.O. FORM 2373

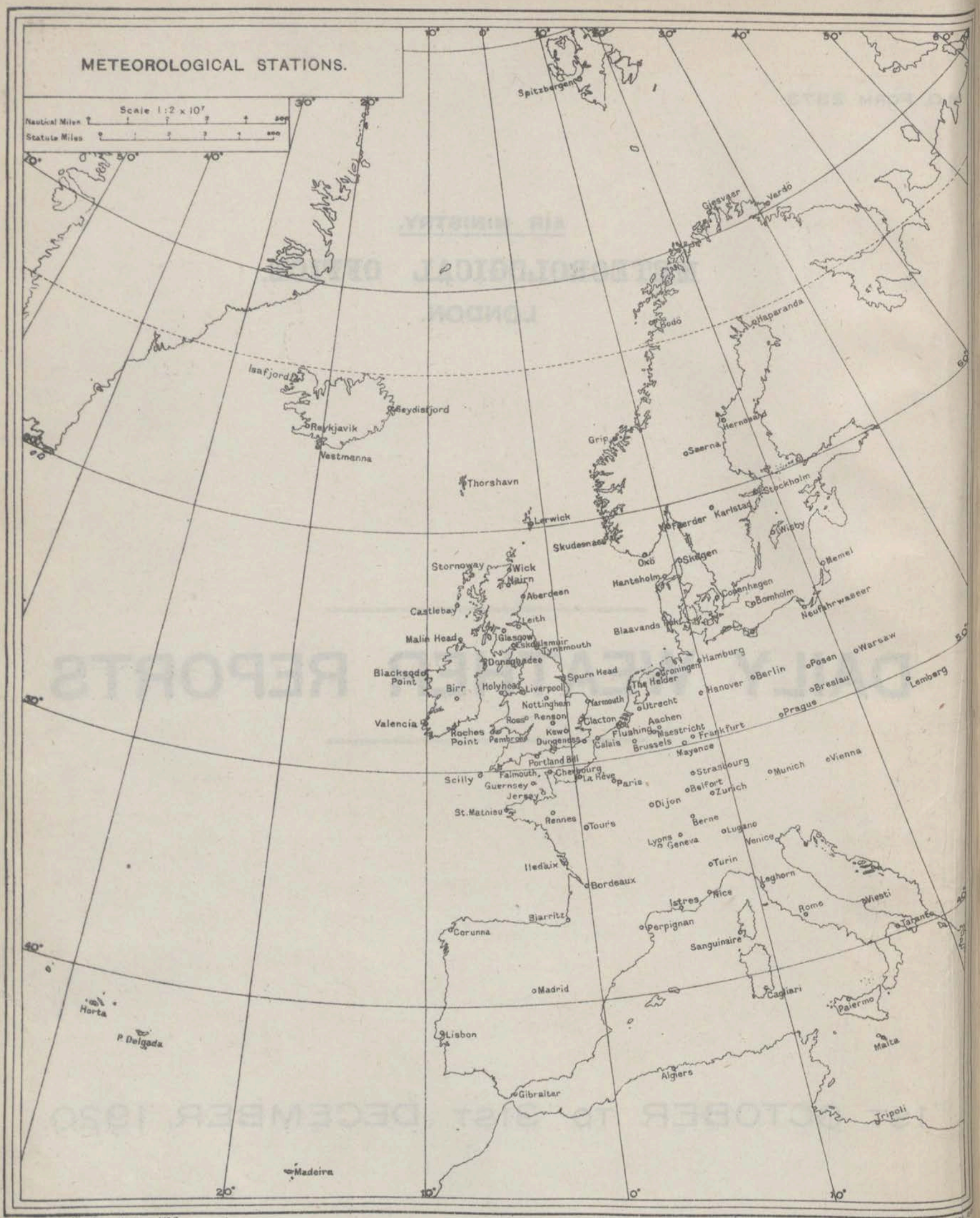
AIR MINISTRY.

METEOROLOGICAL OFFICE.

LONDON.

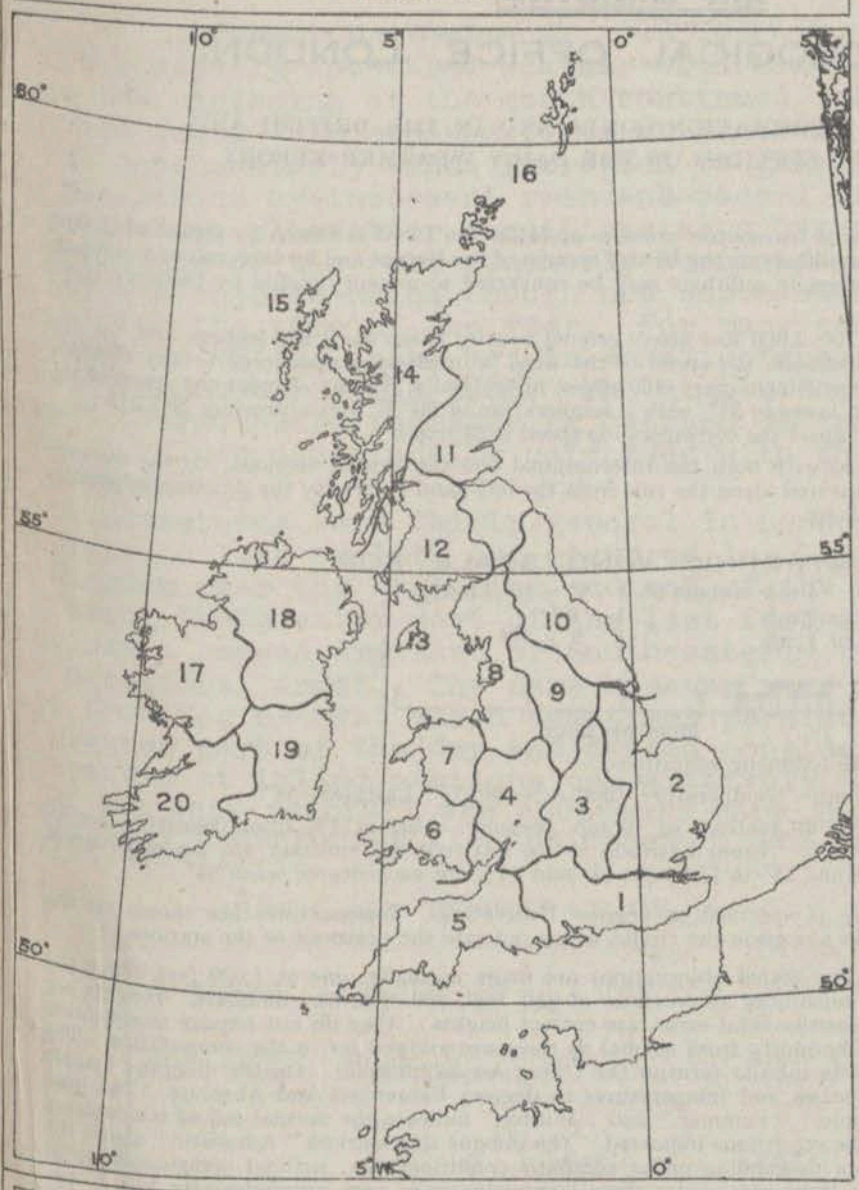
DAILY WEATHER REPORTS

1ST OCTOBER TO 31ST DECEMBER, 1920.

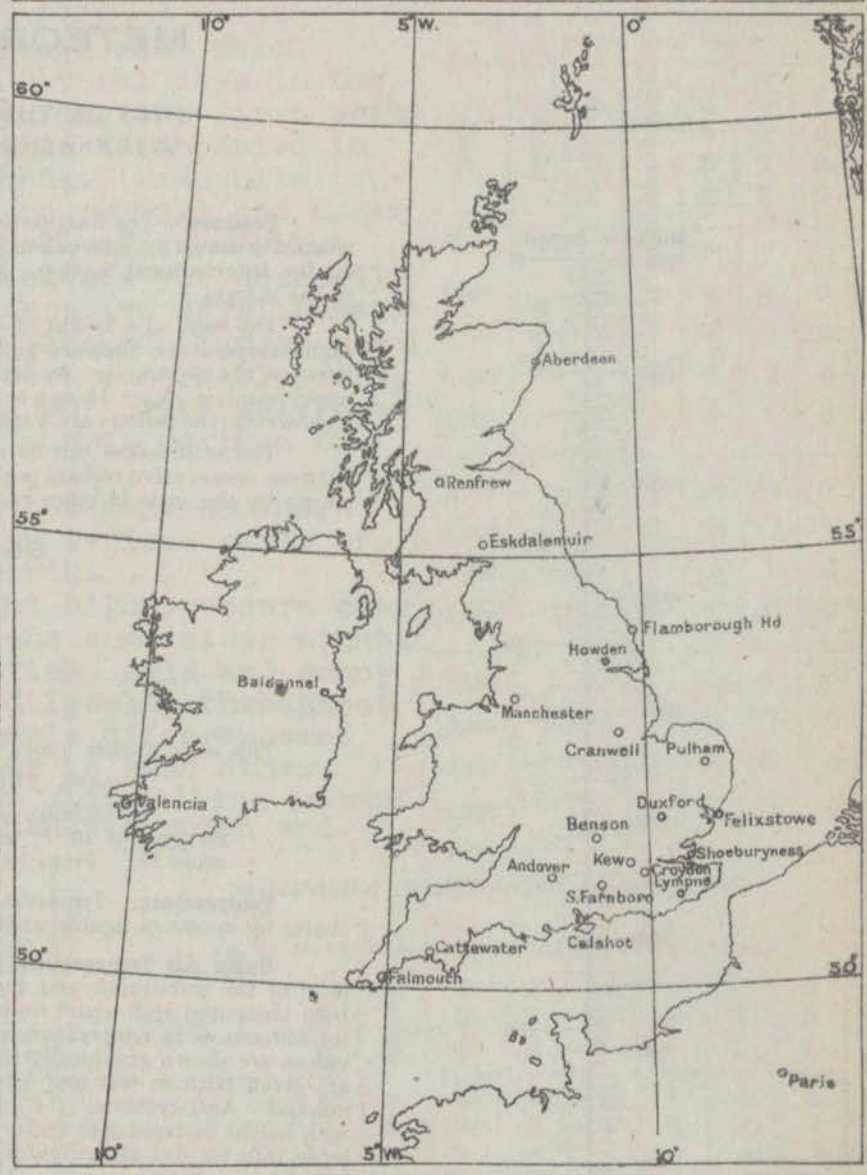


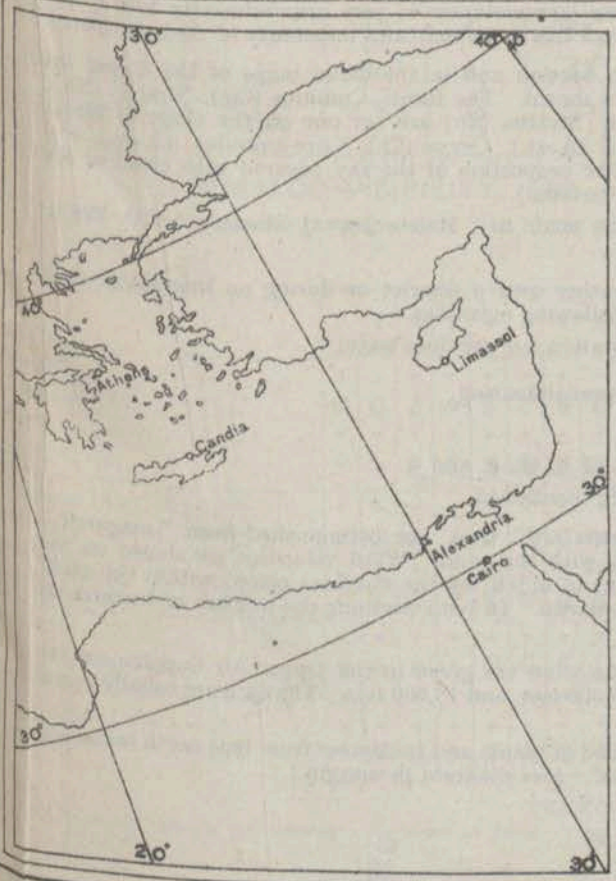
H.M. Stationery Office Press, Kingsway, W.C.2.

DISTRICTS.



STATIONS USED FOR UPPER AIR SUPPLEMENT.





THE BEAUFORT SCALE OF WIND FORCE.

Beaufort Number.	Admiral Beaufort's General Description of Wind.	Specification for use on Land, based on observations made at Land Stations.	Limits of Mean Velocities Statute Miles per Hour.
0	Calm	Calm ; smoke rises vertically	Less than 1
1	Light air ..	Direction of wind shown by smoke drift	1–3
2	Slight breeze ..	Wind felt on face ; leaves rustle..	4–7
3	Gentle breeze..	Leaves and small twigs in constant motion ; wind extends light flag	8–12
4	Moderate wind	Raises dust and loose paper ; small branches are moved ..	13–18
5	Fresh wind ..	Small trees in leaf begin to sway ; crested wavelets on inland waters	19–24
6	Strong wind ..	Large branches in motion ; whistling heard in telegraph wires	25–31
7	High wind ..	Whole trees in motion ; inconvenience felt when walking against wind	32–38
8	Gale	Breaks twigs off trees ; generally impedes progress	39–46
9	Strong gale ..	Slight structural damage occurs (chimney pots and slates removed)..	47–54
10	Whole gale ..	Seldom experienced inland ; trees uprooted	55–63
11	.. .. ..	Very rarely experienced ; accompanied by widespread damage	64–75
12	Hurricane ..	.. ..	Above 75

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
o overcast sky. d drizzle.
e wet air without rain falling
f fog. g gloom.
h hail. l lightning
m mist. p passing showers.

BEAUFORT NOTATION.

q squalls r rain.
rs sleet, *i.e.*, rain and snow.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air ; humidity less than 60 per cent.
z dust haze ; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:—
R=heavy rain rr=continuous moderate rain. $r_s r_s$=continuous slight rain.

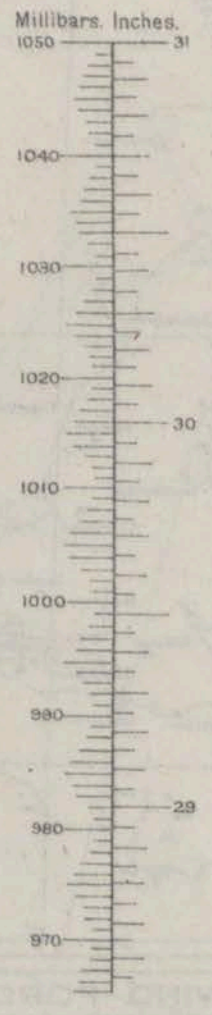
WEATHER SYMBOLS.

Clear sky	○	Sky ¼ clouded	◔
Sky ½ clouded	◐	Sky ¾ clouded	◕
Overcast sky	●	Rain falling	●
Snow	✳	Sleet	●
Fog	≡	Hail	▲
Thunder	⊤	Mist	≡
Lightning	↯	Thunderstorm	↯
Aurora	⌂	Gale	↙
Rime	⚹	Solar halo	⊕
Glazed frost	∽	Lunar halo	⊕
Glazed roads	⚹	Solar corona	⊙
Snow lying	⊠	Lunar corona	⊙

AIR MINISTRY.

METEOROLOGICAL OFFICE, LONDON.

NOTES ON THE INFORMATION CONTAINED IN THE BRITISH AND INTERNATIONAL SECTIONS OF THE DAILY WEATHER REPORT



Pressure.—The distribution of barometric pressure at Mean Sea Level is shown by means of isobars which are drawn for intervals of 2 millibars on the British Section of the Report and for intervals of 4 millibars on the International Section. Values in millibars may be converted to mercury inches by the scale given in the margin.

The wind at a height of 1,100–2,000 feet above ground usually blows *along* the isobars and, for the same temperature, pressure and latitude, the speed of the wind is inversely proportional to the distance between the isobars, *e.g.*, for isobars 1 inch apart (160 miles) in the Daily Weather Report the speed of the upper wind is about 12 m.p.h. in latitude 55°, with a temperature of 50° F. and a pressure of 1,015 mb. if, however, the isobars are ½ inch apart the corresponding speed is 24 m.p.h.

The scale below can be used with both the International and the British Sections. If the distance between consecutive isobars is measured along the rule from the left-hand extremity the geostrophic wind is shown by the scale in miles per hour.

GEOSTROPHIC WIND SCALE FOR

4 mb. isobars on 1 : 2×10^7 Charts
or 2 mb " " 1 : 10^7 "
or 1 mb " " 1 : 5×10^6 "

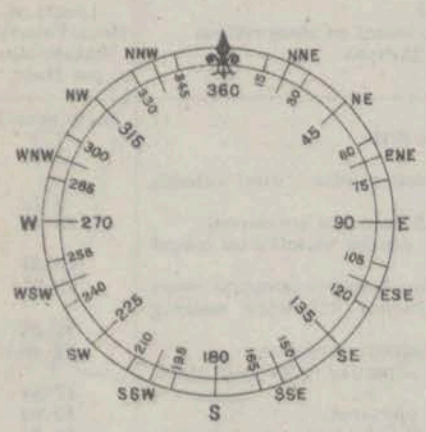
This scale applies under the following conditions —

Pressure, 1,015 mb Temperature, 283° A = 50° F Latitude, 55°

Corrections.—For an increase of 10 mb pressure, subtract 1% from velocity; for an increase of 10° F add 2%. From Latitude 55° to Latitude 65° subtract 1% for each degree *above* 55°. From Latitude 55° to Latitude 45° add 1½% for each degree *below* 55°.

Temperature.—Temperature is specified in degrees Fahrenheit. Temperatures are shown on the charts by means of figures written alongside the circles which indicate the positions of the stations.

Upper Air Temperature.—The actual observations are made normally, one at 1,000 feet above the level of the aerodrome, and the remainder at *pressures* of 950, 900, 850, 800, etc., millibars. Heights are then computed and, apart from instrumental error, are correct heights; they do not require modification for differences of temperature or humidity from normal as these are allowed for in the computation. The values are shown graphically and in tabular form in the Upper Air Supplement. On the diagram, heights are given both in feet and kilometres and temperatures in degrees Fahrenheit and Absolute. The lines marked "Anti-cyclonic," "Cyclonic," "Summer," and "Winter," indicate the normal fall of temperature with height or lapse rate under the conditions indicated. The oblique line marked "Adiabatic" shows the lapse rate for dry air ascending or descending under adiabatic conditions, *i.e.*, without communication of heat from external sources. The lapse rate under these circumstances is very approximately 5·5° F. per 1,000 feet, or 10a per kilometre. A lapse rate greater than this value indicates instability of the atmosphere.



Cloud Types.—In the inset maps of the British Section and in the cloud maps of the Upper Air Supplement the amounts of different types of cloud are shown. The forms, Cumulus (Cu.), Nimbus (Nb.), Strato-cumulus (St.-cu.), Cumulo-nimbus (Cu.-nb), and Stratus (St.) are set out on the chart of Lower Cloud. The forms, Alto-cumulus (A.-cu.), Alto-stratus (A.-st.), Cirrus (Ci.), Cirro-cumulus (Ci.-cu.), and Cirro-stratus (Ci.-st.) are given under Upper Cloud. The proportion of the sky covered with cloud of the different types is shown by numbers (tenths of the sky covered).

For description of Cloud Types reference may be made to "Meteorological Glossary," M.O. 225 ii, and "Cloud Forms," M.O. 233.

Weather.—In describing the distribution of weather over a district or during an interval of time such as a day, descriptive adjectives are used with the following meanings :—

Fine—mainly b and bc of the Beaufort notation (*see* previous page).
Fair or fair generally—mainly bc and c.
Cloudy—combinations of bc, c and o, c predominating.
Overcast—mainly c and o.
Dull—overcast with low heavy cloud.
Varying or variable cloud—combinations of b, bc, c, and o.

Precipitation when occurring is specifically mentioned.

Wind.—All wind directions specified in the reports are "true," as distinguished from "magnetic." The arrows indicating wind direction are drawn to fly with the wind. Wind velocities are shown on the charts of the British Section and Upper Air Supplement in m.p.h. by the numbers placed within the small circles. In the International Section velocities are not shown. In both Sections the number of feathers on the arrows denotes wind force by Beaufort number.

Upper Winds.—The direction and velocity of the wind are given in the Upper Air Supplement for heights of 1,000 feet, 2,000 feet, 5,000 feet, 8,000 feet, 10,000 feet, and 15,000 feet. The data are usually based on Pilot Balloon ascents.

In the forecasts of upper wind, direction is specified in points and in degrees from true north measured through East 90°, South 180°, West 270° to North 360°. (*See* diagram in margin.)

AIR MINISTRY.

SUPPLEMENT TO THE DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

SUMMARY OF METEOROLOGICAL OBSERVATIONS AT SELECTED STATIONS ISSUED ON THE 1st DAY OF EACH MONTH.

Notes on the Weather of DECEMBER, 1920

After a bright, sunny opening of the month the weather deteriorated rapidly. In the early hours of the 2nd gales were blowing in the Channel, rain became general and high winds or gales were experienced in most parts of the Kingdom within a day or two.

During the night of 7th - 8th much fog developed in England and persisted throughout the greater part of the day in London at a few hundred feet above the ground. Smoke from the crowded parts of the metropolis caused a darkness, as of night at times, to prevail both in the morning and afternoon.

Perhaps the most note-worthy feature of the month, so far as England is concerned, was the cold, snowy weather experienced during the second week-end. On the morning of Monday the 13th, the minimum temperature at Kew Observatory was 20°, the lowest for the year, while in the Midlands the frost was much more severe. Raunds reported -1°. Aeroplane observations on the previous day indicated that the Easterly current had brought a supply of unusually cold air to our islands: at Andover the reading at a pressure of 750 mb was more than 20° below normal.

Midday temperature in London remained below the average until the 19th but about Christmas mild, damp weather was re-established with variable amounts of rain and considerable fair periods. Individual records were not unprecedented in themselves but the persistence with which day and night temperatures both remained above the normal maximum was at least unusual for the season.

UPPER WINDS.

No. of records of Velocity (m.p.h.) within fixed limits.

Height.	Station.	No. of Obs.	Under 10 m.p.h.	10–25 m.p.h.	25–45 m.p.h.	45–70 m.p.h.	Above 70 m.p.h.
ft.							
2,000	Valencia.	38	8	19	10	1	0
5,000		23	11	8	4	0	0
10,000		11	2	6	3	0	0
15,000		10	0	5	1	4	0
2,000	Lympne.	15	0	5	8	2	0
5,000		8	0	1	7	0	0
10,000		0	0	0	0	0	0
15,000		0	0	0	0	0	0
2,000	Eskdalemuir.	11	2	8	1	0	0
5,000		8	1	5	2	0	0
10,000		1	0	1	0	0	0
15,000		1	0	1	0	0	0

UPPER AIR TEMPERATURE.

Pressure.	Normal Height.	Normal Temperature.	Baldonnel. Mean.	Baldonnel. No. of Reports.	Shoeburyness. Mean.	Shoeburyness. No. of Reports.	S. Farnboro'. Mean.	S. Farnboro'. No. of Reports.	Andover. Mean.	Andover. No. of Reports.
mb.	feet.	°F.	°F.		°F.		°F.		°F.	
950	1780	35	36°	18	-	0	40°	6	36°	20
850	4690	29	30°	18	-	0	31°	5	25°	20
750	7920	21	21°	18	-	0	24°	5	18°	19
650	11,580	9	12°	17	-	0	10°	3	8°	16

MINIMUM SURFACE HUMIDITY.

No. of Days with Minima between Fixed Limits.

Station.	95–100 %	90–94 %	80–89 %	70–79 %	60–69 %	50–59 %	40–49 %	30–39 %	20–29 %
Renfrew	2	5	14	8	2	0	0	0	0
Eskdalemuir ...	1	4	8	12	4	0	2	0	0
Valencia	0	0	8	9	12	2	0	0	0
Falmouth	1	1	4	9	9	7	0	0	0
Aberdeen	0	4	7	8	6	5	1	0	0
Leith	0	0	3	10	14	4	0	0	0
Benson	1	5	11	11	3	0	0	0	0
London (Kew Obs.)	0	2	12	12	5	0	0	0	0

SURFACE VISIBILITY. [No. of observations within fixed limits of telegraphic code (see below).]

NOTE. No observations were taken at 1h on 25th & 26th

STATIONS.	1h. 0	1	2	3	4	5	6	7	8	9	7h. 0	1	2	3	4	5	6	7	8	9	13h. 0	1	2	3	4	5	6	7	8	9	18h. 0	1	2	3	4	5	6	7	8	9
Renfrew	*	*	*	*	*	*	*	*	*	*	1	3	3	6	10	1	7	0	0	0	1	3	10	3	5	1	3	3	2	0	1	0	8	8	2	4	4	2	2	0
Eskdalemuir	0	0	3	1	5	6	7	6	1	0	0	0	2	5	4	5	4	9	2	0	0	1	0	3	2	7	6	7	5	0	0	1	0	6	2	5	14	2	1	0
Valencia	*	*	*	*	*	*	*		*	*	0	0	0	0	1	2	1	12	15	0	0	0	0	0	0	0	3	5	22	1	0	0	0	1	0	2	6	9	12	1
Baldonnel	0	0	0	4	10	8	6	1	0	0	0	2	0	2	4	6	10	4	3	0	0	0	0	0	2	5	9	5	10	0	0	0	0	1	10	10	8	2	0	0
Manchester (Alex. Pk.)	*	*	*	*	*	*	*	*	*	*	2	0	0	17	8	1	1	1	1	0	2	1	3	5	11	5	2	1	1	0	2	1	3	13	7	2	2	1	0	0
Falmouth	0	0	0	1	2	6	3	14	3	0	0	0	2	0	0	2	8	16	3	0	0	0	0	1	2	5	11	8	4	0	0	0	0	1	9	11	8	2	0	0
Calshot	0	0	0	1	4	5	8	3	8	0	0	0	0	1	2	7	12	4	5	0	0	0	0	3	9	2	9	3	5	0	0	0	1	3	6	4	9	3	5	0
Lympne	0	2	0	2	4	10	6	3	2	0	1	2	2	2	5	7	7	4	1	0	0	2	1	2	5	4	7	3	7	0	0	2	0	3	6	8	6	4	2	0
Aberdeen	*	*	*	*	*	*	*	*	*	*	0	0	2	2	8	9	5	3	2	0	0	0	3	4	7	4	4	4	5	0	0	1	1	3	12	5	3	3	3	0
Cranwell	0	0	2	2	6	14	5	0	0	0	0	1	2	0	6	13	7	2	0	0	0	0	1	2	7	6	7	6	1	1	0	0	5	1	7	9	6	2	1	0
Benson	*	*	*	*	*	*	*	*	*	*	0	0	2	3	6	8	6	1	5	0	0	0	2	2	7	6	6	3	3	2	0	1	1	4	7	6	6	5	1	0
London (Kew Obsy.)	*	*	*	*	*	*	*	*	*	*	2	1	3	2	4	10	4	5	0	0	0	1	3	6	9	7	3	0	2	0	1	1	2	6	11	7	3	0	0	0
Croydon	0	1	4	2	5	5	10	1	1	0	0	2	2	5	8	5	6	3	0	0	1	0	4	8	6	2	6	4	0	0	1	0	7	4	5	4	9	1	0	0

TELEGRAPHIC CODE FOR SURFACE VISIBILITY.

0. Dense fog. Objects not visible at 50 metres (or yards)
1. Very Bad. " " 200 " "
2. Bad. " " 1,000 " "
3. Very Poor. " " 2,000 " "
4. Poor. Objects not visible at 4,000 metres (or yards)
5. Indifferent. " " 7,000 " (4·3 miles)
6. Fair. " " 12,000 " (7·5 ")
7. Good. Objects not visible at 20,000 metres (12·4 miles)
8. Very Good. Objects visible beyond 20,000 " (12·4 ")
9. Excellent. Exceptional visibility.

H.M. Stationery Office Press, Kingsway, W.C.2

Pa.5794/272. 3:33. 20620. 312. 1/21.

SUMMARY OF RECORDS OF TEMPERATURE, SUNSHINE AND RAINFALL, DECEMBER, 1920

Equivalents of Temperature.

A°.	F°.
268	23·0
273	32·0
274	33·8
278	41·0
279	42·8
283	50·0

STATIONS.	Temperature. Number of daily readings within fixed limits. Maximum. Below 273 A	273 — 278	279 — 283	Above 283 A	Minimum. Below 268 A	268 — 273	274 — 278	Above 278 A	Coldest Day and Warmest Night. Lowest Maximum. °F	Date.	Highest Minimum. °F	Date.	Number of Ground Frosts.	Sunshine. Number of days with duration. Nil.	0·1—3h.	3·1—6h.	6·1—9h.	Above 9h.	Maximum Duration. Hours.	Date.	Rainfall. Total for past 12 months. mm.	Difference from Average. mm.	Total for month. mm.	Difference from Average. mm.	Number of days with amount. 0, trace or 0·1 mm.	0·2—1 mm.	1·1—5 mm.	5·1—15 mm.	15·1—25 mm.	Above 25 mm.	Days with Thunder.	Days with Snow or Sleet.
Aberdeen ...	0	10	21	0	0	9	20	2	33	18	43	1	19	12	12	7	0	0	5·5	9	699	-49	90	+8	9	8	9	4	0	1	0	3
Leith	0	10	16	5	0	7	23	1	33	17	44	26	15	*	*	*	*	*	*	*	720	+128	63	+12	12	7	9	3	0	0	0	1
Renfrew ...	0	15	13	3	2	13	14	2	33	17	44	26	19	19	9	3	0	0	5·5	22	*	*	106	*	11	3	8	9	0	0	0	3
Eskdalemuir ...	1	14	15	1	5	13	12	1	30	17	45	26	16	17	7	6	1	0	6·2	4	1627	*	138	*	10	3	10	6	1	1	0	6
Tynemouth ...	0	10	18	3	0	2	24	5	35	16	47	26	*	*	*	*	*	*	*	*	660	+39	80	+25	11	8	8	3	1	0	0	2
Yarmouth ...	0	9	13	9	0	9	18	4	35	12, 15	44	26, 29	6	20	8	3	0	0	5·3	26	532	-90	58	-4	6	10	13	2	0	0	0	5
Nottingham ...	1	12	10	8	2	9	14	6	31	12	47	26, 30	12	20	8	3	0	0	4·1	26	650	+52	61	0	10	10	8	3	0	0	0	6
Benson... ...	0	12	9	10	4	9	10	8	32	9, 12, 13, 15	48	25	14	*	*	*	*	*	*	*	580	*	43	*	9	12	9	1	0	0	0	3
Richmond (Kew Obsy.) ...	1	11	9	10	2	8	12	9	28	12	49	28, 30	11	18	9	4	0	0	5·0	1	600	-6	49	-9	12	8	9	2	0	0	0	5
Manchester (Alex. Pk.) ...	0	12	10	9	2	10	13	6	33	13	48	26	15	*	*	*	*	*	*	*	*	*	65	*	15	4	9	3	0	0	0	5
Bidston ...	0	12	11	8	0	10	12	9	34	12, 13, 15	49	26	15	11	13	6	1	0	6·5	4	846	+137	57	-10	14	9	5	3	0	0	1	0
Holyhead ...	0	8	11	12	0	7	11	13	34	13	49	25	7	11	14	6	0	0	6·0	16	1225	+337	85	-21	13	7	5	5	1	0	0	0
Falmouth ...	0	8	8	15	0	7	11	13	36	15	50	25	9	9	13	7	2	0	6·1	9, 17	1196	+89	133	-26	14	1	7	7	2	0	0	2
Calshot ...	0	9	10	12	0	8	12	11	34	12	48	29, 30	9	14	8	8	1	0	6·2	22	663	*	53	*	15	3	9	4	0	0	0	4
Dublin (Phœnix Park)	0	11	12	8	0	12	12	7	34	14	48	26	15	9	13	9	0	0	5·9	10	851	+146	55	-10	7	11	11	2	0	0	0	2
Baldonnel ...	0	9	14	8	2	13	10	6	34	13, 14	49	25	14	13	13	5	0	0	5·8	4	883	*	55	*	2	5	10	4	0	0	0	3
Birr Castle ...	0	10	13	8	0	15	10	6	33	13, 14	47	25	17	11	12	7	1	0	6·2	10	958	+129	77	-7	16	3	6	6	0	0	0	0
Valencia ...	0	4	13	14	0	6	9	16	36	13	52	25	9	10	13	6	2	0	6·4	5	1645	+231	183	+14	14	1	3	10	2	1	1	0

Errata. Baldonnel: 12 months' rainfall, Difference from Average, +[illegible] mm.

METEOROLOGICAL OFFICE, AIR MINISTRY, KINGSWAY, W.C.2.

G. C. SIMPSON, F.R.S., Director.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. No. B. 21569 WEDNESDAY 1st DECEMBER 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

STATIONS.	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind. Direc.	Wind. Force 0-12.	Weather	Temp. °F.	Humidity. %	§ Visibility 0-9.	Height of Low Cloud. Feet.	Low Cloud. Form.	Low Cloud. Amt. 0-10.	Upper Cloud. Form.	Upper Cloud. Amt. 0-10.	Sea 0-9.	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind. Direc.	Wind. Force 0-12.	Weather	Temp. °F.	Humidity. %	§ Visibility 0-9.	Height of Low Cloud. Feet.	Low Cloud. Form.	Low Cloud. Amt. 0-10.	Upper Cloud. Form.	Upper Cloud. Amt. 0-10.	Sea 0-9.
	13H. G.M.T. 30th Nov.														18H. G.M.T. of 30th Nov.													
Renfrew	1005.6	-6	ESE	3	0u	47	85	6	2000	St	2	A.St	8	*	999.3	-5	ESE	5	0r	48	92	5	2000	Nb	10	-	-	
Eskdalemuir	1006.9	-5	SSE	3	0	47	85	6	2000	Cu	3	C.St	5	*	1002.0	-4	SE	4	0zf	46	85	5	-	St	10	-	-	*
Valencia (Cahirc'n)	991.3	+3	SW	4	01f	48	85	7	2000	St	7	A.St	3	4	1002.5	+13	WSW	7	b	48	85	8	2000	Cu	2	-	-	6
Baldonnel	996.3	-12	SSE	6	0r3f	52	85	5	2000	St	10	-	-	*	997.1	+4	S	3	0r	45	92	4	2000	St	9	-	-	*
Manchester (Alex. Pk)	1005.9	-5	SSE	4	02f	48	85	4	2000	St	10	-	-	*	1003.5	-4	SSE	7	0r	49	85	4	2000	Nb	10	-	-	*
Ross on Wye	1008.3	-6	SW	3	0	51	85	7	2000	Nb	7	A.St	3	*	1003.9	-5	SSW	2	0	47	85	7	2000	St	10	-	-	*
Falmouth	1002.6	-10	SSE	7	0Rq	53	97	5	-	Nb	10	-	-	*	1006.7	+7	WSW	6	cpq	47	75	6	-	Nb	7	-	-	*
Calshot (Hants) *	1012.1	-4	S	4	0	51	92	8	1250	St	6	A.St	4	3	1006.8	-6	S	6	rhq	51	97	5	<500	Nb	10	-	-	5
Lympne (Folkestone)	1014.8	-2	S	3	01f	48	97	7	<500	St	10	-	-	*	012.2	-4	S	6	0qm	48	85	5	<500	St	10	-	-	*
Aberdeen	1008.7	-2	S	1	c3fe	47	85	3	750	St	8	-	-	3	1005.5	-4	SSE	4	02f	48	92	4	750	St	10	-	-	4
Howden	1009.6	-3	SSE	2	02f	47	97	4	<500	St	10	-	-	*	1006.5	-5	SSE	5	0q	47	97	4	<500	St	10	-	-	*
Cranwell (Lincs)	1012.3	-3	SSE	3	02f	46	97	5	<500	St.Cu	10	-	-	*	1007.8	-5	SSE	5	0	46	97	5	750	St	10	-	-	*
Felixstowe	1015.2	-3	SSW	2	c	50	97	6	2000	St	1	Ci	6	*	1012.6	-8	S	4	bc	47	97	6	1250	St	6	-	-	*
Shoeburyness	1014.2	-3	SSW	1	cu	51	85	7	1250	St.Cu	7	A.Cu	1	*	1011.3	-3	SSW	4	0	49	85	7	2000	St.Cu	9	A.St	1	*
Benson	1010.8	-5	SSE	4	0	51	85	6	-	St	10	-	-	*	1006.3	-6	SSE	5	0r	49	92	5	-	Nb	10	-	-	*
S. Farnborough	1012.9	-3	S	3	01f	50	85	6	2000	Nb	10	-	-	*	1007.7	-6	S	5	0R1-3f	50	97	5	750	Nb	10	-	-	*
London (Kew Obsy.)	1013.0	-5	SSE	4	02f	52	85	5	1250	Cu.Nb	8	A.St	2	*	1008.6	-5	SE	4	0r	50	85	5	1250	Nb	10	-	-	*
Croydon	1013.5	-3	SSW	4	01f	50	85	6	1250	St.Cu	10	-	-	*	1010.0	-5	S	4	02fr	49	92	5	1250	Nb	8	St	2	*
	1H. G.M.T. of 1st Dec.														7H. G.M.T. of 1st Dec.													
Renfrew															1008.0	+6	SW	4	b	46	85	6	2,000	St.Cu	2	-	-	*
Eskdalemuir	1002.7	+4	W	4	0r	41	85	6	-	St	10	-	-	*	1010.0	+6	WSW	4	b	36	85	7	-	St	1	-	-	*
Valencia (Cahirc'n)															1011.8	+2	SSW	4	c	46	75	8	2,000	Cu	4	Ci.St	3	*
Baldonnel	1008.2	+8	S	3	bq	40	75	5	4200	St.Cu	1	-	-	*	1012.2	+2	SSW	3	b	40	85	5	-	-	-	A.Cu	2	*
Manchester (Alex. Pk)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1013.9	+6	SW	5	0rq	43	85	7	5,000	Nb	2,10	-	-	*
Ross on Wye	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1016.3	+3	WSW	3	c	41	92	7	3,000	Nb	7	Ci	1	*
Falmouth	1015.6	+6	W	6	b	44	75	7	-	St.Cu	1	-	-	*	1017.9	+2	WSW	4	bc	43	92	7	-	Nb	2	A.Cu	2	*
Calshot (Hants)	1014.2	+10	W	3	bc	44	97	8	2,000	St.Cu	4	A.Cu	4	2	1019.1	+6	WSW	3	b1f	44	85	6	2,000	Cu	1	-	-	2
Lympne (Folkestone)	1013.3	+1	SW	3	01f	45	92	7	1200	St.Cu	10	-	-	*	1020.1	+6	SW	2	b	34	92	8	-	-	-	-	-	*
Aberdeen	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1005.7	+7	SSW	3	bc1f	43	75	6	4200	St.Cu	4	-	-	4
Howden	1006.0	+6	SSW	4	0rq	46	97	6	1250	Nb	8	A.St	2	*	1012.1	+7	S	1	bx	34	92	4	-	-	-	-	-	*
Cranwell (Lincs)	1007.1	+3	WSW	3	0	46	85	6	4200	St.Cu	9	Ci.St	-	*	1015.6	+6	SW	3	b	37	85	6	4200	St.Cu	2	-	-	*
Felixstowe	1011.6	+2	SW	3	bc2f	46	92	5	2,000	St	4	A.Cu	3	0	1018.0	+8	W	3	b	41	85	6	-	-	-	A.St	1	3
Shoeburyness	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1018.4	+7	W	2	b	39	85	7	-	-	-	Ci.St	1	*
Benson	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1016.1	+6	SW	3	bc	37	92	8	-	St.Cu	6	-	-	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1018.8	+5	WSW	1	b	33	97	7	-	-	-	Ci.St	1	*
London (M.O. at 1H.)	1012.0	+6	*	*	*	*	*	*	*	*	*	*	*	*	1018.9	+7	SW	2	bmw	39	85	4	2,000	St	1	-	-	*
Croydon	1012.5	+6	W	4	bc1f	45	85	6	3,000	St.Cu	3	A.Cu	1	*	1019.2	+8	S	3	b1f	38	85	6	-	-	-	A.St	1	*

STATIONS CONTRIBUTING REPORTS AT 7H. AND 13H.

STATIONS.	Barom. at M.S.L. mb.	Temp. °F.	Wind. Direc.	Wind. Force 0-12.	Weather.	Barometer. at M.S.L. mb.	‡ Change in 3 hours.	Temperature. Temp. °F.	Temperature. Change in 24 hours.	Wind. Direc.	Wind. Force 0-12.	Direc. of Upper Cloud.	Weather.	Sea 0-9.	† Rainfall mm.	Temp. Max. °F.	Temp. Min. °F.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Sunshine Hours.
	13H. G.M.T. of 30th Nov.					7H. G.M.T. of 1st Dec.									24 HOURS ENDED 7H. 1st DEC.						30th Nov.
Lerwick	1009.9	50	SE	5	0qp	1003.6	-3	47	0	SE	5	-	0qp	6	3	51	45	0qr	0mr	0qp.0qr	*
Stornoway	995.3	49	SE	6	0	999.9	+3	43	-3	SW	4	-	b	3	2	51	42	b	b.0	0q.b	2.2
Castlebay (Barra Is)	991.7	50	ESE	7	0rq	1002.3	+3	46	-5	SSW	4	-	bc	4	3	51	42	bo	0rq	q.0.bc	0.0
Malin Head	990.6	47	SSW	3	0m	1003.4	+4	41	-1	SW	3	W	bcmq	3	3	53	38	0m	0mr	0mp.cmq	0.0
Blacksod Point	993.3	45	W	5	0m	1003.1	+4	45	-3	W	6	-	cq	7	18	51	41	0mr	0mp	bc.cq	*
Roche's Point	1001.4	46	WNW	4	0	1013.5	+5	43	-9	WNW	3	-	b	4	14	53	39	rc	cr0	c.b	*
Birr Castle	998.1	43	S	4	r	1009.6	*	38	-11	SSE	1	-	c	*	0	51	30	0r	0r	0r.bc	0.0
Donaghadee	996.6	50	S	5	0mrq	1008.3	+3	39	-4	W	1	-	bcm	1	4	52	38	cmqp	0mrq	bcmp	*
Liverpool (Bidston)	1000.5	49	SE	5	0	1012.5	+4	42	-2	SSW	3	S	bc	4	1	50	40	bc0m	0g	0pq	0.4
Holyhead	997.8	50	S	5	0p	1011.2	+2	46	-2	SW	4	SW	bc0	3	6	52	44	bbc0	0rqcp	0pq.c.b	0.0
Pembroke (St. Ann's Head)	1000.9	50	SW	6	cq	1014.7	+3	47	-4	SW	5	-	bv	5	8	53	47	0q	0qp0q	bcqv	0.0
Scilly (St. Mary's)	1005.9	48	WNW	5	0	1017.6	+3	47	-6	WSW	4	W	b	5	8	54	47	0rqc	c0pq	bc.bpq	1.0
Jersey (St. Aubin)	1003.5	53	SE	5	0	1020.8	+2	49	-2	SW	3	SW	b	4	5	54	47	bc0p	0p	0qp.b	0.0
Portland Bill	1004.8	52	SW	6	0	1017.8	+6	49	-3	W	7	W	0qr	7	5	54	45	bc0	0qmr0	0.bc.0q	*
Dungeness	1011.6	50	SW	5	c	1018.9	+13	42	-10	WNW	3	-	b	4	4	54	41	c	c	0.0r.c.b	*
Wick	1002.5	48	SSE	6	cmq	1001.8	+6	40	-7	SW	3	-	0m	4	3	49	40	0mbc	bcmq	c0mqr	*
Nairn	1000.2	47	ESE	2	0	1003.1	*	39	-2	-	0	-	bc	1	1	47	38	cbc	bc0	0q.bc	4.0
Leith	1001.6	45	SE	2	0	1007.4	+3	39	-5	SW	2	-	b	1	1	49	34	bm.bc.0	cu.0	0r.c.b	*
Tynemouth	1005.4	47	S	4	bcm	1009.4	+6	42	-4	W	2	-	b	3	1	48	41	f	bcm	0mr.bm	*
Spurn Head	1008.4	47	SSW	4	0	1014.1	+9	41	-5	WSW	4	-	b	4	1	47	38	cmfd	0	0qp.c	*
Yarmouth (Gorleston)	1012.9	48	S	5	0	1015.8	+4	40	-8	W	3	-	b	2	4	49	40	0rfam	0m.0m	0vr.bc	0.0
Clacton-on-Sea	1011.9	49	S	4	0	1017.3	+5	41	-8	W	3	-	bc	2	3	50	40	0gmc	c0g	0gr.bc	1.0
Nottingham	1006.1	49	SE	4	0p	1015.6	*	37	-9	SW	1	SW	b	*	3	50	36	0	0	r.0	0.0

* Information for these columns not usually received. ‡ The barometric change is expressed in half millibars. § For code see page 3 † See footnote p. 4.

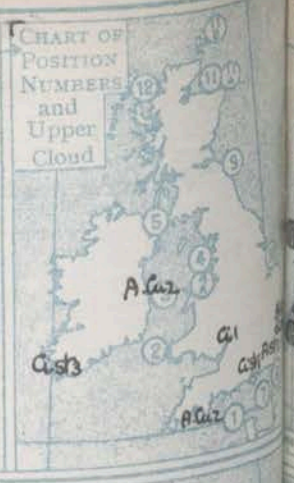
M.O. FORM 2370

SUMMARY OF CONDITIONS AT 7 h. G.M.T. 1.12.1920.

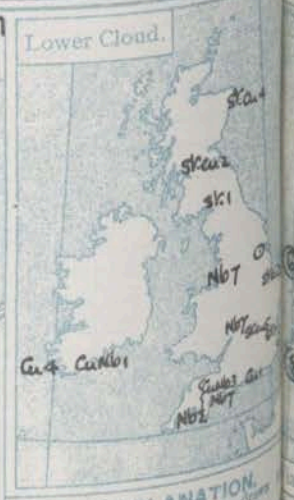
Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Fine, mist locally.	Good	Slight
2. E. England	Fine.	"	Smooth
3. E. Midlands	Fine.	"	-
4. W. Midlands	Fair to cloudy.	"	-
5. S.W. England	Fair, local rain & squalls.	"	R. Rough
6. South Wales	Fine.	V. Good	"
7. North Wales	Fair.	Good	Mod.
8. N.W. England	Fair, local showers.	"	"
9. N. Midlands	Fair, local showers.	"	-
10. N.E. England	Fine.	Indiff.	Slight
11. E. Scotland	Fair, some mist.	Fair	Mod.
12. S.W. Scotland	Fine.	Good	Slight
13. Isle of Man	Fair.	"	"
14. N. & N.W. Scotland	Fair to dull, some mist.	"	Mod.
15. Hebrides	Fair.	"	Slight
16. Orkneys and Shetlands	Showery, squally.	Poor	Rough
17. N.W. Ireland	Cloudy, squally.	Fair	"
18. N.E. Ireland	Cloudy to fair.	Good	Slight
19. S.E. Ireland	Fair.	"	Mod.
20. S.W. Ireland	Fair.	"	"

Temperature reported from Coastal and Cross Channel Steamers.

Position Number	Date	Time G.M.T.	Sea °F	Air °F
12	30th	?	57	53
6	30th	0819	52	50
4A	1st	0400	50	47



Barometric change from 4 h. to 7 h. (half millibars).



EXPLANATION.
BAROMETER.—Isobars are drawn at intervals of two millibars.
WIND.—Direction is shown by arrows flying with the wind. Force, on the scale 0-12, is indicated by the number of feathers. Mean velocity is shown in miles per hour by figures in small italics.
TEMPERATURE is given in degrees F.
WEATHER SYMBOLS.—clear sky. sky ½ clouded. overcast sky. snow. fog. T thunder. sky ¼ clouded. sky ¾ clouded. rain. sleet. mist. ℞ thunderstorm.
SEA DISTURBANCE.—Rough. High seas.

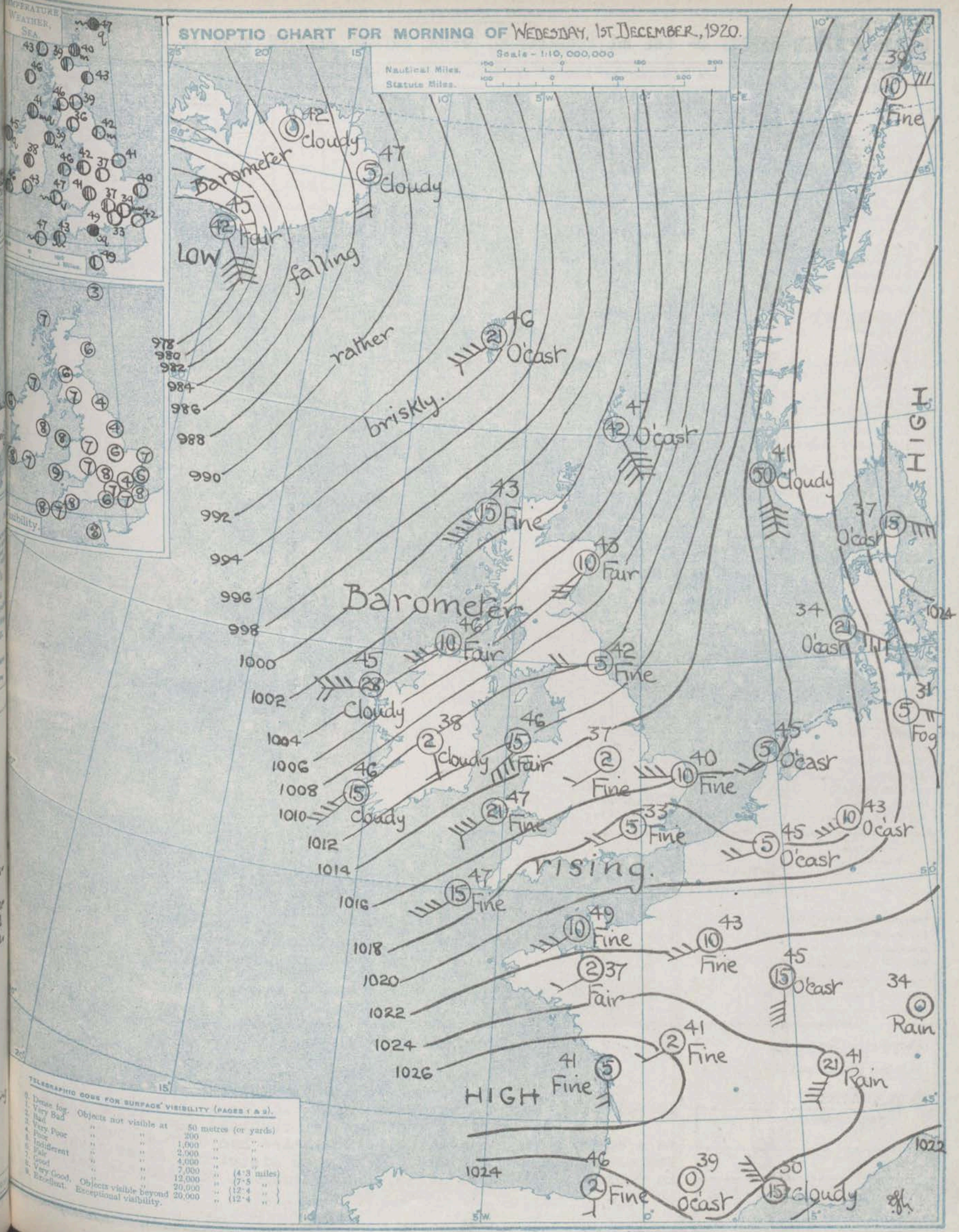
GENERAL INFERENCE from observations received up to 9h.

A temporary improvement in the weather will accompany a rise of the barometer now in progress over the British Isles, but fresh depressions are likely to cause further rains, beginning in the West, before the ensuing 24 hours have elapsed.

Districts.	Forecasts for the 24 hours commencing 15 h. G.M.T. Wednesday, 1st December, 1920.	Further Outlook.
1. S.E. England 2. E. England 3. E. Midlands 4. W. Midlands 5. S.W. England 6. South Wales 7. North Wales 8. N.W. England 9. N. Midlands 10. N.E. England 11. E. Scotland	Wind South-Westerly, light or moderate today, with mainly fair weather; wind increasing tomorrow, with much cloud and some rain; visibility good to fair; no great change of temperature.	Continuing unsettled, with South and South-West winds, and occasional rain.
12. S.W. Scotland 13. Isle of Man 14. N. & N.W. Scotland 15. Hebrides 16. Orkneys and Shetlands 17. N.W. Ireland 18. N.E. Ireland 19. S.E. Ireland 20. S.W. Ireland	Wind South and South-West, moderate or fresh, stronger later; fair or cloudy, then some rain, visibility mainly fair; moderate or mild temperature.	South Cone still flying

R.S.

Meteorological Office: Air Ministry, Kingsway, London, W.C.2. Forecasts issued at 08.50. G. C. SIMPSON, F.R.S., Director.


SYNOPTIC CHART FOR MORNING OF WEDESDAY, 1ST DECEMBER, 1920.
Scale - 1:10,000,000
Nautical Miles.
Statute Miles.
TEMPERATURE
WEATHER.
SEA
Barometer falling rather briskly.
Barometer rising.
LOW
HIGH
HIGH
978
980
982
984
986
988
990
992
994
996
998
1000
1002
1004
1006
1008
1010
1012
1014
1016
1018
1020
1022
1024
1026
1024
1022
1024
12 cloudy
47 cloudy
42 Fair
46 O'cast
47 O'cast
43 Fine
43 Fair
46 Fair
45 Cloudy
38 cloudy
46 Fair
46 cloudy
37 Fine
40 Fine
45 O'cast
47 Fine
33 Fine
45 O'cast
43 O'cast
47 Fine
49 Fine
43 Fine
37 Fair
45 O'cast
34 Rain
41 Fine
41 Fine
41 Rain
46 Fine
39 O'cast
50 cloudy
41 cloudy
37 O'cast
34 O'cast
30 Fine
31 Fog
TELEGRAPHIC CODE FOR SURFACE VISIBILITY (PAGES 1 & 2).
0. Dense fog. Objects not visible at 50 metres (or yards)
1. Very Bad " " 200 " "
2. Bad " " 1,000 " "
3. Very Poor " " 2,000 " "
4. Poor " " 4,000 " "
5. Indifferent " " 7,000 " (4·3 miles)
6. Fair " " 12,000 " (7·5 ")
7. Good " " 20,000 " (12·4 ")
8. Very Good. Objects visible beyond 20,000 " (12·4 ")
9. Excellent. Exceptional visibility.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 326.

WEDNESDAY 1st DEC. 1920

WEATHER, TEMPERATURE, RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 30th NOV.

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 29th-30th	Rainfall. Day. 9h-18h. 30th	Sunshine. Sunrise to Sunset. 30th
Scotland.	Oban	bcb	bbccq	51	35	4	–	1.4
	Banff	cbc	bccod	48	43	2	–	3.6
	Montrose							
	St. Andrews							
England, N.E.	Harrogate	fo	o	45	40	4	0.1	0.0
	Scarborough	o	o	43	42	0.3	–	0.0
	Skegness	fogg	oc	48	43	1	–	0.0
England, E.	Lowestoft							
	Felixstowe	om	omc	51	48	2	–	1.3
	Southend-on-Sea	oc	co	53	40	1	–	1.0
England, S.E.	Tunbridge Wells	o	o	50	46	2	–	0.0
	Margate	–	–	52	46	1	–	0.1
	Ramsgate	*	*	50	46	2	–	0.7
	Folkestone	oge	oge	52	48	4	–	0.0
	Hastings	orb	o	52	48	7	–	0.0
	Eastbourne	o	oro	51	49	8	0.2	0.0
	Brighton	o	o	52	48	5	–	0.1
	Worthing	c	or	52	44	4	–	0.2
	Littlehampton							
	Portsmouth (S'thsea)	–	–	54	44	2	–	2.0
	Bournemouth	*	*	52	45	6	6	0.0
	Ventnor (I. of W.)	*	*	53	47	1	2	1.5
England, N.W.	Douglas (I.O.M.)							
	Blackpool	co	–	50	42	2	–	0.0
	Southport	oco	o	50	42	1	–	0.0
	Morecambe	–	–	51	41	1	1	0.4
Midlands.	Buxton							
	Leamington Spa	o	od	52	38	0.3	–	0.0
	Malvern	or	ro	49	39	1	7	0.0
	Bath	ocbcb	oR	53	40	1	9	0.0
Wales.	Rhyl	ro	R	51	40	2	4	0.2
	Colwyn Bay	–	–	52	43	3	3	0.0
	Llandudno	*	*	52	43	0.2	3	0.0
	Aberystwyth	roc	oro	53	44	1	4	
	Tenby							
	Swansea							0.2
England, S.W.	Weymouth	o	opo	54	45	2	6	
	Teignmouth							0.0
	Torquay	cR	oR	54	44	2	4	0.0
	Paignton	oqpoR	cbeqp	54	38	1	4	0.4
	Penzance	oR	ocbc	55	46	0.3	5	0.0
	Newquay	oobqs	obc	54	43	0.3	4	0.7
	Bude	rcoc	cpcp	54	43	0.1	4	0.0
	Ilfracombe	op	op	54	47	–	2	0.0
	Weston-s-Mare	or	ro	53	40	1	10	

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-18h. 30th	Weather. 18h-18h. 30th	Weather. 18h-1h. 1st	Weather. 1h-7h. 1st	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall.† Day. 7h-18h. mm.	Rainfall.† Night. 18h-7h. mm.	Sun. Hours.
Renfrew	bcc 3f bcc		o2f r	b. of	49	40	32	–	3	8
Eskdalemuir	4-5fc bcbc	co.o2f	rr. o2f	rr. o2c.c.b	47	36	32	Tra	6	1.5
Valencia (Cahirc'n)	o1f RRo2f	rr.prh co. obc	bccf.RRr	bc.c	54	49	46	22	7	0.0
Baldonnel	3r	rr.q	b. bcq	b.bc.q	53	38	34	5	3	0.4
Manchester (Alex Pk)	obc 3fco3f	o2f rr	o3f 3rr	b. o1f	51	37	28	1	1	.8
Ross on Wye	oco	oq grr	of. bc.q	b.bc.o.c or	52	38	30	5	1	0.0
Falmouth	oRR	p q pco	b. bc. b	b. bcp	54	43	41	6	2	0.0
Calshot (Hants)	cop. u	o2f RRq	Rq.r. b	rq.b.bc.if	53	41	36	2	2	2.0
Lympne (Folkestone)	o2fo2f	pd o2fq 2f	rr o2f	of.bc.b.bc	50	35	31	0.2	6	0.2
Aberdeen	o2f 3fo	2fco2f	o2f q	rr if	49	43	38	–	3	1.2
Howden	o2-3fc	o2f.q	RRq	b.bc.2f	47	34	28	–	5	0.0
Cranwell (Lincs)	opd	o o2f	rro.bc.c.o	b.o.b	47	36	32	0.2	2	0.6
Felixstowe	o2fco	o1f r	w x	bc.c.b.bc	52	41	*	–	4	1.4
Shoeburyness	pd co	pd o	rr q	b.bc.bc.c	53	39	*	0.2	2	1.2
Benson	o	o	rr bc.c	bc.c.b.bc	52	33	25	1	2	*
S. Farnborough	o4-5fco	o2fDD.rr	rr b	b.b.bc	51	33	27	1	5	0.1
London (Kew Obsy.)	o3f pd	o2f rr	RRo1f p.b.bc	b.bc2fw	53	39	30	0.1	4	0.4
Croydon	o1f 2fcr co	o1f pd o2f r	rro2f.bc.c if	b.bc if	53	38	*	0.1	7	*

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, i.e., rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:–
R = heavy rain.
rr = continuous moderate rain.
r.r. = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 30 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0·3
1	1– 3	0·3– 1·5
2	4– 7	1·6– 3·3
3	8–12	3·4– 5·4
4	13–18	5·5– 8·0
5	19–24	8·1–10·8
6	25–31	10·9–13·9
7	32–38	14·0–17·1
8	39–46	17·2–20·7
9	47–54	20·8–24·4
10	55–63	24·5–28·4
11	64–75	28·5–33·5
12	Above 75	33·6 or above

SYMBOLS–

Aurora, Rime, Glazed frost, Glazed roads, Solar halo, Lunar halo, Solar corona, Lunar corona

LONDON. OBSERVATIONS.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Hours.	Humidity % 15 h. G.M.T. (Yesterday)	Humidity % 9 h. G.M.T. (To-day)
	24 hours ended on G.M.T. 1st Dec.									
Greenwich (Royal Observatory)	o	omf or	orb.o.b.o	54	37	30	4	1.1	88	85
City (Bunhill Row)	*	*	*	*	*	*	*	0.2	*	*
Westminster (St. James's Park)	*	*	rm	54	38	30	4	0.4	81	79
Regents Pk. (Botanical Gdns)	*	*	*	*	*	*	*	0.0	*	*
Camden Sq. (British Rainfall)	og. o.c	c. og. o	*	53	38	32	4	*	86	83
Kensington Palace	o	o	*	54	36	30	5	*	92 (18h)	87
Hampstead Observatory	*	*	*	50	37	31	5	0.1	*	86

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday

Total 113 Joules.

Milliwatts.
Average Rate. 3.8
Maximum Rate. 22

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

1st to 2nd DECEMBER 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth	7.42	11.42	3.42
	7.43	11.42	3.42
Greenwich	7.45	11.49	3.54
	7.46	11.49	3.53
Wick	8.34	12.1	3.28
	8.33	12.1	3.30
Valencia	8.28	12.30	4.32
	8.29	12.30	4.32

Photographic Record of Pole Star (Polaris) and of δ Ursæ Minoris at Greenwich Observatory.

Exposure from 30 Nov. 19 am
to 1 Dec. 6 31m

Star.	Duration of Exposure. h.	m.	Duration of Record. h.	m.	%
Polaris	13	30	8	10	61
δ Ursæ Minoris	13	30	7	10	56

NOTES ON THE WEATHER OF YESTERDAY

Rain fell very generally, the heaviest amounts being 29mm at Valencia, 18mm at Blacksod Point, and 14mm at Roche's Point. Little or no sunshine was recorded over the Kingdom as a whole, but some Scottish localities had 3 or 4 hours. Temperature rose to about 50° in most districts; frost occurred in Central Ireland at night, the minimum at Birr Castle falling to 30°.

* Information for these columns not usually received.

† Trace = rain has fallen but amount less than 0·1 mm.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. No. B21,560 Thursday 2nd December 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

STATIONS.	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind. Direc.	Wind. Force 0-12.	Weather.	Temp. °F.	Humidity. %	§ Visibility 0-9.	Height of Low Cloud. Feet.	Low Cloud. Form.	Low Cloud. Amt. 0-10.	Upper Cloud. Form.	Upper Cloud. Amt. 0-10.	Sea 0-9.
	13H. G.M.T. 1st													
Renfrew	1011.7	+2	SSW	4	c	45	75	7	2,000	Strcu	8	–	–	*
Eskdalemuir	1012.8	+1	SW	4	b	43	85	8	2,000	Cu	3	–	–	*
Valencia (Cahirc'n)	1009.9	-3	S	4	o	51	75	8	2,000	St.Cu	6	A.St	4	5
Baldonnel	1013.1	+2	SW	5	oq	46	75	8	4,200	St.	3	A.St	6	*
Didsbury	1017.0	+3	SW	3	b1f	47	75	7	3,000	St.Cu	1	–	–	*
Ross on Wye	1018.2	+1	WSW	4	bc	49	75	8	4,200	Cu.	1	Ci	2	*
Falmouth	1019.3	-2	SSW	4	o	52	75	8	–	St.Cu	1	A.St	9	*
Calshot (Hants)	1020.9	0	SW	3	c	51	85	8	2,000	Cu	4	Ci	3	2
Lympne (Folkestone)	1022.4	+1	SW	3	o	47	85	8	1,250	St.Cu	10	–	–	*
Aberdeen	1010.7	+4	SSW	4	b2f	43	75	4	–	–	–	A.Cu	2	4
Howden	1018.5	+2	SW	2	b	46	85	6	3,000	?	?	Ci.St	1	*
Cranwell (Lincs)	1018.6	+3	SW	4	b	46	85	6	–	–	–	A.St	1	*
Felixstowe	1021.3	0	SSW	3	b2f	48	75	5	–	–	–	Ci	2	2
Shoeburyness	1021.2	+2	SW	2	bc	49	75	6	3,000	St.Cu	5	A.Cu	1	*
Benson	1019.4	+1	SW	3	b	49	75	8	–	Cu	1	Ci	1	*
S. Farnborough	1020.9	0	SW	4	bc	49	75	8	3,000	St.Cu	4	Ci.St	2	*
London (Kew Obsy.)	1020.9	0	SW	3	b	48	75	6	–	–	–	A.Cu	1	*
Croydon	1020.9	+1	WSW	4	bc1f	48	75	6	3,000	St.Cu	3	A.Cu	2	*
	1H. G.M.T. of 2nd													
Renfrew	1011.5	-3	S	3	o	40	92	5	–	St	10	–	–	*
Eskdalemuir	1006.4	+3	NNW	3	op	47	*	*	*	*	*	*	*	3
Valencia (Cahire'n)	1008.9	-2	S	3	or3f	46	92	5	2,000	St	10	–	–	*
Baldonnel	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Didsbury	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ross on Wye	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Falmouth	1004.7	-11	SE	8	orq	49	97	4	–	Nb	10	–	–	*
Calshot (Hants)	1015.4	-7	S	6	orq	49	85	8	2,000	St	10	–	–	5
Lympne (Folkestone)	1018.5	-4	SW	3	o	48	85	8	1,250	St	10	–	–	*
Aberdeen	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Howden	1016.0	-5	–	0	o3f	35	97	3	<500	St	10	–	–	*
Cranwell (Lincs)	1017.5	-5	SE	3	o3f	35	97	4	2,000	St	10	–	–	*
Felixstowe	1019.5	-2	S	4	o3f	47	92	5	1,250	StCu	10	–	–	3
Shoeburyness	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Benson	*	*	*	*	*	*	*	*	*	*	*	*	*	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*
London (M.O. at 1H.)	1016.7	-4	*	*	*	46	*	*	*	*	*	*	*	*
Croydon	1017.5	-5	SSW	4	o1f r.	45	85	6	2,000	St	10	–	–	*
	18H. G.M.T. of 1st													
Renfrew	1012.3	0	S	2	b	40	85	7	3,000	St.Cu	1	–	–	*
Eskdalemuir	1014.3	+1	SSW	3	c	37	92	6	–	St.Cu	7	–	–	*
Valencia (Cahirc'n)	1005.7	-5	S	3	or.	48	92	7	2,000	St	7	A.St	3	5
Baldonnel	1011.4	-1	S	3	oq	45	85	5	2,000	St	9	1 -	–	*
Didsbury	1017.1	-1	S	3	b1f	43	85	7	–	–	–	–	–	*
Ross on Wye	1018.0	0	SSE	5	bcq	45	75	7	–	–	–	Ci.St	4	*
Falmouth	1015.1	-6	SSE	4	o1f	52	85	6	–	St	10	–	–	*
Calshot (Hants)	1021.0	-1	SSE	2	o1f	47	92	6	2,000	A.St	8	St	2	
Lympne (Folkestone)	1023.1	0	SSW	1	b	43	92	8	–	–	–	–	–	*
Aberdeen	1013.2	+2	S	3	b2fe	42	75	4	–	C	–	–	–	4
Howden	1018.0	0	S	2	b	40	92	5	2,000	St	2	–	–	*
Cranwell (Lincs)	1019.8	+1	S	3	bw	38	97	5	4,200	St	1	–	–	*
Felixstowe	1022.2	+1	SW	2	b2f	43	97	5	–	–	–	–	–	*
Shoeburyness	1021.9	+1	–	0	b	41	85	6	–	–	–	–	–	*
Benson	1020.2	0	S	1	b	40	86	7	–	–	–	–	–	*
S. Farnborough	1021.2	-1	SE	2	b	41	92	7	<500	St	2	Ci.St	1	*
London (Kew Obsy.)	1021.4	0	SSW	2	bmw	41	85	4	–	–	–	–	–	*
Croydon	1022.1	+1	SW	3	b1fw	41	97	6	–	–	–	–	–	*
	7H. G.M.T. of 2nd													
Renfrew	1010.2	+1	S	4	or	45	92	6	1,250	StCu	10	–	–	*
Eskdalemuir	1012.4	+2	SSW	4	or3f	41	97	5	2,000	Nb	10	–	–	*
Valencia (Cahire'n)	1014.6	+8	WNW	4	c	48	65	8	3,000	Cu	1	ACu	5	*
Baldonnel	1012.1	+6	SW	2	o	43	97	7	1,250	StCu	9	–	–	*
Didsbury	1013.0	+1	SE	3	or3f	44	92	3	750	Nb	10	–	–	*
Ross on Wye	1011.1	+1	E	3	od	41	97	5	1,250	Nb	10	–	–	*
Falmouth	1011.4	+10	NW	7	bq	51	85	7	–	CuN	2	–	–	*
Calshot (Hants)	1008.5	-7	SE	7	or3f	47	97	5	1,250	Nb	10	–	–	6
Lympne (Folkestone)	1014.9	-5	S	8	orqm	41	97	4	<500	Nb	10	–	–	*
Aberdeen	1011.3	0	SSE	4	or.3f	46	85	5	1,250	Nb	10	–	–	3
Howden	1014.3	0	S	2	o3fe	41	97	2	<500	St	10	–	–	*
Cranwell (Lincs)	1015.1	-1	SE	3	or.	42	97	5	1,250	Nb	10	–	–	*
Felixstowe	1016.6	-1	S	5	or.	45	85	7	1,250	Nb	10	–	–	5
Shoeburyness	1015.1	-3	S	6	orq	44	85	5	1,250	CuN	10	–	–	*
Benson	1011.3	-1	ESE	4	or3f	41	92	3	–	Nb	10	–	–	*
S. Farnborough	1011.7	-5	E	4	or3f	42	97	4	1,250	Nb	8	A.St	2	*
London (M.O. at 1H.)	1012.8	-3	ESE	4	or3f	42	92	5	2,000	Nb	10	–	–	*
Croydon	1013.9	-3	ESE	5	or3f	41	92	5	750	Nb	10	–	–	*

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

STATIONS.	Barom. at M.S.L. mb.	Temp. °F.	Wind. Direc.	Wind. Force 0-12.	Weather.	Barometer. at M.S.L. mb.	Barometer. ‡ Change in 3 hours.	Temperature. Temp. °F.	Temperature. Change in 24 hours.	Wind. Direc.	Wind. Force 0-12.	Direc. of Upper Cloud.	Weather.	Sea 0-9.	† Rainfall mm.	Temp. Max. °F.	Temp. Min. °F.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Sunshine Hours.
	18H. G.M.T. of 1st					7H. G.M.T. of 2nd									24 HOURS ENDED 7H. 2nd						1st
Lerwick	1009.4	46	S	3	?c	1010.1	-2	48	+1	SE	7	SE	c	5	7	48	45	oqr	bcm	bc	*
Stornoway	1006.2	43	WSW	2	c	1002.5	+6	45	+2	SW	6	–	orq	5	12	47	41	opc	cphc	orq	0.2
Castlebay (Barra Is)	1006.0	48	S	4	o	1007.1	+5	47	+1	W	4	SW	bc	4	5	49	42	bchpc	chpo	opbc	0.7
Malin Head	1006.1	43	SW	3	bc	1007.5	+3	47	?	W	2	W	bc	3	1	50	39	bc	bc	c	5.2
Blacksod Point	1002.3	47	S	5	omr	1008.5	+5	45	0	W	2	–	bc	2	24	53	42	bcp	bcp	omrcm	*
Roche's Point	1009.9	49	S	5	r	1014.1	+7	45	+2	W	3	W	bc	4	17	52	43	b.or	r.or	ro.bc	*
Birr Castle	1009.1	46	S	2	r	1011.3	*	41	+3	S	1	–	b	*	7	46	37	c	cor	cp.b	2.2
Donaghadee	1012.2	43	SW	1	bcm	1010.5	+3	45	+6	–	0	–	omr	1	17	48	38	bcm	bc	omr	*
Liverpool (Bidston)	1015.7	43	S	3	b	1012.0	+2	42	0	SE	3	–	or	3	2	48	42	bcp	bc	or	3.0
Holyhead	1013.2	47	SSW	4	op	1010.8	+3	45	-1	S	2	–	or.	2	12	51	44	bcc	ocphq	opcqr	2.1
Pembroke (St. Ann's Head)	1014.7	52	SSW	4	o	1010.9	+6	44	-3	S	2	–	b	5	10	52	43	cpv	cp	oqrcq	1.5
Scilly (St. Mary's)	1013.6	51	SSE	4	o	1013.2	+12	51	+4	WNW	6	W	c	7	8	52	48	bo	op	fcpq	0.6
Jersey (St. Aubin)	1021.8	51	S	4	o	1008.5	0	~~45~~ 51	~~-4~~ +5	W	7	–	o	4	4	55	47	c	cbo	boqp	2.0
Portland Bill	1019.8	50	WSW	5	c	1005.6	-3	51	+2	SE	5	–	or	8	19	58	46	ocqp	c	oqr	*
Dungeness	1022.2	?	SW	3	b	1012.8	-5	43	+1	S	7	–	r	6	5	53	42	cpc	cpcc	cpcqr	*
Wick	1008.2	45	SSW	5	bc	1004.9	-3	47	+7	S	9	–	omqp	6	0.4	48	40	om	bcq	bcoqp	*
Nairn	1009.6	40	WSW	1	bc	1006.6	*	45	+6	W	1	–	cg	1	–	46	34	bc	bcgc	bccg	4.0
Leith	1012.7	42	SW	1	b	1010.1	0	46	+7	SW	2	–	o	2	–	47	39	b.bc	b	bzb.ou	*
Tynemouth	1015.9	41	S	2	bm	1013.7	+1	41	-1	S	2	–	bcf	2	–	46	39	bcm	bcm	bmom	*
Spurn Head	1019.1	42	SW	3	b	1014.6	0	45	+4	S	3	–	om	3	–	45	37	b	b	c	*
Yarmouth (Gorleston)	1020.7	41	SW	2	b	1016.9	-3	46	+6	S	4	–	o	3	–	48	38	b.bmbz	bz	bz.bov	0.0
Clacton-on-Sea	1021.6	47	SW	3	b	1015.6	-2	46	+5	SSE	8	–	ogr	4	1	49	39	bc	bcb	bcogr	6.3
Nottingham	1018.9	39	S	1	b	1013.7	*	43	+6	SE	2	SE	or	*	2	47	36	bcbm	bm	b	2.6

* Information for these columns not usually received. ‡ The barometric change is expressed in half millibars. § For code see page 3 † See footnote p. 4.

M.O. FORM 2370.

SUMMARY OF CONDITIONS AT 7 h. G.M.T. 2.12.20.

Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Rainy, misty.	Poor.	R.Rough
2. E. England	Dull, rainy.	Good	Moder.
3. E. Midlands	Rainy, misty.	Indif.	-
4. W. Midlands	Rainy.	Indif.	-
5. S.W. England	Fair to dull, some rain.	Good.	High.
6. South Wales	Fine.	V.Good	R.Rough
7. North Wales	Rainy.	Good.	Smooth
8. N.W. England	Rainy, some mist.	Poor	Slight
9. N. Midlands	Rainy, misty.	Poor	-
10. N.E. England	Dull, misty.	Indif.	Slight
11. E. Scotland	Dull, local rain.	Indif.	Slight
12. S.W. Scotland	Rainy.	Indif.	Slight
13. Isle of Man	Dull, rainy.	Indif.	Smooth
14. N.& N.W. Scotland	Rainy, squally.	Indif.	Rough
15. Hebrides	Fair to dull, showery, squally.	Fair.	R.Rough
16. Orkneys and Shetlands	Cloudy, squally.	Poor	R.Rough
17. N.W. Ireland	Fair.	Good.	Smooth
18. N.E. Ireland	Fair to dull, some rain.	Fair.	Slight.
19. S.E. Ireland	Fair to fine.	V.Good	Moder.
20. S.W. Ireland	Cloudy to fair.	V.Good	Moder.

Temperature reported from Coastal and Cross Channel Steamers.

Position Number.	Date	Time G.M.T.	Sea °F	Air °F
8	1st	0515	55	52
5	1st	0830	53	44
6	1st	1455	54	51
7	2nd	0350	52	49

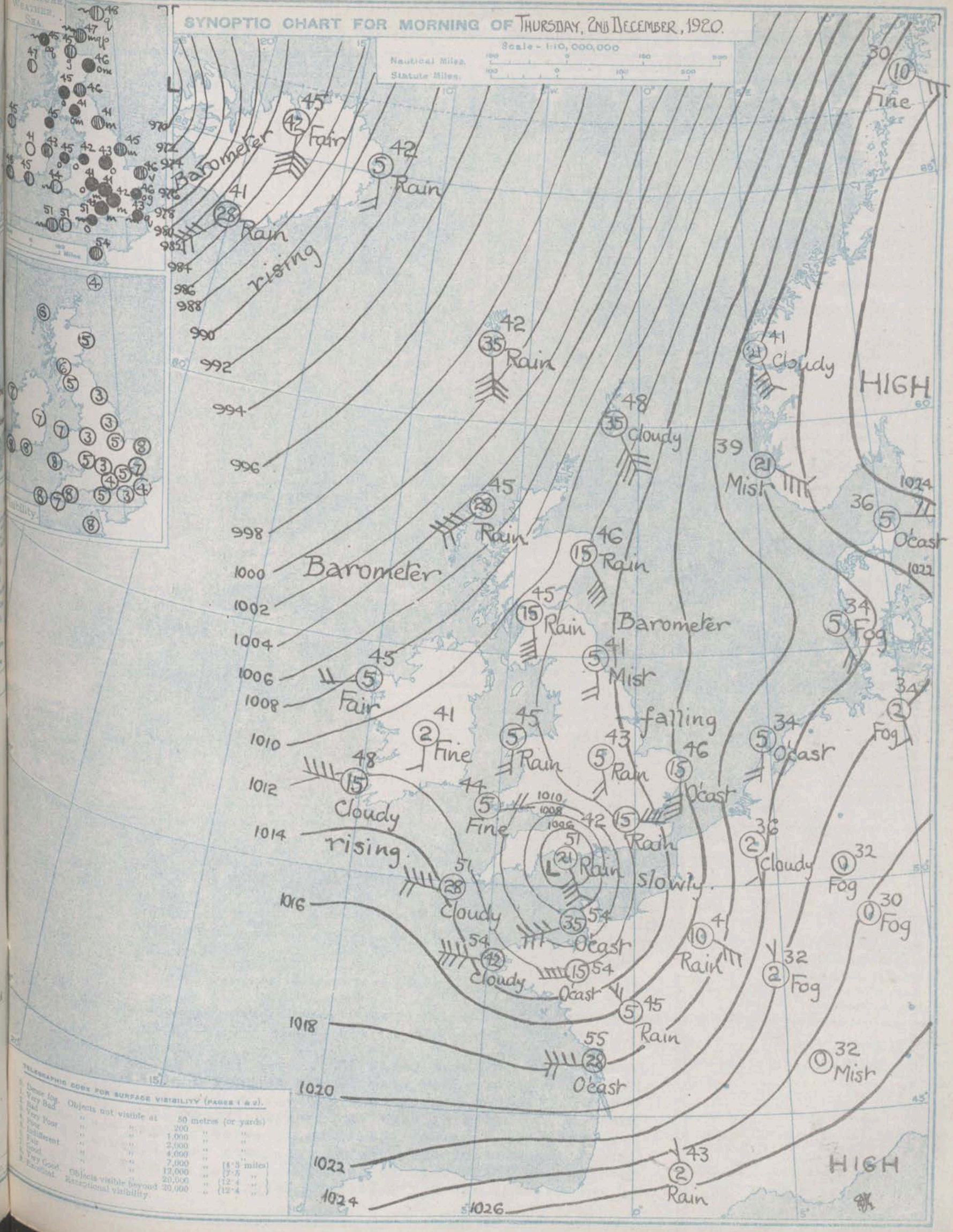
Barometric change from 1 h. to 7 h. (half millibars).

EXPLANATION.
BAROMETER.—Isobars are drawn at intervals of two millibars.
WIND.—Direction is shown by arrows flying with the wind. Force, on the scale 0–12, is indicated by the number of feathers. Mean velocity is shown in miles per hour by figures in small circles.
TEMPERATURE is given in degrees.
WEATHER SYMBOLS.—clear sky. sky ¼ clouded. overcast sky. snow. fog. thunder. sky ½ clouded. sky ¾ clouded. rain. sleet. mist. thunderstorm.
SEA DISTURBANCE.—Rough. High.

GENERAL INFERENCE from observations received up to 9h. G.M.T.

The weather is likely to continue unsettled. A depression which is at present moving Eastward up the English Channel and causing rain over a large area will probably be followed by other disturbances arriving on our Western coasts from the Atlantic.

Districts.	Forecasts for the 24 hours commencing 15h. G.M.T. Thursday 2nd. December 1920.	Further Outlook.
1. S.E. England 2. E. England 3. E. Midlands	Wind East to North-East or North, moderate or fresh. Dull, rainy, then improving gradually. Visibility mainly indifferent to fair. Temperature rather low.	Continuing unsettled.
4. W. Midlands 5. S.W. England 6. South Wales	Wind NW backing to W or SW, moderate, changeable, some showers. Visibility fair. Temperature moderate or rather low.	
7. North Wales 8. N.W. England 9. N. Midlands 10. N.E. England 11. E. Scotland 12. S.W. Scotland 13. Isle of Man	Wind between South and South-West or West, moderate or light. Variable cloud, some showers. Visibility fair. Moderate temperature.	South Cone hoisted at 0215 today in Districts 1, 2, 10, and Still Flying in other Districts except 7, 8 and 13 where North Cone hoisted at 0215 today.
14. N.& N.W. Scotland 15. Hebrides 16. Orkneys and Shetlands	Wind S to SW, strong to moderate; much cloud, some rain. Visibility indifferent to fair. Moderate temperature	
17. N.W. Ireland 18. N.E. Ireland 19. S.E. Ireland 20. S.W. Ireland	Wind Westerly backing to SW or S, light to fresh; variable sky, some showers. Visibility fair. Moderate temperature.	


SYNOPTIC CHART FOR MORNING OF THURSDAY, 2ND DECEMBER, 1920.
Scale - 1:10,000,000
Nautical Miles.
Statute Miles.
TEMPERATURE
WEATHER.
SEA
Barometer rising
Barometer falling
Barometer
HIGH
HIGH
Fine
Fair
Rain
Cloudy
Mist
O'cast
Fog
TELEGRAPHIC CODE FOR SURFACE VISIBILITY (PAGES 1 & 2).
0. Dense fog. Objects not visible at 50 metres (or yards)
1. Very Bad " " " 200 " "
2. Bad " " " 1,000 " "
3. Very Poor " " " 2,000 " "
4. Poor " " " 4,000 " "
5. Indifferent " " " 7,000 " "
6. Fair " " " 12,000 " (4·5 miles)
7. Good " " " 20,000 " (7·5 ")
8. Very Good. " " " 30,000 " (12·4 ")
9. Excellent. Objects visible beyond 30,000 " (12·4 ")
Exceptional visibility.

M.O. Form 2370

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 357 {Thursday 2nd December

WEATHER, TEMPERATURE, RAINFALL, AND SUNSHINE AT HEALTH RESORTS FOR 1st Dec.

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. mm.	Rainfall. Day. 9h-18h. mm.	Sunshine. Sunrise to Sunset. hrs.
Scotland.	Oban	oc	cbc	47	42	16	-	1.2
	Banff	b	b	44	37	2	-	4.1
	Montrose							
	St. Andrews	-	-	45	37	2	-	5.5
England, N.E.	Harrogate	cbcb	abcb	46	35	2	-	2.9
	Scarborough	bc	bc	49	38	3	-	0.9
	Skegness	bcb	b	46	36	2	0.1	5.2
England, E.	Lowestoft	b	bm	61	40	5	-	6.3
	Felixstowe	bc	bcb	50	36	3	-	3.5
	Southend-on-Sea							
England, S.E.	Tunbridge Wells	bbc	bcb	50	36	10	-	3.3
	Margate	b	bbcc	52	40	2	-	3.7
	Ramsgate	*	*	50	35	3	1	4.5
	Folkestone	acobc	bcoro	51	38	4	3	3.4
	Hastings	bbcob	cobbc	53	38	6	2	3.4
	Eastbourne	bcobc	bcbbc	53	40	5	1	3.5
	Brighton	bccb	bc	52	38	6	1	2.7
	Worthing	bcr	cbc	50	36	11	1	2.3
	Littlehampton	bcb	qbc	50	37	3	1	3.0
	Portsmouth (S'thsea)	-	-	52	43	6	0.4	3.5
	Bournemouth	*	*	53	40	2	-	3.8
	Ventnor (I. of W.)	*	*	53	43	3	2	3.0

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 17h-9h. mm.	Rainfall. Day. 9h-17h. mm.	Sunshine. to 17h. hrs.	Sunshine. Sunrise to Sunset. hrs.
England, N.W.	Douglas (I.O.M.)								3.2
	Blackpool	or	cbc	49	41	3	-		3.7
	Southport	bcebc	bcbbcb	49	39	1	-		2.5
	Morecambe	-	-	48	39	3	-		
Midlands.	Buxton								5.2
	Leamington Spa								5.1
	Malvern	oc	bcb	50	37	01	0.1		3.2
	Bath	bcb	bbc	51	36	2	-		3.7
Wales.	Rhyl	bc	bc	48	39	3	-		4.0
	Colwyn Bay	-	-	50	40	5	-		2.0
	Llandudno	*	*	50	41	4	1		
	Aberystwyth	acb	coo	50	42	5	-		3.3
	Tenby								
	Swansea								
England, S.W.	Weymouth	cpqc	bco	54	46	2	-		3.8
	Teignmouth								3.5
	Torquay	b	bbcco	54	41	4	-		2.2
	Paignton	bbc	bccpq	54	36	2	1		2.8
	Penzance	bc	co	53	43	3	-		3.5
	Newquay	b	o	51	42	4	-		3.7
	Bude	cbc	c	52	43	3	-		4.6
	Ilfracombe	bcc	cc	50	44	6	-		
	Weston-s-Mare	b	bbc	52	42	2	-		

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-13h.	Weather. 13h-18h.	Weather. 18h-1h.	Weather. 1h-7h.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall.† Day. 7h-18h. mm.	Rainfall.† Night. 18h-7h. mm.	Sun. Hours.
Renfrew	bbc2fbccf	bbc1f	orr	orr	46	35	30	-	6	3.6
Eskdalemuir	bbobobbc	bbcbcc	cocc	o2frr	44	33	30	-	2	4.2
Valencia (Cahirc'ty)	co	pd. prh	rr	co bcc	51	45	40	4	14	0.0
Baldonnel	qbcc	q dd	o2frrq	o2fr	49	38	40	½	7	3.7
Didsbury	bccpbbcf	bbc1f	bcc1f o2f	o3f RR	49	37	36	0.2	3	*
Ross on Wye	bcc bbc	bccobbc	bccqqqrq	RR dd	49	41	40	-	14	4.2
Falmouth	bbcco	o	orr	bbc	54	43	52	trace	18	2.3
Calshot (Hants)	bbqcop	co1f	orq	rr1frr1f	52	44	46	0.1	6	4.0
Lympne (Folkestone)	bbc1fqq bo	pcobbcb	~~[illegible]~~ bobbc.c.o	o1frro2f	49	36	36	½	3	3.9
Aberdeen	1f.2f	2f 2fc.	2fc	2fc r.	48	37	32	-	0.2	4.2
Howden	dr.3f	bbc2f	bbc.o2f	Po.4.8fc	48	34	28	-	-	3.1
Cranwell (Lincs)	b.bc	bbc.bbc	bw o2f	orr	46	33	30	-	1	5.1
Felixstowe	b.bc	bbc2f	bo.o2f	or.	49	39	*	-	0.2	6.2
Shoeburyness	bc.c	pd. bbc	bbc.bcc	qrr.	51	38	*	trace	2	4.5
Benson	bbc	b	bbc o	rr	50	35	29	-	8	*
S. Farnborough	b.bc.c	bbc	bbc.1f	bccrr	49	33	30	-	7	3.8
London (Kew Obsy.)	o2fpbbc	2f w	bw o2f	o2frr	49	38	28	trace	4	5.0
Croydon	bbco1f Po	bbc1f	w.b.bo2f r.o1f	rr.rr1f2f	49	37	*	trace	5	*

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, *i.e.*, rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:-
R = heavy rain.
rr = continuous moderate rain.
r.r. = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 30 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0·3
1	1- 3	0·3- 1·5
2	4- 7	1·6- 3·3
3	8-12	3·4- 5·4
4	13-18	5·5- 7·9
5	19-24	8·0-10·7
6	25-31	10·8-13·8
7	32-38	13·9-17·1
8	39-46	17·2-20·7
9	47-54	20·8-24·4
10	55-63	24·5-28·4
11	64-75	28·5-32·6
12	Above 75	32·7 or above

SYMBOLS—
Aurora, Rime, Glazed frost, Glazed roads, Solar halo, Lunar halo, Solar corona, Lunar corona

LONDON. OBSERVATIONS.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Hours.	Humidity % 15 h. G.M.T. Yesterday.	Humidity % 9 h. G.M.T. To-day.
	24 Hours ended 9h G.M.T. 2nd									
Greenwich (Royal Observatory)	b	b.bc	bcc or	51	35	31	4	5.2	76	92
City (Bunhill Row)	*	*	*	*	*	*	*	0.5	*	*
Westminster (St. James's Park)	*	*	*	51	40	33	4	2.9	67	86
Regents Pk. (Botanical Gdns)	*	*	*	*	*	*	*	3.7	*	*
Camden Sq. (British Rainfall)	b	bbc	*	50	40	*	5	*	73	97
Kensington Palace	bc.b	b	*	51	37	31	4	*	85 (18h)	92
Hampstead Observatory	*	*	*	48	39	39	5	6.5	*	93

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday.

Total 248 Joules.

Milliwatts.
Average Rate. 8.4
Maximum Rate. 22

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

2nd & 3rd December 1920.

Stations.	Sunrise G.M.T.	Noon G.M.T.	Sunset G.M.T.
Yarmouth	7.45	11.42	3.42
	7.45	11.43	3.41
Greenwich	7.46	11.49	3.51
	7.48	11.50	3.52
Wick	8.39	12.1	3.24
	8.41	12.2	3.23
Valencia	8.29	12.30	4.32
	8.31	12.31	4.31

Photographic Record of Pole Star (Polaris) and of 8 Ursae Minoris at Greenwich Observatory.

Exposure from 1st 17 h. 0 m. to 2nd 6 h. 30 m.

Stars.	Duration of Exposure. h. m.	Duration of Record. h. m.	%
Polaris	13 30	4 19	32
8 Ursae Minoris	13 30	2 48	21

NOTES ON THE WEATHER OF YESTERDAY.

Temperature remained below 50° over a large portion of the Kingdom, but exceeded that figure at many Southern and Western stations. Rain fell, except in the North-East and East of Gt. Britain; 24mm at Blacksod Point, 19mm at Portland Bill and more than 10mm at several other stations. Bright sunshine records varied from more than 6 hours at Clacton and Felixstowe to less than 1 hour on some parts of our Western and North-Western coasts.

* Information for these columns not usually received.

† Trace = rain has fallen but amount less than 0·1 mm.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. No. B.2561 Friday 3rd DECEMBER 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

STATIONS.	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind. Direc.	Wind. Force 0-12.	Weather.	Temp. °F.	% Humidity.	§ Visibility 0-9.	Height of Low Cloud. Feet.	Low Cloud. Form.	Low Cloud. Amt. 0-10.	Upper Cloud. Form.	Upper Cloud. Amt. 0-10.	Sea 0-9.
13H. G.M.T. 2nd														
Renfrew	1014.6	+3	SSW	3	0 2f	45	85	4	2000	StCu	4	A St	6	*
Eskdalemuir ...	1016.0	+3	SW	3	or 2f	42	97	5	750	Nb	10	-	-	*
Valencia (Cahirc'n)	1017.6	0	SSE	1	0	46	75	8	3000	StCu	4	A St	6	4
Baldonnel ...	1017.9	+4	SW	3	0	45	85	8	-	-	-	A St	10	*
Manchester (Alex. Pk.)	1017.8	+4	SSE	3	02f	44	85	4	1250	St	10	-	-	*
Ross on Wye ...	1017.9	+5	NNW	1	c v	46	85	9	3000	StCu	8	Cu Cu	1	*
Falmouth	1020.0	+5	NW	4	c	53	75	8	-	-	-	A Cu	7	*
Calshot (Hants) * ...	1017.8	+10	N	3	0	47	92	8	1250	St	10	-	-	2
Lympne (Folkestone)	1016.6	+2	SE	4	od m	47	97	5	1500	Nb	10	-	-	*
Aberdeen	1014.5	+2	SSW	3	02f	46	85	6	1250	St	10	-	-	3
Howden	1018.6	+3	S	2	02f	43	97	5	3000	St	7	A St	2	*
Cranwell (Lincs) ...	1019.2	+3	SSE	3	0 f	43	92	6	2000	StCu	10	-	-	*
Felixstowe ...	1018.8	+2	SSE	4	od	44	85	7	750	Nb	10	-	-	*
Shoeburyness ...	1017.5	+4	SE	3	od	43	85	6	1250	Cu N	5	A St	4	*
Benson	1018.1	+7	ENE	1	02f	43	85	4	-	St	10	-	-	*
S. Farnborough	1017.4	+9	NNE	2	02f	43	92	4	1250	Nb	10	-	-	*
London (Kew Obsy.)	1018.1	+7	ENE	2	od	43	92	3	1250	Nb	10	-	-	*
Croydon	1018.5	+7	NNE	2	od 2f	42	97	4	750	St	10	-	-	*
1H. G.M.T. OF 3rd														
Renfrew ...														
Eskdalemuir ...	1013.0	-8	SSE	4	or m	41	97	4	-	Nb	10	-	-	*
Valencia (Cahirc'n)	1001.1	-9	NNW	8	o pq	52	*	*	*	*	*	*	*	7
Baldonnel ...	1003.6	-17	SE	6	or q	54	92	4	2000	St	10	-	-	*
Manchester (Alex. Pk.)	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ross on Wye...	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Falmouth ...	1017.6	-4	SW	6	oq	55	92	7	-	St	10	-	-	*
Calshot (Hants)...	1021.1	-6	SSW	5	o f	50	97	7	2000	St	10	-	-	4
Lympne (Folkestone)	1023.2	0	S	3	o f	44	92	5	1250	St	10	-	-	*
Aberdeen ...	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Howden ...	1018.2	-5	SSE	4	o 2fe	39	97	3	2000	St	10	-	-	*
Cranwell (Lincs)	1020.7	-3	SSE	4	o 2f	40	92	5	3000	St	10	-	-	*
Felixstowe ...	1023.6	-2	S	4	o f	45	85	6	3000	St	10	-	-	3
Shoeburyness...	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Benson	*	*	*	*	*	*	*	*	*	*	*	*	*	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*
London (M.O. at 1H.)	1021.7	-4	*	*	*	42	*	*	*	*	*	*	*	*
Croydon ...	1022.2	-5	SSW	4	o f	42	97	5	1250	St	10	-	-	*
18H. G.M.T. OF 2nd														
Renfrew	1017.8	+3	S	3	b	41	92	2	3000	St Cu	3	-	-	*
Eskdalemuir ...	1018.3	+3	SSW	1	03f	40	97	3	-	St	10	-	-	
Valencia (Cahirc'n)	1011.3	-12	SE	6	0	48	85	8	2000	St Cu	7	A St	3	4
Baldonnel ...	1018.1	-1	S	2	0	43	85	5	2000	St	10	-	-	*
Manchester (Alex. Pk.)	1020.3	+2	S	3	03f	44	85	4	750	St	10	-	-	*
Ross on Wye ...	1021.9	+5	-	0	0 f	43	92	6	2000	St	4	A St	6	*
Falmouth	1022.6	+1	-	0	0	49	95	7	-	St	9	-	-	*
Calshot (Hants) * ...	1023.4	+6	-	0	0 f	45	97	7	2000	St Cu	10	-	-	1
Lympne (Folkestone)	1023.7	+9	-	0	0 m	39	97	5	750	St	10	-	-	*
Aberdeen	1016.8	+3	SSW	1	3fe	42	92	4	-	-	-	-	-	3
Howden	1020.9	+4	S	2	c	40	97	4	2000	St	8	-	-	*
Cranwell (Lincs) ...	1022.7	+4	S	2	0	41	97	6	2000	St	10	-	-	4
Felixstowe ...	1023.8	+5	S	3	bc	44	85	7	1250	St	5	-	-	
Shoeburyness ...	1023.3	+4	-	0	0	41	85	6	2000	St Cu	6	A St	4	*
Benson	1022.8	+3	-	0	0	40	92	3	-	St	10	-	-	*
S. Farnborough	1023.0	+6	WNW	1	0 if	41	97	5	2000	Nb	10	-	-	*
London (Kew Obsy.)	1023.9	+6	-	0	03fw	43	92	3	1250	St	10	-	-	*
Croydon	1023.7	+4	WSW	2	03f	42	97	3	750	St	10	-	-	*
7H. G.M.T. OF 3rd														
Renfrew ...	9902	-22	NE	4	or 2f	42	85	4	1250	Nb	10	-	-	*
Eskdalemuir ...	9929	-20	S	6	oR 3fq	49	97	3	1250	Nb	10	-	-	*
Valencia (Cahirc'n)	10123	+13	WNW	6	c	48	75	7	3000	Cu	7	-	-	*
Baldonnel ...	9989	+8	WSW	7	o f	45	85	7	2000	StCu	10	-	-	*
Manchester (Alex. Pk.)	10015	-15	S	6	or m	53	92	4	750	Nb	10	-	-	*
Ross on Wye...	10059	-11	SW	7	od q	55	92	6	1250	Nb	10	-	-	*
Falmouth ...	1011.3	-6	SW	8	oq	55	97	6	-	Nb	10	-	-	*
Calshot (Hants)...	1013.8	-8	SW	6	or 2f	54	97	4	750	Nb	10	-	-	5
Lympne (Folkestone)	1015.3	-9	SSW	7	o m q	52	97	4	1500	Nb	10	-	-	*
Aberdeen ...	997.6	-18	SE	5	or q f	45	92	5	1250	Nb	10	-	-	4
Howden ...	1003.0	-8	S	6	or q	46	97	6	2000	Nb	10	-	-	*
Cranwell (Lincs)	1007.2	-14	SSE	5	od	47	97	5	750	Nb	10	-	-	*
Felixstowe ...	1014.5	-12	S	6	od	49	97	6	2000	Nb	10	-	-	4
Shoeburyness...	1013.3	-11	SW	6	oq	53	85	6	1250	Cu	7	A St	3	*
Benson	1009.4	-10	WSW	5	or q	53	92	6	-	Nb	9	-	-	*
S. Farnborough	1012.3	-9	SSW	7	or m	54	97	4	750	Nb	10	-	-	*
London (Kew Obsy.)	1012.1	-11	SW	6	od q	54	92	7	750	Cu N	7	A St	3	*
Croydon ...	1013.6	-6	SW	7	o 2f dq	54	92	5	1500	St	10	-	-	*

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

STATIONS.	Barom. at M.S.L. mb.	Temp. °F.	Wind. Direc.	Wind. Force 0-12.	Weather.	Barometer. at M.S.L. mb.	‡ Change in 3 hours.	Temperature. Temp. °F.	Temperature. Change in 24 hours.	Wind. Direc.	Wind. Force 0-12.	Direc. of Upper Cloud.	Weather.	Sea 0-9.	† Rainfall 100s.	Temp. Max. °F.	Temp. Min. °F.	Weather. Morning	Weather. Afternoon	Weather. Night.	Sunshine Hours.
	18H. G.M.T. of 2nd					7H. G.M.T. of 3rd									24 HOURS ENDED 7H. 3rd						2nd
Lerwick																					*
Stornoway ...	1012.5	48	SW	3	bc	1006.3	-6	46	-2	SSW	4	-	cmrq	3	3	48	44	cq r	bc	bc.c	
Castlebay (Barra Is)	1012.3	42	W	1	bc	999.1	-8	41	-4	NE	1	-	or	1	8	46	40	fb. bc	bc	or	0.0
Malin Head ...	1013.3	48	WSW	3	bc	996.1	-7	41	-6	NE	4	-	or	4	23	49	40	bc. fb	ohp. bc	bopr	1.0
Blacksod Point	1010.9	47	NW	5	0	982.7	-2	44	?	NW	5	-	omqr	4	5	47	42	omq r	omqp	omqr	1.2
Roche's Point ...	1012.5	46	SE	2	c	1001.6	+9	45	0	W	6	-	oqr	7	18	50	43	bc	bc	oqrq	*
Birr Castle ...	1016.5	50	S	5	0	1009.2	+11	47	+2	WNW	5	-	b	4	2	50	47	bc.o	o	or.b	*
Donaghadee ...	1016.2	43	SE	1	0	1004.0	*	45	+4	W	5	-	c	*	3	56	36	czo	zo	orc	1.0
Liverpool (Bidston)	1017.4	42	WSW	1	bm	995.3	-17	54	+9	SW	4	SW	cmqp	4	14	54	43	bcm	bcm	omr	*
Holyhead ...	1019.8	43	SSE	2	0	999.2	-11	54	+12	SSW	5	-	oq	5	1	55	42	o	c	opq	0.5
Pembroke (St. Ann's Head)	1018.8	47	SW	2	oq	997.0	-7	55	+10	SW	8	-	opq	7	5	55	43	op. q	c. e f	copdq	1.5
Scilly (St. Mary's)	1020.8	49	-	0	or	1004.9	-3	52	+8	WSW	7	-	oqr	6	3	54	42	bc. c	or	ormqr	0.6
Jersey (St. Aubin)	1021.2	50	SSE	4	orm	1012.9	-2	52	+1	WNW	7	W	c	7	1	55	50	o	omd	opqmc	
Portland Bill ...	1024.3	52	WNW	3	0	1018.6	-3	55	+1	SSW	5	-	od	4	1	56	51	c. c	c. bc. o	cod	1.8
Dungeness ...	1022.6	50	W	4	0	1012.4	-6	53	+2	SW	8	-	orq	5	2	54	49	or. c	c. bc. bc. o	oqr	*
Wick	1022.4	42	NW	2	0	1015.2	-18	53	+10	SW	6	SW	c	5	4	54	41	q. or. c	c. o	o.cqc	*
Nairn	1013.3	40	S	2	b	999.9	-15	43	-4	SE	6	-	omrq	4	2	48	39	bc	b	bompq	*
Leith	1014.9	36	-	0	bc	995.3	*	39	-6	E	1	-	orq	1	4	45	35	c. bc	bc	bccp	3.5
Tynemouth ...	1017.2	42	SW	2	b	999.9	-11	44	-2	SW	1	-	o	2	8	47	40	opc	cbc	bbc.rq	*
Spurn Head ...	1019.3	44	SW	2	bcm	999.0	-12	46	+4	SW	6	-	o 2f	4	6	46	41	cf	bcf	omr	*
Yarmouth (Gorleston)	1021.3	41	SSW	2	c	1005.0	-12	46	+1	S	6	-	oqr	4	4	46	40	om. c	bcr	oqr	*
Clacton-on-Sea.	1022.8	44	SW	1	bc	1013.7	-8	42	-4	SSW	6	-	oqr	5	2	47	41	bcp. cv	cv. b cv	bcrcv. om	0.0
Nottingham ...	1022.2	45	ESE	3	0	1010.0	-10	49	+3	SSE	6	-	ogc	4	4	49	42	ogr	ogd. og	ogr	0.0
	1021.9	39	S	1	b	1004.7	*	53	+10	SSW	5	SW	o	*	3	53	38	r. o	o. c	co	0.0

* Information for these columns not usually received. ‡ The barometric change is expressed in half millibars. § For code see page 3 † See footnote p.4.

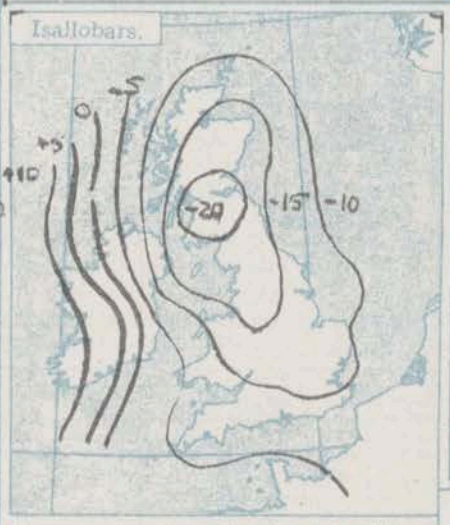
M.O. FORM 2370.

SUMMARY OF CONDITIONS AT 7 h. G.M.T. 3.12.1920.

Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Dull, slight rain & mist.	Indiff.	Mod.
2. E. England	Dull, slight rain.	Good	"
3. E. Midlands	Dull, slight rain.	Fair	-
4. W. Midlands	Dull, squally, slight rain.	"	-
5. S.W. England	Dull, squally, some rain.	"	Rough
6. South Wales	Dull, squally, slight rain.	Good	"
7. North Wales	Dull, squally, showery.	Fair	"
8. N.W. England	Dull, squally, some rain.	Poor	R. Rough
9. N. Midlands	Dull, some rain.	"	"
10. N.E. England	Dull, misty, slight rain.	Indiff.	Mod.
11. E. Scotland	Dull, squally, some rain.	"	"
12. S.W. Scotland	Dull, mist, rainy.	Poor	"
13. Isle of Man	Dull, squally, rainy.	Fair	R. Rough
14. N. & N.W. Scotland	Rainy, squally.	Indiff.	Mod.
15. Hebrides	Dull, rainy.	"	"
16. Orkneys and Shetlands	Rainy, squally.	Poor	Slight
17. N.W. Ireland	Rainy, squally.	Indiff.	High
18. N.E. Ireland	Rainy, squally.	"	Mod.
19. S.E. Ireland	Fine to dull.	Good	"
20. S.W. Ireland	Cloudy.	"	"

Temperature reported from Coastal and Cross Channel Steamers.

Position Number.	Date.	Time G.M.T.	Sea °F	Air °F
12	2nd	0610	50	48
7	3rd	0318	52	54
4A	3rd	0400	47	49



Barometric change from 4 h. to 7 h. (half millibars).

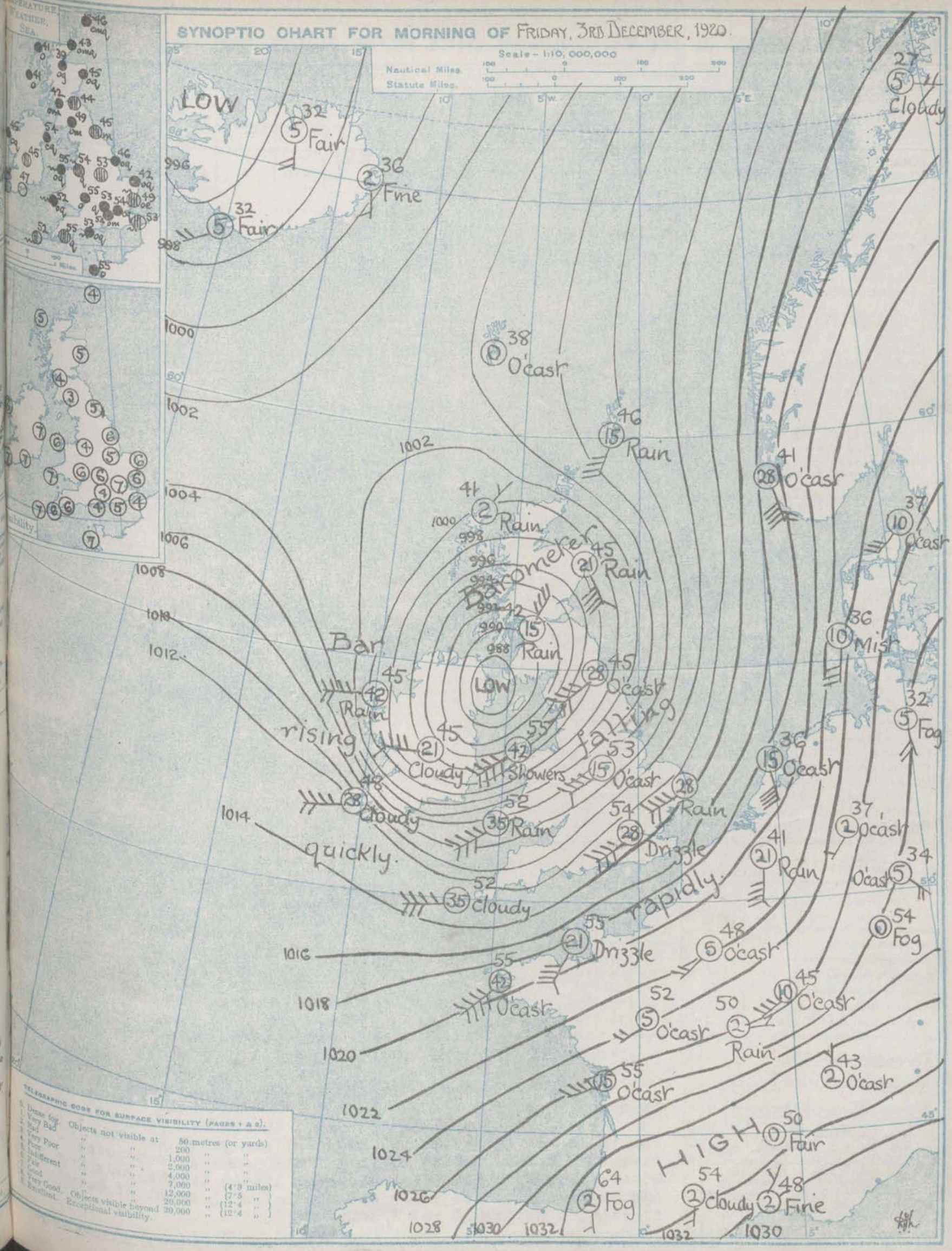
EXPLANATION.
BAROMETER.—Isobars are drawn at intervals of two millibars.
WIND.—Direction is shown by arrows flying with the wind. Force, on the scale 0-12, is indicated by the number of feathers. Mean velocity is shown in miles per hour by figures in small circles.
TEMPERATURE is given in degrees F.
WEATHER SYMBOLS.—clear sky. sky ½ clouded. sky ¾ clouded. overcast sky. rain falling. snow. sleet. hail. fog. mist. T thunder. R thunderstorm.
SEA DISTURBANCE.—Rough. High.

GENERAL INFERENCE from observations received up to 9h.

A deep depression having its centre over the South-West of Scotland covers the whole of the United Kingdom. It will probably move in a North-Easterly direction and be followed by winds from between West and North-West, with a variable sky, and squally, showery weather. Temperature will fall over England.

Districts.	Forecasts for the 24 hours commencing 15 h. G.M.T. Friday, 3rd December, 1920.	Further Outlook.
1. S.E. England 2. E. England 3. E. Midlands 4. W. Midlands 5. S.W. England 6. South Wales 7. North Wales 8. N.W. England 9. N. Midlands 10. N.E. England	Wind mainly between West and North-West, strong or a gale, then moderating; squally, variable sky, some showers, hail locally, perhaps thunder, visibility fair to good; colder.	Continuing unsettled.
11. E. Scotland 12. S.W. Scotland 13. Isle of Man 14. N. & N.W. Scotland 15. Hebrides 16. Orkneys and Shetlands	Wind variable in direction and force, then North-West or West, strong to moderate; squally, cloudy or variable sky, some showers, hail locally; moderate temperature.	South Cone — hoisted on West and S.W. coasts at 19h 30 yesterday and on all other coasts at 02h 25 today.
17. N.W. Ireland 18. N.E. Ireland 19. S.E. Ireland 20. S.W. Ireland	Wind North-Westerly, strong or a gale, then backing and moderating; squally, showers, hail or rain, fair intervals, visibility fair or good; colder, then milder.	

R.S.


SYNOPTIC CHART FOR MORNING OF FRIDAY, 3RD DECEMBER, 1920.
Scale - 1:10,000,000
Nautical Miles.
Statute Miles.
LOW
Fair
Fine
Cloudy
O'cast
Rain
Mist
Fog
Drizzle
Showers
Barometer falling rapidly
Barometer rising quickly
HIGH
Fair
Fine
Cloudy
Fog
Drizzle
O'cast
Rain
Mist
Cloudy
Fog
TELEGRAPHIC CODE FOR SURFACE VISIBILITY (PAGES 1 & 2).
0. Dense fog. Objects not visible at 50 metres (or yards)
1. Very Bad " " 200 " "
2. Bad " " 1,000 " "
3. Very Poor " " 2,000 " "
4. Poor " " 4,000 " "
5. Indifferent " " 7,000 " (4·3 miles)
6. Fair " " 12,000 " (7·5 ")
7. Good " " 20,000 " (12·4 ")
8. Very Good. " " 20,000 " (12·4 ")
9. Excellent Objects visible beyond Exceptional visibility.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 338

Friday 3rd December

WEATHER, TEMPERATURE, RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 2nd

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 1st-2nd	Rainfall. Day. 9h-18h. 2nd	Sunshine. Sunrise to Sunset. 2nd
Scotland.	Oban	bc	c	49	42	16	-	1.5
	Banff	o.c. bc	bc. b	44	37	-	-	1.8
	Montrose							
	St. Andrews							
England, N.E.	Harrogate	od	o	42	36	1	0.1	0.0
	Scarborough	bc	bc	46	38	-	-	0.5
	Skegness	dc	o	45	40	-	-	0.0
England, E.	Lowestoft							
	Felixstowe	ocn	ocm	45	43	2	2	0.0
	Southend-on-Sea	ocg. p.o	o.c. bc	43	38	3	-	0.4
England, S.E.	Tunbridge Wells	ok	o	43	39	7	0.3	0.0
	Margate	or	o	45	40	4	2	0.0
	Ramsgate	*	*	48	40	4	3	0.0
	Folkestone	r	ro	44	39	3	2	0.0
	Hastings	or.o	o.c.o	50	42	8	2	0.0
	Eastbourne	r.o	o.c	47	43	6	1	0.2
	Brighton	od.o	o	47	39	5	1	0.5
	Worthing	c. bc	c	47	44	6	-	1.0
	Littlehampton	rgd	o. bc.o	47	42	6	0.4	0.4
	Portsmouth (S'thsea)	*	*	47	44	9	-	0.0
	Bournemouth	*	*	48	44	12	-	1.5
	Ventnor (I. of W.)	*	*	53	43	9	Trace	0.0

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 17h-9h. 1st-2nd	Rainfall. Day. 9h-17h. 2nd	Sunshine. Sunrise to Sunset. 2nd
England, N.W.	Douglas (I.O.M.)							0.0
	Blackpool	oro	o	46	41	5	-	0.0
	Southport	o	o.p.o	45	41	4	-	0.1
	Morecambe	*	*	47	42	4	-	
Midlands.	Buxton							0.1
	Leamington Spa	o	o	43	37	3	0.1	0.1
	Malvern	o	o	45	40	7	0.3	0.3
	Bath	o	o.c. bc	46	42	11	0.3	
Wales.	Rhyl	p.o.c. bc	c	49	41	4	-	1.2
	Colwyn Bay	-	-	50	40	5	-	1.8
	Llandudno	c.o	c.o	49	41	5	-	1.7
	Aberystwyth	roc	co	49	42	4	-	0.2
	Tenby							
	Swansea							
England, S.W.	Weymouth	grc. bc	bc. om	50	45	17	-	1.1
	Teignmouth							
	Torquay	bbc	bcc	54	47	6	-	3.6
	Paignton	bg bc	bc.c.p	55	35	26	-	4.1
	Penzance	c/bc	c.o	54	47	14	-	1.6
	Newquay	c	o	53	45	10	-	1.2
	Bude							
	Ilfracombe	o.c. bc	c.o	57	45	11	-	2.2
	Weston-s-Mare	o. bc	bc.c	50	42	14	-	1.2

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-13h. 2nd	Weather. 13h-18h. 2nd	Weather. 18h. 2nd-1h. 3rd	Weather. 1h-7h. 3rd	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall.† Day. 7h-18h	Rainfall.† Night. 18h-7h	Sun. Hours.
								mm.	mm.	
Renfrew	orrcop	bc.c/bcg	r.c.of	orr	48	38	30	1	12	1.2
Eskdalemuir	orrrofco	dd.d.of	ofr pd. rr	rr RR	49	36	34	26	9	0.0
Valencia (Cahire'a)	bccco	o.p.	rr	r.c.p	57	45	44	1	9	0.0
Baldonnel	bccco	o.of	rrq	r.r of	56	39	39	0.1	1	1.8
Manchester (Alex. Pk.)	ofr.r.ofg	c.of. of	of	of R.r.q	53	43	39	1	2	*
Ross on Wye	ddf.oco	bc.c.o.c/of	oco q.pd.	of.q.r.pdq	55	41	41	0.4	3	0.5
Falmouth	bcc.bcc	c.o.o	r.r.o	or.r.o	56	48	48	-	3	2.1
Calshot (Hants)	r.of	of g	of.g	of q r.of	55	45	40	1	1	0.0
Lympne (Folkestone)	of r.r.ddq	c.p.c.o.of	o.of	of q r.r	52	38	32	5	0.3	0.0
Aberdeen	r.of	of.f/c	f/c f/c	corr	47	38	29	3	9	0.1
Howden	o.pd.	c.o.of	q.of	of rr	47	39	36	0.3	6	0.1
Cranwell (Lincs)	pd.of	q o.o	o of	orr	47	37	35	1	2	0.0
Felixstowe	dd.of	pd. c.o	b o.of	r.of	46	41	*	2	0.3	0.0
Shoeburyness	q dd	pd. c.o	o of	pd. o	53	37	*	2	1	0.8
Benson	r.r.of	o	co o	orr	54	40	35	0.4	1	*
S. Farnborough	rr.dd.of	of. of	of bcc	bcc r.r	54	41	37	1	1	0.0
London (Kew Obsy.)	dd.of	o.p.g/w	of w	o pd. q	54	41	35	1	0.1	0.0
Croydon	of r.r.r.pd.	of/pd. a of	of.of	of q pd	54	40	*	2	1	*

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, i.e., rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:-
R = heavy rain.
rr = continuous moderate rain.
r.r. = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 30 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	0·0-0·4
1	1-3	0·5-1·5
2	4-7	1·6-3·4
3	8-12	3·5-5·4
4	13-18	5·5-7·9
5	19-24	8·0-10·7
6	25-31	10·8-13·8
7	32-38	13·9-17·1
8	39-46	17·2-20·7
9	47-54	20·8-24·4
10	55-63	24·5-28·4
11	64-75	28·5-32·6
12	Above 75	32·6 or above

SYMBOLS—

Aurora ☆ Solar halo ◎
Rime ⌶ Lunar halo ◎
Glazed frost ~ Solar corona ◎
Glazed roads ⚒ Lunar corona ◎

LONDON. OBSERVATIONS.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Hours.	Humidity % 15 h. G.M.T.	Humidity % 9 h. G.M.T.
	24 Hours ended 9h G.M.T. 3rd							Yesterday.		To-day.
Greenwich (Royal Observatory)	or.	or. r	r o	54	40	37	1	0.0	90	92
City (Bunhill Row)	*	*	*	*	*	*	*	0.0	*	*
Westminster (St. James's Park)	*	*	*	56	41	37	1	0.0	84	89
Regent's Pk. (Botanical Gdns)	*	*	*	*	*	*	*	0.0	*	*
Camden Sq. (British Rainfall)	oro	o	*	55	41	38	2	*	95	98
Kensington Palace	oro	o	*	55	39	36	2	*	91 (18h)	94
Hampstead Observatory	*	*	*	53	39	35	2	0.0	*	96

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday

Total 74 Joules.

Milliwatts.
Average Rate. 25
Maximum Rate. 6

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

3rd & 4th Dec. 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth	7.45	11.43	3.41
	7.46	11.43	3.40
Greenwich	7.48	11.50	3.52
	7.49	11.50	3.52
Wick	8.41	12.2	3.23
	8.43	12.2	3.23
Valencia	8.31	12.31	4.31
	8.32	12.31	4.32

Photographic Record of Pole Star (Polaris) and of δ Ursae Minoris at Greenwich Observatory.

Exposure from 2nd 17 h. 0 m.
to 3rd 6 h. 30 m.

Stars.	Duration of Exposure. h.	m.	Duration of Record. h.	m.	%
Polaris	13	30	0	45	6
δ Ursae Minoris	13	30	0	0	0

NOTES ON THE WEATHER OF YESTERDAY.

Temperature rose to about 55° over a large area in England and Ireland.

Rain fell at all stations, but the amount was not generally large. At Castlebay, however, the value was 23mm., at Blacksod Point 18mm., and between 3 and 12mms at some other Western and Northern stations. Very little bright sunshine was recorded, but at Nairn and on the South coast of Devon there were between 3 and 4 hours.

* Information for these columns not usually received.

† Trace = rain has fallen but amount less than 0·1 mm.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. No. B. 21562 SATURDAY 4TH DECEMBER 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

13H. G.M.T. 3RD

Stations	Barom. at M.S.L. mb.	Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew	991.5	+16	WNW	7	q	48	85	8	1250	St	10	-	-	
Eskdalemuir	985.4	0	NW	8	or3fq	37	97	5	1250	St	10	-	-	*
Valencia (Cahirc'n)	1024.3	+9	WNW	6	bcq	56	58	8	3000	St Cu	3	Ci Cu	2	6
Baldonnel	1011.1	+10	W	6	cq	45	75	8	2000	St Cu	8	-	-	*
Manchester (Alex. Pk.)	1001.5	-1	W	8	or0qm	47	86	6	1250	St Cu	10	-	-	+
Ross on Wye	1010.1	+5	WNW	7	cr0qm	48	75	8	3000	Nb	5	-	-	*
Falmouth	1015.7	+5	WNW	7	bcq	47	75	7	-	Cu Nb	5	Ci St	1	*
Calshot (Hants)	1012.3	+8	W	5	c	50	85	8	3000	St Cu	6	A Cu	1	3
Lympne (Folkestone)	1008.6	-6	WSW	6	odq	53	92	8	<500	Nb	8	A St	1	*
Aberdeen	984.7	-9	WNW	4	orq	47	92	5	750	Nb	10	-	-	6
Howden	996.6	-2	WSW	7	or0q	46	86	7	3000	St	9	-	-	*
Cranwell (Lincs)	1002.7	+1	W	6	cv	45	75	9	3000	St Cu	8	-	-	+
Felixstowe	1006.9	-2	W	6	cq	52	75	8	2000	St Cu	6	A St	2	5
Shoeburyness	1007.4	-5	W	7	cq	52	65	7	1200	St Cu	7	A Cu	2	*
Benson	1008.9	+5	W	5	bcv	48	65	9	-	Cu	5	-	-	*
S. Farnborough	1010.7	-3	W	5	c	49	75	7	2000	Nb	7	Ci	1	*
London (Kew Obsy.)	1009.8	+5	W	4	c	50	65	8	2000	Nb	7	Ci	1	*
Croydon	1010.3	+5	W	6	cif	49	75	7	750	St	4	Ci St	[illegible]	*

18H. G.M.T. OF 3RD

Stations	Barom. at M.S.L. mb.	Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew	1003.9	+16	WNW	8	cq	45	75	8	1250	St Cu	8	-	-	
Eskdalemuir	1001.2	+12	NW	6	o	41	75	6	2000	St	9	-	-	*
Valencia (Cahirc'n)	1027.8	+5	WNW	6	c	49	75	7	3000	St Cu	5	A St	3	6
Baldonnel	1017.6	+6	W	4	or	43	92	6	2000	St Cu	8	A St	2	*
Manchester (Alex. Pk.)	1006.8	+8	W	8	omq	44	86	6	2000	St Cu	7	-	-	*
Ross on Wye	1014.4	+11	NW	7	bq	45	65	8	4200	St Cu	1	-	-	*
Falmouth	1024.2	+6	WNW	7	bc	48	65	6	-	Cu Nb	6	-	-	*
Calshot (Hants)	1015.8	+4	W	6	b	46	85	8	-	-	-	-	-	4
Lympne (Folkestone)	1011.5	+3	W	7	bq	46	75	8	1250	St	3	-	-	*
Aberdeen	991.2	+9	NW	8	orqf	44	86	5	750	Nb	10	-	-	5
Howden	999.5	+6	WNW	8	o	45	75	5	3000	St Cu	10	-	-	*
Cranwell (Lincs)	1004.1	+2	WNW	8	bcv	44	85	8	3000	St Cu	6	-	-	+
Felixstowe	1009.6	+2	W	6	bq	47	75	7	-	-	-	-	-	4
Shoeburyness	1009.6	+2	W	6	b	46	75	6	-	-	-	-	-	*
Benson	1011.3	+3	W	5	b	45	65	8	-	-	-	-	-	*
S. Farnborough	1013.1	+2	WNW	4	b	45	75	8	-	-	-	-	-	*
London (Kew Obsy.)	1012.5	+5	W	4	b	46	65	4	-	-	-	-	-	*
Croydon	1013.1	+4	W	6	bq	46	75	8	-	-	-	-	-	*

1H. G.M.T. OF 4TH

Stations	Barom. at M.S.L. mb.	Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew														
Eskdalemuir	1009.7	+6	NNW	8	bq	41	65	7	-	St	2	-	-	*
Valencia (Cahirc'n)	1031.3	+1	WNW	8	opq	49	*	*	*	*	*	*	*	7
Baldonnel	1023.6	+5	W	4	b	43	92	6	3000	St Cu	2	-	-	*
Manchester (Alex. Pk.)	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ross on Wye	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Falmouth	1025.5	0	NW	7	o	46	92	6	-	Nb	10	-	-	*
Calshot (Hants)	1017.3	*	WNW	5	b	44	85	8	-	-	-	-	-	4
Lympne (Folkestone)	1012.7	0	W	8	bq	41	85	8	-	-	-	-	-	*
Aberdeen	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Howden	1005.5	+5	WNW	8	oqp	45	65	6	2000	St	5	Nb	5	*
Cranwell (Lincs)	1010.0	+2	NW	5	c	45	85	5	3000	St	5	A St	2	*
Felixstowe	1009.6	0	WNW	5	oq	44	75	7	1250	Nb	10	-	-	5
Shoeburyness	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Benson	*	*	*	*	*	*	*	*	*	*	*	*	*	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*
London (M.O. at 1H.)	1012.6	0	*	*	*	44	*	*	*	*	*	*	*	*
Croydon	1014.7	0	W	7	bq	43	75	8	3000	Cu	1	-	-	*

7H. G.M.T. OF 4TH

Stations	Barom. at M.S.L. mb.	Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew	1024.5	+10	SW	3	b	42	65	6	2000	St	1	-	-	*
Eskdalemuir	1018.9	+9	N	7	bq	41	65	7	-	St	2	-	-	*
Valencia (Cahirc'n)	1034.1	+3	NNW	4	o	52	75	8	2000	St Cu	8	A St	2	*
Baldonnel	1027.8	+4	W	4	b	42	85	8	2000	St Cu	3	-	-	*
Manchester (Alex. Pk.)	1016.9	+4	WNW	7	cq	43	65	8	3000	St Cu	6	Ci Cu	1	4
Ross on Wye	1019.2	+3	NNW	6	cqv	44	65	9	5700	St Cu	7	-	-	*
Falmouth	1026.6	+2	N	7	bcq	49	65	8	-	Nb	5	-	-	*
Calshot (Hants)	1017.3	0	NW	5	b	45	85	8	3000	St Cu	3	-	-	3
Lympne (Folkestone)	1011.9	-1	NW	7	or0q	42	85	7	750	Nb	10	-	-	*
Aberdeen	1018.8	+10	NNW	5	oqp	44	85	6	1250	Nb	10	-	-	5
Howden	1012.5	+8	NNW	7	orq	42	92	6	2000	Nb	10	-	-	*
Cranwell (Lincs)	1011.7	+3	N	7	or0q	44	85	7	1250	St Cu	10	-	-	*
Felixstowe	1007.9	-1	NW	7	or0q	43	85	7	1250	Nb	10	-	-	6
Shoeburyness	1010.4	0	NW	7	od0q	44	85	6	1250	St	10	-	-	*
Benson	1015.2	+1	NW	6	o	45	65	8	-	St Cu	9	-	-	*
S. Farnborough	1015.4	0	WNW	7	c	43	75	7	2000	St Cu	8	-	-	*
London	1014.3	-1	WNW	5	o2fq	46	65	5	750	Nb	8	A St	2	*
Croydon	1014.4	0	NW	7	o1fq	45	65	7	750	St	10	-	-	*

-WNW
-42

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

Stations	18h. G.M.T. of 3rd: Barom. at M.S.L. mb.	Temp. °F.	Wind Direc.	Wind Force 0-12	Weather	7h. G.M.T. of 4th: Barometer at M.S.L. mb.	Change in 3 hours	Temp. °F.	Change in 24 hours	Wind Direc.	Wind Force 0-12	Direc. of Upper Cloud	Weather	Sea 0-9	24 hours ended 7h. 4th: Rainfall mm.	Temp. Max. °F.	Temp. Min. °F.	Weather Morning	Weather Afternoon	Weather Night	Sunshine Hours (3rd)
Lerwick	1000.4	43	E	6	omrq	1018.8	+10	44	-2	N	5	-	omqr0	4	12	46	42	omrq	omrq	omqr omq	*
Stornoway	1008.1	42	NW	5	oq	1026.5	+5	43	+2	NW	4	-	b	3	6	45	40	orq	mrq	opqb	0.0
Castlebay (Barra Is.)	1012.1	44	NW	5	op	1029.7	+5	47	+6	NW	4	-	b	4	3	47	39	rezp.c	ozp	opbcb	0.5
Malin Head	1010.9	47	NW	5	omqr	1026.2	+3	48	+4	NW	5		bcq	5	18	50	40	bcq	bcq	bcqp	0.9
Blacksod Point	1020.8	45	NW	1	oq	1030.6	+5	49	+4	NW	4	-	bc	4	2	50	43	cq	cq	ompbc	*
Roche's Point						1030.8	+3	49	+2	WNW	4	W	bc	4	2	49	47			bbcp	*
Birr Castle	1019.7	45	W	4	c	1029.8	*	45	0	W	2	-	c	*	0.1	46	43	cq	qcp	cpc	2.6
Donaghadee	1011.6	44	NW	5	b	1024.6	+8	47	-7	N	6	-	bq	6	7	54	40	cmqp	cmqp	bcmpq	*
Liverpool (Bidston)	1008.1	46	W	8	*	1017.8	+4	46	-8	W	8	-	bq	7	1	55	43	o. bcpq	oq	oqb	0.3
Holyhead	1013.2	48	WNW	9	cq	1021.8	+4	48	-7	NNW	9	-	bq	8	0.2	55	45	op. cpq	cq	cbcbq	0.1
Pembroke (St. Ann's Head)	1020.6	48	NW	7	cq	1025.8	+2	48	-4	NW	6	-	cqv	7	1	53	46	oqp	cq	oqcq	0.6
Scilly (St. Mary's)	1026.6	48	NW	7	b	1028.0	0	51	-1	NW	7	NW	c	7	3	52	48	opq	c. opq	ocpq	2.6
Jersey (St. Aubin)	1021.0	50	W	6	b	1021.9	0	49	-6	NW	5	-	bc	4	6	57	45	od.c.o	oq.p.bc	qpbc	0.5
Portland Bill	1017.0	51	WNW	1	bcq	1019.1	0	50	-3	NW	8	-	bcq	8	2	54	47	oqr	o. bcq	bcq	*
Dungeness	1011.7	46	WSW	5	b	1011.6	-1	44	-9	W	6	-	o	5	-	54	42	cq	cq. b	b.bbco	*
Wick	995.8	43	NNW	8	omrq	1020.5	+11	44	+1	NW	8	-	bcq	6	18	45	42	omrq	omrq	opbcq	*
Nairn	1001.8	44	NNW	7	o	1023.1	*	43	+4	NW	5	-	bcq	4	6	44	37	pq.cu	qp.c.o	oqc	0.0
Leith	998.5	46	NW	7	o	1020.6	+5	45	+1	NW	5	-	c	4	2	53	40	orq	rq.o	oqouc	*
Tynemouth	985.9	44	NNW	6	rq	1013.2	+8	45	0	NW	9	-	rhq	8	5	52	42	bcmqp	omrq	omrq	*
Spurn Head	994.5	46	W	9	oqp	1006.2	+5	46	0	NW	9	-	oqp	7	0.3	49	40	bcq	cqp	oqp	*
Yarmouth (Gorleston)	1004.3	47	W	6	b	1004.4	-1	42	0	NW	6	-	oqr0	3	3	55	41	oqr.c	bcqv. b	oqvr	1.5
Clacton-on-Sea	1008.4	47	W	6	b	1009.1	-1	43	-6	WNW	6	-	oqqr	4	2	54	42	oqr.c	c.bc.b	bcoqr	1.0
Nottingham	1007.0	43	W	7	op	1013.8	*	46	-7	NW	6	NW	o	4	2	57	48	op.c	c.op	cp	2.0

* Information for these columns not usually received. ↕ The barometric change is expressed in half millibars. § For code see page 3 † See footnote p. 4.

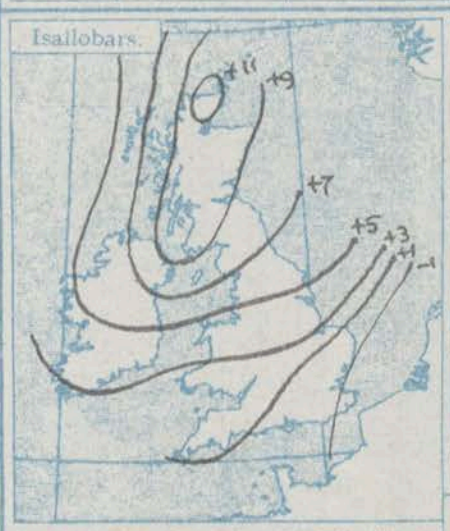
M.O. FORM 2370

SUMMARY OF CONDITIONS AT 7 h. G.M.T. 4.12.1920.

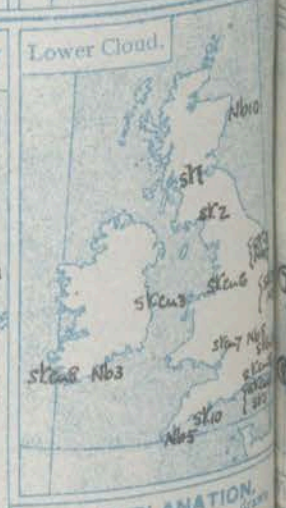
Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Dull, squally, slight rain.	Good	R.Rough
2. E. England	Dull, squally, slight rain.	"	Mod.
3. E. Midlands	Dull.	"	-
4. W. Midlands	Dull, squally.	V.Good	-
5. S.W. England	Fair, squally.	"	Rough
6. South Wales	Cloudy, squally.	"	High
7. North Wales	Fine, squally.	"	"
8. N.W. England	Fair, squally.	Good	Rough
9. N. Midlands	Cloudy, squally.	"	-
10. N.E. England	Dull, squally, showery.	Fair	High.
11. E. Scotland	Dull, squally, slight rain.	"	"
12. S.W. Scotland	Fine, squally.	Good	Mod.
13. Isle of Man	Fine, squally.	"	Rough
14. N.&N.W. Scotland	Fair, squally.	"	R.Rough
15. Hebrides	Fine.	"	Mod.
16. Orkneys and Shetlands	Squally, slight rain.	Indiff.	R.Rough
17. N.W. Ireland	Fair.	Good	Mod.
18. N.E. Ireland	Fine, squally.	"	"
19. S.E. Ireland	Fair to cloudy.	"	"
20. S.W. Ireland	Fair to dull.	"	"

Temperature reported from Coastal and Cross Channel Steamers

Position Number	Date	Time G.M.T	Sea °F	Air °F
1	3rd	1225	54	51
5	3rd	0823	53	50
6	3rd	1510	53	49
7	4th	0440	49	48



Barometric change from 4 h. to 7 h. (half millibars).



EXPLANATION.
BAROMETER.—Isobars are drawn at intervals of two millibars.
WIND.—Direction is shown by the way flying with the wind. Force, scale 0-12, is indicated by the number of feathers. Mean velocity is shown in miles per hour by figures in small circles.
TEMPERATURE is given in degrees.
WEATHER SYMBOLS—
clear sky. sky ½ clouded. overcast sky. snow. sleet. fog. mist. T thunder. Y, thunderstorm.
SEA DISTURBANCE.—Rough. High.

GENERAL INFERENCE from observations received up to 9h.

The deep depression over the Southern part of the North Sea will continue to affect the winds and weather over these Islands for the present, but the gales still prevalent will subside gradually, and the weather improve temporarily.

Districts.	Forecasts for the 24 hours commencing 15 h. G.M.T. Saturday, 4th December, 1920.
1. S.E. England 2. E. England 3. E. Midlands	Wind N.W. or N., strong or a gale, then decreasing; much cloud, some showers and squalls, hail locally, visibility fair or good; rather cold.
4. W. Midlands 5. S.W. England 6. South Wales 7. North Wales 8. N.W. England	Wind N. and N.W., backing later, strong to moderate; variable sky, some local showers, hail or rain, visibility good; rather cold.
9. N. Midlands 10. N.E. England	Same as 1 - 3.
11. E. Scotland 12. S.W. Scotland 13. Isle of Man 14. N.&N.W. Scotland 15. Hebrides 16. Orkneys and Shetlands	Wind N. and N.W., fresh to moderate; variable sky, some showers of rain or hail, visibility fair or good; rather cold.
17. N.W. Ireland 18. N.E. Ireland 19. S.E. Ireland 20. S.W. Ireland	Wind N.W. backing to W. or S.W., moderate to light; mainly fair, then dull, visibility fair or good; moderate temperature.

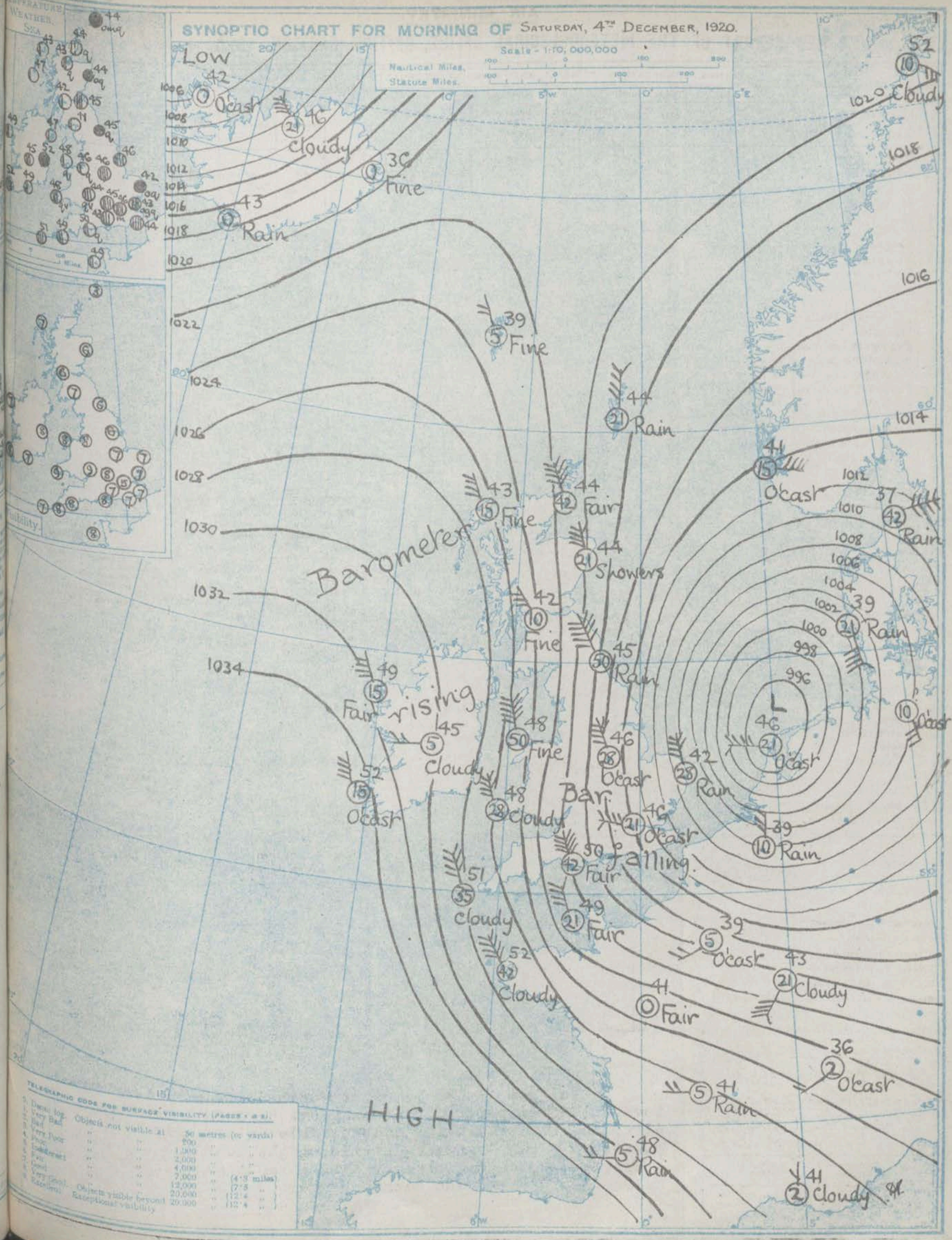
Further Outlook

Unsettled generally, with winds between West and South.

RS.

Meteorological Office: Air Ministry, Kingsway, London, W.C.2. Forecasts issued at 08.50.

G. C. SIMPSON, F.R.S., Director.


SYNOPTIC CHART FOR MORNING OF SATURDAY, 4TH DECEMBER, 1920.
Scale - 1:10,000,000
Nautical Miles.
Statute Miles.
Low
Barometer
Bar. rising
Bar. falling
HIGH
L
1006
1008
1010
1012
1014
1016
1018
1020
1022
1024
1026
1028
1030
1032
1034
996
998
1000
1002
1004
1006
1008
1010
1012
1014
1016
1018
1020
42 O'cast
46 Cloudy
43 Rain
39 Fine
44 Rain
43 Fine
44 Fair
44 Showers
42 Fine
45 Rain
49 Fair
45 Cloudy
52 O'cast
48 Fine
46 O'cast
48 Cloudy
46 O'cast
51 Cloudy
50 Fair
49 Fair
52 Cloudy
41 Fair
39 O'cast
43 Cloudy
36 O'cast
41 Rain
48 Rain
41 Cloudy
52 Cloudy
41 O'cast
37 Rain
39 Rain
42 O'cast
46 O'cast
42 Rain
39 Rain
TELEGRAPHIC CODE FOR SURFACE VISIBILITY (PAGES 1 & 2).
0. Dense fog. Objects not visible at 50 metres (or yards)
1. Very Bad " " 200 " "
2. Bad " " 1,000 " "
3. Very Poor " " 2,000 " "
4. Poor " " 4,000 " "
5. Moderate " " 7,000 " (4·3 miles)
6. Fair " " 12,000 " (7·5 ")
7. Good " " 20,000 " (12·4 ")
8. Very Good. Objects visible beyond 20,000 " (12·4 ")
9. Excellent. Exceptional visibility

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 339.

SATURDAY 4th DEC.R 1920

WEATHER, TEMPERATURE, RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 3.52

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 2-3rd	Rainfall. Day. 9h-18h. 3rd	Sunshine. Sunrise to Sunset. 3rd
Scotland.	Oban	r.o.c.bc	bc	48	34	12	4	0.0
	Banff	rm	rq	47	34	7	8	0.0
	Montrose							
	St. Andrews	c	c	48	39	12	4	0.0
England, N.E.	Harrogate	oqcp	oqp	53	39	9	8	0.1
	Scarborough	bc	?	54	40	6	4	1.1
	Skegness	o.bc	ho.op	56	42	5	1	2.8
England, E.	Lowestoft							
	Felixstowe	omr	b	49	44	1	2	1.0
	Southend-on-Sea	or.oq	c.bc.bq	54	39	1	1	0.1
England, S.E.	Tunbridge Wells	or	or.c.bc	54	39	3	1	0.7
	Margate	o	o	56	41	1	1	0.0
	Ramsgate	*	*	56	35	0.3	1	0.0
	Folkestone	or.o	ro	54	42	1	-	0.0
	Hastings	or.o	o.c	54	42	2	2	0.4
	Eastbourne	r.o	o.c.bc	53	43	1	2	0.4
	Brighton	or.o	c.bc	54	44	1	1	0.7
	Worthing	r.c.	c.bc	54	43	1	1	1.1
	Littlehampton	rqd	bcq	55	43	2	1	1.0
	Portsmouth (S'thsea)	*	*	56	45	3	-	2.0
	Bournemouth	*	*	55	45	3	1	1.9
	Ventnor (I. of W.)	*	*	54	43	4	1	1.7

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 17h-9h. 2-3	Rainfall. Day. 9h-17h. 3	Sunshine. Sunrise to Sunset. 3rd
England, N.W.	Douglas (I.O.M.)							0.0
	Blackpool	or	or	48	42	5	5	0.0
	Southport	oqr.oq	orh.oq	48	42	3	1	0.0
	Morecambe	h	h	48	43	14	6	
Midlands.	Buxton							3.5
	Leamington Spa	o.c.b	c	53	48	3	-	1.2
	Malvern	o.c	bc.b	55	42	3	0.3	3.2
	Bath	o.c.bc.b	bc.bc.b	52	44	1	0.3	
Wales.	Rhyl	q	q	50	42	1	-	1.0
	Colwyn Bay	h	h	49	44	2	-	0.0
	Llandudno	o	op.c	? 50	45	1	0.2	0.0
	Aberystwyth	r.o.c	c.o	56	43	2	-	
	Tenby							
	Swansea							
England, S.W.	Weymouth	op.o.c	op.bc.b	57	45	2	1	1.4
	Teignmouth							
	Torquay	b	bc.oq.c	53	46	3	1	2.4
	Paignton	oq.bc	bcq.p	53	46	2	1	1.9
	Penzance	cq	cp.rq	55	50	4	2	4.1
	Newquay	bcpq	bcq.oq	51	47	2	1	2.0
	Bude	o	c.op	53	40	1	-	1.6
	Ilfracombe	oq	oq	52	47	3	0.1	0.9
	Weston-s-Mare	p.bc	bc	53	44	1	1	1.6

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-13h. 3	Weather. 13h-18h. 3	Weather. 18h-1h. 3-4	Weather. 1h-7h. 4	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall.† Day. 7h-18h. mm.	Rainfall.† Night. 18h-7h mm.	Sun. Hours.
Renfrew	or.r.qrr	opq.c.o	b.f	b.f	52	39	30	4	-	0.0
Eskdalemuir	rr.p.or	[illegible]	q.bbc	bbcq	51	36	36	12	-	0.0
Valencia (Cahirc'n)	c.o.p.h.bc	bc.c.p.h.o.c	c.o.p	q.p.c.o	62	44	46	1	2	2.1
Baldonnel	rq	c.r.q.p.h	bbc.b.bc	bbc.bbc	45	40	36	~~trace~~ 03	-	2.2
Manchester (Ald. Pk.)	oq.q.R	orq.RR.r	c.o.q.r	bc.c.q	56	43	36	3	0.1	*
Ross on Wye	[illegible]	[illegible]	bbcq.pq	bbcq	56	41	33	0.4	0.1	2.1
Falmouth	[illegible]	bc.c.b.o	op	p.r.h.	55	45	43	2	8	3.3
Calshot (Hants)	q.o.p.c.o	p.b.c.b.p	bbc.q	bq	56	43	39	3	-	1.9
Lympne (Folkestone)	[illegible]	[illegible]	bbc.bq	b.bc.q	53	40	37	3.	0.1	0.5
Aberdeen	rrq	RR	RR	r	50	42	40	21	10	0.0
Howden	p.q	p	p.	p	56	40	39	10	0.4	1.3
Cranwell (Lincs)	q.bc.c.bc	p	bc.c.o	bc.c.o	56	43	40	0.4	-	2.7
Felixstowe	o.r.q.p.q.q	q.b	q.bc.c	q.rr	55	42	*	1	1	1.0
Shoeburyness	[illegible]	bc.c.b.bc	q	dd.q.dd	56	37	*	1	1	0.3
Benson	c.o	b	bbc.bbc	bbc.c.o	56	41	34	1	0.1	*
S. Farnborough	[illegible]	bc.c.b	b.bbc	bbc.bcc	55	41	37	2	-	2.0
London (Kew Obsy.)	[illegible]	bc.c.b.c.b	b	b.o.q	55	43	36	2	trace	1.4
Croydon	[illegible]	b.b.bc.o.q	q.b.bbc.q	bbc.c.o.q	56	42	*	3	-	*

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, i.e., rain and snow together.
s snow. t thunder.
u hzly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:-
R = heavy rain.
rr = continuous moderate rain.
r.r. = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 30 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0·3
1	1- 3	0·3- 1·5
2	4- 7	1·6- 3·8
3	8-12	3·9- 7·9
4	13-18	8·0-10·7
5	19-24	10·8-13·8
6	25-31	13·9-17·1
7	32-38	17·2-20·7
8	39-46	20·8-24·4
9	47-54	24·5-28·4
10	55-63	28·5-32·6
11	64-75	32·7-38·2
12	Above 75	38·3 or above

SYMBOLS—

Aurora — Solar halo
Rime — Lunar halo
Glazed frost — Solar corona
Glazed roads — Lunar corona

LONDON. OBSERVATIONS.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Hours.	Humidity % 9h. G.M.T.	Humidity % 9h. G.M.T.
	24 hours ended 9h G.M.T. 4th Dec.r							Yesterday.		To-day.
Greenwich (Royal Observatory)	or.	obcb	b.o	57	42	36	trace	0.9	69	67
City (Bunhill Row)	*	*	*	*	*	*	*	0.5	*	*
Westminster (St. James's Park)	*	*	*	57	43	34	1	1.0	68	61
Regent's Park (Botanic Gdns)	*	*	*	*	*	*	*	0.0	*	*
Camden Sq. (British Rainfall)	od.oroq	cq	*	55	42	40	1	*	70	63
Kensington Palace	oroc	bcb	*	56	41	38	1	*	69 (18h)	65
Hampstead Observatory	*	*	*	54	40	34	0.2	1.1	*	68

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday.

Total 143 Joules.

Milliwatts.
Average Rate. 49
Maximum Rate. 14

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

4th & 5th December 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth	7.46 / 7.47	11.58 / 11.59	4.10 / 4.11
Greenwich	7.59 / 7.56	11.52 / 11.50	3.52 / 3.51
Wick	8.42 / 8.45	12.2 / 12.3	3.21 / 3.21
Valencia	8.32 / 8.33	11.31 / 11.31	2.31 / 2.31

Photographic Record of Pole Star (Polaris) and of δ Ursae Minoris at Greenwich Observatory.

Exposure from 3rd 17 h. 0 m. to 4 6 h. 30 m.

Stars.	Duration of Exposure. h. m.	Duration of Record. h. m.	%
Polaris	13·30	10 40	79
δ Ursae Minoris	13·30	10 17	76

NOTES ON THE WEATHER OF YESTERDAY.

Gales from the Westward or North-Westward were experienced in most parts of the Kingdom. Rain fell very generally, the quantity being considerable or large in several places; 31mm at Aberdeen. Little bright sunshine was recorded over the Kingdom as a whole, but Penzance had 4.1 hours, Falmouth 3.3 hours and Bath 3.2 hours.

* Information for these columns not usually received.

† Trace = rain has fallen but amount less than 0·1 mm.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. No. B.21563 .....SUNDAY, 5TH DECEMBER, 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

STATIONS.	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind. Direc.	Wind. Force 0-12.	Weather	Temp. °F.	Humidity. %	Visibility § 0-9.	Height of Low Cloud. Feet.	Low Cloud. Form	Low Cloud. Amt. 0-10.	Upper Cloud. Form	Upper Cloud. Amt. 0-10.	Sea 0-9.	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind. Direc.	Wind. Force 0-12.	Weather	Temp. °F.	Humidity. %	Visibility § 0-9.	Height of Low Cloud. Feet.	Low Cloud. Form	Low Cloud. Amt. 0-10.	Upper Cloud. Form	Upper Cloud. Amt. 0-10.	Sea 0-9.
	13H. G.M.T. 4TH														18H. G.M.T. OF 4TH													
Renfrew	1029.5	+6	W	2	c	46	65	7	3,000	St.Cu	5	Ci.Cu	3	*	1031.0	+3	NW	3	b	40	75	5	-	-	-	A.St	2	*
Eskdalemuir ...	1025.8	+4	N	6	bvq	43	55	8	-	Cu	1	Ci	1	*	1029.5	+4	N	4	bc	39	75	8	-	St	1	-	-	*
Valencia (Cahirc'n)	1036.8	+1	NNW	4	c	52	75	8	2,000	St.Cu	8	-	-	4	1036.7	+1	N	3	bc	51	85	8	3,000	St.Cu	6	-	-	4
Baldonnel ..	1031.6	+2	NNW	5	bc	48	75	8	3,000	Cu	1	Ci.St	3	*	1032.9	+1	-	0	b	42	85	6	-	-	-	A.St	1	*
Manchester (Alex.Pk)	1022.8	+5	NW	6	b2f	46	65	4	3,000	St.Cu	2	A.Cu	1	*	1022.5	+4	NNW	4	b3f	44	65	3	3,000	St.Cu	2	-	-	*
Ross on Wye ...	1022.0	+3	N	6	bc	48	55	9	4,200	St.Cu	5	-	-	*	1024.6	+3	NNW	5	c	43	65	8	3,000	St.Cu	3	A.St	5	*
Falmouth	1028.0	0	NNW	7	bc	50	65	7	-	Cu.Nb	5	-	-	*	[illegible]	+1	NNW	7	b62f/q	46	75	5	-	Cu.Nb	2	-	-	*
Calshot (Hants) ...	1018.9	+2	NNW	7	o	47	85	8	3,000	St.Cu	10	-	-	5	1020.5	+1	NNW	5	o	46	85	8	3,000	St.Cu	10	-	-	4
Lympne (Folkestone)	1011.1	0	NNW	9	ogv	45	75	8	1,250	St	6	A.Cu	2	*	1012.2	0	N	9	ofqm	42	92	3	<500	Nb	10	-	-	*
Aberdeen	1026.0	+7	NNW	5	cvq	46	65	8	1,250	Cu.Nb	8	-	-	4	1030.2	+5	NW	3	bif	42	75	6	-	-	-	-	-	4
Howden	1018.2	+2	NNW	6	oq	45	85	7	3,000	St	9	-	-	*	1023.4	+5	N	6	ofq	44	97	6	2,000	Nb	10	-	-	*
Cranwell (Lincs) ...	1017.5	+3	N	6	of	42	97	6	2,000	Nb	9	-	-	*	1021.4	+4	NNE	6	bc	43	92	7	3,000	St.Cu	5	-	-	*
Felixstowe. ...	1018.4	+1	NNW	7	ofq	45	92	7	750	Nb	10	-	-	6	1018.1	+4	N	7	ofq	45	92	6	750	Nb	10	-	-	6
Shoeburyness ...	1011.6	+1	NNW	7	oq	46	75	6	2,000	St.Cu	8	A.St	2	*	1013.6	+3	NNW	8	ofq	44	85	5	-	St	10	-	-	*
Benson	1017.6	+1	NNW	6	o	45	65	4	-	St.Cu	8	-	-	*	1020.0	+2	NNW	6	o	44	75	4	-	St.Cu	8	-	-	*
S. Farnborough	1017.2	+1	NNW	7	o	45	65	6	2,000	St.Cu	10	-	-	*	1018.8	+3	N	8	bc	44	75	7	1,250	St.Cu	6	-	-	*
London (Kew Obsy.)	1018.9	+2	NNW	6	c2fq	47	65	5	3,000	St.Cu	6	A.Cu	1	*	1017.3	+2	NW	6	o2fq	44	75	5	750	St	10	-	-	*
Croydon	1016.4	+3	NW	7	o1fq	46	65	6	750	Nb	10	-	-	*	1017.8	+2	NNW	6	cq.f	44	75	6	1,250	St.Cu	8	-	-	*
	1H. G.M.T. OF 5TH														7H. G.M.T. OF 5TH													
Renfrew ...															1037.3	+2	-	0	b2f	31	92	5	-	-	-	-	-	*
Eskdalemuir ...	1034.1	+3	NNE	2	b	36	85	8	-	Sr	1	-		*	1035.6	+1	NNE	4	o	41	98	8	-	Sr.Cu	9	-	-	*
Valencia (Cahirc'n)	1036.9	0	NNW	3	bc	49	*	*	*	*	*	*	*	4	1036.4	0	NE	1	o	48	76	8	4,200	St	10	-	-	*
Baldonnel ...	1034.6	0	-	0	b	36	92	5	-	-	-	HSr	1	*	1036.7	+2	-	0	o2f	33	92	5	2,000	Sr.Cu	10	-	-	*
Manchester (Alex.Pk)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1032.7	+4	NNW	3	o3f	42	85	3	3,000	Sr.Cu	3	-	-	*
Ross on Wye...	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1030.4	+3	NE	4	o	42	75	7	3,000	Sr.Cu	9	-	-	*
Falmouth ...	1025.5	+1	N	7	b	45	73	7	-	-	-	-	-	*	1030.1	+2	NNE	5	b	44	76	8	-	-	-	-	-	*
Calshot (Hants)...	1021.7	+1	N	5	o	45	85	8	3,000	Sr.Cu	9	-	-	4	1026.7	+5	NNE	5	c	45	85	8	2,000	Sr.Cu	8	-	-	3
Lympne (Folkestone)	1019.1	+6	NNE	9	ofqm	44	85	5	<500	Sr	10	-	-	*	1025.1	+7	NNE	6	oq	42	85	7	<500	Nb	9	-	-	*
Aberdeen ...	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1036.8	+2	NW	3	bif	38	92	7	-	-	-	-	-	4
Howden ...	1028.9	+4	N	3	o	43	85	6	2,000	Sr.Cu	10	-	-	*	1033.2	+4	NNW	1	o1f	40	92	5	750	St	9	-	-	*
Cranwell (Lincs)	1017.9	+1	NE	5	o2f	42	92	5	3,000	Sr	6	A.Sr	4	*	1030.7	+3	NNE	4	c	43	92	6	3,000	Sr.Cu	6	A.Cu	2	*
Felixstowe ..	1021.0	+7	NNE	6	o	45	92	6	1,250	Sr	10	-	-	*	1026.8	+5	NNE	3	o1f	46	92	6	1,250	[illegible]	[illegible]	-	-	6
Shoeburyness...	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1025.9	+7	NE	3	bc	44	85	7	4,200	Sr.Cu	4	-	-	*
Benson	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1027.5	+3	N	4	o	43	85	4	-	Sr.Cu	8	-	-	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1027.1	+6	NNE	6	od.	44	85	6	1,250	Nb	7	A.Sr	3	*
London (M.O. at 1H.)	1021.5	+4	*	*	*	*	*	*	*	*	*	*	*	*	1027.4	+3	NNE	3	o2f	45	85	5	2,000	Sr	10	-	-	*
Croydon ...	1021.2	+3	N	7	oq1f	44	85	6	750	Sr.Cu	10	-	-	*	1027.0	+6	NNE	5	c1f	44	85	6	750	Sr.Cu	8	-	-	*

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

STATIONS.	Barom. at M.S.L. mb.	Temp. °F.	Wind. Direc.	Wind. Force 0-12.	Weather.	Barometer. at M.S.L. mb.	‡ Change in 3 hours.	Temperature. Temp. °F.	Temperature. Change in 24 hours.	Wind. Direc.	Wind. Force 0-12.	Direc. of Upper Cloud.	Weather.	Sea 0-9	† Rainfall mm.	Temp. Max. °F.	Temp. Min. °F.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Sunshine hours.
	18H. G.M.T. of 4TH					7H. G.M.T. of 5TH									24 HOURS ENDED 7H. 5TH						4TH
Lerwick								36	-12												
Stornoway ...	1029.9	40	WNW	2	b	1035.5	+1	[illegible]	[illegible]	-	0	-	bc	0	1	46	36	omqr	b	bc	*
Castlebay (Barra Is)	1033.3	45	-	0	bc	1036.2	+1	45	+2	-	0	-	o	0	1	47	41	b.bc	bc	bc.o	1.5
Malin Head ...	1034.7	48	N	2	bc	1037.0	+1	45	-2	-	0	-	bc	1	-	49	44	bc	c.bc	bco.bc	1.2
Blacksod Point	1033.6	46	N	2	bc	1036.0	0	43	-5	SE	1		b	0	-	51	43	bm	bm	bm	2.5
Roche's Point...	1034.7	50	N	1	cm	1034.9	0	48	-1	-	0	-	c	1	0.4	55	43	bc	bc	bo.bcm	*
Birr Castle ...	1034.4	49	NNW	3	c	1035.5	+1	43	-6	-	0	-	b	2	1	51	42	cp.o	bc.o.c	bc.b	*
Donaghadee ...	1034.0	48	NW	1	c	1036.2	*	36	-9	WNW	1	-	c	*	-	49	36	c	c	cxz	3.3
Liverpool (Bidston)	1030.1	48	NE	5	bcq	1035.5	+2	45	-2	N	4	-	bq	3	-	49	45	bq	bcq	bcq	*
Holyhead ...	1027.7	44	NNW	5	b	1033.6	+2	40	-6	N	3	-	b	3	-	46	40	bq	bq	b	6.5
Pembroke (St. Ann's Head)	1029.5	48	NE	7	bcq	1034.0	+2	45	-3	NE	5	-	b	4	-	50	44	b.bc.cq	c.bcq	bcbq	1.5
Scilly (St. Mary's)	1029.5	48	N	7	bcq	1032.7	+1	43	-5	N	3	-	b	4	0.3	49	42	cq	bcq	bcqbv	4.6
Jersey (St. Aubin)	1029.2	50	N	6	c	1030.5	0	48	-3	NE	4	NE	c	5	-	52	48	c.bcq	bc.cq	bcqc	3.9
Portland Bill ...	1022.5	50	NW	5	o	1022.9	0	48	-1	NE	6	-	bc	4	1	52	44	bc	bc.o.	o.p.bc	4.3
Dungeness ...	1021.8	46	NNW	7	bcq	1026.2	+4	45	-5	NNE	6	NE	bc	6	-	51	43	bcq	bcq	bc	*
Wick	1011.1	44	N	8	cq	1023.0	+6	46	+2	NNE	6	-	bc	6	4	53	43	c.cq	cpq	qor.bc	*
Nairn	1030.7	42	NW	3	b	1036.0	+1	33	-11	W	2	-	b	3	-	48	32	bcq.c	cq.b.	b.	*
Leith	1032.0	38	NW	1	bc	1036.6	*	37	-6	-	0	-	bc	1	-	45	35	bc	bc	bcc	1.2
Tynemouth ...	1031.0	44	NNW	5	b	1037.0	+1	38	-7	W	1	NE	bc	2	-	46	38	cbcqb	bq.b	bqobc	*
Spurn Head ...	1024.1	46	N	9	bcfqm	1033.5	+3	46	+1	ENE	3	-	c1f	5	5	46	43	omqp	omqp	ompq	*
Yarmouth (Gorleston)	1018.8	46	N	8	bcq	1030.0	+5	45	-1	NE	5	-	oqp	5	1	47	39	oqp	cq	coq	*
Clacton-on-Sea.	1012.3	46	NNE	8	*	1026.9	+5	46	+4	ENE	5	-	oqv	4	4	47	41	omrqp	oqr	opqorcqv	0.0
Nottingham ...	1012.2	44	WNW	6	*	1026.2	+5	46	+3	NE	4	NE	bc	4	7	46	41	oqqr	oqqr	oqqr.bc	0.0
	1022.7	43	N	5	op	1031.4	*	42	-4	N	3	-	c		1	46	42	op.c	or.c	bc.b	0.1

Information for these columns not usually received. ‡ The barometric change is expressed in half millibars. § For code see page 3. † See footnote p. 4.

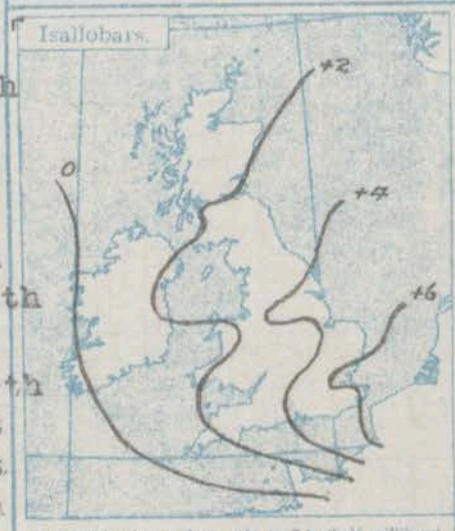
M.O. FORM 2370

SUMMARY OF CONDITIONS AT 7 h. G.M.T. 5.12.20.

Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Fine to dull.	Fair.	Rough
2. E. England	Fair to dull.	Good.	Mod.
3. E. Midlands	Cloudy.	Indif.	-
4. W. Midlands	Cloudy.	Poor	-
5. S.W. England	Fine to cloudy.	Good.	R.Rough
6. South Wales	Fine to dull.	V.Good	Mod.
7. North Wales	Fine.	Good.	"
8. N.W. England	Fine to cloud, local mist.	Var.	Slight
9. N. Midlands	Cloudy.	Indif.	-
10. N.E. England	Dull, local mist or haze	Fair.	R.Rough
11. E. Scotland	Fair or fine.	Good	Mod.
12. S.W. Scotland	Fine to overcast, local mist.	Good.	Slight
13. Isle of Man	Fine.	"	"
14. N.& N.W. Scotland	Fair or fine, local mist	Fair.	Smooth
15. Hebrides	Fair to dull.	"	V. Smooth
16. Orkneys and Shetlands	Fair	Poor	Calm.
17. N.W. Ireland	Cloudy, some mist.	Indif.	V. Smooth
18. N.E. Ireland	Fine to cloudy.	Fair.	Slight
19. S.E. Ireland	Fine to dull, local mist	"	Slight
20. S.W. Ireland	Fine to dull.	Good	Smooth

Temperature reported from Coastal and Cross Channel Steamers.

Position Number.	Date	Time G.M.T.	Sea °F	Air °F



Barometric change from 4 h. to 7 h. (half millibars).

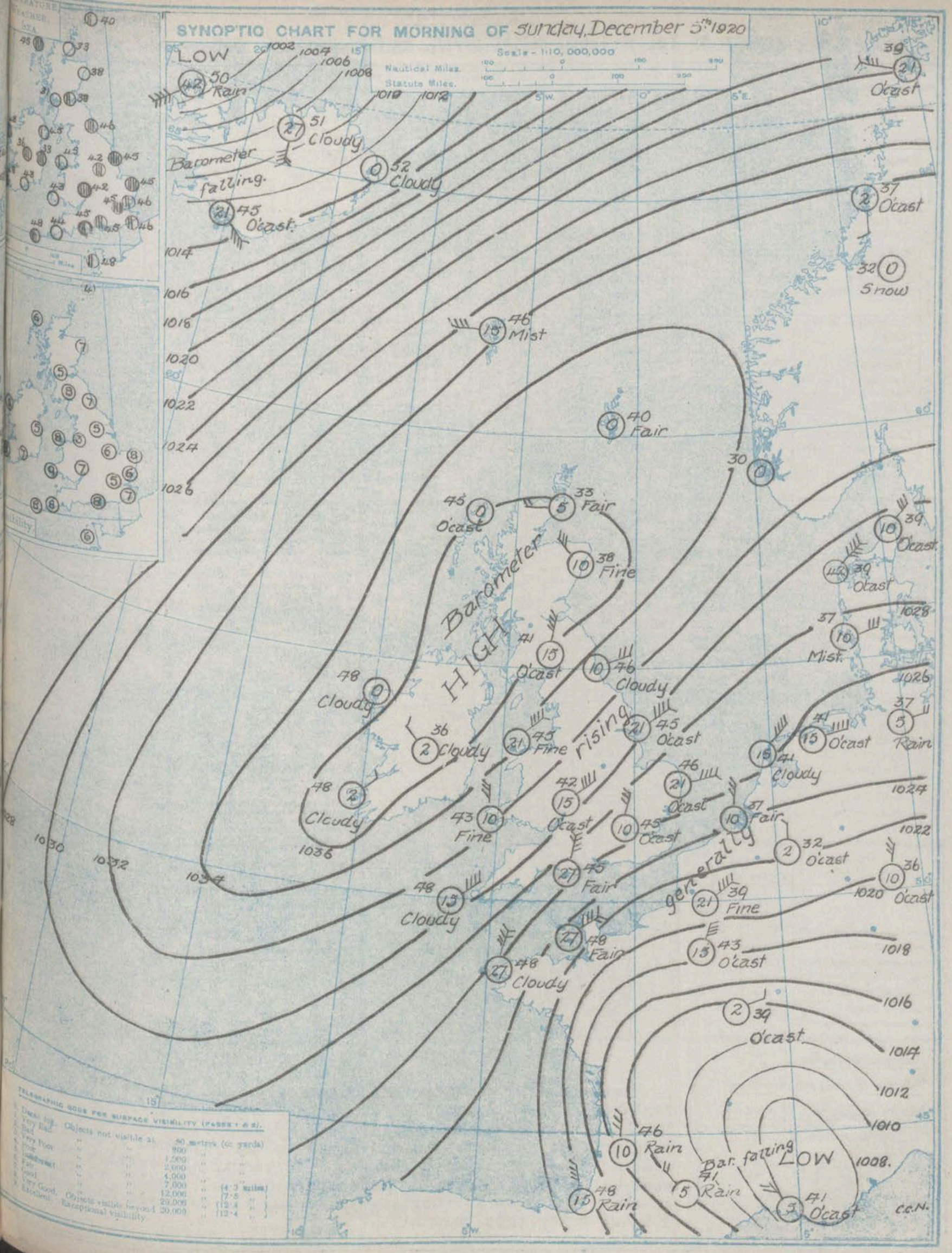
GENERAL INFERENCE from observations received up to 9h GMT.

An anticyclone over Scotland and Ireland will spread East and South-East causing fair to fine weather with little wind, and mist or fog inland at night with slight frost.

Districts.	Forecasts for the 24 hours commencing 15 h. G.M.T. Sunday 5th December, 1920.	Further Outlook.
1. S.E. England 2. E. England 3. E. Midlands 4. W. Midlands 5. S.W. England 6. South Wales 7. North Wales 8. N.W. England 9. N. Midlands 10. N.E. England	Moderate NE wind, becoming light; fair to fine, slight frost at night inland with mist or fog, but visibility fair to good during the day.	Fair to fine for a day or two with frost at night except possibly in Scotland and Ireland where there is a risk of mild and unsettled weather setting in again.
11. E. Scotland 12. S.W. Scotland 13. Isle of Man	Light indefinite breezes; fair to fine, slight frost at night inland with mist or fog, partly clearing during the day.	
14. N.& N.W. Scotland 15. Hebrides 16. Orkneys and Shetlands 17. N.W. Ireland	Light Southerly breezes; fair to cloudy; visibility fair; moderate temperature.	
18. N.E. Ireland 19. S.E. Ireland 20. S.W. Ireland	Same as 11 - 13.	

Meteorological Office, Air Ministry, Kingsway, London, W.C.2. Forecasts issued at 18.40.

G. C. SIMPSON, F.R.S., Dir.


SYNOPTIC CHART FOR MORNING OF Sunday, December 5th 1920
Scale - 1:10,000,000
Nautical Miles.
Statute Miles.
LOW
Rain
Cloudy
Barometer falling.
O'cast.
Mist
Fair
Fine
Barometer rising generally
HIGH
Bar. falling
LOW
Snow
Rain
C.C.N.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 340 {Sunday 5th December}

WEATHER, TEMPERATURE, RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 4TH

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 3rd-4th	Rainfall. Day. 9h-18h. 4th	Sunshine. Sunrise to Sunset. 4th
Scotland.	Oban							
	Banff	bc. bq	bc	47	44	5	-	2.3
	Montrose							
	St. Andrews							
England, N.E.	Harrogate	c.o	oq	42	39	2	1	0.3
	Scarborough	o	o	48	41	10	1	0.0
	Skegness							
England, E.	Lowestoft							
	Felixstowe	omqp	omqr	46	43	2	3	0.0
	Southend-on-Sea	oq.cq	c.orq	47	40	-	1	1.2
England, S.E.	Tunbridge Wells	o	o	46	41	-	-	0.0
	Margate	o	orq	47	42	-	1	0.0
	Ramsgate	*	*	49	40	0.2	-	0.1
	Folkestone	r.o	or.o	50	40	1	1	0.0
	Hastings	o	bc.o	48	41	Trace	-	1.2
	Eastbourne	o	oc	47	42	0.2	-	0.3
	Brighton							
	Worthing	o	o	47	42	-	-	0.0
	Littlehampton	bc	bcu	47	41	-	-	0.1
	Portsmouth (S'thsea)	*	*	48	43	0.4	-	3.0
	Bournemouth	*	*					
	Ventnor (I. of W.)	*	*	54	42	-	-	4.3

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 3rd-4th	Rainfall. Day. 9h-18h. 4th	Sunshine. Sunrise to Sunset. 4th
England, N.W.	Douglas (I.O.M.)							6.2
	Blackpool	bc	bc	46	43	0.2	-	6.0
	Southport	b	b	45	43	0.4	-	
Midlands.	Buxton							
	Leamington Spa							1
	Malvern	b.bc	bc.b	46	42	-	-	5.1
	Bath	b	b.bc	48	43	-	-	
Wales.	Rhyl							
	Colwyn Bay							
	Llandudno	b	c.bc.	49	46	-	-	4.3
	Aberystwyth	rc.c.	c.o	49	44	1	-	5.5
	Tenby							
	Swansea							
England, S.W.	Weymouth	b.	b.	51	43	-	-	6.9
	Teignmouth							
	Torquay							6.2
	Paignton	bq	bc.b	51	43	2	-	
	Penzance							
	Newquay							
	Bude	q	c.bc	50	37	4	-	3.9
	Ilfracombe	cdbcq	bc.bq	50	46	3	-	3.7
	Weston-s-Mare							

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-13h. 4th	Weather. 13h-18h. 4th	Weather. 18h-1h. 4th-5th	Weather. 1h-7h. 5th	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall.† Day. 7h-18h. mm.	Rainfall.† Night. 18h-7h. mm.	Sun. Hours.
Renfrew	bbcrf	bbc.rf	bzfx	bzx	48	30	18	-	-	4.3
Eskdalemuir	bbcq	qbbcdbh	wbbc	wbbc.co	43	35	31	-	-	6.2
Valencia (Cahirc'n)	hdc.co.	obccf h	bbc.bcc	o	52	46	41	-	-	1.0
Baldonnel	bbc	bc.co	bzf	box	48	29	*	-	-	5.8
Manchester (Alex. Pk)	bbczf	b.bczfq	bbczf	ozf.Rbzf	48	40	28	-	1	*
Ross on Wye	bc.cvbhq	bbcqvbhqc	coq	oq	49	42	35	-	-	5.8
Falmouth	bc.c.	bc.h.	b	b	51	43	40	1	-	5.2
Calshot (Hants)	bbccoq	c.oq	obbccoq	oq	45	42	40	-	-	3.5
Lympne (Folkestone)	rrrozfq	rrrozfq	rrr.qozf	rrr.qozf coq	45	41	38	3	8	0.3
Aberdeen	hhrh.	bc.cif	w if	zf	46	37	32	0.4	-	2.0
Howden	r o	o	uz	oif co	46	39	36	2	-	0.7
Cranwell (Lincs)	orq	r.bc	bccco	ozf co	44	41	38	1	-	0.0
Felixstowe	rrq	rrRRqozf	qRRbop	qp	47	41	*	3	6	0.0
Shoeburyness	qhd.	o.bc.c	r q	q.bbc	47	42	*	1	1	1.2
Benson	o	o	o	o	46	42	40	-	-	*
S. Farnborough	bcc.o	o.bccr	bccco	copq	46	43	40	-	trace	0.7
London (Kew Obsy.)	ozf.zf	c.ozf.ifq	oqpq.p	o	47	43	40	-	1	0.8
Croydon	ozfofqrafq	0.C 2-1fq	ccrrozfq ozf	coq	46	43	*	-	1	*

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, *i.e.*, rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air, humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:–
R = heavy rain.
rr = continuous moderate rain.
r.r. = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 30 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0.3
1	1–3	0.3–1.5
2	4–7	1.6–3.4
3	8–12	3.5–5.4
4	13–18	5.5–8.0
5	19–24	8.1–10.8
6	25–31	10.9–13.9
7	32–38	14.0–17.1
8	39–46	17.2–20.7
9	47–54	20.8–24.4
10	55–63	24.5–28.4
11	64–75	28.5–33.5
12	Above 75	33.6 or above

SYMBOLS–

Aurora, Rime, Glazed frost, Glazed roads, Solar halo, Lunar halo, Solar corona, Lunar corona

LONDON. OBSERVATIONS.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass °F.	Rainfall. mm.	Sunshine to Sunset. Hours.	Humidity % 15 h. G.M.T.	Humidity % 9 h. G.M.T.
	24 Hours ended 9h G.M.T. 5th							Yesterday.	To-day.	
Greenwich (Royal Observatory)	o	oco	boq	47	43	37	1	0.1	74	86
City (Bunhill Row)	*	*	*	*	*	*	*		*	*
Westminster (St. James's Park)	*	*	*							
Regent's Park (Botanical Gdns)	*	*	*	*	*	*	*	00	*	*
Camden Sq. (British Rainfall)	cqbc	bc.cq	*	47	43	37	2	*	68	87
Kensington Palace	o	oc bc	*	47	42	38	1	*	79 (18h)	85
Hampstead Observatory	*	*	*						*	

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday

Total ..... Joules.

Milliwatts.

Average Rate.

Maximum Rate.

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

5TH AND 6TH DECEMBER 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth	7.47 / 7.47	11.44 / 11.44	3.40 / 3.37
Greenwich	7.50 / 7.51	11.51 / 11.51	3.51 / 3.51
Wick	8.46 / 8.47	12.3 / 12.3	3.21 / 3.20
Valencia	8.33 / 8.35	12.32 / 12.32	4.30 / 4.29

Photographic Record of Pole Star (Polaris) and of δ Ursæ Minoris at Greenwich Observatory.

Exposure from.....h ... m
to..... ... m

Stars.	Duration of Exposure.	Position of Image.		
Polaris	h m	h m		°
δ Ursæ Min.				

NOTES ON THE WEATHER OF YESTERDAY.

Rain fell in considerable quantity on the East coast of England, 11mm at Lympne 7mm at Cleeton and 5mm at Tynemouth In these regions there was practically no sunshine, but further West and North about six hours was recorded at several places. The aurora borealis was observed in the evening at most Northern stations The temperature fell to 32° at Wick at night but the Northerly gale during the day over England did not bring very cold air.

* Observations not usually received

† Trace = rain has fallen but amount less than 0.1 mm.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. No. B. 21564 MONDAY ... 6TH ... DECEMBER ..... 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

STATIONS	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind. Direc.	Wind. Force 0-12.	Weather	Temp. °F.	Humidity. %	Visibility ‡ 0-9.	Height of Low Cloud. Feet.	Low Cloud. Form.	Low Cloud. Amt. 0-10.	Upper Cloud. Form.	Upper Cloud. Amt. 0-10.	Sea 0-9.	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind. Direc.	Wind. Force 0-12.	Weather	Temp. °F.	Humidity. %	Visibility. ‡ 0-9.	Height of Low Cloud. Feet.	Low Cloud. Form	Low Cloud. Amt. 0-10.	Upper Cloud. Form.	Upper Cloud. Amt. 0-10.	Sea 0-9.
	13H. G.M.T. ... 5TH														18H. G.M.T. OF ... 5TH													
Renfrew ...	1038.5	0	-	0	c3f	40	83	3	-	-	-	A S	7	*	1038.2	+1	N	0	03f	41	97	2	750	St	10	-	-	*
Eskdalemuir ...	1036.0	0	NNW	3	6	43	75	8	-	St Cu	1	Cu	1	*	1037.3	0	[illegible]	3	6c	37	85	7	-	Cu	5	-	-	*
Valencia (Cahirc'n)	1036.1	-2	-	0	6c	50	75	8	-	-	-	Cu	4	3	1035.6	+1	NE	2	6	41	85	8	-	-	-	Cu	1	3
Baldonnel ...	1037.3	0	-	0	01f	39	85	6	2000	St Cu	10	-	-	*	1036.7	0	N	0	03f	37	92	4	1250	St Cu	10	-	-	*
MANCHESTER (Ringway)	1034.0	0	NE	4	63f	45	75	4	2000	Cu	2	-	-	*	1034.2	0	[illegible]	3	04f	45	75	3	1250	Ns	10	-	-	*
Ross on Wye ...	1031.9	+2	NE	4	0	44	75	6	3000	St Cu	10	-	-	*	1032.2	+1	NNE	4	01f	43	75	5	2000	St	10	-	-	*
Falmouth ...	1031.1	-2	[illegible]	4	63	47	75	5	-	St Cu	1	-	-	*	1031.7	+1	NNE	4	63f	41	85	4	-	St Cu	2	-	-	*
Calshot (Hants) * ...	1028.4	-1	NE	4	c	47	85	7	2000	St	5	A Cu	3	3	1029.6	+1	NNE	4	01f	45	85	7	2000	St	10	-	-	2
Lympne (Folkestone)	1026.6	+1	NNE	6	8g	45	76	7	1250	St Cu	9	-	-	*	1027.6	0	NNE	5	023/g	40	92	4	<500	Ns	10	-	-	*
Aberdeen ...	1037.5	0	NW	2	81f2	42	85	7	-	-	-	Cu	1	3	1038.2	+1	NW	2	82f	38	85	5	-	-	-	-	-	3
Howden ...	1038.1	-1	NE	3	c	45	75	7	1250	St Cu	3	Cu St	1	*	1033.7	0	NNE	2	6c	46	92	8	2000	St	4	-	-	*
Cranwell (Lincs) ...	1032.3	0	NNE	4	0	42	94	8	2000	Ns	8	-	-	+	1032.5	0	NNE	3	6	36	97	6	2000	St	1	-	-	+
Felixstowe ...	1028.3	0	NNE	5	02	45	85	6	1250	St Cu	10	-	-	3	1028.7	0	N	3	0	43	92	6	1250	St	10	-	-	3
Shoeburyness ...	1027.5	+2	NNE	2	0	44	85	7	5700	St Cu	6	A Cu	9	*	1026.9	0	NNE	3	0	43	85	7	<500	St	10	-	-	*
Benson ...	1030.6	+1	N	5	c	43	85	6	4200	St Cu	8	-	-	*	1030.2	0	N	3	0	42	85	6	-	St Cu	9	-	-	*
S. Farnborough	1029.1	0	NNE		03	45	75	6	1250	St Cu	7	A St	3	*	1029.3	+1	NE	4	0m	43	85	6	1250	St Cu	10	-	-	*
London (Kew Obsy.)	1029.0	-1	NNE	4	02f	46	78	5	3200	St Cu	4	A Cu	5	*	1029.5	0	NNE	4	02g	44	85	6	4200	St Cu	10	-	-	*
Croydon ...	1028.8	0	NNE	4	02f	45	85	4	750	St	10	-	-	*	1029.2	0	NNE	5	02f	43	85	4	750	St Cu	10	-	-	*
	1H. G.M.T. OF 6TH														7H. G.M.T. OF 6TH													
Renfrew ...															1036.0	-1	-	0	08f	28	97	1	<500	St	10	-	-	
Eskdalemuir ...	1036.8	-2	-	0	6c	37	85	7	-	St Cu	8	-	-	*	1038.2	0	-	0	6c	30	97	8	-	St	1	-	-	*
Valencia (Cahirc'n)	1034.8	-1	ENE	1	6c	40	*	*	*	*	*	*	*	1	1032.2	-2	NE	1	6c	34	85	9	-	-	-	-	-	*
Baldonnel ...	1035.6	-3	-	0	6c	37	97	5	3000	St Cu	4	-	-	*	1033.6	-3	-	0	02f	38	92	6	2000	St Cu	9	-	-	*
MANCHESTER (Ringway)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1032.4	0	NE	2	03f	41	85	3	3000	St Cu	9	-	-	*
Ross on Wye...	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1030.3	-1	NE	3	02f	40	95	8	2000	St	8	17St	2	*
Falmouth ...	1030.3	-1	N	3	6	41	75	7	-	St	2	-	-	*	1029.0	-2	NNE	3	6	39	85	7	-	St	1	-	-	*
Calshot (Hants)...	1028.2	-1	N	3	0	42	97	7	2000	St	9	-	-	2	1027.7	0	NNE	3	0	41	97	8	2000	St	10	-	-	2
Lympne (Folkestone)	1026.1	0	NE	6	03gm	40	92	4	2500	Ns	10	-	-	*	1026.3	0	NE	5	0mg	38	85	6	750	St	10	-	-	*
Aberdeen ...	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1036.0	-1	NNW	1	02fex	32	97	2	2000	St Cu	8	-	-	3
Howden ...	1033.4	-1	NE	2	cr	38	97	7	3000	Ns	8	-	-	*	1032.5	-1	NE	1	c	39	97	5	2000	St	2	-	-	*
Cranwell (Lincs)	1032.3	0	NE	3	6	37	92	8	3000	St	9	-	-	*	1031.0	0	NE	3	0	40	97	6	4200	St Cu	9	-	-	*
Felixstowe ...	1028.4	0	NE	6	0mg	43	85	6	1250	Ns	10	-	-	6	1028.1	0	NE	5	0	43	75	6	1250	St Cu	10	-	-	5
Shoeburyness...	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1027.1	0	ESE	4	0	42	85	7	2000	St Cu	10	-	-	*
Benson ...	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1028.0	0	NE	3	0	39	92	8	-	St Cu	10	-	-	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1028.1	0	NE	4	0	40	85	6	1250	St Cu	7	A St	3	*
London (M.O. at 1H.)	1028.7	-1	*	*	*	42	*	*	*	*	*	*	*	*	1029.1	0	NE	4	01f	41	85	6	1250	St Cu	8	A St	2	*
Croydon ...	1028.4	-2	NNE	5	01f	41	92	6	750	Ns	10	-	-	*	1028.2	0	NNE	4	02f	40	85	5	1250	St	10	-	-	*

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

STATIONS.	Barom. at M.S.L. mb.	Temp. °F.	Wind. Direc.	Wind. Force 0-12.	Weather.	Barometer. at M.S.L. mb.	Barometer. ‡ Change in 3 hours.	Temperature. Temp. °F.	Temperature. Change in 24 hours.	Wind. Direc.	Wind. Force 0-12.	Direc. of Upper Cloud.	Weather.	Sea 0-9.	Rainfall † mm.	Temp. Max. °F.	Temp. Min. °F.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Sunshine Hours.
	18H. G.M.T. of ... 5TH					7H. G.M.T. of ... 6TH									24 HOURS ENDED 7H. ... 6TH						... 5TH
Lerwick																					*
Stornoway ...	1036.4	46	-	0	c	1034.6	-2	46	48	S	2	-	b	1	-	47	40	bem	bem	o	
Castlebay (Barra Is)	1036.1	49	S	1	0	1032.7	-	46	44	S	2	-	o	1	-	47	44	o	o	o	0.0
Malin Head ...	1036.7	49	SSE	2	0	1032.9	-2	46	44	S	4	S	c	4	-	50	43	bc.o	o	o.c	0.0
Blacksod Point	1036.3	40	S	2	6													bm	bm		
Roche's Point...	1036.5	48	-	0	bc	1031.4	-2	41	-7	S	1	-	bc	1	-	50	41	bc	bc	bc	*
Birr Castle ...	1036.2	42	NNE	2	6	1032.7	-2	39	-4	N	2	-	o	2	bcex	48	3	b.bc.b	b	b.o	*
Donaghadee ...	1037.2	37	NW	1	bc	1034.0	*	28	-8	NW	1	-	o	*	-	43	26	bc	fc.bc	bcx.f.o	5.5
Liverpool (Bidston)	1036.7	44	ENE	1	6	1034.2	-2	46	0	S	3	-	bc	2	-	47	38	bc	bc	bcm	*
Holyhead ...	1034.1	43	NE	1	m	1032.8	-1	39	-1	NE	2	-	cm	2	-	46	38	b	bm	bcm	4.2
Pembroke (St. Ann's Head)	1035.2	47	ENE	5	0	1032.4	-1	43	0	ENE	4	-	o	3	-	48	43	b.bc.c	cg	o.b.bc.c	0.3
Scilly (St. Mary's)	1033.9	42	NE	3	bv	1031.3	-1	40	-3	NE	2	-	b	2	-	48	38	bv	bv	bv.b	6.9
Jersey (St. Aubin)	1031.5	47	ENE	3	bc	1028.9	-2	46	-3	ESE	3	NE	c	4	-	50	47	c	bc.c	o.c	6.0
Portland Bill ...	1026.4	48	ENE	6	0	1024.1	0	45	-	NE	5	-	o	4	1	50	42	bc.op.o	op.p.o	bc.cp.o	0.8
Dungeness ...	1028.2	46	NNE	5	c	1027.2	-2	45	0	NE	5	NE	o	5	-	49	41	bc	bc.c	o	*
Wick ...	1026.4	44	NE	4	c	1021.7	0	42	-4	NE	5	NE	c	5	3	49	42	bc.c	c.bc	cp.cr.c	*
Nairn ...	1037.1	33	SW	2	6	1033.6	0	41	+8	SSW	2	-	b	2	-	44	33	b	b	c	*
Leith ...	1037.1	30	-	0	bc	1032.0	*	28	-11	-	0	-	bc	0	-	41	25	bcm	bm	bcx	4.6
Tynemouth ...	1037.7	28	N	1	b	1035.2	0	34	-4	W	1	-	b	1	-	41	34	bc.c.b	bc.b	bg.bm.b	*
Spurn Head ...	1035.4	45	NE	4	bcj	1034.7	0	43	-3	ENE	3	-	bc	2	0.4	48	43	cj	bcp	c.bcp	*
Yarmouth (Gorleston)	1031.4	45	E	5	bcq	1031.1	0	41	-4	E	5	-	cqp	2	1	49	38	cq.p.	cqp	cqp	*
Clacton-on-Sea.	1029.0	44	ENE	5	1	1028.0	0	42	-4	E	5	-	cq	4	3	37	40	bcp.cq	cq.p	cq.c	0.0
Nottingham ...	1028.2	44	N	4	0	1027.4	0	43	-3	NE	5	-	cqv	4	2	46	41	c.cq.p.o	cq	cqbv	0.1
	1033.1	41	NNE	3	6	1031.3	*	40	-2	NE	3	NE	c	2	0.2	44	37	c.cp	c.c	b	0.1

* Information for these columns not usually received. ‡ The barometric change is expressed in half millibars. § For code see page 3 † See footnote p.4.

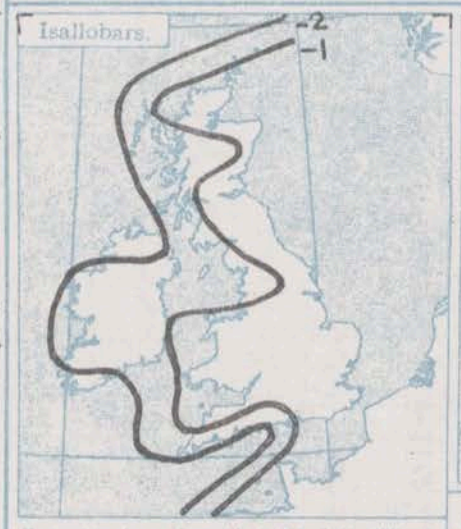
M.O. FORM 2370

SUMMARY OF CONDITIONS AT 7 h. G.M.T. 6.12.1920.

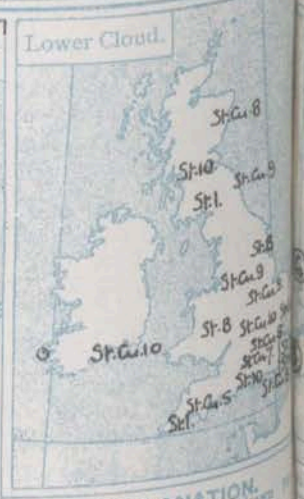
Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Cloudy or dull.	Fair.	Mod.
2. E. England	Dull.	Good	"
3. E. Midlands	Dull.	Fair	-
4. W. Midlands	Dull, misty.	Indiff.	-
5. S.W. England	Fine to dull.	Good	Mod.
6. South Wales	Fine.	"	Smooth
7. North Wales	Dull.	"	Slight
8. N.W. England	Fair to dull, mist in (South.	Indiff.	Smooth
9. N. Midlands	Cloudy or dull.	"	-
10. N.E. England	Fair to dull, local showers.	"	Mod.
11. E. Scotland	Fine to dull, frosty.	Poor	Smooth
12. S.W. Scotland	Fine to dull, fog at Glasgow.	Var.	"
13. Isle of Man	Fair to dull.	Good	"
14. N.&N.W. Scotland	Fine to cloudy.	Fair	"
15. Hebrides	Cloudy or dull.	"	Slight
16. Orkneys and Shetlands	Fine.	"	Smooth
17. N.W. Ireland	Fair.	"	"
18. N.E. Ireland	Fair.	"	"
19. S.E. Ireland	Dull.	Good	"
20. S.W. Ireland	Fine to dull.	"	"

Temperature reported from Coastal and Cross Channel Steamers.

Position Number.	Date	Time G.M.T.	Sea °F	Air °F
4A.	4th	03.45	50	48
12.	"	08.15	50	48
5.	"	08.31	51	48
4A.	5th	04.45	49	42
8.	"	04.45	49	48
6.	"	15.10	53	47



Barometric change from 4 h. to 7 h. (half millibars).



EXPLANATION.
BAROMETER.—Isobars are drawn at intervals of two millibars.
WIND.—Direction is shown by arrows flying with the wind. Force, on the scale 0-12, is indicated by the number of feathers. Mean velocity is shown in miles per hour by figures in small circles.
TEMPERATURE is given in degrees F.
WEATHER SYMBOLS.—
clear sky. sky ½ clouded. sky ¾ clouded. overcast sky. rain falling. snow. sleet. hail. fog. mist. thunder. thunderstorm.
SEA DISTURBANCE.—Rough. High seas.

GENERAL INFERENCE from observations received up to 9h.

The anticyclone extending from Scandinavia to Ireland will probably maintain North-Easterly winds over the Southern half of the Kingdom for two or three days. Rather cold weather with a good deal of cloud is indicated. In Scotland and North Ireland weather will be fair with Southerly winds. Subsequently a spell of frosty weather is not unlikely.

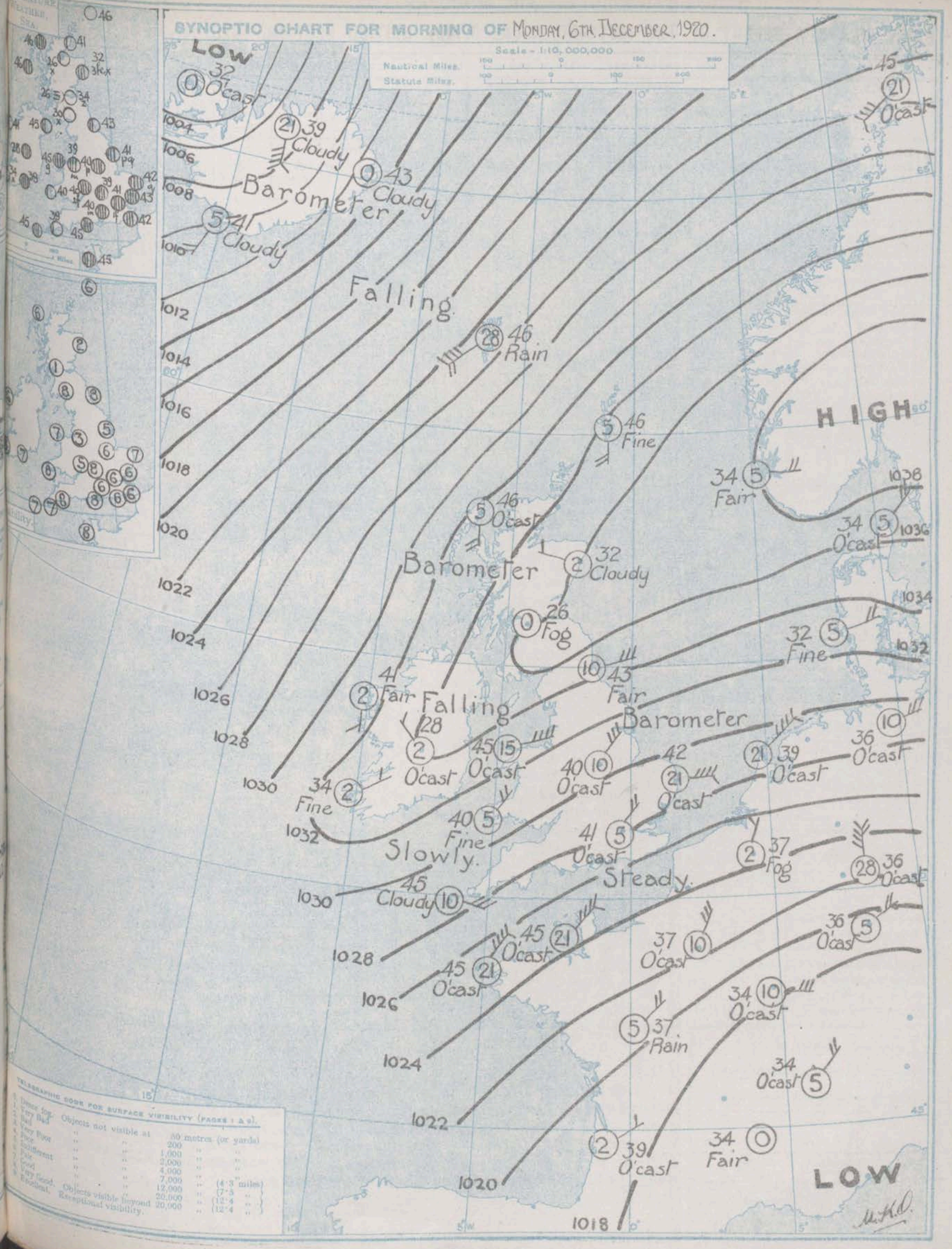
Districts.	Forecasts for the 24 hours commencing 15 h. G.M.T. Monday, 6th December, 1920.
1. S.E. England 2. E. England 3. E. Midlands 4. W. Midlands 5. S.W. England	Wind N.E., moderate, fresh locally; mainly overcast, some local showers, visibility fair; rather cold.
6. South Wales 7. North Wales 8. N.W. England 9. N. Midlands 10. N.E. England	Wind mainly N.E., light or moderate; cloudy, visibility fair but some local mist; rather cold.
11. E. Scotland 12. S.W. Scotland 13. Isle of Man	Wind light variable; fine, visibility fair, local fog; cold.
14. N.&N.W. Scotland 15. Hebrides 16. Orkneys and Shetlands 17. N.W. Ireland 18. N.E. Ireland	Wind S. or S.W., light or moderate; mainly fair or fine, visibility fair to good; temperature moderate.
19. S.E. Ireland 20. S.W. Ireland	As for 11 - 13.

Further Outlook.

Rather cold weather probable for two or three days except along North-West coasts. Winds North-Easterly over England. Spell of frosty weather not unlikely.

E.S.A.

Meteorological Office: Air Ministry, Kingsway, London, W.C.2. Forecasts issued at 09.00. G. C. SIMPSON, F.R.S., Director.


SYNOPTIC CHART FOR MORNING OF MONDAY, 6TH DECEMBER, 1920.
Scale - 1:10,000,000
Nautical Miles.
Statute Miles.
LOW
32 O'cast
21 39 Cloudy
0 43 Cloudy
5 41 Cloudy
Barometer
Falling
28 46 Rain
5 46 Fine
HIGH
34 5 Fair
5 46 O'cast
34 O'cast 5
Barometer
2 32 Cloudy
0 26 Fog
32 5 Fine
10 43 Fair
Falling
Barometer
2 41 Fair
2 28 O'cast
45 15 O'cast
40 10 O'cast
42 21 O'cast
21 39 O'cast
10 36 O'cast
34 2 Fine
40 5 Fine
41 5 O'cast
Slowly.
Steady.
2 37 Fog
28 36 O'cast
45 Cloudy 10
45 21 O'cast
37 10 O'cast
36 5 O'cast
45 21 O'cast
34 10 O'cast
5 37 Rain
34 O'cast 5
2 39 O'cast
34 Fair 0
LOW
1004
1006
1008
1010
1012
1014
1016
1018
1020
1022
1024
1026
1028
1030
1032
1034
1036
1038
TELEGRAPHIC CODE FOR SURFACE VISIBILITY (PAGES 1 & 2).
0 Dense fog. Objects not visible at 50 metres (or yards)
1 Very thick " " 200 " "
2 Thick " " 1,000 " "
3 Very poor " " 2,000 " "
4 Poor " " 4,000 " "
5 Indifferent " " 7,000 " "
6 Fair " " 12,000 " (4·3 miles)
7 Good " " 20,000 " (7·5 "
8 Very good " " 20,000 " (12·4 "
9 Excellent. Objects visible beyond Exceptional visibility. " (12·4 "

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 341.

Monday 6th Dec 1920

WEATHER, TEMPERATURE, RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 5th

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h.	Rainfall. Day. 9h-18h.	Sunshine. Sunrise to Sunset.
Scotland, N.	Oban							
	Banff	b	b	46	31	-	-	4·3
	Montrose							
	St. Andrews							
England, N.E.	Harrogate	b	bc.c	44	37	5	-	3·5
	Scarborough							
	Skegness							
England, E.	Lowestoft							
	Felixstowe	omr	og	46	43	6	1	0·2
	Southend-on-Sea	or.o	b	46	40	1	-	0·0
England, S.E.	Tunbridge Wells	0	0	46	41	1	-	0·4
	Margate	or	or	48	42	1	2	0·0
	Ramsgate	*	*					
	Folkestone	*	*	50	42	1	9	0·0
	Hastings	b.bc.o	ob	48	42	2	1	?
	Eastbourne	bc.c	c.or.or	43	43	-	1	2·9
	Brighton	bc.c.o	o	48	43	1	-	2·8
	Worthing	bc	c.o	48	43	-	-	3·0
	Littlehampton							
	Portsmouth (S'thsea)	*	*	48	44	-	-	2·3
	Bournemouth	*	*	48	43	-	-	2·1
		*	*					

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 17h-9h.	Rainfall. Day. 9h-17h.	Sunshine. Sunrise to Sunset.
England, N.W.	Douglas (I.O.M.)							
	Blackpool	bc	c	47	38	-	-	
	Southport	b.bc	b.bc.b	46	39	-	-	
Midlands.	Buxton							
	Leamington Spa	c.o	o	42	40	0·2	-	
	Malvern							
	Bath	o	bo	45	43	-	0·1	
Wales.	Rhyl	bc	bo	46	43	-	-	
	Colwyn Bay	*	*	46	43	-	-	
	Llandudno	bc	bc.c	44	37	-	-	
	Aberystwyth							
	Tenby							
	Swansea							
England, S.W.	Weymouth	c.o.c.bc	c.o	48	43	-	-	
	Teignmouth							
	Torquay	c.bc.c	c	47	43	-	-	
	Paignton	cbc	bcc	45	42	-	-	
	Penzance	c.c.b	c.c.b	51	46	0·2	-	
	Newquay	b	b	47	43	-	-	
	Bude	c.b	c.b.c	48	42	0·2	-	
	Ilfracombe	bc	bc.c.o	47	46	-	-	
	Weston-s-Mare	bc.b	bc.c	46	43	-	-	

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-13h.	Weather. 13h-18h.	Weather. 18h.-1h.	Weather. 1h-7h.	Max. Temp. °F.	Min Temp. °F.	Min. on Grass. °F.	Rainfall.† Day. 7h-18h	Rainfall.† Night. 18h-7h	Sun. Hours.
								mm.	mm.	
Renfrew	b.bf.bf.bf	b.o.of	o4-5f3c	o8-9f3c	41	26	16	-	-	2·0
Eskdalemuir	c.o.b.bc	b.bc.b.bc	bc.c	b.bco	43	23	23	-	-	3·7
Valencia (Cahire'n)	b.bc	b.bc	b.bo	b	50	34	28	-	-	6·4
Baldonnel	o.c.o	o.c.o	bo.c2f							
MANCHESTER (ALex'n)	3f3f.b.b3f	b.bc2f.o2f	o3f.r	co3f	46	40	32	-	1	*
Ross on Wye	o.o1f	o1f.g.c	o1f.c.o	o1f	44	39	33	-	-	0·0
Falmouth	b.b2f	b.bc2f	b.bc	b.bc	48	38	34	-	-	5·6
Calshot (Hants)	c.o1f	o1f.g	o.ro	o.o1f	48	41	36	-	0·1	1·9
Lympne (Folkestone)	g.c.o.bc.c.o	c.o1f.o1f.o2f	rog.rraf	rgo2faf	48	38	36	3	3	2·8
Aberdeen	3f.1fc	3f.1fc	2fc.3fc	3fcx	42	31	25	-	-	5·2
Howden	c.o.o1f	b.o.bc.c	b.bcp.	r.bo	46	36	30	-	1	1·7
Cranwell (Lincs)	c.op	c.opbcb	b.bcp.	ors	44	35	31	1	0·2	0·1
Felixstowe	p	p.o	p.o1f	po.o	47	41	*	1	1	0·2
Shoeburyness	c.o.bo	c.og	p.o	pdo.o	46	40	*	a1	1	0·1
Benson	o	o	r.o	o	46	39	36	-	1	*
S. Farnborough	c.ors	o.pd	c.o.po	opo	46	41	37	0·2	1	0·1
London (Kew Obsy.)	o.o1f	o.p	oo2.opdo	o1f.ro	46	40	39	-	1	0·0
Croydon	o2f	o2f.o3f.p	o1f.o2f.rs.p	o1f.o2f	46	40	*	trace	0·4	*

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, *i.e.*, rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:- R = heavy rain. rr = continuous moderate rain. r,r, = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 30 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0·3
1	1- 3	0·3- 1·5
2	4- 7	1·6- 3·4
3	8-12	3·5- 5·9
4	13-18	6·0- 8·7
5	19-24	8·8-10·9
6	25-31	11·0-13·9
7	32-38	14·0-17·1
8	39-46	17·2-20·7
9	47-54	20·8-24·4
10	55-63	24·5-28·4
11	64-75	28·5-33·5
12	Above 75	33·6 or above

SYMBOLS—
Aurora, Rime, Glazed frost, Glazed roads, Solar halo, Lunar halo, Solar corona, Lunar corona

LONDON. OBSERVATIONS.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Hours.	Humidity % 15 h. G.M.T.	Humidity % 9 h. G.M.T.
	24 HOURS ENDED 9H G.M.T. 6th							Yesterday.		To-day.
Greenwich (Royal Observatory)	o	o1.o	o1o	46	39	38	1	0·0	79	86
City (Bunhill Row)	*	*	*	*	*	*	*	0·0	*	*
Westminster (St. James's Park)	*	*	or.o	47	41	37	1	0·0	78	81
Regent's Park (Romney Road)	*	*	*	*	*	*	*	0·0	*	*
Camden Sq. (British Rainfall)	-	-	*	46	39	37	2	*	-	87
Kensington Palace	o	o	*	47	38	38	1	*	88 (18h)	86
Hampstead Observatory	*	*	*	46	38	37	1	0·0	*	

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday.

Total 105 Joules.

Milliwatts.
Average Rate. 5·7
Maximum Rate. 10

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

6th & 7th DECEMBER 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth	7.49 / 7.50	11.46 / 11.45	3.43 / 3.42
Greenwich	7.48 / 7.50	11.41 / 11.51	3.32 / 3.31
Wick	9.47 / 9.49	12.4 / 12.4	3.19 / 3.18
Valencia	8.35 / 8.37	12.21 / 12.21	3.56 / 3.56

Photographic Record of Pole Star (Polaris) and of δ Ursæ Minoris at Greenwich Observatory.

Exposure from 6th 7 h. to 6th 6 h. 45 m.

Stars.	Duration of Exposure. h. m.	Duration of Record. h. m.	%
Polaris	13. 45	0. 0	0
δ Ursæ Minoris	13. 45	0. 0	0

NOTES ON THE WEATHER OF YESTERDAY.

Slight falls of rain occurred in the East and South-East districts, the largest amount being 6 mm at Lympne. Sunshine was abendant in the Western districts, Penzance recording as much as 7.4 hours and Valencia 6.4 hours. Temperature failed to reach 50° in most places and there were some rather low minima in Scotland, 25° at Nairn and 26° at Renfrew.

* Information for these columns not usually received.

† Trace = rain has fallen but amount less than 0·1 mm.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

'BRITISH SECTION. No. B21,565 Tuesday, 7th December 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

STATIONS.	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind. Direc.	Wind. Force 0-12.	Weather.	Temp. °F.	% Humidity.	‖ Visibility 0-9.	Height of Low Cloud. Feet.	Low Cloud. Form.	Low Cloud. Amt. 0-10.	Upper Cloud. Form.	Upper Cloud. Amt. 0-10.	Sea 0-9.
	13H. G.M.T. 6th													
Renfrew	1034.6	-3	-	0	08f	29	97	0	<500	St	10	-	-	*
Eskdalemuir	1033.8	-2	ENE	3	c	39	85	7	4,200	StCu	7	-	-	*
Valencia (Cahire'n)	1029.6	-4	ENE	2	b	46	75	8	4,200	Cu	2	-	-	3
Baldonnel	1031.4	-2	E	1	02f	42	92	5	3,000	StCu	10	-	-	*
Manchester (Alex Pk)	1030.5	-3	ENE	4	02f	43	75	4	3,000	St	5	aCu	4	*
Ross on Wye	1028.4	-3	ENE	4	0m	42	75	6	4,200	StCu	10	-	-	*
Falmouth	1027.3	-3	NNE	3	c2f	43	75	7	-	StCu	7	-	-	*
Calshot (Hants)	1026.0	-3	NE	4	02f	42	97	5	2,000	St	10	-	-	2
Lympne (Folkestone)	1025.0	-3	ENE	5	0mq	41	75	8	3,000	StCu	10	-	-	*
Aberdeen	1034.3	-3	WNW	1	03f	40	92	2	2,000	StCu	10	-	-	3
Howden	1030.9	-4	E	3	c	43	75	6	4,200	StCu	8	-	-	*
Cranwell (Lincs)	1029.8	-3	NE	4	01f	41	97	7	1,250	StCu	7	-	-	*
Felixstowe	1027.0	-3	NE	5	0	42	85	6	1,250	CuNb	9	-	-	*
Shoeburyness	1026.3	-2	NE	5	0d	41	85	7	2,000	StCu	9	-	-	*
Benson	1026.8	-1	NE	3	0	41	85	6	-	StCu	10	-	-	*
S. Farnborough	1026.7	-3	NE	3	02f	40	85	5	1,250	St	10	-	-	*
London (Kew Obsy.)	1027.1	-3	NE	3	02f	40	75	4	3,000	StCu	10	-	-	*
Croydon	1026.6	-3	NNE	5	03f	40	85	3	750	St	10	-	-	*
	18H. G.M.T. OF 6th													
Renfrew														
Eskdalemuir														
Valencia (Cahire'n)	1029.3	-3	NNE	1	bc	31	85	7	-	St.Cu	1	-	-	*
Baldonnel	1022.0	-4	ESE	1	bc	42	*	-	*	*	*	*	*	2
Manchester (Alex Pk)	1028.0	-3	-	0	02f	39	92	4	1250	St	10	-	-	*
Ross on Wye	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Falmouth	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Calshot (Hants)	1022.6	-3	NNE	2	0	39	85	5	-	St	10	-	-	*
Lympne (Folkestone)	1022.2	-4	NNE	3	0	39	97	6	2000	St	10	-	-	2
Aberdeen	1021.7	-3	NE	3	01f	38	92	7	2,000	St	10	-	-	*
Howden	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Cranwell (Lincs)	1022.4	-4	-	0	0	42	92	7	3,000	St	10	-	-	*
Felixstowe	?	-1	NE	2	01f	40	92	5	2000	1/8 Nb	10	-	-	*
Shoeburyness	1023.2	-2	NE	4	01f	42	92	6	3,000	St	10	-	-	4
Benson	*	*	*	*	*	*	*	*	*	*	*	*	*	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*
London (M.O. at 1H.)	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Croydon	1022.1	-2	*	*	*	40	*	*	*	*	*	*	*	*
	1022.8	-3	NE	4	od3f	39	97	4	750	Nb	10	-	-	*
	13H. G.M.T. OF 7th													
Renfrew														
Eskdalemuir														
Valencia (Cahire'n)														
Baldonnel														
Manchester (Alex Pk)														
Ross on Wye														
Falmouth														
Calshot (Hants)														
Lympne (Folkestone)														
Aberdeen														
Howden														
Cranwell (Lincs)														
Felixstowe														
Shoeburyness														
Benson														
S. Farnborough														
London (M.O. at 1H.)														
Croydon														
	7H. G.M.T. OF 7th													
Renfrew	1024.9	-4	-	0	07fc	27	97	0	<500	St	10	-	-	*
Eskdalemuir	1024.8	-4	ENE	3	0	35	92	7	-	St.	10	-	-	*
Valencia (Cahire'n)	1019.3	-4	ESE	3	0	43	75	8	5700	St.Cu	10	-	-	*
Baldonnel	1021.3	-4	-	0	0d	37	97	4	2000	St.	9	-	-	*
Manchester (Alex Pk)	1022.0	-3	ENE	2	03f	42	85	3	3,000	St.Cu	10	-	-	*
Ross on Wye	1020.9	-2	ENE	2	02fc	38	97	4	750	St.	10	-	-	*
Falmouth	1019.9	-3	NNE	2	0	37	85	6	-	St.Cu	9	-	-	*
Calshot (Hants)	1019.9	-3	-	0	01f	39	97	6	3,000	St.Cu	10	-	-	2
Lympne (Folkestone)	1018.5	-5	NE	3	01f	39	92	7	1250	St.	10	-	-	*
Aberdeen	1026.3	-3	S	1	c2fc	41	85	5	3,000	StCu	8	-	-	3
Howden	1022.6	-4	-	0	0	38	92	7	3,000	St	5	aCu	4	*
Cranwell (Lincs)	1022.1	-3	NE	2	0	40	97	5	2,000	St.	9	-	-	*
Felixstowe	1020.2	-2	NE	4	0	42	92	7	2,000	StCu	10	-	-	4
Shoeburyness	1019.4	-3	NE	1	0	42	85	7	3,000	St.	10	-	-	*
Benson	1019.5	-3	NNE	2	0	39	97	5	-	St	10	-	-	*
S. Farnborough	1021.1	-3	-	0	08f	40	97	2	750	St	10	-	-	*
London (M.O. at 1H.)	1019.6	-4	NNE	2	02f	40	92	4	1250	St.	10	-	-	*
Croydon	1020.1	-4	NNE	2	02f	40	92	4	750	St.	10	-	-	*

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

STATIONS.	Barom. at M.S.L. mb.	Temp. °F.	Wind. Direc	Wind. Force 0-12	Weather.	Barometer. at M.S.L. mb.	Barometer. ‡ Change in 3 hours.	Temperature. Temp. °F.	Temperature. Change in 24 hours.	Wind. Direc.	Wind. Force 0-12.	Direc. of Upper Cloud.	Weather.	Sea 0-9.	† Rainfall mm.	Temp. Max. °F.	Temp. Min. °F.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Sunshine Hours.
	18H. G.M.T. of 6th					7H. G.M.T. of 7th									24 HOURS ENDED 7H. 7th						6th
Lerwick	1031.9	46	S	4	c	1028.5	-3	45	-1	S	4	-	o	3	-	46	43	b	c.	c.o	*
Stornoway	1029.2	45	WSW	6	o	1022.5	-3	43	-3	SE	4	-	bc	3	-	46	43	bc.	c.o	o.bc	2.3
Castlebay (Barra Is)	1029.3	47	ESE	4	o	1021.8	-3	45	-1	SE	4	-	o	5	-	47	43	c.bc	c.o	o	2.0
Malin Head	1029.7	37	S	1	bm	1021.9	-3	36	+1	SSE	2	SE	bcm	2	-	46	34	b.	b	om.bcm	6.2
Blacksod Point	1027.7	42	SE	2	bc	1018.2	-5	43	+2	SE	3	-	bc	3	-	46	42	bc.	bc	bc	*
Roche's Point	1028.7	43	ENE	1	o	1021.1	-4	41	+2	ENE	3	-	o	2	-	45	3,	o c.o	c	o	*
Birr Castle	1029.7	35	-	0	o	1020.9	*	38	+10	N	1	-	o	*	-	38	27	f.of.	f.of	f.o	0.0
Donaghadee	1030.2	45	ESE	2	cm	1022.2	-3	43	-2	ESE	3	-	omfq	3	0.1	48	42	bcm	bcm	cmq	*
Liverpool (Bidston)	1029.3	40	NE	3	o	1021.4	-3	41	+2	ENE	2	E	of	2	1	43	38	om.	om	of.	0.0
Holyhead	1029.1	43	ENE	4	of2f	1020.7	-4	41	-4	ENE	5	-	of	3	-	46	39	o.cq	c.om	of.bm	1.5
Pembroke (St. Ann's Hall)	1028.0	42	NE	3	o	1020.4	-3	39	-1	NE	3	-	o	2	-	45	38	bv.	c	o	3.2
Scilly (St. Mary's)	1026.0	44	E	3	c	1019.9	-3	42	-3	-	0	NE	o	3	-	47	42	c	c	c.o	0.8
Jersey (St. Aubin)	1022.8	43	NE	4	o	1018.7	-1	41	-4	E	2	-	o	3	0.2	45	40	of.	of.o	o	0.0
Portland Bill	1025.3	42	NE	5	bc	1019.6	-3	40	-6	ENE	4	NE	o	4	-	45	38	o.	o.bc	bc.c.o	*
Dungeness	1022.8	42	NE	6	o	1017.9	-2	43	+1	ENE	3	E	c	4	-	49	40	c2.c.	c.o	o.c	*
Wick	1029.8	43	SSW	4	bcq	1026.0	-4	43	+2	S	4	-	bcq	3	-	44	39	b.	b.bcq	bcq	*
Nairn	1031.0	30	-	0	b	1024.7	*	28	+2	-	0	-	bc	0	0.3	33	26	bmx.	bmx	bmx	4.8
Leith	1032.3	39	SE	1	m	1024.9	-2	37	+3	SW	1	-	om	1	0.1	40	33	bm.b	om.o	m.o.co	*
Tynemouth	1032.0	43	SE	4	01f.	1024.6	-3	42	-1	SE	3	-	01fp	3	2	45	41	bcz	cmp.	omp	*
Spurn Head	1027.9	44	ENE	5	o	1021.4	-4	41	0	ENE	4	-	c	3	2	44	39	cq	oq	ogp.oq.c	*
Yarmouth (Gorleston)	1026.1	44	E	5	oq	1020.8	-3	41	-1	E	5	-	ogf	4	-	44	41	oq.cq	bcq.ov.	ov.oq	2.9
Clacton-on-Sea	1024.8	42	NNE	3	o	1019.6	-3	43	0	ENE	4	-	of	3	1	43	40	ogpf.	ogpf.	of	0.1
Nottingham	1028.4	40	NE	3	o	1021.5	*	42	+2	NE	3	NE	o	*	1	42	38	op.	op.	op	0.0

* Information for these columns not usually received. * The barometric change is expressed in half millibars. § For code see page 3. † See footnote p.4.

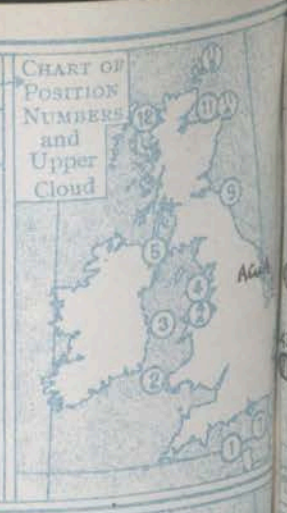
M.O. FORM 2370

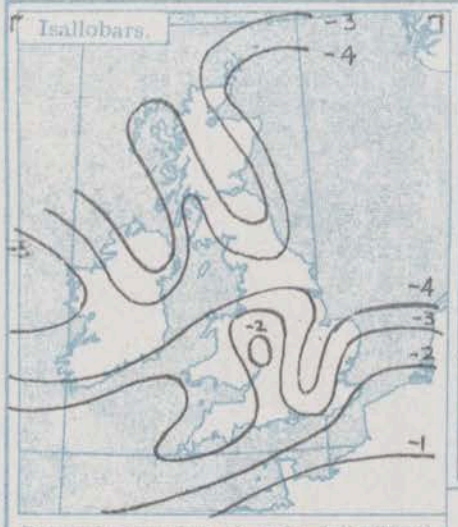
SUMMARY OF CONDITIONS AT 7 h. G.M.T. 7.12.20.

Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Dull, misty	Indif.	Slight
2. E. England	Dull.	Good.	"
3. E. Midlands	Dull.	Indif.	-
4. W. Midlands	Dull, misty.	Poor.	-
5. S.W. England	Dull.	Fair.	Slight
6. South Wales	Dull.	Good.	Smooth
7. North Wales	Dull gloomy.	Fair.	Slight
8. N.W. England	Dull local mist.	Indif.	Smooth
9. N. Midlands	Dull.	"	-
10. N.E. England	Dull, local mist and showers.	Good.	Slight
11. E. Scotland	Fine to dull, local mist	Indif.	Smooth
12. S.W. Scotland	Dull, fog at Renfrew.	Var.	Slight
13. Isle of Man	Dull.	Fair.	"
14. N.& N.W. Scotland	Fine to cloudy.	"	"
15. Hebrides	Fair to dull.	Good.	Mod.
16. Orkneys and Shetlands	Dull.	Fair.	Slight
17. N.W. Ireland	Fair.	Good.	"
18. N.E. Ireland	Fair to dull, local mist, rain and squalls.	Fair	"
19. S.E. Ireland	Dull, slight local drizzle.	"	Smooth
20. S.W. Ireland	Dull.	Good.	"

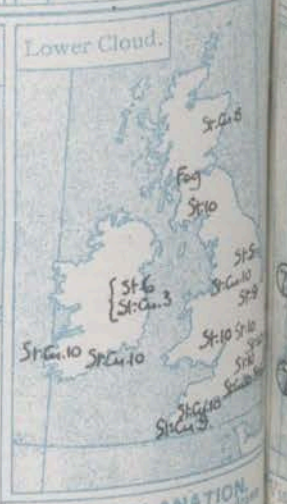
Temperature reported from Coastal and Cross Channel Steamers.

Position Number.	Date	Time G.M.T.	Sea °F	Air °F
5.	6th	08.20	57	45
7.	7th	03.45	48	45





Barometric change from 4 h. to 7 h. (half millibars).



EXPLANATION.
BAROMETER.—Isobars are drawn at intervals of two millibars.
WIND.—Direction is shown by arrows flying with the wind. Force, on the scale 0-12, is indicated by the number of feathers. Mean velocity is shown in miles per hour by figures in small circles.
TEMPERATURE is given in degrees.
WEATHER SYMBOLS.—
clear sky. sky ¼ clouded. sky ½ clouded. overcast sky. rain. snow. sleet. mist. fog. thunder. thunderstorm.
SEA DISTURBANCE.—Rough. High seas.

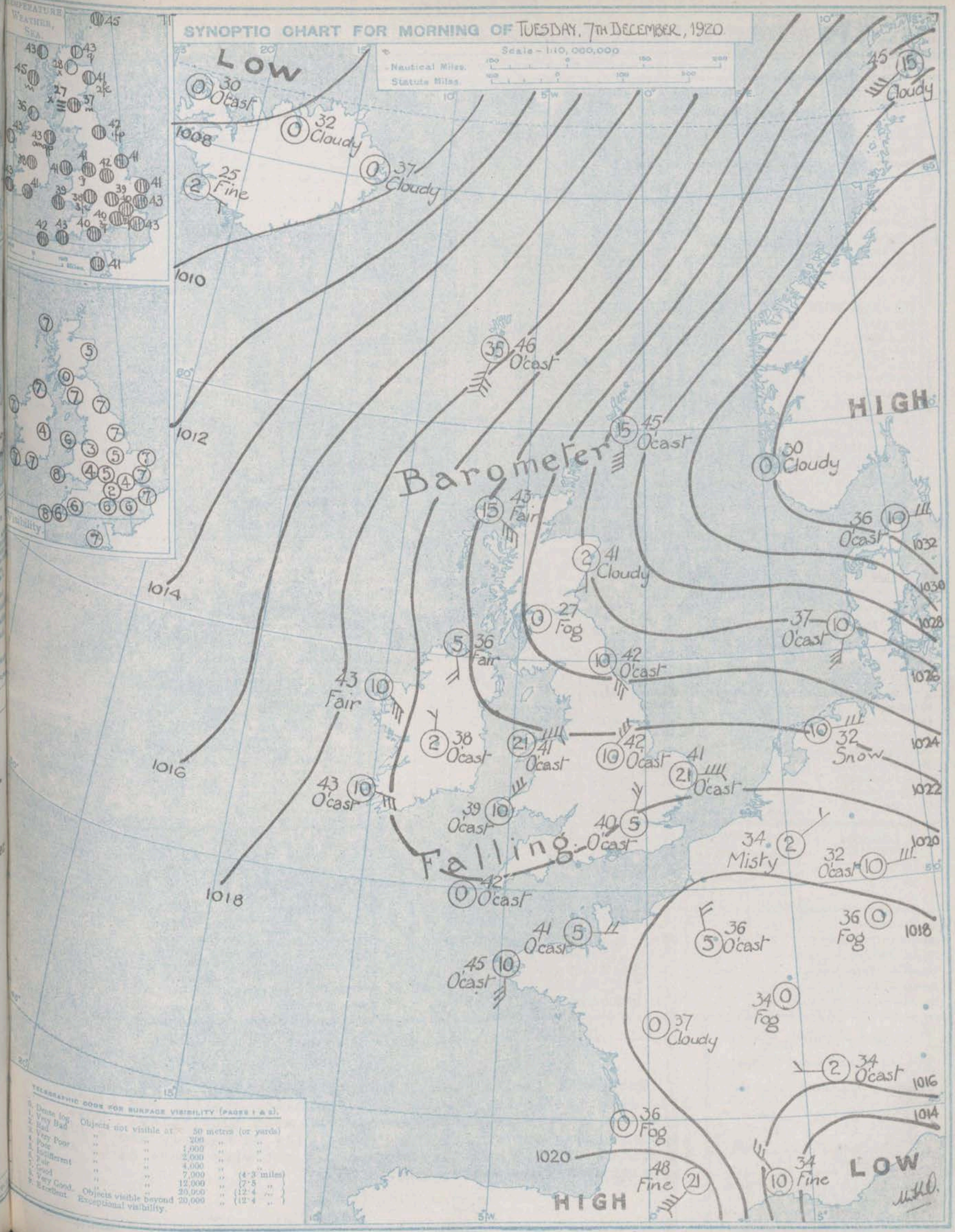
GENERAL INFERENCE from observations received up to 9h G.M.T.

The anticyclone over Scandinavia is moving Northeastward and pressure is decreasing over the British Isles. Except along the North-West coasts winds are likely to continue from North-East or East for some days with rather low temperature and much cloud. Later, a change to fairer and frosty conditions is not unlikely.

Districts.	Forecasts for the 24 hours commencing 15 h. G.M.T. Tuesday 7th December 1920.	Further Outlook.
1. S.E. England 2. E. England 3. E. Midlands 4. W. Midlands 5. S.W. England 6. South Wales 7. North Wales 8. N.W. England 9. N. Midlands	Wind North-East or East moderate, fresh locally; mainly overcast, rain or sleet showers; visibility fair to good on coast, some mist inland; cold.	Cold with Easterly winds for several days; subsequent change to fairer frosty weather not unlikely.
10. N.E. England 11. E. Scotland 12. S.W. Scotland 13. Isle of Man	Wind Easterly, light or moderate, dull, some rain or sleet; visibility indifferent to fair, local fog; cold.	
14. N.& N.W. Scotland 15. Hebrides 16. Orkneys and Shetlands	Wind South-East or South moderate; variable sky; visibility fair to good; rather cold.	
17. N.W. Ireland 18. N.E. Ireland 19. S.E. Ireland 20. S.W. Ireland	Wind between East and South, light or moderate; cloudy or dull, some rain or sleet; visibility fair; cold.	

E.S.B.

Meteorological Office: Air Ministry, Kingsway, London, W.C.2. Forecasts issued at 10.10. G. C. SIMPSON, F.R.S. Director.


SYNOPTIC CHART FOR MORNING OF TUESDAY, 7TH DECEMBER, 1920.
Scale - 1:10,000,000
Nautical Miles.
Statute Miles.
LOW
HIGH
Barometer
Falling
1008
1010
1012
1014
1016
1018
1020
1022
1024
1026
1028
1030
1032
30 O'cast
32 Cloudy
37 Cloudy
25 Fine
45 Cloudy
46 O'cast
45 O'cast
30 Cloudy
43 Fair
41 Cloudy
36 O'cast
27 Fog
37 O'cast
36 Fair
42 O'cast
43 Fair
38 O'cast
41 O'cast
42 O'cast
32 Snow
43 O'cast
41 O'cast
39 O'cast
40 O'cast
34 Misty
32 O'cast
42 O'cast
41 O'cast
36 O'cast
36 Fog
45 O'cast
34 Fog
37 Cloudy
34 O'cast
36 Fog
48 Fine
34 Fine
TELEGRAPHIC CODE FOR SURFACE VISIBILITY (PAGES 1 & 2).
0. Dense fog. Objects not visible at 50 metres (or yards)
1. Very Bad " " 200 " "
2. Bad " " 1,000 " "
3. Very Poor " " 2,000 " "
4. Poor " " 4,000 " "
5. Indifferent " " 7,000 " (4·3 miles)
6. Fair " " 12,000 " (7·5 ")
7. Good " " 20,000 " (12·4 ")
8. Very Good. Objects visible beyond 20,000 " (12·4 ")
9. Excellent. Exceptional visibility.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 342

Tuesday 7th Decr 1920

WEATHER, TEMPERATURE RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 6th

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 5th 6th	Rainfall. Day. 9h-18h. 6th	Sunshine. Sunrise to Sunset. 6th
Scotland.	Oban	c.	bc.c	48	30	-	-	3.5
	Banff	b.bc.	c.bc.b	38	28	-	-	0.6
	Montrose							
	St. Andrews	c	c	39	31	-	-	0.0
England, N.E.	Harrogate	o	op	40	37	-	0.3	0.2
	Scarborough	o	o	47	42	-	-	0.0
	Skegness	op	o	44	41	0.4	2	1.5
England, E.	Lowestoft							
	Felixstowe	og	op	45	43	1	0.2	0.9
	Southend-on-Sea	o	o.or	43	37	1	1	0.0
England, S.E.	Tunbridge Wells	o	o	41	38	1	-	0.0
	Margate	c.	c.	44	41	-	-	0.6
	Ramsgate	*	*	50	40	5	-	0.9
	Folkestone	c.	c	48	40	4	-	2.3
	Hastings	o.c.o.	o	43	39	2	-	0.2
	Eastbourne	o.c.o	o	47	40	2	-	0.2
	Brighton	o	o.c	43	40	-	-	0.0
	Worthing	o	o.c	42	39	-	-	0.5
	Littlehampton	o.bc	bc	42	39	0.3	-	0.5
	Portsmouth (S'thsea)	*	*	42	40	1	-	0.0
	Bournemouth	*	*	43	39	0.3	-	0.3
	Ventnor (I. of W.)	*	*					

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 5th 6th	Rainfall. Day. 9h-18h. 6th	Sunshine.	Sunrise to Sunset 6th
England, N.W.	Douglas (I.O.M.)								1.3
	Blackpool	c.o.	c.o	45	37	-	-		0.8
	Southport	c.bc.c	c.o	43	37	-	-		2.2
	Morecambe	*	*	43	39	-	-		
Midlands.	Buxton								0.0
	Leamington Spa	o	ov.o	41	36	0.2	0.1		0.0
	Malvern	o.	o	41	38	-	-		0.5
	Bath	o.	bc.c.o	43	40	-	-		0.0
Wales.	Rhyl	o	o.c	43	39	-	-		0.2
	Colwyn Bay	*	*	43	40	-	-		0.0
	Llandudno	*	*	46	42	-	-		0.0
	Aberystwyth	o.o.	c.o	45	40	-	-		
	Tenby								
	Swansea								
England, S.W.	Weymouth	o.c.	c.b	44	39	-	-		0.4
	Teignmouth								
	Torquay	o.	c.	44	42	-	-		0.0
	Paignton	od.p.o	o	44	41	-	-		0.0
	Penzance	bc.c	o.o	45	41	-	-		1.7
	Newquay	b.bc.c	c	43	40	-	-		0.7
	Bude	c.	c	44	38	-	-		0.2
	Ilfracombe	o	o	46	44	-	-		0.0
	Weston-s-Mare	c.bc.c	c.	44	41	-	-		0.0

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-13h. 6th	Weather. 13h-18h. 6th	Weather. 18h. 6th-1h. 7th	Weather. 1h-7h. 7th	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall.† Day. 7h-18h.	Rainfall.† Night. 18h-7h.	Sun. Hours.
Renfrew	o.b.8f.x	o.b.8f.x	o.b.8f.x	o.b.8f.x	34	26	23	mm. -	mm. -	0.0
Eskdalemuir	x.bc.c	o.op.o.o2f	b.bcx.	b.ox.	42	28	25	trace	trace	2.4
Valencia (Cahirc'n)	b.b.bo	b.bc.b.bc	b.bc.c.o	o	46	23	35	-	-	5.9
Baldonnel	c.o.o2f	o2f	x o2f	c.od.d.	43	33	*	-	-	0.1
Manchester (Alex Park)	o3f.	o2.o2	o3f.p.	o3f	45	39	33	-	0.1	*
Ross on Wye	o1f.	o1f	o1f.c.o	o2f.3fe	42	37	35	-	0.1	0.0
Falmouth	c.o1f	o.o1f.o2f	o	o	45	36	34	-	-	0.4
Calshot (Hants)	o1f r.	o2f.q	o1f	o1f.r.	43	38	36	-	0.3	0.0
Lympne (Folkestone)	o1f p.q.o	b.oq.c.op.	o1f.q.r.o1f	o1f	41	37	36	trace	-	0.3
Aberdeen	3fe o3f	o3f p.	2fe.o3f	o3f.2fe	44	31	36	0.1	-	0.0
Howden	r. bc.c	o	b.bo.d.d.	c.o	44	37	32	-	1	0.3
Cranwell (Lincs)	o.op.	op.c.op	o2f.p.	o2f.	42	36	31	0.4	2	0.1
Felixstowe	p.o.	p.c.o	o.o1f.	o1f.o	44	40	*	1	-	0.6
Shoeburyness	op d.o	pd.o.d.o	pd.o	o	43	39	?	1	0.2	0.0
Benson	o	o	b.bop.	o	42	31	24	-	0.4	*
S. Farnborough	o.op.c.o	d.d.o.o2f	pd.o.o2f	o2f pd.	41	38	36	0.2	0.3	0.0
London (Kew Obsy.)	o1f.o2f	o2f p.	or.	o2f	42	39	36	-	1	0.0
Croydon	o2f pd.o3f	o3f o2f p.p.	o3f o2f.o2f	o2f pd.	41	39	*	trace	1	*

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, *i.e.*, rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:-
R = heavy rain.
rr = continuous moderate rain.
r.r. = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 30 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0·8
1	1- 3	0·8- 1·6
2	4- 7	1·6- 3·2
3	8-12	3·2- 5·4
4	13-18	5·5- 7·9
5	19-24	8·0-10·7
6	25-31	10·8-13·8
7	32-38	13·9-17·1
8	39-46	17·2-20·7
9	47-54	20·8-24·4
10	55-63	24·5-28·4
11	64-75	28·5-32·6
12	Above 75	32·6 or above

SYMBOLS—

Aurora — Solar halo
Rime — Lunar halo
Glazed frost — Solar corona
Glazed roads — Lunar corona

LONDON OBSERVATIONS.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Hours.	Humidity % 15h. G.M.T.	Humidity % 9h. G.M.T.
	24 Hours ended 9h G.M.T. 7th							Yesterday.		To-day.
Greenwich (Royal Observatory)	o m d	o m d	o m d. o	41	38	34	1	0.0	87	91
City (Bunhill Row)	*	*	*	*	*	*	*	0.0	*	*
Westminster (St. James's Park)	*	*	o d. m	43	40	35	1	0.0	78	86
(Regents Pk (Botanical Soc.)	*	*	*	*	*	*	*		*	*
Camden Sq. (British Rainfall)	o	or. o	*	42	38	32	1	*	83	94
Kensington Palace	o	o	*	42	37	37	1	*	80 (18h)	88
Hampstead Observatory	*	*	*	39	37	32	1	0.0	*	95

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday.

Total 61 Joules.

Milliwatts.

Average Rate. 2.1

Maximum Rate. 11

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

7th & 8th December 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth	7.51	11.45	3.39
	7.52	11.45	3.38
Greenwich	7.53	11.52	3.51
	7.54	11.52	3.50
Wick	8.49	12.4	3.19
	8.50	12.4	3.18
Valencia	8.37	12.33	4.34
	8.38	12.33	4.34

Photographic Record of Pole Star (Polaris) and of δ Ursae Minoris at Greenwich Observatory.

Exposure from 6th 17h. 5m. to 7th 6h. 45m.

Star.	Duration of Exposure. h.	m.	Duration of Record. h.	m.	s.
Polaris	13.	45	0.	0	0
δ Ursae Minoris	13.	46	0.	0	0

NOTES ON THE WEATHER OF YESTERDAY.

Except in Ireland and the North of Scotland where there were from four to six hours of bright sunshine, weather was generally dull and there were slight showers in many localities. Temperature remained rather low, especially at Renfrew where fog persisted all day and temperature did not rise above 34°. At Nairn the maximum was as low as 33°.

* Information for these columns not usually received.

† Trace = rain has fallen but amount less than 0·1 mm.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. No. 821,566 Wednesday, 8th December, 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

STATIONS.	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind. Direc.	Wind. Force 0-12.	Weather	Temp. °F.	% Humidity.	§ Visibility 0-9.	Height of Low Cloud. Feet.	Low Cloud. Form.	Low Cloud. Amt. 0-10.	Upper Cloud. Form.	Upper Cloud. Amt. 0-10.	Sea 0-9.
	13H. G.M.T. 7th													
Renfrew														
Eskdalemuir	1021.0	-6	-	0	bsf	27	97	1	-	-	-	-	-	*
Valencia (Cahirc'n)	1020.8	-4	NE	2	o	37	85	7	2,000	StCu	9	-	-	*
Baldonnel	1015.5	-5	SE	3	o	45	75	8	4,200	StCu	10	-	-	4
Manchester (Ilex PK)	1017.5	-8	NW	1	bc2f	44	85	5	4,200	StCu	6	-	-	*
Ross on Wye	1018.9	-4	ENE	1	o2f	42	85	4	3,000	St	10	-	-	*
Falmouth	1018.0	-4	NE	2	o2fr	40	97	4	4500	St	10	-	-	*
Calshot (Hants) *	1017.2	-4	NNE	3	o1f	41	85	6	-	StCu	10	-	-	*
Lympne (Folkestone)	1017.5	-3	NNE	2	o2f	41	97	5	3,000	St	10	-	-	1
Aberdeen	1016.8	-4	NE	2	o5m	37	92	6	750	Nb	10	-	-	*
Howden	1022.4	-5	SE	3	c	43	75	8	3,000	CuNb	8	-	-	3
Cranwell (Lincs)	1018.9	-4	NE	1	o	42	92	6	4,200	St	4	o5t	6	*
Felixstowe	1019.2	-4	NE	1	or	41	97	6	1,250	St	10	-	-	*
Shoeburyness	1017.8	-3	NE	3	or	39	92	6	750	Nb	10	-	-	*
Benson	1017.0	-3	NE	1	o5	40	85	6	1,250	St	10	-	-	*
S. Farnborough	1017.2	-3	NNE	2	o	41	92	5	-	St	10	-	-	*
London (Kew Obsy.)	1017.6	-4	NNE	1	o2f	41	92	5	1,250	St	10	-	-	*
Croydon	1017.4	-4	NNE	2	o2f	42	85	5	1,250	St	10	-	-	*
	1017.7	-3	N	3	o3f	41	85	3	750	St	10	-	-	*
	1H. G.M.T. of 8th													
Renfrew														
Eskdalemuir														
Valencia (Cahirc'n)	1017.3	0	-	0	o	34	92	6	-	St.Cu	9	-	-	*
Baldonnel	1012.4	0	SSE	3	o5	47	*	*	*	*	*	*	*	3
Manchester (Ilex PK)	1015.3	0	-	0	o3f	37	92	3	750	St	10	-	-	*
Ross on Wye	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Falmouth	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Calshot (Hants)	1014.9	-1	NNE	2	c	40	92	5	-	St.Cu	8	-	-	*
Lympne (Folkestone)	1017.3	0	-	0	b	36	97	5	-	-	-	-	-	0
Aberdeen	1017.3	+1	-	0	b1f.	34	97	6	-	-	-	Ci.	2	*
Howden	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Cranwell (Lincs)	1016.7	0	-	0	o4fe	36	97	2	4500	St.	10	-	-	*
Felixstowe	1017.9	0	SW	1	o4f	38	92	5	2.000	Nb	10	-	-	*
Shoeburyness	1017.6	+2	WNW	1	o	39	97	6	2.000	St.	10	-	-	2
Benson	*	*	*	*	*	*	*	*	*	*	*	*	*	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*
London (M.O. at 1H.)	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Croydon	1016.9	0	*	*	*	37	*	*	*	*	*	*	*	*
	1018.2	0	-	0	b3f	37	97	3	-	-	-	-	-	*

STATIONS.	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind. Direc.	Wind. Force 0-12.	Weather	Temp. °F.	% Humidity.	§ Visibility 0-9.	Height of Low Cloud. Feet.	Low Cloud. Form.	Low Cloud. Amt. 0-10.	Upper Cloud. Form.	Upper Cloud. Amt. 0-10.	Sea 0-9.
	18H. G.M.T. of 7th													
Renfrew														
Eskdalemuir	1018.4	-2	NE	1	o3f	36	92	3	3,000	St	10	-	-	*
Valencia (Cahirc'n)	1018.0	-2	NNE	1	o	37	92	6	-	StCu	10	-	-	*
Baldonnel	1013.4	-2	ESE	3	o1f	46	75	7	4,200	StCu	10	-	-	4
Manchester (Ilex PK)	1015.9	-1	SE	1	c	39	85	5	5,700	StCu	8	-	-	*
Ross on Wye	1017.5	0	ESE	1	o3f	39	92	3	1,250	St	10	-	-	*
Falmouth	1017.2	-1	E	1	o2f	39	97	4	750	St	10	-	-	*
Calshot (Hants) *	1016.0	0	-	0	or2-3f	41	92	4	-	Nb	10	-	-	*
Lympne (Folkestone)	1017.4	+2	W	2	o2f	40	97	5	5,700	StCu	10	-	-	1
Aberdeen	1016.8	0	NE	1	o1f	36	92	5	750	St	10	-	-	*
Howden	1019.3	-3	SE	3	o1f	42	85	7	3,000	StCu	10	-	-	3
Cranwell (Lincs)	1017.2	-1	-	0	o5m	39	97	6	3,000	Nb	10	-	-	*
Felixstowe	1018.1	0	NE	1	o5	39	97	4	1,250	Nb	10	-	-	*
Shoeburyness	1017.2	0	ESE	2	o5	38	97	6	750	Nb	10	-	-	*
Benson	1016.4	-1	-	0	o	38	92	6	1,250	St	10	-	-	*
S. Farnborough	1016.5	0	NNE	1	o	38	92	4	-	St	10	-	-	*
London (Kew Obsy.)	1016.8	0	-	0	o2f	37	92	5	2,000	St	10	-	-	*
Croydon	1016.8	0	N	2	o2f	41	85	4	1,250	St	10	-	-	*
	1017.3	-0	ENE	2	or2-3f	39	92	4	750	St	10	-	-	*
	7H. G.M.T. of 8th													
Renfrew														
Eskdalemuir	1016.7	0	-	0	o5fx	36	97	1	<500	St.	10	-	-	*
Valencia (Cahirc'n)	1018.1	0	-	0	o4fex	23	97	2	750	St.	10	-	-	*
Baldonnel	1013.7	+2	NNW	3	o	46	97	8	4200	St.	10	-	-	*
Manchester (Ilex PK)	1015.9	0	-	0	bx	29	85	6	-	-	-	A St	3	*
Ross on Wye	1018.2	0	-	0	o3f	36	92	3	3.000	St.Cu	7	-	-	*
Falmouth	1017.8	+1	-	0	o6fx	33	97	1	<500	St.	10	-	-	*
Calshot (Hants)	1015.2	0	N	2	o	41	92	6	-	St.	10	-	-	*
Lympne (Folkestone)	1018.3	+2	NE	1	o2f	38	97	5	3.000	St.	10	-	-	1
Aberdeen	1017.2	+1	-	0	o1f	37	97	6	750	St.	10	-	-	*
Howden	1016.6	0	SW	1	b2fe	34	97	4	3.000	St.Cu	1	-	-	3
Cranwell (Lincs)	1017.5	+2	-	0	o4fe	37	97	3	<500	St.	10	-	-	*
Felixstowe	1018.4	+2	NSW	1	o6f	36	97	1	<500	St.	10	-	-	*
Shoeburyness	1018.9	+2	NW	1	o6f	30	97	1	<500	St.	10	-	-	1
Benson	1017.8	+1	-	0	o3f	38	92	3	2.000	St.Cu	10	-	-	*
S. Farnborough	1018.0	+2	-	0	o3fx	28	97	3	-	St	10	-	-	*
London (M.O. at 1H.)	1018.8	+2	-	0	o5f	27	97	1	<500	St.	10	-	-	*
Croydon	1018.8	+2	WSW	1	o7fx	32	92	0	<500	St.	10	-	-	*
	1019.0	+1	SW	1	o3f	31	97	2	750	St.	10	-	-	*

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

STATIONS.	Barom. at M.S.L. mb.	Temp. °F.	Wind. Direc.	Wind. Force 0-12.	Weather.	Barometer. at M.S.L. mb.	Barometer. ‡ Change in 3 hours.	Temperature. Temp. °F.	Temperature. Change in 24 hours.	Wind. Direc.	Wind. Force 0-12.	Direc. of Upper Cloud.	Weather.	Sea 0-9.
	18H. G.M.T. of 7th					7H. G.M.T. of 8th								
Lerwick	1020.4	43	S	2	bc	1015.9	-3	44	-1	S	3	-	o2-3fp	2
Stornoway	1016.3	44	SSW	3	c	1012.8	0	44	+1	S	3	-	o	3
Castlebay (Barra Is) ?	1016.5	45	SE	4	rg	1012.7	0	46	+1	SSW	4	-	op	4
Malin Head	1014.4	40	S	2	o	1012.5	0	39	+3	S	3	S	c	2
Blacksod Point	1012.8	44	SE	3	bc	1013.4	+6	45	+2	NW	2	-	or2-3f	2
Roche's Point	1015.4	45	SE	3	o	1015.1	0	47	+6	S	2	-	o	2
Birr Castle	1015.0	36	S	1	o	1014.2	*	40	+2	S	1	-	o	*
Donaghadee	1016.3	44	SE	3	omq	1015.4	0	40	-3	-	0	-	cm	3
Liverpool (Bidston)	1016.8	40	-	0	o	1016.6	+1	33	-8	SE	2	-	f	2
Holyhead	1016.2	43	E	3	o2	1015.6	+1	41	0	SSE	3	-	o2f	1
Pembroke (St. Ann's Head)	1016.1	41	ENE	2	o1fg	1016.7	0	42	+3	ENE	2	-	og	2
Scilly (St. Mary's)	1016.2	44	-	0	o	1014.2	0	45	+3	ESE	1	-	o	2
Jersey (St. Aubin)	1017.3	42	E	3	o	1017.4	0	42	+1	ESE	2	SE	b	2
Portland Bill	1016.6	40	ENE	3	o	1018.6	0	43	+3	ENE	3	-	o	4
Dungeness	1016.1	39	NNE	1	o	1017.4	+1	38	-5	N	2	-	o	2
Wick	1017.8	43	S	4	og	1013.8	-1	41	-2	S	3	-	b	3
Nairn	1018.0	28	-	0	bc	1014.8	*	26	-2	-	0	-	bc	0
Leith	1017.5	41	E	1	o	1016.2	0	32	-6	W	1	-	bm	1
Tynemouth	1018.0	42	ESE	3	or2	1018.7	0	35	-7	W	2	-	6f	2
Spurn Head	1016.8	41	E	3	or	1017.0	+1	40	-1	SSE	3	-	om	3
Yarmouth (Gorleston)	1017.4	39	SE	2	od	1017.7	+1	35	-6	NW	1	S	bcmx	1
Clacton-on-Sea	1016.4	40	NNE	2	r	1018.2	+1	35	-8	NNW	2	-	bc	1
Nottingham	1017.1	40	NE	2	o	1018.3	*	35	-7	W	1	-	f	*

STATIONS.	Rainfall † mm.	Temp. Max. °F.	Temp. Min. °F.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Sunshine Hours.
	24 HOURS ENDED 7H. 8th						7th
Lerwick	3	46	43	o.	o.cp	o.omp	*
Stornoway	-	45	41	bc.b.	bc.c.	c.o	0.0
Castlebay (Barra Is) ?	9	46	41	or.	r	op.cop	0.0
Malin Head	-	44	34	om.	o	bc.c	0.6
Blacksod Point	3	47	42	bc.	bc	bcomr	*
Roche's Point	2	47	40	o3	o3.o	or.o	*
Birr Castle	-	40	33	f.o	f.c.o	f.o	1.0
Donaghadee	4	46	41	omqp.	cmq/	omqp	*
Liverpool (Bidston)	-	42	32	ogm.	ogm.	o.f	0.0
Holyhead	-	43	38	o.cg	og	om.bom	0.0
Pembroke (St. Ann's Head)	0.2	45	39	ogm	ogm	ocp.v.o	0.0
Scilly (St. Mary's)	4	45	42	o.	o	op.o	0.0
Jersey (St. Aubin)	-	43	40	o	o	o.b	0.0
Portland Bill	4	46	40	o	o	o.or	*
Dungeness	1	44	35	or.	cp.o	o.c.c.o	*
Wick	1	44	40	bc.cq/	g.oqp	oq.bq	*
Nairn	-	33	25	bx.	b.bcx	bcxc	5.8
Leith	-	44	32	om.c.o	o	om.cx.b	*
Tynemouth	2	43	35	o.	op.	omr.ombm.	*
Spurn Head	3	43	38	c. ogp.	op	od.bcom	*
Yarmouth (Gorleston)	2	42	35	om.omd	od.	om.odcbc	0.0
Clacton-on-Sea	2	43	34	ogd	ogmd	ogm.bc	0.0
Nottingham	0.1	42	35	om.	o.cp	o	0.0

* Information for these columns not usually received. ‡ The barometric change is expressed in half millibars. § For code see page 3 † See footnote p. 4.

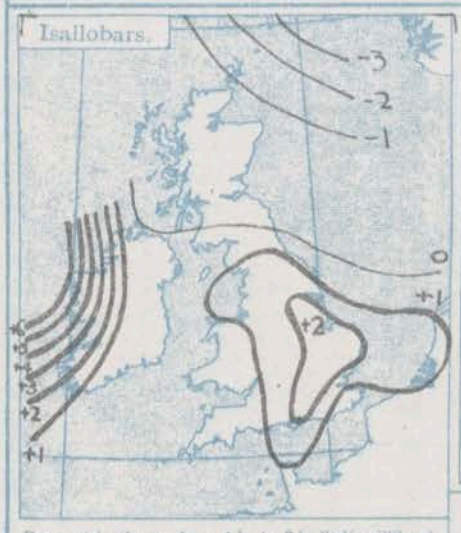
M.O. FORM 2370.

SUMMARY OF CONDITIONS AT 7 h. G.M.T. 8. 12. 20.

Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Dull, some mist or fog	Var.	Smooth
2. E. England	Fair to dull, local mist or fog	Poor.	V Smooth
3. E. Midlands	Dull, some mist or fog.	Bad.	-
4. W. Midlands	Dull, some mist or fog	"	-
5. S.W. England	Dull.	Fair	Smooth
6. South Wales	Dull, local mist.	Fair	"
7. North Wales	Dull, local mist.	"	V Smooth
8. N.W. England	Dull, some mist or fog	V. Poor	Smooth
9. N. Midlands	Dull, mist or fog.	"	-
10. N.E. England	Dull, mist or fog.	Poor	Smooth
11. E. Scotland	Fair or fine, misty.	Poor	Slight
12. S.W. Scotland	Dull, some fog.	Bad.	Smooth
13. Isle of Man	Cloudy or dull, some mist	Indif.	"
14. N. & N.W. Scotland	Fine to cloudy.	"	Slight
15. Hebrides	Dull, local showers.	Good.	"
16. Orkneys and Shetlands	Dull, misty, showery.	V. Poor	Smooth
17. N.W. Ireland	Dull, local mist and slight rain.	Indif.	"
18. N.E. Ireland	Cloudy, local mist.	Fair.	"
19. S.E. Ireland	Fine to dull.	"	"
20. S.W. Ireland	Dull.	Good	"

Temperature reported from Coastal and Cross Channel Steamers.

Position Number.	Date	Time G.M.T.	Sea °F	Air °F
[illegible]	7th	?	51	49
4.	"	04.30	42	43
5.	"	08.22	51	43
1.	"	13.00	50	42
6.	"	14.55	51	41
7.	8th	03.14	53	46
4A.	"	04.20	45	42



Barometric change from 4 h. to 7 h. (half millibars).

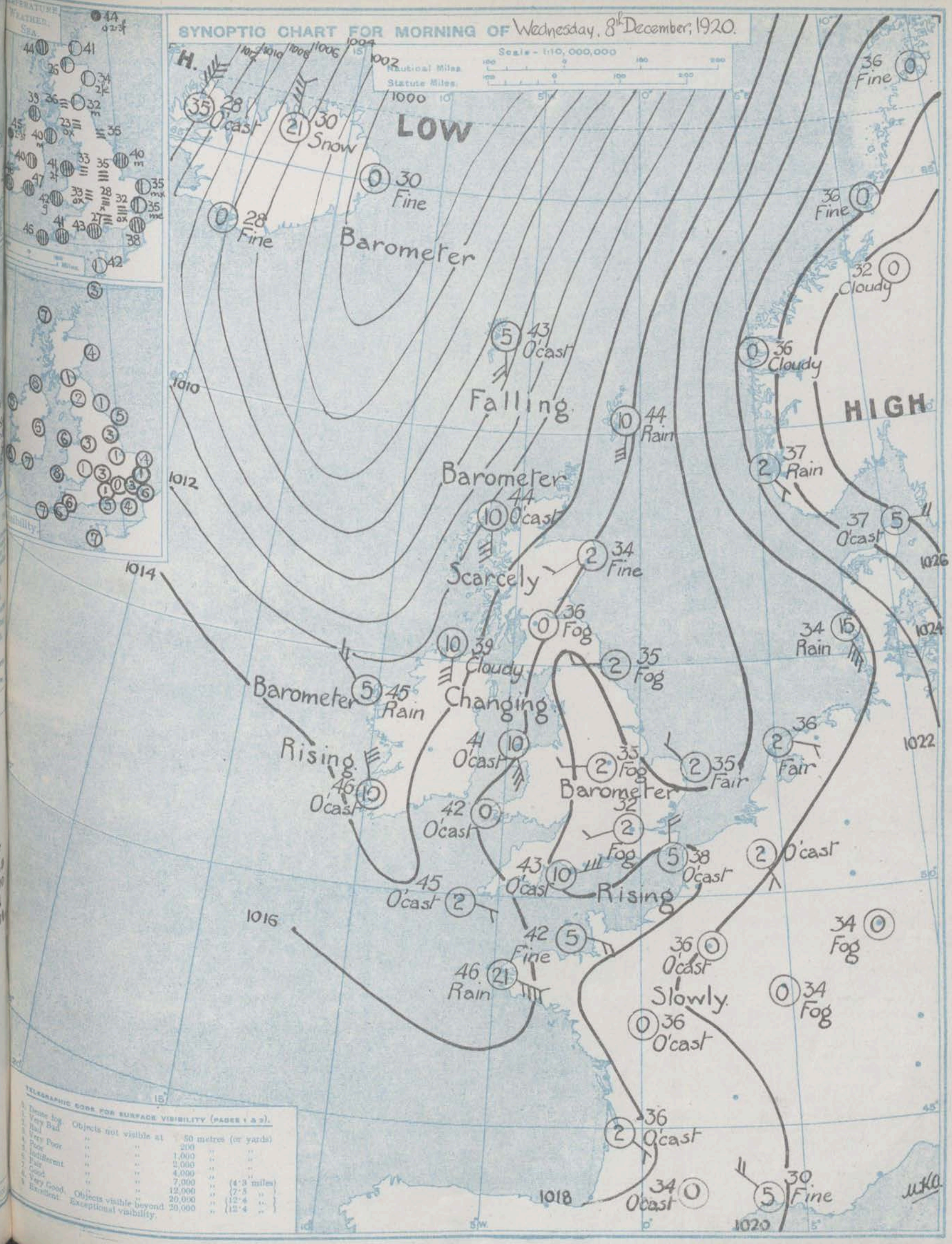
EXPLANATION.
BAROMETER.—Isobars are drawn at intervals of two millibars.
WIND.—Direction is shown by the way flying with the wind. Force, on the scale 0-12, is indicated by the number of feathers. Mean velocity is shown in miles per hour by figures in small circles.
TEMPERATURE is given in degrees F.
WEATHER SYMBOLS.—
clear sky.
sky ¼ clouded.
sky ½ clouded.
overcast sky.
snow.
fog.
T thunder.
sky ¼ clouded.
rain.
sleet.
mist.
K thunderstorm.
SEA DISTURBANCE.—Rough.
High seas.

GENERAL INFERENCE from observations received up to 9h G.M.T.

The British Isles will probably be between two anticyclones for the next day or two and in consequence the wind will be light. The weather will be fair to dull and cold with local showers over the Western districts and much fog inland.

Districts.	Forecasts for the 24 hours commencing 15 h. G.M.T. Wednesday 8th December 1920.	Further Outlook.
1. S.E. England 2. E. England 3. E. Midlands 4. W. Midlands	Wind light and indefinite; fair to dull, clouds rather low; fog inland; cold.	Cold and cloudy in all districts for a day or two with occasional rain in the West
5. S.W. England 6. South Wales 7. North Wales	Wind light and indefinite; mainly dull, clouds rather low; local drizzle on the coast; fog inland; cold.	
8. N.W. England 9. N. Midlands 10. N.E. England 11. E. Scotland 12. S.W. Scotland 13. Isle of Man	Same as 1 & 4.	
14. N. & N.W. Scotland 15. Hebrides	Light to moderate Southerly wind, veering to W or NW later; much low cloud, some showers; visibility good; rather cold.	
16. Orkneys and Shetlands 17. N.W. Ireland	Light to moderate Southerly wind veering to SW; much low cloud, some showers; visibility improving; rather cold.	
18. N.E. Ireland 19. S.E. Ireland 20. S.W. Ireland	Wind light and indefinite; much low cloud, local showers; some mist or fog inland; rather cold.	

Meteorological Office: Air Ministry, Kingsway, London, W.C.2. Forecasts issued at 09.30. K.V.N G. C. SIMPSON, F.R.S., Director.


SYNOPTIC CHART FOR MORNING OF Wednesday, 8th December, 1920.
Scale - 1:10,000,000
Nautical Miles
Statute Miles
LOW
HIGH
H.
Barometer Falling
Barometer Scarcely Changing
Barometer Rising
Barometer Rising Slowly
35 28 O'cast
21 30 Snow
0 30 Fine
0 28 Fine
5 43 O'cast
10 44 Rain
10 44 O'cast
10 39 Cloudy
5 45 Rain
41 O'cast
46 O'cast
42 O'cast
45 O'cast
43 O'cast
42 Fine
46 Rain
2 34 Fine
0 36 Fog
2 35 Fog
2 33 Fog
2 32 Fog
5 38 O'cast
2 35 Fair
2 36 Fair
2 O'cast
36 O'cast
36 O'cast
2 36 O'cast
34 O'cast
0 36 Fine
0 36 Fine
0 32 Cloudy
0 36 Cloudy
2 37 Rain
37 O'cast
5 11
34 15 Rain
34 Fog
0 34 Fog
5 30 Fine
1000
1002
1004
1006
1008
1010
1012
1014
1016
1018
1020
1022
1024
1026
TELEGRAPHIC CODE FOR SURFACE VISIBILITY (PAGES 1 & 2).
Dense fog. Objects not visible at 50 metres (or yards)
Very Bad " " 200 " "
Very Poor " " 1,000 " "
Poor " " 2,000 " "
Indifferent " " 4,000 " "
Fair " " 7,000 " (4·3 miles)
Good " " 12,000 " (7·5 ")
Very Good. Objects visible beyond 20,000 " (12·4 ")
Excellent. Exceptional visibility. 20,000 " (12·4 ")

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 343

Wednesday 8th Dec. 1920

WEATHER, TEMPERATURE, RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 7th

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 6th-7th	Rainfall. Day. 9h-18h. 7th	Sunshine. Sunrise to Sunset. 7th
Scotland.	Oban	c.	bc	48	30	-	-	2.7
	Banff	cp.	pc	38	28	-	1	0.1
	Montrose							
	St. Andrews							
England, N.E.	Harrogate	o.	od	39	36	2	-	0.0
	Scarborough	o.	or	45	40	3	1	0.0
	Skegness	op.	opd	44	40	2	0.1	0.0
England, E.	Lowestoft							
	Felixstowe	omd	omr	42	39	0.4	2	0.0
	Southend-on-Sea	or.	or.o	41	36	-	3	0.0
England, S.E.	Tunbridge Wells	o.	od	41	37	0.3	1	0.0
	Margate	or.	odg	40	39	1	1	0.0
	Ramsgate	*	*	44	37	-	2	0.0
	Folkestone	o	o	44	38	4	0.3	0.0
	Hastings	o	od.o	41	38	trace	1	0.0
	Eastbourne	or.	ro.	47	39	-	2	0.0
	Brighton	o.	o	43	39	-	-	0.0
	Worthing	o.	o	43	39	-	-	0.0
	Littlehampton	o.bc.	om	44	38	0.2	-	0.0
	Portsmouth (S'thsea)	x.	x.	43	39	0.4	-	0.0
	Bournemouth	*	*	41	38	0.3	-	0.0
		*	*					

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 6th-7th	Rainfall. Day. 9h-18h. 7th	Sunshine. Sunrise to Sunset. 7th
England, N.W.	Douglas (I.O.M.)							0.0
	Blackpool	o.	o	42	38	-	-	0.0
	Southport	o3	o3.	41	37	2	-	0.0
	Morecambe	x.	x.	43	38	-	-	
Midlands.	Buxton							0.0
	Leamington Spa	o	o	42	35	0.1	-	0.0
	Malvern	mc	o.bc	40	36	-	-	0.0
	Bath	o.	o	41	34	-	-	0.0
Wales.	Rhyl	o.	o	41	37	2	-	0.0
	Colwyn Bay	x.	x.	41	37	2	-	0.0
	Llandudno	x.	x.	43	38	1	-	0.0
	Aberystwyth	o.c.	c.o	44	36	-	-	
	Tenby							
	Swansea							
England, S.W.	Weymouth	o.	o	42	38	-	-	0.0
	Teignmouth							
	Torquay	c	o	43	36	-	-	0.0
	Paignton	om.	o.bm	44	35	-	-	0.0
	Penzance	og.	og	44	38	-	-	0.0
	Newquay	om.	omg	42	32	-	-	0.0
	Bude	wxco	c	39	30	-	-	0.0
	Ilfracombe	o.	o	42	40	-	-	0.0
	Weston-s-Mare	o.c.	om	42	35	-	-	

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-18h. 7th	Weather. 18h-18h. 7th	Weather. 18h 7th-18h 8th	Weather. 18h-7h. 8th	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall.† Day. 7h-18h	Rainfall.† Night. 18h-7h	Sun. Hours.
Renfrew	ob.8fx.	[illegible]	o4.5fx	o4.5fx	37	25	19	mm. -	mm. -	0.0
Eskdalemuir	bc.c.co	o.	c.o	x.3fe	38	23	18	-	-	1.5
Valencia (Cahirc'n)	o	o.o1f	o	r.R.R.	47	43	43	-	15	0.0
Baldonnel	o1fpo	c.o1f b	c.o3f	b.bc2f	46	28	21	-	-	2.3
Manchester (Alex.Pk)	o2f	o3f	o3f	c.o3f.	43	36	2.6	-	-	*
Ross on Wye	2fpo	g.o2f	g.o2f	o2fo8o5fc	40	33	28	0.1	trace	0.0
Falmouth	o2f o1f	o1fo2f	r.o.o	o	42	36	36	-	4	0.0
Calshot (Hants)	o2f g	o2fg	b.bc.c.o2f	o2fcoic.	42	33	29	trace	-	0.0
Lympne (Folkestone)	o1f ro	o1fpo.ro.po	c.o1f.bc.bbb	bbbc.if.co	39	33	29	0.2	trace	0.0
Aberdeen	c.o po	c.o.o1f.	o1f po	1fe	43	34	30	1	0.4	0.1
Howden	po.o.	o1f o.o.o	3fe. o	o6.8fe	42	34	29	-	T.	0.0
Cranwell (Lincs)	s.o.	od.o.o	d.o.d.p	c.o4.6f	41	33	34	0.4	0.4	0.0
Felixstowe	ro	ro.o.o	d.o.d.o1f	x.4.6f	43	29	*	2	0.3	0.0
Shoeburyness	od.	od.po	o.o1f	o2f. o3f	43	33	*	2	0.1	0.0
Benson	o	o	b.bc	3f.x	42	27	25	-	0.1	*
S. Farnborough	o.o2f	o.o2f.	o1f.o2f	o2f o4.5f	41	26	27	0.1	0.2	0.0
London (Kew Obsy.)	o2f	o2f	o2f	o2f.o6.8fc	42	32	28	trace	-	0.0
Croydon	o3fo5fpo	o2f o3fpo	cobcbbcb bbo3f	b.o3f	42	31	*	trace	-	*

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, *i.e.*, rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:–
R = heavy rain.
rr = continuous moderate rain.
r.r. = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 30 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0.5
1	1– 3	0.5– 1.5
2	4– 7	1.6– 3.4
3	8–12	3.5– 5.4
4	13–18	5.5– 7.9
5	19–24	8.0–10.7
6	25–31	10.8–13.8
7	32–38	13.9–17.1
8	39–46	17.2–20.7
9	47–54	20.8–24.4
10	55–63	24.5–28.4
11	64–75	28.5–33.5
12	Above 75	33.6 or above

SYMBOLS–

Aurora, Rime, Glazed frost, Glazed roads, Solar halo, Lunar halo, Solar corona, Lunar corona

LONDON. OBSERVATIONS.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Hours.	Humidity % 15 h. G.M.T.	Humidity % 9 h. G.M.T.
	24 Hours ended 9h G.M.T. 8th							Yesterday.		To-day.
Greenwich (Royal Observatory)	o.omd	omd.o	omomdg	41	36	33	1	0.0	86	94
City (Bunhill Row)	*	*	*	*	*	*	*	0.0	*	*
Westminster (St. James's Park)	*	*	or.r.fe	44	36	34	1	0.0	83	94
Regents Park (Botanical Gdns)	x.	x.	x.	x.	x.	*	x.	0.0	x.	x.
Camden Sq. (British Rainfall)	o	c.od	*	42	35	30	1	*	88	98
Kensington Palace	oc	oc.or	*	42	31	28	1	*	92 (18h)	97
Hampstead Observatory	*	*	*	40	33	26	1	0.0	*	96

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday

Total 75 Joules.

Milliwatts.
Average Rate 2.6
Maximum Rate 8

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

8th & 9th December 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth	7.52	11.46	3.38
	7.52	11.45	3.39
Greenwich	7.54	11.52	3.50
	7.55	11.52	3.49
Wick	8.50	12.24	3.57
	8.52	12.23	3.58
Valencia	8.38	12.20	4.23
	8.39	12.20	4.23

Photographic Record of Pole Star (Polaris) and of δ Ursae Minoris at Greenwich Observatory.

Exposure from 7th 17h. 0m. to 8th 6h. 45m.

Stars.	Duration of Exposure. h. m.	Duration of Record. h. m.	%
Polaris	13. 45	0. 0	0
δ Ursae Minoris	13. 45	0. 0	0

NOTES ON THE WEATHER OF YESTERDAY.

Maximum temperatures did not exceed 45° and at night sharp frost occurred, the minimum at Eskdalemuir being 25° and at South Farnborough 26°. Rain fell in many places, 15mm at Valencia and 9mm at Castlebay being the largest amounts. Fog formed during the night over practically the whole of England.

* Information for these columns not usually received.

† Trace = rain has fallen but amount less than 0·1 mm.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. No. B.21,567 Thursday 9th December 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

STATIONS.	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind. Direc.	Wind. Force 0-12.	Weather.	Temp. °F.	% Humidity.	Visibility 0-9.	Height of Low Cloud. Feet.	Low Cloud. Form.	Low Cloud. Amt. 0-10.	Upper Cloud. Form.	Upper Cloud. Amt. 0-10.	Sea 0-9.	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind. Direc.	Wind. Force 0-12.	Weather.	Temp. °F.	% Humidity.	Visibility 0-9.	Height of Low Cloud. Feet.	Low Cloud. Form.	Low Cloud. Amt. 0-10.	Upper Cloud. Form.	Upper Cloud. Amt. 0-10.	Sea 0-9.
	13H. G.M.T. of 8														18H. G.M.T. of 8													
Renfrew																												
Eskdalemuir	1017.8	0	N	1	0	34	97	2	750	St	7	A Cu	2	*	1019.3	+3	WSW	3	b 3f	41	85	5	1250	St.Cu	2	-	-	*
Valencia (Cahirc'n)	1019.1	+1	SSE	1	c 3f	33	85	3	1250	Cu	3	Ci	5	*	1020.5	+2	-	0	03f	35	92	3	-	St	10	-	-	*
Baldonnel	1019.9	+4	N	2	0	46	85	8	1250	St.Cu	7	A St	3	4	1023.7	+5	NNE	2	c	46	85	8	2000	St.Cu	4	A St	3	4
Manchester (Alex Pk)	1018.8	+2	S	1	01f	40	85	6	4200	St.Cu	6	A St	4	*	1022.1	+4	W	2	02f	40	97	4	1250	St	10	-	-	*
Ross on Wye	1019.6	+1	NE	1	07fc	34	97	0	<500	St	10	-	-	*	1021.6	+2	-	0	07f	34	92	0	<500	St	10	-	-	*
Falmouth	1019.9	0	E	1	05f	32	97	1	<500	St	10	-	-	*	1021.9	+3	-	0	05fc	33	97	1	<500	St	10	-	-	*
Calshot (Hants) *	1017.2	?	SSE	2	0	47	85	6	-	Nb	10	-	-	*	1019.9	+3	SSW	2	08	45	92	5	-	Cu N	10	-	-	*
Lympne (Folkestone)	1019.9	+1	E	2	02f	44	92	4	3000	St.Cu	4	A Cu	6	[illegible]	1022.2	+3	E	1	b 2f	41	97	4	-	-	-	-	-	0
	1019.9	0	NE	1	0	41	85	5	1250	St	10	-	-	*	1021.9	+3	NE	3	0m N	36	97	3	1250	St	10	-	-	*
Aberdeen	1016.4	-1	SSW	1	b 3fc	38	92	3	3000	St.Cu	1	-	-	3	1016.7	0	SSW	3	03f	38	85	3	3000	St.Cu	10	-	-	3
Howden	1019.7	+1	-	0	02f	38	92	3	750	St	8	Ci St	2	*	1021.5	+2	-	0	0f x	30	97	1	<500	St	10	-	-	*
Cranwell (Lincs)	1021.0	+3	W	1	bc	40	92	4	1250	St.Cu	3	Ci	3	*	1022.7	+3	W	1	c 4f	30	97	2	<500	St	8	-	-	*
Felixstowe	1021.0	+1	NNW	1	07f	35	97	0	<500	St	10	-	-	*	1022.7	+3	NW	2	07f	33	97	0	<500	St	10	-	-	*
Shoeburyness	1020.4	+2	NE	1	bc fc	40	85	6	-	-	-	A Cu	4	*	1022.6	+3	-	0	b 6fc	31	85	1	-	-	-	-	-	*
Benson	1020.1	0	-	0	3fc	35	97	2	-	-	-	-	-	*	1022.7	+2	-	0	06f	30	97	1	-	-	-	Ci	9	*
S. Farnborough	1020.4	+1	-	0	04f	33	85	2	<500	St	10	-	-	*	1022.8	+3	-	0	04fc	30	97	2	<500	St	10	-	-	*
London (Kew Obsy.)	1020.4	0	W	1	05f w	37	97	1	750	St	10	-	-	*	1022.9	+3	-	0	07f w	36	97	0	<500	St	10	-	-	*
Croydon	1020.7	+1	-	0	07f	35	97	0	<500	St	10	-	-	*	1023.3	+3	-	0	06fc	35	97	0	<500	St	10	-	-	*
	1H. G.M.T. of 9														7H. G.M.T. of 9													
Renfrew															1024.2	+3	SW	1	b 2f	36	92	4	3.000	St	2	-	-	*
Eskdalemuir	1023.3	+2	SE	1	04fc	31	97	2	750	St	10	-	-	*	1025.0	+1	SW	3	bc w	34	92	7	-	St	6	-	-	*
Valencia (Cahirc'n)	1027.5	?+2	NNW	3	bc	41	*	*	*	*	*	*	*	3	1028.2	+1	NE	1	b	38	92	8	3.000	St	3	-	-	*
Baldonnel	1028.2	+2	-	0	b	35	92	6	-	-	-	-	-	*	1027.6	+1	S	2	bc	33	75	8	-	-	-	-	-	*
Manchester (Alex Pk)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1026.7	+3	SSE	1	07f	31	97	0	<500	St	10	-	-	*
Ross on Wye	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1025.7	+2	W	1	b 4fc	31	97	2	1250	St	2	-	-	*
Falmouth	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1026.0	+2	N	2	bc	41	97	7	-	St.Cu	4	-	-	*
Calshot (Hants)	1022.8	+1	NNE	1	0	45	92	6	-	St	9	-	-	*	1024.5	+1	NNW	2	bc 1f	35	97	6	2.000	St	6	-	-	1
Lympne (Folkestone)	1023.7	0	NNW	1	03f	36	97	3	2000	St	9	-	-	1	1023.5	+1	N	3	05f	32	97	1	<500	St	10	-	-	*
	1023.1	+1	NE	4	?05f	30	97	1	<500	St	10	-	-	*														
Aberdeen	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1022.2	+3	W	1	b 2fc	36	92	5	-	-	-	-	-	2
Howden	1023.5	+1	-	0	07fc	31	97	0	<500	St	10	-	-	*	1025.2	+3	-	0	07fc	28	97	0	<500	St	10	-	-	*
Cranwell (Lincs)	1023.1	0	W	1	02c	27	97	2	<500	St	10	-	-	*	1024.9	+1	NW	3	c 3f	31	97	2	<500	St	6	A Cu	2	*
Felixstowe	1023.5	+1	NW	2	b 3f	30	97	3	-	-	-	-	-	0	1023.9	+1	NW	3	bc	29	97	3	-	-	-	A St	2	0
Shoeburyness	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1023.7	0	-	0	bmx	27	76	5	-	-	-	C St	1	*
Benson	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1024.3	+1	N	1	bc 3fc	29	97	3	-	St	5	-	-	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1026.1	+2	-	0	b 3f	29	97	E	1250	St	3	-	-	*
London (M.O. at 1H.)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1024.8	+1	W	1	06f cu	32	97	1	750	St	10	-	-	*
Croydon	1023.5	+1	*	*	*	33	*	*	*	*	*	*	*	*	1025.2	0	-	0	06fc	32	97	1	<500	St	10	-	-	*
	1024.1	0	NW	1	06fc	35	97	1	<500	St	10	-	-	*														

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

STATIONS.	Barom. at M.S.L. mb.	Temp. °F.	Wind. Direc.	Wind. Force 0-12.	Weather.	Barometer. at M.S.L. mb.	Barometer. ‡ Change in 3 hours.	Temperatures. Temp. °F.	Temperatures. Change in 24 hours.	Wind. Direc.	Wind. Force 0-12.	Direc. of Upper Cloud.	Weather.	Sea 0-9.	Rainfall † mm.	Temp. Max. °F.	Temp. Min. °F.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Sunshine Hours.
	18H. G.M.T. of 8					7H. G.M.T. of 9									24 HOURS ENDED 7H. 9						8
Lerwick	1013.0	45	S	3	bcm	1014.1	+2	39	-5	W	3	-	b	2	9	46	38	oc p	bcm	omr or	*
Stornoway	1014.5	39	NNW	1	b	1021.3	+4	35	-9	W	1	-	b	1	13	44	34	or	or b	bcp b	0.0
Castlebay (Barra Is)	1017.1	44	NNW	5	bcp	1023.4	+3	42	-4	NNW	1	-	o	2	7	47	39	opr	r bcp	op bc o	0.0
Malin Head	1019.5	44	NNW	3	bc	1023.8	+1	45	+6	W	2	W	c	2	2	45	38	omp	cp	cp.	0.6
Blacksod Point	1023.0	45	NW	2	bc	1024.7	+4	41	-4	-	0	-	bc	2	trace	745	34	bc	bc	bc	*
Roche's Point	1022.6	45	NNW	3	b	1028.1	+2	37	-10	NW	3	-	b	2	trace	50	35	ocm	cmomb	b	*
Birr Castle	1022.4	39	-	0	bc	1027.4	*	27	-13	-	0	-	bc	*	1	41	27	f.odr	f.odr.b	bcx	0.0
Donaghadee	1019.7	41	W	2	om	1025.9	+1	35	-5	W	1	-	bm	1	0.2	43	34	cm	omd.	bcm	*
Liverpool (Bidston)	1021.0	36	SE	1	m	1025.4	+2	39	+6	SSE	1	-	bm	1	1	41	32	bm	bm	f.op.bm	4.2
Holyhead	1020.9	44	WSW	2	bc 2f	1025.6	+2	45	+4	N	4	-	b	3	1	46	40	ocm	ocp bc	op bc.b	0.0
Pembroke (St. Ann's Head)	1021.5	42	NE	2	bc 1f	1025.1	+1	42	0	N	1	-	c	2	1	46	742	omcm	cm	bcm.op	0.8
Scilly (St. Mary's)	1019.8	49	-	0	0	1024.6	+2	47	+2	ENE	1	-	c	2	1	51	745	ocp	cop	abc.cp	0.1
Jersey (St. Aubin)	1021.1	40	SE	3	b	1023.7	0	43	+1	NE	3	-	or	3	4	46	33	b	b	b.or	6.3
Portland Bill	1021.1	47	SSE	3	0	1024.0	+2	40	-3	N	5	-	bcm	4	0.1	49	36	obc	bco	om.bcm	*
Dungeness	1021.6	36	NNE	2	bcm	1023.0	+1	32	-6	NNE	3	-	f	3	-	43	28	oc	cbcm	f.fx	*
Wick	1012.7	40	SW	3	omr	1019.5	+5	33	-8	W	3	-	bq	3	2	42	32	bc	com	omp bcop	*
Nairn	1014.2	37	-	0	0	1021.8	*	36	+10	W	1	-	bc	1	0.4	39	26	bcm	cm	oc.x	0.4
Leith	1017.8	42	W	2	0	1023.0	+2	36	+4	W	1	-	b	1	0.2	42	30	bm.c	cm.o	cm.b	*
Tynemouth	1019.7	37	W	1	b 3f	1023.5	+1	36	+1	W	2	-	b 2f	3	trace	40	33	f	bf	f.bcm	*
Spurn Head	1021.3	36	SSW	2	f	1022.9	0	36	-4	NNW	3	-	fw	2	0.1	42	33	omf	fcf	fw	*
Yarmouth (Gorleston)	1021.8	33	-	0	4f	1023.3	0	29	-6	NW	3	-	b 6fx	8	-	36	27	fx bfx	bfx	b.fx	0.2
Clacton-on-Sea	1022.1	32	NW	2	f	1023.6	0	30	-8	NW	3	-	bcm	1	-	38	29	bcm	bcmfc	fx.bcm	1.3
Nottingham	1022.1	33	SW	2	fc	1024.8	*	32	-3	SW	1	-	fc	*	-	36	30	f	fc	fc	0.0

* Information for these columns not usually received. * The barometric change is expressed in half millibars. ‡ For code see page 3. † See footnote p.4.

M.O. FORM 2370.

SUMMARY OF CONDITIONS AT 7 h. G.M.T. 9. 12. 20.

Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Fine to dull, mist or fog	Bad	Smooth
2. E. England	Fine to cloudy, misty.	V. Poor	"
3. E. Midlands	Fair generally, mist or fog.	"	-
4. W. Midlands	Mainly fine, mist or fog	"	-
5. S.W. England	Fair to cloudy, slight local mist.	Good.	Smooth
6. South Wales	Cloudy, local mist.	Fair.	"
7. North Wales	Fine.	Good.	Slight
8. N.W. England	Fine to dull, mist or fog	V. Poor	Smooth
9. N. Midlands	Dull foggy.	V. Bad	-
10. N.E. England	Fine to dull, mist or fog	Poor	Smooth
11. E. Scotland	Fair or fine, local mist	Indif.	Smooth
12. S.W. Scotland	Fair or fine, local mist	Fair.	"
13. Isle of Man	Fine.	Good.	"
14. N. & N.W. Scotland	Fine.	Indif.	"
15. Hebrides	Fine in North, dull in South	Good.	"
16. Orkneys and Shetlands	Fine.	Poor.	"
17. N.W. Ireland	Fair.	Indif.	"
18. N.E. Ireland	Fine to cloudy, local mist.	Good.	"
19. S.E. Ireland	Fair or fine.	"	"
20. S.W. Ireland	Fine.	"	"

Temperature reported from Coastal and Cross Channel Steamers.

Position Number	Date	Time G.M.T.	Sea °F	Air °F
5	8th	0249	51	46
7	9th	0348	52	43

Barometric change from 4 h. to 7 h. (half millibars).

EXPLANATION.
BAROMETER.—Isobars are drawn at intervals of two millibars.
WIND.—Direction is shown by the flying with the wind. Force, as in 0-12, is indicated by the number of feathers. Mean velocity is given in miles per hour by figures in small stations.
TEMPERATURE is given in degrees.
WEATHER SYMBOLS.—
clear sky. sky ½ clouded. overcast sky. snow. fog. thunder. sleet. mist. rain. hail. shower. high wind.
SEA DISTURBANCE.—Rough.

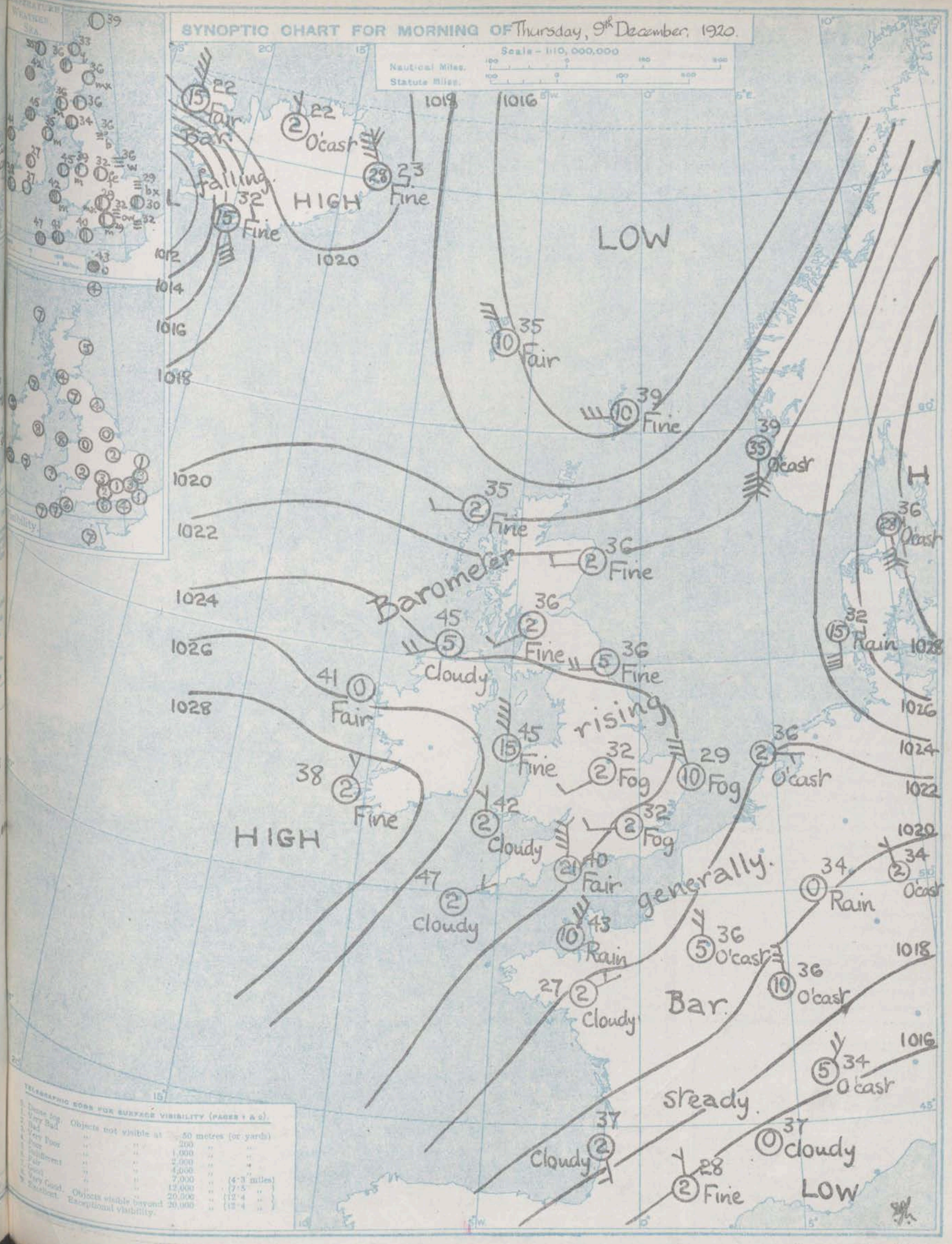
GENERAL INFERENCE from observations received up to 9h. G.M.T.

The anticyclone still persists in the Baltic region while another anticyclone is extending over the British Isles from the Atlantic. A depression which has begun to encroach on Iceland will probably move North-Eastward. A low temperature appears likely in this country for some days, with mainly fair, but sometimes misty or foggy, weather.

Districts.	Forecasts for the 24 hours commencing 15 h. G.M.T. Thursday 9th December, 1920.	Further Outlook.
1. S.E. England 2. E. England 3. E. Midlands 4. W. Midlands 5. S.W. England 6. South Wales 7. North Wales	Wind mainly from North or North-East, light; some mist or fog, principally inland, otherwise fair. Visibility variable; temperature low, frost at night.	A spell of cold and generally fair weather is probable over the British Isles
8. N.W. England 9. N. Midlands 10. N.E. England 11. E. Scotland 12. S.W. Scotland 13. Isle of Man 14. N. & N.W. Scotland 15. Hebrides 16. Orkneys and Shetlands 17. N.W. Ireland 18. N.E. Ireland	Wind mainly between West and North-West, light, moderate locally. Fair generally but some local mist or fog. Visibility mainly fair or good. Temperature rather low; frost at night.	
19. S.E. Ireland 20. S.W. Ireland	Wind between North-West and North-East, light. Fair or fine. Visibility fair to good. Temperature low, frost at night.	

R.S.

Meteorological Office: Air Ministry, Kingsway, London, W.C.2. Forecasts issued at 09.30. G. C. SIMPSON, F.R.S. Dir.


SYNOPTIC CHART FOR MORNING OF Thursday, 9th December, 1920.
Scale - 1/10,000,000
Nautical Miles.
Statute Miles.
HIGH
LOW
Barometer
falling
rising
generally.
Bar.
steady.
Fair
O'cast
Fine
Fog
Cloudy
Rain
1012
1014
1016
1018
1020
1022
1024
1026
1028
1019
1016
TELEGRAPHIC CODE FOR SURFACE VISIBILITY (PAGES 1 & 2).
0 Dense fog. Objects not visible at 50 metres (or yards)
1 Very Bad " " 200 " "
2 Bad " " 1,000 " "
3 Very Poor " " 2,000 " "
4 Poor " " 4,000 " "
5 Indifferent " " 7,000 " (4·3 miles)
6 Fair " " 12,000 " (7·5 ")
7 Good " " 20,000 " (12·4 ")
8 Very Good. Objects visible beyond 20,000 " (12·4 ")
9 Excellent. Exceptional visibility.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 344.

Thursday 9th December

WEATHER, TEMPERATURE, RAINFALL, AND SUNSHINE AT HEALTH RESORTS FOR 8th

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h 9h. 7th 8th	Rainfall. Day. 9h-18h. 8th	Sunshine. Sunrise to Sunset. 8th
Scotland.	Oban	o	pc	48	35	–	0.3	0.0
	Banff	b	bccop	38	30	–	0.1	3.8
	Montrose							
	St. Andrews	=	f	38	30	3	–	0.0
England, N.E.	Harrogate	com	bcbm	38	34	–	–	0.0
	Scarborough	bc	bc	44	36	–	–	1.0
	Skegness	om	omfc	40	34	0.2	0.1	0.0
England, E.	Lowestoft							
	Felixstowe	bcf	of	38	~~36~~ 33	1	–	1.3
	Southend-on-Sea	opcm	fc	39	31	0.2	–	0.4
England, S.E.	Tunbridge Wells	ocf	cof	39	29	–	–	1.0
	Margate	o	c	42	37	–	–	0.0
	Ramsgate	*	*	43	36	0.2	–	0.0
	Folkestone	c	o	43	37	–	–	0.0
	Hastings	bc	bbcf	42	34	trace	–	5.5
	Eastbourne	bc	bc	40	31	0.1	–	5.2
	Brighton	b	b	43	32	1	–	3.9
	Worthing	b	b	42	30	–	–	5.0
	Littlehampton	b.bc	bcm	42	29	–	–	4.2
	Portsmouth (S'thsea)	–	–	45	34	–	–	0.8
	Bournemouth	*	*	43	31	–	–	0.0

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 17h-9h. 7th 8th	Rainfall. Day. 9h-18h. 8th		Sunshine. Sunrise to Sunset. 8th
England, N.W.	Douglas (I.O.M.)								
	Blackpool								1.7
	Southport	bcf bc	bbcof	37	32	–	–		0.3
	Morecambe	–	–	40	36	–	–		
Midlands.	Buxton								3.5
	Leamington Spa	cb	cb	43	32	–	–		0.0
	Malvern	m	m	38	31	–	–		2.1
	Bath	ocbcb	bbcco	42	33	–	–		
Wales.	Rhyl	bc	bc	41	30	–	–		3.8
	Colwyn Bay	–	–	42	33	–	–		3.5
	Llandudno	*	*	43	35	–	–		2.5
	Aberystwyth	ooc	cco	43	37	–	–		0.0
	Tenby								
	Swansea								
England, S.W.	Weymouth	ocbc	bcco	51	39	0.2	–		2.2
	Teignmouth								
	Torquay	omhrh	om	48	39	1	12		0.0
	Paignton	of p	ofr of	45	36	trace	5		0.0
	Penzance	or	cor	49	39	1	5		0.1
	Newquay	of	or	45	38	1	4		0.0
	Bude	o	coer	46	38	–	2		0.0
	Ilfracombe	co	o	46	39	–	–		0.1
	Weston-s-Mare	cbcc	c	44	35	–	–		

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-13h. 8th	Weather. 13h-18h. 8th	Weather. 18h-1h. 8th	Weather. 1h-7h 9th	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass °F.	Rainfall.† Day. 7h-18h	Rainfall.† Night. 18h-7h	Sun. Hours.
Renfrew	04-8f x	04-8f 8fc 8f	b.bc2f	b.bc2fbcp.	42	32	24	mn. 1	mn. 0.2	0.0
Eskdalemuir	x3fc 3fco	co o2f	b.03fc	3fc.bcc~	36	23	26	–	0.4	0.2
Valencia (Cahiro'n)	r.o	oco	o.o.b.bc	b.bcp.	47	33	30	1	–	0.0
Baldonnel	bbcifco4f	ddo o3f	c.o. bc.c	bx.	42	31	24	0.2	1 –	0.0
Manchester (Alex. Pk.)	bcxb3fc8fc	04-8f 4-8fc8fc	06-8f	6-8fc68f	41	29	20	–	0.1	*
Ross on Wye	6-8fc 6-8f	4-8fc 6-8fc	4-8fRDg	04-8f bcdfx	34	30	27	trace	[illegible]	0.0
Falmouth	of	oe	o.e.	bc.c	47	39	33	5	0.3	0.0
Calshot (Hants)	o2fg	bbc.2f	o2f.bcbbcf	fcaf.cobcif	45	34	26	–	–	0.2
Lympne (Folkestone)	o2fg o2f	cobbcw o2f	cabcc4-8f	04-6f~	41	28	25	–	0.1	0.1
Aberdeen	3fc 3fc	3fc o3f	o3f.2fc	2fc.x	39	33	26	–	–	2.8
Howden	04-8fc	6-8fc x	6-8fc ~	3fc.~	42	28	22	–	–	0.0
Cranwell (Lincs)	4-8fc bbc	04-8f	o3f.x	4-8f.bcc	40	26	22	0.1	–	1.7
Felixstowe	4-8f 6-8f	6-8f.6-8fc	6-8fc.4-8f	3f.b.bc	38	29	*	0.1	–	0.6
Shoeburyness	o2f.bcc	3f8f.1fc3fc	6-8fc.b.bc	x2.fc	41	26	*	–	trace	2.2
Benson	bccbcc	6-8fc	4-8f.3f	3f.x	37	27	22	–	0.1	*
S. Farnborough	04-8f	6-8fc 4-8fc	04-8f.o2f	bcc.bbc	33	26	25	0.1	0.1	0.0
London (Kew Obsy.)	06-8f 04-8f KW	06-8f w	06-8f w	06-8f w	37	31	32	trace	–	0.0
Croydon	o3f 04-8f 06-8f.o	06-8fc	06-8f 04-8f	04-8fc 6-8fc	36	31	*	–	–	*

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, *i.e.*, rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:–
R = heavy rain.
rr = continuous moderate rain.
r,r, = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 10 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0·3
1	1– 3	0·3– 1·5
2	4– 7	1·6– 3·4
3	8–12	3·5– 5·9
4	13–18	6·0– 8·9
5	19–24	10·0–13·9
6	25–31	14·0–17·9
7	32–38	18·0–21·9
8	39–46	22·0–25·9
9	47–54	26·0–29·9
10	55–63	30·0–34·9
11	64–75	35·0–39·9
12	Above 75	40·0 or above

SYMBOLS–
Aurora ☆ Solar halo ◎
Rime x Lunar halo ◎
Glazed frost ~ Solar corona ◎
Glazed roads ⚒ Lunar corona ◎

LONDON. OBSERVATIONS.	Morning.	Afternoon.	Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Hours.	Humidity % 15 h. G.M.T. Yesterday.	Humidity % 9 h. G.M.T. To-day.
	24 HOURS ENDED ON G.M.T. 9th									
Greenwich (Royal Observatory)	f.g	f.g	f.g	38	28	29	–	0.0	99	94
City (Bunhill Row)	*	*	*	*	*	*	*	0.0	*	*
Westminster (St. James's Park)	*	*	*	41	32	28	–	0.0	92	99
Regent's Pk. (Botanical Gdns).	*	*	*	*	*	*	*	0.0	*	*
Camden Sq. (British Rainfall)	o.g m	om.f	*	38	31	27	–	*	98	94
Kensington Palace	of	f	*	38	29	28	–	*	96 (18h)	93
Hampstead Observatory	*	*	*	37	27	26	trace	0.0	*	?

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday.

Total 47 Joules.

Milliwatts.
Average Rate. 1.6
Maximum Rate. 6

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

9th & 10th Dec. 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth	7.53 / 7.54	11.48 / 11.46	3.34 / 3.37
Greenwich	7.55 / 7.56	11.52 / 11.53	3.30 / 3.32
Wick	8.52 / 8.53	12.4 / 12.5	3.17 / 3.17
Valencia	8.39 / 8.40	12.33 / 12.34	3.34 / 3.35

Photographic Record of Pole Star (Polaris) and of δ Ursæ Minoris at Greenwich Observatory.

Exposure from 8th 17 h. 0 m. to 9th 6 h. 45 m.

Stars.	Duration of Exposure. h.	m.	Deviation of Record. h.	m.	%
Polaris	13.	45	0.	0	0
δ Ursæ Minoris	13.	45	0.	0	0

NOTES ON THE WEATHER OF YESTERDAY.

Temperature remained below 40° at some Northern, Eastern and South-Eastern stations. Frost occurred at night at most inland and at several coast stations. Rain fell over the greater part of the Kingdom, the quantity being slight generally, but 9mm at Lerwick and 13mm at Stornoway. Bright sunshine was high for the time of the year at some stations in the South and South-East, as well as at Liverpool, and fairly high in North Wales and at Banff.

* Information for these columns not usually received.

† Trace = rain has fallen but amount less than 0·1 mm.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. No. B.21,568 ..FRIDAY, 10TH DECEMBER, 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

STATIONS.	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind. Direc.	Wind. Force 0-12.	Weather	Temp. °F.	% Humidity.	Visibility § 0-9.	Height of Low Cloud. Feet.	Low Cloud. Form	Low Cloud. Amt. 0-10.	Upper Cloud. Form.	Upper Cloud. Amt. 0-10.	Sea 0-9.	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind. Direc.	Wind. Force 0-12.	Weather	Temp. °F.	% Humidity.	Visibility § 0-9.	Height of Low Cloud. Feet.	Low Cloud. Form	Low Cloud. Amt. 0-10.	Upper Cloud. Form.	Upper Cloud. Amt. 0-10.	Sea 0-9.
	13H. G.M.T. 9TH														18H. G.M.T. OF 9TH													
Renfrew	1027.0	+1	-	0	05f	37	92	1	3,000	StCu	3	A.St	6	*	1027.4	+1	NNE	1	09.23f	37	92	3	3,000	St	10	-	-	*
Eskdalemuir ...	1026.6	+1	-	0	b	39	85	7	2,000	Cu	2	-	-	*	1028.0	+2	-	0	0	33	92	6	-	St	3	A.St	7	*
Valencia (Cahire'n)	1029.3	-1	-	0	b	45	85	8	3,000	StCu	2	Ci.Cu	1	3	1029.1	0	-	0	b	41	92	8	3,000	StCu	2	-	-	3
Baldonnel ..	1028.5	0	SW	1	b	45	78	8	4,200	StCu	2	Ci.St	1	*	1028.7	0	S.	1	bc	36	92	5	4,200	StCu	4	-	-	*
Manchester (Alex. Pk.)	1027.0	0	W	1	07fe	33	97	0	<500	St	10	-	-	*	1029.8	+1	ENE	1	08fe	32	97	0	<500	St	10	-	-	*
Ross on Wye ...	1026.4	-1	VV	1	bm	42	85	4	-	-	-	-	-	*	1027.2	+1	-	0	b	36	97	5	1,250	St	1	-	-	*
Falmouth	1026.1	-1	NNE	4	bif	47	78	6	-	St.Cu	1	-	-	*	1027.4	+2	NNE	1	bzf	38	92	7	-	-	-	-	-	*
Calshot (Hants) ...	1025.2	-1	N	3	bzf	42	92	4	-	-	-	A.Cu	3	1	1026.4	+2	N	3	bzf	39	97	3	-	-	-	-	-	1
Lympne (Folkestone)	1023.5	0	N	4	04f	34	90	2	<500	St	10	-	-	*	1024.6	0	N	4	03f	35	97	3	-	-	-	-	-	*
Aberdeen	1025.4	+2	WNW	3	bif	39	65	7	-	-	-	-	-	2	1026.7	+2	WNW	2	bzfe	33	85	5	-	-	-	Cu	1	2
Howden	1025.9	-1	-	0	bcsfe	36	97	2	3,000	St	2	A.St	1	*	1026.7	+1	-	0	bm	32	97	4	3,000	St	1	A.St	2	*
Cranwell (Lincs) ...	1026.1	0	NNW	3	bzf	36	92	4	-	-	-	-	-	*	1026.7	+1	NNW	3	b	33	97	4	-	-	-	-	-	*
Felixstowe ...	1024.9	-2	NNW	2	04f	35	97	2	<500	St	10	-	-	0	1024.7	0	NNW	3	sfe	34	97	1	<500	St	10	-	-	0
Shoeburyness ...	1024.5	+1	NNW	1	04fex	32	92	2	2,000	St	10	-	-	*	1024.8	0	N	1	bzfex	32	85	4	-	-	-	-	-	*
Benson	1025.1	-1	-	0	4f	32	97	2	-	-	-	-	-	*	1026.5	+1	-	0	4f	32	97	2	-	-	-	-	-	*
S. Farnborough	1025.4	-1	SW	1	C3f	36	97	3	750	St	3	A.Cu	5	*	1025.1	+1	-	0	b4fe	30	97	2	-	-	-	-	-	*
London (Kew Obsy.)	1024.8	-2	N	2	03fw	40	88	3	3,000	-	-	A.Cu	9	*	1024.8	0	NNE	2	bmsc	38	85	3	-	-	-	-	-	*
Croydon	1025.5	0	NW	1	03f	34	97	2	750	St	10	-	-	*	1025.8	0	WSW	1	bxzf	32	97	2	-	-	-	-	-	*
	1H. G.M.T. OF 10TH														7H. G.M.T. OF 10TH													
Renfrew ...															1028.2	-1	-	0	05f	38	97	1	750	St.	10	-	-	*
Eskdalemuir ...	1027.8	-1	-	0	02om	34	92	4	-	St.	10	-	-	*	1027.0	0	-	0	02f	35	97	4	1250	St.	10	-	-	*
Valencia (Cahire'n)	1029.1	0	-	0	bc	40	*	*	*	*	*	*	*	2	1026.6	-2	SE	2	bc	42	85	8	4200	St.	4	-	-	*
Baldonnel ...	1028.4	-1	S	1	01f	37	92	6	3.000	St.	10	-	-	*	1027.4	-1	S	1	bc	36	85	6	-	-	-	A.St	4	*
Manchester (Alex. Pk.)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1027.4	0	NSW	1	07fe	33	97	0	<500	St	10	-	-	*
Ross on Wye...	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1027.8	0	ENE	1	04fx	28	97	2	<500	St.	10	-	-	*
Falmouth ...	1027.9	0	NNE	1	bx	35	97	7	-	-	-	-	-	*	1027.0	0	NNE	2	bx	35	85	7	-	St.	1	-	-	*
Calshot (Hants)...	1026.5	-1	N	3	bzf	36	97	5	-	-	-	-	-	1	1026.1	0	N	3	cx	34	97	5	-	-	-	A.St	8	2
Lympne (Folkestone)	1024.5	-1	N	3	bzf	32	97	3	-	-	-	-	-	*	1024.3	-1	N	4	omx	32	97	4	2,000	St.Cu	2	Ci.St	7	*
Aberdeen ...	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1026.2	0	SE	1	02f	37	97	4	4,200	St.Cu	9	-	-	2
Howden ...	1026.9	-1	-	0	bmx	31	97	6	3.000	St.	4	-	-	*	1026.2	-1	-	0	cx	32	97	7	3.000	St.	1	A.Cu	6	*
Cranwell (Lincs)	1028.8	0	NNW	4	bx	32	97	5	3.000	St.	3	-	-	*	1026.7	0	NNW	3	c	33	97	5	3.000	St.	5	A.St	3	*
Felixstowe ..	1024.8	0	NNW	3	bzf	35	97	3	-	-	-	-	-	0	1024.8	0	NNW	3	bzf	33	97	5	-	-	-	Ci.St	4	0
Shoeburyness...	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1024.8	0	N	1	bikx	32	92	6	-	-		Ci.St	2	*
Benson	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1026.4	0	-	0	4fx	27	97	2	-	-	-	-	-	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1026.5	0	NW	1	bcfx	29	97	2	750	St.	5	-	-	*
London (M.O. at 1H.)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1026.0	0	SW	2	bcmx	30	97	2	750	St.	4	A.St	2	*
Croydon .	1026.4	-2	W	1	bx03f	30	97	2	-	-	-	-	-	*	1027.0	0	W	1	bc4bx	29	97	2	2,000	St.	4	-	-	*

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

STATIONS.	Barom. at M.S.L. mb.	Temp. °F.	Wind. Direc	Wind. Force 0-12.	Weather.	Barometer. at M.S.L. mb.	Barometer. ‡ Change in 3 hours.	Temperature. Temp. °F	Temperature. Change in 24 hours.	Wind. Direc.	Wind. Force 0-12.	Direc. of Upper Cloud.	Weather.	Sea 0-9.	Rainfall † mm.	Temp. Max. °F.	Temp. Min. °F.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Sunshine Hours.
	18H. G.M.T. of 9TH					7H. G.M.T. of 10TH									24 HOURS ENDED 7H. 10TH						9TH
Lerwick	1025.2	38	WNW	2	bcm	1025.8	-1	40	+1	SW	2	-	bcm	1	1	41	34	b.	bcm	bcmp	*
Stornoway ...	1023.8	44	W	1	cd	1022.5	0	46	+10	WSW	1	-	bc	1	2	47	36	c.o	cd	o.bc	0.5
Castlebay (Barra'ls)	1023.3	49	WNW	2	*	1023.7	0	48	+6	W	2	-	cp	2	5	50	42	op	op.r.of	bo.ocp	0.0
Malin Head ...	1024.8	45	SSW	2	om	1024.8	0	42	-3	SSW	2	-	om	2	trace	46	41	cp	om	omd.c	0.2
Blacksod Point	1025.9	47	SW	2	o	1023.6	-2	47	+6	SW	2	-	bc	2	0.3	48	41	bc	c	c	*
Roche's Point...	1029.9	40	NNE	1	b	1027.9	-1	34	-3	NNE	1	-	b	1	0.2	47	34	bz.	bz.b.	bcx.m	*
Birr Castle ...	1028.2	38	E	1	c	1026.9	*	32	+5	E	1	-	bc	*	-	47	27	bc	bc	bcx	4.7
Donaghadee ...	1027.3	38	W	1	bcm	1026.6	-1	38	+3	SW	1	-	bcm	1	trace	45	35	bcm	bcm	bcm	*
Liverpool (Bidston)	1027.6	36	WNW	1	f	1026.6	0	36	-3	ESE	1	-	om	1	1	42	33	bf	bf	f.op	4.9
Holyhead ...	1027.8	46	N	3	cg	1026.5	0	45	0	W	2	-	o	0	0.2	48	40	b.bc.c	c.bc.c	bc.op	3.0
Pembroke (St. Ann's Head)	1028.1	41	NNE	1	bv	1027.3	-1	39	-3	NE	2	-	ov	1	-	46	39	bcv	bcv	bv.cv	2.8
Scilly (St. Mary's)	1027.0	47	NE	2	c	1026.4	0	40	-7	-	0	-	b	2	-	51	40	c.bc.c	c	c.bc.b	4.3
Jersey (St. Aubin)	1024.7	45	NE	3	b	1024.7	0	38	-5	NE	2	-	o	2	1	48	35	op.b	bc.b	b.o	2.1
Portland Bill ...	1025.4	41	NNE	4	bcm	1026.2	0	38	-2	NNE	4	-	bcm	4	-	45	35	bcm	bcm	bcm	*
Dungeness ...	1022.8	34	NNE	3	m	1023.1	-1	31	-1	N	3	-	b	3	-	38	31	f.bcm	c.bcm	b.bc	*
Wick	1025.4	33	W	2	bc	1024.6	-2	44	+11	S	4	-	bc	3	0.4	44	31	bq.ps	bc	bc.b.bc	*
Nairn	1025.6	38	-	0	bc	1024.6	*	35	-1	-	0	-	o	0	0.2	37	31	bc	bc	bcx.c.f	4.7
Leith	1026.7	39	SW	1	o	1025.6	0	39	+3	SW	1	-	dm	1	2	40	35	bm.c.o	o.c.o.o	odm.d	*
Tynemouth ...	1026.6	35	NW	2	bm	1026.5	0	38	+2	W	2	-	o	2	-	41	35	bm	bm	bm.om	*
Spurn Head ...	1024.9	40	NW	4	bm	1025.6	0	39	+3	NW	4	-	bc	3	-	42	33	f.bm	bm	b.bc	*
Yarmouth (Gorleston)	1023.6	37	NNW	2	b	1024.2	0	37	+3	N	2	-	bcm	1	1	41	28	bf.bcf	f.bc.bm	bm.bc	0.4
Clacton-on-Sea.	1024.4	34	NW	3	f	1024.2	0	34	+4	NW	3	-	bcmx	1	-	35	29	bcx.fe	fe	fm.bcx	0.0
Nottingham ...	1026.9	32	N	1	bf	1026.6	*	33	+1	SW	1	-	omx	*	-	40	31	fe	f.bx	bm	0.0

* Information for these columns not usually received. ‡ The barometric change is expressed in half millibars. § For code see page 3 † See footnote p.4.

M.O. FORM 2370

SUMMARY OF CONDITIONS AT 7 h. G.M.T. 10.12.1920.

Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Fine, frosty, local fog.	Poor	Smooth
2. E. England	Fair, misty, frosty.	Indiff.	V. Smooth
3. E. Midlands	Dull, frosty.	"	-
4. W. Midlands	Dull, foggy.	Dense fog.	-
5. S.W. England	Fine, frosty.	Good	Smooth
6. South Wales	Dull.	Excellt.	V. Smooth
7. North Wales	Dull, gloomy.	Good	Calm
8. N.W. England	Dull, foggy.	V. Bad	V. Smooth
9. N. Midlands	Cloudy, frosty.	Good	-
10. N.E. England	Fair to dull, misty.	Indiff.	Slight
11. E. Scotland	Dull, foggy.	Poor	Smooth
12. S.W. Scotland	Dull, misty.	"	V. Smooth
13. Isle of Man	Fair to dull, misty.	Fair	"
14. N.& N.W. Scotland	Fair to dull.	Indiff.	Smooth
15. Hebrides	Fair to showery.	Fair	"
16. Orkneys and Shetlands	Fair.	"	V. Smooth
17. N.W. Ireland	Fair.	Good	Smooth
18. N.E. Ireland	Fair, misty.	"	V. Smooth
19. S.E. Ireland	Fine, frosty.	Poor	"
20. S.W. Ireland	Fair.	V. Good	-

Temperature reported from Coastal and Cross Channel Steamers.

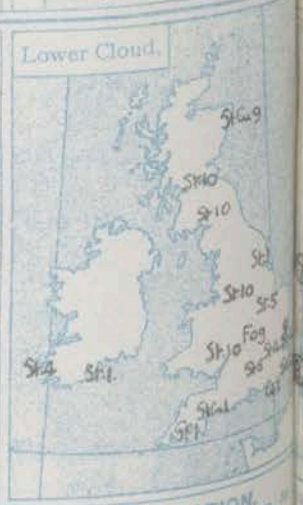
Position Number	Date	Time G.M.T.	Sea °F	Air °F
12.	9th	05.15	51.	44
5.	"	09.40	50	47
6.	"	14.45.	51	44
7.	10th	03.02	53	44
8.	"	05.12	49	44

Chart of Position Numbers and Upper Cloud

Isallobars.

Barometric change from 4 h. to 7 h. (half millibars).

Lower Cloud.



EXPLANATION.
BAROMETER.—Isobars are drawn at intervals of two millibars.
WIND.—Direction is shown by arrows flying with the wind. Force, on the scale 0-12, is indicated by the number of feathers. Mean velocity is shown in miles per hour by figures in small circles.
TEMPERATURE is given in degrees F.
WEATHER SYMBOLS.—clear sky. sky ¼ clouded. sky ½ clouded. sky ¾ clouded. overcast sky. rain falling. snow. sleet. hail. fog. mist. T thunder. ⚡ thunderstorm.
SEA DISTURBANCE.—Rough. High seas.

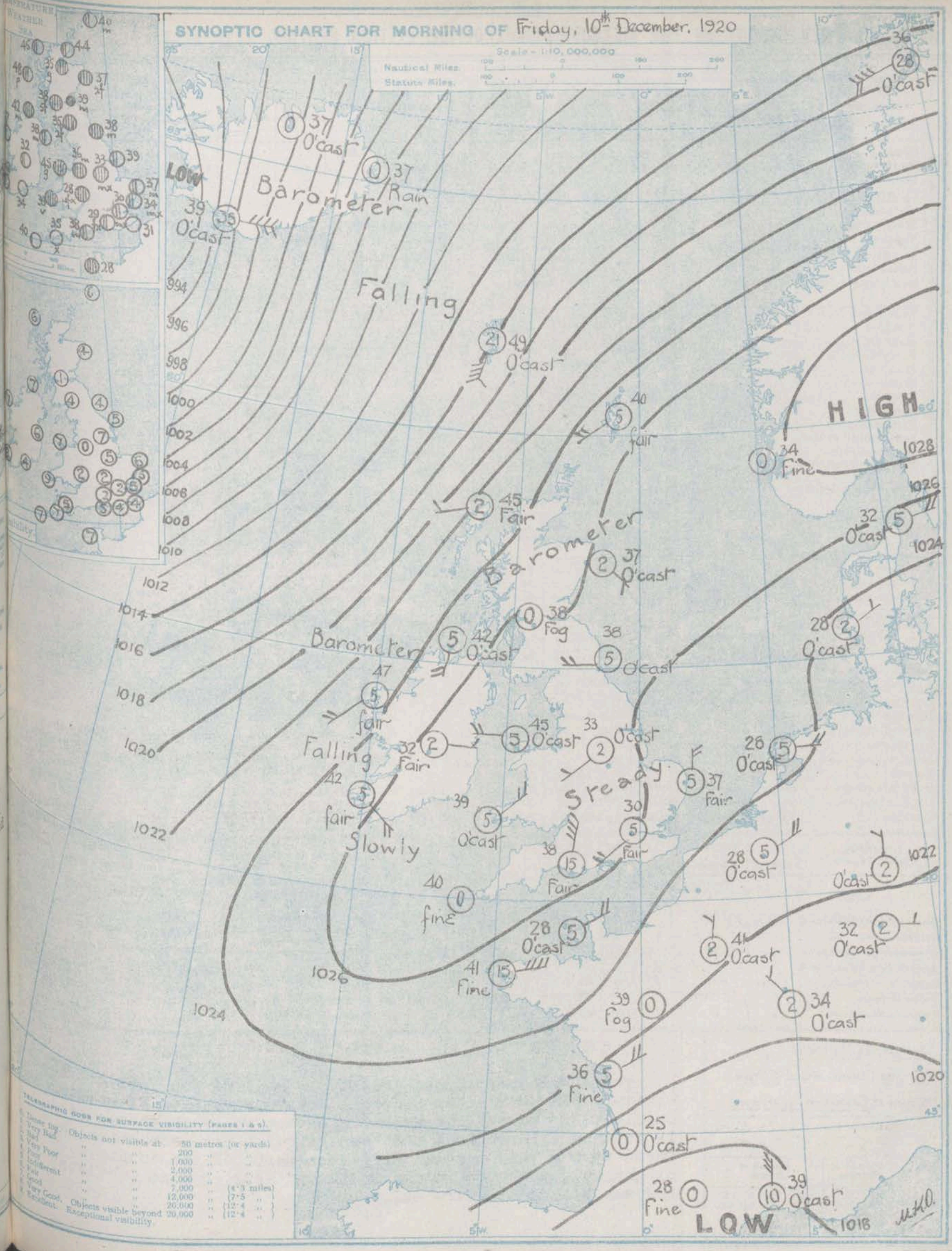
GENERAL INFERENCE from observations received up to 9h.

A ridge of high pressure that extends from Scilly to Southern Norway will cause fair cold weather with local fog over England for a day or two but in Scotland and Ireland somewhat milder and less settled weather is likely.

Districts.	Forecasts for the 24 hours commencing 15 h. G.M.T. Friday, 10th December, 1920.	Further Outlook.
1. S.E. England 2. E. England	Light to moderate North or North-East wind; fair, fog locally; cold with frost at night.	Fair and rather cold with local fog over England during the week-end.
3. E. Midlands 4. W. Midlands 5. S.W. England 6. South Wales 7. North Wales 8. N.W. England 9. N. Midlands 10. N.E. England 11. E. Scotland	Wind light and indefinite; fair, fog locally; cold with frost at night.	
12. S.W. Scotland 13. Isle of Man 14. N.& N.W. Scotland 15. Hebrides 16. Orkneys and Shetlands 17. N.W. Ireland	Light to moderate South-West wind; fair to dull, slight drizzle locally; visibility fair; moderate temperature.	
18. N.E. Ireland 19. S.E. Ireland 20. S.W. Ireland	Same as 3 - 11.	

E.V.N

Meteorological Office: Air Ministry, Kingsway, London, W.C.2. Forecasts issued at 09.30. G. C. SIMPSON, F.R.S., Director.


SYNOPTIC CHART FOR MORNING OF Friday, 10th December, 1920
Scale - 1:10,000,000
Nautical Miles.
Statute Miles.
LOW
Barometer
Falling
Slowly
Steady
HIGH
LOW
994
996
998
1000
1002
1004
1006
1008
1010
1012
1014
1016
1018
1020
1022
1024
1026
1028
TELEGRAPHIC CODE FOR SURFACE VISIBILITY (PAGES 1 & 5).
Dense fog. Objects not visible at 50 metres (or yards)
Very Bad " " 200 " "
Very Poor " " 1,000 " "
Indifferent " " 2,000 " "
Fair " " 4,000 " "
Good " " 7,000 " (4·3 miles)
Very Good. " " 12,000 " (7·5 "
Excellent. Objects visible beyond 20,000 " (12·4 "
Exceptional visibility.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 345

Friday, 10th December

WEATHER, TEMPERATURE, RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 9h

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 8h-9h	Rainfall. Day. 9h-18h. 9h	Sunshine. Sunrise to Sunset. 9h
Scotland.	Oban	o.c.	o	48	35	1	-	0.3
	Banff	b.	bx	42	29	-	-	5.2
	Montrose							
	St. Andrews							
England, N.E.	Harrogate	b	b	43	31	-	-	6.3
	Scarborough	b	b	45	31	-	-	5.0
	Skegness	x.m.b	b	40	26	-	-	3.6
England, E.	Lowestoft							
	Felixstowe	of	bf	35	30	-	-	0.0
	Southend-on-Sea	fx	c.bc b	34	25	-	-	0.3
England, S.E.	Tunbridge Wells	of.o.	o.c	37	29	-	-	0.0
	Margate	o	o	42	37	-	-	0.0
	Ramsgate	*	*	43	34	-	-	0.3
	Folkestone	mbx b	bc o	38	30	-	-	3.3
	Hastings	x.b.bc	bcm	39	31	0.2	-	4.6
	Eastbourne	bc	bc.c bc	40	30	-	-	4.4
	Brighton	b	b	40	32	-	-	4.2
	Worthing	b	bc o	40	31	-	-	4.2
	Littlehampton	bcmb	bcm	40	29	-	-	3.9
	Portsmouth (S'thsea)	*	*	44	34	-	-	3.6
	Bournemouth	*	*	43	31	-	-	0.0
	Ventnor (I. of W.)	*	*					

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 8h-9h	Rainfall. Day. 9h-18h. 9h	Sunshine. Sunrise to Sunset. 9h
England, N.W.	Douglas (I.O.M.)							0.0
	Blackpool	f o.c.	of	34	26	0.2	-	0.0
	Southport	f	of	33	28	0.2	-	
	Morecambe							
Midlands.	Buxton							0.0
	Leamington Spa	f	f	31	28	-	-	3.2
	Malvern	o.c.bc	bc.b	44	32	-	-	1.0
	Bath	m.o.c	b.bcc	41	30	-	-	
Wales.	Rhyl	bc.c.	bcc	45	32	0.2	-	2.8
	Colwyn Bay	*	*	45	36	3	-	1.5
	Llandudno	*	*	47	39	2	-	2.5
	Aberystwyth	o.c.b.	b.bc	47	34	-	-	7.0
	Tenby							
	Swansea							
England, S.W.	Weymouth	c.bc	bc b.	43	37	-	-	4.0
	Teignmouth							
	Torquay	bm	bm	46	40	-	-	5.9
	Paignton	bm	b	47	39	-	-	5.4
	Penzance	bc	bc	49	39	0.2	-	4.8
	Newquay	b	b	46	39	5	-	5.8
	Bude	wx bc	b	47	35	2	-	5.7
	Ilfracombe	oc.bc	bc.b bc	46	39	-	-	0.7
	Weston-s-Mare	mbc.b	b	44	32	-	-	5.0

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-13h. 9h	Weather. 13h-18h. 9h	Weather. 18h. 9h-11h. 10h	Weather. 1h-7h. 10h	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall.† Day. 7h-18h	Rainfall.† Night. 18h-7h	Sun. Hours.
								mm.	mm.	
Renfrew	bo.bc.o.o.s	f.o.f o.o.f.f.c	o.f.r.	o.o.f.f.p.o.	39	33	36	0.2	4	0.5
Eskdalemuir	b.bc.y.	bc.c.o	o.p.o.	p.o.o.c.f	40	32	31	-	3	4.1
Valencia (Cahirc'o)	b.bc	b.bc.c	b.bc	b.bcx	48	34	30	-	-	3.8
Baldonnel	b.bc	b.bc.f	b.bc.c.o	bc.cx	45	32	32	-	-	5.4
Manchester (Alex. Pk)	o.c.f	6.8fe	6.8fe	6.8fe	35	31	31	trace	-	*
Ross on Wye	co.o.f.o.f.b	b.z.f b.bc.z.f	bx	b.f.x.c.s.f.x	44	26	23	-	-	4.8
Falmouth	z.f.c.b.bc	if b.bc.if.c	bxc	bxc	48	34	27	-	-	6.1
Calshot (Hants)	3f.z.f	b.z.f	b.z.f	b.z.b.c.z.f	43	32	25	-	-	3.9
Lympne (Folkestone)	o.s.f.c.o.b.c.s.f	o.s.f o.s.f	c.o.b.b.c.s.f.w	c.o.b.b.c.s.f.c	36	31	29	-	-	2.0
Aberdeen	1fe.1f	1f.2fe	2fe.3fe	3fe.o.z.f	39	31	25	-	-	5.6
Howden	o.c.s.f.1f	b.bc.3f	x.b.bc	x.c.o	42	27	21	-	-	3.3
Cranwell (Lincs)	c.s.f.b.	b.bc	bx.	b.bc	37	29	29	0.1	-	4.7
Felixstowe	4.s.f 2fe	4.s.f 6.s.fe	4.5fe.x	3f.x	36	28	*	0.2	-	0.0
Shoeburyness	2f 4.s.f	3fe.2fe	1fe.x	1fe.x	34	27	27	0.1	0.1	0.0
Benson	3f 1.s.f	3f	3f.x	x.3f	32	24	19	-	-	*
S. Farnborough	o.s.f.c.o.s.f	b.bc.s.f.b.s.f.b	b.s.f	b.bc.s.f	38	24	20	-	trace	1.0
London (Kew Obsy.)	3f.w	b.bc.b.s.f.x	b.z.f.x	3f.x	41	30	22	-	-	0.3
Croydon	c.s.f.c.o.s.f.b	c.o.b.c.b.b.c.s.f.b	f.z.f.s.f.x	b.b.c.s.f.x	36	29	*	-	-	*

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, *i.e.*, rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:-
R = heavy rain.
rr = continuous moderate rain.
r.r. = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 30 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0·3
1	1- 3	0·3- 1·5
2	4- 7	1·6- 3·4
3	8-12	3·5- 5·4
4	13-18	5·5- 7·9
5	19-24	8·0-10·7
6	25-31	10·8-13·8
7	32-38	13·9-17·1
8	39-46	17·2-20·7
9	47-54	20·8-24·4
10	55-63	24·5-28·4
11	64-75	28·5-32·6
12	Above 75	32·6 or above

SYMBOLS

Aurora — Solar halo
Rime — Lunar halo
Glazed frost — Solar corona
Glazed roads — Lunar corona

LONDON. OBSERVATIONS.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Hours.	Humidity %. 15 h. G.M.T. Yesterday.	Humidity %. 9 h. G.M.T. To-day.
	24 HOURS ENDED 9h G.M.T. 10th									
Greenwich (Royal Observatory)	f.c.m	c3.b3	b3.x	38	32	26	-	0.0	84	87
City (Bunhill Row)	*	*	*	*	*	*	*	0.0	*	*
Westminster (St. James's Park)	*	*	*	42	31	28	-	0.0	75	82
Regent's Park (Botanical Grdns)	*	*	*	*	*	*	*	0.0	*	*
Camden Sq. (British Rainfall)	bcm	bc	*	39	32	26	-	*	83	89
Kensington Palace	0	c.b	*	40	28	25	-	*	81 (18h)	85
Hampstead Observatory	*	*	*	38	27	27	-	1.6	*	84

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday.

Total 147 Joules.

Milliwatts.

Average Rate. 5.2

Maximum Rate. 13

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

10th and 11th December, 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth	7.54 7.56	11.46 11.46	3.37 3.37
Greenwich	7.56 7.57	11.53 11.53	3.49 3.49
Wick	8.33 8.34	12.5 12.5	3.17 3.16
Valencia	8.40 8.41	12.34 12.34	4.36 4.37

Photographic Record of Pole Star (Polaris) and of δ Ursæ Minoris at Greenwich Observatory.

Exposure from 9th 17h. 0m. to 10th 6h. 45m.

Stars.	Duration of Exposure. h.	m.	Duration of Record. h.	m.	%
Polaris	13.	45	13.	15	96
δ Ursæ Minoris	13.	45	9.	24	68

NOTES ON THE WEATHER OF YESTERDAY.

There was sharp frost locally in England and Ireland, the minimum being 24° at Farnborough and Benson, and 27° at Birr Castle. There was not much fog except at Manchester, where it continued throughout the twenty-four hours. Sunshine records varied very much in different parts of the country. Slight rain occurred in the North and West, 5mm at Castlebay and 3mm at Eskdalemuir.

* Information for these columns not usually received.

† Trace = rain has fallen but amount less than 0·1 mm.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. No. B 2569 SATURDAY ... 11th ... DECEMBER ... 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H., 7H., 13H. AND 18H.

STATIONS.	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind. Direc.	Wind. Force 0-12.	Weather.	Temp. °F.	% Humidity.	§ Visibility 0-9.	Height of Low Cloud. Feet.	Low Cloud. Form.	Low Cloud. Amt. 0-10.	Upper Cloud. Form.	Upper Cloud. Amt. 0-10.	Sea 0-9.	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind. Direc.	Wind. Force 0-12.	Weather.	Temp. °F.	% Humidity.	§ Visibility 0-9.	Height of Low Cloud. Feet.	Low Cloud. Form.	Low Cloud. Amt. 0-10.	Upper Cloud. Form.	Upper Cloud. Amt. 0-10.	Sea 0-9.
	13H. G.M.T. 10th														18H. G.M.T. of 10th													
Renfrew	1026.4	-1	N	1	osfe	39	97	1	750	St	10	-	-	*	1026.9	+1	-	0	osf	39	97	1	750	St	10	-	-	*
Eskdalemuir	1026.4	0	-	0	od,m	37	97	3	1,250	Nb	10	-	-	*	1026.6	+1	-	0	ow d,	38	97	3	750	Nb	10	-	-	*
Valencia (Cahirc'n)	1024.4	-3	SSE	3	cy	45	75	9	3,000	St.Cu	8	-	-	4	1023.6	0	SE	3	bc	45	75	9	3,000	St.Cu	4	-	-	4
Baldonnel	1026.7	-1	W	1	c	39	85	8	-	-	-	A.Cu	8	*	1026.9	+1	-	0	b	33	92	5	-	-	-	A.St	2	*
Manchester (Nw.Pk)	1026.7	-1	SSE	1	osfe	35	97	1	<500	St	10	-	-	*	1026.7	0	SW	1	osfe	37	97	1	<500	St	10	-	-	*
Ross on Wye	1026.6	-1	-	0	o3f	34	97	2	750	St	9	A.St	1	*	1026.2	0	ENE	1	o4f	35	97	2	<500	St	10	-	-	*
Falmouth	1025.9	-3	NNE	1	c	46	75	7	-	-	-	A.Cu	8	*	1025.4	0	NE	2	b2f	38	85	5	-	-	-	-	-	*
Calshot (Hants)	1025.2	-2	N	2	b2f	41	85	4	-	-	-	Ci	1	1	1025.5	+1	NNE	2	b3f	37	86	3	-	-	-	-	-	1
Lympne (Folkestone)	1023.4	0	N	4	bc2f	39	85	4	3,000	St.Cu	4	-	-	*	1025.3	+2	E	4	bcnw	34	85	6	750	St	6	-	-	*
Aberdeen	1026.2	0	SSW	1	b3fe	40	85	3	-	-	-	-	-	2	1026.8	+1	SSW	1	o3f	41	85	3	3,000	St.Cu	10	-	-	2
Howden	1026.1	-2	-	0	c	39	92	5	3,000	St	6	-	-	*	1026.3	0	-	0	bcnw	32	97	3	2,000	St	2	-	-	*
Cranwell (Linco)	1026.2	-1	NW	3	b2f	38	92	4	4,200	St	1	Ci.St	1	*	1026.2	0	N	3	b2f	34	97	4	5,700	St.Cu	2	-	-	*
Felixstowe	1024.5	-2	NNW	3	bc	41	85	6	5,200	St.Cu	6	-	-	0	1026.2	+2	ENE	3	o1f	37	88	6	5,700	St.Cu	10	-	-	2
Shoeburyness	1024.3	-1	N	2	b1fe	40	75	6	-	-	-	A.Cu	2	*	1025.1	+2	E	1	o2fe	38	75	5	2,000	St	3	A.Cu	6	*
Benson	1025.3	-2	-	0	b2f	33	97	3	-	-	-	-	-	*	1025.8	0	-	0	b	28	97	3	-	-	-	-	-	*
S. Farnborough	1025.7	+2	WNW	1	b3f	36	92	3	-	-	-	-	-	*	1025.5	0	-	0	b2fe	30	97	4	-	-	-	-	-	*
London (Kew Obsy.)	1025.0	-3	N	2	b3f	39	85	3	~~<500~~	~~St~~	~~10~~	-	-	*	1025.4	+1	NE	2	bz	37	85	3	-	-	-	-	-	*
Croydon	1025.5	-2	-	0	bx3f	33	92	2	-	-	-	-	-	*	1025.8	0	WSW	1	od,4f	33	97	2	<500	St	10	-	-	*
	1H. G.M.T. of 11th														7H. G.M.T. of 11th													
Renfrew															1027.4	0	ESE	1	o3f	39	97	2	1,250	St.	10	-	-	*
Eskdalemuir	1027.0	0	-	0	c	36	92	5	2,000	St.Cu	8 ~~6~~	~~A.St~~		*	1028.1	0	NE	1	o	~~32~~	92	7	-	St.Cu	9	-	-	*
Valencia (Cahirc'n)	1023.0	0	SE	3	bc	43	*	*	*	*	*	*	*	0	1022.9	0	SE	3	b	45	75	8	2,000	Cu	3	-	-	*
Baldonnel	1023.3	-1	-	0	bc	31	92	6	-	-	-	A.St.	3	*	1024.9	-1	-	0	o2f	39	85	5	2,000	St.	10	-	-	*
Manchester (Nw.Pk)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1025.7	0	N	2	o3f	35	85	3	3,000	St.Cu	6	A.Cu	4	*
Ross on Wye	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1024.7	-1	ENE	1	o4fbc	32	97	2	<500	St.	10	-	-	*
Falmouth	1024.5	-1	N	1	0	40	85	7	-	St.	10	-	-	*	1022.9	-2	NE	2	0	42	85	6	-	St.	10	-	-	*
Calshot (Hants)	1024.4	0	NNE	2	o2f	36	85	4	3,000	St.	10	-	-	1	1023.4	-2	NNW	3	0	34	88	7	1,250	St.	10	-	-	1
Lympne (Folkestone)	1024.7	0	-	0	o1f	31	86	6	750	St.	10	-	-	*	1023.6	+2	N	1	o1f	28	92	6	750	St.	10	-	-	*
Aberdeen	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1028.3	+1	S	2	o2f	41	75	5	3,000	St.Cu	9	-	-	2
Howden	1026.6	0	-	0	c3fe	34	97	3	750	St.	8	-	-	*	1025.8	-1	ENE	1	b1f	33	97	4	3,000	St.	10	-	-	*
Cranwell (Linco)	1026.0	0	N	2	bc2,	33	97	4	2,000	Nb	5	-	-	*	1025.0	0	NNE	3	0	33	97	5	3,000	St.Cu	9	-	-	*
Felixstowe	1025.3	-1	NSW	2	0	36	85	6	-	-	-	A.St	10	1	1023.0	-2	NW	3	o6o	33	85	6	4,200	St.	10	-	-	2
Shoeburyness	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1022.7	-3	-	0	o2c	32	75	6	4,200	Cu	6	A.St	3	*
Benson	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1022.8	-2	-	0	o4fbc	31	97	2	-	St.	10	-	-	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1023.5	-3	WNW	1	o3fbc	31	92	2	750	St.	10	-	-	*
London (M.O. at 1H.)	1025.1	0	*	*	*	34	*	*	*	*	*	*	*	*	1023.3	-3	W	2	o3f	34	85	3	2,000	St.	10	-	-	*
Croydon	1025.5	0	S	1	o1fbc	32	85	6						*	1024.3	-1	SW	1	o2fbc5,	32	92	4	1,250	St.	9	A.St	1	*

STATIONS CONTRIBUTING REPORTS AT 7H. AND 13H.

STATIONS.	Barom. at M.S.L. mb.	Temp. °F.	Wind. Direc.	Wind. Force 0-12.	Weather.	Barometer. at M.S.L. mb.	‡ Change in 3 hours.	Temperature. Temp. °F.	Temperature. Change in 24 hours.	Wind. Direc.	Wind. Force 0-12.	Direc. of Upper Cloud.	Weather.	Sea 0-9.	† Rainfall mm.	Temp. Max. °F.	Temp. Min. °F.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Sunshine Hours.
	18H. G.M.T. of 10th					7H. G.M.T. of 11th									24 HOURS ENDED 7H. 11th						10th
Lerwick																		bc	bcp		*
Stornoway	1025.9	45	S	3	o4,23f																
Castlebay (Barra Is)	1023.8	46	S	1	o	1025.1	+1	43	-2	S	1	-	bc	7	trace	48	42	bc.c	c.o	o.bc	0.0
Malin Head	1024.0	49	WSW	4	o	1024.7	0	48	0	SSE	3	-	c	3	-	49	46	c.op	op.o	oc.bc	0.1
Blacksod Point	1024.2	41	SSW	2	b	1024.2	0	37	-6	S	2	E	bc	2	-	45	35	bc	c	b	0.2
Roche's Point	1022.4	44	SE	3	bc	1021.6	0	42	-5	SE	2	-	bc	2	-	48	40	bc	bc	bc	*
Birr Castle	1025.6	47	ESE	2	b	1023.9	-1	~~44~~ 45	+10	SE	2	-	r	2	1	48	34	bm.cm	cm.b	b.or	*
Donaghadee	1025.5	38	SW	1	c	1024.2	*	37	+8	W	1	-	o	*	-	42	30	bc	c.o.c	cxc.o	6.2
Liverpool (Bidston)	1025.3	41	W	1	om	1024.3	-1	44	+6	S	2	-	omr	1	1	45	37	cm	cm	bf.omq	*
Holyhead	1026.2	39	SE	1	r	1025.6	0	36	-1	ESE	2	-	bm	2	1	40	34	ogd	ogd	o.bm	0.0
Pembroke (St. Ann's Head)	1026.0	45	-	0	c3f	1024.3	0	42	-3	E	3	-	cg	2	1	49	41	o.c.bc	o.cpm	c.odm	0.3
Scilly (St. Mary's)	1026.1	41	N	1	o	1023.6	-2	41	+2	SE	3	-	odm	2	1	43	38	o	o	ov.odm	0.0
Jersey (St. Aubin)	1025.4	44	E	1	bc	1022.4	-2	45	+5	ESE	1	E	o	2	-	48	40	bc.cm	c.bc	bc.b.o	5.3
Portland Bill	1023.8	43	NE	2	b	1022.3	0	37	?-1	ENE	4	E	c	3	-	46	38	o.c.o	o.cb	bc	0.2
Dungeness	1025.7	39	NNE	3	bm	1022.7	-4	38	0	ENE	4	-	bcm	4	-	43	35	bcm	bm	bm.bcm	*
Wick	1024.0	37	ENE	3	b	1022.9	-2	30	-1	NE	3	NE	bc	3	2	41	29	b.bc	cp.bc	c.bc	*
Nairn	1024.7	44	S	2	c	1025.6	0	44	0	S	3	-	bc	2	-	45	42	bc	c	c.o.bc	*
Leith	1025.4	37	-	0	c	1026.2	*	38	+3	-	0	-	ogm	0	0.2	39	34	cm.c	c.bc.cm	cgm	1.6
Tynemouth	1026.1	42	ENE	1	r	1028.8	0	37	-2	SE	1	-	o	1	1	42	35	d.m.o	odm	d.o.o.o	*
Spurn Head	1026.5	39	NNE	1	b2f	1028.8	0	41	+3	ENE	2	-	o	3	0.2	42	37	bcm	bcm	cm.c	*
Yarmouth (Gorleston)	1024.9	42	NW	2	bc	1024.7	0	39	0	ENE	2	-	opv	2	1	43	32	cp.bc	bc	bcv.op	*
Clacton-on-Sea	1025.2	39	SSE	3	c	1022.2	-3	38	+1	NE	6	-	cqp	3	2	44	32	bcp.cm	c	osm.cv	2.4
Nottingham	1025.5	38	E	3	o	1022.8	-3	32	-2	NW	3	-	cm	1	1	42	31	bcmz	bcz.op	ov.cps	5.4
	1026.2	*	SSE	1	b	1024.8	*	36	+3	NE	3	NE	o	x	-	41	31	of	of.c.	bc.om	0.0

* Information for these columns not usually received. ‡ The barometric change is expressed in half millibars. § For code see page 3. † See footnote p. 4.

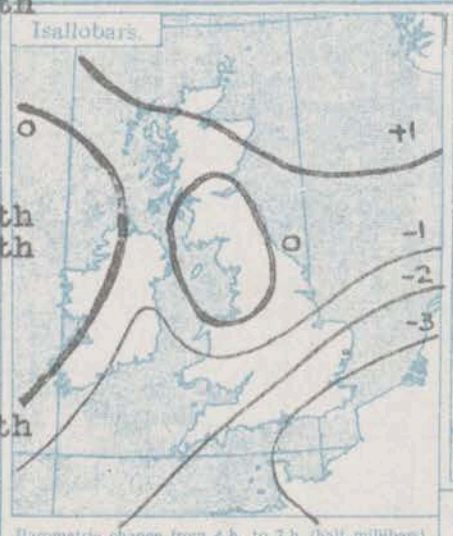
M.O. FORM 2370.

SUMMARY OF CONDITIONS AT 7 h. G.M.T. 11.12.20.

Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Dull, foggy, frost slight snow.	Indif.	Smooth
2. E. England	Squally, slight snow.	Fair.	Smooth
3. E. Midlands	Dull.	Indif.	-
4. W. Midlands	Dull, misty.	V. Poor	-
5. S.W. England	Fair to dull, misty.	Fair.	Smooth
6. South Wales	Dull misty drizzle.	Fair.	Smooth
7. North Wales	Cloudy, squally.	Good.	V. Smooth
8. N.W. England	Dull, misty.	Poor.	V. Smooth
9. N. Midlands	Dull, misty.	Poor.	-
10. N.E. England	Dull showery.	V. Good	Smooth
11. E. Scotland	Dull, foggy, gloomy.	Indif.	Smooth
12. S.W. Scotland	Dull.	Good.	Smooth
13. Isle of Man	Overcast.	Fair.	V. Smooth
14. N. & N.W. Scotland	Fair to dull.	Indif.	V. Smooth
15. Hebrides	Fair to dull.	Good.	Slight
16. Orkneys and Shetlands	- - -	-	-
17. N.W. Ireland	Fair.	Good.	Smooth
18. N.E. Ireland	Dull, misty, rainy.	Fair.	V. Smooth
19. S.E. Ireland	Dull, misty, rain locally.	Fair.	Smooth
20. S.W. Ireland	Fine.	V. Good	-

Temperature reported from Coastal and Cross Channel Steamers.

Position Number.	Date	Time G.M.T.	Sea °F.	Air °F.
5	10th	0854	51	46
1	10th	1222	54	45
7	11th	0867	50	40



Barometric change from 4 h. to 7 h. (half millibars).

EXPLANATION.
BAROMETER.—Isobars are drawn at intervals of two millibars.
WIND.—Direction is shown by arrows flying with the wind. Force, on the scale 0-12, is indicated by the number of feathers. Mean velocity is shown in miles per hour by figures in small circles.
TEMPERATURE is given in degrees F.
WEATHER SYMBOLS.—
clear sky. sky ¼ clouded. sky ½ clouded. sky ¾ clouded. overcast sky. rain. snow. sleet. hail. fog. mist. thunder. thunderstorm.
SEA DISTURBANCE.—Rough. High seas.

GENERAL INFERENCE from observations received up to 9h. G.M.T.

A large anticyclone extending over the British Isles from Scandinavia will maintain cold weather and winds from between North-East and East over England, but in Ireland and Scotland the wind is likely to be South-East or South and the temperature more moderate. Slight showers may be expected - of snow, sleet or rain in the South-East and East and of rain in the South-West and West.

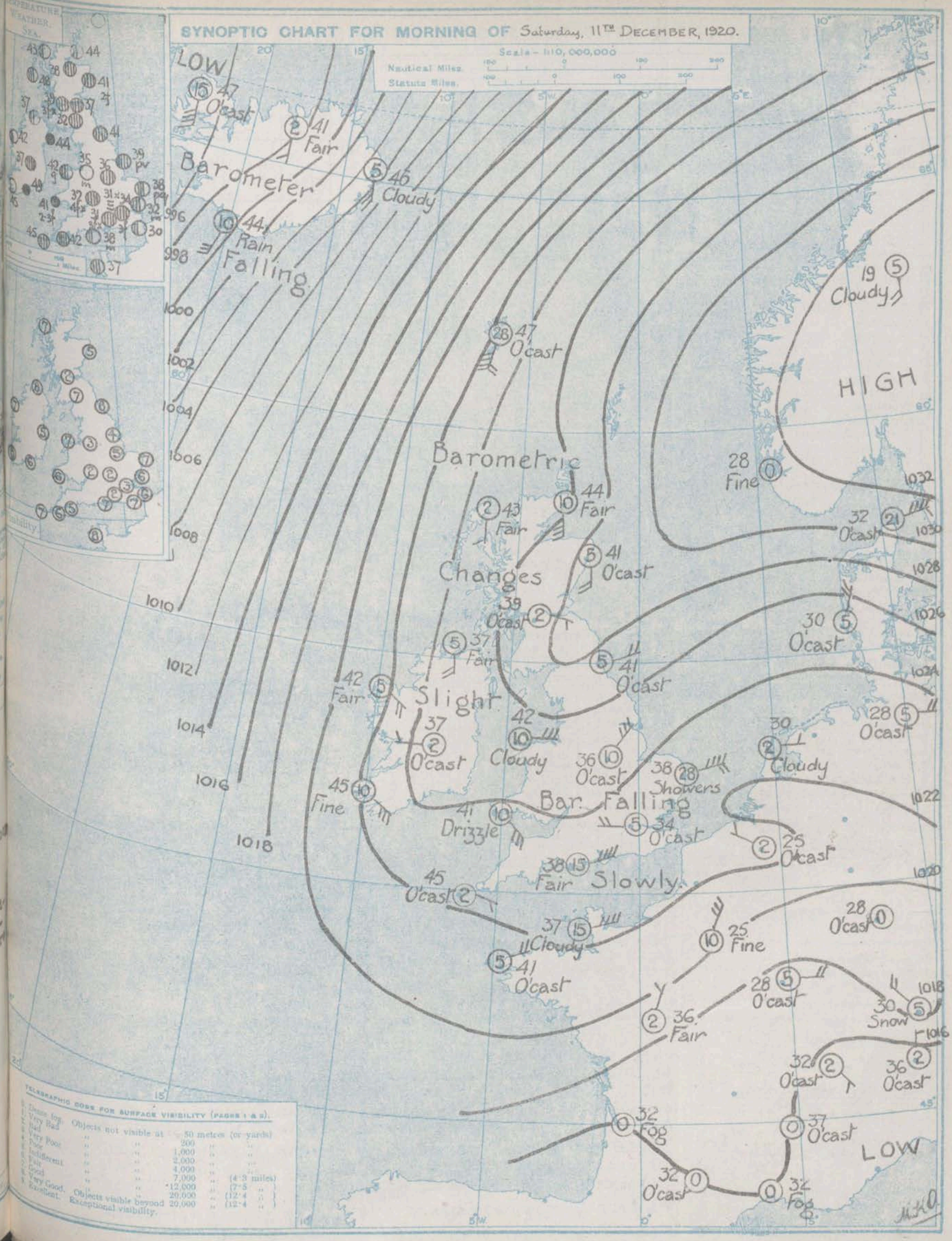
Districts.	Forecasts for the 24 hours commencing 15h. G.M.T. Saturday 11th December 1920.
1. S.E. England 2. E. England 3. E. Midlands 4. W. Midlands	Wind light or moderate North-East or East; much cloud generally, some slight showers of rain, sleet or snow. Mist locally; visibility indifferent to fair; continuing cold.
5. S.W. England 6. South Wales 7. North Wales 8. N.W. England	Wind mainly East, light, cloudy or overcast, some slight rain showers, fairer intervals. Visibility mainly fair. Little change of temperature.
9. N. Midlands 10. N.E. England	Same as 1 - 4.
11. E. Scotland 12. S.W. Scotland 13. Isle of Man 14. N. & N.W. Scotland 15. Hebrides	Wind South-East or South, light; mainly fair or cloudy, but slight local showers. Visibility fair generally. Little change of temperature.
16. Orkneys and Shetlands	Wind S, moderate. Fair. Moderate temperature.
17. N.W. Ireland 18. N.E. Ireland 19. S.E. Ireland 20. S.W. Ireland	Same as 11 - 15.

Further Outlook.

Continuing cold over England with some tendency for sleet or snow showers. Mainly fair in Ireland and Scotland, with a moderate temperature.

R.S.

Meteorological Office: Air Ministry, Kingsway, London, W.C.2. Forecasts issued at 09.30. G. C. SIMPSON, F.R.S., Director.


SYNOPTIC CHART FOR MORNING OF Saturday, 11TH DECEMBER, 1920.
Scale – 1:10,000,000
Nautical Miles
Statute Miles
LOW
Barometer
Falling
Barometric
Changes
Slight
Bar. Falling
Slowly.
HIGH
LOW
TELEGRAPHIC CODE FOR SURFACE VISIBILITY (PAGES 1 & 2).
0 Dense fog. Objects not visible at 50 metres (or yards)
1 Very Bad " " 200 " "
2 Bad " " 1,000 " "
3 Very Poor " " 2,000 " "
4 Poor " " 4,000 " "
5 Indifferent " " 7,000 " (4·3 miles)
6 Fair " " 12,000 " (7·5 ")
7 Good " " 20,000 " (12·4 ")
8 Very Good. Objects visible beyond 20,000 " (12·4 ")
9 Excellent. Exceptional visibility.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 346.

Saturday 11th Dec. 1920

WEATHER, TEMPERATURE, RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 10th

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 9th-10th	Rainfall. Day. 9h-18h. 10th	Sunshine. Sunrise to Sunset. 10th
Scotland.	Oban	od.	o	48	40	6	1	0.0
	Banff	c. bc	c. or	39	29	-	?	2.9
	Montrose							
	St. Andrews	o	f	41	30	-	-	0.0
England, N.E.	Harrogate	o	o	39	33	-	-	0.0
	Scarborough	b	b	45	37	-	0.3	2.3
	Skegness	c. bcp	cp. b	43	34	2	0.4	4.3
England, E.	Lowestoft							
	Felixstowe	bom	om	42	22	-	-	4.4
	Southend-on-Sea	mx. bc	bc. ero	42	28	Trace	1	5.1
England, S.E.	Tunbridge Wells	bc	bc. cs	41	28	-	-	1.5
	Margate	b.bcc	ohqt	43	37	-	5	1.5
	Ramsgate	*	*	44	36	-	3	0.9
	Folkestone	x.b.bcc	oghc	42	30	-	2	4.0
	Hastings	xc bc	b bc. od	42	34	0.2	0.1	5.0
	Eastbourne	c. bc	bc. c. o	41	34	-	-	4.1
	Brighton	bf	bf	40	32	-	-	2.6
	Worthing	bc	bcc	42	32	-	-	2.0
	Littlehampton	bom	bom	40	33	-	-	2.0
	Portsmouth (S'thsea)	*	*	42	33	-	-	4.2
	Bournemouth	*	*	41	29	-	-	4.2
	Ventnor (I. of W.)	*	*					
England, N.W.	Douglas (I.O.M.)							
	Blackpool	o	me	38	28	0.4	1	0.0
	Southport	ofe. o	om	38	27	0.2	0.2	0.0
	Morecambe	*	*	40	30	1	1	0.0
Midlands.	Buxton							0.0
	Leamington Spa	o	omfe	36	26	-	-	0.0
	Malvern	o	o	39	28	-	-	0.0
	Bath	cm. o	m. o	38	29	-	-	0.0
Wales.	Rhyl	c	d	43	32	-	1	0.0
	Colwyn Bay	*	*	45	36	1	1	0.0
	Llandudno	*	*	46	36	1	0.1	0.0
	Aberystwyth	o.c	c. o	44	33	-	-	
	Tenby							
	Swansea							2.5
England, S.W.	Weymouth	y.c.bc	bc b	42	33	-	-	
	Teignmouth							3.6
	Torquay	x. bom	bc b. bc	44	34	-	-	4.6
	Paignton	bom. b	bm. o	47	32	-	-	3.0
	Penzance	bc	bc. c	47	33	-	-	2.2
	Newquay	bx. o	o. b	44	31	-	-	1.9
	Bude	ox. b.	c. bc. c	40	28	-	-	1.3
	Ilfracombe	o. c bc	bc. c. o	43	35	-	-	
	Weston-s-Mare							

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-13h. 10th	Weather. 13h-18h. 10th	Weather. 18h-1h. 10th-11th	Weather. 1h-7h. 11th	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall.† Day. 7h-18h. mm.	Rainfall.† Night. 18h-7h. mm.	Sun. Hours.
Renfrew	o-sfeo osfe	o-sf oxef	o4-sf o3f	o3f. r0	40	36	38	0.2	1	0.0
Eskdalemuir	dr0	2fe d. d0	o2f. c. o	c. o	38	32	30	1	0.2	0.0
Valencia (Cahirc'n)	bc. o. o	v. bc c	bcc. b bc	b. bc	48	40	39	-	-	0.0
Baldonnel	1f. bc c.	b bc 2f	bx	b. o x	41	28	18	-	0.1	0.4
Manchester (Alex. Park)	4-sfe	4-sfe	4-sfe.	o4-sf bc oof	37	27	23	0.1	trace	*
Ross on Wye	o-sf o3f	o3f. o4-sf	o2-sf o6-sf	o4-sf. x	36	28	27	0.1	0.1	0.0
Falmouth	1fe. bc. c	b. bc	o	o	46	34	32	-	-	3.2
Calshot (Hants)	co3f. bbc 2f	b2f	o2f. o bc. b	o1f. o2f	42	32	28	-	-	3.9
Lympne (Folkestone)	x o2f bc o2f	b. c o2f b bc. o	o1f. w	o1f	40	27	21	o4	-	5.0
Aberdeen	2fe 3fe	3fe. o3f	o3f	po. o2f	41	35	27	-	0.2	2.6
Howden	1fe. c. o	2fe x	x. 4-sf	o2f. e	40	26	19	-	-	2.0
Cranwell (Lincs)	3f. 2f	b. bc	bxc.	b. o	39	31	29	trace	trace	5.7
Felixstowe	b bc 1f	c. o o4f	o. o1f	o1f. S0 S0	43	33	*	0.1	0.4	4.3
Shoeburyness	x. b bc	p d0 2fe	o x c	o x c	41	31	28	0.3	-	5.0
Benson	3f b	b	b. x c	x. S0 S0	35	26	20	-	1	
S. Farnborough	b bc r-sf x	b bc 3fe	b. bc	bc. c o2f	38	30	25	0.2	-	3.7
London (Kew Obsy.)	x. 3f	3f x	b3f. o2f	o2f. o3f	41	30	25	trace	trace	1.8
Croydon	b 3f x	bo-sf x x	bo-sf o-fc p d0 r0 r0	o1f o2f c S0	35	29	*	trace	0.3	*

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, i.e., rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:-
R = heavy rain.
rr = continuous moderate rain.
r.r. = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 30 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0·3
1	1- 3	0·3- 1·5
2	4- 7	1·6- 3·4
3	8-12	3·5- 5·4
4	13-18	5·5- 7·9
5	19-24	8·0-10·7
6	25-31	10·8-13·8
7	32-38	13·9-17·1
8	39-46	17·2-20·7
9	47-54	20·8-24·4
10	55-63	24·5-28·4
11	64-75	28·5-32·6
12	Above 75	32·7 or above

SYMBOLS—
Aurora — Solar halo
Rime — Lunar halo
Glazed frost — Solar corona
Glazed roads — Lunar corona

LONDON OBSERVATIONS.

24 HOURS ENDED 9h G.M.T. 11th

	Morning.	Weather. Afternoon.	Weather. Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Hours. Yesterday.	Humidity % 15 h. G.M.T. Yesterday.	Humidity % 9 h. G.M.T. To-day.
Greenwich (Royal Observatory)	b3	b3 o. or	or o r5 fe o	40	32	30	-	0.4	86	79
City (Bunhill Row)	*	*	*	*	*	*	*	0.8	*	*
Westminster (St. James's Park)	*	*	x	43	34	30	0.3	0.2	77	7
Regent's Park (Botanical Gdns)	*	*	x	*	*	*	*	3.2	*	*
Camden Sq. (British Rainfall)	b3. b	b. c	*	42	34	28	-	*	81	95
Kensington Palace	c	c	*	42	31	26	0.3	*	93 (18h)	90
Hampstead Observatory	*	*	*	40	32	30	0.3	5.0	*	70

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday

Total 129 Joules.

Milliwatts.
Average Rate. 4.5
Maximum Rate. 12

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

11th & 12th DECEMBER 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth	7.06 / 7.07	11.56 / 11.57	3.51 / 3.50
Greenwich	7.58 / 7.58	11.53 / 11.52	3.47 / 3.46
Wick	8.34 / 8.35	12.6 / 12.6	3.16 / 3.17
Valencia	8.41 / 8.42	12.24 / 12.25	3.34 / 3.34

Photographic Record of Pole Star (Polaris) and of 3 Ursae Minoris at Greenwich Observatory.

Exposure from 10th 17 h. 0 m. to 11th 6 h. 45 m.

Star	Duration of Exposure. h.	m.	Location of Record. h.	m.	s.
Polaris	13.	43	7	23	15
3 Ursae Minoris	13.	45	0	56	7

NOTES ON THE WEATHER OF YESTERDAY.

Temperature remained below 40° in some inland parts of Gt. Britain, only reaching 35° at Benson and Croydon, but rose to above 45° at many western stations. Frost occurred at night over a large area in England and at Baldonnel. Slight showers of rain fell in the West and North and of rain or snow, in the South-East and East. Several hours of bright sunshine were recorded on the East and South coasts of England and as much as 6.2 hours at Birr Castle; elsewhere there was little or none.

* Information for these columns not usually received.

† Trace = rain has fallen but amount less than 0·1 mm.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. No. B21570 SUNDAY 12TH DECEMBER 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

STATIONS.	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind. Direc.	Wind. Force 0-12.	Weather	Temp. °F.	Humidity. %	§ Visibility 0-9.	Height of Low Cloud. Feet.	Low Cloud. Form	Low Cloud. Amt. 0-10	Upper Cloud. Form	Upper Cloud. Amt. 0-10.	Sea 0-9.	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind. Direc.	Wind. Force 0-12.	Weather	Temp. °F.	Humidity. %	§ Visibility. 0-9.	Height of Low Cloud. Feet.	Low Cloud. Form	Low Cloud. Amt. 0-10	Upper Cloud. Form	Upper Cloud. Amt. 0-10.	Sea 0-9.
	13H. G.M.T. 11TH														18H. G.M.T. OF 11TH													
Renfrew																												
Eskdalemuir	1027.6	-3	NNE	1	03f	37	85	2	1250	St	5	A.Cu	4	*	1027.4	0	ENE	3	03f	38	92	3	2000	StCu	10	-	-	*
Valencia (Cahirc'n)	1027.2	-2	NE	2	c	34	85	7	5700	StCu	8	·	·	*	1026.3	0	NE	3	0	34	92	6	-	StCu	10	-	-	*
Baldonnel	1021.5	-1	E	3	c	47	75	8	4200	StCu	8	-	-	4	1021.8	0	-	0	0	46	85	8	5700	StCu	10	-	-	4
Manchester (Ales'n)	1024.3	0	ESE	2	od.	40	92	6	1250	Nb	7	A.St	3	*	1024.2	0	-	0	c	38	75	5	1250	StCu	8	-	-	*
Ross on Wye	1023.9	-3	N	2	03f	38	85	8	2000	St.	9	-	-	*	1022.8	-1	NE	4	0f.m	37	85	3	2000	St	10	-	-	*
Falmouth	1022.5	-3	NNE	2	02f	37	85	4	2000	St	10	-	-	*	1020.8	-2	NE	3	02f	36	85	4	750	St	10	-	-	*
Calshot (Hants)	1021.4	-2	NE	3	01f	41	78	6	-	Cu N.	9	-	-	*	1020.5	-2	NNE	2	02f	37	75	4	-	St	10	-	-	*
Lympne (Folkestone)	1020.6	-4	N	3	03f	36	85	3	750	St	4	A.Cu	5	2	1018.4	-2	N	3	01f	36	85	6	2000	St	10	-	-	2
Aberdeen	1018.7	-4	NNW	3	02f	33	92	5	750	St	10	-	-	*	1018.5	0	SE	4	bcm	31	85	6	750	StCu	6	-	-	*
Howden	1028.9	0	E	4	c	40	65	8	2000	StCu	8	-	-	3	1029.0	0	ESE	4	0f.s.	38	97	6	1250	Nb	10	-	-	4
Cranwell (Lincs)	1022.5	-4	NE	3	c	37	92	7	1250	StCu	8	-	-	*	1022.6	-1	ENE	3	0	34	97	7	1250	StCu	9	-	-	*
Felixstowe	1022.4	-4	NNE	3	c	34	97	5	2000	StCu	8	-	-		1021.3	-1	NNE	3	0	32	97	5	2000	St	10			
Shoeburyness	1020.1	-3	N	3	oh	33	97	3	750	Nb	10	-	-	*	1018.8	-1	N	1	0	32	97	3	750	Nb	10	-	-	9
Benson	1019.6	-3	NE	2	0	35	85	6	2000	StCu	10	-	-	*	1018.3	-1	-	0	0	33	85	6	1250	St	10	-	-	*
S. Farnborough	1021.3	-3	NNE	1	0	34	92	4	-	StCu	10	-	-	*	1018.9	-1	NNE	3	0	34	92	4	-	St	10	-	-	*
London (Kew Obsy.)	1021.0	-4	NNW	1	02f	36	97	5	2000	St	10	-	-	*	1018.5	-2	NNW	1	0s.	40	97	5	2000	Nb	10	-	-	*
Croydon	1020.1	-4	N	3	0f.2f	37	85	4	2000	StCu	7	A St	3	*	1018.4	-3	N	2	02f	36	85	4	2000	StCu	10	-	-	*
	1020.8	-3	NNE	3	02f	36	85	3	750	St	10	-	-	*	1019.0	-2	E	3	0f.s.2f	32	85	5	750	St	10	-	-	*
	1H. G.M.T. OF 12TH														7H. G.M.T. OF 12TH													
Renfrew																												
Eskdalemuir															1025.7	0	NE	3	02f	35	92	4	2,000	St	10	-	-	*
Valencia (Cahirc'n)	1024.9	-1	NE	3	0s.	33	85	6	-	Nb	6	a St	4	*	1025.2	0	NE	2	5c	28	92	7	-	St	7	-	-	*
Baldonnel	1022.1	0	ESE	1	or	42	*	*	*	*	*	*	*	1	1021.4	0	ENE	2	0	39	65	8	5,700	St	8	a St	2	*
Manchester (Ales'n)	1023.0	-1	-	0	02f	37	85	4	2500	St	10	-	-	*	1022.1	-1	E	1	0	32	85	6	1,250	St	9	-	-	*
Ross on Wye	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1020.3	-1	NNE	4	0s.	31	92	3	3,000	Nb	10	-	-	*
Falmouth	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1019.2	0	E	3	02f	30	92	5	1,250	St	10	-	-	*
Calshot (Hants)	1018.1	-3	NNE	1	0	33	85	4	-	St	10	-	-	*	1017.6	-1	NNE	3	bcm	34	75	7	-	StCu	4	-	-	*
Lympne (Folkestone)	1017.1	-2	NE	3	01f	33	97	7	1,250	St	10	-	-	2	1017.6	0	NNE	3	01f	30	85	7	3,000	St	10	-	-	2
Aberdeen	1018.2	0	SSE	4	bm	27	85	6	750	St	1	-	-	*	1018.7	+1	ENE	1	bcm	26	92	5	750	St	6	-	-	*
Howden	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1027.7	0	SE	5	01f	40	65	7	2,000	StCu	10	-	-	4
Cranwell (Lincs)	1021.3	-2	ENE	1	03m	32	97	4	1,250	Nb	10	-	-	*	1020.9	0	ENE	1	0	31	85	6	3,000	StCu	10	-	-	*
Felixstowe	1020.7	-0	E	2	bc	29	97	5	2,000	St	4	-	-	*	1020.7	0	NE	2	c	27	97	5	3,000	StCu	7	-	-	*
Shoeburyness	1019.6	0	ESE	4	0	30	97	3	760	Nb	10	-	-	2	1019.4	0	NW	2	0	28	97	3	1,250	Nb	10	-	-	1
Benson	*	*	*	*	*	*	*	*	*	*	*	*	-	*	1018.8	0	-	0	cx	27	75	7	3,000	SCu	2	aCu	5	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1018.5	0	NE	2	0	27	85	5	-	St	10	-	-	*
London (M.O. at 1H.)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1018.7	0	WNW	1	cm	24	97	4	3,000	StCu	8	-	-	*
Croydon	1018.4	+1	*	*	*	28	*	*	*	*	*	*	*	*	1019.0	0	-	0	0	28	85	5	2,000	St	10	-	-	*
	1019.5	-0	SE	2	bf	24	92	6	-	-	-	Ci	1	*	1019.6	0	E	3	0s. 3f	25	85	3	750	Nb	10	-	-	*

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

STATIONS.	Barom. at M.S.L. mb.	Temp. °F.	Wind. Direc.	Wind. Force 0-12.	Weather.	Barometer. at M.S.L. mb.	‡ Change in 3 hours.	Temperature. Temp. °F.	Temperature. Change in 24 hours.	Wind. Direc.	Wind. Force 0-12.	Direc. of Upper Cloud.	Weather.	Sea 0-9.	† Rainfall mm.	Temp. Max. °F.	Temp. Min. °F.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Sunshine Hours.
	18H. G.M.T. of 11TH					7H. G.M.T. of 12TH									24 HOURS ENDED 7H. 12TH						11TH
Lerwick	10305	42	S	3	c	10304	-1	41		S	3	-	c	2	0.2	45	38	bc	c	cm.c	·x·
Stornoway	10263	45	S	1	0	10269	0	41	-2	S	1	-	b	1	-	46	41	bco	o	o.b	0.0
Castlebay (Barra Is)	10264	43	SE	4	0	10260	0	41	-7	E	3	-	b	3	-	48	40	co	o	o.c.b	0.0
Malin Head	10247	38	SSE	3	om	10238	0	41	+4	ESE	2	SE	om	2	-	42	35	om	om	c.om	0.0
Blacksod Point	10217	44	SE	3	bc	10221	0	38	-4	E	2	-	bc	3	0.3	46	37	bc	bc	o.omr	*
Roche's Point	10224	42	E	1	or	10230	-1	35	-10	NNW	2	-	b	1	1	46	35	pom	or	ob	*
Birr Castle	10234	40	NW	1	0	10222	*	34	-3	NW	1	-	o	*	trace	42	32	o	oz	oxo	0.0
Donaghadee	10232	42	E	3	bcm	10234	-1	39	-5	ENE	4	-	orq	3	1	45	38	omd	om	emq	*
Liverpool (Bidston)	10228	36	NE	3	0	10205	-2	31	-4	NE	2	-	o	2	-	38	30	bcom	om	om	0.0
Holyhead	10233	42	ENE	5	cg	10202	-1	36	-6	ENE	6	-	bc	4	1	42	34	cbccm	cbccm	cpqycphoc	4.1
Pembroke (St. Ann's Head)	10223	38	NE	3	c	10193	-1	34	-7	ENE	3	-	c	2	1	42	33	ombm	bc	c.o.c.o.c	4.4
Scilly (St. Mary's)	10207	42	ENE	2	bc	10175	-2	41	-4	NE	2	-	o	3	-	46	40	o	ocbc	bcco.o	0.0
Jersey (St. Aubin)	10188	36	E	3	s	10143	-1	34	-3	NE	3	-	o	3	5	40	32	cbo	o.bc.os	s.b os.o	5.1
Portland Bill	10188	38	ENE	4	bc	10154	-2	33	-5	NE	5	-	s	4	-	41	31	bcm	bcm	bcm bcmq	*
Dungeness	10181	33	ESE	3	bc	10182	0	31	+1	SE	2	SE	bc	3	0.2	36	29	bcs.bc	cbc	bc. bc	*
Wick	10282	42	S	4	cq	10277	0	40	-4	S	4	-	bcq	4	1	44	39	bc	bccq	bcqp.bcqp	*
Nairn	10272	33	-	0	bc	10273	*	33	-5	-	0	-	oq	0	-	40	28	obc	bc	bcx.c.	3.4
Leith	10266	37	SE	1	c	10254	0	36	-1	E	1	-	c	2	3	41	35	o.c.bcc	cp.o.c.	c.or.c	*
Tynemouth	10252	39	E	4	o	10227	0	40	-1	E	5	-	bcq	4	5	43	35	bc	cphs.	opqh.oqhq	*
Spurn Head	10203	37	ESE	5	bcp	10196	0	32	-7	ESE	4	-	oqp	4	3	40	30	bcp	bcp	bcpsoqps	*
Yarmouth (Jetty)	10190	34	ESE	3	sq	10190	0	33	-5	SE	4	-	oqh	3	3	39	30	cqpsh	opsq	bcvox.oqxsv	0.0
Clacton-on-Sea	10183	32	NW	2	s	10189	0	28	-4	WNW	2	-	ogm	1	29	35	27	cops	ogps	ogs.sm	0.0
Nottingham	10211	34	N	3	o	10196	*	30	-6	NE	2	-	cps	*	1	37	29	opsc	cprs	o.cp.s	0.0

* Information for these columns not usually received. ‡ The barometric change is expressed in half millibars. § For code see page 3. † See footnote p. 4.

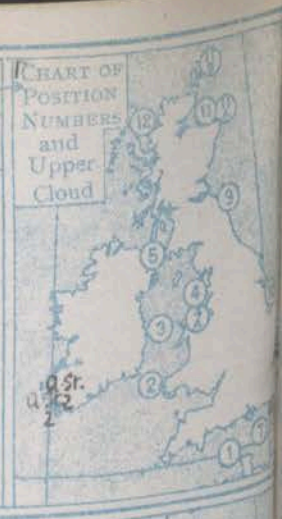
M.O. FORM 2370

SUMMARY OF CONDITIONS AT 7 h. G.M.T. 12.12.1920.

Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Fair to dull, local snow, (misty	Indiff.	Slight
2. E. England	Dull, snow lying.	Var.	"
3. E. Midlands	Cloudy or dull, local snow (showers.	Indiff.	-
4. W. Midlands	Dull, misty, local snow	"	-
5. S.W. England	Var. sky, local snow. (showers	Good	Slight
6. South Wales	Cloudy or dull, local mist.	Var.	Smooth
7. North Wales	Fair to dull.	Fair	Mod.
8. N.W. England	Mainly dull, local snow &	Indiff.	Smooth
9. N. Midlands	Snow lying locally. (mist.	"	-
10. N.E. England	Local snow showers.	Fair	Mod.
11. E. Scotland	Cloudy or dull.	"	"
12. S.W. Scotland	Fair to dull, local mist.	Indiff.	Slight
13. Isle of Man	Cloudy.	Fair	Mod.
14. N.& N.W. Scotland	Variable sky.	"	Slight
15. Hebrides	Fine.	Good	"
16. Orkneys and Shetlands	Fair to cloudy.	Poor	"
17. N.W. Ireland	Fair to dull, local mist.	Good	Smooth
18. N.E. Ireland	Dull, misty.	Fair	Slight
19. S.E. Ireland	Dull, snow lying locally.	"	"
20. S.W. Ireland	Dull.	Good	Smooth

Temperature reported from Coastal and Cross Channel Steamers.

Position Number.	Date	Time G.M.T.	Sea °F	Air °F
5	11th	0835	51	+1
12	11th	-	51	54
6	11th	1500	51	39



Barometric change from 4 h. to 7 h. (half millibars).

EXPLANATION.
BAROMETER.—Isobars are drawn at intervals of two millibars.
WIND.—Direction is shown by arrows flying with the wind. Force, on the scale 0-12, is indicated by the number of feathers. Mean velocity is shown in miles per hour by figures in small circles.
TEMPERATURE is given in degrees F.
WEATHER SYMBOLS.—
clear sky. sky ¼ clouded. sky ½ clouded. overcast sky. rain. snow. sleet. mist. fog. thunder. T. thunderstorm.
SEA DISTURBANCE.—Rough. High.

GENERAL INFERENCE from observations received up to 9h.

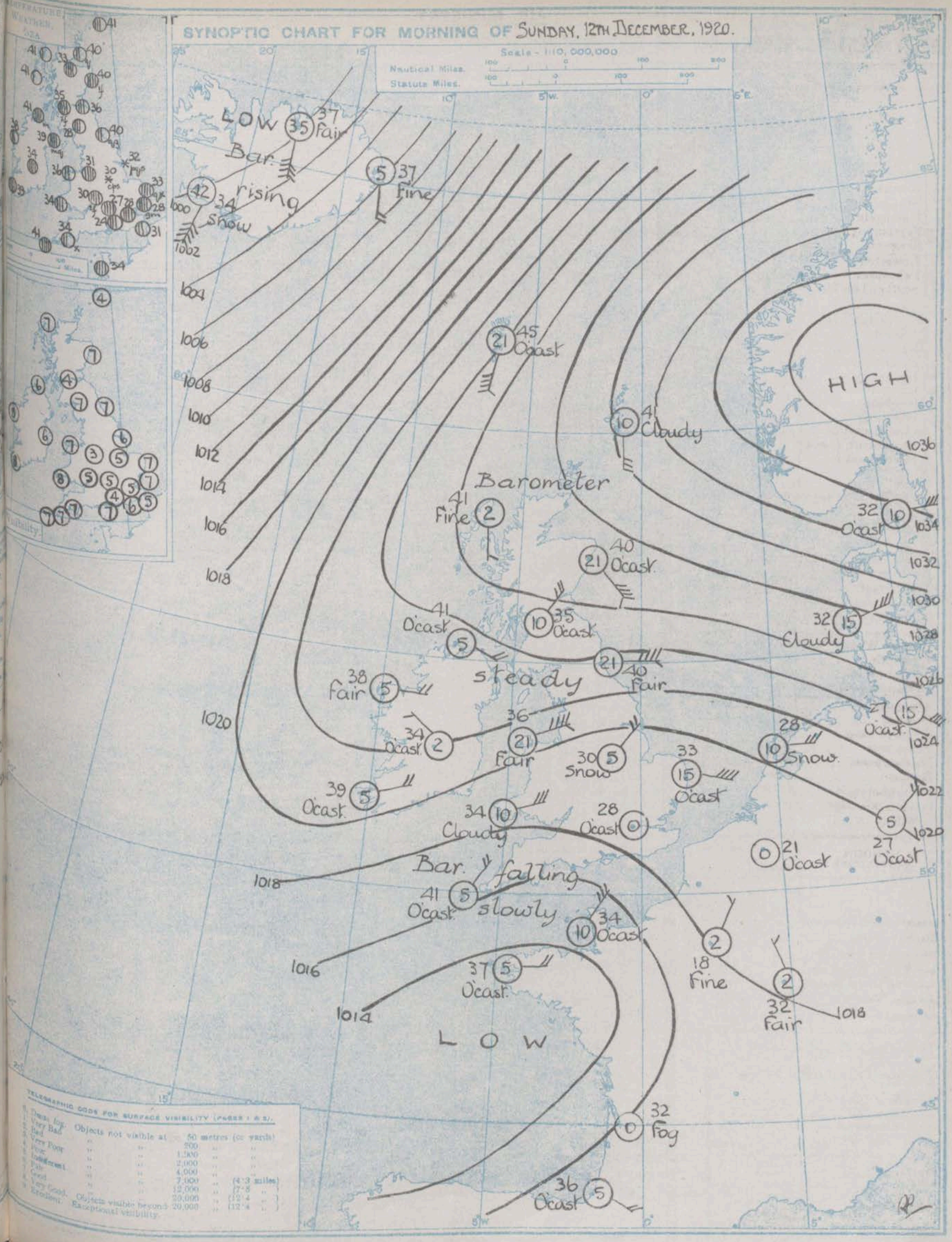
The anticyclone over Scandinavia continues to maintain Easterly winds over all but the extreme North of the British Isles. Cold weather is likely to continue for some days with snow in places.

Districts.	Forecasts for the 24 hours commencing 15 h. G.M.T. Sunday, 12th December, 1920.
1. S.E. England 2. E. England 3. E. Midlands	Winds Easterly, light or moderate; variable sky, slight snow in places, visibility fair but local mist; cold.
4. W. Midlands 5. S.W. England 6. South Wales	Wind N.E. to E., light or moderate; variable sky, snow in places, visibility fair but local mist; cold.
7. North Wales 8. N.W. England 9. N. Midlands 10. N.E. England	Wind Easterly, mainly light or moderate; cloudy, snow showers, visibility fair; cold.
11. E. Scotland	As for 14-16.
12. S.W. Scotland 13. Isle of Man	As for 7 - 10.
14. N.& N.W. Scotland 15. Hebrides 16. Orkneys and Shetlands	Wind S.E. or S., moderate; fair or cloudy, visibility fair; rather cold.
17. N.W. Ireland 18. N.E. Ireland 19. S.E. Ireland 20. S.W. Ireland	Wind Easterly, light; cloudy, local rain or sleet showers, visibility fair; cold.

Further Outlook.

Continuing cold with Easterly winds and snow in places.

Meteorological Office: Air Ministry, Kingsway, London, W.C.2. Forecasts issued at 09.00. G. C. SIMPSON, F.R.S., Director.


SYNOPTIC CHART FOR MORNING OF SUNDAY, 12TH DECEMBER, 1920.
Scale - 1/10,000,000
Nautical Miles.
Statute Miles.
LOW
Bar. rising
HIGH
Barometer steady
Bar. falling slowly
LOW
TELEGRAPHIC CODE FOR SURFACE VISIBILITY (PAGES 1 & 2).
Very Bad. Objects not visible at 50 metres (or yards)
Bad " " 500 " "
Very Poor " " 1,000 " "
Poor " " 2,000 " "
Moderate " " 4,000 " "
Fair " " 7,000 " (4·3 miles)
Good " " 12,000 " (7·5 ")
Very Good. Objects visible beyond 20,000 " (12·4 ")
Excellent. Exceptional visibility.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 341.

SUNDAY 12th DEC. 1920

WEATHER, TEMPERATURE, RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 11th

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 10th-11th	Rainfall. Day. 9h-18h. 11th	Sunshine. Sunrise to Sunset. 11th
Scotland.	Oban	o	o	48	36	-	-	0.0
	Banff							
	Montrose							
	St. Andrews							
England, N.E.	Harrogate							
	Scarborough	o	o	43	35	-	-	0.0
	Skegness							
England, E.	Lowestoft							
	Felixstowe	ogs	ogs	35	33	-	5	0.0
	Southend-on-Sea	xos	os	36	30	0.1	1	0.0
England, S.E.	Tunbridge Wells	oso	oso	35	30	1	1	0.0
	Margate	os	o	35	33	-	1	0.0
	Ramsgate	*	*	43	30	-	3	0.0
	Folkestone	xos	os	35	30	4	2	0.0
	Hastings	oc	cos	37	31	0.2	0.4	0.0
	Eastbourne	o	oso	37	32	-	1	0.0
	Brighton							
	Worthing	o	o	42	33	-	-	0.0
	Littlehampton	os	om	36	32	-	-	0.0
	Portsmouth (S'thsea)			35	34	-	-	0.0
	Bournemouth	*	*					
England, N.W.	Douglas (I.O.M.)							
	Blackpool	c	o	38	30	0.1	-	1.5
	Southport	xcoc	cbcco	37	30	0.1	-	0.5
Midlands.	Buxton							
	Leamington Spa							
	Malvern	o	o	37	34	-	-	0.8
	Bath	moc	mo	38	29	0.3	-	0.1
Wales.	Rhyl							
	Colwyn Bay							
	Llandudno	*	*	44	35	1	-	0.3
	Aberystwyth	oc	bco	41	34	0.3	-	3.0
	Tenby							
	Swansea							
England, S.W.	Weymouth	xcbc	bco	39	33	-	-	1.2
	Teignmouth							
	Torquay							
	Paignton	bcm	bcb	42	32	-	-	2.3
	Penzance	cbc	bc	45	36	-	-	2.4
	Newquay							
	Bude	b	c	45	36	-	-	3.9
	Ilfracombe	ocbc	bcco	42	36	-	-	0.0
	Weston-s-Mare							

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-13h 11th	Weather. 13h-18h 11th	Weather. 18h 11th-1h 12th	Weather. 1h-7h 12th	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall.† Day. 7h-18h mm.	Rainfall.† Night. 18h-7h mm.	Sun. Hours.
Renfrew	osfo.sf	o.sf	o.sf	osf.o2f	40	35	32	-	-	0.1
Eskdalemuir	bcc.o	co.o	o	So.c.o	35	27	22	-	0.2	0.0
Valencia (Cahirc'n)	bbc.bcc	co.o	c.opSo	o	48	39	37	-	-	2.5
Baldonnel	osfcSf.o2f	c.osf	o2f prs	o2f.o2f	40	30	22	-	1	0.0
Manchester (Alex Pk)	osfo.sf	osfosf r.	osfr.	osfo4osfss	39	31	23	trace	0.1	x
Ross on Wye	osfcosfo	osf pd.	o2fo1f.bcc	o.c.o	37	30	28	-	-	0.0
Falmouth	coifc.coif	coif.coif	bx.o	bc.cx	42	30	25	-	-	1.7
Calshot (Hants)	osfsfs.g	osf.oif	oifso	oif ss.	37	29	25	-	0.2	0.0
Lympne (Folkestone)	cofs.coS	cosf bcc	b.bcif	if.b.bc	34	26	21	1	-	0.1
Aberdeen	osf.bcc	o.prs.	prh.c.o	c.o.oif	43	39	34	0.2	1	1.2
Howden	cop	rs.co	ssx	ssx	41	26	17	1	1	0.8
Cranwell (Lincs)	prs.prs	prs.prs	DD ss	soif	36	27	27	1	2	0.3
Felixstowe	ssrsRS.ss	PRH ss	prh.ss.	ss.s.s.	35	28	x	8	9	0.0
Shoeburyness	x s	rs.ss.	xso	ssx	35	25	25	3	2	0.0
Benson	o	o	DD.b.bc.c	o	36	27	27	-	-	x
S. Farnborough	ps.o2f	o2f s.s.	S.S.o.	s.c.o	36	24	21	trace	1	0.0
London (Kew Obsy.)	prh.osfpd	o2f.rs.	o2fss b.	b.o2f	37	26	29	trace	.5	0.0
Croydon	xosfo4-sf s.osf	osfss.rsrs o2f	osfrs.ssSS	bcsfx/b osfa	36	19	x	0.1	1	x

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky
p passing showers.
q squalls. r rain.
rs sleet, *i.e.*, rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:-
R = heavy rain.
rr = continuous moderate rain.
r.r. = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 10 feet above Ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0·3
1	1- 3	0·3- 1·5
2	4- 7	1·6- 3·4
3	8-12	3·5- 5·9
4	13-18	6·0-10·7
5	19-24	10·8-13·8
6	25-31	13·9-17·1
7	32-38	17·2-20·7
8	39-46	20·8-24·4
9	47-54	24·5-28·4
10	55-63	28·5-32·6
11	64-75	32·7
12	Above 75	32·6 or above

SYMBOLS—

Aurora — Solar halo
Rime — Lunar halo
Glazed frost — Solar corona
Glazed roads — Lunar corona

LONDON. OBSERVATIONS.

24 HOURS ENDED 9h G.M.T. 12th

	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Max. Temp. °F	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Hours. (Yesterday.)	Humidity %. 15h. G.M.T. (Yesterday.)	Humidity %. 9h. G.M.T. (To-day.)
Greenwich (Royal Observatory)	o.b.o	os	os	37	21	32	5	0.0	89	94
City (Bunhill Row)	*	*	*	*	*	*	*		*	*
Westminster (St James's Park)	*	*	x	39	26	30	3	?	83	90
Regents Park (Botanic. Gdns)	*	*	*	*	*	*	*		*	*
Camden Sq. (British Rainfall)	o	of	*	37	23	20	4	*	89	95
Kensington Palace	o.	o.	*	38	21	26	4	*	88(18h)	99
Hampstead Observatory	*	*	*	35	23	18	4	0.1	*	94

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday.

Total ..... joules.

Milliwatts.
Average Rate.
Maximum Rate.

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

12th & 13th DECEMBER 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth	7.57 / 7.58	11.57 / 11.57	3.16 / 3.16
Greenwich	7.53 / 7.54	11.54 / 11.54	3.12 / 3.12
Wick	8.50 / 8.50	12.6 / 12.6	3.16 / 3.16
Valencia	8.44 / 8.44	12.45 / 12.45	3.37 / 3.37

Photographic Record of Pole Star (Polaris) and of δ Ursae Minoris at Greenwich Observatory.

Exposure from.....h.....m.
to.....h.....m.

Stars.	Duration of Exposure. h. m.	Duration of Record. h. m.	%
Polaris			
δ Ursae Minoris			

NOTES ON THE WEATHER OF YESTERDAY.

Snow or sleet fell over a wide area extending Aberdeen to Jersey and from Gorleston to Baldonnel. The greatest fall occurred at Clacton where it attained a depth of 14 inches and measured 29 mm. Some of the Western stations had from 4 to 5 hours of sunshine but the day was overcast in most localities. Temperature continued low, the screen mimimum being as low as 19° at Croydon.

* Information for these columns not usually received.

† Trace = rain has fallen but amount less than 0·1 mm.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. No. B21,571 ... MONDAY, 13TH DECEMBER 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

Stations	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	§ Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
13H. G.M.T. 12th														
Renfrew	1025.5	-3	NE	5	ors₀	36	85	4	1,250	St	10	-	-	*
Eskdalemuir	1023.0	-3	NNE	4	os₀	34	85	7	2,000	Nb	7	ASt	2	*
Valencia (Cahirc'n)	1021.1	-1	ENE	3	b	41	75	8	5,700	Cu	2	-	-	3
Baldonnel	1021.3	-2	NE	2	c	38	85	5	2,000	Sc	7	-	-	*
Manchester (Alex. Pk.)	1019.0	-3	E	1	o3f	34	85	3	3,000	St	10	-	-	*
Ross on Wye	1018.6	-1	NE	2	c	31	92	7	3,000	St.Cu	7	-	-	*
Falmouth	1016.2	-2	NNE	3	bif	36	75	6	-	St.Cu	2	-	-	*
Calshot (Hants)	1017.0	-3	NE	4	bc ≡	30	97	6	3,000	St.Cu	5	-	-	3
Lympne (Folkestone)	1018.7	-1	SE	2	bcz	31	75	6	2,000	St.Cu	5	-	-	*
Aberdeen	1027.8	-1	ESE	5	ogr₀	39	97	7	2000	Nb	10	-	-	4
Howden	1018.3	-4	-	0	os₀x	31	97	3	750	Nb	10	-	-	*
Cranwell (Lincs)	1018.6	-3	NW	3	os	28	92	3	2000	Nb	10	-	-	*
Felixstowe	1019.2	0	NNW	2	c ≡,	28	85	5	5700	St.Cu	5	A.St	1	1
Shoeburyness	1018.8	-1	-	0	c	25	75	6	4200	St.Cu	5	A.Cu	3	*
Benson	1018.1	0	ENE	1	b	31	75	5	-	Cu	1	-	-	*
S. Farnborough	1017.8	-1	ENE	1	bm ≡	35	85	3	3000	St	1	-	-	*
London (Kew Obsy.)	1018.1	-3	-	0	c4f	28	85	2	2,000	Sc	8	-	-	*
Croydon	1019.2	-1	-	0	b3f ≡,	29	75	3	-	-	-	-	-	*
1H. G.M.T. of 13th														
Renfrew														
Eskdalemuir	1021.9	0	NE	4	ors₀m	34	92	5	1250	Nb	10	-	-	*
Valencia (Cahirc'n)	1020.0	-2	ENE	3	bcm	38	*	*	*	*	*	*	*	0
Baldonnel	1018.6	+1	NE	4	o	36	75	4	1250	St.Cu	9	-	-	*
Manchester (Alex. Pk.)	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ross on Wye	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Falmouth	1013.5	-3	NNE	3	ox	32	75	7	-	St.Cu	9	-	-	*
Calshot (Hants)	1017.3	0	ENE	5	oif	32	97	6	2000	St	10	-	-	4
Lympne (Folkestone)	1019.2	0	E	4	b	26	85	5	-	-	-	-	-	*
Aberdeen	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Howden	1021.6	0	-	0	bafex	20	97	2	<500	St	3	-	-	*
Cranwell (Lincs)	1021.5	0	N	1	b≡	8	97	4	-	-	-	-	-	*
Felixstowe	1020.4	-1	NNE	3	o	27	85	5	3000	St	10	-	-	1
Shoeburyness	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Benson	*	*	*	*	*	*	*	*	*	*	*	*	*	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*
London (M.O. at 1H.)	1019.8	0	*	*	*	22	*	*	*	*	*	*	*	*
Croydon	1020.6	0	ESE	2	bx2f	16	85	5	-	-	-	-	-	*

Stations	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	§ Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
18H. G.M.T. of 12th														
Renfrew	1024.2	-1	NNE	4	o2f	38	92	4	1,250	St	10	-	-	*
Eskdalemuir	1022.1	-1	NE	6	bc	35	92	6	1,250	St	4	-	-	*
Valencia (Cahirc'n)	1021.0	0	ENE	3	b	35	75	8	5,700	Cu	1	-	-	3
Baldonnel	1018.8	-1	NNE	2	o2f	36	92	4	750	St	10	-	-	*
Manchester (Alex. Pk.)	1018.0	+1	ENE	2	o3f	31	97	3	3,000	Nb	9	-	-	*
Ross on Wye	1018.5	0	ESE	2	b	27	75	6	2,000	Cu	1	-	-	*
Falmouth	1015.9	-1	NNE	3	bczx	31	75	5	-	Cu	1	-	-	*
Calshot (Hants)	1017.7	+1	NE	4	o2f	31	85	5	2,000	St	10	-	-	3
Lympne (Folkestone)	1019.4	+2	E	1	bz	25	75	5	2,000	St.Cu	2	-	-	*
Aberdeen	1027.5	0	E	5	o	40	75	8	2,000	Cu.Nb	10	-	-	4
Howden	1019.2	+3	-	0	os₀	32	97	3	750	Nb	10	-	-	*
Cranwell (Lincs)	1019.8	+2	ESE	3	o ≡	27	97	3	<500	St.Cu	10	-	-	*
Felixstowe	1020.4	+2	N	1	b ≡	21	97	5	-	-	-	-	-	0
Shoeburyness	1019.4	+1	-	0	b3fx	15	65	3	-	-	-	-	-	*
Benson	1018.8	0	-	0	b	24	85	5	-	-	-	-	-	*
S. Farnborough	1018.6	?	E	1	bm	23	97	3	2,000	St	2	-	-	*
London (Kew Obsy.)	1019.0	+1	ESE	1	bsf	25	85	2	-	-	-	-	-	*
Croydon	1019.8	+1	SE	1	b≡x3f	22	85	3	-	-	-	-	-	*
7H. G.M.T. of 13th														
Renfrew	1022.5	-2	NE	4	o2f	33	92	4	1250	St	10	-	-	5
Eskdalemuir	1021.2	*	NE	3	o	35	92	7	-	St.Cu	10	-	-	*
Valencia (Cahirc'n)	1018.6	+1	ENE	3	bx	34	85	7	3000	St	2	-	-	*
Baldonnel	1019.7	+1	-	0	c	27	92	4	1250	St	7	-	-	*
Manchester (Alex. Pk.)	1021.1	0	NE	2	bm	18	92	4	-	-	-	-	-	*
Ross on Wye	1019.5	+1	E	1	bx	20	85	5	-	-	-	-	-	*
Falmouth	1011.9	-1	NE	5	o	38	75	7	-	St	10	-	-	*
Calshot (Hants)	1017.6	0	ENE	5	o1f	30	97	6	2000	St	10	-	-	4
Lympne (Folkestone)	1018.5	-1	ESE	4	o2f	27	85	5	750	St	10	-	-	*
Aberdeen	1025.4	-1	ESE	5	oq	41	85	8	2000	Cu.Nb	10	-	-	5
Howden	1021.1	0	-	0	o	24	97	2	1250	St	10	-	-	*
Cranwell (Lincs)	1021.8	0	NW	2	o2f	15	97	2	<500	St	10	-	-	*
Felixstowe	1019.9	-1	ENE	3	o	33	97	5	3000	St.Cu	10	-	-	2
Shoeburyness	1019.1	0	N	1	b3fx	24	75	3	4200	St.Cu	3	-	-	*
Benson	1015.6	0	NE	2	ox	21	85	4	-	St	10	-	-	*
S. Farnborough	1019.5	-1	E	1	o3f	17	97	3	2000	St	10	-	-	*
London (M.O. at 1H.)	1019.4	0	-	0	o4f	23	85	2	1250	St	10	-	-	*
Croydon	1020.3	-1	-	0	o3fx	18	85	3	1250	St	10	-	-	*

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

Stations	18H. G.M.T. of 12th: Barom. at M.S.L. mb.	Temp. °F.	Wind Direc.	Wind Force 0-12	Weather	7H. G.M.T. of 13th: Barometer at M.S.L. mb.	‡ Change in 3 hours	Temp. °F.	Temp. Change in 24 hours	Wind Direc.	Wind Force 0-12	Direc. of Upper Cloud	Weather	Sea 0-9	† Rainfall mm. (24 hours ended 7H. 13th)	Max. °F.	Min. °F.	Weather Morning	Weather Afternoon	Weather Night	Sunshine Hours (12th)
Lerwick	1030.9	41	SSE	2	cm	1029.6	-1	40	-1	SE	3	-	c	3	-	42	38	c	c	d.c	4
Stornoway	1027.3	39	SE	2	b	1026.5	-1	36	-5	-	0	.	b	0	-	43	36	b.	b	b.c	3.2
Castlebay (Barra Is)	1026.0	40	ENE	3	b	1023.6	-1	41	0	E	3	.	b	3	-	44	39	bc.	bc.b	b	3.7
Malin Head	1023.0	40	E	3	bcm	1021.3	0	41	0	E	4	E	o	3	-	43	39	c.	bc	cm.o	0.0
Blacksod Point	1023.1	36	E	1	b	1019.7	-4	39	+1	SE	3	-	bc	4	-	41	34	bc.	b	bc.bbc	*
Roche's Point	1020.7	35	N	3	b	1017.6	+1	30		NE	2	.	b	1	1	40	30	bc.b	b.bcp	b.s	*
Birr Castle	1021.1	31	N	1	b	1019.7	*	27	-7	N	1	.	b	*	-	37	27	b	b	bx	5.2
Donaghadee	1021.6	42	ENE	4	cq	1020.2	0	40	+1	SE	3	-	om	3	3	43	38	cmq.	bcq.	ompqh	*
Liverpool (Bidston)	1017.3	33	ENE	3	s	1020.5	0	23	-8	SE	2	-	bm	2	5	34	23	os	os.	cbm	0.1
Holyhead	?	39	ENE	3	cqp	1019.1	0	31	-5	E	4	-	bx	3	1	40	23	cph.bc	bc.cp	cpqm.bx	0.5
Pembroke (St. Ann's Head)	1017.7	33	E	3	b	1016.4	+1	30	-4	ENE	3	-	bm	2	-	36	29	c.	c.bc	co.opsbc	2.9
Scilly (St. Mary's)	1016.1	35	ENE	1	c	1011.6	-3	37	+4	ENE	4	E	c	4	1	41	32	o.c.bcs.	bc.c.	csbmb.bc	1.9
Jersey (St. Aubin)	1013.0	36	SE	5	o	1013.4	0	35	+1	E	5	.	ogu	4	15	39	33	os.pc.o	or.so.	orspo	0.3
Portland Bill	1014.8	32	NE	6	osq	1013.8	0	33	0	ENE	6	-	oqs	6	4	36	31	osq.	oqs.	oqs	*
Dungeness	1018.8	31	SSE	2	b	1018.7	-1	31	-1	ESE	3	SE	bc	3	-	32	29	c.os.c	bc.	bcbbc	*
Wick	1028.2	43	ESE	5	oq	1026.0	-1	43	+3	ESE	5	-	cq	4	1	44	38	oqp.	oq	bocqp	*
Nairn	1027.6	36	-	0	c	1025.2	*	35	+2	-	0	-	cm	0	-	37	30	obcm	mbccg	cgoc	1.5
Leith	1024.6	40	E	3	o	1021.8	0	40	+4	E	2	-	o	2	2	42	35	copco	orsco	oro	*
Tynemouth	1021.2	41	E	7	Thq	1020.4	0	39	-1	SE	2	.	omd.	4	12	41	34	oprhq	oprhq	omr.omd	*
Spurn Head	1019.6	35	ESE	5	oq	1021.8	0	32	0	NW	4	-	ops	4	4	38	26	oqps.	ps.pq	o.ops	*
Yarmouth (Gorleston)	1026.5	28	SW	1	o	1019.6	-1	29	-4	WNW	2	-	omx	1	3	35	27	oqxs	o.c.ox m	bcxobxm	0.0
Clacton-on-Sea	1019.7	26	NW	2	o	1018.7	-2	34	+6	ESE	3	-	c	2	2	34	24	ogfg	c.oq	ogcm	0.0
Nottingham	1018.6	30	NE	2	o	1020.8	*	20	-10	NE	2	-	o	*	3	31	13	o.cso	so.	com	0.0

* Information for these columns not usually received. ‡ The barometric change is expressed in half millibars. § For code see page 3. † See footnote p. 3.

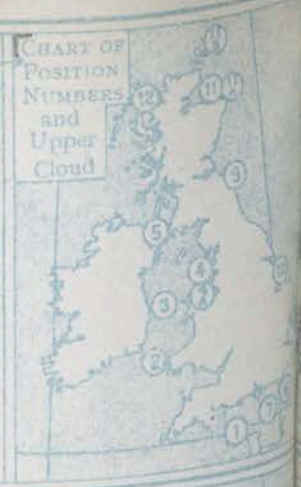
M.O. FORM 2370

SUMMARY OF CONDITIONS AT 7 h. G.M.T. 13. 12. 20.

Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Dull to fair, fog inland	Indif.	Slight
2. E. England	Dull, misty, snow lying.	Fair.	Smooth
3. E. Midlands	Dull, frosty.	Poor.	-
4. W. Midlands	Fine to dull, misty, frosty.	Poor	-
5. S.W. England	Dull, some snow. local squalls.	Fair	R.Rough
6. South Wales	Fine, misty.	Fair.	Smooth
7. North Wales	Fine, frosty.	Good.	Slight
8. N.W. England	Fine to dull; misty.	Indif.	Smooth
9. N. Midlands	Fine to dull; misty.	Poor.	-
10. N.E. England	Dull; drizzle or snow showers.	Indif.	Mod.
11. E. Scotland	Dull, squally.	Good.	R.Rough
12. S.W. Scotland	Dull, misty.	Fair.	Slight
13. Isle of Man	Cloudy.	Indif.	Smooth
14. N.&N.W. Scotland	Cloudy, squally.	Good.	Mod.
15. Hebrides	Fine.	Good.	Smooth
16. Orkneys and Shetlands	Cloudy.	Fair.	Slight
17. N.W. Ireland	Fair.	Good.	Mod.
18. N.E. Ireland	Dull	Good.	Slight
19. S.E. Ireland	Fine to cloudy.	Fair.	Smooth
20. S.W. Ireland	Fine, frosty.	Good.	Smooth.

Temperature reported from Coastal and Cross Channel Steamers

Position Number	Date	Time G.M.T.	Sea °F	Air °F
7	12th	0310	51	37
4A	12th	0450	45	38



Barometric change from 4 h. to 7 h. (half millibars).

EXPLANATION.
BAROMETER.—Isobars are drawn at intervals of two millibars.
WIND.—Direction is shown by arrows flying with the wind. Force, on Beaufort 0-12, is indicated by the number of feathers. Mean velocity is shown in miles per hour by figures in small circles.
TEMPERATURE is given in degrees F.
WEATHER SYMBOLS.—clear sky. sky ¼ clouded. sky ½ clouded. sky ¾ clouded. overcast sky. rain. snow. sleet. fog. mist. T thunder. R thunderstorm.
SEA DISTURBANCE.—Rough. High seas.

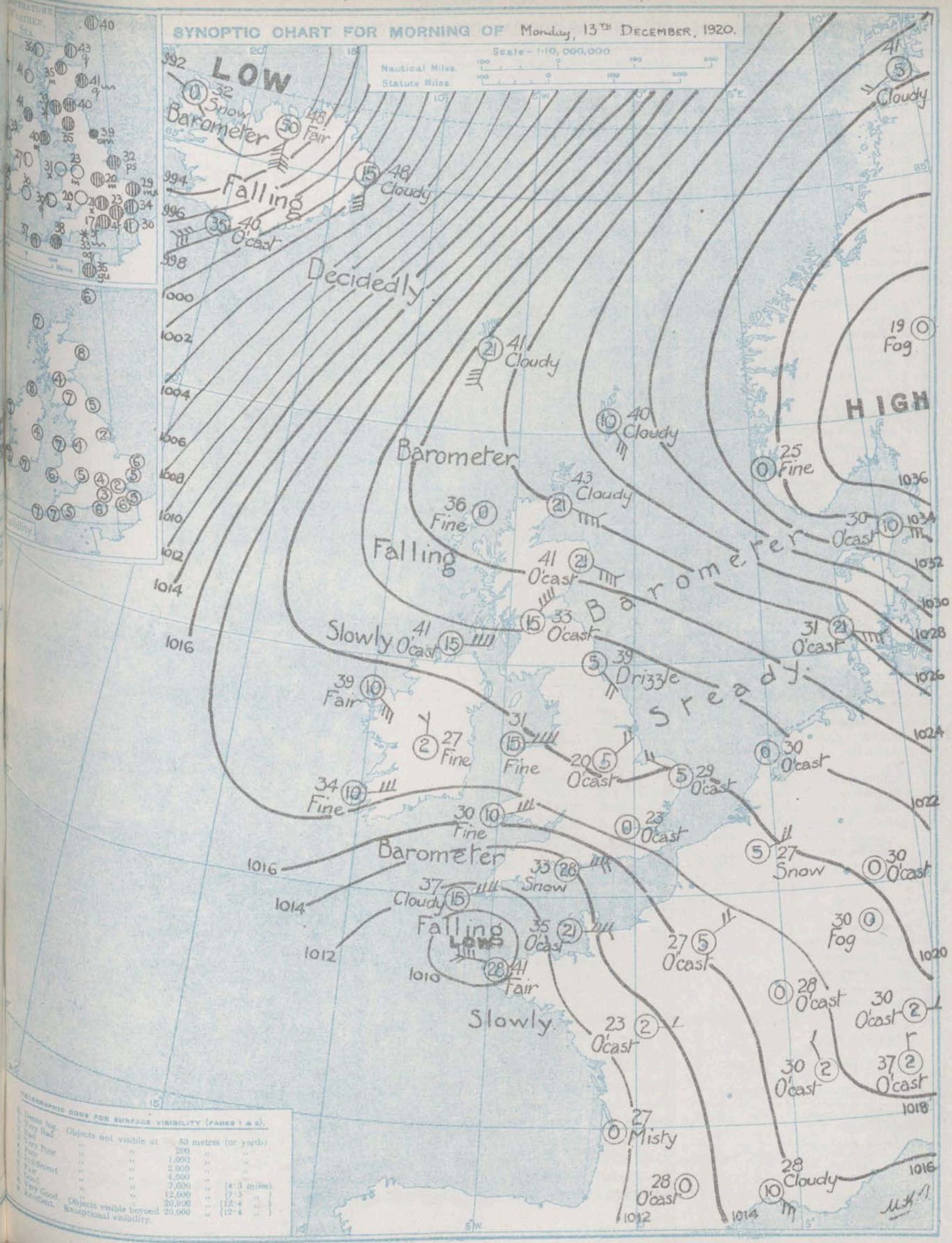
GENERAL INFERENCE from observations received up to 9h. G.M.T.

Pressure is still highest over Scandinavia and relatively high in the North of these Islands, while a depression lies over the Mouth of the English Channel. North-East and East winds are consequently still probable, with some snow showers in several localities. Temperature is likely to continue low over England for several days.

Districts.	Forecasts for the 24 hours commencing 15 h. G.M.T. Monday 13th December 1920.	Further Outlook.
1. S.E. England 2. E. England 3. E. Midlands 4. W. Midlands 5. S.W. England 6. South Wales 7. North Wales 8. N.W. England 9. N. Midlands 10. N.E. England	Wind East or North-East, light. Much cloud generally, snow showers locally. Some mist or fog. Visibility mainly poor or indifferent. Little change of temperature.	Continuing cold for several days, especially over England.
11. E. Scotland 12. S.W. Scotland 13. Isle of Man 14. N.&N.W. Scotland 15. Hebrides 16. Orkneys and Shetlands	Wind East or South-East, light or moderate, fresh locally. Cloudy, some local snow showers, fairer intervals. Visibility mainly fair. Little change of temperature.	
17. N.W. Ireland 18. N.E. Ireland 19. S.E. Ireland 20. S.W. Ireland	Wind East or North-East, light or moderate. Variable sky, some snow or sleet showers. Visibility mainly fair. Becoming colder.	

R.S.

Meteorological Office: Air Ministry, Kingsway, London, W.C.2. Forecasts issued at: 09.10. G. C. SIMPSON, F.R.S., Director.



TELEGRAPHIC CODE FOR SURFACE VISIBILITY (PAGES 1 & 2).

0	Dense fog.	Objects not visible at	50	metres	(or yards)
1	Very Bad.	"	200	"	"
2	Bad.	"	1,000	"	"
3	Very Poor	"	2,000	"	"
4	Poor	"	4,000	"	"
5	Indifferent	"	7,000	"	(4·3 miles)
6	Fair	"	12,000	"	(7·5 ")
7	Good	"	20,000	"	(12·4 ")
8	Very Good.	"	20,000	"	(12·4 ")
9	Excellent.	Objects visible beyond exceptional visibility.			

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 348. (MONDAY, 13TH DECEMBER)

WEATHER, TEMPERATURE, RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 12TH

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 12th-13th	Rainfall. Day. 9h-18h. 12th	Sunshine. Sunrise to Sunset. 12th
Scotland.	Oban							
	Banff	0	0	39	32	0.2	-	0.0
	Montrose							
	St. Andrews ...							
England, N.E.	Harrogate	CS	CS	33	30	1	1	0.0
	Scarborough ...							
	Skegness							
England, E.	Lowestoft ...							
	Felixstowe	0gS	cm	?	2	18	-	0.0
	Southend-on-Sea...	xoc.	bx	35	24	3	-	1.5
England, S.E.	Tunbridge Wells	b.	b	29	23	0.4	-	3.5
	Margate	of.	of	?	?	6	-	1.4
	Ramsgate	*	b	38	23	4	-	2.5
	Folkestone	sx.bc	bco.	33	28	Trace	-	2.5
	Hastings	c.o.os	o.c.bc	34	28	Trace	0.1	0.3
	Eastbourne	o	o	33	30	0.3	0.1	0.0
	Brighton	-	-	32	28	0.4	1	0.0
	Worthing	bc.c	c.o	31	28	3	-	0.6
	Littlehampton ...							
	Portsmouth (S'thsea)	S	S	31	26	2	6	0.3
	Bournemouth ...	*	*	30	27	1	1	0.0
	Ventnor (I. of W.)	*	*					
England, N.W.	Douglas (I.O.M.)							
	Blackpool	obc	c	36	30	-	0.2	0.1
	Southport	c.o S	bc.b	34	29	Trace	1	0.3
	Morecambe							
Midlands.	Buxton							
	Leamington Spa...	c.b.	oS	31	26	0.1	-	1.0
	Malvern							
	Bath	b.bc	b.bc.c	32	27	-	-	1.8
Wales.	Rhyl	bc.c.	SS	36	32	-	2	0.7
	Colwyn Bay ...	*	*	36	33	-	2	0.6
	Llandudno	o.c.	csr.	39	33	0.1	3	0.7
	Aberystwyth ...							
	Tenby							
	Swansea							
England, S.W.	Weymouth	c.o.	o.S.o	32	29	-	1	0.0
	Teignmouth ...							
	Torquay	o	S	35	33	-	-	0.0
	Paignton							
	Penzance	o.c.	bc	40	34	-	-	3.0
	Newquay	c.b.	o.bc.b	35	30	-	-	2.0
	Bude	x.bc.b	b	35	30	-	-	5.0
	Ilfracombe	o.c.bc	bc	36	34	-	-	2.0
	Weston-s-Mare ...	c.bc	rs.bc	37	29	-	-	1.1

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-18h. 12th	Weather. 18h-18h. 12th	Weather. 18h 12th-1h 13th	Weather. 1h-7h 13th	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass °F.	Rainfall.† Day. 7h-18h	Rainfall.† Night. 18h-7h	Sun. Hours.
Renfrew ...	bcc osf	o2fs	co	o2f	38	31	33	mm. 0.3	mm. 1	1.8
Eskdalemuir	bo. S.	o3s. coprs	bbc.bo.rs.	ss o	36	27	32	0.2	2	0.7
Valencia (Cahire'n) ...	o.o.bc.bbc	b.b.bc	bx	bbcx	41	33	27	-	-	6.0
Baldonnel	co.s	SS. o2f.	bcc2f	co2f	38	26	31	2	3	0.1
Manchester (Alex. Pk)	b.o3f	ps.s.f.ss co3f	b2fx	b2fx	36	16	15	1	-	*
Ross on Wye... ...	ps. co.	bc.c.b.bc	bbcxbx	ox	32	20	17	-	-	17
Falmouth	co.bbc.if	2f co	bx.bcc.co	o	39	27	25	-	-	45
Calshot (Hants)... ...	SS o2f	o1f o2f	ps o2f	o1fx	34	28	28	1	-	0.4
Lympne (Folkestone) ...	cobcc.b.b2f b.b2f b.bc2f		bbc2f.b2f	bbbco2f	31	21	15	0.1	-	2.0
Aberdeen	o.prh.	prh o.o.	prh o	prh q	41	38	35	1	3	0.0
Howden	s. x	SS. S. So	≡ ifc	sfc o	33	20	16	7	-	0.0
Cranwell (Lincs) ...	ps. ss	SS 5f	co4-5f.bbc	b3f	29	4	2	3	0.1	0.0
Felixstowe	SS bcc	bc.s. b.o	bo. o2f	e2f o1f	33	19	*	2	-	0.5
Shoeburyness	xc bbc	x3f.	3fx	x3f	28	9	14	-	-	0.0
Benson	b.bo.bco	b.	bx	bxbcc	32	20	13	-	-	*
S. Farnborough ...	bcc.bbc	b.bc2f	bbc2fc	bbcco	35	17	6	-	-	3.6
London (Kew Obsy.) ...	co3f s.	b-o5f.	b 4-5f	o4-5f	28	20	10	-	-	0.0
Croydon	s.bbc2f.bb	bbc3fx	bx.2f.2f	bo2fx o3f	28	10	*	-	-	*

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, i.e., rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:-
R = heavy rain.
rr = continuous moderate rain.
r.r. = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 30 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0·3
1	1- 3	0·3- 1·5
2	4- 7	1·6- 3·4
3	8-12	3·5- 5·4
4	13-18	5·5- 8·0
5	19-24	8·1-10·7
6	25-31	10·8-13·8
7	32-38	13·9-17·1
8	39-46	17·2-20·7
9	47-54	20·8-24·4
10	55-63	24·5-28·4
11	64-75	28·5-32·6
12	Above 75	32·6 or above

SYMBOLS

Aurora. Solar halo. Rime. Lunar halo. Glazed frost. Solar corona. Glazed roads. Lunar corona.

LONDON. OBSERVATIONS.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass °F.	Rainfall. mm.	Sunshine to Sunset. Hours.	Humidity % 15 h. G.M.T.	Humidity % 9 h. G.M.T.
	24 HOURS ENDED 9H G.M.T. 13TH							YESTERDAY.		TO-DAY.
Greenwich (Royal Observatory)	bfx	bbcfx	bxf	28	16	13	-	1.8	89	84
City (Bunhill Row)	*	*	*	*	*	*	*	0.0	*	*
Westminster (St. James's Park)	*	*	✓	38	22	22	-	0.0	69	85
Regents Park (Botanical Gdns)	*	*	*	*	*	*	*	0.0	*	*
Camden Sq. (British Rainfall)	-	-	*	27	12	17	-	*	-	70
Kensington Palace	of	of	*	30	16	9	-	*	80 (18h)	91
Hampstead Observatory ...	*	*	*	26	18	16	-	0.0	*	85

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday.

Total 100 Joules.

Milliwatts.
Average Rate. 36
Maximum Rate. 12

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

13TH AND 14TH DECEMBER, 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth...	7.58 / 11-47	11-47 / 11-48	3.36 / 3.34
Greenwich	7.59 / 8.0	11.54 / 11.55	3.49 / 3.49
Wick ...	8.56 / 8.57	12.1 / 12.7	3.19 / 3.16
Valencia ...	8.43 / 8.44	12.35 / 12.36	4.27 / 4.27

Photographic Record of Pole Star (Polaris) and of δ Ursae Minoris at Greenwich Observatory.

Exposure from.....h.....m.
to.....h.....m.

Stars.	Duration of Exposure. h. m.	Duration of Record. h. m.	%
Polaris			
δ Ursae Minoris			

NOTES ON THE WEATHER OF YESTERDAY.

Temperature remained below 32° over a large portion of England and fell to below 20° during the night; at Manchester the minimum was 16°, Nottingham 13°, Croydon 10°, and at Shoeburyness 9°. Minima below 20° were reached in some parts of the London area. Snow fell in many places, the largest measurement being 5mm at Liverpool and Baldonnel. At Tynemouth the measurement of rain and hail was 12mm, and at Jersey there was as much as 15mm of rain and snow.

* Information for these columns not usually received.

† Trace = rain has fallen but amount less than 0·1 mm.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. No. B. 2572 TUESDAY 14TH DECEMBER 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

Stations	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	§ Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	§ Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
	13H. G.M.T. 13TH														**18H. G.M.T. OF 13TH**													
Renfrew	1022.3	-2	NE	4	o1f	40	92	6	4.200	St.	10	-	-	*	1021.9	0	NE	4	od₂	39	92	6	1250	St	10	-	-	*
Eskdalemuir	1021.3	-1	NE	3	or₀	36	92	6	2.000	Nb	10	.	-	*	1021.6	+1	NE	2	o1f	36	92	6	2000	St	10	-	-	*
Valencia (Cahirc'n)	1019.4	-1	NE	2	b	36	88	8	-	-	.	-	-	3	1019.3	+1	-	0	b	33	65	8	-	-	-	-	-	3
Baldonnel	1020.2	-1	NNE	1	c2f	31	75	4	3.000	St.Cu	4	A.Cu	2	*	1019.5	0	N	1	o2f	33	97	4	1250	St.	10	-	-	*
Manchester (Alex. Pk.)	1020.9	-1	SW	1	o3f	21	97	3	<500	St.	10	-	-	*	1020.8	0	WSW	1	o4f	25	85	2	<500	St	10	-	-	*
Ross on Wye	1020.0	-2	E	2	o2f	24	75	4	2000	St.Cu	10	-	-	*	1020.0	0	ENE	2	o3fx	25	75	3	750	St.	10	-	-	*
Falmouth	1013.7	0	NE	4	o1f	35	92	6	-	Nb	10	-	-	*	1014.5	+2	NE	4	c3fe	31	85	3	-	St.Cu	7	-	-	*
Calshot (Hants) *	1017.4	-2	NE	5	o.[box],	32	75	6	2000	St.	10	-	-	4	1017.8	+2	NE	4	os₀	32	85	2	1250	St	10	-	-	3
Lympne (Folkestone)	1018.3	0	ESE	4	o1f	31	85	6	1250	St.	10	-	-	*	1018.7	0	ESE	4	o2f	32	85	5	1250	St.	10	-	-	*
Aberdeen	1025.2	-1	ESE	5	or₀	41	92	8	2000	CuNb	10	-	-	5	1024.9	0	ESE	4	o	42	92	8	2.000	CuNb	10	-	-	5
Howden	1021.0	-1	-	0	oxms	29	97	2	1250	Nb	10	.	-	*	1020.8	+1	-	0	oxm[box],	26	97	1	2000	St	10	-	-	*
Cranwell (Lincs)	1021.2	-1	NW	1	os	24	97	2	1250	St.	10	.	-		1021.3	0	N	1	os₀	27	97	2	<500	Nb	10	-	-	
Felixstowe	1019.5	-1	E	3	o	36	75	7	3.000	St.Cu	10	-	-	*	1019.9	+1	SE	4	o1f	37	75	6	2.000	St.	10	-	-	*
Shoeburyness	1019.0	-2	WNW	1	ofx.x	22	65	3	1.280	St.Cu	10	-	-	*	1018.7	0	-	0	o4fx	30	75	2	1250	St.	10	-	-	*
Benson	1018.9	-1	ENE	2	o	24	85	4	-	St.	10	-	-	*	1019.2	0	ENE	3	o	26	92	4	-	St	10	-	-	*
S. Farnborough	1019.0	-1	NNE	1	o3f	26	92	3	750	St	10	-	-	*	1019.0	+1	-	0	o3f	27	85	3	750	St	10	-	-	*
London (Kew Obsy.)	1019.0	-3	-	0	omxg[box],	28	75	2	<500	St.	10	-	-	*	1019.3	0	NE	2	o3fx	28	88	3	1250	St	10	-	-	*
Croydon	1019.9	-2	NE	2	o3fx[box],	27	85	2	750	St.	10	-	-	*	1019.8	+1	E	1	ors3fx	27	92	2	<500	St	10	-	-	*
	1H. G.M.T. OF 14TH														**7H. G.M.T. OF 14TH**													
Renfrew															1025.3	+4	E	1	cif	34	92	4	2000	St	5	A.St	2	*
Eskdalemuir	1022.3	0	NE	2	orsm	33	97	5	1250	Nb	10	-	-	*	1026.5	+4	-	0	o2f	31	85	6	1250	St	9	-	-	*
Valencia (Cahirc'n)	1020.7	0	NE	2	bc	32	*	*	*	*	*	*	*	0	1021.0	+2	-	0	bx	29	75	7	4200	St	1	-	-	*
Baldonnel	1020.7	+1	-	0	o[box],	27	85	3	750	St	10	-	-	*	1022.9	+2	-	0	bcsf	24	75	1	<500	St	4	-	-	*
Manchester (Alex. Pk.)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1024.5	+2	ENE	3	o3f	33	92	3	4200	St	10	-	-	*
Ross on Wye	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1023.3	+2	E	1	om[box]	24	92	3	750	St	10	-	-	*
Falmouth	1015.8	+1	NE	4	o	32	85	5	-	St.Cu	9	-	-	*	1017.6	+2	NE	6	ors	37	92	5	-	Nb	10	-	-	*
Calshot (Hants)	1019.5	+2	ENE	4	o2f	35	85	5	1250	St	10	-	-	3	1020.7	+1	NNE	4	o2f	33	85	3	1250	St	10	-	-	3
Lympne (Folkestone)	1020.4	+1	ESE	4	o2f	33	85	5	750	St	10	-	-	*	1020.3	0	ESE	4	o2f	34	75	5	750	St	10	-	-	*
Aberdeen	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1027.4	+2	SSE	4	od₀	41	85	8	2000	Nb	10	-	-	4
Howden	1022.6	+1	-	0	of~	29	97	2	750	St	10	-	-	*	1025.3	+2	-	0	o[box]	32	97	4	750	St	10	-	-	*
Cranwell (Lincs)	1022.8	+2	NE	1	o2fs	29	97	4	1250	St	10	-	-	*	1024.4	+1	NNE	1	o[box]	32	97	4	3000	St	10	-	-	*
Felixstowe	1022.3	+2	E	4	o2f	38	75	6	3000	St	10	-	-	2	1022.2	0	E	4	o[box]if	39	75	6	3000	St.Cu	10	-	-	3
Shoeburyness	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1021.1	0	SE	2	o2fe	35	75	5	2000	St	10	-	-	*
Benson	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1021.3	0	ENE	3	o	29	92	4	-	St	10	-	-	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1021.5	0	NE	1	o2f	30	92	3	750	St	10	-	-	*
London (M.O. at 1H.)	1021.5	+2	*	*	*	33	*	*	*	*	*	*	*	*	1021.3	-1	NE	3	o2f	33	75	5	2000	St	10	-	-	*
Croydon	1021.9	+2	NE	1	o3fx[box]	29	92	2	<500	St	10	-	-	*	1022.0	0	NE	1	o3fx	31	85	3	4500	St	10	-	-	*

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

Stations	Barom. at M.S.L. mb.	Temp. °F.	Wind Direc.	Wind Force 0-12	Weather	Barometer at M.S.L. mb.	‡ Change in 3 hours	Temperature Temp. °F.	Change in 24 hours	Wind Direc.	Wind Force 0-12	Direc. of Upper Cloud	Weather	Sea 0-9	† Rainfall mm.	Temp. Max. °F.	Temp. Min. °F.	Weather Morning	Weather Afternoon	Weather Night	Sunshine Hours
	18H. G.M.T. of 13TH					**7H. G.M.T. of 14TH**									**24 HOURS ENDED 7H. 14TH**						**13TH**
Lerwick	1030.2	40	SE	5	omrq	1031.1	0	42	+2	SSE	5	-	oq	4	1	43	40	c	omrq	omrq.oq	*
Stornoway	1024.3	40	SE	2	b	1024.2	+2	43	+7	SE	4	-	b	3	-	43	36	b	b	b	2.8
Castlebay (Barra Is)	1022.9	42	E	2	b	1022.9	0	43	+2	ESE	4	E	bc	4	0.2	44	39	bc	bc.b	bop.bc	0.5
Malin Head	1020.1	43	E	2	o	1022.3	+2	34	-7	SE	2	-	bc	3	1	43	33	cmp	o	op.om	0.0
Blacksod Point	1020.1	38	E	1	b	1019.6	+2	35	-4	SE	3	..	b	3	-	46	34	bc	bc	cm bc	*
Roche's Point	1019.3	31	NE	3	b	1021.0	+2	29	-1	NE	3	-	b	2	0.2	37	27	b.bc.b	b	bz	*
Birr Castle	1019.6	30	N	1	o	1022.0	*	30	+3	N	1	-	o	*	-	33	26	f.	efo	fox	3.5
Donaghadee	1018.8	40	SSE	4	ompq	1022.2	+1	37	-3	SSE	2	-	om	2	2	42	34	cm	cmqp	bc.oms	*
Liverpool (Bidston)	1020.3	26	-	0	f	1024.2	+2	29	+6	-	0	-	o	1	-	34	23	fbc.om	of	com	0.2
Holyhead	1019.6	32	E	3	bcm	1022.8	+1	31	0	E	2	-	bzf	0	trace	34	29	bcm	bcm	oxm bm	5.9
Pembroke (St. Ann's Head)	1018.2	30	E	3	bm	1021.5	+2	32	+2	ENE	3	-	o1f	2	-	32	28	bm	bm	bm.om	5.1
Scilly (St. Mary's)	1013.7	32	ENE	3	c	1016.6	+1	42	+5	E	4	E	c	5	2	42	32	cph	cph	obphlblopc	1.5
Jersey (St. Aubin)	1014.3	36	E	4	b	1016.4	0	37	+2	E	5	-	o	4	0.3	37	31	osp.o	ocb.	b.o	0.0
Portland Bill	1015.4	32	ENE	6	oqs	1018.0	+3	34	+1	ENE	6	-	o	6	1	37	31	soq	oqs	oqsoqmp	*
Dungeness	1018.3	34	ESE	4	o	1019.9	+1	36	+6	E	4	-	o	4	-	37	?30	c	c.o	o	*
Wick	1025.4	43	ESE	5	r	1025.9	0	44	+1	SE	5	-	oq	5	2	45	41	cqp	cqp	oqp	*
Nairn	1024.2	38	E	1	c	1026.0	*	40	+5	-	0	-	cg	1	-	40	33	cg	cg	ocg	0.4
Leith	1021.7	40	ESE	2	r	1025.7	+2	37	-3	E	1	-	o	2	2	42	36	oro	odo	domo	*
Tynemouth	1020.6	41	SE	3	om	1026.0	+2	37	-2	W	1	-	o3f	3	4	41	36	omp	omr	omr.om	*
Spurn Head	1019.9	35	WNW	2	ops	1023.9	+1	40	+8	SSE	4	-	op	4	4	40	28	ops	ops	ops.op	*
Yarmouth (Gorleston)	1019.9	38	SSE	4	o	1022.2	+1	40	+11	ESE	5	-	oq	4	1	40	25	omqps	o	ox.oqx	0.0
Clacton-on-Sea	1018.9	37	ESE	3	o	1021.2	0	38	+4	E	3	-	og	2	2	38	33	cog	ogps.	og	0.0
Nottingham	1020.4	25	SE	1	om	1023.8	*	32	+12	NNE	2	-	o	*	0.1	32	19	osfx	osfx	ops	0.0

* Information for these columns not usually received. ‡ The barometric change is expressed in half millibars. § For code see page 3 † See footnote p.4.

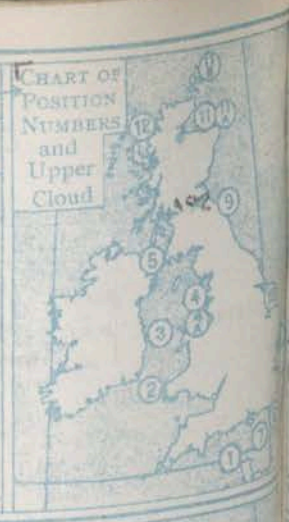
M.O. FORM 2370.

SUMMARY OF CONDITIONS AT 7 h. G.M.T. 14.12.20.

Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Dull, misty, snow lying.	Indiff.	Moderate
2. E. England	Dull; misty, snow lying.	Fair.	Mod.
3. E. Midlands	Dull.	Poor	-
4. W. Midlands	Dull, misty, snow lying.	V. poor.	-
5. S.W. England	Mainly dull, local sleet.	Fair.	R. rough
6. South Wales	Dull, misty.	Indiff.	Smooth
7. North Wales	Variable sky, local mist.	Indiff.	Smooth.
8. N.W. England	Dull, local mist.	Poor.	Smooth
9. N. Midlands	Dull, misty.	Poor	-
10. N.E. England	Dull, local mist & showers	Poor	Slight
11. E. Scotland	Cloudy or dull, local drizzle	Fair	Mod.
12. S.W. Scotland	Cloudy, or dull; misty.	Fair	Smooth
13. Isle of Man	Cloudy.	Indiff.	Slight
14. N. & N.W. Scotland	Variable sky, some mist.	Var.	Mod.
15. Hebrides	Fine or fair.	Good	Mod.
16. Orkneys and Shetlands	Dull, squally.	Indiff.	R. rough
17. N.W. Ireland	Fine or fair.	Good	Smooth
18. N.E. Ireland	Fair to dull, local mist	Var.	Slight.
19. S.E. Ireland	Fair or dull, local fog.	Var.	Slight.
20. S.W. Ireland	Fine.	Good.	Slight.

Temperature reported from Coastal and Cross Channel Steamers.

Position Number	Date	Time G.M.T.	Sea °F	Air °F
6	13	0854	51	45
6	13	?	50	34
4A	14	0430	41	37



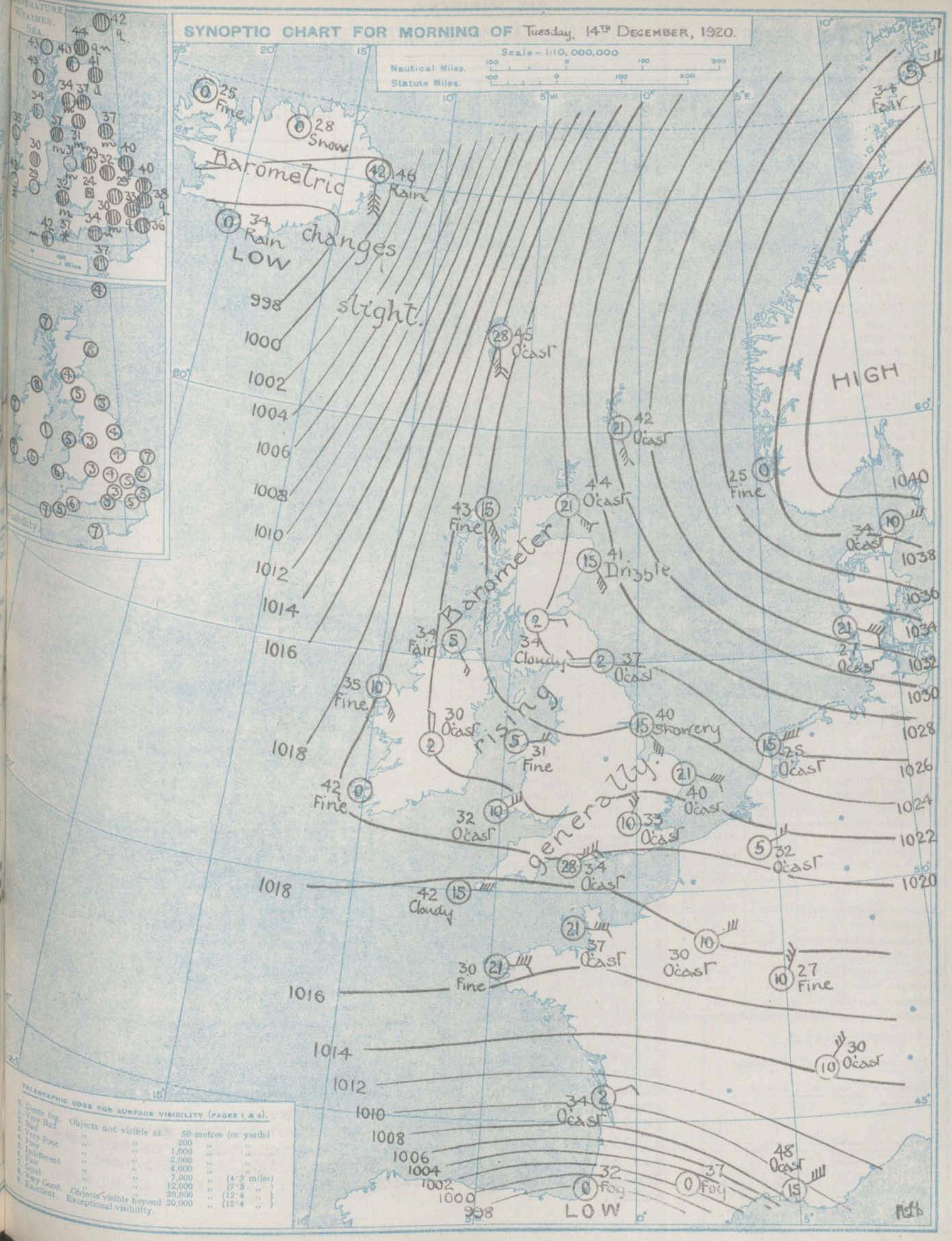
Barometric change from 4 h. to 7 h. (half millibars).

EXPLANATION.
BAROMETER.—Isobars are drawn at intervals of two millibars.
WIND.—Direction is shown by the way flying with the wind. Force, on the scale 0-12, is indicated by the number of feathers. Mean velocity is shown in miles per hour by figures in small circles. TEMPERATURE is given in degrees F.
WEATHER SYMBOLS.—clear sky; sky ¼ clouded; sky ½ clouded; overcast sky; rain; snow; sleet; hail; fog; mist; T thunder; R thunderstorm.
SEA DISTURBANCE.—Rough; High seas.

GENERAL INFERENCE from observations received up to 9h. GMT

There are no indications of any important change in the pressure distribution. The anticyclone centred near Scandinavia appears to be expanding in all directions and increasing in intensity. The barometer is rising slowly over these Islands. A rise of temperature may occur in most districts but frost may be expected to return very shortly - especially over England.

Districts.	Forecasts for the 24 hours commencing 15 h. G.M.T. Tuesday, 14th December 1920.	Further Outlook.
1. S.E. England 2. E. England 3. E. Midlands 4. W. Midlands 5. S.W. England 6. South Wales 7. North Wales 8. N.W. England 9. N. Midlands 10. N.E. England	Wind E or NE, light or moderate, cloudy or dull to fairer some snow or sleet showers locally. Visibility indifferent to fair. Temperature below the normal, frost in most places at night.	Continuing cold and generally frosty for some days. The cold is likely to be more severe over England than in Scotland and Ireland.
11. E. Scotland 12. S.W. Scotland 13. Isle of Man 14. N. & N.W. Scotland 15. Hebrides 16. Orkneys and Shetlands 17. N.W. Ireland 18. N.E. Ireland	Wind mainly SE, light or moderate, fresh locally, mainly cloudy or overcast. Visibility fair. Temperature moderate, then falling.	
19. S.E. Ireland 20. S.W. Ireland	Wind mainly Easterly, light; fair or cloudy, visibility fair, cold, frost at night.	


SYNOPTIC CHART FOR MORNING OF Tuesday, 14th DECEMBER, 1920.
Scale – 1:10,000,000
Nautical Miles.
Statute Miles.
Barometric changes slight.
LOW
HIGH
Barometer rising generally.
LOW
998
1000
1002
1004
1006
1008
1010
1012
1014
1016
1018
1020
1022
1024
1026
1028
1030
1032
1034
1036
1038
1040
25 Fine
28 Snow
46 Rain
34 Rain
45 O'cast
42 O'cast
44 O'cast
25 Fine
34 Fair
43 Fine
41 Drizzle
34 O'cast
34 Fair
34 Cloudy
37 O'cast
27 O'cast
35 Fine
30 O'cast
40 Showery
25 O'cast
31 Fine
42 Fine
40 O'cast
32 O'cast
33 O'cast
32 O'cast
34 O'cast
42 Cloudy
37 O'cast
30 O'cast
30 Fine
27 Fine
30 O'cast
34 O'cast
32 Fog
37 Fog
48 O'cast
TELEGRAPHIC CODE FOR SURFACE VISIBILITY (PAGES 1 & 2).
0. Dense fog. Objects not visible at 50 metres (or yards)
1. Very Bad " " 200 " "
2. Very Poor " " 1,000 " "
3. Poor " " 2,000 " "
4. Indifferent " " 4,000 " "
5. Fair " " 7,000 " (4·3 miles)
6. Very Good. " " 12,000 " (7·5 ")
7. Excellent. Objects visible beyond 20,000 " (12·4 ")
8. Exceptional visibility. 20,000 " (12·4 ")

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No 349.

TUESDAY 14th DEC. 1920

WEATHER, TEMPERATURE RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 13th

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 13th-14th	Rainfall. Day. 9h-18h. 13th	Sunshine. Sunrise to Sunset. 13th
Scotland.	Oban	c.bc	c.o	48	33	-	-	1.5
	Banff	r.o	or	41	36	1	1	0.0
	Montrose							
	St. Andrews	op.	op	42	38	4	1	0.0
England, N.E.	Harrogate	os	s.o.c	32	23	3	2	0.0
	Scarborough	os	or	38	31	1	2	0.0
	Skegness	op.o	os	30	11	4	0.4	0.0
England, E.	Lowestoft							
	Felixstowe	oc	oc	36	23	-	0.4	0.0
	Southend-on-Sea	x.orn	x.o	30	20	-	-	0.0
England, S.E.	Tunbridge Wells	0	0	31	22	-	-	0.0
	Margate	0	0	36	25	-	-	0.0
	Ramsgate	*	*	36	27	-	-	0.0
	Folkestone	x.o	0	35	27	-	-	0.0
	Hastings	0	o.s.o	35	27	-	trace	0.0
	Eastbourne	0	0	43	31	-	-	0.0
	Brighton	0	0	33	27	-	-	0.0
	Worthing	0	0	33	27	-	-	0.0
	Littlehampton	-	-	33	26	-	-	0.0
	Portsmouth (S'thsea)	*	*	31	27	-	-	0.0
	Bournemouth	*	*	31	27	1	1	0.0
	Ventnor (I. of W.)	*	*					

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 13th-14th	Rainfall. Day. 9h-18h. 13th	Sunshine. Sunrise to Sunset. 13th
England, N.W.	Douglas (I.O.M.)							0.0
	Blackpool	om		30	23	-	-	0.0
	Southport	o3.o3	o3	29	19	-	-	0.0
	Morecambe	-	-	32	25	-	2	
Midlands.	Buxton							0.0
	Leamington Spa	o	o	25	11	2	-	0.0
	Malvern	o	o	25	18	-	-	1.5
	Bath	b.bc	bc.c.o	28	22	-	-	3.7
Wales.	Rhyl	x	x	34	17	1	-	4.0
	Colwyn Bay	-	-	30	21	-	-	4.8
	Llandudno	b	bc	33	22	0.3	-	2.0
	Aberystwyth	c.b.o	c.o.o	30	25	2	-	
	Tenby							
	Swansea							
England, S.W.	Weymouth	s.o	os	32	29	5	0.3	0.0
	Teignmouth							0.0
	Torquay	os.cq	c.o	36	31	5	-	0.0
	Paignton	osrpq	ospq	37	29	4	-	1.2
	Penzance	ps.bc	ps.bc	36	28	1	0.2	1.8
	Newquay	x.bc	bc.ps.b	34	27	-	-	2.5
	Bude	b	b	33	28	-	-	2.8
	Ilfracombe	b.bc	bc.c	34	30	-	-	2.1
	Weston-s-Mare	c.bc	bc.orn	37	24	-	-	

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-13h 13th	Weather. 13h-18h 13th	Weather. 18h-1h 13th-14th	Weather. 1h-7h 14th	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass °F.	Rainfall † Day. 7h-18h mm.	Rainfall † Night. 18h-7h mm.	Sun. Hours.
Renfrew	ozf.o.olf	olf.dod.	co.lf	bcc.xf	40	34	29	0.4	0.3	0.0
Eskdalemuir	ozf.pd.ozf	rs.olf	dd.rs	rs.ozf	36	30	27	2	1	0.0
Valencia (Cahirc'n)	bbc.b	b	bbc.x	bbc.x	36	29	22	-	-	6.3
Baldonnel	x.R.bccf	s.zf	ozf	bcc.rsf RH	34	21	13	0.1	1	0.0
Manchester (Oless. Pk.)	ozf	ozf s.ozf	co x	ozf	33	16	22	-	0.2	*
Ross on Wye	bccf.cobof	gozf.x	ozf s.	ps.ozf	27	22	19	-	0.3	0.6
Falmouth	olf.s.	olf s.ozf	bbc.yf.rco	o	38	29	27	2	1	0.0
Calshot (Hants)	o.lf	ozf.s.	ozf ozf	ozf ozf	35	28	29	-	-	0.0
Lympne (Folkestone)	~~co.bcc~~ orn	ozf.s.	ozf	ozf	34	31	30	trace	-	0.0
Aberdeen	prh.q	prh.ps	pq	pq	42	40	38	2	5	0.0
Howden	ss ~	s.s ~	o4sf ss	ozf ~	33	23	24	4	1	0.0
Cranwell (Lincs)	ozf.s	os.s.bcc	ozf.ps.	ps. ozf	32	15	26	0.3	1	0.0
Felixstowe	olf.o	s.ozf	olf ozf	ozf olf	39	30	*	1	-	0.0
Shoeburyness	zf.c.o	zf.4sf	ozf	ozf ozf	36	20	28	-	-	0.0
Benson	oc	o	os.	ox	32	20	17	-	0.2	*
S. Farnborough	c.o.ozf	ozf ps.	ozf	ozf	30	17	25	-	-	0.0
London (Kew Obsy.)	x.o4sf	ozf s.	ozf x	ozf	33	22	27	-	-	0.0
Croydon	co.o4sf ozf.x	ozf 4sf os. rs.x ozf	ozf prs.x	ozf x	31	18	*	trace	-	*

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, *i.e.*, rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air: humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:-
R = heavy rain.
rr = continuous moderate rain.
r,r, = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 30 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0·3
1	1- 3	0·3- 1·5
2	4- 7	1·6- 3·4
3	8-12	3·5- 5·9
4	13-18	6·0-10·7
5	19-24	10·8-15·5
6	25-31	15·6-17·1
7	32-38	17·2-20·7
8	39-46	20·8-24·4
9	47-54	24·5-28·4
10	55-63	28·5-33·5
11	64-75	33·6 or above
12	Above 75	

SYMBOLS—

Aurora ⌂ Solar halo ⊗
Rime ⌅ Lunar halo ⊘
Glazed frost ~ Solar corona ⊙
Glazed roads ⌅ Lunar corona ⊚

LONDON. OBSERVATIONS.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Hours.	Humidity % 15 h. G.M.T.	Humidity % 9 h. G.M.T.
	24 HOURS ENDED 9h G.M.T. 14th							YESTERDAY.		TO-DAY.
Greenwich (Royal Observatory)	ox	ox	o	35	24	28	-	0.0	81	82
City (Bunhill Row)	*	*	*	*	*	*	*	0.0	*	*
Westminster (St. James's Park)	*	*	*	36	25	25	-	0.0	86	90
Regents Pk (Botanical Gdns)	*	*	*	*	*	*	*	0.0	*	*
Camden Sq. (British Rainfall)	o	o.os	*	34	24	20	-	*	93	84
Kensington Palace	o	o	*	35	21	26	-	*	84 (18h)	79
Hampstead Observatory	*	*	*	33	22	17	-		*	84

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday.

Total 48 Joules.

Milliwatts.

Average Rate. 17

Maximum Rate. 4

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

14th + 15th DECEMBER 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth	7.59	11.48	3.36
	8.0	11.48	3.36
Greenwich	8.0	11.55	3.49
	8.1	11.55	3.49
Wick	8.57	12.7	3.16
	8.58	12.7	3.16
Valencia	8.44	12.36	4.27
	8.45	12.36	4.27

Photographic Record of Pole Star (Polaris) and of δ Ursae Minoris at Greenwich Observatory

Exposure from 13th 17 h. 0 m. to 14th 6 h. 46 m.

Stars.	Duration of Exposure. h.	m.	Duration of Record h.	m.	%
Polaris	13	45	0	0	-
δ Ursae Minoris	13	46	0	0	-

NOTES ON THE WEATHER OF YESTERDAY.

Temperature remained below 32° over a large portion of England during the day, but rose above it in many localities during the night. The lowest minima reported this morning are 15° at Cranwell and 16° at Manchester. Snow showers fell in many places, but the measurements were generally small. At Plymouth, however, the total fall of melted snow was as much as 22mm. The day was bright in South-west Ireland and in Wales; elsewhere there was little or no sunshine.

* Information for these columns not usually received.

† Trace = rain has fallen but amount less than 0·1 mm.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. No. B21.573 Wednesday, 15th December ... 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

STATIONS	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind. Direc.	Wind. Force 0-12.	Weather	Temp. °F.	Humidity. %	Visibility § 0-9.	Height of Low Cloud. Feet.	Low Cloud. Form.	Low Cloud. Amt. 0-10.	Upper Cloud. Form.	Upper Cloud. Amt. 0-10.	Sea 0-9.	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind. Direc.	Wind. Force 0-12.	Weather.	Temp. °F.	Humidity. %	Visibility § 0-9.	Height of Low Cloud. Feet.	Low Cloud. Form	Low Cloud. Amt. 0-10.	Upper Cloud. Form.	Upper Cloud. Amt. 0-10.	Sea 0-9.
	13H. G.M.T. 14th														18H. G.M.T. of 14th													
Renfrew ...																												
Eskdalemuir ...	1028.8	0	ENE	1	o4f	36	85	2	2000	st.c.	10	-	-	*	1029.8	+1	E	1	o3f	38	75	3	4200	St	10	-	-	*
Valencia (Cahirc'n)	1028.3	+1	NE	3	o1f	38	85	6	4200	St.c.	10	-	-	*	1029.3	+2	ENE	4	o2f	36	92	6	-	St	10	-	-	*
Baldonnel	1023.1	+1	-	0	b3	38	56	7	-	-	-	A.St	1	3	1024.9	+2	ENE	1	b3	32	85	7	-	-	-	ASt	2	3
Manchester (Ringway)	1025.3	+1	E	1	b2f	32	85	4	3000	St.	1	-		*	1026.2	+1	-	0	b4	31	85	4	1250	St	6	-	-	*
Ross on Wye ...	1025.0	-2	NE	4	o3f	37	85	2	1250	St	10	-	-	*	1025.6	+2	ENE	4	o3f	36	92	3	1250	nb	10	-	-	*
Falmouth ...	1022.7	-2	NNW	1	om	31	86	3	750	St.	10	-	-	*	1023.0	+1	ENE	4	o2f	35	92	4	1250	St	10	-	-	*
Calshot (Hants) ...	1019.3	0	NE	4	b1f	38	65	6	-	-	-	A.Cu	3	*	1021.0	+2	NNE	3	bo1f	33	85	6	-		-	-	-	*
Lympne (Folkestone)	1019.9	-1	NE	4	o3f	36	86	3	2000	St	10	-	-	3	1021.1	+2	NE	4	o3f	37	92	3	1250	St	10	-	-	3
Aberdeen ...	1020.2	0	E	4	o2f	36	92	6	750	St	10	-	-	*	1021.1	+1	E	4	o2f	36	85	5	750	St	10	-	-	*
Howden ...	1029.6	0	SSE	4	o1f	43	85	6	1250	St	10	-	-	4	1032.3	+3	SE	4	o1f	41	88	7	1250	St	9	-	-	4
Cranwell (Lincs) ...	1025.3	-1	E	1	o2f	36	97	3	3000	St	10	-	-	*	1027.3	+3	E	2	o2f	36	97	4	3000	St	10	-	-	*
Felixstowe ...	1024.6	0	NE	2	o4	35	97	5	2000	St	10	-	-	*	1026.0	+2	ENE	3	o3f	33	92	2	750	St	10	-	-	4
Shoeburyness ...	1022.6	0	ENE	6	o2f	38	92	6	750	St	10	-	-	4	1023.7	+2	E	6	o2f	37	85	5	1250	St	10	-	-	*
Benson ...	1021.2	-2	NE	2	o	38	88	6	750	St	10	-	-	*	1022.3	+2	NNE	6	o	37	85	6	1250	St	9	-	-	*
S. Farnborough	1020.8	-2	NE	3	o	34	85	5	-	St	10	-	-	*	1022.0	+2	NE	3	o4o	34	97	4	-	nb	10	-	-	*
London (Kew Obsy.)	1020.7	-1	NE	1	om	34	86	4	750	St	10	-	-	*	1021.6	+1	ENE	2	o4m	35	97	4	750	nb	10	-	-	*
Croydon ...	1021.1	-2	ENE	3	om	36	86	2	<500	St	10	-	-	*	1022.3	+2	NE	4	omd	36	92	3	750	St	10	-	-	*
															1022.5	+2	ENE	3	o4o3f	35	97	2	<500	St	10	-	-	*
	1H. G.M.T. of 15th														7H. G.M.T. of 15th													
Renfrew ...															1033.4	+2	-	0	b2fx	31	85	4	-	-	-	-	-	
Eskdalemuir ...	1031.2	+2	ENE	3	c	34	85	6	-	St	8	-	-	*	1033.8	+2	E	3	o	33	75	7	-	StCu	10	-	-	*
Valencia (Cahirc'n)	1026.9	0	NE	1	bc	32	*	*	*	*	*	*	*	2	1025.2	+1	ENE	1	bx	29	85	7	-	-	-	-	-	*
Baldonnel ...	1027.8	+1	-	0	o2f	34	92	3	<500	St	10	-	-	*	1029.9	+2	-	0	bo3f	32	92	3	750	St	4	-	-	*
Manchester (Ringway)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1030.7	+2	E	5	o4m	34	76	6	2000	StCu	9	-	-	*
Ross on Wye ...	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1028.4	+3	ENE	4	o	31	85	7	2000	St	10	-	-	*
Falmouth ...	1023.5	+1	NNE	2	o2f	35	92	5	-	St	10	-	-	*	1026.0	+2	NNE	3	o	36	85	6	-	St	10	-	-	*
Calshot (Hants) ...	1024.1	+2	ENE	4	o1f	35	85	6	1250	St	10	-	-	4	1026.5	+3	NE	3	o2f	33	75	5	1250	St	10	-	-	2
Lympne (Folkestone)	1023.7	+2	NE	6	bc1f	30	76	6	2000	StCu	4	-	-	*	1025.6	+2	ENE	6	o2f	29	85	5	750	St	10	-	-	*
Aberdeen ...	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1030.0	+1	SSE	3	o1f	41	85	7	1250	St	10	-	-	4
Howden ...															1032.2	+2	ESE	4	o3fe	34	76	3	2000	St	10	-	-	*
Cranwell (Lincs) ...	1030.1	+1	ESE	3	c	35	85	3	2000	St	8	-	-	*	1030.6	+2	ENE	4	o	32	85	6	2000	St	10	-	-	*
Felixstowe ...	1028.7	+2	E	3	o	34	92	5	1250	St	10	-	-	*	1027.8	+1	NE	5	o1f	33	75	6	2000	StCu	10	-	-	5
Shoeburyness ...	1026.7	+2	ENE	5	c	34	75	6	1250	St	7	-	-	5	1026.8	+1	NE	5	o	34	75	7	3000	StCu	10	-	-	*
Benson ...	*	*	*	*	*	*	*	-	*	*	*	*	-	*	1027.0	+2	NE	3	o	31	85	6	-	StCu	10	-	-	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1027.1	+3	ENE	4	o2f	31	85	3	750	St	10	-	-	*
London (M.O. at 1H.)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1027.4	+3	NE	4	o2f	33	75	5	1250	StCu	10	-	-	*
Croydon ...	1025.1	+2	*	*	*	34	*	*	*	*	*	*	*	*	1027.3	+2	ENE	4	o2f	32	85	4	750	St	10	-	-	*
	1024.9	+1	ENE	4	o	34	85	6	1250	St	10	-	-	*														

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

STATIONS.	Barom. at M.S.L. mb.	Temp. °F.	Wind. Direc	Wind. Force 0-12.	Weather.	Barometer at M.S.L. mb.	‡ Change in 3 hours.	Temperature. Temp. °F.	Temperature. Change in 24 hours.	Wind. Direc.	Wind. Force 0-12.	Direc. of Upper Cloud.	Weather	Sea 0-9.	Rainfall † mm.	Temp. Max. °F.	Temp. Min. °F.	Weather. Morning	Weather. Afternoon	Weather. Night.	Sunshine Hours.
	18H. G.M.T. of 14th					7H. G.M.T. of 16th									24 HOURS ENDED 7H. 15th						14th
Lerwick																					
Stornoway ...	1033.3	44	SSE	4	cq	1034.9	0	42	0	SSE	6	-	omr.q	2	-	44	39	cq	cq	cqoma	*
Castlebay (Barra Is)	1029.7	39	S	2	b1f	1030.0	0	41	-2	SE	3	-	bc	2	-	44	33	b	b3	b.bbc	2.5
Malin Head ...	1028.8	43	ESE	5	o	1030.3	0	43	0	SE	4	SE	o	5	0.2	43	40	bc.oc	co	obpo	0.0
Blacksod Point	1027.1	33	SSE	2	bm	1028.9	0	35	+1	SSE	2	SE	bm	2	-	37	32	bom	bm	omom	4.2
Roche's Point ...	1025.6	35	SE	2	b	1027.2	+2	38	+3	SE	2	-	bc	2	-	46	34	bc	bc	bc	*
Birr Castle ...	1024.8	35	ENE	2	b	1028.6	+1	31	+2	NNW	3	-	b	2	0.4	36	29	b3.osg	osg.b	bxm	*
Donaghadee ...	1026.2	27	N	1	bc	1028.8	*	29	-1	N	1	-	o	*	-	33	23	fxbc	fbcx	fox	2.7
Liverpool (Bidston)	1027.0	40	ENE	3	bcm	1031.5	+1	39	+2	SSE	3	-	bcm	2	1	43	33	bcms	bcm	omdcm	*
Holyhead ...	1025.4	36	E	3	o	1030.3	+2	33	+4	E	3	E	o	4	-	37	29	f.om	om	oq	0.0
Pembroke (St. Ann's Head)	1024.9	39	E	4	o3f	1029.1	+2	34	+3	E	4	-	b	3	-	40	30	bm⊕	bm.om	ompd.b	0.0
Scilly (St. Mary's)	1023.6	35	NE	3	o2f	1027.8	+2	36	+4	ENE	3	-	o	2	-	39	29	om.cm	bcm	omomo	2.7
Jersey (St. Aubin)	1021.1	40	ENE	3	c1f	1024.7	+2	41	-1	ENE	3	E	o	4	-	43	40	c	c.bcc	o	2.9
Portland Bill ...	1017.1	39	E	4	ome	1021.5	+1	41	+4	NE	4	-	o	4	1	41	37	odm	odm.em	oe.co	0.0
Dungeness ...	1019.5	36	NE	5	om	1025.0	+4	35	+1	NE	5	-	oq	5	0.2	38	33	om	om	omoq	*
Wick ...	1020.2	38	E	4	o	1024.7	+2	32	-4	E	4	-	c	4	-	39	32	oc.o	o	oc	*
Nairn ...	1030.6	44	S	5	cq	1032.5	0	42	-2	S	7	-	oq	6	0.3	46	40	oq	oqp	oqp	*
Leith ...	1030.7	38	-	0	c	1033.1	*	33	-7	-	0	-	cg	0	-	40	31	c.bc	bc..	cbcxc	1.8
Tynemouth ...	1029.6	40	E	2	o	1033.0	+1	38	+1	E	2	-	o	2	0.2	41	37	omo	odo	oco	*
Spurn Head ...	1029.1	41	E	4	bc	1033.2	+2	39	+2	SE	4	-	o	4	1	43	36	om	omr	om.o	*
Yarmouth (Gorleston)	1024.3	38	E	6	bcq	1030.4	+2	35	-5	E	6	-	cq	5	0.2	41	31	op	bcq	bcqocq	x
Clacton-on Sea	1027.8	35	ESE	6	cq	1029.2	+1	32	-6	ESE	6	*	oqx	5	-	40	31	om.omz	oq	ov.bobcx	0.0
Nottingham ...	1022.8	38	E	4	o	1027.2	+2	33	-5	ENE	4	-	og	3	-	39	33	og	og	og	0.0
	1025.3	35	E	4	od	1030.3	*	34	+2	E	4	E	o	*	0.4	36	32	om	odm	do	0.0

* Information for these columns not usually received. ‡ The barometric change is expressed in half millibars. § For code see page 3. † See footnote p. 6.

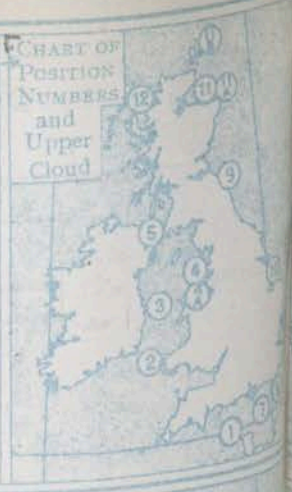
M.O. FORM 2370

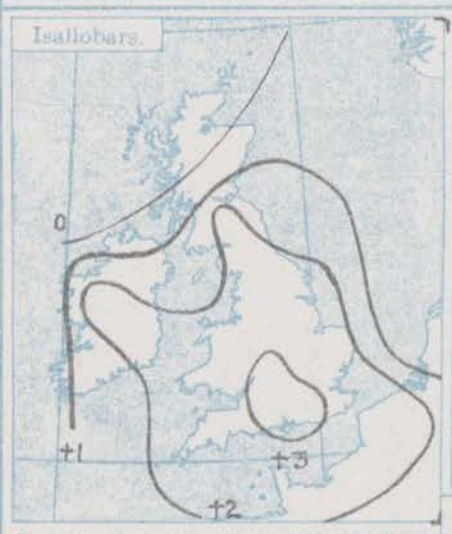
SUMMARY OF CONDITIONS AT 7 h. G.M.T. 15.12.20.

Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Dull, misty.	Indif.	Mod.
2. E. England	Dull, local squalls.	Fair.	R.Rough
3. E. Midlands	Dull.	Indif.	-
4. W. Midlands	Dull, some mist.	Fair.	-
5. S.W. England	Dull, local squalls.	Fair.	Mod.
6. South Wales	Dull.	Good.	Slight
7. North Wales	Variable sky.	Good.	Mod.
8. N.W. England	Dull, local squalls.	Fair.	Mod.
9. N. Midlands	Dull, misty, snow lying locally.	Indif.	-
10. N.E. England	Dull, snow lying locally.	Var.	Mod.
11. E. Scotland	Dull.	Fair.	Mod.
12. S.W. Scotland	Variable sky, local mist.	Fair.	Smooth
13. Isle of Man	Fair.	Fair.	Mod.
14. N.&N.W. Scotland	Fair to dull.	Fair.	R.Rough
15. Hebrides	Fair to dull.	Fair.	Mod.
16. Orkneys and Shetlands	Dull, squally, local rain.	Indif.	R.Rough
17. N.W. Ireland	Fair or fine.	Fair.	Smooth
18. N.E. Ireland	Fair or fine, some mist.	Fair.	Smooth
19. S.E. Ireland	Fair to dull, local mist.	Var.	"
20. S.W. Ireland	Fine or fair.	Good.	Smooth.

Temperature reported from Coastal and Cross Channel Steamers.

Position Number	Date	Time G.M.T.	Sea °F	Air °F
5	14	0841	50	40
3	14	1000	49	40
1	14	1239	51	40
4A	15	0345	45	38
8	15	0437	39	35





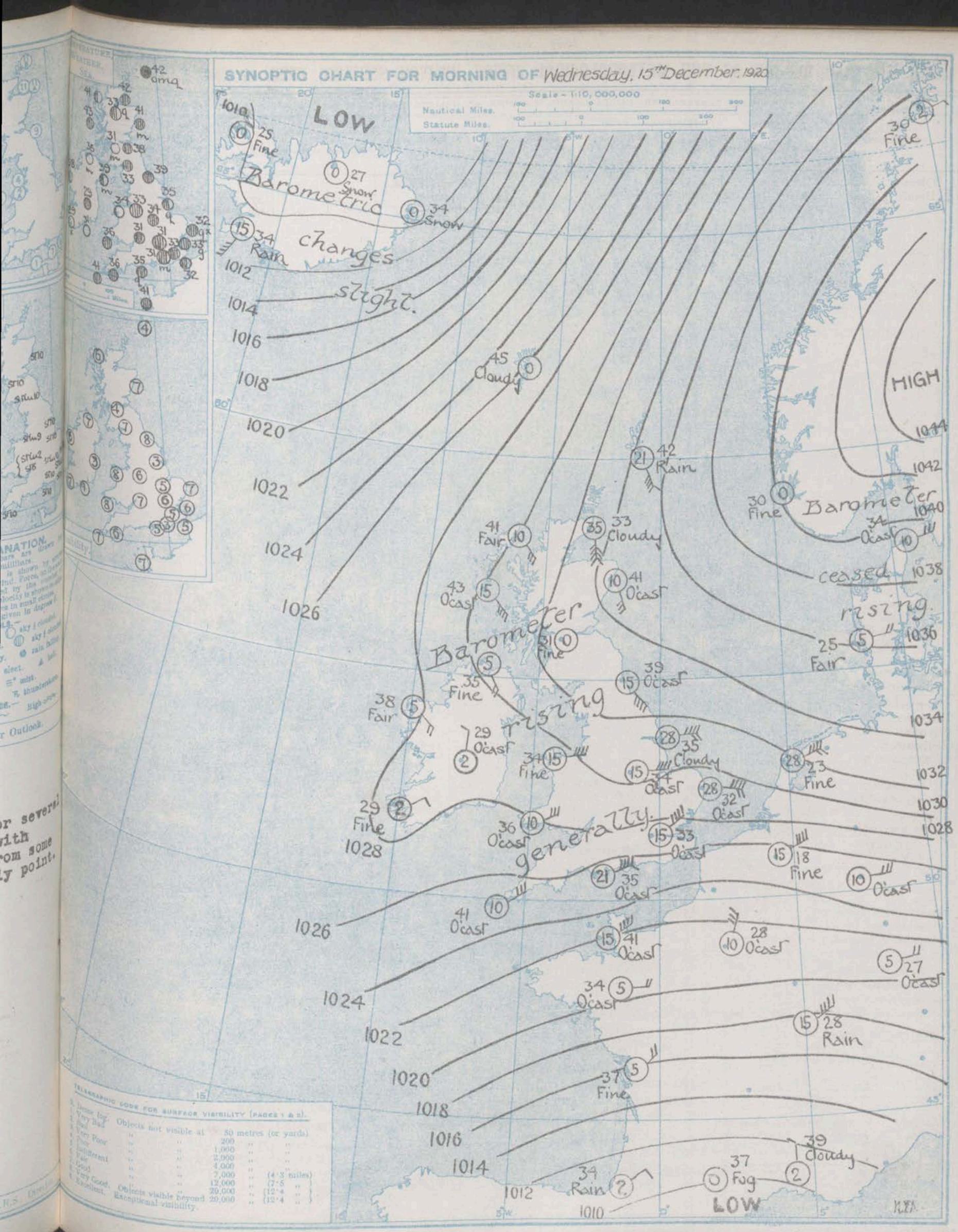
Barometric change from 4 h. to 7 h. (half millibars).

EXPLANATION.
BAROMETER.—Isobars are drawn at intervals of two millibars.
WIND.—Direction is shown by arrow flying with the wind. Force, on Beaufort 0–12, is indicated by the number of feathers. Mean velocity is shown in miles per hour by figures in small circles.
TEMPERATURE is given in degrees F.
WEATHER SYMBOLS.—clear sky. sky ¼ clouded. sky ½ clouded. sky ¾ clouded. overcast sky. rain. snow. sleet. fog. mist. thunder. thunderstorm.
SEA DISTURBANCE.—Rough. High seas.

GENERAL INFERENCE from observations received up to 9h. G.M.T.

The large anticyclone which is spreading over these Islands from Scandinavia will still maintain Easterly winds for several days. The weather will probably become fair to bright and the cold increase - especially over England. In Scotland the wind will be South-Easterly for a time and the temperature less low than elsewhere.

Districts.	Forecasts for the 24 hours commencing 15 h. G.M.T. Wednesday 15th December 1920.	Further Outlook.
1. S.E. England 2. E. England 3. E. Midlands 4. W. Midlands 5. S.W. England 6. South Wales 7. North Wales 8. N.W. England 9. N. Midlands 10. N.E. England	Wind Easterly, moderate or fresh, stronger locally on East coast; overcast, then fairer generally, but perhaps some snow showers along East coast. Visibility fair or good. Temperature low, frost in most inland localities.	Cold for several days, with wind from some Easterly point.
11. E. Scotland 12. S.W. Scotland 13. Isle of Man 14. N.&N.W. Scotland 15. Hebrides 16. Orkneys and Shetlands	Wind South-East or South, moderate or light, stronger in the East. Much cloud generally, some snow showers on East coast. Visibility fair. Cold, with some frost, in West and South-West, milder on East coast.	
17. N.W. Ireland 18. N.E. Ireland 19. S.E. Ireland 20. S.W. Ireland	Wind East or South-East, light or moderate; fair. Visibility fair or good. Cold, frost in most inland localities.	


SYNOPTIC CHART FOR MORNING OF Wednesday, 15th December 1920
Scale - 1:10,000,000
Nautical Miles.
Statute Miles.
LOW
Barometric changes slight.
HIGH
Barometer rising generally.
Barometer ceased rising.
LOW
1010
1012
1014
1016
1018
1020
1022
1024
1026
1028
1030
1032
1034
1036
1038
1040
1042
1044
25 Fine
27 Snow
34 Snow
34 Rain
45 Cloudy
42 Rain
30 Fine
30 Fine
34 O'cast
41 Fair
33 Cloudy
43 O'cast
41 O'cast
31 Fine
25 Fair
35 Fine
39 O'cast
38 Fair
29 O'cast
31 Fine
35 Cloudy
34 O'cast
23 Fine
32 O'cast
29 Fine
36 O'cast
33 O'cast
18 Fine
35 O'cast
41 O'cast
41 O'cast
28 O'cast
27 O'cast
34 O'cast
28 Rain
37 Fine
39 Cloudy
37 Fog
34 Rain
TELEGRAPHIC CODE FOR SURFACE VISIBILITY (PAGES 1 & 2).
0. Dense fog. Objects not visible at 50 metres (or yards)
1. Very bad " " 200 " "
2. Bad " " 1,000 " "
3. Very Poor " " 2,000 " "
4. Poor " " 4,000 " "
5. Indifferent " " 7,000 " " (4·3 miles)
6. Fair " " 12,000 " " (7·5 ")
7. Good " " 20,000 " " (12·4 ")
8. Very Good. Objects visible beyond 20,000 " " (12·4 ")
9. Excellent. Exceptional visibility.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 350.

Wednesday 15th December

WEATHER, TEMPERATURE RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 14th Dec.

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 13th-14th	Rainfall. Day. 9h-18h. 14th	Sunshine. Sunrise to Sunset. 14th
Scotland.	Oban	c.bc.b		47	32	-	-	3.8
	Banff	o	or c.bc	42	39	1	1	0.0
	Montrose							
	St. Andrews							
England, N.E.	Harrogate	o	or	34	27	4	2	0.0
	Scarborough	or	o	42	35	0.3	0.3	0.0
	Skegness							
England, E.	Lowestoft							
	Felixstowe	o.um	o.um	40	37	-	-	0.0
	Southend-on-Sea	x.o	o	38	25	-	-	0.0
England, S.E.	Tunbridge Wells	o	om.o	36	30	-	-	0.0
	Margate	o	o	40	32	-	-	0.0
	Ramsgate	*	*	38	33	-	-	0.0
	Folkestone	x.o	o	39	32	-	-	0.0
	Hastings	o	o	39	34	-	-	0.0
	Eastbourne	-	-	44	31	-	-	0.0
	Brighton	o	o	37	32	-	-	0.0
	Worthing	o	o	37	31	-	-	0.0
	Littlehampton	om	o.mr	37	30	-	-	0.0
	Portsmouth (S'thsea)	-	-	36	30	-	-	0.0
	Bournemouth	*	*	35	28	-	-	0.0
	Ventnor (I. of W.)	*	*					

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 17h-9h. 13th-14th	Rainfall. Day. 9h-17h. 14th	Sunshine. Sunrise to Sunset. 14th
England, N.W.	Douglas (I.O.M.)							
	Blackpool	o		37	27	1	-	0.0
	Southport	o.c.o	o	36	28	0.4	-	0.0
	Morecambe	-	-	39	29	2	-	0.0
Midlands.	Buxton							
	Leamington Spa	o	o	36	22	0.3	-	0.0
	Malvern	o	o	35	24	1	-	0.0
	Bath	o	od	35	24	1	0.3	0.0
Wales.	Rhyl	x.o	x.o	32	24	0.2	-	0.0
	Colwyn Bay	-	-	34	23	-	-	0.0
	Llandudno	o	om	36	26	-	-	0.0
	Aberystwyth	o.o.c	c.oo	37	25	-	-	0.0
	Tenby							
	Swansea							
England, S.W.	Weymouth	o.c	c.s.o	35	28	1	0.2	0.1
	Teignmouth							
	Torquay	o§	c.o§	37	30	7	-	0.0
	Paignton	o	o.spmr	36	27	7	1	0.0
	Penzance	c.bc	bc.b	40	30	2	-	4.0
	Newquay	b	b3	37	27	-	-	5.4
	Bude	x.b.bc	o	36	27	1	-	2.7
	Ilfracombe	c.o	o	40	30	-	-	0.0
	Weston-s-Mare	osr.o	o	36	25	-	-	0.0

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-13h 14th	Weather. 13h-18h 14th	Weather. 18h 14th-1h 15th	Weather. 1h-7h 15th	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall.† Day. 7h-18h	Rainfall.† Night. 18h-7h	Sun. Hours.
								mm.	mm.	
Renfrew	bccoosf	o.s.f.osf	o3f.bc.c	bbc x	40	31	19	-	-	0.0
Eskdalemuir	o.f.o.osf	o2f	o3f.bobcbcc	c.o.o	35	30	27	-	-	0.0
Valencia (Cabirc'n)	b.bc.	b.bc3	bbcx	x b	39	26	24	-	-	5.8
Baldonnel	x.3f.bco2f	bccef	f.o.o3f	bo3f	34	22	*	-	2	0.0
Manchester (Ringway)	o3f	o.s.f.s.f.pd.	o3f	co3f	35	31	22	-	-	*
Ross on Wye	o.f.p.s.g	p.s.o3f	o2f	o.f.o	35	24	30	0.1	trace	0.0
Falmouth	co.b.o.f	bccobbc.f	bbccoo.f.o2	o	40	32	30	-	-	4.3
Calshot (Hants)	o.osf	osf.o2f	o3f.dd	o.f.o3f	37	32	31	-	trace	0.0
Lympne (Kent)	o2f	o2f	co.3f	bcc.f.o2f	36	29	28	-	-	0.0
Aberdeen	p.o.f	of	o.f	o.f	43	40	38	1	-	0.0
Howden	o.f.	o2f.pd.	cobcc	2fc.o	37	33	31	1	-	0.0
Cranwell (Lincs)	osf	pd.osf	o3f.o	o3f	35	32	31	0.4	-	0.0
Felixstowe	of.osf	osf.p.	o.f.co	co.f	41	32	*	0.1	-	0.0
Shoeburyness	o.f.o	o	o9	9.o	39	32	30	-	-	0.0
Benson	o	o.pd.	dd.o	ox	35	28	29	0.2	0.2	*
S. Farnborough	osf.osf	osf.dd	pd.osf	o3f.o2f	35	30	30	1	0.3	0.0
London (Kew Obsy.)	osf	osf.dd	dd.o2f.o	o.o2f	36	32	32	0.2	trace	0.0
Croydon	x.osf.osf	osf.osf.dd.dd	o2f.o.f.pd.	o.f.o2f	35	31	*	0.4	-	*

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, *i.e.*, rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v. unusual visibility.
w dew. x hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:–
R = heavy rain.
rr = continuous moderate rain.
r.r. = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 30 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0·3
1	1– 3	0·3– 1·5
2	4– 7	1·6– 3·4
3	8–12	3·5– 5·9
4	13–19	6·0– 10·7
5	20–24	10·8–13·8
6	25–31	13·9–17·1
7	32–38	17·2–20·7
8	39–46	20·8–24·4
9	47–54	24·5–28·4
10	55–63	28·5–32·6
11	64–75	32·7–38·5
12	Above 75	38·6 or above

SYMBOLS–

Aurora ⌂ Solar halo ⊕
Rime ⊥ Lunar halo ⊙
Glazed frost ⌒ Solar corona ⊙
Glazed roads ⌒ Lunar corona ⊙

LONDON OBSERVATIONS.

	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Yesterday. Hours.	Humidity % 15 h. G.M.T. Yesterday.	Humidity % 9 h. G.M.T. To-day.
	24 Hours ended 9h G.M.T. 15th									
Greenwich (Royal Observatory)	o	o d o	o d.o d	36	32	32	1	0.0	92	83
City (Bunhill Row)	*	*	*	*	*	*	*	0.0	*	*
Westminster (St. James's Park)	*	*	*	38	32	30	1	0.0	88	85
Regents Pk. (Botanical Gdns)	*	*	*	*	*	*	*	0.0	*	*
Camden Sq. (British Rainfall)	co	o m o r	*	36	32	30	0.4	*	98	92
Kensington Palace	o.o r	o d.	*	37	30	30	1	*	98 (18h)	72
Hampstead Observatory	*	*	*	35	30	30	1	0.0	*	83

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday

Total 41 Joules.

Milliwatts.
Average Rate. 1·5
Maximum Rate. 3

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

15th & 16th December 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth	8.0 / 8.1	11.48 / 11.48	3.36 / 3.40
Greenwich	8.1 / 8.2	11.55 / 11.56	3.40 / 3.42
Wick	8.58 / 9.0	12.7 / 12.6	3.16 / 3.16
Valencia	8.45 / 8.46	12.26 / 12.27	4.27 / 4.27

Photographic Record of Pole Star (Polaris) and of δ Ursae Minoris at Greenwich Observatory.

Exposure from 14th 17 h. 0 m. to 15th 6 h. 45 m.

Star.	Duration of Exposure. h.	m.	Duration of Rest. h.	m.	%
Polaris	13	45	0	0	-
δ Ursae Minoris	13	45	0	0	-

NOTES ON THE WEATHER OF YESTERDAY.

Temperature rose to 35° or above in nearly all places and exceeded 40° in most Western and Northern districts, but frost again occurred at night over a large area. Several hours of bright sunshine were recorded in Ireland and the South-West of England and nearly 4 hours at Oban, but generally the day was very dull. Slight rain or drizzle was experienced in many localities.

* Information for these columns not usually received.

† Trace = rain has fallen but amount less than 0·1 mm.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. No. B 2574 Thursday 16th December 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

13H. G.M.T. 15

Stations	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	Visibility § 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew	1034.4	-1	ESE	1	o4f	34	85	2	3.000	St.Cu	9	-	-	*
Eskdalemuir	1034.3	0	ESE	2	o	34	85	6	-	St.Cu	10	-	-	*
Valencia (Cahirc'n)	1029.6	0	-	0	bz	37	85	6	-	-	-	-	-	3
Baldonnel	1030.8	+1	E	2	o1f	36	85	6	2000	St	10	-	-	*
Manchester (Alex. Pk.)	1032.5	0	E	5	o1f	33	86	6	2000	St.Cu	9	-	-	*
Ross on Wye	1029.7	+1	NE	4	o	31	75	8	2000	St.Cu	10	-	-	*
Falmouth	1028.1	+1	NNE	4	o1f	34	75	6	-	St	10	-	-	*
Calshot (Hants) *	1027.7	+1	NE	5	o1f	34	76	6	2000	St	10	-	-	4
Lympne (Folkestone)	1026.6	+1	NE	6	omq	27	85	6	1250	St	10	-	-	*
Aberdeen	1034.9	-2	S	3	o2f	41	85	4	1250	St.Cu	9	-	-	4
Howden	1032.7	-1	-	0	om.▦	34	85	6	2.000	St	10	-	-	*
Cranwell (Lincs)	1031.6	0	ENE	4	o1f	32	85	7	2.000	St	10	-	-	*
Felixstowe	1029.7	-1	NE	5	o1f	31	85	*	2000	St.Cu	10	-	-	5
Shoeburyness	1028.1	+1	NE	5	o	31	85	7	3.000	St.Cu	7	A.St	3	*
Benson	1028.5	*	NE	4	o	31	75	7	-	St.Cu	10	-	-	*
S. Farnborough	1028.1	0	NNE	3	o1f	31	85	6	750	St	10	-	-	*
London (Kew Obsy.)	1028.4	-1	NE	4	o2f	32	66	4	2000	St.Cu	8	A.St	2	*
Croydon	1028.6	0	ENE	5	o2f▦o	31	85	4	750	St	10	-	-	*

18H. G.M.T. OF 15

Stations	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	Visibility § 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew	1034.0	0	SE	1	o3f	36	75	3	3000	St.Cu	10	-	-	*
Eskdalemuir	1033.9	0	ENE	2	o1f	33	86	6	-	St.Cu	10	-	-	*
Valencia (Cahirc'n)	1029.8	+1	E	1	bz	34	85	7	-	-	-	A.St	1	2
Baldonnel	1031.5	+2	-	0	b	31	85	4	2000	St.Cu	2	A.St	1	*
Manchester (Alex. Pk.)	1033.0	+1	E	3	o1f	33	92	6	2000	St.Cu	9	-	-	*
Ross on Wye	1031.0	+2	ENE	4	o	30	85	7	2000	St	10	-	-	*
Falmouth	1029.5	+2	NNE	4	o2f	32	75	4	-	St.Cu	10	-	-	*
Calshot (Hants) *	[illegible]	+2	NE	4	o2f	32	75	5	1250	St	10	-	-	3
Lympne (Folkestone)	1028.0	+2	NE	5	o1fq	29	85	6	1250	St	9	-	-	*
Aberdeen	1034.6	0	SSW	2	o2f	39	85	4	3000	St	10	-	-	4
Howden	1033.3	0	-	0	om▦1	32	85	5	3.000	St.Cu	10	-	-	*
Cranwell (Lincs)	1032.5	+1	N	2	o	31	97	~~6~~ 7	3.000	St	10	-	-	*
Felixstowe	1030.2	+1	NE	5	bc	34	75	7	2000	St.Cu	5	-	-	6
Shoeburyness	1029.0	+2	NNE	3	bc	33	86	7	3.000	St.Cu	4	-	-	*
Benson	1030.3	+1	NNE	3	o	30	75	6	-	St.Cu	10	-	-	*
S. Farnborough	1029.3	+1	NE	2	om	30	97	5	1250	St	10	-	-	*
London (Kew Obsy.)	1029.7	+1	NE	4	o2f	32	75	4	2000	St	10	-	-	*
Croydon	1029.4	+1	NNE	4	o2f▦o	31	92	5	750	St	10	-	-	*

1 G.M.T. OF 16

Stations	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	Visibility § 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew														
Eskdalemuir	1034.1	0	-	0	bc1f	31	85	6	-	St	6	-	-	*
Valencia (Cahirc'n)	1029.6	0	NE	1	bc	36	*	*	*	*	*	*	*	0
Baldonnel	1032.2	0	SE	3	o2f	33	75	4	1250	St	10	-	-	*
Manchester (Alex. Pk.)	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ross on Wye	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Falmouth	1030.4	0	NNE	4	~~ofq~~ o	30	75	7	-	St	10	-	-	*
Calshot (Hants)	1029.8	-1	NNE	3	b	29	75	8	-	-	-	-	-	2
Lympne (Folkestone)	1025.9	-4	NE	6	oms₀	29	92	5	750	Nb	10	-	-	*
Aberdeen	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Howden	1031.9	-3	-	0	o	32	92	6	4200	St	10	-	-	*
Cranwell (Lincs)	1030.8	-2	NW	4	cx	31	97	5	3.000	St.Cu	7	-	-	*
Felixstowe	1028.6	-2	NE	5	os₀	31	97	2	1250	Nb	10	-	-	5
Shoeburyness	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Benson	*	*	*	*	*	*	*	*	*	*	*	*	*	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*
London (M.O. at 1H.)	1029.2	-2	*	*	*	28	*	*	*	*	*	*	*	*
Croydon	1029.6	-2	NNW	3	b2f▦o	26	95	4	-	-	-	-	-	*

7H. G.M.T. OF 16

Stations	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	Visibility § 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew	1033.5	0	NE	1	o3f	31	86	3	2.000	St	10	-	-	*
Eskdalemuir	1033.5	-1	-	0	o	30	85	6	-	St.Cu	9	-	-	*
Valencia (Cahirc'n)	1028.4	-2	ESE	4	b	39	75	7	-	-	-	A.St	1	*
Baldonnel	1032.4	0	SSE	1	bc	26	75	5	2000	St.Cu	2	A.St	1	*
Manchester (Alex. Pk.)	1031.8	0	NE	3	bc3f	33	85	3	3.000	St.Cu	3	A.Cu	2	
Ross on Wye	1031.1	-1	-	0	o	26	85	5	2,000	St	10	-	-	*
Falmouth	1030.8	+1	N	2	bc	29	85	7	-	St	1	-	-	*
Calshot (Hants)	1029.6	0	N	3	b	30	75	8	3.000	St.Cu	2	-	-	2
Lympne (Folkestone)	1026.7	-1	NE	6	o4fS₀	28	97	2	750	Nb	10	-	-	*
Aberdeen	1032.9	0	SW	1	orsm	36	97	4	2000	Nb	10	-	-	4
Howden	1032.1	+1	-	0	o	32	92	6	3.000	St	9	-	-	*
Cranwell (Lincs)	1031.3	+2	NNE	3	o▦o	31	97	6	4200	St.Cu	10	-	-	*
Felixstowe	1028.5	0	N	4	os₀	31	92	6	1250	St.Cu	10	-	-	3
Shoeburyness	1027.8	-2	NE	3	csx▦o	29	85	6	2.000	St.Cu	7	-	-	*
Benson	1029.3	0	NE	1	bcx	22	92	5	-	St	5	-	-	*
S. Farnborough	1029.8	-1	NNW	2	em	26	85	3	2.000	St	7	-	-	*
London (M.O. at 1H.)	1029.4	0	N	2	o2f	29	85	4	1.250	St	10	-	-	*
Croydon	~~1029.6~~ 1029.4	0	NNW	2	o3f▦o	29	85	3	750	St	10	-	-	*

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

Stations	18H. G.M.T. of 15: Barom. at M.S.L. mb.	Temp. °F.	Wind Direc.	Wind Force 0-12	Weather	7H. G.M.T. of 16: Barometer at M.S.L. mb.	‡ Change in 3 hours	Temperature Temp. °F.	Change in 24 hours	Wind Direc.	Wind Force 0-12	Direc. of Upper Cloud	Weather	Sea 0-9	† Rainfall mm. (24 hours ended 7H. 16)	Temp. Max. °F.	Temp. Min. °F.	Weather Morning	Weather Afternoon	Weather Night	Sunshine Hours (15)
Lerwick	1033.2	43	S	5	cm	1031.0	-2	43	+1	S	5	-	omrq	4	1	44	39	omrq	ompq	bcompq	*
Stornoway	1031.2	38	S	3	b	1028.2	-1	40	-1	S	6	-	o	4	-	41	38	b	b	b.o	2.4
Castlebay (Barra Is)	1031.3	42	ESE	4	o	1029.1	-1	42	-1	S	5	-	o	5	-	43	41	o	o	o	0.0
Malin Head	1030.5	33	ESE	2	om	1028.0	-1	36	+1	ESE	2	-	bm	2	-	~~36~~ 37	30	bm	bm	bm	5.1
Blacksod Point	1028.5	38	SE	2	bc	1028.3	-2	39	+1	SE	1	-	c	1	-	40	33	bm	bc	bc	*
Roche's Point	1030.2	35	ENE	2	b	1030.4	0	39	+8	E	3	-	o	2	0.1	40	31	bz	bz.b	b.o	*
Birr Castle	1031.1	30	N	1	c	1030.7	*	29	0	N	1	-	c	*	-	34	23	f.o.cx	fx.c	fx.c	1.8
Donaghadee	1031.9	39	SSE	3	cm	1031.8	0	39	0	SW	2	-	om	2	-	41	37	cm▦q	cm	om	*
Liverpool (Bidston)	1032.8	33	E	3	o	1032.5	+1	32	-1	ENE	1	-	o	1	-	34	31	com	o	o	0.0
Holyhead	1030.8	33	E	5	bx	1032.3	0	29	-6	E	2	-	bx	0	-	36	28	x.b.bcm	bz	x.bccmb	4.4
Pembroke (St. Ann's Head)	1031.0	30	E	3	bm	1031.9	0	29	-7	NE	2	-	b	2	-	36	29	oc.bm	bm	bm.bc.b	5.0
Scilly (St. Mary's)	1028.3	39	ENE	1	o1f	1030.3	0	35	-6	-	0	-	c	2	-	42	33	om	ocm	c.o.c	0.0
Jersey (St. Aubin)	1025.2	38	NE	5	o	1028.0	0	34	-7	NNE	2	-	o	2	-	42	28	o	o.c.o	o	0.8
Portland Bill	1028.2	33	NE	4	o	1029.2	0	32	-3	N	4	N	bc	4	-	36	30	oq	o	o.bc	*
Dungeness	1026.8	32	E	4	bc	1025.5	-1	28	-4	N	3	NE	c	3	-	33	28	c	c.bc	bcps.c	*
Wick	1032.3	40	SSW	5	bq	1029.9	-1	41	-1	SSW	5	-	bq	4	-	42	38	oq.b	cq.bcq	bq	*
Nairn	1032.7	29	-	0	b	1030.9	*	24	-9	-	0	-	bx	0	-	36	23	c.bc	bc	bx	4.8
Leith	1033.4	39	ESE	2	o	1032.9	0	35	-3	E	1	-	o	2	-	39	35	om.o	o▦.o	om.o	*
Tynemouth	1033.6	39	SSE	2	o	1032.4	0	39	0	SE	3	-	o	3	0.3	40	36	opa	opa	om.oqprs	*
Spurn Head	1031.9	37	E	4	o	1030.1	0	?	?	NE	6	-	oq.ps	5	0.3	37	33	pf	cq	o.coqps	*
Yarmouth (Gorleston)	1030.1	35	E	6	c	1028.4	0	33	+1	ENE	7	-	oq▦o	5	1	35	31	oq	ocqv	c.ofsvqp	0.7
Clacton-on-Sea	1029.2	33	NNE	4	c	1027.9	0	29	-4	NW	3	-	c	3	2	34	27	oq	oq.c	bc.c.ps	0.0
Nottingham	1032.3	32	E	2	o	1031.0	*	32	-2	NNE	3	N	ps	6	0.1	34	31	o	o.s	o	0.0

* Information for these columns not usually received. ‡ The barometric change is expressed in half millibars. § For code see page 3 † See footnote p.4.

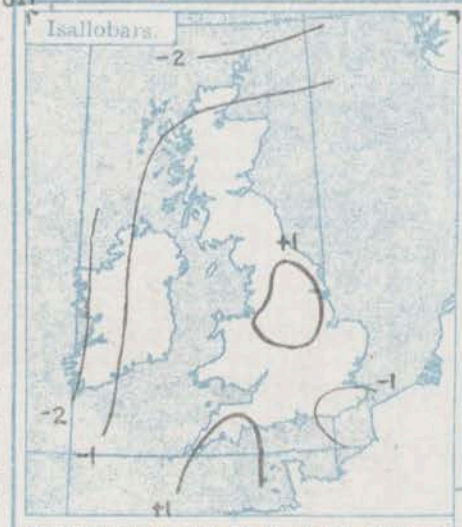
M.O. FORM 2370.

SUMMARY OF CONDITIONS AT 7 h. G.M.T. 16.12.20.

Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Dull, slight snow, misty.	Indif.	Slight
2. E. England	Dull, slight snow, misty.	Fair.	Mod.
3. E. Midlands	Fair to dull.	Fair.	-
4. W. Midlands	Fair to dull.	Indif.	-
5. S.W. England	Fine to fair.	Good.	Slight
6. South Wales	Fine.	Good.	Smooth
7. North Wales	Fine.	Good.	Calm.
8. N.W. England	Fair to dull.	Indif.	V. Smooth
9. N. Midlands	Fair to dull.	Indif.	-
10. N.E. England	Dull, slight snow.	Good.	Smooth
11. E. Scotland	Dull, slight rain.	Poor	Mod.
12. S.W. Scotland	Dull.	Indif.	Smooth
13. Isle of Man	Cloudy.	Fair.	Smooth
14. N. & N.W. Scotland	Fine, squally.	Fair.	Mod.
15. Hebrides	Dull.	Fair.	Mod.
16. Orkneys and Shetlands	Fair to dull; squally, slight rain.	Indif.	Mod.
17. N.W. Ireland	Cloudy.	Indif.	Smooth
18. N.E. Ireland	Fine to dull; misty.	Fair.	Smooth
19. S.E. Ireland	Dull.	Indif.	Smooth
20. S.W. Ireland	Fine to dull.	Good.	Smooth

Temperature reported from Coastal and Cross Channel Steamers.

Position Number	Date	Time G.M.T.	Sea °F	Air °F
5.	15th	08.19	50	39
12	"	?	43	33
3.	"	10.00	48	39
7.	16th	0350	48	36.5
49.	"	04.10	46	37



Barometric change from 4 h. to 7 h. (half millibars).

EXPLANATION.
BAROMETER.—Isobars are drawn at intervals of two millibars.
WIND.—Direction is shown by arrows flying with the wind. Force, on the scale 0-12, is indicated by the number of feathers. Mean velocity is shown in knots per hour by figures in small circles.
TEMPERATURE is given in degrees.
WEATHER SYMBOLS.—clear sky. sky ¼ clouded. sky ½ clouded. sky ¾ clouded. overcast sky. rain. snow. sleet. fog. mist. T thunder. K thunderstorm.
SEA DISTURBANCE.—Rough. High.

GENERAL INFERENCE from observations received up to 9h G.M.T.

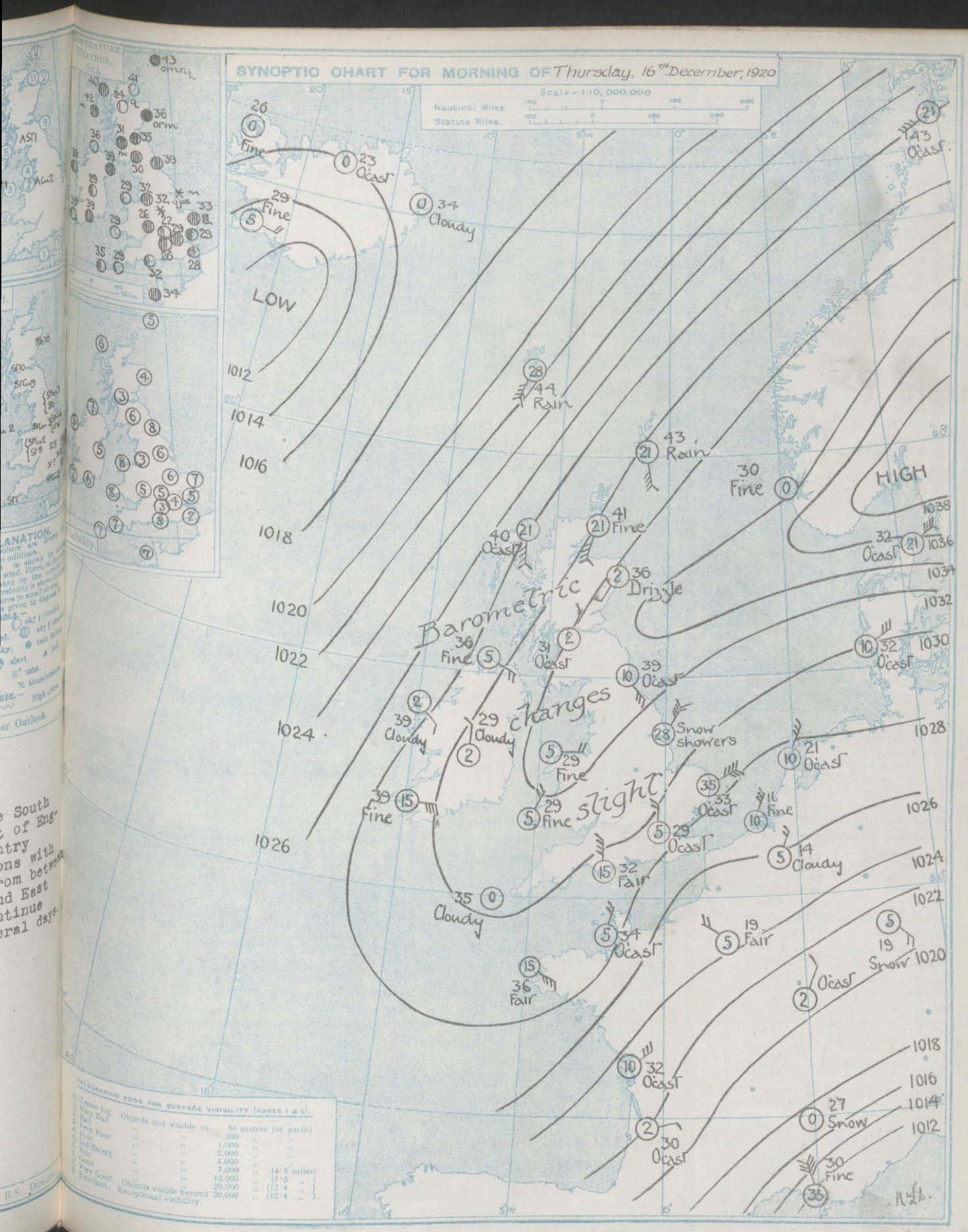
There are no indications of any break in the very cold spell which is established over the greater part of England and Ireland, and there will probably be further falls of snow in the East and South of England.

Districts.	Forecasts for the 24 hours commencing 15 h. G.M.T. Thursday 16th December 1920.
1. S.E. England 2. E. England 3. E. Midlands 4. W. Midlands	Moderate to fresh North-East wind; much low cloud, some snow; visibility good at times; very cold.
5. S.W. England 6. South Wales 7. North Wales 8. N.W. England 9. N. Midlands 10. N.E. England	Light East to South-East breezes; fair; visibility good, sharp frost inland at night.
11. E. Scotland 12. S.W. Scotland 13. Isle of Man	Light indefinite breezes; fair; visibility fair to good; frost at night inland.
14. N. & N.W. Scotland 15. Hebrides 16. Orkneys and Shetlands 17. N.W. Ireland	Fresh to strong South to South-West wind; much cloud, some rain locally; visibility fair; mild.
18. N.E. Ireland 19. S.E. Ireland 20. S.W. Ireland	Light to moderate South-East breezes; fair; visibility mainly good; frost inland at night.

Further Outlook.

In the South and East of England wintry conditions with winds from between North and East will continue for several days.

Meteorological Office: Air Ministry, Kingsway, London, W.C.2. Forecasts issued at 09.40. G. C. SIMPSON, F.R.S., Director.


SYNOPTIC CHART FOR MORNING OF Thursday, 16th December, 1920
Scale - 1:10,000,000
Nautical Miles.
Statute Miles.
LOW
HIGH
Barometric changes slight
1012
1014
1016
1018
1020
1022
1024
1026
1028
1030
1032
1034
1036
1038
26 0 Fine
0 23 O'cast
29 5 Fine
0 34 Cloudy
28 44 Rain
21 43 Rain
30 Fine 0
21 43 O'cast
40 21 O'cast
21 41 Fine
2 36 Drizzle
36 Fine 5
31 2 O'cast
10 39 O'cast
2 39 Cloudy
29 2 Cloudy
28 Snow showers
5 29 Fine
10 21 O'cast
39 15 Fine
5 29 Fine
35 33 O'cast
10 16 Fine
5 29 O'cast
5 14 Cloudy
15 32 Fair
35 0 Cloudy
5 34 O'cast
5 19 Fair
5 19 Snow
15 36 Fair
2 O'cast
10 32 O'cast
2 30 O'cast
0 27 Snow
30 Fine 35
10 32 O'cast
TELEGRAPHIC CODE FOR SURFACE VISIBILITY (PAGES 1 & 2).
0. Dense fog. Objects not visible at 50 metres (or yards)
1. Very Bad " " 200 " "
2. Bad " " 1,000 " "
3. Very Poor " " 2,000 " "
4. Poor " " 4,000 " "
5. Indifferent " " 7,000 " (4·5 miles)
6. Fair " " 12,000 " (7·5 ")
7. Good " " 20,000 " (12·4 ")
8. Very Good. Objects visible beyond 20,000 " (12·4 ")
9. Excellent. Exceptional visibility.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 351

Thursday 16th December

WEATHER, TEMPERATURE RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 15

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 14-15	Rainfall. Day. 9h-18h. 15	Sunshine. Sunrise to Sunset. 15
Scotland.	Oban	b.bc	c.o	46	31	-	-	1.7
	Banff	bc.b	b	40	34	-	-	2.8
	Montrose							
	St. Andrews	o	c	40	35	-	1	0.0
England, N.E.	Harrogate	o	o.s.p	33	30	0.2	0.1	0.0
	Scarborough	o	o	40	37	-	-	0.0
	Skegness	o.v	o.v	40	33	-	-	0.0
England, E.	Lowestoft	o	c.u	34	33	-	-	0.0
	Felixstowe							
	Southend-on-Sea	o	o	33	30	-	-	0.0
England, S.E.	Tunbridge Wells	o	o.oc.b	32	28	-	-	0.0
	Margate	o	c	34	31	-	-	0.0
	Ramsgate	*	*	38	28	-	-	0.0
	Folkestone	x.o	o	31	27	-	-	0.0
	Hastings	o	o	36	29	-	-	0.0
	Eastbourne	-	-	38	29	-	-	0.0
	Brighton	o.o	o	34	31	-	-	0.0
	Worthing	o	o	34	31	-	-	0.0
	Littlehampton	bc.o	o	34	31	-	-	0.0
	Portsmouth (Southsea)	*	*	38	32	-	-	0.0
	Bournemouth	*	*	33	30	-	-	0.0

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 14-15	Rainfall. Day. 9h-18h. 15	Sunshine. Sunrise to Sunset. 15
England, N.W.	Douglas (I.O.M.)							
	Blackpool	o		34	30	-	-	0.0
	Southport	c.o.c.o	o.c.o	34	33	-	-	0.0
	Morecambe	-	-	37	34	-	-	0.0
Midlands.	Buxton							
	Leamington Spa	o	o	32	29	-	-	0.0
	Malvern	o	o	30	29	-	-	0.0
	Bath	o	o	32	30	-	-	0.0
Wales.	Rhyl	o	c.o	37	30	-	0.1	0.0
	Colwyn Bay	-	-	34	31	-	-	0.0
	Llandudno	*	*	37	32	0.2	-	0.0
	Aberystwyth	o.c.b	o.o.o	36	30	-	-	2.0
	Tenby							
	Swansea							
England, S.W.	Weymouth	o	o	33	31	-	-	0.0
	Teignmouth							
	Torquay	c	c	35	32	1	-	0.0
	Paignton	o	o	35	30	0.3	-	0.0
	Penzance	o	o	37	34	-	-	0.0
	Newquay	o	o	35	30	-	-	0.0
	Bude	o	o	36	31	-	-	0.0
	Ilfracombe	o	o	36	32	0.4	-	0.0
	Weston-s-Mare	c.o	c.o	33	30	-	-	0.0

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-13h. 15	Weather. 13h-18h. 15	Weather. 18h-1½h. 16	Weather. 1h-7h. 16	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall.† Day. 7h-18h. mm.	Rainfall.† Night. 18h-7h. mm.	Sun. Hours.
Renfrew	bcoo3f+g	o3f	o3f	o3f	37	29	24	-	-	0.0
Eskdalemuir	o	o2f.o	o2f.c.o	bc.c.o	34	29	25	-	-	0.0
Valencia (Cahirciveen)	b3	b.bc3	bc	bc	40	27	26	-	-	5.7
Baldonnel	bcc3fbefg	b.o2f	o3f	bo.o3f	36	24	14	-	-	0.0
Manchester (Ak. Pk.)	o2f.if	o1f.o.o1f	o2f	b.bc3f	36	30	22	-	-	*
Ross on Wye	o	o	?	coofob.bc	31	23	19	-	-	0.0
Falmouth	o1f	o1f.o2f	o2f.o	b.o	36	28	25	-	-	0.0
Calshot (Hants)	o1f.g	o2f	b2f	b.bc	35	27	23	-	-	0.0
Lympne (Folkestone)	o1f.g	g.o1f	cobbco1fs.s	o2fs.s	30	24	16	-	5	0.0
Aberdeen	po.o2f	o2f	o2f	o2f.r5	41	36	30	0.2	2	0.0
Howden	o2f.if	o1f.o	o1f.o2f	ps.c.o	35	30	*	-	0.2	0.0
Cranwell (Lincs)	o1f.ps.	o	o	ps.o	33	27	24	trace	1	0.0
Felixstowe	o1f	o1f bc.c	bcco1fs.s	g/o2fs.	35	28	*	-	1	0.0
Shoeburyness	o	o.bc.c	bcoo	co.s.s.	35	27	20	-	0.2	0.0
Benson	o	o	b	bo.s.bbc	32	19	13	-	0.1	*
S. Farnborough	o2f.o1f	o.o1f	c.o b bc	b.o.ps	35	21	16	-	0.2	0.0
London (Kew Obsy.)	o3f.o2f	o2f	o1f.b	bo2f.ps.	33	27	22	-	trace	0.0
Croydon	o2f.g	o2fs.fr	cobbco2fr	bo.s.fr 3f.2f	32	25	*	-	0.1	*

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, *i.e.*, rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:-
R = heavy rain.
rr = continuous moderate rain.
r,r, = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 30 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0·3
1	1-3	0·3-1·5
2	4-7	1·6-3·3
3	8-12	3·3-5·4
4	13-18	5·5-7·9
5	19-24	8·0-10·7
6	25-31	10·8-13·8
7	32-38	13·9-17·1
8	39-46	17·2-20·7
9	47-54	20·8-24·4
10	55-63	24·5-28·4
11	64-75	28·5-32·6
12	Above 75	32·6 or above

SYMBOLS—

Aurora ⚹ Solar halo ⊛
Rime ⚹ Lunar halo ◎
Glazed frost ∽ Solar corona ◎
Glazed roads ⚒ Lunar corona ◎

LONDON. OBSERVATIONS.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Hours.	Humidity % 15 h. G.M.T.	Humidity % 21 h. G.M.T.
	24 HOURS ENDED 9h G.M.T. 16							YESTERDAY.		TO-DAY.
Greenwich (Royal Observatory)	0.0c	0.0c	0.b.s.o	33	28	26	0.3	0.0	67	81
City (Bunhill Row)	*	*	*	*	*	*	*	0.0	*	*
Westminster (St. James's Park)	*	*	*	34	30	25	0.1	0.0	87	98
Regent's Pk (Botanic Gdns)	*	*	*	*	*	*	*	0.0	*	*
Camden Sq. (British Rainfall)	o	c.o	*	32	27	22	0.3	*	80	86
Kensington Palace	o	o	*	34	27	23	-	*	81 (18h)	97
Hampstead Observatory	*	*	*	32	25	21	0.3	0.0	*	93

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday

Total 27 Joules.

Milliwatts.

Average Rate. 0.1

Maximum Rate. 3

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

16th & 17th Dec. 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth	8.1	11.49	3.36
	8.2	11.49	3.36
Greenwich	8.2	11.56	3.49
	8.3	11.56	3.49
Wick	9.0	12.5	3.15
	9.1	12.5	3.15
Valencia	8.46	12.37	4.37
	8.47	12.37	4.37

Photographic Record of Pole Star (Polaris) and of δ Ursae Minoris at Greenwich Observatory.

Exposure from 15th 17 h. 0 m. to 16th 6 h. 45 m.

Stars.	Duration of Exposure. h. m.	Duration of Record. h. m.	%
Polaris	13 · 45	5 · 35	41
δ Ursae Minoris	13 · 45	4 · 33	33

NOTES ON THE WEATHER OF YESTERDAY.

The temperature exceeded 40° locally in the North but did not exceed 32° at some Southern Stations. There was some sharp frost at night, a minimum temperature of 23° being recorded at Nairn and Birr Castle, and 19° at Benson. Two millimetres of rain fell at Aberdeen and 1mm at Lerwick, and there was some snow in the East of England.

* Information for these columns not usually received.

† Trace – rain has fallen but amount less than 0·1 mm.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. No. B.21576 FRIDAY 17th DECEMBER 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

Stations	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	§ Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
13H. G.M.T. 16th														
Renfrew	1033.2	-2	-	0	o2f	35	85	3	1250	StCu	8	ASt	1	*
Eskdalemuir	1033.4	0	SE	1	bc2f	33	92	6	2000	Nb	2	ACu	4	*
Valencia (Cahirc'n)	1028.2	-1	SSE	4	o1f	43	75	7	4200	StCu	4	ASt	6	3
Baldonnel	1031.7	-1	SE	1	bc1f	38	75	7	4200	StCu	2	Ci	3	*
Manchester (Alex Pk)	1032.1	-2	ENE	2	c2f	35	65	5	3000	St	8	-	-	*
Ross on Wye	1030.9	-2	NE	1	bz	36	75	5	4200	Cu	2	-	-	*
Falmouth	1030.5	-2	NE	3	b	38	76	7	-	StCu	1	-	-	*
Calshot (Hants)	1029.7	-1	NNE	3	b1f	34	75	6	2000	StCu	1	-	-	2
Lympne (Folkestone)	1027.1	0	NNE	6	os°qm	30	92	3	750	Nb	10	-	-	*
Aberdeen	1033.1	-1	SSE	2	or°fg	37	97	4	2000	Nb	10	-	-	3
Howden	1031.8	-1	NE	1	o	34	76	6	3000	StCu	6	ASt	3	*
Cranwell (Lincs)	1030.9	-2	NNE	3	o1f	36 2	97	6 7	3000	StCu	9	-	-	*
Felixstowe	1029.0	-1	N	3	os	30	97	3	1250	Nb	10	-	-	7
Shoeburyness	1028.5	-2	N	3	o2f	31	85	5	1250	St	10	-	-	*
Benson	1029.4	-2	N	2	b	34	75	7	-	Cu	2	-	-	*
S. Farnborough	1029.5	-1	N	3	o	33	85	6	1250	StCu	9	-	-	*
London (Kew Obsy.)	1029.3	-4	N	3	o2f	34	65	4	-	-	-	ACu	9	*
Croydon	1029.1	-2	N	4	o3f	32	85	3	750	St	9	-	-	*
1H. G.M.T. of 17th														
Renfrew														
Eskdalemuir	1033.9	-2	-	0	bx	17	97	7	-	-	-	-	-	*
Valencia (Cahirc'n)	1025.8	-2	SSE	3	o	46	*	*	*	*	*	*	*	3
Baldonnel	1031.3	-1	-	0	bx	31	85	5	-	-	-	ASt	3	*
Manchester (Alex Pk)	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ross on Wye	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Falmouth	1030.6	-2	NE	3	b	29	75	7	-	-	-	-	-	*
Calshot (Hants)	1028.2	-3	N	4	o1f	29	85	6	3000	StCu	6	ASt	3	3
Lympne (Folkestone)	1025.1	-3	NE	4	os°m	32	97	4	750	St	10	-	-	*
Aberdeen	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Howden	1030.9	-2	-	0	om	32	97	5	3000	StCu	10	-	-	*
Cranwell (Lincs)	1029.4	-1	N	4	o	32	97	6	2000	St	9	-	-	*
Felixstowe	1026.5	-3	NNW	4	c	33	97	6	4200	StCu	7	-	-	2
Shoeburyness	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Benson	*	*	*	*	*	*	*	*	*	*	*	*	*	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*
London (M.O. at 1H.)	1027.7	-1	*	*	*	35	*	*	*	*	*	*	*	*
Croydon	1028.3	-2	NNW	3	o2f	33	93	4	750	St	10	-	-	*

Stations	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	§ Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
18H. G.M.T. of 16th														
Renfrew	1033.4	0	SE	2	c2f	30	85	4	4500	StCu	8	-	-	*
Eskdalemuir	1034.5	0	-	0	bx	23	85	6	-	-	-	-	-	*
Valencia (Cahirc'n)	1027.5	0	SSE	4	o1f	42	75	7	-	-	-	ASt	10	3
Baldonnel	1032.3	+1	-	0	b	27	92	6	-	-	-	ASt	1	*
Manchester (Alex Pk)	1032.6	+1	NNE	1	o3f	34	75	2	3000	St	10	-	-	*
Ross on Wye	1031.5	+1	-	0	bm	28	85	4	-	-	-	-	-	*
Falmouth	1031.3	0	NE	2	b1f	30	75	6	-	-	-	-	-	*
Calshot (Hants)	1029.7	0	N	4	c	33	85	6	3000	StCu	8	-	-	2
Lympne (Folkestone)	1027.2	0	NNE	4	osm	30	92	4	750	Nb	10	-	-	*
Aberdeen	1033.7	0	SSW	3	o2f	37	85	4	2000	Nb	10	-	-	3
Howden	1032.4	+2	NNE	1	om	33	85	5	3000	StCu	10	-	-	*
Cranwell (Lincs)	1031.1	0	N	4	o	33	97	5	3000	StCu	10	-	-	*
Felixstowe	1028.5	+1	N	3	os°	32	92	5	1250	Nb	10	-	-	*
Shoeburyness	1028.0	-1	NNE	1	ox	32	85	6	2000	St	10	-	-	*
Benson	1029.8	0	N	3	o	32	85	5	-	StCu	10	-	-	*
S. Farnborough	1029.5	0	NE	2	o	33	85	6	1250	St	10	-	-	*
London (Kew Obsy.)	1029.2	0	N	2	o2f	33	85	4	3000	StCu	10	-	-	*
Croydon	1029.1	0	N	3	o3fs°	33	85	3	750	St	10	-	-	*
7H. G.M.T. of 17th														
Renfrew	1030.6	-1	E	1	o3f	30	85	3	2000	St	9	-	-	*
Eskdalemuir	1032.7	-2	-	0	bx	15	85	7	-	-	-	-	-	*
Valencia (Cahirc'n)	1024.2	-2	SE	4	oz	46	75	7	3000	StCu	10	-	-	*
Baldonnel	1029.3	-2	S	1	bc	34	85	5	2000	St	5	-	-	*
Manchester (Alex Pk)	1030.4	-1	NE	1	o3f	34	85	3	1250	St	10	-	-	*
Ross on Wye	1029.2	-2	NE	1	o3f	32	85	3	1250	St	10	-	-	*
Falmouth	1028.8	-1	NE	2	bx	29	75	7	-	-	-	-	-	*
Calshot (Hants)	1026.4	-2	NNE	3	o1f	35	85	6	3000	StCu	6	ASt	4	2
Lympne (Folkestone)	1024.0	0	NE	4	ors3f	32	97	3	750	Nb	10	-	-	*
Aberdeen	1029.8	-2	SW	1	b2fx	32	75	4	-	-	-	-	-	3
Howden	1029.7	0	-	0	bcm	31	97	5	1250	StCu	6	-	-	*
Cranwell (Lincs)	1028.8	0	N	3	o2f	32	97	5	3000	St	10	-	-	*
Felixstowe	1025.0	0	N	3	od°	34	97	6	1250	Nb	10	-	-	2
Shoeburyness	1025.2	0	NNE	4	od°	32	85	6	1250	St	10	-	-	*
Benson	1026.7	-1	N	3	o	33	85	6	-	StCu	10	-	-	*
S. Farnborough	1026.8	-1	NNE	2	o2f	34	85	5	2000	St	10	-	-	*
London (M.O. at 1H.)	1026.0	-2	NNE	4	o2f	35	85	5	1250	StCu	10	-	-	*
Croydon	1026.7	-1	N	4	ors2f	34	92	4	750	Nb	10	-	-	*

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

Stations	18H. G.M.T. of 16th: Barom. at M.S.L. mb.	Temp. °F.	Wind Direc.	Wind Force 0-12	Weather	7H. G.M.T. of 17th: Barometer at M.S.L. mb.	‡ Change in 3 hours	Temp. °F.	Change in 24 hours	Wind Direc.	Wind Force 0-12	Direc. of Upper Cloud	Weather	Sea 0-9	24 hours ended 7H. 17th: † Rainfall mm.	Temp. Max. °F.	Temp. Min. °F.	Weather Morning	Weather Afternoon	Weather Night	Sunshine Hours (16th)
Lerwick	1029.8	43	S	5	c	1026.5	-3	42	-1	S	3	S	o	2	-	43	40	ompq	c	eqo	*
Stornoway	1026.3	42	S	6	o	1024.7	0	42	+2	SSE	6	-	bc	5	-	42	40	oq	oq	o.bc	0.0
Castlebay (Barra Is)	1027.6	42	SE	4	o	1025.5	-1	44	+2	S	4	-	c	4	-	44	42	o	o	oc	0.0
Malin Head	1028.1	34	ESE	3	bm	1025.4	-1	37	+1	S	3	-	b	3	-	37	33	bcm	cm	bm	1.7
Blacksod Point	1025.5	38	SE	2	bc	1022.7	-2	40	+1	SE	3	-	or°2f	3	0.4	42	37	bc	bc	cbcom	*
Roche's Point	1030.1	41	SSE	4	o	1028.3	-1	42	+3	SE	4	-	o	4	trace	45	39	oc	oc	o	*
Birr Castle	1030.0	33	SE	1	c	1027.4	*	33	+4	SE	1	-	b	*	-	36	27	fcx	cx	bx	2.4
Donaghadee	1031.5	39	SW	1	cm	1029.0	-1	39	-2	S	1	.	om	1	-	41	37	cm	cm	cm	*
Liverpool (Bidston)	1032.9	32	E	1	m	1030.6	0	34	+2	E	1	.	o	1	-	36	32	obcm	bcm	om	1.0
Holyhead	1032.1	30	SE	3	bx2f	1029.9	-1	29	0	-	0	-	bx	6	-	39	26	bm	bmx	bx	6.0
Pembroke (St. Ann's Head)	1031.8	34	E	3	b1f	1029.9	-1	29	0	ENE	2	-	b	2	-	37	28	b.	bbm	bmb	6.1
Scilly (St. Mary's)	1030.3	38	-	0	c	1028.6	-2	37	+2	ESE	1	E	c	3	-	40	34	co	oc	ebcbcc	0.1
Jersey (St. Aubin)	1028.2	37	NE	3	o	1025.0	-1	40	+6	NE	4		o	3	0.1	40	32	ospo	o	o	0.0
Portland Bill	1029.2	33	N	4	b	1026.8	-3	33	+1	NNE	4	-	bcm	4	-	36	29	bc	bcm	bmobcm	*
Dungeness	1026.3	34	ENE	4	s	1023.9	0	32	+4	ESE	4	.	r	4	4	36	28	cos	qos	osopr	*
Wick	1028.5	40	SSW	5	bq	1025.0	-2	39	-2	SSW	6	.	bcq	4	-	43	37	bcq	bcq	bcq bq	*
Nairn	1029.4	29	-	0	b	1026.7	*	28	+4	-	0	.	bcmx	0	0.3	31	24	bmx	bmx	bbcx	1.5
Leith	1032.9	33	SE	1	b	1030.7	0	29	-6	SW	1	.	b	1	-	38	27	omc	cbcb	bzbxb	*
Tynemouth	1032.7	38	ESE	3	c1f	1030.6	-1	35	-4	W	2	.	cm	3	-	35	33	c	c	om	*
Spurn Head	1030.1	35	NE	5	oq	1027.7	-2	38	?	NNE	5	.	cqv	4	9	38	30	cqphs	cqphs	oq	*
Yarmouth (Gorleston)	1027.6	36	ESE	4	o	1025.8	0	38	+5	E	4	-	od°	3	3	38	31	oshqp	od	opqv.bcq or.	0.0
Clacton-on-Sea	1027.7	32	NNW	3	o	1025.3	0	35	+6	NNW	2	-	ogd	2	2	35	28	cogs	og	ogpsr	0.0
Nottingham	1031.1	35	N	3	o	1026.7	*	34	+2	NNW	3	.	c	*	-	36	31	cb	bcco	o	2.3

* Information for these columns not usually received. ‡ The barometric change is expressed in half millibars. § For code see page 3 † See footnote p. 4.

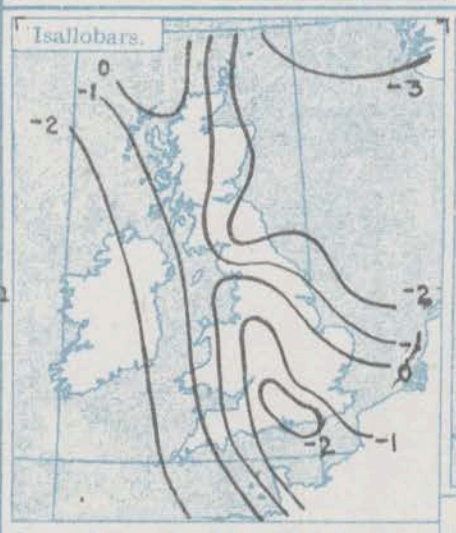
M.O. FORM 2370

SUMMARY OF CONDITIONS AT 7 h. G.M.T. 17. 12. 20.

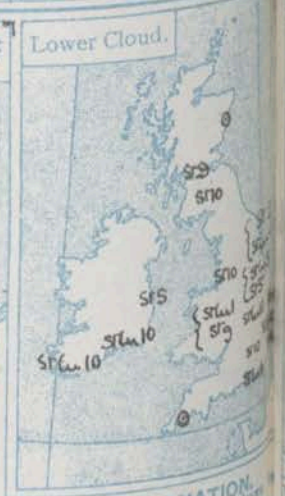
Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Dull, misty, local sleet.	Indif.	Mod.
2. E. England	Dull, some drizzle.	Fair.	Slight
3. E. Midlands	Cloudy or dull.	Fair.	-
4. W. Midlands	Dull, misty.	Poor	-
5. S.W. England	Fine to cloudy, local mist	Good.	Slight
6. South Wales	Variable sky.	Var.	Smooth
7. North Wales	Variable sky.	Var.	V. Smooth
8. N.W. England	Variable sky, mist inland.	Var.	Smooth
9. N. Midlands	Fair to dull, some mist.	Indif.	-
10. N.E. England	Fair or cloudy, local mist	Var.	Mod.
11. E. Scotland	Fine or fair, local mist.	Indif.	Slight
12. S.W. Scotland	Variable sky, local mist.	Var.	Smooth
13. Isle of Man	Cloudy.	-	Smooth
14. N. & N.W. Scotland	Fair or cloudy.	Indif.	Mod.
15. Hebrides	Fair or cloudy.	Fair.	R. Rough
16. Orkneys and Shetlands	Fair or dull.	Fair.	Slight
17. N.W. Ireland	Mainly dull, local rain.	Indif.	Slight
18. N.E. Ireland	Variable sky, local mist.	Var.	Smooth
19. S.E. Ireland	Fine or fair.	Fair.	Smooth
20. S.W. Ireland	Mainly dull.	Fair.	Mod.

Temperature reported from Coastal and Cross Channel Steamers

Position-Number.	Date	Time G.M.T	Sea °F	Air °F
5	16.	0823	50	39
3	16.	1000	48	39
7	17.	0305	50	40
4a	17.	0430	44	39



Barometric change from 4 h. to 7 h. (half millibars).



EXPLANATION.
BAROMETER.—Isobars are drawn at intervals of two millibars.
WIND.—Direction is shown by the arrow flying with the wind. Force, on the scale 0-12, is indicated by the number of feathers. Mean velocity is shown in miles per hour by figures in small circles.
TEMPERATURE is given in degrees.
WEATHER SYMBOLS.—○ clear sky. ◐ sky ½ clouded. ◍ overcast sky. ✳ snow. ⊗ sleet. ≡ fog. ≡ mist. ● rain. T thunder. K shower.
SEA DISTURBANCE.—Rough ~~ High ≈≈

GENERAL INFERENCE from observations received up to 9h. G.M.T.

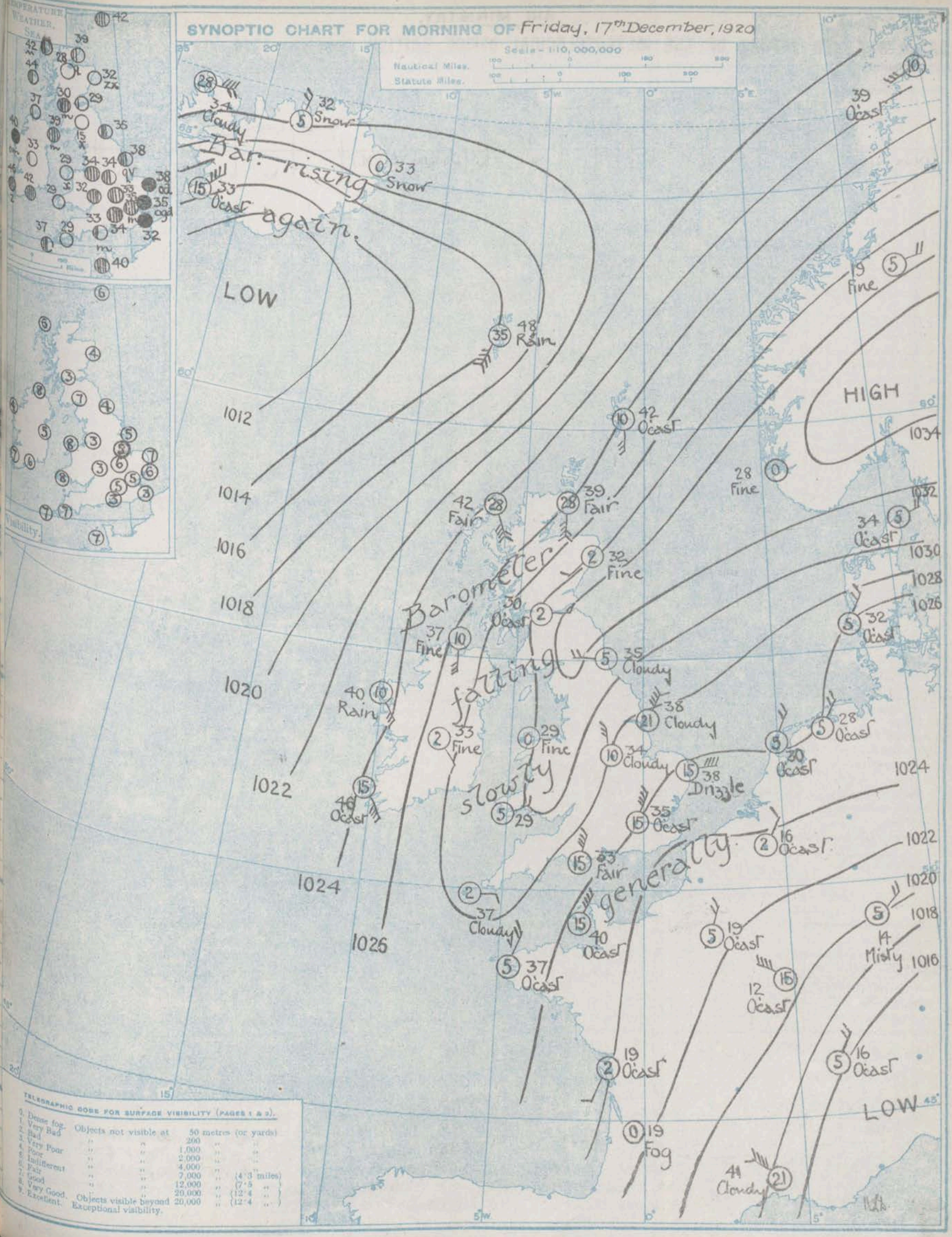
A wedge of high pressure extends from the St. George's Channel to the anticyclone over Scandinavia and Finland. Pressure is relatively low in a depression to the Southward of Iceland and also over Germany and France. There are at present no definite indications of any material change in the pressure distribution, and it is therefore probable that the North-Easterly winds will continue over the greater part of England. Temperature, however, may be less low than of late for a time.

Districts.	Forecasts for the 24 hours commencing 15 h. G.M.T. Friday 17th December 1920.
1. S.E. England 2. E. England 3. E. Midlands 4. W. Midlands 5. S.W. England	Wind North or North-East, moderate, fresh locally; much cloud some rain, sleet or snow showers. Visibility mainly fair. Temperature rising temporarily; little or no frost.
6. South Wales 7. North Wales 8. N.W. England	Wind East or South-East, light or moderate. Fair to dull. Visibility fair generally. Temperature rising.
9. N. Midlands 10. N.E. England	Northeasterly to variable winds, light or moderate. Mainly fair or cloudy. Visibility fair. Less cold than of late.
11. E. Scotland 12. S.W. Scotland 13. Isle of Man 14. N. & N.W. Scotland 15. Hebrides 16. Orkneys and Shetlands	Wind Southerly, light or moderate, fresh locally. Fair or cloudy generally, but some rain or snow in several localities later. Temperature rising.
17. N.W. Ireland 18. N.E. Ireland 19. S.E. Ireland 20. S.W. Ireland	Wind mainly Southerly, light to fresh; cloudy or overcast, some rain or showers. Visibility fair. Temperature rising.

Further Outlook.

Wind mainly Northeasterly in the East with a low temperature; Southerly and Southwesterly in the West with a relatively high temperature.

R.S.


SYNOPTIC CHART FOR MORNING OF Friday, 17th December, 1920
Scale - 1:10,000,000
Nautical Miles.
Statute Miles.
Bar. rising again.
LOW
HIGH
Barometer falling slowly generally.
1012
1014
1016
1018
1020
1022
1024
1026
1028
1030
1032
1034
34 Cloudy
32 Snow
33 Snow
33 O'cast
48 Rain
42 O'cast
42 Fair
39 Fair
32 Fine
30 O'cast
37 Fine
35 Cloudy
40 Rain
38 Cloudy
33 Fine
29 Fine
34 Cloudy
38 Drizzle
40 O'cast
29
35 O'cast
16 O'cast
33 Fair
37 Cloudy
40 O'cast
37 O'cast
19 O'cast
19 Fog
41 Cloudy
12 O'cast
19 O'cast
14 Misty
16 O'cast
28 O'cast
30 O'cast
32 O'cast
39 O'cast
19 Fine
28 Fine
TELEGRAPHIC CODE FOR SURFACE VISIBILITY (PAGES 1 & 2).
0. Dense fog. Objects not visible at 50 metres (or yards)
1. Very Bad " " 200 " "
2. Bad " " 1,000 " "
3. Very Poor " " 2,000 " "
4. Poor " " 4,000 " "
5. Indifferent " " 7,000 " (4·3 miles)
6. Fair " " 12,000 " (7·5 ")
7. Good " " 20,000 " (12·4 ")
8. Very Good. Objects visible beyond 20,000 " (12·4 ")
9. Excellent. Exceptional visibility.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 352.

Friday 17 December

WEATHER, TEMPERATURE RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 16

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 15-16	Rainfall. Day. 9h-18h. 16	Sunshine. Sunrise to Sunset. 16
Scotland.	Oban	o	co	38	32	–	–	0.1
	Banff	c bc b	b	39	30	–	–	3.4
	Montrose							
	St. Andrews							
England, N.E.	Harrogate	bc bbcc	co	33	28	–	–	1.3
	Scarborough	o	o	40	36	–	–	0.0
	Skegness	o3pco	co	39	31	2	1	1.2
England, E.	Lowestoft							
	Felixstowe	o p3	o3	32	?	0.2	0.2	0.0
	Southend-on-Sea	x o3	o	33	27	0.2	0.2	0.0
England, S.E.	Tunbridge Wells	o3o	o3o	31	25	0.3	0.3	0.0
	Margate	o3	o	36	27	1	2	0.0
	Ramsgate	*	*	39	27	1	2	0.0
	Folkestone	f3	3o33	32	28	3	1	0.0
	Hastings	o3	o3	31	27	1	2	0.0
	Eastbourne	3	3o	32	27	–	1	0.0
	Brighton	c	co	34	28	0.2	–	0.6
	Worthing	pc	bc	34	26	–	–	1.8
	Littlehampton	bc3	bc	34	27	–	–	1.5
	Portsmouth (S'thsea)	*	*	35	28	–	–	0.0
	Bournemouth	*	*	35	25	–	–	3.0

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 15h-9h. 15-16	Rainfall. Day. 9h-15h. 16	Sunshine. Sunrise to Sunset. 16
England, N.W.	Douglas (I.O.M.)							
	Blackpool	c	bc	37	29	–	–	4.5
	Southport	bbc b	bc bbc	35	29	–	–	3.3
	Morecambe							
Midlands.	Buxton							
	Leamington Spa	cb	o	36	23	–	–	2.5
	Malvern							
	Bath	ocbcb	– b	35	22	–	–	2.6
Wales.	Rhyl	cx	xc	36	24	–	–	0.0
	Colwyn Bay	–	–	34	25	–	–	2.5
	Llandudno	*	*	35	25	–	–	2.9
	Aberystwyth	occ	c.o	36	23	–	–	1.5
	Tenby							
	Swansea							
England, S.W.	Weymouth	cb	b	38	25	–	–	5.8
	Teignmouth							
	Torquay	m bc b	bm	37	25	–	–	3.8
	Paignton	bc	bcb	37	24	–	–	4.4
	Penzance	b	b	40	29	–	–	6.8
	Newquay	x b	b	38	25	–	–	6.8
	Bude							
	Ilfracombe	x b	b	38	27	–	–	6.2
	Weston-s-Mare	cbc	bbc	37	23	–	–	3.5

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-18h 16	Weather. 18h-18h 16	Weather. 18h 16-1h 17	Weather. 1h-7h 17	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall.† Day. 7h-18h	Rainfall.† Night. 18h-7h	Sun. Hours.
								mm.	mm.	
Renfrew	o 3f	co3f bcc 3f	co 3f	o 3f	37	30	20	–	– 4	0.5
Eskdalemuir	o3, o3f co	bbc.b	x b	bx	34	15	9	–	–	0.4
Valencia (Cahire'n)	bbcco	o 1f 2	o2	o	46	27	39	–	–	0.2
Baldonnel	bcc 3f bcc 3f	bcc 1f	bbcx	bbcx	40	24	21	–	–	4.1
Didsbury	bcc3f o3f co3f	co2f o3f	o 4-8f	o 8f	38	30	26	–	–	*
Ross on Wye	o cobbcz	bbcz bz	b 3f co3f	o2f o3f	36	26	20	–	–	2.1
Falmouth	bbc 4f x b	bbc 1f b3f	b	bx	40	27	19	–	–	5.7
Calshot (Hants)	bcc3f bbc 1f	bbo3f bcc 1f	o2f o1f	o1f	35	29	29	–	–	4.6
Lympne (Folkestone)	s3, s9 o2f 3f	o2f s3.	o2f s. o2f	o2f s. o2f	34	26	20	6	1	0.0
Aberdeen	o2f prs.	r. o2f	o2f 2f	2fe 2f	38	30	23	3	–	0.0
Howden	bbc ~	o1f o	o1f o	o1f co	34	27	21	–	–	0.0
Cranwell (Lincs)	o1f ps.	co.o	o 1fe	co co	33	31	28	trace	trace	0.4
Felixstowe	o3f s.s.	o3.s.	o2f s. 1f bc	o 1f pd.	35	29	*	1	2	0.0
Shoeburyness	s. x	s. x	o9	o pd.	35	28	28	0.3	0.2	0.0
Benson	bbc	o	coco	cox	35	22	26	–	–	*
S. Farnborough	co ps bcc	coo	o 2f	co2f	34	25	31	–	–	2.0
London (Kew Obsy.)	ps. o3f	2f o2f	ps. o2f	o 2f	35	29	29	–	–	0.6
Croydon	o3f s.s.	o3f s.	o3f s. o2f	o2f rs.	34	29	*	trace	trace	*

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, *i.e.*, rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:–
R = heavy rain.
rr = continuous moderate rain.
r,r, = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 30 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0·3
1	1– 3	0·3– 1·5
2	4– 7	1·6– 3·3
3	8–12	3·4– 5·4
4	13–18	5·5– 7·9
5	19–24	8·0–10·7
6	25–31	10·8–13·8
7	32–38	13·9–17·1
8	39–46	17·2–20·7
9	47–54	20·8–24·4
10	55–63	24·5–28·4
11	64–75	28·5–33·5
12	Above 75	33·6 or above

SYMBOLS–

Aurora, Rime, Glazed frost, Glazed roads, Solar halo, Lunar halo, Solar corona, Lunar corona

LONDON. OBSERVATIONS.

	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Hours.	Humidity % 15 h. G.M.T.	Humidity % 9 h. G.M.T.
	24 Hours ended 9h G.M.T. 17							Yesterday.		To-day.
Greenwich (Royal Observatory)	oc s.	s. o co s.	o	36	31	29	–	0.0	86	91
City (Bunhill Row)	*	*	*	*	*	*	*	0.0	*	*
Westminster (St. James's Park)	*	*	*	36	32	29	0.2	0.0	75	91
Regent's Pk. (Botanic Gdns)	*	*	*	*	*	*	*	0.1	*	*
Camden Sq. (British Rainfall)	o3cbc	cs. bcc	*	35	31	23	–	*	85	90
Kensington Palace	oc	o	*	36	30	28	0.3	*	86 (18h)	87
Hampstead Observatory	*	*	*	33	29	26	trace	0.8	*	91

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday

Total 122 Joules.

Milliwatts.
Average Rate. 4.4
Maximum Rate. 11

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

17 & 18 December 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth	8.2	11.49	3.36
	8.3	11.50	3.37
Greenwich	8.3	11.56	3.49
	8.4	11.57	3.50
Wick	9.1	12.8	3.15
	9.2	12.9	3.16
Valencia	8.47	12.37	4.27
	8.48	12.38	4.28

Photographic Record of Pole Star (Polaris) and of 3 Ursæ Minoris at Greenwich Observatory.

Exposure from 16 h. 17 h. 0 m.
to 17 h. 6 h. 45 m.

Stars.	Duration of Exposure. h.	m.	Duration of Record. h.	m.	%
Polaris	13	45	1	11	9
3 Ursæ Minoris	13	45	0	0	–

NOTES ON THE WEATHER OF YESTERDAY.

Temperature rose to 40° or higher in the extreme North and North-West but remained below 35° at some places in the South-East of England. The minima of the night were not generally much below 32°, but at Eskdalemuir the thermometer fell to 15° in the screen and to 9° on the grass. Snow fell in several Eastern and Southeastern localities; at Spurn Head the value was as much as 9mm. Much bright sunshine was recorded at some Western and South-Western stations.

* Information for these columns not usually received.

† Trace – rain has fallen but amount less than 0·1 mm.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. No. B2157(?) SATURDAY 18th DECEMBER 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

Stations	Barom. at M.S.L. mb.	Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9	Barom. at M.S.L. mb.	Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
	13H. G.M.T. 17th														**18H. G.M.T. of 17th**													
Renfrew	1029.7	-3	NE	1	o4f	30	75	2	1250	Sr Cu	10	-	.		1029.3	0	-	0	o3f	31	75	2	3000	StCu	10	-	-	*
Eskdalemuir	1030.5	-2	-	0	b2fx	28	85	5	-	Sr Cu	1	-	.	*	1030.7	0	-	0	bx	19	86	6	-	-	-	-	-	*
Valencia (Cahirc'n)	1021.5	-3	SE	5	c	41	66	8	2000	Sr Cu	7	.	.	4	1023.1	0	ESE	4	o	44	65	8	2000	Sr Cu	7	-	-	4
Baldonnel	1022.3	-2	SE	3	o1f	38	75	7	3000	Sr Cu	8	.	.	*	1022.0	0	S	2	o	30	45	6	.	.	.	aCu (red)	7	*
Manchester (Alex Pk)	1028.6	-3	NE	3	o3f	38	65	3	2000	Sr	9	-	.	+	1028.4	0	NNE	2	c3f	35	92	5	2000	Sr	7	-	-	4
Ross on Wye	1027.1	-3	NE	2	c3	37	75	4	2000	Sr	7	A Cu	1	*	1026.7	0	E	2	o3f	36	85	3	750	Sr	10	-	-	*
Falmouth	1026.8	-½	NNE	3	bif	38	66	6	-	.	-	-	.	*	1025.3	-1	NNE	2	bifx	30	75	5	.	Sr Cu	1	-	-	*
Calshot (Hants)	1026.4	-2	NNE	4	oif	37	65	6	1250	Sr	10	-	-	2	1025.1	0	NNE	3	od0	36	92	4	1250	Sr	10	-	-	2
Lympne (Folkestone)	1024.5	0	-	0	om [illegible]	32	97	4	750	Sr	0	-	.	*	1024.5	0	NNE	1	o S m	32	97	4	750	Sr	10	-	.	*
Aberdeen	1028.9	-2	SSW	3	b2f	36	65	4	.	.	-	-	.	5	1007.8	-1	SSW	2	b2fc	32	86	4	-	.	.	.	.	2
Howden	1028.4	-2	-	0	o [illegible]	35	92	5	3000	Cu	9	-	-	*	1028.0	0	-	0	o [illegible]	34	97	6	3000	Sr	10	-	-	*
Cranwell (Lincs)	1027.4	-2	N	3	c2f	34	92	4	3000	Sr Cu	5	A Cu	2	+	1027.3	0	NNE	3	o2f	34	97	4	3000	Sr	10	-	-	4
Felixstowe	1025.8	-3	N	3	od0	35	97	5	750	Nb	10	.	.	2	1025.3	0	N	2	o2f	36	97	5	3000	Sr Cu	10	.	-	2
Shoeburyness	1024.8	-2	NE	2	o2f	35	86	6	1250	Sr Cu	10	.	.	3	1024.4	0	NE	2	o2fd	36	86	5	1250	Cu Nb	10	-	.	c
Benson	1025.3	-3	N	3	o	36	65	5	.	Sr	10	-	.	*	1025.7	0	NNE	2	o	35	97	5	-	Sr	10	-	-	*
S. Farnborough	1025.6	-2	N	2	odm	35	97	4	750	Nb	10	-	.	*	1025.5	0	-	0	od0m	35	94	4	1200	Nb	10	-	.	*
London (Kew Obsy.)	1025.4	-2	NNE	3	od0m	36	92	6	1250	Sr	10	-	-	*	1025.7	0	NNE	2	o3f	36	92	2	1250	Sr	10	-	.	*
Croydon	1025.8	-2	NNE	3	o3fd	35	97	2	750	Nb	10	-	.	*	1025.6	+1	NNE	1	o4fd	36	97	2	<500	Nb	10	-	.	*
	1H. G.M.T. OF 18th														**7H. G.M.T. OF 18th**													
Renfrew															1028.5	-2	-	0	o4fx	25	92	2	1250	Sr	10	-	-	*
Eskdalemuir	1030.0	-1	-	0	bx	16	92	7	-	StCu	2	-	-	*	1029.1	-1	-	0	o2fx	23	92	5	-	StCu	9	-	-	*
Valencia (Cahirc'n)	?	+2	SSW	1	o	38	*	*	*	*	*	*	*	2	1025.3	+2	ESE	2	b	39	75	8	4200	Sr	2	-	-	*
Baldonnel	1028.1	0	-	0	bc	30	75	4	4200	StCu	5	-	.	*	1027.5	0	E	1	o1f	34	75	6	4200	Sr	10	-	-	*
Manchester (Alex Pk)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1028.2	0	ENE	3	o3f	37	85	3	1250	Sr	10	-	-	*
Ross on Wye	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1026.7	0	E	1	o4fc	35	97	2	<500	Sr	10	-	-	*
Falmouth	1024.7	-1	NE	4	o1f	37	85	6	-	Sc (red)	10 (red)	-	.	*	1025.1	0	NE	3	o1f	37	85	6	-	Sr	10	-	-	*
Calshot (Hants)	1024.7	-1	N	3	o2f (red)	36	97	4	2000	Sr	10	-	-	23 (red)	1024.7	0	NNE	3	o2f	37	92	5	1250	Sr	10	-	-	2
Lympne (Folkestone)	1023.9	0	NNE	1	o2fe	33	97	4	750	Sr	10	-	-	*	1023.6	0	NNE	1	od0	33	97	3	750	Nb	10	-	-	*
Aberdeen	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1026.6	-1	W	1	b3fex	25	97	2	-	-	-	-	-	2
Howden	1027.7	-1	-	0	o	32	97	4	2000	Sr	4	-	-	*	1028.2	0	-	0	[illegible] o2f	32	97	4	2000	Sr	10	-	-	*
Cranwell (Lincs)	1027.0	0	NNE	3	od0	33	97	5	2000	Sr	10	-	-	*	1027.1	0	N	3	o2f	33	97	5	3000	Sr	10	-	-	*
Felixstowe															1025.1	0	N	3	or0 2f	37	97	5	1250	Nb	10	-	-	1
Shoeburyness	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1024.4	0	NNE	1	od0	38	85	6	1250	StCu	10	-	-	*
Benson	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1024.8	0	N	2	o	36	97	4	-	Sr	10	-	-	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1025.1	0	NNE	2	odm	36	97	3	750	Nb	10	-	-	*
London (M.O. at 1H.)	1024.8	-1	*	*	*	37	*	*	*	*	*	*	*	*	1025.3	+1	NNE	2	o2f	38	92	4	2000	Sr	10	-	-	*
Croydon	1025.3	-2	NNE	1	o3fr0	36	97	2	<500	Nb	10	-	-	*	1025.4	0	NNE	2	o3f	37	92	3	<500	Sr	10	-	-	*

[Margin notes in red: |-a.Cu (Baldonnel row); |- (Calshot row)]

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

Stations	Barom. at M.S.L. mb.	Temp. °F.	Wind Direc.	Wind Force 0-12	Weather	Barometer at M.S.L. mb.	Change in 3 hours	Temp. °F.	Change in 24 hours	Wind Direc.	Wind Force 0-12	Direc. of Upper Cloud	Weather	Sea 0-9	Rainfall mm.	Max. °F.	Min. °F.	Weather Morning	Weather Afternoon	Weather Night	Sunshine Hours
	18H. G.M.T. of 17th					**7H. G.M.T. of 18th**									**24 HOURS ENDED 7H. 18th**						**17th**
Lerwick	1024.1	43	S	3	bcm	1020.4	-2	46	+4	SW	5	.	omrq	4	4	47	41	o	cm	bcomrq	*
Stornoway	1023.8	44	S	5	o	1025.3	+1	42	0	S	2		c	1	-	44	42	c.o	o	oc	0.0
Castlebay (Barra Is)	1025.5	45	S	4	o	1026.1	0	44	0	S	3	.	o	4	-	46	42	c.o	o	o	0.0
Malin Head	1024.8	37	S	3	bm	1026.4	0	32	-5	S	1	-	bm	1	-	40	30	bm	bm	bm	5.0
Blacksod Point	1023.0	38	SE	2	bc	1024.0	0	38	-2	S	2	-	bc	3	-	45	40	bc	bc	bc	*
Roche's Point	1026.4	42	SSE	4	c	1026.8	+1	40	-2	NE	3 (red, over 2)	.	o	3	-	43	40	c.o	bc	co	*
Birr Castle	1026.3	34	E	2	b	1026.5	*	29	-4	SE	1	-	o	*	-	40	25	b	bx	bxo	59
Donaghadee	1027.8	37	SW	1	cm	1026.9	-1	37	-2	W	2	.	cm	2	-	40	36	cm	bcm	cm	*
Liverpool (Bidston)	1028.0	36	NNE	1	o	1027.9	0	35	+1	-	0	.	o	0	-	37	34	o. cm	bm	o	1.7
Holyhead	1027.7	36	E	3	b	1027.3	0	30	+1	-	0	-	bif	0	-	40	26	b. bc cm	bm	bx	6.0
Pembroke (St. Ann's Head)	1027.0	34	NE	3	b	1026.5	0	36	+7	NE	3	-	o2f	2	-	36	28	b	b	bmbcm	6.2
Scilly (St. Mary's)	1026.4	37	E	1	bc	1024.1	0	41	+4	E	3	-	o	3	-	43	34	c.b	b.bc	bc.bo	6.1
Jersey (St. Aubin)	1022.5	38 (red)	NE	3	o	1024.1	0	30	-10	E	3	-	o	3	1	43	29	o	o	odo	0.8
Portland Bill	1024.8	35	NNE	6	c	1024.8	0	36	+3	NNE	4	.	o	4	-	37	32	bcm.c	c	com	.
Dungeness	1023.7	36	E	3	c	1023.4	0	38	+6	E	2	-	o	3	-	38	32	c	c.o.c	co.odo	*
Wick	1024.7	35	SW	2	b	1023.9	-1	37	-2	WNW	1	-	o	1	-	41	30	bcq. bm	bm	b.o	*
Nairn	1025.9	36	SSW	1	bc	1025.4	*	34	+6	-	0	.	com	0	0.2	35	28	bcm	bcgm	bcgcm	3.4
Leith	1028.5	39	SW	1	b	1027.4	0	29	-1	SW	1	-	b	1	.	33	24	bm	bbz	bxb	*
Tynemouth	1028.8	36	WNW	2	o	1028.0	0	36	+1	W	1	-	o2f	2	-	37	34	cm	om	cmom	*
Spurn Head	1026.7	41	ENE	4	op	1026.4	0	39	+1	NE	4	.	op	4	1	43	35	cv	c.op	op.oc	*
Yarmouth (Gorleston)	1025.5	40	E	4	o	1025.2	0	42	+4	E	3	-	or0	2	2	42	38	od omr	op	orrorop	0.0
Clacton-on-Sea	1024.6	37	NNE	3	o	1024.7	0	38	+3	NNW	3	.	oge	2	3	38	34	og	ogdb	opdmo	0.0
Nottingham	1027.2	36	NNE	3	op	1027.0	*	37	+3	N	3	-	o	*	1	38	34	bc.b	bc.c.o	oprs	3.2

[Margin notes in red: |. (Roche's Point row); |- (Nairn row)]

* Information for these columns not usually received. ‡ The barometric change is expressed in half millibars. § For code see page 3 † See footnote p. 4.

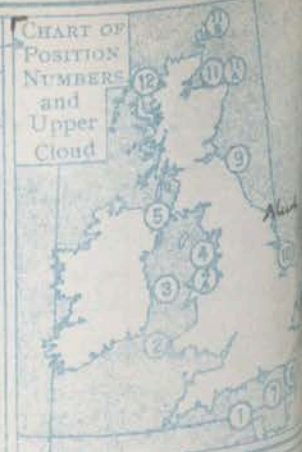
M.O. FORM 2370

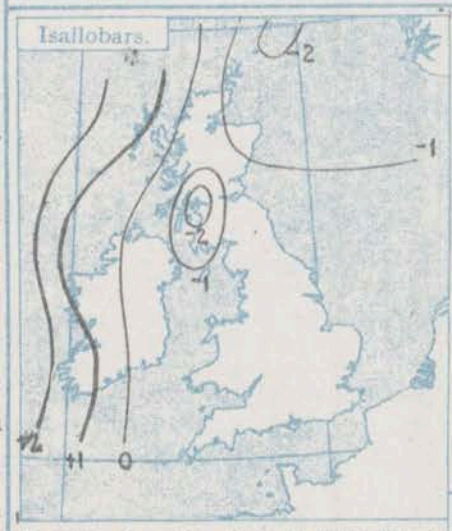
SUMMARY OF CONDITIONS AT 7 h. G.M.T. 18.12.20.

Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Dull, local drizzle and fog mist	Poor	Slight
2. E. England	Dull, local rain & mist.	Fair.	Smooth
3. E. Midlands	Dull.	Poor	-
4. W. Midlands	Dull, some mist or fog.	V. Poor	-
5. S.W. England	Dull.	Fair.	Slight
6. South Wales	Dull, some mist or fog	Poor	Smooth
7. North Wales	Variable sky.	Var.	Smooth
8. N.W. England	Mainly dull, some mist.	Indif.	"
9. N. Midlands	Dull, misty.	Poor.	-
10. N.E. England	Mainly dull, local showers and mist	Poor	Slight
11. E. Scotland	Fine to cloudy, some mist	Poor	Smooth
12. S.W. Scotland	Dull, frosty, mist or fog	V. Poor	"
13. Isle of Man	Fair.	Fair.	Smooth
14. N. & N.W. Scotland	Dull, local mist.	Indif.	Slight
15. Hebrides	Cloudy or dull..	Fair.	"
16. Orkneys and Shetlands	Dull, local rain and squalls.	Indif.	Mod.
17. N.W. Ireland	Fair or fine.	Good.	Slight
18. N.E. Ireland	Fine to cloudy, misty.	Fair.	Smooth
19. S.E. Ireland	Dull.	Fair	Slight
20. S.W. Ireland	Variable sky.	Good	Slight

Temperature reported from Coastal and Cross Channel Steamers.

Position-Number.	Date	Time G.M.T.	Sea °F	Air °F
4a	17th	0430	44	39
7	17th	0305	50	40
5	17th	0825	50	39
3	17th	1000	49	40
1	17th	1223	51	41
6	17th	1530	48	32
7	18th	0340	47	41
4a	18	0400	46	42
12	18th	0440	49	46





EXPLANATION.
BAROMETER.—Isobars are drawn at intervals of two millibars.
WIND.—Direction is shown by arrow flying with the wind. Force, on the scale 0–12, is indicated by the number of feathers. Mean velocity is shown in miles per hour by figures in small circles.
TEMPERATURE is given in degrees F.
WEATHER SYMBOLS.—clear sky. sky ¼ clouded. sky ½ clouded. sky ¾ clouded. overcast sky. rain falling. snow. sleet. hail. fog. mist. thunder. thunderstorm.
SEA DISTURBANCE.—Rough. High sea.

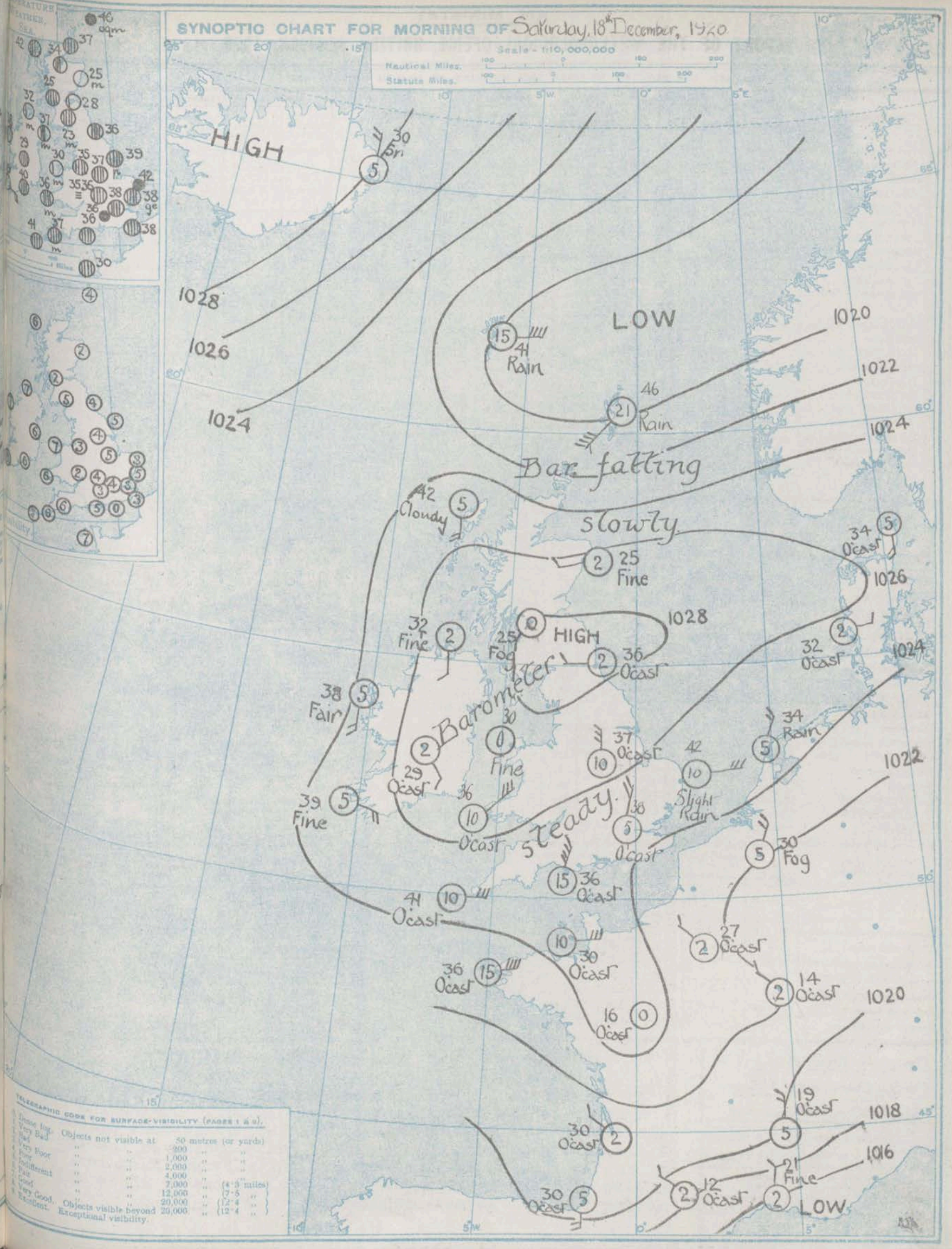
GENERAL INFERENCE from observations received up to 9h. G.M.T.

An anticyclone over the British Isles will continue and the wind will be light generally during the week-end with much cloud and occasional drizzle in the South and East of England but with fairer and colder weather further North. There are indications of a return to colder weather generally after a day or two.

Districts.	Forecasts for the 24 hours commencing 15 h. G.M.T. Saturday 18th December 1920.	Further Outlook.
1. S.E. England 2. E. England 3. E. Midlands 4. W. Midlands	Light North-East to North breeze; much low cloud; local drizzle at first improving later; visibility indifferent to fair; rather cold.	There are indications of a return to colder weather generally after a day or two.
5. S.W. England 6. South Wales	Light North-East breeze; varying amount of cloud; visibility fair; rather cold.	
7. North Wales 8. N.W. England 9. N. Midlands 10. N.E. England	Light indefinite breezes; varying amount of cloud; mist locally; sharp frost at night inland.	
11. E. Scotland	Light North-West wind; fair to fine; visibility good; sharp frost at night inland.	
12. S.W. Scotland 13. Isle of Man	Same as 7 - 10.	
14. N. & N.W. Scotland 15. Hebrides 16. Orkneys and Shetlands	Light to moderate SW to W wind veering to NW later; much low cloud with local rain followed by snow or hail showers and colder weather; visibility improving.	
17. N.W. Ireland 18. N.E. Ireland 19. S.E. Ireland 20. S.W. Ireland	Same as 7 - 10.	

E.V.N

Meteorological Office: Air Ministry, Kingsway, London, W.C.2. Forecasts issued at 09.40. G. C. SIMPSON, F.R.S., Director.


SYNOPTIC CHART FOR MORNING OF Saturday, 18th December, 1920
Scale - 1:10,000,000
Nautical Miles.
Statute Miles.
HIGH
LOW
HIGH
LOW
1028
1026
1024
1020
1022
1024
1026
1028
1024
1022
1020
1018
1016
Bar. falling slowly
Barometer steady.
5 Fri.
15 41 Rain
21 46 Rain
42 Cloudy
34 O'cast
25 Fine
32 Fine
25 Fog
36 O'cast
32 O'cast
38 Fair
30 Fine
37 O'cast
34 Rain
29 O'cast
42 Slight Rain
39 Fine
36 O'cast
30 O'cast
30 Fog
15 36 O'cast
41 O'cast
27 O'cast
10 30 O'cast
36 O'cast
14 O'cast
16 O'cast
19 O'cast
30 O'cast
21 Fine
30 O'cast
12 O'cast
LOW
TELEGRAPHIC CODE FOR SURFACE-VISIBILITY (PAGES 1 & 6).
0. Dense fog. Objects not visible at 50 metres (or yards)
1. Very Bad " " 200 " "
2. Bad " " 1,000 " "
3. Very Poor " " 2,000 " "
4. Poor " " 4,000 " "
5. Indifferent " " 7,000 " (4·3 miles)
6. Fair " " 12,000 " (7·5 "
7. Good " " 20,000 " (12·4 "
8. Very Good. " " 20,000 " (12·4 "
9. Excellent. Objects visible beyond 20,000 " (12·4 "
Exceptional visibility.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 353.

Saturday 18th December

WEATHER, TEMPERATURE RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 17th

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 16-17	Rainfall. Day. 9h-18h. 17	Sunshine. Sunrise to Sunset. 17
Scotland.	Oban	o.c.	o	39	35	-	-	0.0
	Banff	bx	bx	33	27	-	-	4.1
	Montrose							
	St. Andrews	*	*	34	26	-	-	4.3
England, N.E.	Harrogate	o.c. bc.c	c.o	35	31	-	-	1.2
	Scarborough	b	o	43	27	-	-	2.2
	Skegness	o. bc	c.o2	41	39	1	-	0.8
England, E.	Lowestoft							
	Felixstowe	o9	o9	39	33	5	1	0.0
	Southend-on-Sea	o2.o	o2	36	30	0.4	1	0.0
England, S.E.	Tunbridge Wells	om	o2ome	35	30	-	2	0.0
	Margate	o	o	40	32	6	-	0.0
	Ramsgate	*	*	38	31	5	-	0.0
	Folkestone	5.o	5	35	28	4	-	0.0
	Hastings	o.5.o	o	36	31	1	-	0.0
	Eastbourne	o2.o	o	36	32	0.2	0.1	0.0
	Brighton	o.c	o2	36	30	0.2	0.4	0.0
	Worthing	o	o2	37	30	-	-	0.0
	Littlehampton	o.cm	or	35	33	-	T	0.0
	Portsmouth (S'thsea)	*	*	37	28	-	-	0.0
	Bournemouth	*	*	37	29	-	-	0.9

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 16-17	Rainfall. Day. 9h-18h. 17	Sunshine. Sunrise to Sunset. 17
England, N.W.	Douglas (I.O.M.)							
	Blackpool	c	o	38	28	-	-	2.4
	Southport	o.c.o	o.c.o	35	28	-	-	0.6
	Morecambe	*	*	36	30	-	-	0.1
Midlands.	Buxton							
	Leamington Spa	c	o	37	26	-	-	0.0
	Malvern							
	Bath	b. bc	b bc.c.o	39	26	-	-	2.7
Wales.	Rhyl	cx	xc	39	22	-	-	1.7
	Colwyn Bay	*	*	36	22	-	-	2.0
	Llandudno	o.c.b	o.bc	39	23	-	-	3.3
	Aberystwyth	o.c.c	c.o.o	37	24	-	-	0.7
	Tenby							
	Swansea							
England, S.W.	Weymouth	r.bc.b	bc.o	38	28	-	-	1.8
	Teignmouth							
	Torquay	m.b.bc	b bc	40	27	-	-	5.4
	Paignton	b	b o	40	27	-	-	5.2
	Penzance	b	b	40	26	-	-	0.0
	Newquay	x.b	b	38	24	-	-	1.0
	Bude	b	b	40	20	-	-	5.0
	Ilfracombe	b. bc	bc.c.o	41	27	-	-	3.3
	Weston-s-Mare							

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-18h 17	Weather. 18h-18h 17	Weather. 18h 17-18h 18	Weather. 18h-7h 18	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall.† Day. 7h-18h	Rainfall.† Night. 18h-7h	Sun. Hours.
								mm.	mm.	
Renfrew	c.o3f.4-8f	o 3f		o4-8f x	33	22	13	-	-	0.0
Eskdalemuir	b. bcx	bx	bx	bbcx cnx	30	14	10	-	-	5.5
Valencia (Cahirc'n)	3.c.o	c.o	bcc bcc	bbc bbc	47	37	31	-	-	0.5
Baldonnel	c.o3f. c.o1f	bc. o1f	o3f.2f	c o x	38	26	21	-	-	2.0
Manchester (Blex. Pk.)	o3f. o3f	o3f c.o3f	bcc 3f	c o 3f	39	32	21	-	-	*
Ross on Wye	o3f bc.c 3f	o3.c.o2f	o3f o4-5f	3fc pd o3f.4f	37	32	32	-	0.4	2.5
Falmouth	bx 1f	b.bc o.1f x	b o1f	o1f	39	27	26	-	-	6.1
Calshot (Hants)	o1f	o1f. o2f	dd o2f	o2f	38	33	34	-	trace	0.0
Lympne (Folkestone)	o3f rs o1f o2f	o2f	o2f	o2fc o2f pd	34	29	31	0.3	0.2	0.0
Aberdeen	3fx	3f. 3fc	3fc x	3fc x	36	25	17	-	-	3.8
Howden	1fc pd	o	1 1fc	3fc o	39	29	22	+	+	0.0
Cranwell (Lincs)	o3f. bc c	pd. o3f	o	o	35	32	30	0.1	0.2	2.8
Felixstowe	o3f. pd	fx o3f		dd o3f	38	34	*	0.3	2	0.0
Shoeburyness	fx o2f	dd 3fc	pd r	rr dd	38	34	33	1	2	0.0
Benson	o	o	pd.o	o	36	32	33	0.1	0.4	*
S. Farnborough	pd dd	2f dd	o3f pd	o2f pd	37	33	33	-	1	0.0
London (Kew Obsy.)	rr rr dd	dd o3f	dd o2f	o3f	38	35	34	0.3	0.1	0.0
Croydon	o3f rr dd dd	o3f o4-5f dd dd fog	o3f dd rr rr	o3f pd r	37	34	*	1	1	*

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, *i.e.*, rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:-
R = heavy rain.
rr = continuous moderate rain.
r,r, = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 30 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0·3
1	1- 3	0·3- 1·5
2	4- 7	1·6- 3·3
3	8-12	3·4- 5·4
4	13-18	5·5- 7·9
5	19-24	8·0-10·7
6	25-31	10·8-13·8
7	32-38	13·9-17·1
8	39-46	17·2-20·7
9	47-54	20·8-24·4
10	55-63	24·5-28·4
11	64-75	28·5-32·5
12	Above 75	32·6 or above

SYMBOLS—

Aurora, Rime, Glazed frost, Glazed roads, Solar halo, Lunar halo, Solar corona, Lunar corona

LONDON. OBSERVATIONS.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Hours.	Humidity % 15 h. G.M.T.	Humidity % 9 h. G.M.T.
	24 HOURS ENDED 9H G.M.T. 18th							Yesterday.		To-day.
Greenwich (Royal Observatory)	odo dr	o.od.	odo dr	38	35	35	1	0.0	93	92
City (Bunhill Row)	*	*	*	*	*	*	*	0.0	*	*
Westminster (St. James's Park)	*	*	*	39	36	33	1	0.0	91	88
Regent's Pk. (Botanic Gd)	*	*	*	*	*	*	*	0.0	*	*
Camden Sq. (British Rainfall)	o	o d	*	38	34	32	1	*	99	94
Kensington Palace	o. omr	omr	*	37	34	34	1	*	95 (18h)	91
Hampstead Observatory	*	*	*	36	32	*	1	0.0	*	97

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday

Total 27 Joules.

Milliwatts.
Average Rate. 0.1
Maximum Rate. 1

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

18th & 19th December 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth	8.3 / 8.3	11.50 / 11.50	3.37 / 3.37
Greenwich	8.4 / 8.4	11.57 / 11.57	3.60 / 3.60
Wick	9.2 / 9.2	12.9 / 12.9	3.16 / 3.16
Valencia	8.48 / 8.48	12.38 / 12.38	4.28 / 4.28

Photographic Record of Pole Star (Polaris) and of δ Ursae Minoris at Greenwich Observatory.

Exposure from 17th 17 h. 9 m. to 18th 6 h. 45 m.

Stars.	Duration of Exposure. h.	m.	Duration of Record. h.	m.	%
Polaris	13	45	0	0	-
δ Ursae Minoris	13	45	0	0	-

NOTES ON THE WEATHER OF YESTERDAY.

The lowest temperatures occurred in the North, the minimum being 14° at Eskdale and 22° at Glasgow. During the day the temperature rose to between 30° and 40° in most places. There were some good records of bright sunshine in the West of England and in Scotland and Ireland but over Eastern England the sky was overcast. A total of two or three millimetres of rain was measured locally in S.E. England.

* Information for these columns not usually received.

† Trace = rain has fallen but amount less than 0·1 mm.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. No. B21577 Sunday 19th December 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

STATIONS	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	Visibility § 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	Visibility § 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
	13H. G.M.T. 18th														**18H. G.M.T. of 18th**													
Renfrew	1027.7	-2	-	0	o4f	31	85	2	3000	St.Cu	10	-	-	*	1026.0	-1	W	2	o4f	34	85	2	3.000	St	10	-	-	*
Eskdalemuir	1027.6	-2	WSW	2	o	32	85	8	3.000	St.Cu	10	-	-	*	1026.2	-2	-	0	o	30	85	6	-	St.Cu	9	-	-	*
Valencia (Cahirc'n)	1028.1	-2	ESE	1	bc	42	75	8	4.200	St.Cu	4	-	-	3	1024.5	-1	ENE	2	oz	42	75	8	3.000	St.Cu	5	A.St	5	3
Baldonnel	1026.7	-2	-	0	o2f	36	85	5	2.000	St.	10	-	-	*	1026.9	0	-	0	o2f	35	92	4	2.000	St	10	-	-	*
Manchester (Alex. Pk)	1027.4	-2	ENE	2	o3f	39	75	2	2.000	St.	10	-	-	*	1026.8	-1	ENE	3	o2f	37	75	5	2.000	St	10	-	-	*
Ross on Wye	1026.4	-2	NE	2	o3f	37	92	3	<500	St	10	-	-	*	1025.8	0	ENE	1	o3f	36	92	3	<500	St	10	-	-	*
Falmouth	1024.6	-4	NNE	2	o1f	40	75	6	-	St	10	-	-	*	1024.0	-1	NNE	2	o2f	38	75	5	-	St	10	-	-	*
Calshot (Hants)	1024.3	-1	N	3	or₀2-3f	39	92	4	1250	St.	10	-	-	2	1024.1	+1	NNE	3	o2f	39	92	4	750	St	10	-	-	2
Lympne (Folkestone)	1023.6	0	NNE	3	o1f	36	92	6	750	St	10	-	-	*	1022.6	-1	NNE	3	or₀2-3f	36	92	5	750	Nb	10	-	-	*
Aberdeen	1025.6	-1	N	1	b3fe	32	92	3	-	St.Cu	1	-	-	2	1024.9	-1	-	0	o3fe	32	97	3	4.200	St.Cu	10	-	-	2
Howden	1027.4	0	N	1	om[illegible]	?35	92	4	3.000	St.Cu	10	-	-	*	1027.0	0	-	0	om[illegible]	35	92	4	3.000	St.Cu	10	-	-	*
Cranwell (Lincs)	1027.2	0	NNW	3	o2f	36	97	4	4.200	St.Cu	9	-	-	*	1026.3	0	N	2	o1f	35	97	4	2.000	St	10	-	-	*
Felixstowe	1025.1	-2	N	2	or₀2-3f	40	97	5	1250	Nb	10	-	-	1	1024.4	-1	N	2	or₀2-3f	38	92	5	1.250	St.Cu	10	-	-	1
Shoeburyness	1024.4	0	NE	1	o2fa	39	92	5	1250	St	10	-	-	*	1023.7	-1	NE	3	or₀m	38	92	6	1.250	St.Cu	10	-	-	*
Benson	1026.3	0	NNE	2	o	38	92	4	-	St	10	-	-	*	1024.6	-2	NNE	3	o	38	92	4	-	St	10	-	-	*
S. Farnborough	1024.9	-2	NNE	3	o2f	39	92	6	750	Nb	10	-	-	*	1024.2	-1	NE	2	o3f	38	92	6	750	St	10	-	-	*
London (Kew Obsy.)	1024.9	-2	NE	3	o3fa	41	85	3	2000	St.Cu	8	A.St	2	*	1024.1	-1	NNE	3	o2f	40	85	4	3.000	St	10	-	-	*
Croydon	1024.8	-2	NE	5	or₀3f	40	92	3	<500	Nb	10	-	-	*	1024.3	0.	NNE	4	o3f	39	92	3	750	Nb	10	-	-	*
	1H. G.M.T. of 19th														**7H. G.M.T. of 19th**													
Renfrew															1020.1	-3	-	0	o3f	32	97	3	2,000	St	10	-	-	*
Eskdalemuir	1024.2	-3	SW	2	o	32	92	6	-	St	10	-	-	*	1021.0	-4	SW	2	o	34	85	6	-	St	10	-	-	*
Valencia (Cahirc'n)	1022.1	-2	SSE	2	o	40	*	*	*	*	*	*	*	2	1019.0	-3	SE	3	oz	42	75	4	4,200	St.Cu	7	-	-	*
Baldonnel	1024.5	-3	-	0	o2f	34	85	4	400	St	10	-	-	*	1021.5	-3	-	0	o2f	37	85	4	2,000	St	10	-	-	*
Manchester (Alex. Pk)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1022.6	-3	NNW	1	o3f	34	75	3	2,000	St.Cu	10	-	-	*
Ross on Wye	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1021.2	-2	-	0	o3f	34	85	3	1250	St	10	-	-	*
Falmouth	1022.4	-3	NE	2	o1f	39	82	6	-	St	10	-	-	*	~~1019.7~~ 1020.0	-2	NNE	2	o1f	40	75	6	-	St	10	-	-	*
Calshot (Hants)	1022.0	-3	N	3	or₀	39	92	6	1250	St	10	-	-	2.2	1020.6	-2	N	3	o2f	37	92	5	1250	St	10	-	-	2
Lympne (Folkestone)	1021.0	-2	NNE	4	o2f	36	97	5	750	St	10	-	-	*	1019.2	-2	NNE	4	or₀1-3f	36	92	5	750	Nb	10	-	-	*
Aberdeen	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1019.5	-2	W	1	b2fex	26	97	5	-	-	-	-	-	2
Howden	1024.7	-2	-	0	o [⊠]₀	32	97	5	2,000	St.Cu	10	-	-	*	1022.1	-3	-	0	o1f	32	97	6	3,000	St	10	-	-	*
Cranwell (Lincs)	1025.0	-1	N	3	o2f	33	85	5	3,000	St.Cu	10	-	-	*	1022.5	-2	N	3	o2f	34	85	5	2,000	St	10	-	-	*
Felixstowe															1021.1	-2	NNE	4	od₀	38	92	6	2,000	St.Cu	10	-	-	3
Shoeburyness	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1019.8	-1	NE	1	od₀	38	92	6	1250	St	10	-	-	*
Benson	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1021.2	0	NE	2	o	33	92	4	-	St	10	-	-	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1020.6	-2	NNE	1	od₀m	35	97	5	750	Nb	10	-	-	*
London (M.O. at 1H.)	1022.4	-2	*	*	*	39	*	*	*	*	*	*	*	*	1020.3	-1	NNE	2	or₀2-3f	37	92	3	1250	St	10	-	-	*
Croydon	1022.5	-2	N	4	o3fd	38	92	3	<600	St	10	-	-	*	1020.8	-1	NE	3	or₀2-3f	37	92	4	<500	Nb	10	-	-	*

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

STATIONS	Barom. at M.S.L. mb.	Temp. °F.	Wind Direc.	Wind Force 0-12	Weather	Barometer at M.S.L. mb.	Barometer ‡ Change in 3 hours	Temperature Temp. °F.	Temperature Change in 24 hours	Wind Direc.	Wind Force 0-12	Direc. of Upper Cloud	Weather	Sea 0-9	† Rainfall mm.	Temp. Max. °F.	Temp. Min. °F.	Weather Morning	Weather Afternoon	Weather Night	Sunshine Hours
	18H. G.M.T. of 18th					**7H. G.M.T. of 19th**									**24 HOURS ENDED 7H. 19th**						
Lerwick	1020.5	48	SSW	3	om	1014.4	-3	45	-1	SW	1	-	c	1	3	49	43	omr	omr	c	*
Stornoway	1023.2	42	S	3	o	1015.9	-3	43	+1	S	5	NW	bcq	4	-	43	38	c	c.o	o.bcq	0.0
Castlebay (Barrala)	1023.9	44	S	3	o	1017.0	-2	44	+4	SSW	4	-	o	4	-	47	43	o	o	o.bc.o	0.0
Malin Head	1024.2	34	S	2	bm	1018.1	-3	36	+4	SSW	2	-	bm	2	-	39	30	bm	bm	bm	5.6
Blacksod Point	1022.5	42	SW	2	b	1015.4	-3	42	+4	S	3	-	om	3	-	46	40	b	b	om	*
Roche's Point	1026.1	41	NE	2	o	1020.4	-1	41	+1	E	2	-	o	3	0.1	43	39	op.o	o	o	*
Birr Castle	1025.8	38	SSE	1	o	1020.0	*	34	+8	ESE	1	-	o	*	-	39	29	f.o	f.o	o	0.0
Donaghadee	1025.9	37	W	2	bcm	1021.1	-2	38	+1	W	1	-	om	1	-	39	32	cm	cm	bcm	*
Liverpool (Bidston)	1026.6	36	NNE	2	o	1022.2	-2	35	0	SSE	1	W	o	1	-	38	34	om	om	om	0.0
Holyhead	1026.8	38	S	2	o2f	1021.0	-3	37	+4	-	0	-	om	0	Trace	39	28	bom	om	om	0.4
Pembroke (St. Ann's Head)	1025.9	39	E	2	o2f	1021.5	-3	~~38~~ 39	+2	ENE	2	-	o	2	-	41	38	om	om	om	0.0
Scilly (St. Mary's)	1024.2	42	E	2	o	1020.5	-2	41	0	E	2	E	o	3	-	43	41	o	o	o	0.0
Jersey (St. Aubin)	1021.1	38	NE	3	o	1017.4	0	38	+8	E	3	-	o	3	3	41	30	odm	odm.oe	odmo	0.0
Portland Bill	1022.0	38	NE	5	o	1019.6	-4	36	0	NE	4	-	om	4	-	40	34	m.o	o	om	*
Dungeness	1021.8	41	NE	4	c	1018.1	-1	40	+2	ENE	4	NE	c	4	2	42	36	oc.r.c	cp.c	cp.cp.c	*
Wick	1023.1	34	W	1	bc	1016.9	-3	29	-8	W	2	-	bc	1	-	41	26	om	om.bc	bc	*
Nairn	1024.0	33	*	0	bc	1018.0	*	29	-5		0	-	bc	0	-	34	28	c.bc	bc	bcx	1.8
Leith	1025.1	34	SW	1	b	1019.3	-2	34	+9	SW	2	SW	c	1	-	37	24	bq.c	cq.b.bq	c.o.c	*
Tynemouth	1026.7	35	-	0	bzf	1021.4	-3	35	-1	W	1	-	om	2	-	39	31	cm	cm	f.om	*
Spurn Head	1025.5	39	NW	3	om	1021.9	-3	36	-3	NNW	3	-	om	3	4	41	32	op.og	og	omp	*
Yarmouth (Gorleston)	1024.5	41	ENE	4	r₀	1021.0	-3	39	-3	ESE	4	-	or₀	3	1	42	38	op	op.v	op.cv	0.0
Clacton-on-Sea	1023.5	39	NNW	2	o	1020.3	-2	39	+1	NE	3	-	og	2	2	39	34	ogmpd	ogmpd	ogm.pd	0.0
Nottingham	1026.0	37	N	3	o	1022.0	*	36	-1	N	2	-	o	*	-	39	35	om	om	o	0.0

* Information for these columns not usually received. ‡ The barometric change is expressed in half millibars. § For code see page 3 † See footnote p.4.

M.O. FORM. 2370.

SUMMARY OF CONDITIONS AT 7 h. G.M.T. 18.12.1920.

Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Dull, slight rain & mist.	Indiff.	Mod.
2. E. England	Dull, some rain.	Fair	Slight
3. E. Midlands	Dull, some mist.	Poor	-
4. W. Midlands	Dull, some mist.	"	-
5. S.W. England	Dull, some mist.	Fair	Slight
6. South Wales	Overcast.	Good	Smooth
7. North Wales	Overcast.	Fair	Calm
8. N.W. England	Overcast.	Poor	V.Smooth
9. N. Midlands	Dull, some mist.	"	-
10. N.E. England	Dull, local mist.	Indiff.	Slight
11. E. Scotland	Fine to cloudy, local mist.	"	Smooth
12. S.W. Scotland	Overcast, local mist.	"	"
13. Isle of Man	Overcast, misty.	Poor	"
14. N.& N.W. Scotland	Fair.	Fair	"
15. Hebrides	Fair to dull, local squalls.	Good	Mod.
16. Orkneys and Shetlands	Cloudy.	Indiff.	V.Smooth
17. N.W. Ireland	Variable sky, local mist.	Fair	Slight
18. N.E. Ireland	Dull, misty.	Indiff.	V.Smooth
19. S.E. Ireland	Overcast.	Fair	Smooth
20. S.W. Ireland	Cloudy, some haze.	Good	Slight

Temperature reported from Coastal and Cross Channel Steamers.

Position Number.	Date	Time G.M.T.	Sea °F	Air °F
5	18th	0850	50	41
3	18th	1000	49	42
7	19th	0307	50	43
4A	19th	0330	46	40
8	19th	0538	41	40

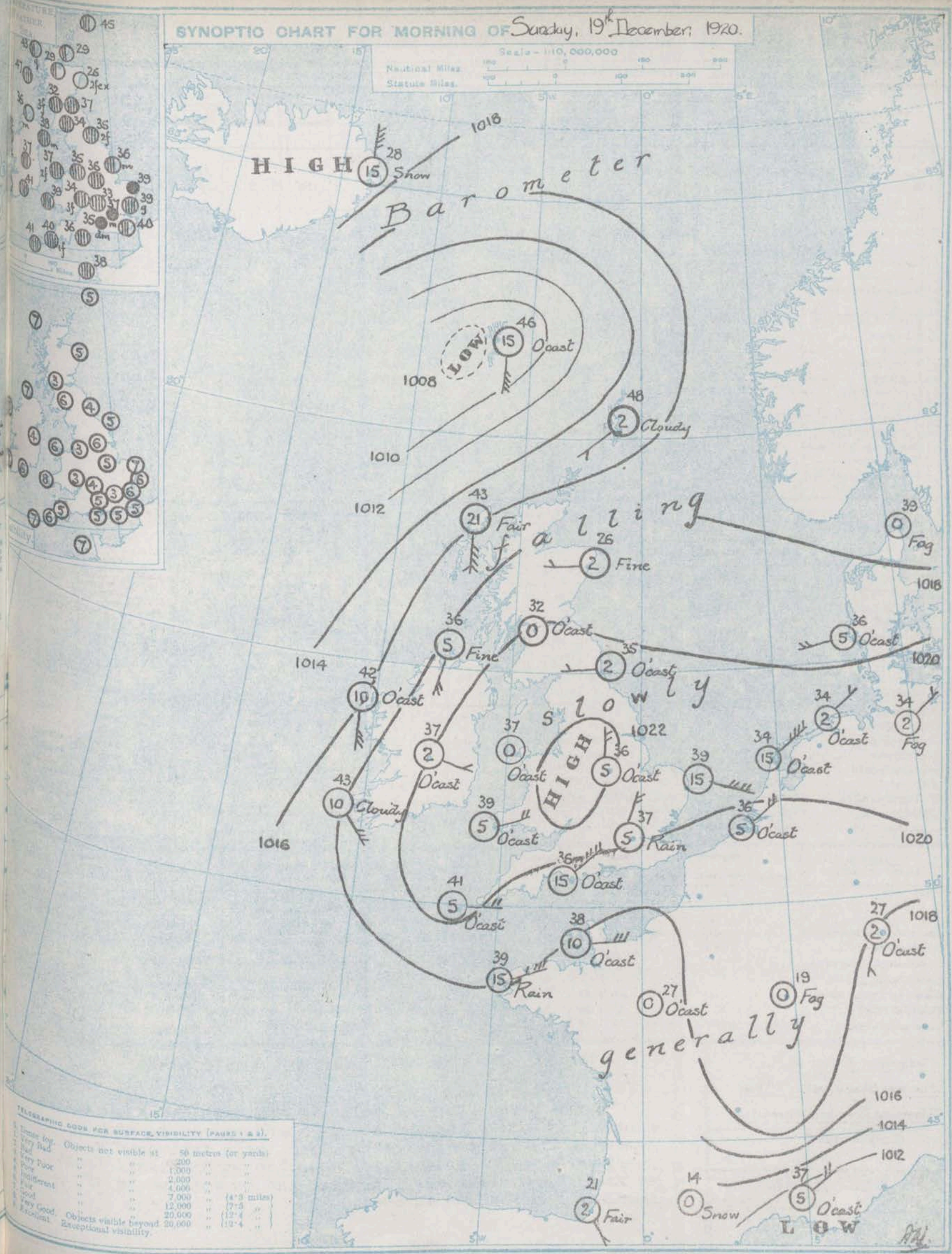
Barometric change from 4 h. to 7 h. (half millibars).

EXPLANATION.
BAROMETER.—Isobars are drawn for intervals of two millibars.
WIND.—Direction is shown by arrows flying with the wind. Force, on the scale 0–12, is indicated by the number of feathers. Mean velocity is shown in miles per hour by figures in small circles.
TEMPERATURE is given in degrees F.
WEATHER SYMBOLS.—clear sky. sky ¼ clouded. sky ½ clouded. sky ¾ clouded. overcast sky. rain falling. snow. sleet. hail. fog. mist. thunder. thunderstorm.
SEA DISTURBANCE.—Rough. High.

GENERAL INFERENCE from observations received up to 9h.

The anticyclone over England will probably decrease still further in intensity and perhaps move in a Southerly direction, leading finally to a considerable alteration in the pressure distribution - perhaps to a South-Westerly type.

Districts.	Forecasts for the 24 hours commencing 15 h. G.M.T. Sunday, 19th December, 1920.	Further Outlook.
1. S.E. England 2. E. England 3. E. Midlands 4. W. Midlands 5. S.W. England 6. South Wales	Wind E. or N.E., light, then more variable; much cloud, some rain or drizzle, mist or fog locally, visibility mainly indifferent; no great change of temperature.	None issued.
7. North Wales 8. N.W. England 9. N. Midlands 10. N.E. England 11. E. Scotland	Wind variable, then between S. and W., light; much cloud, some fairer intervals; temperature rising later.	
12. S.W. Scotland 13. Isle of Man 14. N.& N.W. Scotland 15. Hebrides 16. Orkneys and Shetlands 17. N.W. Ireland 18. N.E. Ireland	Wind between S. and S.W., light or moderate, fresh locally; cloudy or variable sky, some rain or showers; temperature rising.	
19. S.E. Ireland 20. S.W. Ireland	Wind S.E. to S.W., light to fresh; cloudy to dull, some rain later; temperature rising.	



TELEGRAPHIC CODE FOR SURFACE VISIBILITY (PAGES 1 & 2).

0	Dense fog.				
1	Very Bad	Objects not visible at	50 metres (or yards)		
2	Bad	"	"	200	" "
3	Very Poor	"	"	1,000	" "
4	Poor	"	"	2,000	" "
5	Indifferent	"	"	4,000	" "
6	Fair	"	"	7,000	" (4·3 miles)
7	Good	"	"	12,000	" (7·5 ")
8	Very Good	"	"	20,000	" (12·4 ")
9	Excellent	Objects visible beyond		20,000	" (12·4 ")
		Exceptional visibility.			

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 364.

Sunday, 19th December

WEATHER, TEMPERATURE RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 18th Dec.

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 17th-18th	Rainfall. Day. 9h-18h. 18th	Sunshine. Sunrise to Sunset. 18th
Scotland.	Oban	0	0	41	36	-	-	0·0
	Banff	b.	b.bc	40	21	-	-	2·7
	Montrose							
	St. Andrews							
England, N.E.	Harrogate	0	0	35	32	-	-	0.0
	Scarborough	bc	0	42	36	1	-	0.0
	Skegness							
England, E.	Lowestoft							
	Felixstowe	omd	omd	41	40	2	1	0.0
	Southend-on-Sea	od	od	39	33	1	1	0.0
England, S.E.	Tunbridge Wells	omd	o.omd	38	34	3	1	0.0
	Margate	0	op	43	36	1	0·2	0.0
	Ramsgate	*	*	41	39	1	-	0.0
	Folkestone	0	0	39	34	-	0.2	0.0
	Hastings	0	od.o	38	34	1	1	0·0
	Eastbourne	or.o	0	39	35	1	0·4	0.0
	Brighton							
	Worthing	od	0	39	35	-	-	0·0
	Littlehampton	omr	o.om	40	34	0.2	1	0.0
	Portsmouth (S'thsea)	*	*	40	36	-	2	0.0
	Bournemouth	*	*					
	Ventnor (I. of W.)	*	*					

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night 17h-9h. 17th-18th	Rainfall. Day. 9h-17h. 18th	Sunshine. Sunrise to Sunset. 18th
England, N.W.	Douglas (I.O.M.)							0.0
	Blackpool	0		38	32	-	-	0.0
	Southport	0	0	37	28	-	-	
Midlands.	Buxton							
	Leamington Spa	od	0	40	34	1	-	0.0
	Malvern							
	Bath	op	op	39	35	0·3	-	0.0
Wales.	Rhyl							
	Colwyn Bay							
	Llandudno	*	*	37	31	-	-	0.0
	Aberystwyth	o.o.c	o	40	26	-	-	0.0
	Tenby							
	Swansea							
England, S.W.	Weymouth	0	0	39	33	-	-	0.0
	Teignmouth							
	Torquay							
	Paignton	omo	0	40	35	-	-	0.0
	Penzance	o	o.o	42	32	-	-	0.0
	Newquay							
	Bude	0	0	40	28	-	0·3	0.0
	Ilfracombe	0	od	41	37	0·4	0.1	0.0
	Weston-s-Mare							

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-13h 18th	Weather. 13h-18h 18th	Weather. 18h-1h 18th-19th	Weather. 1h-7h 19th	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall.† Day. 7h-18h mm.	Rainfall.† Night. 18h-7h mm.	Sun. Hours.
Renfrew	0.4sf.x	0.4sf	0.4sf.0sf	c.0sf	35	25	20	-	-	0·0
Eskdalemuir	x.c.obc	0	0sf.0	0	34	23	25	-	-	0·0
Valencia (Cahire'n)	b.bc	c.o.3	0.1	c.0.3	46	37	39	-	-	2·2
Baldonnel	0zf.0	0zf.0	0zf	0zf.0	39	44	32	-	-	0·0
Manchester (Alex. Pk)	0sf	0sf.0zf	0zf	0sf	40	34	39	-	-	*
Ross on Wye	3fe.0sf	0.0sf.0sf	0sf.pd.	0sf	37	33	31	0·5	0·1	0·0
Falmouth	0if	0if.0zf	0if	0if	40	46	35	-	-	0·0
Calshot (Hants)	0zf.0if.0zf	r.0zf	0zf.0sf.0sf	0if.0zf	40	37	36	0·1	Trace	0·0
Lympne (Folkestone)	0sf.0zf	0.0sf.0zf	0if.r.	0zf.r.	37	32	33	1	0·1	0·0
Aberdeen	3fe.x.	4.5fe	0sf.x.	x.3fe	33	25	17	-	-	2·6
Howden	b.0zf	0if.0zf	0.0if	0if.0	36	32	31	-	-	0·0
Cranwell (Lincs)	0zf.c.0	0if.r.	0.3c.0	3f.0sf	37	32	31	0·1	0·1	0·0
Felixstowe	d.d.0zf	0pd.	pd.0if	0if	41	37	*	1	1	0·0
Shoeburyness	d.d.0zf	r.r.0if	r.r.d.d	0.d.d.	38	34	36	1	1	0·0
Benson	0	0	0	0	39	23	33	-	1	*
S. Farnborough	dd.0zf	0zf	0sf	0zf.d.d.	39	35	34	0·3	Trace	0·0
London (Kew Obsy.)	0sf.pd.	pd.0sf.0zf	0zf.d.d.	0sf.r.r.	41	37	36	Trace	Trace	0·0
Croydon	0sf.0zf.pd.0zf.d.d.	0zf.0zf.d.d.	0sf.d.d.	0sf.0zf.pd.0if	40	37	*	1	0·3	*

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. R gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, *i.e.*, rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:-
R = heavy rain.
rr = continuous moderate rain.
r.r. = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 30 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0·3
1	1- 3	0·3- 1·5
2	4- 7	1·6- 3·4
3	8-12	3·5- 5·4
4	13-18	5·5- 7·9
5	19-24	8·0-10·7
6	25-31	10·8-13·8
7	32-38	13·9-17·1
8	39-46	17·2-20·7
9	47-54	20·8-24·4
10	55-63	24·5-28·4
11	64-75	28·5-32·6
12	Above 75	32·6 or above

SYMBOLS—
Aurora ⌒ Solar halo ⊙
Rime ⚹ Lunar halo ☾
Glazed frost ∼ Solar corona ☉
Glazed roads ⚹ Lunar corona ☾

LONDON. OBSERVATIONS.

	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Hours. Yesterday.	Humidity % 15 h. G.M.T. Yesterday.	Humidity % 9 h. G.M.T. To-day.
	24 Hours ended 9h G.M.T. 19th									
Greenwich (Royal Observatory)	or	or. *	or	40	36	35	1	0·0	91	95
City (Bunhill Row)	*	*	*	*	*	*	*	0.0	*	*
Westminster (St. James's Park)	*	*						0.0		
Regents Park (Botanic. Pk)						*		0.0		
Camden Sq. (British Rainfall)	0.c	c.0	*	40	36	32	1	*	92	97
Kensington Palace	0	0.	*	41	35	35	1	*	88 (13h)	94
Hampstead Observatory	ορδm.	ορδ.	ορδm	38	34	34	1	0·0	*	97.

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday.

Total ..... 66 ..... Joules.

Milliwatts.

Average Rate. 2.4

Maximum Rate. 7

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

19th & 20th December 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth	8.3	11.50	3.37
	8.4	11.51	3.39
Greenwich	8.4	11.57	3.50
	8.5	11.58	3.51
Wick	9.2	12.9	3.16
	9.3	12.10	3.17
Valencia	8.48	12.38	4.28
	8.49	12.39	4.20

Photographic Record of Pole Star (Polaris) and of δ Ursae Minoris at Greenwich Observatory.

Exposure from 18th ....h.... m. to 19th ....h.... m.

Stars.	Duration of Exposure. h. m.	Duration of Record. h. m.	%
Polaris			
δ Ursae Minoris			

NOTES ON THE WEATHER OF YESTERDAY.

Temperature remained below 40° in most parts of the Kingdom, but only touched 33° at Aberdeen. At Lerwick, however, the maximum was 49°: slight rain fell over a considerable area in England, and also in Shetland. Except at Malin Head, Valencia, Holyhead and in some parts of Scotland the day was sunless.

* Information for these columns not usually received.

† Trace = rain has fallen but amount less than 0·1 mm.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. No. B21578 Monday, 20th December 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

13H. G.M.T. 19th (left) — 18H. G.M.T. OF 19th (right)

Stations	Barom. at M.S.L. mb.	Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9	Barom. at M.S.L. mb.	Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew	1017.6	-5	SW	2	o3f	39	85	3	3,000	St	10	-	-	*	1015.4	-2	SSW	3	or₀2-3f	38	85	3	2,000	St	10	-	-	*
Eskdalemuir	1018.5	-6	SSW	2	o2f	35	80	5	-	St Cu	10	-	-	*	1016.6	-2	S	2	odm	33	97	3	1,250	St	10	-	-	*
Valencia (Cahirc'n)	1014.3	-7	SSE	5	bc	47	75	8	4,200	Cu	4	-	-	4	1012.1	-2	S	4	o	46	75	8	4,200	St Cu	6	A St	4	4
Baldonnel	1017.9	-4	SSE	4	o1f	39	86	6	2,000	St	10	.	.	*	1015.4	-2	SSE	4	o2f	40	75	4	2,000	St	10	-	-	*
Manchester (Alex. Pk)	1020.6	-4	WSW	1	o2f	36	86	5	1250	St	10	-	-	*	1018.7	-2	-	0	o2f	36	75	5	2,000	St	10	-	-	*
Ross on Wye	1019.4	-4	NE	1	o2f	35	85	4	450	St	10	-	-	*	1018.4	-1	ENE	1	odom	34	97	3	<500	St	10	-	-	*
Falmouth	1017.9	-5	NNE	3	o2f	39	75	4	-	St Cu	10	-	-	*	~~1007.1~~	+1	ENE	2	o2f	39	75	4	-	St	10	-	-	*
Calshot (Hants) *	1017.8	-4	N	3	o1f	38	86	6	2,000	St	10	-	-	2	1017.1	0	NNE	3	o1f	38	92	6	1,250	St	10	-	-	2
Lympne (Folkestone)	1017.0	-4	NE	4	o2f	36	92	4	450	St	10	-	-	*	1016.8	0	NE	1	odo3f	35	97	3	<500	St	10	-	-	*
Aberdeen	1016.2	-4	-	0	b3fe	32	92	2	-	-	-	Ci Cu	1	2	1014.1	-2	WSW	1	bife	32	85	6	-	-	-	A Cu	1	2
Howden	1020.0	-4	-	0	o1f	35	92	5	2,000	St	10	-	-	*	1018.4	-1	-	0	o2f	33	97	5	3,000	St Cu	10	-	-	*
Cranwell (Lincs)	1020.3	-3	N	3	c4f	36	75	4	1250	St	8	-	-	*	1019.2	0	N	2	o2f	34	92	4	1,250	St	10	-	-	*
Felixstowe	1019.0	-3	N	3	o2f	38	92	5	2,000	St Cu	10	-	-	3	1018.1	0	N	3	or₀2-3f	38	97	5	2,000	St Cu	10	-	-	*
Shoeburyness	1017.8	-4	NE	1	od	37	92	6	1250	St Cu	10	-	-	*	1017.0	0	NE	1	or₀m	32	92	4	1,250	St Cu	10	-	-	*
Benson	1018.7	-2	NE	2	o	36	92	3	-	St	10	-	-	*	1017.7	0	NNE	1	o	35	97	3	-	St	10	-	-	*
S. Farnborough	1018.2	-4	N	1	o2f	37	92	5	450	St	10	-	-	*	1017.7	0	N	1	o2f	36	97	5	750	St	10	-	-	*
London (Kew Obsy.)	1018.1	-4	NNE	3	o3fd₀	38	85	3	2,000	St Cu	8	A St	2	*	1017.5	0	NE	2	omd	37	92	3	1,250	Nb	10	-	-	*
Croydon	1018.7	-4	NE	3	od₀3f	37	92	3	<500	St	10	-	-	*	1017.7	0	NE	3	o3fd	36	97	2	<500	St	10	-	-	*

1017.1 (red, margin, Falmouth)

1H. G.M.T. OF 20th (left) — 7H. G.M.T. OF 20th (right)

Stations	Barom. at M.S.L. mb.	Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9	Barom. at M.S.L. mb.	Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew															1005.2	-4	ESE	2	or2-3f	39	92	4	1250	St	10	-	-	*
Eskdalemuir	1013.4	-3	SSW	3	o3fe	32	94	3	1260	St	10	-	-	*	1008.6	-6	S	2	o1f	32	85	6	2,000	St	10	-	-	*
Valencia (Cahirc'n)	1007.9	-4	SSW	5	omr	48	*	*	*	*	*	*	*	2	1006.4	0	SW	3	o	48	92	8	3000	St	10	-	-	*
Baldonnel	1012.2	-4	S	4	o2f	40	85	5	2000	St Cu	10	-	-	*	1006.2	-6	SW	5	o1f	44	85	6	750	St	7	A St	3	*
Manchester (Alex. Pk)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1012.9	-3	S	4	o3f	34	86	3	3,000	St	10	-	-	*
Ross on Wye	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1014.4	-6	SSE	1	om	33	92	3	1250	St	10	-	-	*
Falmouth	1015.4	-3	-	0	bx	36	92	8	-	-	-	-	-	*	1014.1	0	-	0	bx	35	94	7	-	St Cu	1	-	-	*
Calshot (Hants)	1016.9	-3	N	1	o3f	36	92	4	1250	St	10	.	.	1	1015.8	-1	NW	1	o2f	34	92	4	1250	St	10	-	-	1
Lympne (Folkestone)	1015.9	-2	NE	1	od₀3f	34	94	3	<600	St	10	-	.	*	1014.4	-1	-	0	o6f	34	94	1	<500	St	10	-	-	*
Aberdeen	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1005.5	-6	SSW	3	b2fe	36	85	4	-	-	-	-	-	2
Howden	1015.9	-4	-	0	o2f	33	94	4	<500	St	10	-	-	*	1013.2	-1	SSW	1	o1f	35	92	4	2,000	St	10	-	-	*
Cranwell (Lincs)	1017.0	-4	W	2	o1f	33	94	6	4200	St	10	-	-	*	[illegible]	-1	SW	1	or₀2-3f	34	94	4	2,000	Nb	10	-	-	*
Felixstowe	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1012.3	-1	W	2	o2f	34	94	5	3,000	St	10	-	-	1
Shoeburyness	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1014.6	-1	-	0	o3fe	36	92	3	1250	St Cu	10	-	-	*
Benson	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1014.2	0	-	0	o	35	94	4	-	St	10	-	-	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1014.9	-1	-	0	o3f	34	94	3	750	St	10	-	-	*
London (M.O. at 1H.)	1015.6	-3	*	*	*	34	*	*	*	*	*	*	*	*	1015.0	-1	W	1	o3f	36	94	2	1250	St	10	-	-	*
Croydon	1016.3	-3	NE	1	o4fe	36	94	2	<500	St	10	-	-	*	1015.8	0	-	0	o3f	36	94	1	<500	St	10	-	-	*

1015.0 (red, margin, Cranwell)

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

18H. G.M.T. of 19th — 7H. G.M.T. of 20th — 24 HOURS ENDED 7H. 20th — Sunshine 19th

Stations	Barom. at M.S.L. mb.	Temp. °F.	Wind Direc.	Wind Force 0-12	Weather	Barometer at M.S.L. mb.	‡ Change in 3 hours	Temp. °F.	Change in 24 hours	Wind Direc.	Wind Force 0-12	Direc. of Upper Cloud	Weather	Sea 0-9	† Rainfall mm.	Max. °F.	Min. °F.	Morning	Afternoon	Night	Sunshine Hours
Lerwick	1010.8	44	S	3	o	1000.8	-5	45	0	S	3	5	o	2	-	45	39	cm.	o	bc.o	*
Stornoway	1010.4	44	S	4	odp	995.0	-4	43	0	S	4	-	orq	6	8	44	42	bc.opq.	odp.	odp.orq	0.0
Castlebay (Barra Is)	1010.4	46	SSW	4	o	996.5	-3	49	+2	SSW	5	.	op	5	2	49	43	o.bc.o	o	op	1.0
Malin Head	1011.2	38	S	3	om	999.0	-2	40	+4	SSW	4	S	c	3	1	41	35	bcm.	om	om.omp	2.6
Blacksod Point	1009.1	46	S	4	om	1000.2	-1	48	+6	W	4	-	bcq	5	10	49	40	bc.	c	omq.opq	*
Roche's Point	1015.4	45	S	4	o	1008.5	-3	49	+8	SSW	4	-	or	4	1	49	41	o.	o.c.o	op.o	*
Birr Castle	1014.0	37	SE	1	b	1005.4	*	45	+8	SE	2	-	r	*	2	45	34	od.a ll	of.b	b.or	0.0
Donaghadee	1015.6	40	SW	1	cm	1006.9	-4	43	+5	SW	3	-	omq	2	1	44	34	cm	om	omp	*
Liverpool (Bidston)	1017.8	35	SE	2	o	1011.6	-3	31	-4	SE	3	Se	bc	2	-	36	31	om	om	o.bc	0.0
Holyhead	1017.0	38	SSW	4	o1f	1008.4	-4	41	+4	S	5	-	oq1f	4	-	41	36	omq	omq	o.bc.c.o	0.0
Pembroke (St. Ann's Head)	1018.0	37	NE	2	o	1011.4	-3	47	+8	S	4	-	o	3	-	47	34	om	oqm	om.o	0.0
Scilly (St. Mary's)	1017.5	43	-	0	o	1013.6	-2	47	+6	S	2	-	o	3	-	47	41	om	om	om.c.o	0.0
Jersey (St. Aubin)	1015.9	38	E	3	o	1014.5	0	39	+1	SE	3	-	o	2	0.1	39	34	o	ob.o	o	0.0
Portland Bill	1016.4	38	NE	5	c	1014.4	0	38	+2	ENE	3	-	o	4	-	41	32	om c.	c.	c.o	*
Dungeness	1016.8	38	SE	7	T.	1014.6	-1	36	-4	N	2	-	o	3	1	40	35	cp.c	cp.T.	op.cp.o	*
Wick	1011.2	36	SW	1	bc	999.4	-8	42	+13	SSW	5	.	cq	4	-	42	29	bc	bc	bc.cq	*
Nairn	1011.1	31	SSW	1	c	999.2	*	41	+12	SW	2	-	cq	2	.	41	29	bc	bc.c	oq	5.1
Leith	1015.0	38	SW	2	o	1005.5	-3	38	+1	SSW	2	-	o	1	0.4	40	36	cu.o	o.c.o	odq.o	*
Tynemouth	1017.2	36	WSW	2	3f	1010.5	-2	34	-1	WSW	3	-	fm	2	-	34	33	f	f	f.omfbm	*
Spurn Head	1017.8	37	NNW	3	oqv	1013.3	-2	37	+1	WNW	2	-	om	3	2	39	32	cm	op.m	cp.om	*
Yarmouth (Gorleston)	1018.2	38	ENE	3	T	1015.2	-1	38	-1	-	0	-	o	0	2	39	34	or.ovp	or	or.od.v	0.0
Clacton-on-Sea	1017.1	38	NNE	2	T	1014.5	-1	34	-2	NW	2	-	oqme	1	3	39	36	oqe	oqe md.	oqm.or	0.0
Nottingham	1018.4	35	E	1	o	1013.4	*	35	-1	SW	1	-	o	*	0.2	38	33	om	opm	ob	0.0

* Information for these columns not usually received. ‡ The barometric change is expressed in half millibars. § For code see page 3 † See footnote p. 4.

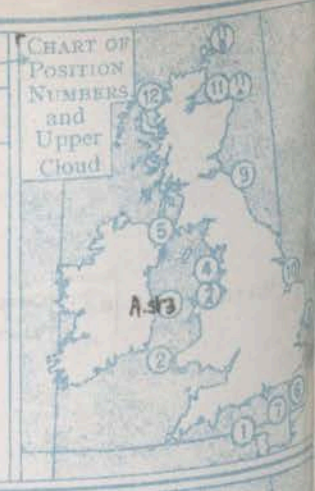
M.O. FORM 2370.

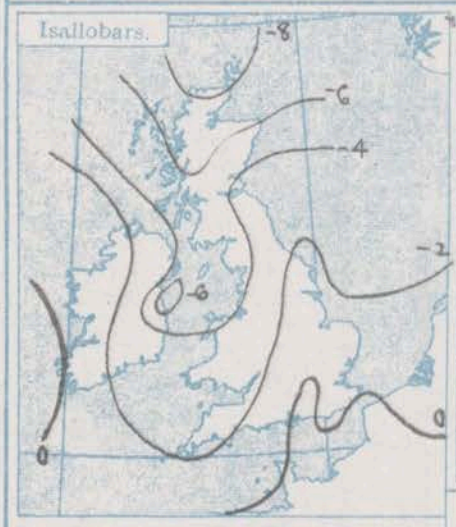
SUMMARY OF CONDITIONS AT 7 h. G.M.T. 20.12.1920.

Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Dull, mist or fog.	V.Poor	Slight
2. E. England	Dull, local mist.	Indiff.	V.Smooth
3. E. Midlands	Dull.	Poor	-
4. W. Midlands	Dull, local mist.	V.Poor	-
5. S.W. England	Fine to dull.	Good	Slight
6. South Wales	Dull.	"	"
7. North Wales	Dull, squally.	"	Mod.
8. N.W. England	Fair to dull, local mist.	Poor	Smooth
9. N. Midlands	Dull, local mist.	"	-
10. N.E. England	Fine to dull, misty.	Indiff.	Smooth
11. E. Scotland	Fine to dull, local mist.	Poor	"
12. S.W. Scotland	Dull, misty, local rain.	Indiff.	"
13. Isle of Man	Dull, some mist.	Fair	Slight
14. N. & N.W. Scotland	Dull, slight local rain.	Poor.	Mod.
15. Hebrides	Dull, slight rain.	Indiff.	R.Rough
16. Orkneys and Shetlands	Dull.	Fair	Smooth
17. N.W. Ireland	Fair.	Good	R.Rough
18. N.E. Ireland	Cloudy or dull, local mist.	Fair.	Slight
19. S.E. Ireland	Dull, local rain.	"	"
20. S.W. Ireland	Dull, local rain.	Good	Mod.

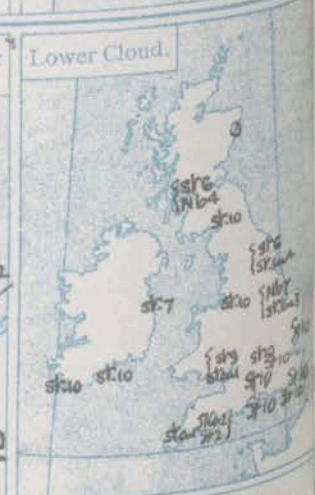
Temperature reported from Coastal and Cross Channel Steamers

Position Number	Date	Time G.M.T.	Sea °F	Air °F
3	19th	1000	50	44





Barometric change from 4 h. to 7 h. (half millibars).



EXPLANATION.
BAROMETER.—Isobars are drawn for intervals of two millibars.
WIND.—Direction is shown by arrows flying with the wind. Force, on the scale 0-12, is indicated by the number of feathers. Mean velocity is shown in miles per hour by figures in small circles.
TEMPERATURE is given in degrees F.
WEATHER SYMBOLS.—
clear sky. sky ¼ clouded. sky ½ clouded. sky ¾ clouded. overcast sky. rain falling. snow. sleet. hail. fog. mist. T thunder. R thunderstorm.
SEA DISTURBANCE.—Rough. High.

GENERAL INFERENCE from observations received up to 9h.

A deep depression centred near the Faroe Islands is likely to move slowly Eastward. Weather will be rainy and temporarily milder in all districts, but colder weather is likely tp spread later from the North-West.

Districts.	Forecasts for the 24 hours commencing 15 h. G.M.T. Monday, 20th December, 1920.
1. S.E. England 2. E. England 3. E. Midlands 4. W. Midlands	Wind S. veering W., light to moderate; dull, some rain, visibility indifferent to fair, local mist; milder.
5. S.W. England 6. South Wales 7. North Wales 8. N.W. England	Wind S.W. veering W. or N.W., moderate or fresh; some rain early, improving later, visibility fair but local mist; rather mild.
9. N. Midlands 10. N.E. England 11. E. Scotland	Wind S.W. to W., moderate; dull, some rain, visibility indifferent to fair; milder.
12. S.W. Scotland 13. Isle of Man	As for 5 - 8.
▼ 14. N. & N.W. Scotland ▼ 15. Hebrides ▼ 16. Orkneys and Shetlands	Wind S.W. veering W. or N.W., strong to a gale, moderating later; dull, some rain, then improving; mild, then colder.
▼ 17. N.W. Ireland ▼ 18. N.E. Ireland ▼ 19. S.E. Ireland ▼ 20. S.W. Ireland	Wind W. or N.W., moderate to fresh; variable sky, rain or hail showers, visibility fair to good; mild, then colder.

Further Outlook.

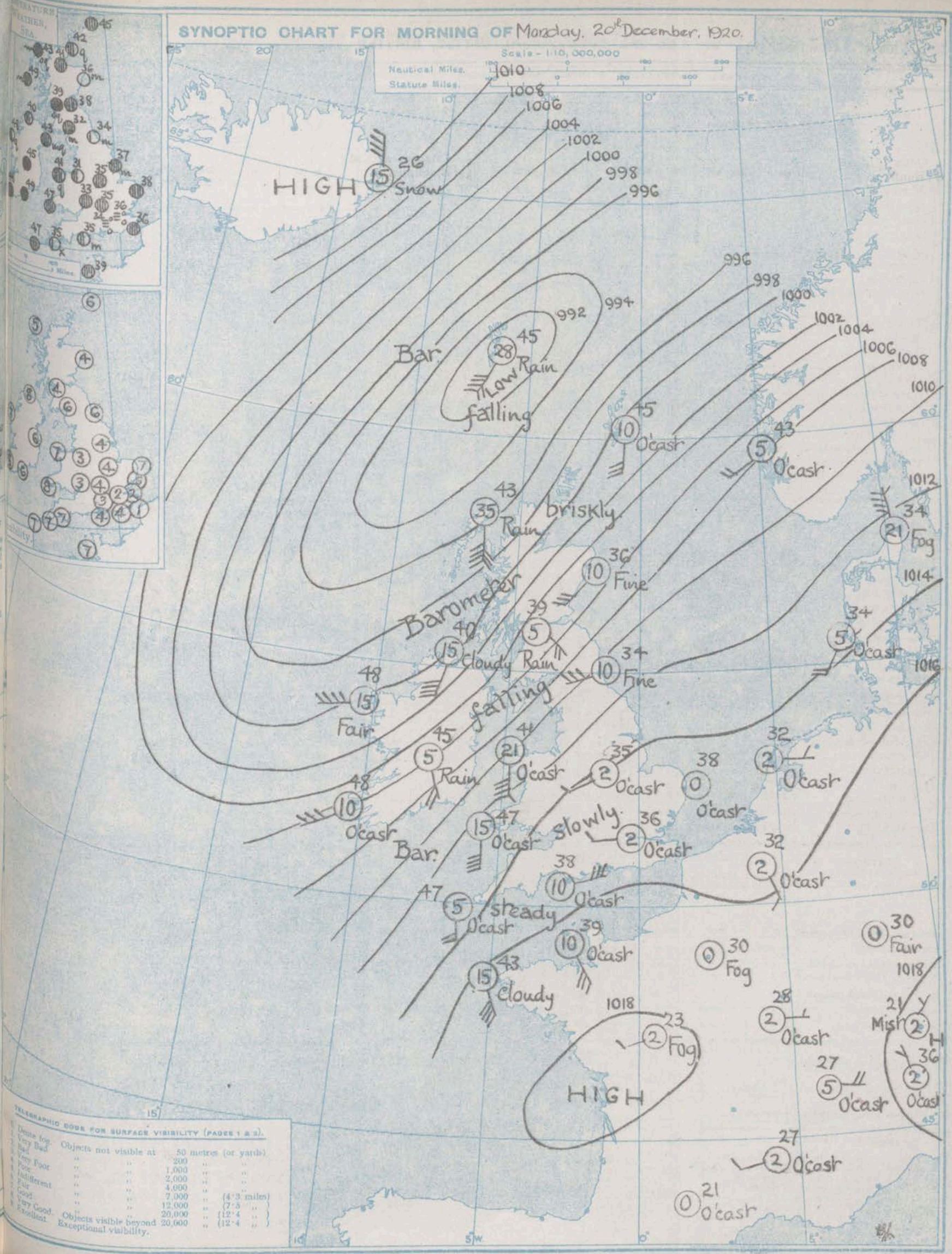
Milder temporarily with Westerly winds; colder weather likely tp spread from North-West.

▼ South Cone hoisted morning 20th Dec. 1920

E.G.B.

Meteorological Office: Air Ministry, Kingsway, London, W.C.2. Forecasts issued at 09.20.

G. C. SIMPSON, F.R.S., Director.


SYNOPTIC CHART FOR MORNING OF Monday, 20th December, 1920.
Scale - 1:10,000,000
Nautical Miles.
Statute Miles.
HIGH
Snow
Bar.
Low
falling
Rain
O'cast
briskly
Fog
Fine
Barometer
Cloudy
Rain
Fair
slowly
steady
Mist
HIGH
TELEGRAPHIC CODE FOR SURFACE VISIBILITY (PAGES 1 & 2).
0 Dense fog. Objects not visible at 50 metres (or yards)
1 Very Bad " " 200 " "
2 Bad " " 1,000 " "
3 Very Poor " " 2,000 " "
4 Poor " " 4,000 " "
5 Indifferent " " 7,000 " (4·3 miles)
6 Fair " " 12,000 " (7·5 ")
7 Good " " 20,000 " (12·4 ")
8 Very Good. Objects visible beyond 20,000 " (12·4 ")
9 Excellent Exceptional visibility.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 365 {Monday 20th December

WEATHER, TEMPERATURE, RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 19th

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 18th-19th	Rainfall. Day. 9h-18h. 19th	Sunshine. Sunrise to Sunset. 19th
Scotland.	Oban	bx	bc. bx	35	23	-	-	4.2
	Banff							
	Montrose							
	St. Andrews							
England, N.E.	Harrogate	o	o	34	32	-	-	0.0
	Scarborough							
	Skegness							
England, E.	Lowestoft							
	Felixstowe	omd	omd	39	33	2	0.2	0.0
	Southend-on-Sea	od	od r.	38	35	1	2	0.0
England, S.E.	Tunbridge Wells	omd	omd	37	35	2	?	0.0
	Margate	o	o	42	39	-	-	0.0
	Ramsgate	*	*	40	36	-	-	0.0
	Folkestone	o.c.o	o	44	34	0.3	-	0.0
	Hastings	ofd	ofd	39	37	1	2	0.0
	Eastbourne	ord	od	38	37	1	2	0.0
	Brighton	od	od	39	?	2	1	0.0
	Worthing	od	o	39	37	1	1	0.0
	Littlehampton							
	Portsmouth (S'thsea)							
	Bournemouth	*	*	38	35	-	-	0.7
	Ventnor (I. of W.)	*	*					

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 17h-9h. 18th-19th	Rainfall. Day. 9h-17h. 19th	Sunshine. Sunrise to Sunset. 19th
England, N.W.	Douglas (I.O.M.)							
	Blackpool	o.c.	o.	36	34	-	-	0.0
	Southport	o.	o.c.o	36	34	-	-	0.0
	Morecambe.							
Midlands.	Buxton							
	Leamington Spa	o	o	36	34	0.3	-	0.0
	Malvern							
	Bath	o.	o	37	34	1	-	0.0
Wales.	Rhyl	p.	c.	38	29	-	-	0.0
	Colwyn Bay	*	*	37	33	-	-	0.0
	Llandudno	*	*					
	Aberystwyth							
	Tenby							
	Swansea							
England, S.W.	Weymouth	bc.	o	39	36	-	-	0.7
	Teignmouth							
	Torquay	o.	o	40	37	0.1	-	0.0
	Paignton	o	o	40	36	-	-	0.0
	Penzance	o.	o.c.o	41	38	-	-	0.0
	Newquay	o.	o	38	35	-	-	0.0
	Bude	o	o	40	36	-	-	0.0
	Ilfracombe	o.c.	o.c	39	37	0.2	-	0.0
	Weston-s-Mare	m.o.	om	37	34	-	-	

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-18h 19th	Weather. 18h-18h 19th	Weather. 18h 19th-18h 20th	Weather. 18h-7h 20th	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall.† Day. 7h-18h. mm.	Rainfall.† Night. 18h-7h. mm.	Sun. Hours.
Renfrew	02f. 03f	03f r0	03f	02f r0	40	32	33	-	0.1	0.0
Eskdalemuir	0. 02f	03f δ0δ0	3f. R	R 3R. 01f	35	30	30	0.3	1	0.0
Valencia (Cahire'n)	c.o.bo.c	bc.c.o.o	0rf	rr. r0	50	43	44	-	7	2.0
Baldonnel	01f	01f 02f	03f q	q r	44	37 35	36	q-	0.4	0.0
Manchester (Alex. Pk)	02f. 02f	02f 03f 02f	02f	0 3f	38	34	30	-	-	*
Ross on Wye	03f. pr5	q 02f.	0 5f. q 5f	q. 03f	36	32	30	0.1	Trace	0.0
Falmouth	01f. 02f	02f. 2f. 02f	c.d. 8x	8x	39	33	24	-	-	0.0
Calshot (Hants)	02f. pd	01f pd0	02f	02f	40	35	33	Trace	Trace	0.0
Lympne (Folkestone)	03f d0d0 pd0	03f pd.	03f. d. d.	03f pd0 01-5f	36	33	32	1	0.2	0.0
Aberdeen	1fc. 3fc	3f. 1fc.	1fc	1fc. 2fc	34	25	17	-	-	3.2
Howden	1fc. 0	02f 01f	02f 0	pd0 2fc	36	32	31	-	-	0.0
Cranwell (Lincs)	p5. 02f	02f. 02f	pd. 01f	01f. 02f	36	32	32	0.2	Trace	*
Felixstowe	pd. 03f	02f pd0		d.d. 03f pd. 01f	39	36	?	0.2	2	0.0
Shoeburyness	d.d. 0	δ0δ0 r0 r0	r0. 03f	03f. 03f.	38	31	25	2	1	0.0
Benson		0.	0	0	34	32	?	0.1	0.1	*
S. Farnborough	02f	02f p0 2	p. 02f	02f 02f	37	34	34	0.3	0.1	0.0
London (Kew Obsy.)	03f pd. q	δ0δ0δδ. 03f.	02f	04-05f	38	36	36	1	1	0.0
Croydon	03f 03f d. r r0	03f δδ r0 r0 δδ	03f dd. 04-5f 4f. 0 4-5f	11-5f pd. 04-05f	37	36	*	1	0.4	*

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, *i.e.*, rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:-
R = heavy rain.
rr = continuous moderate rain.
r.r. = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 30 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0·3
1	1- 3	0·3- 1·5
2	4- 7	1·6- 3·3
3	8-12	3·4- 5·4
4	13-18	5·5- 7·9
5	19-24	8·0-10·7
6	25-31	10·8-13·8
7	32-38	13·9-17·1
8	39-46	17·2-20·7
9	47-54	20·8-24·4
10	55-63	24·5-28·4
11	64-75	28·5-33·5
12	Above 75	33·6 or above

SYMBOLS—

Aurora, Rime, Glazed frost, Glazed roads, Solar halo, Lunar halo, Solar corona, Lunar corona

LONDON. OBSERVATIONS.

24 HOURS ENDED 9H G.M.T. 20th

	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Hours. (Yesterday.)	Humidity % 15 h. G.M.T. (Yesterday.)	Humidity % 9 h. G.M.T. (To-day.)
Greenwich (Royal Observatory)	o.r	o.r	oc. o. or	38	36	36	2	0.0	91	95
City (Bunhill Row)	*	*	*	*	*	*	*		*	*
Westminster (St. James's Park)	*	*	od	39	37	35	2		89	96
Regents Pk. (Botanical Gdns)	*	*	*	*	*	*	*	0.0	*	*
Camden Sq. (British Rainfall)	*	*	*	39	38	35	1	*	*	96
Kensington Palace	om	omd	*	39	36	35	2	*	98 (18h)	97
Hampstead Observatory	*	*	*	36	34	35	1		*	98

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday.

Total ..... Joules.

Milliwatts.

Average Rate.

Maximum Rate.

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

20th & 21st December 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth	8.4	11.51	3.38
	8.4	11.51	3.39
Greenwich	8.6	11.58	3.50
	8.6	11.58	3.51
Wick	9.3	12.10	3.17
	9.3	12.10	3.17
Valencia	8.49	12.39	4.26
	8.49	12.39	4.27

Photographic Record of Pole Star (Polaris) and of δ Ursae Minoris at Greenwich Observatory.

Exposure from 19th ....h. ....m.
to 20th ....h. ....m.

Stars.	Duration of Exposure. h.	m.	Duration of Record. h.	m.	%
Polaris	14	0	NIL		0
δ Ursae Minoris	14	0	NIL		0

NOTES ON THE WEATHER OF YESTERDAY.

Except in the North of Scotland where from 3 to 5 hours of sunshine were registered the day was generally overcast. 5 to 10 mm of rain fell in Ireland and the Hebrides and slight falls also occurred in East and South-East England. Temperature touched 50° in Ireland but remained below 40° in most parts of England. The lowest minimum was 25° at Aberdeen.

* Information for these columns not usually received.

† Trace = rain has fallen but amount less than 0·1 mm.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. No. B21579 Tuesday...21st...December.......1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

STATIONS	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	Humidity %	§ Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
13H. G.M.T. 20th														
Renfrew	999.0	-6	SSW	4	od₀	45	97	6	1250	StCu	10	-	-	
Eskdalemuir	1002.6	-6	SSE	2	od₀m	33	92	3	2000	Nb	10	-	-	*
Valencia (Cahirc'n)	1004.4	-4	SSW	2	o1f	50	92	7	1250	St	10	-	-	4
Baldonnel	1003.4	-4	SW	5	oq	49	85	7	2000	StCu	10	-	-	*
Manchester (Alex. Pk.)	1007.9	-7	S	4	o3f	38	85	3	750	St	4	A.St	6	*
Ross on Wye	1010.5	-4	WSW	4	omq	41	55	6	3000	St	10	-	-	*
Falmouth	1011.7	-4	SW	5	or₀	49	75	7	-	Nb	10	-	-	*
Calshot (Hants)	1013.1	-3	SSE	2	c2f	43	85	4	2000	St	1	ACu	6	1
Lympne (Folkestone)	1013.4	-2	WSW	1	o2f	38	97	4	750	StCu	10	-	-	*
Aberdeen	998.8	-6	SSW	4	o2f	40	85	4	1250	St	9	-	-	3
Howden	1008.2	-6	SW	3	o1f	37	92	4	2000	StCu	10	-	-	*
Cranwell (Lincs)	1010.5	-4	SSW	4	o2f	38	85	5	750	StCu	10	-	-	*
Felixstowe	1013.4	-3	SSW	3	o1f	39	92	5	5700	StCu	10	-	-	*
Shoeburyness	1014.0	-2	W	1	bc3f	40	85	3	2000	StCu	5	-	-	*
Benson	1011.2	-4	SW	3	o	40	85	6	-	StCu	10	-	-	*
S. Farnborough	1013.1	-4	SW	3	cz	42	75	6	3000	StCu	7	Ci	1	*
London (Kew Obsy.)	1012.5	-3	SW	2	bc2f	40	85	4	-	-	-	ACu	5	*
Croydon	1013.2	-3	W	3	c1f	41	75	6	3000	StCu	5	Ci	2	*
1H. G.M.T. of 21st														
Renfrew														
Eskdalemuir	993.2	-5	S	6	or2-3f	44	97	2	750	Nb	10	-	-	*
Valencia (Cahirc'n)	988.8	-7	SSW	5	oqr	49	*	*	*	*	*	*	*	5
Baldonnel	991.9	-10	SSW	6	or₀q	49	75	4	750	St	10	-	-	*
Manchester (Alex. Pk.)	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ross on Wye	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Falmouth	1002.2	-8	SSW	7	or₀q	49	95	5	-	Nb	10	-	-	*
Calshot (Hants)	1007.5	-5	SSW	5	o	45	85	8	2,000	St	10	-	-	3
Lympne (Folkestone)	1009.3	-4	SSW	5	o2f	41	97	4	750	St	10	-	-	*
Aberdeen	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Howden	999.6	-4	SSW	4	o1f	43	97	3	1,250	St	10	-	-	*
Cranwell (Lincs)	1002.2	-3	SW	6	c	45	92	6	2,000	St	8	-	-	*
Felixstowe	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Shoeburyness	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Benson	*	*	*	*	*	*	*	*	*	*	*	*	*	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*
London (M.O. at 1H.)	1006.7	-3	*	*	*	44	*	*	*	*	*	*	*	*
Croydon	1008.4	-4	SSW	5	o2fq	44	85	5	1,250	St	10	-	-	*

STATIONS	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	Humidity %	§ Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
18H. G.M.T. of 20th														
Renfrew	996.9	-3	SW	5	o2f	47	97	6	1250	StCu	10	-	-	*
Eskdalemuir	997.7	-4	SSW	5	or₀2f	43	97	3	1250	Nb	10	-	-	
Valencia (Cahirc'n)	999.8	-6	S	4	o1f	50	92	6	750	St	10	-	-	4
Baldonnel	1000.6	-3	SW	6	or₀q	48	85	5	1250	St	10	-	-	*
Manchester (Alex. Pk.)	1004.1	-4	SSW	6	or₀q	42	85	4	3000	Nb	10	-	-	*
Ross on Wye	1007.7	-3	SW	4	o	44	85	6	2000	Nb	10	-	-	*
Falmouth	1009.4	-2	SSW	5	or	47	97	5	-	Nb	10	-	-	*
Calshot (Hants)	1011.3	-2	SW	4	o1f	46	85	6	2000	StCu	10	-	-	2
Lympne (Folkestone)	1012.1	-2	SSW	1	o2f	37	97	4	750	St	10	-	-	*
Aberdeen	993.6	-6	SSW	3	o2f	43	97	4	1250	St	10	-	-	3
Howden	1004.5	-4	SSW	3	or₀3f	39	97	2	1250	Nb	10	-	-	*
Cranwell (Lincs)	1006.7	-4	SSW	5	o	41	85	5	1250	StCu	10	-	-	*
Felixstowe	1011.9	-1	SSW	4	o3f	40	92	3	1250	St	10	-	-	*
Shoeburyness	1010.9	-2	-	0	b2fe	35	85	4	-	-	-	CiCu	1.	*
Benson	1009.1	-2	SSW	3	o	41	92	5	-	St	10	-	-	*
S. Farnborough	1010.6	-2	S	2	o3f	42	92	3	1250	St	10	-	-	*
London (Kew Obsy.)	1010.2	-4	SW	3	c	40	92	5	-	-	-	ACu	7	*
Croydon	1011.2	-2	SSW	3	o2f	39	92	4	4200	StCu	9	-	-	*
7H. G.M.T. of 21st														
Renfrew	981.3	-9	S	5	bcq	48	92	6	1,250	Nb	6	-	-	*
Eskdalemuir	983.4	-7	S	7	or₀qm	45	97	3	1250	Nb	10	-	-	*
Valencia (Cahirc'n)	985.5	-3	SW	7	c	49	65	7	3000	Cu	7	-	-	*
Baldonnel	983.6	-9	SSW	6	cq	47	75	6	1,250	St	8	-	-	*
Manchester (Alex. Pk.)	990.0	-11	SSW	6	oqm	46	85	5	1,250	StCu	8	A.St	1	*
Ross on Wye	993.6	-7	S	6	or₀q	47	92	6	1,250	Nb	10	-	-	*
Falmouth	995.7	-6	SW	4	o	50	97	7	-	StCu	9	-	-	*
Calshot (Hants)	1000.3	-7	S	6	o1f	45	92	6	2,000	StCu	10	-	-	4
Lympne (Folkestone)	1003.4	-7	SSW	5	odq	39	92	4	750	St	10	-	-	*
Aberdeen	980.9	-7	SSW	4	o2fp	47	85	4	1,250	Nb	10	-	-	4
Howden	992.5	-6	SSW	6	o1fq	46	92	6	1,250	St	10	-	-	*
Cranwell (Lincs)	995.5	-7	S	6	o	43	92	6	2,000	St	10	-	-	*
Felixstowe	1003.1	-6	S	5	o	41	92	7	2,000	StCu	10	-	-	4
Shoeburyness	1001.9	-6	SSW	6	o	41	85	7	3,000	StCu	9	-	-	*
Benson	997.1	-9	S	6	o	42	92	5	-	St	10	-	-	*
S. Farnborough	999.9	-9	S	6	o2f	41	97	4	750	St	10	-	-	*
London	1000.1	-8	SSW	5	od₀w	44	85	7	750	Nb	7	A.St	3	*
Croydon	1002.0	-8	SSW	5	o2fd₀	43	92	4	750	St	10	-	-	*

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

STATIONS	18H. Barom. at M.S.L. mb.	18H. Temp. °F.	18H. Wind Direc.	18H. Wind Force 0-12	18H. Weather	7H. Barometer at M.S.L. mb.	7H. ‡ Change in 3 hours	7H. Temp. °F.	7H. Change in 24 hours	7H. Wind Direc.	7H. Wind Force 0-12	Direc. of Upper Cloud	Weather	Sea 0-9	† Rainfall mm.	Temp. Max. °F.	Temp. Min. °F.	Weather Morning	Weather Afternoon	Weather Night	Sunshine Hours
	18H. G.M.T. of 20th					**7H. G.M.T. of 21st**									**24 HOURS ENDED 7H. 21st**						**20th**
Lerwick	989.2	45	S	6	or2f	979.9	-6	47	+2	SW	6	-	omr₀q	4	2	49	42	o	omr	omrq	*
Stornoway	986.4	45	SSW	3	c	972.6	-8	47	+4	S	6	-	odq₀	5	22	48	42	orcq	oc	cp.odq	0.0
Castlebay (Barra Is.)	989.8	50	WSW	5	op	973.3	-8	50	+1	SSE	5	-	cp	5	10	50	47	op	op	o.cp	0.0
Malin Head	993.1	47	SSW	3	o1fe	971.5	-6	46	+6	SSW	4.	-	o	4	1	47	40	cm	ome	om	0.6
Blacksod Point	995.0	51	SW	5	omd	970.8	-8	49	+1	WSW	7	-	oqr	7	12	52	41	cq	omr	omp.om	*
Roche's Point	1003.0	48	SW	5	o	988.6	-3	48	-1	WSW	5	-	b	5	4	50	48	opo	opdo	od.cp.b	*
Birr Castle	1000.1	48	S	2	o	980.3	*	47	+2	S	6	-	o	*	-	48	44	o	o	o	0.0
Donaghadee	999.9	48	SW	2	omp	982.2	-8	47	+4	SW	4	-	b	4	2	49	43	cm	om	bcmp	*
Liverpool (Bidston)	1002.8	45	S	3	c	988.5	-8	45	+14	SSE	5	SW	oq	4	-	49	31	cop	cm	oq	0.0
Holyhead	1001.4	49	SW	4	cg	986.3	-6	49	+8	WSW	6	-	cq	5	8	50	40	odqm	orqc	cog.copq	0.0
Pembroke (St. Ann's Head)	1005.4	49	SSW	6	or₀2f	991.8	-3	50	+3	SW	5	-	c	5	8	51	46	od	odm	odm pc	0.0
Scilly (St. Mary's)	1008.2	49	SW	4	o1f	996.1	-6	50	+3	W	4	-	o	6	6	52	47	orm	omp	omb	0.0
Jersey (St. Aubin)	1013.9	42	S	3	b	1003.2	-4	44	+5	S	5	-	od₀2f	4	0.2	44	38	o	ob	b.odm	0.2
Portland Bill	1010.4	46	SW	6	odp	997.4	-6	48	+10	SW	8	-	oq	7	0.2	49	38	oc	cod	oqp	*
Dungeness	1011.5	44	WSW	4	c	1004.3	-3	41	+5	SW	5	SW	c	5	-	45	36	oc	c	c.o.c	*
Wick	988.3	45	SSW	5	omq	977.8	-10	47	+5	SSW	5	-	ompq	4	1	47	40	cqs	comq	ompq	*
Nairn	989.3	44	W	1	r	976.4	*	45	+4	-	0	-	bcg	1	2	46	36	ebcc	cgp	prg.bc	3.4
Leith	994.3	47	SW	4	o	982.3	-7	49	+11	SW	5	SW	bc	3	0.1	50	38	o.cq.o	oq.o	o.cq.bc	*
Tynemouth	1001.6	35	SW	3	bc3f	990.1	-6	46	+12	SW	3	-	o2f	3	-	47	33	om	bcm	omom	*
Spurn Head	1004.8	40	SW	5	oqp	994.3	-6	43	+6	S	6	-	oq	5	0.4	44	34	om	coqp	cp.oq	*
Yarmouth (Gorleston)	1010.4	35	SW	3	3f	1001.7	-6	41	+3	SSW	6	-	oq	4	0.2	44	34	bcmom	ombm	ombco.cbq	0.8
Clacton-on-Sea	1009.7	40	SSW	3	o	1002.5	-5	41	+4	SSW	4	-	c	3	-	41	37	ogmc	ogmc	ogmc.c	0.1
Nottingham	1006.7	42	SW	3	o	994.4	*	45	+10	S	5	-	o/o	*	Trace	49	34	om	co	o.c	0.5

* Information for these columns not usually received. ‡ The barometric change is expressed in half millibars. § For code see page 3. † See footnote p.4.

M.O. FORM 2370.

SUMMARY OF CONDITIONS AT 7 h. G.M.T. 21.12.1920.

Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Dull, misty, local drizzle.	Indiff.	R. Rough
2. E. England	Cloudy or dull.	Good	Mod.
3. E. Midlands	Dull, local showers.	Fair	-
4. W. Midlands	Dull, squally, local rain.	"	-
5. S.W. England	Dull, local squalls.	"	Rough
6. South Wales	Cloudy or dull.	Good	R. Rough
7. North Wales	Cloudy or dull, squally.	"	"
8. N.W. England	Dull, squally, local mist.	Indiff.	Mod.
9. N. Midlands	Dull.	"	-
10. N.E. England	Dull, mist or squalls.	"	Mod.
11. E. Scotland	Fair to dull.	Poor	"
12. S.W. Scotland	Fair to dull, squally, local rain	"	"
13. Isle of Man	Fair to dull, squally.	Fair	"
14. N. & N.W. Scotland	Fair to dull, showery, misty.	Poor	"
15. Hebrides	Dull, showery, squally.	Indiff.	R. Rough
16. Orkneys and Shetlands	Dull, misty, slight rain.	Poor	Mod.
17. N.W. Ireland	Dull, squally, slight shower.	Indiff.	High
18. N.E. Ireland	Fine to dull.	Good	Mod.
19. S.E. Ireland	Cloudy or dull, squally.	Fair	R. Rough
20. S.W. Ireland	Fine to cloudy.	Good	Rough.

Temperature reported from Coastal and Cross Channel Steamers.

Position Number	Date	Time G.M.T.	Sea °F	Air °F
5	20th	0850	50	46
3	20th	1000	50	49

Barometric change from 4 h. to 7 h. (half millibars).

EXPLANATION.

BAROMETER.—Isobars are drawn for intervals of two millibars.

WIND.—Direction is shown by arrows flying with the wind. Force, on the scale 0-12, is indicated by the number of feathers. Mean velocity is shown in miles per hour by figures in small circles.

TEMPERATURE is given in degrees F.

WEATHER SYMBOLS.— clear sky. sky ¼ clouded. sky ½ clouded. sky ¾ clouded. overcast sky. rain falling. snow. sleet. hail. fog. mist. T thunder. R thunderstorm.

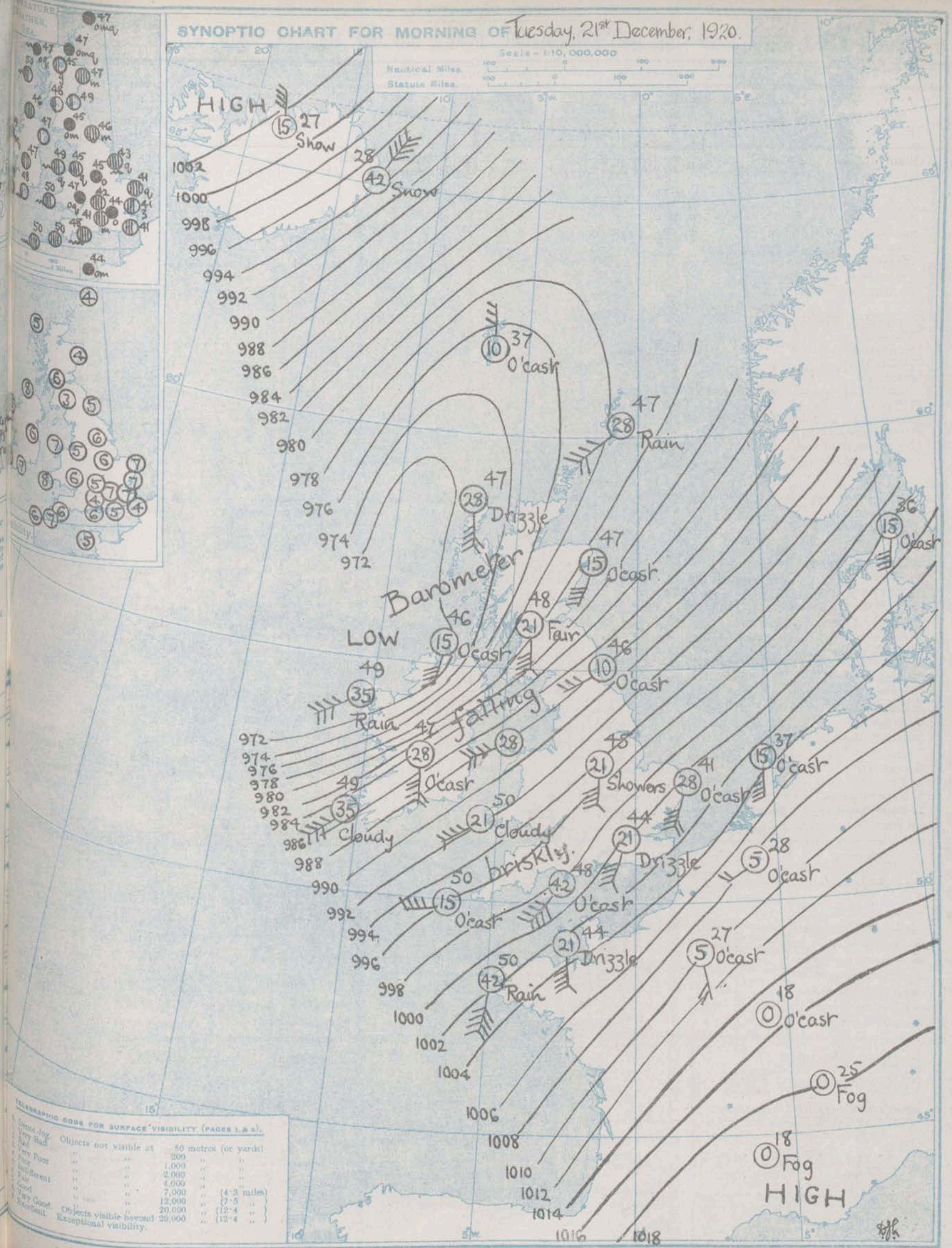
SEA DISTURBANCE.— Rough High

GENERAL INFERENCE from observations received up to 9h.

A very deep depression off N.W. Ireland will cause strong winds or gales from between S.W. and W. over the British Isles veering to N.W. later over the Northern Districts and there will be much low cloud and intermittent rain in all districts.

Districts.	Forecasts for the 24 hours commencing 15 h. G.M.T. Tuesday, 21st December, 1920.	Further Outlook.
1. S.E. England 2. E. England 3. E. Midlands 4. W. Midlands 5. S.W. England 6. South Wales	Wind S.W. to W., strong to a gale; much low cloud, intermittent rain, visibility fair to good; rather mild then somewhat colder temporarily.	Continuing Unsettled.
7. North Wales 8. N.W. England 9. N. Midlands 10. N.E. England 11. E. Scotland 12. S.W. Scotland 13. Isle of Man	Wind Westerly, strong to a gale, veering temporarily to N.W. later; much low cloud, intermittent rain, visibility fair to good; becoming temporarily colder.	Districts 1-10 South Cone hoisted 02.40 21/12/20
14. N. & N.W. Scotland 15. Hebrides 16. Orkneys and Shetlands	Wind veering to N.W., strong to a gale; much low cloud; showers of rain, hail or sleet; visibility good; colder.	Districts 11-20 South Cone hoisted morning 20/12/20.
17. N.W. Ireland 18. N.E. Ireland 19. S.E. Ireland 20. S.W. Ireland	As for 7 - 13.	

Meteorological Office: Air Ministry, Kingsway, London, W.C.2. Forecasts issued at 09.00 E.V.N. G. C. SIMPSON, F.R.S., Director.


SYNOPTIC CHART FOR MORNING OF Tuesday, 21st December, 1920.
Scale - 1:10,000,000
Nautical Miles.
Statute Miles.
HIGH
LOW
Barometer falling.
Cloudy
Rain
Snow
Drizzle
O'cast
Fair
Showers
briskly.
Fog
TELEGRAPHIC CODE FOR SURFACE VISIBILITY (PAGES 1 & 2).
Very Bad
Very Poor
Poor
Indifferent
Fair
Good
Very Good
Excellent
Objects not visible at 50 metres (or yards)
200
1,000
2,000
4,000
7,000 (4·3 miles)
12,000 (7·5 ")
20,000 (12·4 ")
Objects visible beyond 20,000 (12·4 ")
Exceptional visibility.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 256.

TUESDAY 21st DEC. 1920

WEATHER, TEMPERATURE, RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 20th

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 19th-20th.	Rainfall. Day. 9h-18h. 20th	Sunshine. Sunrise to Sunset. 20th
Scotland.	Oban	or	or	50	33	8	2	0.0
	Banff	dr.cbc	bccod	41	26	–	0.4	1.5
	Montrose							
	St. Andrews	*	*	43	34	–	–	0.2
England, N.E.	Harrogate	o	opr	39	32	–	0.2	0.0
	Scarborough	o	o	39	35	–	–	0.0
	Skegness	odco	co	43	34	–	–	0.0
England, E.	Lowestoft							
	Felixstowe	omd	cm	39	38	2	–	0.0
	Southend-on-Sea	moec	bcb	40	35	1	–	0.0
England, S.E.	Tunbridge Wells	omc	bcc	42	34	0.3	–	1.7
	Margate	ofc	c	41	36	0.1	–	0.5
	Ramsgate	*	*	39	34	–	–	0.9
	Folkestone	o	o	42	35	–	–	0.0
	Hastings	omc	oco	45	36	1	–	0.0
	Eastbourne	omo	co	45	36	1	–	0.5
	Brighton	obc	bco	45	37	0.4	–	2.4
	Worthing	obcb	o	43	37	–	–	2.6
	Littlehampton	of	bc	44	36	–	–	2.2
	Portsmouth (S'thsea)	*	*	45	36	0.1	–	1.7
	Bournemouth	*	*	46	35	1	–	1.5
England, N.W.	Douglas (I.O.M.)							
	Blackpool	o	or	43	32	–	4	0.0
	Southport	opo	oro	42	31	–	1	0.0
	Morecambe							
Midlands.	Buxton							
	Leamington Spa	b	o	40	36	–	–	2.3
	Malvern							
	Bath	o	op	46	34	–	0.3	0.0
Wales.	Rhyl	oc	oc	48	29	–	–	0.0
	Colwyn Bay	*	*	48	32	–	–	0.0
	Llandudno	*	*	51	30	–	0.2	0.0
	Aberystwyth	oco	oro	47	36	–	1	0.0
	Tenby							
	Swansea							
England, S.W.	Weymouth	ofoc	coc	48	35	–	–	0.1
	Teignmouth							
	Torquay	fobc	c	47	33	–	–	1.0
	Paignton	ofbc	cod	47	28	–	trace	0.9
	Penzance	obco	or	51	36	–	2	1.0
	Newquay	c	o.or	48	31	0.2	–	0.1
	Bude	o	o	50	32	–	–	0.0
	Ilfracombe	o	o	48	36	–	0.1	0.0
	Weston-s-Mare	co	od	46	35	–	–	0.0

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-12h 20th	Weather. 12h-18h 20th	Weather. 18h-1h 21st	Weather. 1h-7h 21st	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall.† Day. 7h-18h. mm.	Rainfall.† Night. 18h-7h. mm.	Sun. Hours.
Renfrew	03fr c o/fpq	o/f p	o.W	c.op	49	38	44	9	3	0.0
Eskdalemuir	s. dd	dd. rr	DR rr	rr	45	31	42	7	11	0.0
Valencia (Cabire'n)	r. o/f	pd o/f	op rr	rr.co	58	48	45	1	7	0.0
Baldonnel	r.q o/f o	q/pd o/f o	o/f p.q W	r.q	49	43	41	0.2	1.	0.0
Manchester (Alck. Pk.)	o3f o3f c	or o3/ss.	o3f r.q	o2f r.q	47	33	38	0.1	Trace	*
Ross on Wye	co2f o/f	o.o/f	pd.o q	r.q	47	33	41	–	1	0.0
Falmouth	bbc co o	o2f o rr	rr o q	rr o	51	34	45	3	9	0.1
Calshot (Hants)	co2f	o2f o/f	r. c. o.	o o/f	47	34	40	–	Trace	1.6
Lympne (Folkestone)	o2f/co2f	o2f co bcc o3f	o2f	o2f q	42	34	36	0.2	–	1.6
Aberdeen	3f o2f	o2f g	o2f	o2f p.	47	36	35	–	0.1	0.1
Howden	o/f o2f	p. p.	p. o2f	o2f q	46	34	32	–	–	0.0
Cranwell (Lincs)	cobcc o	pd. o	W b.bc	c.o	46	33	40	0.4	–	1.3
Felixstowe	o2f o	o2f o3f	3f c 2f c	pd. o2f o	42	36	*	–	0.2	0.0
Shoeburyness	o3f 3f		2f c q	q.o	41	33	30	0.1	–	1.3
Benson	bcc co	o	o	o pd.	48	34	38	–	0.2	*
S. Farnborough	o2f o bcc	cobcc co	o3f. o2f	o2f hd.	45	34	35	–	0.3	1.5
London (Kew Obsy.)	pd. o3/f	bcc bcc	o/f pd.	o/f u	48	36	35	–	0.1	0.7
Croydon	o2f/o2f o bc o/f	bo/f 2f	o2f dd. o2f q	o2f q	44	35	*	Trace	Trace	*

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, *i.e.*, rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:–
R = heavy rain.
rr = continuous moderate rain.
r.r. = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 30 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0·3
1	1– 3	0·3– 1·5
2	4– 7	1·6– 3·3
3	8–12	3·4– 5·4
4	13–18	5·5– 7·9
5	19–24	8·0–10·7
6	25–31	10·8–13·8
7	32–38	13·9–17·1
8	39–46	17·2–20·7
9	47–54	20·8–24·4
10	55–63	24·5–28·4
11	64–75	28·5–33·5
12	Above 75	33·6 or above

SYMBOLS–

Aurora ⌂ Solar halo ⊘
Rime ⌶ Lunar halo ⊙
Glazed frost ⌇ Solar corona ⊙
Glazed roads ⚒ Lunar corona ⊙

LONDON. OBSERVATIONS.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Hours.	Humidity % 15 h. G.M.T.	Humidity % 9 h. G.M.T.
	24 HOURS ENDED 9h G.M.T. 21st							YESTERDAY.		TO-DAY.
Greenwich (Royal Observatory)	c.o	c.o.	o.bc.of.	44	37	32	–	0.9	80	93
City (Bunhill Row)	*	*	*	*	*	*	*	0.0	*	*
Westminster (St. James's Park)	*	*	*	43	37	33	1	0.2	76	81
Regents Pk (Botanic Gdns)	*	*	*	*	*	*	*	0.2	*	*
Camden Sq. (British Rainfall)	o.c.	bc.c	*	50	37	32	–	*	78	91
Kensington Palace	o.c.	o.c	*	45	36	37	0.4	*	90 (18h)	92
Hampstead Observatory	*	*	*					1.3	*	

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday.

Total ..... 117 ..... Joules.

	Milliwatts.
Average Rate.	4.2
Maximum Rate.	12

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

21st & 22nd DEC. 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth	8.34 / 8.35	11.57 / 11.58	3.41 / 3.39
Greenwich	8.41 / 8.46	11.59 / 11.59	3.41 / 3.42
Wick	9.3 / 9.4	12.10 / 12.11	3.4 / 3.3
Valencia	8.19 / 8.20	12.20 / 12.20	3.8 / 3.8

Photographic Record of Pole Star (Polaris) and of δ Ursae Minoris at Greenwich Observatory.

Exposure from ....17..... h. 0 ... m.
to ....7..... h. 0 ... m.

Stars.	Duration of Exposure. h.	m.	Duration of Record. h.	m.	%
Polaris	14	0	2	10	15
δ Ursae Minoris	14	0	1	31	11

NOTES ON THE WEATHER OF YESTERDAY.

The maximum temperature was for the most part between 40° and 50°, and reached 52° at Scilly. Rain fell nearly everywhere; although in many places the amount was not very large, at Stornoway the total was 22mm and at Eskdale 18mm.

Sunshine records were poor, only a very few places experiencing even an hour or two.

* Information for these columns not usually received.

† Trace = rain has fallen but amount less than 0·1 mm.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE. LONDON:

BRITISH SECTION. No. B21,580 Wednesday, 22nd December. 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

13H. G.M.T. 21st

Stations	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	§ Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew	973.2	-7	SSW	8	orq	47	85	5	1250	Nb	7	A.St	3	*
Eskdalemuir	977.5	-6	SSW	8	oif	43	85	6	2000	[illegible]	10	-	-	*
Valencia (Cahirc'n)	985.4	-2	WSW	6	c	49	75	8	3000	StCu	8	-	-	6
Baldonnel	982.4	-1	SSW	6	cq	47	75	7	1280	StCu	7	-	-	*
Manchester (Alex. Pk)	987.2	-4	SSW	5	o	49	75	5	2000	StCu	2	A.St	7	*
Ross on Wye	990.3	-2	WSW	4	ou⊕	49	75	7	1250	Nb	7	A.St	2	*
Falmouth	994.5	-4	WSW	6	b	51	75	8	-	StCu	2	-	-	*
Calshot (Hants)	994.4	-5	SSW	5	or2f	46	97	4	750	Nb	10	-	-	4
Lympne (Folkestone)	997.3	-8	SSW	7	oR2fq	43	97	3	750	Nb	10	-	-	*
Aberdeen	974.4	-8	S	5	cq ifc	48	75	6	1250	St	8	-	-	4
Howden	987.3	-6	SSW	3	oqm	47	97	5	1280	St	10	-	-	*
Cranwell (Lincs)	989.8	-5	SSW	4	o	48	92	7	2000	St	10	-	-	*
Felixstowe	997.1	-8	S	5	or₀2f	43	97	4	750	St	10	-	-	5
Shoeburyness	995.3	-8	SSW	6	oq	45	85	7	2000	Cu	7	A.St	3	*
Benson	991.7	-3	SSW	4	o	48	92	6	-	St	10	-	-	*
S. Farnborough	993.0	-7	SSW	6	or	46	97	4	<500	Nb	10	-	-	*
London (Kew Obsy.)	993.6	-9	SSW	4	or2f	47	92	4	750	Nb	7	A.St	3	*
Croydon	994.6	-7	SSW	6	or2fq	46	92	5	<500	Nb	10	-	-	*

18H. G.M.T. of 21st

Stations	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	§ Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew	974.1	+1	SSW	7	od	45	85	5	1250	Nb	10	-	-	*
Eskdalemuir	977.5	0	SSW	6	o	42	85	6	-	StCu	10	-	-	*
Valencia (Cahirc'n)	986.9	+3	WNW	6	oif	46	85	7	1250	St	7	A.St	3	6
Baldonnel	980.5	-1	SSW	6	oq	43	75	6	2000	St	9	-	-	*
Manchester (Alex. Pk)	985.5	-1	SSW	4	bc2f	44	75	4	2000	StCu	5	A.St	1	
Ross on Wye	989.4	-2	W	6	bq	44	85	8	3000	Cu	2	-	-	*
Falmouth	992.5	-3	WSW	6	bqif	46	75	6	-	Cu	2	-	-	*
Calshot (Hants)	993.7	-1	SW	4	b	46	85	8	-	-	-	A.St	1	3
Lympne (Folkestone)	994.5	-2	SSW	7	orq	44	97	4	<500	Nb	10	-	-	*
Aberdeen	971.2	-1	SSW	5	bcif	45	75	7	1250	St	4	-	-	4
Howden	985.1	-2	SSW	4	bq	44	85	5	2000	St	2	A.St	1	*
Cranwell (Lincs)	988.1	-2	SSW	5	b	44	85	5	-	-	-	CiC	3	*
Felixstowe	994.8	0	S	4	o2f	43	97	4	750	St	10	-	-	4
Shoeburyness	993.0	-3	SW	2	o2f	45	85	5	3000	StCu	6	A.St	4	*
Benson	991.2	0	SW	3	b	43	92	7	-	-	-	-	-	*
S. Farnborough	992.7	-2	SSW	4	b	44	85	6	3000	St	1	A.Cu	1	*
London (Kew Obsy.)	992.7	0	S	3	b2f	46	92	5	-	-	-	A.Cu	1	*
Croydon	992.9	-1	S	5	bcifq⊕	45	92	6	2000	St	2	A.Cu	2	*

1H. G.M.T. of 22nd

Stations	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	§ Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew														
Eskdalemuir	977.5	+2	W	4	oro	40	85	6	-	Nb	10	-	-	*
Valencia (Cahirc'n)	993.8	+6	NW	6	omqr	45	*	*	*	*	*	*	*	5
Baldonnel	986.2	+5	SW	4	bcq	39	85	7	1,250	St	3	a.St	1	*
Manchester (Alex. Pk)	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ross on Wye	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Falmouth	992.9	+2	W	4	c	44	92	7	-	Nb	7	-	-	*
Calshot (Hants)	992.1	-1	SSW	5	bc	45	85	8	2,000	StCu	4	-	-	4
Lympne (Folkestone)	993.2	-1	SSW	6	ormq	42	97	5	<500	Nb	10	-	-	*
Aberdeen	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Howden	983.5	-2	SSW	4	bcmq	40	92	5	3,000	St	3	a.St	2	*
Cranwell (Lincs)	986.3	-2	SSW	5	c	40	85	6	4,200	StCu	5	a.St	2	*
Felixstowe	992.8	-2	S	4	b	42	92	7	-	-	-	a.Cu	1	4
Shoeburyness	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Benson	*	*	*	*	*	*	*	*	*	*	*	*	*	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*
London (M.O. at 1h.)	990.8	-1	*	*	*	42	*	*	*	*	*	*	*	*
Croydon	992.0	-1	S	5	bifq	42	85	6	-	-	-	a.St	1	*

7H. G.M.T. of 22nd

Stations	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	§ Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew	980.4	+5	SW	4	bc	40	85	6	3,000	St	5	-	-	*
Eskdalemuir	981.4	+2	SW	5	oif	37	92	6	2,000	St	10	-	-	*
Valencia (Cahirc'n)	998.0	+3	WNW	5	b	45	75	8	3,000	Cu	3	-	-	*
Baldonnel	989.9	+4	SSW	5	cq	38	85	6	1,250	St	7	-	-	*
Manchester (Alex. Pk)	987.5	+4	SSW	4	c2f	39	85	4	3,000	StCu	7	-	-	*
Ross on Wye	992.9	+4	W	4	bv	39	75	9	4,200	Cu	1	CiCu	1	*
Falmouth	998.8	+6	W	6	b	43	75	7	-	Nb	3	-	-	*
Calshot (Hants)	994.9	+7	SW	4	b	40	92	8	3,000	StCu	2	-	-	3
Lympne (Folkestone)	994.3	0	WSW	3	o2f	41	92	5	750	St	9	-	-	*
Aberdeen	974.7	+1	SSW	2	bc2fs	37	85	5	-	-	-	a.Cu	6	2
Howden	985.5	+3	WSW	4	bcq	39	92	5	2,000	St	2	a.St	2	*
Cranwell (Lincs)	989.0	+4	WSW	4	b	39	85	5	1,250	St	1	a.St	1	*
Felixstowe	993.1	+2	SSW	3	cd₀	42	85	7	3,000	StCu	7	a.Cu	1	4
Shoeburyness	992.7	+3	WSW	1	bc	41	85	7	3,000	StCu	2	CiCu	3	*
Benson	992.5	+5	SW	4	b	38	92	8	-	StCu	2	-	-	*
S. Farnborough	994.1	+4	WSW	2	b	38	92	7	-	-	-	-	-	*
London	993.6	+6	SW	3	b	41	85	7	3,000	St	1	a.St	1	*
Croydon	994.1	+3	WSW	4	bif	40	85	6	-	-	-	a.St	3	*

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

Stations	18h. G.M.T. of 21st: Barom. at M.S.L. mb.	Temp. °F.	Wind Direc.	Wind Force 0-12	Weather	7h. G.M.T. of 22nd: Barometer at M.S.L. mb.	‡ Change in 3 hours	Temp. °F.	Change in 24 hours	Wind Direc.	Wind Force 0-12	Direc. of Upper Cloud	Weather	Sea 0-9	24 hours ended 7h. 22nd: † Rainfall mm.	Max. °F.	Min. °F.	Weather Morning	Afternoon	Night	Sunshine Hours 21st
Lerwick	969.2	48	S	5	omr₀q	972.9	+4	42	-5	N	6	-	omrq	5	10	48	41	oq	omrq	omr.omrq	*
Stornoway	965.1	43	SSW	3	op	982.3	+10	37	-10	WNW	6	-	bcRq	5	18	47	.36	od	op	o.bcpq	0.0
Castlebay (Barra Is)	970.6	46	WNW	5	op	986.1	+9	40	-10	N	4	-	ohp	4	4	50	39	cop	op	op.b.hp	0.0
Malin Head	971.5	44	SW	4	or	983.4	+5	43	-3	W	4	-	oqp	4	6	47	38	cqp.	op	oqp.	0.4
Blacksod Point	979.1	48	NW	4	or 2f	990.7	+6	44	-5	NW	3	-	bc	3	7	51	41	omp	cqp	bcp cp	*
Roche's Point	986.3	44	WSW	3	o	996.7	+4	40	-8	NW	3	-	b	2	2	49	39	cp bc	cpo	cp.b	*
Birr Castle	980.4	44	S	4	r	991.7	*	38	-9	SW	2	-	b	*	4	47	37	cqp	cp. or	or b	2.8
Donaghadee	978.1	44	SW	4	bcm	984.9	+4	40	-7	SW	3	-	bcm	3	2	49	37	bcq	bcqm	cmqp.	*
Liverpool (Bidston)	983.6	45	SW	4	b	987.0	+2	41	-4	WSW	5	SW	oq	5	4	50	39	obc b	b	bc.or	3.4
Holyhead	982.0	47	SW	6	bcq	989.2	+1	44	-5	W	6	W	oq	5	2	51	41	cbcq	cq	c.o.cpq	2.2
Pembroke (St. Ann's Head)	987.8	46	SW	7	cq	994.3	+4	45	-5	NW	5	-	bcqV	5	3	51	44	cbc	bcqp	cqp.cq	2.4
Scilly (St. Mary's)	992.9	49	W	6	c	998.8	+3	47	-3	WNW	6	W	bc	7	1	51	45	ocp.b	bbc.c	cpq.cbcpq	3.4
Jersey (St. Aubin)	997.3	49	SW	4	b	999.7	+3	46	+2	W	4	-	o	4	2	50	43	odm	odm b	c.oq.ho	0.0
Portland Bill	993.8	50	WSW	6	bcq	994.6	+4	49	+1	WNW	6	W	bcqp	7	5	51	41	oqp	oqbcq	bcqp.bcqr.	*
Dungeness	994.2	46	SW	5	cq	993.5	+1	45	+4	WSW	4	SW	bc	4	8	47	41	cqr	cq	cpq.pc.	*
Wick	964.6	44	SSW	6	cq	972.2	+3	40	-7	W	4	-	omqr	3	1	48	39	omcqp	cqp	cq.cbc.	*
Nairn	967.5	41	W	1	c	975.7	*	38	-7	NNW	7	-	qprso	4	1	46	37	bcpc	cg	c.bcqc	2.1
Leith	973.6	46	SW	5	c	978.2	+1	41	-8	WSW	4	-	b	3	1	50	40	bcp. c.	cqp.c	cq.bc.b	
Tynemouth	980.2	46	SW	5	bmq	981.3	+2	42	-4	WSW	2	-	c3f	3	1	49	41	cmq	cmq	omq.omp	*
Spurn Head	986.0	45	SSW	5	cm	986.7	+2	41	-2	SW	5	-	bcqp	5	0.1	46	38	oq	oqpm	bcq.cmq	*
Yarmouth (The Lodge)	992.6	45	SW	5	o	996.4	-1	41	0	WSW	4	-	c	2	1	45	40	omrq	om	bcm.bcv	0.0
Clacton-on-Sea	992.8	42	S	4	o	992.1	+2	42	+1	SW	3	W	bc	3	1	43	40	ogmr	ogmp	og.bcm	0.0
Nottingham	987.5	45	SW	4	b	988.9	*	39	-6	W	3	-	b	*	0.3	49	39	op	oc	bm.c.	0.0

* Information for these columns not usually received. ‡ The barometric change is expressed in half millibars. § For code see page 3 † See footnote p.4.

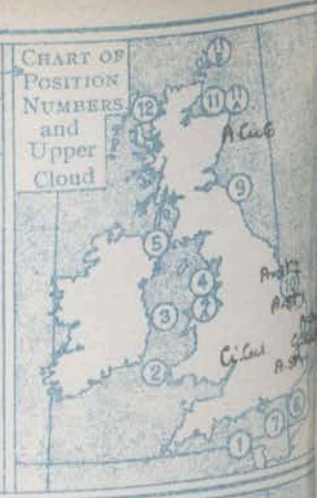
M.O. FORM 2370.

SUMMARY OF CONDITIONS AT 7 h. G.M.T. 22.12.1920.

Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Fair or fine.	Good	Slight
2. E. England	Fine to cloudy, slight drizzle at Felixstowe	"	"
3. E. Midlands	Fine	"	-
4. W. Midlands	Fine to cloudy.	"	-
5. S.W. England	Fine to cloudy.	"	High
6. South Wales	Fair generally, squally	V.Good	R.Rough
7. North Wales	Cloudy or dull, squally.	Good	"
8. N.W. England	Cloudy or dull, mist or squalls		"
9. N. Midlands	Fine to cloudy	Indiff.	-
10. N.E. England	Fair generally, mist or showers.	"	Mod.
11. E. Scotland	Fine to dull, sleet showers in North.	"	Slight
12. S.W. Scotland	Fine to dull.	Fair	"
13. Isle of Man	Fair to dull.	"	Mod.
14. N.&N.W. Scotland	Fair to dull, showers and squalls.	Indiff.	"
15. Hebrides	Fair to dull, rain or hail showers.	Fair	R.Rough.
16. Orkneys and Shetlands	Dull, rainy, squally, misty.	Poor	"
17. N.W. Ireland	Fair generally.	Good	Slight
18. N.E. Ireland	Fair to dull, showers and squalls.	Fair	Mod.
19. S.E. Ireland	Fine to cloudy.	"	R.Rough
20. S.W. Ireland	Fine.	Good	Mod.

Temperature reported from Coastal and Cross Channel Steamers.

Position Number.	Date	Time G.M.T.	Sea °F	Air °F
7	21st	0400	49	46
4A	21st	0430	46	48
12	21st	?	51	46
5	21st	0830	50	49
3	21st	1005	50	50
1	21st	1310	52	52
6	21st	1600	49	45



Barometric change from 4 h. to 7 h. (half millibars).

EXPLANATION.

BAROMETER.—Isobars are drawn for intervals of two millibars.

WIND.—Direction is shown by arrows flying with the wind. Force, on the scale 0-12, is indicated by the number of feathers. Mean velocity is shown in miles per hour by figures in small circles.

TEMPERATURE is given in degrees F.

WEATHER SYMBOLS.—clear sky. sky ½ clouded. sky ¾ clouded. overcast sky. rain falling. snow. sleet. hail. fog. mist. T. thunder. ⚡ thunderstorm.

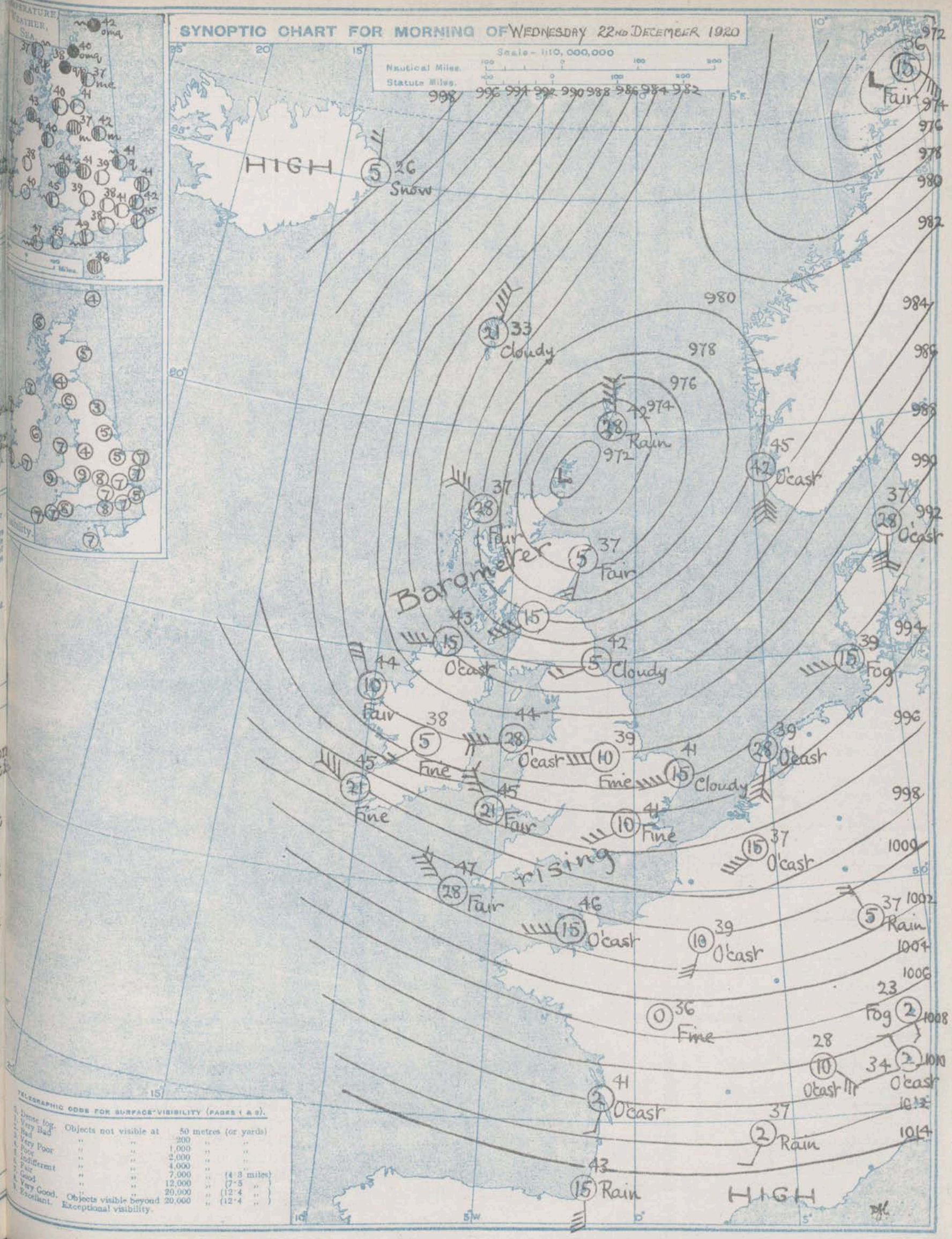
SEA DISTURBANCE.—Rough. High.

GENERAL INFERENCE from observations received up to 9h. G.M.T.

The deep depression off NE. Scotland will move away Eastwards and over the British Isles fresh to strong West to North-west winds are probable with temporarily fair and rather cold weather and slight frost at night.

Districts.	Forecasts for the 24 hours commencing 15 h. G.M.T. Wednesday, 22nd December, 1920.	Further Outlook.
1. S.E. England 2. E. England 3. E. Midlands 4. W. Midlands	Fresh to strong Westerly wind, moderating; mainly fair to fine; visibility good; rather cold temporarily with slight frost at night.	Another depression out in the Atlantic will probably advance in the course of the next few days, in which case a return to mild and unsettled weather will take place, with winds from between S and W.
5. S.W. England 6. South Wales 7. North Wales 8. N.W. England	Fresh to strong wind from between W and NW, moderating; mainly fair to fine; visibility good; rather cold.	
9. N. Midlands 10. N.E. England 11. E. Scotland 12. S.W. Scotland	Fresh to strong wind from between W and NW, moderating; variable sky, some rain or sleet showers at first; visibility good; rather cold temporarily, with slight frost at night.	
13. Isle of Man	Same as 5 - 8	
14. N.&N.W. Scotland 15. Hebrides 16. Orkneys and Shetlands	Wind strong to a gale from NW or N, moderating; variable sky, showers of hail or sleet at first; visibility good; cold temporarily, with slight frost inland at night.	
17. N.W. Ireland 18. N.E. Ireland 19. S.E. Ireland 20. S.W. Ireland	Same as 5 - 8.	

Meteorological Office: Air Ministry, Kingsway, London, W.C.2. Forecasts issued at 10.45 G. C. SIMPSON, F.R.S., Director.


SYNOPTIC CHART FOR MORNING OF WEDNESDAY 22ND DECEMBER 1920
Scale - 1:10,000,000
Nautical Miles.
Statute Miles.
HIGH
Snow
Cloudy
Rain
Fair
O'cast
Fog
Fine
Barometer rising
HIGH
TELEGRAPHIC CODE FOR SURFACE-VISIBILITY (PAGES 1 & 2).
0. Dense fog. Objects not visible at 50 metres (or yards)
1. Very Bad " " 200 " "
2. Bad " " 1,000 " "
3. Very Poor " " 2,000 " "
4. Poor " " 4,000 " "
5. Indifferent " " 7,000 " (4·3 miles)
6. Fair " " 12,000 " (7·5 ")
7. Good " " 20,000 " (12·4 ")
8. Very Good. Objects visible beyond 20,000 " (12·4 ")
9. Excellent. Exceptional visibility.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 357 ... Wednesday, 22nd DECEMBER

WEATHER, TEMPERATURE, RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 21st .....

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 20th-21st	Rainfall. Day. 9h-18h. 21st	Sunshine. Sunrise to Sunset. 21st
Scotland.	Oban	opr	opr	50	43	12	6	0.0
	Banff	b bc	bc bq	46	37	0.2	-	1.5
	Montrose							
	St. Andrews							
England, N.E.	Harrogate	opc	cbco	47	38	0.2	-	0.0
	Scarborough	o	bc	48	38	-	-	0.0
	Skegness							
England, E.	Lowestoft							
	Felixstowe	om	om	43	38	-	1	0.0
	Southend-on-Sea	o	od	45	34	-	0.4	0.0
England, S.E.	Tunbridge Wells	or	oro	47	38	-	2	0.0
	Margate	o	od.	46	37	-	1	0.0
	Ramsgate	*	*	44	36	-	0.3	0.0
	Folkestone	oe o	r.ro	45	39	-	2	0.0
	Hastings	or	or	48	40	trace	8	0.0
	Eastbourne	or	ro	49	41	-	5	0.0
	Brighton	or	op	48	38	-	4	0.0
	Worthing	ro	ro	47	42	0.3	3	0.0
	Littlehampton	oor	bc	47	42	0.2	3	0.0
	Portsmouth (S'thesa)	*	*	48	37	1	5	0.0
	Bournemouth	*	*	49	35	2	3	0.3

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 20th-21st	Rainfall. Day. 9h-18h. 21st	Sunshine. Sunrise to Sunset. 21st
England, N.W.	Douglas (I.O.M.)							
	Blackpool	r.cb	cu	48	35	1	-	2.3
	Southport	coc	bc bcb	49	41	0.4	* -	2.6
	Morecambe	*	*	49	41	1	-	2.2
Midlands.	Buxton							
	Leamington Spa	od	cb	49	44	-	-	0.0
	Malvern							
	Bath	ro	ocbcb	50	45	4	1	0.4
Wales.	Rhyl	co	cp	50	46	-	-	0.9
	Colwyn Bay	*	*	50	45	3	-	1.3
	Llandudno	*	*	54	47	0.1	-	3.3
	Aberystwyth	roc	co	51	45	2	-	0.0
	Tenby							
	Swansea							
England, S.W.	Weymouth	ergo	ocb	51	46	4	3	0.2
	Teignmouth							
	Torquay	o	bc pr.b	51	45	12	0.4	1.9
	Paignton	oc bcp	bc	52	44	13	trace	1.7
	Penzance	ocp	bc	52	48	9	0.3	3.4
	Newquay	cb	b.op.b	51	45	5	1	2.7
	Bude	p	p	52	47	3	-	2.7
	Ilfracombe	oc.bc	bcc	50	41	.7	-	0.7
	Weston-s-Mare	cbc	cbc	50	43	3	-	0.5

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-13h 21st	Weather. 13h-18h 21st	Weather. 18h-21h 21st	Weather. 21h-7h 22nd	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall.† Day. 7h-18h. mm.	Rainfall.† Night. 18h-7h. mm.	Sun. Hours.
Renfrew	bc oz rq	oz RR oz pd	oz r b bc	b bc	49	39	32	5	3	0.0
Eskdalemuir	r oz	r q o	d d o	r oz	45	35	33	2	4	0.0
Valencia (Cahirc'n)	pr hc o	co pr h bc	c. op.	b bc p o	50	43	39	4	1	0.3
Baldonnel	c o q	q p c o z	c. oq	bc. cq	47	36	32	0.2	0.1	0.0
Manchester (Alex. Pk)	q o z r o	c o z f bc z	b. oz o z f p	o z f RR b o z	50	39	31	0.2	2	*
Ross on Wye	rq o q o	o g c o p b c q	b c q p b c p q	b c o. b. bc	49	38	30	1	2	0.3
Falmouth	o. b bc	b c c q	q b b c r b. b c	p o b bc	51	42	38	0.2	3	2.3
Calshot (Hants)	r r o z f	o z f b c c b b c	b b c q	b bc. b	48	40	36	5	-	0.0
Lympne (Folkestone)	o z f p d o z f	r r o z f R	r q R z f o r	r q o z f o z f	45	38	37	3	5	0.0
Aberdeen	o z f z f c	o z f z f c z f q	z f q	z f z x.	48	37	28	0.2	-	0.1
Howden	q r	o q	q b. bc	1 f e r.	48	38	33	0.3	0.1	0.0
Cranwell (Lincs)	o z f r	o z f o z f	b bc b. b bc. c	b bc. b. bc	48	38	36	0.1	-	0.0
Felixstowe	r d d	r. o z f	o z f b c c b b c.	o z f r s	44	40	*	1	0.1	0.0
Shoeburyness	q p d.	d d r	z f c. b c. c	b bc. b bc	46	39	36	1	trace	0.0
Benson	r r o	o. b	b. b. bc	b bc. b. bc	48	37	32	3	0.1	*
S. Farnborough	r r q	r. o z f o c b	b. b. bc	b bc. b	47	38	34	3	-	0.0
London (Kew Obsy.)	d d r r d d	o z f z f	b. bc	b. bc	47	40	34	1	trace	0.0
Croydon	o z f o z f p d r q e b r	o z f o z f r r q s u r c e	b bc q z f	b bc z f q b b c	47	40	*	2	-	*

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, *i.e.*, rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:–
R = heavy rain.
rr = continuous moderate rain.
r,r, = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 30 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0·3
1	1–3	0·3–1·5
2	4–7	1·6–3·3
3	8–12	3·4–5·4
4	13–18	5·5–7·9
5	19–24	8·0–10·7
6	25–31	10·8–13·8
7	32–38	13·9–17·1
8	39–46	17·2–20·7
9	47–54	20·8–24·4
10	55–63	24·5–28·4
11	64–75	28·5–33·5
12	Above 75	33·6 or above

SYMBOLS—
Aurora — Solar halo
Rime — Lunar halo
Glazed frost — Solar corona
Glazed roads — Lunar corona

LONDON. OBSERVATIONS.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Hours. Yesterday.	Humidity % 15 h. G.M.T. Yesterday.	Humidity % 9 h. G.M.T. To-day.
	24 hours ended 9h G.M.T. 22nd									
Greenwich (Royal Observatory)	o or	or. o.	bc. b.	47	40	33	1	0.0	92	87
City (Bunhill Row)	*	*	*	*	*	*	*	0.0	*	*
Westminster (St. James's Park)	*	*	*	49	41	32	1	0.0	87	83
Regent's Pk (Botanical Soc.)	*	*	*	*	*	*	*	0.0	*	*
Camden Sq. (British Rainfall)	od. o	od. o	*	48	39	32	1	*	92	88
Kensington Palace	o. or	odr. o	*	48	39	34	1	*	96 (18h)	88
Hampstead Observatory	*	*	*	46	38	32	2	0.0	*	90

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday.

Total ..... 59 ..... Joules.

	Milliwatts.
Average Rate.	1·8
Maximum Rate.	8

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

22nd AND 23rd DECEMBER 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth	8·5 / 8·5	11·52 / 11·52	3·39 / 3·39
Greenwich	8·6 / 8·6	11·59 / 11·59	3·52 / 3·52
Wick	9·4 / 9·4	12·11 / 12·11	3·18 / 3·18
Valencia	8·50 / 8·50	12·40 / 12·40	4·30 / 4·30

Photographic Record of Pole Star (Polaris) and of δ Ursae Minoris at Greenwich Observatory.

Exposure from ....17.... h. 0.. m. to .....7.... h. ...0.. m.

Star.	Duration of Exposure. h. m.	Duration of Record. h. m.	%
Polaris	14. 0	13. 20	95
δ Ursae Minoris	14. 0	11. 10	80

NOTES ON THE WEATHER OF YESTERDAY.

The temperature reached 50° over our Western districts but on the East Coast of England remained a few degrees lower, and by this morning the thermometer was below 40° at nearly all inland stations. The deep depression which skirted our Northern Coasts did not cause very much rain, some places in the Eastern and Midland districts of England recording only a trace; 18mm at Stornoway and 10mm at Lerwick were the largest totals. There was a general deficiency of bright sunshine.

* Information for these columns not usually received.

† Trace = rain has fallen but amount less than 0·1 mm.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. No. B. 21,581 Thursday, 23rd December, 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

STATIONS.	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind Direc.	Wind Force 0-12.	Weather	Temp. °F.	% Humidity.	Visibility § 0-9.	Height of Low Cloud. Feet.	Low Cloud Form	Low Cloud Amt. 0-10.	Upper Cloud Form.	Upper Cloud Amt. 0-10.	Sea 0-9.	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind Direc.	Wind Force 0-12.	Weather	Temp. °F.	% Humidity.	Visibility § 0-9.	Height of Low Cloud. Feet.	Low Cloud Form	Low Cloud Amt. 0-10.	Upper Cloud Form.	Upper Cloud Amt. 0-10.	Sea 0-9.
	13H. G.M.T. 22nd														18H. G.M.T. OF 22nd													
Renfrew	987.9	+6	W	5	b	42	75	8	3,000	Cu	3	-	-	*	992.2	+5	WNW	1	b	36	85	7	-	-	-	ASt	2	*
Eskdalemuir ...	986.9	+5	WNW	6	b	39	75	7	3,000	Cu	2	-	-	*	991.9	+4	-	0	b	34	85	7	-	-	-	ACu	1	*
Valencia (Cahirc'n)	995.9	-5	-	0	o	44	85	8	3,000	Cu	2	aSt	8	4	990.1	-7	E	3	or	40	85	6	2000	St	4	ASt	6	4
Baldonnel ..	994.8	+2	SW	5	bcif	42	75	6	2,000	Cu	2	aCu	3	*	~~994.8~~	-1	SW	2	ozf	38	85	5	-	-	-	ASt	10	*
Manchester (Alex Pk)	990.7	+4	W	5	orqm	45	85	4	750	Nb	10	-	-	*	994.4	+2	W	4	o (1)	39	85	3	3000	CuN	4	ACu	5	*
Ross on Wye ...	994.9	+1	W	5	or₀q	44	75	8	3,000	Cu	7	-	-	*	996.9	+2	SW	2	o	40	85	8	-	-	-	ASt	9	*
Falmouth	1000.9	0	W	4	c	47	75	8	-	CuTb	1	aSt	7	*	996.6	-7	SW	3	or₀	45	92	6	-	Nb	10	-	-	*
Calshot (Hants) * ...	998.1	+2	SW	5	b	47	65	8	2,000	Cu	1	-	-	3	999.7	+1	SW	3	c	42	85	7	-	-	-	ASt	7	2 1-
Lympne (Folkestone)	995.6	0	WSW	5	bc	43	85	8	3,000	Cu	4	-	-	*	999.3	+3	WSW	5	b	39	85	7	-	-	-	-	-	*
Aberdeen	983.2	+10	NW	5	c	40	85	8	3,000	CuNb	7	-	-	4	990.8	+8	WNW	4	b	35	75	8	-	-	-	-	-	4
Howden	987.8	+1	SW	4	ozf	42	92	4	1250	St	9	-	-	*	993.1	+6	W	3	bc	38	92	5	2000	Cu	6	-	-	*
Cranwell (Lincs) ...	990.7	+2	WSW	5	c	42	85	6	3,000	Cu	7	-	-	*	995.1	+4	WNW	4	c	38	92	5	5700	StCu	4	CiCu	2	*
Felixstowe ...	995.6	0	SW	4	bzf	43	85	4	-	-	-	-	-	*	998.7	+5	WSW	3	bcif	42	85	6	4200	StCu	6	-	-	*
Shoeburyness ...	994.9	0	W	4	b	45	65	7	-	-	-	aSt	3	*	997.9	+3	WSW	3	bc	42	75	7	4200	Cu	5	-	-	*
Benson	994.6	+1	WSW	4	bc	46	65	8	-	Cu	5	-	-	*	996.8	+2	WSW	3	b	38	85	7	-	-	-	Ci	2	*
S. Farnborough	996.3	0	WSW	4	bc	45	75	7	2,000	Cu	6	-	-	*	999.1	+2	W	3	b	39	85	7	-	-	-	CiSt	3	*
London (Kew Obsy.)	995.7	0	SW	4	bzf	48	75	5	5,700	Cu	2	aCu	1	*	998.5	+3	SW	2	bcif	41	85	6	-	-	-	ACu	4	*
Croydon	996.5	+2	W	5	bcifq	45	75	6	4,200	StCu	6	-	-	*	999.5	+3	WSW	4	bcif	41	85	6	-	-	-	CiCu	4	*
	1H. G.M.T. OF 23rd														7H. G.M.T. OF 23rd													
Renfrew ...															1002.5	+6	WSW	1	bzfx	24	97	3	-	-	-	-	-	*
Eskdalemuir ...	997.2	+5	NE	1	bc	28	85	7	-	-	-	aCu	4	*	1003.4	+6	-	0	bx	21	85	7	-	-	-	-	-	*
Valencia (Cahirc'n)	994.6	+6	SSW	4	bc	39	*	*	*	*	*	*	*	6	1002.1	+4	-	0	bx	32	92	8	-	-	-	-	-	*
Baldonnel ...	995.5	+2	E	1	ozfr	34	97	3	<500	StCu	10	-	-	*	1002.0	+5	-	0	bcx	29	85	5	3,000	StCu	4	-	-	*
Manchester (Alex Park)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1002.4	+7	N	1	bx3f	30	97	3	-	-	-	-	-	*
Ross on Wye...	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1000.5	+9	NNW	1	ozfe	35	97	2	750	St	9	-	-	*
Falmouth ...	992.2	+4	W	7	crhq	46	85	7	-	Nb	7	-	-	*	~~999.7~~	+11	N	1	b	39	97	7	-	St	1	-	-	* 1000.3
Calshot (Hants)...	990.9	-8	E	6	or2-3f	43	97	5	1,250	Nb	10	-	-	4	997.6	+10	N	4	oif	40	85	6	1,250	StCu	10	-	-	3
Lympne (Folkestone)	995.8	-5	-	0	or₀2-3f	42	97	5	750	Nb	10	-	-	*	994.9	+1	NNE	6	oqm	40	97	4	<500	Nb	10	-	-	*
Aberdeen ...	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1000.9	+7	WSW	1	bifx	30	75	6	-	-	-	-	-	2
Howden ...	995.6	+2	-	0	bc	28	97	2	3000	StCu	2	aSt	4	*	1000.7	+6	-	0	cmx	29	97	4	3000	St	4	aSt	2	*
Cranwell (Lincs)	999.6	0	W	3	c	35	92	5	3,000	St	3	aCu	6	*	1000.2	+7	N	3	b	30	97	5	-	-	-	aSt	1	*
Felixstowe ..	997.8	-1	-	0	o	?	97	4	-	-	-	aSt	10	2	997.7	+2	N	3	or₀2-3f	39	97	4	750	StCu	10	-	-	2
Shoeburyness...	*	*	*	*	*	*	*	*	*	*	*	*	*	*	996.0	+2	NE	3	od₀	40	92	7	1,250	StCu	9	-	-	*
Benson	*	*	*	*	*	*	*	*	*	*	*	*	*	*	997.9	+11	NNE	3	o	36	97	5	-	St	10	-	-	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*	998.7	+12	NE	3	om	38	92	5	1,250	StCu	10	-	-	*
London (M.O. at 1h.)			*	*	*	41	*	*	*	*	*	*	*	*	996.8	+8	NNE	4	ozf	39	85	5	750	Nb	10	-	-	*
Croydon ...	996.7	-3	SE	2	ozfr	40	97	4	<500	St	10	-	-	*	995.6	+6	NE	4	or₀zf	39	97	4	<500	Nb	10	-	-	*

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

STATIONS.	Barom. at M.S.L. mb.	Temp. °F.	Wind Direc.	Wind Force 0-12.	Weather	Barometer at M.S.L. mb.	‡ Change in 3 hours.	Temp. °F.	Change in 24 hours.	Wind Direc.	Wind Force 0-12.	Direc. of Upper Cloud.	Weather.	Sea 0-9.	† Rainfall mm.	Max. °F.	Min. °F.	Weather Morning	Weather Afternoon	Weather Night.	Sunshine Hours.
	18H. G.M.T. of 22nd					7H. G.M.T. of 23rd									24 HOURS ENDED 7H. 23rd						22nd
Lerwick ...	967.4	36	NNW	5	b	997.2	+5	33	-9	W	2	-	os	1	2	42	31	cq	oms	bhsoma	*
Stornoway ...	991.3	34	N	1	bc	999.6	+3	28	-9	N	1	-	b	2	3	37	27	opq	obc	b	0.7
Castlebay (Barra Is)	993.2	38	NNE	2	b	1000.2	+3	42	+2	S	4	-	bc	3	1	42	37	h.bc hp	bch p b	b bc	1.8
Malin Head ...	992.4	43	N	1	c	1000.0	+2	35	-8	SE	1	-	b	2	1	47	35	cqp	cqp	bc. b	0.5
Blacksod Point	993.0	40	-	0	bc	998.9	+5	40	-4	SW	2	-	bc	3	1	50	39	bc	bcp	bc.	*
Roche's Point...	993.4	44	SE	3	r	1002.7	+7	38	-2	N	1	-	b	2	11	44	36	bc	or	r.o.b	*
Birr Castle ...	993.1	39	S	1	o	1000.3	*	39	+1	SW	1	-	o	*	1	43	39	c.	cfo	op. cfx	2.9
Donaghadee ...	995.0	35	WNW	2	cm	1002.0	+5	40	0	SE	3	-	bqm	3	1	49	32	bcmpq	bm	bcmq/p	*
Liverpool (Bidston)	994.1	40	W	3	bc	1000.9	+7	34	-7	-	0	-	m	1	1	44	33	bc	bc	bcmx	1.2
Holyhead ...	994.3	42	W	4	o	1000.8	+6	39	-5	E	3	-	b	2	-	46	35	c	qc	o.cq.bx	2.2
Pembroke (St. Ann's Head)	996.0	46	SW	2	ov	1000.6	+5	37	-8	N	1	-	bv	3	9	46	36	bcq v	cv	ov.od or bv	3.5
Scilly (St. Mary's)	994.6	47	S	3	r zf	999.4	+5	48	+1	NW	5	-	b	6	5	49	47	cpo q	orm	p orq. b	1.3
Jersey (St. Aubin)	1002.2	48	W	3	o	999.1	+3	48	+2	WNW	5	NW	bc	4	7	50	45	op. b	bopbo	orq. bcq	3.2
Portland Bill ...	999.3	47	W	5	bc	997.3	+6	40	-9	N	5	-	b	6	7	49	38	bcq	bc	bc or oqp	*
Dungeness ...	998.6	44	WSW	4	b	993.4	+2	43	-2	ENE	4	-	r	4	8	46	42	ebc	bcb	bc. or	*
Wick	989.4	34	NNW	6	bcq	998.9	+5	31	-9	W	1	-	bc	3	5	42	25	omrcq	bcqsp	bc.sp.	*
Nairn	991.8	32	NNW	1	bc	1001.2	*	25	-13	-	0	-	bc	0	1	40	24	qocqp	cbc	bcx	0.0
Leith	991.8	38	NNW	3	c	1002.0	+2	27	-14	SW	1	-	bcm	2	-	43	27	bu.c.bc	bc.cu.c	cp.o.c.b	*
Tynemouth ...	991.3	40	W	3	cif	1001.4	+4	33	-9	NW	2	-	bczf	3	-	44	33	bcmq	bcz	cm bcm	*
Spurn Head ...	992.3	40	WSW	5	bz	999.4	+4	40	-1	E	3	-	c	3	-	42	33	bcq	bcb	bz, bmc	*
Yarmouth (Gorleston)	995.7	43	W	4	bc	997.9	+1	41	0	ENE	4	-	o	3	0.4	45	34	bcb	bcp bc	b bc.o	3.3
Clacton-on Sea	997.0	42	WNW	3	bc	995.9	+2	41	-1	ENE	3	-	cqd	2	4	43	38	bcm	bcc bc	bc, oqr	4.4
Nottingham ...	995.4	38	SW	2	bc	1000.2	*	34	-5	N	3	E	bx	*	0.3	44	29	cpo	ocb	bc.c	0.0

* Information for these columns not usually received. ‡ The barometric change is expressed in half millibars. § For code see page 3 † See footnote p.4.

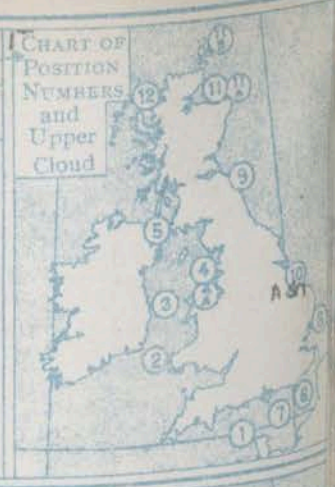
M.O. FORM 2370

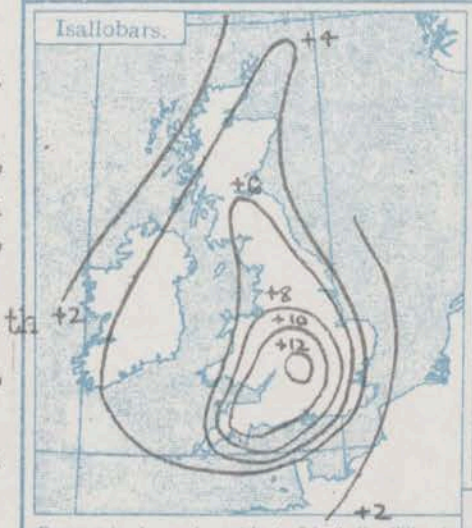
SUMMARY OF CONDITIONS AT 7 h. G.M.T. 23.12.1920.

Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Overcast, misty, rain locally.	Indiff.	Slight
2. E. England	Cloudy to overcast.	"	"
3. E. Midlands	Fine, frosty.	"	-
4. W. Midlands	Fine, misty or hazy.	Bad	-
5. S.W. England	Fine.	V.Good	Rough
6. South Wales	Fine.	"	Slight
7. North Wales	Fine, misty in places.	Indiff.	Smooth
8. N.W. England	Fair, misty in places.	"	"
9. N. Midlands	Fine, hazy.	"	-
10. N.E. England	Fair to cloudy, some mist.	Fair	Smooth
11. E. Scotland	Fine to fair, some haze.	"	"
12. S.W. Scotland	Fair, fog locally.	V.Poor	Slight
13. Isle of Man	Fine, some mist.	Fair	Smooth
14. N.& N.W. Scotland	Fair.	"	Slight
15. Hebrides	Fine to fair.	Good	"
16. Orkneys and Shetlands	Overcast, snow falling.	V.Poor	V.Smooth
17. N.W. Ireland	Fair.	Good	Slight
18. N.E. Ireland	Fine, some mist.	Fair	"
19. S.E. Ireland	Fine to fair.	Good	Smooth
20. S.W. Ireland	Fine, frosty.	V.Good	"

Temperature reported from Coastal and Cross Channel Steamers.

Position Number.	Date	Time G.M.T.	Sea °F	Air °F
7	22 12	0310	50	45
4a.	22 12	0400	45	44
6	22 12	0826	50	46
3	22 12	1020	50	42





Barometric change from 4 h. to 7 h. (half millibars).

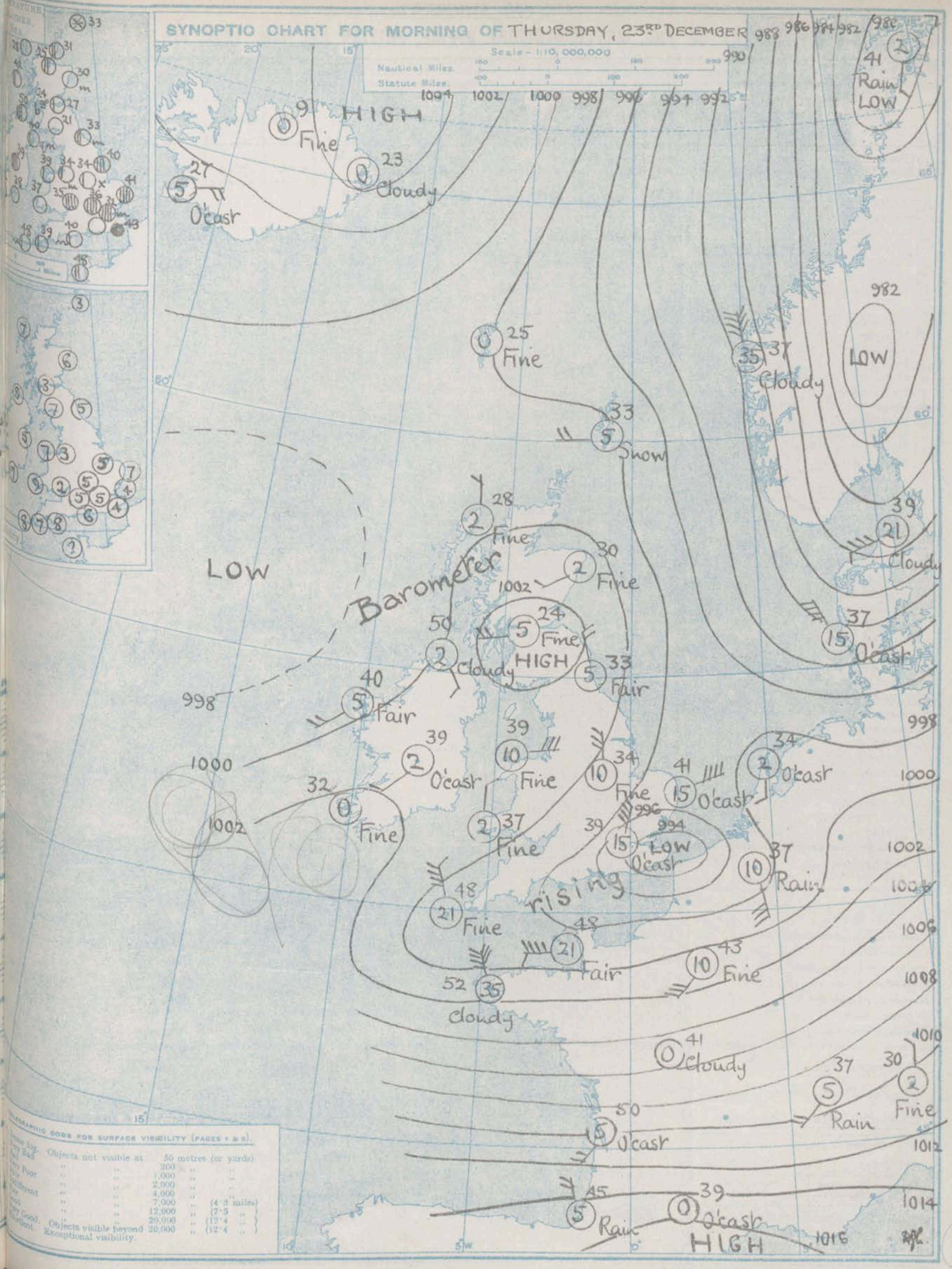
EXPLANATION.
BAROMETER.—Isobars are drawn for intervals of two millibars.
WIND.—Direction is shown by arrows flying with the wind. Force, on the scale 0-12, is indicated by the number of feathers. Mean velocity is shown in miles per hour by figures in small circles.
TEMPERATURE is given in degrees F.
WEATHER SYMBOLS.—
clear sky. sky ¼ clouded. sky ½ clouded. sky ¾ clouded. overcast sky. rain falling. snow. sleet. hail. fog. mist. T thunder. R thunderstorm.
SEA DISTURBANCE.—Rough High

GENERAL INFERENCE from observations received up to 9h.

An anticyclone that is forming over the British Isles will cause the weather to become temporarily fine and cold in all districts with light breezes, but in the course of the next few days a return to mild and unsettled weather is probable.

Districts.	Forecasts for the 24 hours commencing 15 h. G.M.T. Thursday, 23rd December, 1920.	Further Outlook.
1. S.E. England	Wind light and indefinite; fine, visibility good; cold, with frost inland at night.	Mild and unsettled weather is likely to become general again in the course of the next few days. -----
2. E. England		
3. E. Midlands		
4. W. Midlands		
5. S.W. England		
6. South Wales		
7. North Wales		
8. N.W. England		
9. N. Midlands		
10. N.E. England		
11. E. Scotland		
12. S.W. Scotland		
13. Isle of Man		
14. N.& N.W. Scotland		
15. Hebrides		
16. Orkneys and Shetlands		
17. N.W. Ireland		
18. N.E. Ireland		
19. S.E. Ireland		
20. S.W. Ireland	Wind becoming Southerly; fine at first, less settled later, visibility good; becoming milder.	

Meteorological Office: Air Ministry, Kingsway, London, W.C.2. Forecasts issued at 10.00. S.V.N. G. C. SIMPSON, F.R.S., Director.


SYNOPTIC CHART FOR MORNING OF THURSDAY, 23RD DECEMBER
Scale - 1:10,000,000
Nautical Miles
Statute Miles
HIGH
Fine
Cloudy
O'cast
Rain
LOW
Snow
Fair
Barometer
rising
TELEGRAPHIC CODE FOR SURFACE VISIBILITY (PAGES 1 & 2).
Very Bad Objects not visible at 50 metres (or yards)
Very Poor 200
Poor 1,000
Indifferent 2,000
Fair 4,000
Good 7,000 (4·3 miles)
Very Good 12,000 (7·5 miles)
Excellent 20,000 (12·4 miles)
Objects visible beyond 20,000 (12·4 miles)
Exceptional visibility.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 358 (Thursday 23rd December)

WEATHER, TEMPERATURE RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 22nd.

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 21-22	Rainfall. Day. 9h-18h. 22	Sunshine. Sunrise to Sunset. 22
Scotland.	Oban	c b	c b	46	35	5	-	2.8
	Banff	r o c b c	b c	43	37	1	1	0.3
	Montrose							
	St. Andrews	o	c	43	33	1	-	2.9
England, N.E.	Harrogate	b c b	b b c	43	37	2	-	3.8
	Scarborough							
	Skegness	b o	o b	44	37	-	-	4.0
England, E.	Lowestoft							
	Felixstowe	b m	b c m	45	32	-	-	4.7
	Southend-on-Sea	b c	b c	45	33	0.3	-	5.0
England, S.E.	Tunbridge Wells	b	b b c b	46	38	1	-	4.7
	Margate	b	b b c c	44	40	1	-	5.5
	Ramsgate	*	*	45	39	1	-	5.6
	Folkestone	b c	b c c	47	40	6	-	?
	Hastings	b c b	b b c	47	40	12	-	5.5
	Eastbourne	b c	b c	47	43	6	-	5.7
	Brighton	c b c b	b b c b	46	42	4	-	5.6
	Worthing	b	b	46	40	2	-	6.0
	Littlehampton	b c b	b c	47	40	2	-	6.0
	Portsmouth (S'thsea)	*	*	47	40	-	-	6.5
	Bournemouth	*	*	47	40	1	-	6.0

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. F.	Rainfall. Night. 17h-9h. 21-22	Rainfall. Day. 9h-17h. 22	Sunshine. Sunrise to Sunset. 22
England, N.W.	Douglas (I.O.M.)							
	Blackpool	r c b	p h c	45	40	3	1	1.4
	Southport	o r c	c p r h c	44	41	4	1	1.2
	Morecambe	*	*	45	41	1	1	1.7
Midlands.	Buxton							
	Leamington Spa	b	o d c	44	37	1	-	2.4
	Malvern							
	Bath	b	b b c	48	38	1	-	5.2
Wales.	Rhyl	r c	c b c	45	40	3	-	1.0
	Colwyn Bay	*	*	44	39	4	2	0.0
	Llandudno	c r c	c	47	40	2	1	0.5
	Aberystwyth	r o c	c o	48	42	1	-	0.0
	Tenby							
	Swansea							
England, S.W.	Weymouth	b c b	b b c o	49	42	2	-	6.6
	Teignmouth							
	Torquay	d r b c b	b b c o	50	40	1	0.1	4.8
	Paignton	b c	b c o m r	49	39	2	1	4.6
	Penzance	c b c	c o r	50	43	6	2	2.3
	Newquay	b c	o o r	48	43	4	0.2	2.2
	Bude	p	p	48	41	6	0.4	4.1
	Ilfracombe	c b c b	b b c c	48	45	4	-	2.0
	Weston-s-Mare	b c b	b b c	47	42	2	-	2.8

SUMMARIES, FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-18h 22	Weather. 18h-18h 22	Weather. 18h 22-1h 23	Weather. 1h-7h 23	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall.† Day. 7h-18h	Rainfall.† Night. 18h-7h	Sun. Hours.
								mm.	mm.	
Renfrew	b b c b b c	b b c i f	b b c b 3 f x	b 3 f x	43	23	10	~	~	5.5
Eskdalemuir	p o b o	b.	b c c b c c	b b c b	39	21	14	trace	-	5.0
Valencia (Cahire'n)	b b c c o	r o r r	r r c o	b x	45	32	26	6	5	0.3
Baldonnel	c o b b c q	c o 2 f	o 2 f e ⊕	x b b c	43	27	20	0.1	~	2.5
Manchester (Alex Park)	c o r o 2 f r r	o b c c r h 3 f	o 2 f.	c o b b c b 3 f	45	27	17	5	~	*
Ross on Wye	b c c w b b c q	b c c q b b c	o r o	r r o 2 f	46	35	30	0.1	6	4.5
Falmouth	b b c p o	c o r o	r r b b c r h o q	p o b b c	49	39	31	1	13	2.7
Calshot (Hants)	b b c b b c	b c c o ⊕ i f	o 1 f r r o 2 f r r	o 2 f o 1 f r R R	48	39	35	-	5	6.2
Lympne (Folkestone)	o 1 f b c c f x	b b c c	b o b	b b c c c o r r	r r o 2 f o 2 f q	44	36	32	-	8	5.5
Aberdeen	p r s o q	b b c b	b 1 f c	1 f c x	42	29	18	2	-	1.1
Howden	p d q	b b c q	x ⊕	b c c b 7 f f	45	22	19	-	-	2.8
Cranwell (Lincs)	b b c b c o	o b b c	b b c b c c	b b c b x	44	25	22	trace	-	3.5
Felixstowe	2 f b	p o c o	b c c o 2 f.	r r o 2 f	43	35	*	-	2	4.7
Shoeburyness	b b c b b c	b b c b c c	b c c b c c	R R o o	45	34	28	-	6	5.1
Benson	b b b c	b b c b	c o r r	r r o	47	35	30	-	5	*
S. Farnborough	b b c b c o	b c c b c	b b c c o	R R o 1 f	45	37	32	-	12	5.2
London (Kew Obsy.)	2 f	o 2 f 1 f	o 2 f r r	r r o 2 f	46	38	31	-	10	4.6
Croydon	o 1 f b c b c q / b b c c 2 f 1 f q	q / q 1 f b c c / b b c q	⊕ b c c o 1 f o 2 f r r	o 2 f r r o 2 f	45	38	*	-	8	*

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, *i.e.*, rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:-
R = heavy rain.
rr = continuous moderate rain.
r,r, = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 30 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0·3
1	1- 3	0·3- 1·5
2	4- 7	1·6- 3·3
3	8-12	3·4- 5·4
4	13-18	5·5- 7·9
5	19-24	8·0-10·7
6	25-31	10·8-13·8
7	32-38	13·9-17·1
8	39-46	17·2-20·7
9	47-54	20·8-24·4
10	55-63	24·5-28·4
11	64-75	28·5-32·6
12	Above 75	32·6 or above

SYMBOLS—

Aurora, Rime, Glazed frost, Glazed roads, Solar halo, Lunar halo, Solar corona, Lunar corona

LONDON. OBSERVATIONS.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Hours. Yesterday.	Humidity % 15 h. G.M.T. Yesterday.	Humidity % 9 h. G.M.T. To-day.
	24 Hours ended 9h G.M.T. 23rd									
Greenwich (Royal Observatory)	bc.	bc.	o o r o	45	38	31	9	5.5	75	90
City (Bunhill Row)	*	*	*	*	*	*	*	2.1	*	*
Westminster (St. James's Park)	*	*	o E	47	40	32	9	4.8	71	84
Regent's Park (Botanical Gdns)	*	*	*	*	*	*	*	4.6	*	*
Camden Sq. (British Rainfall)			*	46	38	33	8	*	71	90
Kensington Palace	bc.	c o	*	47	38	33	10	*	81 (18h)	90
Hampstead Observatory	*	*	*						*	

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday.

Total 233 Joules.

	Milliwatts.
Average Rate.	8·3
Maximum Rate.	17

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

23rd + 24th December 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth	8.5	11.52	3.39
	8.6	11.53	3.40
Greenwich	8.6	11.59	3.52
	8.7	12.0	3.53
Wick	9.14	12.11	3.18
	9.5	12.12	3.19
Valencia	8.30	12.40	4.38
	8.31	12.41	4.31

Photographic Record of Pole Star (Polaris) and of δ Ursae Minoris at Greenwich Observatory.

Exposure from 17 h. 9 m. to 7 h. 9 m.

Stars.	Duration of Exposure. h. m.	Duration of Record. h. m.	%
Polaris	14. 0	2. 37	19
δ Ursae Minoris	14. 0	2. 13	16

NOTES ON THE WEATHER OF YESTERDAY.

The temperature fell considerably during the night and sharp frost occurred in Scotland. The minimum temperature was as low as 21° at Eskdale, 23° at Glasgow and 24° at Nairn, while at Cranwell (Lincs.) it was 25°. Rain fell fairly heavily in the South at night, 14mm at Falmouth, and 12mm at South Farnborough. Good records of bright sunshine were obtained nearly everywhere.

* Information for these columns not usually received.

† Trace – rain has fallen but amount less than 0·1 mm.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE. LONDON:

BRITISH SECTION. No. B. 21,582 FRIDAY, 24th DECEMBER, 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

13H. G.M.T. of 23rd

Stations	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	§ Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew	1005.9	+3	-	0	bzf	25	97	2	-	-	-	-	-	*
Eskdalemuir	1006.7	+5	-	0	c	31	85	8	-	StCu	8	-	-	*
Valencia (Cahirc'n)	1001.4	-2	ESE	4	o	45	78	8	2,000	StCu	7	A.St	3	5
Baldonnel	1004.6	+1	ESE	3	ozf	39	85	5	2,000	StCu	9	A.St	1	*
Manchester (Alex. Pk)	1006.8	+4	SE	1	bzf	33	85	2	-	-	-	-	-	*
Ross on Wye	1006.9	+5	-	0	b	37	85	4	-	-	-	Ci	1	*
Falmouth	1006.6	+3	E	1	o	44	85	7	-	StCu	9	-	-	*
Calshot (Hants)	1006.4	+6	NNW	3	bif	43	85	6	-	-	-	-	-	2
Lympne (Folkestone)	1005.2	+6	NNE	5	bcm	43	85	6	750	St	5	-	-	*
Aberdeen	1004.7	+3	SW	2	bzf	34	55	5	-	-	-	-	-	2
Howden	1006.6	+2	-	0	bm	38	85	5	3,000	St	1	A.St	1	-
Cranwell (Lincs)	1007.1	+5	NNW	3	b	36	85	4	4,200	StCu	2	-	-	*
Felixstowe	1005.9	+5	N	3	bozf	44	86	5	4,200	StCu	4	A.Cu	2	3
Shoeburyness	1004.6	+8	NE	2	bife	43	85	7	-	-	-	A.St	2	*
Benson	1006.3	+7	N	2	ozf	36	97	4	-	-	-	-	-	*
S. Farnborough	1006.6	+8	NNW	2	ozf	40	95	5	<500	St	10	-	-	*
London (Kew Obsy.)	1006.3	+7	NNW	3	8m ~~ozf~~	41	85	4	~~<500~~	~~St~~	~~10~~	-	-	*
Croydon	1008.5	+6	NNW	2	c3f	41	92	3	1,250	St	7	-	-	*

18H. G.M.T. of 23rd

Stations	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	§ Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew	1007.0	+1	-	0	bcqfx⊞	25	97	2	-	-	-	Ci.St	5	*
Eskdalemuir	1008.7	+1	-	0	bz⊞	24	96	4	-	-	-	-	-	*
Valencia (Cahirc'n)	995.7	-7	SSE	6	or	47	85	6	1,250	St	10	-	-	5
Baldonnel	1004.4	-1	E	2	ozf	42	85	5	1,250	StCu	10	-	-	*
Manchester (Alex. Pk)	1009.2	+3	-	0	ozf	32	85	2	750	St	10	-	-	*
Ross on Wye	1010.0	+3	-	0	osf	32	97	1	<500	St	10	-	-	*
Falmouth	1006.6	-2	SE	3	or	47	92	6	-	Nb	10	-	-	*
Calshot (Hants)	1010.9	+2	NE	2	ozf	37	92	4	3,000	StCu	10	-	-	1 [NNW]
Lympne (Folkestone)	1010.3	+6	-	0	ozf	39	97	5	2,000	StCu	10	-	-	*
Aberdeen	1007.0	+3	WSW	1	bzf	29	75	4	-	-	-	-	-	2
Howden	1009.9	+3	-	0	ov x⊞	30	97	4	3,000	St	4	A.St	2	*
Cranwell (Lincs)	1011.1	+4	ENE	1	ozf	32	97	4	-	-	-	Ci.St	2	*
Felixstowe	1011.2	+6	N	2	bczf	36	97	4	5,700	StCu	6	-	A	1
Shoeburyness	1010.3	+6	WNW	1	bc3fe	36	85	3	3,000	StCu	2	A.Cu	7	*
Benson	1010.4	+3	-	0	o	35	97	3	-	-	-	Ci.St	10	*
S. Farnborough	1011.2	+6	E	1	ozf	37	92	2	<500	St	10	-	-	*
London (Kew Obsy.)	1011.3	+6	-	0	osf w	37	97	1	<500	St	10	-	-	*
Croydon	1011.7	+5	S	1	ozfe	36	97	2	<500	St	10	-	-	*

1H. G.M.T. of 24th

Stations	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	§ Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew														
Eskdalemuir	1006.6	-3	-	0	ozf	32	85	4	.	St	10	-	-	*
Valencia (Cahirc'n)	994.2	*	S	4	o	63	*	*	*	*	*	*	*	5
Baldonnel	997.0	-9	S	6	oq	44	85	5	2000	St.	10	-	-	*
Manchester (Alex. Pk)	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ross on Wye	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Falmouth	1003.1	-2	SW	7	orq	54	97	3	-	Nb	10	-	.	*
Calshot (Hants)	1008.0	-4	ESE	5	ozf	43	97	5	1250	StCu	10	-	-	*
Lympne (Folkestone)	1012.1	+2	SSW	3	ozf	40	97	6	750	St	10	-	.	*
Aberdeen	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Howden	1009.0	-2	ESE	2	oif	36	97	4	<500	St	10	-	.	*
Cranwell (Lincs)	1011.5	o	SE	3	ozf	32	75	2	4000	St	7	A.St	3	*
Felixstowe	1012.3	o	SSE	3	ozf	40	97	5	-	-	-	A.St	10	2
Shoeburyness	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Benson	*	*	*	*	*	*	*	*	*	*	*	*	*	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*
London (M.O. at 1H.)			*	*	*	41	*	*	*	*	*	*	*	*
Croydon	1010.9	-2	SSE	4	or2f	40	97	5	750	St	10	-	.	*

7H. G.M.T. of 24th

Stations	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	§ Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew	1000.5	-4	NE	4	ors	34	97	3	-	Nb	10	-	-	*
Eskdalemuir	1001.0	-5	SE	2	omx	34	92	3	-	Nb	10	-	*	*
Valencia (Cahirc'n)	995.6	+2	S	4	o	54	92	7	750	St	10	-	-	*
Baldonnel	996.5	0	SW	5	orq	53	86	7	1250	StCu	10	-	-	*
Manchester (Alex. Pk)	1001.6	-3	S	4	orm	43	92	4	2000	Nb	10	-	-	*
Ross on Wye	1002.8	+1	W	3	o	51	97	7	1250	Nb	10	-	-	*
Falmouth	1005.1	+2	SW	6	orq	54	97	5	-	Nb	10	-	-	*
Calshot (Hants)	1006.7	+2	SW	5	ozf	51	97	5	1250	StCu	10	-	*	4
Lympne (Folkestone)	1007.8	-4	S	2	or4f	45	97	0	<500	Nb	10	-	-	*
Aberdeen	1008.9	-4	S	3	or	39	85	6	2,000	Nb	10	-	-	3
Howden	1003.9	-3	SE	5	ormq	38	97	4	750	Nb	10	-	-	*
Cranwell (Lincs)	1004.6	-5	SE	6	od	38	97	4	750	Nb	10	-	-	*
Felixstowe	1005.9	-5	SE	5	or23f	41	97	5	1250	Nb	10	-	-	2
Shoeburyness	1006.5	-7	S	3	o3fr	42	85	2	1250	St	10	-	-	*
Benson	1003.5	0	S	4	o	45	97	7	-	StCu	10	-	-	*
S. Farnborough	1005.3	-1	SW	4	odm	51	97	7	750	Nb	10	-	-	*
London (M.O. at 1H.)	1004.8	-4	SSW	2	oif	49	97	7	750	St	10	-	-	*
Croydon	1006.2	-2	SSW	5	or4f	48	97	6	750	St	8	A.St	2	*

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

Stations	18H. G.M.T. of 23rd: Barom. at M.S.L. mb.	Temp. °F.	Wind Direc.	Wind Force 0-12	Weather	7H. G.M.T. of 24th: Barometer at M.S.L. mb.	‡ Change in 3 hours	Temperature Temp. °F.	Change in 24 hours	Wind Direc.	Wind Force 0-12	Direc. of Upper Cloud	Weather	Sea 0-9	24 hours ended 7H. 24th: † Rainfall mm.	Temp. Max. °F.	Temp. Min. °F.	Weather Morning	Weather Afternoon	Weather Night	Sunshine Hours (23rd)
Lerwick	1004.1	34	-	0	o	1004.3	-2	42	+9	S	3	-	b	2	0.2	42	32	c.	os	o	.4
Stornoway	1001.0	40	SSW	2	oR	998.0	-2	42	+14	S	1	-	o	1	7	42	28	c or	or	o bc o	0.0
Castlebay (Barra Is)	1002.1	43	SW	3	op	995.1	-3	40	-2	ESE	5	.	r	5	6	45	38	bcp.o	ohp	opr	0.1
Malin Head	1002.2	38	S	2	o	991.2	-3	41	+6	SE	3	-	omr	3	1	41	33	bc	c	o omr.or	3.7
Blacksod Point	999.4	40	SE	2	bc	989.6	+3	53	+12	SE	2	.	om	2	8	53	33	bc	bc	omr.omp	*
Roche's Point	1001.2	47	SE	4	r	998.5	+4	51	+14	SSW	4	.	o	4	21	52	36	bo.	or	r.om	*
Birr Castle	1001.5	43	SE	1	r	995.0	*	52	+13	S	1	-	o	*	7	52	29	f.o	or	od r.o	0.0
Donaghadee	1005.9	41	S	1	cmp	998.0	-2	45	+5	SSE	3	-	omr	3	4	45	37	bm	cmp	omd	*
Liverpool (Bidston)	1008.1	35	SE	3	o	1000.4	-2	40	+6	SE	4	E	o	4	10	40	33	bcm	bcm	or	3.1
Holyhead	1006.0	42	S	4	og	997.8	+3	50	+8	SSW	4	.	o3fe	2	9	50	35	b.g.	b.om	od.orm	4.0
Pembroke (St. Ann's Head)	~~1005.6~~ [1005.6]	44	SE	4	ov	1001.5	+2	52	+15	SW	4	-	or 2-3f	4	1	52	36	bv.bc	cv.ov	ov.or.odm	2.2
Scilly (St. Mary's)	1005.3	49	S.	3	or 2-3f	1004.1	+1	53	+6	SW	4	-	or 2-3f	6	5	53	46	b.o.	orm	odm	0.0
Jersey (St. Aubin)	1010.2	45	E	3	o	1010.4	+1	54	+6	SW	3	-	o	3	2	54	44	bc.b.	bc.o	odm.o	4.0
Portland Bill	1008.9	44	SSE	2	c	1006.1	+1	50	+10	WSW	6	SW	op	6	7	50	39	b	bc	c.op.omr	*
Dungeness	1009.7	41	N	2	bc	1006.9	-4	47	+4	S	4	-	r	4	6	47	35	or. bc	c. bc	bc.or	*
Wick	1003.4	34	SW	2	b	1000.9	-4	40	+9	S	4	-	bcq	4	-	40	29	bc.b.	b	b. bcq	*
Nairn	1004.3	29	-	0	bc	1000.5	*	34	+9	-	0	-	oq	0	-	34	21	bc	b.bc	bcx.cq	5.9
Leith	1006.6	32	S	1	b	1000.8	-2	37	+10	SE	2	-	o	2	1	37	26	bm.bc	bc.bm.b	bq.od.o	*
Tynemouth	1008.6	36	W	2	bcsf	1002.8	-3	38	+5	S	5	-	or 3	4	5	40	32	bcm	bm	f. omr	*
Spurn Head	1010.0	40	NE	3	b	1004.8	-5	40	0	SSE	6	-	opr	4	3	44	37	bm.c	bc	b.omqr	*
Yarmouth (Gorleston)	1010.2	44	ENE	2	bc	1010.2	-3	44	0	SSE	6	.	omrq	6	3	44	39	o.bc	bc	bc.orq	?
Clacton-on-Sea	1009.1	40	N	2	bc	1007.1	-4	41	0	ESE	4	.	ogr	4	6	44	39	c.bcm	bcm	bc.c.or	2.1
Nottingham	1010.2	31	E	1	f	1003.4	*	41	+4	SE	3	.	om	*	8	44	39	bm	bm.f	f.om	3.5

* Information for these columns not usually received. ‡ The barometric change is expressed in half millibars. § For code see page 3 † See footnote p. 4.

M.O. FORM 2370

SUMMARY OF CONDITIONS AT 7 h. G.M.T. 24.12.1920.

Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Dull, mist or fog, some rain.	Var.	Mod.
2. E. England	Dull, some rain & mist.	Indiff.	"
3. E. Midlands	Dull, local mist.	Fair	-
4. W. Midlands	Dull.	"	-
5. S.W. England	Dull, local slight rain & mist.	Indiff.	Rough
6. South Wales	Dull, slight rain & mist.	"	Mod.
7. North Wales	Dull, some mist.	Poor	Smooth
8. N.W. England	Dull, local rain & mist.	"	Mod.
9. N. Midlands	Dull, misty, local rain.	"	-
10. N.E. England	Dull, rainy.	Fair	Mod.
11. E. Scotland	Dull, slight local rain.	"	Smooth
12. S.W. Scotland	Dull, misty, rain or sleet.	V. Poor	Slight
13. Isle of Man	Dull, some mist & rain.	Poor	"
14. N. & N.W. Scotland	Fair to dull, local rain.	Fair	"
15. Hebrides	Dull, local rain.	"	Var.
16. Orkneys and Shetlands	Fine.	"	Smooth
17. N.W. Ireland	Dull, misty.	Indiff.	"
18. N.E. Ireland	Dull, rainy, misty.	"	Slight
19. S.E. Ireland	Dull, slight local rain.	Good	Mod.
20. S.W. Ireland	Dull.	Fair	"

Temperature reported from Coastal and Cross Channel Steamers.

Position Number.	Date	Time G.M.T.	Sea °F	Air °F
7	23rd.	0355	49	51
4A	"	0430	44	40
5	"	0842	49	37
12	"	0545	49	45
3	"	1015	48	44
10	"	1025	48	44
6	"	1530	49	45
7	"	0312	50	50
4A	"	0415	44	40

Chart of Position Numbers and Upper Cloud

Isallobars.

Barometric change from 4 h. to 7 h. (half millibars).

Lower Cloud.

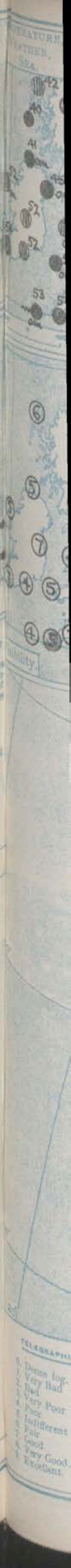
EXPLANATION.
BAROMETER.—Isobars are drawn for intervals of two millibars.
WIND.—Direction is shown by arrows flying with the wind. Force, on the scale 0-12, is indicated by the number of feathers. Mean velocity is shown in miles per hour by figures in small circles.
TEMPERATURE is given in degrees F.
WEATHER SYMBOLS.— clear sky. sky ¼ clouded. sky ½ clouded. sky ¾ clouded. overcast sky. rain falling. snow. sleet. hail. fog. mist. thunder. thunderstorm.
SEA DISTURBANCE.— Rough High

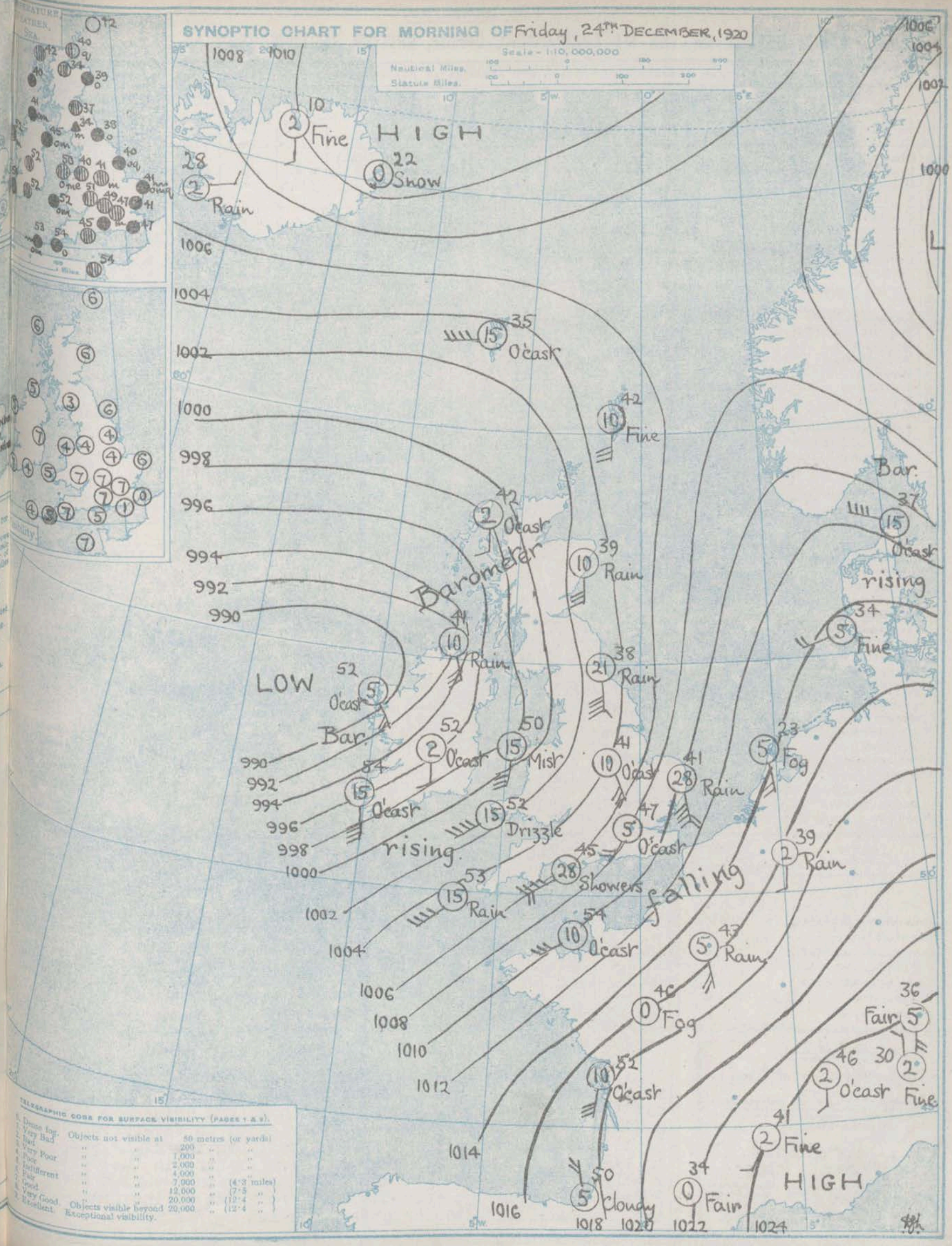
GENERAL INFERENCE from observations received up to 9h.

A depression off Western Ireland will cause much low cloud and intermittent rain over the Kingdom generally during the next day or two with fresh to strong South-West winds and mild weather.

Districts.	Forecasts for the 24 hours commencing 15 h. G.M.T. Friday, 24th December, 1920.	Further Outlook.
1. S.E. England 2. E. England 3. E. Midlands 4. W. Midlands 5. S.W. England 6. South Wales 7. North Wales 8. N.W. England 9. N. Midlands 10. N.E. England 11. E. Scotland 12. S.W. Scotland 13. Isle of Man 14. N. & N.W. Scotland 15. Hebrides 16. Orkneys and Shetlands 17. N.W. Ireland 18. N.E. Ireland 19. S.E. Ireland 20. S.W. Ireland	Wind from between South and West, fresh to strong; much low cloud with intermittent rain and some fair intervals, visibility fair to good at times; mild.	Probably continuing mild and unsettled over the week-end. ----

Meteorological Office: Air Ministry, Kingsway, London, W.C.2. Forecasts issued at 09.25. E.V.N. G. C. SIMPSON, F.R.S., Director.





TELEGRAPHIC CODE FOR SURFACE VISIBILITY (PAGES 1 & 2).

0. Dense fog.	Objects not visible at	50 metres	(or yards)	
1. Very Bad	" "	200	"	"
2. Bad	" "	1,000	"	"
3. Very Poor	" "	2,000	"	"
4. Poor	" "	4,000	"	"
5. Indifferent	" "	7,000	"	(4·3 miles)
6. Fair	" "	12,000	"	(7·5 ")
7. Good	" "	20,000	"	(12·4 ")
8. Very Good.	Objects visible beyond	20,000	"	(12·4 ")
9. Excellent.	Exceptional visibility.			

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 359.

Friday 24th December

WEATHER, TEMPERATURE, RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 23rd

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 22-23	Rainfall. Day. 9h-18h. 23rd	Sunshine. Sunrise to Sunset. 23rd		STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 17h-9h. 22-23rd	Rainfall. Day. 9h-17h. 23rd	Sunshine. Sunrise to Sunset. 23rd
Scotland	Oban	b	b	39	24	-	-	4.0	England, N.W.	Douglas (I.O.M.)							
	Banff	b	b	37	24	-	-	5.4		Blackpool	b. e.	c. o	36	27	-	-	2.1
	Montrose									Southport	x b. bc. c	c. o x	33	28	-	-	0.0
	St. Andrews									Morecambe	*	*	38	30	-	-	4.2
England, N.E.	Harrogate	x. bc	bcm	37	29	-	-	3.6	Midlands	Buxton							
	Scarborough	b	b	46	34	-	-	5.5		Leamington Spa	om	om	35	32	-	-	0.0
	Skegness									Malvern							
England, E.	Lowestoft									Bath	c bc bm	bm	38	34	12	-	0.1
	Felixstowe	omt	bcm	44	33	2	-	2.5	Wales	Rhyl	x. c. bc	bc. c	?	27	-	-	1.9
	Southend-on-Sea	bc	bc	45	35	7	-	2.8		Colwyn Bay	*	*	40	29	-	-	4.4
England, S.E.	Tunbridge Wells	om. o	c. o. om	43	37	8	-	0.2		Llandudno	b	b. bc	42	27	-	-	3.4
	Margate	c	c	46	38	9	-	0.4		Aberystwyth	o. c. b.	c. o	42	32	-	-	1.5
	Ramsgate	*	*	44	35	7	-	2.0		Tenby							
	Folkestone	x. o. c.	c	45	39	7	-	1.6		Swansea							
	Hastings	o. c	c. bc. o	45	40	10	-	2.1	England, S.W.	Weymouth	bc. b.	b. bc. o	45	38	9	-	5.6
	Eastbourne	o. c. bc	bc. c. o	45	40	10	-	2.5		Teignmouth							
	Brighton	o. bc	b	45	40	13	-	2.5		Torquay	b. bc	o	50	39	9	-	3.5
	Worthing	c. bc	bc. o	44	39	10	-	2.0		Paignton	b	bc. o	46	37	9	-	3.0
	Littlehampton	bcm	bc. o c	44	39	8	-	2.6		Penzance	bc. c	c. or	49	41	8	2	1.2
	Portsmouth (S'thsea)	*	*	43	40	5	-	4.2		Newquay	x b. b2	o. or	45	37	8	0.1	3.6
	Bournemouth	*	*	43	38	9	-	4.9		Bude	b	c	45	34	8	-	3.0
	Ventnor (I. of W.)	*	*	47	39	6	-	4.4		Ilfracombe	b. bc. c	c. o	45	40	13	-	4.7
										Weston-s-Mare	bc	bc. cm	46	37	9	-	0.0

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-12h 23rd	Weather. 12h-18h 23rd	Weather. 18h-22h 23rd	Weather. 18h-1h 24th	Weather. 1h-7h 24th	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. † Day. 7h-18h mm.	Rainfall. † Night. 18h-7h mm.	Sun. Hours.
Renfrew	bx 3f 45f	b. c o 4 5f	4c 4f 5f/p r	03f r5		34	22	19	-	1	0.0
Eskdalemuir	bc. c.	bc. c b b 2.	c. o. o	02f. pr 2		36	19	18	-	1	3.2
Valencia (Cahirc'n)	bc. c. o	o r r	rr 2	0 p 6		64	51	45	8	5	0.0
Baldonnel	b bc c o 4 5	c. o. o 2f	r 9	g r r		53	26	34	0.1	3	0.0
Manchester (Alex Park)	c b. 3 4 5 3f	b. o 4 5f	04 5/03f r 6	03f r. r		43	29	29	0.1	11	*
Ross on Wye	c o 3f c b 2 3f	b b c 2 b o 5f	c o 2 3f r 3f	r. o		51	32	31	-	6	2.7
Falmouth	b c c 3f. c. o.	o g r f	o r r. g	o r 6		54	36	42	2	13	1.0
Calshot (Hants)	2f. b bc	bc. c. o	02f r r	02f r r		52	36	46	-	7	4.6
Lympne (Folkestone)	o 2f g o 3f. b bc	b. bc 3f c o 2f	o 2f	o 3f r m o 5f g r c 6 3f R		45	37	31	-	7	2.4
Aberdeen	b o. o 2f	1f. 2f	2f c. x	2f c. o 2f		42	28	19	-	Trace	4.7
Howden	2f c x.	c b. bc	o r c	r r g		39	28	20	-	5	3.8
Cranwell (Lincs)	3f. bc. c	b bc. c o.	o. o 2f	r r 2		38	28	24	0.1	6	3.4
Felixstowe	o 2f. bc c	b. bc 2f	c. o. o 2f	o 2f r r		45	35	4	0.1	7	2.7
Shoeburyness	d d c o b b c	d 2 f c 3f c	3f c r o f c	R r. r.		44	31	28	0.2	7	3.6
Benson	o 2f	o. c. o	o. r r	r r		49	34	30	-	5	*
S. Farnborough	b. bc b. c o.	o 2f o 2f	o 2f r r	r r d d		51	36	31	-	7	3.0
London (Kew Obsy.)	o 2f 2f. b.	o 2f c o 4 5f w	o 4f m o 6 4f w	o 1f p d		48	35	30	Trace	9	3.1
Croydon	r r o 2f bc c o	c o 3f r 5f c	3 c c r 5f c o 2f	o 2f o 1f r r r r		48	35	4	Trace	6	4

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, *i.e.*, rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:–
R = heavy rain.
rr = continuous moderate rain.
r, r, = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 30 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0·3
1	1– 3	0·3– 1·5
2	4– 7	1·6– 3·3
3	8–12	3·4– 5·4
4	13–18	5·5– 7·9
5	19–24	8·0–10·7
6	25–31	10·8–13·8
7	32–38	13·9–17·1
8	39–46	17·2–20·7
9	47–54	20·8–24·4
10	55–63	24·5–28·4
11	64–75	28·5–32·5
12	Above 75	32·6 or above

SYMBOLS–

Aurora ☆ Solar halo ⊕
Rime ⌶ Lunar halo ◎
Glazed frost ∽ Solar corona ⊙
Glazed roads ⚡ Lunar corona ◎

LONDON. OBSERVATIONS.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Hours.	Humidity % 15 h. G.M.T.	Humidity % 9 h. G.M.T.
	24 Hours ended 9h G.M.T. 24th							Yesterday.		To-day.
Greenwich (Royal Observatory)	o	o. b. o. o	or	53	34	28	8	0.6	94	93
City (Bunhill Row)	*	*	*	*	*	*	*	0.2	*	*
Westminster (St. James's Park)	*	*	or	54	36	30	9	0.0	86	92
Regents Pk. (Botanical Gdns)	*	*	*	*	*	*	*	1.9	*	*
Camden Sq. (British Rainfall)	bc. b	b. bc	*	52	33	28	10	*	98	98
Kensington Palace	bc. c	o. of	*	53	34	31	10	*	95 (18h)	97
Hampstead Observatory	*	*	*	51	35	26	10	5.0	*	97

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday.

Total 187 Joules.

Milliwatts.
Average Rate. 6.4
Maximum Rate. 12

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

24th + 25th December 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth	8.6 / 8.6	11.53 / 11.53	3.40 / 3.41
Greenwich	8.7 / 8.7	12.0 / 12.0	3.53 / 3.53
Wick	9.5 / 9.5	12.12 / 12.12	3.19 / 3.19
Valencia	8.51 / 8.51	12.41 / 12.41	4.31 / 4.32

Photographic Record of Pole Star (Polaris) and of δ Ursæ Minoris at Greenwich Observatory.

Exposure from ..... h ..... m.
to ..... h ..... m.

Stars.	Duration of Exposure. h. m.	Duration of Record. h. m.	%
Polaris			
δ Ursæ Minoris			

NOTES ON THE WEATHER OF YESTERDAY.

A considerable fall of rain was experienced generally, which amounted to 21mm at Roche's Point and 15 at Falmouth, but this was preceded by bright weather, and between 4 and 6 hours of bright sunshine was experienced in several places. Local frost in England and **Scotland** early in the night was followed by a considerable rise of temperature in the West, a warm South-West wind in which the temperature varied from 50° to 54° advancing from the West, reaching a line from the Thames Estuary to North-West Ireland by 7 a.m.

* Information for these columns not usually received.

† Trace – rain has fallen but amount less than 0·1 mm.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. No. B.21,583 Saturday, 25th December 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

STATIONS.	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind. Direc.	Wind. Force 0-12.	Weather	Temp. °F.	Humidity %	Visibility § 0-9.	Height of Low Cloud. Feet.	Low Cloud. Form.	Low Cloud. Amt. 0-10.	Upper Cloud. Form.	Upper Cloud. Amt. 0-10.	Sea 0-9.	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind. Direc.	Wind. Force 0-12.	Weather	Temp. °F.	Humidity %	Visibility § 0-9.	Height of Low Cloud. Feet.	Low Cloud. Form.	Low Cloud. Amt. 0-10.	Upper Cloud. Form.	Upper Cloud. Amt. 0-10.	Sea 0-9.
	13H. G.M.T. of 24th														18H. G.M.T. of 24th													
Renfrew	997.0	-3	ENE	2	0 3f	36	97	2	1250	St	10	-	-	*	995.1	+1	~~SSW~~ N	3	0 4f	37	97	2	1250	St	5	A St	4	*
Eskdalemuir	998.8	-2	-	0	0 f 0 3f	36	97	4	1250	Nb	10	-	-	*	1000.7	+3	SW	3	0 f 0 4 3f	43	97	1	750	St	10	-	-	*
Valencia (Cahirc'n)	998.1	+1	SSW	5	0 1f	54	97	6	750	St	10	-	-	4	1003.7	+1	S	3	0	52	92	6	750	St	10	-	-	4
Baldonnel	998.6	+2	SW	5	0 f 9	53	85	8	1250	Nb	10	-	-	*	1002.0	+4	SW	5	0 [illegible]	52	85	7	4200	St Cu	3	A St	7	*
Manchester (Alex'n)	1001.5	-1	SW	3	0 2f	51	92	4	1250	Nb	4	A St	6	*	1003.7	+2	SW	3	0 f 0 2f	52	92	4	2000	Nb	9	A St	1	*
Ross on Wye	1004.6	0	SW	3	0 f m	54	97	6	1250	Nb	10	-	-	*	1006.3	+2	WSW	6	0 p 9	54	92	7	750	Nb	9	A Cu	1	*
Falmouth	1006.8	+1	SW	7	0 d	54	97	5	-	Nb	10	-	-	*	1009.0	+4	SW	6	0 f	54	97	5	-	Nb	10	-	-	*
Calshot (Hants) *	1007.5	0	SW	5	0 D	52	97	4	<500	Nb	10	-	-	4	1011.2	+3	SW	4	0 d	52	97	4	<500	Nb	10	-	-	3
Lympne (Folkestone)	1009.5	+3	WSW	6	0 d	50	97	1	<500	Nb	10	-	-	*	1012.0	+3	SW	5	0 d 9	51	97	1	<500	Nb	10	-	-	*
Aberdeen	997.6	-6	SSW	3	0 8 2f	41	97	4	1250	Nb	10	-	-	3	996.1	-1	SW	2	0 2f	40	97	4	1250	Nb	9	-	-	3
Howden	1001.4	-2	S	2	0 3f	43	97	1	750	St	10	-	-	*	1003.0	+1	SSE	2	0 4 f e	50	97	3	2000	St	10	-	-	*
Cranwell (Lincs)	1003.4	-1	SSW	4	0 f 0 2f	52	97	5	2000	St	10	-	-	*	1004.9	+1	SW	4	0	53	92	5	2000	Nb	7	A St	3	*
Felixstowe	1008.3	+1	SSW	3	0 2f	49	97	5	1250	St	10	-	-	*	1010.0	+2	SSW	3	0 2f	50	92	5	1250	St	10	-	-	*
Shoeburyness	1007.5	+2	SW	5	c	~~53~~ 55	85	6	Cu	7	-	-	-	*	1010.3	+3	SSW	3	0	53	85	7	2000	St Cu	7	A St	3	*
Benson	1008.9	0	SW	5	c	54	92	9	-	St Cu	10	-	-	*	1008.5	+2	SW	4	c	55	92	7	-	St Cu	8	-	-	*
S. Farnborough	1007.7	+1	SSW	5	0 d	53	97	5	<500	Nb	10	-	-	*	1010.1	+2	WSW	4	0 d m	53	97	4	<500	Nb	10	-	-	*
London (Kew Obsy.)	1007.3	+1	SW	4	0 1f	54	92	6	2000	St Cu	8	A St	2	*	1010.0	+3	SW	4	0 2f	53	92	5	1250	St Cu	8	A St	2	*
Croydon	1008.5	+2	SW	4	0 f 0	54	92	7	750	St	8	A St	2	*	1010.7	+3	WSW	4	0 f 0 1f	54	92	6	<500	St	10	-	-	*
	1H. G.M.T. of 25th														7H. G.M.T. of 25th													
Renfrew															1004.4	+1	NE	3	0 f 2f	46	97	4	-	St	10	-	-	*
Eskdalemuir														*	1005.8	0	SSE	3	0 f 3f	47	97	3	750	Nb	10	-	-	*
Valencia (Cahirc'n)	998.7	54	SSE	4	0	54	*	*	*	*	*	*	*	4	993.0	-3	SSE	7	0	54	88	6	1250	St	10	-	-	*
Baldonnel														*	1001.7	-2	SSW	6	0 9	53	85	?	2000	St	9	-	-	*
Manchester (Alex'n)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1008.9	+1	S	4	0 3f	52	85	3	4200	St Cu	7	A Cu	3	*
Ross on Wye	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1010.7	-1	S	4	0 c	50	85	7	-	-	-	Ci	6	*
Falmouth														*	1008.0	-2	SSE	5	0 c	51	97	6	-	St Cu	6	-	-	*
Calshot (Hants)														*	1013.8	0	~~SSW~~	3	0 1f	47	97	6	-	-	-	A St	10	3
Lympne (Folkestone c.)														*	1016.4	+1	SW	3	c	47	92	6	3000	St Cu	5	Ci Cu	3	*
Aberdeen	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1006.2	+7	NW	2	0 c 2f e	39	97	4	-	-	-	Ci Cu	5	2
Howden														*	1010.0	+2	SSW	1	0 m	51	92	4	2000	St	7	A St	2	*
Cranwell (Lincs)														*	1011.9	+2	S	3	0 1f	50	97	6	4200	St Cu	8	A St	2	*
Felixstowe															1014.5	+2	S	2	0 1f	45	92	6	2,000	St	10	-	-	2
Shoeburyness	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1015.3	+2	SW	2	0	47	85	~~8~~ 7	2000	St Cu	5	A St	4	*
Benson	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1012.4	0	SSW	2	b	48	92	6	-	-	-	Ci St	2	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1013.5	0	S	3	b	49	92	6	-	-	-	A St	3	*
London (M.O. at 1H.)			*	*	*	52	*	*	*	*	*	*	*	*	1014.5	0	S	1	b c	49	92	6	2000	St	2	A St	2	*
Croydon														*	1015.8	0	S	3	c 1f	49	92	6	750	St	6	A St	2	*

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

STATIONS.	Barom. at M.S.L. mb.	Temp. °F.	Wind. Direc	Wind. Force 0-12.	Weather.	Barometer at M.S.L. mb.	Barometer ‡ Change in 3 hours.	Temperature. Temp. °F.	Temperature. Change in 24 hours.	Wind. Direc.	Wind. Force 0-12.	Direc. of Upper Cloud.	Weather.	Sea 0-9	Rainfall † mm.	Temp. Max. °F.	Temp. Min. °F.	Weather. Morning	Weather. Afternoon	Weather. Night.	Sunshine Hours.
	18H. G.M.T. of 24th					7H. G.M.T. of 25th									24 HOURS ENDED 7H. 25th						24th
Lerwick	996.5	42	SE	3	o m r	1004.9	+8	44	+2	N	5	-	b c	4	12	44	41	o p	o m r	o m r	*
Stornoway	991.9	39	SE	1	o f e	1002.4	+2	41	-1	-	0	-	o	2	9	43	34	o d p m	o p m	o	0.0
Castlebay (Barra Is)	993.9	51	W	5	o p	1000.1	0	50	+10	E	4	-	o p	4	5	52	40	r o p	o p b c p	c p o p	0.0
Malin Head	995.8	49	S	3	o m	997.1	-1	48	+7	SE	2	-	o f 2f	2	3	52	41	o	o p	o m p	1.2
Blacksod Point	997.0	52	SW	3	c m	991.8	-5	52	0	SE	4	-	o r m	4	19	55	45	o m	b o m	c o m r	*
Roche's Point	1003.3	51	SW	3	o f e	999.1	-4	52	0	SSE	5	-	o	5	10	53	50	f d o m c	o m d f e	f d o	*
Birr Castle	1001.2	48	S	1	o	997.5	*	53	+1	SE	4	-	o	*	7	53	47	o p o	o	o r o	0.0
Donaghadee	1000.0	51	WSW	2	b c m	1003.3	-2	51	+6	SW	2	-	o m	2	6	53	44	c m p	b c m	o m p	*
Liverpool (Bidston)	1003.6	51	SSE	3	o	1007.4	+1	50	+10	SE	2	-	o	3	7	53	40	o m	o p	o r	0.0
Holyhead	1003.1	51	SW	4	0 2f e	1005.2	-1	51	+1	S	5	-	o g	4	14	51	49	f c d r m	o r m f e	f e r o	0.0
Pembroke (St. Ann's Head)	1006.2	53	WSW	4	0 f 8f	1006.3	-2	50	-2	SE	4	-	o	4	6	53	50	o d m	o d m	o f r o m	0.0
Scilly (St. Mary's)	1007.4	54	SW	4	o	1005.1	-4	53	0	S	5	-	o	6	2	55	50	o d m	o m p q	c o	0.0
Jersey (St. Aubin)	1015.2	54	SW	5	o	1013.8	0	49	-5	SE	4	-	o	3	1	55	48	o r o	o p o	o b o	0.0
Portland Bill	1016.3	52	SW	6	o m r	1011.5	+2	49	+4	S	5	-	b c	6	3	53	47	o m r	o m r	o p b c	*
Dungeness	1010.7	51	SW	4	r	1015.5	+1	49	+2	SW	3	SW	b c	4	4	52	47	o r o	o d	o d p b	*
Wick	991.6	42	SW	6	o m p	1005.6	+6	36	-4	WNW	1	-	o m	2	3	43	35	o m q p	o m p q	o m p b c	*
Nairn	992.7	35	-	0	b c	1004.7	*	40	+6	-	0	-	o g	1	4	43	32	p r s r c	c b c	b c c p g	0.0
Leith	997.1	48	SW	3	c	1005.7	+1	44	+7	E	1	-	d m	1	5	51	37	o d m	o c p c	c g o d	*
Tynemouth	999.7	44	SW	3	0 3f e	1006.9	+3	45	+10	SW	2	-	0 2f	2	1	49	39	o m r	f e	o m	*
Spurn Head	1003.5	50	SW	5	o q p	1010.6	+2	49	+9	SSW	4	-	c	4	2	51	40	o m q r	o g	o r f e	*
Yarmouth (Roy Jetty)	1007.2	53	WSW	3	o	1014.5	+2	52	+11	WSW	4	-	c m	2	3	55	40	o m	o m r o m	o m d	0.0
Clacton-on Sea	1009.0	48	SW	3	c	1015.0	+2	46	+5	SSW	3	-	o g e	2	1	51	41	o g r m c	o g c o c	c m o g e	0.0
Nottingham	1005.2	54	SW	3	o	1011.6	*	51	+10	S	1	-	o	*	3	54	40	o p	r o	o p	0.0

* Information for these columns not usually received. ‡ The barometric change is expressed in half millibars. § For code see page 3. † See footnote p.4.

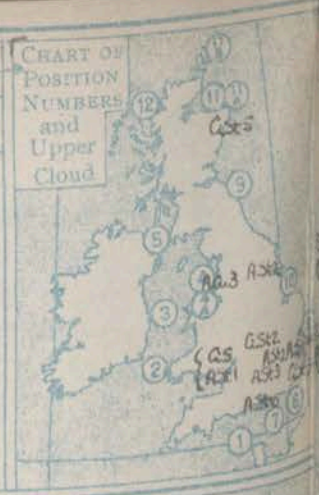
M.O. FORM 2370

SUMMARY OF CONDITIONS AT 7 h. G.M.T. 25. 12. 20.

Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Fair to cloudy.	Fair	Moderate
2. E. England	Cloudy	Good	Smooth
3. E. Midlands	Fair	Fair	-
4. W. Midlands	Fair	Fair	-
5. S.W. England	Fair to dull	Fair	Rough
6. South Wales	Dull	Good	Moderate
7. North Wales	Dull	Fair	Moderate
8. N.W. England	Dull, some mist	Indiff.	Slight
9. N. Midlands	Dull	Indiff	-
10. N.E. England	Dull, some mist.	Indiff	Slight
11. E. Scotland	Fair, misty; some drizzle	Poor	Smooth
12. S.W. Scotland	Dull, some rain.	Indiff.	Smooth
13. Isle of Man	Dull	Fair	Slight
14. N. & N.W. Scotland	Dull	Fair	Smooth
15. Hebrides	Dull	Fair	Smooth
16. Orkneys and Shetlands	Fair	Fair	Moderate
17. N.W. Ireland	Dull, rainy.	Indiff.	Moderate
18. N.E. Ireland	Dull, some rain	Fair	Smooth
19. S.E. Ireland	Dull	Indiff.	R. rough
20. S.W. Ireland	Dull	Fair	Rough

Temperature reported from Coastal and Cross Channel Steamers.

Position Number	Date	Time G.M.T	Sea °F	Air °F
5	24	0835	50	47
3	24	1000	51	53
7	25	0340	49	52
4A	25	0400	46	51
5	25	0825	50	52
12	25	0550	49	46



Barometric change from 4 h. to 7 h. (half millibars).

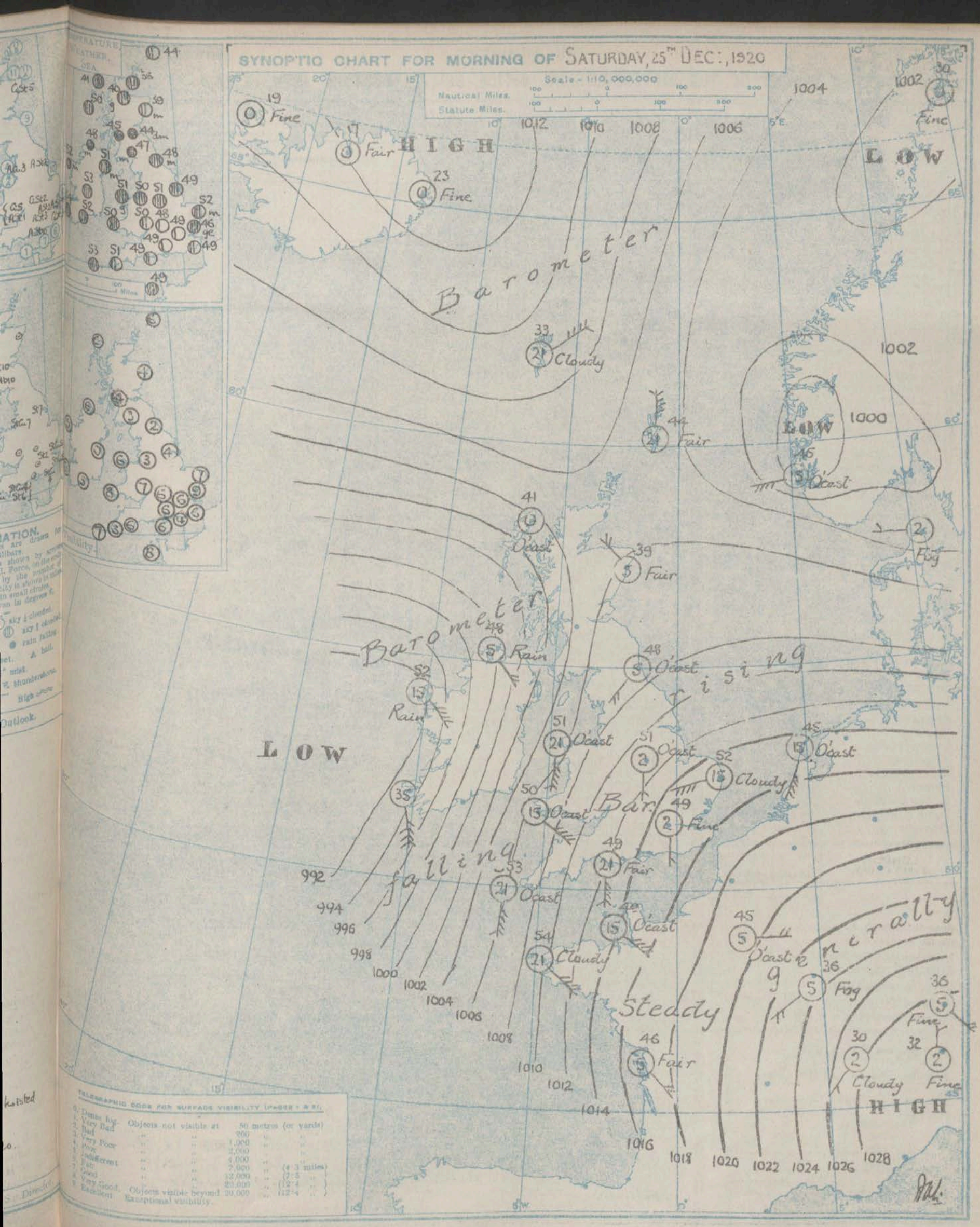
EXPLANATION.
BAROMETER.—Isobars are drawn for intervals of two millibars.
WIND.—Direction is shown by arrows flying with the wind. Force, on the scale 0–12, is indicated by the number of feathers. Mean velocity is shown in miles per hour by figures in small circles.
TEMPERATURE is given in degrees F.
WEATHER SYMBOLS.—
clear sky. sky ¼ clouded. sky ½ clouded. overcast sky. rain falling. snow. sleet. A hail. fog. mist. T thunder. thunderstorm.
SEA DISTURBANCE.—Rough. High.

GENERAL INFERENCE from observations received up to 9h.

A new depression off Western Ireland will cause mild weather with much cloud and some rain during the next day or two The wind will be mainly from SW or W, blowing strongly at times in all districts and probably reaching gale force in the West

Districts.	Forecasts for the 24 hours commencing 15 h. G.M.T. Saturday, 25th December 1920	Further Outlook.
1. S.E. England 2. E. England 3. E. Midlands 4. W. Midlands	Wind from between SW & W fresh to strong; much low cloud, some rain; visibility poor at times; mild.	
✦ 5. S.W. England ✦ 6. South Wales ✦ 7. North Wales ✦ 8. N.W. England	Gales or strong winds from between SW & W; much low cloud, some rain; visibility poor at times, mild.	Continuing mild with rain at times for a day or two, perhaps longer.
9. N. Midlands 10. N.E. England 11. E. Scotland	Same as 1 - 4	
✦ 12. S.W. Scotland ✦ 13. Isle of Man	Same as 5 - 8	
✦ 14. N. & N.W. Scotland ✦ 15. Hebrides 16. Orkneys and Shetlands	Moderate Southerly winds, veering and freshening later; much cloud, some rain; visibility poor at times; mild.	
✦ 17. N.W. Ireland ✦ 18. N.E. Ireland ✦ 19. S.E. Ireland ✦ 20. S.W. Ireland	Same as 5 - 8	✦ South Cone hoisted 0900 25. 12. 20.

Meteorological Office: Air Ministry, Kingsway, London, W.C.2. Forecasts issued at 10. 00 G. C. SIMPSON, F.R.S., Director.



TELEGRAPHIC CODE FOR SURFACE VISIBILITY (PHASE 1 & 2).

0. Dense fog	Objects not visible at	50 metres (or yards)	
1. Very Bad	" "	200 "	"
2. Bad	" "	1,000 "	"
3. Very Poor	" "	2,000 "	"
4. Poor	" "	4,000 "	"
5. Indifferent	" "	7,000 "	(4·3 miles)
6. Fair	" "	12,000 "	(7·5 ")
7. Good	" "	20,000 "	(12·4 ")
8. Very Good.	Objects visible beyond	20,000 "	(12·4 ")
9. Excellent	Exceptional visibility.		

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 360

SATURDAY 25th DEC.R 1920

WEATHER, TEMPERATURE RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 24th

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature Max. °F.	Temperature Min. °F.	Rainfall. Night 18h-9h. 23-24th	Rainfall. Day. 9h-18h. 24th	Sunshine. Sunrise to Sunset. 24th
Scotland.	Oban	or	oc	52	36	[illegible]	7	0.0
	Banff	oro	doc	40	27	0.2	1	0.0
	Montrose							
	St. Andrews	op	op	38	24	3	2	0.0
England, N.E.	Harrogate	f	fdo	49	32	6	1	0.0
	Scarborough	or	o	51	37	2	1	0.0
	Skegness							
England, E.	Lowestoft							
	Felixstowe	opm	om	51	31	6	-	0.0
	Southend-on-Sea	o	c	51	45	11	-	0.0
England, S.E.	Tunbridge Wells	od	od	53	36	5	1	0.0
	Margate	o	o	55	38	6	0.1	0.0
	Ramsgate	*	*	54	46	7	-	0.0
	Folkestone	roc	r	48	40	9	1	0.0
	Hastings	frm	mr	51	40	11	2	0.0
	Eastbourne	or	rd	54	41	16	1	0.0
	Brighton	od	od	51	41	14	2	0.0
	Worthing							
	Littlehampton	ocm	or	50	37	13	1	0.0
	Portsmouth (S'thsea)							
	Bournemouth	*	*					
	Ventnor (I. of W.)	*	*					
England, N.W.	Douglas (I.O.M.)							
	Blackpool	or	o	51	32	7	5	0.0
	Southport	o	oro	50	33	8	7	0.0
	Morecambe	-	-	51	34	4	2	0.0
Midlands.	Buxton							
	Leamington Spa							
	Malvern							
	Bath	ro	op	56	34	10	1	0.0
Wales.	Rhyl							
	Colwyn Bay							
	Llandudno	*	*	55	37	5	4	0.0
	Aberystwyth	ro	ro	51	42	7	3	0.0
	Tenby							
	Swansea							
England, S.W.	Weymouth	omd	d	54	43	9	2	0.0
	Teignmouth							
	Torquay	odr	odr	55	44	17	4	0.0
	Paignton	or	o.od.	55	43	14	5	0.0
	Penzance							
	Newquay							
	Bude	oeo	d	55	42	7	1	0.0
	Ilfracombe	or	or	55	45	11	3	0.0
	Weston-s-Mare							

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-13h 24th	13h-18h 24th	18h-24h 24th	18h-7h 25th	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall.† Day. 7h-18h	Rainfall.† Night. 18h-7h	Sun. Hours.
Renfrew	o3rr.o3r	o3ro4fp	o4fo(co)	co o2f	49	34	34	mm. ~~1.5~~	mm. trace	0.0
Eskdalemuir	rr r.f.	pd 4.5fe	r.o3f	dd rr	47	34	37	7	3	0.0
Valencia (Cahirc'n)	ro o1f	co o	o RR.	o pd	54	52	50	-	9	0.1
Baldonnel	rr q	bccq		o2fq rrq	54	49	46	2	4	0.0
Manchester (Ship Canal)	rro2f3fo1	o2frr o3f	o2f bcc RR.	o3fr co3f	53	42	44	4	4	*
Ross on Wye	or	r.f. o q	pd.rr oq	ocooq	55	49	43	2	3	0.0
Falmouth	odd dd	dd pd r		bcc	54	50	46	3	2	0.0
Calshot (Hants)	o2f dd	o2f DD.		o1f	53	46	45	2	0.2	0.0
Lympne (Folkestone)	d.d o4f3f5	d.d o2f3f		ddo o1f3f	52	45	44	3	1	0.0
Aberdeen	rr o2f	o2f pd	p.2fc	D.fc	45	36	32	5	0.1	0.0
Howden	o4-5 o	pd r		co.o	52	38	37	1	2	0.0
Cranwell (Lincs)	o1f	rr o		oro	54	37	48	1	1	00
Felixstowe	o2f o	o2f r		o1f c.o	51	41	8	1	-	0.0
Shoeburyness	r.o	o	o	ow	54	42	44	1	0.1	0.0
Benson	p.o	o	o	o	56	48	41	1	-	*
S. Farnborough	dd p	o2f pd	dd o2f	obbc b	54	48	45	0.4	0.1	0.0
London (Kew Obsy.)	o2f pd	o1f dd o2f	o1f	o1f bcc	54	47	41	1	trace	0.0
Croydon	o1f o Prr	o2f rr pd rro1f p	o1f d.d	o1f pd coif	56	48	*	1	trace	*

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, *i.e.*, rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. y hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:-
R = heavy rain.
rr = continuous moderate rain.
r.r. = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 30 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0·3
1	1- 3	0·3- 1·5
2	4- 7	1·6- 3·3
3	8-12	3·4- 5·4
4	13-18	5·5- 7·9
5	19-24	8·0-10·7
6	25-31	10·8-13·8
7	32-38	13·9-17·1
8	39-46	17·2-20·7
9	47-54	20·8-24·4
10	55-63	24·5-28·4
11	64-75	28·5-33·5
12	Above 75	33·6 or above

SYMBOLS—
Aurora ☆ Solar halo ⊕
Rime ⌅ Lunar halo ◐
Glazed frost ∽ Solar corona ◎
Glazed roads ⚒ Lunar corona ◎

LONDON. OBSERVATIONS.

	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Hours.	Humidity % 15 h. G.M.T.	Humidity % 9 h. G.M.T.
	24 Hours ended 9h G.M.T. 25th							Yesterday.		To-day.
Greenwich (Royal Observatory)	o	op	op	56	48	43	0.3	0.0	93	90
City (Bunhill Row)	*	*	*	*	*	*	*		*	*
Westminster (St. James's Park)	*	*								
Regents Pk. (Botanic Gdns)						*		0.0		
Camden Sq. (British Rainfall)	o	o.od or	*	56	49	42	2	*	98	84
Kensington Palace	o od	or.o	*	56	49	44	1	*	94(18h)	89
Hampstead Observatory	*	*	*						*	

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday

Total 158 Joules.

Milliwatts.
Average Rate. 5.6
Maximum Rate. 12.

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

25th & 26th DEC.R 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth	8.6 / 9.6	11.57 / 11.57	3.48 / 3.52
Greenwich	8.7 / 8.7	12.0 / 12.1	3.58 / 3.59
Wick	9.8 / 9.8	12.12 / 12.13	3.19 / 3.20
Valencia	8.57 / 8.57	12.37 / 12.44	4.23 / 4.33

Photographic Record of Pole Star (Polaris) and of δ Ursae Minoris at Greenwich Observatory.

Exposure from ..... h. ..... m.
to ..... h. ..... m.

Stars.	Duration of Exposure. h. m.	Duration of Record. h. m.	%
Polaris			
δ Ursae Minoris			

NOTES ON THE WEATHER OF YESTERDAY.

The temperature exceeded 50° over England and Ireland, and in the Southern part of the Hebrides, and touched 55° at many Southern stations.

Rain fell heavily, 19mm at Blacksod Point, 14 at Holyhead and 12 at Lerwick, being the largest totals.

There was an almost entire absence of bright sunshine.

* Information for these columns not usually received.

† Trace = rain has fallen but amount less than 0·1 mm.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. No. B21,584 ...Sunday, 26th DECEMBER... 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

STATIONS.	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind. Direc.	Wind. Force 0-12.	Weather	Temp. °F.	Humidity. %	§ Visibility 0-9.	Height of Low Cloud. Feet.	Low Cloud. Form.	Low Cloud. Amt. 0-10.	Upper Cloud. Form.	Upper Cloud. Amt. 0-10.	Sea 0-9.
	13H. G.M.T. 25th													
Renfrew	1003·0	-2	SE	3	oif	51	85	7	3,000	StCu	7	aSt	3	*
Eskdalemuir	1004·7	-1	SSE	3	oif	49	92	6	-	St	10	-	-	*
Valencia (Cahirc'n)	987·6	-5	SSE	7	o	55	85	6	2,000	St	9	-	-	4
Baldonnel	997·5	-4	SSW	7	c	55	75	6	4,250	StCu	8	-	-	*
Manchester (Alex. Pk.)	1007·4	-2	SSE	5	o2f	51	85	4	4,200	StCu	7	aSt	3	*
Ross on Wye	1008·9	-3	S	3	o	52	85	7	-	-	-	aSt	9	*
Falmouth	1008·3	-3	S	6	c2fq	56	75	5	-	StCu	7	-	-	*
Calshot (Hants) *	1011·9	-3	SE	3	o	49	85	7	2,000	St	3	A.St	7	2
Lympne (Folkestone)	1015·8	-1	S	4	o	49	85	8	5,700	StCu	2	CiSt	8	*
Aberdeen	1006·5	-2	SE	2	or2-3f	46	97	4	1,250	Nb	10	-	-	2
Howden	1009·1	-2	SSW	3	omq	50	92	5	3,000	StCu	5	A.St	4	*
Cranwell (Lincs)	1010·8	-1	S	4	o	50	92	7	4,200	StCu	7	aSt	2	*
Felixstowe	1014·7	-2	S	4	oif	47	92	6	3,000	Cu	4	A.St	6	*
Shoeburyness	1013·6	-2	SSW	2	c	49	85	7	3,000	StCu	4	A.Cu	3	*
Benson	1011·1	-2	S	2	bc	51	85	6	-	-	-	CiSt	5	*
S. Farnborough	1011·8	-3	S	2	o	52	85	7	-	-	-	A.St	9	*
London (Kew Obsy.)	1012·5	-2	S	3	c2f	53	75	5	-	~~CuNb~~	~~2~~	CiSt	8	*
Croydon	1013·2	-2	SSW	4	oif	52	85	6	-	-	-	ASt	10	*
	1H. G.M.T. OF 26th													
Renfrew														*
Eskdalemuir														*
Valencia (Cahirc'n)	999·0	+10	SSW	7	om	50	*	*	*	*	*	*	*	2
Baldonnel														*
Manchester (Alex. Pk.)	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ross on Wye	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Falmouth														*
Calshot (Hants)														
Lympne (Folkestone)														*
Aberdeen	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Howden														*
Cranwell (Lincs)														*
Felixstowe	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Shoeburyness	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Benson	*	*	*	*	*	*	*	*	*	*	*	*	*	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*
London (M.O. at 1H.)														*
Croydon														*

STATIONS.	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind. Direc.	Wind. Force 0-12.	Weather	Temp. °F.	Humidity. %	§ Visibility 0-9.	Height of Low Cloud. Feet.	Low Cloud. Form.	Low Cloud. Amt. 0-10.	Upper Cloud. Form.	Upper Cloud. Amt. 0-10.	Sea 0-9.
	18H. G.M.T. OF 25th													
Renfrew	999·3	-4	SE	5	o	51	86	6	3,000	St	9	-	-	*
Eskdalemuir	1002·1	-3	SSE	4	or2-3f	46	92	3	-	Nb	10	-	-	*
Valencia (Cahirc'n)	990·6	+4	SSW	8	o	52	75	6	2,000	StCu	10	-	-	5
Baldonnel	996·1	0	S	7	o8-2-3f	54	75	4	750	St	4	aSt	5	*
Manchester (Alex. Pk.)	1005·9	-2	SSE	5	o2f	52	92	4	4,200	StCu	6	aSt	3	*
Ross on Wye	1007·5	-3	S	5	o	52	75	7	-	-	-	aCu	10	*
Falmouth	1005·8	0	SSW	8	o2fq	55	85	4	-	St	10	-	-	*
Calshot (Hants) *	1012·5	0	SE	4	c1f	49	85	6	4,200	St	8	-	-	2
Lympne (Folkestone)	1015·1	0	SSE	4	c	46	97	6	-	-	-	aSt	8	*
Aberdeen	1003·3	-4	SE	4	or2-3f	47	97	4	1,250	Nb	10	-	-	2
Howden	1007·3	-1	S	5	o2f	48	92	4	2,000	St	5	aSt	5	*
Cranwell (Lincs)	1010·0	-1	SSE	4	o1f	47	92	6	-	-	-	aSt	10	*
Felixstowe	1014·8	0	S	3	c1f	45	92	6	3,000	Cu	2	aSt	6	*
Shoeburyness	1014·1	+1	S	3	c	46	85	7	3,000	StCu	7	-	-	*
Benson	1011·2	0	S	3	bc	48	85	6	-	-	-	CiSt	5	*
S. Farnborough	1012·4	+1	SSE	3	o	47	92	6	2,000	St	10	-	-	*
London (Kew Obsy.)	1012·9	0	S	3	o2f	49	85	4	3,000	St	3	aCu	6	*
Croydon	1013·4	+1	S	5	o1f	48	85	6	-		-	aSt	10	*
	7H. G.M.T. OF 26th													
Renfrew	1001·6	+4	SW	5	orqm	49	92	6	2,000	CuNb	9	-	-	*
Eskdalemuir	1002·6	+2	SSW	6	or2-3f	46	97	4	750	Nb	10	-	-	*
Valencia (Cahirc'n)	1002·3	+1	S	4	c	50	85	7	2,000	Cu	7	-	-	*
Baldonnel	1005·0	+5	SSW	1	o1f	50	85	7	4,200	StCu	3	Ci	5	*
Manchester (Alex. Pk.)	1009·0	+3	S	4	b2f	48	85	4	3,000	StCu	3	-	-	*
Ross on Wye	1011·4	+3	SW	2	cW	49	85	7	3,000	StCu	6	Ci	1	*
Falmouth	1010·7	0	SW	3	bc	50	92	7	-	-	-	-	-	*
Calshot (Hants)	1014·9	+3	S	4	o1f	47	92	6	3,000	StCu	1	-	-	3
Lympne (Folkestone)	1015·5	0	SSW	4	o1f	45	97	6	-	-	-	CiSt	1	*
Aberdeen	1001·0	+2	SSE	1	o1f	48	85	6	1,250	St	10	-	-	2
Howden	1009·3	+1	S	4	bmq	44	97	5	3,000	St	2	aSt	1	*
Cranwell (Lincs)	1011·2	+2	S	3	b	44	97	7	-	-	-	aSt	1	*
Felixstowe	1015·1	+1	SSW	3	c1f	44	92	6	4,200	StCu	6	aSt	2	1
Shoeburyness	1014·3	0	-	0	bw	45	85	7	4,200	StCu	1	Ci	2	*
Benson	1012·9	+1	SSW	3	bc	47	92	6	-	Cu	5	-	-	*
S. Farnborough	1014·3	+2	S	2	c	47	92	7	3,000	St	7	-	-	*
London (M.O. at 1H.)	1014·3	+2	SSW	3	bcw	47	92	6	-	-	-	aSt	4	*
Croydon	1015·0	+1	S	4	c1f	47	92	7	2,000	StCu	3	CiSt	5	*

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

STATIONS.	Barom. at M.S.L. mb.	Temp. °F.	Wind. Direc.	Wind. Force 0-12.	Weather	Barometer. at M.S.L. mb.	Barometer. ‡ Change in 3 hours.	Temperature. Temp. °F.	Temperature. Change in 24 hours.	Wind. Direc.	Wind. Force 0-12.	Direc. of Upper Cloud.	Weather.	Sea 0-9.
	18H. G.M.T. of 25th					7H. G.M.T. of 26th								
Lerwick	1007·7	44	SE	6	omq	994·9	-8	50	+6	S	6	S	omrq	5
Stornoway	993·5	48	S	5	orm	994·5	+5	51	+10	S	5	-	orqq	4
Castlebay (Barra)	990·7	51	ESE	5	or	994·2	+4	52	+2	SW	4		o	5
Malin Head	987·2	51	SE	5	o	999·3	+3	48	0	SSW	3	S	c	3
Blacksod Point	980·7	55	S	7	cqp	1000·3	+8	50		SW	3		bc	4
Roche's Point	995·9	53	SSW	6	c	1005·6	+1	50	-2	SSE	4	-	o	5
Birr Castle	992·3	54	SSE	4	o	1003·8	*	45	-8	SSE	1	-	b	*
Donaghadee	998·4	53	SW	3	om	1004·6	+7	45	-6	S	1	-	b	?
Liverpool (Bidston)	1003·6	50	ESE	4	o	1007·3	+3	50	0	SSW	3	b	SW	3
Holyhead	999·7	52	S	7	o	1005·2	+2	50	+1	SW	5	SW	bcW	4
Pembroke (St. Ann's Head)	1002·9	53	S	5	o	1009·4	+3	51	-2	SSW	4	-	b1f	4
Scilly (St. Mary's)	1003·3	54	SSW	5	c1f	1008·7	+1	52	-1	S	2	-	b1f	4
Jersey (St. Aubin)	1013·7	49	SE	3	c	1015·5	0	49	0	S	3	-	b	3
Portland Bill	1010·7	50	SSE	6	c	1012·9	+2	49	0	SSW	6	-	c	6
Dungeness	1014·3	49	SSW	3	b	1014·9	0	48	-1	SW	2	SW	bc	3
Wick	1001·0	46	ESE	8	omrq	996·8	+5	47	+9	SSW	4	-	om	3
Nairn	998·1	50	SSW	1	o	998·0	*	48	+8	WSW	1	-	cg	1
Leith	1000·5	51	SSW	2	o	1000·3	+1	50	+6	SW	3	SW	c	2
Tynemouth	1004·8	49	SSW	4	o2f	1004·1	0	49	+1	SW	3	-	b1f	3
Spurn Head	1008·2	46	SSW	5	om	1001·5	+3	43	-6	S	3	-	bw	3
Yarmouth (Gor. Terrace)	1014·6	47	SSW	4	c	1013·5	+1	48	-4	WSW	3	-	bc	1
Clacton-on Sea	1014·0	47	SSW	3	c	1014·3	+1	44	-2	SSW	3	SW	bcE	2
Nottingham	1008·4	50	S	4	c	1010·7	*	49	-2	S	3	S	bc	*

STATIONS.	‡ Rainfall mm.	Temp. Max. °F.	Temp. Min. °F.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Sunshine Hours.
	24 HOURS ENDED 7H. 26th						25th
Lerwick	5	51	43	c	omq	omrq	*
Stornoway	8	55	51	or	or	ot.opq	0·0
Castlebay (Barra)	5	53	49	opd	dr	rorr	0·0
Malin Head	1	55	42	om	omp	om	0·0
Blacksod Point	6	54	48	cp	cqp	c	*
Roche's Point	1	54	50	om	ompc	c.od.o	*
Birr Castle	3	55	44	oqp	oq	oqpb	0·0
Donaghadee	-	53	?	cm	om	bcmq	*
Liverpool (Bidston)	-	53	49	cm	cm	o.bc	0·5
Holyhead	3	54	48	o.c.v.o	ou.cq	o.cqp.c	0·0
Pembroke (St. Ann's Head)	-	54	50	o	o	o.c.bcm	0·1
Scilly (St. Mary's)	-	57	51	o.cmq	c.om.c	c.b	0·0
Jersey (St. Aubin)	-	50	48	o	o.c	o.c.bc	0·0
Portland Bill	0·2	53	47	bc.c	c	c.cp	*
Dungeness	-	50	47	bc	bc	bc	*
Wick	2	50	35	omp	orq	omqr	*
Nairn	1	51	38	odgp	gfm	og.c	0·0
Leith	6	54	44	dm.o.c	o.cdo	odcq.c	*
Tynemouth	-	50	47	om	om	bcm	*
Spurn Head	-	49	37	cu	ou	c.b.bcm	*
Yarmouth (Gor. Terrace)	-	52	44	cm	cm	cm	0·0
Clacton-on Sea	-	47	43	ogce	bc.c	c.bcg	0·0
Nottingham	-	52	47	om	c.o	c.bc	0·0

* Information for these columns not usually received. ‡ The barometric change is expressed in half millibars. § For code see page 3. † See footnote p. 4.

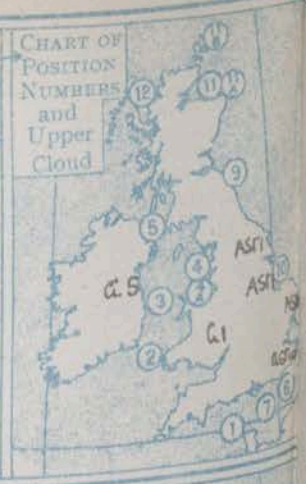
M.O. FORM 2370

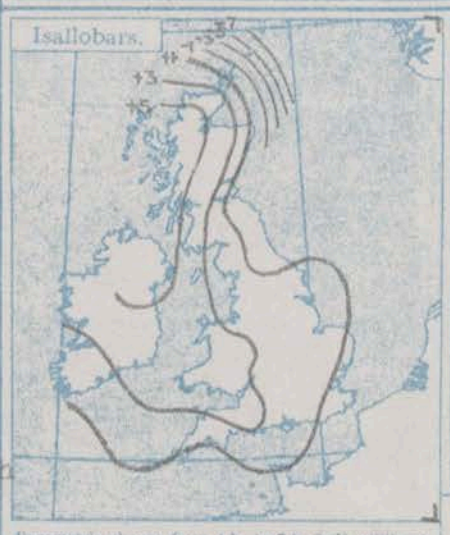
SUMMARY OF CONDITIONS AT 7 h. G.M.T. 26.12.30

Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Fair.	Fair	Slight
2. E. England	Fair.	Good	Smooth
3. E. Midlands	Fair.	Fair	–
4. W. Midlands	Fair.	Good	–
5. S.W. England	Fine to cloudy.	"	R Rough
6. South Wales	Fine.	"	Mod.
7. North Wales	Fair.	"	"
8. N.W. England	Fair, some mist.	Fair	Slight
9. N. Midlands	Fair, some mist.	indiff.	–
10. N.E. England	Fine, misty.	Fair	Slight
11. E. Scotland	Cloudy, misty.	"	Smooth
12. S.W. Scotland	Dull, some rain.	indiff.	Slight
13. Isle of Man	Fair.	Good	"
14. N.&N.W. Scotland	Dull, mist.	indiff.	"
15. Hebrides	Dull, showery.	"	mod.
16. Orkneys and Shetlands	Squally, some rain.	Poor	Slight
17. N.W. Ireland			
18. N.E. Ireland	Fine to cloudy.	Good	Slight
19. S.E. Ireland	Dull.	indiff	R.Rough
20. S.W. Ireland	Cloudy.	Good	mod.

Temperature reported from Coastal and Cross Channel Steamers.

Position Number	Date	Time G.M.T.	Sea °F	Air °F





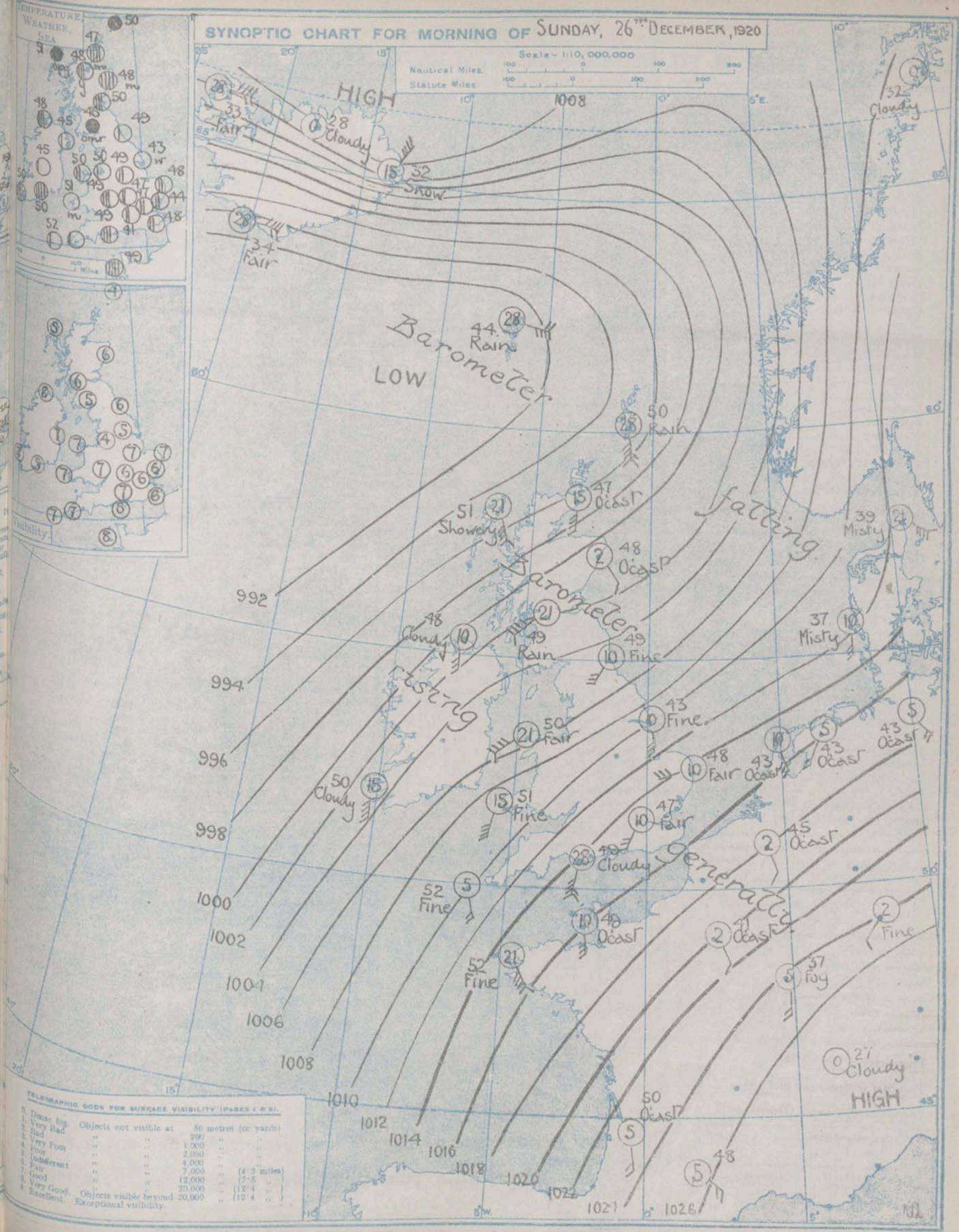
Barometric change from 4 h. to 7 h. (half millibars)

EXPLANATION.
BAROMETER.—Isobars are drawn to intervals of two millibars.
WIND.—Direction is shown by arrows flying with the wind. Force, on the scale 0-12, is indicated by the number of feathers. Mean velocity is shown in miles per hour by figures in small circles.
TEMPERATURE is given in degrees F.
WEATHER SYMBOLS.—
clear sky. sky ¼ clouded. sky ½ clouded. overcast sky. snow. sleet. rain. hail. fog. mist. thunder. thunderstorm.
SEA DISTURBANCE.—Rough. High.

GENERAL INFERENCE from observations received up to 9h. G.M.T.

Atlantic depressions will cause mild weather with rain at times in most districts during the next day or two the wind remaining South-westerly and the weather continuing very mild.

Districts.	Forecasts for the 24 hours commencing 15 h. G.M.T. Sunday, 26th December, 1930	Further Outlook.
1. S.E. England 2. E. England 3. E. Midlands 4. W. Midlands 5. S.W. England	Moderate to fresh S to SW wind; fair at first, some rain later; visibility mainly good; mild.	Mild with rain at times
6. South Wales 7. North Wales 8. N.W. England 9. N. Midlands	Wind SW, strong at times; much cloud, some rain; visibility mainly good; mild.	
10. N.E. England	Same as 1 – 5	
11. E. Scotland 12. S.W. Scotland 13. Isle of Man 14. N.&N.W. Scotland 15. Hebrides 16. Orkneys and Shetlands 17. N.W. Ireland	Wind S to SW, strong at times; much cloud, some rain; visibility fair; mild.	
18. N.E. Ireland 19. S.E. Ireland 20. S.W. Ireland	Same as 6 – 9	


SYNOPTIC CHART FOR MORNING OF SUNDAY, 26TH DECEMBER, 1920
Scale - 1:10,000,000
Nautical Miles
Statute Miles
TEMPERATURE
WEATHER
SEA
Visibility
HIGH
1008
Fair
Cloudy
Snow
Rain
LOW
Barometer
falling
Showery
Ocasl
Misty
Fine
Fair
Cloudy
Fog
992
994
996
998
1000
1002
1004
1006
1008
1010
1012
1014
1016
1018
1020
1022
1024
1026
TELEGRAPHIC CODE FOR SURFACE VISIBILITY (PAGES 1 & 2).
0. Dense fog. Objects not visible at 50 metres (or yards)
1. Very Bad " " 200 " "
2. Bad " " 1,000 " "
3. Very Poor " " 2,000 " "
4. Poor " " 4,000 " "
5. Indifferent " " 7,000 " (4·3 miles)
6. Fair " " 12,000 " (7·5 "
7. Good " " 20,000 " (12·4 "
8. Very Good. Objects visible beyond 20,000 " (12·4 "
9. Excellent. Exceptional visibility.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 364.

Sunday 26th DECEMBER.

WEATHER, TEMPERATURE, RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 25th

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 24-25th	Rainfall. Day. 9h-18h. 25th	Sunshine. Sunrise to Sunset. 25th
Scotland.	Oban	o	o	53	47	4	-	0·0
	Banff	odr	do	48	37	-	0·4	0·0
	Montrose							
	St. Andrews							
England, N.E.	Harrogate	o	o	49	37	3	-	0·0
	Scarborough							
	Skegness							
England, E.	Lowestoft							
	Felixstowe	o	og	46	39	-	-	0·5
	Southend-on-Sea							
England, S.E.	Tunbridge Wells	c.o.c.	c.o.bc	52	47	1	-	0·0
	Margate	c	c	52	49	0.1	-	0·0
	Ramsgate	*	*					
	Folkestone							
	Hastings	o.c.o	bo.cu.	51	47	1	-	0·5
	Eastbourne	c.bc.c	o.c	51	47	1	-	0·8
	Brighton							
	Worthing	bc.	bc	50	47	1	-	0·2
	Littlehampton							
	Portsmouth (S'thsea)							
	Bournemouth	*	*					
	Ventnor (I. of W.)	*	*					
England, N.W.	Douglas (I.O.M.)							
	Blackpool	o.	o	51	42	3	-	0·0
	Southport							
	Morecambe							
Midlands.	Buxton							
	Leamington Spa	c.b.	o	52	47	4	-	0·5
	Malvern							
	Bath	c.	c.bc.o	55	50	1	-	1·1
Wales.	Rhyl							
	Colwyn Bay							
	Llandudno	*	*	59	40	7	-	1·5
	Aberystwyth							
	Tenby							
	Swansea							
England, S.W.	Weymouth	c.	c	53	47	1	-	0·0
	Teignmouth							
	Torquay	o	co	55	52	2	-	0·4
	Paignton	o	o.odp.	56	43	*1	1	0·1
	Penzance							
	Newquay							
	Bude	?	?	59	51	2	-	2·9
	Ilfracombe	o.c.bc	bc.c.o	57	51	5	-	1·5
	Weston-s-Mare							

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-13h 25th	Weather. 13h-18h 25th	Weather. 18h-1h 26th	Weather. 1h-7h 26th	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall.† Day. 7h-18h mm.	Rainfall.† Night. 18h-7h mm.	Sun. Hours.
Renfrew	03fr 02fq	02fr.oq	oq bc e	bc.oq	54	44	44	4	0·3	0·0
Eskdalemuir	03f 01f	or		01fr.	50	45	44	2	1	0·0
Valencia (Cahire'g)	01fp.a	opo	opo	o.o.c.o	56	48	45	2	1	0·0
Baldonnel	01f co	ro		o.o1f	56	48	40	02	1	0·0
Manchester (Alex Pk)	03f.o.02f	02f.c.o	o.02f bc 02f	b.bc 02f	53	48	42	-	-	·x
Ross on Wye	bc.c.c.o	c.oq.	oq ro q	c.o.bc.c	53	49	42	-	1	0·4
Falmouth	bc c 2f	c.02f? 02f		c.o.b.bc	56	49	46	-	-	1·5
Calshot (Hants)	01f.c.o.	c.o1f.		o1f.	52	44	44	-	-	0·1
Lympne (Folkestone)	01f.c.o.	01fc.01f		c.of.01f	51	45	42	-	trace	0·5
Aberdeen	2fe ro ro	ra ro 02f		2fe 1fr ro 02f	49	38	43	3	1	0·0
Howden	q.o	2fcq.		b.bcq	51	44	39	-	-	0·0
Cranwell (Lincs)	01f.o	o		c.obcbcc	51	42	40	-	0·1	0·0
Felixstowe	01f.c.o	01f.c.o		1f.c.o	48	43	*	-	-	0·7
Shoeburyness	o.c.o.	c.o.o.o	bc.c.c.o	bc.c.b.bc	49	43	36	-	-	0·6
Benson	b.bc.b.bc	b.bc.b.bc	b.bc.b.bc	b.bc.b.bc	52	47	41	-	-	*
S. Farnborough	b.bc.o	bc.c.c.o	bc.c	b.bc	52	47	44	-	trace	0·3
London (Kew Obsy.)	02f 2f	o.02f	c.o.02f	b.bc.w.	53	47	36	-	trace	0·0
Croydon	c.o1f 01f.	01f.01f.		c.o.c.01f	52	47	*	-	-	·x

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
ra sleet, *i.e.*, rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:-
R = heavy rain.
rr = continuous moderate rain.
r.r. = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 30 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0·3
1	1- 3	0·3- 1·5
2	4- 7	1·6- 3·3
3	8-12	3·4- 5·4
4	13-18	5·5- 7·9
5	19-24	8·0-10·7
6	25-31	10·8-13·8
7	32-38	13·9-17·1
8	39-46	17·2-20·7
9	47-54	20·8-24·4
10	55-63	24·5-28·4
11	64-75	28·5-33·5
12	Above 75	33·6 or above

SYMBOLS—

Aurora ☆ Solar halo ⊕
Rime ⌶ Lunar halo ⊕
Glazed frost ~ Solar corona ⊕
Glazed roads ⚒ Lunar corona ⊕

LONDON. OBSERVATIONS.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Hours.	Humidity % 15 h. G.M.T.	Humidity % 9 h. G.M.T.
	24 HOURS ENDED 9h G.M.T. 26th							YESTERDAY.		TO-DAY.
Greenwich (Royal Observatory)	o.c.bc	c.bc.	c. ⊕	53	46	38	-	0·0	84	89
City (Bunhill Row)	*	*	*	*	*	*	*		*	*
Westminster (St. James's Park)	*	*	*							
Regent's Park (Botanical Gdns)	*	*	*	*	*	*	*	0·0	*	*
Camden Sq. (British Rainfall)	?	?	*	53	46	39	-	*	?	92
Kensington Palace	c.o.	c.	*	54	47	41	-	*	81 (18h)	92
Hampstead Observatory	*	*	*						*	

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday.

Total 135 Joules.

	Milliwatts.
Average Rate.	4·8
Maximum Rate.	12

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

26th AND 27th DECEMBER 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth	8. 6 / 8. 6	11.54 / 11.54	3.42 / 3.43
Greenwich	8. 7 / 8. 8	12. 1 / 12. 1	3.54 / 3.55
Wick	9. 5 / 9. 5	12.13 / 12.13	3.20 / 3.21
Valencia	8.31 / 8.31	12.42 / 12.42	4.33 / 4.34

Photographic Record of Pole Star (Polaris) and of δ Ursae Minoris at Greenwich Observatory.

Exposure from ..... h ..... m.
to ..... h ..... m.

Stars.	Duration of Exposure. h. m.	Duration of Record. h. m.	%
Polaris			
δ Ursae Minoris			

NOTES ON THE WEATHER OF YESTERDAY.

Rain fell in the West and North, 8mm at Stornoway, 6mm at Leith and 5 mm at Lerwick.

The temperature reached 56° at several places and even 59°. at Bude and Llandudno.

There was again a general deficiency of bright sunshine.

* Information for these columns not usually received.

† Trace = rain has fallen but amount less than 0·1 mm.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. No.B.26,585 Monday, 27th December.....1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

13H. G.M.T. 26th

Stations	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	§ Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew	1007·2	+4	SSW	4	c	49	85	6	2,000	StCu	2	Ci St	6	*
Eskdalemuir	1008·2	+4	SSW	4	o	47	92	7	–	St	10	–	–	*
Valencia (Cahirc'n)	999·0	-5	SE	6	c	53	75	8	2,000	StCu	7	A.St	1	4
Baldonnel	1006·5	-1	S	4	oif	65	75	7	750	St	8	–	–	*
Manchester (Alex Pk)	1010·9	0	S	4	c2f	53	75	5	–	–	–	Ci	7	*
Ross on Wye	1011·8	-1	SSW	3	c	53	85	7	2,000	StCu	6	Ci	2	*
Falmouth	1008·6	-4	SSE	3	c2fe	52	92	4	–	CuNb	7	–	–	*
Calshot (Hants)	1013·9	-2	ESE	2	oif	~~53~~ 52	85	6	–	–	–	a.St	9	1
Lympne (Folkestone)	1015·6	0	S	3	bcm	49	92	6	1,250	St	1	a.Cu	4	*
Aberdeen	1005·5	+4	SSW	3	bif	50	75	7	–	–	–	–	–	2
Howden	1011·4	+1	SSW	2	cq/m	51	92	6	3,000	St	4	Ci St	4	*
Cranwell (Lincs)	1012·5	0	SW	3	o	53	85	7	4,200	Cu	1	CiSt	8	*
Felixstowe	1015·5	-2	S	3	bcif	47	92	7	–	–	–	a.St	5	*
Shoeburyness	1014·9	-1	SSW	1	bife	47	85	6	–	–	–	a.Cu	2	*
Benson	1012·7	0	S	2	b	54	75	5	–	–	–	–	–	*
S. Farnborough	1013·6	-2	WNW	2	b	56	92	7	–	–	–	–	–	*
London (Kew Obsy.)	1013·9	-4	S	2	b2f	53	75	4	–	–	–	–	–	*
Croydon	1014·6	-2	S	3	b2f	55	85	5	–	–	–	a.St	1	*

18H. G.M.T. OF 26th

Stations	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	§ Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew	1007·7	0	ESE	2	oif	46	85	6	3,000	StCu	8	A.St	2	*
Eskdalemuir	1009·2	0	S	2	b	42	92	6	–	StCu	2	A.St	1	*
Valencia (Cahirc'n)	990·9	-10	S	7	or₀	54	75	7	1,250	St	10	–	–	4
Baldonnel	1003·2	-5	SSE	4	o2f	50	85	5	1,250	St	10	–	–	*
Manchester (Alex Pk)	1009·8	-3	E	2	b2f	45	85	3	4,200	StCu	1	–	–	*
Ross on Wye	1009·0	-4	ESE	2	o	49	85	7	2,000	Nb	3	A.St	6	*
Falmouth	1002·6	-5	SE	5	or₀2,3f	51	92	5	–	Nb	10	–	–	*
Calshot (Hants)	1010·2	-5	ESE	4	cif	46	97	6	4,200	St	8	–	–	3
Lympne (Folkestone)	1011·9	-4	SSE	5	bcm	47	92	6	–	–	–	Ci St	4	*
Aberdeen	1008·5	+2	NW	1	bc2fe	44	92	4	–	–	–	A.St	6	2
Howden	1011·5	-1	S	1	om	41	97	6	<750	St	4	A.St	6	*
Cranwell (Lincs)	1012·6	-1	SE	2	bc	40	97	2	–	–	–	Ci St	6	*
Felixstowe	1017·4	-2	SSE	2	b2f	43	97	5	–	–	–	A.St	2	1
Shoeburyness	1012·8	-2	SSW	2	b	43	85	7	4,200	StCu	1	Ci	1	*
Benson	1010·3	-2	S	2	b	48	92	5	–	Cu	2	–	–	*
S. Farnborough	1011·1	-5	SE	2	bif	47	92	5	2,000	St	3	–	–	*
London (Kew Obsy.)	1011·5	-5	SE	1	b2f	48	92	4	–	–	–	A.Cu	1	*
Croydon	1011·7	-6	S	3	bc2f	49	85	4	2,000	St	2	A.St	3	*

1H. G.M.T. OF 27th

Stations	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	§ Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew														
Eskdalemuir	1004·1	-4	NNE	1	or2,3f	41	92	4	2,000	Nb	10	–	–	*
Valencia (Cahirc'n)	982·2	-12	SE	7	omqr	51	*	*	*					6
Baldonnel	994·8	-10	SE	5	or₀q	~~48~~ 49	85	4	750	~~CuNb~~ St	~~3~~ 6	~~Cu~~ Nb	~~6~~ 4	*
Manchester (Alex Pk)	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ross on Wye	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Falmouth	997·8	-2	S	6	o	53	85	7	–	StCu	10	–	–	*
Calshot (Hants)	1003·6	-4	SE	3	oif	47	85	6	–	–	–	A.St	10	3
Lympne (Folkestone)	1007·3	-5	S	4	cm	46	~~97~~ 92	6	–	–	–	Ci.St	8	*
Aberdeen	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Howden	1005·0	-6	ESE	3	o	43	97	5	3,000	StCu	10	–	–	*
Cranwell (Lincs)	1007·3	-1	SE	3	bcif	41	97	4	3,000	St	1	A.Cu	3	*
Felixstowe	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Shoeburyness	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Benson	*	*	*	*	*	*	*	*	*	*	*	*	*	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*
London (M.O. at 1H.)	1004·9	-5	*	*	*	45	*	*	*	*	*	*	*	*
Croydon	1005·4	-6	S	5	oifq	47	85	6	3,000	St	4	A.St	6	*

7H. G.M.T. OF 27th

Stations	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	§ Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew	995·8	-5	ENE	3	od2f	46	92	4	–	–	St	10	–	*
Eskdalemuir	997·4	-5	E	3	or₀2,3f	46	85	4	1,250	Nb	10	–	–	*
Valencia (Cahirc'n)	989·0	+16	SW	6	bc	50	65	8	4,200	Cu	6	–	–	*
Baldonnel	989·5	-4	SSE	6	orq	50	85	3	750	St	10	–	–	*
Manchester (Alex Pk)	998·2	-5	SE	3	o2f	47	85	3	750	St	10	–	–	*
Ross on Wye	998·9	-3	SW	5	or₀q	51	92	6	1,250	Nb	10	–	–	*
Falmouth	1000·4	+6	SW	6	b	51	85	8	–	–	–	–	–	*
Calshot (Hants)	1003·4	0	SSW	5	oif	49	97	7	750	St	10	–	–	4
Lympne (Folkestone)	1004·5	-2	SSW	5	oifq	48	97	6	1,250	St	10	–	–	*
Aberdeen	1002·1	-6	SE	4	or₀2,3f	46	97	5	1,250	Nb	10	–	–	3
Howden	999·6	-2	S	1	o	41	97	4	750	St	10	–	–	*
Cranwell (Lincs)	1000·6	-6	S	4	o2f	41	97	4	2,000	StCu	10	–	–	*
Felixstowe	1005·0	-2	S	4	or	45	97	6	1,250	Nb	10	–	–	3
Shoeburyness	1003·7	-1	SW	1	cw	48	85	7	3,000	StCu	7	–	–	*
Benson	1001·3	-3	S	5	o	48	97	5	–	–	–	–	–	*
S. Farnborough	1002·3	-1	SSW	4	o2f	49	97	5	<600	St	10	–	–	*
London (M.O. at 1H.)	1002·7	-1	SSW	3	o	50	~~97~~ 92	7	1,250	StCu	8	A.St	2	*
Croydon	1004·2	0	SSW	4	or₀2f	49	97	5	750	Nb	10	–	–	*

Margin notes: 1·2 (Renfrew, 18H.); 52/ (Calshot, 18H.); 1/ (Cranwell, 18H.); 1014.6/ (Croydon, 18H.); /4; 1/

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

Stations	18H. 26th Barom. at M.S.L. mb.	Temp. °F.	Wind Direc.	Wind Force 0-12	Weather	7H. 27th Barometer at M.S.L. mb.	‡ Change in 3 hours	Temp. °F.	Change in 24 hours	Wind Direc.	Wind Force 0-12	Direc. of Upper Cloud	Weather	Sea 0-9	24 hours ended 7H. 27th † Rainfall mm.	Max. °F.	Min. °F.	Weather Morning	Afternoon	Night	Sunshine Hours 26th
Lerwick	1005·9	49	SW	3	bc	1006·7	-3	44	-6	–	0	–	b	0	0·2	50	43	o	c	c b	*
Stornoway	1003·8	48	SW	2	b	995·6	-7	47	-4	S	4	–	oq	4	1	51	47	op.c	c.b.	bc.e.og	0·5
Castlebay (Barrals)	1004·0	49	ESE	4	bc	991·8	?	50	-2	E	4		o	4	1	52	48	o bc	co bc	bco p₀	0·0
Malin Head	1001·4	46	SSW	3	bc	985·9	-5	48	0	ESE	5	–	o2f	4	1	49	44	c	c	oq/p om	2·0
Blacksod Point	996·1	50	SE	2	bc	984·4	-2	40		SE	3	–	c	4	1	60	48	bc	bc	bc	*
Roche's Point	996·1	51	SE	6	o	992·3	+9	50	0	WSW	5	–	b	5	6	52	50	o.c.om	op.o	od.b	*
Birr Castle	999·3	51	SE	2	o	986·6	*	51	+6	S	4	–	o	*	2	52	44	c	op	oq/p	1·7
Donaghadee	1006·8	49	S	2	bcm	993·2	-3	49	+4	SSE	4	–	omq	4	3	50	45	bcm	cmp	omqp	*
Liverpool (Bidston)	1008·0	47	SE	4	b	996·7	-4	45	-5	ESE	4	SE	o	3	–	52	44	bc	bc	c.o	4·9
Holyhead	1005·6	48	SSE	4	bc	993·1	-4	50	0	S	6	–	ogqd	5	0·1	53	46	bc.of.c.	o.bc bc	opc.om.ogqd	0·0
Pembroke (St. Ann's Head)	1003·2	50	SE	4	c	996·4	+1	52	+1	SW	6	–	oq	5	2	52	48	bm cm	omp	omp oqp	1·4
Scilly (St. Mary's)	1001·1	53	SSE	5	oif	999·1	+3	52	0	SW	4	SW	cif	6	1	53	52	bc c	c. omp	o.p.c	0·1
Jersey (St. Aubin)	1008·7	49	SE	3	o	1006·3	+1	51	+2	SW	3	–	b	3	1	52	47	bc.o	o	op.b.	3·0
Portland Bill	1008·1	49	E	5	bc	1001·5	-4	49	0	SSW	6	–	oqr	6	3	53	47	c. bc	bc	bcoqr	*
Dungeness	1012·5	49	S	3	b	1004·2	-1	50	+2	SW	4	SW	c	4	–	53	48	bc	bc	bc c	*
Wick	1005·6	45	SW	2	bc	1001·0	-4	46	-1	SE	2	–	o	2	–	48	40	bcv	bc	b.o	*
Nairn	1006·6	40	–	0	bc	998·2	*	45	-3	–	0	–	og	0	0·2	50	35	cg.bc	bc	bcx.c/p	3·0
Leith	1008·9	45	SW	2	c	997·5	-4	45	-5	E	2	–	o	2	1	51	41	c.bc.o.c	cm.o.c	c.b.op.o	*
Tynemouth	1010·2	46	SW	2	bc	999·6	-4	46	-3	SSE	4	–	omd₀	3	Trace	52	44	bcm	bcm	bcm om	*
Spurn Head	1011·6	45	SSW	3	bc	1001·6	-3	43	0	SSE	3	–	ow	3	0·2	51	38	bc	bc	c. omw	*
Yarmouth (Her Hotel)	1015·4	43	SSW	2	b	1003·8	-1	39	-9	SSW	3	–	o	2	0·2	56	39	bcz. bz	bz. bme	emembmeme	5·3
Clacton-on-Sea	1013·0	43	SE	2	bc	1003·4	-1	44	0	SSE	3	–	c	2	0·1	47	42	bce	bce m	bcm bcp	2·4
Nottingham	1011·0	43	SE	2	b	999·8	*	44	-5	E	1	–	o	*	1	54	41	b. bc	bc.b	bc.c	4·1

* Information for these columns not usually received. ‡ The barometric change is expressed in half millibars. § For code see page 3 † See footnote p.4.

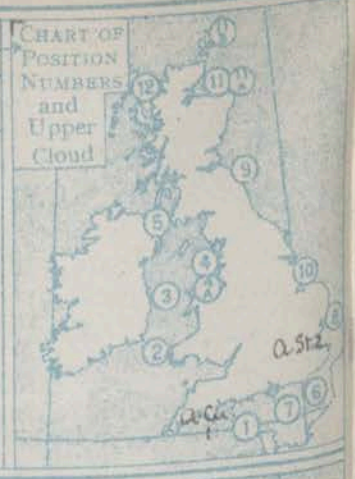
M.O. FORM 2370.

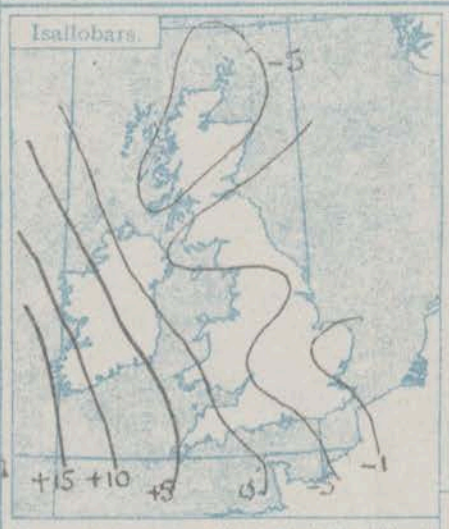
SUMMARY OF CONDITIONS AT 7 h. G.M.T. 27.12.1920.

Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Dull, misty, rain locally.	Indiff.	Mod.
2. E. England	Dull.	Fair	Smooth
3. E. Midlands	Dull, misty.	Poor	-
4. W. Midlands	Dull, misty.	V.Poor	-
5. S.W. England	Variable sky, clearing.	Good	Rough
6. South Wales	Dull, squally.	V.Good	R.Rough
7. North Wales	Dull, squally, drizzle.	Fair.	"
8. N.W. England	Dull, misty.	Poor	Mod.
9. N. Midlands	Dull, misty.	"	..
10. N.E. England	Dull.	Fair	Slight
11. E. Scotland	Dull, rainy, foggy.	Indiff.	"
12. S.W. Scotland	Dull, misty, rainy.	Poor	Mod.
13. Isle of Man	Dull, squally.	Fair	"
14. N.& N.W. Scotland	Variable sky.	Indiff.	Smooth
15. Hebrides	Dull, squally.	Fair	Mod.
16. Orkneys and Shetlands	Fine.	Poor	Calm
17. N.W. Ireland	-	-	-
18. N.E. Ireland	Dull, misty, squally.	Fair	Mod.
19. S.E. Ireland	Fine.	"	R.Rough
20. S.W. Ireland	Fair.	V.Good	-

Temperature reported from Coastal and Cross Channel Steamers.

Position Number.	Date	Time G.M.T.	Sea °F	Air °F
3	26th	1342	52	51





Barometric change from 4 h. to 7 h. (half millibars).

EXPLANATION.

BAROMETER.—Isobars are drawn for intervals of two millibars.
WIND.—Direction is shown by arrows flying with the wind. Force, on the scale 0-12, is indicated by the number of feathers. Mean velocity is shown in miles per hour by figures in small circles.
TEMPERATURE is given in degrees F.
WEATHER SYMBOLS.—
clear sky. sky ¼ clouded. sky ½ clouded. sky ¾ clouded. overcast sky. rain falling. snow. sleet. hail. fog. mist. T thunder. R thunderstorm.
SEA DISTURBANCE.—Rough High

GENERAL INFERENCE from observations received up to 9h.

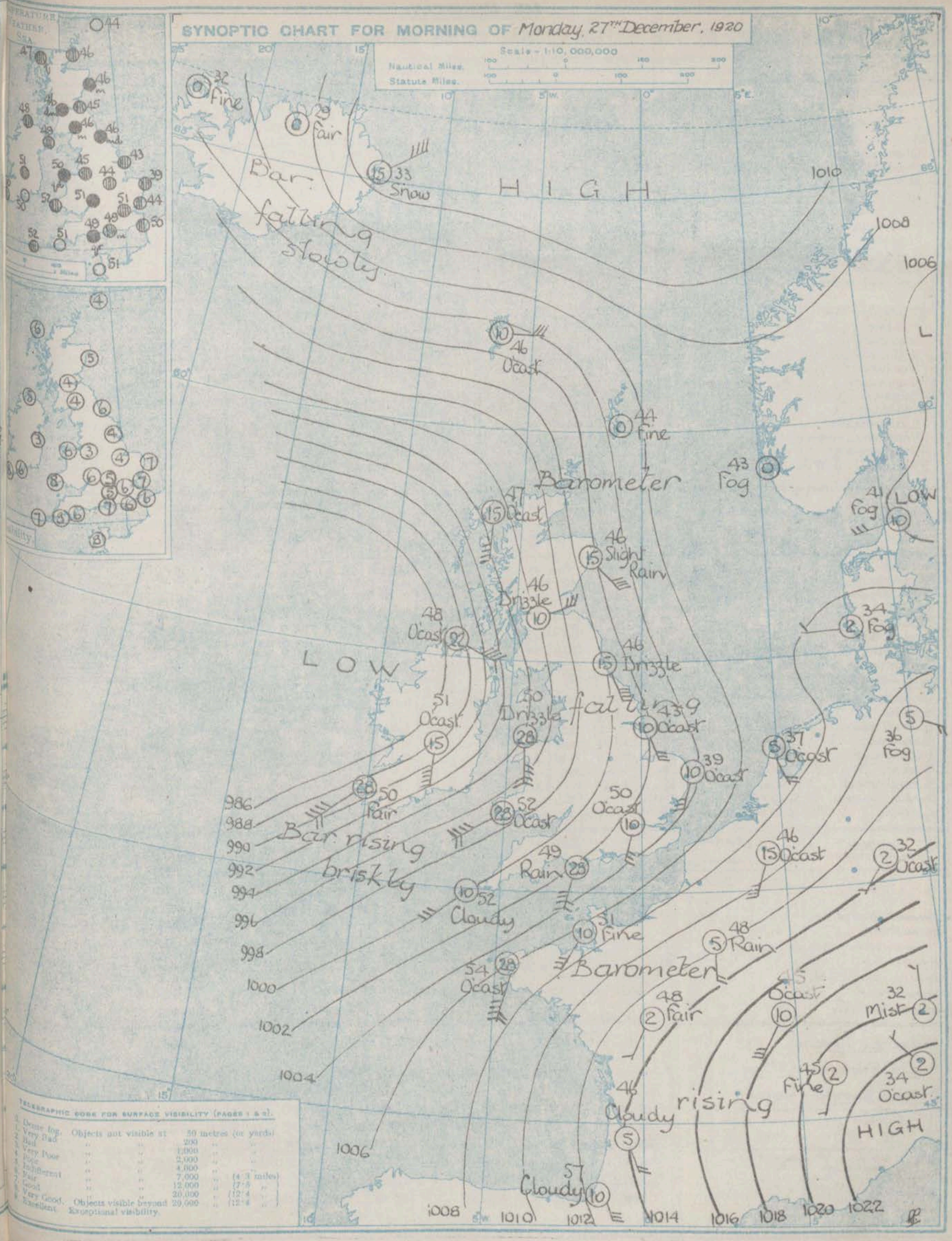
A deep depression centred off the North of Ireland is likely to move Northward, but it is probable that other depressions will arrive from the Atlantic and maintain the mild, unsettled weather.

Districts.	Forecasts for the 24 hours commencing 15 h G.M.T. Monday, 27th December, 1920.	Farther Outlook.
1. S.E. England 2. E. England 3. E. Midlands 4. W. Midlands 5. S.W. England 6. South Wales 7. North Wales 8. N.W. England 9. N. Midlands 10. N.E. England	Wind between S. and S.W., light or moderate, stronger in places; variable sky, some showers and squalls, visibility mainly fair; continuing mild.	Wind continuing between South & South-West and temperature high.
11. E. Scotland 12. S.W. Scotland 13. Isle of Man 14. N.& N.W. Scotland 15. Hebrides 16. Orkneys and Shetlands	Wind mainly between S. and S.W., fresh or strong to moderate; rainy, squally, then showery, visibility indifferent to fair; mild.	
17. N.W. Ireland 18. N.E. Ireland 19. S.E. Ireland 20. S.W. Ireland	Wind between S. and S.W. or W., fresh or strong to moderate; changeable, showery, squally, visibility mainly fair; mild.	South Cone Hoisted

Meteorological Office: Air Ministry, Kingsway, London, W.C.2. Forecasts issued at

R.S.

G. C. SIMPSON, F.R.S., Director.


SYNOPTIC CHART FOR MORNING OF Monday, 27th December, 1920
Scale - 1:10,000,000
Nautical Miles.
Statute Miles.
HIGH
Bar. falling slowly
Barometer
LOW
Bar. rising briskly
Barometer
rising
HIGH
LOW
1010
1008
1006
986
988
990
992
994
996
998
1000
1002
1004
1006
1008
1010
1012
1014
1016
1018
1020
1022
TELEGRAPHIC CODE FOR SURFACE VISIBILITY (PAGES 1 & 2).
0. Dense fog. Objects not visible at 50 metres (or yards)
1. Very Bad " " 200 " "
2. Bad " " 1,000 " "
3. Very Poor " " 2,000 " "
4. Poor " " 4,000 " "
5. Indifferent " " 7,000 " (4·3 miles)
6. Fair " " 12,000 " (7·5 ")
7. Good " " 20,000 " (12·4 ")
8. Very Good. " " 20,000 " (12·4 ")
9. Excellent. Objects visible beyond Exceptional visibility.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 362 {Monday 27th December.

WEATHER, TEMPERATURE RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 26th

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 25th-26th	Rainfall. Day. 9h-18h. 26th	Sunshine. Sunrise to Sunset. 26th
Scotland.	Oban							
	Banff	bc	bc.b	50	45	-	-	2.4
	Montrose							
	St. Andrews ...							
England, N.E.	Harrogate	c.bc.b	b.bc.b	50	44	-	-	1.3
	Scarborough ...							
	Skegness							
England, E.	Lowestoft ...							
	Felixstowe	bc	bcm	47	?	-	-	3.5
	Southend-on-Sea...							
England, S.E.	Tunbridge Wells	c.bc.b	b.bc b	55	45	-	-	2.6
	Margate	c	bc	?	46	-	-	0.6
	Ramsgate	*	*	51	45	-	-	1.7
	Folkestone	fo.c.c	c	55	46	-	-	0.0
	Hastings	bc.c	c.bc	53	47	0.2	-	2.9
	Eastbourne	bc	c.bc	52	45	-	-	2.1
	Brighton							
	Worthing							
	Littlehampton ...							
	Portsmouth (S'thsea)							
	Bournemouth ...	*	*	55	48	-	-	3.5
	Ventnor (I. of W.)	*	*					

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 25-26	Rainfall. Day. 9h-18h. 26th	Sunshine. Sunrise to Sunset. 26th
England, N.W.	Douglas (I.O.M.)							
	Blackpool	c	bc	52	47	-	-	2.8
	Southport	b.bc.b	c.b.bc.b	53	46	-	-	3.5
	Morecambe ...							
Midlands.	Buxton							
	Leamington Spa...							
	Malvern							
	Bath	bc.bc	bc.c.o	54	51	-	-	1.3
Wales.	Rhyl							
	Colwyn Bay ...							
	Llandudno	b.bc	c.b	56	48	-	-	3.4
	Aberystwyth ...							
	Tenby							
	Swansea							
England, S.W.	Weymouth	c.bc b	b.bc	55	48	-	-	3.2
	Teignmouth ...							
	Torquay	o.c.o	bc	55	50	6	-	1.2
	Paignton	c.bc	bcc	56	49	-	-	1.1
	Penzance							
	Newquay	bc	bc.of	53	48	0.1	0.1	1.4
	Budle	bc	b	55	47	-	-	3.5
	Ilfracombe	b.bc.c	c.o	54	50	-	-	2.9
	Weston-s-Mare ...							

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-13h 26th	Weather. 13h-18h 26th	Weather. 18h 26th-1h 27th	Weather. 1h-7h 27th	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall.† Day. 7h-18h. mm.	Rainfall.† Night. 18h-7h. mm.	Sun. Hours.
Renfrew ...	c.fo b bc c	if	c.o 3f	o2f r	50	42	35	-	3	1.4
33 Eskdalemuir	p.o1f	cobc.c.b.b	bbcc o2f rr	rr o2f	47	36	32	0.2	3	0.5
Valencia (Cahirc'n) ...	c.o	c.o1f r.r.	r r	r.r bcc	55	44	47	1	18	0.1
Baldonnel	c.o.bc.c.	c.o1f	r.r. q.o3f	o3f rr q.o2f	56	41	45	0.1	2	2.0
Manchester (Alex Pk)	bo.o1f.	bc e2f b b3f	b.bc 5f	b.bc.c	53	42	33	-	0.1	*
Ross on Wye... ...	bc.c.o.	c.o.	c o	oq.r.q	53	47	42	-	1	0.5
Falmouth	bc.c.co2fe	o 2fe o1fe	bc.c.o	b.o.b.	53	49	48	-	-	0.5
Calshot (Hants)... ...	1f.c.o	o2f 1f	o 1f	o1f rr	54	45	42	-	3	3.6
Lympne (Folkestone) ...	c.o o1f 1f bc.c	/co.b bc 2f	bcc o 1f	c.o1f o2f q	51	45	42	-	Trace	2.8
Aberdeen	3fe 1fe	2f 2fe	2fe 3fe	2fe r.r.	50	35	29	0.2	0.1	3.1
Howden	q.bo c	1fe o	oq	o o1f	51	38	32	-	-	2.0
Cranwell (Lincs)	b.bc.bc.c	bc.c w	bc.c b.bc	4f o2f	53	35	32	-	0.1	4.7
Felixstowe	2fe.bc.c	1f b.bc		o1f p	48	42	8	-	1	3.9
Shoeburyness	b.bc 1fe	1fe b.bc	b bc c	bc c	48	39	33	-	-	3.3
Benson	b	b	b.bc.	b.bc.o	55	43	37	-	1	*
S. Farnborough ...	bc.o.	b.bc	b bc c	b.bc rr	57	44	37	-	1	3.4
London (Kew Obsy.) ..	wo2f.b2f	2 2f	o o3f	o r.r.	54	45	36	-	0.4	3.6
Croydon	bc.o.b bc c 2fe	/bbc o2f <co2f	c.o2f w o4f	o1f q r.r. o2f	55	46	*	-	0.2	*

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, *i.e.*, rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:-
R = heavy rain.
rr = continuous moderate rain.
r.r. = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 30 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0·3
1	1- 3	0·3- 1·5
2	4- 7	1·6- 3·3
3	8-12	3·4- 5·4
4	13-18	5·5- 7·9
5	19-24	8·0-10·7
6	25-31	10·8-13·8
7	32-38	13·9-17·1
8	39-46	17·2-20·7
9	47-54	20·8-24·4
10	55-63	24·5-28·4
11	64-75	28·5-33·5
12	Above 75	33·6 or above

SYMBOLS—

Aurora ☆ Solar halo ⊕
Rime ⊥ Lunar halo ◐
Glazed frost ∽ Solar corona ◎
Glazed roads ⚒ Lunar corona ◎

LONDON, OBSERVATIONS.

24 HOURS ENDED 9H G.M.T. 27th

	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Hours. (Yesterday.)	Humidity % 15 h. G.M.T. (Yesterday.)	Humidity % 9 h. G.M.T. (To-day.)
Greenwich (Royal Observatory)	c bc.b	b. bc c	o.od.	54	42	35	-	3.7	89	92
City (Bunhill Row)	*	*	*	*	*	*	*		*	*
Westminster (St. James's Park)	*	*								
Regents Pk (Botanical Gdns)	*	*	*	*	*	*	*	0.0	*	*
Camden Sq. (British Rainfall)	-	-	*	53	42	36	1	*	*	93
Kensington Palace			*	55	44	37	1	*	94 (18h)	93
Hampstead Observatory ...	*	*	*						*	

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday.

Total ..... 204 ..... Joules.

	Milliwatts.
Average Rate.	7·3
Maximum Rate.	13

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

27th & 28th December 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth ...	8.6	11.54	3.43
	8.6	11.55	3.44
Greenwich	8.8	12.1	3.55
	8.8	12.2	3.56
Wick ...	9.5	12.13	3.21
	9.5	12.14	3.22
Valencia ...	8.51	12.42	4.34
	8.51	12.43	4.35

Photographic Record of Pole Star (Polaris) and of δ Ursae Minoris at Greenwich Observatory.

Exposure from ..... h ..... m
to ..... h ..... m.

Stars.	Duration of Exposure. h. m.	Duration of Record. h. m.	%
Polaris			
δ Ursae Minoris			

NOTES ON THE WEATHER OF YESTERDAY.

Temperature rose to 50° or above at nearly all stations, to 55° or 56° at a few stations, and to 57° at South Franborough. Rain fell in most localities, but the quantity was slight generally except in the South of Ireland; at Valencia the amount was 19mm Bright sunshine ranged from 5 3 hours at Yarmouth, 4 9 hours at Liverpool and 4 7 hours at Cranwell to between 1 and 3 hours in most other parts of the Kingdom

* Information for these columns not usually received.

† Trace = rain has fallen but amount less than 0·1 mm.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. No. B.21586 ... Tuesday, 28th December ... 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

18H. G.M.T. 27th

Stations	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	Visibility § 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew	994.5	-2	ESE	3	or023f	48	92	4	1250	Nb	10	-	-	*
Eskdalemuir	995.7	-1	S	4	odm	46	97	4	750	Nb	10	.	.	*
Valencia (Cahirc'n)	994.2	+1	S	3	c	51	85	8	2.000	St.	2	Ci.St	6	4
Baldonnel	995.8	+2	SW	6	bq	51	75	6	3.000	St.Cu	1	A.St	2	*
Manchester (Alex. Pk)	999.7	+2	SW	4	c	52	75	8	3.000	St.Cu	5	A.Cu	3	*
Ross on Wye	1002.2	+2	WSW	4	bcq	54	75	7	4200	Cu	4	-	.	*
Falmouth	1002.4	0	SSW	4	bczf	54	85	5	-	St.Cu	6	-	-	*
Calshot (Hants)	1006.0	+2	SSW	4	cif	50	92	6	1250	St	3	Ci	5	3
Lympne (Folkestone)	1006.4	+1	SW	6	cmq	50	92	7	750	St.Cu	8	-	-	*
Aberdeen	998.4	-4	SE	3	or0	46	92	6	2.000	Nb	10	.	.	3
Howden	999.5	+1	SW	2	oif	50	85	5	3.000	St.	4	A.St	3	*
Cranwell (Lincs)	1001.7	+1	SW	4	bc	52	75	6	4200	Cu	2	Ci.Cu	2	*
Felixstowe	1005.8	0	SSW	3	bif	49	86	7	2000	Cu	1	A.St	1	2
Shoeburyness	1005.1	+2	SW	3	b	53	85	7	-	.	.	A.Cu	1	*
Benson	1003.8	+2	SW	3	b	52	92	6	-	-	-	-	-	*
S. Farnborough	1005.1	+2	SW	5	b	53	85	6	3.000	Cu	2	Ci	1	*
London (Kew Obsy.)	1006.1	+2	SW	4	bozf	53	75	5	3.000	Cu	4	.	.	*
Croydon	1005.8	+2	WSW	5	bcifq	53	75	6	2000	Cu	4	.	.	*

18H. G.M.T. OF 27th (right-hand columns)

Stations	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	Visibility § 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew	997.7	+3	SSW	3	~~sif~~ c2f	48	85	5	~~2,000~~	~~St~~	7	A.St	7	*
Eskdalemuir	999.4	+3	S	2	cm	42	92	5	-	StCu	7	-	.	*
Valencia (Cahirc'n)	995.6	+1	S	3	o	50	92	5	2,000	St	3	A.St	7	3
Baldonnel	998.4	+3	S	4	bc	48	86	6	3.000	St.Cu	2	A.St	2	*
Manchester (Alex. Pk)	1001.8	+2	SSW	2	bzf	45	85	4	4,200	StCu	3	-	-	*
Ross on Wye	1003.3	+1	SSW	3	opd0	51	85	6	1,250	Nb	9	-	-	*
Falmouth	1000.6	-2	SSE	5	oRq3of	50	92	5	-	Nb	10	-	-	*
Calshot (Hants)	1006.0	0	S	3	cif	50	92	6	1500	StCu	8	~~A.St~~	~~2~~	3
Lympne (Folkestone)	1007.9	0	SSW	5	omR	48	97	4	-	Nb	10	-	-	*
Aberdeen	997.7	0	SSE	2	ozf	46	92	5	2,000	Nb	10	-	-	3
Howden	1002.1	+1	SW	2	bc	44	92	5	2,000	St	2	A.St	1	*
Cranwell (Lincs)	1004.1	+1	SSW	3	b	43	97	6	-	-	-	A.St	1	*
Felixstowe	1008.0	+2	SSW	3	bcif	46	92	6	2,000	Cu	4	-	-	*
Shoeburyness	1006.4	+1	SW	1	bw	46	92	6	-	-	-	A.Cu	3	*
Benson	1004.8	0	SSW	3	bc	48	92	6	-	Cu	4	-	-	*
S. Farnborough	1006.1	+1	SW	4	bc	49	97	5	1,250	St	5	-	-	*
London (Kew Obsy.)	1006.4	0	S	3	b	50	85	5	-	-	-	A.St	2	*
Croydon	1007.0	0	SSW	4	oifd0	50	92	6	750	St	9	-	-	*

1H. G.M.T. OF 28th

Stations	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	Visibility § 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew														
Eskdalemuir	1000.7	0	S	1	o3fe	44	97	2	-	St.Cu	9	-	-	*
Valencia (Cahirc'n)	996.7	0	SSE	2	bc	46	*	*	*	*	*	*	*	3
Baldonnel	997.8	-1	E	1	oif	45	92	6	3000	St.Cu	6	A.St	4	*
Manchester (Alex. Pk)	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ross on Wye	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Falmouth	992.7	~~+4~~ +3	WSW	8	bq	50	92	8	-	St.Cu	2	-	-	*
Calshot (Hants)	998.7	-6	SE	6	od0	48	97	6	750	Nb	10	.	.	6
Lympne (Folkestone)	1003.8	-4	S	5	omR	47	97	5	-	Nb	10	.	.	*
Aberdeen	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Howden	1002.1	0	-	0	om	43	97	4	750	St.	10	-	-	*
Cranwell (Lincs)	1003.6	-1	SE	3	ozf	43	97	4	3.000	St	6	A.St	4	*
Felixstowe	1006.1	-3	SSE	3	oif	45	97	6	1.250	Nb	10	.	.	1
Shoeburyness	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Benson	*	*	*	*	*	*	*	*	*	*	*	*	*	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*
London (M.O. at 1h.)	1002.1	-6	*	*	*	50	*	*	*	*	*	*	*	*
Croydon	1002.4	-6	SSE	4	oif r0	49	92	6	750	St.	7	A.St.	2	*

7H. G.M.T. OF 28th

Stations	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	Visibility § 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew	1000.7	+1	-	0	cafc	36	97	2	-	-	-	A.St	7	*
Eskdalemuir	1000.8	0	N	2	om	39	97	5	.	.	.	A.St	10	*
Valencia (Cahirc'n)	992.6	-4	SE	5	oR	49	86	4	4200	St.	10	-	-	*
Baldonnel	997.9	0	-	0	o6f	47	92	1	750	St.	10	.	.	*
Manchester (Alex. Pk)	998.2	-3	NE	4	o3f	47	85	3	3000	St.Cu	9	-	-	
Ross on Wye	997.5	+6	W	3	oif	48	97	6	750	St.	10	-	-	*
Falmouth	1001.3	+1	SW	3	c	49	92	7	.	Nb	2	A.Cu	5	*
Calshot (Hants)	1001.3	+10	SW	6	bif	49	85	7	1250	St.	2	A.St	1	5
Lympne (Folkestone)	1000.5	-2	SW	7	ozfq	50	92	5	750	St.	10	.	.	*
Aberdeen	1001.4	+1	W	1	bc3fcx	34	97	3	.	.	.	Ci.St	5	2
Howden	999.9	-1	ENE	2	omr	51	97	4	750	Nb	10	-	-	*
Cranwell (Lincs)	998.2	-6	E	3	orz3f	46	97	4	750	Nb	10	~~Ci.Cu~~	~~8~~	*
Felixstowe	1000.3	-6	SSE	4	od0	47	97	6	1250	St.Cu	10	-	-	3
Shoeburyness	998.4	-5	SW	7	odoq	51	85	7	2000	Cu	7	A.St	3	*
Benson	996.2	0	WSW	4	o	50	97	5	.	St.	10	-	-	*
S. Farnborough	998.6	+4	WSW	6	o	50	92	7	750	St.	9	-	-	*
London (M.O. at 1h.)	997.3	0	SW	5	orq	50	92	5	750	Nb	10	-	-	*
Croydon	999.1	+2	SW	6	odoqif	50	85	7	750	Nb	10	-	-	*

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

Stations	18h. G.M.T. of 27th: Barom. at M.S.L. mb.	Temp. °F.	Wind Direc.	Wind Force 0-12	Weather	7h. G.M.T. of 28th: Barometer at M.S.L. mb.	‡ Change in 3 hours	Temp. °F.	Change in 24 hours	Wind Direc.	Wind Force 0-12	Direc. of Upper Cloud	Weather	Sea 0-9	24 hours ended 7h. 28th: † Rainfall mm.	Max. °F.	Min. °F.	Weather Morning	Weather Afternoon	Weather Night	Sunshine Hours (27th)
Lerwick	1003.1	46	ESE	5	omq	999.8	0	47	+3	-	0	-	om	1	-	50	43	cq	cq	o.om	*
Stornoway	991.6	50	S	4	o	998.0	+1	44	-3	S	1	.	b	1	3	50	43	o	o	or.b	0.0
Castlebay (Barra Is)	992.8	50	SW	4	o	998.2	+1	48	?	SE	3	.	bc	4	1	51	47	opm	opm.o	o.c.bc	0.0
Malin Head	993.1	47	SW	2	bc	995.9	0	40	-8	SSE	2	S	bc	2	-	52	39	op	c	bc.b	0.3
Blacksod Point	992.9	49	SW	4	bc	991.5	-8	50	?	SE	2	.	bcp	2	7	?	48	bc	bc	omqr.c	*
Roche's Point	998.1	50	SE	2	o	995.8	-4	49	-1	SSE	~~?~~ 3	.	o	4	0.4	52	45	b.o	om	oe.f.o	*
Birr Castle	996.9	47	SW	1	o	995.8	*	42	-9	SW	1	-	o	*	0.2	52	39	c	f.o	f.p.o	4.7
Donaghadee	998.3	46	SSW	3	b	999.5	-1	47	-2	ESE	3	-	c	2	1	52	41	bcmp	bm	bm	*
Liverpool (Bidston)	1000.9	47	S	2	b	997.4	-1	46	+1	E	2	-	o	2	1	52	43	b.bc	b.bc	c.o.p	1.7
Holyhead	999.9	49	SW	4	bc	997.6	0	45	-5	-	0	.	c	0	0.2	53	44	bc	bc	bcc.o.c	1.3
Pembroke (St. Ann's Head)	1001.0	50	SW	3	oif	999.5	+3	48	-4	W	2	.	bcv	4	18	52	46	oq.c	om	ormoc	3.5
Scilly (St. Mary's)	998.9	53	SSE	4	rq	1000.5	+1	51	-1	SSW	2	-	ozf	4	9	54	48	c.bcm	bc.orq	ormqbbcom	1.2
Jersey (St. Aubin)	1006.7	51	S	3	od23f	1005.6	+1	52	+1	SW	4	-	o	4	5	54	49	bc.o	odm	odm.o	0.8
Portland Bill	1003.5	50	S	5	o	1001.1	+5	50	+1	WSW	8	W	bcq	7	5	53	47	oqp.cq	cq.o	or.bcq	*
Dungeness	1007.1	50	SW	4	c	1000.0	0	61	+1	SW	6	W	bcq	6	5	52	48	c.bc	bc.c	c.rq	*
Wick	996.9	46	SSE	5	omrq	998.9	+1	42	-4	SSW	2	-	b	1	2	47	41	omp	omrq	omrq.cb	*
Nairn	994.5	45	-	0	o	999.7	*	34	-11	-	0	-	bcx	0	0.2	48	33	ogd	gd.ou	og.c.bcx	0.0
Leith	996.9	48	SW	2	o	1000.0	0	40	-5	ESE	1	-	cm	2	-	50	39	ocgo	og.c.o	obcm.c	*
Tynemouth	999.4	45	W	1	bif	1000.9	0	38	-8	-	0	-	bfe	1	1	48	38	omd.	om	bm.f	*
Spurn Head	1000.3	44	WSW	2	b	1000.3	-2	46	+2	SE	4	.	fr	3	12	50	38	cm	b	cm.f.r	*
Yarmouth (Gorleston)	1005.2	44	SW	2	b	1000.5	-6	45	+6	SSE	5	-	omqr	3	1	53	42	cm	bc.m.bm	cm.omrq	?
Clacton-on-Sea	1006.6	44	SSW	3	bc	997.6	-5	46	+7	SSE	4	S	o	3	3	48	43	cp.c	bce	bc.ogp	3.6
Nottingham	1003.5	47	S	2	c	997.3	*	47	+3	E	3	-	or	*	10	53	43	op.c	bc.c	c	1.9

* Information for these columns not usually received. ‡ The barometric change is expressed in half millibars. § For code see page 3 † See footnote p. 4.

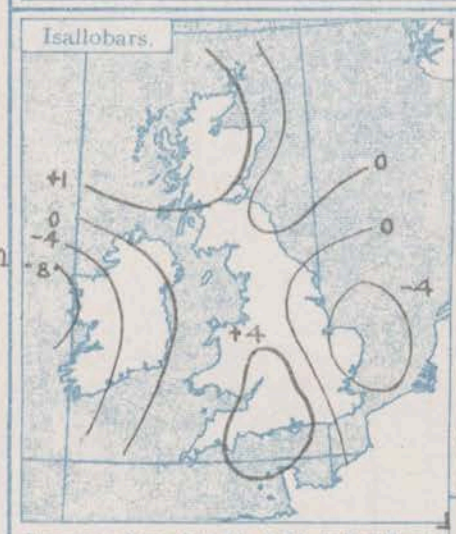
M.O. FORM 2370

SUMMARY OF CONDITIONS AT 7 h. G.M.T. 28.12.20.

Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Squally, rainy, misty.	Fair.	R.Rough
2. E. England	Squally, rainy, misty.	"	Slight
3. E. Midlands	Rainy, misty.	Poor.	-
4. W. Midlands	Dull.	"	-
5. S.W. England	Dull.	Fair.	Mod.
6. South Wales	Fair.	Exclt.	"
7. North Wales	Gloomy.	V.Good	Calm.
8. N.W. England	Dull.	Fair.	Smooth
9. N. Midlands	Dull, misty, rainy.	Poor.	-
10. N.E. England	Foggy.	Bad.	Smooth
11. E. Scotland	Fine, foggy, frosty.	V.Poor	Smooth
12. S.W. Scotland	Dull, misty.	Indif.	"
13. Isle of Man	Cloudy, misty.	Fair.	"
14. N.& N.W. Scotland	Fine.	Good.	V. Smooth
15. Hebrides	Fine.	"	"
16. Orkneys and Shetlands	Dull, misty.	Fair.	" "
17. N.W. Ireland	- - -	-	-
18. N.E. Ireland	Cloudy, misty.	Fair.	Smooth
19. S.E. Ireland	Dull.	Fair.	Mod.
20. S.W. Ireland	Heavy rain.	Poor.	-

Temperature reported from Coastal and Cross Channel Steamers.

Position Number.	Date	Time G.M.T.	Sea °F	Air °F
5.	27th	08.07	50	49
3.	"	10.00	51	51
6.	28th	15.00	50	52
7.	"	03.00	49	53



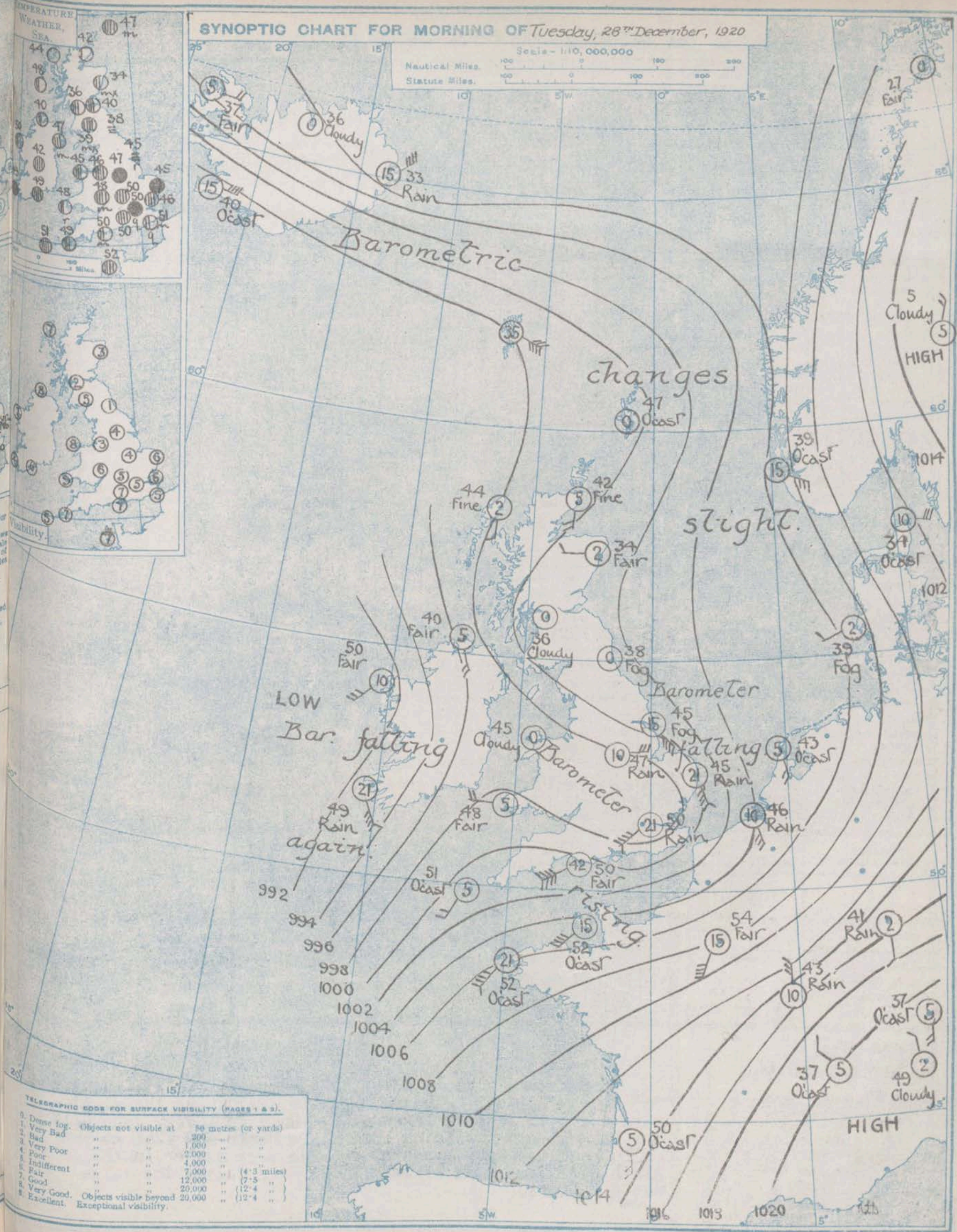
Barometric change from 4 h. to 7 h. (half millibars).

EXPLANATION.
BAROMETER.—Isobars are drawn for intervals of two millibars.
WIND.—Direction is shown by arrows flying with the wind. Force, on the scale 0–12, is indicated by the number of feathers. Mean velocity is shown in miles per hour by figures in small circles.
TEMPERATURE is given in degrees F.
WEATHER SYMBOLS.—
clear sky. sky ¼ clouded. sky ½ clouded. sky ¾ clouded. overcast sky. rain falling. snow. sleet. hail. fog. mist. T thunder. ₮ thunderstorm.
SEA DISTURBANCE.—Rough High

GENERAL INFERENCE from observations received up to 9h.

A trough of low pressure extends from Wales to the South-East of England while another depression is already spreading over Ireland from the Atlantic. Unsettled weather is likely to continue over the Kingdom generally, with South and South-West winds and a high temperature in the South, but with South-East to East winds and a lower temperature in the North.

Districts.	Forecasts for the 24 hours commencing 15 h. G.M.T.	Further Outlook.
1. S.E. England 2. E. England 3. E. Midlands 4. W. Midlands 5. S.W. England 6. South Wales	Wind mainly between South and South-West, moderate or fresh; much cloud generally, some rain or showers, fairer intervals; visibility indifferent to fair. Mild.	Temperature will become less high than of late but will continue above the normal.
7. North Wales 8. N.W. England 9. N. Midlands 10. N.E. England	Wind between South and East, light or moderate, cloudy or overcast, some rain; visibility indifferent to fair. Moderate or mild temperature.	
11. E. Scotland 12. S.W. Scotland 13. Isle of Man 14. N.& N.W. Scotland 15. Hebrides 16. Orkneys and Shetlands	Wind East or South-East, light or moderate; much cloud generally, some rain. Visibility indifferent to fair. Temperature lower than of late.	
17. N.W. Ireland 18. N.E. Ireland 19. S.E. Ireland 20. S.W. Ireland	Wind South or South-East, veering to South-West or West, strong at times. Mainly overcast, intermittent rain. Visibility variable. Temperature moderate or rather high.	



TELEGRAPHIC CODE FOR SURFACE VISIBILITY (PAGES 1 & 3).

0. Dense fog.	Objects not visible at		50 metres	(or yards)	
1. Very Bad	"	"	200	"	"
2. Bad	"	"	1,000	"	"
3. Very Poor	"	"	2,000	"	"
4. Poor	"	"	4,000	"	"
5. Indifferent	"	"	7,000	"	(4·3 miles)
6. Fair	"	"	12,000	"	(7·5 ")
7. Good	"	"	20,000	"	(12·4 ")
8. Very Good.	Objects visible beyond		20,000	"	(12·4 ")
9. Excellent.	Exceptional visibility.				

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 363.

Tuesday, 28th December

WEATHER, TEMPERATURE RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 27th

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 26th-27th	Rainfall. Day. 9h-18h. 27th	Sunshine. Sunrise to Sunset. 27th
Scotland.	Oban	or	o	53	45	4	13	0.0
	Banff	d.o	or	47	35	0.2	0.4	0.0
	Montrose							
	St. Andrews							
England, N.E.	Harrogate	c	c	49	40	0.1	-	0.0
	Scarborough							
	Skegness							
England, E.	Lowestoft							
	Felixstowe	or.p	bc	50	39	0.4	-	3.1
	Southend-on-Sea	b	bc	52	42	-	-	3.5
England, S.E.	Tunbridge Wells	o.c.bc	o.o.p	53	44	2	2	1.1
	Margate	c.	bc	55	46	-	-	0.9
	Ramsgate	*	*	52	43	-	-	2.5
	Folkestone							
	Hastings	o.bc.c	bc.o.p	53	47	0.4	1	1.6
	Eastbourne	o.c.bc	c.o.d.o	53	45	1	1	2.2
	Brighton	bc.c.o	c.o	51	48	1	-	2.1
	Worthing	b.bc	bc.r.c	51	47	2	1	2.9
	Littlehampton							
	Portsmouth (S'thsea)							
	Bournemouth	*	*	53	47	3	-	1.8
	Ventnor (I. of W.)	*	*					
England, N.W.	Douglas (I.O.M.)							
	Blackpool	c	bc	50	45	?	-	0.8
	Southport	c.o.c	c.bc.b.bc	53	45	-	-	2.1
	MORECAMBE							
Midlands.	Buxton							
	Leamington Spa	c.b	o	54	43	2	-	4.0
	Malvern							
	Bath	b.bc	p.c.bc.b	54	48	2	1	1.8
Wales.	Rhyl							
	Colwyn Bay							
	Llandudno	o.c.	b.bc	53	44	1	-	3.6
	Aberystwyth	r.c.	c.o	52	48	1	-	1.0
	Tenby							
	Swansea							
England, S.W.	Weymouth	bc.b.bc	c.bc.o	54	48	3	-	1.7
	Teignmouth							
	Torquay	bc	bc.o	54	50	3	3	2.0
	Paignton	bop	corq.p	54	49	2	5	0.7
	Penzance	c.o	c.o.p	56	51	1	0.2	0.9
	Newquay	c	o.or	53	50	1	1	0.1
	Bude							
	Ilfracombe	b.c.c.o	or	54	50	1	-	0.4
	Weston-s-Mare	bc	bc.c	55	48	2	-	1.7

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-18h 27th	Weather. 18h-18h 27th	Weather. 18h 27th-18h 28th	Weather. 18h-7h 28th	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall.† Day. 7h-18h	Rainfall.† Night. 18h-7h	Sun. Hours.
Renfrew	or.f.pd.o	o3f.D.coaf		bco.r2f.af	50	36	29	mm.	mm.	0.0
Eskdalemuir	rr.dd	D.D.c.o	c.o	c.o2f	46	38	35	4.5	0.2	0.0
Valencia (Cahirc'ty)	bcc.po	c.o.po	cob.bc	b.bc.c.o	53	44	38	-	6	1.1
Baldonnel	bcc.gbbaf	b.bc	c.o. ⊕	o5f	52	44	37	0.2	0.2	4.7
Manchester (Alex Pk)	orf.pcaf	b.bc.b.	b.o.3f	o3f R.R.o3f	53	44	33	trace	4	*
Ross on Wye	bcq.f.bpo	bcc.p.bc	c.o.rr.	R.R.o	54	48	42	0.2	11	3.4
Falmouth	bcc.o.b2f	o3f.e R	orr.c.o.bbc	b.bc	56	47	43	3	8	0.8
Calshot (Hants)	p.bc.c	lf.c.o.	o1f.p.p.bp	r.r.o1f.o.bc	53	47	46	0.2	3	3.1
Lympne (Folkestone)	o1f.c.o.q	bcc.f.q.p.m	o2f P.	P.o2f.q	51	47	46	1	6	0.7
Aberdeen	f.c.rr.	r.o o1f	o2f.2f.c	2f.c.f.bc.c	47	34	28	3	-	0.0
Howden	R.r.o	1f.c b.o	oc.c.o	rr.o	51	38	31	1	3	0.0
Cranwell (Lincs)	p.c.o	b bc	bc.c.o	o.rr.	53	40	38	0.2	6	2.7
Felixstowe	lf.b.bc	lf b.bc	po.o1f	R.r.r.	50	42	*	-	3	3.1
Shoeburyness	b.bc	b.bc	b.bc.c	r.q	54	44	41	trace	3	3.4
Benson	r.b.	b	o	r.	55	47	42	1	4	*
S. Farnborough	d.d.bcc	c.o1f.pd.bbc	bc.c.p.d	c.o.r	53	48	46	1	3	2.3
London (Kew Obsy.)	o1f.p.bcc.f	b.bc.p.bbc	bc.c.o2f	o2f.r.r.q	53	49	44	0.1	2	2.3
Croydon	o1f.r.o1f.o.bc.c.f	c.o1f.q.p.b	o1f.p.d.o2f.d.d.o1f.r.n	o1f.r.r.d.d.q	54	48	*	0.4	3	*

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, *i.e.*, rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:–
R = heavy rain.
rr = continuous moderate rain.
r.r. = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 30 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0·3
1	1– 3	0·3– 1·5
2	4– 7	1·6– 3·3
3	8–12	3·4– 5·4
4	13–18	5·5– 7·9
5	19–24	8·0–10·7
6	25–31	10·8–13·8
7	32–38	13·9–17·1
8	39–46	17·2–20·7
9	47–54	20·8–24·4
10	55–63	24·5–28·4
11	64–75	28·5–32·5
12	Above 75	32·6 or above

SYMBOLS–

Aurora ☆ Solar halo ⊕
Rime ⌶ Lunar halo ⊕
Glazed frost ∽ Solar corona ⊕
Glazed roads ⁂ Lunar corona ⊕

LONDON. OBSERVATIONS.

	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Hours.	Humidity % 15 h. G.M.T.	Humidity % 9 h. G.M.T.
	24 Hours ended 9h G.M.T. 28th							Yesterday.		To-day.
Greenwich (Royal Observatory)	o.c.bc	c.o	od	55	48	43	2	3.4	85	81
City (Bunhill Row)	*	*	*	*	*	*	*	1.2	*	*
Westminster (St. James's Park)	*	*	*	56	49	43	2	2.2	74	78
Regent's Park (Botanical Gdns)	*	*	*	*	*	*	*	0.5	*	*
Camden Sq. (British Rainfall)	-	-	*	54	49	46	2	*	-	85
Kensington Palace	bc	bc	*	55	48	45	2	*	93 (18h)	85
Hampstead Observatory	*	*	*	53	47	42	3	2.2	*	88

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday

Total 188 Joules.

Milliwatts.
Average Rate. 6.7
Maximum Rate. 18

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

28th and 29th DECEMBER 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth	8.6	11.55	3.44
	8.6	11.55	3.46
Greenwich	8.8	12.2	3.56
	8.8	12.2	3.57
Wick	9.5	12.14	3.22
	9.5	12.14	3.23
Valencia	8.51	12.42	4.34
	8.51	12.42	4.35

Photographic Record of Pole Star (Polaris) and of δ Ursæ Minoris at Greenwich Observatory.

Exposure from 27th 17 h. ... m. to 28th 7 h. ... m.

Stars.	Duration of Exposure. h. m.	Duration of Record. h. m.	%
Polaris	14. 0	2. 6	15
δ Ursæ Minoris	14. 0	1. 15	9

NOTES ON THE WEATHER OF YESTERDAY.

Temperature rose to above 50° generally, and to about 55° at many places. The minimum readings during the night were above 45° over a large area. Rain fell very generally the largest amounts being 18mm at Pembroke and 12mm at Spurn Head. Bright sunshine records were higher in the South and West than elsewhere; at Birr Castle the value was 4.7 hours.

* Information for these columns not usually received.

† Trace = rain has fallen but amount less than 0·1 mm.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. No. B 21584 WEDNESDAY 29th DECEMBER 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

13H. G.M.T. 28th

Stations	Barom. at M.S.L. mb.	Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew	999.4	-1	ENE	1	o3fe	34	94	2	4200	St.Cu	5	A St	5	*
Eskdalemuir	999.1	-2	NE	2	o2f	43	97	5	-	St	10	-	-	
Valencia (Cahirc'n)	997.9	+5	SSW	3	b	53	85	8	2000	Cu	3	-	-	4
Baldonnel	996.5	-1	SSW	5	orq	49	85	8	750	Nb	10	-	-	*
Manchester (Alex. Pk)	999.2	-1	S	3	odf	48	92	4	750	St	10	-	-	*
Ross on Wye	1001.3	+2	WSW	4	od	48	92	7	1250	Nb	10	-	-	*
Falmouth	1004.4	-4	SW	7	cq	55	85	6	-	St.Cu	7	A Cu	1	*
Calshot (Hants)	1005.4	+3	SW	5	or2-3f	52	97	3	<500	St	10	-	-	3
Lympne (Folkestone)	1005.0	+6	SW	6	om eq	51	97	7	750	Nb	10	-	-	*
Aberdeen	1001.6	0	WNW	1	bc3fe	34	92	2	4200	St.Cu	5	-	-	2
Howden	999.1	0	S	1	d	45	94	1	[illegible]	[illegible]	10	-	-	*
Cranwell (Lincs)	1000.1	+1	SW	3	o2f	49	97	5	750	St	10	-	-	*
Felixstowe	1003.4	+4	SW	6	o1f	50	65	6	1250	St.Cu	10	-	-	3
Shoeburyness	1002.6	+5	W	4	bc	52	75	7	2000	St.Cu	6	-	-	*
Benson	1002.8	+2	SSW	2	o	52	85	8	-	St	10	-	-	*
S. Farnborough	1003.8	+4	SW	3	o	52	85	8	2000	St.Cu	9	A St	1	*
London (Kew Obsy.)	1003.9	+4	SW	4	o	53	75	6	2000	Cu	9	-	-	*
Croydon	1004.5	+6	WSW	6	o1fq	53	85	7	2000	St.Cu	9	-	-	*

18H. G.M.T. OF 28th

Stations	Barom. at M.S.L. mb.	Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew	999.7	+2	SSW	1	or4-5f	42	97	2	-	Nb	10	-	-	*
Eskdalemuir	998.6	0	N	1	or2-3f	42	94	4	-	Nb	10	-	-	+
Valencia (Cahirc'n)	999.3	+1	S	5	bc	51	85	7	2000	St.Cu	5	-	-	4
Baldonnel	1001.2	+6	SSW	3	b	47	85	6	-	-	-	A St	1	*
Manchester (Alex. Pk)	1001.2	+3	SW	5	o3f	49	85	3	2000	St.Cu	10	-	-	+
Ross on Wye	1005.2	+4	W	5	bq	51	75	8	3000	Cu	1	-	-	*
Falmouth	1008.6	+4	SW	4	c	53	92	6	-	St.Cu	7	-	-	*
Calshot (Hants)	1008.9	+5	SW	4	bif	50	94	6	750	St	3	-	-	3
Lympne (Folkestone)	1007.6	+2	WSW	7	cmq	51	97	7	1250	St	7	-	-	*
Aberdeen	1000.7	-1	WNW	2	bsfe	39	97	1	-	-	-	-	-	2
Howden	999.1	0	SW	3	orqf	45	92	1	750	Nb	10	-	-	*
Cranwell (Lincs)	1001.5	+1	SW	4	b	49	92	5	1250	St	1	-	-	+
Felixstowe	1005.5	+2	SSW	4	bif	50	92	6	-	-	-	-	-	2
Shoeburyness	1005.5	+2	WSW	4	bw	52	85	7	-	-	-	-	-	*
Benson	1005.8	+6	SW	3	b	50	85	6	-	-	-	-	-	*
S. Farnborough	1007.4	+4	SW	5	b	50	92	7	-	-	-	-	-	*
London (Kew Obsy.)	1006.6	+5	SW	3	b	52	85	6	-	-	-	-	-	*
Croydon	1007.2	+4	SW	6	bifq	52	85	6	-	-	-	-	-	*

1H. G.M.T. OF 29th

Stations	Barom. at M.S.L. mb.	Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew														
Eskdalemuir	1004.6	+6	SW	4	o2f	43	97	5	1250	St.	10	-	-	*
Valencia (Cahirc'n)							*	*	*	*	*	*	*	
Baldonnel	1003.8	+1	SSW	4	c	49	85	5	-	..	-	A.Cu	8	*
Manchester (Alex. Pk)	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ross on Wye	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Falmouth	1010.0	0	SSW	5	o	52	97	7	-	St.Cu	10	-	-	*
Calshot (Hants)	1012.4	+1	SW	3	o1f	51	92	6	750	St.	10	-	-	3
Lympne (Folkestone)	1012.7	+4	WSW	3	om	49	92	6	3.000	St.Cu	9	-	-	*
Aberdeen	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Howden	1006.6	+4	-	0	c	41	92	4	3.000	St.	6	A St	2	*
Cranwell (Lincs)	1007.8	+2	WSW	3	b	45	92	5	3.000	St.	3	-	-	*
Felixstowe														
Shoeburyness	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Benson	*	*	*	*	*	*	*	*	*	*	*	*	*	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*
London (M.O. at 1h.)	1011.1	+2	*	*	*	49	*	*	*	*	*	*	*	*
Croydon	1012.3	+2	SW	5	bo1f	49	92	7	-	-	-	Ci	6	*

7H. G.M.T. OF 29th

Stations	Barom. at M.S.L. mb.	Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew	1003.6	0	SSE	2	o1f	44	97	6	2.000	St.Cu	9	-	-	*
Eskdalemuir	1004.2	-1	SW	4	oqm	46	97	3	750	St.	10	-	-	*
Valencia (Cahirc'n)	1003.5	0	S	3	o	50	92	5	2000	St.	4	A.St	6	4
Baldonnel	1004.5	0	SW	4	oq	49	85	5	2000	St.Cu	6	A.St.	4	*
Manchester (Alex. Pk)	1007.4	0	SSW	4	o2fq	49	85	4	1.250	Nb	10	-	-	6
Ross on Wye	1009.5	0	W	2	o	48	92	7	2000	Nb	9	A St	1	*
Falmouth	1008.1	-2	SSW	2	od₀	51	97	2	-	Nb	10	-	-	*
Calshot (Hants)	1011.7	-1	-	0	od₀	49	97	6	1250	St.	10	-	-	1
Lympne (Folkestone)	1013.1	0	SW	4	oqr2-3f	49	97	2	<500	Nb	10	-	-	*
Aberdeen	1003.1	+1	-	0	bc3fe	38	92	3	-	-	-	A St	4	2
Howden	1004.2	0	S	3	omqf	43	94	4	3000	St.Cu	10	-	-	*
Cranwell (Lincs)	1009.7	+1	SW	2	o	46	97	5	3.000	St.	2	C.Cu	7	*
Felixstowe	1012.7	+1	S	3	o1f	47	97	7	2.000	St.Cu	10	-	-	2
Shoeburyness	1012.3	0	SW	3	cw	48	92	6	3.000	Cu	8	-	-	*
Benson	1010.1	-1	SSW	3	o	48	97	6	-	St	10	-	-	*
S. Farnborough	1011.7	0	SSE	1	or₀	50	97	5	<500	Nb	10	-	-	*
London (M.O. at 1h.)	1012.1	0	SSW	2	or₀	50	92	6	750	Nb	10	-	-	*
Croydon	1012.6	0	S	3	o2fq	50	97	5	1250	St.	10	-	-	*

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

18H. G.M.T. of 28th / 7H. G.M.T. of 29th

Stations	18h Barom. at M.S.L. mb.	18h Temp. °F.	18h Wind Direc	18h Wind Force 0-12	18h Weather	7h Barometer at M.S.L. mb.	7h Change in 3 hours	7h Temp. °F.	7h Temp. Change in 24 hours	7h Wind Direc	7h Wind Force 0-12	Direc. of Upper Cloud	7h Weather	Sea 0-9
Lerwick	1002.1	44	-	0	b	1005.2	+1	46	-1	SSE	2	-	c	1
Stornoway	998.1	38	-	0	bc	999.8	0	46	+2	S	2	-	o	1
Castlebay (Barrals)	997.1	48	E	3	op	999.7	0	49	+1	S	4	-	op	4
Malin Head	996.9	45	S	1	o	999.8	0	44	+4	S	2	-	b	2
Blacksod Point	995.1	50	SW	2	bc	1000.1	+3	49	.	SW	3	-	bc	3
Roche's Point	1002.1	50	W	2	b	1005.2	0	50	+1	SW	1	-	o	4
Birr Castle	1000.5	46	S	1	c	1003.9	*	44	+2	S	1	-	o	*
Donaghadee	999.0	46	WSW	2	bc	1003.8	0	44	-3	-	0	-	bcm	1
Liverpool (Bidston)	1001.1	49	WSW	5	bc	1008.3	0	50	+4	SSW	3	SW	o	3
Holyhead	1002.2	48	WSW	5	b	1005.3	0	50	+5	SW	3	-	R2-3f	2
Pembroke (St. Ann's Head)	1004.9	57	WSW	4	b	1007.6	0	51	+3	S	2	-	o1f	4
Scilly (St. Mary's)	1006.8	52	WSW	3	bc1f	1007.7	-1	52	+1	-	0	-	or₀2-3f	3
Jersey (St. Aubin)	1011.1	51	SW	3	o	1012.1	-1	52	0	SW	5	-	o	4
Portland Bill	1009.6	51	SW	5	bcq	1010.7	-3	50	0	S	4	-	or	6
Dungeness	1008.0	51	SW	4	bc	1013.1	0	50	-1	SW	3	-	r	4
Wick	999.5	46	SSE	3	c	1002.1	0	42	0	SSW	2	.	cmd	2
Nairn	999.1	32	-	0	bc	1001.5	*	36	+2	-	0	-	cs	1
Leith	998.3	44	E	1	r	1003.4	0	40	0	SE	1	SE	cm	1
Tynemouth	997.6	45	SW	1	or2-3f	1008.1	+1	44	+6	W	2	-	o3f	2
Spurn Head	999.2	47	SW	4	bcm	1008.1	+2	45	0	SSW	3	-	cm	3
Yarmouth (Gorleston)	1002.7	50	WSW	4	b	1011.3	0	46	+1	SW	3	-	om	2
Clacton-on Sea	1004.8	48	WSW	3	bc	1012.0	0	45	-1	WSW	3	-	og	2
Nottingham	1002.2	49	SW	3	b	1008.8	*	47	0	SW	2	-	o	*

24 HOURS ENDED 7H. 29th / Sunshine 28th

Stations	Rainfall mm.	Max. °F.	Min. °F.	Weather Morning	Weather Afternoon	Weather Night	Sunshine Hours
Lerwick	1	50	43	bc	bp	bc.c	*
Stornoway	1	46	35	c	bc	bc.o	0.3
Castlebay (Barrals)	2	49	46	bc.o.c	c.op	op.r.op	0.0
Malin Head	1	45	40	om	om	bc	0.0
Blacksod Point	-	60	43	c	c	bc	*
Roche's Point	7	53	47	r.o.b	b bc.b	b.o	*
Birr Castle	13	50	40	op.c	c	c.op	1.8
Donaghadee	5	49	41	omd	omd	bcm	*
Liverpool (Bidston)	4	50	45	om	op.bc	bop	0.5
Holyhead	5	51	42	f.ocr	r.op.o.c	bopomr	0.0
Pembroke (St. Ann's Head)	3	52	48	c.oqp	cq.c	bccom	2.0
Scilly (St. Mary's)	2	54	50	o.bcpm	bcm	bcomd	4.9
Jersey (St. Aubin)	6	55	49	o	o.b	b.op	0.2
Portland Bill	2	54	47	bc.oqm	om.bcq	bcq.or	*
Dungeness	0.2	52	49	op.od	op.c	bc.c.or	*
Wick	0.3	46	39	bm	bm.c	c.omd	*
Nairn	3	37	31	bcm	bcm	bcpg.c	2.8
Leith	5	45	39	cm.o	odmr	r.omc	*
Tynemouth	9	46	39	fr	omr	cm.om	*
Spurn Head	2	47	36	fd	op	b.III	*
Yarmouth (Gorleston)	1	52	44	om	om bm	b.bv.cIII	0.0
Clacton-on Sea	1	51	43	og.cm	c.bcm	bcogp	1.7
Nottingham	2	50	44	ome	op.c	b	0.0

* Information for these columns not usually received. ‡ The barometric change is expressed in half millibars. § For code see page 3 † See footnote p. 4.

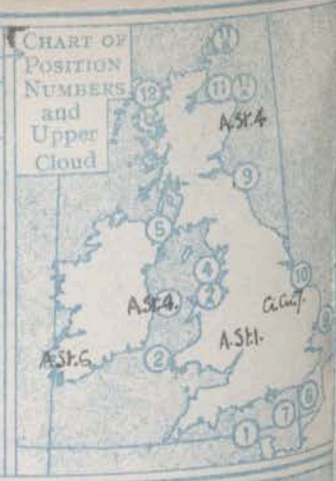
M.O. FORM 2370

SUMMARY OF CONDITIONS AT 7 h. G.M.T. 29.12.20.

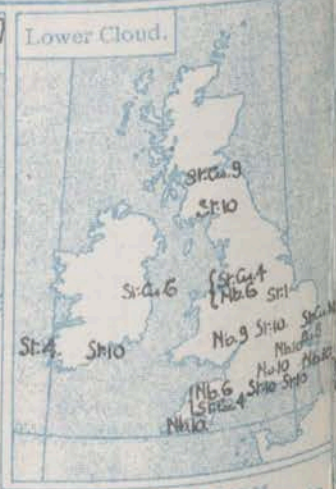
Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Dull, misty, rainy.	Indiff.	Slight
2. E. England	Dull, misty.	Fair.	Smooth
3. E. Midlands	Overcast.	Indiff.	-
4. W. Midlands	Squally, misty.	Poor.	-
5. S.W. England	Dull, rainy.	"	Slight
6. South Wales	Dull, misty.	V.Good.	Mod.
7. North Wales	Showery, misty.	Fair.	Smooth
8. N.W. England	Squally, misty.	Poor.	Slight
9. N. Midlands	Dull.	Fair.	-
10. N.E. England	Cloudy, misty.	V.Poor.	Smooth
11. E. Scotland	Fair to dull, some fog.	V.Poor.	Smooth
12. S.W. Scotland	Dull, drizzle, misty.	" "	V.Smooth
13. Isle of Man	Fair, misty.	Good.	" "
14. N.& N.W. Scotland	Drizzle, misty.	Indiff.	Smooth
15. Hebrides	Dull, showery.	Fair.	"
16. Orkneys and Shetlands	Cloudy.	Indiff.	V.Smooth
17. N.W. Ireland	- - -	-	-
18. N.E. Ireland	Fair, misty.	Good.	V.Smooth
19. S.E. Ireland	Dull.	Indiff.	Mod.
20. S.W. Ireland	Dull.	"	-

Temperature reported from Coastal and Cross Channel Steamers.

Position Number.	Date	Time G.M.T.	Sea °F	Air °F
12.	28th	05.20	53	49
5.	"	08.08.	50	47
3.	"	10.00	51	50
1.	"	12.10	51.75	54
4A.	29th	03.40	47	50
7.	"	03.55	50	53



Barometric change from 4 h. to 7 h. (half millibars).



EXPLANATION.

BAROMETER.—Isobars are drawn for intervals of two millibars.

WIND.—Direction is shown by arrows flying with the wind. Force, on the scale 0-12, is indicated by the number of feathers. Mean velocity is shown in miles per hour by figures in small circles.

TEMPERATURE is given in degrees F.

WEATHER SYMBOLS.—clear sky. sky ¼ clouded. sky ½ clouded. overcast sky. rain falling. snow. sleet. hail. fog. mist. T thunder. R thunderstorm.

SEA DISTURBANCE.—Rough High

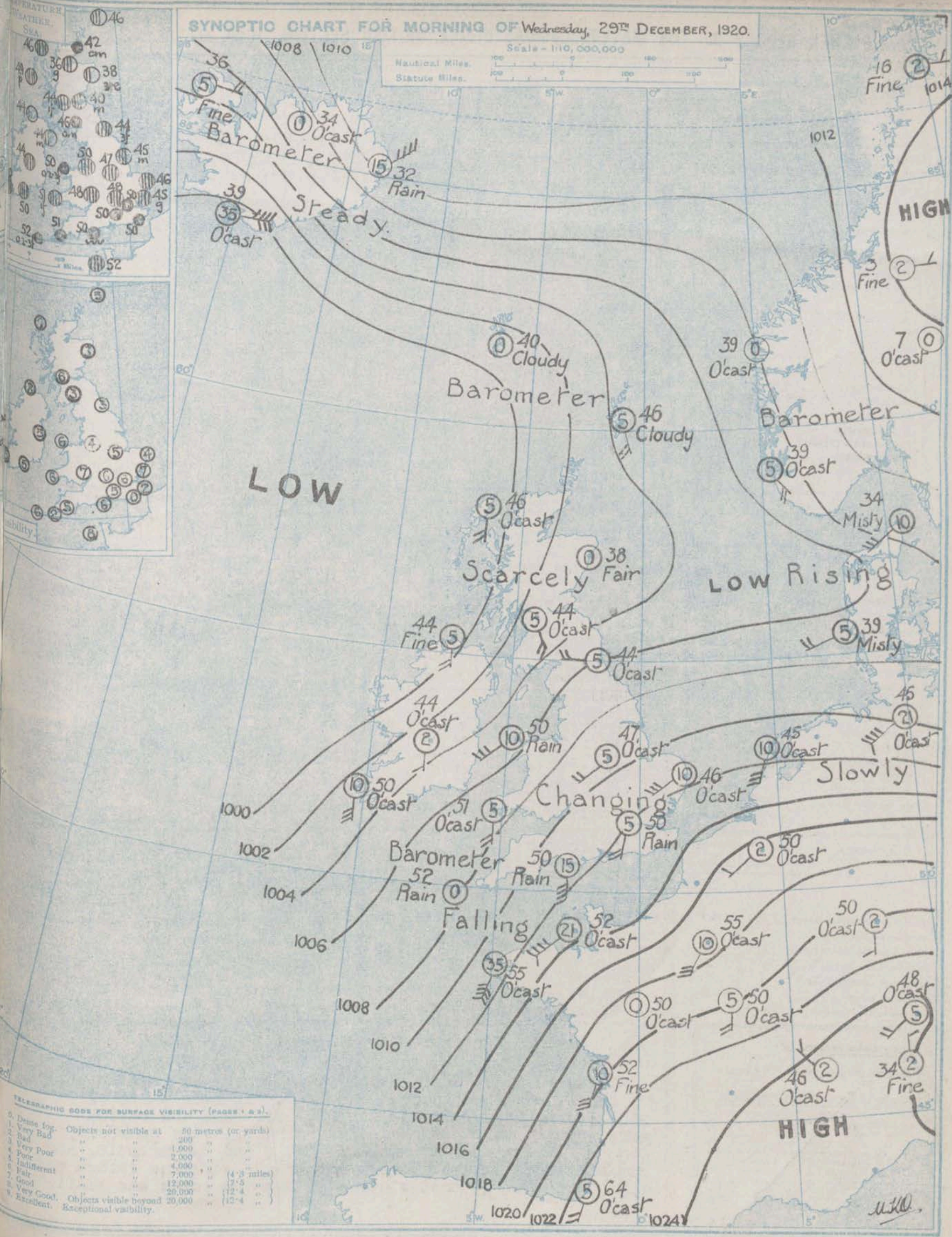
GENERAL INFERENCE from observations received up to 9h.

The changes in barometric pressure are now slight, but the general distribution continues favourable for Southerly and South-Westerly winds and for the approach of further depressions from the Atlantic. Mild, unsettled weather is consequently still probable for some days.

Districts.	Forecasts for the 24 hours commencing 15h. G.M.T. Wednesday 29th December 1920.	Further Outlook.
1. S.E. England 2. E. England 3. E. Midlands 4. W. Midlands 5. S.W. England 6. South Wales 7. North Wales 8. N.W. England 9. N. Midlands 10. N.E. England	Wind South or South-West, light or moderate; much cloud generally, some rain or showers, fairer intervals. Visibility indifferent to fair. Mild.	Wind South or South-West, unsettled, mild weather.
11. E. Scotland 12. S.W. Scotland 13. Isle of Man 14. N.& N.W. Scotland 15. Hebrides	Wind South or South-East, light or moderate; cloudy or overcast, some rain. Visibility indifferent to fair. Mild.	
16. Orkneys and Shetlands 17. N.W. Ireland 18. N.E. Ireland 19. S.E. Ireland 20. S.W. Ireland	Wind South or South-West, light to fresh or strong. Much cloud, occasional rain. Visibility indifferent to fair. Mild.	

RP.

Meteorological Office: Air Ministry, Kingsway, London, W.C.2. Forecasts issued at 09.30. G. C. SIMPSON, F.R.S., Director.



TELEGRAPHIC CODE FOR SURFACE VISIBILITY (PAGES 1 & 2).

0. Dense fog.					
1. Very Bad	Objects not visible at		50 metres	(or yards)	
2. Bad	"	"	200	"	"
3. Very Poor	"	"	1,000	"	"
4. Poor	"	"	2,000	"	"
5. Indifferent	"	"	4,000	"	"
6. Fair	"	"	7,000	"	(4·3 miles)
7. Good	"	"	12,000	"	(7·5 ")
8. Very Good.	"	"	20,000	"	(12·4 ")
9. Excellent.	Objects visible beyond Exceptional visibility.		20,000	"	(12·4 ")

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 364.

WEDNESDAY 29th DEC.R 1920

WEATHER, TEMPERATURE, RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 28th

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 24th-25th	Rainfall. Day. 9h-18h. 25th	Sunshine. Sunrise to Sunset. 25th
Scotland.	Oban	bc	c. o	48	38	-	-	0·2
	Banff	b. bc	bc. c. o	43	36	1	-	2·9
	Montrose							
	St. Andrews							
England, N.E.	Harrogate	fr	rm	?	?	1	3	0·0
	Scarborough	fog	ofr	48	44	-	2	0·0
	Skegness							
England, E.	Lowestoft							
	Felixstowe	omd	om	?	42	3	-	0·0
	Southend-on-Sea	bc	bc	52	43	4	-	2·5
England, S.E.	Tunbridge Wells	o. c. bc	od. o. c	53	47	5	0·4	1·9
	Margate	o. bc	bc. c	53	47	5	-	2·3
	Ramsgate	*	*	53	41	5	-	2·4
	Folkestone	r. o	or. o	53	47	7	0·4	1·6
	Hastings	c. o	od	53	48	7	1	0·0
	Eastbourne	c od. o	or. d. o	54	48	7	0·3	0·9
	Brighton	b. bc. om	or	51	49	6	1	0·9
	Worthing	bc. c	cr. c	51	49	6	0·1	1·6
	Littlehampton	bc. r	om	51	48	6	1	2·2
	Portsmouth (S'thsea)	*	*	54	48	6	1	1·5
	Bournemouth	*	*	53	48	5	1	0·8
		*	*					

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. F.	Rainfall. Night. 17h-9h. 24th-25th	Rainfall. Day. 9h-17h. 25th	Sunshine. Sunrise to Sunset. 25th
England, N.W.	Douglas (I.O.M.)							
	Blackpool	o	or	48	42	-	5	0·0
	Southport	o	or. o. c	41	42	-	3	0·0
	Morecambe	*	*	44	42	-	5	0·0
Midlands.	Buxton							
	Leamington Spa	o. c. b	bc. h. o	52	45	6	2	0·6
	Malvern							
	Bath	bc. b	b. bc. c	56	48	7	-	3·0
Wales.	Rhyl	c	cr	51	43	1	-	0·5
	Colwyn Bay	*	*	52	41	-	4	0·5
	Llandudno	or	r. c	53	44	0·1	3	0·2
	Aberystwyth	r. or	c. c. o	51	48	12	4	0·3
	Tenby							
	Swansea							
England, S.W.	Weymouth	bc. oc. c	c. bc. b	55	49	5	0·4	0·2
	Teignmouth							
	Torquay	o. bc. r	o	56	48	7	3	0·1
	Paignton	cp	op. c. b	56	48	8	0·4	0·1
	Penzance							
	Newquay	omd. bc	b	55	48	5	0·3	2·6
	Bude	b	b	56	49	4	-	2·0
	Ilfracombe							
	Weston-s-Mare	bc. b	bc. c	55	46			

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-13h 28th	Weather. 13h-18h 28th	Weather. 18h-1h 29th	Weather. 1h-7h 29th	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall.† Day. 7h-18h. mm.	Rainfall.† Night. 18h-7h mm.	Sun. Hours.
Renfrew	bc. o. o. b-bf	o3f/c o4f/r	o4f r o2f r o2f	c. o p.	45	32	38	4	3	0·0
Eskdalemuir	o2f	r/c. rr	b. o o2f	r. o3f	46	38	34	10	3	0·0
Valencia (Cahirc'ni)	[illegible]	b. bc. c. o bc	bc/c/tlg	c. o	54	45	43	6	8	2·5
Baldonnel	c. o R/f. o g	b. o1f	bo2f	c. o. r	50	45	39	3	2	0·7
Manchester (Alex Pk.)	o3f. o2f	o2f r	o3f c. o bbc	b. or. o2f	49	41	33	3	trace	*
Ross on Wye	c. o/pc. b. o.	o. bc. c. b. o.	bg. b. bc. bo	o. c. o	53	47	40	trace	-	1·4
Falmouth	c. o/p. c. o.	c. o	c. o	o. r	55	47	50	1	3	0·1
Calshot (Hants)	bo. b. bc. co	d. o2f o/bc	bc. c. o	o1f. r r d. o	53	48	46	1	1	1·6
Lympne (Folkestone)	o/f. bc. g. o/f	o/f. o/p. r bc. o/b. bc. c	co. if. bb. c. o	o1f. r.	52	48	44	1	0·1	0·2
Aberdeen	r. o/f. 1/f	o1f. 4-5f	4-5f. DD	4-5f. DD	40	34	30	-	3	0·0
Howden	o. bg	R. r	bc. c. b. oc	0 o1f						
Cranwell (Lincs)	bo. 3/f	or. b. bc	b. bc. c.	bc. O.	51	45	43	2	-	0·0
Felixstowe	o/f. o	b. bc/f.		o1f. o	53	45	*	0·2	-	1·7
Shoeburyness	bg. bc. c	b. bc. b	b. bc	bc. c. o	50	41	33	0·1	trace	2·9
Benson	bc. c. o	bc. c. b	b. bc	bc. c. o	54	45	35	0·3	0·1	*
S. Farnborough	c. o/b. bbc. o	or. b. bc. b	b. bc.	b. bc. d o d.	54	47	44	0·1	0·1	3·0
London (Kew Obsy.)	c. o. b. bc. o	r. b. bo	b. bc	bbc o1f. r. r.	54	48	43	0·1	trace	2·0
Croydon	b. o/f. g	o1f. g b. o	b. bc. b bo g/f	bc/f bo2f d o d.	54	48	*	trace	0·2	*

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, *i.e.*, rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the typical atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:-
R = heavy rain.
rr = continuous moderate rain.
r.r. = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.
Used only for surface observations.

No.	Limits of Velocity at about 30 feet above Ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0·3
1	1- 3	0·3- 1·5
2	4- 7	1·6- 3·3
3	8-12	3·4- 5·4
4	13-18	5·5- 7·9
5	19-24	8·0-10·7
6	25-31	10·8-13·8
7	32-38	13·9-17·1
8	39-46	17·2-20·7
9	47-54	20·8-24·4
10	55-63	24·5-28·4
11	64-75	28·5-33·5
12	Above 75	33·6 or above

SYMBOLS—
Aurora — Solar halo
Rime — Lunar halo
Glazed frost — Solar corona
Glazed roads — Lunar corona

LONDON. OBSERVATIONS.	Morning.	Weather. Afternoon.	Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Hours.	Humidity % 18 h. G.M.T.	Humidity % 9 h. G.M.T.
	24 HOURS ENDED 9H G.M.T. 29th							YESTERDAY.		TO-DAY.
Greenwich (Royal Observatory)	o. b. o	or. o. b	b. o. r	55	48	42	1	2·0	87	86
City (Bunhill Row)	*	*	*	*	*	*	*	1·8	*	*
Westminster (St. James's Park)	*	*	bc. od	56	49	41	1	1·9	82	90
Regents Park (Botanic Gdns)	*	*	*	*	*	*	*	1·9	*	*
Camden Sq. (British Rainfall)	-	-	*	55	47	41	0·3	*	-	94
Kensington Palace	c.	bc. b	*	55	48	41	1	*	83 (18h)	96
Hampstead Observatory	*	*	*	53	47	41	0·3	1·9	*	95

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday

Total 167 Joules.

Milliwatts.
Average Rate. 5·9
Maximum Rate. 17

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

29th & 30th DECEMBER 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth	8·6 / 8·6	11·55 / 11·56	3·49 / 3·48
Greenwich	8·8 / 8·8	12·1 / 12·3	3·57 / 3·58
Wick	9·6 / 9·5	12·14 / 12·15	3·21 / 3·24
Valencia	8·50 / 8·51	12·44 / 12·44	4·36 / 4·37

Photographic Record of Pole Star (Polaris) and of δ Ursae Minoris at Greenwich Observatory.

Exposure from 28th 17 h. 0 m. to 29th 7 h. 0 m.

Stars.	Duration of Exposure. m.	s.	Duration of Record. h.	m.	%
Polaris	14.	0	10.	54	78
δ Ursae Minoris	14.	0	10.	11.	73

NOTES ON THE WEATHER OF YESTERDAY.

Temperature again exceeded 50° over the greater part of the Kingdom and touched 55° or 56° in some parts of Southern England. In the North of Scotland the maxima were lower - only 37° at Nairn. Rain fell very generally; 14mm at Valencia, 13mm at Birr Castle and Eskdalemuir, and 9mm at Tynemouth. At Scilly the bright sunshine record was 4.9 hours, but at most other stations the value was small.

* Information for these columns not usually received.

† Trace = rain has fallen but amount less than 0·1 mm.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. No. B 21588 THURSDAY 30TH DECEMBER 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

STATIONS.	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind. Direc.	Wind. Force 0-12.	Weather	Temp °F.	% Humidity.	Visibility § 0-9.	Height of Low Cloud. Feet.	Low Cloud. Form.	Low Cloud. Amt. 0-10.	Upper Cloud. Form.	Upper Cloud. Amt. 0-10.	Sea 0-9.
	13H. G.M.T. 29TH													
Renfrew	1005.5	+2	SW	4	c 2f	48	85	4	2,000	Sr Cu	6	Cu Sr	2	*
Eskdalemuir	1006.0	+1	SW	3	o	46	92	6	1250	Sr	6	A Sr	4	*
Valencia (Cahire'n)	1001.3	-4	SSE	3	or	49	85	7	2000	Sr	3	A Sr	7	4
Baldonnel	1005.4	0	SSW	8	o1f	52	85	6	2000	Sr Cu	2	A Sr	8	*
MANCHESTER (ALEX TK)	1007.8	-1	SSW	3	o 2f	49	85	4	1250	Sr	10	-	-	*
Ross on Wye	1007.9	-2	E	1	ogr4-5f	50	97	2	750	Nb	10	-	-	*
Falmouth	1006.2	-3	SSW	6	or	54	97	6	-	Nb	10	-	-	*
Calshot (Hants) *	1009.6	-3	SSW	6	od	52	97	4	<500	Nb	10	-	-	3
Lympne (Folkestone)	1011.6	-1	SSE	4	o Dsf	49	97	1	<500	Nb	10	-	-	*
Aberdeen	1005.0	+1	SSW	2	bsfc	48	92	8	-	-	-	-	-	2
Howden	1007.3	-2	-	0	o	48	92	4	2,000	Sr Cu	6	Cu Cu	4	*
Cranwell (Lincs)	1010.0	-1	S	3	o2f	50	92	5	4,200	Sr	8	A Sr	7	4
Felixstowe	1012.8	-1	SSE	2	or2-3f	47	97	2	1250	Nb	10	-	-	1
Shoeburyness	1011.8	-2	SE	2	od3f	49	92	8	750	Sr	10	-	-	*
Benson	1008.0	-4	SSE	3	od	50	97	5	-	Nb	10	-	-	*
S. Farnborough	1009.6	-4	S	2	odm	51	97	4	<500	Nb	10	-	-	*
London (Kew Obsy.)	1009.7	-5	SSE	2	od,m	52	97	4	1250	Nb	8	A Sr	2	*
Croydon	1010.6	-4	S	2	o3fd,	51	97	4	750	Nb	10	-	-	*
	18H. G.M.T. OF 29TH													
Renfrew	1004.1	-3	ESE ~~WSW~~	2	o3f	40	97	3	-	-	-	A Sr	10	*
Eskdalemuir	1004.9	-3	-	0	o3f	48	97	5	-	Sr	10	-	-	*
Valencia (Cahire'n)	997.9	-3	N	2	or	48	85	6	2000	Sr	10	-	-	4
Baldonnel	1000.2	-5	NE	2	oR2-3f	46	92	3	750	Sr	10	-	-	*
MANCHESTER (ALEX TK)	1003.9	-6	SSE	2	orm	47	92	8	750	Nb	10	-	-	*
Ross on Wye	1002.9	-5	SSW	6	odq	54	92	7	1250	Nb	9	A Sr	1	*
Falmouth	1003.5	-4	SSW	7	od,	54	97	4	-	Nb	10	-	-	*
Calshot (Hants)	1008.5	-1	SSW	6	or2-3f	52	97	4	<500	Nb	10	-	-	4
Lympne (Folkestone)	1009.6	-2	SW	5	o1f	52	97	6	750	Sr	10	-	-	*
Aberdeen	1004.8	-1	-	0	bsfc	54	92	2	-	-	-	-	-	2
Howden	1006.7	-4	-	0	or2-3f	46	97	4	1250	Nb	10	-	-	*
Cranwell (Lincs)	1008.6	-7	SE	3	od	48	97	2	<500	Nb	10	-	-	*
Felixstowe	1009.5	-2	S	4	or2-3f	49	97	3	1250	Nb	10	-	-	1
Shoeburyness	1008.4	-1	SW	5	o3fd	53	92	5	750	Cu	10	-	-	*
Benson	1005.8	-3	SSW	4	or	53	92	5	-	Sr	10	-	-	*
S. Farnborough	1007.0	-2	S	6	odm	53	92	4	<500	Nb	10	-	-	*
London (Kew Obsy.)	1007.6	-2	SSW	4	odm	54	97	4	1250	Nb	8	A Sr	2	*
Croydon	1008.4	-2	S	6	o3fq	53	97	2	750	Nb	10	-	-	*
	1H. G.M.T. OF 30TH													
Renfrew														
Eskdalemuir	995.9	-10	E	4	oR2-3f	40	92	4	-	Nb	10	-	-	*
Valencia (Cahire'n)	999.0	+2	SSW	2	cqpd	47	*	*	*	*	*	*	*	3
Baldonnel	997.6	+3 ~~+4~~	SSW	4	oR2-3f	44	97	4	<500	St.	10	-	-	*
MANCHESTER (ALEX TK)	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ross on Wye	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Falmouth	1000.6	+3	SW	6	b	50	86	7	-	St.Cu	1	Ci St.	2	*
Calshot (Hants)	1003.5	+2	SW	5	oR2-3f	50 ~~54~~	97	4	<500	Nb	10	-	-	4
Lympne (Folkestone)	1005.8 ~~1005.8~~	-4	S	7	omq	52	85	7	750	St.	10	-	-	*
Aberdeen	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Howden	995.8	-6	SSW	4	omr	52	97	5	3,000	St.	10	-	-	*
Cranwell (Lincs)	999.0	-5	W	4	R r	52	97	3	750	~~St.Cu~~ Nb	10	-	-	*
Felixstowe	1008.5	+2	SW	4	b	48	92	6	-	-	-	-	-	4
Shoeburyness	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Benson	*	*	*	*	*	*	*	*	*	*	*	*	*	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*
London (M.O. at 1H.)			*	*	*	*	*	*	*	*	*	*	*	*
Croydon	1004.6	-3	S	7	ozf.gr	53	92	4	750	Nb	10	-	-	*
	7H. G.M.T. OF 30TH													
Renfrew	998.4	+4	-	0	o2f	44	85	4	4,200	St Cu	10	-	-	4
Eskdalemuir	995.2	+5	NE	5	or2-3f	40	97	4	-	Nb	10	-	-	*
Valencia (Cahire'n)	1001.6	+1	S	3	or	48	85	5	2,000	St.Cu	9	A St	1	*
Baldonnel	~~1003.8~~ 1002.8	+5	-	0	o1f	43	97	6	2,000	St	10	-	-	*
MANCHESTER (ALEX TK)	999.9	+2	WSW	6	ogm	46	85	4	1,250	CuNb	9	A St	1	4
Ross on Wye	1004.4	+3	W	6	opdq	49	85	7	2,000	Nb	9	-	-	*
Falmouth	1009.0	+3	SW	3	b	50	85	7	-	-	-	A Cu	3	*
Calshot (Hants)	1010.0	+1	SW	6	c	49	92	6	2,000	St.Cu	3	A St.	4	4
Lympne (Folkestone)	1008.3	+2	SW	6	omq	49	85	7	1,250	St.	9	-	-	*
Aberdeen	998.0	0	W	3	of.r	44	92	4	2,000	Nb	10	-	-	2
Howden	996.0	-2	WSW	6	oq	47	92	4	1,250	St.Cu	10	-	-	*
Cranwell (Lincs)	~~999.6~~ 997.7	0	WSW	5	bc	~~47~~ 48	~~75~~ 85	6	3,000	St.Cu	4	-	-	*
Felixstowe	1005.0	-4	S	4	o2f	49	95	4	4,200	St.	10	-	-	3
Shoeburyness	1005.9	+1	SW	6	b	50	75	7	-	-	-	Ci	1	*
Benson	1005.5	+2	SW	5	b	48	85	8	-	St.Cu	2	-	-	*
S. Farnborough	1007.3	+1	SW	6	b	48	85	6	2,000	St.	1	-	-	*
London (M.O. at 1H.)	1008.7	+1	SW	4	b	50	85	7	-	-	-	A St	1	*
Croydon	1007.9	+2	WSW	5	bfq	50	85	6	2,000	St.	1	A St.	2	*

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

STATIONS.	Barom. at M.S.L. mb.	Temp. °F.	Wind. Direc	Wind. Force 0-12.	Weather.	Barometer at M.S.L. mb.	Barometer ‡ Change in 3 hours.	Temperature. Temp. °F.	Temperature. Change in 24 hours.	Wind. Direc.	Wind. Force 0-12.	Direc. of Upper Cloud.	Weather.	Sea 0-9.	Rainfall † mm.	Temp. Max. °F.	Temp. Min. °F.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Sunshine Hours.
	18H. G.M.T. of 29TH					7H. G.M.T. of 30TH									24 HOURS ENDED 7H. 30TH						29TH
Lerwick	1004.5	45	ESE	1	0	1002.9	-4	45	-1	SE	3	SE	omR	2	9	47	43	b.o	o	bcmom	*
Stornoway	1001.0	45	S	1	bc	1000.5	+1	39	-7	-	0	-	b	0	4	47	36	o.p.c	bcp	bm.b	0.8
Castlebay (Barra Is)	1001.6	48	-	0	b	1000.6	0	45	-4	-	0	-	b	1	0.3	51	43	op.bp	bp.bc.b	bp.bc.p	1.6
Malin Head	1000.8	44	S	1	om	1000.2	+2	44	0	ESE	1	-	cm	1	-	45	41	bc	om	om.cm	0.0
Blacksod Point	998.7	43	-	0	cm	999.3	+3	44		SSE	3	-	o	3	1	52	40	bc	cm	omr.o	*
Roche's Point	~~998.8~~	46	NW	3	r	1004.2	+5	47	-3	SW	2	-	o	4	19	50	45	orm	orm	r.o	*
Birr Castle	999.6	46	S	1	r	1001.7	*	43	-1	S	1	-	o	*	9	47	41	f.o	f.o.r	op.o	0.0
Donaghadee	1003.3	48	E	1	o	1000.7	+5	42	-2	N	2	N	bm	2	28	49	42	om	om	omr.bc	*
Liverpool (Bidston)	1002.5	47	ESE	4	r	999.0	+4	45	-5	WSW	7	W	oq	5	15	51	44	opm	or	oqr	0.0
Holyhead	999.8	49	ENE	6	or2-3f	1001.2	+7	46	-4	W	5	NW	cp	4	19	51	44	opdcc	oq.orm	or.bc.p	0.0
Pembroke (St. Ann's Head)	999.8	52	SW	4	or2-3f	1005.3	+3	51	0	SW	6	-	cqp	5	6	52	48	oqmr	omrf	of.rqp	0.0
Scilly (St. Mary's)	1002.6	53	SSW	5	or2-3f	1007.8	+2	51	-1	WSW	3	SW	c	5	2	54	49	omr	omr	ompb.bc	0.0
Jersey (St. Aubin)	1011.8	54	SW	3	c	1012.9	0	50	-2	SW	3	-	o	4	0.2	56	49	o.c.o	o.c	o.c.op.o	0.1
Portland Bill	1007.5	52	SSW	6	o	1008.4	+4	52	+5	WSW	6	SW	cq	7	6	54	47	omr	oqmr	oqr.o.cq	*
Dungeness	1009.6	53	SW	5	c	1008.1	+1	50	0	WSW	5	W	cq	6	2	54	49	op.or	opr.c	op.cq	*
Wick	1002.4	42	SSW	2	bc	999.5	-2	37	-5	WNW	2	-	cm	1	2	45	34	omd	bo	bc.b	*
Nairn	1002.6	35	-	0	bc	999.4	*	37	+1	-	0	-	o	0	0.4	41	33	c.bcm	bcm	bccpg	3.6
Leith	1004.0	45	SE	1	m	995.9	+1	45	+5	NNE	3	-	o	2	13	48	40	cm	ogm.o	m.or.o	*
Tynemouth	1006.2	47	S	1	nf	991.6	+3	43	-1	NW	4	-	r2-3f	2	17	49	39	cf	f	omr	*
Spurn Head	1006.2	45	SSW	3	fr	995.1	-1	47	+2	SW	6	-	bq	4	9	51	35	or	omrf	ormogpbq	*
Yarmouth (Gor Lighted)	1009.5	45	S	3	o2-3f	1002.9	+1	47	+1	WSW	4	-	b	3	6	54	43	omd	omrfr	oqr.bc	0.0
Clacton-on-Sea	1008.1	47	SSW	3	o	1005.5	+2	47	+2	SW	4	W	b	3	5	51	45	oqmr	oqmrb	oq.bc.b	0.0
Nottingham	1004.5	48	E	2	or	999.7	*	49	+2	WSW	6	W	c	*	13	55	47	opm	rm	r.o	0.0

* Information for these columns not usually received

‡ The barometric change is expressed in half millibars.

§ For code see page 3

† See footnote p. 4.

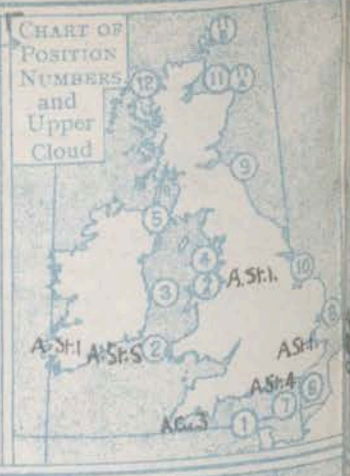
M.O. FORM 2370

SUMMARY OF CONDITIONS AT 7 h. G.M.T. 30.12.20.

Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Variable sky, squally.	Fair	R. rough
2. E. England	Fine	Good	Slight
3. E. Midlands	Fair	Fair	-
4. W. Midlands	Squally, misty.	Poor	-
5. S.W. England	Fine.	Good	R. rough
6. South Wales	Showery, squally.	V. good	Rough
7. North Wales	Showery, squally.	V. good	R. rough
8. N.W. England	Squally, misty.	Poor	Moderate
9. N. Midlands	Fine, squally.	Indiff.	-
10. N.E. England	Dull, misty, rainy.	Poor	Smooth
11. E. Scotland	Foggy, slight rain.	Poor	Smooth
12. S.W. Scotland	Dull, misty, rainy.	Poor	Smooth.
13. Isle of Man	Fine, misty.	Good.	Smooth.
14. N. & N.W. Scotland	Dull.	Fair	Calm
15. Hebrides	Fine	Good	Calm
16. Orkneys and Shetlands	Dull, misty, rainy.	V. Poor	Smooth
17. N.W. Ireland	-	-	-
18. N.E. Ireland	Fine, misty.	Good	Smooth
19. S.E. Ireland	Dull.	Good	Moderate
20. S.W. Ireland	Dull, showery.	Indiff.	-

Temperature reported from Coastal and Cross Channel Steamers

Position Number.	Date	Time G.M.T.	Sea °F	Air °F
3.	29th	10.00	50	52
6.	"	1530	52	53
7.	30th	02.54	50	52
4A.	"	04.00	50	47



Barometric change from 4 h. to 7 h. (half millibars).

EXPLANATION.

BAROMETER.—Isobars are drawn for intervals of two millibars.

WIND.—Direction is shown by arrows flying with the wind. Force, on the scale 0-12, is indicated by the number of feathers. Mean velocity is shown in miles per hour by figures in small circles.

TEMPERATURE is given in degrees F.

WEATHER SYMBOLS.—clear sky. sky ¼ clouded. sky ½ clouded. sky ¾ clouded. overcast sky. rain falling. snow. sleet. hail. fog. mist. T thunder. ℞ thunderstorm.

SEA DISTURBANCE.—Rough. High.

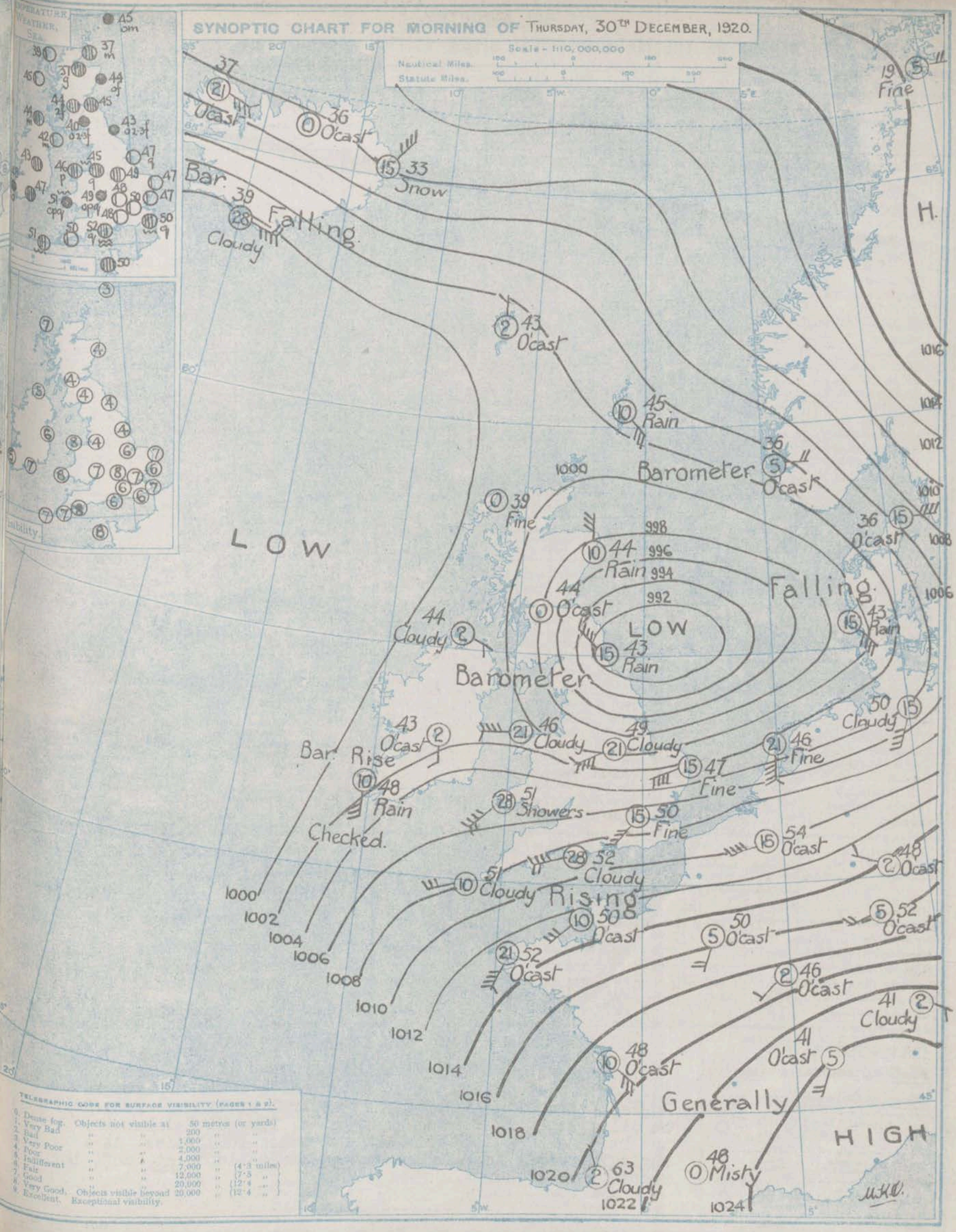
GENERAL INFERENCE from observations received up to 9h.

A depression centred off the NE of England will move away North-Eastward or Eastward, but as there are already some indications of the approach of another disturbance to Ireland, the mild, unsettled weather is still likely to continue.

Districts.	Forecasts for the 24 hours commencing 15 h. G.M.T. Thursday, 30th December 1920.	Further Outlook.
1. S.E. England 2. E. England 3. E. Midlands 4. W. Midlands 5. S.W. England 6. South Wales	Wind between W & SW, moderate or fresh; variable sky, some showers; visibility mainly fair or good; mild.	Continuing mild and unsettled generally.
7. North Wales 8. N.W. England 9. N. Midlands 10. N.E. England	Wind North-Westerly fresh or strong, backing to W or SW; variable sky, some showers, then dull, some rain; visibility fair; cooler, then milder.	
11. E. Scotland 12. S.W. Scotland 13. Isle of Man 14. N. & N.W. Scotland 15. Hebrides 16. Orkneys and Shetlands	Wind N or NW, shifting later to SE, moderate or light; much cloud, some rain; visibility indifferent to fair; moderate temperature.	
17. N.W. Ireland 18. N.E. Ireland 19. S.E. Ireland 20. S.W. Ireland	Wind mainly from between S & W, moderate to strong; mainly overcast, occasional rain; visibility indifferent to fair; mild.	

K.S.

Meteorological Office: Air Ministry, Kingsway, London, W.C.2. Forecasts issued at 10.00 G. C. SIMPSON, F.R.S., Director.



TELEGRAPHIC CODE FOR SURFACE VISIBILITY (PAGES 1 & 2).

0. Dense fog.	Objects not visible at	50 metres	(or yards)		
1. Very Bad	"	"	200	"	"
2. Bad	"	"	1,000	"	"
3. Very Poor	"	"	2,000	"	"
4. Poor	"	"	4,000	"	"
5. Indifferent	"	"	7,000	"	(4·3 miles)
6. Fair	"	"	12,000	"	(7·5 ")
7. Good	"	"	20,000	"	(12·4 ")
8. Very Good.	Objects visible beyond		20,000	"	(12·4 ")
9. Excellent.	Exceptional visibility.				

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 365.

THURSDAY 30th DEC. 1920

WEATHER, TEMPERATURE, RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 29th

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 28th-29th	Rainfall. Day. 9h-18h. 29th	Sunshine. Sunrise to Sunset. 29th
Scotland.	Oban	b̄c	b̄	48	42	6	-	0.0
	Banff	b̄	b̄	45	38	2	-	4.8
	Montrose							
	St. Andrews	o	o	45	34	5	-	0.0
England, N.E.	Harrogate	c.o	or	49	42	2	0.3	0.0
	Scarborough	o	o	49	44	1	0.3	0.0
	Skegness	or	or	47	42	-	2	0.0
England, E.	Lowestoft							
	Felixstowe	om	of.r	49	44	-	5	0.0
	Southend-on-Sea							
England, S.E.	Tunbridge Wells	o.od	od	54	48	0.3	4	0.0
	Margate	or	or	55	47	1	1	0.0
	Ramsgate	*	*	52	46	1	2	0.0
	Folkestone	ro.ro	ro.ro	50	48	1	2	0.0
	Hastings	ofm	omr	53	49	1	2	0.0
	Eastbourne	d̄	rd.c	53	49	2	3	0.0
	Brighton	od	od	53	50	1	2	0.0
	Worthing	od	d	52	48	1	3	0.0
	Littlehampton	omr	or	52	47	1	3	0.0
	Portsmouth (S'thsea)	+	+	54	48	1	3	0.0
	Bournemouth	*	*	53	50	1	5	0.0
	Ventnor (I. of W.)	*	*					
England, N.W.	Douglas (I.O.M.)							
	Blackpool	o	or	49	43	1	1	0.0
	Southport	o	or	48	42	2	3	0.0
	Morecambe	+	+	50	44	2	1	0.0
Midlands.	Buxton							
	Leamington Spa	od	or	51	46	-	8	0.0
	Malvern							
	Bath	o	or	55	41	-	2	0.0
Wales.	Rhyl	or	r	51	46	3	9	0.0
	Colwyn Bay	+	+	52	42	2	7	0.0
	Llandudno	o	r	53	47	1	8	0.0
	Aberystwyth	oer	r.o	51	47	-	9	0.0
	Tenby							
	Swansea							
England, S.W.	Weymouth	mo	do	54	49	2	5	0.0
	Teignmouth							
	Torquay	o. or	odr	55	50	2	8	0.0
	Paignton	odpfr	or.oq	53	49	3	9	0.0
	Penzance	qfr	or.d	56	51	2	3	0.0
	Newquay	omdr	o.omd	53	50	2	2	0.0
	Bude	or.o.c	c.or.o	56	48	1	3	0.0
	Ilfracombe	or	or	56	48	3	8	0.0
	Weston-s-Mare	r	or.o	55	46	1	3	0.0

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-18h. 29th	Weather. 18h-18h 29th	Weather. 18h 29th-1h 30th	Weather. 1h-7h 30th	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall.† Day. 7h-18h. mm.	Rainfall.† Night. 18h-7h mm.	Sun. Hours.
Renfrew	c.o bc c bbq	bc q c.o qf	o3f. r.	o3f. RR. o.o.f	48	40	34	-	12	0.7
Eskdalemuir	o2f c.o	o2f	ORf R.R.	rr	46	35	35	0.1	25	0.0
Valencia (Cahirc'n)	o1f r.o	bc o1f.c.orr	r.r. 2.o.c.o	c.o	51	46	43	4	6	0.0
Baldonnel	o2f	RR o3f	r.o.r. o2f	Drr.o.o2f	50	42	40	6	9	0.0
Manchester (Alex Pk.)	o2f r.o.2f	o3f rr	o2f.rr.r.o2f	o2f RR.r.	54	41	40	4	8	*
Ross on Wye	o1r.R 3f	rrpd oq	dodqrq	rq.o1f.coq	55	48	43	7	6	0.0
Falmouth	d.q.rr3f d.q	d.q.rr.q.d	r.r.o.c.o.bbc	b.bc	54	49	47	4	5	0.0
Calshot (Hants)	o1f.o2f.d.d.d	rr. o2f	o1f.P.Do2f	r.o. corh.	54	47 48	46	5	1	0.0
Lympne (Folkestone)	o1r.o1f.r.o.o	DD r.o.o4f	c.o.bbcoifq	o1fq	53	48	46	3	-	0.0
Aberdeen	3fc 3fc	3fc 3fc	3fc.o2f	o1f. r.	44	35	30	-	0.3	2.8
Howden	o3f	r.r. d.d	dd.rr.	q	53	42	39	1	8	0.0
Cranwell (Lincs)	o2f pd.	rr	~~r.r.o.p.~~ r.o.p	r.b.o	54	46	45	3	8.7	0.0
Felixstowe	o3f rr	dd r.r.	o2f.b.o	o2f. r.	50	45	*	5	trace	0.0
Shoeburyness	DD. o3f	rr. R	pdo. f	f. q	54	47	45	5	0.2	0.0
Benson	o r.r.	r	o.r	o.b.bc	54	47	42	1	2	*
S. Farnborough	dd. r.r.	DD. dd	o2f	r.r. bc.c	53	49	44	3	1	0.0
London (Kew Obsy.)	d.d o2f	dd o2f	dodo.q	q.o1f.bbc	54	50 49	45	3	0.4	0.0
Croydon	o2f d.r.r. r o2f	o2f d.d o2f.r rr	o2f.rro1fpd. o1f.q.q	b.o2f.1fq	55	50	*	4	1	*

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, *i.e.*, rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:-
R = heavy rain.
rr = continuous moderate rain.
r.r. = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 30 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0·3
1	1- 3	0·3- 1·5
2	4- 7	1·6- 3·3
3	8-12	3·4- 5·4
4	13-18	5·5- 7·9
5	19-24	8·0-10·7
6	25-31	10·8-13·8
7	32-38	13·9-17·1
8	39-46	17·2-20·7
9	47-54	20·8-24·4
10	55-63	24·5-28·4
11	64-75	28·5-32·5
12	Above 75	32·6 or above

SYMBOLS—

Aurora, Rime, Glazed frost, Glazed roads, Solar halo, Lunar halo, Solar corona, Lunar corona

LONDON. OBSERVATIONS

24 HOURS ENDED 9h G.M.T. 30th

	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Hours. (Yesterday.)	Humidity % 15 h. G.M.T. (Yesterday.)	Humidity % 9 h. G.M.T. (To-day.)
Greenwich (Royal Observatory)	or.	or.	or. b	55	49	42	4	0.0	98	76
City (Bunhill Row)	*	*	*	*	*	*	*		*	*
Westminster (St. James's Park)	*	*	or. bc.	56	50	42	5	0.0	92	76
Regents Pk. (Botanical Gdns)	*	*	*	*	*	*	*	0.0	*	*
Camden Sq. (British Rainfall)	od.o	or	*	55	49	43	7	*	98	78
Kensington Palace	d.r	d.r	*	56	49	44	6	*	96 (18h)	78
Hampstead Observatory	*	*	*	58	48	42	8	0.0	*	78

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday.

Total 68 Joules.

Milliwatts.
Average Rate. 2.4
Maximum Rate. 5

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

30th & 31st DECEMBER 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth	8.6	11.56	3.46
	8.6	11.56	3.46
Greenwich	8.8	12.3	3.58
	8.8	12.3	3.58
Wick	9.5	12.18	3.24
	9.5	12.18	3.28
Valencia	8.51	12.44	4.37
	8.51	12.44	4.37

Photographic Record of Pole Star (Polaris) and of δ Ursae Minoris at Greenwich Observatory.

Exposure from 29th 17h. 0m. to 30th 7h. 0m.

Stars.	Duration of Exposure. h.	m.	Duration of Record. h.	m.	%
Polaris	14.	0	4.	8	30
δ Ursae Minoris	14.	0	3.	11	23

NOTES ON THE WEATHER OF YESTERDAY.

Temperature remained below 50° over a large area in the North, but again rose to 50° or above in most parts of England, touching 55° or 56° at several stations. Rain fell in all districts; 28mm at Donaghadee, 25mm at Esdalemuir, and between 15 and 20mm in several other localities. As a whole there was no sunshine except in Scotland; at Banff the record was 4.8 hours.

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* Information for these columns not usually received.

† Trace = rain has fallen but amount less than 0·1 mm.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. No. B 21,589 FRIDAY 31ST DECEMBER 1920.

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1H, 7H, 13H AND 18H.

13H. G.M.T. 30TH / 18H. G.M.T. OF 30TH

STATIONS	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	§ Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	§ Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew	1004.8	+6	WSW	1	b	44	65	4	-	-	-	-	-	*	1005.7	+1	-	0	b3f	38	94	2	-	-	-	-	-	÷
Eskdalemuir ...	1005.2	+5	SW	1	o	44	85	6	-	St Cu	9	.	.		1007.0	+1	-	0	o2f	41	92	5	-	St Cu	10	-	-	*
Valencia (Cahirc'n)	999.4	-4	S	5	c	62	85	4	2,000	St Cu	5	A St	3	4	994.5	-5	S	6	or	62	92	5	<500	St	10	-	-	5
Baldonnel ..	1005.2	-1	SSW	3	bc	48	85	8	4,200	Cu	1	A Cu	4	*	1003.1	-2	SSE	6	og	49	95	6	2,000	St	10	-	-	*
Manchester (Alex. Pk.)	1004.4	+4	WNW	3	o2f	47	86	4	1250	St Cu	10	-	-	÷	1008.6	+3	SE	1	o3f	43	92	3	750	St	9	-	-	÷
Ross on Wye ...	1008.3	+2	WSW	3	o	50	85	4	2,000	Nb	4	A St	3	*	1009.2	+1	SSW	2	o	46	92	6	2,000	St	2	A St	9	*
Falmouth	1009.4	-1	SSW	4	o	53	86	4	-	Cu Nb	1	A St	9	*	1008.1	-1	S	3	o	51	94	6	-	St	10	-	-	*
Calshot (Hants) * ...	1011.0	+2	SW	3	of	50	97	4	4,200	St Cu	9	-	-	3	1011.9	0	S	3	o	48	97	3	3,000	St Cu	3	A St	6	3
Lympne (Folkestone)	1010.5	+4	WSW	6	cq	51	75	8	1250	St	3	A Cu	5	*	1012.3	+2	SW	3	c	46	92	4	1250	St	8	-	-	*
Aberdeen	1003.6	+4	NW	3	of	43	92	6	2,000	St Cu	10	-	-	3	1006.3	+2	WNW	1	b2fe	39	92	4	5,400	St Cu	8	-	-	2
Howden	1004.9	+9	WNW	4	bog	44	85	8	4,200	St Cu	2	Ci	8	*	1008.8	+2	-	0	ofe	34	94	3	2,000	St	4	Ci	3	*
Cranwell (Lincs) ...	1006.8	+4	WNW	5	bc	47	75	4	4,400	St	1	Ci	5	÷	1009.9	+3	W	1	o2f	44	85	5	5,400	St Cu	6	A St	4	÷
Felixstowe ...	1008.3	+2	WSW	6	c	52	75	6	2,000	Cu	1	Ci	6	5	1011.4	+3	SW	2	bif	48	65	6	4,200	St Cu	3	-	-	2
Shoeburyness ...	1009.5	+5	W	4	cu	52	65	4	2000	Cu	3	A Cu	8	*	1010.8	+2	-	0	bife	47	65	6	-	-	-	A St	2	*
Benson	1008.6	+1	SW	4	c	50	75	4	-	St Cu	5	-	-	*	1010.0	+1	SW	3	b	45	92	6	-	-	-	-	-	*
S. Farnborough	1009.9	+2	WSW	5	c	52	85	8	3,000	St Cu	3	Ci Cu	5	*	1011.5	+1	SSW	2	bm	46	92	6	1250	St	2	-	-	*
London (Kew Obsy.)	1010.1	+4	WSW	4	o	52	75	8	2,000	St Cu	10	-	-	*	1011.3	0	SW	1	b	48	85	4	-	-	-	-	-	*
Croydon	1010.3	+2	WSW	6	o1/g	52	65	4	2,000	St	2	Ci	4	*	1012.0	0	SSW	3	b2f	47	92	5	2,000	St Cu	2	Ci	1	*

1H. G.M.T. OF 31ST / 7H. G.M.T. OF 31ST

STATIONS	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	§ Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9	Barom. at M.S.L. mb.	‡ Change in 3 hours	Wind Direc.	Wind Force 0-12	Weather	Temp. °F.	% Humidity	§ Visibility 0-9	Height of Low Cloud Feet	Low Cloud Form	Low Cloud Amt. 0-10	Upper Cloud Form	Upper Cloud Amt. 0-10	Sea 0-9
Renfrew ...															995.6	-6	ENE	4	or2f	44	97	3	-	Nb	10	-	-	*
Eskdalemuir ...	1005.5	-3	-	0	o	41	85	6	-	St Cu	10	-			997.0	-9	SW	5	or2 3f	43	92	5	1,250	Nb	10	-	-	*
Valencia (Cahirc'n)	988.8	-3	SSE	6	or	53	*	*	*	*	*	*	*	5	989.8	+6	SW	5	o	53	85	7	2,000	St	9	A St	1	4
Baldonnel ...	996.6	-7	S	5	org	52	85	6	1,250	St	10	-	-	*	988.9	-8	SSW	5	org	54	85	4	750	St	9	-	-	*
Manchester (Alex. Pk.)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	999.3	-9	S	5	or0 3f	50	85	4	1250	Nb	10	-	-	÷
Ross on Wye...	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1000.5	-6	SSW	6	or0g	52	92	6	1,250	Nb	10	-	-	*
Falmouth ...	1004.0	-7	S	6	or0	52	97	5	-	Nb	10	-	-	*	1000.0	-7	SSW	7	od0g	55	97	2	-	Nb	10	-	-	*
Calshot (Hants)...	1010.7	-1	S	4	o	50	97	8	1,250	St	10	-	-	3	1006.1	-5	S	6	or0g	50	97	6	<500	Nb	10	-	-	4
Lympne (Folkestone)	1012.4	0	SW	4	obf.d0	46	97	1	<500	Nb	10	-	-	*	1010.0	-2	SSW	5	omr0	49	97	6	1,250	Nb	10	-	-	*
Aberdeen ...	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1002.6	-5	SSE	5	o2fq	45	85	5	2,000	St	10	-	-	3
Howden ...	1006.8	-2	SE	?	o2f	40	97	3	2,000	St	6	A St	4	*	1002.5	-6	SSE	4	or2 3f	47	97	4	1,250	Nb	10	-	-	*
Cranwell (Lincs)	1010.1	-1	S	3	bc3f	40	87	3	-	-	-	A Cu	4	*	1004.5	-5	S	4	or2 3f	47	97	4	1,250	Nb	10	-	-	*
Felixstowe ..	1012.9	0	SSE	3	c	41	97	6	5,700	St Cu	4	A St	3	3	1010.8	-3	SE	4	or	46	97	6	1,250	Nb	10	-	-	2
Shoeburyness...	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1008.8	-2	S	2	or0	47	94	7	1,250	St	10	-	-	*
Benson ...	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1003.7	-5	S	5	org	50	92	5	-	Nb	10	-	-	*
S. Farnborough	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1006.0	-6	SSW	6	or0g	50	97	5	<500	Nb	10	-	-	*
London (M.O. at 1H.)	1010.8	-1	*	*	*	51	*	*	*	*	*	*	*	*	1006.5	-6	S	4	or2 3f	54	92	5	1,250	Nb	10	-	-	*
Croydon ...	1011.4	-2	S	2	od0 2f	48	97	5	1,250	St	8	A St	2	*	1007.5	-5	S	5	o2f.rg	50	97	4	750	Nb	10	-	-	*

STATIONS CONTRIBUTING REPORTS AT 7H. AND 18H.

18H. G.M.T. of 30TH / 7H. G.M.T. of 31ST / 24 HOURS ENDED 7H. 31ST / Sunshine 30TH

STATIONS	Barom. at M.S.L. mb.	Temp. °F.	Wind Direc	Wind Force 0-12	Weather	Barometer at M.S.L. mb.	‡ Change in 3 hours	Temp. °F.	Change in 24 hours	Wind Direc.	Wind Force 0-12	Direc. of Upper Cloud	Weather	Sea 0-9	† Rainfall mm.	Temp. Max. °F.	Temp. Min. °F.	Weather Morning	Weather Afternoon	Weather Night	Sunshine Hours
Lerwick ...	1005.4	40	-	0	b	1008.0	-2	43	-2	SSE	3	S	bc	2	1	47	42	omr	bc	bcm.bc	·
Stornoway ...	1002.0	34	-	0	3f	993.1	-5	46	+7	SSE	5	-	or0	4	2	47	37	b	f	f.bc.or	2.5
Castlebay (Barra Is)	1001.4	44	E	4	o	989.6	-7	47	+2	SE	6	-	r	6	2	48	43	b.op.bc	bc.o	or	1.7
Malin Head ...	1000.0	41	SE	2	o	986.5	+1	49	+5	SW	3	-	omr	3	3	53	48	bc	c	omqr	1.3
Blacksod Point	994.5	47	SE	3	r02 3f	984.5	?	50	?	SE	2	-	or02 3f	2	8	52	46	c	c.r	omr.or	*
Roche's Point...	1000.5	50	S	5	r	991.6	0	53	+6	SW	5	-	o	6	19	53	47	o.c	or	or.o	*
Birr Castle ...	1000.3	49	SE	2	o	987.0	*	54	+11	S	2	-	r	*	6	54	42	o.c.q	oq	or.od	0.0
Donaghadee ...	1005.6	48	SSE	2	bcm	992.2	-4	49	+7	SSW	3	-	omr	3	19	50	38	bcm	bcm	omr	*
Liverpool (Bidston)	1004.4	45	SE	3	o	996.7	-6	49	+4	SE	5	-	oq	4	2	49	44	bc	co	or	1.7
Holyhead ...	1005.4	49	SSW	4	om	992.2	-7	50	+4	S	6	-	or2 3fq	5	7	51	43	c.bc.c	c.op.d	oorqm	1.2
Pembroke (St. Ann's Head)	1004.0	50	S	3	o	996.3	-4	52	+1	S	6	-	or02 3f	4	7	52	50	cqm	cm.o	o.odm	0.8
Scilly (St. Mary's)	1006.6	52	S	2	o	997.6	-3	54	+3	SW	5	-	r0q	6	10	54	52	c.o	o	orqmom	0.5
Jersey (St. Aubin)	1012.4	50	SSW	3	o	1008.9	-1	50	0	SSW	6	-	o	4	14	51	48	omr	omr.oc.	b.or.o	0.0
Portland Bill ...	1011.2	50	SSW	4	o	1003.9	-5	49	-3	SSW	8	-	oqr	7	4	53	47	c	op.o	od.oqr	*
Dungeness ...	1012.9	48	W	2	c	1009.9	-2	51	+1	SW	3	SW	c	4	0.2	52	48	bc	c	c.p.c	*
Wick	1003.6	44	S	2	bc	999.7	-8	45	+8	S	7	-	oq	5	5	46	36	c.omp	om.bc	fq.bccoq	*
Nairn	1004.2	31	-	0	bc	996.5	*	45	+8	WSW	1	-	ou	1	0.3	45	30	o.bcm	bcmx	bccpq	1.9
Leith	1005.9	40	ENE	1	b	997.6	-4	44	-1	SE	1	-	r	2	5	45	39	od.c	c.bc.b	bz.or	*
Tynemouth ...	1004.0	43	W	2	bcm	1002.6	-4	45	+2	S	5		r0m	4	1	46	40	bcm	bcm	f.omr	*
Spurn Head ...	1008.7	42	W	3	bm	1004.0	-5	44	+3	S	4	-	orm	3	1	48	35	bq	bcm	om.cm.or	*
Yarmouth (Gorleston)	1009.4	46	NW	2	bc	1001.7	-2	44	-3	SSW	4	-	or2 3f	2	0.1	53	40	bpc.u.bc	bc	bcmoma.or	4.6
Clacton-on-Sea	1010.4	46	WSW	3	o	1009.3	-2	46	-1	S	3	-	o3r	3	1	52	43	b.bc.c	c.oqm	bcoqr	2.2
Nottingham ...	1009.3	42	SE	1	bc	1002.5	*	49	0	SSE	4	S	or	4	5	50	40	o.c	bcm	bc bm	2.0

* Information for these columns not usually received. ‡ The barometric change is expressed in half millibars. § For code see page 3 † See footnote p. 4

M.O. FORM 2370

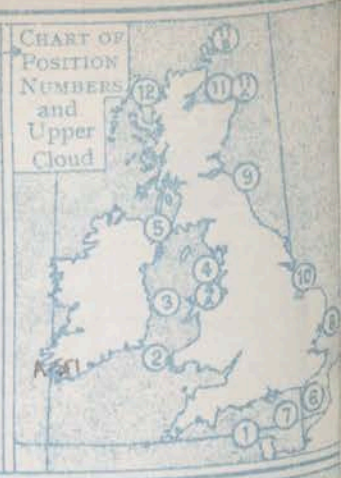
SUMMARY OF CONDITIONS AT 7 h. G.M.T. 31.12.20.

Districts.	Weather, Cloud and Precipitation.	Visibility.	Sea.
1. S.E. England	Overcast, rain; squally,	Indiff	Mod.
2. E. England	Overcast, misty. (misty	Poor	Slight
3. E. Midlands	Overcast, misty, (Rain. rain.	Poor	"
4. W. Midlands	Rain, squally.	Indiff.	-
5. S.W. England	Overcast, rain, squally.	Fair	Rough
6. South Wales	Overcast, rain	Fair	Mod.
7. North Wales	Overcast, rain, squally.	Fair	Mod.
8. N.W. England	Overcast, misty, rain.	Poor	Slight
9. N. Midlands	Overcast, misty, rain.	Poor	-
10. N.E. England	Rain, misty.	Indiff.	Slight
11. E. Scotland	Overcast, squally, threat-	Indiff.	Mod.
12. S.W. Scotland	Overcast, rain, ening misty	V.poor	Slight
13. Isle of Man	-	-	-
14. N.& N.W. Scotland	Overcast, squally.	Indiff.	Mod.
15. Hebrides	Rain.	Indiff.	R.rough
16. Orkneys and Shetlands	Fair to cloudy.	Indiff.	Smooth
17. N.W. Ireland	Overcast, misty, rain.	Indiff.	Slight
18. N.E. Ireland	Overcast, misty, rain.	Indiff.	Slight.
19. S.E. Ireland	Overcast, squally.	Good.	Rough.
20. S.W. Ireland	Overcast	Good	Rough

Temperature reported from Coastal and Cross Channel Steamers.

Position Number.	Date	Time G.M.T.	Sea °F	Air °F
12.	30th	-	49	48
3.	"	-	50	47
7	31st	03.55	47	54
8.	"	04.56	47	52

Chart of Position Numbers and Upper Cloud



Isallobars.

Barometric change from 4 h. to 7 h. (half millibars).

Lower Cloud.

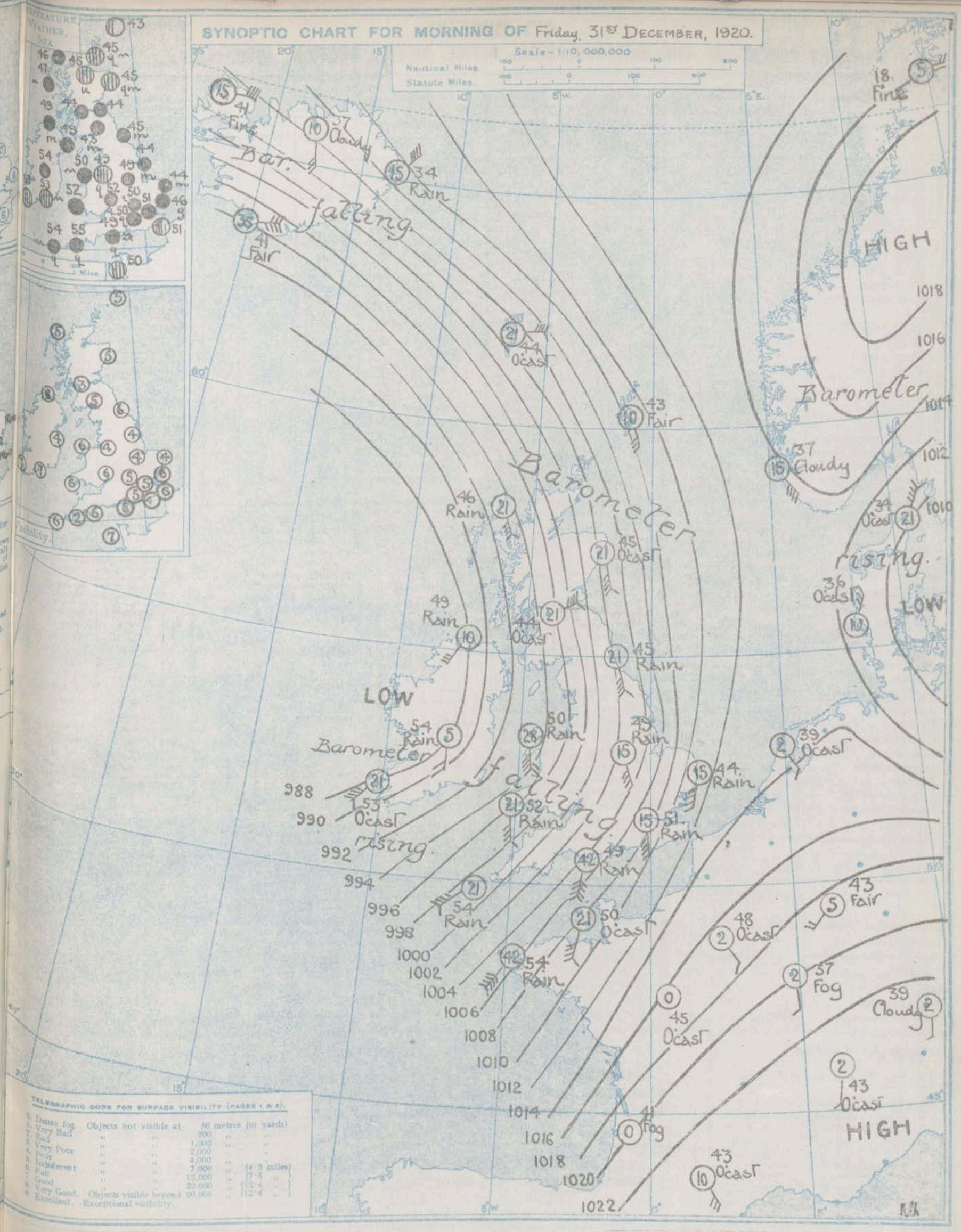
EXPLANATION.
BAROMETER.—Isobars are drawn for intervals of two millibars.
WIND.—Direction is shown by arrows flying with the wind. Force, on the scale 0-12, is indicated by the number of feathers. Mean velocity is shown in miles per hour by figures in small circles.
TEMPERATURE is given in degrees F.
WEATHER SYMBOLS.—
clear sky. sky ¼ clouded. sky ½ clouded. sky ¾ clouded. overcast sky. rain falling. snow. sleet. hail. fog. mist. T thunder. ℞ thunderstorm.
SEA DISTURBANCE.—Rough High

GENERAL INFERENCE from observations received up to 9h.

The deep depression off NW Ireland will probably move slowly N or NW. The strong S to SW wind over the British Isles will moderate and the weather will become fairer, but the temperature will remain unseasonably high.

Districts.	Forecasts for the 24 hours commencing 15 h. G.M.T. Friday, 31st December 1920.	Further Outlook.
1. S.E. England 2. E. England 3. E. Midlands 4. W. Midlands	Moderate Southerly wind; varying amount of low cloud, sky nearly cloudless at times; showery at first, but improving; visibility fair to good; very mild.	Wind between S & W with alternating stormy and fair periods & an unseasonably high temperature.
5. S.W. England 6. South Wales 7. North Wales 8. N.W. England	Moderate S to SW wind, varying amount of low cloud, sky nearly cloudless at times; occasional showers, visibility mainly good; very mild.	
9. N. Midlands 10. N.E. England 11. E. Scotland 12. S.W. Scotland 13. Isle of Man 14. N.& N.W. Scotland 15. Hebrides 16. Orkneys and Shetlands 17. N.W. Ireland 18. N.E. Ireland	Same as 1 - 4	
19. S.E. Ireland 20. S.W. Ireland	Same as 5 - 8	

Meteorological Office: Air Ministry, Kingsway, London, W.C.2. Forecasts issued at 10.10 E.V.N. G. C. SIMPSON, F.R.S., Director.


SYNOPTIC CHART FOR MORNING OF Friday, 31st DECEMBER, 1920.
Scale - 1:10,000,000
Nautical Miles.
Statute Miles.
Bar. falling.
Barometer falling.
Barometer rising.
HIGH
1018
1016
1014
1012
1010
LOW
Barometer
988
990
992
994
996
998
1000
1002
1004
1006
1008
1010
1012
1014
1016
1018
1020
1022
TELEGRAPHIC CODE FOR SURFACE VISIBILITY (PAGES 1 & 2).
0. Dense fog. Objects not visible at 50 metres (or yards)
1. Very Bad " " 200 " "
2. Bad " " 1,000 " "
3. Very Poor " " 2,000 " "
4. Poor " " 4,000 " "
5. Indifferent " " 7,000 " (4·3 miles)
6. Fair " " 12,000 " (7·5 ")
7. Good " " 20,000 " (12·4 ")
8. Very Good. Objects visible beyond 20,000 " (12·4 ")
9. Excellent. Exceptional visibility.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, BRITISH SECTION, 1920. No. 366.

FRIDAY 31st Dec. 1920

WEATHER, TEMPERATURE, RAINFALL AND SUNSHINE AT HEALTH RESORTS FOR 30th

	STATIONS.	Weather. Forenoon.	Weather. Afternoon.	Temperature. Max. °F.	Temperature. Min. °F.	Rainfall. Night. 18h-9h. 29th-30th	Rainfall. Day. 9h-18h. 30th	Sunshine. Sunrise to Sunset. 30th
Scotland.	Oban	b	b	47	35	-	-	3.8
	Banff	o	o	43	32	1	-	0.0
	Montrose							
	St. Andrews							
England, N.E.	Harrogate	c.bc.b	b	46	40	14	-	4.0
	Scarborough	bc	b	52	42	12	-	1.3
	Skegness							
England, E.	Lowestoft							
	Felixstowe	bc	bc	53	45	1	-	3.5
	Southend-on-Sea	bc	bc	53	44	-	-	2.3
England, S.E.	Tunbridge Wells	b.bc	bc.o	53	47	1	-	1.2
	Margate	b.bc.c	bc.c	54	48	-	-	0.5
	Ramsgate	*	*	51	46	-	-	1.6
	Folkestone	bc	c.bc	54	48	-	-	1.1
	Hastings	c.bc.c	o	53	48	0.4	-	1.9
	Eastbourne	bc.c	cp.oc	52	50	0.4	0.1	2.1
	Brighton	c.o	o	57	50	1	-	1.8
	Worthing	bc.c	c	51	49	1	-	0.8
	Littlehampton	bc	o.c	50	47	0.4	-	0.8
	Portsmouth (S'thsea)	*	*	53	48	1	-	0.8
	Bournemouth	*	*	51	48	1	2	0.7
		*	*					
England, N.W.	Douglas (I.O.M.)							
	Blackpool	c	bc	47	43	11	-	3.2
	Southport	b.bc.c	c.o.bc	46	43	7	-	2.8
	Morecambe	*	*	46	42	10	-	0.8
Midlands.	Buxton							
	Leamington Spa	bc	c	52	47	5	-	1.2
	Malvern							
	Bath	b.bc	bc.bc	53	47	4	-	3.0
Wales.	Rhyl							
	Colwyn Bay	*	*	50	48	13	-	2.3
	Llandudno	c.b	c.bc	55	44	8	-	2.5
	Aberystwyth	rc.b	c.c.o	51	45	2	-	1.0
	Tenby							
	Swansea							
England, S.W.	Weymouth	b.bc	bc.o	54	50	4	-	0.6
	Teignmouth							
	Torquay	bc	bc.c.o	55	50	3	-	2.3
	Paignton							
	Penzance	c.bc	c.o	53	49	2	-	1.3
	Newquay	bc	o	53	48	8	-	1.1
	Bude	b	b	54	49	2	-	2.4
	Ilfracombe	bc.c	o.c.o	53	51	3	-	1.9
	Weston-s-Mare	bc	bc.c.bc	55	47	4	-	1.6

SUMMARIES FOR PAST 24 HOURS.

STATIONS.	Weather. 7h-13h 30th	Weather. 13h-18h 30th	Weather. 18h 30th-1h 31st	Weather. 1h-7h 31st	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall.† Day. 7h-18h	Rainfall.† Night. 18h-7h	Sun. Hours.
Renfrew	bc.o2f.b2f	bc.o2f.b2f	b.bcc.co3f	o2f.rr	47	36	29	mm.	mm.	1.9
Eskdalemuir	0	c.o.o2f	o3f.o	o1f.rr	45	37	34	0.1	4	2.3
Valencia (Cahire'n)	o2f.o1f.c.o	c.o.rf	rr.	r.o	56	48	50	13	18	0.0
Baldonnel	c.o.bc.o	oq	rrq.o2f	o2f.rrq.o	54	39	45	trace	3	1.5
Manchester (Alexander Park)	o3f.c.bc.o	c.b3f	o3f.o2f	o2f.rr	51	40	36	trace	5	*
Ross on Wye	bc.cpq.c.o	o.c.o	oq	rq	52	46	38	0.3	3	0.2
Falmouth	bc.c.o	o.opd.	dd.o.rs	rr	55	48	47	-	16	0.9
Calshot (Hants)	b.bc.f.c.o2f	o1f.o	o1r	or.rs.rq	51	47	46	-	3	0.7
Lympne (Folkestone)	q.o1f.c.o	q.c.o	b.o1f.4.5fdd.	dd.o1f.r.	51	46	44	-	1	2.2
Aberdeen	*.*.o1f	o1f.3f.c	2fc.3fc	3fc.o2f	45	38	30	1	-	0.1
Howden	bc.cq	3f.bc.c	3fc.bcc.	o.rr	48	35	29	-	34	3.0
Cranwell (Lincs)	b.bq.v.b.bc	o	bcc.w.	orr	50	38	36	-	3	4.2
Felixstowe	b.bcq	bc.c1f	b1f.	c.o.o1f.rq	54	39	*	-	2	3.9
Shoeburyness	b.bc	3fc.b.bc	b.bo2fc	o1f.r.	53	40	31	0.1	1	2.2
Benson	bc.c	b.bc	bcc.o	orr	53	43	34	-	2	*
S. Farnborough	bc.c	c.o.b.bc	b.bc.o	dd.o.rr	52	45	38	-	2	3.0
London (Kew Obsy.)	bc.c.o	c.o.bc.b	b.c.o	o2f.rr	53	43	37	-	2	2.2
Croydon	b.o1fq.o1fq.o2f.bc.b.bc.3f	o1fq.o2f.bc.o2f	b.bc.c.opd.o2f	rrqo2f.p.	53	46	*	-	2	*

* Information for these columns not usually received.

† Trace = rain has fallen but amount less than 0·1 mm.

BEAUFORT NOTATION.

b blue sky (not more than a quarter covered).
bc sky partly cloudy (one half covered).
c generally cloudy (three quarters covered).
d drizzle, or fine rain.
e wet air without rain falling.
f fog. g gloom.
h hail. l lightning.
m mist. o overcast sky.
p passing showers.
q squalls. r rain.
rs sleet, *i.e.*, rain and snow together.
s snow. t thunder.
u ugly, threatening sky.
v unusual visibility.
w dew. x hoar frost.
y dry air; humidity less than 60 per cent.
z dust haze; the turbid atmosphere of dry weather.

Capital letters indicate intensity, and repetition of letters continuity, thus:–
R = heavy rain.
rr = continuous moderate rain.
r,r, = continuous light rain.

THE BEAUFORT SCALE OF WIND FORCE.

Used only for surface observations.

No.	Limits of Velocity at about 30 feet above ground. Statute miles per hour.	Metres per second.
0	Less than 1	Less than 0·3
1	1– 3	0·3– 1·5
2	4– 7	1·6– 3·3
3	8–12	3·4– 5·4
4	13–18	5·5– 7·9
5	19–24	8·0–10·7
6	25–31	10·8–13·8
7	32–38	13·9–17·1
8	39–46	17·2–20·7
9	47–54	20·8–24·4
10	55–63	24·5–28·4
11	64–75	28·5–33·5
12	Above 75	33·6 or above

SYMBOLS–

Aurora, Rime, Glazed frost, Glazed roads, Solar halo, Lunar halo, Solar corona, Lunar corona

LONDON. OBSERVATIONS.

24 HOURS ENDED 9h G.M.T. 31st

	Weather. Morning	Weather. Afternoon	Weather. Night	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. mm.	Sunshine to Sunset. Hours. Yesterday.	Humidity %. 15 h. G.M.T. Yesterday.	Humidity %. 9 h. G.M.T. To-day.
Greenwich (Royal Observatory)	c.o	c.o	o.or	54	46	36	3	2.7	75	92
City (Bunhill Row)	*	*	*	*	*	*	*	1.1	*	*
Westminster (St. James's Park)	*	*	b.or	54	48	39	3	1.6	70	87
Regents Park (Botanic Gdns)	*	*	*	*	*	*	*	0.6	*	*
Camden Sq. (British Rainfall)	b.bc	c	*	54	46	40	4	*	74	93
Kensington Palace	c	o.c	*	54	47	40	3	*	82 (18h)	93
Hampstead Observatory	*	*	*	51	46	37	4	1.2	*	94

SOUTH KENSINGTON (Meteorological Office).

Vertical Component of Solar Radiation per Square Centimetre during yesterday

Total 258 Joules.

Milliwatts.
Average Rate. 9·2
Maximum Rate 24

TABLE SHOWING THE GREENWICH TIMES OF SUNRISE, NOON AND SUNSET FOR STATIONS IN THE UNITED KINGDOM.

31st Dec. to 1st Jan. 1920.

Stations.	Sunrise. G.M.T.	Noon. G.M.T.	Sunset. G.M.T.
Yarmouth	8.6 / 8.6	11.56 / 11.57	3.46 / 3.48
Greenwich	8.9 / 8.8	12.3 / 12.4	3.58 / 4.0
Wick	9.5 / 9.5	12.15 / 12.16	3.22 / 3.24
Valencia	8.51 / 8.51	12.44 / 12.45	4.24 / 4.28

Photographic Record of Pole Star (Polaris) and of δ Ursae Minoris at Greenwich Observatory.

Exposure from 30th 17 h. 0 m. to 31st 7 h. 0 m.

Star.	Duration of Exposure. h.	m.	Duration of Record. h.	m.	s.
Polaris	14.	0	4.	0	15
δ Ursae Minoris	14.	0	2.	1	15

NOTES ON THE WEATHER OF YESTERDAY.

Rain fell heavily in most places, 34mm at Howden, 31mm at Valencia, and 19mm at Roche's Point and Donaghadee. Between 3 and 4 hours of bright sunshine occurred at several stations in the East of England, but further West the records were not quite so good.

Very mild weather continued, the temperature rising to between 50° and 55° over England and Ireland.

R.J.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

BRITISH SECTION. CORRECTIONS AND ADDITIONS, DECEMBER 1920.

I.—CORRECTIONS.

Report for	STATION.	CORRECTION.
1st	Eskdalemuir.	18h cloud. Sc:10: 1h cloud. Nb.10.
	Renfrew.	7h bar. 1010·0.
	Valencia.	7h: Wind. SW: temp. 41.
	Baldonnel.	18h bar. 1002·5.
		1h: Wind. SW. 4: humidity. 75:
		Vis. 5: 7h bar. 1011·2.
	Lympne.	1h bar. 1013·3.
	Felixstowe.	1h. Cloud. Sc:1. Ci Sc:2: Sea. 5.
	Cranwell.	Rain. night. 2.
2nd	Baldonnel.	1h bar. 1007·9.
	Falmouth.	18h clouds. Sc:10.
	Calshot.	18h clouds. Sc.2. A.Sc 9: Sea. 2.
	Cranwell.	7h temp. 42.
	Jersey.	" " 54.
	Croydon.	7h-13h: bbcc15p₀.
3rd	Renfrew.	18h bar. 1017·5
	Eskdalemuir.	Rain. day. 6.
	Shoeburyness.	18h clouds. 2000. Sc.Cu.6: A.Sc.4.
	Liverpool.	Sunshine. 0.5.
	Dungeness.	7h bar. change. -8.
4th	Renfrew.	13h wind. WNW: 7h. wind. SW.
	Valencia.	1h wind. WNW.
	Baldonnel.	7h. temp. 42: Rain. day. 0·3.
	Houden.	1h cloud. Sc:10: Max. 55.
	Felixstowe.	Sunshine. 1·0hrs.
	Lerwick.	7h temp. 44: change. -2.
	Holyhead.	Rainfall. 5.
	Portland Bill.	18h wind. WNW. 8
	Tynemouth.	18h bar. 993·0: 7h weather. omg.
5th	Renfrew.	18h bar. 1031·9: temp. 40.
	Baldonnel.	Grass min. 28
	Falmouth.	18h bar 1028·8
	Cranwell.	13h visibility. 6.
	Calshot.	7h Sea. 3.
	Felixstowe.	7h clouds. Nb.10: Min. 44
	Lerwick.	Max. 46.
	Nairn.	7h bar. 1036·6.
6th	Eskdalemuir.	18h wind. N
	Manchester.	" " N
	Baldonnel.	13h bar. 1037·2
	Falmouth.	13h wind NNE
	Felixstowe.	7h cloud. Nb.10.
	Lerwick.	Min. 40.
	Birr Castle.	Min. 36.
7th	Valencia.	7h Vis. 8.
	Baldonnel.	1h: wind. calm: 025: 39.
	Cranwell.	1h clouds. Nb 10
	Blacksod.	Min. 42
	Houden.	Max. 44.
8th	Renfrew.	13h temp 27: 7h bar 1016·7
	Valencia.	7h humidity. 75.
	Cranwell.	1h bar 1017·9, Wind SW, temp 38
		7h bar 1018·4: temp. 36. Rain day
	Houden.	Sun. 0·0
	Castlebay.	18h bar. 1014·5
	Pembroke.	7h wind. ENE. 2.
	Portland.	18h bar 1018·6
9th	Baldonnel.	Min. 31: rain day. 0·2: night. -
	Ross-on-Wye.	13h temp. 33: Rain night. 0·1
	Calshot.	13h. Sea. 1
	Falmouth.	Rain. night. 0·3
	Blacksod.	Max. 47: Min. 40.
	Donaghadee.	7h bar. 1025·9.
	Jersey.	18h bar. 1021·1
10th	Malin.	Max. 46.
	Jersey.	7h temp 38: change -5
	Wick.	7h bar 1022·8
11th	Renfrew.	18h visibility. 1.
	Baldonnel.	18h bar. 1026·9.
	London.	13h. no cloud. 18h wind. NE.1
	Eskdalemuir.	1h cloud. Sc.Cu.8: 7h temp. 33.
	Blacksod.	Min. 40.
	Roches Point.	7h temp. 45
12th	Falmouth.	13h. 025
	Calshot.	13h. Sea 2: 1h temp. 23.
	Eskdalemuir.	7h. clouds Sc:9: weather "c"
	Donaghadee.	18h bar. 1024·2.

Report for	STATION.	CORRECTION.
12th	Roches Point.	7h: bar. 1022·0: temp. 35: change -10
	Cranwell.	18h-1h: SS_0: Rainfall. day 2 night 2.
13th	Eskdalemuir.	13h clouds. Nb.9. A.Sc.2.
	Falmouth.	1h wind. NNE. 3.
	Malin Head.	Sunshine. 3·0.
	Holyhead.	18h wind. ENE. 6.
	Scilly.	Min. 32
	Jersey.	Max. 39.
	Dungeness.	7h temp. 31.
14th	Valencia.	18h bar. 1019·3.
	Calshot.	13h bar change. -2.
	Lerwick.	Min. 40.
	Spurn Head.	Rainfall. 0·4.
	Renfrew.	Rain. day. 0·4: night. 0·3.
	Lympne.	7h-13h. om.
	Houden.	Rain. day. 4: night. 1.
	Cranwell.	7h-13h. 03f5:
15th	Baldonnel	Grass min. 29.
	Roches Point.	18h weather. "b".
16th	Baldonnel.	18h humidity. 85.
	Calshot.	18h bar. 1029·2.
	Cranwell.	18h Vis. 7.
	Eskdalemuir.	1h weather. "bc 2f".
	Falmouth.	1h " "o
	Croydon.	7h bar. 1029·4.
	Malin Head.	7h bar. 1028·8: Max. 37.
17th	Valencia.	18h cloud. Sc:10.
	Baldonnel.	18h humidity. 92.
	Renfrew.	Rain. night. nil.
	Cranwell.	13h temp. 32: Vis. 7.
	Valencia.	7h clouds. Sc.Cu 10.
	Holyhead.	18h temp. 33.
	Dungeness.	Min. 28.
	Tynemouth.	Max. 39.
18th	Baldonnel.	18h clouds. A.Cu.7.
	Falmouth.	1h clouds. Sc:10.
	Calshot.	1h weather. "025": Sea. 2.
	Roches Point.	7h wind. NE.3.
	Jersey.	18h temp. 38.
	Nairn.	" " 35.
	Ross on Wye.	18h-1h. 4-5f
19th	Falmouth.	7h bar. 1020·6
	Calshot.	1h Sea. 2.
	Pembroke.	7h temp. 38.
	Spurn Head.	Rain. 0·4.
20th	Falmouth.	18h bar. 1017·1.
	London.	13h weather. "03fdo".
	Eskdalemuir.	1h " "03fe"
	Cranwell.	7h bar. 1015·0: Grass min. 32.
	Croydon.	1h bar. change. "-3"
	Stornoway.	Rainfall. 2·7.
	Pembroke.	Min. 37.
	Spurn Head.	Rain. 0·2.
	Yarmouth.	Max. 39.
	Baldonnel.	Min. 37: Rain. day. Nil.
21st	Renfrew.	18h Vis. 6.
	Eskdalemuir.	13h humidity. 85.
	Calshot.	18h. Sea 2.
	Croydon.	13h bar. 1013·2.
	Falmouth.	1h Vis. 5.
	Holyhead.	Rainfall. 8
	Baldonnel.	Grass min 41.
	Shoeburyness.	13h-18h. 3fe 2fe".
	Westminster.	Max. 46: Rain. 0·2.
22nd	Eskdalemuir.	13h cloud. "Sc:10: 7h. cloud. Sc.10"
	Baldonnel.	1h humidity 85: Cloud. "Sc.3. A.Sc:1"
	Malin Head.	Min. 38.
	Blacksod Pt.	18h temp. 44.
	Jersey.	Rain. "12".
	Tynemouth.	7h wind. "WSW.3".
23rd	Calshot.	13h. Vis 8: Sea. 3: 18h clouds
		A.Sc:7.
	Houden.	18h clouds "2000: Cu:6".
	Falmouth.	7h bar. 1000·3.
	S. Farnborough.	" " 997·7.
	Malin.	Min. 33.
	Birr Castle.	Min. 29.

Report for	STATION.	CORRECTION.
23rd	Holyhead.	Sunshine. 2·8.
24th	Calshot.	13h wind. NNW. Grass Min. 46.
	London.	13h. Cloud. Nil. Weather "bm".
	Castlebay.	7h. Sea. 5.
	Blacksod.	18h bar. 1001·2.
	Pembroke.	" " 1005·6.
	Portland.	Max. 45
	Yarmouth.	Sunshine. "0·0"
25th	Renfrew.	18h wind. "N". Rain. day. "8"
	Shoebury.	13h temp. 53. 7h Vis. "7".
	Baldonnel.	7h. Vis. 6.
	Calshot.	" Wind. "SE'E".
	Croydon.	" bar. 1015·1: 16h-1h, "015 do do".
	Malin.	Sunshine. "1·2"
	Birr Castle.	Max. 54.
26th	Valencia.	13h bar change. "-5"
	Calshot.	13h cloud "Sc.3. A.Sc.7".
	London.	" " "Ci Sc.8"
	Baldonnel	13h-18h. "r₀"
	Cranwell.	Grass Min. 40: Rain. day "Nil".
	Stornoway.	Max. "52". Min. "41".
27th	Renfrew.	16h cloud "Sc.Cu.8: A.Sc:2": 7h
		cloud "Sc:10": Sunshine. "2·4".
	Eskdalemuir.	16h cloud "Sc.Cu 2: A.Sc.1": Grass Min. 33
	Ross-on-Wye.	13h wind "SW".
	Calshot.	13h temp. "52": 7h Sea 4.
	Cranwell.	18h bar change "-1": 7h bar "1000·6".
	Felixstowe.	18h bar. "1014·4"
	London.	18h bar change "-5"
	Croydon.	13h bar. "1014·6"
	Baldonnel.	1h temp. "49": Cloud "Sc:10".
	Lympne.	Humidity 1h. "85".
	London.	" 7h "92".
	Malin Head.	Sunshine. 2·1.
	Holyhead.	" 1·0.
28th	Renfrew.	18h. cloud "A.Sc.7": weather "c 2f".
	Calshot.	" " "1500: Sc.Cu: 8".
	Falmouth.	1h bar change "+3"
	Calshot.	1h wind "SE.6".
	Cranwell.	7h cloud "Nb.10".
	Eskdalemuir.	Rain. day "5".
	Blacksod.	Max. 40.
	Roches Point.	7h wind "SSE.3".
	Spurn Head.	Rain. 2·2.
	Yarmouth.	Min. "?39".
29th	Eskdalemuir.	18h wind. N.1
	Valencia.	" Vis. 7.
	Houden.	13h Clouds. "750: Sc:10.
	Cranwell.	1h wind. WSW.3: 7h-13h. "pdo3f".
		7h weather. "5": Cloud. Sc.2: Ci Cu.7"
	Roche's Point.	Afternoon. "bbcb".
	Renfrew.	Sunshine. 0·0.
30th	Renfrew.	18h wind "ESE".
	Cranwell.	13h clouds. "Sc.3. A.Sc:7".
	"	1h weather "r": Cloud. "Nb.10".
	"	7h bar. 999·7: temp. 48: humidity 85.
	"	18h-1h "rop": Rain. night. "7".
	Baldonnel.	1h bar. change "+3": 7h bar. "1002·8".
	Calshot	1h temp. 50: Min. "47".
	Lympne.	1h bar. 1005·9.
	Manchester.	1h-7h "02f PRr₀".
	London.	Min. 50".
	Roche Point.	18h bar. "998·3".
31st	Calshot.	13h. Sea. 2.
	Eskdalemuir.	7h wind. "SE. 5".
	Cranwell.	1h humidity. 97.
	London.	Min. 40.
	Lerwick.	Min. 39.
	Malin Head	" 44.
	Blacksod Pt	" 41.
	Pembroke	7h bar. 995·3.
	Scilly.	Min. 51.
	Yarmouth.	7h bar. 1010·7.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON:

BRITISH SECTION. CORRECTIONS AND ADDITIONS, DECEMBER 1920.

II.—ADDITIONS

STATIONS CONTRIBUTING REPORTS AT 7h. AND 18h.

Report for	STATION.	Barom. at M.S.L. mb.	Temp. °F.	Wind. Direc.	Wind. Force 0-12.	Weather	Barometer. At M.S.L. mb.	‡ Change in 3 hours.	Temperature. Temp. °F.	Change in 24 hours.	Wind. Direc.	Wind. Force 0-12.	Direc. of Upper Cloud.	Weather	Sea 0-9.	Rainfall. mm.	Temp. Max. °F.	Temp. Min. °F.	Weather. Morning.	Weather. Afternoon.	Weather. Night.	Sunshine Hours.
		13h. G.M.T.					7h. G.M.T.									24 Hours Ended 7h.						
2nd	Malin Head	1006·1	43	SW	3	bc	1007·5	+3	47	+6	W	2	-	c	5	0·1	50	39	cbcp	bc pc	omqr	5·2
3rd	" "	1013·9	44	SSW	2	bc	?	+2	44	-3	NW	5	-	omqr	4	5·2	47	42	omqr	omqr	p	1·2
4th	" "	1010·0	47	NW	5	omqr	1026·2	+3	48	+4	NW	5	NW	bcq	5	18?	50	44	bcq	bcq	bcqp	0·9
5th	" "	1033·0	48	N	2	bc	1036·0	0	43	-5	SE	1	-	b	0	-	51	43	bm	bm	bm	2·5
6th	" "	1036·3	40	S	2	b													bm	bm		
22nd	Liverpool	983·6	45	SW	4	b														b		0·0
26th	Castlebay						997·2	+4	52	+2	SW	4	-	o	5	5	53	49			roro	*
"	Blacksod Point.						1000·3	+8	50	-2	SW	3	-	bc	4	6	54	48			cp	0·0
27th	Castlebay	1004·0	49	ESE	4	bc	991·8	?	50	-2	E	4	-	o	4	1	52	48	o bc	co bc	bcopo	*
	Blacksod Pt.	996·1	50	SE	2	bc	984·4	-2	!	?	SE	3	-	c	4	1	60	48	bc	bc	bc	
28th	Blacksod Pt.	992·9	49	SW	4	bc													bc	bc		*
29th	" "	995·1	50	SW	2	bc	1000·1	+3	49	-1	SW	3	-	bc	3	-	60	43	c	c	bc	*
30th	" "	998·7	43	-	0	cm	999·3	+3	44	-5	SSE	3	-	o	3	1	52	40	bc	cm	omro	

OBSERVATORIES AND STATIONS CONTRIBUTING REPORTS AT 1h, 7h, 13h AND 18h.

Report for	STATION.	Barom. at M.S.L. mb.	‡ Change in 3 hours.	Wind. Direc.	Wind. Force 0-12.	Weather	Temp. °F.	Humidity. %	Visibility 0-9	Height of Low Cloud. Feet.	Low Cloud. Form.	Low Cloud. Amt. 0-10.	Upper Cloud. Form.	Upper Cloud. Amt. 0-10.	Sea. 0-9.	Summaries for past 24 hours. Weather. 7h-13h.	13h-18h.	18h-1h.	1h-7h.	Max. Temp. °F.	Min. Temp. °F.	Min. on Grass. °F.	Rainfall. Day. 7h-18h mm.	Rainfall. Night. 18h-7h mm.	Sun Hours.
6th	Baldonnel. 7h.	1033·6	-3	-	0	02f	36	92	6	2000	Sc Cu	9	-	-	*				bcc 2f	42	31	30	-	0·1	0·3
13th	Cranwell. "	1021·8	0	NW	2	02f	15	97	2	<500	Sc.	10	-	-	*				b 3f	29	4	2	3		0·0
14th	" 1h.	1022·8	+2	NE	1	03fs	29	97	4	1250	St.	10	-	-	*			ps. 03f					-	-	
18th	Houden. 7h.																			39	29	22	-		2·0
21st	Shoeburyness 18h.	1010·9	-2	-	0	b 2f	35	85	4	-	-	-	Ci Cu	1	*		3f 2f.						-	-	
23rd	Houden. 7h.	1000·7	+6	-	0	cmx.	29	97	4	3000	Sc.	4	a Sc.	2	*				bcc 6-8f	46	22	17	-		0·0
24th	Baldonnel. 1h.	997·0	-9	E	6	0qs	44	85	5	2000	Sc.	10	-	-	*			rqs.					1	1	
25th	Cranwell. 7h.	1011·9	+2	S	3	01f	50	97	6	4200	Sc Cu	8	a Sc.	2	*				0 r0	54	37	48			
27th	Houden. 18h.	1011·5	-1	S	1	0m	44	97	6	750	Sc.	4	a Sc.	6	*		1f 0						0·2	0·2	4·7
28th	Baldonnel. 7h.	997·9	0	-	0	06f	47	92	1	750	Sc.	10	-	-	*				05f	52	44	37			0·0
29th	Cranwell. 13h.	1000·1	+1	SW	3	02f	49	97	5	750	Sc.	10	-	-	*	pd. 3f							1	-	
"	Houden. 7h.	1007·2	0	S	3	omqs	43	97	4	3000	Sc Cu	10	-	-	*				01f	49	37	28			
7th	" 18h.	1029·7	-2	E	2	orqs.	44	92	5	750	Nb.	5	Sc Cu	5	*										

‡ The barometric change is expressed in half millibars.

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