possible amount of duration was below 35 at most of our eastern stations, the lowest value of all being 25 at Edinburgh. On our west and south coasts, however, it was mostly above 40, and at Hastings and Southampton it reached 46 per cent., and at Jersey 50.

\* The averages employed are—*Pressure* and *Temperature* for the 20 years, 1871–90; *Rainfall* for the 25 years, 1866–90  
*Bright Sunshine* for the 10 years 1881–90.



TABLE XI.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at TELEGRAPHIC  
Observations are made at 8 a.m. daily, but the numbers of days of Rain, Snow, Hail,  
(The Stations are grouped in Districts, and then arranged in order of

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit and Mean Sea Level) from Observations made at 8 a.m.	Difference from Average.	AIR TEMPERATURE.								
				At 8 a.m.	Means of				Absolute Extremes.			
					Minima.	Maxima.	Min. and Max. combined.	Difference Average.	Minimum.	Date.	Maximum.	Date.
0. SCOTLAND, N.	Sumburgh Head	ins. 30°080	ins. +0°197	49°4	44°7	54°0	49°4	-0°4	38	12th	70	25th
	Wick	30°092	+°194	52°3	45°3	57°8	51°6	-0°6	35	9th, 11th	72	25th
	Stornoway	30°044	+°168	53°6	46°2	58°5	52°4	+0°4	37	9th	71	22nd
1. SCOTLAND, E.	Nairn	30°057	+°153	54°1	45°8	62°2	54°0	-1°0	33	9th	78	26th
	Aberdeen	30°087	+°171	54°4	47°4	60°4	53°9	-0°3	35	9th	70	17th
	Leith	30°073	+°143	54°7	48°5	62°1	55°3	-0°6	41	13th	76	11th
2. ENGLAND, N.E.	Shields	30°060	+°112	54°0	47°0	59°9	53°5	-1°2	40	9th	72	29th
	York	30°054	+°085	57°5	47°1	67°0	57°1	-0°2	37	10th	76	24th
	Spurn Head	30°028	+°064	55°2	50°2	59°7	55°0	-0°9	43	10th	71	29th
3. ENGLAND, E.	Yarmouth	30°016	+°039	56°4	51°0	61°3	56°2	-0°4	43	13th	74	26th
	Cambridge	30°034	+°049	59°3	49°9	69°2	59°6	+1°0	40	12th	81	25th
4. MIDLAND COUNTIES	Loughborough	30°048	+°068	57°0	50°6	68°4	59°5	+0°7	41	13th	80	24th
	Oxford	30°039	+°053	56°8	50°8	68°0	59°4	+1°2	42	12th	76	19th
5. ENGLAND, S.	London	30°033	+°041	58°9	51°8	69°9	60°9	+1°0	41	12th	78	18th
	Dungeness	30°000	+°018	57°3	51°8	62°8	57°3	-0°5	37	12th	73	19th
	Hurst Castle	30°031	+°033	58°2	52°8	65°8	59°3	+1°2	46	12th	74	19th
6. SCOTLAND, W.	Ardrossan	30°042	+°110	56°3	49°3	64°1	56°7	+0°9	40	7th	79	23rd
7. ENGLAND, N.W.	Hawes Junction*	28°826	?	53°3	45°6	62°0	53°8	?	33	11th	74	24th
	Liverpool	30°035	+°069	57°9	52°0	64°8	58°4	+1°0	42	7th	76	23rd, 24th
	Holyhead	30°023	+°057	56°4	51°3	61°7	56°5	-0°1	44	7th	71	21st
8. ENGLAND, S.W.	Pembroke	30°006	+°032	56°3	51°7	61°4	56°6	+0°7	46	8th, 10th, 11th	72	20th, 22nd, 23rd
	Prawle Point	30°018	+°011	56°5	51°7	60°9	56°3	+0°3	46	8th, 13th	72	22nd
9. IRELAND, N.	Malin Head	30°005	+°075	54°1	50°6	60°3	55°5	+0°1	44	7th, 11th	75	21st
	Donaghadee	30°045	+°099	55°3	52°7	63°3	58°0	+2°7	47	4th	73	18th
	Mullaghmore	29°988	+°052	56°1	51°9	63°2	57°6	+1°3	44	12th	78	21st
	Belmullet	29°955	+°020	57°8	52°7	62°9	57°8	+2°4	42	12th	76	21st, 22nd
10. IRELAND, S.	Parsonstown	29°997	+°025	57°8	50°8	67°5	59°2	+2°7	40	12th	80	20th
	Valencia	29°952	-°023	58°7	52°5	64°0	58°3	+1°6	41	9th	78	23rd
	Roche's Point	29°984	+°011	57°0	52°1	62°1	57°1	-0°7	46	8th	79	23rd
CHANNEL ISLANDS	Scilly (St. Mary's)	29°979	-°017	57°2	53°9	60°7	57°3	+0°1	47	8th, 9th	67	19th, 20th, 30th
	Jersey	30°024	+°014	59°9	53°8	66°5	60°2	+1°6	44	12th	76	19th, 28th

\* Hawes Junction is 1,135 feet above Mean Sea Level, and the



## SUMMARY OF OBSERVATIONS, JUNE 1891.

xxiii

REPORTING STATIONS in the BRITISH ISLANDS, during the Month of JUNE 1891.

Thunderstorms, and Gales are counted irrespective of the hours at which they occurred.

Latitude, beginning in each case with the Station lying furthest North.)

TENSION OF VAPOUR.	RELATIVE HUMIDITY.	AMOUNT OF CLOUD.	RAINFALL.				WEATHER.							WIND.								
			Total Fall in the Month.	Difference from Average.	Maximum Fall in One Day.	Date.	No. of Days of							No. of Observations of								
							Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
in.	%		ins.	ins.	in.																	
0.312	89	8.4	1.12	-0.86	0.33	17th	10	0	0	0	0	20	3	3	12	3	1	1	0	3	3	4
.334	85	7.4	1.83	+0.09	0.45	28th	10	0	0	2	5	18	1	3	2	9	9	1	0	1	4	1
.377	92	6.0	2.68	-0.17	0.83	28th	12	0	0	0	7	14	0	0	4	11	2	3	3	0	1	6
.356	84	6.6	0.95	-0.75	0.37	26th	9	0	0	1	5	13	0	1	2	8	1	0	6	3	0	9
.325	77	6.2	0.47	-1.30	0.18	26th	10	0	0	2	2	9	0	5	8	1	5	3	2	1	5	0
.342	81	7.4	0.63	-1.17	0.41	26th	6	0	0	0	2	15	0	0	9	11	0	1	2	6	1	0
.334	80	8.1	0.41	-1.30	0.38	15th	2	0	0	0	0	13	0	8	3	4	0	3	3	2	7	0
.372	78	5.8	0.71	-1.46	0.26	4th	7	0	0	0	8	11	0	9	5	4	0	2	3	3	2	2
.357	82	7.0	2.03	+0.49	1.18	4th	7	0	0	1	0	13	0	5	10	2	1	1	4	6	1	0
.382	84	4.4	1.32	-0.56	0.43	4th	10	0	0	4	8	1	0	7	5	7	1	0	2	4	3	1
.403	80	7.4	1.35	-0.88	0.48	24th	9	0	1	5	3	16	0	9	3	5	0	3	6	2	2	0
.369	79	7.5	4.81	+2.59	2.26	25th	13	0	0	4	0	13	0	3	11	3	0	1	6	5	1	0
.380	82	6.7	1.34	-0.87	0.39	24th	10	0	0	3	6	13	0	1	12	2	0	3	4	5	3	0
.378	77	6.5	1.29	-0.82	0.56	22nd	10	0	0	3	7	12	1	2	9	2	1	1	9	3	3	0
.401	85	6.6	1.60	+0.01	0.61	23rd	14	0	0	3	0	5	1	5	7	5	1	1	6	3	1	1
.430	88	6.1	1.72	-0.25	0.49	22nd	10	0	0	1	1	2	0	2	8	2	1	3	5	7	2	0
.359	78	6.2	0.97	-1.52	0.18	26th, 28th	9	0	0	1	7	14	0	1	12	2	2	3	3	4	2	1
.341	83	6.9	2.28	?	0.75	27th	9	0	0	0	4	17	0	1	12	6	1	1	8	0	0	1
.358	75	6.9	4.31	+2.42	2.04	25th	14	0	0	2	2	12	0	0	5	9	5	4	2	3	2	0
.369	81	6.0	2.94	+0.96	0.87	4th	17	0	0	3	3	10	0	3	5	8	1	5	5	0	3	0
.401	88	5.8	2.00	+0.06	0.67	26th	16	0	0	1	2	9	1	4	3	8	4	7	2	1	1	0
.421	92	6.3	2.49	+0.89	0.72	3rd	13	0	0	0	6	16	0	0	9	6	6	2	3	3	1	0
.354	84	7.2	1.08	?	0.44	29th	9	0	0	1	6	17	2	2	0	5	10	5	3	2	3	0
.378	86	6.4	1.04	-0.88	0.33	25th	14	0	0	1	1	5	2	2	7	5	6	2	3	2	3	0
.380	84	6.5	1.99	-0.80	0.51	29th	17	0	0	1	7	11	5	1	4	11	4	2	5	2	0	1
.424	88	6.6	2.10	?	0.57	29th	13	0	0	1	7	16	0	1	1	12	1	4	6	3	2	0
.382	80	7.3	2.76	+0.37	0.51	5th	15	0	0	0	3	17	0	0	3	0	6	0	0	0	0	21
.404	82	7.5	4.61	+1.34	1.12	1st	17	0	1	0	3	14	8	2	1	5	3	5	4	2	0	8
.380	82	6.0	4.18	+1.05	1.45	1st	12	0	0	0	5	10	3	5	0	6	5	5	5	2	2	0
.414	88	7.8	2.88	+1.04	1.15	1st	13	0	0	1	1	15	2	3	5	8	3	4	3	3	1	0
.410	80	5.9	2.53	+0.62	0.48	3rd	12	0	0	2	8	14	0	3	5	6	3	6	1	3	3	0

barometer at this station is not reduced for altitude.



TABLE XII.

OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE, obtained from the VALUES supplied for use in the WEEKLY WEATHER REPORT for the Month of JUNE 1891.

STATIONS.	AIR TEMPERATURE.								RAINFALL.					BRIGHT SUNSHINE.			
	Means of				Absolute Extremes.				No. of Rainy Days.	Total Fall in the Month.	Difference from Average.	Maximum Fall in One Day.	Date.	No. of Hours recorded.	Difference from Average.	Per-centages of possible Duration.	Difference from Average.
	Minima.	Maxima.	Min. and Max. combined.	Difference from Average.	Minimum.	Date.	Maximum.	Date.									
STORNOWAY	°	°	°	°	*	*	°	*	*	ins.	ins.	ins.	*	220°8	+43°1	41	+°8
LAIRG	44°8	64°2	54°5	+1°2	30	9th	79	21st	10	1°64	-0°76	0°56	17th	—	—	—	—
GLENCARRON	46°7	64°5	55°6	+3°1	36	11th	81	21st	12	3°37	-1°90	1°13	17th	—	—	—	—
FORT AUGUSTUS	47°0	63°0	55°0	+0°4	34	9th	80	20th	10	1°88	-0°32	0°56	26th	166°6	?	32	?
FORT WILLIAM	48°6	65°6	57°1	+1°8	38	11th	79	22nd, 25th	11	3°27	-0°77	0°75	26th	237°6	?	45	?
ABERDEEN	*	*	*	*	*	*	*	*	*	*	*	*	*	197°4	+2°0	38	+1
BRAMMAR	44°6	63°9	54°3	+1°8	30	11th	75	20th	8	0°87	-1°52	0°31	30th	228°8	?	43	?
EDINBURGH	—	—	—	—	—	—	—	—	—	—	—	—	—	127°5	?	25	?
OCHTERTYRE	46°6	68°2	57°4	+2°3	35	6th, 10th	82	20th	8	1°44	-1°28	0°68	26th	—	—	—	—
MARCHMONT	46°7	60°9	53°8	-0°4	38	9th	70	19th, 20th, 29th	8	0°71	-1°80	0°22	29th	171°8	?	33	?
ALNWICK CASTLE	48°8	59°4	54°1	0°0	40	8th	68	27th, 28th, 29th	6	0°68	-1°18	0°19	30th	—	—	—	—
DURHAM	47°9	64°6	56°3	+0°5	40	3rd	77	19th	9	0°16	-1°74	0°03	14th, 15th, 29th	175°1	+13°1	34	+2
SCARBOROUGH	49°4	61°1	55°3	-0°3	43	1st, 10th	75	18th	6	0°40	-1°51	0°17	23rd	—	—	—	—
OSWALDKIRK	—	—	—	—	—	—	—	—	—	—	—	—	—	170°2	?	34	?
YORK	*	*	*	*	*	*	*	*	*	*	*	*	*	175°8	+7°2	35	+2
HILLINGTON	49°7	66°0	57°9	+0°2	37	12th	79	25th	12	2°06	-0°11	1°25	4th	162°4	-30°1	33	-5
GELDESTON	50°0	65°0	57°5	+0°3	39	12th, 13th	78	26th	8	1°19	-0°44	0°59	23rd	166°4	-45°4	34	-9
CAMBRIDGE	*	*	*	*	*	*	*	*	*	*	*	*	*	166°8	-24°9	34	-5
ROTHAMSTED	49°6	67°5	58°6	+1°2	40	12th	75	25th	12	1°80	-0°43	0°74	25th	183°1	?	37	?
BATTRY	48°3	67°3	57°8	+0°2	37	9th	78	19th	13	2°64	+0°38	1°50	4th	—	—	—	—
WORKSOP	—	—	—	—	—	—	—	—	—	—	—	—	—	130°3	-26°3	26	-5
STAMFORD (KETTON HALL).	49°0	68°1	58°6	0°0	38	13th	80	24th	10	2°10	?	0°70	2nd	—	—	—	—
THURCASTON	—	—	—	—	—	—	—	—	—	—	—	—	—	166°7	+7°8	33	+1
CHEADLE	48°8	64°1	56°5	+1°1	40	7th	74	24th	12	3°63	+0°74	1°09	3rd	—	—	—	—
CHURCHSTOKE	†	†	†	†	†	†	†	†	†	2°40	+0°24	†	†	†	†	†	†
HEREFORD	49°8	68°6	59°2	+0°9	40	10th, 12th	76	19th, 20th	12	2°00	-0°14	0°52	5th	—	—	—	—
CIRENCESIER	48°1	66°7	57°4	+0°7	37	10th	75	19th	15	1°42	-0°93	0°53	24th	200°8	+13°4	41	+3
OXFORD	*	*	*	*	*	*	*	*	*	*	*	*	*	181°9	-5°4	37	-1
LONDON	*	*	*	*	*	*	*	*	*	*	*	*	*	182°7	+8°9	37	+1
STRATHFIELD TURGIS-	48°6	71°2	59°9	+1°4	37	12th	81	19th	14	1°12	-0°87	0°41	22nd	—	—	—	—
HASTINGS	52°5	64°0	58°3	0°0	42	10th	72	25th	9	1°57	-0°09	0°53	22nd	223°8	+4°7	46	+1
EASTBOURNE	—	—	—	—	—	—	—	—	—	—	—	—	—	215°1	?	44	?
SOUTHAMPTON	52°3	70°8	61°6	+2°5	38	10th	82	19th	11	1°80	-0°09	0°65	23rd	225°7	+21°5	46	+4
STOWELL	50°3	66°6	58°5	+0°4	39	10th	76	19th	12	1°36	?	0°59	3rd	—	—	—	—
LAUDALE	50°1	60°9	58°5	+3°7	37	10th	80	23rd	11	2°14	-2°70	0°52	29th	—	—	—	—
GLASGOW	49°2	64°2	56°7	+1°3	40	7th, 11th	78	20th	9	1°13	-1°57	0°55	26th	168°9	+9°5	33	+2
GLENLEE	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
DOUGLAS	49°7	63°8	56°8	+1°7	37	6th	75	20th	12	3°13	+0°98	0°99	25th	207°9	-9°3	41	-2
NEWTON REIGNY	45°8	66°1	56°0	+1°3	32	6th, 11th	78	20th, 24th	11	1°78	-0°30	0°53	29th	230°8	+39°1	45	+7
STONYHURST	49°5	65°7	57°6	+1°1	37	11th	76	20th, 24th, 25th	12	1°47	-1°78	0°42	4th	189°0	+3°9	37	0
BLACKPOOL	51°7	66°1	58°9	+2°5	40	11th	77	21st, 23th, 24th	9	2°17	+0°07	0°45	30th	—	†	†	†
MANCHESTER	50°0	66°1	58°1	+1°5	37	11th	75	24th, 25th	13	2°68	-0°33	1°03	4th	—	—	—	—
LLANDUDNO	51°7	63°2	57°5	+0°1	42	7th, 11th	73	20th	12	3°34	+1°52	0°91	24th	178°9	+0°4	36	0
LLANDOVERY	48°7	60°8	59°3	+1°5	34	12th, 13th	84	19th, 20th	14	2°66	-0°30	0°81	24th	—	—	—	—
PEMBROKE	*	*	*	*	*	*	*	*	*	*	*	*	*	215°4	-18°1	44	-3
ARLINGTON	49°6	64°9	57°3	+1°3	41	12th, 13th	75	20th	13	1°45	-0°52	0°31	26th	—	—	—	—
CULLOMPTON	49°7	67°8	58°8	+1°1	39	3rd, 10th, 13th	78	19th	10	1°43	-0°91	0°79	3rd	194°4	+0°7	40	0
TORQUAY	—	—	—	—	—	—	—	—	—	—	—	—	—	200°4	?	41	?
FALMOUTH	52°9	63°3	58°1	+0°7	45	8th	72	22nd	14	3°43	+0°88	0°84	6th	166°6	-58°8	34	-13
PLYMOUTH	†	†	†	†	†	†	†	†	†	†	†	†	†	—	—	—	—
JERSEY	*	*	*	*	*	*	*	*	*	*	*	*	*	238°7	+5°0	50	+1
LONDONERRY	51°0	69°4	60°2	+3°4	41	6th, 7th	83	21st, 22nd	12	1°61	-0°93	0°53	25th	—	—	—	—
MARKREE CASTLE	49°7	65°5	57°6	+2°6	39	10th	79	23rd	15	2°21	-0°83	0°39	29th	190°5	+32°2	38	+7
BROOKBOROUGH	50°1	66°2	58°2	+2°8	38	12th	80	20th	14	1°83	-1°05	0°65	25th	—	—	—	—
ARMAGH	49°4	66°1	57°8	+1°8	38	7th, 11th	78	20th	15	2°36	+0°23	0°49	29th	183°0	+11°9	36	+
ARLEY COTTAGE (COUNTY CAVAN).	—	—	—	—	—	—	—	—	—	—	—	—	—	194°6	?	39	?
EDGEWORTHSTOWN	49°6	67°3	58°5	+2°5	41	4th, 7th	78	20th	15	2°10	-0°90	0°39	15th	—	—	—	—
DUBLIN	53°0	65°0	59°0	+1°5	44	10th	74	23rd	14	2°75	+0°90	0°60	24th	211°5	+26°6	42	+
PARSONSTOWN	*	*	*	*	*	*	*	*	*	*	*	*	*	179°2	+4°6	36	+
KILKENNY CASTLE	50°5	66°6	58°6	+1°8	41	10th, 12th	78	20th	13	3°05	+0°84	0°91	3rd	—	—	—	—
WATERFORD	50°0	66°3	58°2	+1°1	39	10th	77	23rd	11	2°40	-0°02	0°63	3rd	—	—	—	—
VALENCIA	*	*	*	*	*	*	*	*	*	*	*	*	*	194°2	-3°6	39	—
KILLARNEY	49°8	65°9	57°9	+1°5	39	9th	79	20th	13	3°38	?	1°37	1st	—	—	—	—
FOYNES	53°0	66°5	59°3	+2°9	43	11th	79	20th	13	2°30	?	0°72	1st	—	—	—	—

For information see Table XI.

† Observations incomplete.

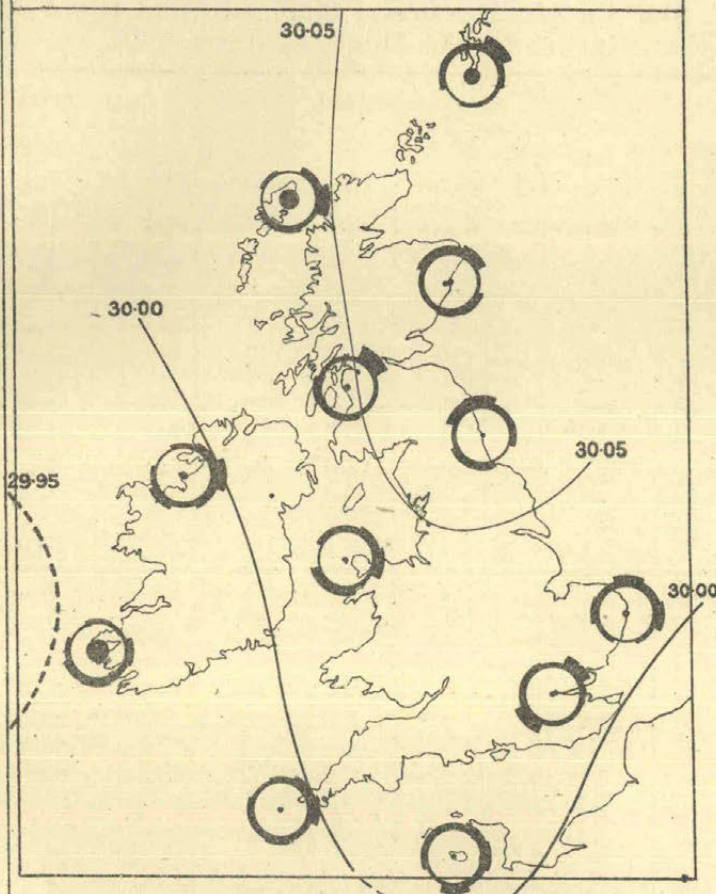


# MONTHLY WEATHER CHART, JUNE, 1891.

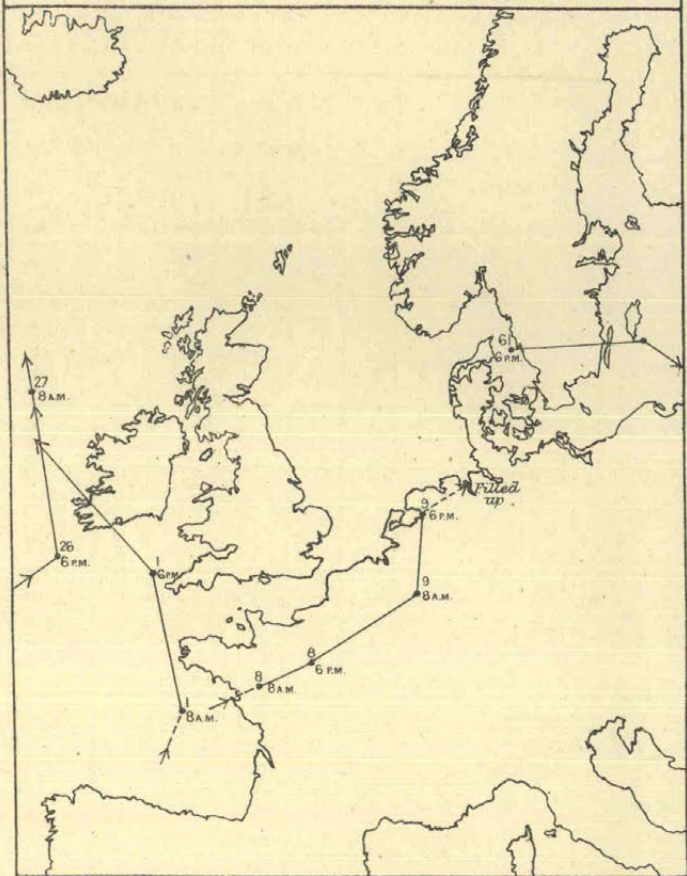
Monthly Summary.

Plate vi.

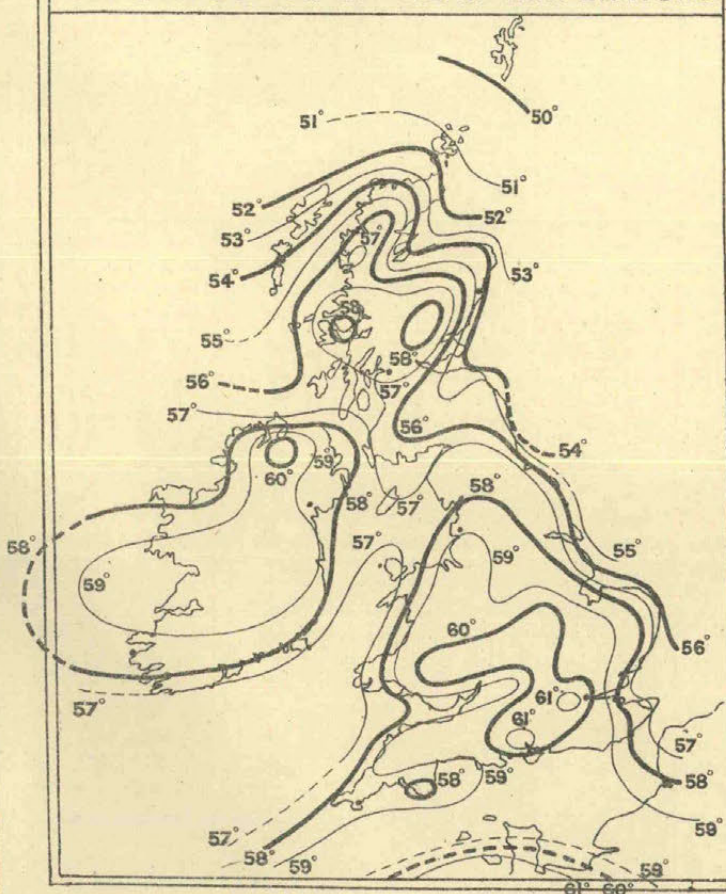
## 1 BAROMETER AND WIND.



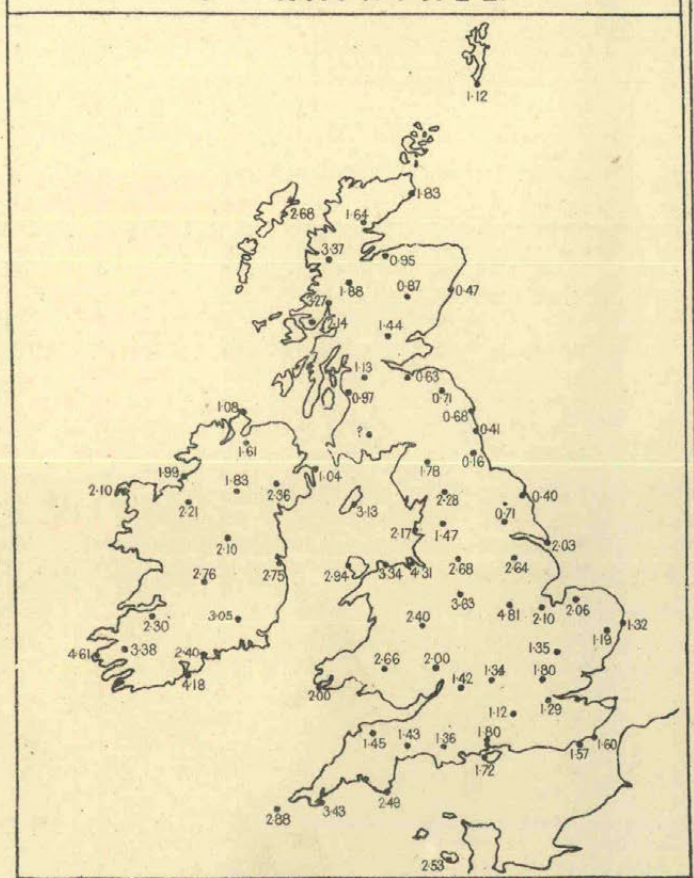
## 2. MOVEMENTS OF DEPRESSIONS.



## 3. DISTRIBUTION OF MEAN TEMPERATURE.



## 4 RAINFALL.









OFFICIAL COPY.

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

JULY 1891.

(Issued as a Supplement to the Weekly Weather Report, 1891.)

ISSUED BY THE METEOROLOGICAL OFFICE, 63, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.  
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; JOHN MENZIES & Co., 12, HANOVER STREET, EDINBURGH, and 90, WEST NILE STREET, GLASGOW; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

**General Summary.**—The month of July was very changeable and unsettled; thunderstorms were frequent over England, and heavy local falls of rain. Pressure was fairly normal; temperature was below the average in all but the eastern and southern parts of Scotland; and the winds were mostly Westerly or North-westerly. Rainfall and bright sunshine varied greatly in amount in different parts of the kingdom, the latter element being upon the whole less prevalent than usual.

**Pressure.**—*Mean for the month at 8 a.m.* ranged from a little above 30·0 ins. in the Channel Islands to a little below 29·8 ins. in the Shetlands and Hebrides. The actual values differed very little from the average,\* but as the western stations showed a slight excess, and the eastern stations a trifling deficit, the gradient was favourable for winds from the northward rather than from the southward of west. *Highest* readings were recorded very generally on the 13th or 14th, when the barometer rose to above 30·3 ins. in most districts, and to above 30·4 ins. in the extreme north. *Lowest* values were registered mostly on the 6th or 7th, when the barometer fell below 29·7 ins. in all but the extreme southern districts, and below 29·4 ins. at some of our northern stations. *Range* was moderate.

**Depressions.**—The depressions observed were mostly shallow, their centres travelling in an easterly direction either over or outside our north-western coasts. Between the 14th and 16th, however, a well-marked system advanced over the North Sea from eastern Germany, while on the 28th and 29th another moved southwards from the west of Norway down the east coast of England.

**Anticyclones.**—Three such systems were observed, but neither of them remained in our neighbourhood for any length of time. In two of the cases the anticyclone came over from the Atlantic, but in the third instance it was formed directly over our Islands and the North Sea.

**Winds.**—The prevailing winds were in most places from the Westward and North-westward, but in the north of Scotland considerable variability was shown, and in the Shetlands the dominant wind was North-easterly. Gales were rather numerous for the time of year on our southern coasts,—at Hurst Castle there were 4 and at Dungeness 5; in other parts of the kingdom, however, they were less frequent, and at the majority of our western, northern, and eastern stations there were none at all.

**Temperature.**—*Mean at Sea Level* ranged from a little below 54° in the Hebrides to rather above 59° in some of the south-eastern parts of Ireland, to a little above 60° over Central Scotland, and to a little above 61° over the inland portion of the south of England. The general distribution did not vary greatly from the normal, but the actual values were below the average\* in all but the central and southern parts of Scotland, the deficit being greatest (2° or more) over the eastern, midland, and south-eastern counties of England. *Highest* values were recorded as a rule about the 17th, when the thermometer rose to between 75° and 80° in most of the inland parts of Great Britain; at Loughborough, Strathfield Turgiss, and in London it reached 81°, and at Hillington and Cambridge 82°. *Lowest* values were observed on the 28th and 29th in the eastern, central, and southern districts, but on very irregular dates in the more western and northern parts of the kingdom; at one or two of the inland stations in Great Britain the thermometer fell as low as 40°. *Vapour Tension* ranged from a little below 0·37 in. in the north of Ireland, the east of Scotland, and some parts of Northern England to 0·42 in. or more over the south of England generally, and to 0·48 in. at Hurst Castle. *Relative Humidity* was below 80 per cent. over the central and north-eastern parts of Great Britain, as well as in the south-east of England, but amounted to 91 per cent. at Hurst Castle and to 95 per cent. at Sumburgh Head.

**Rainfall** varied greatly in amount in different parts of the kingdom, and even in closely adjacent districts. At the western stations the fall was in most cases considerably less than the average,\* but in many other places it was in excess, the difference being large in the north of Scotland. Daily amounts exceeding an inch were recorded in various parts of the country, mostly on the 7th and 21st, while on the 19th as much as 2·6 ins. fell at Sumburgh Head. The number of rainy days was large in the extreme north and north-west; at Stornoway and Glencarron there were as many as 24, at Belmullet 25, and at Laudale 27.

**Bright Sunshine** was in excess of the average\* in the west of Scotland, the north of Ireland, and the south-west of England, but deficient elsewhere, the deficit being considerable in the northern and eastern parts of Great Britain. The per-centage of the possible amount of duration was below 30 at most of the northern and also at one or two of our central stations, the lowest of all being 17 at Fort Augustus. On the south coast of England and in the Isle of Man, however, the per-centage exceeded 40, at Jersey it was as high as 51, and at Falmouth 55.

\* The averages employed are—*Pressure* and *Temperature* for 20 years, 1871–90; *Rainfall* for 25 years, 1866–90; *Bright Sunshine* for 10 years, 1881–90.



TABLE XIII.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at TELEGRAPHIC  
Observations are made at 8 a.m. daily, but the Numbers of Days of Rain, Snow, Hail,  
(The Stations are grouped in Districts, and then arranged in order of Latitude,

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit and Mean Sea Level) from Observations made at 8 a.m.	Difference from Average.	AIR TEMPERATURE.								
				At 8 a.m.	Means of				Absolute Extremes.			
					Minima.	Maxima.	Min. and Max. combined.	Difference from Average.	Minimum.	Date.	Maximum.	Date.
0. SCOTLAND, N.	Sumburgh Head	ins. 29°791	ins. +0°007	53°9	49°3	58°4	53°9	+1°2	45	9th, 27th, 30th	66	16th
	Wick	29°829	+0°023	55°0	49°7	60°7	55°2	-0°1	43	27th	68	14th
	Stornoway	29°834	+0°039	55°1	48°4	58°8	53°6	-1°0	39	2nd	70	18th
1. SCOTLAND, E.	Nairn	29°820	+0°005	56°2	50°6	63°5	57°1	-0°5	45	10th, 14th, 27th	72	18th
	Aberdeen	29°832	+0°006	57°7	52°2	63°5	57°9	+0°6	46	29th	69	12th
	Leith	29°848	+0°004	58°8	52°5	66°6	59°6	+0°6	46	29th	76	17th
2. ENGLAND, N.E.	Shields	29°846	-0°021	57°7	51°1	64°2	57°7	-0°5	46	28th, 29th	72	17th
	York	29°882	-0°019	58°7	49°4	66°6	58°0	-2°3	43	8th, 28th	78	17th
	Spurn Head	29°867	-0°033	59°0	54°1	64°1	59°1	-1°1	49	29th	71	21st
3. ENGLAND, E.	Yarmouth	29°893	-0°036	59°1	53°7	64°4	59°1	-1°7	46	28th, 29th	70	16th, 17th
	Cambridge	29°926	-0°011	60°5	51°2	68°7	60°0	-2°1	43	29th	82	17th
4. MIDLAND COUNTIES	Loughborough	29°918	-0°010	58°9	52°1	68°2	60°2	-1°9	45	4th	81	17th
	Oxford	29°943	-0°003	58°3	51°3	66°9	59°1	-2°4	44	28th	77	17th
5. ENGLAND, S.	London	29°947	-0°010	60°6	52°5	69°0	60°8	-2°4	45	28th, 29th	81	17th
	Dungeness	29°937	-0°020	60°0	53°9	65°5	59°7	-1°9	45	28th, 29th	70	17th
	Hurst Castle	29°968	0°000	60°3	54°9	66°4	60°7	-1°0	50	12th, 28th, 30th	72	14th, 16th
6. SCOTLAND, W.	Ardrossan	29°866	+0°010	58°1	52°7	63°3	58°0	-0°2	47	31st	73	14th
7. ENGLAND, N.W.	Hawes Junction*	28°663	?	53°7	47°8	60°5	54°2	?	41	5th	70	17th
	Liverpool	29°904	-0°002	57°6	53°4	64°2	58°8	-1°3	50	10th, 20th, 30th	77	17th
	Holyhead	29°916	+0°006	57°6	53°2	62°6	57°9	-1°2	50	3rd, 4th	70	17th
8. ENGLAND, S.W.	Pembroke	29°949	+0°013	56°6	53°9	60°5	57°2	-1°5	50	10th	68	14th, 17th
	Prawle Point	29°982	-0°005	58°6	52°9	63°7	58°3	-0°8	48	12th	71	15th
9. IRELAND, N.	Malin Head	29°882	+0°027	55°1	52°2	59°7	56°0	-1°4	46	30th	68	18th
	Donaghadee	29°903	+0°026	56°9	54°6	63°3	59°0	+1°5	50	7th, 9th	70	18th
	Mullaghmore	29°915	+0°046	56°5	52°8	61°4	57°1	-1°4	47	6th	69	15th
	Belmullet	29°922	+0°057	57°2	53°6	62°1	57°9	0°0	51	1st, 28th	73	15th
10. IRELAND, S.	Parsonstown	29°940	+0°027	57°0	51°7	65°1	58°4	-0°6	47	16th	74	16th
	Valencia	29°989	+0°054	59°1	53°4	63°3	58°4	-0°4	46	3rd	72	14th
	Roche's Point	29°965	+0°033	58°1	53°2	63°9	58°6	-1°1	48	3rd	70	20th
CHANNEL ISLANDS	Scilly (St. Mary's)	29°990	+0°016	59°5	55°9	63°3	59°6	-0°7	52	30th	69	17th
	Jersey	30°015	+0°014	61°2	55°0	66°2	60°6	-1°7	47	12th	78	16th

\* Hawes Junction is 1,185 feet above Mean Sea Level, and the



## SUMMARY OF OBSERVATIONS, JULY 1891.

xxvii

REPORTING STATIONS in the BRITISH ISLANDS during the Month of JULY 1891.

Thunderstorms, and Gales are counted irrespective of the Hours at which they occurred.

beginning in each case with the Station lying furthest North.)

			RAINFALL.				WEATHER, No. of Days of						WIND, No. of Observations of									
TENSION OF VAPOUR.	RELATIVE HUMIDITY.	AMOUNT OF CLOUD.	Total Fall in the Month.	Difference from Average.	Maximum Fall in One Day.	Date.	Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
in.	%		ins.	ins.	ins.																	
0.396	95	8.1	5.76	+3.49	2.60	19th	18	0	0	0	0	19	0	4	8	3	2	3	1	6	3	1
392	91	8.7	3.84	+1.50	0.70	28th	20	0	0	0	1	24	2	8	2	2	2	4	1	1	10	1
399	91	7.7	1.53	-1.49	0.40	26th	24	0	0	1	1	17	0	5	4	3	2	2	4	6	2	3
388	86	7.6	5.49	+2.90	0.89	8th	21	0	0	1	0	12	0	2	1	1	0	0	5	9	4	9
368	77	6.6	2.64	-0.14	0.67	16th	19	0	0	2	0	6	3	2	3	1	3	6	2	4	10	0
378	76	7.6	2.82	-0.03	0.56	22nd	17	0	1	2	1	14	0	3	3	2	0	1	8	11	2	1
389	82	7.7	3.37	+0.71	0.77	22nd	13	0	0	7	0	10	0	3	0	0	0	1	8	6	8	5
384	78	5.5	2.73	+0.03	0.60	22nd	15	0	0	2	11	11	0	5	2	0	1	5	2	11	5	0
394	79	5.9	1.87	+0.13	0.27	1st	13	0	0	4	0	9	2	3	3	0	0	4	8	9	4	0
418	83	5.5	4.14	+1.29	0.63	21st	19	0	0	5	5	4	0	4	3	0	0	2	6	9	6	1
417	80	6.5	4.19	+1.77	0.79	3rd	19	0	1	6	1	13	0	5	1	1	0	4	13	3	4	0
395	80	7.5	2.04	-0.30	0.44	7th	15	0	0	5	1	12	0	1	3	1	0	2	7	11	4	2
386	79	6.9	2.28	-0.30	0.43	5th	18	0	0	3	5	13	0	4	2	0	1	4	9	5	5	1
393	75	7.0	3.86	+1.48	0.63	19th	18	0	0	6	4	12	0	3	2	1	0	4	8	5	5	3
438	85	6.5	2.16	+0.21	0.62	27th	12	0	0	3	0	4	5	4	3	2	0	3	5	8	6	0
477	91	6.5	1.75	-0.49	0.65	26th	13	0	0	3	0	3	4	6	1	2	0	1	7	9	4	1
400	82	7.2	0.76	-2.15	0.17	6th	12	0	0	0	2	15	0	0	2	0	3	4	3	14	2	3
362	87	7.4	6.31	?	1.32	21st	22	0	1	3	0	17	0	4	1	1	4	4	10		4	0
381	80	8.1	3.11	+0.15	0.80	28th	16	0	0	0	1	18	0	3	0	0	3	5	3	13	4	0
409	85	6.8	1.88	-0.52	0.48	28th	17	0	0	0	1	12	0	4	1	1	0	5	5	5	8	2
405	88	7.4	2.02	-0.52	0.74	1st	15	0	0	0	0	10	2	5	2	1	2	3	5	6	7	0
430	88	5.8	2.84	+0.60	0.85	1st	11	0	0	2	4	9	0	1	1	4	2	3	4	10	6	0
369	85	8.4	1.75	?	0.31	6th	21	0	1	2	1	22	0	7	1	0	4	3	3	4	9	0
406	88	7.0	2.07	-0.75	0.66	21st	15	0	0	0	0	8	1	5	5	0	3	2	6	5	5	0
368	80	7.3	2.23	-1.49	0.76	17th	19	0	0	1	2	9	2	4	2	1	3	2	6	5	8	0
418	89	8.4	2.13	?	0.47	21st	25	0	0	0	2	24	0	9	1	3	0	1	7	5	5	0
394	85	8.5	2.16	-0.80	0.55	3rd	17	0	0	0	1	22	0	0	0	0	0	0	3	1	5	22
412	82	8.6	2.03	-1.87	0.49	17th	18	0	0	0	1	21	3	5	1	0	1	4	4	5	7	4
384	79	6.1	1.77	-1.52	0.55	4th	7	0	0	0	0	6	0	6	1	1	2	3	4	6	8	0
435	86	5.8	0.70	-1.76	0.16	18th	14	0	0	3	2	6	0	3	2	4	0	3	6	4	9	0
443	82	6.2	1.28	-1.12	0.29	17th	11	0	0	1	3	10	1	1	0	4	1	2	8	9	5	1

barometer at this station is not reduced for altitude.



TABLE XIV.

OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE, obtained from the VALUES supplied for use in the WEEKLY WEATHER REPORT for the Month of JULY 1891.

STATIONS.	AIR TEMPERATURE.								RAINFALL.				BRIGHT SUNSHINE.				
	Means of				Absolute Extremes.				No. of Rainy Days.	Total Fall in the Month.	Difference from Average.	Maximum Fall in One Day.	Date.	No. of Hours recorded.	Difference from Average.	Percentage of possible Duration.	Difference from Average.
	Minima.	Maxima.	Min. and Max. combined.	Difference from Average.	Minimum.	Date.	Maximum.	Date.									
STORNOWAY	°	°	°	°	°	°	°	°	ins.	ins.	ins.	°	103°9	-41°2	20	°	7
LAIRG	49°2	62°0	55°6	0°0	40	2nd, 14th	73	18th	21	4°77	+1°82	1°31	21st	—	—	—	—
GLENCARRON	48°4	60°5	54°5	-0°4	41	2nd	71	18th	24	5°72	-0°38	0°81	7th	—	—	—	—
FORT AUGUSTUS	51°2	62°7	57°0	0°0	43	2nd	71	18th	18	4°11	+0°97	0°92	7th	87°5	?	17	?
FORT WILLIAM	51°1	62°9	57°0	-0°2	45	2nd	73	14th	16	3°68	-1°69	0°91	2nd	116°2	?	22	?
ABERDEEN	°	°	°	°	°	°	°	°	°	°	°	°	°	139°5	-31°7	27	-6
BRAEMAR	48°9	62°4	55°7	+0°7	44	28th	70	10th, 13th	21	2°93	+0°02	0°54	3rd	132°0	?	25	?
EDINBURGH	—	—	—	—	—	—	—	—	—	—	—	—	—	150°0	?	26	?
OCHTERTYRE	49°6	68°4	59°0	+1°5	40	6th	76	15th	17	1°83	-1°53	0°38	5th	—	—	—	—
MARCHMONT	50°2	64°2	57°2	-0°2	44	8th, 28th	71	10th, 17th	16	2°50	-0°99	0°48	15th	155°8	?	30	?
ALNWICK CASTLE	51°9	64°0	58°0	+0°3	45	6th	71	17th	13	1°87	-1°05	0°33	14th	—	—	—	—
DURHAM	51°0	67°1	59°1	-0°4	46	28th	77	17th	16	4°19	+1°21	0°88	22nd	151°1	-11°7	30	-2
SCARBOROUGH	52°2	65°0	58°6	-0°8	44	28th	75	17th	17	3°70	+0°92	1°36	30th	—	—	—	—
OSWALDKIRK	—	—	—	—	—	—	—	—	—	—	—	—	—	138°8	?	27	?
YORK	°	°	°	°	°	°	°	°	°	°	°	°	°	166°6	+5°0	33	+1
HILLINGTON	50°5	67°1	58°8	-2°4	41	31st	82	17th	20	3°60	+0°63	0°62	7th	155°7	-37°0	31	-7
GELDESTON	51°5	67°3	59°4	-1°8	44	28th, 29th	78	17th	18	2°96	+0°30	0°42	29th	167°4	-39°2	34	-8
CAMBRIDGE	°	°	°	°	°	°	°	°	°	°	°	°	°	154°5	-40°5	31	—
ROTHAMSTED	50°1	67°1	58°6	-2°2	43	28th	79	17th	19	2°24	-0°55	0°38	31st	162°7	?	33	?
BAWTRY	49°5	67°7	58°6	-2°2	43	4th	79	17th	14	2°01	-0°75	0°92	30th	—	—	—	—
WORKSOP	—	—	—	—	—	—	—	—	—	—	—	—	—	139°1	-20°8	28	-4
STAMFORD (KETTON HALL).	50°0	68°5	59°3	-2°7	41	13th, 28th	80	17th	16	2°60	?	0°56	8th	—	—	—	—
THURCASTON	—	—	—	—	—	—	—	—	—	—	—	—	—	157°9	-5°8	32	-1
CHHEADLE	50°2	63°8	57°0	-1°4	44	28th	75	17th	15	2°99	-0°14	1°41	8th	—	—	—	—
CHURCHSTOKE	48°6	66°0	57°3	-1°2	43	17th, 28th	76	17th	16	1°65	-1°01	0°26	22nd	161°2	-13°7	32	-3
HEREFORD	50°0	68°5	59°3	-1°6	44	28th	77	17th	17	1°19	-1°19	0°26	5th	—	—	—	—
CIRENCESTER	49°1	66°0	57°6	-2°3	40	28th	75	16th	15	3°89	+0°84	0°81	2nd	185°1	+1°8	37	0
OXFORD	°	°	°	°	°	°	°	°	°	°	°	°	°	180°7	-8°5	37	-1
LONDON	°	°	°	°	°	°	°	°	°	°	°	°	°	163°7	-11°4	33	-3
STRATHFIELD TURGISS	49°8	70°2	60°0	-1°9	41	28th	81	17th	18	2°60	+0°24	0°73	27th	—	—	—	—
HASTINGS	53°4	65°0	59°2	-2°6	44	29th	70	15th, 25th	15	1°49	-0°73	0°23	6th	220°5	-1°9	45	6
EASTBOURNE	—	—	—	—	—	—	—	—	—	—	—	—	—	214°5	?	44	?
SOUTHAMPTON	53°3	69°6	61°5	-0°8	48	29th	77	11th	17	2°45	-0°21	0°51	26th	214°1	+7°6	44	+2
STOWELL	50°6	65°6	58°1	-1°8	44	12th	74	16th, 26th	16	3°36	?	0°50	20th	—	—	—	—
LAUDALE	50°4	62°9	56°7	-0°6	47	1st, 7th, 9th, 29th.	72	14th, 15th	27	3°22	-2°35	0°50	2nd	—	—	—	—
GLASGOW	51°9	65°1	58°5	+0°7	46	7th, 10th	73	15th	12	1°23	-2°31	0°25	6th	171°6	+37°6	33	+7
GLENLEE	52°6	65°2	58°9	+1°7	42	4th, 13th	74	13th	15	1°22	-3°06	0°42	6th	—	—	—	—
DOUGLAS	51°0	62°8	56°9	-0°6	47	5th, 13th	72	14th	9	1°38	-1°67	0°49	6th	211°6	+15°3	42	+3
NEWTON REIGNY	49°4	64°3	56°9	-0°9	45	19th	73	17th	16	5°70	+2°61	1°52	7th	164°7	-3°5	32	-1
STONYHURST	51°6	64°1	57°9	-1°1	47	5th	75	17th	18	3°13	-1°41	0°84	21st	156°9	-9°4	31	-2
BLACKPOOL	53°5	64°1	58°8	-0°9	50	5th, 11th, 30th	79	15th	11	2°44	-0°80	0°71	21st	153°8	-24°8	30	-5
MANCHESTER	51°6	64°4	58°0	-1°1	47	2nd, 5th	77	17th	21	3°17	-0°69	0°62	21st	—	—	—	—
LLANDUDNO	53°0	63°8	58°4	-1°9	50	2nd	73	17th	13	1°79	-0°87	0°36	28th	167°3	+2°8	33	0
LLANDOVERY	49°4	68°1	58°8	-0°8	40	28th	78	16th, 26th	19	4°44	+0°46	1°05	7th	—	—	—	—
PEMBROKE	°	°	°	°	°	°	°	°	°	°	°	°	°	190°6	-11°5	39	-2
ARLINGTON	50°6	63°4	57°0	-2°0	45	11th	72	16th	16	4°52	+1°67	1°28	20th	—	—	—	—
CULLOMPTON	50°0	66°7	58°4	-2°0	42	11th	73	16th	15	3°09	+0°12	0°93	20th	191°2	-14°1	39	+3
TORQUAY	—	—	—	—	—	—	—	—	—	—	—	—	—	219°2	?	45	?
FALMOUTH	53°5	63°9	58°7	-1°5	48	12th	68	17th	16	2°20	-1°08	0°64	3rd	265°0	+54°1	55	+12
JERSEY	°	°	°	°	°	°	°	°	°	°	°	°	°	243°3	+12°9	51	+3
LONDONDERRY	51°6	64°7	58°2	-0°5	46	14th	76	17th	21	3°16	-0°30	0°68	2nd	—	—	—	—
MARKREE CASTLE	50°1	62°9	56°5	-0°8	41	6th	73	14th	20	2°44	-0°84	0°36	18th	132°4	+3°5	26	0
BROOKEBOROUGH	49°7	63°7	56°7	-0°8	44	4th, 7th	76	17th	18	2°26	-1°33	0°38	6th, 28th	—	—	—	—
ARMAGH	50°8	65°1	58°0	-0°3	45	10th	73	16th	16	1°86	-1°33	0°39	28th	152°7	+13°9	30	+3
ARLEY COTTAGE (COUNTY CAVAN).	—	—	—	—	—	—	—	—	—	—	—	—	—	146°9	?	29	?
EDGEWORTHSTOWN	49°8	64°9	57°4	-0°7	45	3rd, 7th	74	16th	14	1°96	-1°72	0°33	3rd	—	—	—	—
DUBLIN	53°2	64°8	59°0	-1°1	47	10th	73	16th	16	2°19	-0°18	0°40	3rd	167°6	+7°2	34	+2
PARSONSTOWN	°	°	°	°	°	°	°	°	°	°	°	°	°	119°0	-28°1	24	-5
KILKENNY CASTLE	51°3	65°1	58°2	-0°9	44	3rd	74	16th	15	2°14	-0°38	0°35	20th	—	—	—	—
WATERFORD	51°4	66°8	59°1	-0°8	42	3rd	74	13th	13	3°13	+0°21	0°94	17th	—	—	—	—
VALENCIA	°	°	°	°	°	°	°	°	°	°	°	°	°	160°3	+2°8	32	0
KILLARNEY	50°5	65°0	57°8	-1°0	41	6th	73	14th	19	2°23	?	0°40	17th, 18th	—	—	—	—
POYNES	53°6	64°0	58°8	+0°1	49	9th, 13th	74	14th	19	1°23	?	0°19	6th	—	—	—	—

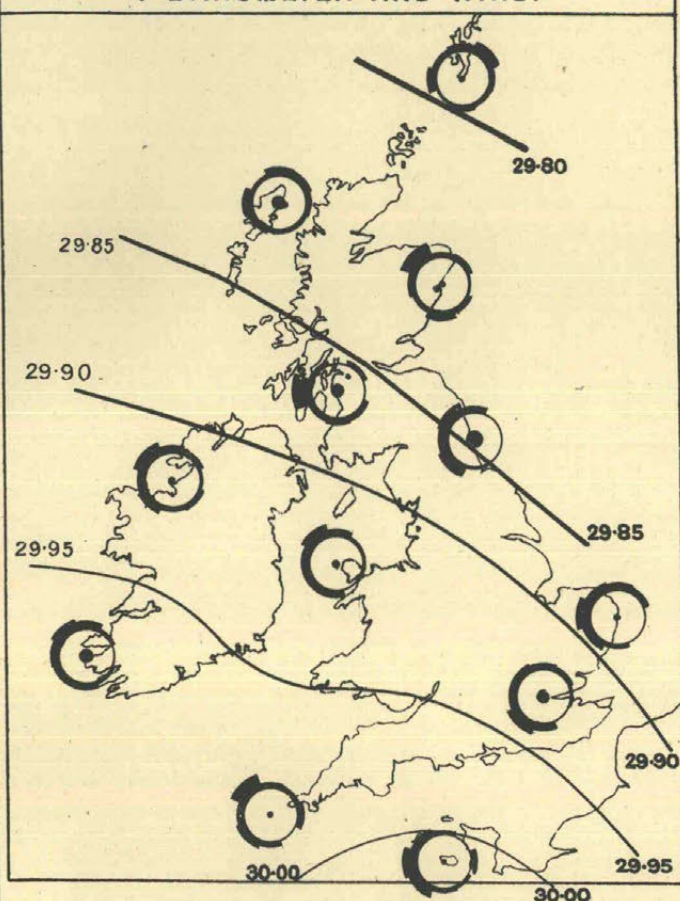


# MONTHLY WEATHER CHART, JULY, 1891.

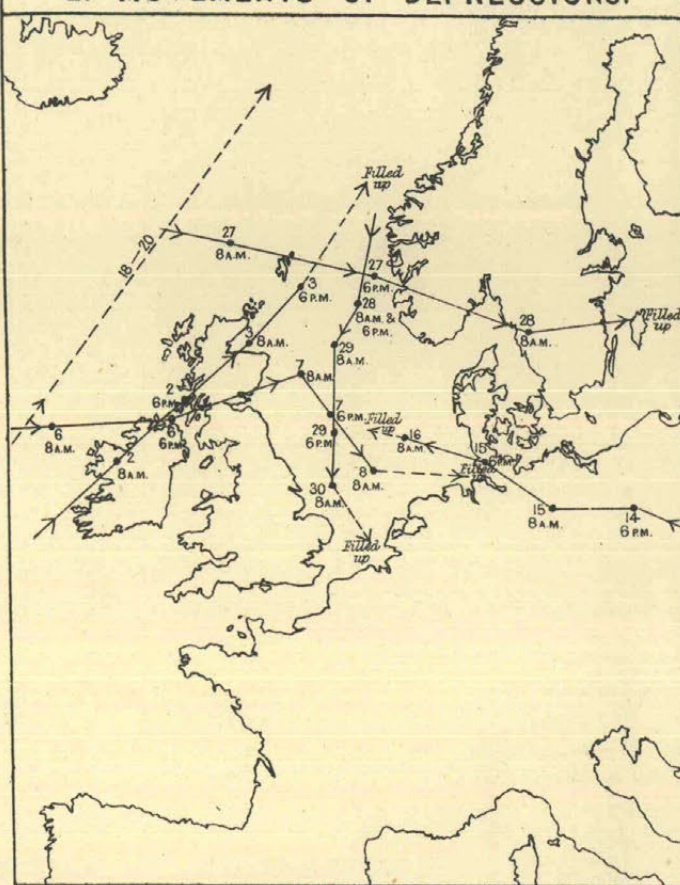
Monthly Summary.

Plate VII.

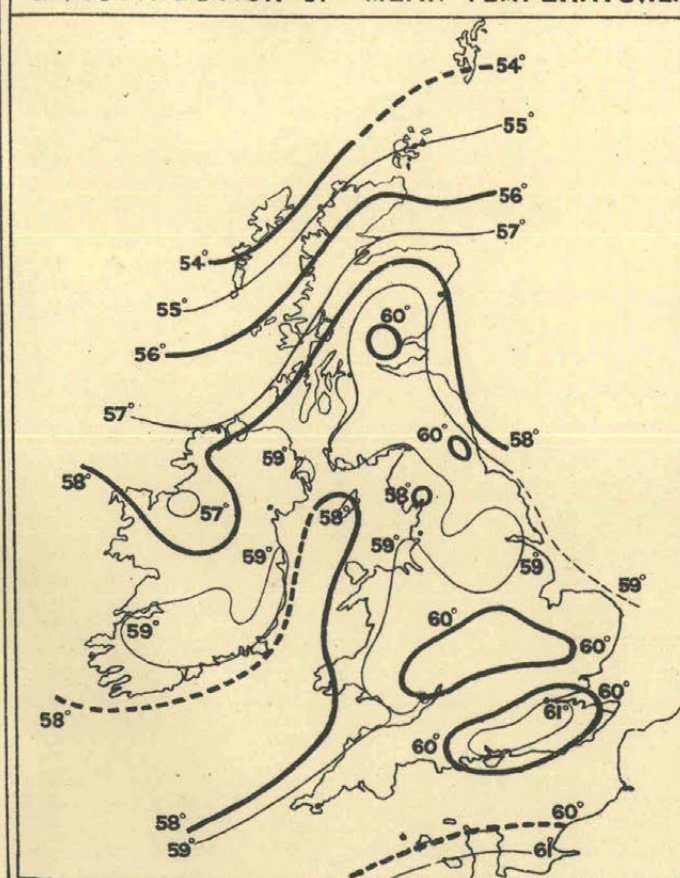
## 1. BAROMETER AND WIND.



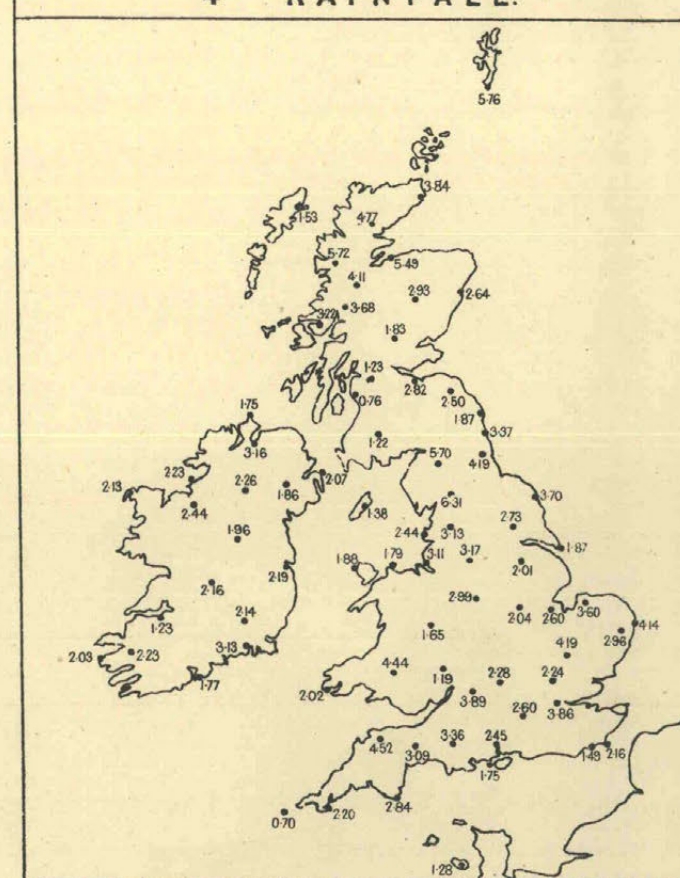
## 2. MOVEMENTS OF DEPRESSIONS.



## 3. DISTRIBUTION OF MEAN TEMPERATURE.



## 4. RAINFALL.









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

## AUGUST 1891.

(Issued as a Supplement to the Weekly Weather Report, 1891.)

ISSUED BY THE METEOROLOGICAL OFFICE, 63, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.  
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; JOHN MENZIES & Co., 12, HANOVER STREET, EDINBURGH, and 90, WEST NILE STREET, GLASGOW; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

**General Summary.**—The month of August was exceedingly cool and unsettled, with heavy rain in nearly all parts of the United Kingdom and with strong gales during the last week. Thunderstorms were of frequent occurrence over England. Pressure and temperature were each below the average; the winds were mainly Westerly or South-westerly; and rainfall was greatly in excess of the normal, especially in the western and southern districts. The amount of bright sunshine was small for the time of year.

**Pressure.**—*Mean for the month at 8 a.m.* ranged from a little above 29·90 ins. in the Channel Islands and a little above 29·85 ins. in the extreme south of England to between 29·60 ins. and 29·62 ins. in the Shetlands and Hebrides. The distribution was therefore of a fairly normal character, but the actual values were everywhere below the average\*; and as the deficit was least (0·05 in. to 0·10 in.) in the extreme south, and greatest (0·15 in. to 0·20 in.) over the northern parts of the kingdom, the mean gradient over England and Ireland was steeper than is ordinarily the case in August. *Highest* readings occurred very generally on the 6th or 7th, when the barometer rose to between 29·9 ins. and 30·0 ins. in Scotland and to between 30·1 ins. and 30·3 ins. over Ireland and England. *Lowest* readings were observed in the northern parts of the kingdom on the 25th or 26th, when the barometer fell as low as 28·6 ins. in the Shetlands, and below 29·0 ins. over our northern districts generally. In the south of England, however, the minimum readings were recorded on the 20th or 21st. *Range* was considerable for the time of year.

**Depressions.**—During the earlier half of the month numerous depressions passed over our Islands, but the systems were too shallow and ill-defined for their tracks to be shown in Map 2, Plate VIII. Towards the close of the period some very deep disturbances skirted our north-western and northern coasts, the two most important being those of the 25th–26th and the 31st August–1st September, each of which produced strong gales over nearly the whole kingdom.

**Anticyclones.**—No well-defined anticyclones appeared immediately over our Islands. On the 6th a small system spread from the Atlantic over our western coasts, but this soon passed away to the southward. At other times the highest pressures were located to the southward or south-eastward of the United Kingdom.

**Winds.**—The prevailing winds were Westerly and South-westerly, excepting in the extreme north, where variable and North-easterly breezes were reported; at Sumburgh Head there was a large proportion of calms. Very few gales were experienced in the north, but an unusually large number at some of our western and southern stations; at Dungeness there were 7, at Hurst Castle 8, and at Mullaghmore as many as 13.

**Temperature.**—*Mean at sea level* ranged from a little below 62° at Jersey and slightly above 60° over the inland parts of our southern counties to a little above 52° in the Shetlands, the distribution over the more central parts of the kingdom being very irregular. The values were everywhere below the average,\* the deficit varying from rather less than a degree in the north of Scotland to between two and three degrees over the greater part of England and also in the south of Ireland. *Highest* readings were observed on varying dates, but mostly between the 13th and 18th; in very few instances did the thermometer reach a maximum as high as 75°. *Lowest* readings occurred mainly on the 30th, when the thermometer fell below 40° in many parts of the kingdom; at Glenlee it sank to 34°, at Nairn to 33°, and at Lairg to 30°. *Range* is somewhat small for the time of year. *Vapour Tension* ranged from 0·36 in. at Aberdeen to between 0·42 in. and 0·46 in. in the south of England. *Relative Humidity* was below 85 per cent. in all the more eastern and central parts of Great Britain, but above 90 per cent. in the extreme north and north-west of our Islands, and also in the south-west of England; the highest value of all was 95 per cent. at Stornoway.

**Rainfall** was considerably more than the average\* in all localities excepting the north of Scotland, the excess being especially great over the western and southern parts of the kingdom. On the south and south-west coasts of England and at several stations in the eastern and central parts of Scotland the fall amounted to between 5 and 7 ins., while in central Ireland, the north-west of England, and portions of Wales and Devonshire it exceeded the latter figure, the largest aggregates of all being 14·8 i.s. at Hawes Junction, 9·9 ins. at Stonyhurst, and 9·6 ins. at Arlington. The most important fall in the space of 24 hours occurred during the progress of the depression of the 20th (shown in Map 2, Plate VIII.), when amounts varying from an inch to an inch and a half or rather more were recorded over all the southern and south-eastern counties of England. An equally heavy fall occurred in some parts of Lancashire between the 13th and 14th and resulted in heavy floods, but in this case the occurrence was purely local. The number of days with rain was very large, 25 or more being reported in many districts; at Llandoverly, Belmullet, and Foynes there were no fewer than 29.

**Bright Sunshine** was very deficient, the per-centage of the possible amount of duration being under 30 at a large majority of our stations and less than 20 in some parts of Scotland and the north of England. At the Channel stations, however, more than 40 per cent. of the possible amount was recorded, the highest per-centage of all being 45 at Guernsey.

\* The averages employed are—*Pressure* and *Temperature* for 20 years, 1871–90; *Rainfall* for the 25 years, 1866–90; *Bright Sunshine* for the 10 years, 1881–90.



TABLE XV.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at TELEGRAPHIC  
Observations are made at 8 a.m. daily, but the Number of Days of Rain, Snow, Hail,  
(The Stations are grouped in Districts, and then arranged in order of Latitude,

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit and Mean Sea Level) from Observations made at 8 a.m.	Difference from Average.	AIR TEMPERATURE.								
				Means of					Absolute Extremes.			
				At 8 a.m.	Minima.	Maxima.	Min. and Max. combined.	Difference from Average.	Minimum.	Date.	Maximum.	Date.
0. SCOTLAND, N.	Sumburgh Head	ins. 29°619	ins. -0°162	52°7	47°7	56°3	52°0	-1°1	42	17th	60	2nd, 22nd
	Wick	29°629	-1°181	53°7	48°2	59°8	54°0	-0°7	35	30th	66	2nd
	Stornoway	29°613	-1°183	45°3	48°7	58°3	53°5	-0°8	35	30th	66	19th
1. SCOTLAND, E.	Nairn	29°615	-1°204	55°0	48°6	62°8	55°7	-1°2	33	30th	70	19th
	Aberdeen	29°647	-1°185	55°2	49°8	61°5	55°7	-0°9	38	30th	68	8th
	Leith	29°660	-1°189	57°1	50°8	64°1	57°5	-1°0	43	29th, 30th	71	6th
2. ENGLAND, N.E.	Shields	29°676	-1°195	55°6	49°8	62°4	56°1	-1°7	45	1st, 30th	72	14th
	York	29°723	-1°183	56°8	49°1	63°9	56°5	-3°1	43	5th, 29th, 30th	69	14th, 19th
	Spurn Head	29°718	-1°187	57°3	53°3	62°6	58°0	-1°7	49	30th	69	2nd
3. ENGLAND, E.	Yarmouth	29°771	-1°157	58°5	52°5	64°2	58°4	-2°2	45	30th	74	14th
	Cambridge	29°797	-1°140	58°5	50°6	67°3	59°0	-2°6	40	30th	76	14th
4. MIDLAND COUNTIES	Loughborough	29°772	-1°156	57°0	51°8	66°2	59°0	-2°1	39	30th	74	14th
	Oxford	29°820	-1°128	56°3	51°7	64°7	58°2	-3°0	43	30th	73	14th
5. ENGLAND, S.	London	29°826	-1°128	58°8	52°5	67°1	59°8	-2°9	43	30th	76	14th
	Dungeneas	29°830	-1°119	59°5	54°4	65°3	59°9	-2°1	44	30th	70	13th, 27th
	Hurst Castle	29°862	-1°103	59°4	55°0	64°9	60°0	-2°0	48	30th	69	15th, 16th
6. SCOTLAND, W.	Ardrossan	29°664	-1°193	56°9	52°1	61°8	57°0	-1°2	43	30th	67	5th
7. ENGLAND, N.W.	Hawes Junction*	28°493	?	51°7	47°3	57°7	52°5	?	39	30th	65	18th, 19th
	Liverpool	29°744	-1°162	56°7	53°3	62°9	58°1	-1°9	47	30th	68	18th
	Holyhead	29°747	-1°160	57°5	53°5	62°2	57°9	-1°6	49	30th	67	18th
8. ENGLAND, S.W.	Pembroke	29°803	-1°125	56°9	54°3	60°3	57°3	-2°1	49	5th	67	3rd
	Prawle Point	29°871	-1°104	57°9	52°4	61°7	57°1	-2°8	46	26th	68	10th, 23rd
9. IRELAND, N.	Malin Head	29°647	-1°208	54°7	51°0	59°5	55°7	-2°0	43	23rd	64	1st
	Donaghadee	29°702	-1°177	56°4	53°8	62°8	58°3	+1°1	51	29th	69	14th
	Mullaghmore	29°687	-1°181	55°9	53°0	61°1	57°1	-1°5	45	20th	63	1st, 8th, 9th, 11th, 12th, 13th, 16th, 17th, 18th
	Belmullet	29°696	-1°174	56°5	53°1	60°0	56°6	-2°6	44	29th	64	
10. IRELAND, S.	Parsonstown	29°746	-1°174	55°8	50°6	62°9	56°8	-1°9	42	29th, 30th	67	5th
	Valencia	29°804	-1°123	57°8	53°6	62°1	57°9	-1°5	46	27th	65	1st
	Roche's Point	29°795	-1°132	57°1	52°5	62°5	57°5	-2°5	46	30th	69	5th
CHANNEL ISLANDS	Scilly	29°861	-1°101	58°8	55°1	62°7	58°9	-2°1	51	4th, 5th	68	14th
	Jersey	29°922	-1°062	60°4	56°1	65°5	60°8	-2°2	47	30th	70	9th

\* Hawes Junction is 1,135 feet above mean sea level, and the



## SUMMARY OF OBSERVATIONS, AUGUST 1891.

xxx

REPORTING STATIONS in the BRITISH ISLANDS during the Month of AUGUST 1891.

Thunderstorms, and Gales are counted irrespective of the Hours at which they occurred.  
beginning in each case with the Station lying furthest North.)

TENSION OF VAPOUR.	RELATIVE HUMIDITY.	AMOUNT OF CLOUD.	RAINFALL.				WEATHER.							WIND.								
			Total Fall in the Month.	Difference from Average.	Maximum Fall in One Day.	Date.	No. of Days of							No. of Observations of								
							Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
in.	%		ins.	ins.	ins.																	
0.366	92	8.3	5.25	+2.09	1.20	8th, 31st	20	0	0	1	0	19	0	5	6	2	2	3	2	0	2	9
.382	92	8.3	4.51	+1.94	0.72	18th	22	0	0	0	4	22	1	5	1	3	3	5	5	3	6	0
.398	95	8.9	3.38	-0.20	0.70	14th	23	0	0	0	0	23	1	0	6	3	3	3	5	5	3	3
.365	85	7.3	2.16	-0.59	0.47	25th	23	0	0	0	0	12	0	0	3	4	3	0	7	8	0	6
.355	82	7.7	5.03	+2.00	0.91	17th	21	0	0	1	0	13	4	2	4	0	5	6	5	4	5	0
.373	80	7.6	3.94	+1.38	0.73	21st	19	0	0	2	1	17	0	1	2	3	2	3	10	4	2	4
.379	85	8.2	3.69	+0.84	0.74	21st	23	0	0	4	0	14	1	4	2	0	3	6	5	7	4	0
.391	84	7.2	4.52	+1.98	0.54	13th	27	0	0	1	5	16	2	3	0	0	2	7	6	10	3	0
.398	84	7.5	1.78	-0.08	0.22	31st	22	0	0	3	0	12	4	1	1	0	2	3	10	10	4	0
.414	84	4.7	3.47	+1.32	0.79	20th	22	0	1	5	10	2	1	3	0	0	1	2	8	10	5	2
.406	82	6.8	3.76	+1.57	1.51	20th	21	0	0	4	1	15	0	3	0	0	0	4	18	2	3	1
.383	82	7.3	3.24	+0.71	0.34	27th	21	0	1	5	0	9	1	2	0	0	1	3	7	13	3	2
.387	85	6.9	4.57	+2.33	1.05	20th	23	0	1	3	7	15	0	1	0	0	0	5	13	7	4	1
.399	81	7.2	4.55	+2.34	1.38	20th	22	0	0	6	2	14	1	1	0	0	0	3	12	11	4	0
.435	86	6.9	4.60	+2.56	1.30	20th	21	0	0	5	0	8	7	3	0	0	0	1	9	14	4	0
.464	93	6.4	5.31	+3.03	1.55	20th	21	0	0	2	0	3	8	1	1	0	0	1	7	16	5	0
.395	86	7.5	4.96	+1.18	0.81	31st	21	0	0	2	0	12	1	2	1	2	3	3	10	5	2	3
.360	94	9.1	14.79	?	3.89	25th	27	0	0	2	0	24	2	3	1	2	3	7	11	3	1	0
.373	81	7.6	4.60	+1.77	0.51	9th	22	0	0	0	3	17	3	2	1	0	7	2	10	7	2	0
.402	85	6.9	4.47	+1.70	0.81	25th	18	0	0	0	0	10	2	5	1	0	0	5	11	6	3	0
.427	92	7.0	5.54	+2.77	1.00	25th	20	0	0	0	0	9	6	3	1	0	0	6	10	6	5	0
.437	91	6.5	4.31	+2.17	0.92	20th	22	0	1	4	0	10	1	1	3	1	0	2	10	9	5	0
.374	88	8.3	4.32	?	0.89	25th	24	0	0	0	2	22	0	6	0	0	3	7	5	5	4	1
.410	90	7.2	5.33	+2.29	1.06	17th	27	0	0	0	0	13	0	3	6	0	0	5	4	10	3	0
.389	87	8.3	6.50	+2.85	0.80	13th, 28th	26	0	0	0	1	17	13	4	0	0	3	4	12	2	5	1
.415	91	8.5	6.11	?	0.83	31st	29	0	0	0	2	23	1	7	0	0	1	3	5	9	6	0
.383	86	8.5	6.59	+3.21	0.73	8th	25	0	0	0	0	19	0	0	0	0	2	0	11	0	3	15
.418	87	9.0	6.17	+1.47	0.95	25th	27	0	0	0	0	23	3	5	0	1	0	2	7	9	5	2
.396	84	6.1	5.36	+1.74	0.96	16th	18	0	1	1	0	9	1	3	0	0	2	0	8	10	8	0
.436	88	7.4	5.58	+3.19	1.16	21st	25	0	0	4	0	9	2	3	1	0	0	5	9	7	6	0
.430	82	6.8	6.17	+3.93	1.04	28th	19	0	0	1	1	11	3	0	1	0	1	1	10	11	7	0

Barometer at this station is not reduced for altitude.



TABLE XVI.

OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE obtained from the VALUES supplied for use in the WEEKLY WEATHER REPORT, during the Month of AUGUST 1891.

STATIONS.	AIR TEMPERATURE.								RAINFALL.					BRIGHT SUNSHINE.			
	Means of				Absolute Extremes.				No. of Days.	Total Fall in the Month.	Difference from Average.	Maximum Fall in One Day.	Date.	No. of Hours recorded.	Difference from Average.	Per-centages of possible Duration.	Difference from Average.
	Minima.	Maxima.	Min. and Max. combined.	Difference from Average.	Minimum.	Date.	Maximum.	Date.									
STORNOWAY	°	°	°	°	°	°	°	°	ins.	ins.	ins.	°	100°9	-19°4	22	°	4
LAIRG	47°7	61°1	54°4	-0°7	30	30th	68	8th	26	3°14	+0°34	0°45	25th	—	—	—	—
GLENCARRON	47°7	59°2	53°5	-1°1	35	30th	70	19th	27	6°88	+0°28	0°82	11th	—	—	—	—
FORT AUGUSTUS	50°0	61°3	55°7	-0°6	37	30th	69	6th, 18th, 19th	26	5°13	+2°08	1°64	3rd	81°4	?	18	?
FORT WILLIAM	50°6	61°0	55°8	-0°9	37	30th	71	18th	27	8°37	+2°67	1°67	3rd	91°4	?	20	?
ABERDEEN	°	°	°	°	°	°	°	°	°	°	°	°	°	125°7	-29°6	27	-7
BRAEMAR	47°3	59°0	53°2	-0°7	36	3rd	66	7th	23	5°18	+1°44	1°21	3rd	83°8	?	18	?
EDINBURGH	—	—	—	—	—	—	—	—	—	—	—	—	—	120°7	?	26	?
OCHTERTYRE	49°2	65°6	57°4	+0°5	37	28th	70	10th, 15th, 18th	21	5°70	+2°21	1°12	30th	—	—	—	—
MARCHMONT	47°7	61°9	54°8	-1°6	39	29th, 30th	68	6th, 14th, 19th	25	6°36	+2°90	1°80	17th	115°5	?	25	?
ALNWICK CASTLE	50°7	61°4	56°1	-0°9	41	29th	69	7th	18	5°78	+2°73	1°49	22nd	—	—	—	—
DURHAM	50°0	64°2	57°1	-1°4	41	1st, 30th	73	14th	23	5°00	+2°23	0°99	21st	100°6	-52°1	22	-11
SCARBOROUGH	52°1	62°1	57°1	-1°5	45	30th	70	2nd, 14th	24	4°14	+1°47	0°90	3rd	—	—	—	—
OSWALDKIRK	—	—	—	—	—	—	—	—	—	—	—	—	—	87°3	?	19	?
YORK	°	°	°	°	°	°	°	°	°	°	°	°	°	166°6	-40°4	23	-9
HILLINGTON	50°6	65°6	58°1	-2°4	38	30th	76	14th	26	4°39	+1°67	0°89	20th	132°5	-41°6	29	-13
GELDESTON	50°9	66°4	58°7	-2°0	41	30th	76	14th	21	4°04	+2°15	0°91	2nd	146°2	-45°5	33	-10
CAMBRIDGE	°	°	°	°	°	°	°	°	°	°	°	°	°	145°3	-31°3	33	-7
ROTHAMSTED	50°7	65°1	57°9	-2°4	39	30th	73	14th	20	3°85	+1°43	1°12	20th	148°2	?	33	?
BAWTRY	50°8	65°5	58°2	-1°6	41	29th	72	2nd, 19th, 20th	20	3°29	+0°89	0°56	13th	—	—	—	—
WORKSOP	—	—	—	—	—	—	—	—	—	—	—	—	—	94°9	-53°8	21	-12
STAMFORD (KETTON HALL).	50°1	66°6	58°4	-2°6	38	30th	75	14th	21	3°40	?	0°54	17th	—	—	—	—
THURCASTON	—	—	—	—	—	—	—	—	—	—	—	—	—	131°8	-25°2	29	-6
CHEADLE	49°6	61°8	55°7	-2°1	42	30th	69	14th	25	4°89	+1°33	0°65	17th	—	—	—	—
CHURCHSTOKE	48°8	62°8	55°8	-2°5	40	30th	67	10th, 14th, 18th	26	4°49	+1°78	0°52	25th	124°1	-42°7	28	-9
HEREFORD	50°4	65°2	57°8	-2°7	40	4th, 30th	72	14th	20	3°93	+1°51	0°57	26th	—	—	—	—
CIRENCESTER	48°4	63°9	56°2	-2°8	37	30th	71	15th	24	5°90	+2°86	1°15	27th	148°9	-30°8	33	-7
OXFORD	°	°	°	°	°	°	°	°	°	°	°	°	°	148°7	-33°9	33	-8
LONDON	°	°	°	°	°	°	°	°	°	°	°	°	°	135°9	-28°4	31	-6
STRATHFIELD TURGIS	50°9	67°4	59°2	-2°3	40	30th	77	14th	26	3°81	+1°68	1°14	20th	—	—	—	—
HASTINGS	53°6	64°2	58°9	-3°4	47	30th	68	8th, 13th, 14th	22	5°79	+3°41	1°09	20th	157°9	-46°0	36	-10
EASTBOURNE	—	—	—	—	—	—	—	—	—	—	—	—	—	151°4	?	34	?
SOUTHAMPTON	52°8	67°4	60°1	-2°0	44	30th	74	12th, 13th, 14th, 16th.	23	5°49	+2°87	1°61	20th	185°1	-17°8	42	-4
STOWELL	51°1	63°5	57°3	-2°8	40	30th	71	14th	23	5°52	?	1°18	20th	—	—	—	—
LAUDALE	50°4	61°5	56°0	-0°9	41	30th	70	18th	25	7°90	+2°66	1°42	31st	—	—	—	—
GLASGOW	51°2	62°2	56°7	-0°2	42	29th	69	18th	24	5°19	+1°42	0°71	31st	119°3	-10°6	26	-2
GLENLEE	49°1	62°6	55°9	-0°6	34	30th	69	16th	24	6°68	+2°28	1°15	17th	—	—	—	—
DOUGLAS	50°7	61°9	56°3	-0°9	40	30th	68	7th	21	7°66	+4°09	1°31	24th	128°3	-42°4	28	-10
NEWTON REIGNY	49°1	62°1	55°6	-0°3	39	30th	68	18th	25	6°46	+3°38	1°23	25th	105°3	-35°8	23	-8
STONYHURST	51°2	61°3	56°3	-2°3	46	1st, 4th, 23rd	66	18th	26	9°85	+5°14	1°81	13th	88°4	-61°3	19	-14
BLACKPOOL	53°4	62°3	57°9	-1°5	46	30th	69	18th	18	7°90	+4°84	1°15	14th, 26th	112°3	-46°6	25	-10
MANCHESTER	51°1	62°3	56°7	-2°2	42	30th	68	18th	25	6°76	+3°23	1°03	13th	—	—	—	—
LLANDUDNO	53°4	62°9	58°2	-2°0	47	30th	70	18th	16	4°19	+1°52	0°57	8th	116°5	-39°7	26	-9
LLANDOVERY	48°1	64°7	56°4	-3°3	38	5th, 30th	71	5th	29	8°77	+4°21	1°54	25th	—	—	—	—
PEMBROKE	°	°	°	°	°	°	°	°	°	°	°	°	°	154°5	-46°8	35	-10
ARLINGTON	50°0	61°5	55°8	-3°0	41	30th	66	14th	22	9°62	+4°65	1°50	27th	—	—	—	—
CULLOMPTON	50°7	64°5	57°6	-2°1	39	30th	71	14th	23	6°26	+3°51	1°42	20th	132°8	-51°0	30	-11
TORQUAY	—	—	—	—	—	—	—	—	—	—	—	—	—	145°7	?	33	?
FALMOUTH	53°2	63°1	58°2	-2°3	47	30th	68	14th	23	7°07	+3°49	1°54	20th	181°2	-25°0	41	-6
GUERNSEY	—	—	—	—	—	—	—	—	—	—	—	—	—	198°6	?	45	?
JERSEY	°	°	°	°	°	°	°	°	°	°	°	°	°	189°7	-53°2	43	-12
LONDONDERRY	51°5	63°0	57°3	-1°0	45	29th, 30th	70	20th	27	5°71	+1°92	0°75	25th	—	—	—	—
MARKREE CASTLE	50°0	61°9	56°0	-1°1	36	29th	67	8th	27	7°14	+3°54	0°82	18th	97°8	-30°0	22	-6
BROOKEBOROUGH	50°0	61°6	55°8	-1°2	39	30th	66	14th	26	7°50	+4°06	1°18	24th	—	—	—	—
ARMAGH	50°6	62°9	56°8	-1°1	44	29th, 30th	68	14th	25	4°75	+1°84	0°64	13th	89°2	-29°2	20	-6
ARLEY COTTAGE (COUNTY CAVAN).	—	—	—	—	—	—	—	—	—	—	—	—	—	93°5	?	21	?
EDGEWORTHSTOWN	49°6	63°0	56°3	-1°3	39	29th, 30th	68	9th, 11th	25	7°53	+4°10	0°95	24th	—	—	—	—
DUBLIN	52°8	63°4	58°1	-1°4	46	29th, 30th	69	11th	25	4°95	+2°16	0°99	8th	127°0	-34°6	28	-8
PARSONSTOWN	°	°	°	°	°	°	°	°	°	°	°	°	°	89°6	-55°8	20	-12
KILKENNY CASTLE	50°3	63°4	56°9	-2°1	38	30th	72	13th	25	5°41	+2°06	0°70	25th	—	—	—	—
WATERFORD	50°2	65°1	57°7	-2°1	44	30th	71	13th	23	7°10	+3°53	0°98	16th	—	—	—	—
VALENCIA	°	°	°	°	°	°	°	°	°	°	°	°	°	120°2	-41°1	27	-9
KILLARNEY	51°7	62°5	57°1	-2°2	43	7th, 30th	69	13th	27	6°67	?	0°84	25th	—	—	—	—
FOYNES	53°0	62°2	57°6	-1°0	47	28th, 29th	67	13th	29	7°04	?	0°96	8th	—	—	—	—

\* For information see Table XV.

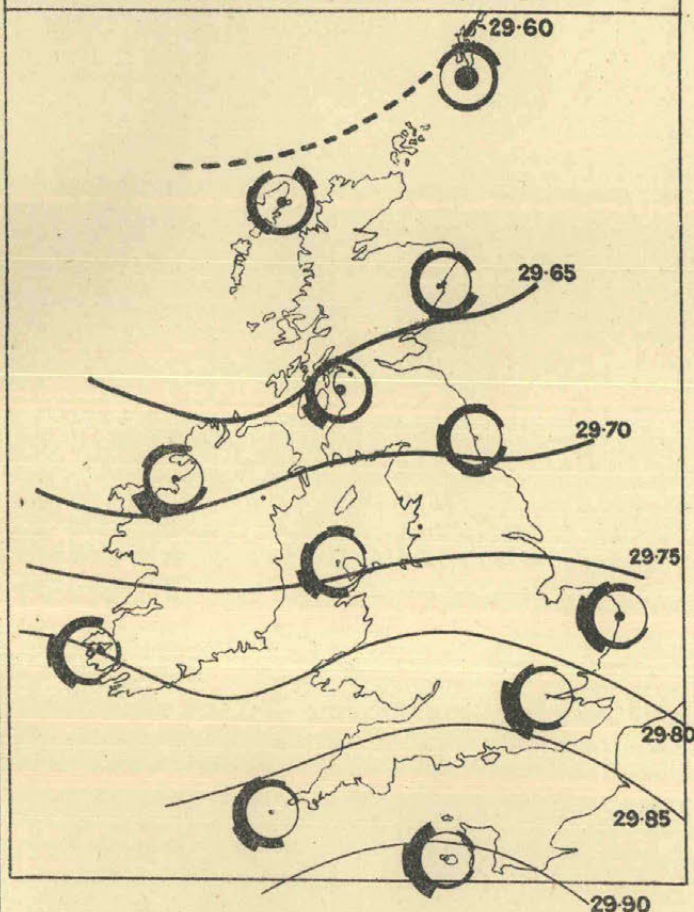


# MONTHLY WEATHER CHART, AUGUST, 1891.

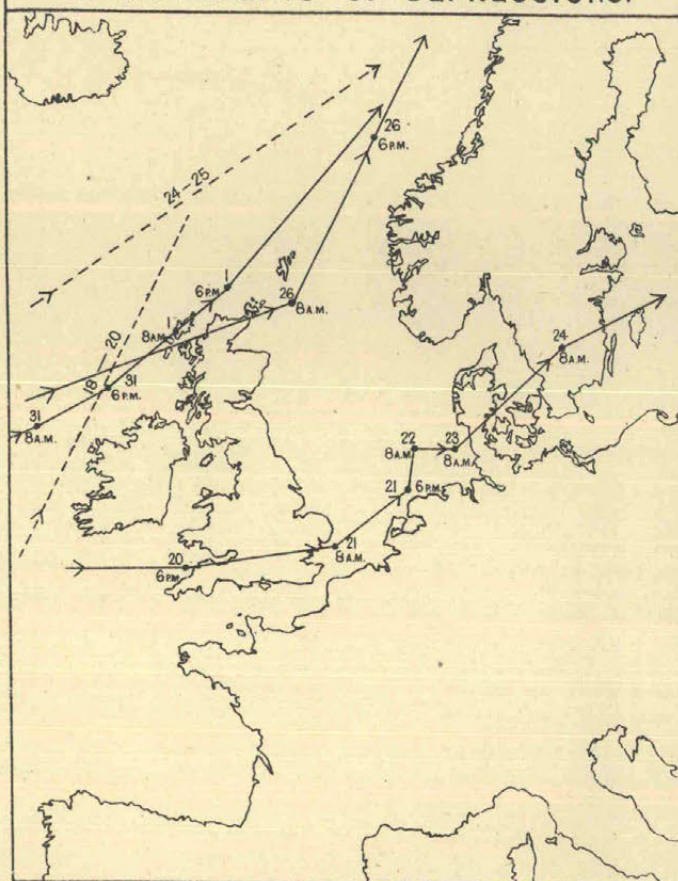
Monthly Summary.

Plate VIII.

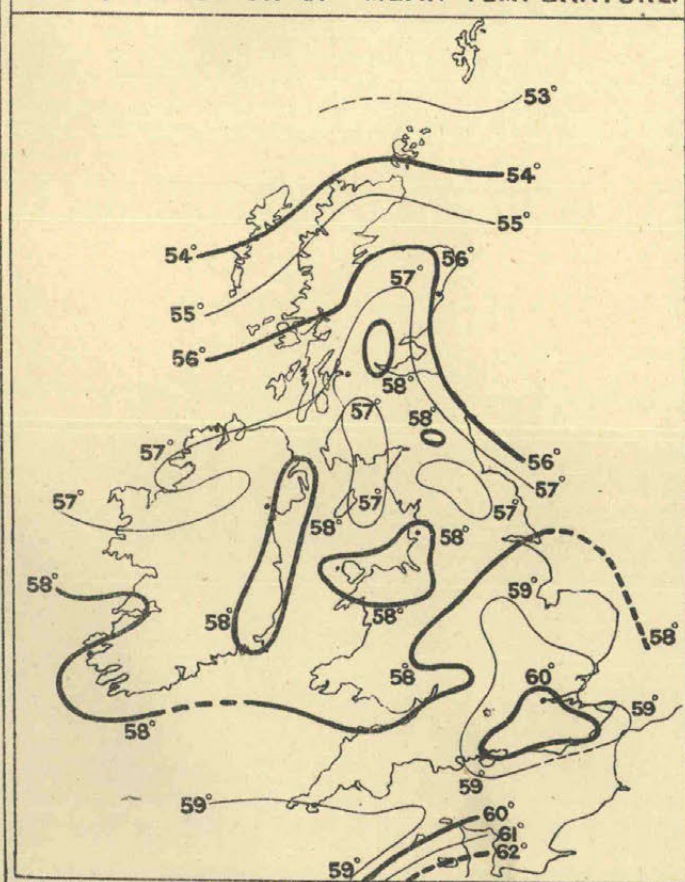
## 1. BAROMETER AND WIND.



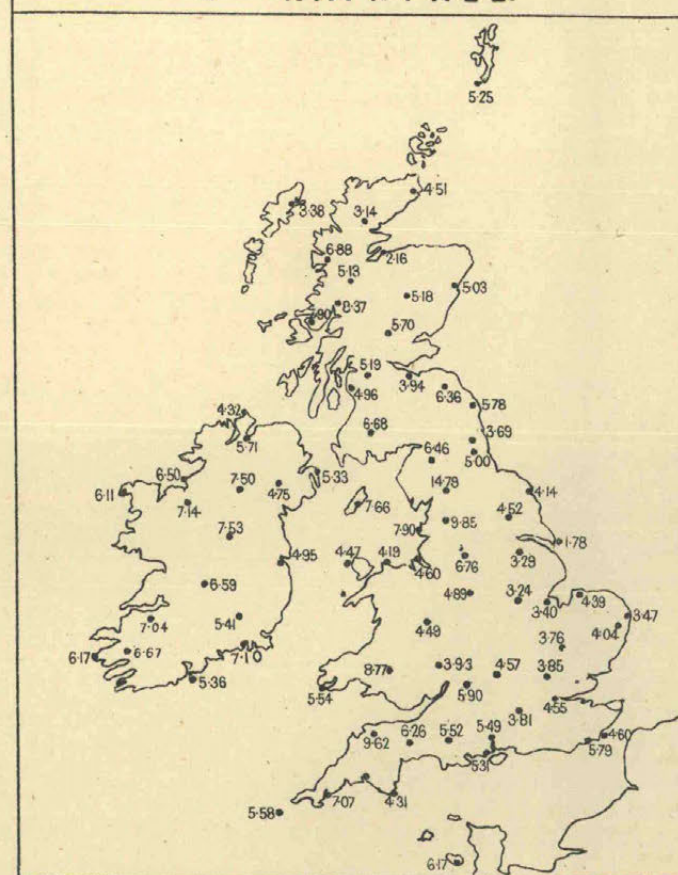
## 2. MOVEMENTS OF DEPRESSIONS.



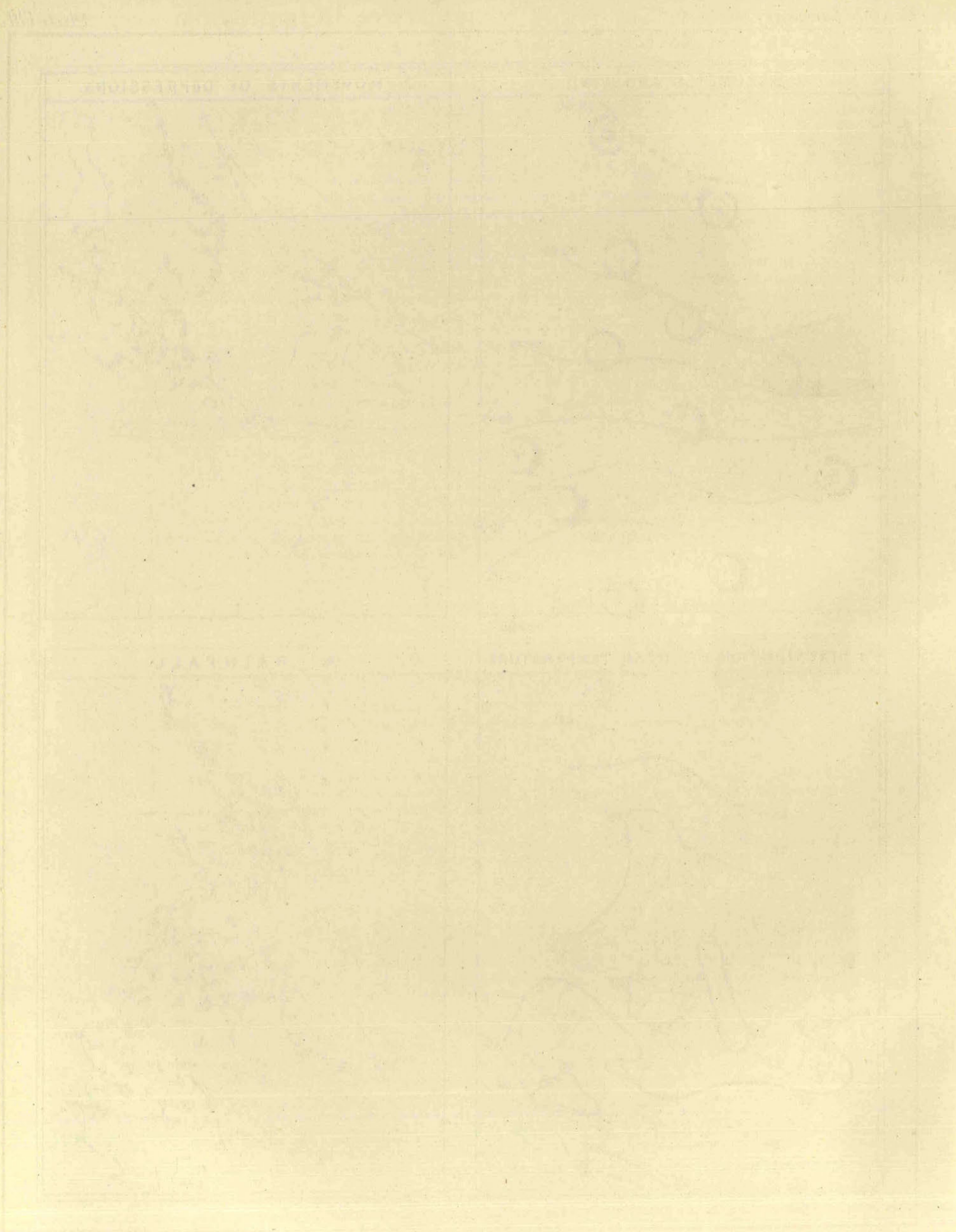
## 3. DISTRIBUTION OF MEAN TEMPERATURE.



## 4. RAINFALL.









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

## SEPTEMBER 1891.

(Issued as a Supplement to the Weekly Weather Report, 1891.)

ISSUED BY THE METEOROLOGICAL OFFICE, 63, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.  
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; JOHN MENZIES & Co., 12, HANOVER STREET, EDINBURGH, and 90, WEST NILE STREET, GLASGOW; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

**General Summary.**—The weather of September, although somewhat changeable, was, upon the whole, fair and warm, the temperatures registered between the 10th and 13th being higher than those observed at any time during the three preceding months. Pressure was below the average in all but the extreme southern districts; temperature was everywhere in excess of the normal; the prevailing winds were Westerly or South-westerly; and rainfall was less than the average excepting in the northern parts of Great Britain. Bright sunshine was more abundant than usual. Thunderstorms, however, were somewhat frequent over Great Britain.

**Pressure.**—*Mean for the Month at 8 a.m.* varied from between 30·00 ins. and 30·08 ins. over the south of England and the Channel to very little above 29·65 ins. in the Shetlands and Hebrides, the distribution being favourable for winds from the Westward and South-westward. In the south of England the values were slightly above the average,\* but in all other parts of the kingdom there was a deficit, and as this was greatest in the north, the mean gradient was unusually steep for the time of year. The difference between the mean readings in the far north and those in the extreme south was in fact twice as great as that shown by the average values for September. *Highest* readings occurred as a rule on the 10th or 11th when the barometer rose to between 30·1 ins. and 30·2 ins. in most districts; at our extreme southern and south-western stations, however, slightly higher readings were observed on the 15th or 16th. *Lowest* readings were recorded on the 1st, when the mercury fell to between 28·5 ins. and 29·0 ins. in Scotland and to below 29·5 ins. in all other parts of the kingdom. *Range* was small in the south, but rather large in the north.

**Depressions.**—The tracks of the large depressions which approached Europe lay as a rule to the northward of our islands, but shallow secondary disturbances occasionally appeared further south. The only clearly marked system which passed over our islands was formed near the mouth of the channel on the evening of the 19th. After advancing across England to our north-east coasts the system entirely altered its course, the centre travelling southwards across the east and south-east of England to the north-east of France where it ultimately dispersed.

**Anticyclones.**—These lay as a rule well to the southward of our islands. Between the 8th and 10th an anticyclone which had passed over central Europe spread westwards until it embraced the greater part of the United Kingdom, but on the 11th and 12th the system again receded over the Continent.

**Winds.**—The prevailing winds were South-westerly, but in the extreme north there was a considerable admixture of breezes from the Westward. Gales were rather frequent in the extreme west and north-west; at Stornoway and Valencia Island there were 8, and at Mullaghmore 10. At the Channel stations, however, there were not more than 3 or 4.

**Temperature.**—*Mean at sea level* ranged from 62° at Jersey and from 60° or more over the Channel and south-east of England to 53° or less in the Shetlands and Hebrides, the distribution over our islands being irregular, though fairly normal for the time of year. The values were in excess of the average\* in all parts of the kingdom, the difference from the mean being greatest (two and a half to three and a half degrees) at stations situated in the north of Ireland and the northern and central parts of England. *Highest* readings were observed between the 10th and 13th when the thermometer rose to a higher level than at any time in the three preceding months; over the inland parts of England and the east of Scotland the thermometer exceeded 80°, the highest values of all being 86° at Loughborough and 85° at Stamford. *Lowest* readings were recorded on varying dates; towards the close of the month slight frost was registered in some parts of Scotland, but in other districts the thermometer did not fall much below 40°. *Range* was large, amounting to 40° or more in many places; at Llandoverly it was as much as 49°, at Stamford 48°, and at Loughborough 47°. *Vapour Tension* ranged from 0·36 in. or less in the east of Scotland to 0·44 in. or more in the extreme south of England. *Relative Humidity* was below 80 per cent. in the east of Scotland and also in the Channel Islands, but amounted to between 90 and 92 per cent. in the Shetlands and Hebrides, as well as in some portions of the extreme south of England.

**Rainfall** amounted to less than an inch in the east of England and to less than an inch and a half over the greater part of our midland and southern counties. In the western and northern portions of the kingdom, however, the amounts were much larger, the heaviest of all being 12·9 ins. at Fort William and 12·3 ins. at Glencarron. The values were in excess of the average\* over the greater part of Scotland and also in the extreme north of England, but elsewhere a deficit was shown, the amounts over our eastern, midland, and southern counties being in many cases less than half the normal. The large excess which occurred place in the north of England and the east and south of Scotland was due to the heavy and continuous rainfall which occurred during the progress of the depression of the 19th–22nd (shown in Map 3, Pl. IX.); between the 19th and 21st as much as 4·1 ins. fell at Marchmont, 3·6 ins. at Aberdeen, and 3·0 ins. at Douglas (Isle of Man). The number of rainy days was large in the extreme north and north-west, as many as 26 being reported at Stornoway, Fort William, and Glenlee, and 27 at Lairg. Over the eastern and central parts of England the number varied between 8 and 15.

**Bright Sunshine** was in excess of the average,\* especially over Ireland and the eastern and central parts of England. The per-centage of the possible amount of duration was as high as 51 at Geldeston, 50 at Jersey, 48 at Guernsey, and 46 at Hastings. In the north of Scotland, however, there was less than 30 per cent., the lowest per-centage of all being 19 at Fort Augustus.

\* The averages employed are—*Pressure* and *Temperature* for the 20 years, 1871–90; *Rainfall* for the 25 years, 1866–90; *Bright Sunshine* for the 10 years, 1881–90.



TABLE XVII.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at TELEGRAPHIC  
Observations are made at 8 a.m. daily, but the Number of Days of Rain, Snow, Hail,  
(The Stations are grouped in Districts, and then arranged in order of Latitude,

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit and Mean Sea Level) from Observations made at 8 a.m.	Difference from Average.	AIR TEMPERATURE.								
				At 8 a.m.	Means of				Absolute Extremes.			
					Minima.	Maxima.	Min. and Max. combined.	Difference from Average.	Minimum.	Date.	Maximum.	Date.
0. SCOTLAND, N.	Sumburgh Head	ins. 29°660	ins. -0°137	52°1	47°7	55°9	51°8	+1°2	43	18th	62	12th
	Wick	29°723	-0°106	53°5	48°2	59°8	54°0	+2°4	43	15th, 20th	74	12th
	Stornoway	29°670	-0°145	53°3	47°5	57°4	52°5	+1°4	37	8th	62	13th
1. SCOTLAND, E.	Nairn	29°716	-0°127	54°2	47°2	62°2	54°7	+1°8	33	23rd	76	12th
	Aberdeen	29°779	-0°079	54°8	48°2	61°3	54°8	+1°8	39	8th	79	12th
	Leith	29°808	-0°073	54°9	48°9	63°2	56°1	+1°4	41	8th	81	12th
2. ENGLAND, N.E.	Shields	29°839	-0°064	55°2	49°8	62°8	56°3	+2°0	45	3rd, 15th, 21st	77	10th, 12th
	York	29°908	-0°031	54°6	47°4	65°9	56°7	+1°4	40	3rd	80	10th, 11th, 13th
	Spurn Head	29°914	-0°015	57°6	52°6	63°8	58°2	+1°6	47	22nd, 23rd	72	8th
3. ENGLAND, E.	Yarmouth	29°977	+0°029	57°7	52°4	64°7	58°6	+1°8	45	15th, 16th	69	11th, 18th
	Cambridge	29°996	+0°031	57°2	48°7	69°4	59°1	+2°2	42	15th	84	12th
4. MIDLAND COUNTIES	Loughborough	29°933	-0°026	54°4	49°0	68°7	58°9	+2°5	39	3rd	86	11th
	Oxford	30°002	+0°031	55°2	49°6	65°7	57°7	+1°2	44	3rd	81	11th
5. ENGLAND, S.	London	30°012	+0°034	57°9	51°1	68°5	59°8	+1°8	42	24th	83	13th
	Dungeness	30°018	+0°048	60°1	54°2	65°5	59°9	+1°7	41	28th	72	13th
	Hurst Castle	30°031	+0°040	59°3	55°3	65°1	60°2	+2°0	46	23rd	74	11th, 12th
6. SCOTLAND, W.	Ardrossan	29°814	-0°071	55°8	51°7	60°8	56°3	+1°8	41	23rd	74	13th
7. ENGLAND, N.W.	Hawes Junction*	28°661	?	50°9	47°3	58°3	52°8	?	39	22nd	77	12th
	Liverpool	29°916	-0°019	56°7	52°9	64°1	58°5	+2°5	47	3rd, 23rd	79	10th, 11th
	Holyhead	29°899	-0°030	58°0	53°6	62°7	58°2	+1°5	47	23rd	76	13th
8. ENGLAND, S.W.	Pembroke	29°956	+0°008	57°3	54°6	60°9	57°8	+1°2	47	7th	71	11th, 12th
	Prawle Point	30°024	+0°026	58°3	53°9	62°3	58°1	+0°8	43	22nd	72	12th
9. IRELAND, N.	Malin Head	29°754	-0°126	54°5	51°3	60°0	55°7	+2°1	46	4th, 23rd	73	11th
	Donaghadee	29°851	-0°054	55°1	53°0	62°1	57°6	+3°2	50	5th, 22nd, 23rd, 25th, 26th, 22nd	70	10th
	Mullaghmore	29°807	-0°083	55°7	52°2	61°2	56°7	+1°1	47		75	11th
	Belmullet	29°792	-0°098	55°6	52°3	59°7	56°0	-0°7	46	7th	71	11th
10. IRELAND, S.	Parsonstown	29°888	-0°049	54°3	48°9	63°2	56°1	+1°6	38	7th	78	11th
	Valencia	29°917	-0°030	56°9	52°0	61°6	56°8	+0°1	43	7th	74	11th
	Roche's Point	29°942	-0°004	55°4	51°4	60°8	56°1	-0°3	43	7th	68	12th
CHANNEL ISLANDS	Scilly (St. Mary's)	29°995	+0°024	58°6	54°9	62°0	58°5	+0°2	50	23rd	66	10th, 11th, 12th, 13th
	Jersey	30°076	+0°088	61°7	55°0	67°1	61°1	+1°0	41	23rd	81	10th, 11th, 12th

\* Hawes Junction is 1,135 feet above Mean Sea Level, and the



## SUMMARY OF OBSERVATIONS, SEPTEMBER 1891.

XXXV

REPORTING STATIONS in the BRITISH ISLANDS during the Month of SEPTEMBER 1891.

Thunderstorms, and Gales are counted irrespective of the Hours at which they occurred.

beginning in each case with the Station lying furthest North.)

TENSION OF VAPOUR.	RELATIVE HUMIDITY.	AMOUNT OF CLOUD.	RAINFALL.			Date.	WEATHER. No. of Days of							WIND. No. of Observations of								
			Total Fall in the Month.	Difference from Average.	Maximum Fall in One Day.		Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
in. 0.352	% 90	7.8	ins. 3.87	ins. +0.55	ins. 0.81	14th	23	0	0	0	0	14	2	0	3	0	2	7	5	7	2	4
359	87	7.2	2.06	-0.47	0.38	2nd	17	0	0	2	5	17	5	0	2	0	0	9	3	7	8	1
376	92	8.5	3.98	-0.12	0.50	26th	26	0	0	1	0	19	8	1	1	0	1	4	11	8	2	2
345	82	6.4	1.91	-0.67	0.70	20th	21	0	0	0	2	9	0	1	1	0	0	3	12	6	1	6
332	77	5.7	5.12	+2.15	2.19	20th	15	0	0	1	2	8	5	2	2	1	2	9	10	3	1	0
355	83	6.5	3.70	+1.36	1.43	20th	19	0	0	0	5	13	1	0	3	3	0	2	11	5	0	6
365	84	7.0	2.08	-0.42	0.48	14th	13	0	0	0	1	9	2	2	1	0	1	9	10	5	0	2
364	85	6.1	1.20	-1.50	0.28	19th	18	0	0	0	7	11	0	0	1	3	5	8	6	5	1	1
390	82	4.6	0.62	-1.40	0.16	14th	10	0	0	1	5	4	6	1	1	0	2	9	11	5	0	1
425	89	3.4	0.92	-1.99	0.25	14th	8	0	0	0	17	3	2	0	1	2	1	4	10	10	1	1
409	87	4.4	1.15	-1.11	0.23	18th	10	0	1	1	8	7	0	2	0	0	3	9	15	0	0	1
369	88	6.4	1.03	-1.73	0.31	21st	10	0	0	0	4	8	3	1	0	1	2	4	9	8	1	4
376	87	5.2	1.32	-1.34	0.39	21st	16	0	0	1	11	11	0	1	0	1	1	6	9	5	1	6
397	83	4.6	1.06	-1.29	0.25	19th	13	0	1	2	14	8	2	1	1	2	1	4	14	4	2	1
437	84	6.1	1.13	-1.51	0.22	17th	14	0	0	1	2	6	3	3	0	3	0	2	9	10	3	0
454	90	5.4	1.38	-1.69	0.20	17th	15	0	0	2	3	4	4	2	3	4	0	3	10	8	0	0
380	85	7.5	4.16	+0.49	0.60	5th	24	0	0	0	3	16	4	1	4	3	0	4	8	5	2	3
354	95	7.9	7.92	?	1.42	5th	23	0	0	0	3	21	0	1	3	1	5	7	7	4	0	2
373	81	6.2	4.10	+0.80	0.60	19th	17	0	0	0	8	13	2	1	1	1	10	3	5	8	1	0
404	83	6.1	4.99	+1.76	0.76	30th	20	0	0	0	3	8	5	2	1	0	1	7	10	3	3	3
416	88	6.6	3.58	0.00	0.80	19th	23	0	0	0	1	8	5	2	1	3	3	5	8	4	4	0
449	92	6.2	2.17	-0.29	0.42	17th	14	0	0	1	4	10	3	0	3	3	1	4	7	9	3	0
368	87	7.3	3.16	?	0.55	23rd	23	0	0	0	4	17	6	2	0	1	3	9	6	6	3	0
382	88	6.1	2.29	-0.75	0.42	5th	23	0	0	0	4	11	2	0	3	0	4	4	12	5	2	0
376	85	6.4	3.02	-1.93	0.59	5th	24	0	0	0	4	7	10	1	1	4	1	7	11	2	2	1
382	86	7.6	5.27	?	0.96	5th	25	0	0	0	4	18	6	2	1	0	2	6	8	10	1	0
365	86	5.6	1.83	-1.33	0.53	5th	19	0	0	0	4	7	0	0	0	0	4	0	9	0	1	16
403	87	7.6	6.14	+1.61	1.08	8th	24	0	0	0	1	17	8	2	1	0	3	3	8	5	4	4
388	89	6.3	3.34	-0.74	0.70	8th	16	0	0	0	1	10	3	3	0	1	2	3	8	9	4	0
430	88	7.1	3.79	+0.38	1.22	19th	18	0	0	0	2	16	1	1	0	3	4	5	5	7	5	0
417	77	5.5	1.34	-1.71	0.38	13th	12	0	0	1	6	8	0	1	0	4	2	4	8	7	4	0

Barometer at this station is not reduced for altitude.



TABLE XVIII.

OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE, obtained from the VALUES supplied for use in the WEEKLY WEATHER REPORT, for the Month of SEPTEMBER 1891.

STATIONS.	AIR TEMPERATURE.								RAINFALL.				BRIGHT SUNSHINE.				
	Means of				Absolute Extremes.				No. of Rainy Days.	Total Fall in the Month.	Difference from Average.	Maximum Fall in One Day.	Date.	No. of Hours recorded.	Difference from Average.	Per-centage of possible Duration.	Difference from Average.
	Minima.	Maxima.	Min. and Max. combined.	Difference from Average.	Minimum.	Date.	Maximum.	Date.									
STORNOWAY	°	°	°	°	°	*	°	*	*	ins.	ins.	ins.	*	87.7	-18.8	23	-5
LAIRG	45.4	60.1	52.8	+1.4	33	3rd	72	13th	27	2.81	-0.26	0.49	5th	—	—	—	—
GLENCARRON	46.8	58.6	52.7	+1.8	34	23rd	75	13th	25	12.34	+5.53	1.70	1st	—	—	—	—
FORT AUGUSTUS	47.6	60.2	53.9	+1.3	30	23rd	74	12th	23	6.83	+3.05	1.30	1st	70.9	?	19	?
FORT WILLIAM	49.4	59.3	54.4	+1.3	36	23rd	71	13th	26	12.90	+6.20	1.32	1st	78.6	?	21	?
ABERDEEN	*	*	*	*	*	*	*	*	*	*	*	*	*	137.7	+22.0	36	+5
BRAEMAR	45.3	57.6	51.5	+1.9	31	23rd	75	12th	17	4.17	+0.72	1.28	20th	95.5	?	25	?
EDINBURGH	—	—	—	—	—	—	—	—	—	—	—	—	—	129.1	?	34	?
OCHTERTYRE	46.4	62.6	54.5	+1.5	37	7th	81	11th	22	4.78	+1.17	0.87	25th	—	—	—	—
MARCHMONT	47.8	61.6	54.7	+2.2	41	8th, 23rd	78	12th	22	6.64	+3.31	1.89	21st	132.0	?	35	?
ALNWICK CASTLE	49.5	61.0	55.3	+2.2	42	7th	73	10th	16	3.66	+0.74	1.00	20th	—	—	—	—
DURHAM	48.4	63.6	56.0	+2.0	41	8th	78	10th	13	1.86	-0.57	0.35	22nd	128.4	+22.2	34	+6
SCARBOROUGH	51.2	63.3	57.3	+2.4	45	15th, 21st, 30th.	77	10th	13	1.59	-1.19	0.32	3rd	—	—	—	—
OSWALDKIRK	—	—	—	—	—	—	—	—	—	—	—	—	—	129.9	?	35	?
YORK	*	*	*	*	*	*	*	*	*	*	*	*	*	125.7	+20.4	34	+6
HILLINGTON	48.9	67.8	58.4	+2.4	41	15th	82	10th	10	1.26	-1.50	0.24	19th	162.7	+40.2	44	+11
GELDESTON	49.7	67.9	58.8	+2.0	43	12th, 16th	80	10th	9	0.98	-1.64	0.39	14th	191.6	+44.0	51	+12
CAMBRIDGE	*	*	*	*	*	*	*	*	*	*	*	*	*	169.9	+34.8	45	+9
ROTHAMSTED	45.4	66.3	57.4	+1.8	39	24th	79	10th, 11th, 12th	15	1.26	-1.50	0.25	14th	161.5	?	43	?
BAWTRY	46.7	67.5	57.1	+1.7	38	23rd	84	13th	10	0.94	-1.53	0.24	21st	—	—	—	—
WORKSOP	—	—	—	—	—	—	—	—	—	—	—	—	—	144.1	+33.9	39	+10
STAMFORD (KETTON HALL).	47.2	68.5	57.9	+1.8	37	24th	85	10th	12	1.48	?	0.49	21st	—	—	—	—
THURCASTON	—	—	—	—	—	—	—	—	—	—	—	—	—	154.3	+46.6	41	+12
CHEADLE	48.8	64.0	56.4	+2.5	43	3rd, 7th, 15th	79	11th	15	1.98	-1.33	0.35	21st	—	—	—	—
CHURCHSTOKE	48.4	64.9	56.7	+2.7	39	3rd, 7th	80	11th	18	2.57	-0.21	0.80	19th	159.3	+34.4	43	+10
HEREFORD	48.8	66.8	57.8	+2.0	39	3rd	80	10th, 11th	15	1.29	-1.50	0.25	20th	—	—	—	—
CIRENCESTER	47.6	64.2	55.9	+0.9	39	24th	77	10th, 11th, 12th	15	1.62	-1.57	0.41	13th	135.1	+14.8	36	+4
OXFORD	*	*	*	*	*	*	*	*	*	*	*	*	*	148.2	+14.3	40	+4
LONDON	*	*	*	*	*	*	*	*	*	*	*	*	*	141.9	+29.6	38	+8
STRATHFIELD TURGISSE	47.8	67.1	57.5	+1.0	41	24th	80	11th, 12th	20	1.79	-0.76	0.32	19th	—	—	—	—
HASTINGS	53.9	64.9	59.4	+0.7	46	15th, 22nd	77	11th, 12th	14	0.90	-1.84	0.33	17th	171.9	+13.2	46	+4
EASTBOURNE	—	—	—	—	—	—	—	—	—	—	—	—	—	164.4	?	44	?
SOUTHAMPTON	51.6	67.0	59.3	+1.4	44	16th, 24th	80	12th	16	1.33	-1.71	0.18	30th	153.0	+3.2	41	+2
STOWELL	50.4	63.9	57.2	+1.7	42	3rd	78	11th, 12th	18	2.54	?	0.90	13th	—	—	—	—
LAUDALE	48.6	61.0	54.8	+1.4	41	7th	75	13th	25	10.87	+4.09	1.70	1st	—	—	—	—
GLASGOW	49.7	60.7	55.2	+2.2	40	23rd	73	13th	25	4.71	+0.76	0.66	20th	87.2	-8.4	23	-2
GLENLEE	45.4	61.6	53.5	+0.8	31	23rd	75	15th	26	6.26	+1.11	1.00	5th	—	—	—	—
DOUGLAS	49.4	61.2	55.3	+1.2	39	3rd	76	12th	18	6.65	+2.92	1.17	21st	135.8	-0.0	36	0
NEWTON REIGNY	47.2	62.3	54.8	+1.6	36	23rd	80	11th, 12th	20	5.55	+2.23	1.04	20th	98.2	-25.3	26	-7
STONYHURST	50.2	62.2	56.2	+1.6	45	3rd, 7th, 21st, 23rd	76	10th	19	4.95	-0.05	0.78	5th	128.5	+8.6	34	+2
BLACKPOOL	52.6	64.4	58.5	+3.5	44	25th	80	13th	14	3.87	+0.12	1.07	6th	114.8	-3.8	31	-1
MANCHESTER	50.2	64.1	57.2	+2.3	43	3rd	80	11th	21	3.10	-0.86	0.67	19th	—	—	—	—
LLANDUDNO	53.6	64.8	59.2	+2.5	47	3rd	81	10th	14	3.94	+0.86	0.97	30th	126.2	+17.5	34	+5
LLANDOVERY	48.6	66.4	57.5	+1.8	35	3rd	84	10th, 11th	23	4.62	-0.16	0.83	30th	—	—	—	—
PEMBROKE	*	*	*	*	*	*	*	*	*	*	*	*	*	141.0	-1.5	38	0
ARLINGTON	50.5	63.1	56.8	+1.3	41	23rd	77	12th	20	5.47	+0.69	1.28	17th	—	—	—	—
CULLOMPTON	49.1	66.0	57.6	+1.7	41	23rd, 30th	80	12th	17	1.95	-1.50	0.36	30th	136.8	+2.9	37	+1
TORQUAY	—	—	—	—	—	—	—	—	—	—	—	—	—	165.3	?	44	?
NEWQUAY	—	—	—	—	—	—	—	—	—	—	—	—	—	138.0	?	37	?
FALMOUTH	52.9	62.2	57.6	+0.3	46	23rd	69	12th	17	2.69	-2.01	0.39	30th	160.6	+14.9	43	+4
PLYMOUTH	53.7	63.4	58.6	+0.9	45	23rd, 28th	76	12th	13	2.52	-1.25	0.47	18th	144.3	-3.2	39	-1
GUERNSEY	—	—	—	—	—	—	—	—	—	—	—	—	—	180.1	?	48	?
JERSEY	*	*	*	*	*	*	*	*	*	*	*	*	*	185.2	+9.8	50	+3
LONDONDERRY	50.2	63.4	56.8	+2.6	42	23rd	77	11th, 13th	23	3.49	-0.29	0.51	5th	—	—	—	—
MARKREE CASTLE	47.9	61.6	54.8	+1.4	37	7th	75	11th	23	2.62	-0.63	0.79	5th	112.8	+19.2	30	+5
BROOKEBOROUGH	47.7	61.8	54.8	+2.1	39	7th, 21st	76	11th	19	3.65	-0.13	0.83	5th	—	—	—	—
ARMAGH	49.0	62.9	56.0	+2.3	42	21st	75	11th	22	1.70	-1.35	0.50	5th	139.6	+36.3	37	+9
EDGEWORTHSTOWN	48.2	63.2	55.7	+2.1	40	7th	76	11th	15	3.20	-0.01	0.78	5th	—	—	—	—
ARLEY (Co. CAVAN)	—	—	—	—	—	—	—	—	—	—	—	—	—	134.3	?	36	?
DUBLIN	51.6	63.5	57.6	+2.1	45	7th	76	10th	18	2.13	-0.21	0.56	19th	156.4	+28.0	42	+8
PARSONSTOWN	—	—	—	—	—	*	*	*	*	*	*	*	*	148.4	+31.2	40	+9
KILKENNY CASTLE	48.7	63.1	55.9	+0.4	38	7th	75	10th	19	2.20	-0.80	0.28	30th	—	—	—	—
WATERFORD	50.0	63.2	56.6	+0.1	38	7th	73	11th	14	3.01	-0.52	0.59	7th	—	—	—	—
VALENCIA	*	*	*	*	*	*	*	*	*	*	*	*	*	133.9	+11.7	36	+3
KILLARNEY	50.2	63.1	56.7	+0.8	36	11th	77	7th	18	4.10	?	0.86	25th	—	—	—	—
FOYNES	50.3	62.4	56.4	+1.2	42	30th	77	11th	19	2.98	?	0.64	5th	—	—	—	—

\* For information, see Table XVII.

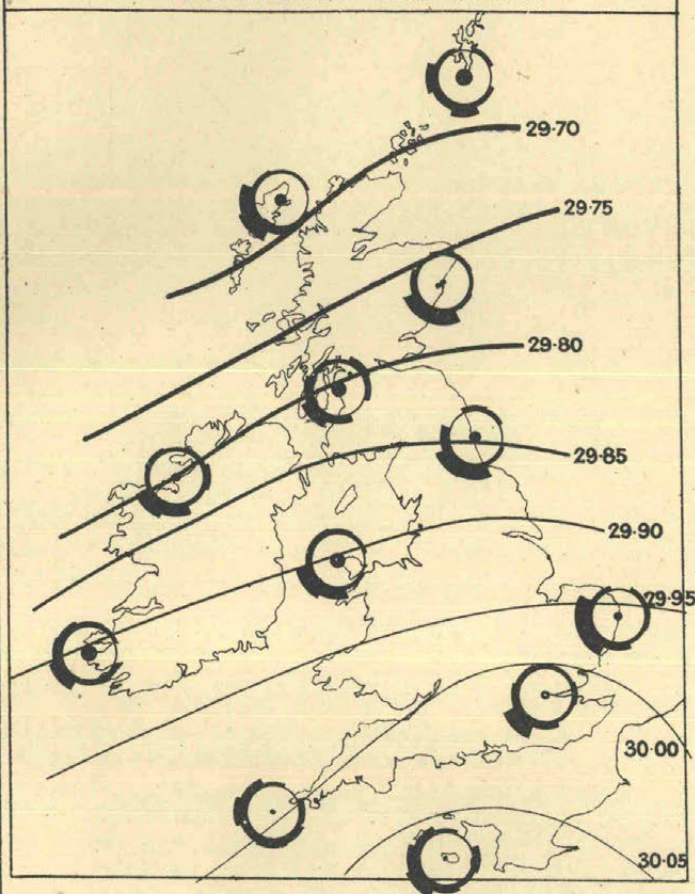


# MONTHLY WEATHER CHART, SEPTEMBER, 1891.

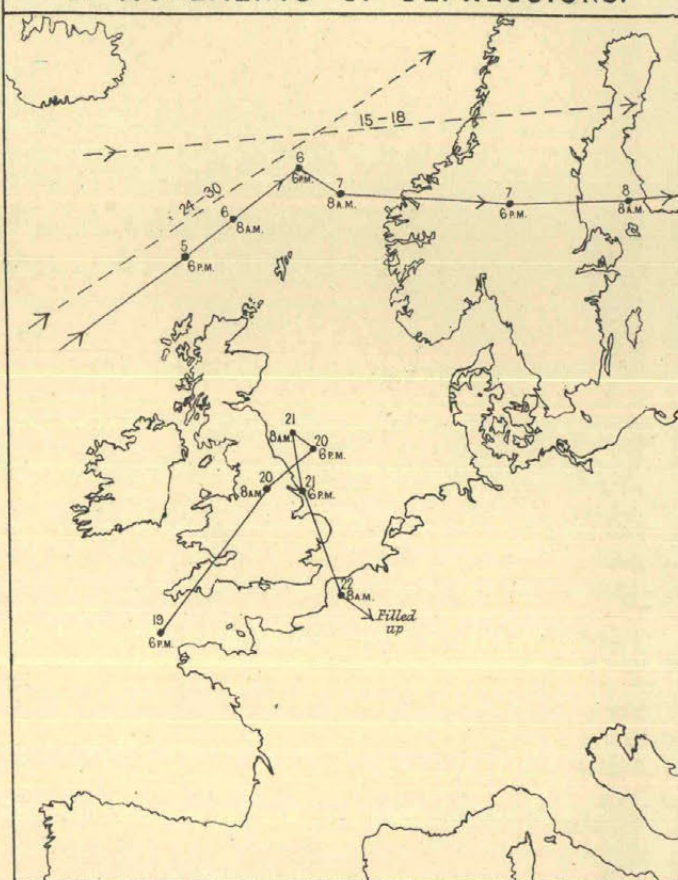
Monthly Summary.

Plate ix.

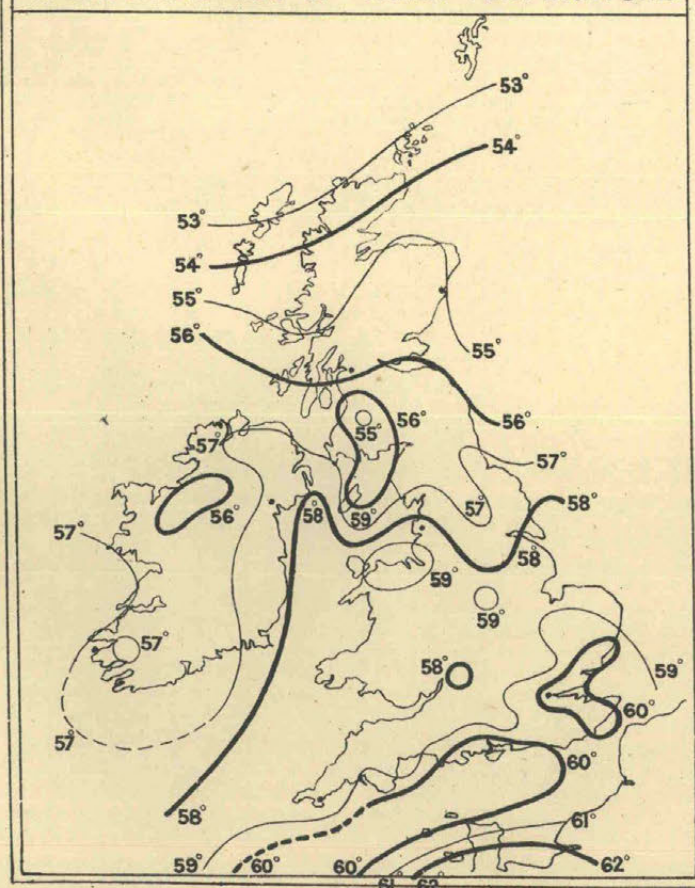
## 1. BAROMETER AND WIND.



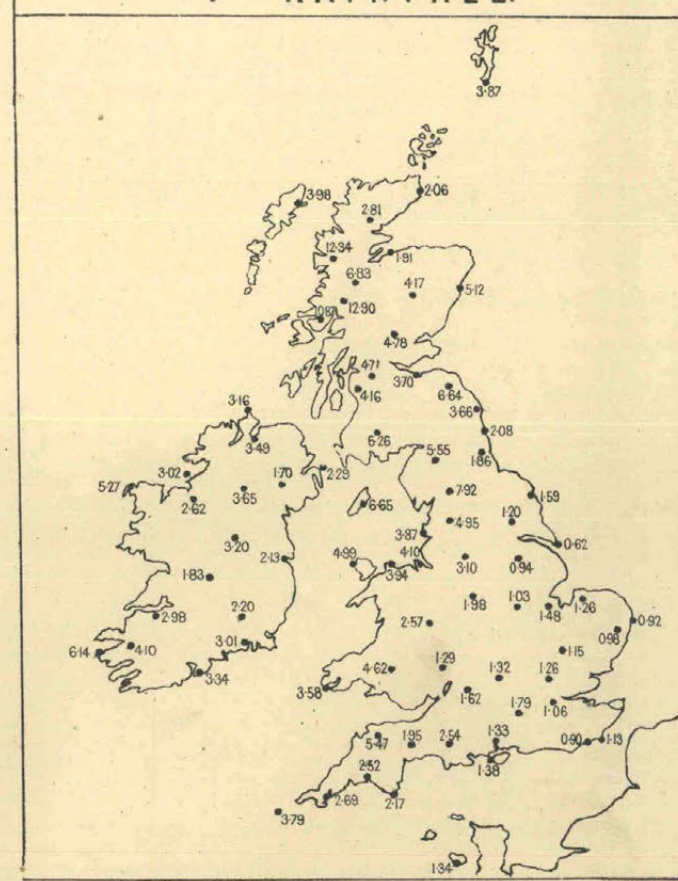
## 2. MOVEMENTS OF DEPRESSIONS.



## 3. DISTRIBUTION OF MEAN TEMPERATURE.



## 4. RAINFALL.





BAROMETER



TEMPERATURE





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

## OCTOBER 1891.

(Issued as a Supplement to the Weekly Weather Report, 1891.)

ISSUED BY THE METEOROLOGICAL OFFICE, 63, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.  
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; JOHN MENZIES & Co., 12, HANOVER ST., EDINBURGH, and 90, WEST NILE STREET, GLASGOW; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

**General Summary.**—The month of October was exceedingly wet and stormy, especially over the southern parts of England. Thunderstorms occurred in most districts, and auroral displays were unusually prevalent in the north of Scotland. Pressure was below the average generally; temperature was below the normal at many of the western and northern stations, but above it elsewhere; the winds were Southerly or South-westerly, and gales of considerable severity were frequent. Rainfall was greatly in excess of the normal, excepting in some of the northern districts. The amount of bright sunshine was very considerable.

**Pressure.**—Mean for the month at 8 a.m. ranged from between 29·75 ins. and 29·78 ins. over the south-east of England and the eastern half of the Channel, to 29·5 ins. and less off the west of Scotland and the north-west of Ireland. The distribution was therefore favourable for winds from the Southward and South-westward, and the gradients were unusually steep. The mean values were below the average\* in all parts of the kingdom, the deficit being greatest (0·27 in. to 0·33 in.) on the west coasts of Ireland and Scotland, and least (0·13 in. to 0·16 in.) in the south-east of England. Highest readings were recorded on the 30th or 31st, when the barometer rose above 30·5 ins. generally, and above 30·7 ins. over the northern parts of Great Britain. Lowest readings were observed as a rule during the passage of the deep depression of the 13th (see Map 2, Plate X.), when the barometer fell to 28 ins. or rather less in the extreme northern and north-western parts of the kingdom, to 28·5 ins. or less over Ireland and Scotland generally, and to between 28·7 ins. and 29·3 ins. over the greater part of England. In the south and east of England, however, equally low readings were registered between the 21st and 23rd of the month. Range was large, especially in the west and north, where it amounted to over two inches.

**Depressions** were very numerous, but in many cases their centres lay too far to the westward or northward of our Islands for the tracks to be laid down on Map 2, Plate X. The most important disturbance was that of the 13th, but the smaller system which traversed Ireland and Scotland on the 16th was of almost equal depth.

**Anticyclones.**—The anticyclones noticed over Europe were as a rule located far to the eastward or southward of our Islands. During the concluding week, however, a large area spread over the United Kingdom from the northward, and at the close of the month the central portion of this system embraced the greater part of north-western Europe.

**Winds.**—The prevailing winds were Southerly and South-westerly, the slight proportion of Easterly breezes being confined almost exclusively to the last week of the month. Gales were of unusual frequency, especially over the English Channel, no fewer than 16 being reported at Dungeness and 14 at Hurst Castle. On other portions of our coasts the maximum number was 12, this value being reached at Stornoway, Mullaghmore, Valencia, and Roche's Point. The Southerly to South-westerly gale of the 13th–14th was very general and of great violence.

**Temperature.**—Mean at Sea Level ranged from 56° at Jersey, and from between 52° and 55° on the south and south-east coasts of England, to a little below 47° over central Ireland, and many of the inland parts of Scotland. Over Ireland, the south-west of England, and at several stations situated in Scotland and the north of England the values were below the average,\* but elsewhere they were above it, the excess being greatest on our south and south-east coasts. Highest readings were observed on somewhat irregular dates, but mostly on the 1st, 3rd, or 4th, when the thermometer rose above 60° in most districts, and above 65° in the south and east of England. Lowest readings occurred mostly between the 29th and 31st, excepting in Ireland, where they were registered on the 25th and 26th; sharp frost was recorded in many of the inland districts, the lowest reading of all being 20° at Braemar. Range was moderate. Vapour Tension varied from 0·26 in. or less over central Ireland and the central and eastern parts of Scotland to between 0·36 in. and 0·39 in. on the south coast of England. Relative Humidity was as low as 81 per cent. at Jersey and below 85 per cent. at one or two other stations on our eastern and western coasts; at Stornoway and Ardrossan it was 96, and at Hurst Castle 97.

**Rainfall** was less than the average\* in the north and east of Scotland and some portions of the north of England, but considerably in excess in most other districts, the difference being especially large over the central and southern parts of England, where the aggregate fall was in many cases from two to three times as much as the average. The largest amounts recorded over England were 9·8 ins. at Southampton, 9·5 ins. at Hurst Castle, and 8·1 ins. at Falmouth. In the extreme north of England, and in many of the eastern Scotch districts, there was less than 2 ins. The number of rainy days was not particularly large in Ireland and Scotland, but at most of the English stations it was above the average for October.

**Bright Sunshine.**—Notwithstanding the generally unsettled character of the weather, the amount of bright sunshine was above the average\* over the entire kingdom, the excess being especially great in the west. The per-centage of the possible amount of duration was above 30 in all localities, excepting the north of England and some isolated parts of Scotland, and above 40 at many of our western and southern stations, the highest of all being 50 at Dublin, 47 at Jersey, and 46 at Armagh.

\* The averages employed are—Pressure and Temperature for the 20 years, 1871–90; Rainfall for the 25 years, 1866–90; Bright Sunshine for the 10 years 1881–90.



TABLE XIX.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at TELEGRAPHIC  
Observations are made at 8 a.m. daily, but the Numbers of Days of Rain, Snow, Hail,  
(The Stations are grouped in Districts, and then arranged in order of

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit and Mean Sea Level) from Observations made at 8 a.m.	Difference from Average.	AIR TEMPERATURE.									
				At 8 a.m.	Means of				Absolute Extremes.				
					Minima.	Maxima.	Min. and Max. combined.	from Average.	Minimum.	Date.	Maximum.	Date.	
0. SCOTLAND, N.	Sumburgh Head	ins. 29°556	ins. -170	48°6	43°8	51°8	47°8	+2°1	39	23rd, 25th	55	3rd, 4th, 5th, 9th, 4th	
	Wick	29°555	-208	47°1	42°6	54°3	48°5	+2°4	32	26th	60		
	Stornoway	29°482	-274	46°7	41°6	52°3	47°0	+1°2	29	28th	57	2nd, 3rd, 5th	
1. SCOTLAND, E.	Nairn	29°547	-232	44°9	38°5	54°7	46°6	+0°2	24	29th	64	3rd	
	Aberdeen	29°629	-164	45°8	40°8	52°9	46°9	-0°1	31	29th	59	4th	
	Leith	29°618	-204	46°4	40°7	55°2	48°0	-0°3	30	29th, 31st	63	4th	
2. ENGLAND, N.E.	Shields	29°658	-188	47°5	42°2	55°0	48°6	+0°6	36	24th, 25th, 29th	62	4th	
	York	29°701	-181	46°6	40°4	55°1	47°8	-0°2	31	31st	62	4th, 5th	
	Spurn Head	29°713	-154	50°8	47°3	55°7	51°5	+2°0	41	31st	62	4th	
3. ENGLAND, E.	Yarmouth	29°768	-126	52°2	47°2	56°8	52°0	+2°5	40	31st	64	1st	
	Cambridge	29°766	-146	49°2	42°7	58°5	50°6	+1°8	28	31st	67	1st	
4. MIDLAND COUNTIES	Loughborough	29°703	-201	46°4	42°2	57°2	49°7	+1°3	25	31st	64	9th	
	Oxford	29°753	-171	47°4	43°3	56°2	49°8	+0°9	28	31st	63	9th	
5. ENGLAND, S.	London	29°774	-149	50°3	44°8	59°0	51°9	+2°2	30	31st	68	1st, 4th	
	Dungeness	29°780	-136	53°8	49°8	59°0	54°4	+3°2	38	3rd	66	1st	
	Hurst Castle	29°763	-159	53°0	49°2	58°3	53°8	+2°3	39	31st	63	3rd, 6th	
6. SCOTLAND, W.	Ardrossan	29°591	-240	48°2	45°1	54°5	49°8	+1°1	34	25th, 30th	60	2nd	
7. ENGLAND, N.W.	Hawes Junction*	28°434	?	43°6	39°4	49°8	44°6	?	30	30th	56	4th, 5th, 6th, 8th, 3rd	
	Liverpool	29°681	-198	47°3	44°1	54°5	49°3	0°0	35	25th	62		
	Holyhead	29°632	-240	49°7	47°2	55°3	51°3	+0°3	39	29th	61	3rd	
8. ENGLAND, S.W.	Pembroke	29°652	-236	51°6	48°3	55°3	51°8	+0°3	39	30th, 31st	60	3rd	
	Prawle Point	29°729	-202	52°0	48°0	55°3	51°7	+0°2	38	31st	60	4th, 9th	
9. IRELAND, N.	Malin Head	29°501	-324	46°5	43°5	52°1	47°8	+0°2	39	13th, 25th, 31st	60	3rd	
	Donaghadee	29°599	-251	47°3	43°0	55°2	49°1	+0°5	32	25th	62	3rd	
	Mullaghmore	29°526	-319	47°3	44°2	53°5	48°9	-1°1	35	26th	65	8th	
	Belmullet	29°519	-321	47°7	44°7	53°0	48°9	-2°0	37	30th	61	3rd	
10. IRELAND, S.	Parsonstown	29°577	-320	43°9	39°9	54°8	47°4	-0°5	27	30th	64	3rd	
	Valencia	29°569	-327	49°9	44°6	55°2	49°9	-1°8	33	30th	60	3rd	
	Roche's Point	29°604	-288	49°6	45°5	54°5	50°0	-1°1	35	26th	59	6th	
CHANNEL ISLANDS	Scilly (St. Mary's)	29°663	-247	53°4	49°1	56°9	53°0	-0°4	45	23rd, 31st	61	3rd, 14th, 13th	
	Jersey	29°785	-140	55°1	50°3	59°8	55°1	+1°7	39	31st	66	9th	

\* Hawes Junction is 1,135 feet above Mean Sea Level, and the



## SUMMARY OF OBSERVATIONS, OCTOBER 1891.

xxxix

REPORTING STATIONS in the BRITISH ISLANDS, during the Month of OCTOBER 1891.

Thunderstorms, and Gales are counted irrespective of the hours at which they occurred.

Latitude, beginning in each case with the Station lying furthest North.)

TENSION OF VAPOUR.	RELATIVE HUMIDITY.	AMOUNT OF CLOUD.	RAINFALL.				WEATHER.							WIND.								
			Total Fall in the Month.	Difference from Average.	Maximum Fall in One Day.	Date.	No. of Days of +							No. of Observations of								
							Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calm.
in.	%		ins.	ins.	in.	6th																
0.310	91	7.6	2.23	-2.04	0.47	6th	19	0	0	1	1	16	4	2	0	2	7	10	3	0	2	5
290	90	5.8	1.86	-1.16	0.65	24th	12	0	1	0	8	11	6	1	0	0	1	15	4	2	8	0
305	96	7.3	9.38	+4.34	1.50	4th	23	0	0	0	1	18	12	0	0	0	3	6	10	5	2	5
250	85	5.0	0.66	-1.72	0.23	16th	11	0	0	0	7	8	1	0	0	1	1	2	10	2	0	15
257	44	5.8	2.56	-0.31	0.44	6th	13	0	1	0	0	5	10	0	0	1	3	11	6	6	4	0
273	87	6.8	1.40	-0.57	0.33	8th	15	0	0	0	1	12	0	1	3	1	4	7	10	2	1	2
284	88	7.6	1.31	-1.17	0.26	6th	15	0	0	0	0	10	3	0	2	0	4	13	5	2	2	8
289	92	6.4	3.23	+0.63	0.74	13th	18	0	0	0	9	16	1	2	3	3	5	12	3	1	1	1
318	85	6.9	2.54	+0.27	0.43	22nd	19	0	0	1	1	9	10	0	4	2	2	11	10	1	1	0
345	89	4.9	3.31	+0.39	0.60	22nd	21	0	0	3	9	5	8	1	2	3	2	9	8	5	0	1
329	95	6.6	4.18	+1.91	0.78	22nd	19	0	0	3	5	16	1	3	1	3	0	17	6	0	0	1
292	93	7.3	5.03	+2.23	1.07	6th	23	0	1	0	1	12	6	0	3	2	6	7	5	2	3	3
298	91	5.6	5.76	+3.20	1.05	6th	23	0	1	1	12	14	0	0	6	1	3	10	6	3	0	2
319	88	6.7	4.86	+2.20	0.59	6th	19	0	1	3	8	15	7	0	3	3	0	6	14	1	1	3
360	86	6.8	4.34	+1.12	0.60	13th	20	0	0	1	0	8	16	3	0	5	1	4	8	6	3	1
389	97	5.5	9.46	+6.18	1.26	6th	24	0	3	0	3	5	14	0	6	2	1	2	11	8	1	0
320	96	6.0	3.54	-0.33	0.90	18th	16	0	0	1	3	10	3	1	5	6	3	7	4	3	1	1
263	93	7.5	7.14	?	1.18	14th	21	0	1	0	1	15	0	1	2	4	5	13	5	1	0	0
278	86	6.4	2.63	-0.83	0.39	18th	21	0	0	0	6	10	1	0	2	5	11	5	4	4	0	0
306	86	6.2	5.74	+1.43	0.80	18th	21	0	0	1	1	5	8	1	1	5	2	4	12	2	2	2
340	89	6.4	7.53	+3.57	1.07	18th	24	0	0	0	1	7	10	1	3	4	0	6	11	5	1	0
348	90	7.2	5.91	+2.31	0.90	5th	22	0	3	2	0	13	9	1	4	2	1	4	13	3	3	0
274	88	5.4	3.06	?	0.48	13th	18	0	0	0	4	8	7	1	0	2	6	16	3	1	2	0
285	88	5.3	4.70	+1.56	0.84	13th	18	0	0	0	3	6	8	0	1	4	2	8	8	6	2	0
267	83	5.8	5.60	+0.85	1.47	4th	19	0	1	0	7	8	12	0	5	4	4	9	7	0	2	0
280	85	5.5	8.27	?	1.10	5th	23	0	1	0	6	12	11	3	0	5	4	3	8	7	1	0
256	89	5.5	3.07	-0.09	0.50	5th	14	0	2	0	5	8	0	0	1	0	7	0	1	0	0	22
303	85	7.1	10.28	+4.40	1.71	5th	24	0	2	2	0	11	12	1	0	4	3	5	7	4	3	4
305	86	5.8	6.39	+2.30	1.15	5th	18	0	0	1	0	6	12	3	0	4	1	3	9	9	2	0
356	87	7.2	6.71	+3.01	1.07	18th	23	0	1	2	0	11	9	2	4	3	1	5	11	3	2	0
351	81	6.5	7.72	+3.27	1.53	21st	22	0	1	1	2	12	11	0	3	6	2	4	7	7	2	0

Barometer at this station is not reduced for altitude.



TABLE XX.

OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE, obtained from the VALUES supplied for use in the WEEKLY WEATHER REPORT for the Month of OCTOBER 1891.

STATIONS.	AIR TEMPERATURE.								RAINFALL.					BRIGHT SUNSHINE.			
	Means of				Absolute Extremes.				No. of Rainy Days.	Total Fall in the Month.	Difference from Average.	Maximum Fall in One Day.	Date.	No. of Hours recorded.	Difference from Average.	Percentage of possible Duration.	Difference from Average.
	Minima.	Maxima.	Min. and Max. combined.	Difference from Average.	Minimum.	Date.	Maximum.	Date.									
STONOWAY	°	°	°	°	°	°	°	°	°	ins.	ins.	ins.	°	98.1	+11.7	31	+3
LAIRG	37.4	53.6	45.5	-0.1	21	29th	62	2nd, 22nd	17	2.00	-2.07	0.49	13th	—	—	—	—
GLENCARRON	39.4	52.7	46.1	+1.0	29	28th, 29th	59	4th	22	7.39	-1.50	0.96	14th	—	—	—	—
FORT AUGUSTUS	39.7	53.6	46.7	+0.5	25	29th	60	5th, 6th	20	3.29	-0.81	0.66	13th	94.8	?	30	?
FORT WILLIAM	42.0	52.7	47.4	-0.1	27	29th	60	4th	23	9.42	+1.55	1.39	13th	98.4	?	31	?
ABERDEEN	—	—	—	—	—	—	—	—	—	—	—	—	—	115.4	+24.2	37	+8
BRAEMAR	36.7	49.1	42.9	-0.5	20	29th	56	3rd, 5th	18	4.93	+0.97	0.89	5th	79.0	?	25	?
EDINBURGH	—	—	—	—	—	—	—	—	—	—	—	—	—	107.2	?	34	?
OCHTERTYRE	38.9	54.6	46.8	+0.7	27	30th	65	4th	21	6.17	+1.92	1.39	8th	—	—	—	—
MARCHMONT	38.8	53.0	45.9	+0.3	30	28th, 29th	59	4th	16	1.80	-1.52	0.37	7th	106.5	?	34	?
ALNWICK CASTLE	41.6	52.7	47.2	0.0	34	28th, 30th	59	4th, 8th	14	3.36	+0.50	0.76	8th	—	—	—	—
DURHAM	40.8	54.2	47.5	+0.3	29	31st	61	4th	20	1.93	-0.98	0.34	6th	73.8	-9.6	23	-3
SCARBOROUGH	43.7	53.4	48.6	-0.2	33	31st	60	3rd	20	3.41	+0.34	0.71	6th	—	—	—	—
OSWALDKIRK	—	—	—	—	—	—	—	—	—	—	—	—	—	84.2	?	26	?
YORK	—	—	—	—	—	—	—	—	—	—	—	—	—	87.2	+6.7	27	+2
HILLINGTON	42.8	57.3	50.1	+1.6	28	31st	65	1st	22	4.28	+1.67	0.67	22nd	113.2	+18.8	35	+6
GELDESTON	44.0	58.6	51.3	+1.8	31	31st	67	1st	22	3.88	+1.26	0.68	21st	130.5	+19.2	40	+6
CAMBRIDGE	—	—	—	—	—	—	—	—	—	—	—	—	—	122.5	+16.9	38	+5
ROTHAMSTED	42.6	56.6	49.6	+1.7	28	31st	63	1st, 9th	22	6.57	+3.64	1.16	6th	131.1	?	40	?
BAWTRY	39.2	55.3	47.3	-0.4	28	30th	62	9th	19	3.46	+0.71	1.07	6th	—	—	—	—
WORKSOP	—	—	—	—	—	—	—	—	—	—	—	—	—	82.9	0.0	26	0
STAMFORD (KETTON HALL).	41.3	57.3	49.3	+1.0	24	31st	64	5th, 9th	23	5.02	?	1.03	6th	—	—	—	—
THURCASTON	—	—	—	—	—	—	—	—	—	—	—	—	—	120.3	+37.2	37	+11
CHREADE	41.2	53.7	47.5	+0.8	32	31st	60	9th	22	4.54	+0.99	0.87	6th	—	—	—	—
CHURCHSTOCK	40.2	53.5	46.9	-0.3	28	30th	61	4th, 9th	24	5.55	+2.12	0.91	13th	100.7	+11.9	31	+3
HEREFORD	42.7	55.5	49.1	+0.7	30	30th, 31st	65	9th	22	6.24	+3.46	1.33	5th	—	—	—	—
CIRENCESTER	41.0	55.1	48.1	+0.6	29	31st	60	2nd, 9th, 10th	22	8.00	+4.97	1.50	6th	118.8	+21.2	37	+7
OXFORD	—	—	—	—	—	—	—	—	—	—	—	—	—	121.4	+19.9	37	+6
LONDON	—	—	—	—	—	—	—	—	—	—	—	—	—	101.3	+24.1	31	+7
STRATHFIELD TURGIS-	42.4	57.6	50.0	+1.2	26	31st	65	9th	24	7.97	+5.32	1.17	6th	—	—	—	—
HASTINGS	48.2	58.0	53.1	+1.8	33	31st	63	6th	20	4.94	+1.34	0.63	10th, 19th	125.1	+2.8	38	0
EASTBOURNE	—	—	—	—	—	—	—	—	—	—	—	—	—	124.1	?	38	?
SOUTHAMPTON	45.4	58.5	52.0	+1.5	32	31st	67	9th	20	9.81	+6.58	1.30	6th	132.4	+20.1	41	+7
STOWELL	43.4	55.4	49.4	+0.9	31	31st	62	9th	22	8.57	?	1.13	6th	—	—	—	—
LAUDALE	40.9	55.2	48.1	+0.9	31	25th, 26th	61	3rd, 9th, 10th, 22nd, 24th.	23	11.61	+3.78	1.24	4th	—	—	—	—
GLASGOW	42.3	52.1	47.2	+0.3	28	25th	60	4th	20	3.60	-0.18	0.60	18th	85.6	+22.2	27	+7
GLENLEE	37.8	53.5	45.7	-0.5	25	29th	58	4th, 5th	24	11.90	+6.37	1.66	18th	—	—	—	—
DOUGLAS	42.8	54.0	48.4	-0.2	32	25th, 30th	58	4th, 9th, 10th	22	7.01	+2.86	0.86	5th, 20th	136.5	+36.7	43	+12
NEWTON REIGNY	39.3	52.8	46.1	-0.2	26	29th, 31st	60	5th	21	5.28	+1.68	0.92	14th	94.1	+14.2	30	+5
STONYHURST	42.9	53.4	48.2	+0.5	32	25th	60	4th	20	3.82	-1.29	0.71	18th	111.4	+31.5	35	+10
BLACKPOOL	44.9	57.4	51.2	+2.4	37	29th	63	4th, 6th, 8th	11	4.31	+0.20	1.30	1st	?	?	?	?
MANCHESTER	43.0	54.6	48.8	+0.8	32	25th	62	9th	23	4.39	+0.31	0.70	13th	—	—	—	—
LLANDUDNO	44.8	55.5	50.2	-0.3	34	31st	62	3rd, 4th	19	4.06	+0.30	0.55	18th	93.1	+18.6	29	+6
LLANDOVERY	39.8	56.1	48.0	-1.0	30	30th	64	5th	26	10.61	+5.18	1.70	13th	—	—	—	—
PEMBROKE	—	—	—	—	—	—	—	—	—	—	—	—	—	136.5	+37.2	42	+11
ARLINGTON	43.2	53.9	48.6	-0.7	33	31st	60	13th	24	6.79	+0.99	1.15	18th	—	—	—	—
CULLOMPTON	41.9	55.7	48.8	-0.6	33	31st	62	9th	23	7.89	+4.00	1.31	5th	112.5	+19.9	34	+6
TORQUAY	—	—	—	—	—	—	—	—	—	—	—	—	—	117.6	?	36	?
NEWQUAY	—	—	—	—	—	—	—	—	—	—	—	—	—	124.1	?	38	?
FALMOUTH	46.4	56.0	51.2	-0.6	41	25th	61	13th	21	8.08	+2.69	1.21	18th	122.9	+7.6	38	+3
PLYMOUTH	46.6	57.1	51.8	+0.5	40	18th, 24th	64	13th	21	8.39	+4.66	1.15	5th	118.7	+15.4	36	+4
GUERNSEY	—	—	—	—	—	—	—	—	—	—	—	—	—	149.3	?	45	?
JERSEY	—	—	—	—	—	—	—	—	—	—	—	—	—	153.9	+29.0	47	+9
LONDONERRY	40.6	52.9	46.8	-1.4	31	25th, 30th	60	3rd	21	3.81	-0.39	0.66	13th	—	—	—	—
MARKREE CASTLE	38.5	52.9	45.7	-2.0	25	25th, 29th, 30th	59	3rd	23	5.22	+1.34	1.23	13th	121.6	+37.2	38	+12
BROOKBOROUGH	39.1	53.6	46.4	-0.2	26	25th	59	3rd, 4th, 5th	17	4.75	+0.61	0.96	13th	—	—	—	—
ARMAGH	39.9	54.3	47.1	-0.2	28	25th, 29th	62	3rd	18	3.42	+0.43	0.92	13th	146.8	+69.0	46	+22
EDGEWORTHSTOWN	37.5	53.8	45.7	-0.9	24	25th	63	3rd	18	3.47	+0.42	0.77	13th	—	—	—	—
ARLEY (COUNTY CAVAN)	—	—	—	—	—	—	—	—	—	—	—	—	—	134.5	?	42	?
DUBLIN	44.0	55.0	49.5	0.0	33	25th	63	3rd, 4th	13	3.59	+0.56	1.18	13th	159.9	+59.7	50	+19
PARSONSTOWN	—	—	—	—	—	—	—	—	—	—	—	—	—	130.4	+39.0	40	+12
KILKENNY CASTLE	40.0	54.7	47.4	-1.4	26	25th	61	3rd	20	4.22	+1.11	1.02	5th	—	—	—	—
WATERFORD	41.4	55.1	48.3	-2.5	27	25th	62	4th	20	6.20	+2.21	1.10	15th	—	—	—	—
VALENCIA	—	—	—	—	—	—	—	—	—	—	—	—	—	135.3	-36.6	42	+12
KILLARNEY	41.7	54.5	48.1	-2.0	29	30th	62	4th	29	9.03	?	1.47	18th	—	—	—	—
FOYNES	42.5	53.7	48.1	-0.3	32	29th	62	3rd	20	4.11	?	0.73	13th	—	—	—	—

\* For information see Table XIX.

† Records incomplete at present.

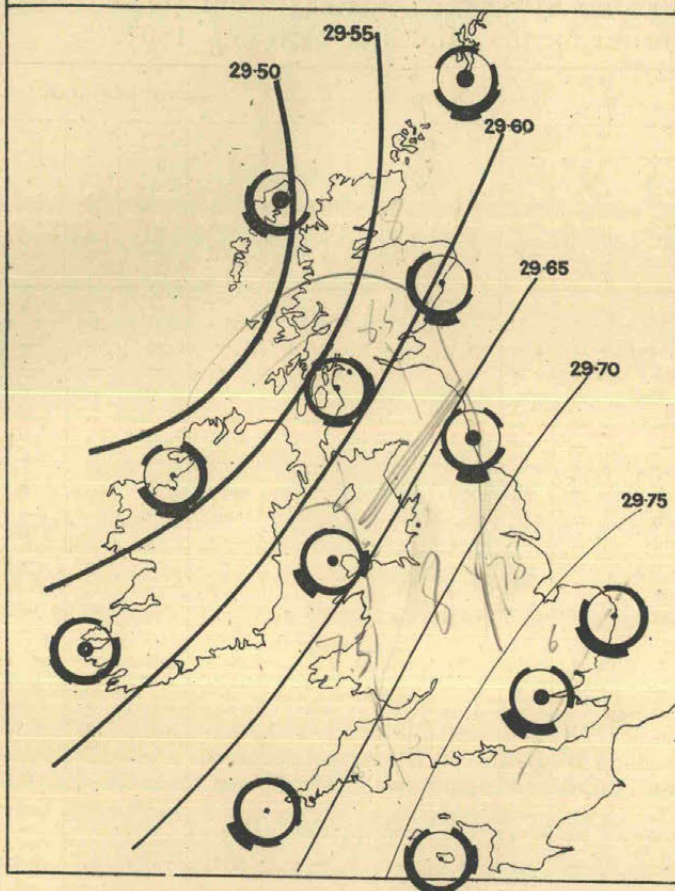


# MONTHLY WEATHER CHART, OCTOBER, 1891.

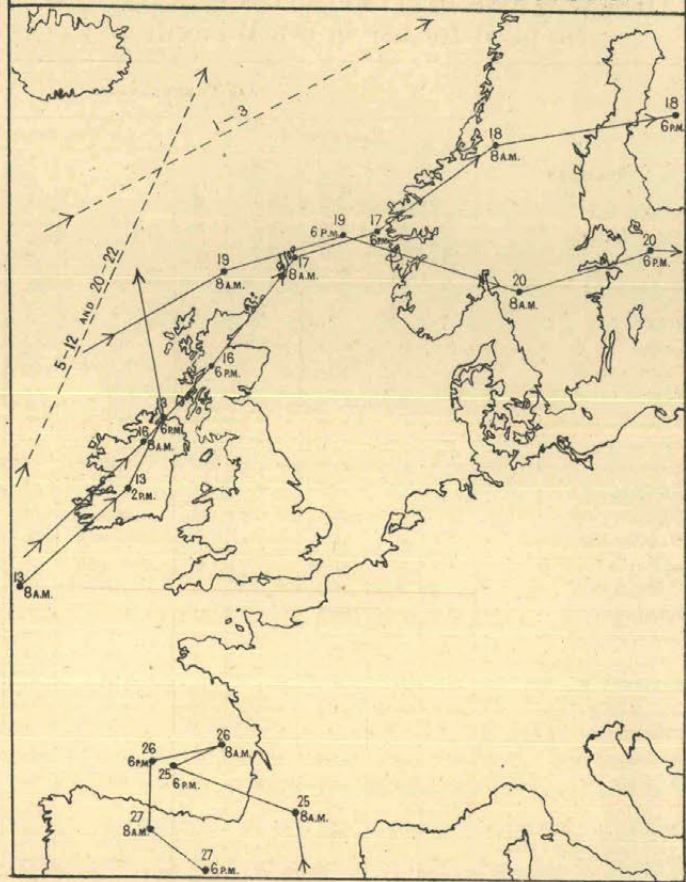
Monthly Summary.

Plate X.

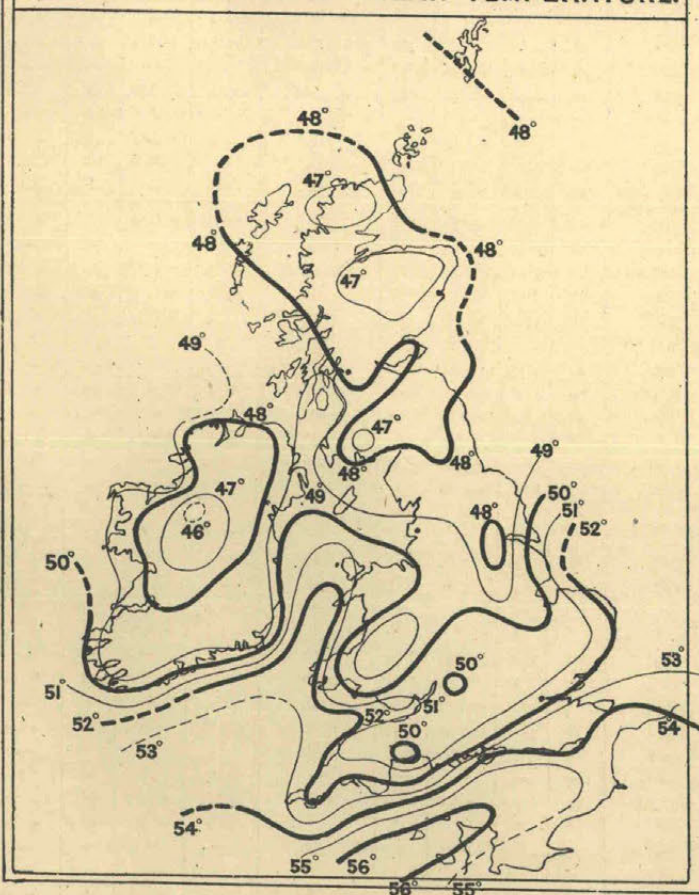
## 1. BAROMETER AND WIND.



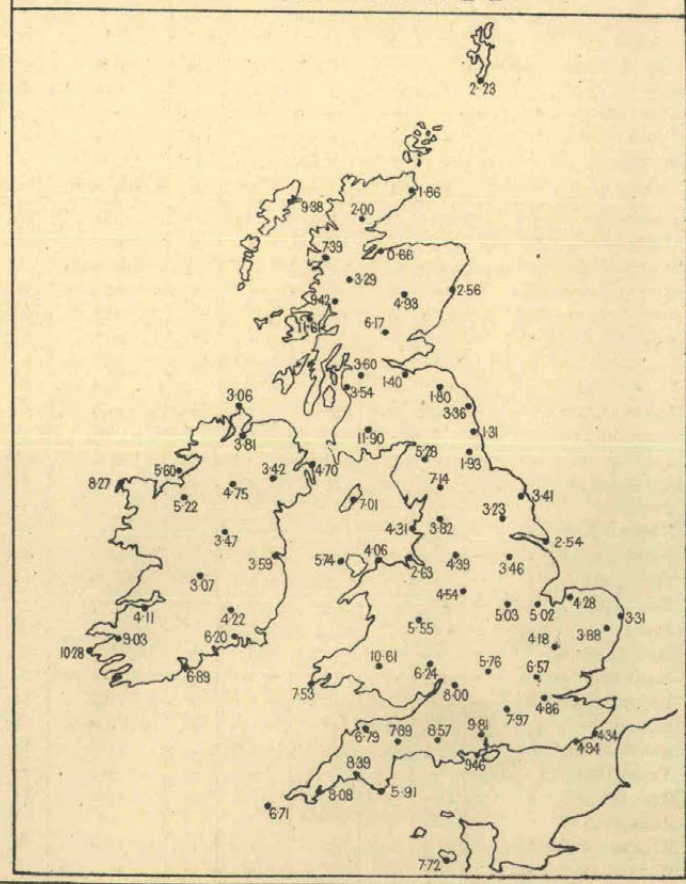
## 2. MOVEMENTS OF DEPRESSIONS.



## 3. DISTRIBUTION OF MEAN TEMPERATURE.



## 4. RAINFALL.



To face p. XI.







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

## NOVEMBER 1891.

(Issued as a Supplement to the Weekly Weather Report, 1891.)

ISSUED BY THE METEOROLOGICAL OFFICE, 63, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.  
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; JOHN MENZIES & Co., 12, HANOVER STREET, EDINBURGH, and 90, WEST NILE STREET, GLASGOW; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

**General Summary.**—The weather of November was at first quiet and dry, with fog or haze over Great Britain; its condition, however, afterwards became very rough and unsettled, and gales occurred frequently with some heavy falls of rain. The South-westerly gale which swept over our Islands on the 11th was of great severity, especially on our southern coasts. Pressure and temperature were each below the average excepting in the north of Scotland; the winds varied a good deal in direction, gales being less numerous than in October; rainfall differed greatly in various parts of the kingdom, but upon the whole was less than the normal at the English Stations. The amount of bright sunshine was very deficient, excepting in the extreme south, where an excess was shown.

**Pressure.**—*Mean at Sea Level* ranged from between 29·85 ins. and 29·87 ins. over the south-east of England and the greater part of the Channel to about 29·65 ins. in the Hebrides, the gradient being favourable for winds from a rather more southerly point than that shown by the ordinary distribution for November. In the extreme north and north-east of Scotland the mean values were slightly above the average,\* but in all other districts they were below it, the deficit being greatest (0·08 in. to 0·09 in.) in the south-western parts of England and Ireland. *Highest* readings were observed mostly on the 5th, when the barometer rose above 30·7 ins. at some of our north-western stations and above 30·6 ins. in most other districts. *Lowest* readings were recorded during the progress of the deep depression of the 11th (shown in Map 2, Plate XI.), when the barometer fell below 28·5 ins. in almost all parts of Great Britain, and below 28·4 ins. at some of our western and northern stations. *Range* was very large, amounting to 2 ins., or rather more, in nearly all parts of the United Kingdom.

**Depressions.**—Numerous depressions of considerable depth skirted our western and northern coasts, but in the majority of cases their centres were too distant for the tracks to be shown in Map 2, Plate XI. The disturbance which travelled north-eastwards across the United Kingdom on the 11th was of unusual intensity, and during its passage the barometer over the south-east of England fell to a lower level than at any time since the deep depression of December 8–9, 1886.

**Anticyclones.**—An anticyclone of great height spread over our Islands from the northward at the close of October, and increased in size until it embraced a considerable part of Europe. After the first week in November the system moved away to the eastward, and for the remainder of the month no well-defined anticyclone was observed in the neighbourhood of our Islands.

**Winds** were somewhat variable. On our northern and eastern coasts there was a decided preponderance of breezes from between South-east and West, but at the western and south-western stations there were frequent spells of Easterly and North-easterly winds. Gales were far less numerous than in October, but as many as 11 were reported at Mullaghmore, and 8 at Prawle Point, Valencia, and Scilly. On the south and east coasts of England there were not more than 4 or 5.

**Temperature.**—*Mean at Sea Level* ranged from a little above 48° in the Scilly and Channel Islands to rather below 41° over Central Ireland and isolated parts of the north of England and the south and west of Scotland, and to very little above 39° at Nairn. The type of distribution was of a rather more wintry character than is usual in November, and the actual values were below the average\* in all districts excepting the extreme north of Scotland. Over Great Britain the deficit was small, but in Ireland it was far greater, the mean readings in the south of that country being from 3° to 4° below the average. *Highest* values were recorded mainly on the 18th or 19th, when the thermometer rose to a little above 55° in most parts of the kingdom. *Lowest* readings were observed as a rule at varying times between the 23rd and 28th, when sharp frost occurred very generally; at Newton Reigny the sheltered thermometer fell to 21°, at Lairg to 20°, and at Braemar to 16°. *Range* was moderate, the amount varying between 30° and 35° at most of the inland stations. *Vapour Tension* varied from 0·28 in. or rather more on some parts of our south and south-west coasts to 0·22 in. or less over the central parts of Ireland and Scotland. *Relative Humidity* was as high 94 per cent. at York, Oxford, and Cambridge, 96 at Hurst Castle, and 98 at Stornoway; at Aberdeen, however, the value was only 85, and on some parts of our south-west coasts it was even lower, the smallest per-centage of all being 82 at Jersey.

**Rainfall** varied considerably in different districts. Over some parts of our midland, north-western, and southern counties as well as in isolated parts of Ireland and Scotland, the amount was more than the average,\* but in most other localities there was a deficit, the latter characteristic being rather marked at the eastern stations. In most districts the largest daily fall was recorded on the 10th or 11th during the passage of the deep depression noticed above, the amount exceeding 1 in. at several of our western and southern stations. The number of rainy days varied greatly in different parts of the country, but was upon the whole rather in excess of the average.

**Bright Sunshine** was upon the whole very deficient, the only localities showing an excess being the Hebrides and the Channel stations. At Jersey the per-centage of the possible amount was as high as 37, or 13 above the average,\* but in all other places it was below 30 while in the northern, eastern, and central parts of Great Britain it was below 20. The lowest per-centages of all were 6 at Glasgow and 7 at Fort Augustus and Stonyhurst.

\* The averages employed are—*Pressure* and *Temperature* for 29 years, 1871–90; *Rainfall* for 25 years, 1866–90; *Bright Sunshine* for 10 years, 1881–90.



TABLE XXI.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at TELEGRAPHIC  
Observations are made at 8 a.m. daily, but the Numbers of Days of Rain, Snow, Hail,  
(The Stations are grouped in Districts, and then arranged in order of Latitude,

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit and Mean Sea Level) from Observations made at 8 a.m.	Difference from Average.	AIR TEMPERATURE.									
				Means of					Absolute Extremes.				
				At 8 a.m.	Minima.	Maxima.	Min. and Max. combined.	Difference from Average.	Minimum.	Date.	Maximum.	Date.	
0. SCOTLAND, N.	Sumburgh Head	ins. 29° 7'10	+0° 027	43° 5	40° 5	46° 9	43° 7	+2° 0	35	27th, 28th	50	1st, 14th, 19th	
	Wick	29° 7'05	-0° 017	41° 6	36° 2	46° 7	41° 5	+0° 4	28	26th, 27th	53	2nd	
	Stornoway	29° 6'52	-0° 047	41° 8	35° 1	46° 9	41° 0	-0° 6	28	27th	53	1st	
1. SCOTLAND, E.	Nairn	29° 7'03	-0° 035	39° 2	32° 1	45° 4	38° 8	-1° 7	23	25th	52	19th	
	Aberdeen	29° 7'79	+0° 031	41° 0	37° 6	46° 0	41° 8	+0° 4	27	28th	51	2nd	
	Leith	29° 7'79	-0° 010	41° 4	36° 2	47° 1	41° 7	-0° 9	27	24th, 28th	55	18th	
2. ENGLAND, N.E.	Shields	29° 7'86	-0° 027	41° 8	36° 5	46° 7	41° 6	-1° 0	28	27th, 28th	54	19th	
	York	29° 8'27	-0° 019	40° 5	35° 4	46° 3	40° 9	-1° 1	27	27th, 28th	55	19th	
	Spurn Head	29° 8'14	-0° 028	43° 3	39° 6	46° 9	43° 3	-0° 2	30	26th, 27th	53	18th	
3. ENGLAND, E.	Yarmouth	29° 8'40	-0° 025	43° 0	38° 2	47° 1	42° 7	-0° 6	28	26th	55	19th	
	Cambridge	29° 8'55	-0° 032	41° 3	35° 3	48° 3	41° 8	-0° 4	27	25th	57	1st, 18th	
4. MIDLAND COUNTIES	Loughborough	29° 8'10	-0° 067	39° 8	35° 7	48° 0	41° 9	-0° 4	25	8th, 30th	55	18th	
	Oxford	29° 8'50	-0° 046	40° 8	37° 1	47° 7	42° 4	-0° 5	29	30th	56	18th, 19th	
5. ENGLAND, S.	London	29° 8'56	-0° 042	42° 2	37° 8	49° 4	43° 6	-0° 1	30	28th	57	1st, 18th, 19th	
	Dungeness	29° 8'50	-0° 043	44° 6	39° 9	50° 0	45° 0	0° 0	26	26th	57	1st	
	Hurst Castle	29° 8'46	-0° 056	44° 6	40° 9	50° 5	45° 7	+0° 1	31	25th	58	11th	
6. SCOTLAND, W.	Ardrossan	29° 7'59	-0° 032	43° 2	38° 5	47° 8	43° 2	-0° 3	26	27th	53	2nd, 7th	
7. ENGLAND, N.W.	Hawes Junction*	28° 5'64	?	37° 8	33° 4	42° 2	37° 8	?	22	28th	50	18th	
	Liverpool	29° 8'13	-0° 038	41° 6	38° 5	47° 1	42° 8	-0° 9	31	25th, 27th	56	18th	
	Holyhead	29° 7'82	-0° 053	45° 4	42° 2	49° 4	45° 8	-0° 5	35	23rd, 24th	54	2nd, 18th	
8. ENGLAND, S.W.	Pembroke	29° 8'02	-0° 062	46° 6	43° 3	50° 2	46° 8	-0° 2	38	23rd, 24th, 25th	55	18th	
	Prawle Point	29° 8'32	-0° 082	45° 5	41° 5	50° 3	45° 9	-0° 6	33	24th, 25th	54	10th, 17th, 18th	
9. IRELAND, N.	Malin Head	29° 7'03	-0° 072	42° 5	39° 9	46° 3	43° 1	-0° 1	35	24th, 25th, 26th, 27th.	51	1st	
	Donaghadee	29° 7'72	-0° 038	42° 0	37° 5	48° 1	42° 8	-1° 0	29	26th	56	4th	
	Mullaghmore	29° 7'26	-0° 054	43° 7	40° 2	47° 5	43° 9	-1° 5	35	15th, 16th	51	1st, 7th, 18th, 19th, 28th, 3rd	
	Belmullet	29° 7'17	-0° 063	43° 1	39° 3	47° 5	43° 4	-3° 2	32	22nd	51		
10. IRELAND, S.	Parsonstown	29° 7'74	-0° 073	39° 2	34° 3	47° 3	40° 8	-2° 3	28	14th, 15th, 25th	58	1st	
	Valencia	29° 7'86	-0° 079	45° 1	39° 9	50° 7	45° 3	-2° 4	31	22nd	55	2nd	
	Roche's Point	29° 7'96	-0° 069	44° 1	39° 7	50° 1	44° 9	-1° 7	31	26th	54	1st, 18th	
CHANNEL ISLANDS	Scilly (St. Mary's)	29° 8'04	-0° 093	48° 7	44° 6	51° 1	47° 9	-1° 7	40	8th	57	18th	
	Jersey	29° 8'68	-0° 060	47° 1	42° 4	52° 3	47° 4	-0° 6	33	8th	59	19th	

\* Hawes Junction is 1,135 feet above Mean Sea Level, and the



## SUMMARY OF OBSERVATIONS, NOVEMBER 1891.

xliii

REPORTING STATIONS in the BRITISH ISLANDS during the Month of NOVEMBER 1891.

Thunderstorms, and Gales are counted irrespective of the Hours at which they occurred.  
beginning in each case with the Station lying furthest North.)

TENSION OF VAPOUR.	RELATIVE HUMIDITY.	AMOUNT OF CLOUD.	RAINFALL.			Date.	WEATHER, No. of Days of							WIND, No. of Observations of								
			Total Fall in the Month.	Difference from Average.	Maximum Fall in One Day.		Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
in.	%		ins.	ins.	ins.																	
0.263	93	7.6	3.89	-0.27	0.61	25th	25	0	0	0	0	15	7	1	4	1	6	6	3	2	0	7
232	89	6.7	2.17	-0.76	0.85	11th	16	0	0	0	1	10	4	2	2	0	1	12	3	1	8	1
258	98	7.7	4.84	+0.14	0.90	11th	23	1	1	0	0	16	6	5	3	1	2	3	10	2	1	3
212	88	6.5	1.07	-1.22	0.36	11th	15	0	0	0	2	10	0	0	0	3	0	2	9	3	1	12
217	85	6.9	3.89	+0.75	0.76	11th	16	0	1	0	0	7	7	1	1	0	6	6	5	8	3	0
238	91	6.7	1.26	-0.94	0.31	18th	12	0	0	0	2	10	0	1	2	3	4	5	8	5	1	1
233	88	7.8	2.31	-0.30	0.62	10th	17	1	0	0	0	12	3	1	3	2	3	5	8	3	5	0
237	94	6.7	2.56	+0.37	0.50	10th	20	0	0	0	10	17	1	6	2	5	2	8	1	2	3	1
246	88	8.0	1.44	-0.96	0.25	28th	20	0	1	0	0	16	5	1	5	3	4	9	3	2	3	0
251	90	6.9	1.80	-1.26	0.42	10th	23	1	0	0	3	9	4	2	2	3	2	3	7	7	3	1
243	94	8.2	1.75	-0.26	0.30	15th	20	0	0	0	3	21	0	2	4	1	2	6	11	0	2	2
226	93	8.7	2.28	+0.04	0.45	10th	18	1	0	0	1	21	1	2	3	3	6	2	3	3	4	4
237	94	7.8	2.39	+0.08	0.49	10th, 28th	16	0	0	0	4	18	0	1	6	0	3	5	5	1	4	5
241	89	7.4	2.35	+0.12	0.66	11th	18	1	1	0	6	18	2	1	2	4	1	5	5	5	0	7
271	92	7.7	2.18	-1.30	0.56	15th	19	0	0	0	0	11	4	4	1	4	3	5	5	4	3	1
283	96	6.5	4.05	+1.00	1.01	10th	17	0	0	0	1	6	5	3	8	3	0	3	5	5	3	0
251	89	7.3	4.28	+0.40	0.59	13th	22	0	1	0	3	14	2	0	7	6	1	3	8	0	0	5
218	97	8.0	7.53	?	0.99	10th	20	3	2	0	0	16	1	7	5	4	3	4	5	2	0	0
227	87	7.4	3.34	+0.38	0.54	10th	21	2	1	0	3	16	1	3	5	5	6	5	6	0	0	0
260	87	6.9	6.15	+2.27	1.03	10th	20	0	1	0	0	9	2	1	2	5	3	5	4	5	2	3
280	89	6.6	4.48	+0.44	0.90	11th	21	1	1	0	0	6	4	3	4	6	1	4	6	3	3	0
270	89	6.8	1.93	-1.27	0.31	12th	18	0	3	1	1	11	8	4	4	3	1	3	4	6	5	0
240	88	7.0	2.83	?	0.45	13th	23	1	2	0	1	14	2	2	1	1	6	13	5	0	2	0
245	92	5.8	3.91	+0.71	0.68	12th	21	0	0	0	0	8	4	1	1	4	4	6	9	5	0	0
245	85	6.8	2.78	-1.70	0.29	19th	22	0	7	0	1	7	11	1	1	6	4	5	7	3	3	1
248	89	6.0	3.66	?	0.40	24th	24	0	3	1	6	12	5	0	0	5	5	5	5	7	3	0
220	92	7.1	2.19	-0.64	0.75	10th	16	0	0	0	4	13	0	0	0	0	4	0	4	0	1	21
261	87	7.9	5.15	-0.27	0.96	27th	23	0	2	0	1	16	8	2	1	6	2	2	3	5	6	3
245	84	5.5	5.83	+1.21	1.10	10th	18	0	1	0	0	7	7	7	2	1	3	2	3	7	5	0
288	84	6.6	3.45	-0.27	0.76	10th	19	0	0	0	0	4	8	3	6	3	1	3	5	4	5	0
263	82	6.2	3.53	-0.77	0.77	10th	21	0	1	1	2	7	6	1	1	7	5	2	5	6	3	0

barometer at this station is not reduced for altitude.



TABLE XXII.

OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE, obtained from the VALUES supplied for use in the WEEKLY WEATHER REPORT for the Month of NOVEMBER 1891.

STATIONS.	AIR TEMPERATURE.								RAINFALL.					BRIGHT SUNSHINE.			
	Means of				Absolute Extremes.				No. of Days.	Total Fall in the Month.	Difference from Average.	Maximum Fall in One Day.	Date.	No. of Hours recorded.	Difference from Average.	Percentage of possible Duration.	Difference from Average.
	Minima.	Maxima.	Min. and Max. combined.	Difference from Average.	Minimum.	Date.	Maximum.	Date.									
STORNOWAY	°	°	°	*	°	*	°	*	*	ins.	ins.	ins.	*	55.6	+14.2	24	+ 6
LAIRG	33.0	47.8	40.4	+ 0.8	20	27th	54	2nd	23	4.40	+0.58	2.00	11th	—	—	—	—
GLENCARRON	34.1	44.1	39.1	- 0.9	24	27th	50	1st	17	6.13	-3.59	1.00	11th	—	—	—	—
FORT AUGUSTUS	35.0	44.8	39.9	- 0.9	25	27th	49	1st, 8th, 13th, 19th, 29th.	17	2.78	-1.50	0.58	11th	17.3	?	7	?
FORT WILLIAM	37.2	45.2	41.2	- 0.4	24	27th	52	13th	20	6.01	-1.76	1.09	9th	25.4	?	11	?
ABERDEEN	—	—	—	—	—	—	—	—	—	—	—	—	—	48.8	- 6.5	21	- 3
BRAEMAR	32.1	41.5	36.8	- 1.0	16	25th	49	19th	18	3.45	-0.44	1.00	11th	30.2	?	13	?
EDINBURGH	—	—	—	—	—	—	—	—	—	—	—	—	—	40.9	?	17	?
OCHTERTYRE	34.7	45.8	40.3	+ 0.1	24	26th	55	7th	20	5.23	+0.88	0.99	18th	—	—	—	—
MARCHMONT	35.0	45.0	40.0	- 0.2	25	28th	52	19th	17	2.85	-0.72	0.54	11th	54.5	?	23	?
ALNWICK CASTLE	37.0	46.0	41.5	- 0.3	27	27th	55	18th	14	3.70	+0.37	0.71	14th	—	—	—	—
DURHAM	36.3	45.5	40.9	- 0.1	26	28th	53	19th	20	2.24	-0.72	0.72	10th	42.0	-13.2	17	- 6
SCARBOROUGH	38.0	45.8	41.9	- 1.2	29	25th	54	19th	22	2.73	-0.29	0.61	10th	—	—	—	—
OSWALDKIRK	—	—	—	—	—	—	—	—	—	—	—	—	—	29.9	?	12	?
YORK	—	—	—	—	—	—	—	—	—	—	—	—	—	21.3	-20.8	9	- 8
HILLINGTON	35.4	47.2	41.3	- 0.6	25	30th	56	19th	23	2.08	-0.63	0.31	15th	41.4	-11.7	16	- 5
GELDESTON	37.3	47.7	42.5	- 0.7	27	25th, 28th	55	19th	23	1.83	-0.89	0.35	10th	45.9	-18.7	18	- 7
CAMBRIDGE	—	—	—	—	—	—	—	—	—	—	—	—	—	38.8	-25.3	15	- 10
ROTHAMSTED	36.2	47.4	41.8	0.0	26	28th	56	18th, 19th	22	2.14	-0.57	0.70	10th	40.9	?	16	?
BAWTRY	34.3	46.4	40.4	- 1.5	26	27th, 29th	55	18th	20	2.33	+0.18	0.42	10th	—	—	—	—
WORKSOP	—	—	—	—	—	—	—	—	—	—	—	—	—	30.7	-19.5	12	- 8
STAMFORD (KETTON HALL).	35.4	48.4	41.9	- 0.2	24	8th	57	18th	20	3.14	?	0.81	15th	—	—	—	—
THURCASTON	—	—	—	—	—	—	—	—	—	—	—	—	—	46.7	- 4.2	18	- 2
CHEADLE	36.1	45.4	40.8	- 0.2	27	25th	54	19th	17	3.07	-0.12	0.54	10th	—	—	—	—
CHURCHSTOKE	34.6	46.6	40.6	- 1.1	24	23rd	55	18th, 19th	17	2.62	-0.90	0.58	10th	36.3	-14.3	14	- 6
HEREFORD	36.3	47.5	41.9	- 1.2	23	25th	55	18th, 19th	15	2.35	-0.21	0.96	10th	—	—	—	—
CIRENCESTER	35.2	46.9	41.1	- 0.4	25	8th	55	18th	19	2.41	-0.62	0.61	10th	37.2	-16.5	14	- 7
OXFORD	—	—	—	—	—	—	—	—	—	—	—	—	—	49.7	- 5.7	19	- 3
LONDON	—	—	—	—	—	—	—	—	—	—	—	—	—	33.5	- 4.2	13	- 1
STRATHFIELD TURGIS	36.4	48.4	42.4	- 0.2	28	28th	56	18th, 19th	18	2.49	-0.06	0.82	10th	—	—	—	—
HASTINGS	39.9	49.3	44.6	- 0.5	31	24th	57	1st	21	2.79	-0.51	0.58	10th	74.5	+ 7.1	28	+ 2
EASTBOURNE	—	—	—	—	—	—	—	—	—	—	—	—	—	57.4	?	22	?
SOUTHAMPTON	38.3	49.4	43.9	- 0.6	28	25th	56	18th, 19th	18	3.62	+0.66	1.31	10th	62.1	+ 6.3	24	+ 3
STOWELL	37.0	47.8	42.4	- 0.8	25	23rd, 25th	55	10th, 18th	16	3.84	?	0.94	10th	—	—	—	—
LAUDALE	36.1	46.4	41.3	- 0.9	25	27th	55	1st	19	5.83	-3.29	1.20	28th	—	—	—	—
GLASGOW	37.4	45.2	41.3	- 0.2	24	27th	51	18th	22	3.66	-0.13	0.75	18th	15.5	-11.2	6	- 5
GLENLEE	34.1	45.6	39.9	- 0.6	23	27th	53	1st	20	6.99	+0.74	1.21	18th	—	—	—	—
DOUGLAS	38.3	48.7	43.5	- 0.7	29	23rd, 24th	53	18th	19	5.67	+0.91	0.76	10th	59.9	- 1.1	24	0
NEWTON REIGNY	33.8	44.7	39.3	- 1.9	21	27th	56	1st	20	4.57	+1.05	0.77	10th	34.2	-10.7	14	- 4
STONYHURST	37.5	45.6	41.6	- 0.6	26	27th	53	and, 18th, 19th	18	4.41	-0.22	0.52	10th	18.5	-26.6	7	- 11
BLACKPOOL	36.3	48.9	42.6	- 0.3	27	27th	59	1st	15	3.19	-0.32	0.78	26th	32.2	-12.4	13	—
MANCHESTER	37.7	46.1	41.9	- 0.2	29	27th, 30th	55	18th, 19th	19	3.54	-0.06	0.46	8th	—	—	—	—
LLANDUDNO	39.7	48.5	44.1	- 1.2	33	23rd	59	18th	18	3.83	+0.32	0.67	15th	42.7	- 2.0	17	- 1
LLANDOVERY	34.9	48.7	41.8	- 1.5	22	23rd	56	18th	20	4.01	-1.10	0.58	11th	—	—	—	—
PEMBROKE	—	—	—	—	—	—	—	—	—	—	—	—	—	50.7	- 8.6	20	- 3
ARLINGTON	37.5	48.3	42.9	- 0.9	27	23rd	55	18th	20	4.15	-2.18	0.66	12th	—	—	—	—
CULLOMPTON	36.2	49.3	42.8	- 1.4	22	25th	57	18th	18	4.72	+1.19	1.19	10th	54.3	+ 6.3	21	+ 3
TORQUAY	—	—	—	—	—	—	—	—	—	—	—	—	—	64.3	?	24	?
NEWQUAY	—	—	—	—	—	—	—	—	—	—	—	—	—	60.0	?	23	?
FALMOUTH	42.1	50.3	46.2	- 1.4	35	24th, 25th	57	18th	21	5.45	+0.02	1.27	10th	64.7	- 4.7	24	- 2
PLYMOUTH	41.2	50.4	45.8	- 0.6	30	24th, 25th	55	18th, 19th	19	4.19	+0.57	1.12	10th	59.6	+ 2.4	22	—
GUERNSEY	—	—	—	—	—	—	—	—	—	—	—	—	—	58.2	?	21	?
JERSEY	—	—	—	—	—	—	—	—	—	—	—	—	—	100.3	+34.9	37	+ 13
LONDONDERRY	37.3	45.6	41.5	- 1.4	30	16th	51	3rd	24	2.74	-1.56	0.41	10th	—	—	—	—
MARKREE CASTLE	34.2	46.4	40.3	- 2.4	25	24th	51	3rd, 7th, 19th	23	3.17	-0.36	0.31	27th	54.8	+ 0.9	22	0
BROOKEBOROUGH	34.6	45.1	39.9	- 1.5	24	24th	52	3rd, 18th	19	3.19	-1.09	0.44	27th	—	—	—	—
ARMAGH	36.1	46.7	41.4	- 0.5	29	24th, 26th	56	18th	20	2.44	-0.45	0.67	12th	49.1	- 7.6	20	- 3
EDGEWORTHSTOWN	33.5	45.7	39.6	- 2.7	26	24th	52	19th	18	2.27	-1.39	0.60	10th	—	—	—	—
ARLEY COTTAGE (COUNTY CAVAN).	—	—	—	—	—	—	—	—	—	—	—	—	—	61.5	?	25	?
DUBLIN	38.7	48.1	43.4	- 1.4	31	24th	58	18th	15	2.91	+0.43	1.23	10th	69.6	- 1.3	27	- 1
PARSONSTOWN	—	—	—	—	—	—	—	—	—	—	—	—	—	57.0	- 6.0	22	- 3
KILKENNY CASTLE	34.3	47.8	41.1	- 3.6	25	27th	55	18th	15	2.55	-0.12	0.58	10th	—	—	—	—
WATERFORD	36.5	49.3	42.9	- 3.3	26	23rd, 26th	55	18th	17	5.51	+1.74	1.62	10th	—	—	—	—
VALENCIA	—	—	—	—	—	—	—	—	—	—	—	—	—	71.6	+11.5	28	+ 5
KILLARNEY	35.1	48.2	41.7	- 3.9	25	22nd	55	18th	21	4.94	?	0.83	12th	—	—	—	—
FOYNES	38.1	47.7	42.9	- 1.7	30	13th	54	1st	21	2.67	?	0.47	12th	—	—	—	—

\* For information see Table XXI.

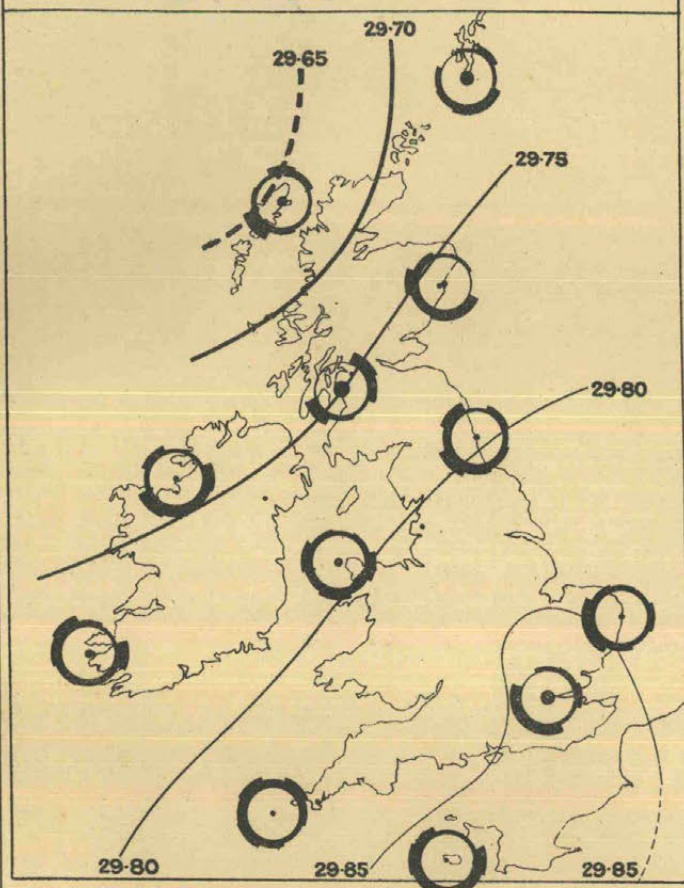


# MONTHLY WEATHER CHART, NOVEMBER, 1891.

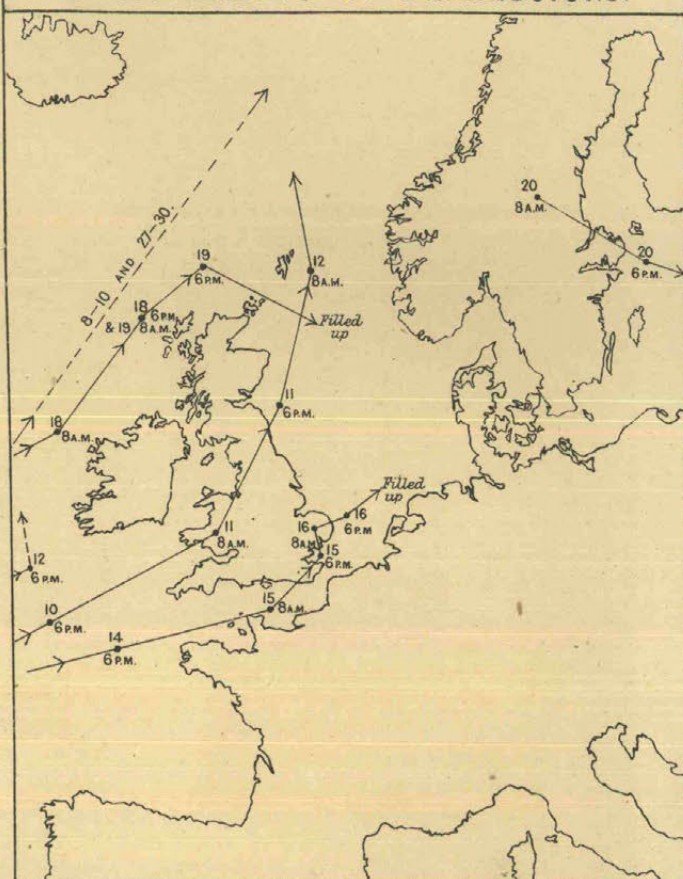
Monthly Summary.

Plate XI.

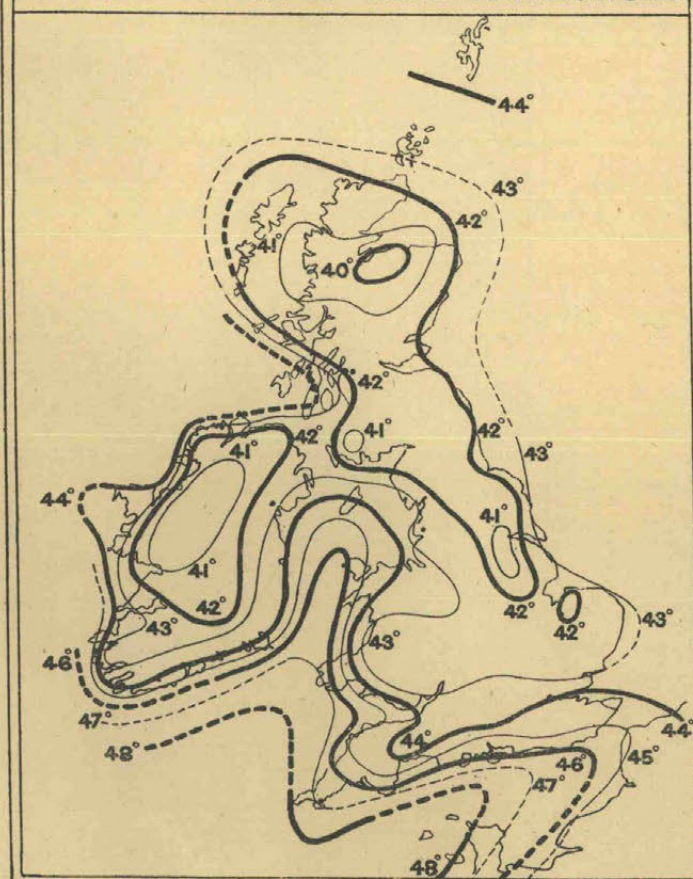
## 1. BAROMETER AND WIND.



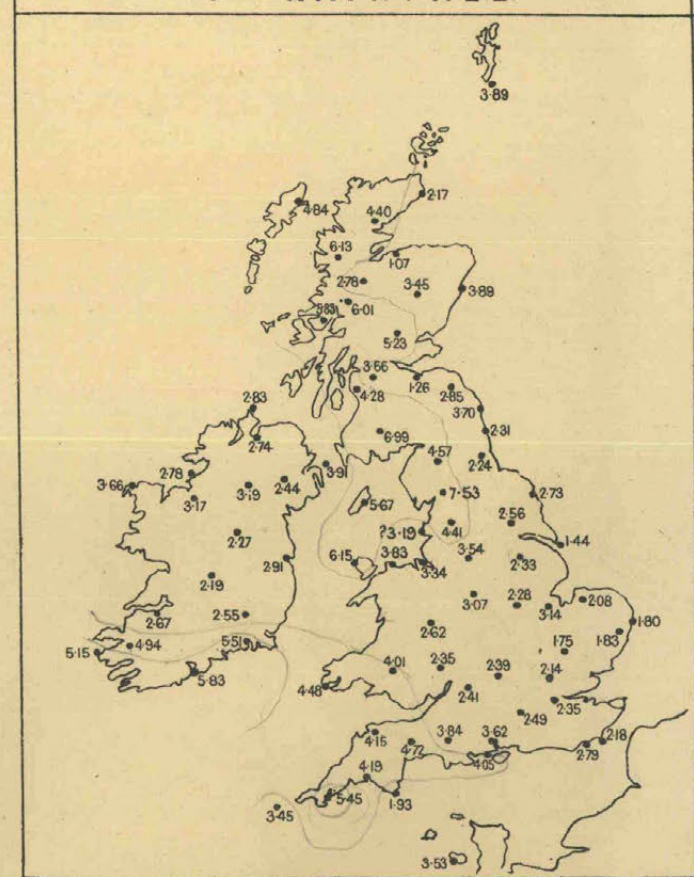
## 2. MOVEMENTS OF DEPRESSIONS.



## 3. DISTRIBUTION OF MEAN TEMPERATURE.



## 4. RAINFALL.





THE UNIVERSITY OF CHICAGO PRESS

THE UNIVERSITY OF CHICAGO PRESS



THE UNIVERSITY OF CHICAGO PRESS





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

## DECEMBER 1891.

(Issued as a Supplement to the Weekly Weather Report, 1891.)

ISSUED BY THE METEOROLOGICAL OFFICE, 63, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.  
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; JOHN MENZIES & Co., 12, HANOVER STREET, EDINBURGH. and 10, WEST NILE STREET, GLASGOW; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

**General Summary.**—The weather was mostly changeable and unsettled, with frequent rain over England and Ireland and with some heavy falls of snow in Scotland. During the third week, however, the conditions were dry and quiet, and thick fogs prevailed over the inland parts of Great Britain. Pressure was below the average excepting in the south and south-east, and gradients were steep; temperature was mostly in excess of the normal; the winds were Westerly or South-westerly; and rainfall was more than the average on all but our eastern coasts. Bright sunshine was upon the whole unusually abundant for the time of year.

**Pressure.**—*Mean for the month at 8 a.m.* varied from 30·0 ins. and upwards over the English Channel to very little above 29·5 ins. in the Shetlands and Hebrides. Over the south and south-east of England the values were slightly in excess of the average,\* but in all other districts they were below it, the divergence from the normal amounting to as much as 0·15 in. in the north of Ireland and 0·17 in. in the north of Scotland. The mean gradient over our Islands was nearly twice as steep as that shown by the chart of average pressure for December. *Highest* readings were observed on the 20th or 21st, when the barometer rose to between 30·4 ins. and 30·5 ins. on our extreme northern coasts and to between 30·5 ins. and 30·7 ins. in other parts of the kingdom. *Lowest* readings occurred on the 10th, when the barometer fell below 28·0 ins. in the Shetlands, below 28·5 ins. over Scotland generally, and to between 29·0 ins. and 29·3 ins. over the southern parts of the United Kingdom. *Range* was very large,—between 2·0 ins. and 2·5 ins. in all districts.

**Depressions.**—During the early part of the month several depressions travelled either directly across our Islands or along our north-western and northern coasts, the most important being those of the 7th, 9th, and the 10th. During the third week the conditions were anticyclonic, after which a new series of depressions skirted our northern coasts on their way from the Atlantic to Scandinavia.

**Anticyclones.**—The only one observed was a large system which was formed over north-western Europe on the 16th and 17th, and which subsequently spread eastwards and southwards until it embraced the greater part of the Continent. On the 23rd and 24th it gradually became reduced in height, and moved in a south-easterly direction towards Asia Minor.

**Winds** were mostly Westerly or South-westerly, but a considerable per-centage of South-easterly breezes was shown at the extreme south-western stations. Gales were very numerous on all but our east coasts, the number being more than 12 in many places, 21 at Mullaghmore, and 17 at Valencia.

**Temperature.**—*Mean at sea level* ranged from 48° and upwards in the extreme south-west of England to 38° or less in the east of Scotland and to 37 or less over the inland parts of the north of Scotland and the north-east of England. The general distribution agreed fairly well with the normal, but the actual values were above the average\* in all localities excepting the north of England, the excess being greatest (two to four degrees) in the western and southern districts. *Highest* readings were recorded mostly on the 3rd or 5th when the thermometer rose to above 55° in most parts of the kingdom and reached 59° at York, Liverpool, Llandudno, and Killarney. *Lowest* readings were observed as a rule between the 21st and 25th, excepting in Scotland where they occurred mostly about the 17th; hard frost was experienced in nearly all districts, the lowest readings in the shade being 9° at Churchstoke and 11° at Stamford and Llandovery. *Range* was very large, especially over the inland parts of England; at Loughborough, Bawtry, Hereford, and Llandovery it amounted to 44°, at Stamford to 45°, at York to 46°, and at Churchstoke to 47°. *Vapour Tension* ranged from about 0·18 in. in the east of Scotland and about 0·20 in. over the northern and central parts of England to 0·30 in. at Scilly. *Relative Humidity* varied from 81 per cent. at Aberdeen and 84 per cent. at Mullaghmore to 95 per cent. at Spurn Head and to 96 per cent. at Stornoway.

**Rainfall** was in excess of the average\* at all but a few of the east coast stations, the excess being greatest in the south of Ireland, the west and north of England, and the south-west of Scotland. At Leith and Newton Reigny the aggregate amount was more than double the average. Over the eastern, central, and southern parts of England the largest daily fall occurred on the 1st, but in other districts it was recorded at various times,—mostly between the 6th and 12th. The number of days with rain was large, being above 20 in most districts and as great as 26 at Glen Carron, Fort Augustus, and Belmullet, and 27 at Stornoway.

**Bright Sunshine.**—The amount of bright sunshine was above the average\* in most districts, but a little below it at one or two stations situated in the northern parts of the United Kingdom. The per-centage of the possible duration was as low as 5 at Fort William, 7 at Blackpool, and 8 at Fort Augustus, while it was as high as 33 at Aberdeen and Hastings, to 34 at Eastbourne, and to 40 at Jersey.

\* The averages employed are—Pressure and Temperature for 20 years, 1871–90; Rainfall for the 25 years, 1866–90; Bright Sunshine for the 10 years, 1881–90.



TABLE XXIII.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at TELEGRAPHIC  
Observations are made at 8 a.m. daily, but the Number of Days of Rain, Snow, Hail,  
(The Stations are grouped in Districts, and then arranged in order of Latitude,

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit and Mean Sea Level) from Observations made at 8 a.m.	Difference from Average.	AIR TEMPERATURE.									
				At 8 a.m.	Means of				Absolute Extremes.				
					Minima.	Maxima.	Min. and Max. combined.	Difference from Average.	Minimum.	Date.	Maximum.	Date.	
0. SCOTLAND, N.	Sumburgh Head	ins. 29'506	ins. -0'167	41'7	38'4	44'3	41'4	+2'5	30	9th	51	3rd	
	Wick	29'566	-152	39'6	34'8	43'7	39'3	+1'8	25	7th	52	3rd	
	Stornoway	29'534	-171	41'3	36'0	44'8	40'4	+1'7	27	7th, 8th	51	1st, 2nd, 3rd	
1. SCOTLAND, E.	Nairn	29'590	-153	37'6	31'3	44'0	37'7	+0'3	23	17th, 18th	57	1st, 3rd	
	Aberdeen	29'667	-100	36'8	33'1	42'1	37'6	+0'3	22	25th	55	3rd	
	Leith	29'720	-087	39'5	33'7	45'1	39'4	+0'5	27	17th, 18th, 23rd	57	3rd	
2. ENGLAND, N.E.	Shields	29'765	-080	38'0	32'8	43'9	38'4	0'0	19	26th	57	3rd	
	York	29'850	-040	36'1	30'2	43'1	36'7	-0'6	13	23rd	59	3rd	
	Spurn Head	29'858	-015	38'8	34'6	43'7	39'2	+0'3	19	26th	53	3rd	
3. ENGLAND, E.	Yarmouth	29'926	+010	39'8	34'5	44'9	39'7	+1'9	24	22nd, 23rd, 26th	55	5th	
	Cambridge	29'952	+011	37'7	31'5	46'4	39'0	+1'8	14	22nd	57	5th	
4. MIDLAND COUNTIES	Loughborough	29'879	-045	36'9	32'3	45'2	38'8	+1'3	12	22nd, 23rd	56	3rd, 5th	
	Oxford	29'908	+013	38'0	34'2	45'3	39'8	+1'6	16	23rd, 24th	57	5th	
5. ENGLAND, S.	London	29'981	+027	40'2	35'1	47'4	41'3	+2'3	19	22nd, 23rd	58	5th	
	Dungeness	29'996	+043	42'9	37'5	48'0	42'8	+2'7	18	25th	55	5th	
	Hurst Castle	30'006	+048	43'7	39'3	48'8	44'1	+3'1	25	24th, 25th, 26th	56	9th	
6. SCOTLAND, W.	Ardrossan	29'733	-087	43'1	38'5	47'0	42'8	+2'6	32	13th, 25th	53	1st, 3rd	
7. ENGLAND, N.W.	Hawes Junction*	28'563	?	35'0	30'7	41'3	36'0	?	15	26th	52	3rd	
	Liverpool	29'857	-038	38'7	35'6	45'1	40'4	+0'8	21	25th, 26th	59	3rd	
	Holyhead	29'832	-047	43'1	39'9	47'9	43'9	+1'1	29	25th	54	3rd	
8. ENGLAND, S.W.	Pembroke	29'887	-029	45'7	41'7	48'7	45'2	+1'6	26	25th	54	3rd	
	Prawle Point	30'000	+030	46'0	40'8	49'1	45'0	+2'4	32	21st, 25th	53	2nd, 3rd, 4th, 5th, 9th, 12th.	
9. IRELAND, N.	Malin Head	29'645	-165	42'1	37'6	46'1	41'9	+2'2	31	25th	53	2nd	
	Donaghadee	29'766	-082	40'6	36'5	46'3	41'4	+0'4	29	25th	55	3rd	
	Mullaghmore	29'705	-116	43'8	39'8	48'1	44'0	+1'8	33	25th	55	2nd	
	Behmullet	29'680	-140	45'0	40'8	48'5	44'7	+0'9	33	11th, 12th, 13th	54	2nd	
10. IRELAND, S.	Parsonstown	29'800	-101	40'5	35'5	48'4	42'0	+3'1	25	25th	57	2nd, 3rd	
	Valencia	29'822	-083	47'4	42'4	51'4	46'9	+2'0	32	24th, 25th	55	2nd, 3rd, 9th, 30th.	
	Roche's Point	29'851	-061	45'8	41'7	50'2	46'0	+2'6	33	24th	54	2nd, 3rd, 15th, 30th.	
CHANNEL ISLANDS	Silly	29'965	+012	48'9	45'1	51'5	48'3	+1'8	38	23rd	56	4th, 10th	
	Jersey	30'087	+102	46'1	42'1	50'3	46'2	+2'9	26	24th	58	5th	

\* Hawes Junction is 1,135 feet above mean sea level, and the



REPORTING STATIONS in the BRITISH ISLANDS during the Month of DECEMBER 1891.

Thunderstorms, and Gales are counted irrespective of the Hours at which they occurred.

beginning in each case with the Station lying furthest North.)

TENSION OF VAPOUR.	RELATIVE HUMIDITY.	AMOUNT OF CLOUD.	RAINFALL.				WEATHER.							WIND.								
			Total Fall in the Month.	Difference from Average.	Maximum Fall in One Day.	Date.	No. of Days of							No. of Observations of								
							Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
in.	%		ins.	ins.	ins.	9th																
0.236	90	9.1	4.05	-0.20	0.78	9th	24	2	0	0	0	24	4	1	2	1	2	5	5	10	4	1
221	91	6.3	3.60	+0.50	0.70	15th	17	4	0	0	4	10	10	1	0	1	1	7	7	4	9	1
249	96	8.1	6.31	+0.68	0.86	28th	27	4	0	1	0	18	13	2	0	0	1	1	10	10	5	2
205	91	5.4	2.10	+0.15	0.35	29th	21	4	0	0	6	8	2	0	0	0	1	1	15	2	1	12
177	81	4.9	1.93	-1.31	0.45	15th	15	2	0	0	1	3	13	0	1	0	1	5	12	9	3	0
226	94	6.3	3.93	+2.07	0.57	15th	17	1	0	0	2	11	0	0	0	0	0	4	12	9	1	5
199	87	7.3	2.97	+0.40	1.32	7th	15	1	0	0	1	9	8	0	0	0	2	5	14	8	1	1
196	92	6.6	2.74	+0.46	0.54	12th	18	1	0	0	10	18	0	0	0	3	3	11	3	9	0	2
222	95	7.1	1.88	-0.26	0.34	1st	18	0	0	0	2	12	6	0	1	0	3	9	10	8	0	0
222	92	5.4	2.20	-0.37	0.35	1st, 10th	20	0	0	0	8	9	5	0	1	0	0	4	8	13	3	2
206	91	5.8	2.71	+0.83	0.51	1st	19	0	0	0	4	12	0	1	0	0	0	8	15	3	2	2
197	90	7.2	3.40	+1.25	0.59	30th	19	2	0	0	3	16	10	0	0	2	7	2	8	10	0	2
208	91	6.2	3.32	+1.22	0.78	1st	21	0	1	0	10	15	2	0	2	0	2	5	11	6	0	5
218	88	6.8	3.07	+0.97	0.59	1st	22	1	0	0	7	17	7	0	0	0	5	4	9	7	1	5
254	92	6.8	2.23	-0.77	0.41	1st	21	0	0	0	1	13	14	4	0	1	5	1	11	5	3	1
267	93	6.5	4.28	+1.50	0.82	1st	22	0	0	0	3	7	13	0	5	2	1	4	5	12	2	0
256	92	8.4	5.54	+1.81	0.70	15th	20	3	0	0	0	20	8	0	5	2	2	6	8	6	2	0
196	96	6.8	11.83	?	1.96	12th	21	3	3	2	4	17	1	3	5	2	1	1	16	3	0	0
202	86	7.4	3.77	+1.18	0.56	30th	21	2	1	0	4	17	9	0	0	2	12	4	6	6	1	0
250	89	6.8	6.55	+2.73	1.03	12th	21	0	0	1	0	11	6	0	0	0	5	7	15	8	2	4
284	93	7.1	5.92	+1.93	0.98	12th	22	0	0	0	0	13	13	0	0	4	4	5	5	10	3	0
280	91	6.6	4.51	+0.85	0.80	20th	23	0	0	1	1	13	10	0	2	5	2	3	8	10	1	0
232	87	6.5	3.71	?	0.53	10th	21	1	3	0	3	15	5	0	0	1	2	15	5	5	3	0
234	93	4.9	3.96	+1.12	0.74	12th	23	0	0	0	4	7	10	0	0	1	1	10	11	5	3	0
240	84	6.6	3.97	-0.54	0.63	12th	23	1	9	1	4	7	21	1	0	1	2	9	11	3	4	0
257	86	7.3	6.05	?	0.65	1st, 9th	26	1	4	2	3	18	14	3	0	1	2	4	10	10	1	0
229	91	5.5	5.41	+2.37	0.93	9th	23	0	0	0	3	8	0	0	0	0	7	0	9	1	1	13
282	87	8.1	8.55	+2.56	1.32	12th	24	0	1	1	1	20	17	0	0	1	7	7	8	4	2	2
274	89	6.4	7.44	+2.49	1.70	12th	22	0	0	0	0	9	16	1	1	0	2	7	6	11	3	0
304	88	7.4	4.17	+0.15	1.14	12th	22	0	1	0	0	8	12	0	0	3	6	4	6	10	2	0
258	83	6.2	4.43	+0.61	0.63	1st	23	0	1	1	4	12	8	0	0	7	3	5	7	9	2	0

Barometer at this station is not reduced for altitude.



TABLE XXIV.

OBSERVATIONS of TEMPERATURE, RAINFALL, and BRIGHT SUNSHINE obtained from the VALUES supplied for use in the WEEKLY WEATHER REPORT, during the Month of DECEMBER 1891.

NAMES OF STATIONS.	AIR TEMPERATURE.								RAINFALL.					BRIGHT SUNSHINE.			
	Means of				Absolute Extremes.				No. of Rainy Days.	Total Fall in the Month.	Difference from Average.	Maximum Fall in One Day.	Date.	No. of Hours recorded.	Difference from Average.	Percentage of possible Duration.	Difference from Average.
	Minima.	Maxima.	Min. and Max. combined.	Difference from Average.	Minimum.	Date.	Maximum.	Date.									
STONOWAY -	°	°	°	°	°	*	°	*	*	ins.	ins.	ins.	*	24.5	-3.1	13	°
LAIRG -	29.0	41.6	35.3	-0.1	18	17th	52	3rd	22	3.53	-0.42	?	?	—	—	—	—
GLENCARRON -	32.8	43.4	38.1	+1.0	24	17th	53	1st	26	11.80	+2.25	1.72	4th	—	—	—	—
FORT AUGUSTUS -	33.9	44.2	39.1	+1.4	25	18th, 15th, 17th	55	3rd	26	8.09	+3.38	1.10	15th	15.4	?	8	?
FORT WILLIAM -	36.2	45.8	41.0	+1.8	28	22nd	58	3rd	23	11.80	+2.64	1.21	8th	9.5	?	5	?
ABERDEEN -	*	*	*	*	*	*	*	*	*	*	*	*	*	67.6	+29.7	33	+14
BRAEMAR -	29.4	39.4	34.4	+0.2	16	15th, 25th	50	3rd	19	4.20	+1.22	0.75	9th	25.3	?	13	?
EDINBURGH -	—	—	—	—	—	—	—	—	—	—	—	—	—	34.5	?	17	?
OCHTERTYRE -	30.6	43.5	37.1	+1.1	21	14th, 16th, 17th	54	3rd	21	5.88	+1.71	0.71	15th	—	—	—	—
MARCHMONT -	31.0	41.8	36.4	+0.2	19	25th, 26th	55	3rd	18	4.61	+1.46	0.71	7th	52.3	?	25	?
ALNWICK CASTLE -	32.5	42.8	37.7	+0.1	21	20th, 30th	56	4th	15	4.10	+0.95	1.43	7th	—	—	—	—
DURHAM -	31.2	42.2	36.7	-0.1	14	25th	57	3rd	18	2.36	-0.69	0.63	7th	56.2	+14.7	25	+6
SCARBOROUGH -	33.2	41.9	37.6	-1.0	18	22nd	55	3rd	18	2.78	-0.05	0.52	12th	—	—	—	—
OSWALDKIRK -	—	—	—	—	—	—	—	—	—	—	—	—	—	40.9	?	18	?
YORK -	*	*	*	*	*	*	*	*	*	*	*	*	*	21.6	-2.9	10	-1
HILLINGTON -	31.6	44.4	38.0	+1.3	13	22nd	56	4th	20	3.33	+0.90	0.70	1st	63.2	+26.3	28	+11
GELDESTON -	33.4	46.9	40.2	+2.4	17	22nd	56	3rd, 4th, 5th, 10th.	23	2.72	+0.32	0.48	1st	60.2	+13.8	26	+6
CAMBRIDGE -	*	*	*	*	*	*	*	*	*	*	*	*	*	52.9	+13.6	23	+6
ROTHAMSTED -	32.3	45.7	39.0	+1.6	14	25th	56	5th	21	4.05	+1.62	0.85	1st	49.1	?	21	?
BAWTRY -	30.3	42.7	36.5	-0.7	12	22nd, 23rd, 24th	56	3rd	18	2.47	+0.21	0.44	12th	—	—	—	—
WORKSOP -	—	—	—	—	—	—	—	—	—	—	—	—	—	35.3	+3.4	15	+1
STAMFORD (KETTON HALL). -	29.9	45.6	37.8	+0.8	11	22nd	56	3rd, 5th	21	2.85	+0.52	0.55	1st	—	—	—	—
THURCASTON -	—	—	—	—	—	—	—	—	—	—	—	—	—	54.8	+31.6	24	+14
CHIDDLE -	32.6	43.9	38.3	+1.9	15	25th	53	3rd	21	5.05	+1.92	0.82	9th	—	—	—	—
CHURCHSTOKES -	32.5	45.2	38.9	+1.2	9	25th	56	3rd	21	5.32	+2.25	0.74	12th	54.6	+17.1	24	+8
HEREFORD -	32.9	44.8	38.9	+0.6	14	23rd	58	3rd	18	3.10	+0.74	0.63	13th	—	—	—	—
GIRENCESTER -	32.3	45.6	39.0	+1.8	14	22nd	56	5th	18	3.53	+0.70	0.59	1st	48.9	+10.3	21	+4
OXFORD -	*	*	*	*	*	*	*	*	*	*	*	*	*	54.2	+16.8	23	+7
LONDON -	*	*	*	*	*	*	*	*	*	*	*	*	*	23.7	+4.3	10	+2
STRATHFIELD TURGIS -	33.1	44.6	38.9	+1.2	17	23rd	56	5th	20	3.82	+1.68	0.84	1st	—	—	—	—
HASTINGS -	38.0	47.3	42.7	+2.7	27	20th	54	4th, 5th	23	3.10	+0.16	0.40	12th	79.7	+25.0	33	+10
EASTBOURNE -	—	—	—	—	—	—	—	—	—	—	—	—	—	80.1	?	34	?
SOUTHAMPTON -	37.5	48.3	42.9	+3.1	21	24th, 25th	55	4th, 5th, 10th	22	4.98	+1.87	1.27	1st	65.0	+19.7	27	+8
STOWELL -	35.8	46.8	41.3	+3.0	22	24th	55	30th	22	4.61	?	0.76	1st	—	—	—	—
LAUDALE -	36.8	47.2	42.0	+2.2	30	7th	58	5th	24	12.50	+3.16	1.47	28th	—	—	—	—
GLASGOW -	36.0	43.5	39.8	+1.9	28	17th, 22nd	54	3rd	21	6.64	+2.60	0.97	15th	21.9	+6.7	10	+3
GLENLEE -	34.6	44.3	39.5	+2.4	24	17th, 22nd	56	3rd	22	10.93	+4.74	1.39	15th	—	—	—	—
DOUGLAS -	38.7	47.3	43.0	+1.9	27	22nd, 24th	52	4th, 15th	21	8.28	+3.76	2.04	15th	42.8	-0.6	19	0
NEWTON REIGNY -	31.8	42.6	37.2	+1.2	17	25th	55	3rd	23	7.69	+4.29	1.06	9th	39.8	+13.9	18	+6
STONYHURST -	34.2	43.5	38.9	+1.3	15	25th	56	3rd	20	8.59	+3.99	1.10	9th	23.4	-4.3	10	-2
BLACKPOOL -	33.4	44.7	39.1	+0.3	20	25th	54	3rd	15	12.30	-0.90	0.49	20th	16.5	-9.3	7	-5
MANCHESTER -	35.3	44.5	39.9	+2.5	23	22nd	55	3rd	21	6.27	+2.72	0.85	9th	—	—	—	—
LLANDUDNO -	38.0	48.0	43.0	+1.4	23	25th	59	3rd	17	4.93	+1.80	0.70	9th	61.0	+36.3	27	+16
LLANDOVERY -	32.1	46.2	39.2	-1.5	11	25th	55	3rd	23	9.03	+3.71	1.32	30th	—	—	—	—
PEMBROKE -	*	*	*	*	*	*	*	*	*	*	*	*	*	43.4	-2.8	19	-1
ARLINGTON -	36.2	47.2	41.7	+1.4	22	25th	55	3rd	22	8.52	+2.79	0.88	20th	—	—	—	—
QULLOMPTON -	36.2	48.2	42.2	+2.9	22	20th	57	3rd, 5th	21	4.85	+1.33	0.74	14th	48.0	+14.1	20	+6
TORQUAY -	—	—	—	—	—	—	—	—	—	—	—	—	—	58.1	?	24	?
NEWQUAY -	—	—	—	—	—	—	—	—	—	—	—	—	—	62.5	?	26	?
FALMOUTH -	43.1	50.1	46.6	+2.5	35	23rd, 24th	55	3rd, 4th	23	6.25	+1.00	0.72	1st	64.3	+10.3	26	+4
PLYMOUTH -	41.9	50.0	46.0	+3.9	28	24th	55	3rd, 4th, 5th, 15th.	23	5.17	+1.33	0.68	20th	55.3	+3.9	23	+2
GUERNSEY -	—	—	—	—	—	—	—	—	—	—	—	—	—	†	†	†	†
JERSEY -	*	*	*	*	*	*	*	*	*	*	*	*	*	99.1	+42.0	40	+17
LONDONERRY -	37.6	48.2	42.9	+3.6	30	21st	55	3rd	23	4.50	+0.55	1.01	10th	—	—	—	—
MARKREE CASTLE -	35.4	46.1	40.8	+2.2	26	21st	54	3rd	25	4.95	+1.48	0.60	9th	32.0	-4.4	14	-2
BROOKBOROUGH -	34.8	45.0	39.9	+2.7	25	25th	53	3rd	24	5.51	+1.44	1.12	12th	—	—	—	—
ARMAGH -	35.5	46.3	40.9	+3.0	20	22nd	56	3rd	23	4.69	+1.89	0.95	12th	48.5	+13.2	22	+6
EDGEWORTHSTOWN -	34.5	47.1	40.8	+2.9	27	24th	54	3rd	19	5.32	+2.10	0.86	6th	—	—	—	—
ARLEY COTTAGE (COUNTY CAVAN). -	—	—	—	—	—	—	—	—	—	—	—	—	—	38.7	?	17	?
DUBLIN -	37.9	48.0	43.0	+2.2	25	22nd	58	3rd	20	3.30	+0.91	0.75	6th	67.2	+18.3	29	+8
PARSONSTOWN -	*	*	*	*	*	*	*	*	*	*	*	*	*	55.0	+10.6	24	+5
KILKENNY CASTLE -	35.1	48.0	41.6	+1.7	24	24th	56	30th	20	5.82	+2.65	0.95	6th	—	—	—	—
WATERFORD -	38.9	49.1	44.0	+2.0	30	12th, 21st	54	3rd, 30th	22	6.38	+2.24	1.36	12th	—	—	—	—
VALENCIA -	*	*	*	*	*	*	*	*	*	*	*	*	*	41.9	-3.2	18	-1
KILLARNEY -	41.9	50.7	46.3	+4.0	25	24th	59	30th	23	9.30	?	1.05	4th	—	—	—	—
FOYNES -	38.8	49.2	44.0	+3.0	28	24th	57	2nd	21	7.24	?	1.04	9th	—	—	—	—

\* For information see Table XXIII.

† Records doubtful.

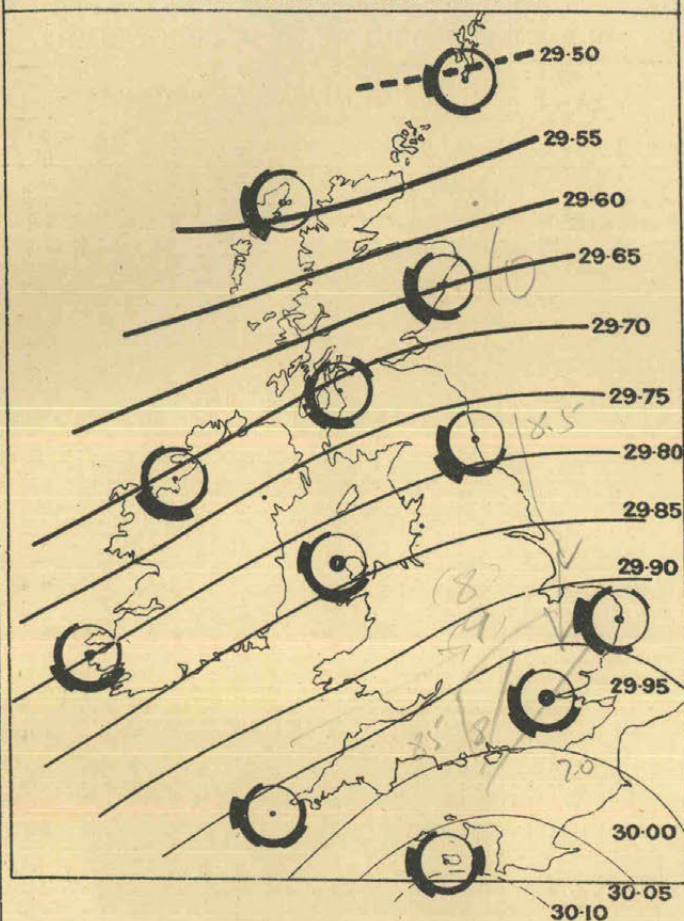


# MONTHLY WEATHER CHART, DECEMBER, 1891.

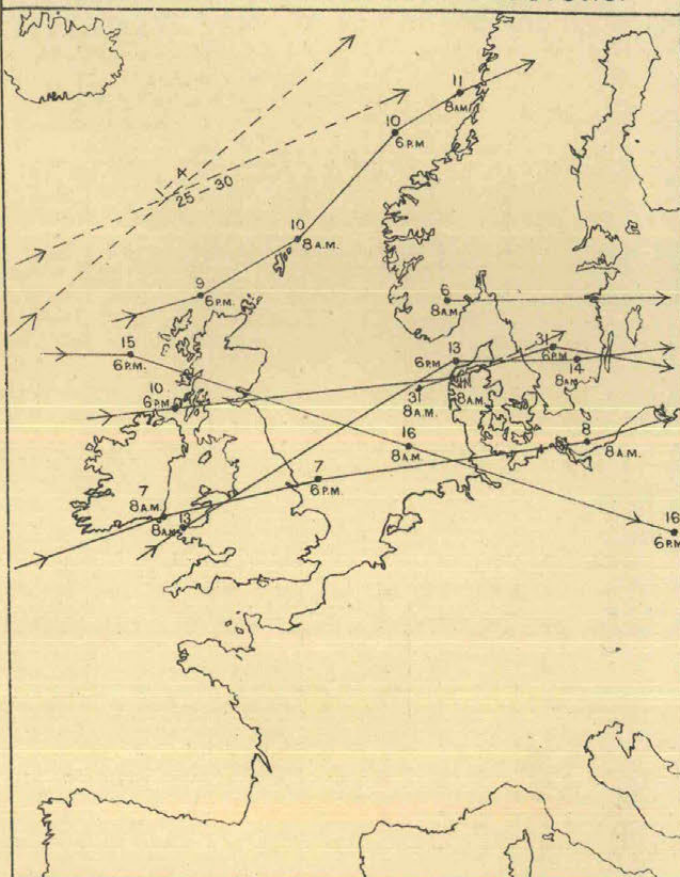
Monthly Summary.

Plate XII.

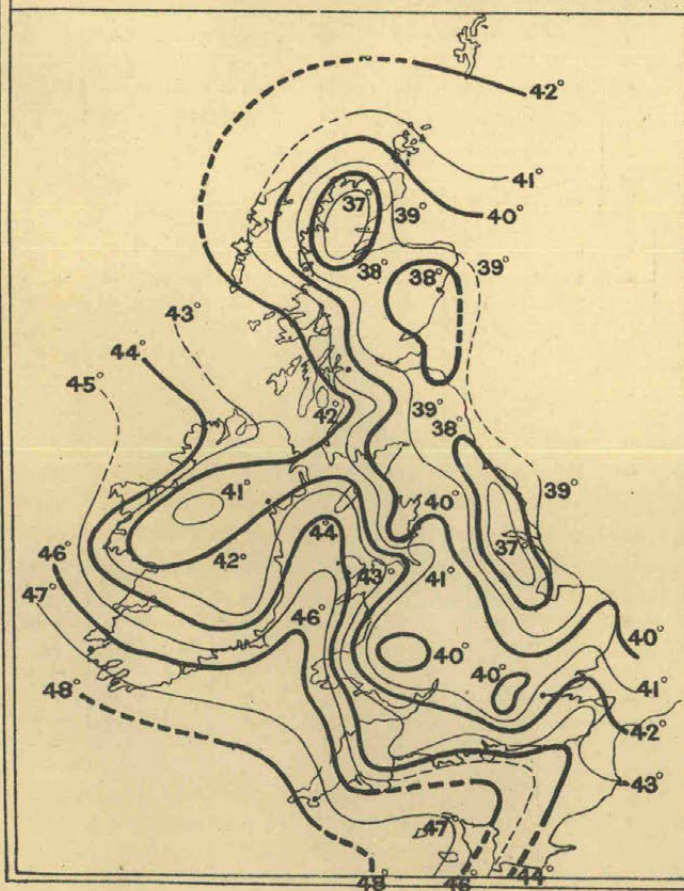
## 1. BAROMETER AND WIND.



## 2. MOVEMENTS OF DEPRESSIONS.



## 3. DISTRIBUTION OF MEAN TEMPERATURE.



## 4. RAINFALL.

