

449638

THE DAILY AEROLOGICAL RECORD

1st January to 31st March

1951



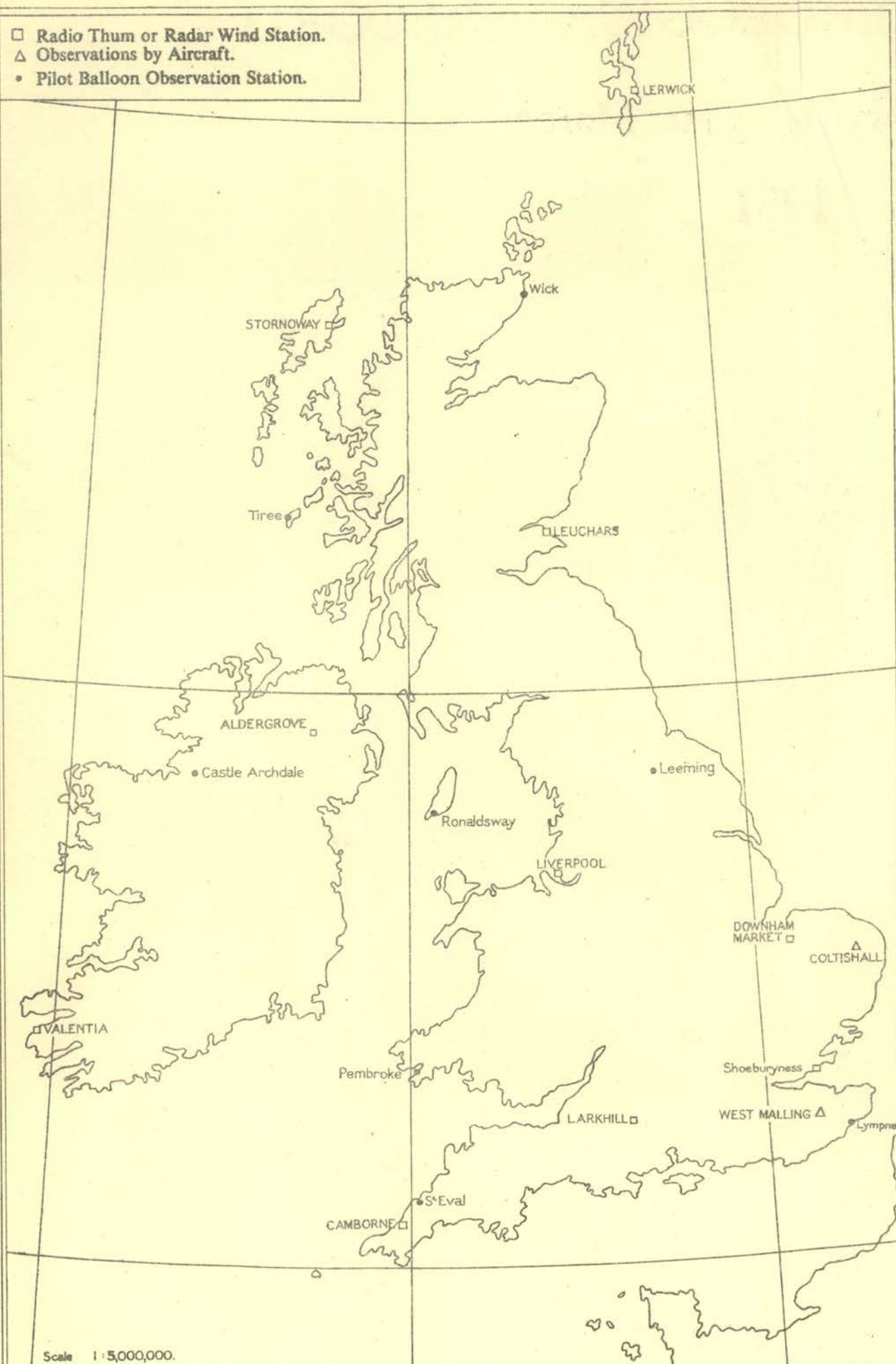
METEOROLOGICAL OFFICE

LONDON, W.C.2

INTRODUCTION

THE DAILY AEROLOGICAL RECORD.

- ☐ Radio Thum or Radar Wind Station.
 Observations by Aircraft.
 • Pilot Balloon Observation Station.



Prior to 1st January, 1950, upper air data and charts derived therefrom were published in the Upper Air Section of the Daily Weather Report. With effect from that date the Upper Air and International Sections have been discontinued, the former being replaced by the Daily Aerological Record of which this is the first volume.

Upper Air Temperature and Humidity.—Observations in the British Isles are made by radio-sonde at Camborne, Larkhill, Liverpool, Downham Market, Aldergrove, Valentia, Leuchars, Stornoway and Lerwick, and from ocean weather ships at 53°50' N., 18°40' W. and 60°00' N., 20°00' W. Observations are also made by meteorological reconnaissance aircraft over the Atlantic Ocean and by meteorological aircraft over East Anglia or South-East England.

Observations by aircraft are normally made at 500, 1,000 and 1,500 feet above airfield level or as near the sea surface as possible and then at pressures of (1,000), 950, 900, 850 etc. millibars, and at temperature inversions. The values of dew point are computed from readings of dry and wet bulb thermometers using tables based on the relationships:—

$$e' = e_w(t') - 0.37(t-t')P/1000 \text{ for } t' \text{ above } 32^\circ\text{F.}$$

$$e' = e_i(t') - 0.33(t-t')P/1000 \text{ for } t' = 32^\circ\text{F or below}$$

where e' is the vapour pressure of the air of which the pressure is P , t and t' are the dry and wet bulb temperatures ($^\circ\text{F}$), $e_w(t')$ is the saturation pressure with respect to water at temperature t' and $e_i(t')$ is the saturation pressure with respect to ice at temperature t' . For temperatures 32°F and below, the wet bulb is assumed to be covered with ice and the dew point is the temperature for which e' is the saturation pressure with respect to supercooled water. On account of the difficulty of ensuring correct functioning of an ice covered wet bulb, the values of dew point cannot be regarded as always reliable when t is below 32°F .

Radio-sonde observations are reported for the standard levels of 1,000, 950, 900 etc. millibars, and at intermediate levels as necessary to represent the results of the ascent. The values of dew point are derived from readings of relative humidity furnished by a gold-beaters skin hygrometer which forms part of the radio-sonde.

Heights.—The heights are computed from the values of temperature, pressure and humidity: the gravitational acceleration g is assumed constant and equal to $980.62 \text{ cm sec}^{-2}$, being that at latitude 45° at sea level: the gas-constant R is taken as $2.8703 \times 10^8 \text{ erg gm}^{-1} \text{ deg. C}^{-1}$: the air density at 1,000 mb. and 0°C . is taken as $.0012762 \text{ gm cm}^{-3}$. The height corresponding to the pressure of 1,000 mb. is interpolated or extrapolated, according as the M.S.L. pressure is above or below 1,000mb. In drawing the contours of the 700, 500 and 300 mb. surfaces as reproduced in the charts, assistance is obtained from the observations of wind at or near those levels.

Height and type of Tropopause.—For the purpose of identifying the Tropopause, rules similar to those employed in the Aerological Section of the Observatories Year Book are employed. Three types of tropopause are recognised, defined as follows:

Type I. The tropopause is indicated by a definite inversion.

Type II. There is no inversion, but a sharp discontinuity, the lapse rate above the discontinuity being 1°F . per 1,000 feet or less.

Type III. There is neither an inversion nor a discontinuity, but the lapse rate falls gradually to a value less than 1°F . per 1,000 feet. The point where the lapse rate drops to the value is taken as the tropopause.

In view of the arbitrary character of the definition of Type III, it is frequently found necessary to disregard a Type III tropopause in charting the contours reproduced on p. 1 of the Report.

Upper Winds.—The upper winds reported by Aldergrove, Downham Market, Larkhill, Liverpool, Lerwick, Shoeburyness, Stornoway, Valentia, Leuchars, are measured by Radar methods, the mean winds being measured over 3,000 feet layers centred at standard pressure levels. Most other reports refer to ordinary pilot balloons observed by theodolite. The results are expressed in knots referring to layers 500 ft. thick centred approximately at the levels 1,000, 2,000, 3,000 etc. feet above Mean Sea Level.

The direction is specified in degrees from true north measured through east.

Abbreviations. Besides the standard abbreviations for cloud forms the following are also used:—

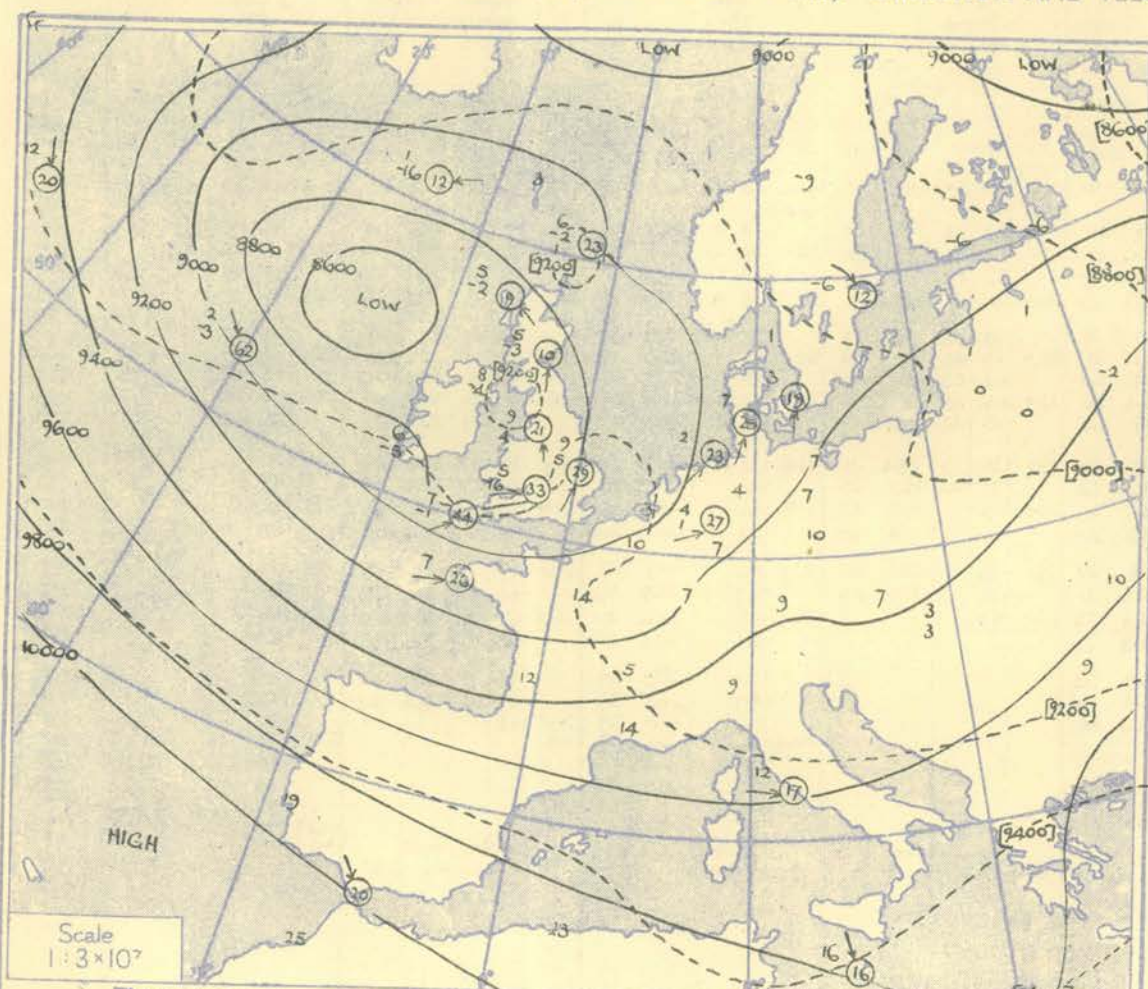
HNG (height not given), TNG (top not given), TNR (top not reached), NR (not reached).

Scale 1:5,000,000.

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION						
Pressure mb	Time M.S.L. Surf Freezing	03h.		G.M.T.	Height ft./100	03h.		G.M.T.	Height ft./100	03h.		G.M.T.	Height ft./100	03h.		G.M.T.	Height ft./100	03h.		G.M.T.	Height ft./100	03h.		G.M.T.	Height ft./100	03h.		G.M.T.	Height ft./100	03h.		G.M.T.	Height ft./100	03h.		G.M.T.							
		993.0	mb	985.2		mb	987.2	mb		982.2	mb	980.8		mb	987.4	mb		986.1	mb	985.7		mb	986.1	mb		984	mb																
		982.9	mb	983.6		mb	986.3	mb		972.4	mb	978.7		mb	982.9	mb		970.0	mb	975.0		mb	984	mb																			
		906	mb	925	mb	945	mb	950	mb	930	mb	913	mb	930	mb	910	mb	900	mb																								
Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.									
Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew								
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind								
Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.								
Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.							
Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure							
Surf	02.7	35	31	105	16	00.4	37	35	110	05	00.2	27	27	Calm	02.6	33	31	00.6	33	32	120	10	01.2	36	35	130	18	04.4	33	32	240	08	02.9	34	31	Calm	00.3	40	33	Surf			
1000	1.1	37	32	126	24	3.9	35	32	089	11	3.5	31	31	106	10	4.8	32	31	5.1	33	32	118	21	3.4	34	32	186	30	3.6	33	31	258	24	3.8	34	31	224	18	38	29			
950	26.0	31	26	130	20	23.8	29	25	095	10	24.4	27	27	112	13	22.9	29	28	22.5	29	26	139	31	24.5	31	29	197	30	24.1	30	25	271	32	23.9	31	28	223	30	24.1	32	25		
900	24	20	131	18	24	21	099	11	24	11	22	22	133	15	24	23	27	24	27	26	24	158	27	26	24	190	30	24	14	271	30	24	19	226	35	25	18	850					
850	56.5	19	16	130	20	54.2	17	14	102	11	54.8	17	17	153	17	53.4	20	18	52.9	21	19	157	23	55.1	21	19	185	31	54.5	18	06	267	32	54.5	20	13	227	36	54.6	19	11		
800	13	10	130	22	12	07	107	08	11	06	153	15	14	11	15	11	141	21	15	11	141	21	15	12	186	29	13	01	262	30	13	01	262	30	14	07	233	39	12	03			
750	90.1	06	02	108	23	87.2	05	02	109	09	88.2	05	03	162	10	87.3	08	04	86.7	09	04	141	21	88.9	09	05	190	29	88.1	05	16	253	33	88.2	07	01	234	44	88.2	06	05		
700	10	12	122	14	03	10	108	09	03	10	169	08	01	03	126	06	11	125	02	02	141	24	127	02	03	184	36	126	04	18	251	33	126	04	18	251	33	126	04	18			
650	128	10	27	149	09	125	11	21	105	11	126	10	17	190	07	125	06	11	125	06	12	144	26	127	06	12	180	26	126	12	24	247	34	126	10	15	232	47	126	11	24		
600	19	34	150	07	21	31	102	10	20	30	219	08	15	19	168	26	33	168	26	33	147	24	170	26	33	184	31	168	32	46	243	25	169	29	37	228	54	169	31	45			
550	171	30	42	156	09	168	32	41	104	13	169	30	43	256	12	168	26	30	168	26	33	147	24	170	26	33	184	31	168	32	46	243	25	169	29	37	228	54	169	31	45		
500	41	170	14	170	14	44	108	13	44	108	13	44	108	13	44	108	13	44	41	170	14	170	14	44	108	13	44	108	13	44	108	13	44	108	13	44	108	13	44	108	13	44	
450	22	53	172	16	217	57	124	14	218	54	244	20	219	49	218	51	156	21	218	51	156	21	220	50	185	45	218	54	251	35	219	50	251	35	219	50	251	35	218	55	62		
400	67	179	10	179	10	69	130	11	67	120	18	67	120	18	67	120	18	67	67	179	10	179	10	67	120	18	67	120	18	67	120	18	67	120	18	67	120	18	67	120	18		
350	281	80	224	11	277	83	117	14	279	79	196	16	279	73	279	72	194	22	279	72	194	22	281	73	206	35	279	62	247	38	281	59	272	46	279	58	279	58	279	58			
300	71	250	14	250	14	74	174	08	74	174	08	74	174	08	74	174	08	74	71	250	14	250	14	74	174	08	74	174	08	74	174	08	74	174	08	74	174	08	74	174	08		
250	361	85	262	16	359	75	254	12	361	75	243	17	365	63	364	66	248	28	364	66	248	28	365	69	226	35	364	68	256	41	367	63	284	44	366	60	366	60	366	60			
200	79	259	18	259	18	75	255	15	75	255	15	75	255	15	75	255	15	75	79	259	18	259	18	75	255	15	75	255	15	75	255	15	75	255	15	75	255	15	75	255	15		
150	80	264	20	264	20	77	264	17	77	264	17	77	264	17	77	264	17	77	80	264	20	264	20	77	264	17	77	264	17	77	264	17	77	264	17	77	264	17	77	264	17		
130	82	267	22	267	22	79	267	22	79	267	22	79	267	22	79	267	22	79	82	267	22	267	22	79	267	22	79	267	22	79	267	22	79	267	22	79	267	22	79	267	22		
110	84	261	28	261	28	82	278	24	82	278	24	82	278	24	82	278	24	82	84	261	28	261	28	82	278	24	82	278	24	82	278	24	82	278	24	82	278	24	82	278	24		
100	85	258	31	258	31	85	281	26	85	281	26	85	281	26	85	281	26	85	85	258	31	258	31	85	281	26	85	281	26	85	281	26	85	281	26	85	281	26	85	281	26		
90	87					87			87						87				87																	87			87				
80	92					92			92						92				92																	92			92				
70																																											
60																																											
Inversion		983mb.35°-946mb.37°								Inversion		986mb.27°-945mb.32°										Isothermal		926-913mb.32°				Isothermal		970-950mb.33°				Isothermal		975-930mb.34°							
Tropopause		I 255mb. -72° 31,300'								I 270mb. -81° 29,800'						I 263mb. -81° 29,000'						I 310mb. -76° 27,200'						I 292mb. -74° 28,700'				I 394mb. -56° 22,000'				I 342mb. -60° 22,800'				I 366mb. -64° 23,500'			
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE								STATION						
Pressure mb	Time M.S.L. Surf Freezing	09h.		G.M.T.	Height ft./100	09h.		G.M.T.	Height ft./100	09h.		G.M.T.	Height ft./100	09h.		G.M.T.	Height ft./100	09h.		G.M.T.	Height ft./100	09h.		G.M.T.	Height ft./100	09h.		G.M.T.	Height ft./100	09h.		G.M.T.	Height ft./100	09h.		G.M.T.							

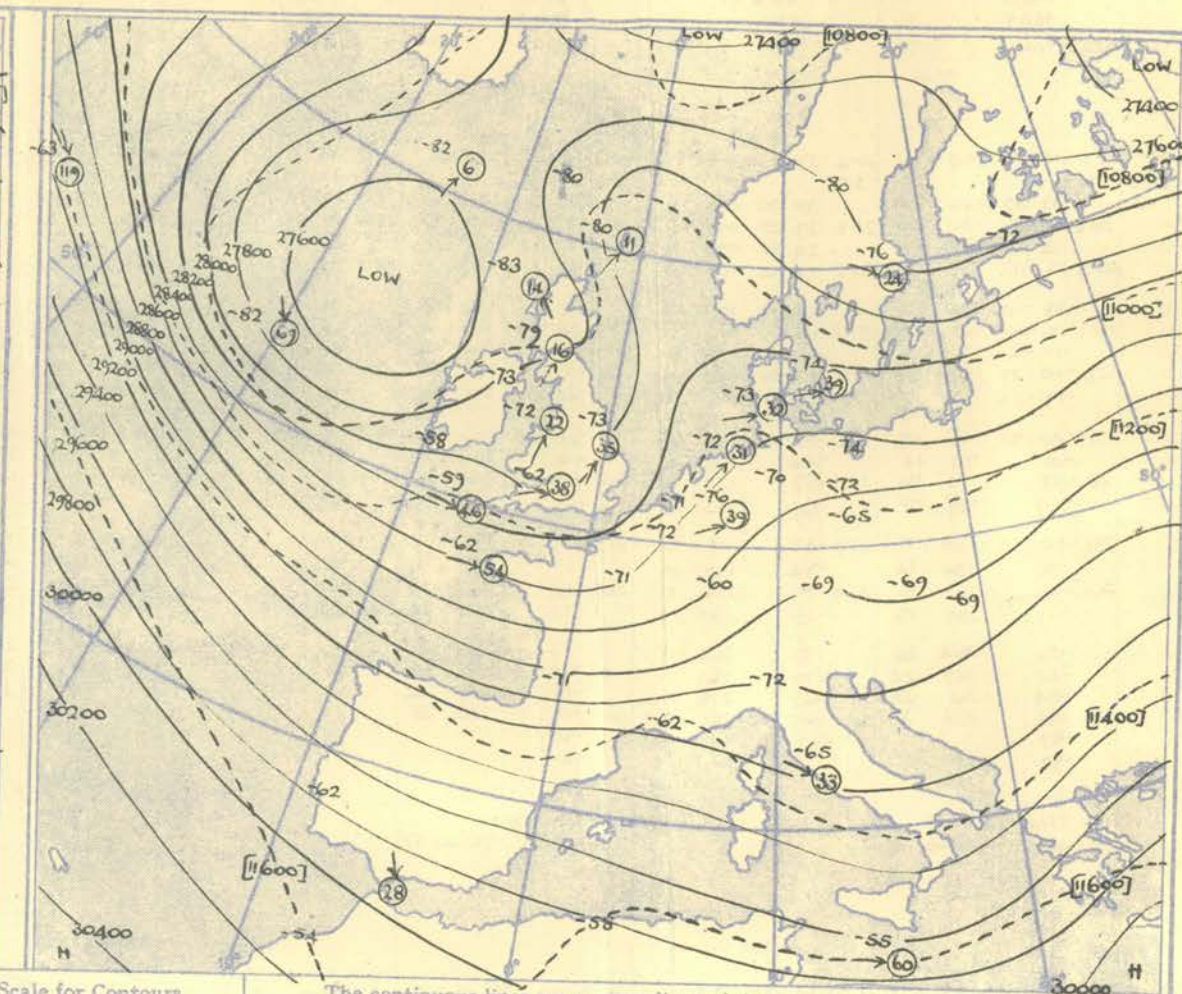
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



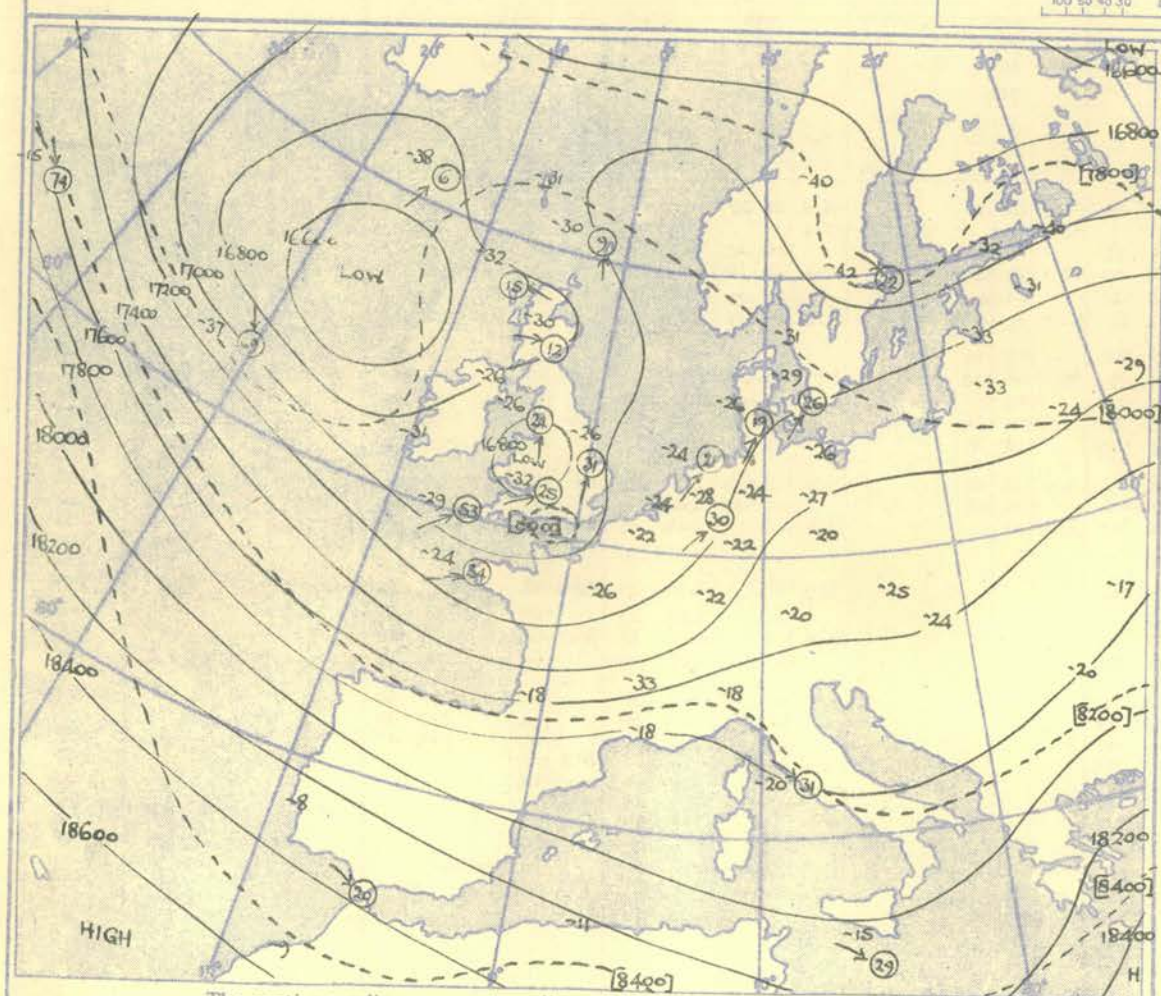
The continuous lines are contour lines of the 700 mb. surface
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. $52\frac{1}{2}^\circ$ N.

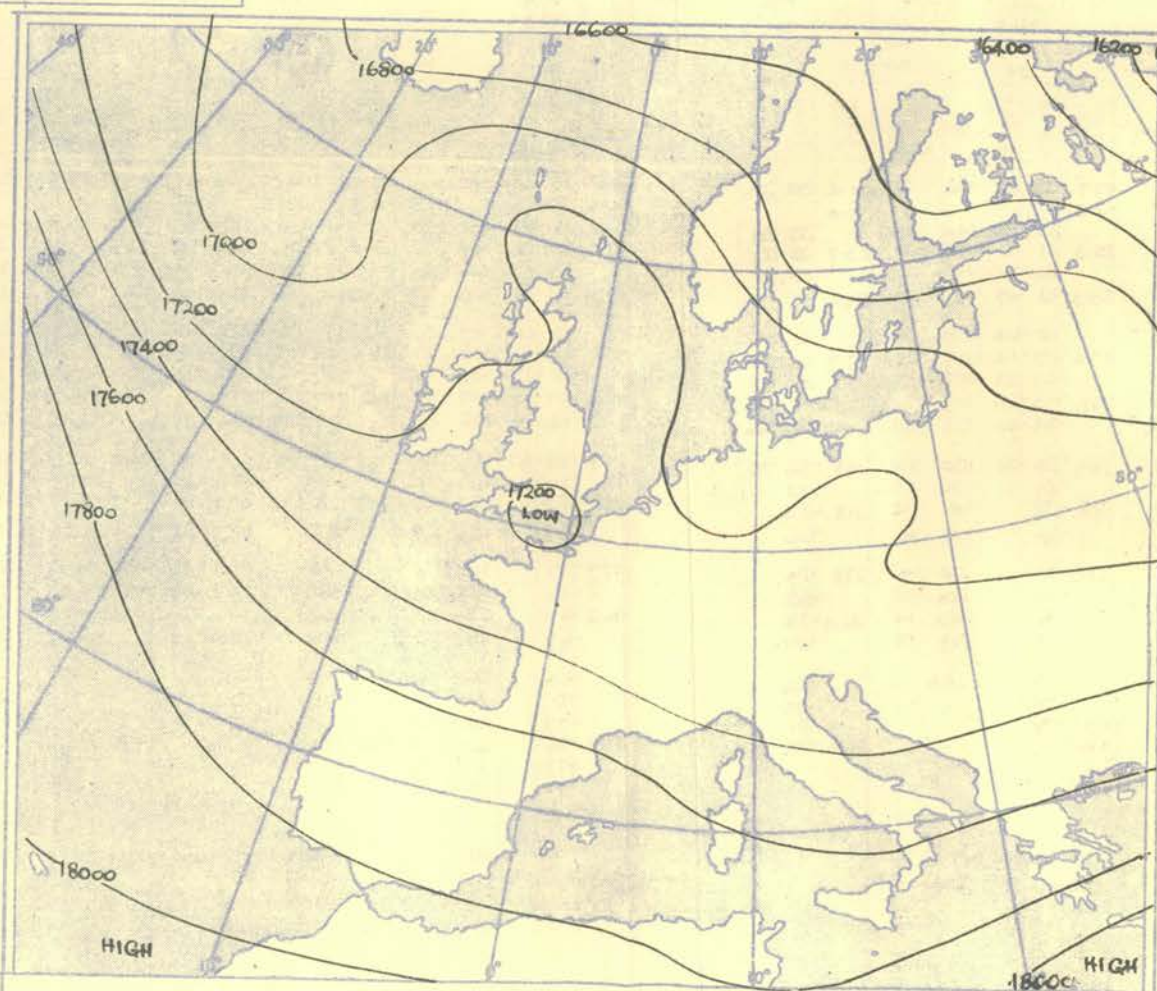
100 50 40 30 20 10 0 knots



The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500-300 mb.



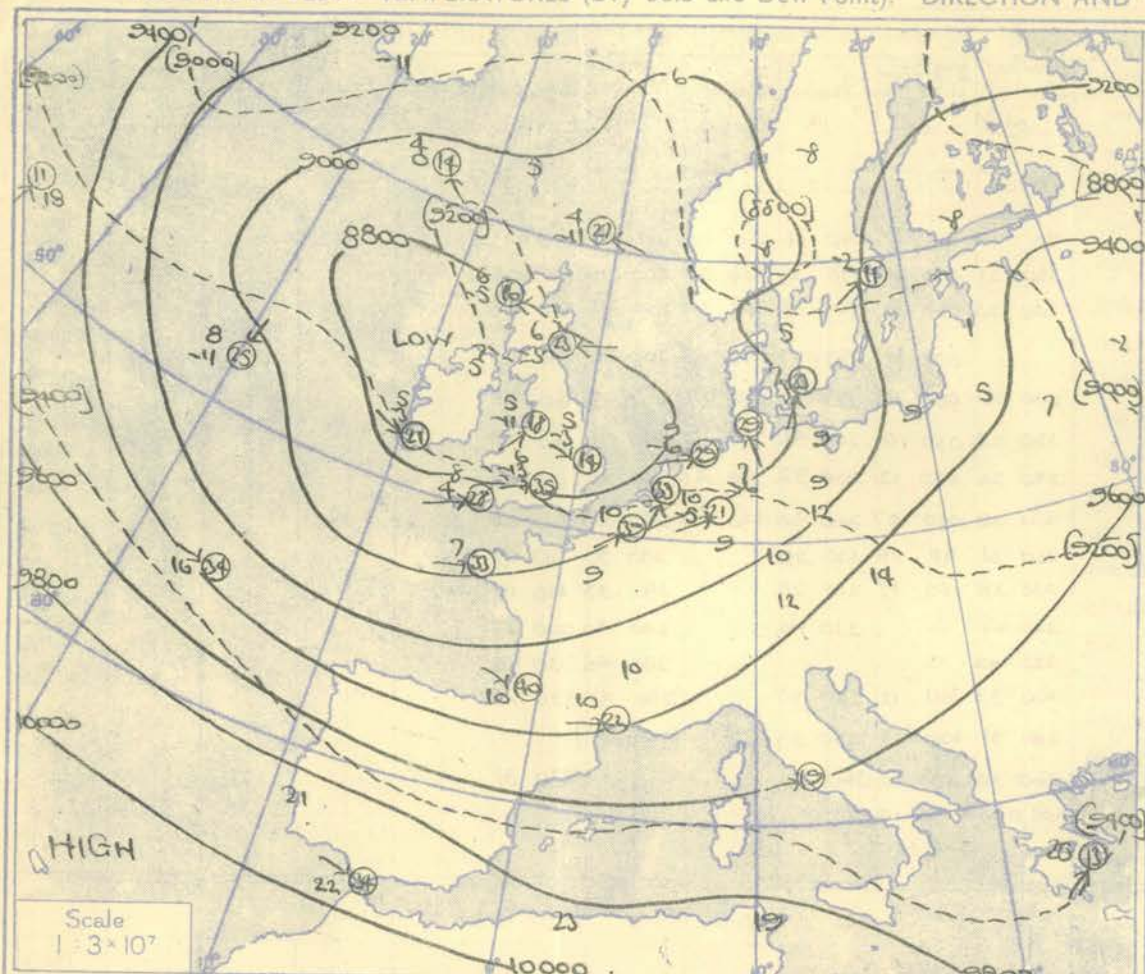
The continuous lines are contour lines of the 500 mb. surface
The dotted lines are isopleths of the thickness of the layer 700-500 mb.



Isopleths of Thickness 500-1000mb.

[illegible]

HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h G.M.T.

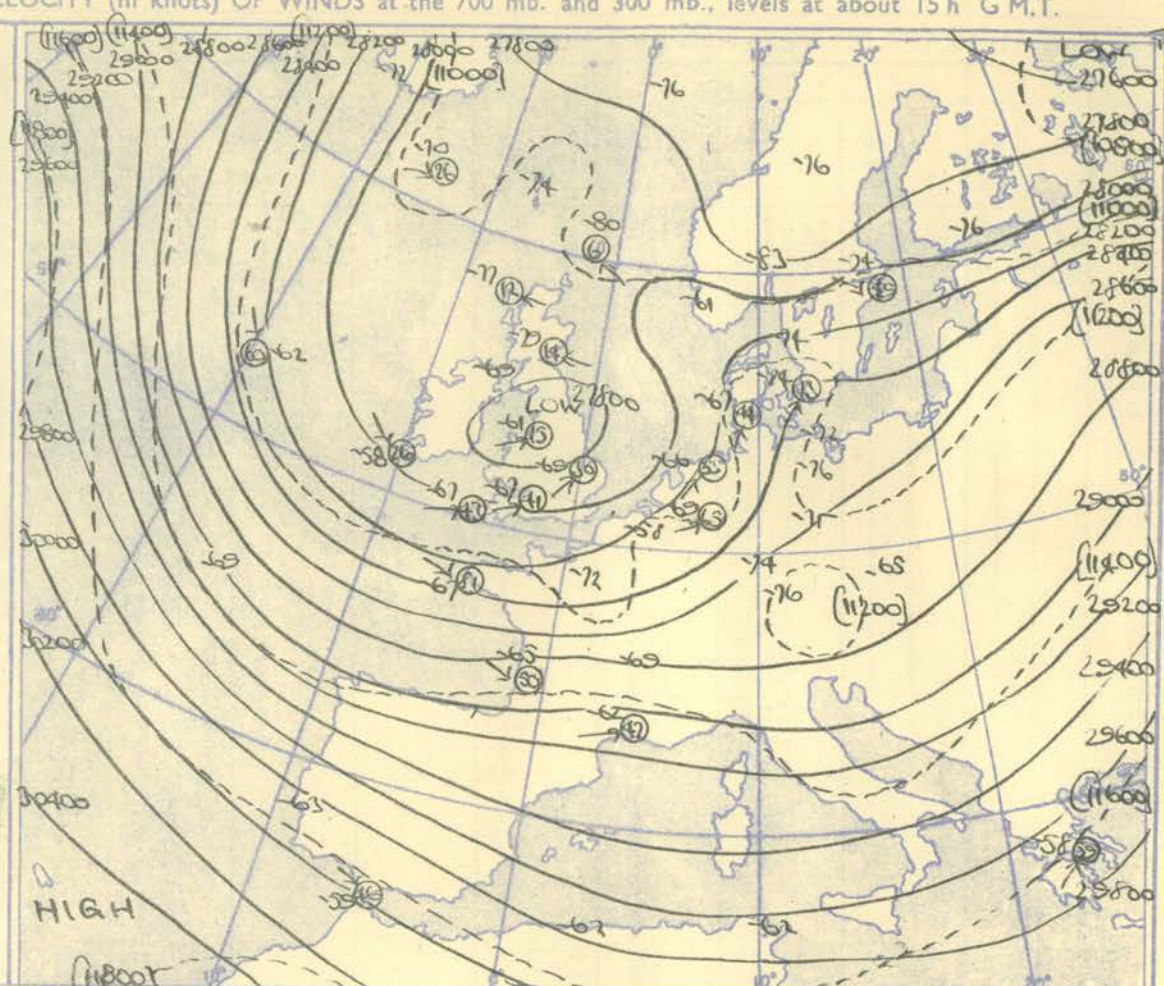


The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb

TROPOPAUSE CHART at about 15h. G.M.T.

Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. $52\frac{1}{2}^\circ$ N.

100 80 60 40 20 10 0 knots

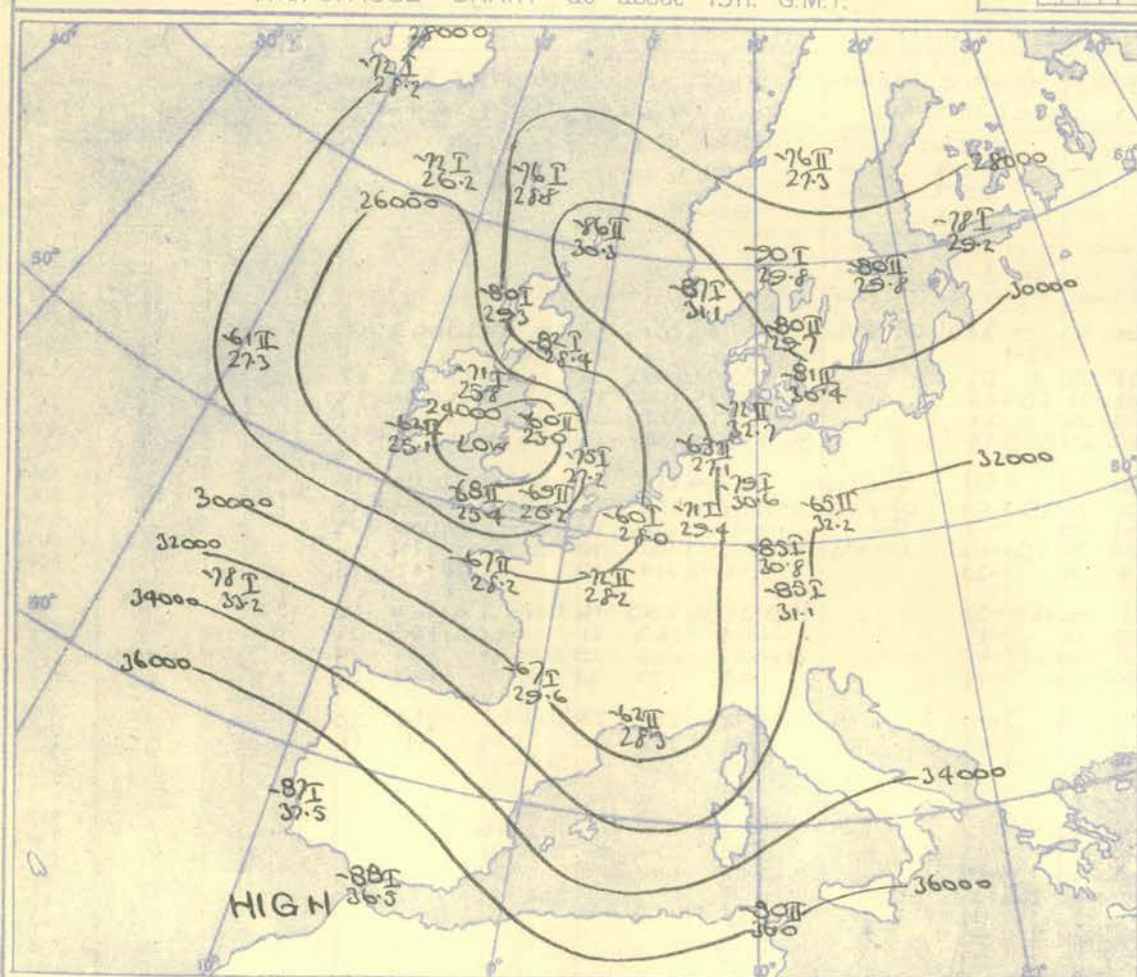


The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500-300 mb.

NOTES ON THE AEROLOGICAL SITUATION.

The weak warm ridge over the British Isles moved slowly East to the Continent in the South. At the same time a little warming occurred in the Western Approaches. The net effect was to cut off a shallow and rather stagnant cold pool over England and Wales.

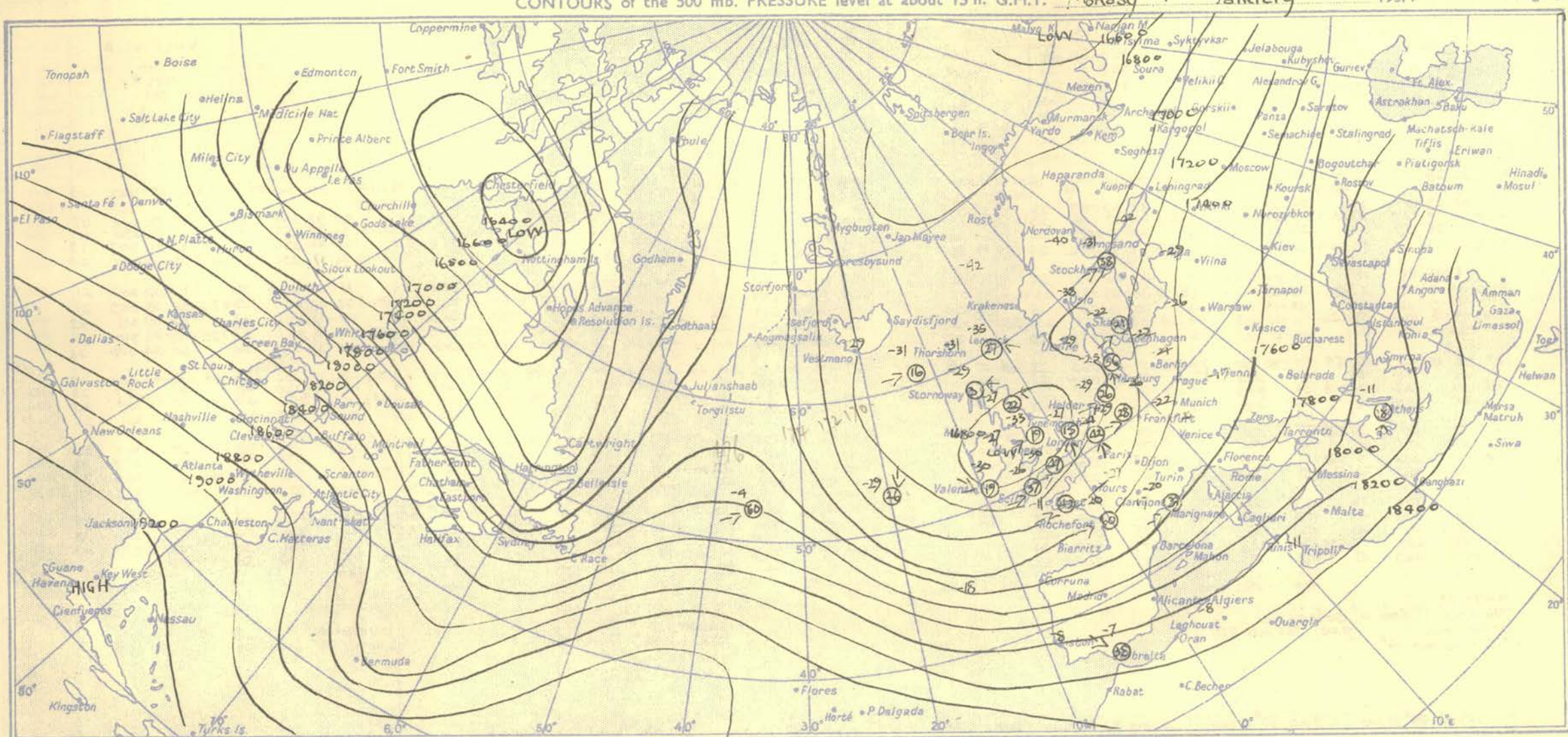
The temperature ascents from the Weather Explorer at 60° N 18° W continued to show somewhat large and irregular fluctuations.



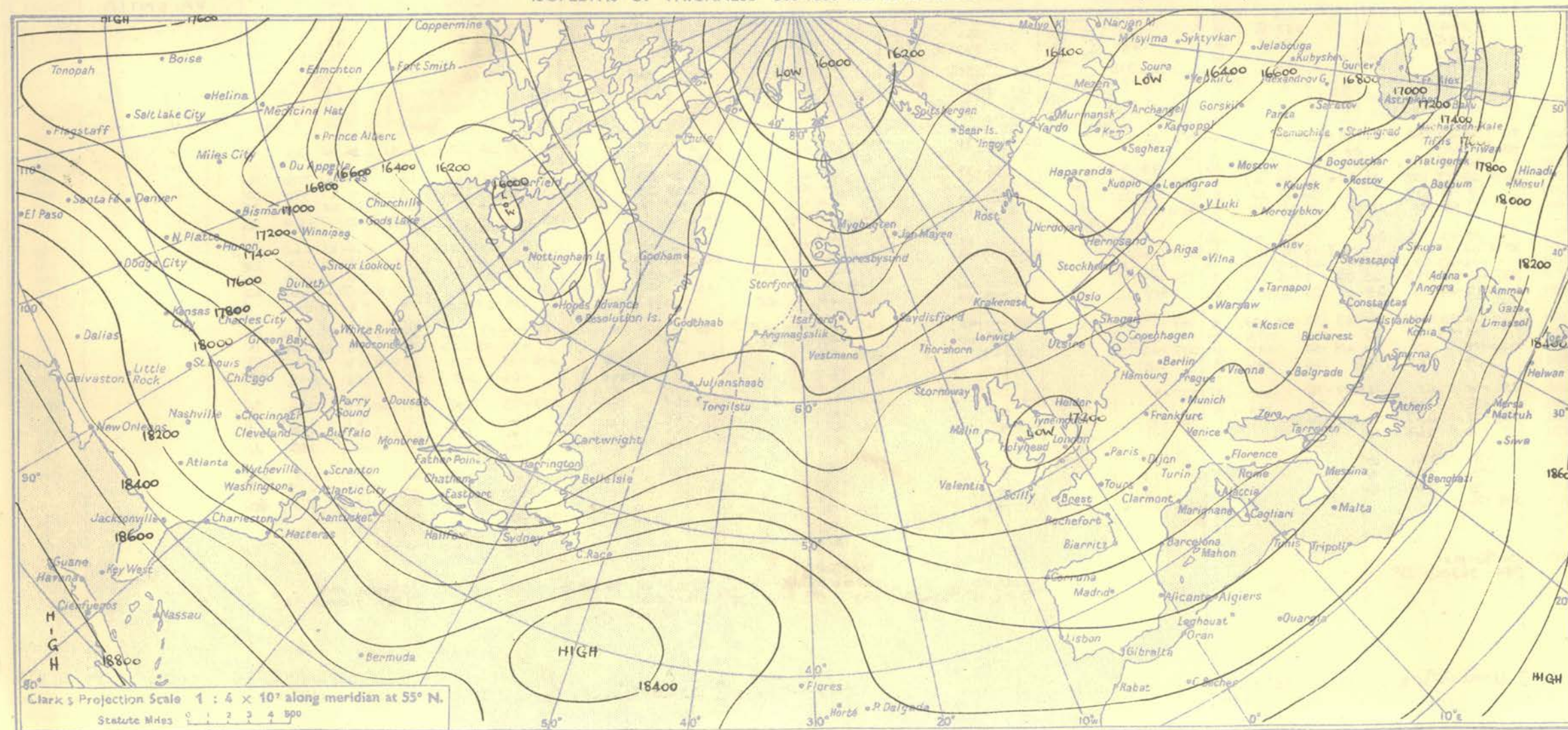
Contour lines of Height of Tropopause.
Temperature of Tropopause.

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Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Monday 1st January, 1951.



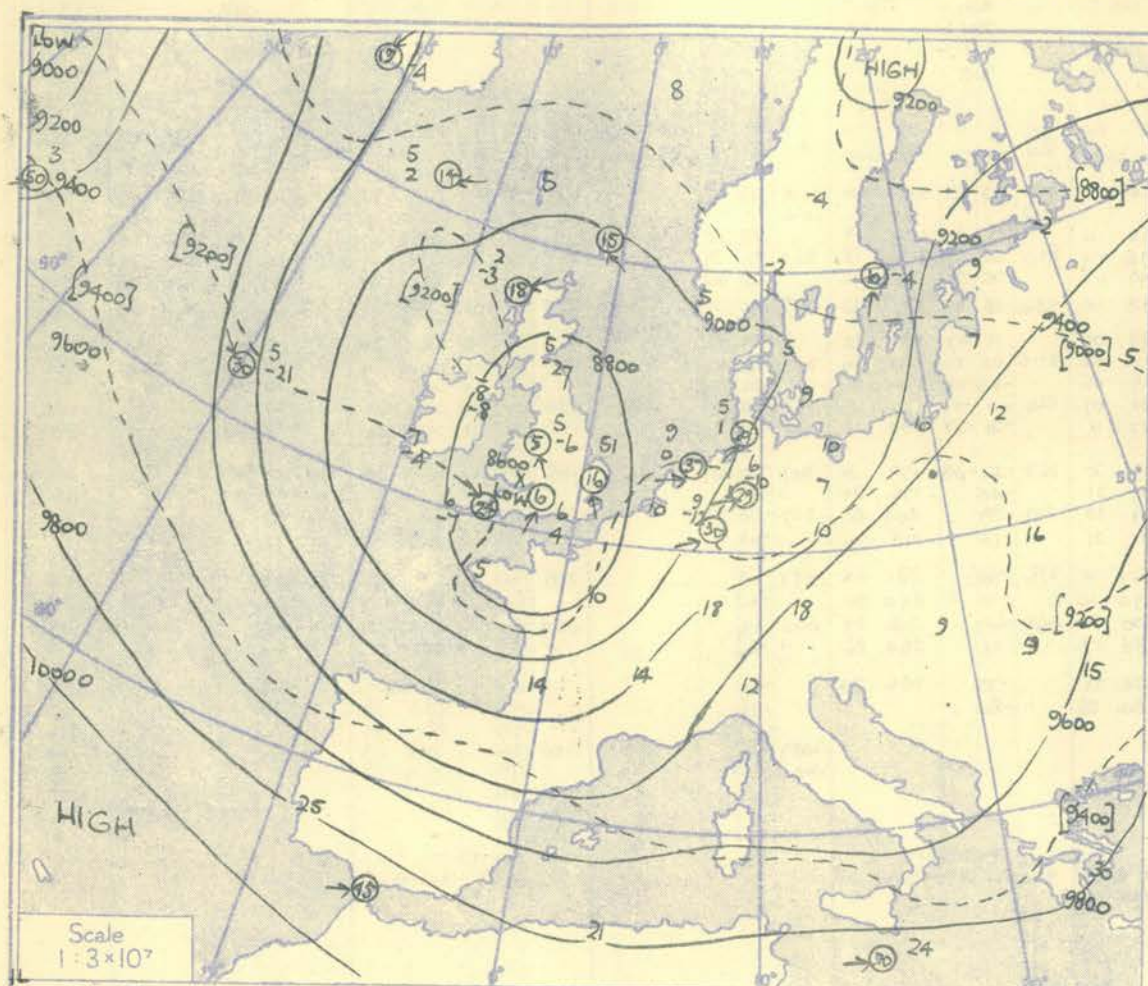
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION																																																																																																																																																																																																																																																																																																																																																																																																																																
Pressure mb	Time M.S.L.	15h		G.M.T.		15h		G.M.T.		15h		G.M.T.		15h		G.M.T.		15h		G.M.T.		15h		G.M.T.		15h		G.M.T.		15h		G.M.T.		Time M.S.L.	Pressure mb																																																																																																																																																																																																																																																																																																																																																																																																																																			
		Surf	Freezing	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb			mb																																																																																																																																																																																																																																																																																																																																																																																																																																		
		991.6	982.4	950	910	901	931	940	930	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900			900																																																																																																																																																																																																																																																																																																																																																																																																																																		
Surf	1000	950	900	850	800	750	700	650	600	550	500	450	400	350	300	250	200	170	150	130	110	100	90	80	70	60	500	450	400	350	300	250	200	170	150	130	110	100	90	80	70	60																																																																																																																																																																																																																																																																																																																																																																																																																												
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	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Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	Temp. °F.	Dew °F.	Wind Dir. Vel.	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Dew °F.	Wind Dir. Vel.

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION						
Pressure Time M.S.L. Surf Freezing	03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		Time M.S.L. Surf Freezing										
	996.0		mb		989.7		mb		984.8		mb		984.2		mb		982.8		mb		984.6		mb		979.7		mb		982.3		mb		988.7										
	985.9		mb		988.1		mb		983.9		mb		974.7		mb		980.7		mb		979.6		mb		963.5		mb		971.8		mb		987.1951										
	978		mb		930		mb		956		mb		926		mb		981		mb		963		mb		950		mb		905		mb		885										
Pressure Height Temp. Dew Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb										
Surf	02.7	33	31	140 21	00.4	37	32	080 15	00.2	36	33		02.6	35	32		00.6	26	22	Calm	01.2	33	33	110 05	04.4	33	33		02.9	38	33	315 15	00.3	41	31	010 09	Surf						
1000	1.1				2.8				4.1				4.2				4.5				4.2				5.4				4.7				2.1				1000						
950	29	26	104	27	35	28	055	18	31	28		23.6	29	25		22.9	26	21	076 09	23.5	30	27	113 18	22.2	29	29	For	23.3	38	27	309 24	39	29	054 14	950								
900	26.3	23	094	26	28	21	062	15	23.6	25	22		23.6	29	25		22.9	26	21	076 09	23.5	30	27	113 18	22.2	29	29		23.3	31	22	314 21	25.0	24	25	062 22	900						
850	18	16	095	22	22	14	062	18	21	19		24	20		20	16	049	11			25	21	137	16	25	22		24	16	310	24	27	19	062 25	850								
800	56.3	12	09	101	22	55.2	16	10	060	17	53.8	15	10	54.1	17	13	53.1	17	10	043	10	54.0	18	14	177	13	52.7	20	16	winds	53.8	17	10	308	23	55.6	20	12	066 29	800			
750	06	03	107	20	09	03	057	15	12	10		12	06		12	02	073	05			11	07	181	12	13	12		11	03	310	21	13	04		750								
700	89.6	03	00	107	15	88.6	02	03	048	18	87.3	05	27	87.8	08	05	86.7	05	06	152	05	87.6	05	01	170	16	86.3	06	04	See	87.3	06	07	304	24	89.2	07	04	700				
650	05	09	105	15	04	11	045	20	01	24		01	24		02	13	149	06			03	08	170	15	02	04		02	14	299	27	00	14		650								
600	127	15	18	096	19	126	12	22	047	20	125	12	44	126	08	32	124	10	19	132	07	125	11	17	182	15	124	10	13	page	125	11	20	298	30	127	07	26	600				
550	23	27	093	23	23	31	053	16	23	51		19	44	19	44		19	24	177	11	21	28	190	18	20	25		21	31	299	30	17	37		550								
500	169	33	38	116	20	168	34	42	053	15	167	33	60	168	30	54	167	27	32	192	21	168	32	38	199	20	167	30	37	3.	168	31	41	304	30	170	28	49	500				
450	44				44				048	15	44			41			36	45			189	21		45				41				43			312	31	40	59	450				
400	219	55			200	14			056	15	217			218	54		217			199	25	217			204	30	217		55				209	33	220	52	400						
350	70				193	14			063	15	70			68			57			211	21			75				64				306	30		74	350							
300	278	82			153	10			043	16	277			278	80		280			267	11	276			231	25	277		62				298	28	281	68	300						
250	83				144	06			009	12	71			68			57			292	10			70				63				291	29		64	250							
200	360	78			298	09			334	16	361			363	68		367			300	15	361			250	29	363		65				288	30	366	65	200						
170	77				285	10			318	22	73			71			61			288	17			71				66				295	35		64	170							
150	79				272	12			318	24	75			73			63			274	21			75				69				284	36		68	150							
130	81				267	18			319	21	76			72			64			280	28			75				72				283	38		73	130							
110	83				271	22			305	20	(138) mb			76			67												76				290	39			110						
100	86				273	23			504	80				79			81			(103) mb									78				295	23			100						
90	87													81															80								90						
80	(88) mb																																				80						
70																																					70						
60																																					60						

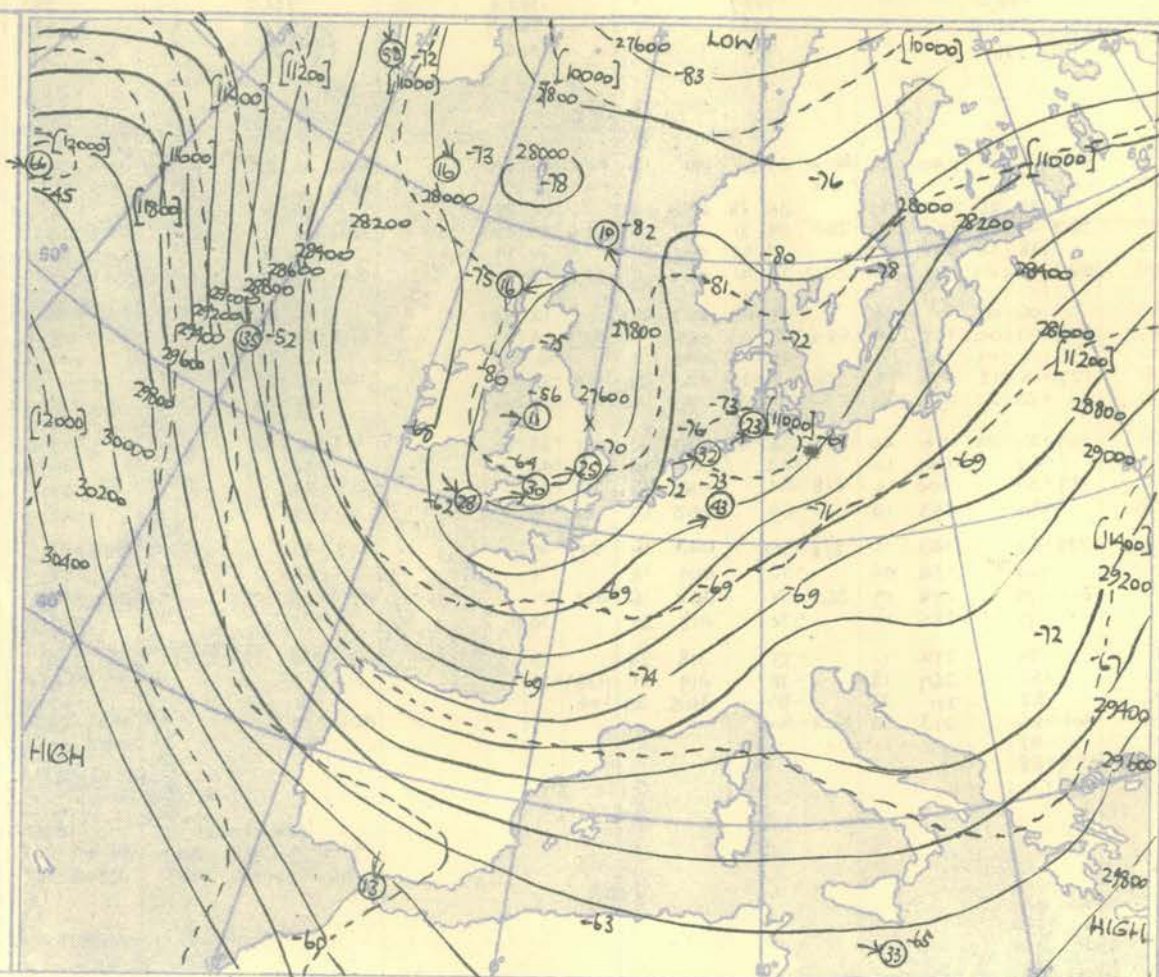
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



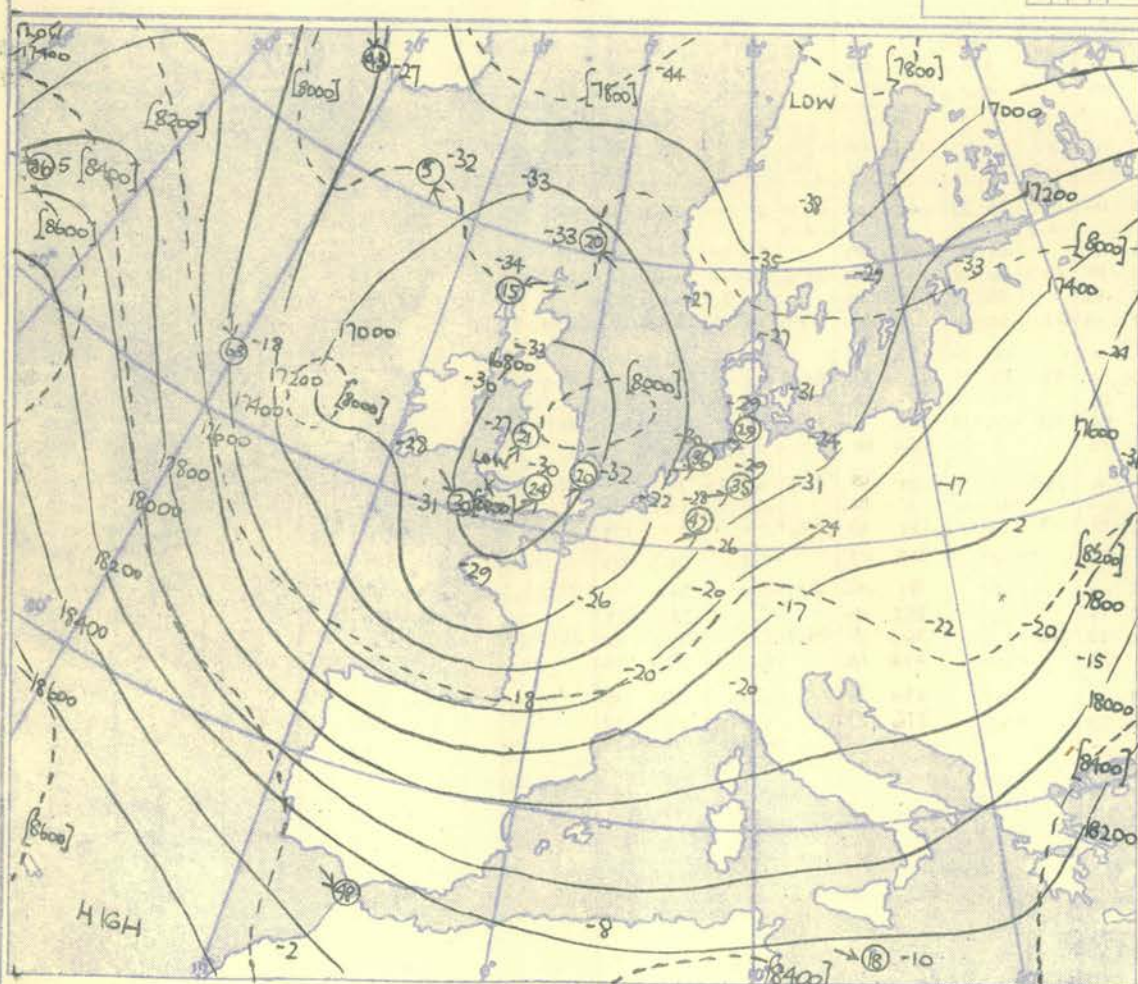
The continuous lines are contour lines of the 700 mb. surface
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. $52\frac{1}{2}^\circ$ N.

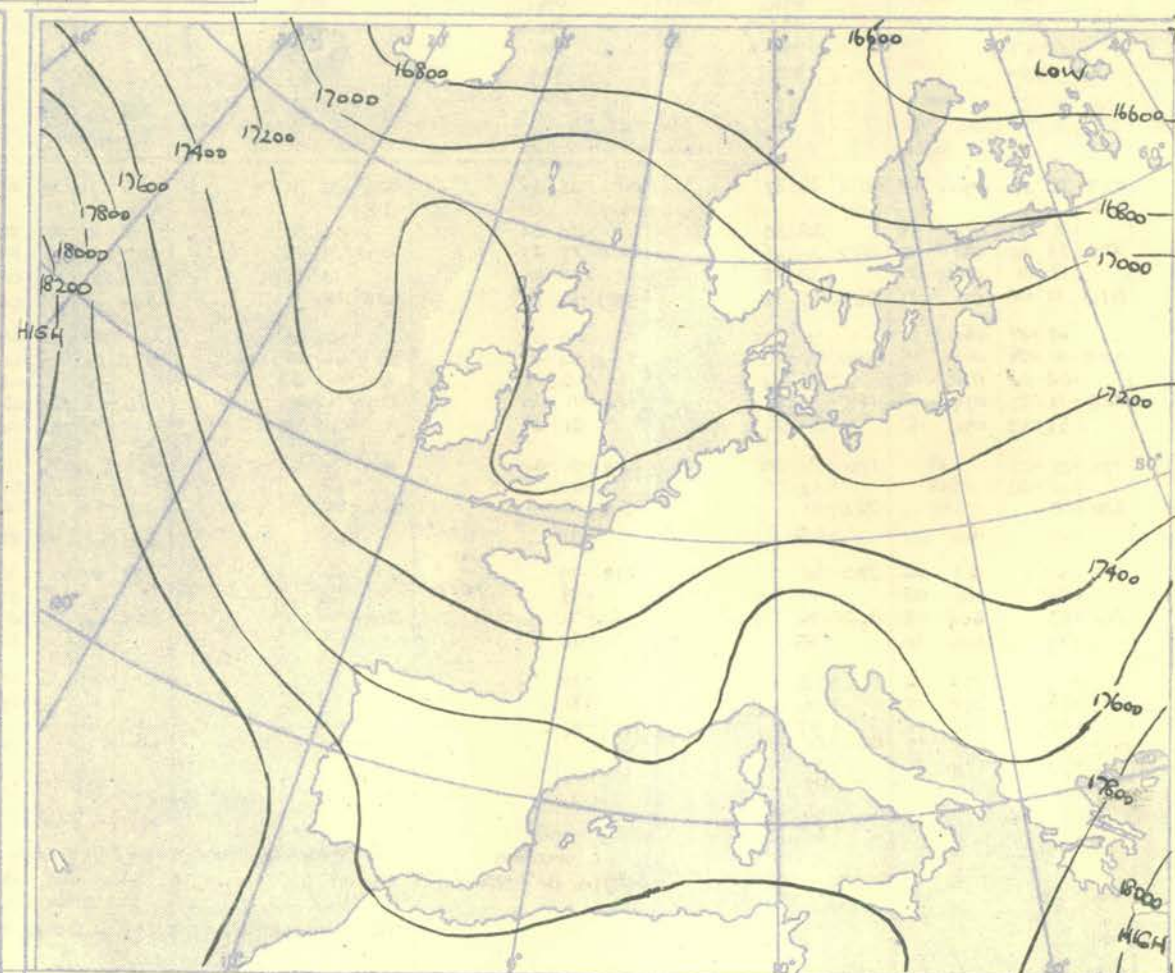
100 80 60 40 20 10 0 knots



The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500-300 mb.



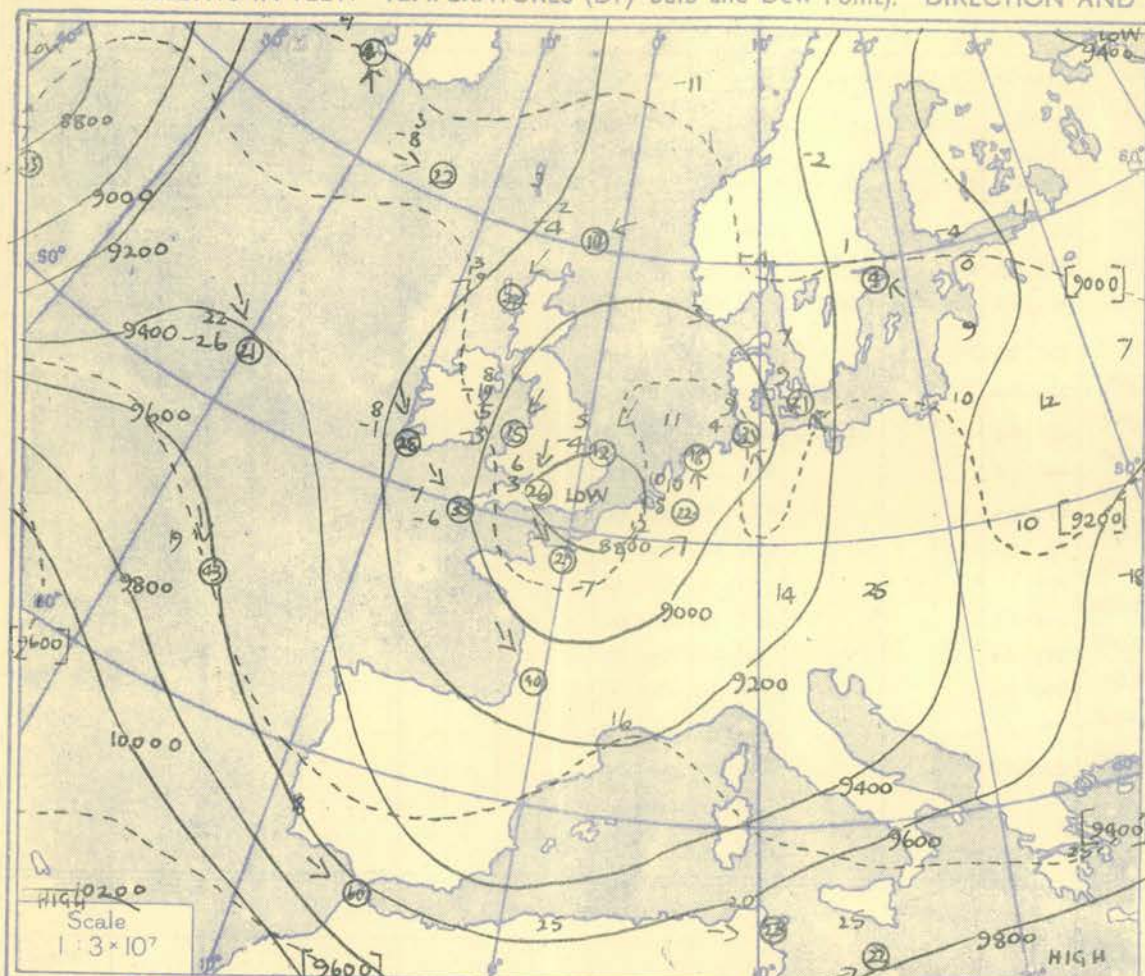
The continuous lines are contour lines of the 500 mb. surface
The dotted lines are isopleths of the thickness of the layer 700-500 mb.



Isopleths of Thickness 500-1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY															DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.																
		43-2N-17-0W		39-5N-12-2W		33-1N-01-2E																									
		1430h		1545h		1430h																									
		1014 mb		1014 mb		983 mb																									
		1010 mb		1010 mb		981 mb																									
		780 mb		835 mb		900 mb																									
		1014 mb		1014 mb		983 mb																									
		1010 mb		1010 mb		981 mb																									
		780 mb		835 mb		900 mb																									
		1014 mb		1014 mb		983 mb																									
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		780 mb		835 mb		900 mb																									
		1014 mb		1014 mb		983 mb																									
		1010 mb		1010 mb		981 mb																									
		780 mb		835 mb		900 mb																									
		1014 mb		1014 mb		983 mb				</																					

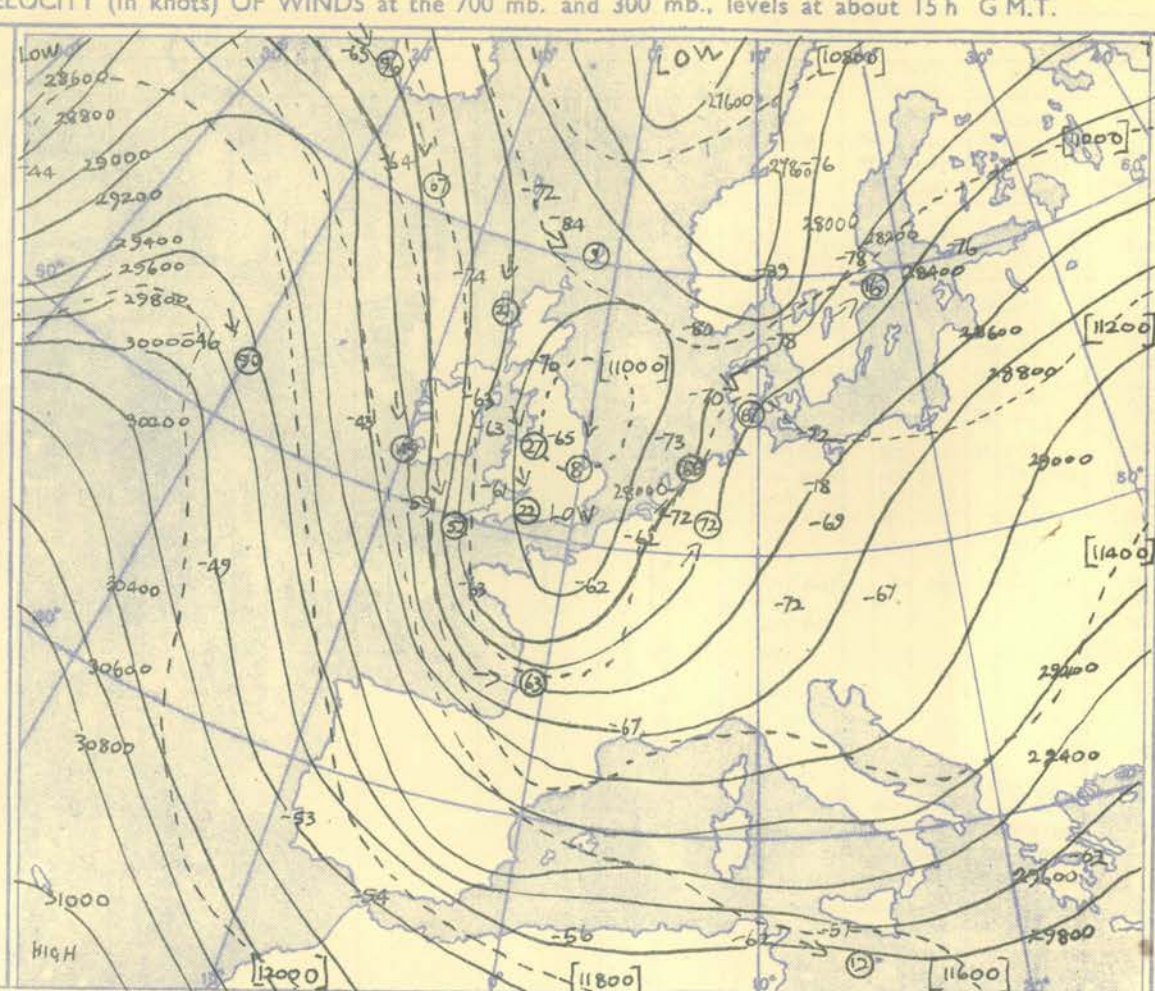
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h G.M.T.



The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb

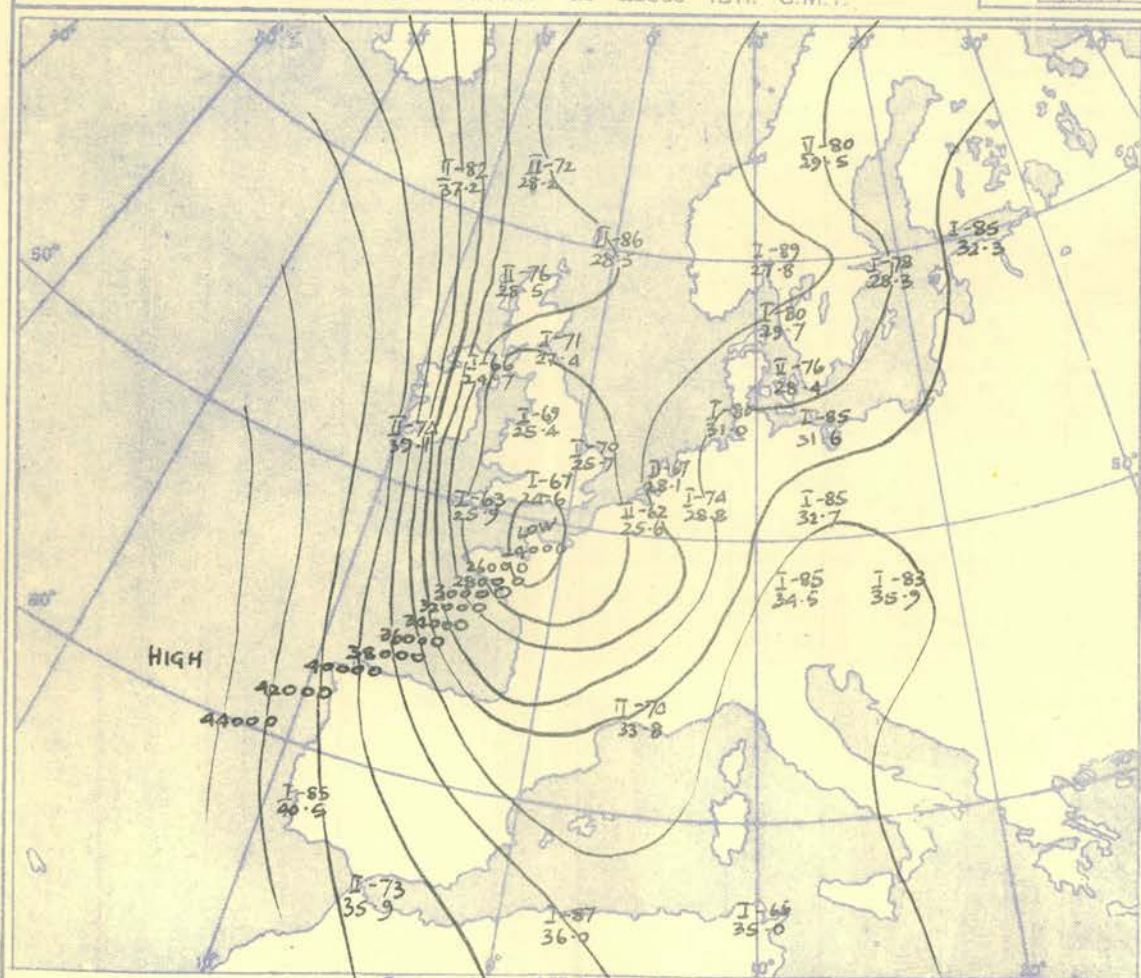
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 20 10 0 knots



The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500-300 mb.

TROPOPAUSE CHART at about 15h. G.M.T.



Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

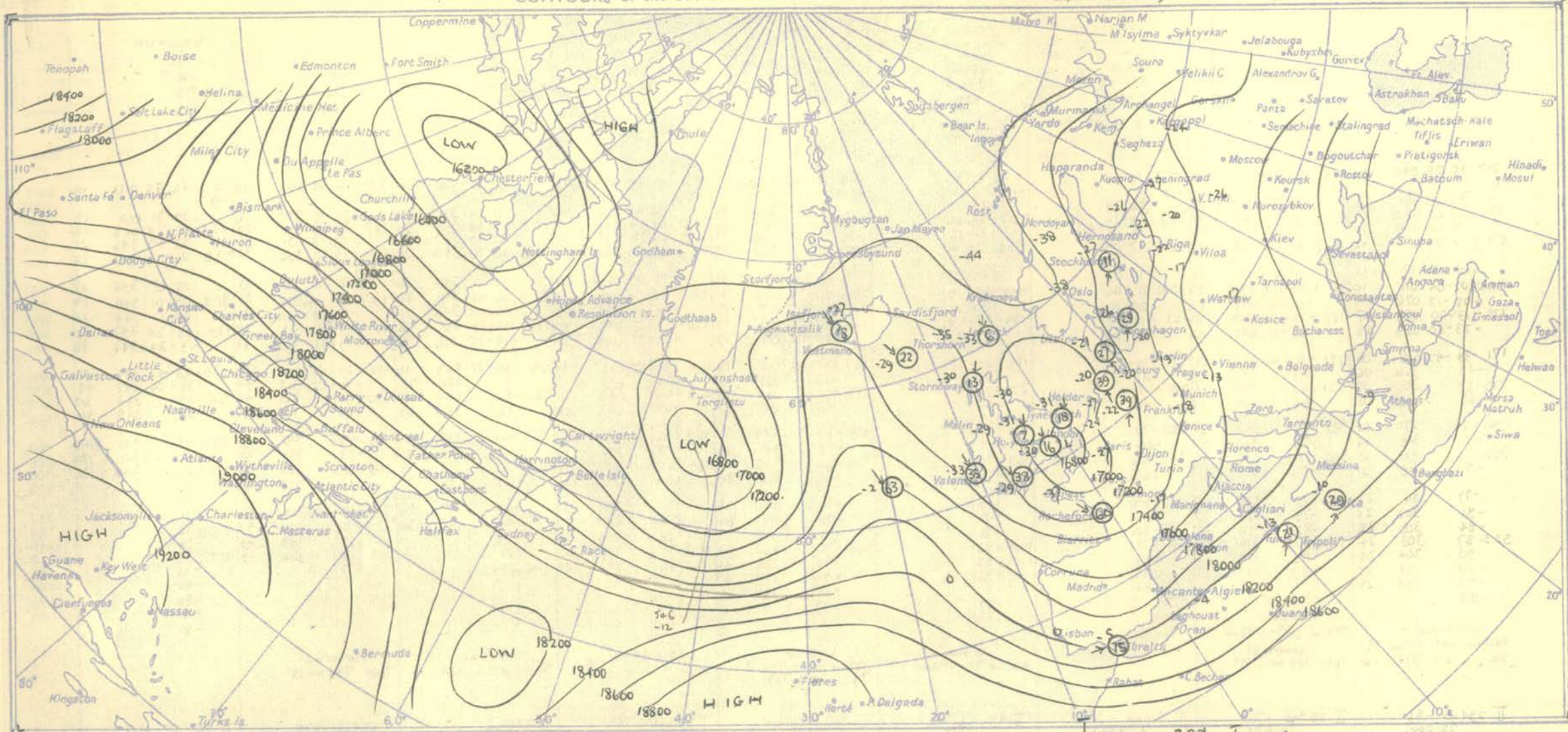
The shallow cold pool over England and Wales moved a little southward whilst its northern part linked with a weak cold trough which moved slowly over Scotland from the west.

A well developed warm ridge bounded by a very tight thermal gradient moved from about latitudes 40° W. to 15° W in the Central Atlantic. A further cold trough penetrated the Western Atlantic.

Appreciable warming by advection occurred over Germany.

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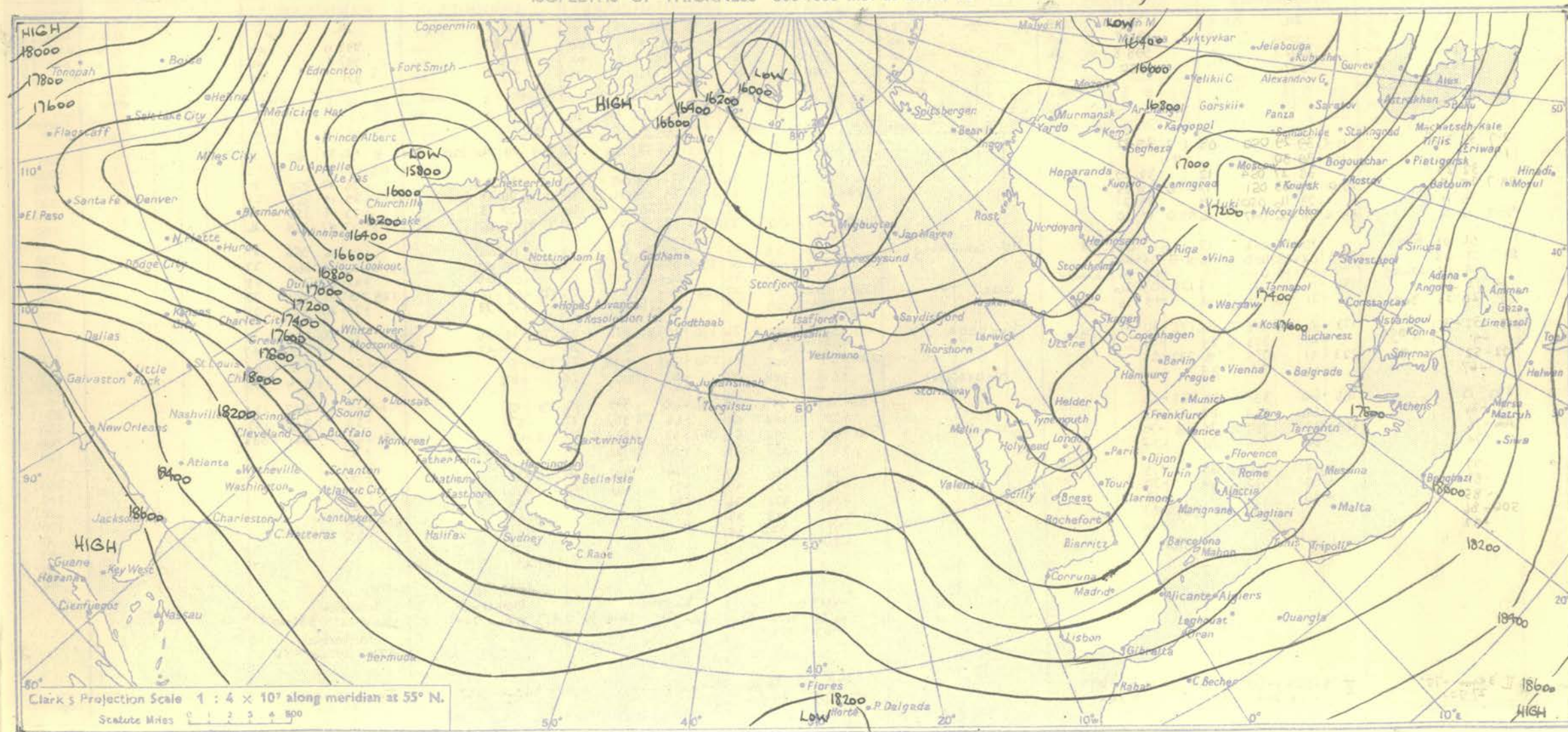
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T.

Tuesday 2nd January

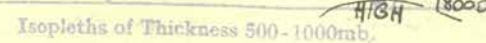
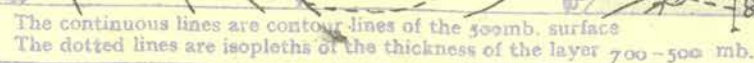
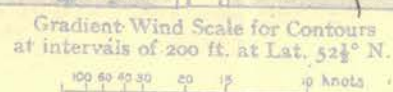
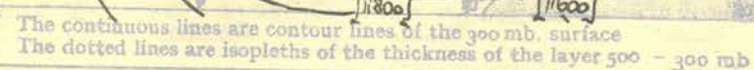
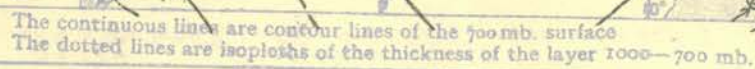
1951.



RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

LERWICK					STORNOWAY					LEUCHARS					ALDERGROVE					LIVERPOOL					DOWNHAM MARKET					LARKHILL					CAMBORNE					VALENTIA					STATION	
Pressure	Time M.S.L. Surf (Freezing)	15L		G.M.T.		15L		G.M.T.		15L		G.M.T.		15L		G.M.T.		15L		G.M.T.		15L		G.M.T.		15L		G.M.T.		15L		G.M.T.		15L		G.M.T.		Time M.S.L. Surf (Freezing)								
		1000.4		mb		999.3		mb		993.4		mb		995.6		mb		987.9		mb		981.4		mb		985.8		mb		989.5		mb		991.0		mb										
		990.3		mb		998.1		mb		992.5		mb		986.8		mb		987.4		mb		981.4		mb		985.8		mb		989.5		mb		991.0		mb										
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb									
Surf	2.7	35	28	080	04	0.4	39	31	060	10	0.2	36	34	0.26	31	28	0.6	31	28	0.6	31	28	0.6	31	28	0.6	31	28	0.6	31	28	0.6	31	28	0.6	31	28	Surf								
1000	0.1					0.0				1.9				-1.0			-2.8			-3.7			-4.4			-4.4			-4.4			-4.4			-4.4			1000								
950	27.7	32	26	081	09	27.7	34	27	058	19	32	29	26	26.7	32	27	24.9	29	20	004	22	24.0	30	28	031	08	23.7	24	24	342	34	25.7	32	28	391	29	27.1	33	24	008	18	950				
900	18	16	079	10	10	20	12	043	20	23	18	09	56.0	51.2	20	06	55.1	15	13	360	25	54.4	19	15	032	12	53.8	16	16	356	28	56.1	18	10	326	32	57.8	21	13	342	25	900				
850	57.7	12	09	074	12	57.8	15	08	048	19	56.0	17	09																											850						
800																																									800					
750																																									750					
700	91.0	02	04	071	10	91.1	03	09	035	32	90.0	05	06	90.9	08	19	88.6	05	03	024	21	88.0	05	04	041	12	87.3	06	03	348	26	89.7	07	06	321	33	91.5	08	07	343	27	700				
650																																									650					
600	123	13	20	078	07	129	12	24	048	10	127	11	25	129	09	28	126	10	26	021	15	126	09	18	052	14	125	10	13	360	26	127	09	20	319	30	129	05	24	347	35	600				
550																																									550					
500	171	33	42	016	06	171	36	41	032	13	170	30	44	171	29	41	169	31	42	011	15	168	31	37	042	18	168	30	37	003	16	170	29	42	319	38	173	23	43	333	35	500				
450																																										450				
400	220	55		326	06	221	52		028	13	220	53		222	54		218	55		042	07	218	56		048	21	218	54		064	07	220	51		321	42	224	39		337	42	400				
350																																										350				
300	280	84		271	09	282	74		357	21	280	70		283	63		279	63		349	21	279	65		346	08	279	61		328	22	282	59		330	52	288	43		341	149	300				
250																																										250				
200	362	76		331	18	366	71		336	43	366	66		368	70		365	64		341	29	364	65		345	17	365	60		319	29	368	60		322	54	376	66		340	173	200				
170																																										170				
150																																										150				
130																																										130				
110																																										110				
100	52.3	87		303	24	507	84		319	32	509	81		509	83		509	76		307	29	508	75		287	33															100					
90																																										90				
80																																										80				
70																																										70				
60																																										60				
Isothermal.		990 mb 35°-975 mb 35°		800-12°-778-12°		Inversion.		999 mb 39°-988 mb 40°		Isothermal.		763-735 mb 9°		Inversion.		987 mb 31°-950 mb 32°		Inversion.		987 mb 31°-975 mb 35°		737-08°-723-09°		Isothermal.		981-957 mb 32°		Isothermal.		800-781 mb 16°		Isothermal.		760-735 mb 12°												
Tropopause		II 294 mb -86°		28.500°		II 293 mb -76°		28.500°		II 310 mb -71°		27.400°		I 355 mb -66°		24.700°		I 338 mb -69°		25.400°		I 332 mb -76°		25.700°		I 345 mb -67°		24.600°		I 334 mb -63°		25.900°		II 185 mb -74°		39.100°		Tropopause								
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				STATION												
Pressure	Time M.S.L. Surf (Freezing)	21L		G.M.T.		21L		G.M.T.		21L		G.M.T.		21L		G.M.T.		21L		G.M.T.		21L		G.M.T.		21L		G.M.T.		21L		G.M.T.		Time M.S.L. Surf (Freezing)												
		1004.2		mb		1004.4		mb		999.7		mb		995.1		mb		995.1		mb																										

HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

[illegible]

DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

Place	Lerwick	Shoeburyness	Leuchars	Collinstown
Time	09h.	10h.	15h.	15h
Type				
Feet	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Surf.	170 06	280 12		120 03
1,000	170 12	310 26		160 14
2,000	166 09	330 27		190 12
3,000	168 08	330 25		190 19
4,000	181 06	330 24		210 25
5,000	195 06	330 26		190 18
6,000	196 09	330 29		210 17
8,000	208 10	330 33		
10,000	225 09	340 31		
14,000	240 05	340 30		
18,000	268 11	330 32		
24,000	297 23	340 96		
30,000	317 68	340 95	274 27	
40,000	305 37	330 52	292 40	
50,000		310 37	289 39	

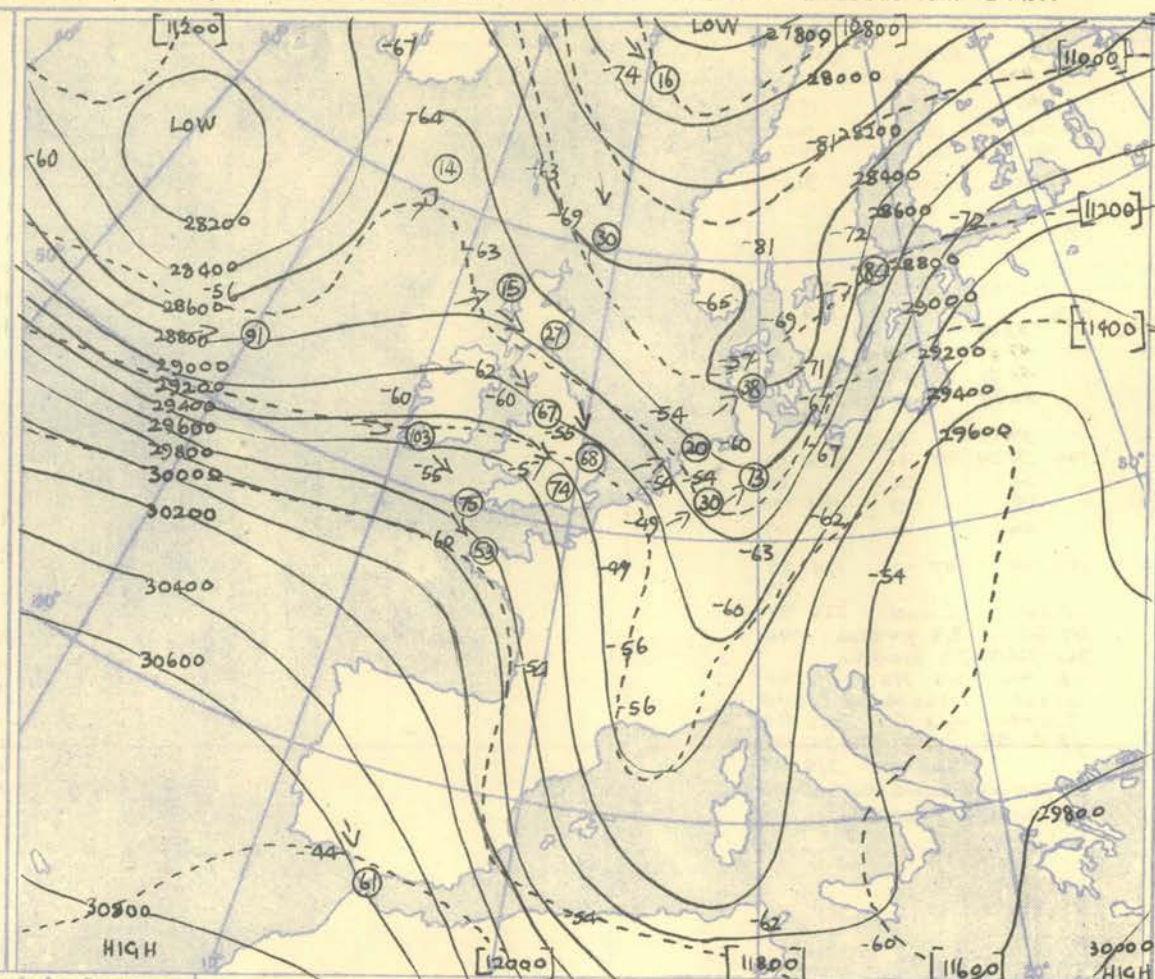
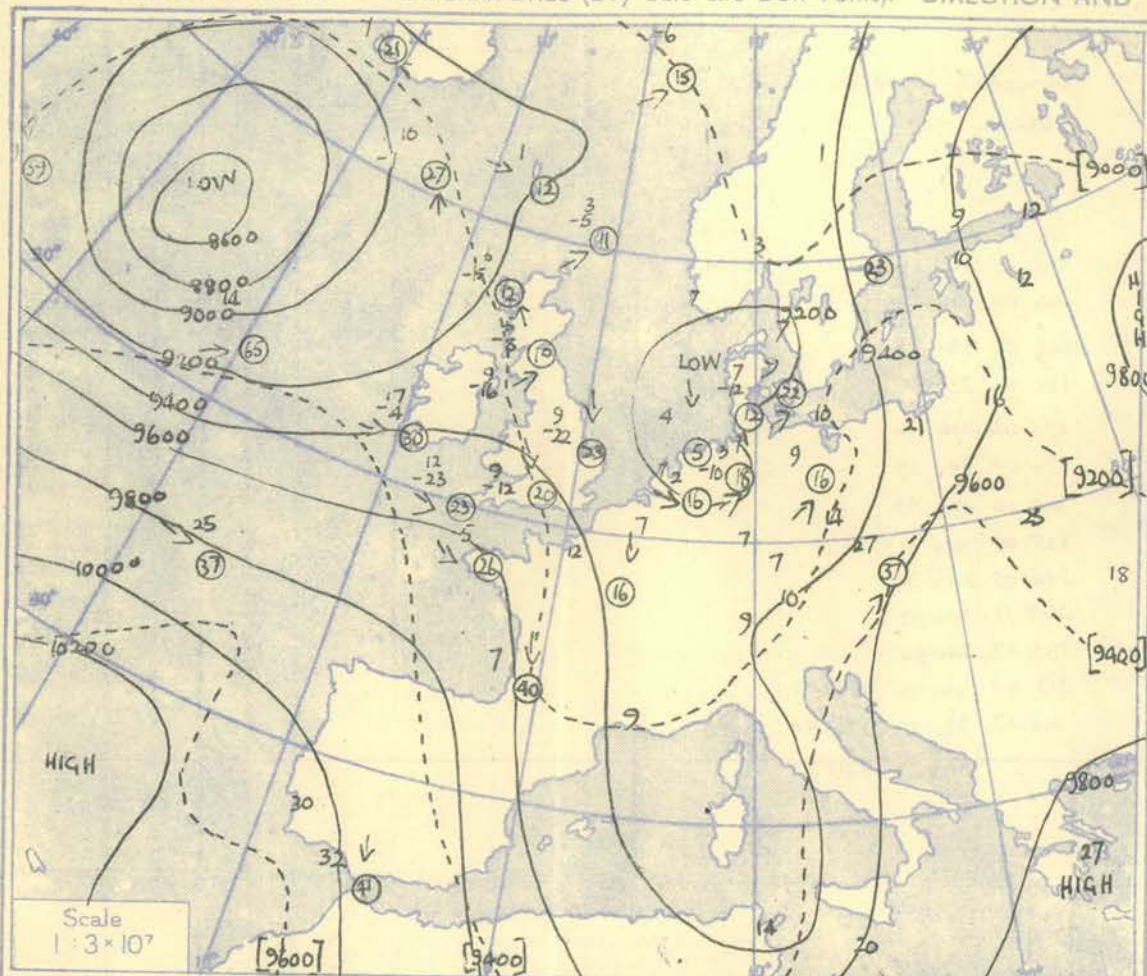
NEPHOSCOPE OBSERVATIONS

[illegible]

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.

Ship	Weather Recorder				Weather Recorder				Weather Recorder				Weather Recorder				Weather Explorer				Weather Explorer				Weather Explorer				Weather Explorer				Ship									
Lat/Long	52-6 N 20-2 W				52-5 N 20-4 W				52-6 N 20-6 W				52-6 N 20-1 W				61-0 N 13-8 W				61 N 14-0 W				61-0 N 14-1 W				61-1 N 14-3 W				Lat/Long									
Pressure	Time	03h G.M.T.			09h G.M.T.			15h G.M.T.			21h G.M.T.			03h G.M.T.			09h G.M.T.			15h G.M.T.			21h G.M.T.			G.M.T.			G.M.T.													
	M.S.L.	994 mb			993 mb			989 mb			987 mb			1005 mb			1001 mb			995 mb			993 mb			mb			mb													
	Surf	994 mb			993 mb			989 mb			987 mb			1005 mb			1001 mb			995 mb			993 mb			mb			mb													
	Freezing	860 mb			870 mb			850 mb			870 mb			950 mb			920 mb			880 mb			890 mb			mb			mb													
Pressure	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Pressure									
	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	mb									
Surf		49	41	260	22	-1-8	49	45	240	25	-3-0	50	42	240	30	-3-6	46	42	250	28	1-3	37	20	070	13	02	40	26	080	22	-1-4	45	38	115	20	-2-0	45	31	100	27	Surf	
1000	-1-7																																						1000			
950		43	39	272	31		43	37	243	36		45	39	237	41		42	38	252	38		32					36	26	105	28		41	34	127	31		43	23	104	37	950	
900	26-7	37	33	273	34	26-5	36	29	246	45	26-5	39	35	234	50	24-8	35	31	252	44	28-8	25					36	26	117	25	26-8	35	30	126	30	26-1	33	20	109	48	900	
850		31	27	268	33		29	20	252	54		32	27	234	55		30	19	256	50		20					24	19	137	22		28	23	126	30		27	15	116	44	850	
800	57-6	26	22	263	37	57-3	24	14	254	51	56-4	25	21	238	53	56-7	24	09	261	54	59-0	19					58-5	20	12	170	16	57-4	22	15	128	27	56-7	21	09	117	41	800
750		19	12	255	41		18	05	251	48		21	13	243	60		18	02	266	60		12					15	10	175	17		18	05	136	25		14	00	119	33	750	
700	91-8	17	04	252	54	91-2	10	05	249	52	90-6	14	04	244	65	89-6	10	04	262	61	92-6	06					92-3	08	10	173	16	91-3	10	01	156	27	90-5	07	13	129	35	700
650		17	12	251	66		03	14	252	57		06	03	243	69		03	09	257	58		01					01	11	161	15		01	07	160	29		03	34	134	39	650	
600							00	17	252	62		03	09	244	64		03	21	256	55	131	06					130	08	14	172	17	129	05	12	161	19	128	08	32	129	30	600
550	131	10	20	250	67		09	31	251	65		11	17	244	62		12	31	258	60		11					17	32	196	17		12	18	165	12		17	35	113	16	550	
500		176	08	36	244	72	173	16	33	254	77	172	20	30	244	64	171	21	40	260	71	174	20				173	23	33	191	13	173	22	26	179	11	171	27	43	134	19	500
450		-16	-43	240	81		28	41	257	81		30	40	244	72		29	47	258	79		27					32	41	200	16		30	35	168	11		36	52	153	18	450	
400	227	26	51	239	72	225	37	50	253	96	224	39	49	244	78	223	37	55	256	87	226	28					294	23	224	42	224	16	224	39	45	163	15	221	47	134	18	400
350		39	59	241	102		48		252	106		48		244	91		46		258	99		39					289	39		48	227	13		52		174		57		112	26	350
300	293	53		243	108	288	61		252	123	287	56		246	91	286	55		264	98	290	51					275	44	287	61	203	16	286	64	176	14	283	69	119	33	300	
250		68		249	108		70		252	118		64		247	86		58		260	87	70						269	55		77	199	17		75	147	14		75	113	30	250	
200	378	78		249	103	372	74		252	114	373	64		248	72	373	59		264	68	374	85					269	71	370	82	217	34	370	77	165	17	366	73	140	14	200	
170		82		246	81		77		252	99		66		248	69		64		260	77	84						275	57		77	246	34		75	210	22		73	181	12	170	
150		84		247	81		79		252	82		64		244	62		64		259	81		87					278	43		78	266	46		74	237	32		75	215	18	150	
130		85		248	61		81		254	63		69		244	57		67		256	56		83					280	40		81	272	50		75	241	41		77	238	28	130	
110	(123 mb)	86					83		254	67		70		243	45		70		256	49		85					285	38		83	269	47		76	244	31		78	256	50	110	
100						513	84		253	78	518	70				518	72		256	48	513	87					510	57	510	85	267	40	512	78	260	30	508	79	256	46	100	
90							85										74		256	52	508	88								86	264	32		80	268	32		81	251	50	90	
80							86										74		258	56	mb)									88	264	30		82	265	34		83	250	55	80	
70							87										74		259	60										90			84	247	40	(072 mb)		85		70		
60							88										74																86	263	49					60		
		Isothermal 759-660mb 19°				(05 mb) 79 (04-150 (03-120 (02-186 Isothermal 807-788mb 24°				Isothermal 770-750mb 21°								Inversion 860mb 19°-823mb 22° 430 -- 30° 412 -- 25°								Isothermal 1001-1000mb 40°				(043 mb)				Isothermal 615-600mb -8°								
Tropopause	I 238mb-82° 34,100'				II 269mb-70° 31,100'				II 250mb-64° 32,500'				I 277mb-60° 30,300'				I 200mb-85° 37,400'				II 243mb-79° 33,200'				II 250mb-75° 32,300'				II 275mb-75° 30,200'				Tropopause									

HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb. levels at about 15 h G.M.T.



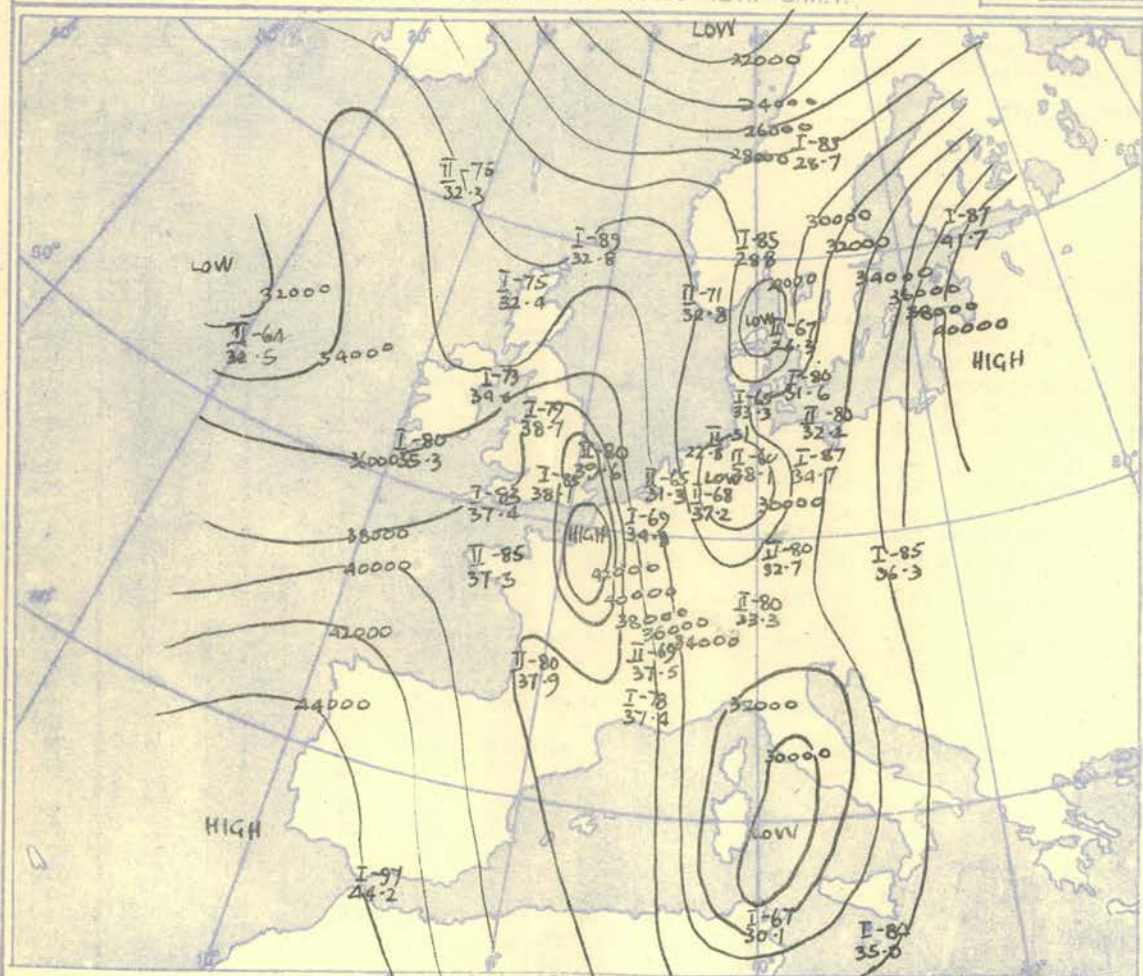
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 20 10 knots

The continuous lines are contour lines of the 300 mb. surface.
The dotted lines are isopleths of the thickness of the layer 500-300 mb.

TROPOPAUSE CHART at about 15h. G.M.T.



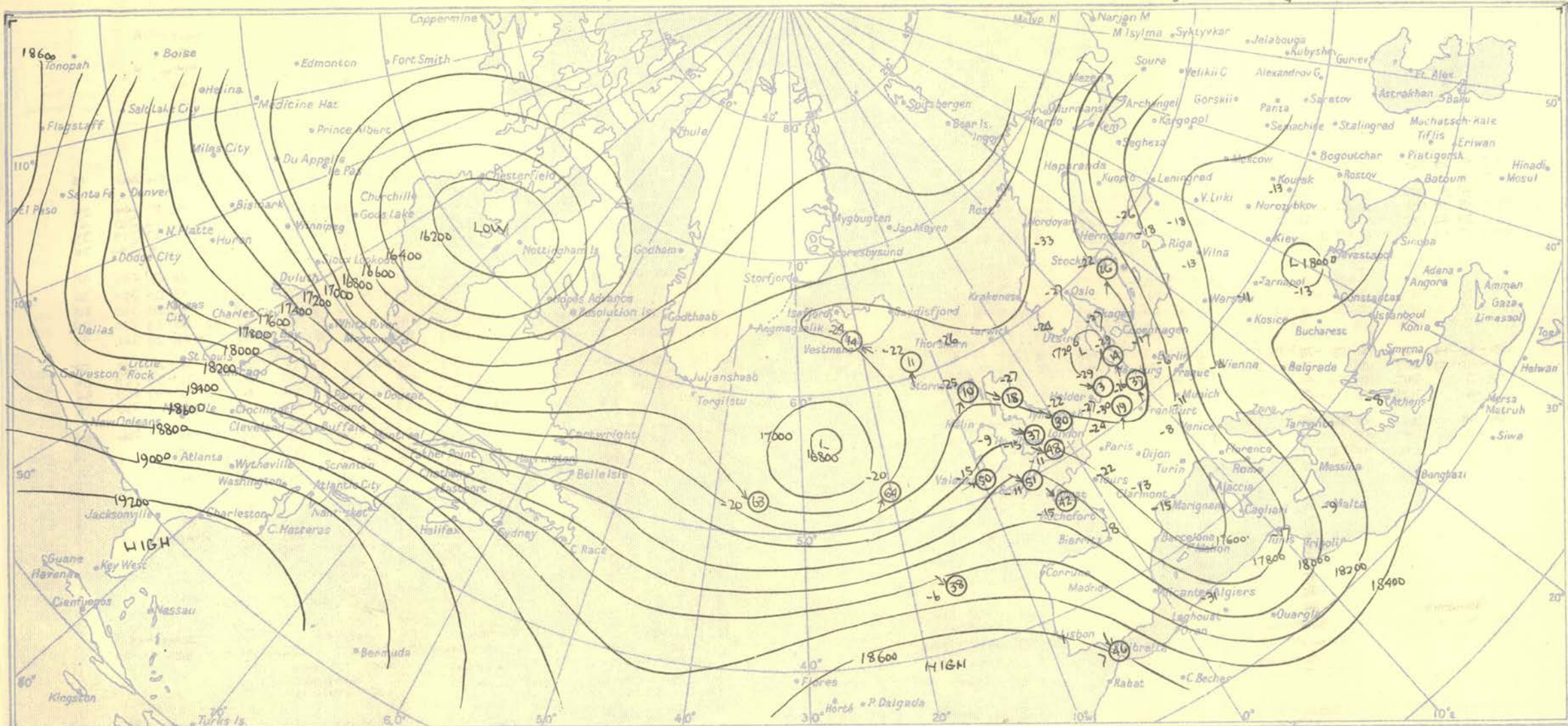
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The warm ridge west of Ireland moved steadily eastwards in the south but was almost stationary in the north. The cold pool over northeast France moved to north Germany but lost its separate identity in a cold trough extending south to the Mediterranean.

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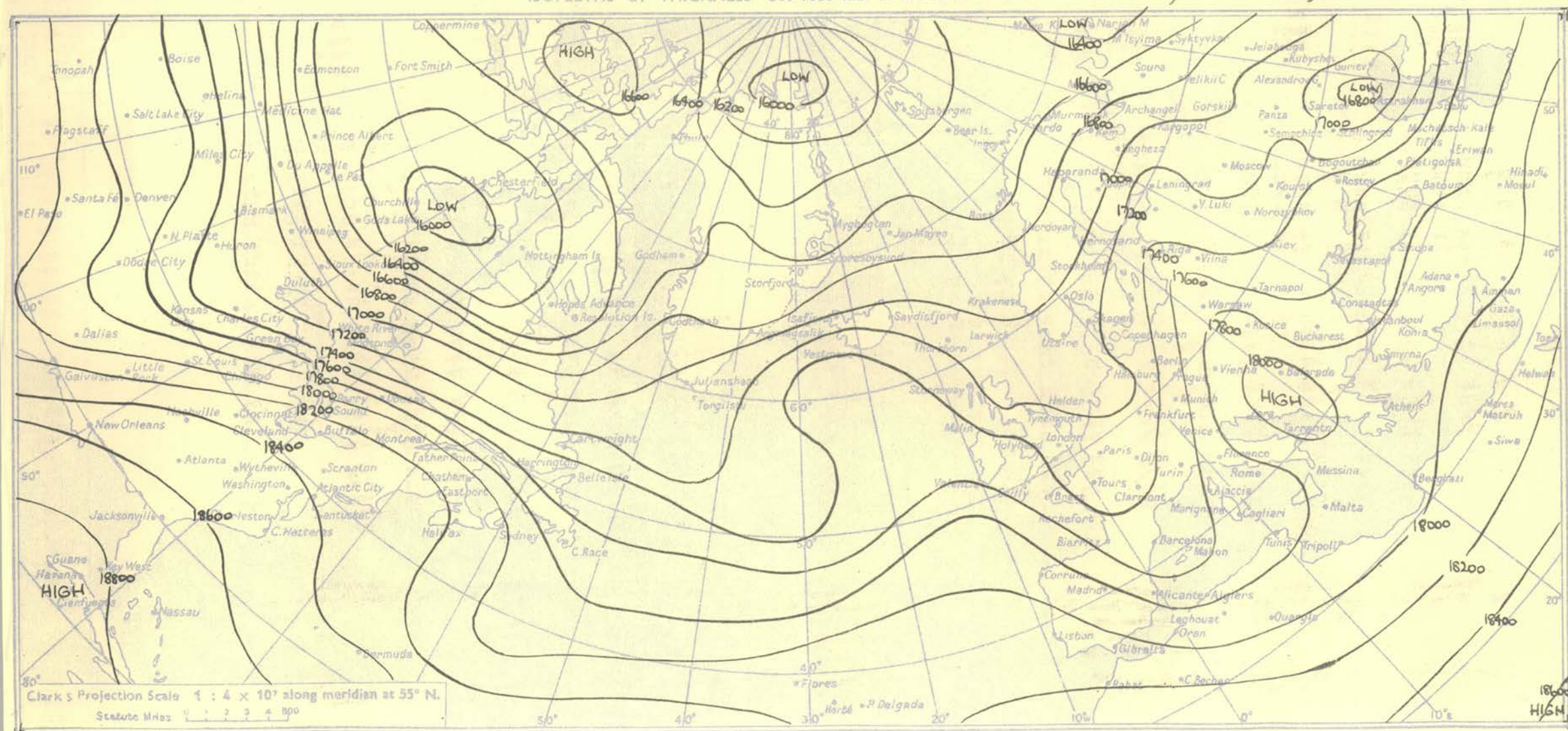
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T.

Wednesday 3rd January

1951.

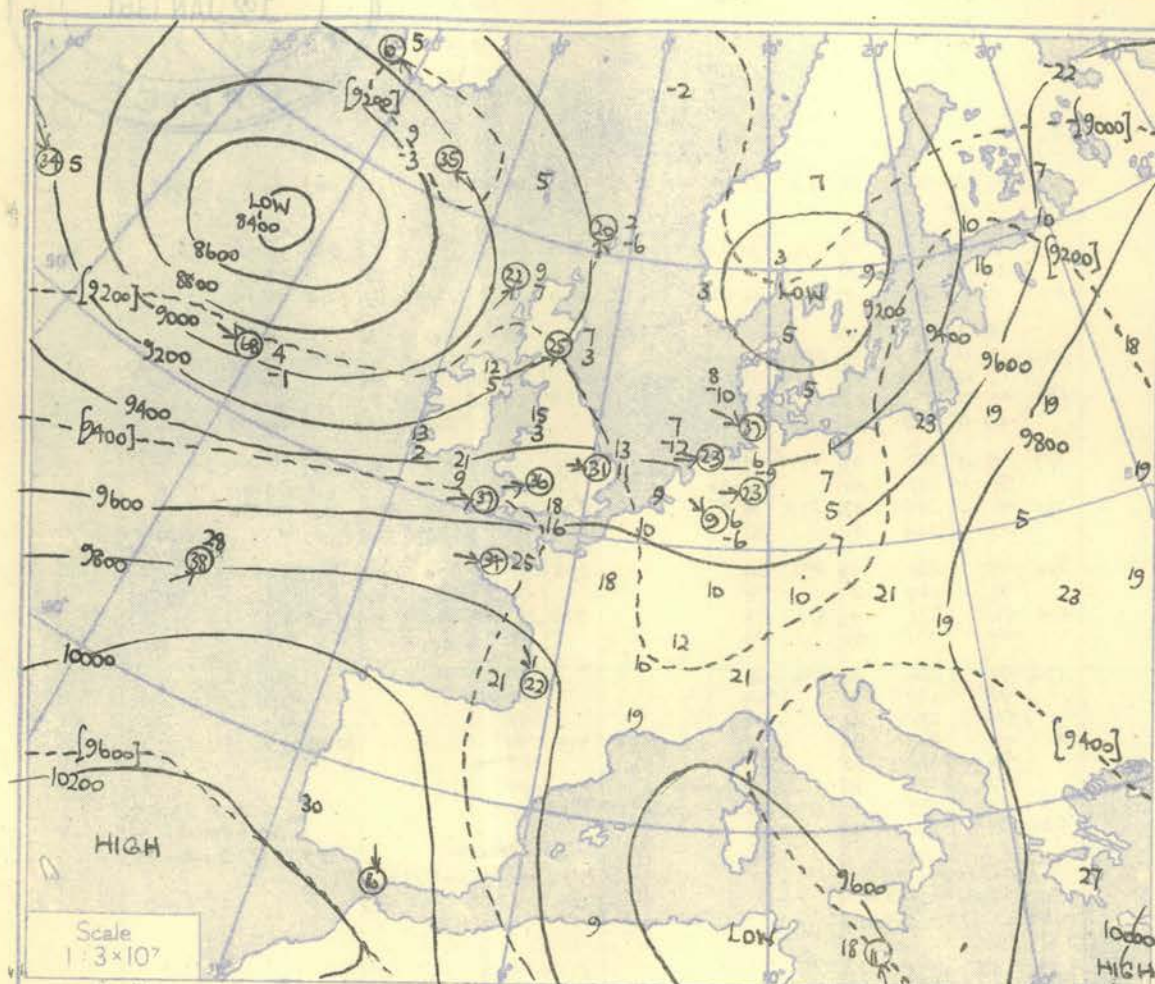


RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				STATION			
Pressure M.S.L. Surf Freezing	Time	03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		Time							
	M.S.L.	1003.6		mb		996.7		mb		1002.0		mb		996.8		mb		1000.8		mb		1009.2		mb		1006.1		mb		M.S.L.							
	Surf	993.4		mb		995.0		mb		1001.1		mb		987.4		mb		998.7		mb		1004.7		mb		989.7		mb		Surf							
Freezing		938		mb		950		mb		950		mb		873		mb		865		mb		910		mb		879		mb		Freezing							
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb				
Surf	02.7	36	29	230	18	00.4	36	34	130	15	00.2	36	33	140	03	02.6	37	35			00.6	36	33			01.2	31	28	135	08	4.4	38	37	Surf			
1000	00.9					00.9					00.5	36	33			00.8					00.2						02.4	32	28		1.7			1000			
950		34	30	183	21		32	30	130	21		32	28	167	21		37	37				34	31				30.3	31	26	222	25	29.6	34	34	950		
900	28.6	26	25	180	20	26.7	27	26	139	24	28.2	26	22	165	21	272	35	34			280	33	30				23	19	223	22		31	30	900			
850		19	18	177	20		22	21	158	29		21	19	163	20		29	25				31	26				60.7	17	13	230	19	60.4	28	27	850		
800	58.7	15	06	177	21	57.0	19	18	187	33	58.5	16	11	169	19	58.0	24	17			58.9	26	22											800			
750		09	03	187	21		15	14	205	28		12	08	203	22		19	11				19	15				18	16	244	27		23	21	750			
700	92.1	02	-06	193	20	90.9	09	07	203	22	92.1	07	03	226	25	92.1	12	05			93.1	15	03			94.6	13	11	257	31	94.8	18	16	700			
650		-06	-12	190	17		03	01	191	17		00	-04	232	29		03	-06				08	-14				07	05	258	27		11	-26	650			
600	129	-13	-26	185	13	129	-04	-07	178	20	130	-09	-14	226	32	130	-04	-15			13.1	-01	-20			133	00	-02	258	83	133	02	-20	600			
550		-17	-38	225	10		-12	-16	193	21		-15	-21	219	28		-11	-22				-09	-11	258	32		-09	-11	258	32		-10	-23	550			
500	172	-25	-47	232	12	172	-23	-27	195	27	173	-25	-32	225	29	173	-25	-32			175	-19	-31			177	-19	-22	257	37	177	-14	-23	500			
450		-35	-47	238	15		-35	-40	202	28		-37	-44	235	29		-37	-48				-28	-49				-31	-34	257	41		-23	-30	450			
400	223	-45		252	18	223	-48		209	28	223	-48		227	37	224	-47			226	-39	-59				228	-41		264	47	229	-35	-43	400			
350		-55		250	13		-60		212	23		-60		229	40		-59				226	-53					230	-53		269	51		-51	350			
300	285	-66		230	16	284	-70		224	18	283	-72		227	41	286	-64			289	-65					290	-65		282	48	292	-64	300				
250		-77		210	14		-70		222	21		-73		245	34		-67				374	-69						374	-72		269	51		-70	250		
200	269	-73		230	25	368	-70		245	25	367	-70		258	33	371	-66				374	-65					374	-72		272	42	376	-73	200			
170		-71		237	24		-68		257	33		-70		260	31		-70					-69						434	-72		266	40	436	-68	170		
150		-72		255	20	428	-72		260	28	427	-73		263	33	430	-72					-67						51.8	-72		268	38		-74	150		
130		-73		255	32		-73		254	26		-78		267	38		-72					-72						51.8	-73		273	40		-74	130		
110		-78		260	27		-77		264	35		-79		268	37		-75					-75						51.8	-74		273	35		-74	110		
100		-81		262	33		-80		264	37	510	-79				514	-77					-75						51.8	-75		273	35		-74	100		
90		-83		265	36		-81		264	37		-81					-73					-73						51.8	-76		273	35		-74	90		
80		-83		265	42		-82		260	39		-82					-73					-73							51.8	-76		273	35		-74	80	
70		-82		265	45		-84		266	45		-84					-76					-76							51.8	-76		273	35		-74	70	
60		-87		265	47		-87		266	45		-87					-76					-76							51.8	-76		273	35		-74	60	
		Inversion		993 mb 36° - 987 mb 37°				Inversion		995-980 mb 36°				Inversion		987-934 mb 37°				Inversion		1005 mb 31° - 975 mb 38°				Inversion		994 mb 46° - 977 mb 48°				Inversion		997-972 mb 46°			
		841. 18° - 825. 19°												342-324. -60°								800. 17° - 760. 19°															
		Isothermal		583-568 mb -15°																																	
Tropopause	I 250 mb -77° 32,250'				I 289 mb -72° 29,100'				II 300 mb -72° 28,300'				I 227 mb -70° 34,500'				I 261 mb -71° 31,900'				I 240 mb -73° 33,600'				II 285 mb -68° 30,300'				I 200 mb -85° 37,800'				I 258 mb -76° 32,200'				Tropopause
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				STATION				
Pressure M.S.L. Surf Freezing	Time	09h.		G.M.T.		09h.		G.M.T.		09h.		G.M.T.		09h.		G.M.T.		09h.		G.M.T.		09h.		G.M.T.		09h.		G.M.T.		Time							
	M.S.L.	1001.7		mb		991.4		mb		998.3		mb		999.5		mb		1005.2		mb		1005.2		mb		1005.4		mb		M.S.L.							
	Surf	991.6		mb		990.8		mb		997.4		mb		997.4		mb		997.4		mb		1000.9		mb		989.1		mb		Surf							
Freezing		935		mb		930		mb		921		mb		860		mb		860		mb		895		mb		850		mb		Freezing							
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb				
Surf	02.7	38	28	170	21	00.4	40	37		00.2	36	34	CALM			00.6	37	34			01.2	37	37	195	10	4.4	38	38	230	07	02.9	48	46	203	10	Surf	
1000	00.4					02.1				00.4						00.1												01.4							1000		
950		34	28	150	28		35	32			34	33	200	10			41	38				36	36	222	24		42	41	249	24		44	41	239	33	950	
900	28.2	26	22	154	27	25.7	29	28		27.4	30	29	226	9		28.0	37	34				32	32	249	24	29.6	39	34	255	30	29.8	38	34	249	29	900	
850		18	16	149	28		25	24			26	23	190	10			30	27				31	11	273	21		32	24	254	30		32	27	252			

Thursday 4th January 1951.

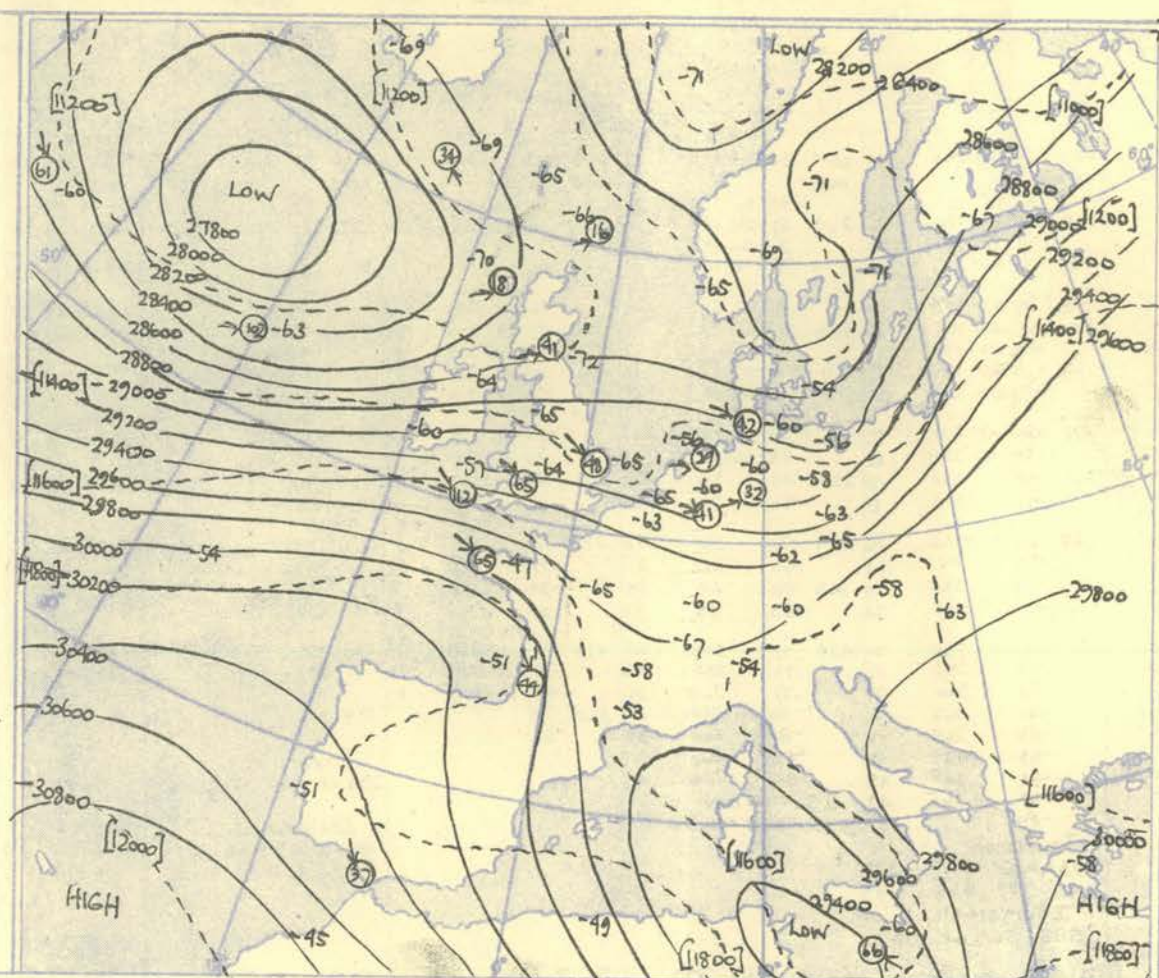
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



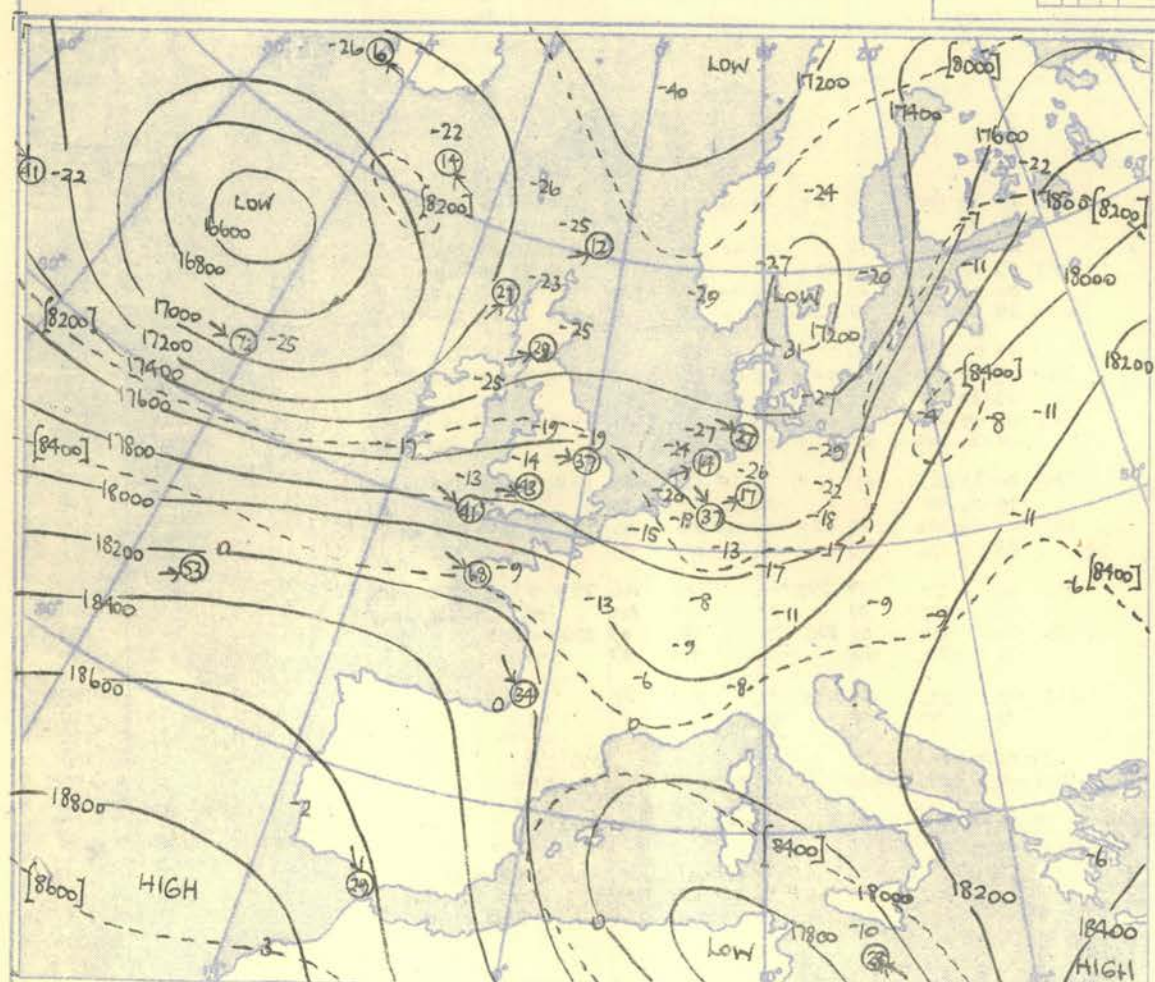
The continuous lines are contour lines of the 700 mb. surface
The dotted lines are isopleths of the thickness of the layer 1000 - 700 mb.

Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

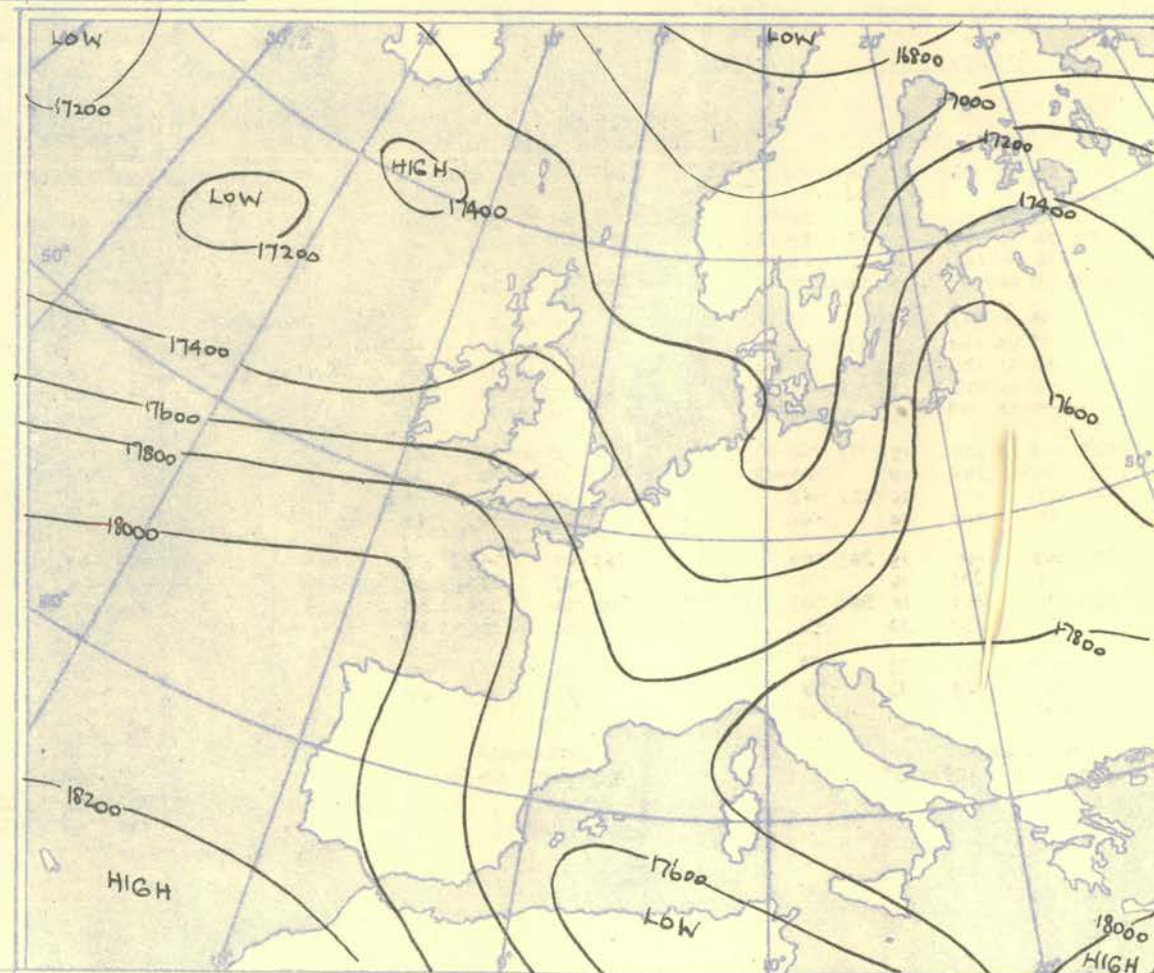
100 80 60 40 20 10 knots



The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 - 300 mb.



The continuous lines are contour lines of the 500 mb. surface
The dotted lines are isopleths of the thickness of the layer 700 - 500 mb.



Isopleths of Thickness 500-1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

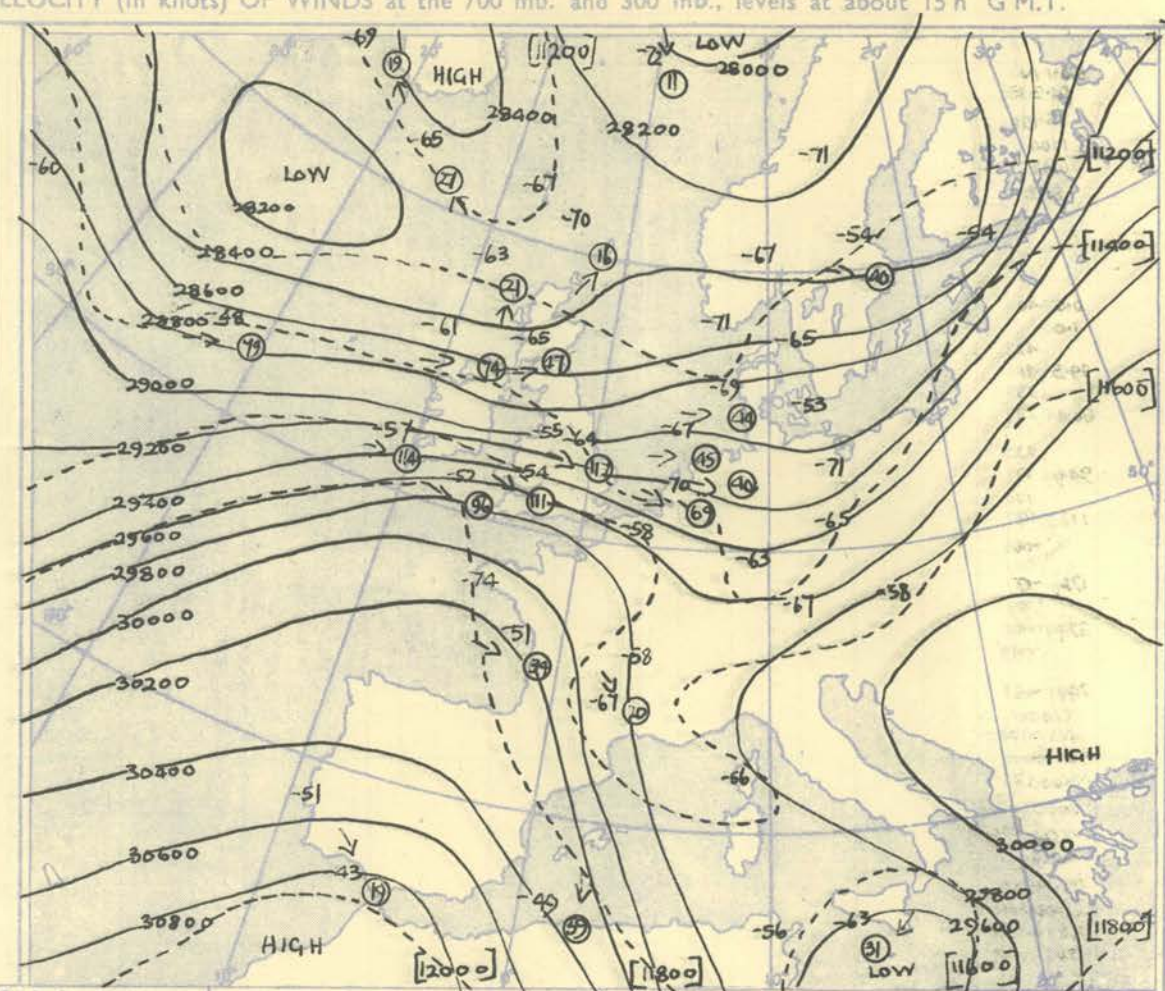
[illegible]

DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

Place	Lorkhill	Ronaldsway	Sherburness	Kerwick	Kerwick
Time	03h.	09h.	09h.	15h.	21h.
Type					
Feet	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Surf.	180 18	240 12			150 25
1,000	190 33	220 22	230 23		185 33
2,000	198 35	250 25	250 25		136 33
3,000	205 40	250 27	260 27		136 35
4,000	225 42	240 36	260 29		139 34
5,000	230 43	230 35	260 38		143 28
6,000	238 41	320 36	260 25		145 25
8,000	242 36	230 38	270 26		147 22
10,000	246 36		260 31		152 20
14,000	248 39		270 42		178 10
18,000	263 43		270 37		198 06
24,000	275 48		280 47		198 06
30,000	279 65		290 103	220 18	227 13
40,000	277 64		280 57	250 27	253 30
50,000	270 44 (47,000')		270 36	250 30 (47,000') 276 40 (54,000')	

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.

Ship	Weather Explorer				Weather Explorer				Weather Explorer				Weather Explorer				Weather Recorder				Weather Recorder				Weather Recorder								Ship									
Lat/Long	61.0 N 13.9 W				61.0 N 13.9 W				61.0 N 14.1 W				61 N 14.3 W				52.6 N 20.1 W				52.6 N 20.4 W				52.4 N 20.6 W				52.4 N 20 W								Lat/Long					
Pressure	Time	03h G.M.T.			03h G.M.T.			03h G.M.T.			03h G.M.T.			03h G.M.T.			03h G.M.T.			03h G.M.T.			03h G.M.T.			03h G.M.T.			03h G.M.T.			G.M.T.			Time							
	M.S.L.	991 mb			989 mb			987 mb			986 mb			987 mb			988 mb			988 mb			991 mb			991 mb			991 mb			991 mb				M.S.L.						
	Surf	991 mb			989 mb			987 mb			986 mb			987 mb			988 mb			988 mb			991 mb			991 mb			991 mb			991 mb					Surf					
	Freezing	885 mb			900 mb			880 mb			880 mb			900 mb			870 mb			855 mb			855 mb			860 mb			860 mb			Freezing										
Pressure	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew		Wind	Pressure								
mb	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	mb									
Surf	-2.6	45	30	085	29	-2.9	44	34	070	23	-3.5	43	37	040	30	-3.8	44	38	047	23	-3.6	44	42	240	30	-3.4	47	41	265	28	-2.6	48	41	270	25	-2.4	46	43	270	30	Surf	
1000																																							1000			
950		41	32	087	39		39	26	085	33		40	36	060	33		40	37	057	30		37	33	254	45		42	41	259	43		44	38	268	38		43	39	267	37	950	
900	25.5	34	27	088	42	25.2	32	20	087	35	24.6	34	29	067	31	24.3	34	33	064	36	24.6	32	28	267	45	24.9	36	36	265	43	25.8	37	30	268	43	25.9	37	30	268	43	900	
850		26	21	094	39		24	08	086	34		28	25	072	20		29	28	075	42		26	22	256	50		29	29	264	48		31	24	268	43		31	22	270	45	850	
800	66.1	19	14	103	34	55.6	18	06	088	31	55.3	21	17	083	28	55.1	23	22	088	40	55.0	17	16	256	48	55.7	23	23	263	48	56.7	25	18	268	44	56.8	26	16	273	44	800	
750		16	06	113	39		11	-04	091	28		14	11	094	27		16	15	086	35		13	09	255	62		18	18	261	48		20	10	267	45		19	06	273	44	750	
700	39.6	09	-03	107	35	39.1	05	-13	099	25	39.1	10	05	089	21	39.1	09	08	085	27	38.6	04	-01	258	68	39.8	12	12	253	49	39.8	14	01	264	46	39.9	12	-03	270	45	700	
650		02	-15	102	27		-02	-27	105	20		03	-07	084	15		02	00	091	23		-03	-07	256	51		03	03	253	48		08	-10	265	51		05	-12	267	45	650	
600	128	-05	-22	106	20	127	-07	-18	093	14	127	-04	-16	109	11	127	-05	-07	095	19	126	-07	-17	255	60	128	-07	-08	258	52	129	01	-26	258	48	129	-04	-24	266	50	600	
550		-12	-28	120	17		-15	-32	073	10		-13	-27	130	08		-15	-18	101	18		-16	-30	256	62		-15	-18	258	59		-07	-23	252	48		-11	-34	265	44	550	
500	171	-22	-33	124	14	170	-26	-43	096	08	171	-24	-39	040	08	170	-26	-29	099	24	169	-25	-45	256	72	171	-20	-24	258	60	173	-17	-31	248	44	173	-21	-43	260	42	500	
450		-34	-44	157	17		-38	-54	107	09		-36	-49	046	11		-38	-42	100	25		-34	-53	267	82		-27	-33	258	72		-27	-40	252	61		-31	-53	255	48	450	
400	222	-45		127	18	220	-51		104	11	221	-46		069	09	220	-51		105	21	220	-44		260	90	223	-39	-45	258	78	225	-39	-51	243	63	224	-42		256	49	400	
350		-53		105	21		-60		093	19		-58		090	14		-61		106	16		-65		259	90		-51		258	76		-50		245	72		-50		262	50	350	
300	284	-69		115	34	281	-70		096	25	283	-65		099	27	282	-68		086	27	282	-63		252	102	285	-59		258	78	288	-48		243	79	287	-54		253	50	300	
250		-73		109	25		-75		104	20		-68		125	12		-71		097	16		-68							258	85		-54		247	66		-55		244	59	250	
200	368	-72		176	06	365	-73		215	05	367	-66		223	12	366	-69		257	07	367	-69			371				258	64	376	-55		251	56	374	-59		242	58	200	
170	(196	-71					-75		270	12		-67		245	18		-69		212	10		-71								258	60		-56		254	46		-61		247	54	170
150	mb)						-75		254	17		-68		245	20		-71		228	18		-73								258	54		-57		254	44		-63		257	46	150
130							-75		243	24		-69		248	25		-70		258	27		-74								258	54		-60		251	42		-64		258	46	130
110							-80		250	24	(120	-71					-73		266	28		-77											-58		252	36		-66		258	46	110
100					50Y	-83			253	29	mb)				510	-74		267	28	509	-79				515							524	-57		273	37	521	-67		258	44	100
90							-86		262	37						-75		274	30		-81												-58		277	35		-68		258	44	90
80							-88		265	35						-78		274	33		-81												-61		271	36		-71		258	38	80
70							-90									-82		273	40		-83												-63		267	24		-74		258	41	70
60							-92									-85					-85												-65		262	33					60	

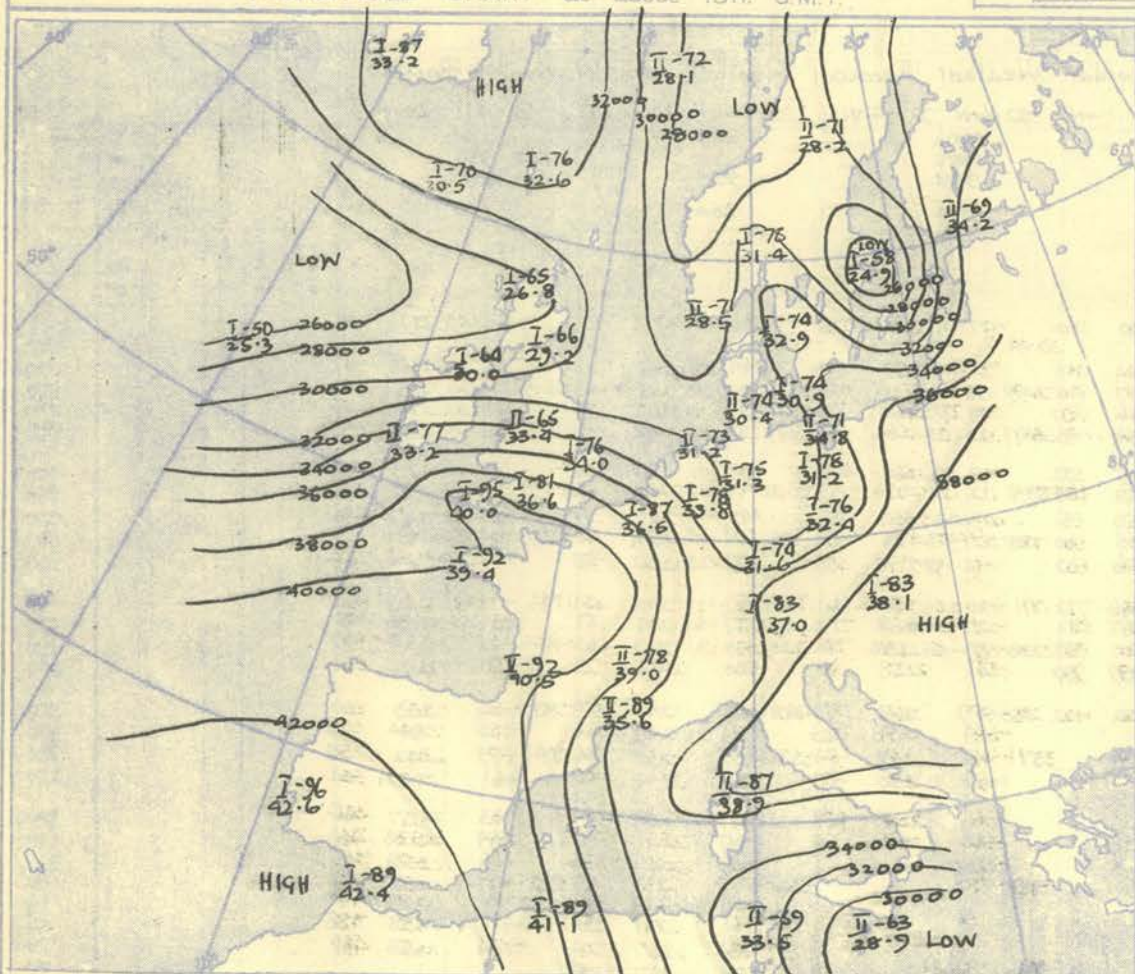


The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb

Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. $52\frac{1}{2}^{\circ}$ N

The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 - 300 mb.

TROPOPAUSE CHART at about 15h GMT



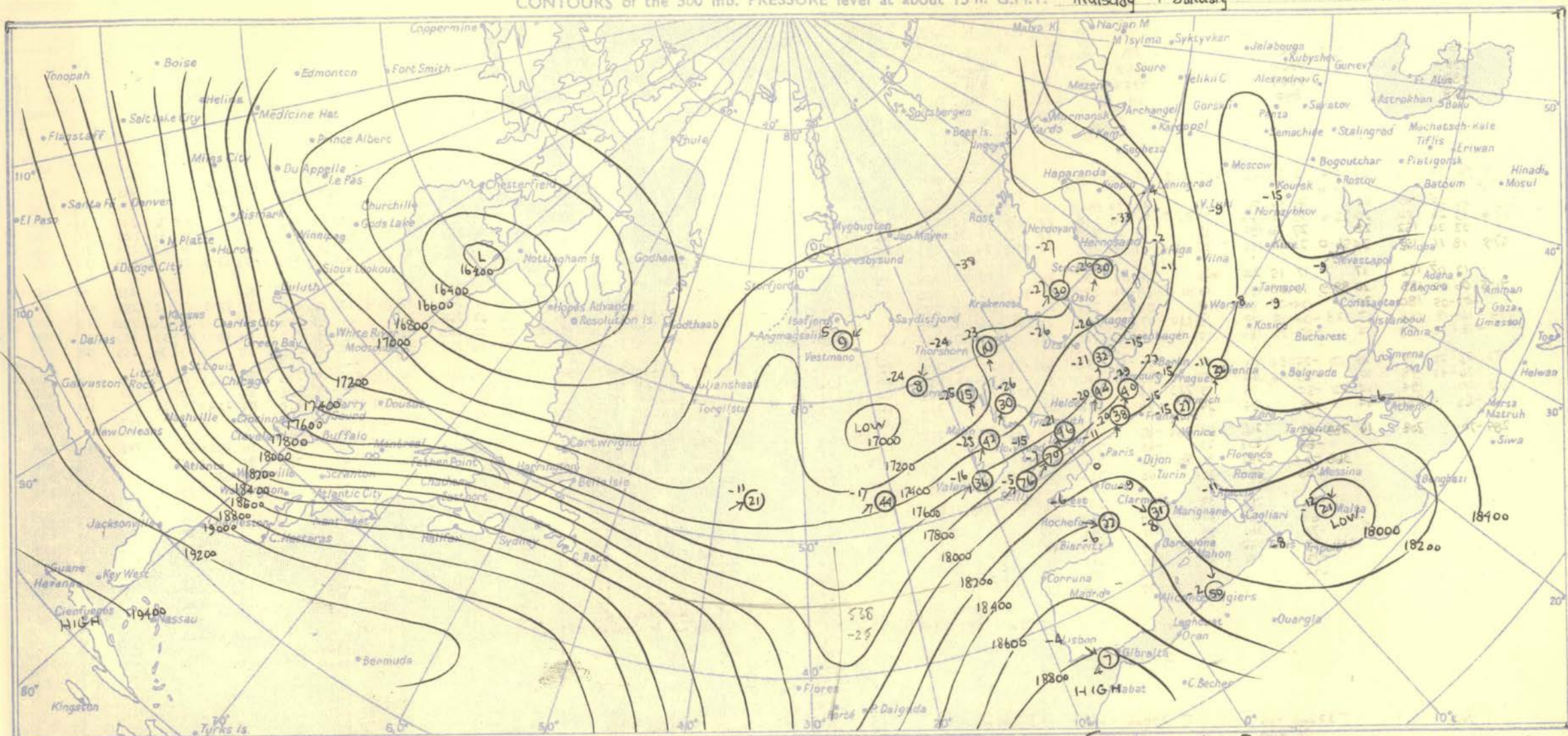
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

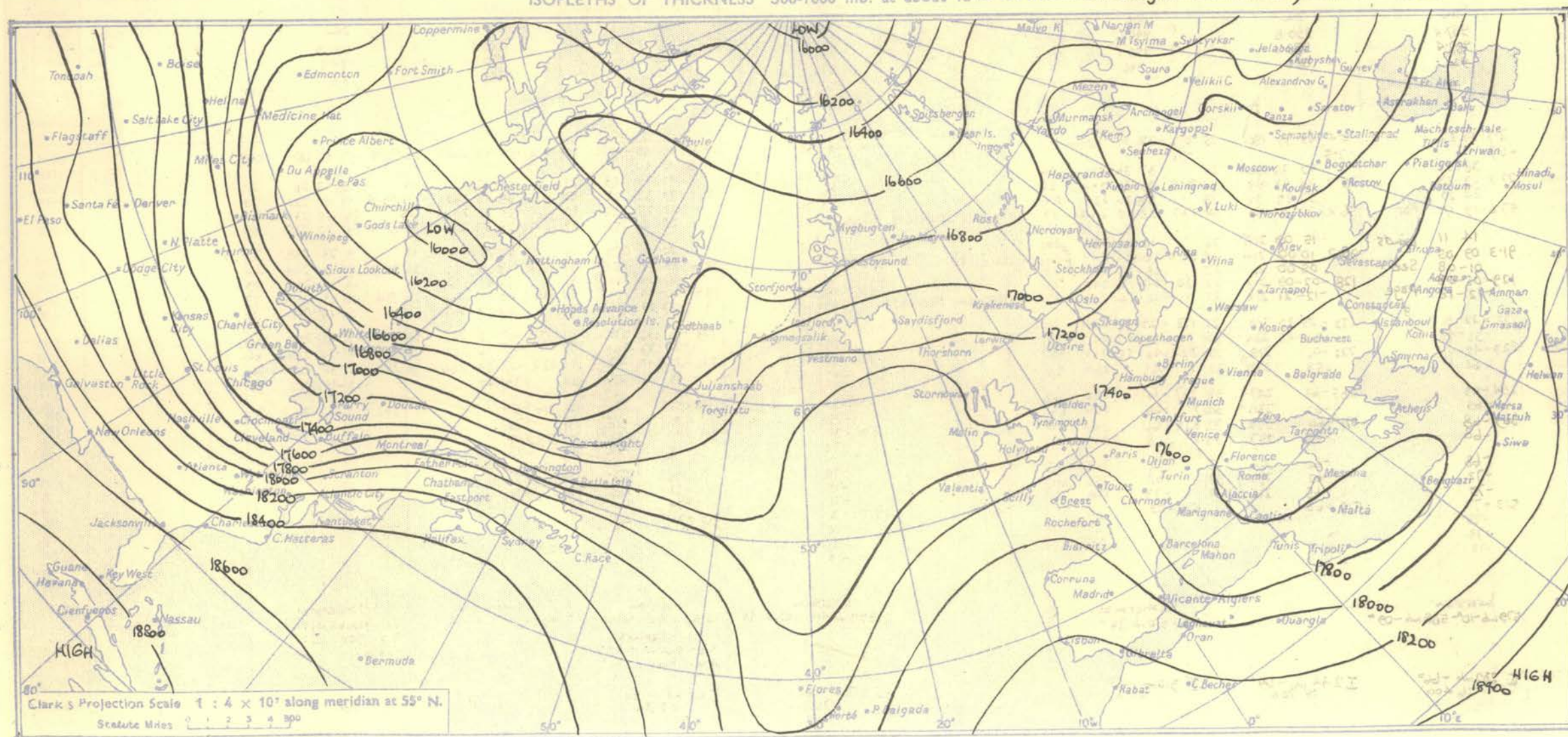
The warm ridge moved eastwards across the British Isles to northwest Germany and the preceding cold trough reached Poland and thence northwards across the Baltic. The development of a secondary depression northeast of the Azores was accompanied by a marked distortion of the thermal pattern and produced a sharp cold trough extending south across the Azores whilst another warm ridge approached southwest England.

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Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Thursday 4th January

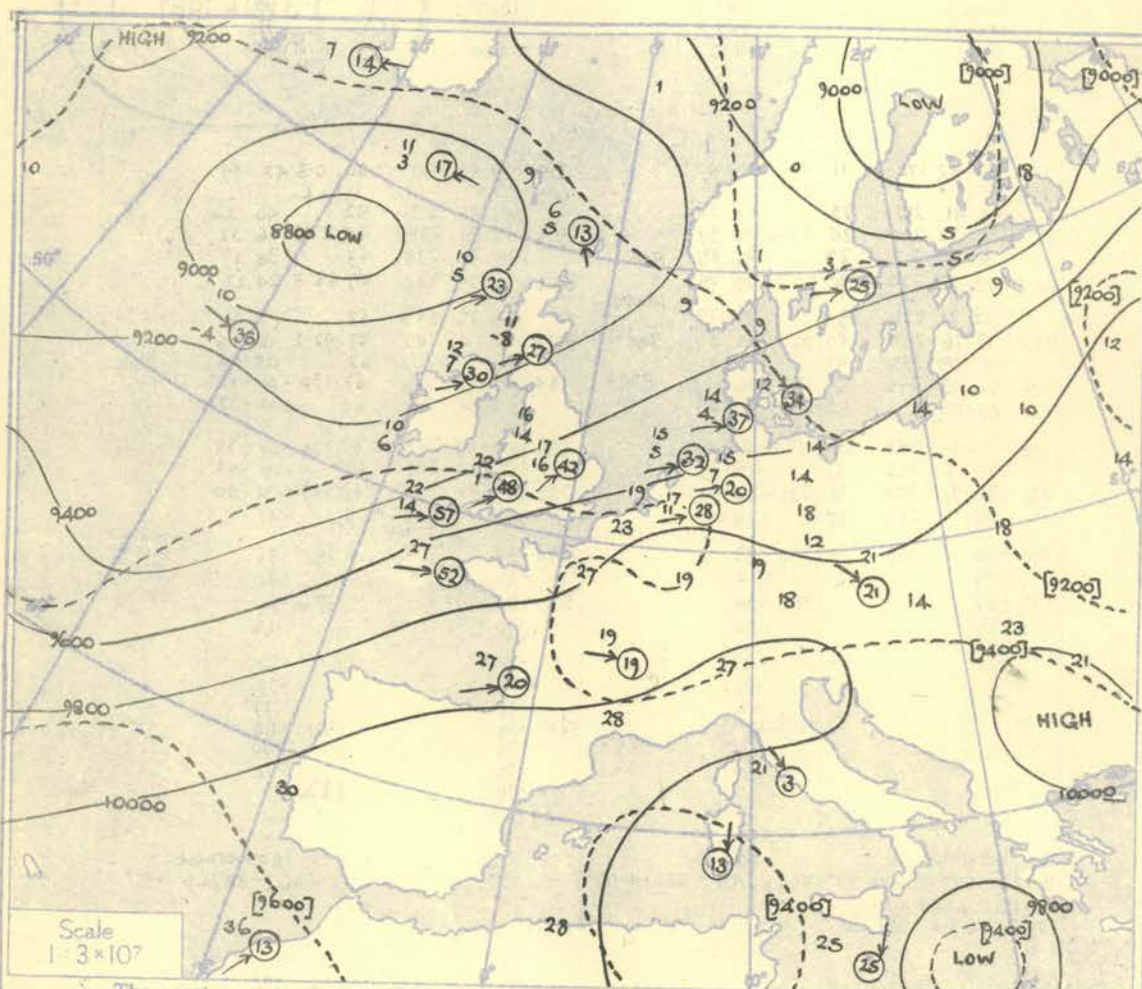


HMSO Press, MO., Dunstable

A circular stamp from the Meteorological Library in Valentia. The text "METEOROLOGICAL" is curved along the top inner edge, and "VALENTIA" is curved along the bottom inner edge. In the center, the word "LIBRARY" is printed above the date "13 JAN 1951". Below the date are the numbers "981", "996", and "876" stacked vertically. The stamp is overlaid on a document with a grid pattern and some handwritten text.

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				STATION										
Pressure	Time	03L			G.M.T.			03L			G.M.T.			03L			G.M.T.			03L			G.M.T.			03L			G.M.T.			03L			G.M.T.								
	M.S.L.	996.0			mb			990.6			mb			996.5			mb			999.9			mb			1006.1			mb			1004.2			mb			1003.2			mb		
	Surf	986.0			mb			988.9			mb			995.6			mb			997.8			mb			1001.7			mb			988.2			mb			992.7			mb		
	Freezing	916			mb			894			mb			887			mb			875			mb			869			mb			830			mb			800			mb		
Pressure	Height	ft./100			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.					
	ft./100	°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.					
Wind	Dir.	Vel.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.					
	°	knots			°			°			°			°			°			°			°			°			°			°			°			°					
Pressure	Height	ft./100			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.					
	ft./100	°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.					
Wind	Dir.	Vel.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.					
	°	knots			°			°			°			°			°			°			°			°			°			°			°			°					
Pressure	Height	ft./100			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.					
	ft./100	°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.					
Wind	Dir.	Vel.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.					
	°	knots			°			°			°			°			°			°			°			°			°			°			°			°					
Pressure	Height	ft./100			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.					
	ft./100	°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.					
Wind	Dir.	Vel.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.					
	°	knots			°			°			°			°			°			°			°			°			°			°			°			°					
Pressure	Height	ft./100			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.					
	ft./100	°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.					
Wind	Dir.	Vel.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.					
	°	knots			°			°			°			°			°			°			°			°			°			°			°			°					
Pressure	Height	ft./100			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.					
	ft./100	°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.					
Wind	Dir.	Vel.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.					
	°	knots			°			°			°			°			°			°			°			°			°			°			°			°					
Pressure	Height	ft./100			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.					
	ft./100	°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.					
Wind	Dir.	Vel.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.					
	°	knots			°			°			°			°			°			°			°			°			°			°			°			°					
Pressure	Height	ft./100			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.					
	ft./100	°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.					
Wind	Dir.	Vel.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.					
	°	knots			°			°			°			°			°			°			°			°			°			°			°			°					
Pressure	Height	ft./100			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.					
	ft./100	°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.					
Wind	Dir.	Vel.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.					
	°	knots			°			°			°			°			°			°			°			°			°			°			°			°					
Pressure	Height	ft./100			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.					
	ft./100	°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.					
Wind	Dir.	Vel.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.					
	°	knots			°			°			°			°			°			°			°			°			°			°			°			°					
Pressure	Height	ft./100			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.					
	ft./100	°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.					
Wind	Dir.	Vel.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.					
	°	knots			°			°			°			°			°			°			°			°			°			°			°			°					
Pressure	Height	ft./100			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.					
	ft./100	°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.					
Wind	Dir.	Vel.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.					
	°	knots			°			°			°			°			°			°			°			°			°			°			°			°					
Pressure	Height	ft./100			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.					
	ft./100	°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.					
Wind	Dir.	Vel.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.					
	°	knots			°			°			°			°			°			°			°			°			°			°			°			°					
Pressure	Height	ft./100			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.					
	ft./100	°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.					
Wind	Dir.	Vel.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.					
	°	knots			°			°			°			°			°			°			°			°			°			°			°			°					
Pressure	Height	ft./100			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.					
	ft./100	°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.					
Wind	Dir.	Vel.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.					
	°	knots			°			°			°			°			°			°			°			°			°			°			°			°					
Pressure	Height	ft./100			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.					
	ft./100	°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.					
Wind	Dir.	Vel.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.					
	°	knots			°			°			°			°			°			°			°			°			°			°			°			°					
Pressure	Height	ft./100			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.					
	ft./100	°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.					
Wind	Dir.	Vel.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.					
	°	knots			°			°			°			°			°			°			°			°			°			°			°			°					
Pressure	Height	ft./100			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.					
	ft./100	°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.					
Wind	Dir.	Vel.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.					
	°	knots			°			°			°			°			°			°			°			°			°			°			°			°					
Pressure	Height	ft./100			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.					
	ft./100	°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.					
Wind	Dir.	Vel.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.					
	°	knots			°			°			°			°			°			°			°			°			°			°			°			°					
Pressure	Height	ft./100			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.					
	ft./100	°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.					
Wind	Dir.	Vel.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.					
	°	knots			°			°			°			°			°			°			°			°			°			°			°			°					
Pressure	Height	ft./100			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.					
	ft./100	°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.			°F.					
Wind	Dir.	Vel.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.			Dir.					
	°	knots			°			°			°			°			°			°			°			°			°			°			°			°					
Pressure	Height	ft./100			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.			Temp.																	

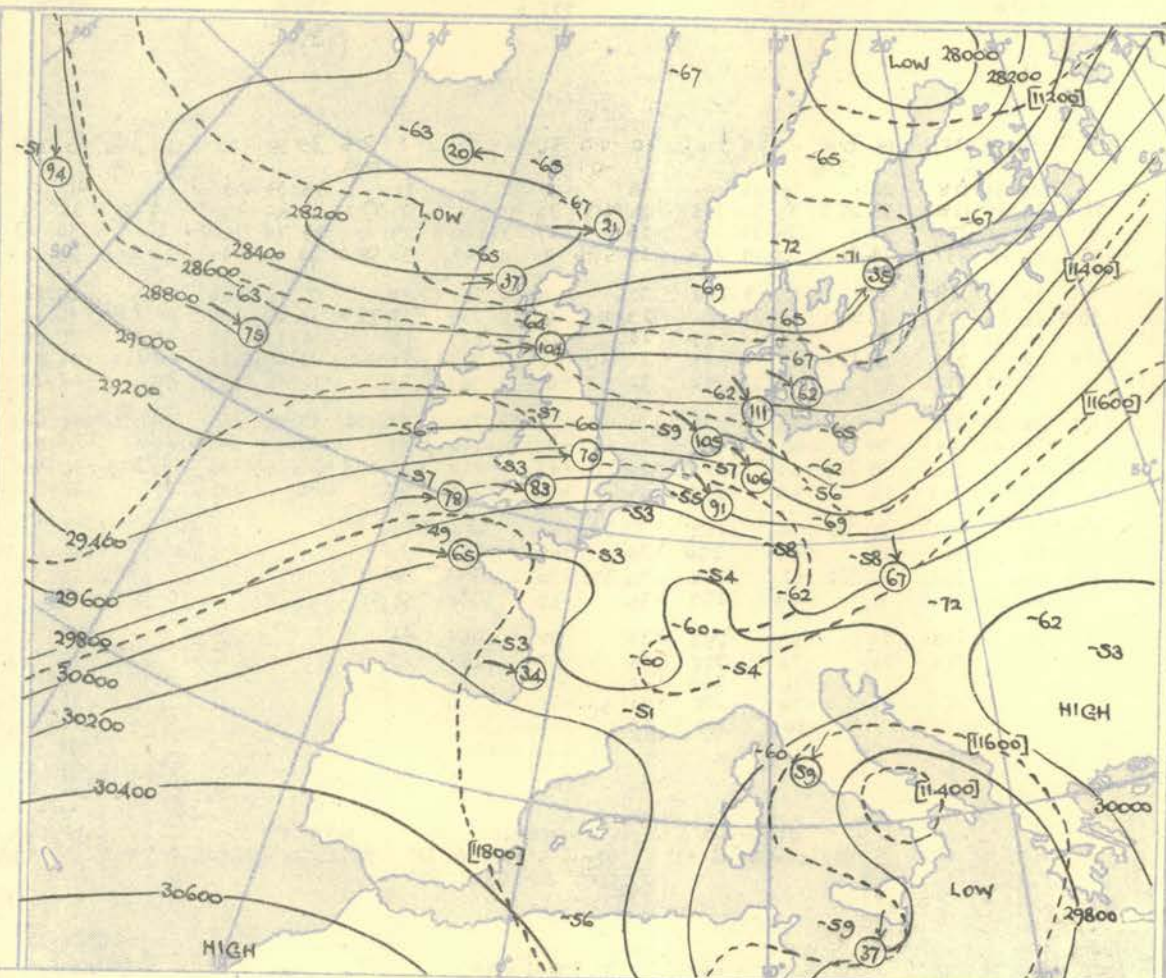
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



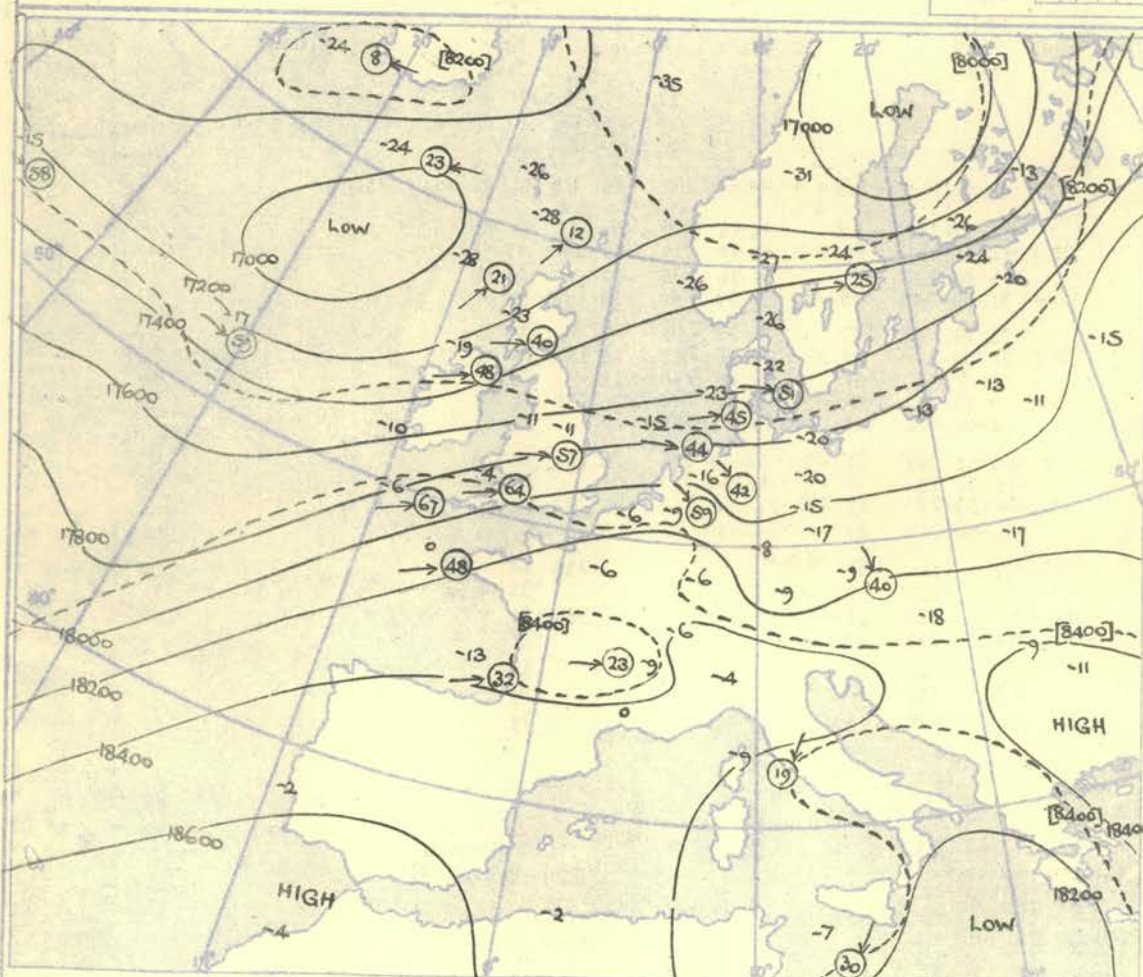
The continuous lines are contour lines of the 700 mb. surface
The dotted lines are isopleths of the thickness of the layer 1000 - 700 mb.

Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

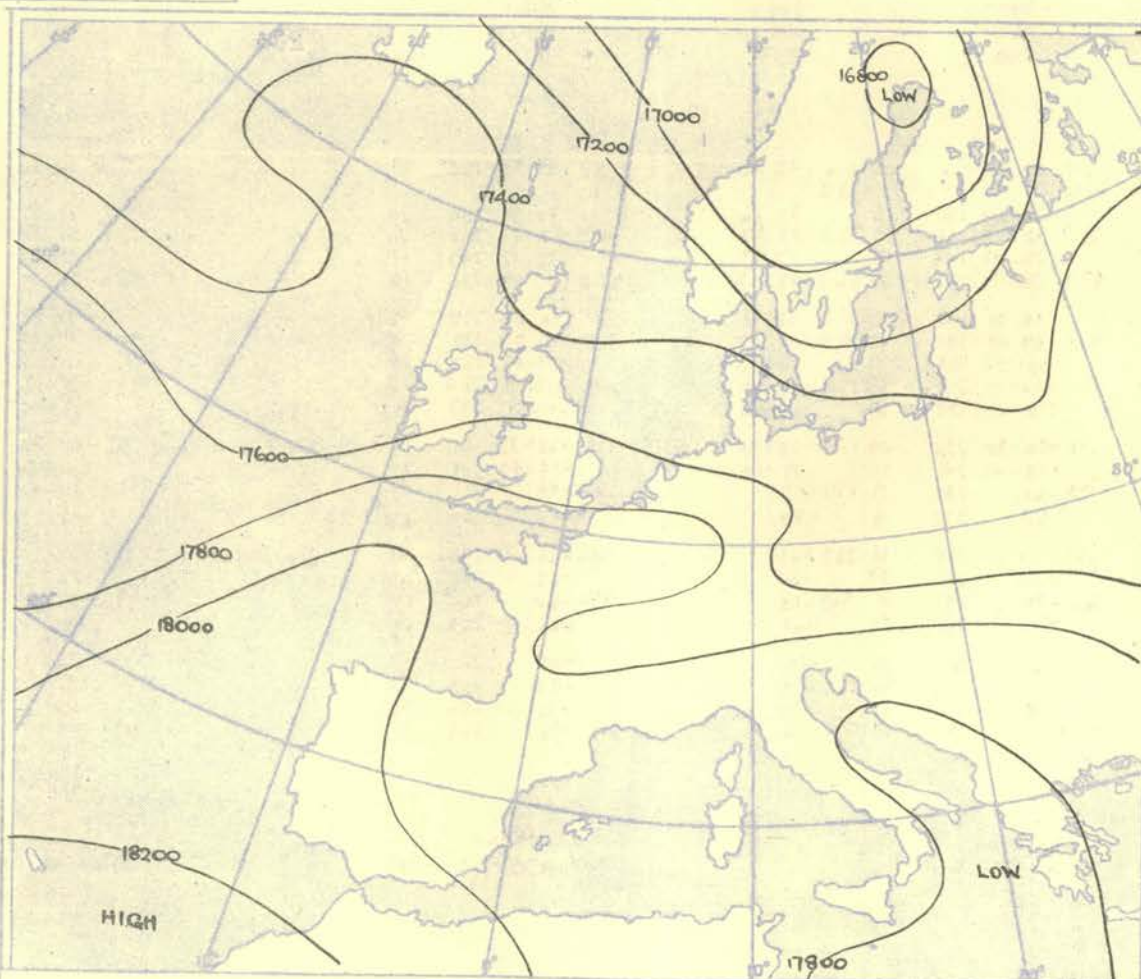
000 20 40 60 80 100 120 140 160 180 200 knots



The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 - 300 mb.



The continuous lines are contour lines of the 500 mb. surface
The dotted lines are isopleths of the thickness of the layer 700 - 500 mb.



Isopleths of Thickness 500 - 1000 mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

[illegible]

DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

Place	Larkhill	Larkhill.	Ronaldsway	Shoebury	Ronaldsway	Dublin.	Heeming	Stornoway	Stornoway	Place											
Time	03L	09L	09L	10L	15L	15L	15L	15L	15L	Time											
Type	Pilar.	Pilar.								Type											
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet				
Surf.	200	20			210	10	200	19	250	12	230	10	170	02	180	15	120	19	170	15	Surf.
1,000	225	27			200	12	220	38	240	22	240	28	260	08	202	18	195	17	224	36	1,000
2,000	232	40			240	14	230	44	250	18	260	31	300	15	205	20	197	16	226	36	2,000
3,000	234	46			250	17	230	42	260	17	260	26	300	19	208	21	202	16	225	33	3,000
4,000	234	46					230	47	250	22	260	25	290	13	212	19	201	14	226	31	4,000
5,000	235	46					240	46			250	19	290	13	216	18	205	15	222	31	5,000
6,000	236	46					250	41	250	27	250	19	280	22	217	18	204	15	220	30	6,000
8,000	243	46					250	47			250	20	250	18	212	19	218	14	219	42	8,000
10,000	246	48					250	53					260	33	213	18	208	17	226	51	10,000
14,000	245	68					240	66					270	40	228	18	213	14	227	57	14,000
18,000	253	64					250	71					(12.000)		216	21	215	16	231	54	18,000
24,000	259	79					250	84							208	21	249	34	242	54	24,000
30,000	264	83	252	87			260	84							242	41	249	57	239	53	30,000
40,000	264	84	255	90			260	78							258	41	259	35	235	61	40,000
50,000	(35.000)		(32.000)				270	54							265	36			279	39	50,000
							(44.000)												247	36	(53.000)

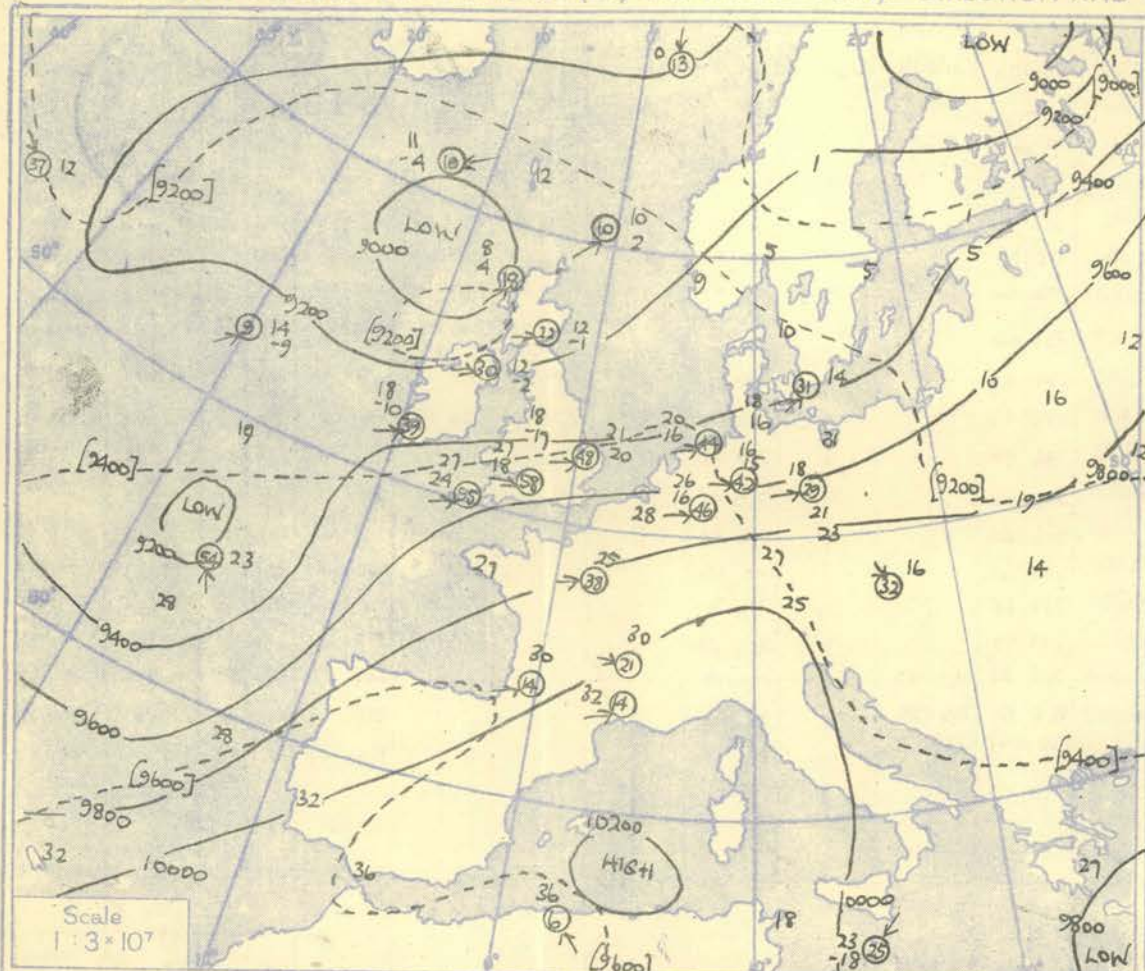
NEPHOSCOPE OBSERVATIONS

[illegible]

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.

[illegible]

HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb. levels at about 15h G.M.T.

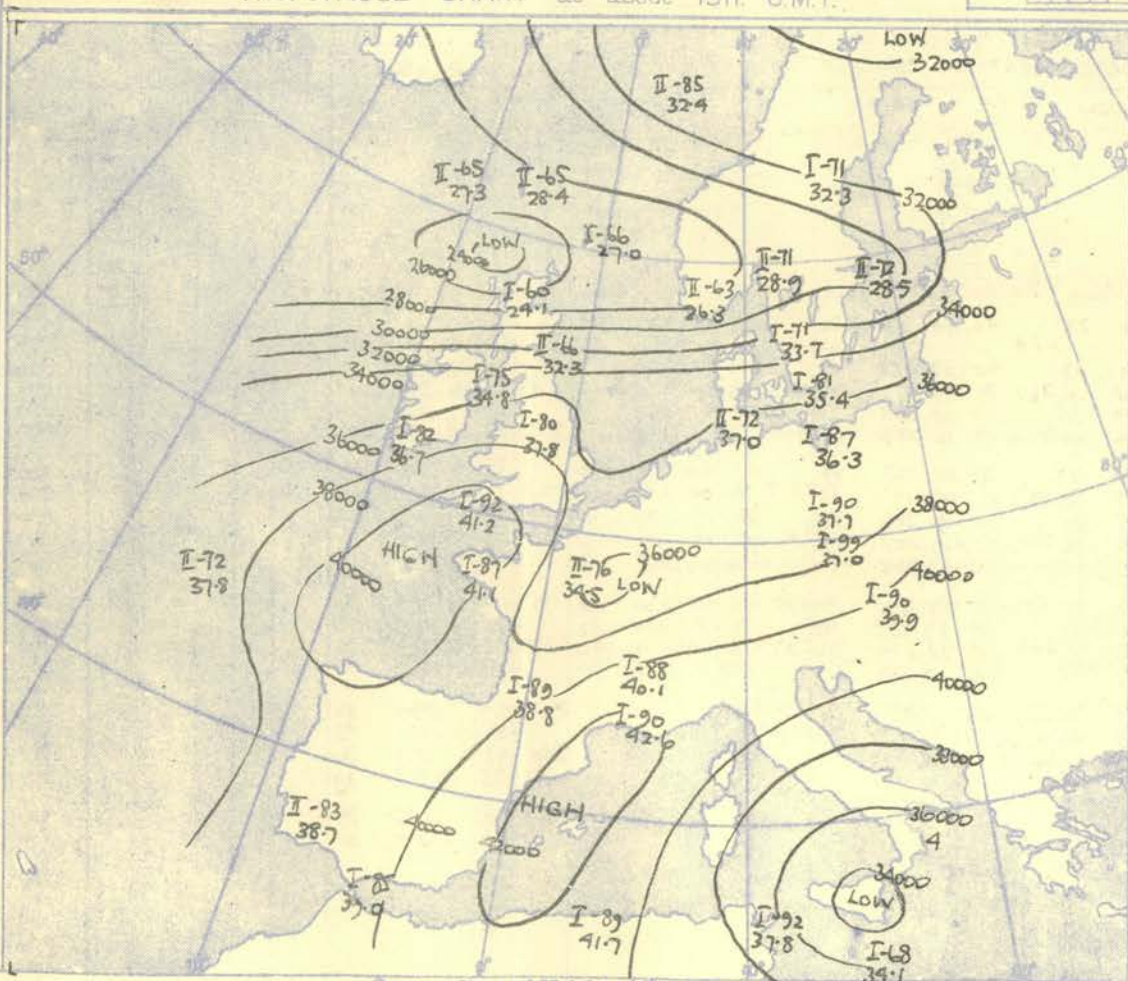


The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

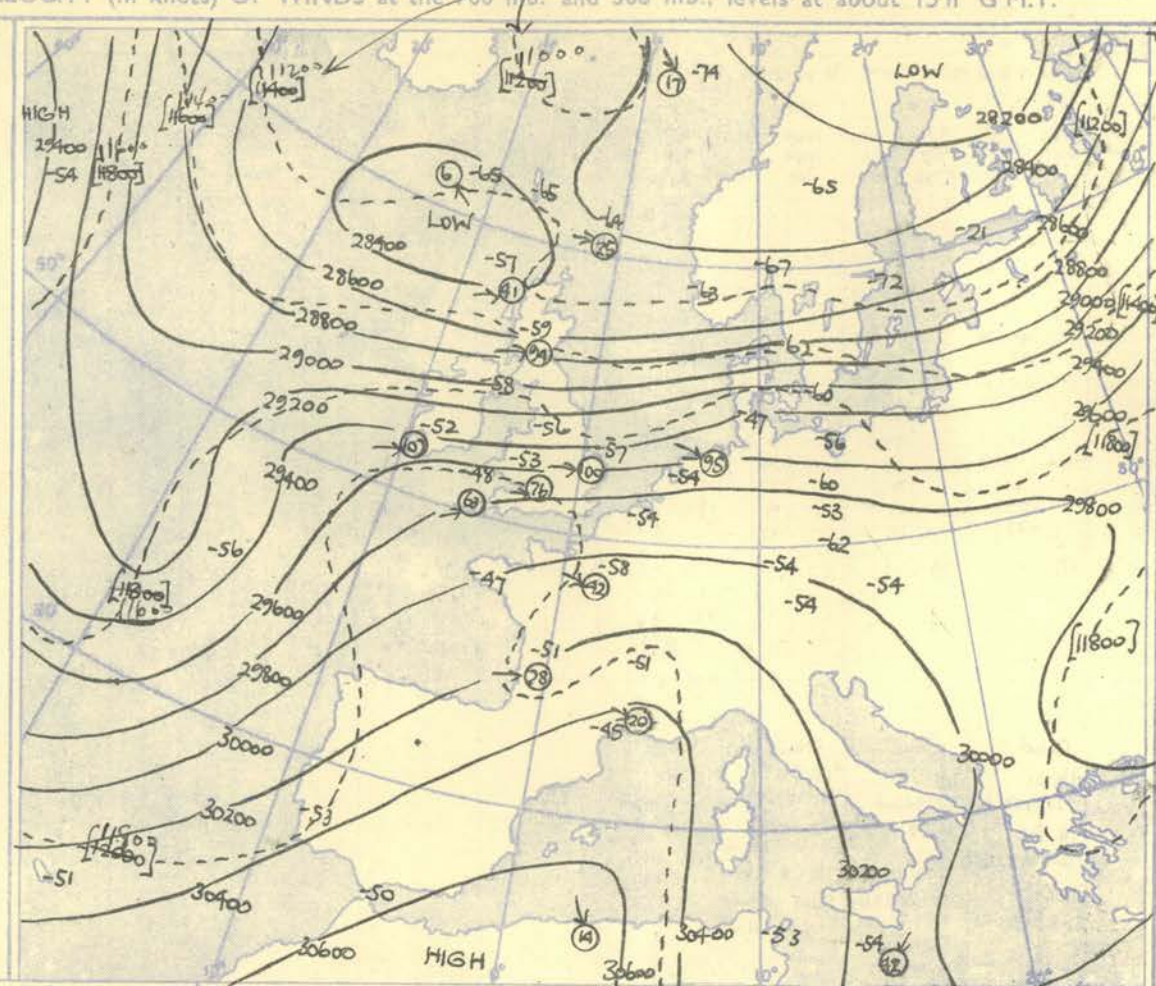
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 20 10 5 knots

TROPOPAUSE CHART at about 15h. G.M.T.



Contour lines of Height of Tropopause.
Temperature of Tropopause.



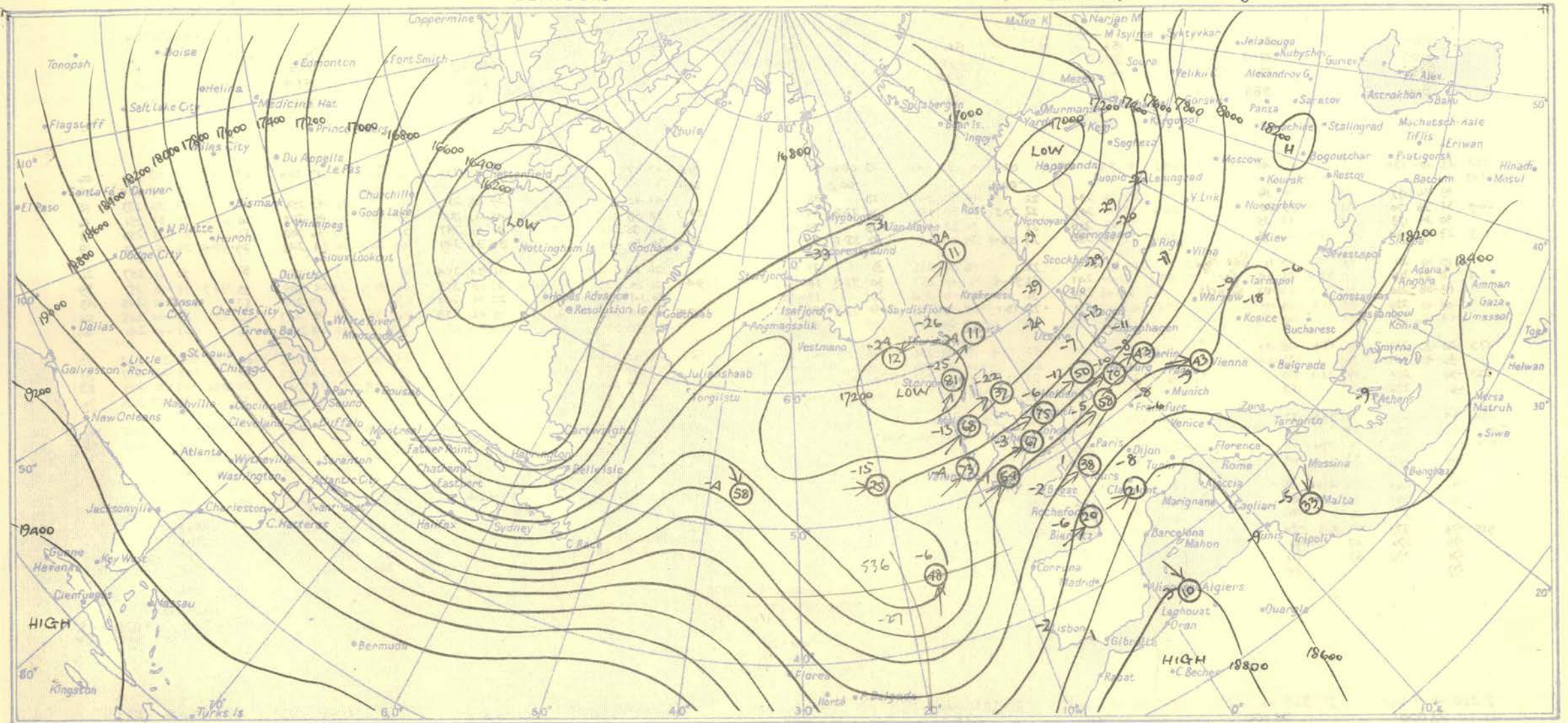
The continuous lines are contour lines of the 300 mb. surface.
The dotted lines are isopleths of the thickness of the layer 500-300 mb.

NOTES ON THE AEROLOGICAL SITUATION.

A warm ridge moved from off Southwest England to North Germany whilst a cold upper trough extending northwards from near the Azores remained almost stationary. A strong thermal gradient developed across England north of a quasi-stationary surface front. In the Western Atlantic a strong thermal pattern was distorted considerably by the circulation of a deep depression moving to the northeast of Newfoundland.

RATES of SUBSCRIPTION: Single copy 2d. or post free 3d. One calendar month 7/- One quarter 18/- One year 70/-
For special arrangements for supply to schools and colleges, see Form 2452.

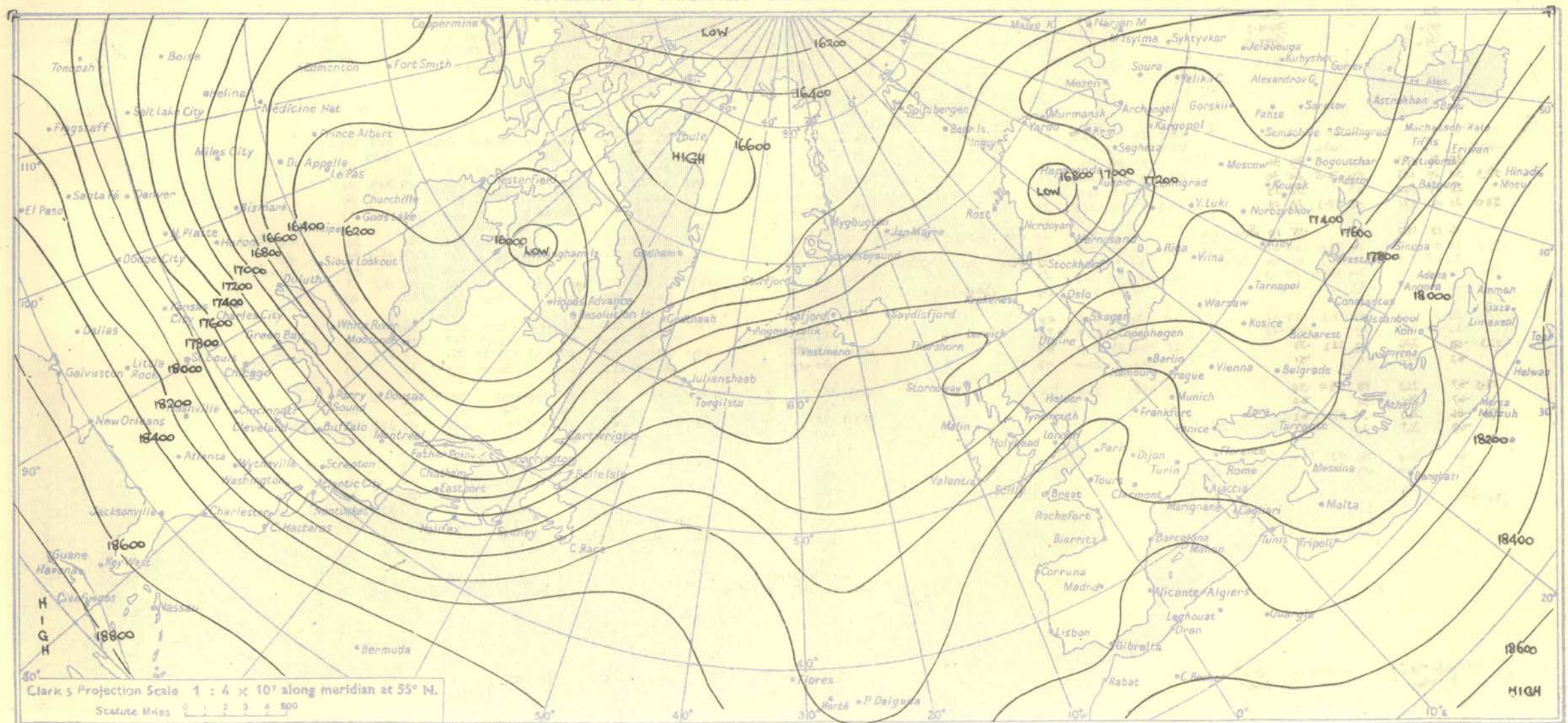
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T.

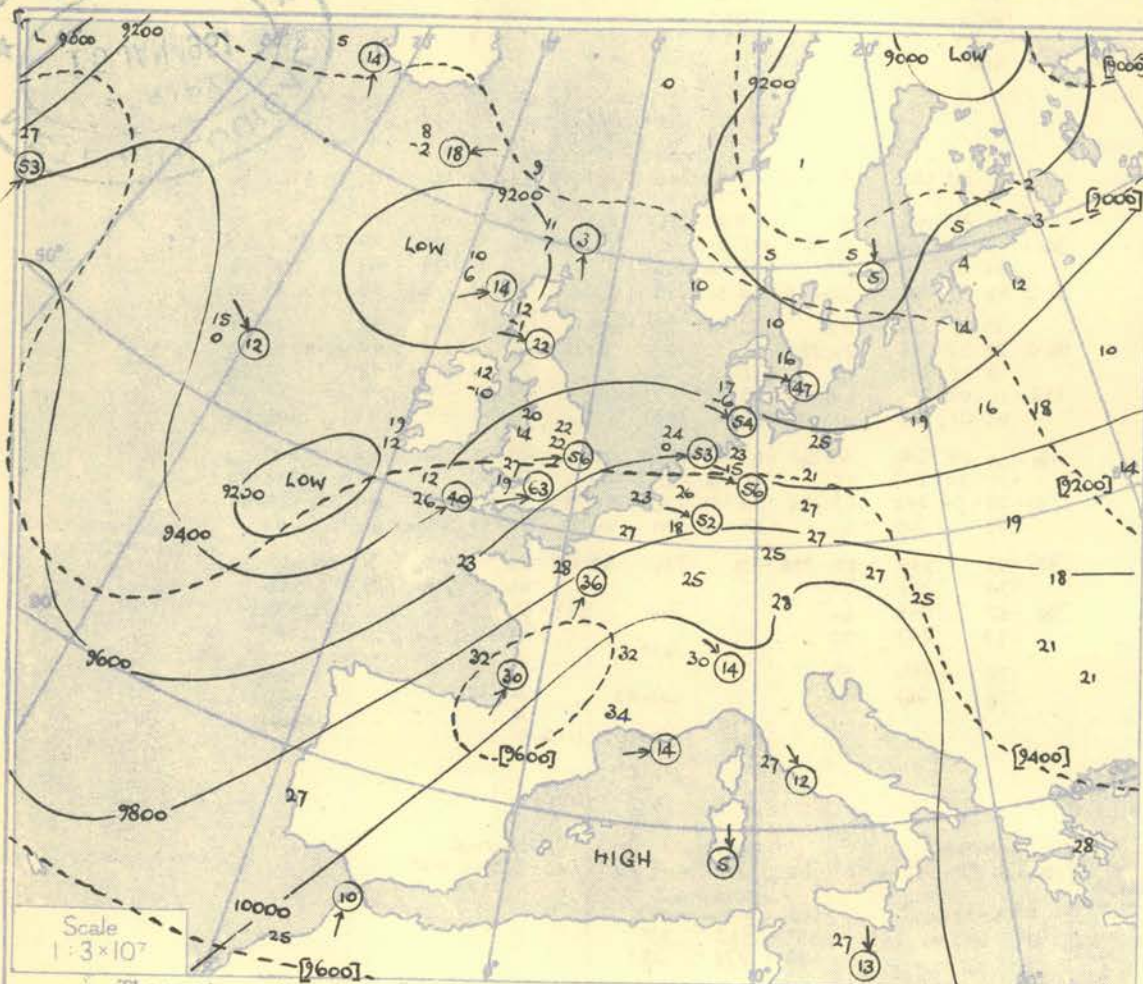
Friday 5th January,

1951.



RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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Pressure	Time M.S.L.	Surf	Preexisting	Pressure	03L		G.M.T.		mb	03L		G.M.T.		mb	03L		G.M.T.		mb	03L		G.M.T.		mb	03L		G.M.T.		mb	03L		G.M.T.		mb	03L		G.M.T.		mb																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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850		29	26	135	06	28	24	217	20		27	23	252	21		28	20			31	21			34	31	240	17		37	36	235	51		41	40	213	47		28	43																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
800	58.7	24	21	141	06	57.5	23	19	220	15	59.1	24	18	252	21	59.2	25	10	59.9	25	15		61.2	32	32	236	28	61.0	33	30	233	58	60.4	37	36	218	38	58.5	25	20																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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550		-12	-19	208	07	-14	-19	238	21		-10	-33	258	51		-09	-18		05	00			05	01	250	62		06	02	232	50		07	01	215	58		03	-04																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
500	174	-22	-29	210	07	173	-24	-30	240	24	175	-15	-39	258	53	175	-13	-19	178	-02	-07		181	-04	-08	249	59	180	-02	-07	234	50	180	-02	-18	216	58	177	-07	-14																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
450		-34	-41	208	07	-36	-49	242	34		-23	-41	255	69		-23	-27			-12	-18			-15	-20	247	55		-12	-18	239	50		-13	-39	211	61		-19	-30																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
400	225	-44		230	07	224	-38	-53	250	60	227	-30	-44	251	102	227	-36	-47	232	-24	-31		233	-28	-34	245	57	234	-24	-31	238	44	234	-22	-35	215	66	229	-29	-41																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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300	287	-57		252	36	287	-58		245	90	291	-58		250	99	290	-65		296	-55			297	-58		249	62	298	-49		236	58	299	-52		215	71	293	-57		306																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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200	373	-64		263	39	373	-64		257	40	375	-73		261	63	371	-96		380	-84			381	-87		248	66				For	383	-82				378	-70		200																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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150		-64		268	37	-66		266	33		-69					-87				-81				-78		246	47				winds	-77					-69		150																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
130		-68		271	35	-70		266	34		-73					-85				-78				-74		245	44					-74					-69		130																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
110		-69		272	38	-69		265	36		-75					-84				-74				-71							See	-72					-69		110																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
100	518	-71		274	37	518	-71		266	39					509	-84			521	-71				-70							(20mb)						-69		100																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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HEIGHTS IN FEET TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03h G.M.T.



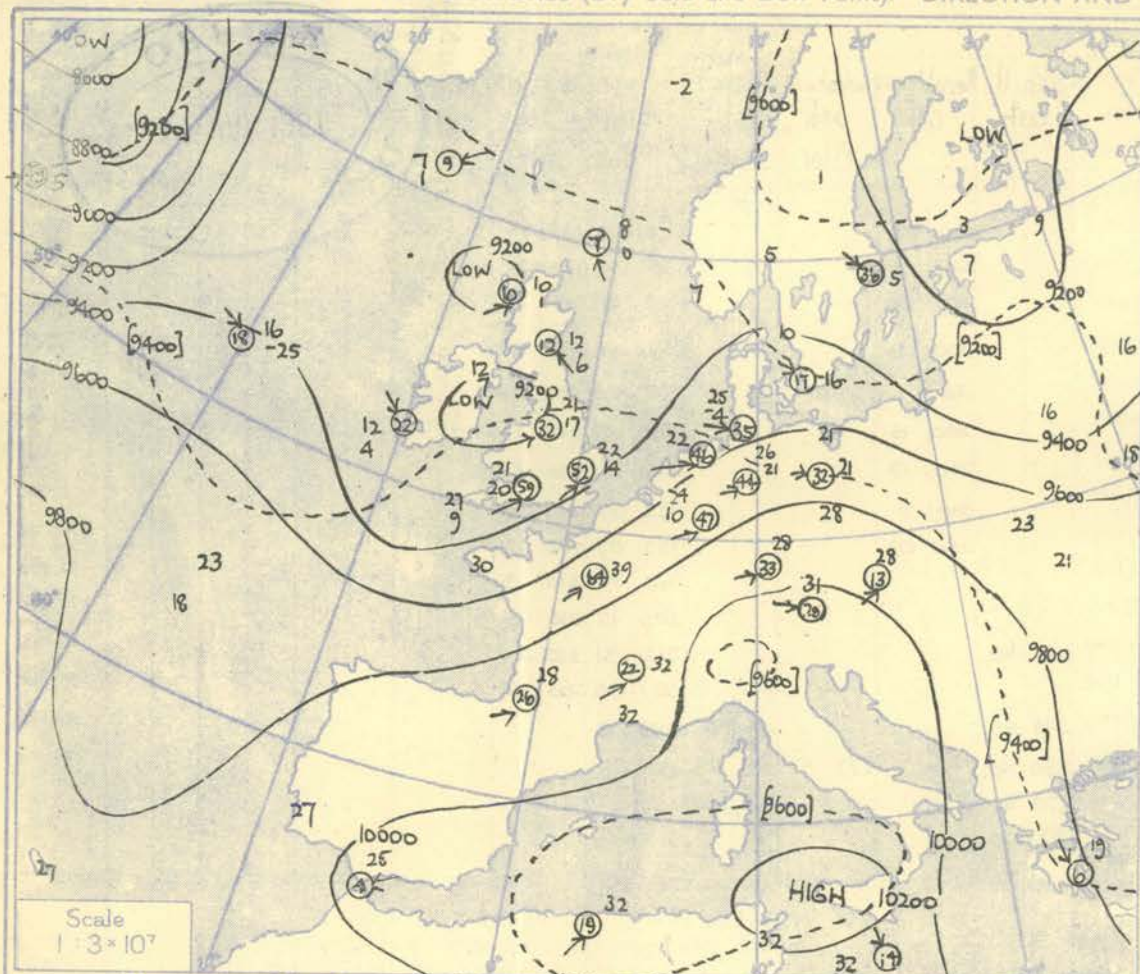
AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY															DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS (heights above M.S.L.)														
43-2N 17-0W			39-5N 12-2W			53-IN 01-3E																							
Time 12h			Time 14h			Time 130h																							
M.S.L. 1010 mb			M.S.L. 1011 mb			M.S.L. 997 mb																							
Surf 1007 mb			Surf 1003 mb			Surf 995 mb																							
Freezing 810			Freezing 760			Freezing 796																							
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots
Surf		54	52			Surf		58	55	0-5	45	43						Surf		58	55	0-5	45	43					
1000	2-9	53	52	3-0	57	1000	2-9	53	52	3-0	57	1000	2-9	53	52	3-0	57	1000	2-9	53	52	3-0	57	1000	2-9	53	52	3-0	57
950		46	46			950		46	46			950		46	46			950		46	46			950		46	46		
900		42	42			900		42	42			900		42	42			900		42	42			900		42	42		
850		36	36			850		36	36			850		36	36			850		36	36			850		36	36		
800		31	31			800		31	31			800		31	31			800		31	31			800		31	31		
750		24				750		24				750		24				750		24				750		24			
700	27-2	18		28-0	26	700	27-2	18		28-0	26	700	27-2	18		28-0	26	700	27-2	18		28-0	26	700	27-2	18		28-0	26
650		15				650		15				650		15				650		15				650		15			
600		06				600		06				600		06				600		06				600		06			
550		-01				550		-01				550		-01				550		-01				550		-01			
500	81	-09		182	-05	500	81	-09		182	-05	500	81	-09		182	-05	500	81	-09		182	-05	500	81	-09		182	-05
450						450						450						450						450					
400						400						400						400						400					
350						350						350						350						350					
300						300						300						300						300					
250						250						250						250						250					
200						200						200						200						200					
170						170						170						170						170					
Cloud 8 St. 800-830mb S. Wind. S. (11-16kts) Cloud 6 St. 510-approx 400-803mb S. Wind. Calm Isothermal 850-800mb 37° Cloud 4 St. 800-803mb S. Wind. Calm Isothermal 45																													

NEPHOSCOPE OBSERVATIONS

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.

Ship	WEATHER EXPLORER				WEATHER EXPLORER				WEATHER EXPLORER				WEATHER EXPLORER				WEATHER RECORDER				WEATHER RECORDER				WEATHER RECORDER				WEATHER RECORDER				Ship						
Lat/Long	61-0N		14-2W		61-0N		14-0W		61-0N		14-0W		61-1N		14-3W		52-4 N		20-6 W		52-4 N		20-6 W		52-2N		20-4W		52-5 N		20-0W		Lat/Long						
Pressure (Freezing)	Time	03L	G.M.T.		09h	G.M.T.		15h	G.M.T.		21h	G.M.T.		03h	G.M.T.		09h	G.M.T.		15h	G.M.T.		21h	G.M.T.		09h	G.M.T.		15h	G.M.T.		21h	G.M.T.						
	M.S.L.	998	mb		1001	mb		1003	mb		1002	mb		1002	mb		1003	mb		1005	mb		1002	mb		1005	mb		1002	mb		1002	mb						
	Surf	998	mb		1001	mb		1003	mb		1002	mb		1002	mb		1003	mb		1005	mb		1002	mb		1005	mb		1002	mb		1002	mb						
	Freezing	900	mb		900	mb		900	mb		905	mb		880	mb		880	mb		895	mb		890	mb		895	mb		890	mb		890	mb						
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb						
Surf		45	29	040	23		45	34	045	21		41	37	015	12		43	36	038	24		47	44	350	16		46	46	320	10		47	43	CALM	Surf				
1000	-5	39	34	039	30	02	45	34	045	21	07	41	37	015	12	06	43	36	038	24	06	47	44	350	16	9	46	46	325	09	1-2	46	42	1000					
950		37	34	039	30		38	31	064	20		37	33	058	24		37	32	069	30		41	38	014	07		40	38	338	08		40	34	950					
900	27-6	32	27	060	29	28-3	32	27	061	20	28-7	32	28	068	21	28-6	31	26	074	29	28-8	35	32	004	07	29-1	34	31	338	08	29-4	33	25	900					
850		27	22	067	27		27	22	058	22		26	22	074	22		26	21	079	25		30	26	355	08		29	25	339	08		27	13	850					
800	58-2	22	17	073	24	58-9	23	13	056	21	59-3	20	15	080	21	59-2	20	15	077	25	59-7	26	16	344	09	59-9	24	19	336	08	60-0	24	07	800					
750		15	09	070	18		19	01	050	23		14	09	071	15		14	08	087	22		20	06	334	10		19	09	319	11		21	-04	750					
700	92-1	08	02	065	18	92-9	11	-08	038	20	93-0	07	01	063	09	92-9	06	-04	101	15	93-9	15	00	315	12		13	-04	309	15	94-2	16	-25	700					
650		00	12	064	18		03	-15	034	17		-02	09	068	11		-03	-12	093	06		06	-13	300	15		10	-33	295	23		10	-33	650					
600	130	-06	23	065	18	131	-06	-23	033	11	131	-10	-17	068	12	131	-11	-20	080	03	132	-02	-25	298	18	132	-04	-26	286	19	133	07	-38	600					
550		-17	39	063	11		-15	-30	031	15		-16	-26	059	09		-19	-29	170	08		-10	-24	302	22		-09	-32	294	25		03	-32	550					
500		173	-28	034	09	174	-25	-39	028	16	174	-25	-39	009	12	173	-24	-41	141	06	176	-18	-31	305	30	176	-14	-37	314	55	178	-06	500						
450		-40	-57	355	12		-36	-60	021	13		-34	-50	004	18		-30	-49	045	18		-29	-42	310	33		-15	-39	318	90		-16	-31	450					
400	223	-52		356	17	225	-44		020	15	224	-42		030	18	225	-41		027	11	227	-40	-53	321	37	229	-29	-51	330	95	231	-27	-38	400					
350		-59		013	18		-51		032	21		-51		028	20		-51		012	08		-49		329	42		-40	-60	345	87		-40	-52	350					
300	285	-64		028	14	287	-50		043	25	287	-63		022	15	287	-65		349	12	290	-52		329	54	293	-58		359	84	295	-57		312	300	300			
250		-66		350	11		-65		007	18		-75		346	19		-65		330	12		-58		329	55		-67		343	67		-74		310	54	250			
200	370	-65		293	16	373	-60		317	14	371	-66		310	25	372	-63		305	23	377	-59		327	44	378	-66		331	58	379	-64		298	62	200			
170		-67		286	24		-61		290	20		-66		300	33		-61		299	32		-63		311	42		-60		320	51		-63		290	50	170			
150		-66		287	35		-62		284	31		-66		291	41		-60		299	46		-66		308	42		-62		310	51		-62		288	38	150			
130		-66		285	40		-64		291	42		-66		295	37		-63		298	39		-69		309	41		-66		307	48		-66		297	40	130			
110		-70		275	39		-66		288	41		-69		304	32		-66		295	36		-68		309	44		-61		312	39		-70		300	34	110			
100	515	-73		271	40	520	-67				517	-69		298	38	519	-69		295	50	623	-73		306	35	524	-71		320	40	525	-77		300	29	100			
90		-74		270	49							-72		294	42		-65		309	63		-73		300	30		-71		322	37		-74		296	22	90			
80		-77										-73		286	58	085	-74					-74		292	33		-70		302	36		-74		299	26	80			
70												-72		281	50	mb						-74		288	35		-73		283	39		-75		299	28	70			
60												-75		298	36							-74		293	42		-77		293	42		-74		296	17	60			
				Inversion 804mb 22° 780mb 23°				Isothermal 1003-1000mb 41° 563-560 .. -16°				Isothermal 1002-1000mb 43° 494-481 .. -25°				(063 mb)				Inversion 505mb -15° 459mb -11°				Isothermal 864-823 mb 27° 630-574 .. 07° 255-250 .. -74°				Inversion 692mb 14°-662mb 18° Isothermal 1002-1000mb 48° 700-692 .. 14°											
Tropopause				II 313mb -63° 27,500'				II 260mb -66° 31,800'				II 250mb -75° 32,600'				I 275mb -69° 30,600'				I 314mb -54° 28,000'				I 255mb -69° 32,700'				I 227mb -77° 35,300'				I 244mb -73° 33,900'				Tropopause			

HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h. G.M.T.

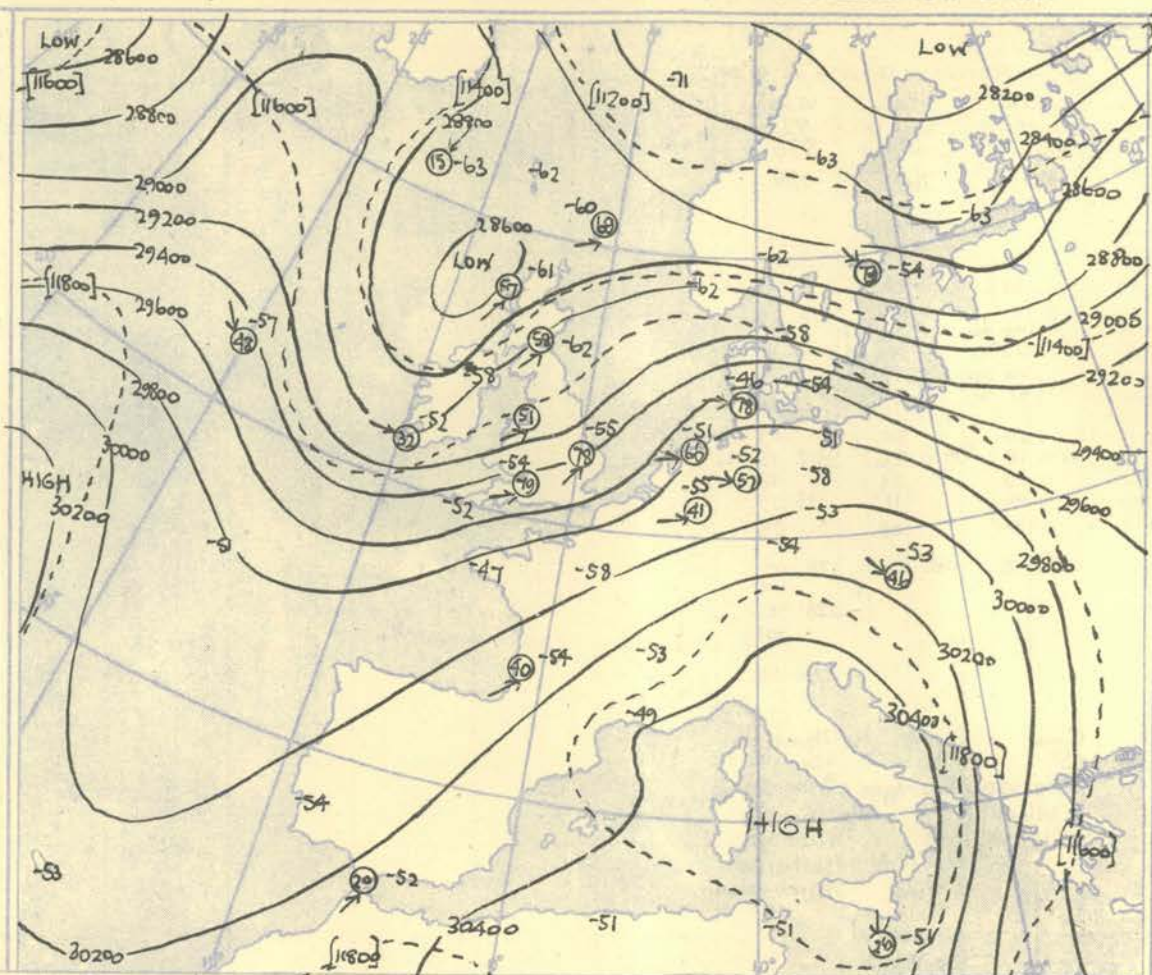


The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb

TROPOPAUSE CHART at about 15 h. G.M.T.

Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. $52\frac{1}{2}^\circ$ N.

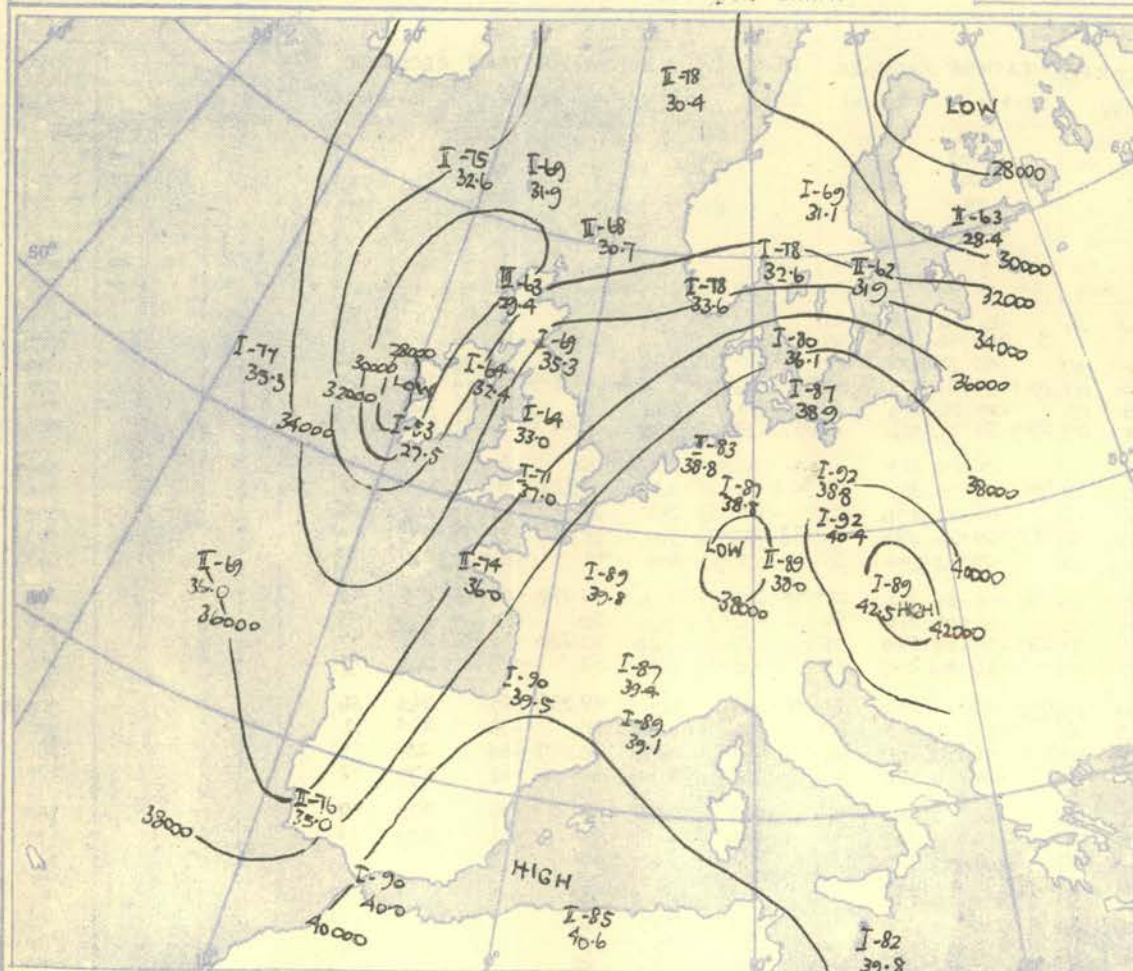
100 80 60 40 20 10 0 knots



The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500-300 mb.

NOTES ON THE AEROLOGICAL SITUATION.

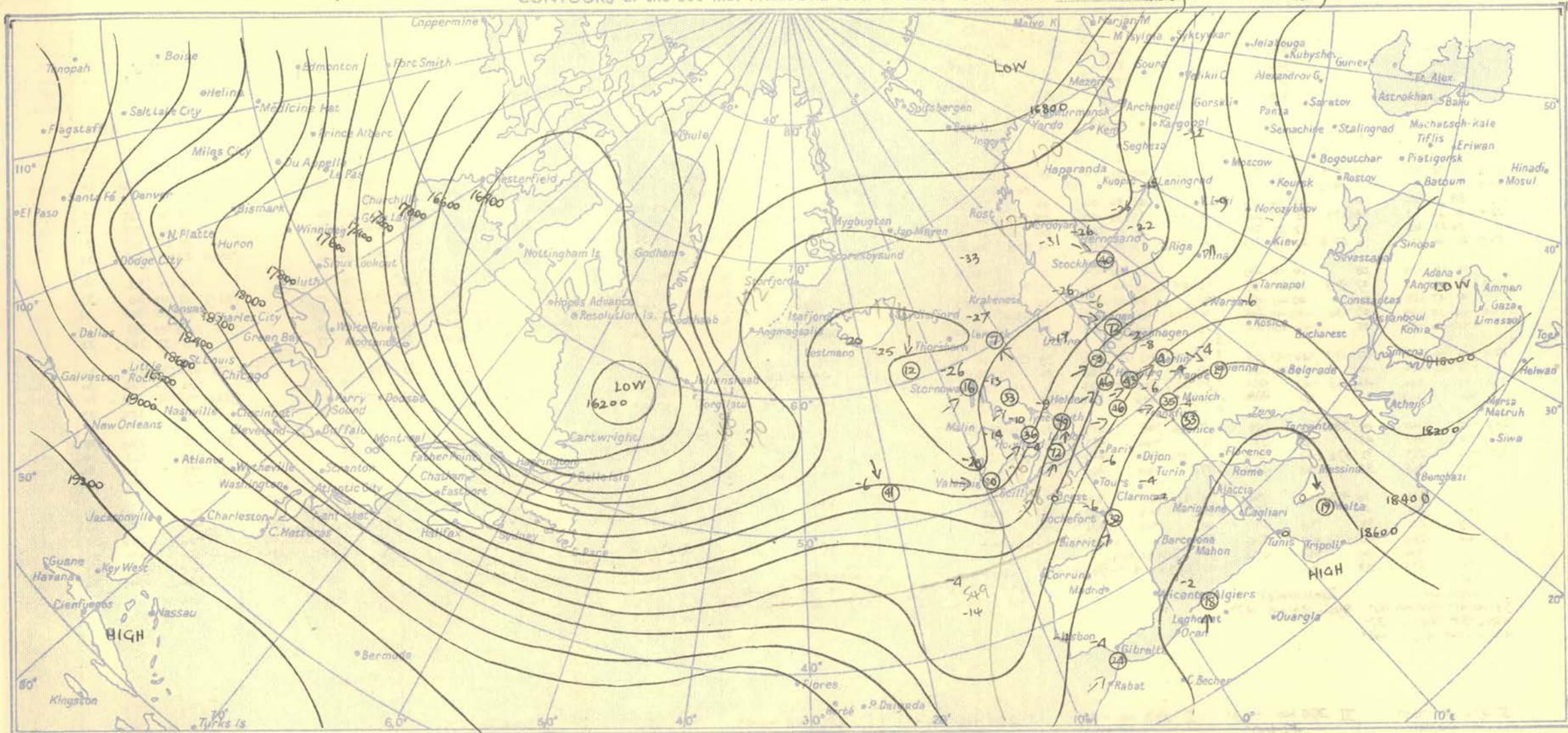
Steady eastward movement of the strong Atlantic thermal wedge and the trough off Ireland.



Contour lines of Height of Tropopause.
Temperature of Tropopause.

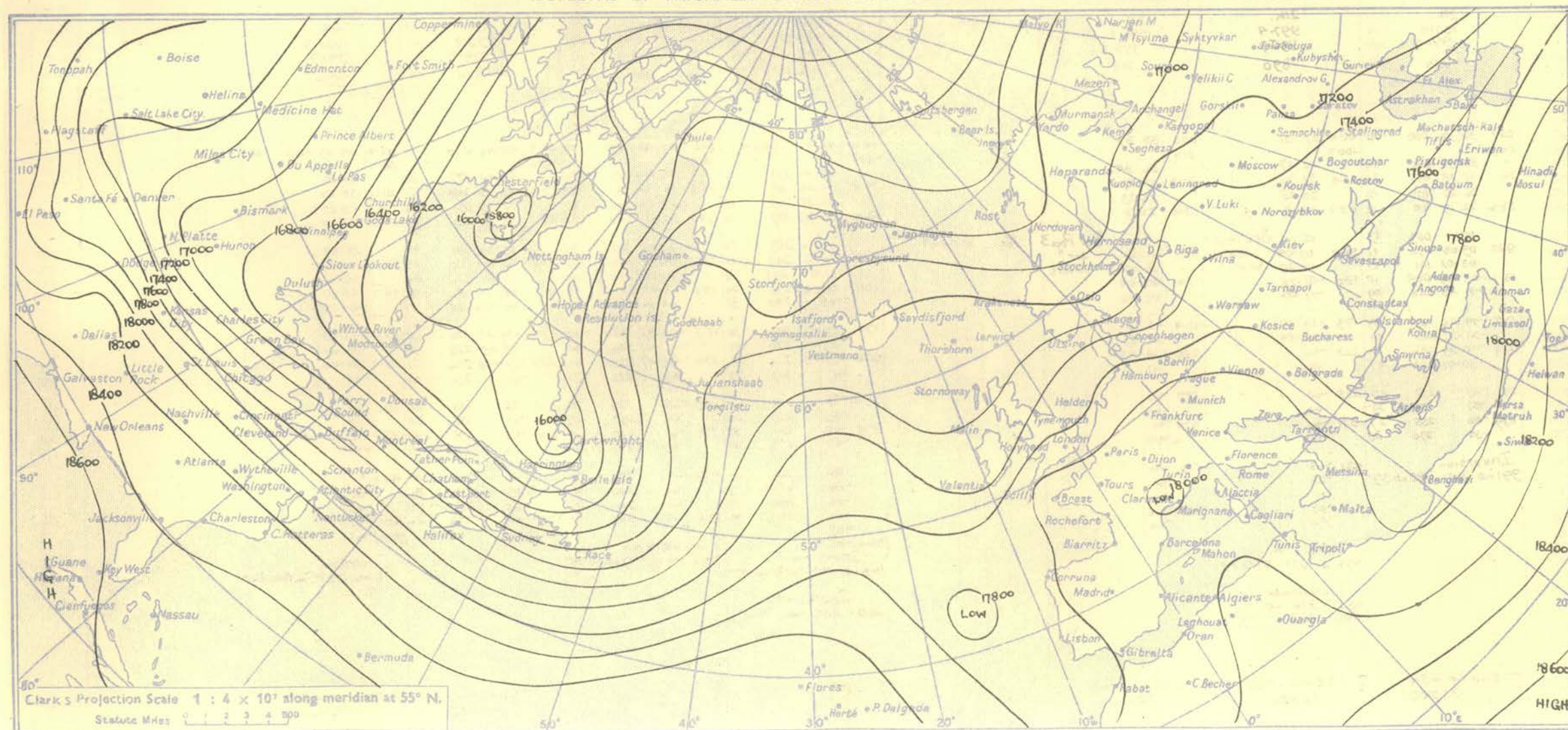
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Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T.

Saturday 6th January, 1951.



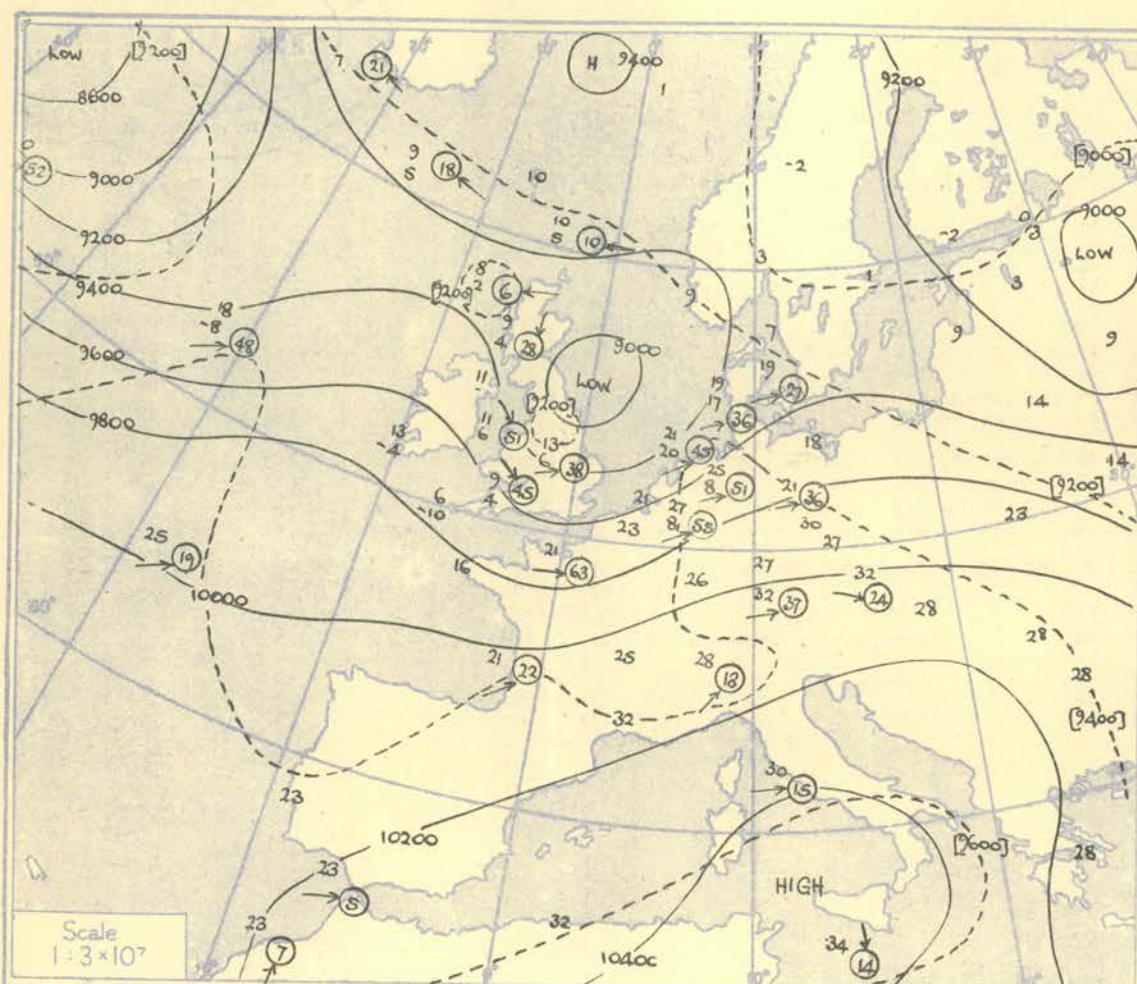
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION						
Pressure mb	Time M.S.L.	15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		Time M.S.L.										
		Surf	Freezing	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	Surf										
		991.7	991.6	905		996.3	994.8	888		998.0	997.1	889		995.9	987.2	886.0		990.9	988.8	801		998.2	993.9	820		995.7	979.8	809		992.5	982.1	750		998	860	Surf								
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb							
Surf	02.7	41	38	120	06	40.4	43	41	190	03	00.2	40	39	110	03	02.6	38	38	00.6	43	43	130	10	01.2	47	45	170	14	04.4	47	46	200	18	02.9	50	49	247	30	00.3	47	41	320	08	Surf
1000	00.4				00.4				00.6					00.9				00.9				00.9				00.9				00.9				00.9				00.9				1000		
950	39	31	116	16	39	36	196	09	37	36	102	09	36	35		44	44	172	21	43	42	183	26	44	44	191	25	44	44	206	48	26.6	43	39	42	38	325	21	950					
900	28.4	31	26	113	16	27.1	33	32	201	09	27.5	33	32	104	08	27.1	34	33	25.9	44	40	210	27	27.9	40	39	190	41	27.2	39	39	206	48	26.6	43	39	28.1	36	32	325	21	900		
850	26	22	113	15	28	27	209	09	28	25	104	09	28	27		36	35	216	26	36	35	196	42	36	36	218	53	36	36	218	53	26.6	43	39	30	25	325	21	850					
800	58.9	20	16	120	11	57.8	22	19	213	09	59.1	23	19	097	11	57.8	22	21	57.1	32	29	233	24	59.1	30	29	201	41	58.4	31	31	226	53	58.1	36	26	59.0	24	18	320	22	800		
750	16	06	133	08	16	10	209	10	17	09	079	12	15	13		27	24	228	29	28	23	205	45	28	26	225	58	26	26	225	58	26	26	225	58	26	26	225	58	750				
700	92.7	08	00	135	07	91.7	10	01	199	10	09.2	13	06	101	12	91.7	12	07	91.7	21	17	225	32	93.8	22	14	202	52	93.1	21	20	222	59	93.2	27	09	92.9	12	04	310	22	700		
650	01	07	128	09	02	11	195	09	06	03	103	12	07	03		15	10	221	31	15	04	198	57	15	04	198	57	16	13	225	64	16	13	225	64	16	13	225	64	650				
600	13.0	06	120	124	07	13.0	07	19	205	10	13.1	02	04	215	18	13.0	02	03	13.1	08	02	214	31	13.3	07	03	194	60	13.2	10	03	225	67	13.3	15	06	131	03	19	297	24	600		
550	15	30	138	05	16	28	211	12	04	10	214	23	05	10		01	08	216	31	01	08	216	31	01	08	216	31	04	15	228	72	05	12	05	12	05	12	05	12	550				
500	17.4	27	39	166	07	17.3	26	43	225	16	17.5	13	20	222	33	17.4	14	20	17.5	10	19	226	36	17.7	09	18	197	79	17.7	04	25	227	74	17.8	05	19	17.5	20	34	271	30	500		
450	38	52	236	10	38	52	236	10	38	52	236	10	38	52	236	10	38	52	236	10	38	52	236	10	38	52	236	10	38	52	236	10	38	52	236	10	38	52	236	10	450			
400	22.4	42	245	46	22.4	42	245	46	22.4	42	245	46	22.4	42	245	46	22.4	42	245	46	22.4	42	245	46	22.4	42	245	46	22.4	42	245	46	22.4	42	245	46	22.4	42	245	46	400			
350	50		245	63	51		245	63	51		245	63	51		245	63	51	45		245	63	51		45		245	63	51		45		245	63	51		45		245	63	350				
300	287	00	260	69	286	01	219	57	291	02	219	57	291	02	219	57	291	02	219	57	291	02	219	57	291	02	219	57	291	02	219	57	291	02	219	57	291	02	219	57	300			
250	372	06	257	32	372	06	257	32	372	06	257	32	372	06	257	32	372	06	257	32	372	06	257	32	372	06	257	32	372	06	257	32	372	06	257	32	372	06	257	32	250			
200	65		265	33	65		265	33	65		265	33	65		265	33	65	65		265	33	65		65		265	33	65		65		265	33	65		65		265	33	200				
170																																									170			
150	67		273	30	433	64	268	29	436	63	263	27	61		61		64		257	36	61		64		257	36	61		64		257	36	61		64		257	36	150					
130	67		272	29	63		284	36	63		275	33	62		62		64		260	31	64		64		260	31	64		64		260	31	64		64		260	31	130					
110	69		280	38	63		281	34	65		275	34	65		65		64		260	31																								

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				STATION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Pressure Time M.S.L. Surf Freezing	03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.	

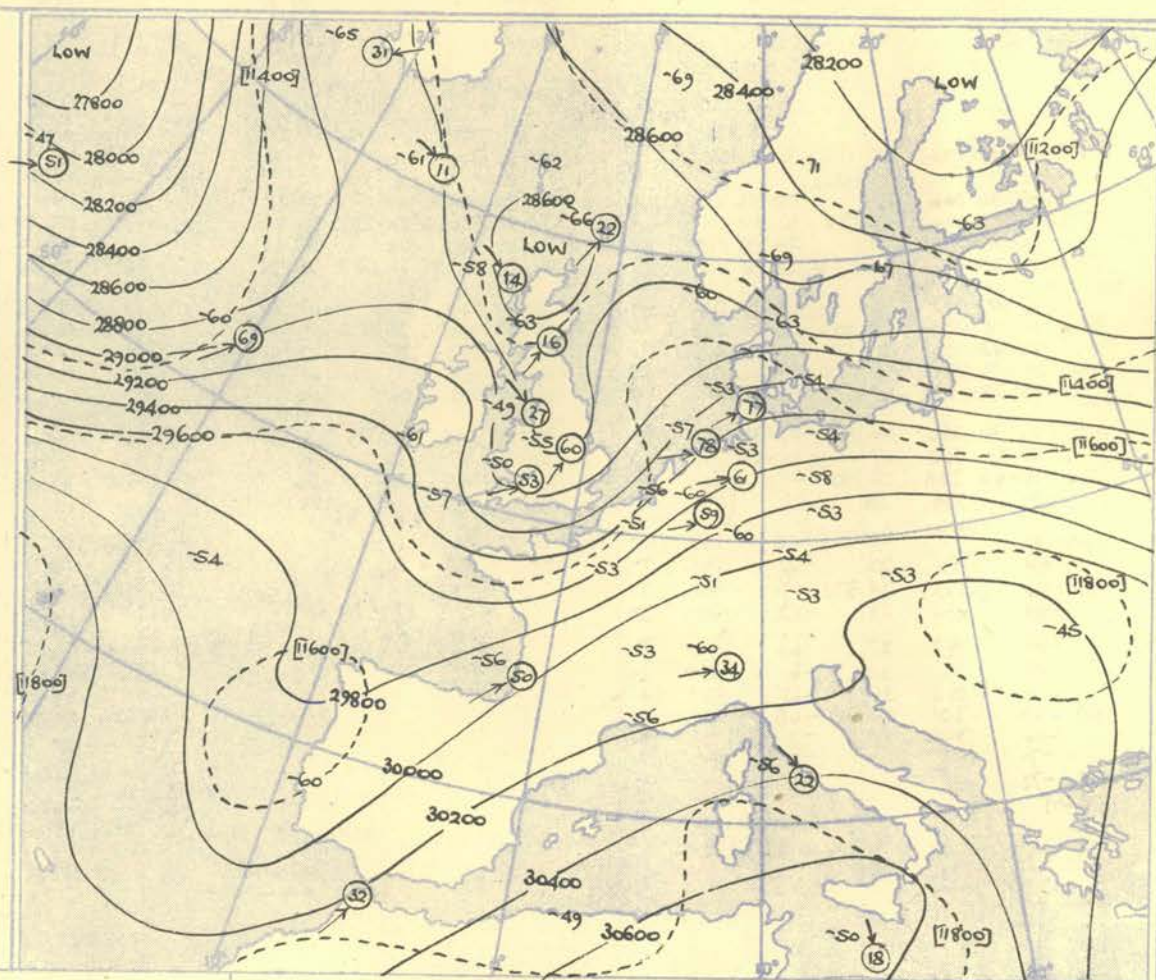
HEIGHTS IN FEET: TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



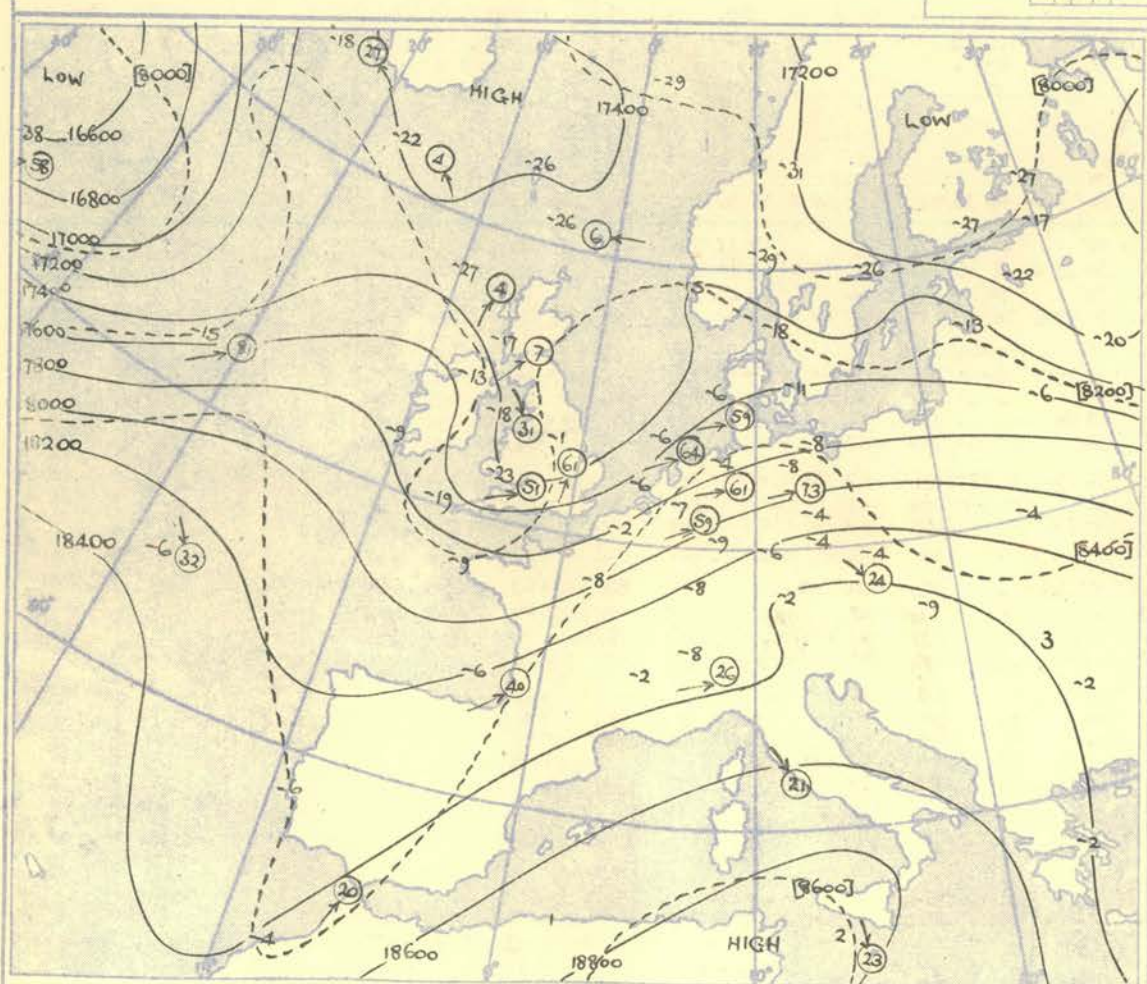
The continuous lines are contour lines of the 700 mb. surface
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

Gradient-Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

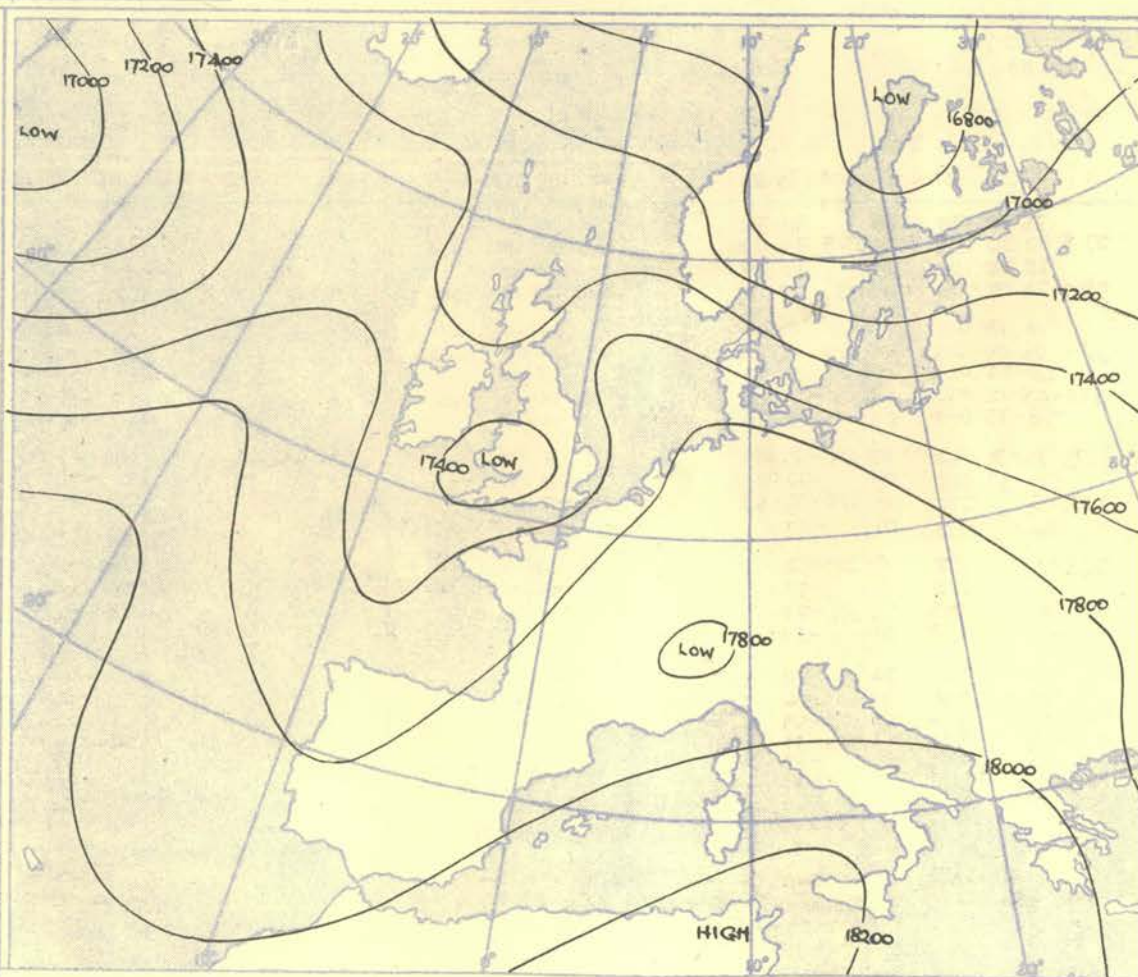
100 50 40 30 20 10 0 knots



The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500-300 mb.



The continuous lines are contour lines of the 500 mb. surface
The dotted lines are isopleths of the thickness of the layer 700-500 mb.

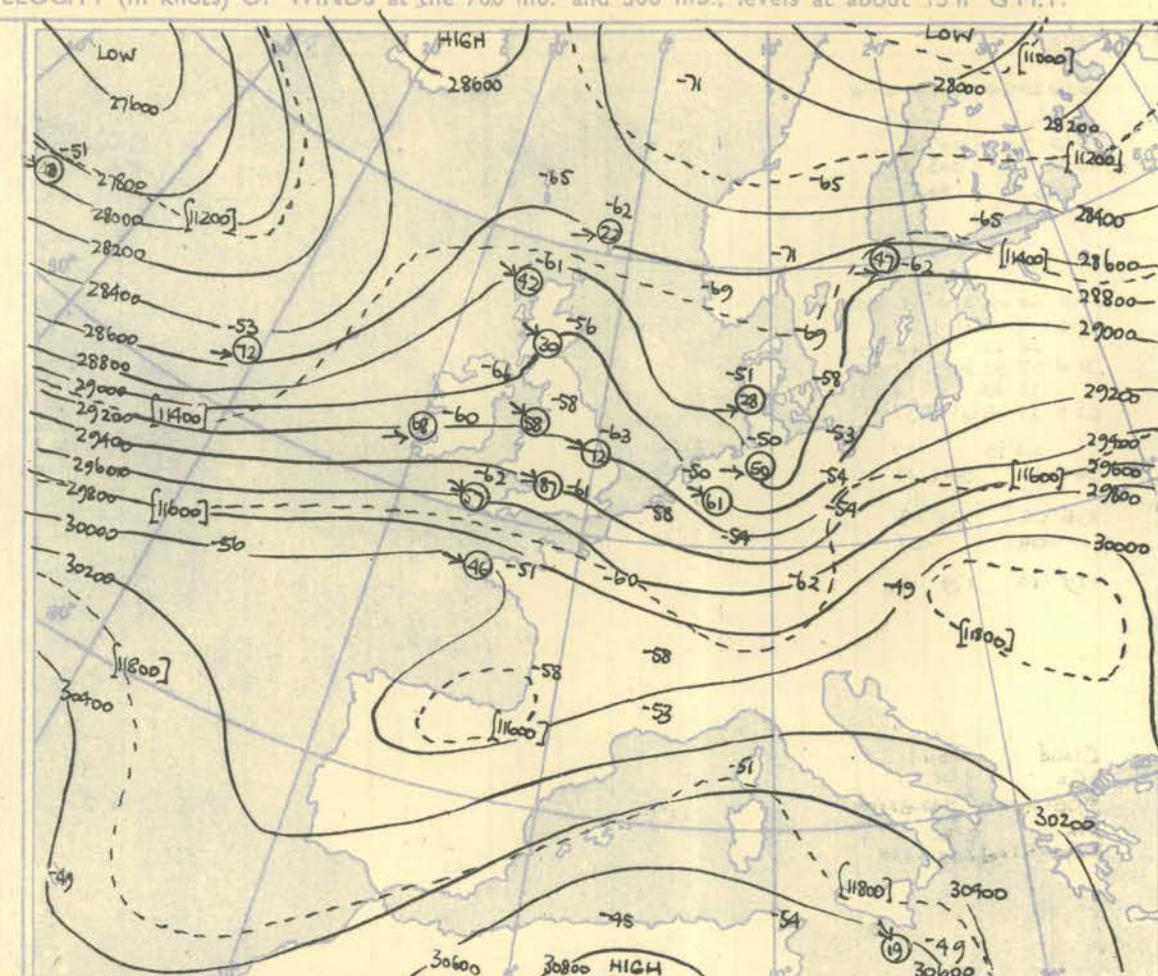
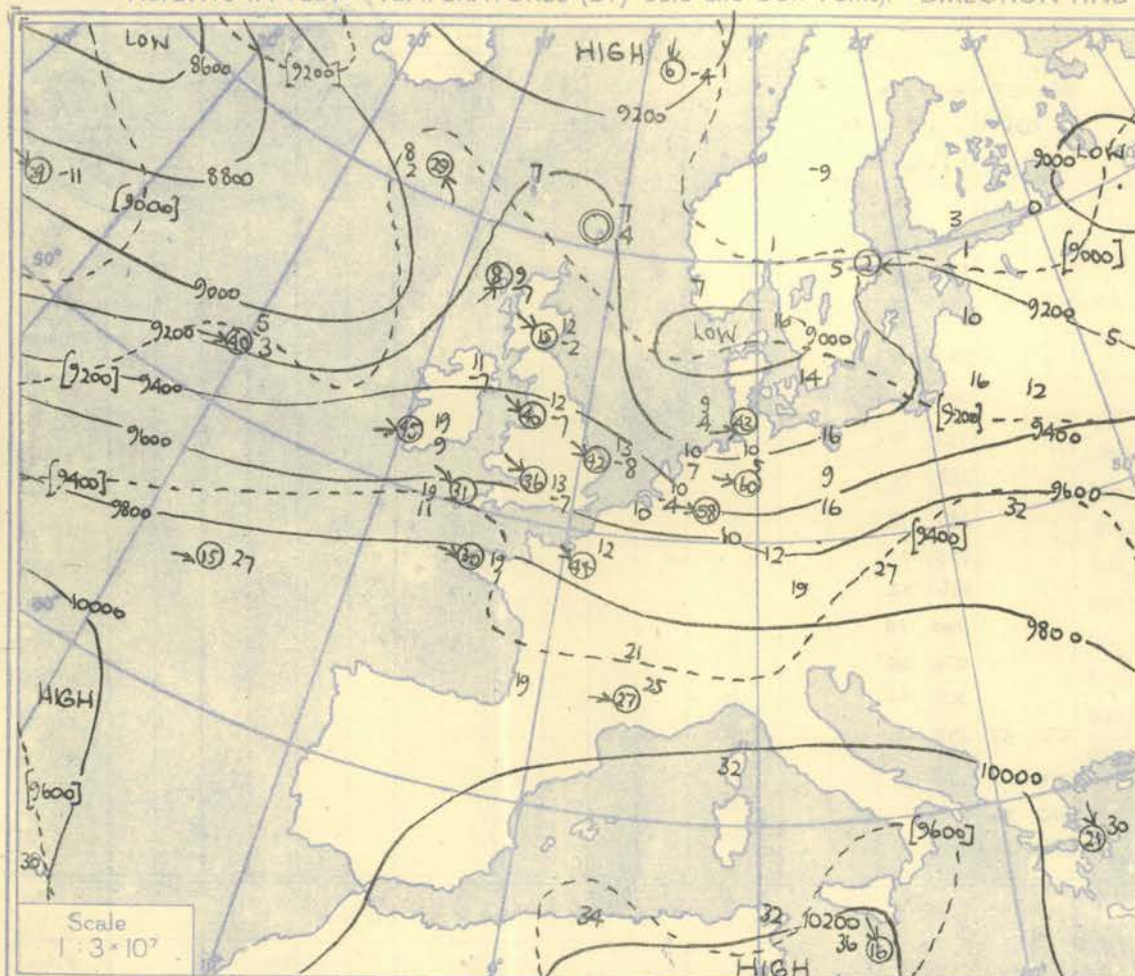


Isopleths of Thickness 500-1000mb.

DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

NEPHOSCOPE OBSERVATIONS

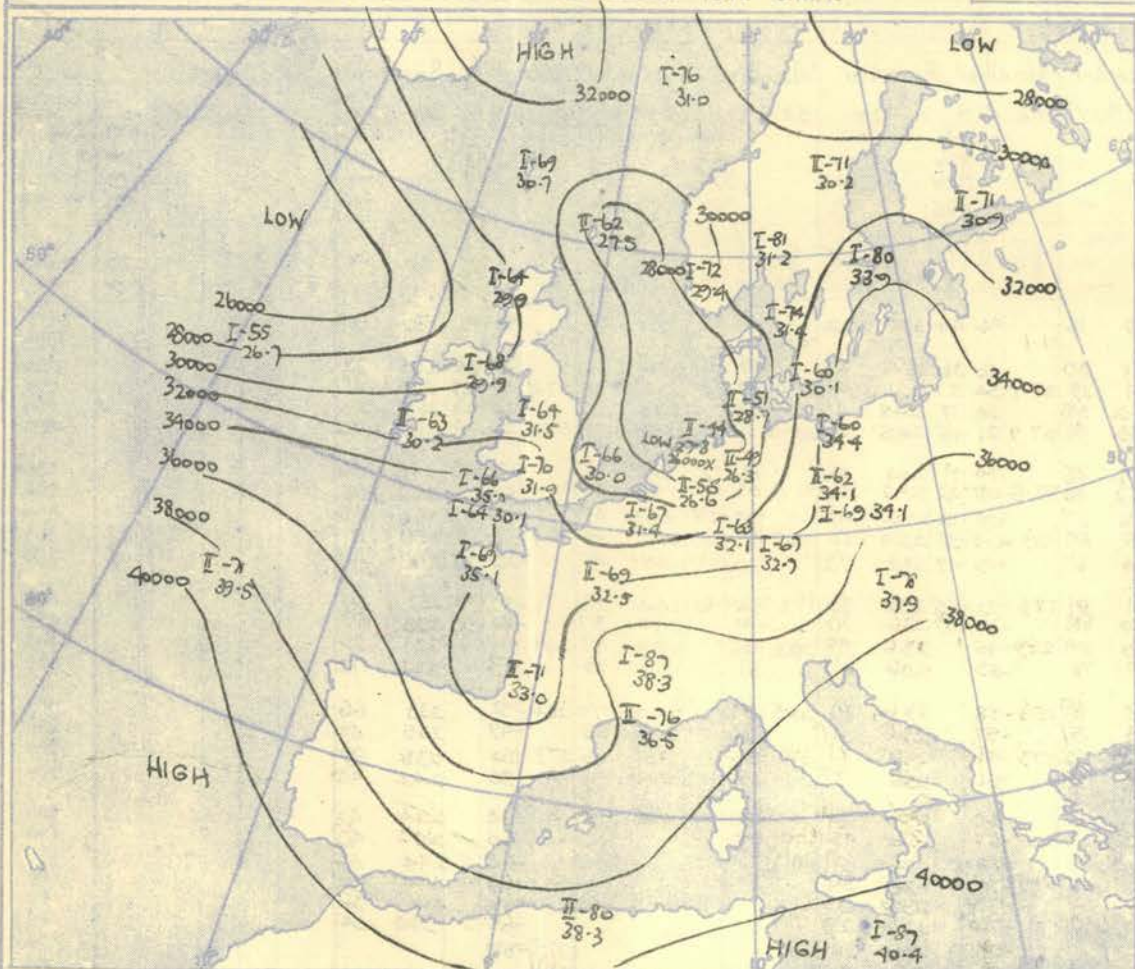
Ship	Weather Explorer					Weather Explorer					Weather Explorer					Weather Explorer					Weather Recorder					Weather Recorder					Weather Recorder					Weather Recorder					Ship																																																
Lat/Long	61-1N 13-8W					61-1N 14-0W					61-1N 14-2W					61-0N 14-5W					52-6N 19-4W					52-5N 20-0W					52-6N 20-0W					52-6N 20-4W					Lat/Long																																																
Pressure (Freezing)	03h G.M.T. 1001 mb 1001 mb 900 mb					09h G.M.T. 999 mb 999 mb 910 mb					15h G.M.T. 997 mb 997 mb 890 mb					21h G.M.T. 992 mb 992 mb 890 mb					03h G.M.T. 997 mb 997 mb 870 mb					09h G.M.T. 996 mb 996 mb 885 mb					15h G.M.T. 997 mb 997 mb 910 mb					21h G.M.T. 997 mb 997 mb 900 mb					G.M.T. mb mb mb Freezing	Time M.S.L. Surf Freezing																																															
Pressure mb	Height ft./100	Temp. °F	Dew °F	Wind Dir. Vel. ° knots	Height ft./100	Temp. °F	Dew °F	Wind Dir. Vel. ° knots	Height ft./100	Temp. °F	Dew °F	Wind Dir. Vel. ° knots	Height ft./100	Temp. °F	Dew °F	Wind Dir. Vel. ° knots	Height ft./100	Temp. °F	Dew °F	Wind Dir. Vel. ° knots	Height ft./100	Temp. °F	Dew °F	Wind Dir. Vel. ° knots	Height ft./100	Temp. °F	Dew °F	Wind Dir. Vel. ° knots	Height ft./100	Temp. °F	Dew °F	Wind Dir. Vel. ° knots	Pressure mb																																																								
Surf	02	44	40	070	22	-02	35	02	080	27	-09	45	35	090	28	-2-3	44	37	095	34	-08	49	48	250	18	-1-1	46	44	270	22	-08	46	42	235	23	-07	45	41	270	30	Surf																																																
1000		44	40																																			1000																																																			
950		39	37	078	27		37	30	094	30		39	31	094	36		39	33	103	39		44	41	241	30		40	36	256	33		38	36	236	28		39	34	265	32	950																																																
900	28-3	33	30	079	25	27-8	30	24	095	31	27-3	33	27	098	36	25-9	33	29	099	37	27-6	38	34	241	29	27-1	34	27	251	42	27-0	30	30	237	26	27-4	32	29	265	41	900																																																
850		27	22	086	21		23	18	100	30		26	21	102	36		27	23	103	39		30	24	242	38		24	24	248	43		24	24	243	27		24	23	265	40	850																																																
800	59-0	23	16	098	17	58-2	17	13	115	22	57-9	22	18	120	35	56-5	21	18	119	34	58-5	25	17	243	41	57-9	21	15	245	44	57-8	18	18	250	33	57-8	20	14	265	36	800																																																
750		16	12	103	16		12	07	125	24		17	13	131	33		16	09	125	31		25	10	242	46		14	01	244	46		12	12	259	37		12	03	265	36	750																																																
700	52-9	09	05	098	8	91-8	08	00	127	22	91-8	08	02	130	29	90-3	10	00	125	26	92-9	18	-08	242	48	91-6	08	-02	233	46	91-4	05	03	260	40	91-4	04	-01	262	36	700																																																
650		02	-04	102	12		-01	-07	129	18		-02	-14	122	24		01	-11	132	24		10	-13	238	57		01	-12	226	47		-02	-03	253	41		-04	-09	160	42	650																																																
600	131	-04	-14	126	10	129	-09	-18	132	13	129	-11	-24	124	22	128	-07	-20	138	26	131	00	-20	235	59	129	-05	-32	224	53	129	-11	-12	252	39	129	-13	-19	259	41	600																																																
550	-13	-28	158	09		-17	-27	136	11		-19	-34	132	22		-15	-25	145	24		-09	-27	234	67		-15	-49	232	72		-20	-21	247	45		-22	-27	253	44	550																																																	
500	174	-22	-40	134	04	173	-27	-39	146	10	172	-24	-42	137	20	171	-23	-30	151	15	175	-15	-33	231	81	173	-22	-55	236	80	172	-30	-32	244	51	171	-32	-38	252	39	500																																																
450		-28	-49	105	08		-33	-48	153	09		-29	-50	145	19		-33	-40	152	10		-24	-43	220	88		-32	-59	236	90		-41		244	57		-40	-50	238	47	450																																																
400	227	-37	-57	090	06	223	-39	-54	184	06	223	-36	-59	165	19	222	-44		134	13	227	-36	-55	220	94	223	-45		236	88	222	-46		244	87	221	-47		231	55	400																																																
350		-49		294	08		-49		218			07	383	-39			-52		120	21		-52		219	78		-55		236	76		-51		246	73		-53		231	72	350																																																
300	289	-61		276	11	286	-60		264	13	mb)					284	-63		122	29	289	-66		228	69	286	-58		236	70	285	-53		244	72	284	-51		233	66	300																																																
250		-62		300	18		-65		264	26						(270-64						-67		245	57		-57		236	67		-51		244	58		-49		235	62	250																																																
200	374	-59		296	25	372	-62		263	26						mb)						375	-64		253	62	373	-56		236	61	373	-53		235	63	373	-50		238	49	200																																															
170		-56					-60															-62		258	55		-56		236	57		-51		245	51		-50		242	44	170																																																
150		-57					-61															(144	-61					-60	236	44		-50		245	55		-54		244	42	150																																																
130		-59					-61															-67						-67	236	45	(144	-49				-60		244	40	130																																																	
110		-63					-65															-72						-72	236	31	mb)				-64		244	36	110																																																		
100	523	-61				519	-66															519	-70					-70	236	34						-64		244	40	100																																																	
90		-60					-65															-73						-73	236	33						-66		244	36	90																																																	
80		-67					-65															-76						-76	236	29						-68		244	34	80																																																	
70		-74					-69															-80						-80	236	28										70																																																	
60	(063	-75					-71															-81						-81	236	30										60																																																	
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Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 20 10 knots

TROPOPAUSE CHART at about 15h. G.M.T.

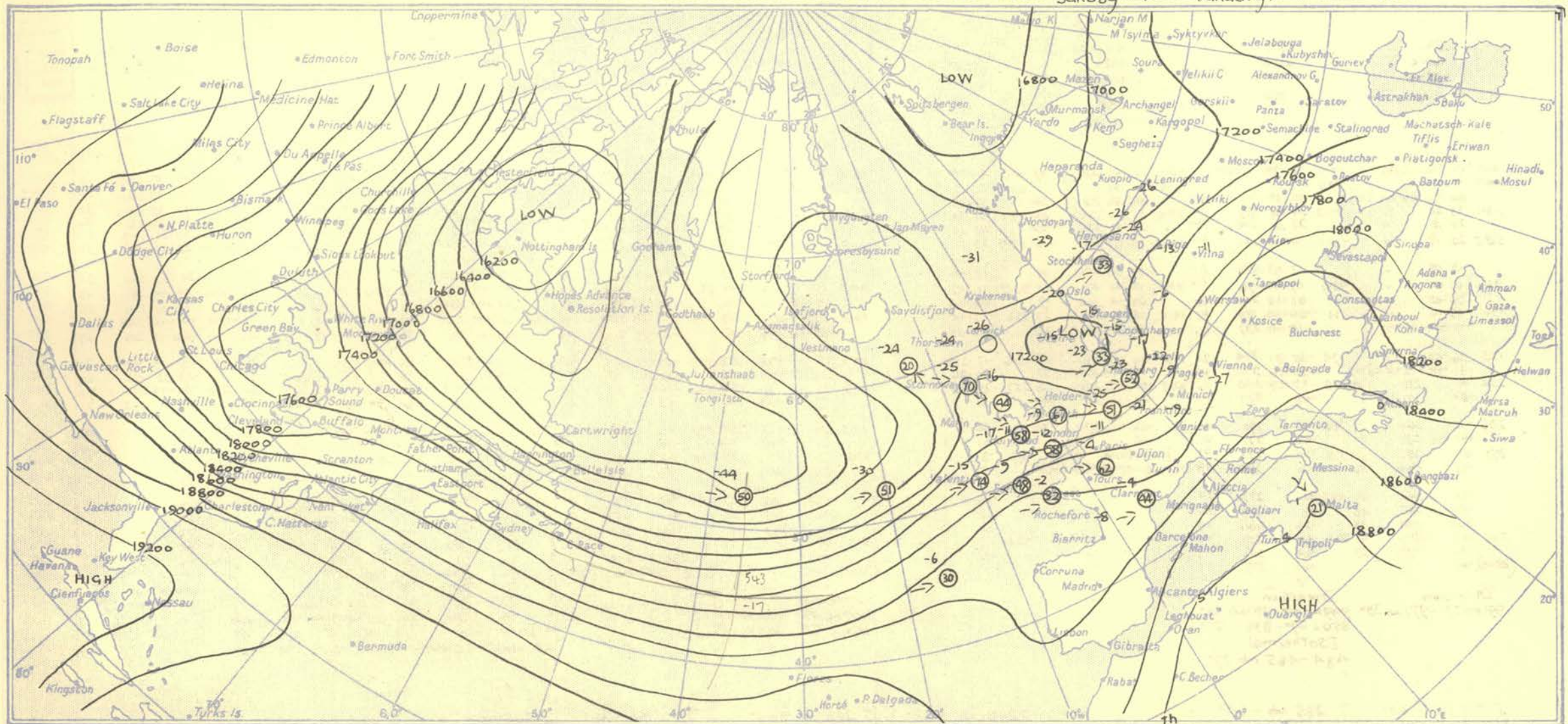


NOTES ON THE AEROLOGICAL SITUATION.

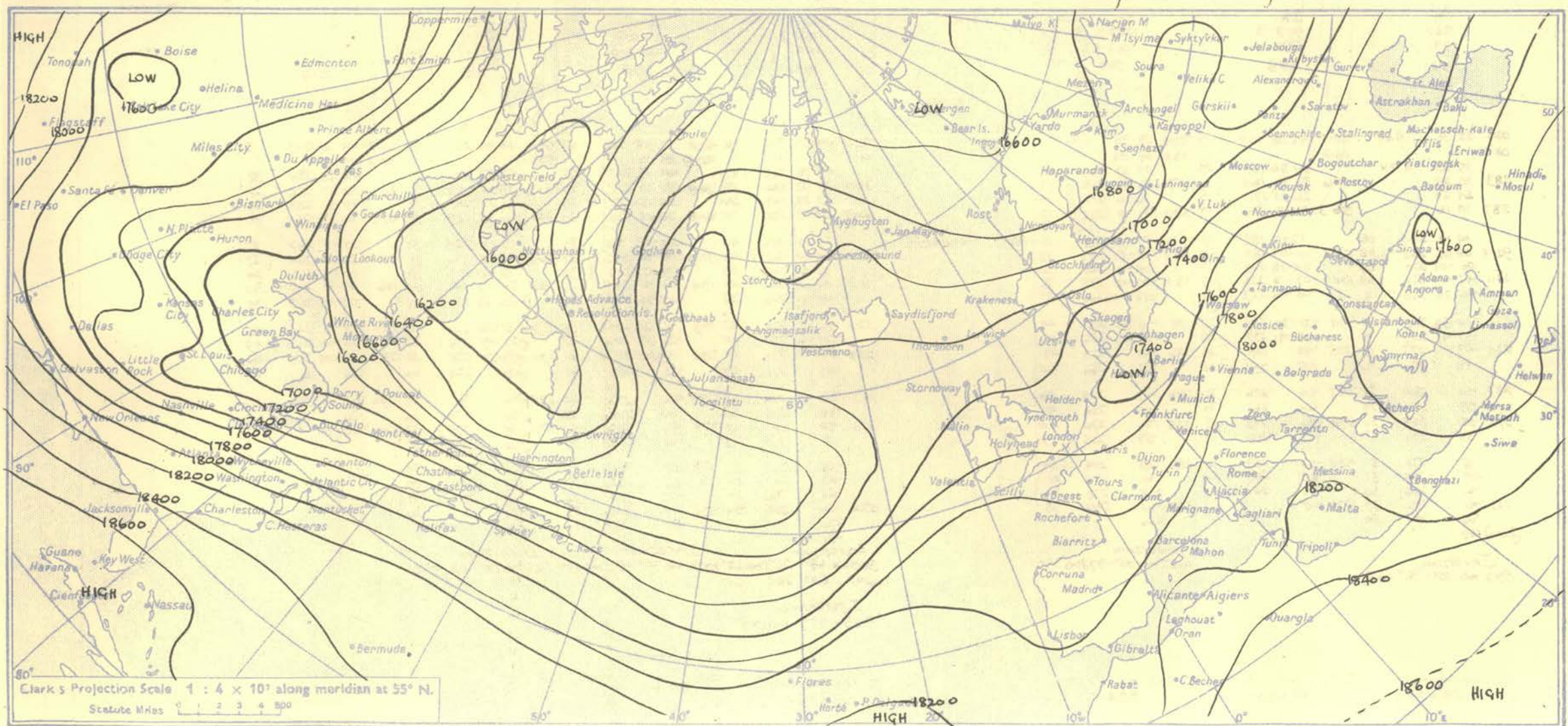
Rapid eastward penetration over the Atlantic of the cold air from Labrador

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Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Sunday 7th January, 1951.



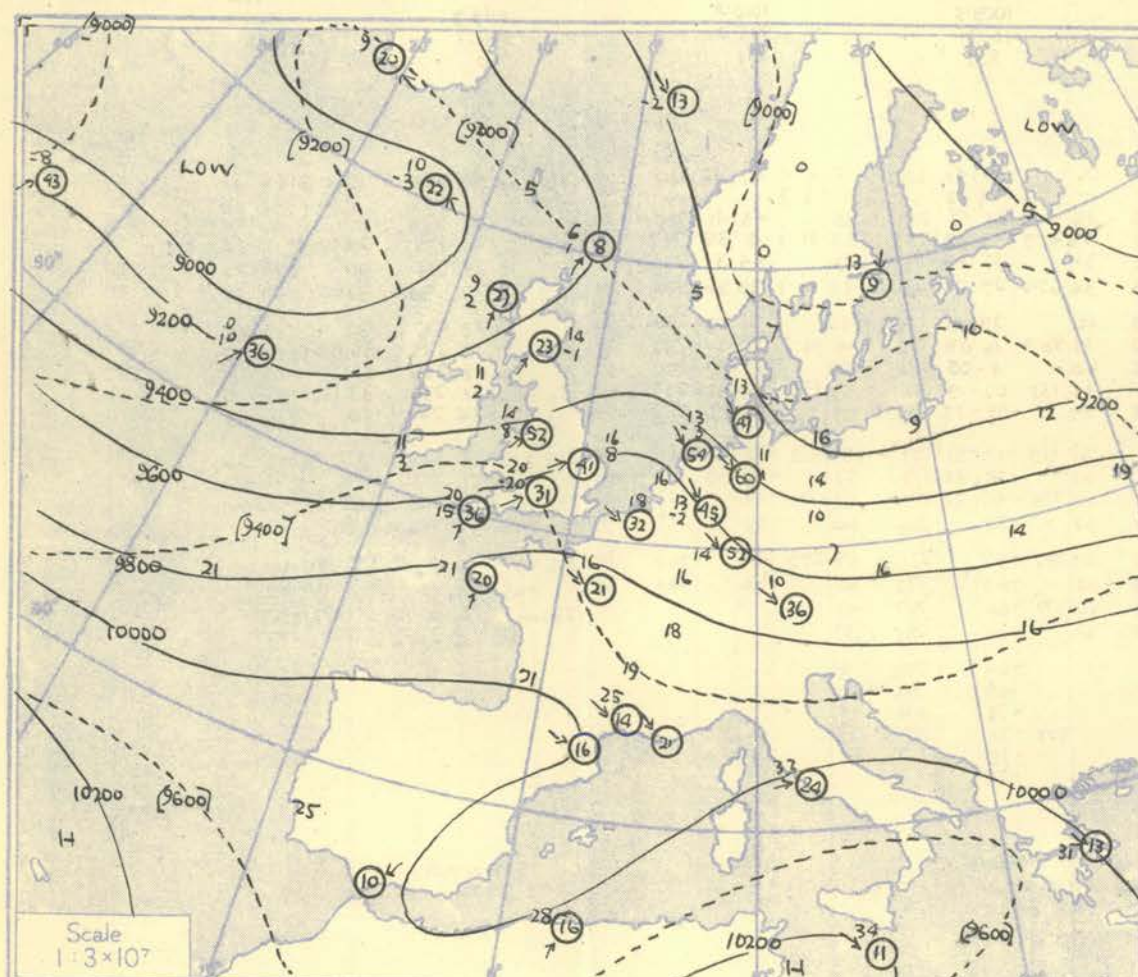
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION																					
Pressure mb	Time M.S.L.	15h.		G.M.T.	Wind Dir. Vel. knots	15h.		G.M.T.	Wind Dir. Vel. knots	15h.		G.M.T.	Wind Dir. Vel. knots	15h.		G.M.T.	Wind Dir. Vel. knots	15h.		G.M.T.	Wind Dir. Vel. knots	15h.		G.M.T.	Wind Dir. Vel. knots	15h.		G.M.T.	Wind Dir. Vel. knots	15h.		G.M.T.	Time M.S.L.	Surf Freezing																									
		Surf	Freezing	Surf		Freezing	Surf	Freezing		Surf	Freezing	Surf		Freezing	Surf	Freezing		Surf	Freezing	Surf		Freezing	Surf	Freezing		Surf	Freezing	Surf		Freezing	Surf	Freezing			Surf	Freezing	Surf	Freezing	Surf	Freezing																			
		Pressure mb	Height ft./100	Temp. °F.		Dew °F.	Pressure mb	Height ft./100		Temp. °F.	Dew °F.	Pressure mb		Height ft./100	Temp. °F.	Dew °F.		Pressure mb	Height ft./100	Temp. °F.		Dew °F.	Pressure mb	Height ft./100		Temp. °F.	Dew °F.	Pressure mb		Height ft./100	Temp. °F.	Dew °F.			Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Pressure mb	Height ft./100	Temp. °F.	Dew °F.													
Surf	1000	02.7	37	36	CALM	00.4	41	39	CALM	00.2	41	35	270	07	02.6	41	39		00.6	43	40	270	20	01.2	44	38	250	14	04.4	46	38	275	10	02.9	48	46	230	08	00.3	49	45	285	12	Surf															
950	960	00.3	36	32	L.V. < 5 kts	00.1	39	33	171	05	00.6	41	34		01.1	41	39		01.6	44	41		20	02.1	44	38		02.7	46	38	275		03.3	48	45	230	08	01.1	49	45	281	14	1000																
900	900	28.1	29	25	"	28.2	34	25	173	06	28.6	38	28	258	06	29.1	39	35		29.7	38	34	279	29	30.3	41	35	269	30	30.8	38	33	273	23	31.8	45	41	255	27	29.6	40	35	255	36	950														
850	850	25	18	"	"	27	21	184	08	08	28	21	274	09	29	22			27	22	288	28	30.3	34	31	277	35	30.8	32	29	273	31	31.8	38	31	266	28	29.6	40	35	255	36	900																
800	800	58.5	20	15	"	59.0	24	14	197	06	59.4	23	11	281	10	59.9	23	11		60.3	23	09	285	33	61.1	28	14	285	40	61.5	24	12	279	33	62.8	28	20	269	30	60.6	28	27	235	38	800														
750	750	13	08	"	"	17	03	189	07	07	19	08	292	14	17	-02			18	00	284	35	20	01	285	38	19	01	282		19	01	282		22	14	277	30	24	22	230	38	750																
700	700	92.1	07	04	"	92.9	09	-07	196	08	93.4	12	-02	298	13	93.9	11	-07		94.3	12	-17	284	40	95.3	13	-08	283	42	95.6	13	-07	285	36	97.2	19	11	279	31	95.0	19	09	237	45	700														
650	650	00	-08	"	"	01	-18	200	08	08	04	-14	294	19	04	-04			05	-19	280	46	05	-19	280	48	05	-17	288	37	05	-17	288	37	15	06	270	30	12	01	241	55	650																
600	600	130	-09	-16	"	131	-06	-30	198	07	13.1	02	-22	290	27	132	-02	-10		13.3	03	-19	292	48	134	-02	-28	285	50	13.4	05	-09	293	45	13.6	09	-01	273	35	13.4	04	-10	248	64	600														
550	550	-17	-24	"	"	-15	-41	237	12	12	-11	-32	288	30	-09	-25			-03	-30	298	51	-02	-31	292	57	-01	-17	291	57	-01	-17	291	57	00	-17	279	45	-06	-18	251	67	550																
500	500	17.3	-26	-40	"	17.4	-25	-51	274	20	17.5	-16	-41	296	44	17.6	-17	-28		17.7	-11	-31	293	58	17.8	-09	-32	295	67	17.8	-12	-22	287	58	18.1	-09	-23	267	48	17.8	-15	-13	252	74	500														
450	450	-31	-38	L.V. < 5 kts	"	-28	-56	290	29	29	-19	-45	297	57	-27	-36			-22	-37	284	69	-22	-46	290	70	-23	-30	286	58	-23	-30	286	58	-21	-34	264	51	-23	-32	252	68	450																
400	400	22.4	-41	232	19	22.5	-35	-58	280	36	22.7	-30	-52	292	58	22.7	-39	-48		22.9	-35	-46	279	58	23.0	-35	-55	288	60	23.0	-35	-41	287	58	23.3	-34	-47	263	60	23.0	-34	-44	254	72	400														
350	350	-54	222	23		-48	274	35		35	-41	289	49		-51				-49	283	60		-48	287	68		-47	281	60		-47	281	60		-47	268	76		-47	252	71	350																	
300	300	28.6	-62	260	22	28.8	-61	270	42	29.1	-56	290	30	29.0	-66				29.2	-58	279	58	29.3	-63	280	72	29.3	-61	283	67	29.6	-62	274	57	29.6	-62	274	57	29.3	-60	255	68	300																
250	250	-61	282	19		-62	277	35		35	-62				-62				-60	279	54		-65	287	58		-61	280	69		-63	271	50		-63	271	50		-64	247	66	250																	
200	200	37.2	-56	290	30	37.5	-54	273	37	37	Inversion			37.6	-53				37.9	-51	291	39	37.9	-62	286	48	37.8	-68	286	52	38.2	-57	275	42	37.9	-55							200																
170	170	-55	300	32		-51	275	38		38	518 mb -15°	496 mb -15°			-57				-56	306	42		-77	292	47		-61	293	41		-61	291	33		-56							170																	
150	150	-56	290	33		438	-53	277	38						-60				-59	305	39	440	-63	293	43	43.9	-60	295	37		-63	285	30		-56						150																		
130	130	-57	287	40		-62	278	36							-62				-56	287	42		-66	295	36		-65	307	37		-61									130																			
110	110	-60	298	33		-62	284	39							-64				-63	291	43		-66	309	34		-66	304	39		-68									110																			
100	100	52.1	-62	292	41	52.4	-63	277	36						-67				-69	295	28		-71	307	29		-69	315	29		-70									100																			
90	90	-61	293	33		-64	281	36							-72				-70	295	28		-73	307	21		-71	325	21		-74									90																			
80	80	(85mb)	-62			-67	277	37											-71	325	21		-74	325	21		-74	325	21		-74									80																			
70	70																																									70																	
60	60																																									60																	
		Inversion 991 mb 37° - 977 mb 38°				Inversion 999 mb 41° - 980 mb 42° 850 - 27° - 835 - 28° Isothermal 484 - 465 mb 27°												Inversion 1004 mb 43° - 1000 mb 74° 620 - 02° - 600 - 03°												Inversion 600 - 547 mb - 02°								Inversion 630 mb 02° - 610 mb 06°								Inversion 1002 mb 48° - 980 mb 49° 714 - 18° - 695 - 19° 293 - 64° - 270 - 60°								Isothermal 1002 - 1000 mb 49°					
Tropopause		II 315 mb - 62° 27,500'				I 285 mb - 64° 29,000'				N.R.				I 286 mb - 68° 29,900'				I 268 mb - 64° 31,500'				I 292 mb - 66° 30,000'				I 265 mb - 70° 32,000'				I 293 mb - 64° 35,000'								I 287 mb - 63° 302,00'				Tropopause																	
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				I 287 mb - 63° 302,00'				STATION																					
Pressure mb	Time M.S.L.	21h.		G.M.T.	Wind Dir. Vel. knots	21h.		G.M.T.	Wind Dir. Vel. knots	21h.		G.M.T.	Wind Dir. Vel. knots	21h.		G.M.T.	Wind Dir. Vel. knots	21h.		G.M.T.	Wind Dir. Vel. knots	21h.		G.M.T.	Wind Dir. Vel. knots	21h.		G.M.T.	Wind Dir. Vel. knots	21h.		G.M.T.	Time M.S.L.	Surf Freezing																									
		Surf	Freezing	Surf		Freezing	Surf	Freezing		Surf	Freezing	Surf		Freezing	Surf	Freezing		Surf	Freezing	Surf		Freezing	Surf	Freezing		Surf	Freezing	Surf		Freezing	Surf	Freezing			Surf	Freezing	Surf	Freezing	Surf	Freezing																			
		Pressure mb	Height ft./100	Temp. °F.		Dew °F.	Pressure mb	Height ft./100		Temp. °F.	Dew °F.	Pressure mb		Height ft./100	Temp. °F.	Dew °F.		Pressure mb	Height ft./100	Temp. °F.		Dew °F.	Pressure mb	Height ft./100		Temp. °F.	Dew °F.	Pressure mb		Height ft./100	Temp. °F.	Dew °F.			Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Pressure mb	Height ft./100	Temp. °F.	Dew °F.													
Surf	1000	02.7	35	35	CALM	00.4	42	38	140	15	00.2	33	33	CALM					00.6	44	39	210	15	01.2	39	35	215	08	04.4	44	42	210	08	02.9	49	47	203	15					Surf																
950	950	00.5	35	33	L.V.	00.5	39	36	167	15	00.5	34	34					01.4	42	38	212	27	02.9	39	35		03.1	42	39	240	27	03.2	49	47						1000																			
900	900	28.3	30	29	"	27.6	33	30	164	17	28.7	32	32	207	13			29.7	37	33	230	28	30.9	35	27	272	26	31.3	37	34	253	31	31.7	44	42	238	32					950																	
850	850	24	20	"	"	26	23	171	17	17	26	26	215	14				30.3	33	29	243	30	30.9	35	27	272	26	31.3	37	34	253	31	31.7	44	42	238	32					900																	
800	800	58.7	19	16	"	58.3	22	18	176	17	59.3	21	18	225	17			60.7	28	23	251	35	61.8	26	08	279	30	62.1	26	23	259	32	62.8	30	27	261	30					850																	
750	750		14	10	240	06	17	10	182	17	17	10	235	15				23.18	256	42		20	03	285	33		19	17	264	31		27	18	267	37					750																			
700	700	92.1	08	05	265	08	92.1	10	-03	183	15	93.2	10	-01	243	18			95.0	15	10	262																																					

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION			
Pressure mb	Time M.S.L. Surf Freezing	03L		G.M.T.	03h		G.M.T.	03L		G.M.T.	03h		G.M.T.	03L		G.M.T.	03h		G.M.T.	03L		G.M.T.	03h		G.M.T.	03L		G.M.T.	03h		G.M.T.	03L		G.M.T.	03h		G.M.T.				
		1001.6		mb	993.1		mb	1001.3		mb	1001.8		mb	1005.1		mb	1003.6		mb	1009.5		mb	1010.3		mb	1009.2		mb	1004.0		mb	1003.0		mb	1004.0		mb				
		991.5		mb	992.5		mb	1000.4		mb	993.0		mb	850		mb	825		mb	832		mb	832		mb	790		mb	880		mb	880		mb	880		mb				
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb				
Surf	2.7	38	34	120	05	00.2	43	41	180	09	0.2	35	35	Calm	02.6	39	36																				Surf				
1000	0.4					0.6					0.3				0.7																						1000				
950		36	32	140	09		38	36	192	18		37	36	258	15		37	34																		950					
900	28.3	30	27	160	08	26.5	33	30	212	20	28.3	35	30	263	20	28.7	34	30																		900					
850		24	21	163	08		27	21	216	25		31	22	260	24		28	24																		850					
800	58.7	19	14	183	08	57.1	21	18	212	29	59.2	25	20	253	27	59.4	22	17																		800					
750		13	08	210	09		14	10	206	30		19	09	243	27		17	07																		750					
700	92.3	06	01	218	08	90.9	09	02	200	27	93.2	14	01	245	23	93.3	11	02																		700					
650		02	06	230	13		02	10	200	24		05	06	256	24		04	05																		650					
600	130	10	16	246	13	129	06	18	217	20	131	04	11	257	26	132	00	10																		600					
550		19	27	248	12		16	24	220	29		13	24	251	41		09	19																		550					
500	173	27	38	248	16	172	26	31	208	43	175	20	39	248	48	175	19	30																		500					
450		35	48	265	19		36	42	203	42		29	51	261	50		29	40																		450					
400	223	41		272	72	222	42		190	28	226	46		261	69	223	39	49																		400					
350		51		270	23		53		190	26		53		259	66		50																			350					
300	286	63		268	22	285	59		204	28	288	63		253	55	289	60																			300					
250		63		268	25		56		229	29		60		254	51		63																			250					
200	372	53		265	30	372	65		227	25	375	57		240	37	376	51																			200					
170		53		267	33		50		228	42		55		246	36		50																			170					
150		54		273	32		50		248	33		56		252	33		52																			150					
130		62		266	37		58		236	24		62		257	33		61																			130					
110		63		271	29		63		238	26		62		259	33		60																			110					
100	520	65		270	31	522	60		255	28	523	65		258	34	525	63																			100					
90		67		269	35		64		231	36		68		254	30		66																			90					
80		67		264	35		65		246	33		72																								80					
70		72		255	30		68		237	27		71																								70					
60							70		246	46																										60					
		Inversion 453mb -36° -439mb 39° Isothermal. 991- 972mb 38°								Inversion 1000mb 35° -980mb 39° Isothermal. 954- 920mb 37°								Inversion 1003mb 42° -992mb 47° Isothermal. 542- 531mb -14°								Inversion 1005mb 43° -950mb 44° Isothermal. 950- 915mb 43°								Isothermal 288- 280mb -65°							
Tropopause		II 289mb -64° 29,400'				I 315mb -60° 27,300'				I 290mb -65° 29,500'				I 268mb -67° 31,300'				I 280mb -70° 30,500'				II 300mb -67° 29,200'				II 300mb -66° 29,300'				NR.				I 276mb -65° 30,800'				Tropopause			
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				STATION							
Pressure mb	Time M.S.L. Surf Freezing	09L		G.M.T.	09h		G.M.T.	09L		G.M.T.	09h		G.M.T.	09L		G.M.T.	09h		G.M.T.	09L		G.M.T.	09h		G.M.T.	09L		G.M.T.	09h		G.M.T.	09L		G.M.T.	09h		G.M.T.				
		1000.1		mb	993.9		mb	1000.5		mb	999.6		mb	1003.5		mb	1008.3		mb	1006.7		mb	1006.5		mb	1006.5		mb	824		mb	824		mb							
		990.1		mb	992.2		mb	893		mb	850		mb	832		mb	864		mb	864		mb	864		mb	864		mb	864		mb	864		mb							
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb				
Surf	2.7	40	37	130	15	00.2	40	39	200	12	0.2	36	35	Calm																						Surf					
1000	0.0					0.6					0.2																									1000					
950		36	32	147	21		37	34	223	25		37	34	247	23		37	34																		950					
900	28.0	29	24	147	15	26.4	33	32	234	33	28.0	33	27	253	26		30	20																	900						
850		23	19	150	17		25	24	234	32		30	20	253	31		34	32																	850						
800	58.3	18	13	153	13	57.0	21	19	229	31	58.8	24	09	247	29		29	26																	800						
750		13	05	168	12		15	14	230	31		18	04	243	27		22	19																	750						
700	91.9	05	01	180	13	90.8	08	06	234	30	93.0	11	11	244	23		17	14																	700						
650		01	07	197	16		00	03	236	31		02	17	251	30		10	07																	650						
600	130	10	16	204	17	12.9	09	15	235	33	131	07	23	244	41		03	18																	600						
550		18	24	225	16		18	23	232	33		15	27	240	46		05	22																	550						
500	172	26	31	236	19	172	28	33	233	30	174	23	37	249	53		15	25																	500						
450		35	40	279	24		39	44	232	27		33	49	247	66		27	37																	450						
400	223	42		229	14	222	49		233	30	225	43		244	77		32	42																	400						
350		55		210	10		56		226	28		53		248	80		37	52																	350						
300	285	63		220	21	283	60		218	27	287	63		250	68		42	78																	300						
250		59		245	23		60		221	28		68		242	54		53	93																	250						
200	372	54		253	27	370	55		234	15	373	58</																													

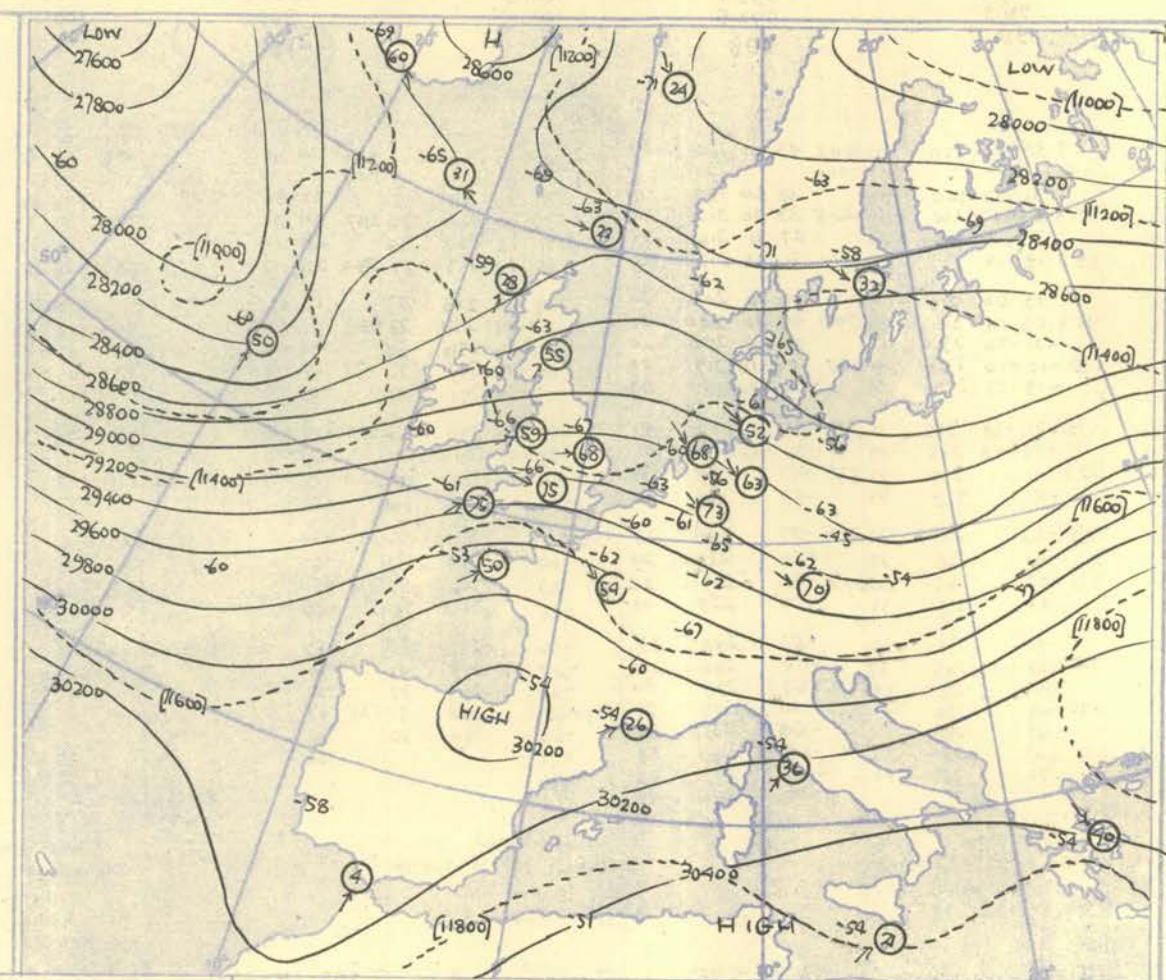
HEIGHTS IN FEET: TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



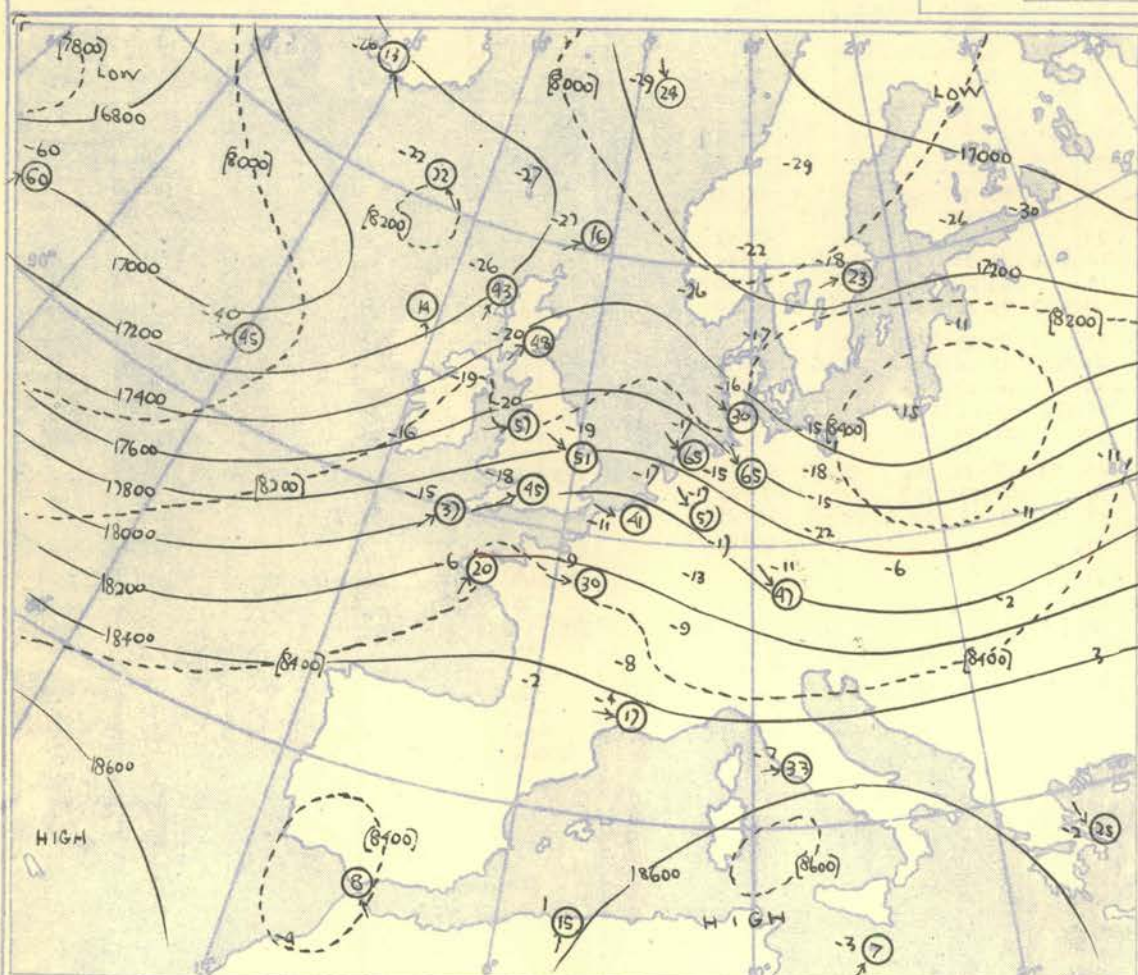
The continuous lines are contour lines of the 700 mb. surface
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. $52\frac{1}{2}^\circ$ N.

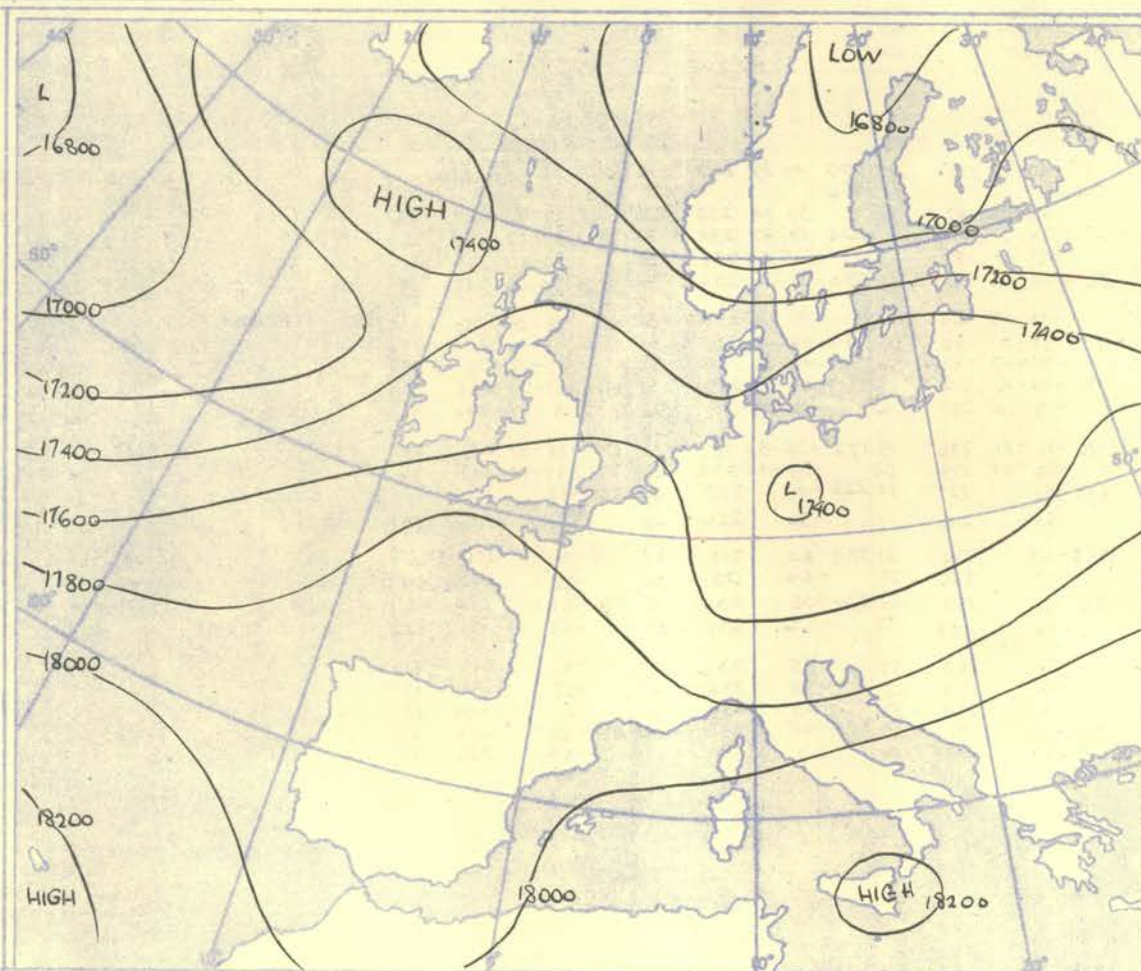
100 80 60 40 20 10 knots



The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500-300 mb



The continuous lines are contour lines of the 500 mb. surface
The dotted lines are isopleths of the thickness of the layer 700-500 mb.



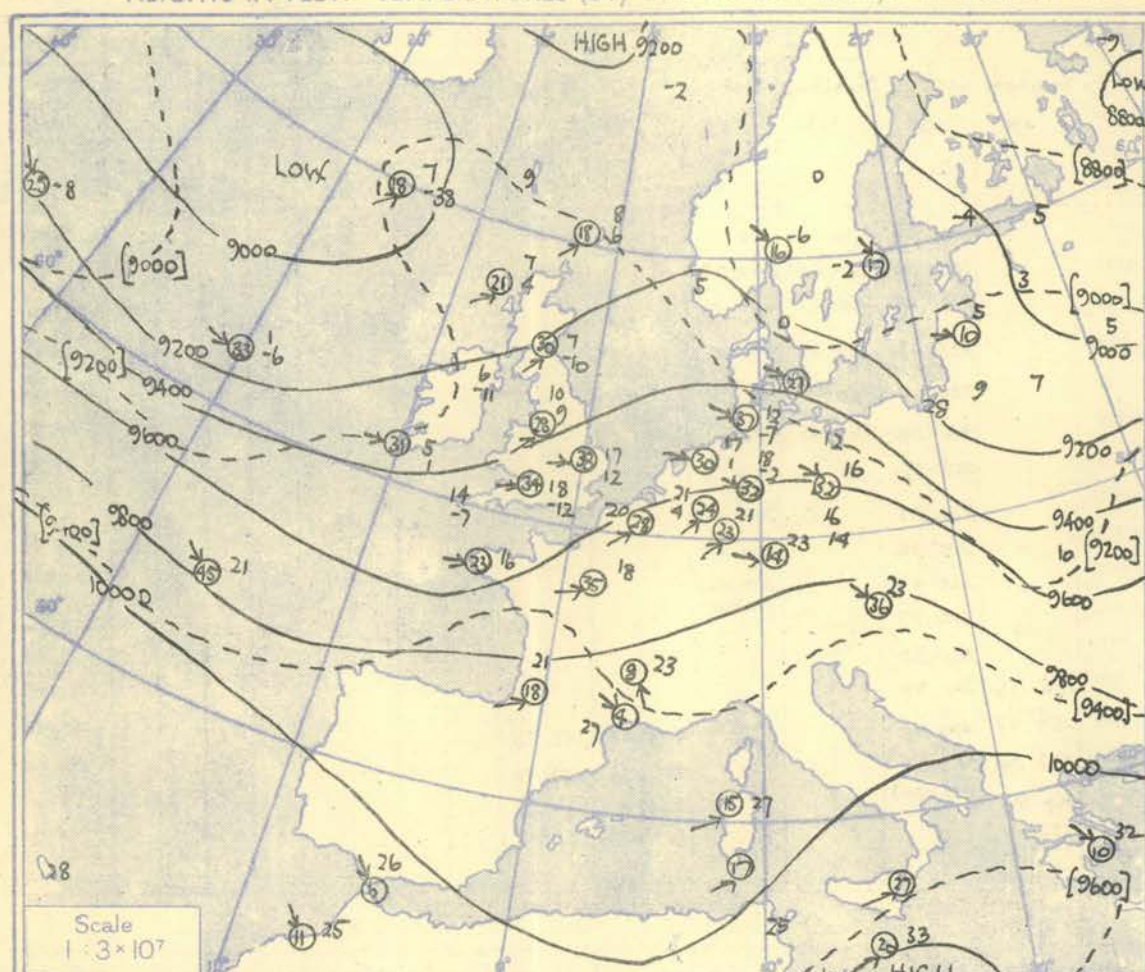
Isopleths of Thickness 500-1000mb.

DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above MSL

NEPHOSCOPE OBSERVATIONS

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.

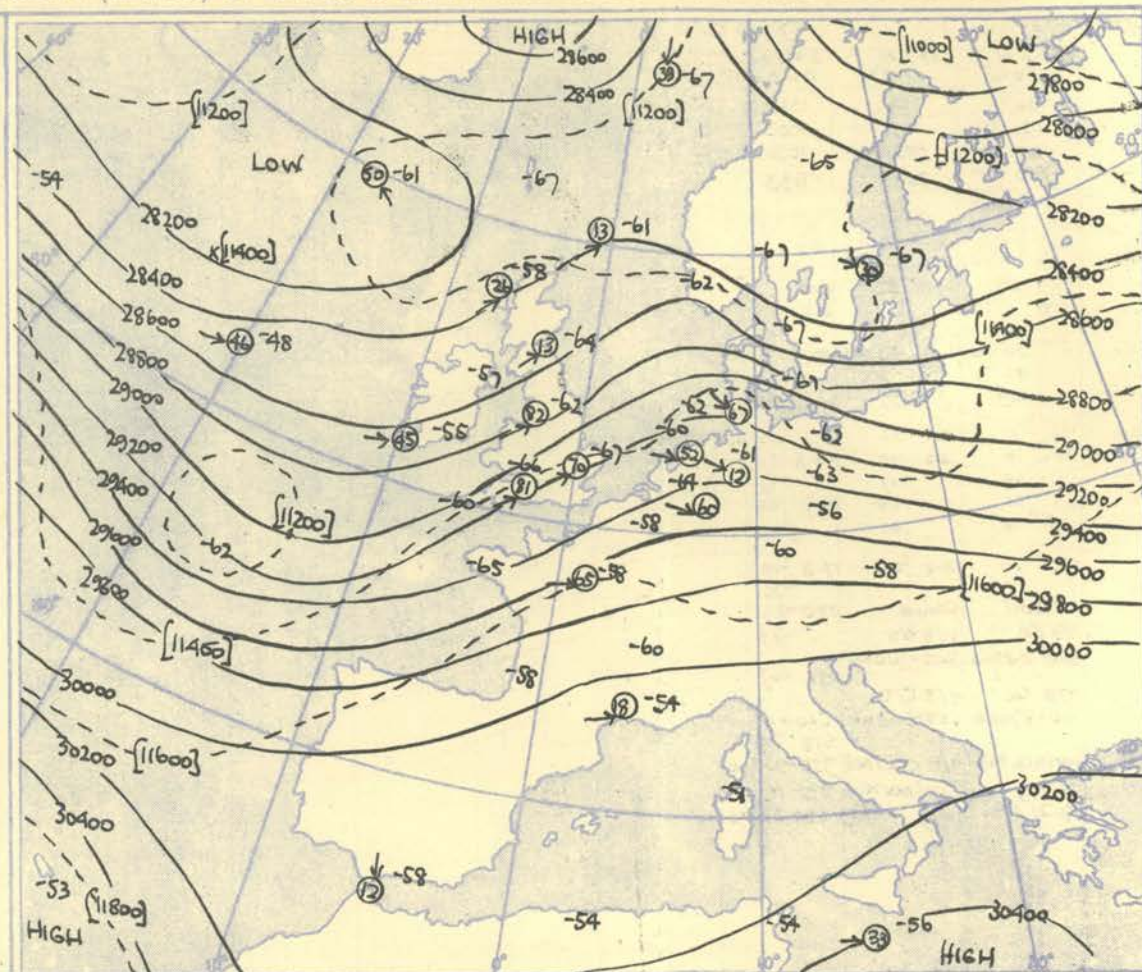
Ship				WEATHER EXPLORER								WEATHER EXPLORER								WEATHER EXPLORER								WEATHER RECORDER								WEATHER RECORDER								WEATHER RECORDER								WEATHER RECORDER								Ship																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Lat/Long				60.6N				15.4W				60.3N				16.2W				60.0N				16.5W				59.6N				17.4W				52.6N				20.1W				52.7N				19.9W				52.4N				20.4W				52.4N				20.2W				Lat/Long																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Pressure	Time	03L		G.M.T.		09L		G.M.T.		15L		G.M.T.		21L		G.M.T.		03L		G.M.T.		09L		G.M.T.		15L		G.M.T.		21L		G.M.T.		03L		G.M.T.		09L		G.M.T.		15L		G.M.T.		21L		G.M.T.		Time																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
	M.S.L.	988		mb		986		mb		988		mb		988		mb		1000		mb		1000		mb		1000		mb		1001		mb		1001		mb		1001		mb		1001		mb		M.S.L.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
	Surf	988		mb		986		mb		988		mb		988		mb		1000		mb		1000		mb		1000		mb		1001		mb		1001		mb		1001		mb		1001		mb		Surf																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
	Freezing	880		mb		900		mb		900		mb		908		mb		930		mb		950		mb		950		mb		940		mb		935		mb		935		mb		935		mb		Freezing																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Pressure	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Pressure																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Surf	46	37	090	25	39	40	35	250	16	44	30	206	14	42	30																														Surf																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
1000	-3.3	46	37	090	25	39	40	35	250	16	44	30	206	14	42	30																													1000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
950		42	35	098	31	36	25	285	21	40	24	230	12	38	34	218	09																												950																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
900	25.0	35	30	102	30	24.1	32	22	282	18	24.8	32	20	232	12	25.4	31	28	199	11																									900																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
850		28	24	107	31	27	16	266	19	24	12	231	13	25	21	195	03																												850																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
800	55.8	23	16	117	31	54.7	22	10	259	18	55.2	19	00	235	14	56.0	22	07	140	01																									800																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
750		17	05	124	29	16	04	226	10	16	24	242	13	15	04	205	02																											750																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
700	89.7	10	03	122	22	88.6	09	03	176	07	88.9	07	38	213	17	89.8	07	05	190	06																								700																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
650		04	02	137	22	02	08	113	09	07	44	188	22	02	18	143	15																											650																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
600	128	03	08	159	24	127	06	18	098	21	127	10	49	197	16	127	12	25	122	25																								600																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
550		11	16	174	22	15	29	101	27	19	56	201	14	20	33	113	23																											550																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
500	171	22	28	161	22	170	26	44	099	39	169	29	56	195	13	170	32	45	115	14																								500																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
450		33	39	145	18	38	56	098	48	41	51	151	14	43	133	12																												450																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
400	222	46		133	25	220	49	43	219	51	219	51		125	33	219	56																											400																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
350		57		130	27	62		104	43	61		112	50	63		106	33																										350																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
300	284	65		130	31	281	62	118	28	281	61	118	30	281	61	162	21																											300																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

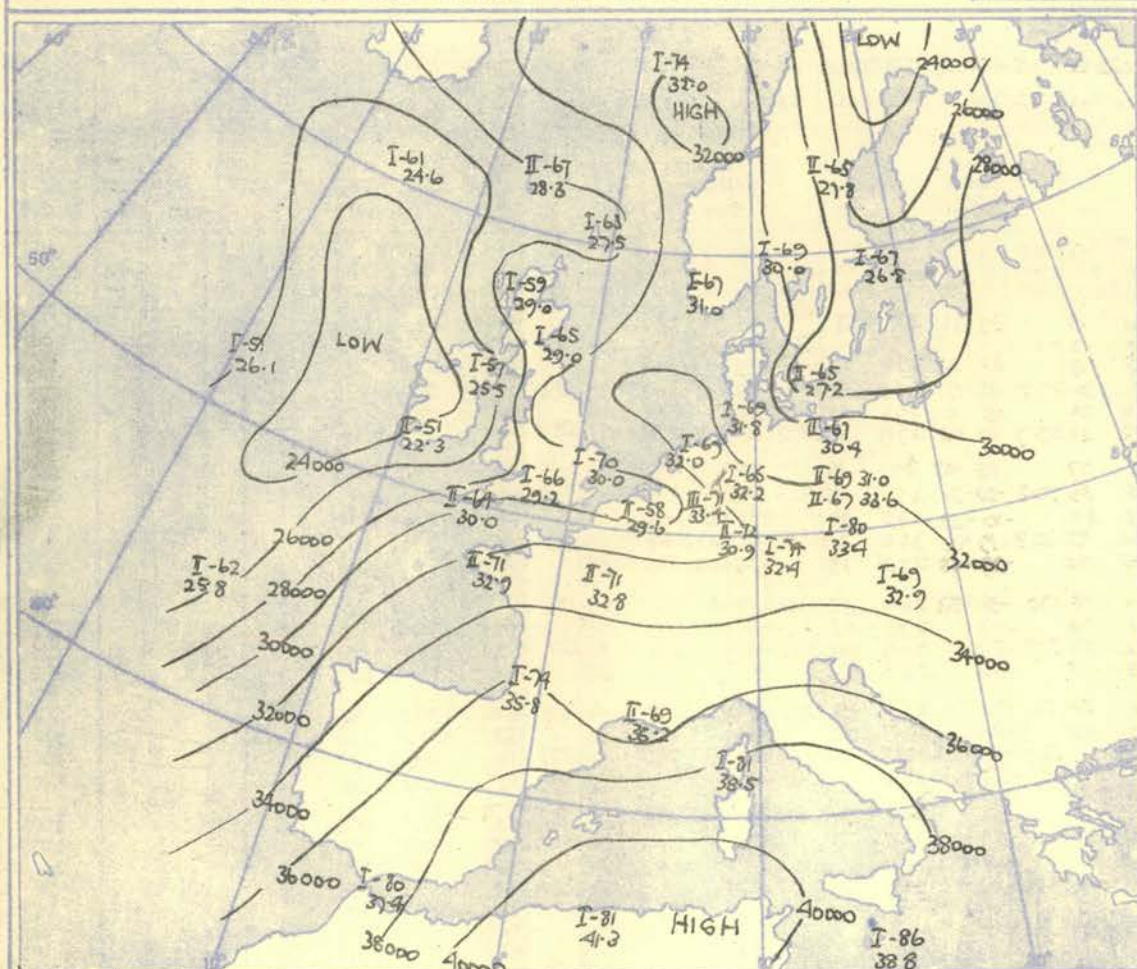
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

100 60 40 20 10 knots.



The continuous lines are contour lines of the 300 mb. surface.
The dotted lines are isopleths of the thickness of the layer 500-300 mb.

TROPOPAUSE CHART at about 15h. G.M.T.



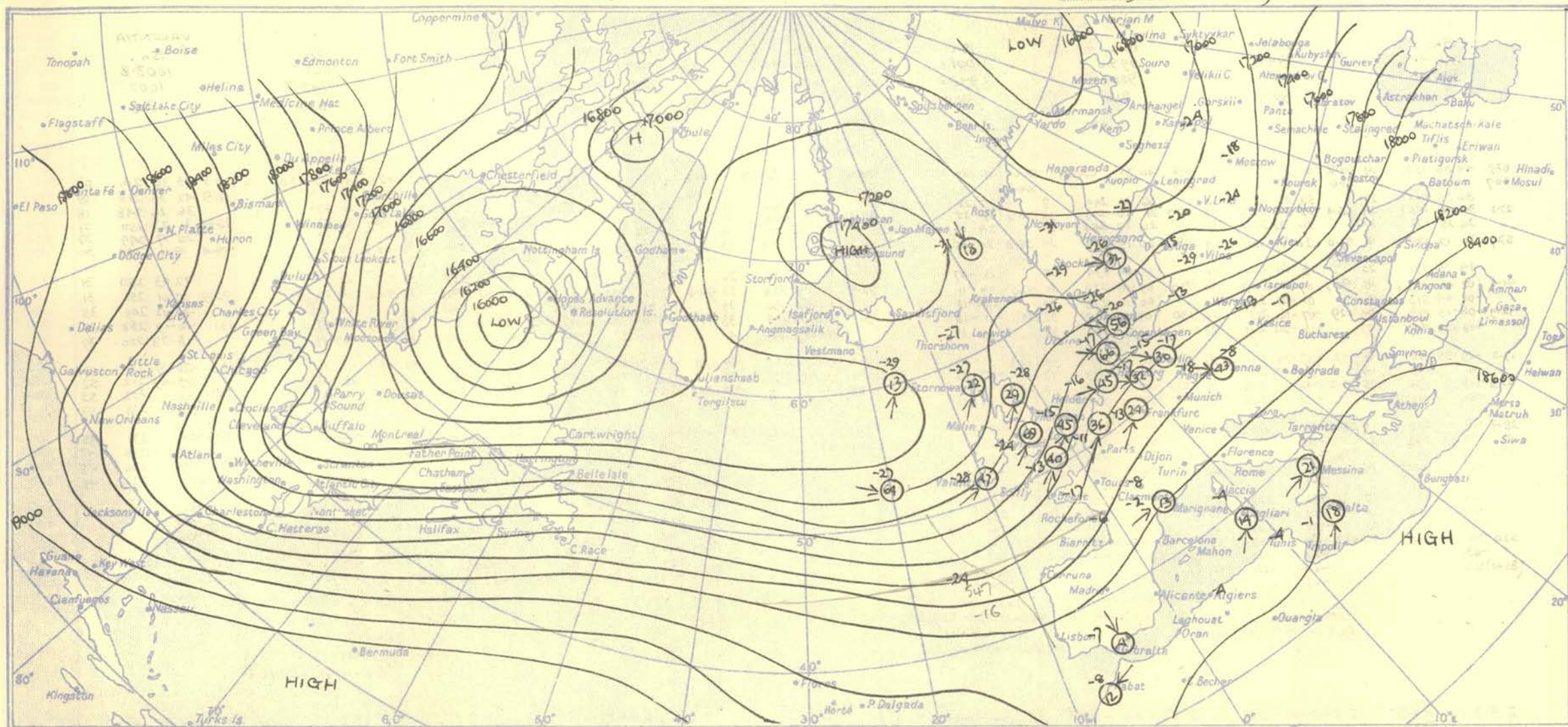
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Little noteworthy change.

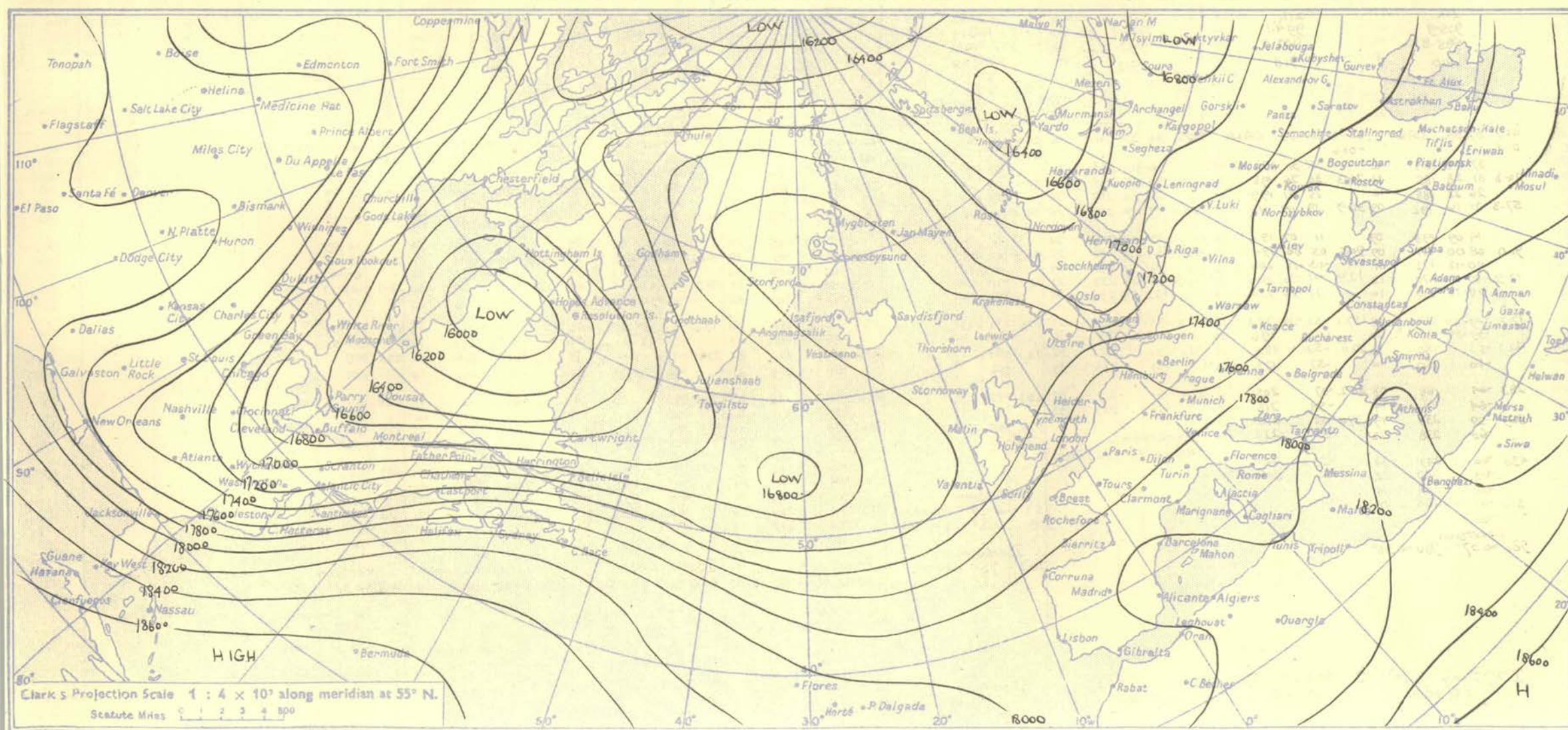
RATES of SUBSCRIPTION: Single copy 2d. or post free 3d. One calendar month 7/- One quarter 18/- One year 70/-
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Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Monday 8th January

195f.

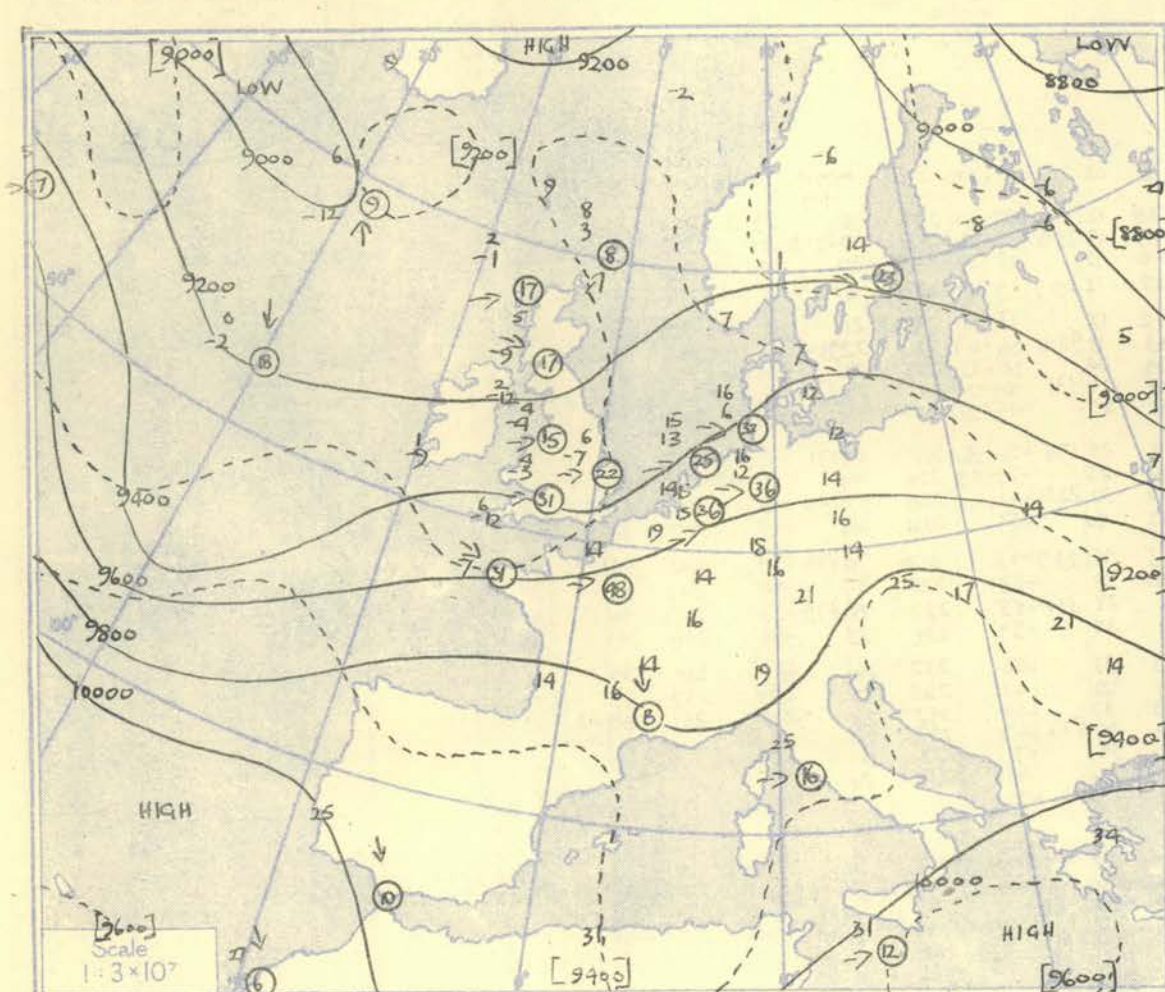


RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION				
Pressure Time M.S.L. Surf Freezing	15h. G.M.T. 997.4 mb 987.3 mb 916				15h. G.M.T. 994.3 mb 992.7 mb 900				15h. G.M.T. 999.0 mb 988.2 mb 920				15h. G.M.T. 1001.1 mb 991.2 mb 900				15h. G.M.T. 1001.4 mb 999.3 mb 895				15h. G.M.T. 1004.1 mb 999.8 mb 840				15h. G.M.T. 1004.6 mb 988.5 mb 840				15h. G.M.T. 1006.2 mb 995.5 mb 860				15h. G.M.T. 1003.3 mb 1002 mb 905				Time M.S.L. Surf Freezing				
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb								
Surf	02.7	40	38	150	19	00.2	41	37	0.2	40	37	CALM	00.6	40	37	00.3	44	41	CALM	01.2	47	46	210	12	4.4	44	43	205	03	02.9	47	43	270	12	00.3	43	36	216	08	Surf	
1000	00.7				01.6				00.3				00.3				00.4				01.2					01.6				01.6					00.9	42	35	218	09	1000	
950		36	35	146	27	32	26	224	18	27.7	31	26	247	18	28.2	32	25				29.5	38	37	264	15	41	40	258	11	01.6	41	37			36	26	248	18	950		
900	27.2	30	30	145	26	26	22	224	20	27.7	26	20	244	20	24	16					29.5	33	32	265	15	29.5	33	34	258	12	29.9	34	28			31	23	250	21	900	
850		26	25	157	17	26	22	224	20																											28.9	31	23	250	21	850
800	57.7	20	19	185	18	57.0	20	17	228	21	58.3	20	15	239	24	58.8	20	05																	59.4	19	11	248	30	800	
750		14	13	191	20																																		750		
700	91.4	08	06	199	18	90.7	07	04	223	21	92.0	07	10	223	30	92.5	06	-11																					700		
650		-01	-04	213	13																																		650		
600	12.9	-08	-13	193	09	12.9	-07	-16	213	24	130	-07	-27	230	30	130	-11	-18																					600		
550		-18	-23	180	07	-16	-24	209	28																														550		
500	17.2	-29	-35	172	11	17.2	-27	-35	211	22	173	-28	-37	219	39	17.3	-31	-39																					500		
450		-41		173	14																																		450		
400	22.2	-48		194	15	22.2	-48		208	20	223	-49		221	75	223	-49																						400		
350		-56		192	11				204	20		-57		221	69		-56																						350		
300	28.4	-61		223	13	28.4	-58		217	26	285	-64		224	55	285	-57																						300		
250		-59		233	21				213	25		-61		235	42		-55																						250		
200	37.1	-54		242	21	37.1	-51		211	23	371	-54		236	40	373	-50																						200		
170		-53		245	25				237	24		-54		249	28		-49																						170		
150		-56		245	25				223	28	434	-57		251	27		-54																						150		
130		-59		240	33				223	29		-60		226	37		-57																						130		
110		-60		252	38				239	29							-60																						110		
100	52.0	-61		268	40	52.3	-58		238	25							-61																						100		
90		-63							230	33							-63																						90		
80		-64							231	34							-67																						80		
70																	-71																						70		
60																																									

STATION LERWICK										STORNOWAY										LEUCHARS										ALDERGROVE										LIVERPOOL										DOWNHAM MARKET										LARKHILL										CAMBORNE										VALENTIA																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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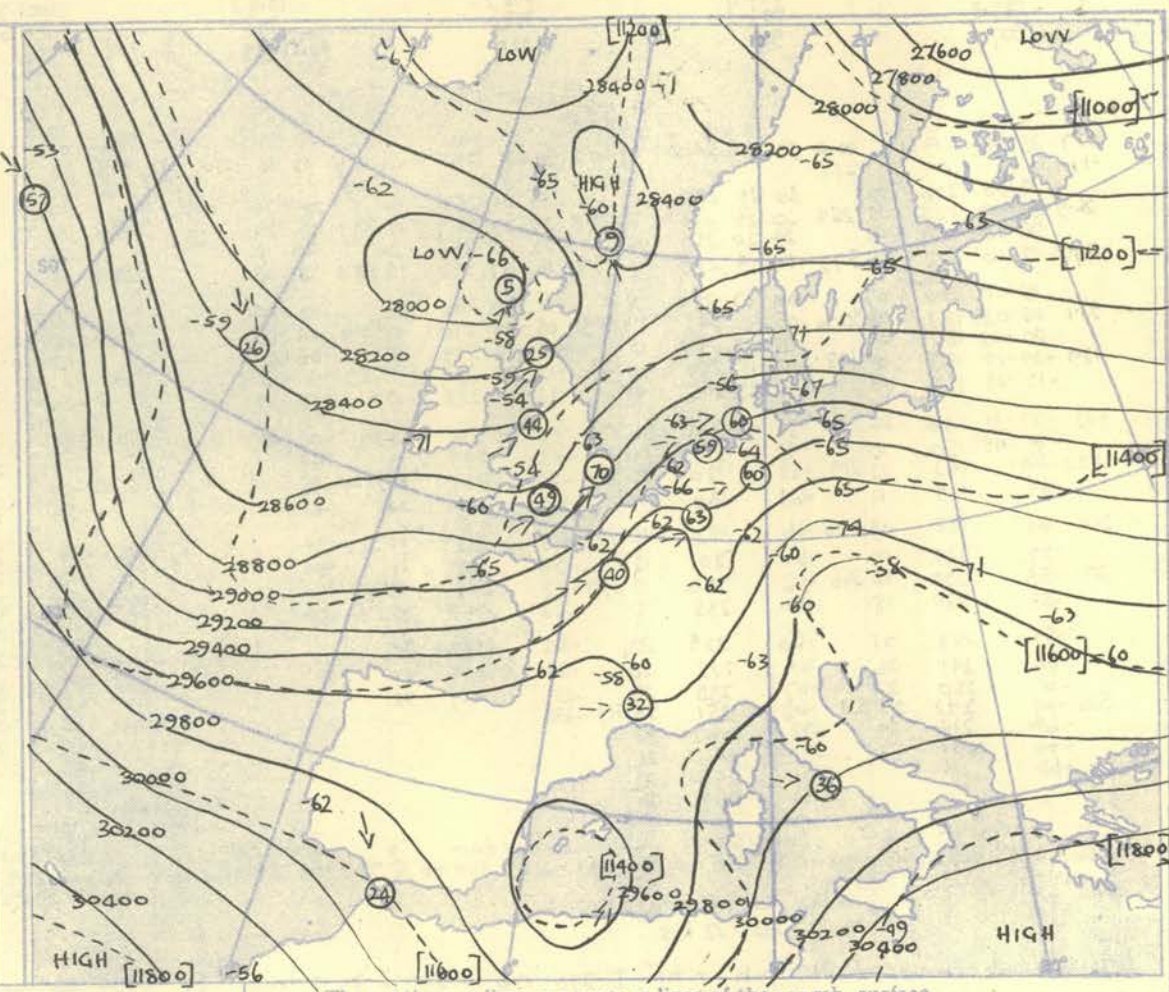
HEIGHTS IN FEET, TEMPERATURES (Dry bulb and Dew Point), DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



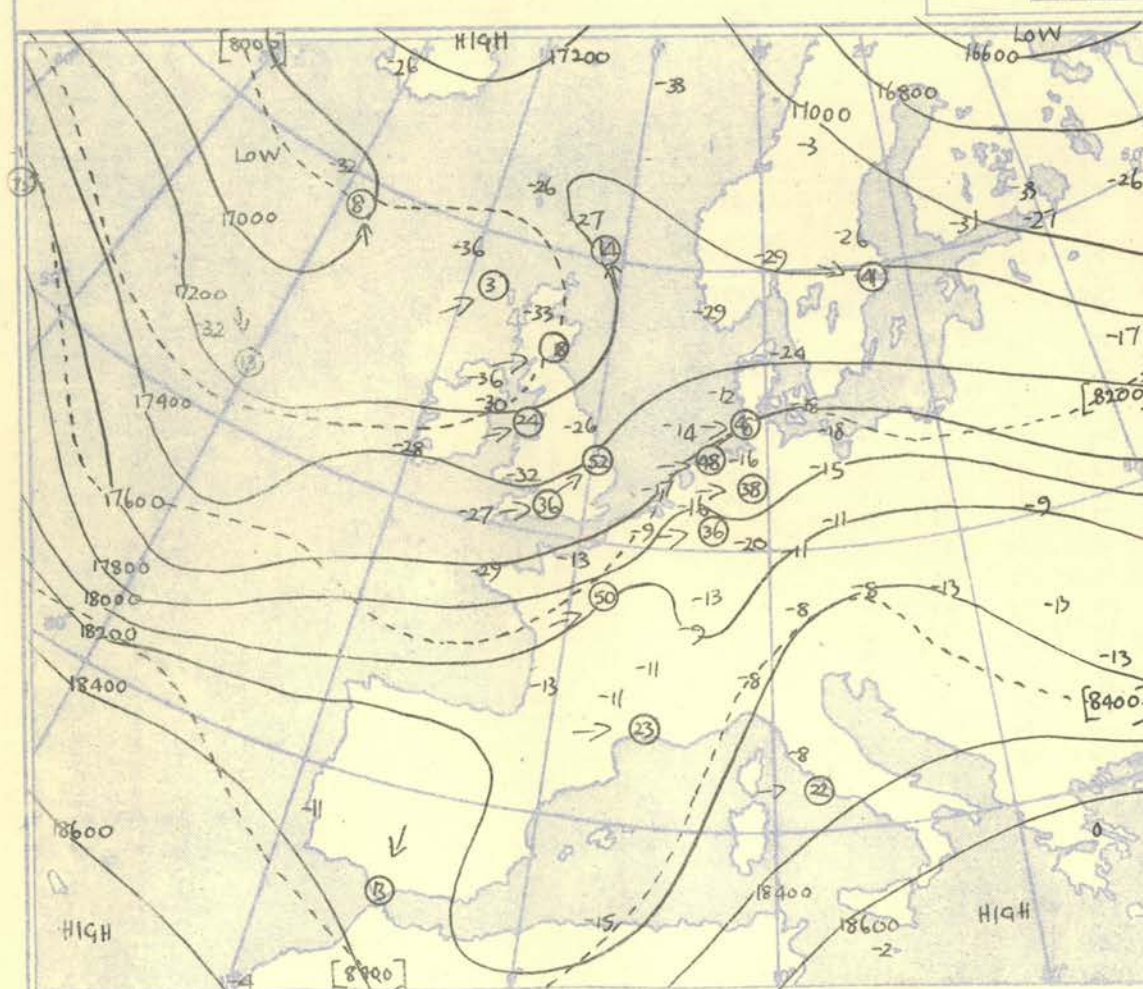
The continuous lines are contour lines of the 700 mb. surface
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

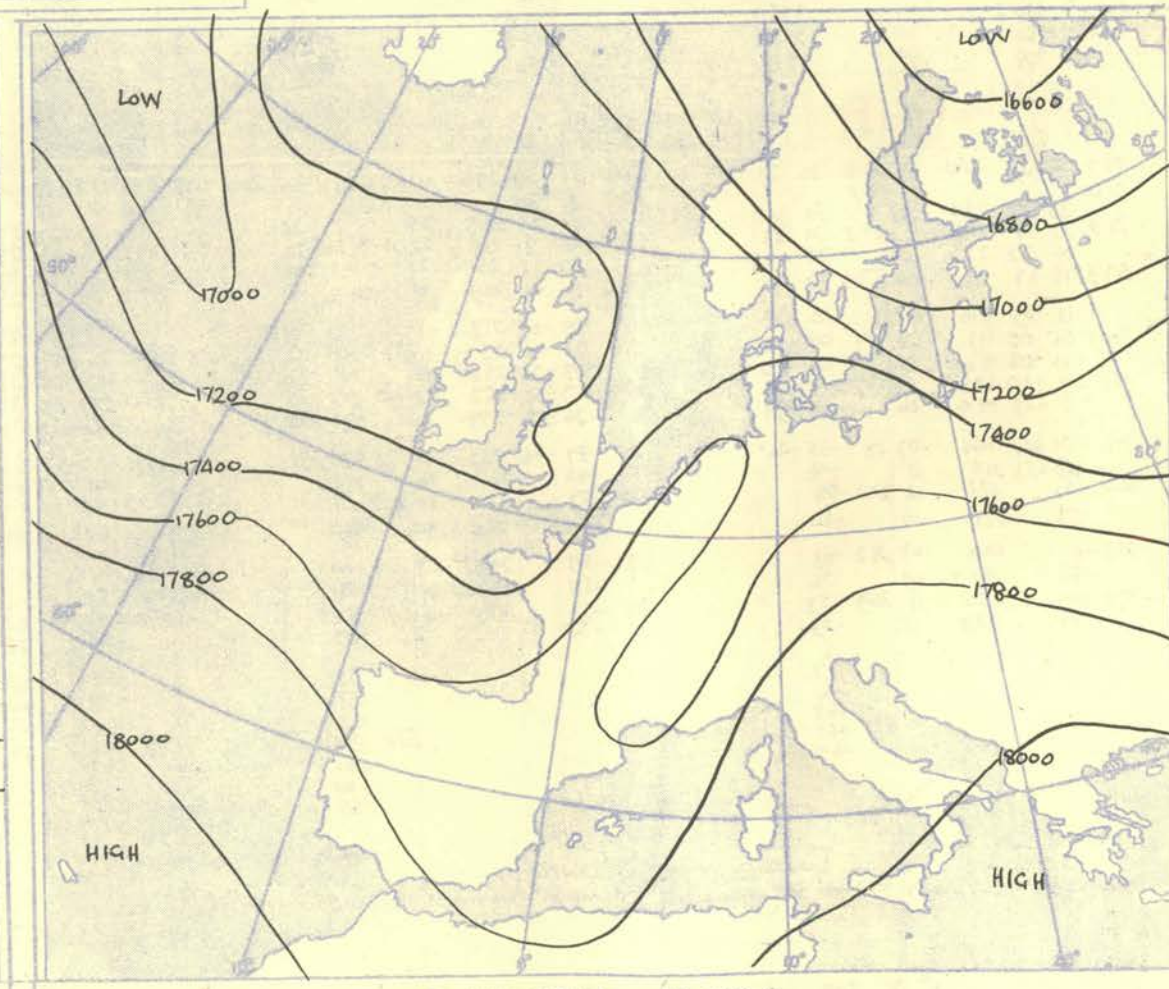
100 80 60 40 20 10 0 knots



The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500-300 mb



The continuous lines are contour lines of the 500 mb. surface
The dotted lines are isopleths of the thickness of the layer 700-500 mb.



Isopleths of Thickness 500-1000 mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

[illegible]

DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

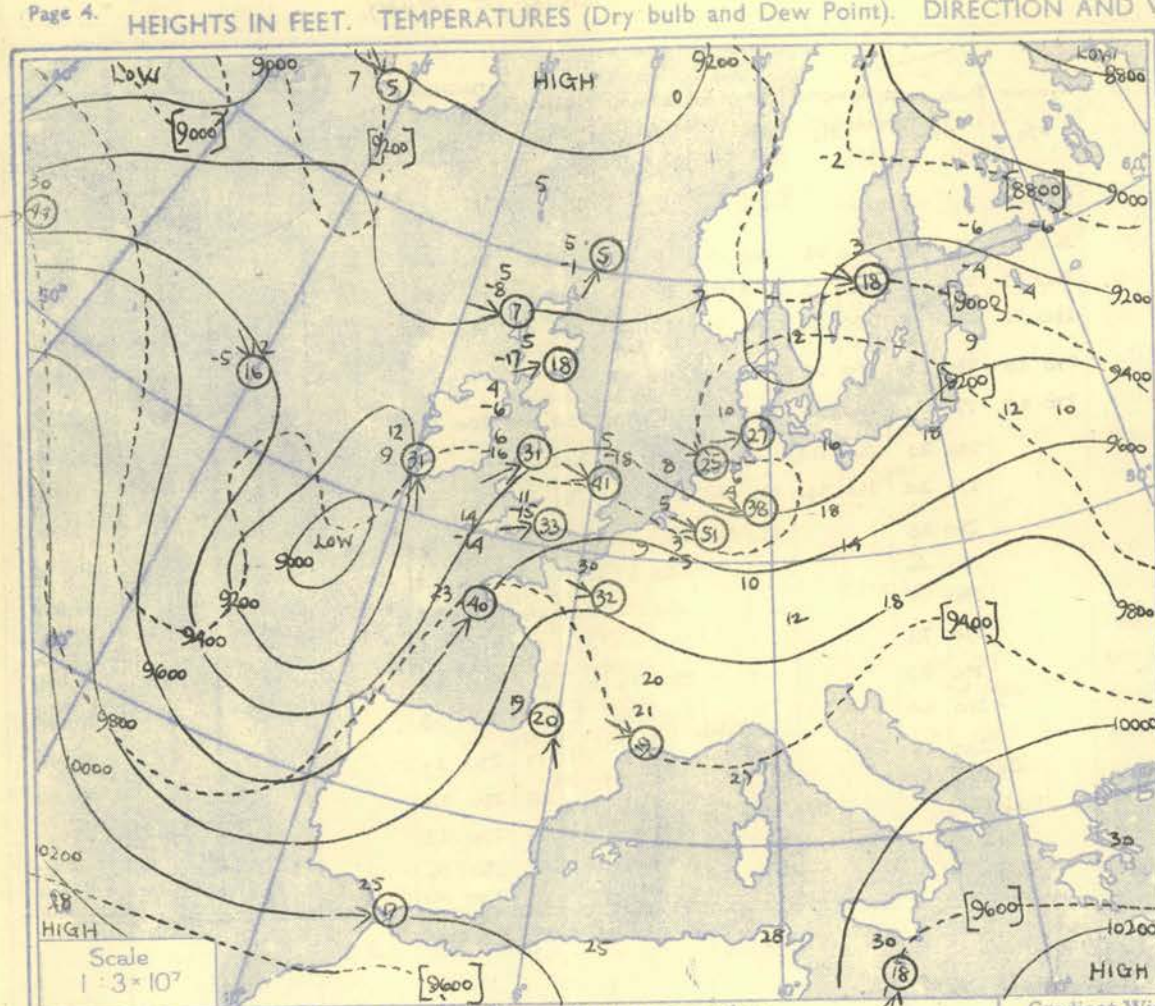
Place	lympne		Shoeburyness		lympne		heerning		Larkhill		heernick		Downham Market				Place
Time	09h.		11h.		14h.		1415h		16h.		21h.		21h.				Time
Type																	Type
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet
Surf.	260	03	230	11	280	08	260	06	160	03	Calm	130	08				Surf.
1,000	260	27	260	25	240	12	250	06	170	15	240	09	190	15			1,000
2,000	280	38	270	31	250	24	270	21	170	15	250	08	190	14			2,000
3,000	270	40	280	36	250	29	270	10	200	17	250	07	190	18			3,000
4,000	270	45	270	31	260	32	280	09	200	18	250	06	200	21			4,000
5,000			270	32	260	34			210	20	260	06	210	25			5,000
6,000			270	34	260	34	270	23	210	25	270	06	210	27			6,000
8,000			280	35			270	20	230	30	270	06	220	34			8,000
10,000			280	46					240	37	260	03	240	44			10,000
14,000			280	68					250	52	300	06	240	54			14,000
18,000			270	73					250	59	320	07	250	54			18,000
24,000			270	87					270	48	020	09	260	48			24,000
30,000			270	60					270	50	L.V.		270	53			30,000
40,000			230	48									270	29			40,000
50,000			240	30									270	24			50,000
									(60,000)	270	29	270	23				
									(70,000)	270	48	280	16				
									(80,000)	270	55	290	26				

NEPHOSCOPE OBSERVATIONS

[illegible]

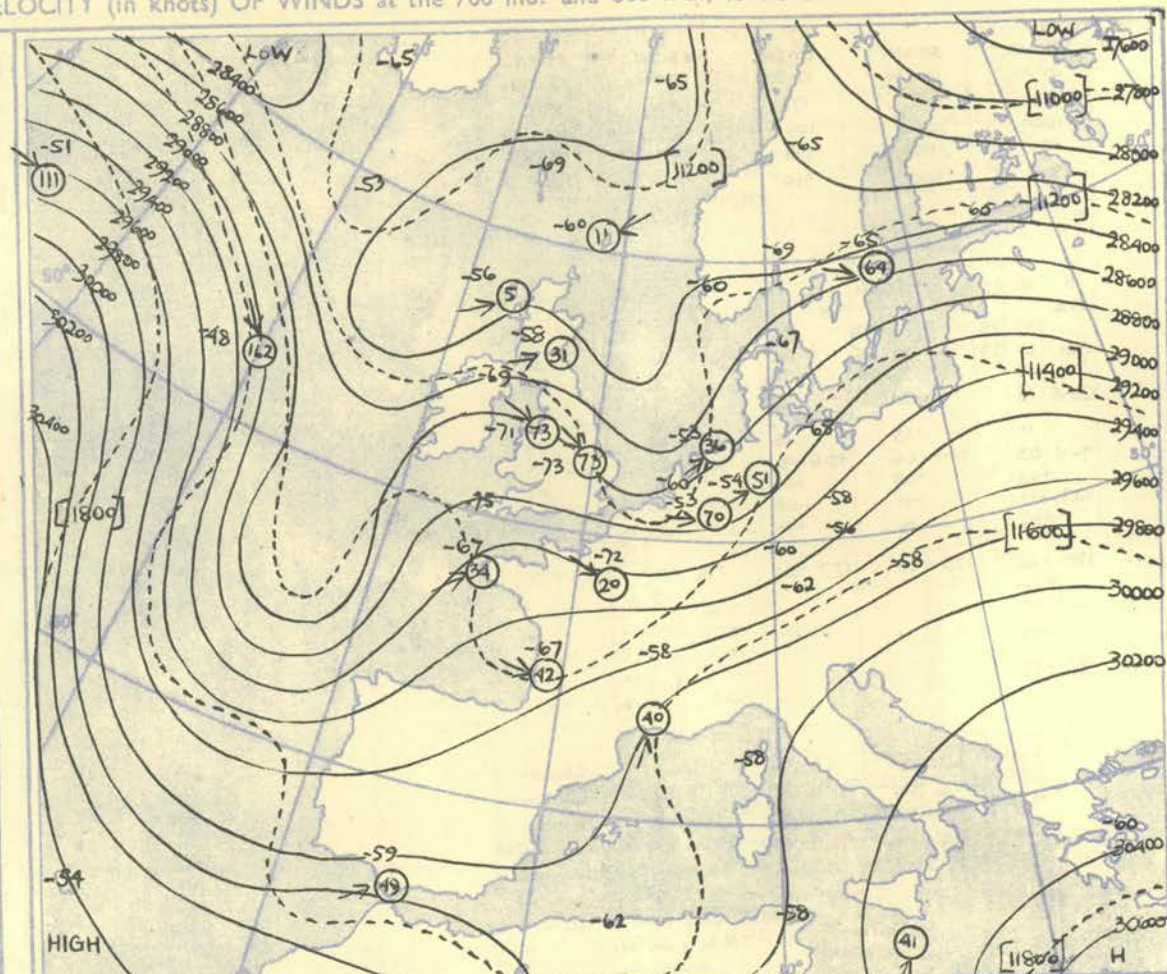
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.

Ship		WEATHER EXPLORER				WEATHER EXPLORER				WEATHER EXPLORER				WEATHER RECORDER				WEATHER RECORDER				WEATHER RECORDER				WEATHER RECORDER				Ship					
Lat/Long		S9°6N. 17°3W.				S9°2N. 18°3W.				S9°2N. 18°SW.				S9°2N. 18°8W.				S2°5N. 20°4W.				S2°4N. 20°3W.				S2°5N. 20°4W.				S2°3N. 20°6W.				Lat/Long	
Pressure	Time	03h.		G.M.T.		09h.		G.M.T.		15h.		G.M.T.		21h.		G.M.T.		03h.		G.M.T.		09h.		G.M.T.		15h.		G.M.T.		21h.		G.M.T.			
	M.S.L.	993	mb			997	mb			1001	mb			1002	mb			1001	mb			1005	mb			1011	mb			1010	mb				
	Surf	993	mb			997	mb			1001	mb			1002	mb			1001	mb			1005	mb			1011	mb			1010	mb				
	Freezing	910	mb			905	mb			905	mb			905	mb			940	mb			915	mb			930	mb			930	mb				
Pressure	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind			
mb	ft./100	°F.	°F.	Dir. Vel.	ft./100	°F.	°F.	Dir. Vel.	ft./100	°F.	°F.	Dir. Vel.	ft./100	°F.	°F.	Dir. Vel.	ft./100	°F.	°F.	Dir. Vel.	ft./100	°F.	°F.	Dir. Vel.	ft./100	°F.	°F.	Dir. Vel.	ft./100	°F.	°F.	Dir. Vel.			
Surf																																			
1000	-1.8	41	35	265 22	8	43	26	285 21	2	42	32		6	43	25	240 20	4	41	36	280 25	112	41	38	330 21	30	42	40	320 20	28	43	36	280 08			
950		37	31	300 37		39	24			38	29			35	20	256 23		33	30	293 29		35	31	260 34		41	38	323 21	28	41	34	252 09			
900	26.2	30	25	300 26	27.2	31	20		282	31	28		286	31	17	256 20	29.8	26	25	297 31	29.1	29	25	360 32	30.9	28	27	326 24	30.5	34	27	260 09			
850		23	18	303 20		23	16			25	17			24	13	257 14		19	17	301 28		23	18	360 34		21	21	334 23	20	14	234 13				
800	56.6	18	10	298 10	57.6	20	02		58.6	19	09	No	59.0	18	00	258 12	58.3	13	12	311 26	59.5	18	12	360 34	61.1	16	14	334 16	60.7	14	08	236 14			
750		14	08	L.V.		14	18			13	03	winds		12	21	259 11		07	03	331 24		11	04	360 31		10	06	315 15		16	09	254 16			
700	90.2	06	12	163 09	91.3	06	25		92.2	05	06	available		05	30	267 08	91.6	00	02	347 18	93.0	04	04	360 32	94.5	02	05	297 16	94.5	13	14	279 19			
650		02	25	155 09		00	29			03	15			02	33	251 04		08	14	342 18		03	13	360 30		04	16	290 18		08	31	289 23			
600	128	11	33	144 09	129	08	38		130	11	25		180	10	46	178 03	129	16	26	326 15	131	11	21	360 22	132	08	27	293 30	133	01	12	288 32			
550		21	39	133 09		18	47			20	37	Gyro		19	59	148 03		25	35	307 08		21	31	360 15		13	31	306 45		00	08	308 50			
500	170	32	48	128 08	172	28	50		173	28	49	u/s.		27	59	123 07	171	32	43	302 13	173	30	41	360 16	175	21	37	312 60	177	07	13	310 67			
450		44		120 11		38	55			37	58			37	60	144 12		39	51	268 27		39	51	360 42		26	40	318 75		16	22	308 84			
400	220	54		110 20	222	60			223	48				37	60	285 33	221	49		268 24	224	40	54	350 66	227	34	44	322 90	230	26	33	320 90			
350		67				56				48				45		315 72		57		273 21		44		340 90		37	49	324 136		38	44	310 93			
300	281	62			284	59			285	53				54		318 86	283	59		299 26	287	48		330 100	291	48		325 162	294	52		312 23			
250		59		105 12		53				53				60		302 66		55		303 31		54		320 84		64		334 159		67		312 54			
200	368	55		L.V.	372	53			373	55				59		302 51		53		314 33	375	56		300 72	377	70		339 108	379	76		318 26			
170		58		258 11		54				56				63		300 46		53		316 31		55		310 54		63		328 63		78					
150		60		268 13		54				54				63		297 51		56		322 34		56		310 48		63		325 54		74					
130		61		266 15		55				55				62		294 46		57		315 30		59		310 51		63		325 46				150			
110		61		255 18		60				58				62		294 27		57		315 28		63		310 42		65		325 39				130			
100	516	63		251 24	521	63			522	60				65		293 30	520	57				65		310 24	523	66		325 38	521	74		110			
90		66		253 29		65				60				68		285 44						64					67		325 37		73		100		
80		68		263 35		66				60				67		287 45						64					67				75		90		
70		69		228 36		67				60				68								62					68				76		80		
60	(550 mb)	70		254 33						63				68			450-390mb. 31°										65				76		70		
				266 30																													60		
Tropopause		I 345mb. -68° 25,000'				I 368mb. -59° 23,800'				II 384mb. -51° 23,000'				II 248mb. -60° 32,800'				II 334mb. -59° 25,900'								II 229mb. -72° 34,900'				I 221mb. -75° 36,000'				Tropopause	

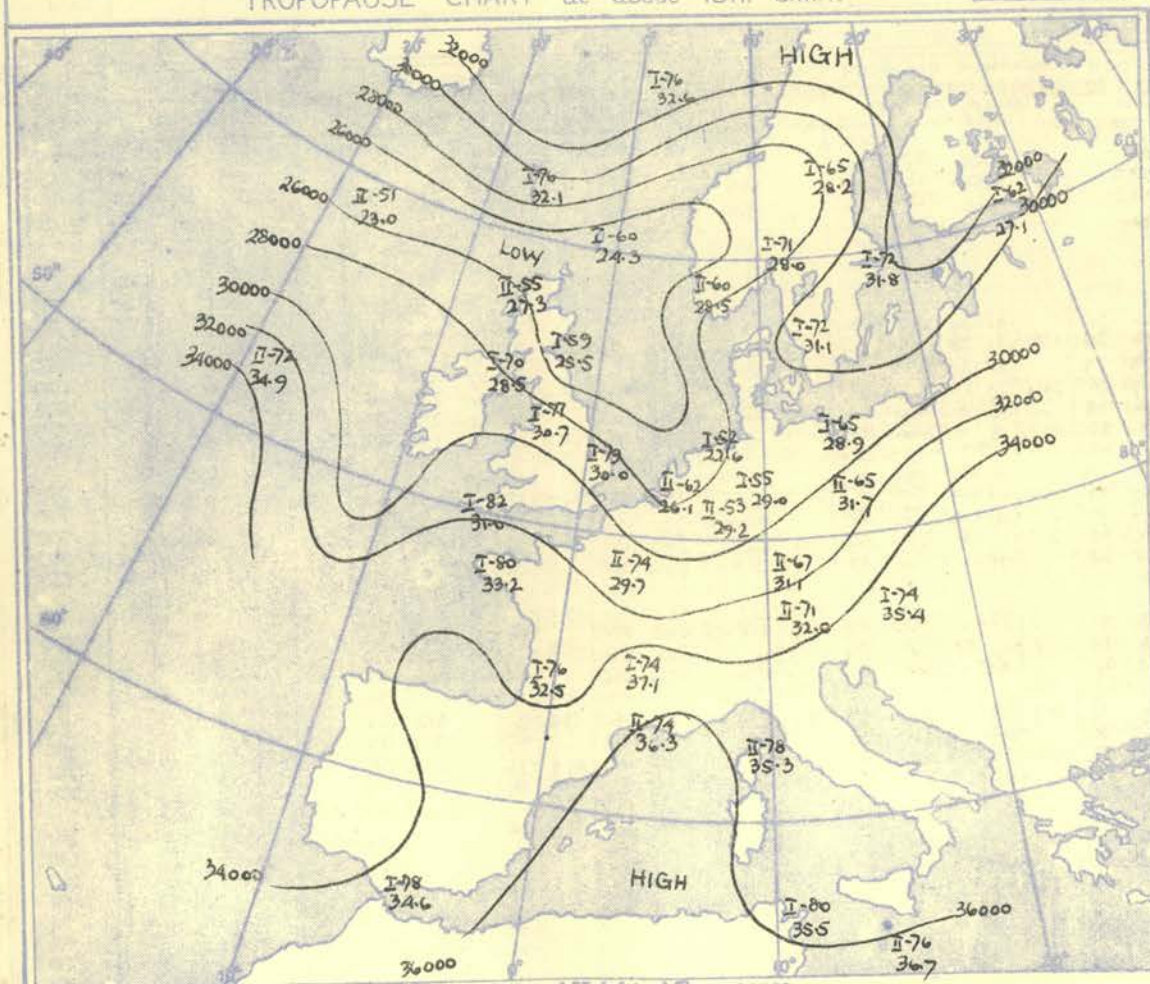


Gradient Wind Scale for Contours at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 20 10 5 knots



TROPOPAUSE CHART at about 15h. G.M.T.

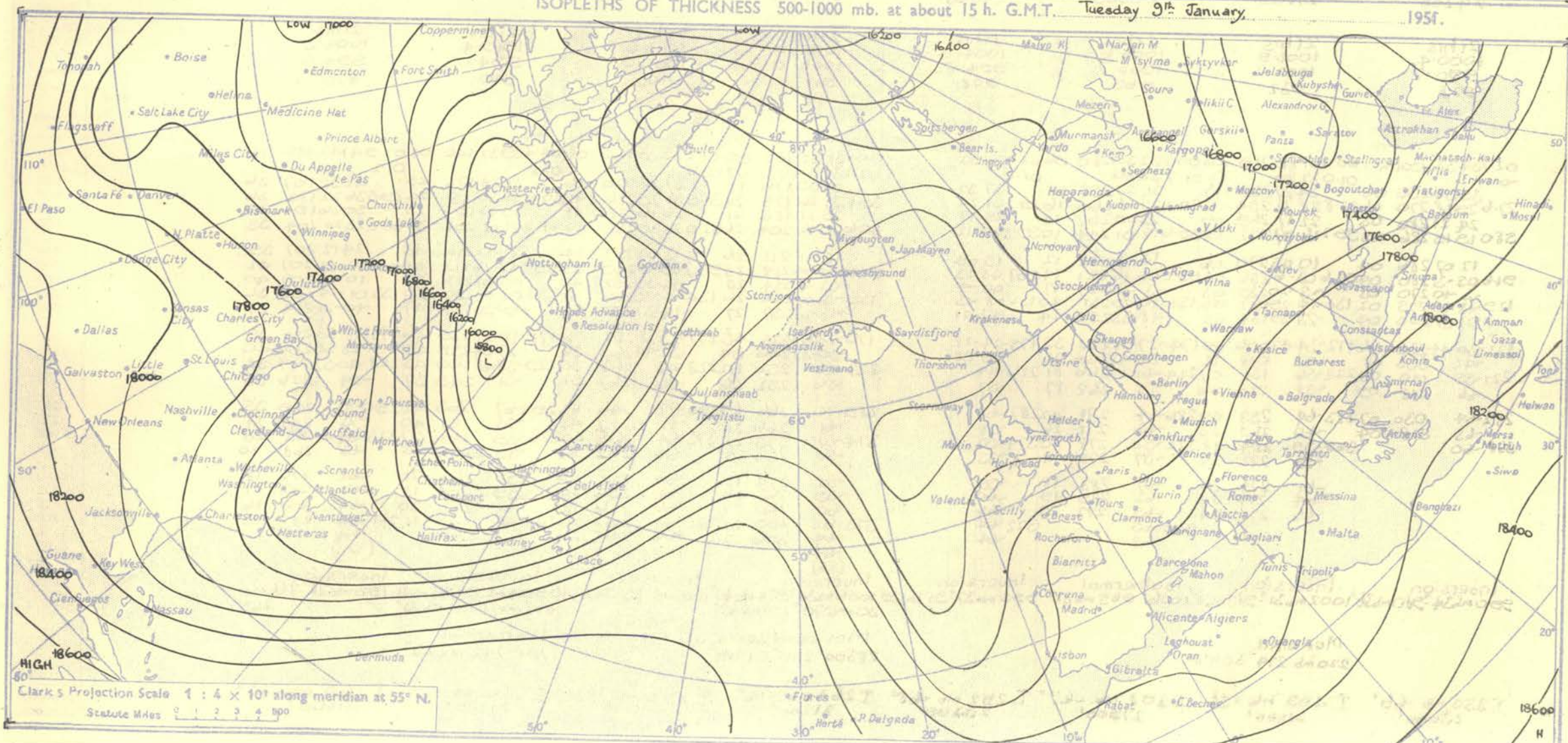
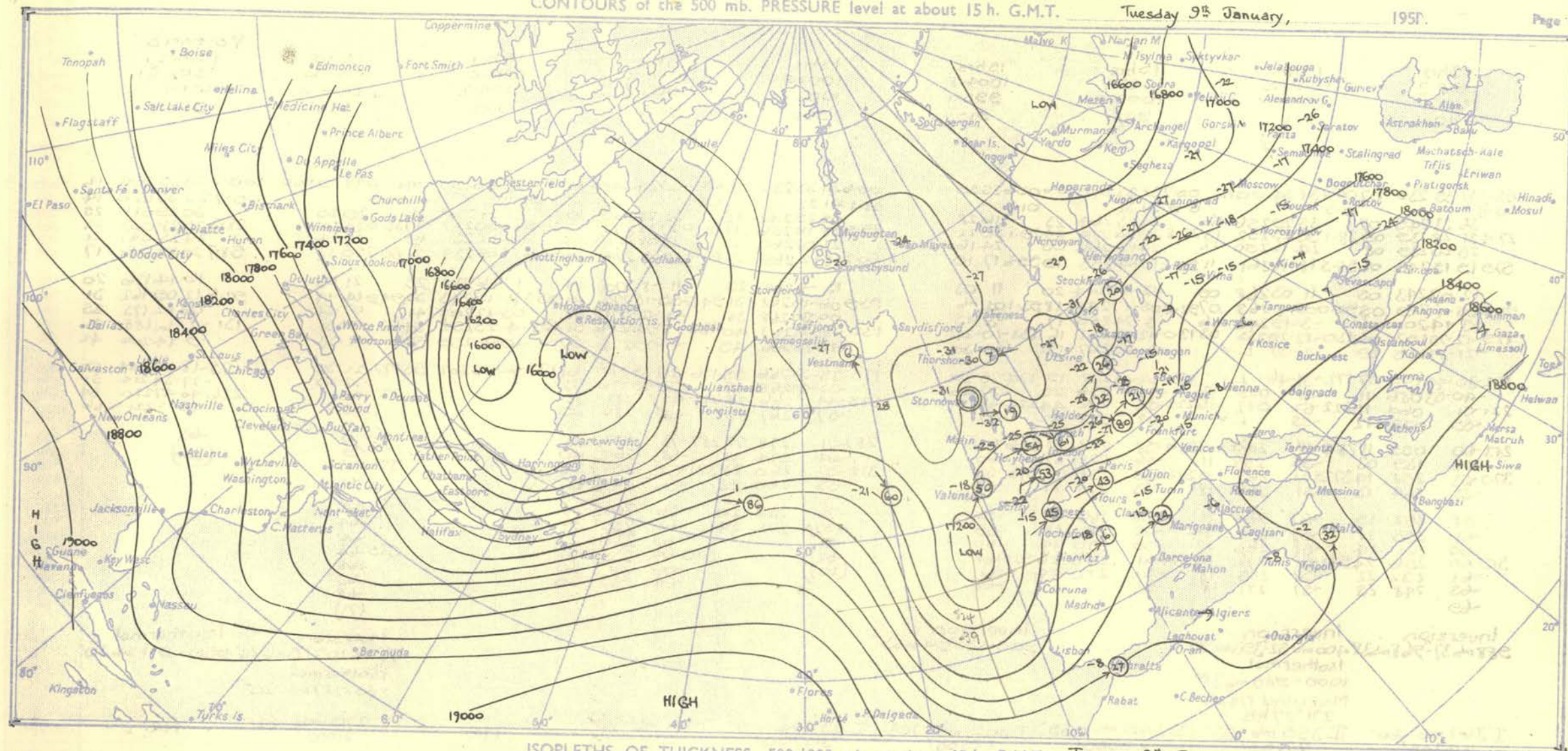


NOTES ON THE AEROLOGICAL SITUATION.

A deepening depression southwest of the Scillies seemed to be associated with a jet stream which moved quickly eastwards across the central Atlantic. The depression appeared to travel south-eastwards near the left exit of the jet. The jet veered as it moved east. Late in the day warm air from the Atlantic appeared to be over-riding the depression at high levels and it began to fill.

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NELSON K. JOHNSON, K.C.B., D.Sc., Director.



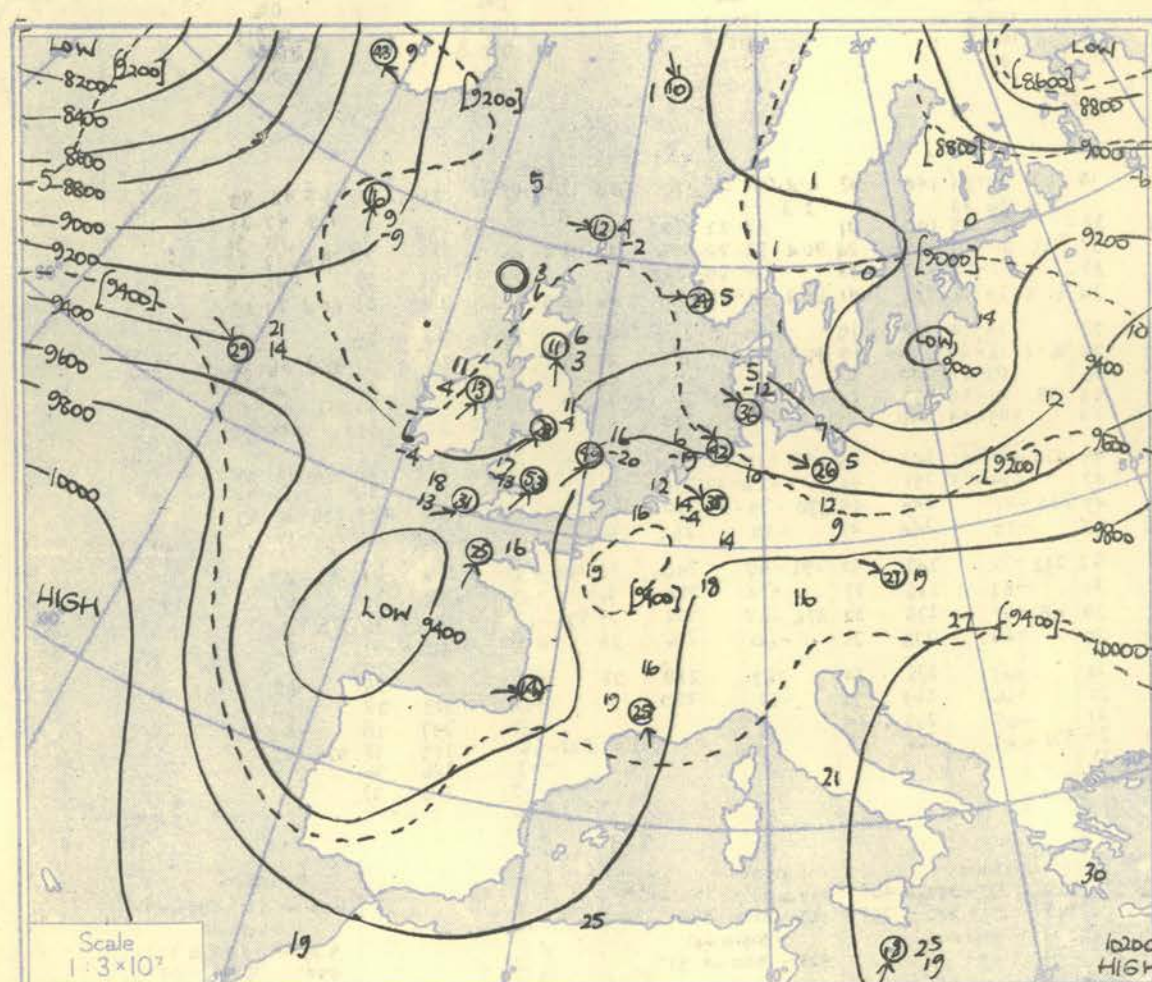
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	Valencia	STATION
Time	15hrs	15hrs	15hrs	15hrs	15hrs	15hrs	15hrs	15hrs	15hrs	Time
M.S.L.	998.2	1001.2	1003.7	1004.8	1005.9	1012.2	1011.0	1007.0	1002.6	M.S.L.
Surf	988.1	999.6	1002.8	995.1	1005.8	1007.8	994.7	996.3	1001	Surf
Freezing	910	918	927	913	930	946	900	890	970	Freezing
Pressure	mb	mb	mb	mb	mb	mb	mb	mb	mb	Pressure
Height	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	Height
Temp.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	Temp.
Dew	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	Dew
Wind	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Wind
Dir.	°	°	°	°	°	°	°	°	°	Dir.
Vel.	knots	knots	knots	knots	knots	knots	knots	knots	knots	Vel.
Pressure	mb	mb	mb	mb	mb	mb	mb	mb	mb	Pressure
Surf	02.73	02.00	00.23	00.26	00.64	01.23	04.41	04.02	00.73	Surf
1000	10.5	0.3	0.9	0.13	02.1	03.2	3.5	01.9	0.7	1000
950	36	35	37	36	34	33	38	35	35	950
900	27.4	28.1	28.8	28.8	29.9	28.1	30.9	28.3	28.3	900
850	25	25	25	25	23	23	26	24	24	850
800	57.9	15	15	15	60.2	18	61.4	58.7	58.7	800
750	12	07	12	11	13	4	17	16	16	750
700	91.4	08	08	08	93.9	06	94.9	92.6	92.6	700
650	3	14	3	3	00	30	03	13	13	650
600	12.9	12	12	13	132	8	133	131	131	600
550	21	34	21	21	16	26	43	17	17	550
500	172	30	172	173	175	25	177	175	175	500
450	40	08	40	40	225	44	40	226	226	450
400	22	51	22	22	57	26	57	55	55	400
350	59	07	59	59	57	26	59	59	59	350
300	283	60	284	267	287	71	289	289	289	300
250	56	13	56	56	64	42	64	63	63	250
200	370	53	372	373	372	37	372	372	372	200
170	53	26	53	53	55	26	55	55	55	170
150	58	26	57	55	56	25	56	56	56	150
130	61	25	58	57	57	24	61	64	64	130
110	60	24	58	59	61	24	63	64	64	110
100	51.9	25	52	52	62	24	64	64	64	100
90	62	22	57	62	64	24	64	64	64	90
80	63	25	57	63	64	24	64	64	64	80
70	69									70
60										60
Inversion 988mb 37°-968mb 38° Isothermal 400mb 52°-393mb 50° Isothermal 1000-980mb 38° Max wind 174mb 271° 27 kts										
Inversion 995mb 35°-944mb 36°										
Inversion 787mb 20°-773mb 24° Isothermal 800-787mb 20°										
Isothermal 950-911mb 30°										
Tropopause	I 362 mb -60° 24300'	I 350 mb -55° 27300'	I 345 mb -59° 25500'	I 352 mb -70° 28500'	I 271 mb -71° 30700'	I 281 mb -79° 30000'	NR	I 270 mb -82° 31000'	NR	Tropopause
STATION	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE		STATION
Time	21hrs	21hrs	21hrs	21hrs	21hrs	21hrs	21hrs	21hrs		Time
M.S.L.	1000.4	1003.9	1006.6	1004.5	1008.0	1013.5	1010.4	1004.5		M.S.L.
Surf	990.2	1002.2	1005.7	994.8	1006.0	1009.0	994.0	994.0		Surf
Freezing	928	932	965	908	917	910	910	870		Freezing
Pressure	mb	mb	mb	mb	mb	mb	mb	mb		Pressure
Height	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100		Height
Temp.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.		Temp.
Dew	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.		Dew
Wind	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.		Wind
Dir.	°	°	°	°	°	°	°	°		Dir.
Vel.	knots	knots	knots	knots	knots	knots	knots	knots		Vel.
Pressure	mb	mb	mb	mb	mb	mb	mb	mb		Pressure
Surf	02.73	00.43	00.23	00.26	00.64	01.23	04.41	04.02		Surf
1000	0.1	01.0	01.7	01.2	02.2	03.3	02.8	01.2		1000
950	35	34	32	31	37	30	31	42		950
900	27.6	28.8	28.8	28.8	30.1	26	30.8	28.3		900
850	24	21	22	22	35	21	25	24		850
800	58.0	15	15	15	60.6	20	61.2	58.7		800
750	12	07	12	11	13	4	17	16		750
700	91.6	08	08	08	94.4	06	94.9	92.6		700
650	3	14	3	3	00	30	03	13		650
600	12.9	12	12	13	132	8	133	131		600
550	21	34	21	21	16	26	43	17		550
500	172	30	172	173	175	25	177	175		500
450	42	08	40	40	225	44	40	226		450
400	22	51	22	22	57	26	57	55		400
350	59	07	59	59	57	26	59	59		350
300	282	64	283	267	287	71	289	289		300
250	56	13	56	56	64	42	64	63		250
200	368	53	372	373	372	37	372	372		200
170	53	26	53	53	55	26	55	55		170
150	58	26	57	55	56	25	56	56		150
130	61	25	58	57	57	24	61	64		130
110	60	24	58	59	61	24	63	64		110
100	51.9	25	52	52	62	24	64	64		100
90	62	22	57	62	64	24	64	64		90
80	63	25	57	63	64	24	64	64		80
70	69									70
60										60
Inversion 990mb 34°-980mb 36° Isothermal 1002mb 31°-985mb 32° Isothermal 1006-965mb 32° Max wind 220mb 274° 30 kts										
Inversion 995mb 35°-944mb 36°										
Inversion 787mb 20°-773mb 24° Isothermal 800-787mb 20°										
Isothermal 950-911mb 30°										
Tropopause	I 350 mb -66° 25000'	I 405 mb -56° 22000'	I 308 mb -67° 27900'	I 292 mb -68° 29200'	I 268 mb -74° 31200'	I 250 mb -83° 32700'	I 265 mb -79° 31700'	I 265 mb -82° 31600'		Tropopause

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA			
Pressure mb	Time M.S.L. Surf (Freezing)	03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.					
		Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew						
1000	03h	392.1	mb	392.1	mb	1004.2	mb	1004.2	mb	1006.4	mb	1006.4	mb	1001.3	mb	1001.3	mb	1004.3	mb	1004.3	mb	1001.9	mb	1001.9	mb	1008.9	mb	1008.9	mb	1003.4	mb	1003.4	mb	1005.5	mb	1005.5	mb
950	03h	392.3	mb	392.3	mb	1003.2	mb	1003.2	mb	1005.7	mb	1005.7	mb	991.9	mb	991.9	mb	1002.2	mb	1002.2	mb	1007.5	mb	1007.5	mb	992.4	mb	992.4	mb	992.8	mb	992.8	mb	1004.4	mb	1004.4	mb
900	03h	392.7	mb	392.7	mb	1003.2	mb	1003.2	mb	1005.7	mb	1005.7	mb	991.9	mb	991.9	mb	1002.2	mb	1002.2	mb	1007.5	mb	1007.5	mb	992.4	mb	992.4	mb	992.8	mb	992.8	mb	1004.4	mb	1004.4	mb
850	03h	392.7	mb	392.7	mb	1003.2	mb	1003.2	mb	1005.7	mb	1005.7	mb	991.9	mb	991.9	mb	1002.2	mb	1002.2	mb	1007.5	mb	1007.5	mb	992.4	mb	992.4	mb	992.8	mb	992.8	mb	1004.4	mb	1004.4	mb
800	03h	392.7	mb	392.7	mb	1003.2	mb	1003.2	mb	1005.7	mb	1005.7	mb	991.9	mb	991.9	mb	1002.2	mb	1002.2	mb	1007.5	mb	1007.5	mb	992.4	mb	992.4	mb	992.8	mb	992.8	mb	1004.4	mb	1004.4	mb
750	03h	392.7	mb	392.7	mb	1003.2	mb	1003.2	mb	1005.7	mb	1005.7	mb	991.9	mb	991.9	mb	1002.2	mb	1002.2	mb	1007.5	mb	1007.5	mb	992.4	mb	992.4	mb	992.8	mb	992.8	mb	1004.4	mb	1004.4	mb
700	03h	392.7	mb	392.7	mb	1003.2	mb	1003.2	mb	1005.7	mb	1005.7	mb	991.9	mb	991.9	mb	1002.2	mb	1002.2	mb	1007.5	mb	1007.5	mb	992.4	mb	992.4	mb	992.8	mb	992.8	mb	1004.4	mb	1004.4	mb
650	03h	392.7	mb	392.7	mb	1003.2	mb	1003.2	mb	1005.7	mb	1005.7	mb	991.9	mb	991.9	mb	1002.2	mb	1002.2	mb	1007.5	mb	1007.5	mb	992.4	mb	992.4	mb	992.8	mb	992.8	mb	1004.4	mb	1004.4	mb
600	03h	392.7	mb	392.7	mb	1003.2	mb	1003.2	mb	1005.7	mb	1005.7	mb	991.9	mb	991.9	mb	1002.2	mb	1002.2	mb	1007.5	mb	1007.5	mb	992.4	mb	992.4	mb	992.8	mb	992.8	mb	1004.4	mb	1004.4	mb
550	03h	392.7	mb	392.7	mb	1003.2	mb	1003.2	mb	1005.7	mb	1005.7	mb	991.9	mb	991.9	mb	1002.2	mb	1002.2	mb	1007.5	mb	1007.5	mb	992.4	mb	992.4	mb	992.8	mb	992.8	mb	1004.4	mb	1004.4	mb
500	03h	392.7	mb	392.7	mb	1003.2	mb	1003.2	mb	1005.7	mb	1005.7	mb	991.9	mb	991.9	mb	1002.2	mb	1002.2	mb	1007.5	mb	1007.5	mb	992.4	mb	992.4	mb	992.8	mb	992.8	mb	1004.4	mb	1004.4	mb
450	03h	392.7	mb	392.7	mb	1003.2	mb	1003.2	mb	1005.7	mb	1005.7	mb	991.9	mb	991.9	mb	1002.2	mb	1002.2	mb	1007.5	mb	1007.5	mb	992.4	mb	992.4	mb	992.8	mb	992.8	mb	1004.4	mb	1004.4	mb
400	03h	392.7	mb	392.7	mb	1003.2	mb	1003.2	mb	1005.7	mb	1005.7	mb	991.9	mb	991.9	mb	1002.2	mb	1002.2	mb	1007.5	mb	1007.5	mb	992.4	mb	992.4	mb	992.8	mb	992.8	mb	1004.4	mb	1004.4	mb
350	03h	392.7	mb	392.7	mb	1003.2	mb	1003.2	mb	1005.7	mb	1005.7	mb	991.9	mb	991.9	mb	1002.2	mb	1002.2	mb	1007.5	mb	1007.5	mb	992.4	mb	992.4	mb	992.8	mb	992.8	mb	1004.4	mb	1004.4	mb
300	03h	392.7	mb	392.7	mb	1003.2	mb	1003.2	mb	1005.7	mb	1005.7	mb	991.9	mb	991.9	mb	1002.2	mb	1002.2	mb	1007.5	mb	1007.5	mb	992.4	mb	992.4	mb	992.8	mb	992.8	mb	1004.4	mb	1004.4	mb
250	03h	392.7	mb	392.7	mb	1003.2	mb	1003.2	mb	1005.7	mb	1005.7	mb	991.9	mb	991.9	mb	1002.2	mb	1002.2	mb	1007.5	mb	1007.5	mb	992.4	mb	992.4	mb	992.8	mb	992.8	mb	1004.4	mb	1004.4	mb
200	03h	392.7	mb	392.7	mb	1003.2	mb	1003.2	mb	1005.7	mb	1005.7	mb	991.9	mb	991.9	mb	1002.2	mb	1002.2	mb	1007.5	mb	1007.5	mb	992.4	mb	992.4	mb	992.8	mb	992.8	mb	1004.4	mb	1004.4	mb
170	03h	392.7	mb	392.7	mb	1003.2	mb	1003.2	mb	1005.7	mb	1005.7	mb	991.9	mb	991.9	mb	1002.2	mb	1002.2	mb	1007.5	mb	1007.5	mb	992.4	mb	992.4	mb	992.8	mb	992.8	mb	1004.4	mb	1004.4	mb
150	03h	392.7	mb	392.7	mb	1003.2	mb	1003.2	mb	1005.7	mb	1005.7	mb	991.9	mb	991.9	mb	1002.2	mb	1002.2	mb	1007.5	mb	1007.5	mb	992.4	mb	992.4	mb	992.8	mb	992.8	mb	1004.4	mb	1004.4	mb
130	03h	392.7	mb	392.7	mb	1003.2	mb	1003.2	mb	1005.7	mb	1005.7	mb	991.9	mb	991.9	mb	1002.2	mb	1002.2	mb	1007.5	mb	1007.5	mb	992.4	mb	992.4	mb	992.8	mb	992.8	mb	1004.4	mb	1004.4	mb
110	03h	392.7	mb	392.7	mb	1003.2	mb	1003.2	mb	1005.7	mb	1005.7	mb	991.9	mb	991.9	mb	1002.2	mb	1002.2	mb	1007.5	mb	1007.5	mb	992.4	mb	992.4	mb	992.8	mb	992.8	mb	1004.4	mb	1004.4	mb
90	03h	392.7	mb	392.7	mb	1003.2	mb	1003.2	mb	1005.7	mb	1005.7	mb	991.9	mb	991.9	mb	1002.2	mb	1002.2	mb	1007.5	mb	1007.5	mb	992.4	mb	992.4	mb	992.8	mb	992.8	mb	1004.4	mb	1004.4	mb
80	03h	392.7	mb	392.7	mb	1003.2	mb	1003.2	mb	1005.7	mb	1005.7	mb	991.9	mb	991.9	mb	1002.2	mb	1002.2	mb	1007.5	mb	1007.5	mb	992.4	mb	992.4	mb	992.8	mb	992.8	mb	1004.4	mb	1004.4	mb
70	03h	392.7	mb	392.7	mb	1003.2	mb	1003.2	mb	1005.7	mb	1005.7	mb	991.9	mb	991.9	mb	1002.2	mb	1002.2	mb	1007.5	mb	1007.5	mb	992.4	mb	992.4	mb	992.8	mb	992.8	mb	1004.4	mb	1004.4	mb
60	03h	392.7	mb	392.7	mb	1003.2	mb	1003.2	mb	1005.7	mb	1005.7	mb	991.9	mb	991.9	mb	1002.2	mb	1002.2	mb	1007.5	mb	1007.5	mb	992.4	mb	992.4	mb	992.8	mb	992.8	mb	1004.4	mb	1004.4	mb
Inversion.		992mb 35° - 979mb 37°				Inversion.		1003mb 31° - 980mb 38°				Inversion.		1006mb 31° - 974mb 33°				Inversion.		942mb 35° - 909mb 37°				Inversion.		1007mb 35° - 983mb 40°		992mb 37° - 955mb 40°		883 - 82° - 872° - 36°		Isothermal.		823 - 800mb 31°			
Tropopause		I 290mb - 67°		29.100°		I 259mb - 56°				I 307mb - 70°		28.100°		I 308mb - 64°		28.300°		I 282mb - 78°		30.200°		I 255mb - 84°				I 266mb - 78°		31.700°		I 293mb - 72°		I 200mb - 76°		27.800°			
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA			
Pressure mb	Time M.S.L. Surf (Freezing)	09h		G.M.T.		09h		G.M.T.		09h		G.M.T.		09h		G.M.T.		09h		G.M.T.		09h		G.M.T.		09h		G.M.T.		09h		G.M.T.					
		Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew				
1000	09h	1002.2	mb	1002.2	mb	1001.5	mb	1001.5	mb	997.2	mb	997.2	mb	1000.5	mb	1000.5	mb	1001.0	mb	1001.0	mb	1007.7	mb	1007.7	mb	1005.5	mb	1005.5	mb	1005.4	mb	1005.4	mb				
950	09h	992.0	mb	992.0	mb	999.8	mb	999.8	mb	996.3	mb	996.3	mb	990.9	mb	990.9	mb	998.9	mb	998.9	mb	1003.3	mb	1003.3	mb	989.2	mb	989.2	mb	994.7	mb	994.7	mb				
900	09h	930	mb	930	mb	930	mb	930	mb	948	mb	948	mb	932	mb	932	mb	937	mb	937	mb	815	mb	815	mb	819	mb	819	mb	836	mb	836	mb				
850	09h	830	mb	830	mb	830	mb	830	mb	848	mb	848	mb	832	mb	832	mb	837	mb	837	mb	715	mb	715	mb	719	mb	719	mb	736	mb	736	mb				
800	09h	830	mb	830	mb	830	mb	830	mb	848	mb	848	mb	832	mb	832	mb	837	mb	837	mb	715	mb	715	mb	719	mb	719	mb	736	mb	736	mb				
750	09h	830	mb	830	mb	830	mb	830	mb	848	mb	848	mb	832	mb	832	mb	837	mb	837	mb	715	mb	715	mb	719	mb	719	mb	736	mb	736	mb				
700	09h	830	mb	830	mb	830	mb	830	mb	848	mb	848	mb	832	mb	832	mb	837	mb	837	mb	715	mb	715	mb	719	mb	719	mb	736	mb	736	mb				
650	09h	830	mb	830	mb	830	mb	830	mb	848	mb	848	mb	832	mb	832	mb	837	mb	837	mb	715	mb	715	mb	719	mb	719	mb	736	mb	736	mb				
600	09h	830	mb	830	mb	830	mb	830	mb	848	mb	848	mb	832	mb	832	mb	837	mb	837	mb	715	mb	715	mb	719	mb	719	mb	736	mb	736	mb				
550	09h	830	mb	830	mb	830	mb	830	mb	848	mb	848	mb	832	mb	832	mb	837	mb	837	mb	715	mb	715	mb	719	mb	719	mb	736	mb	736	mb				
500	09h	830	mb	830	mb	830	mb	830	mb	848	mb	848	mb	832	mb	832	mb	837	mb	837	mb	715	mb	715	mb	7											

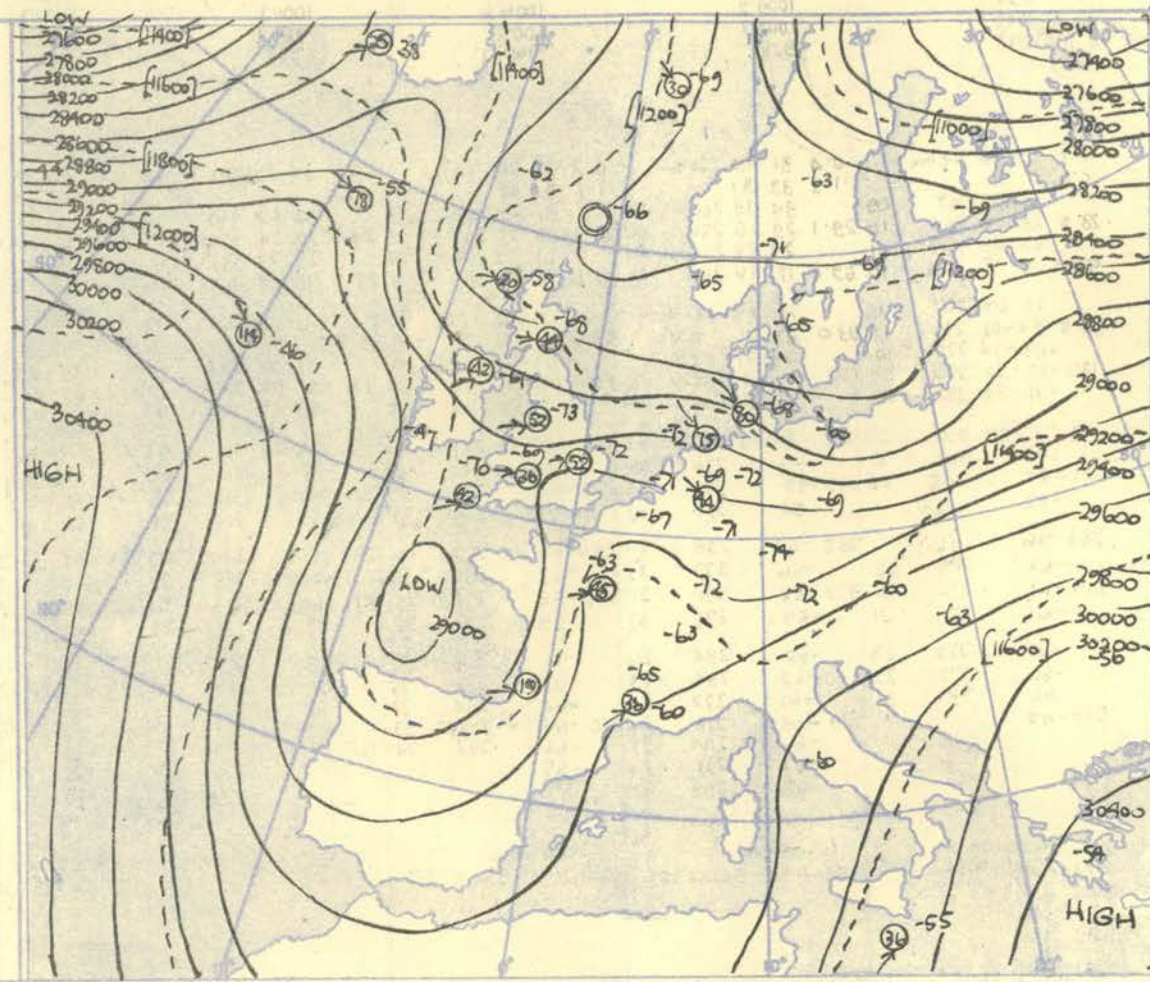
HEIGHTS IN FEET/ TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h. G.M.T.



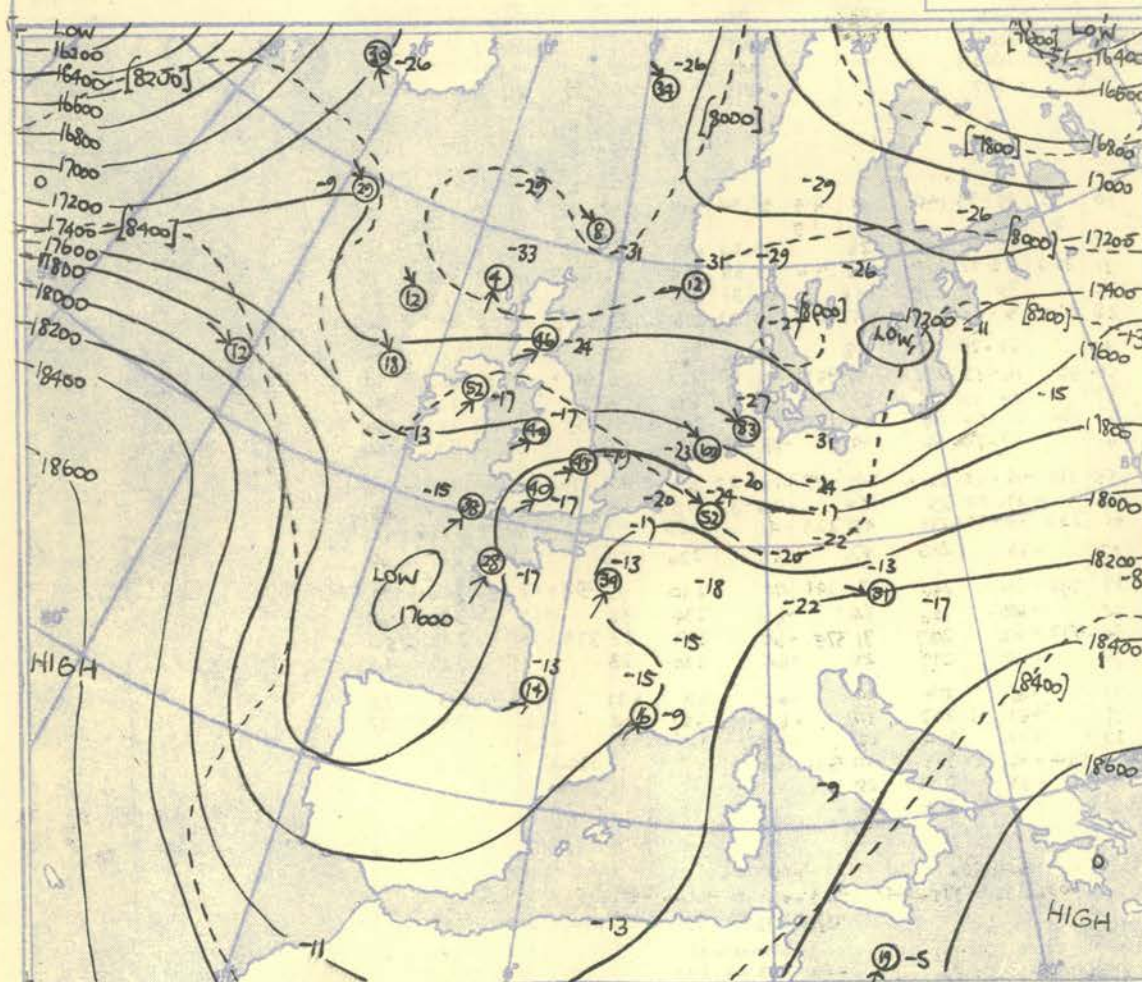
The continuous lines are contour lines of the 700 mb. surface
The dotted lines are isopleths of the thickness of the layer 1000 - 700 mb.

Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. $52\frac{1}{2}^\circ$ N.

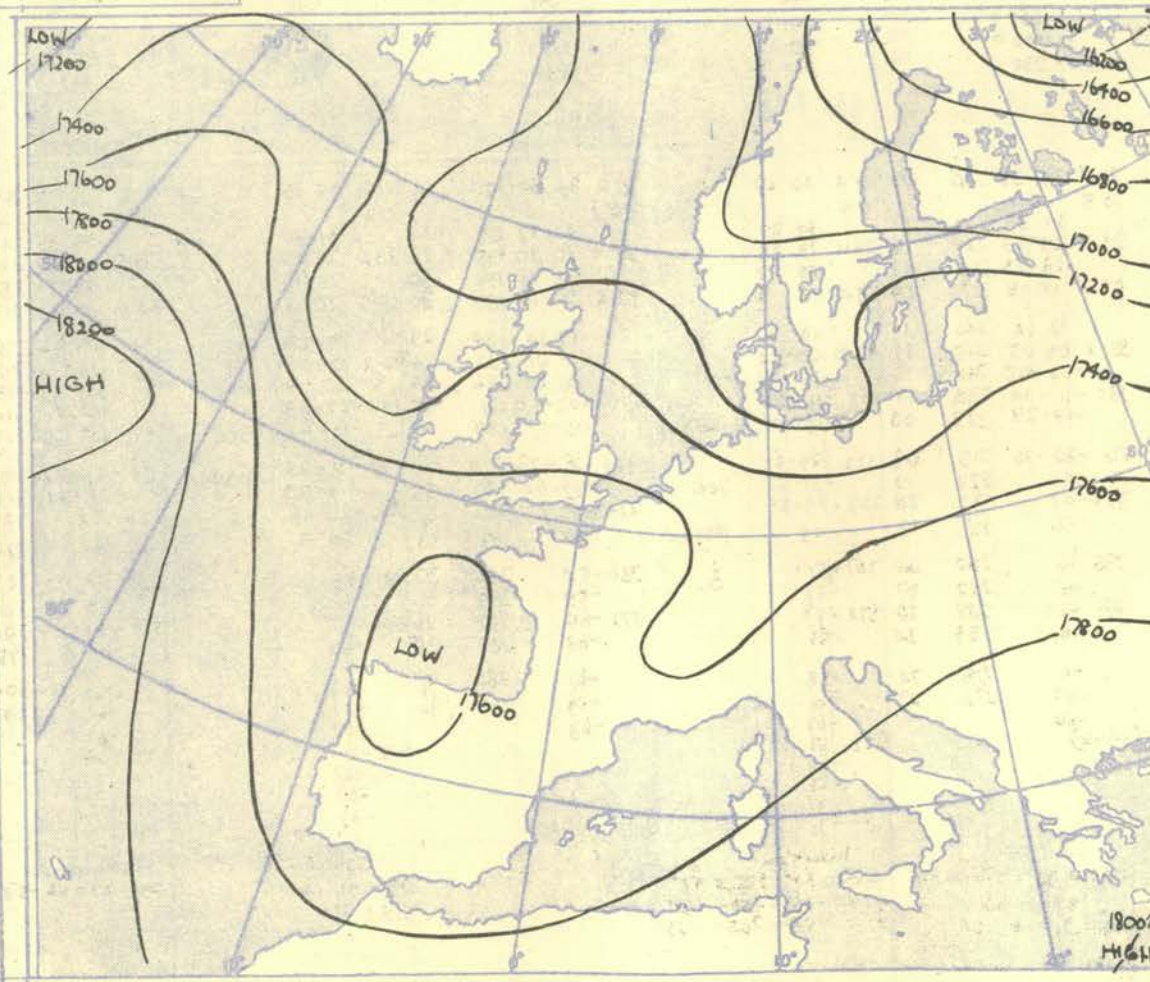
100 80 60 40 20 10 knots



The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 - 300 mb.



The continuous lines are contour lines of the 500 mb. surface
The dotted lines are isopleths of the thickness of the layer 700 - 500 mb.

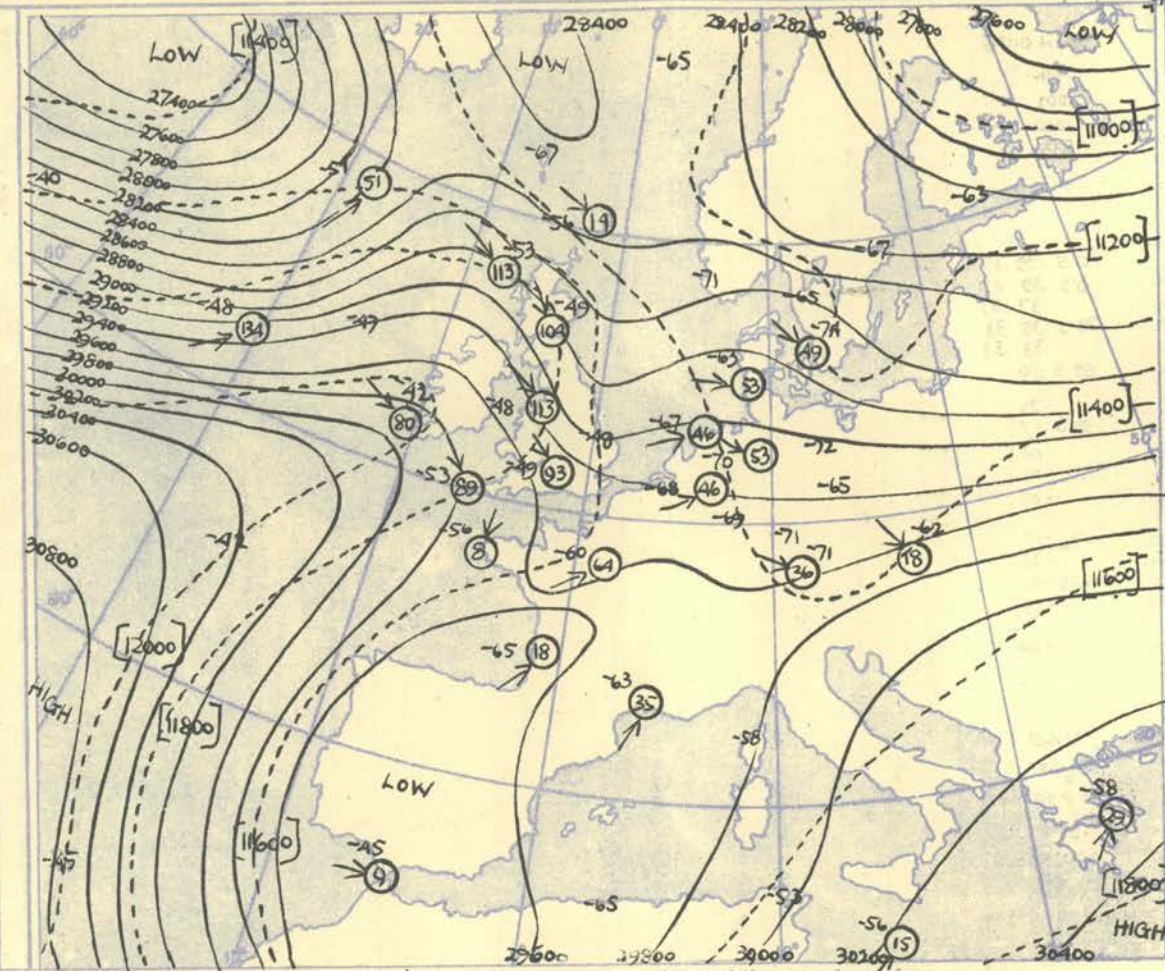
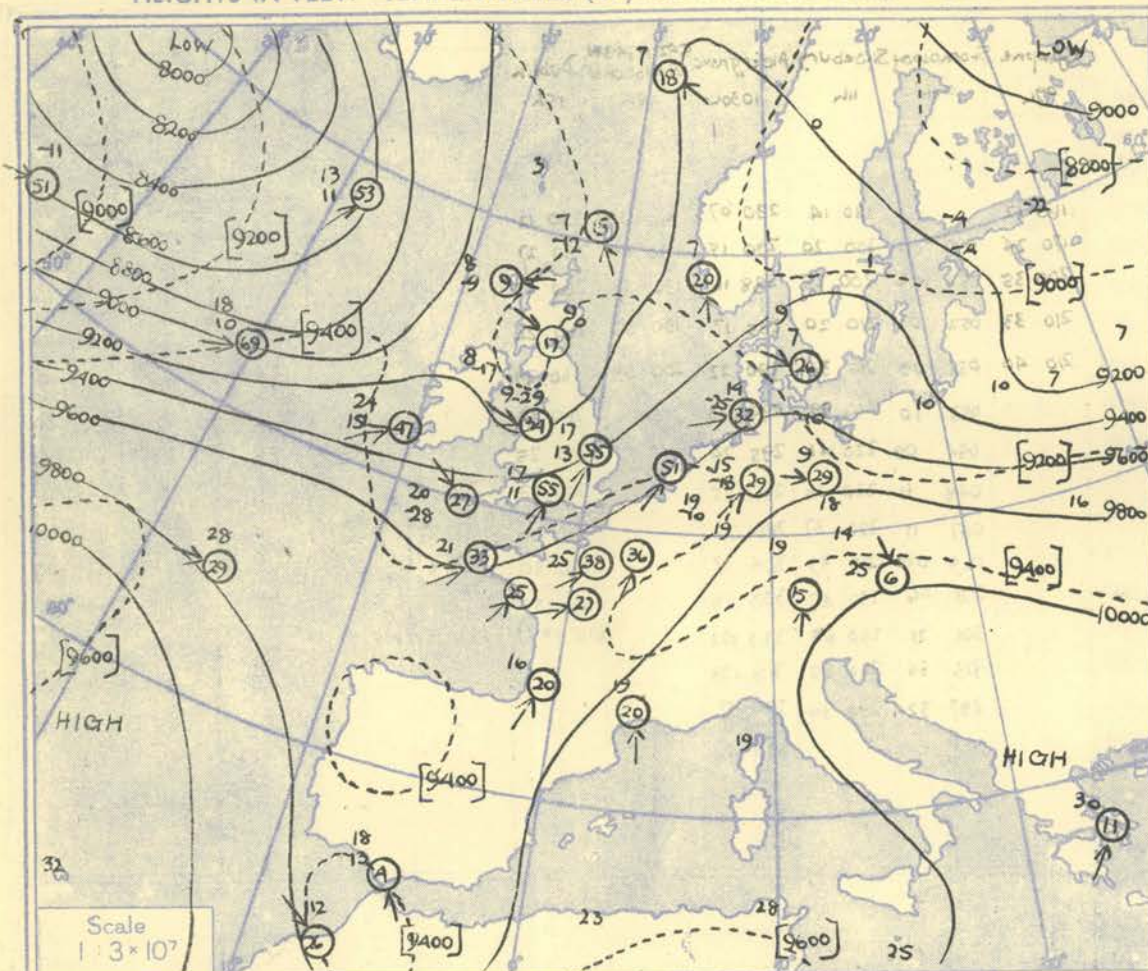


Isopleths of Thickness 500-1000mb.

DIRECTION (degrees from N), and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.

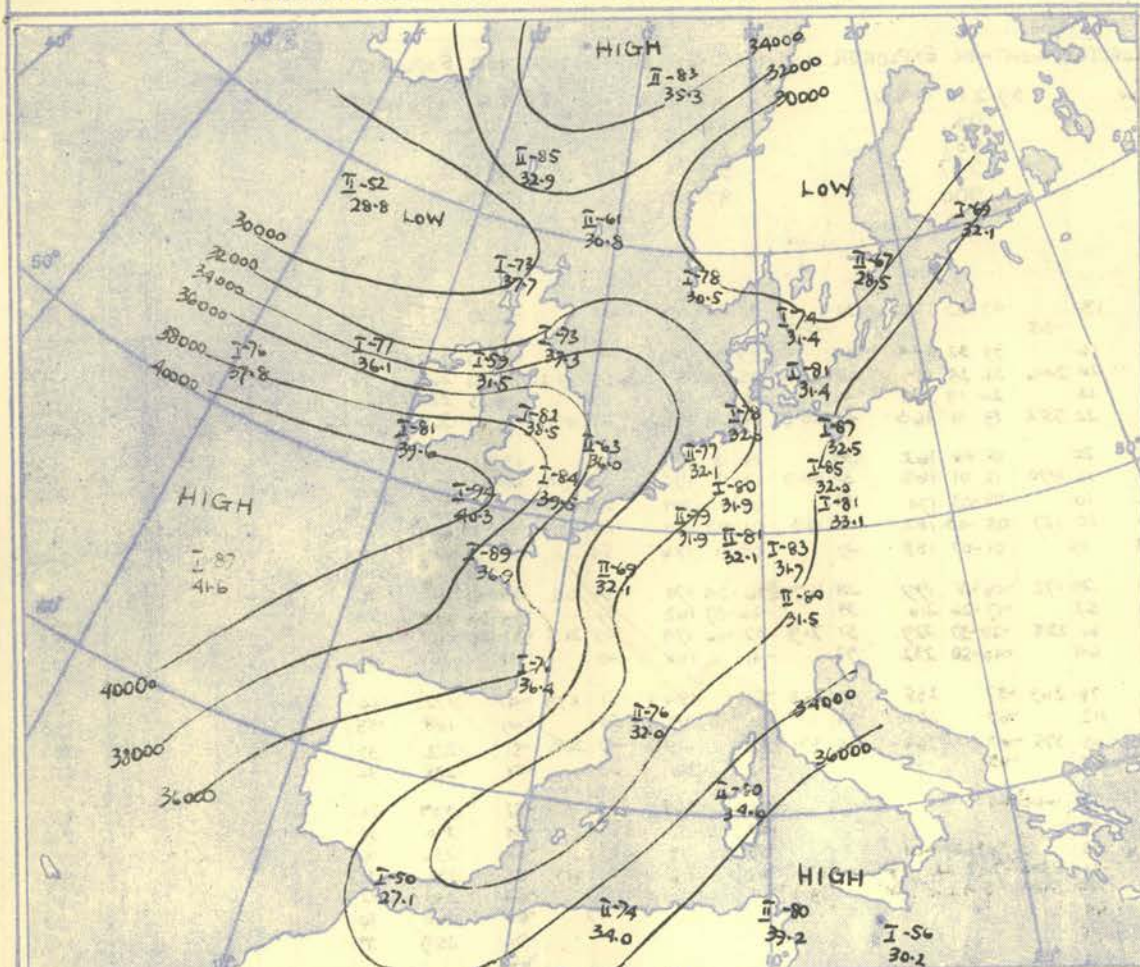
Ship	WEATHER RECORDER					WEATHER RECORDER					WEATHER RECORDER					WEATHER RECORDER					WEATHER EXPLORER					WEATHER EXPLORER					WEATHER EXPLORER					WEATHER EXPLORER					Ship
Lat/Long	52.5 N 20.1 W					52.3 N 19.9 W					52.3 N 20.1 W					52.3 N 19.3 W					59.2 N 18.6 W					59.2 N 18.8 W					59.1 N. 18.3 W					58.7 N 17.5 W					Lat/Long
Pressure	Time	09k.	G.M.T.			09k.	G.M.T.			15k.	G.M.T.			21k.	G.M.T.			03k.	G.M.T.			09k.	G.M.T.			15k.	G.M.T.			21k.	G.M.T.			G.M.T.	Time						
	M.S.L.	1006	mb			991	mb			984	mb			983	mb			1000	mb			987	mb			970	mb			967	mb			mb	M.S.L.						
	Surf	1006	mb			991	mb			984	mb			983	mb			1000	mb			987	mb			970	mb			967	mb			mb	Surf						
Freezing		915	mb			715	mb			825	mb			880	mb			910	mb			900	mb			870	mb			890	mb			mb	Freezing						
Pressure	Height	Temp.	Dew	Wind		Height	Temp.	Dew	Wind		Height	Temp.	Dew	Wind		Height	Temp.	Dew	Wind		Height	Temp.	Dew	Wind		Height	Temp.	Dew	Wind		Height	Temp.	Dew	Wind	Pressure						
mb	ft./100	°F.	°F.	Dir. Vel. knots		ft./100	°F.	°F.	Dir. Vel. knots		ft./100	°F.	°F.	Dir. Vel. knots		ft./100	°F.	°F.	Dir. Vel. knots		ft./100	°F.	°F.	Dir. Vel. knots		ft./100	°F.	°F.	Dir. Vel. knots		ft./100	°F.	°F.	Dir. Vel. knots	mb						
Surf		44	42	160	23		46	46	180	30		50	46	230	18		45	38	270	28		42	26	180	13		43	33	135	32		41	40	140	42	Surf					
1000	15	43	36			2.5	42	42	189	45	4.3	46	42	256	36	4.4	41	35	260	39	0.1	37	25	191	16	3.5	39	32	144	44	8.2	39	38	148	49	1000					
950		37	29	180	27		43	43	195	42		40	36	255	39		34	28	260	42		37	23	193	20		32	24	159	48		35	35	153	59	950					
900	29.5	29	22	186	26	25.9	43	43	205	35	24.2	34	29	256	40	23.8	27	20	260	42	27.9	23	15	193	22	24.6	26	19	164	48	20.0	30	29	159	67	900					
850		25	18	191	26		43	43	215	35		34	29	256	40		27	20	260	42		23	15	193	22		26	19	164	48		25	24	168	64	850					
800	60.0	21	14	206	21	57.5	39	39	235	36	55.4	30	25	257	42	54.5	21	12	260	40	58.3	18	07	192	22	55.2	19	11	163	46	50.8	25	24	168	64	800					
750		25	18	248	21		35	35	245	45		25	19	256	46		17	07	260	39		12	01	190	20		15	00	162	39		19	18	178	60	750					
700	94.4	21	14	271	29	92.8	30	29	265	55	89.9	18	10	245	69	88.4	10	01	260	44		09	09	189	16	89.0	12	01	168	33	84.9	13	11	196	53	700					
650		17	29	283	36		24	22	258	56		10	05	245	73		02	06	258	45		03	16	182	10		08	03	174	33		07	03	204	50	650					
600	134	13	05	293	42	133	19	17	277	57	129	11	18	251	83	126	03	16	250	52	130	03	25	223	20	127	05	03	182	31	123	01	03	201	54	600					
550		8	00	295	48		12	09	277	50		06	13	255	99		18	29	245	67		07	32	293	19		01	07	188	39		05	11	186	54	550					
500	179	01	07	285	78	179	04	01	273	52	174	02	13	252	104	169	09	34	300	29	172	06	15	199	28	167	06	15	199	28	167	16	24	174	54	500					
450		10	22	290	66		06	10	284	64		11	19	238	105		16	39	294	52		17	26	216	34		17	26	216	34		26	37	162	51	450					
400	232	19	30	311	99	233	18	22	285	78	227	21	29	233	116	221	32	51	260	92	227	28	37	229	51	219	32	46	174	49	215	38	58	165	3	400					
350		32	44	301	87		31	35	290	87		30	39	237	133		40	60	259	88		42		291	64		40	50	232	77		41		168	48	350					
300	298	46		299	114	298	46		297	102	293	48		242	134	285	45		256	93	291	55		284	78	289	57		235	91	283	51		184	51	300					
250		64		314	129		65		301	111		67		246	145		47		256	96		57		287	112		67		252	84		54		197	54	250					
200	383	84		306	114	383	86		305	126	378	76		246	120	375	50		256	88	377	68		286	65	375	63		264	64		51		219	47	200					
170		70		313	78		85					72		240	60		53		256	71		63		300	54		65			64		51		241	58	170					
150		74		320	74	(63nb) 83						73					59		256	60		61		294	53	(14nb) 64					56		245	65	150						
130		75		325	72							72					60					60		282	39						57		243	59	130						
110		74		310	54	Inversion						71					61					61		283	35	I Isothermal					58		219	33	110						
100	525	74		311	45	934nb 41° - 870mb 44°	521					75					64				524	64		283	41	800 - 788nb 19°	521	62			61		213	31	100						
90		76		300	36												67					64		287	44	561 - 542.. 61°	(33nb) 60				68		256	50	90						
80		75		300	33												66					66		297	43						71		259	57	80						
70		75			20																															70					
60	(62nb) 70					Inversion																														60					
						800nb 21° - 770nb 26°																																			
Tropopause	204nb - 84°					180nb - 89°						200nb - 76°					313nb - 15°					200nb - 68°			283nb - 64°						295nb - 52°			270nb - 52°	Tropopause						
	38,200'					40,500'						37,800'					27,600'					37,700'			30,200'						28,800'			30,200'							



Gradient Wind Scale for Contours at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 20 10 knots

TROPOPAUSE CHART at about 15h. G.M.T.

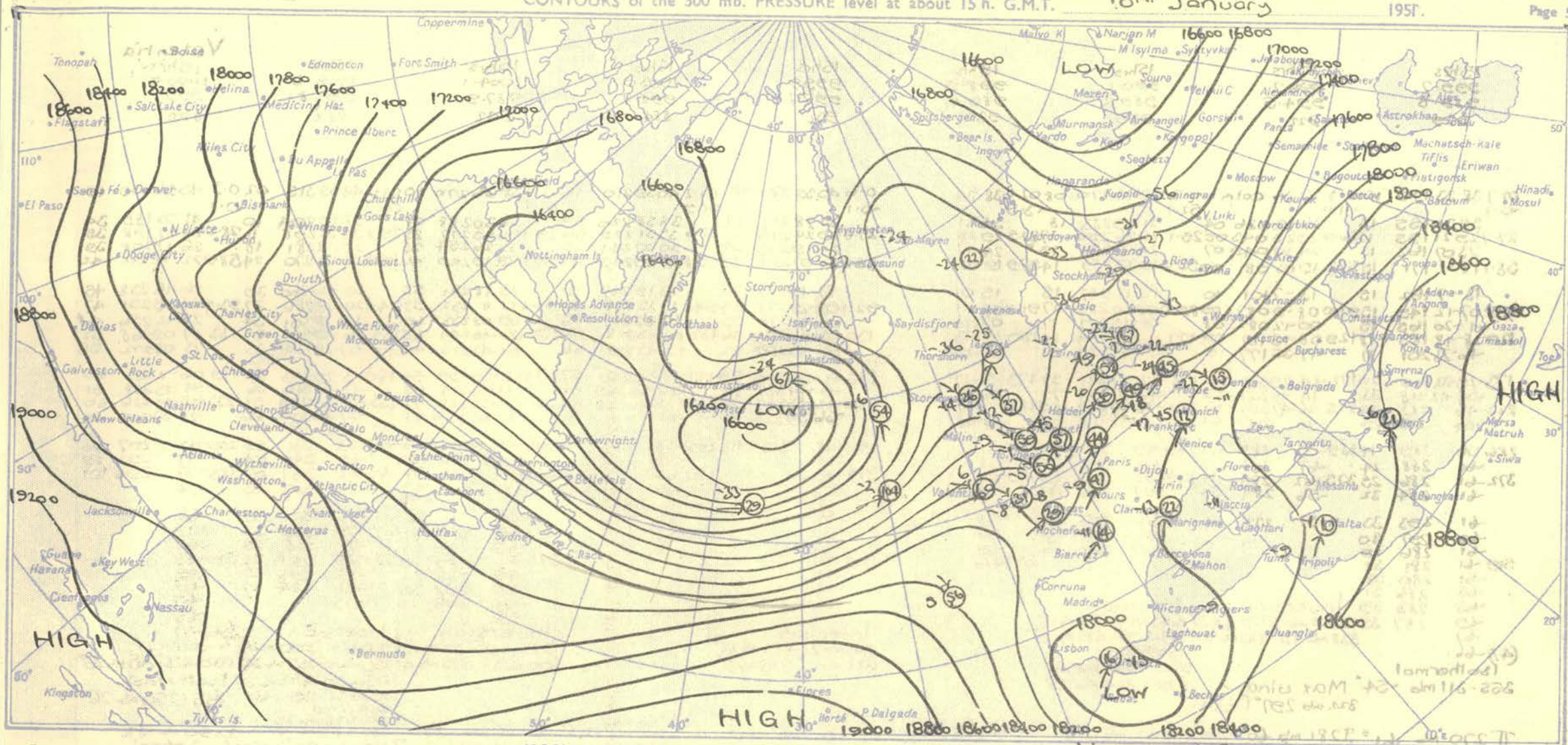


NOTES ON THE AEROLOGICAL SITUATION.

A broad thermal ridge in Mid-Atlantic moved steadily eastwards followed by a new cold outbreak down the Davis Straits in which extreme cold values of thickness occurred

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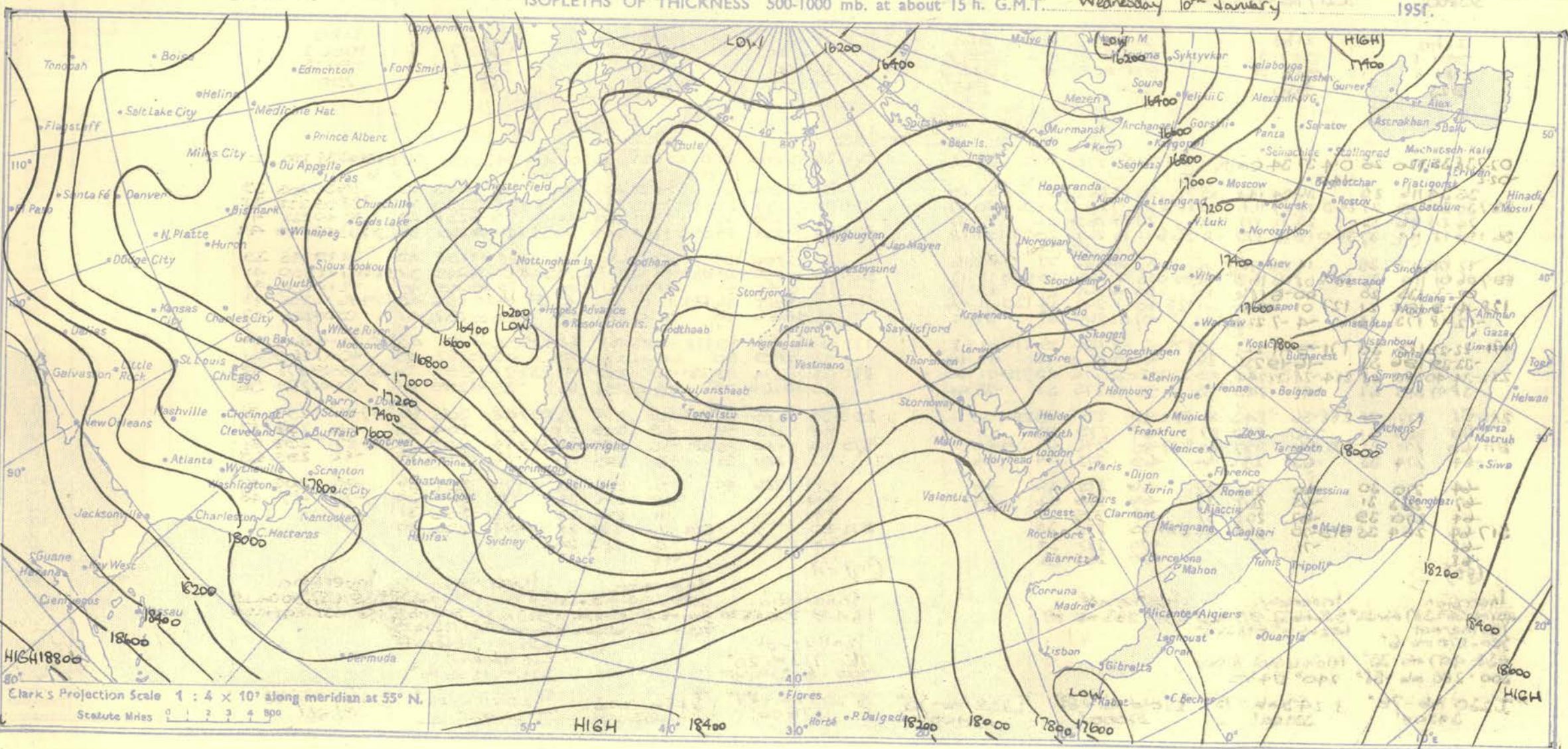
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T.

Wednesday 10th January

1951.

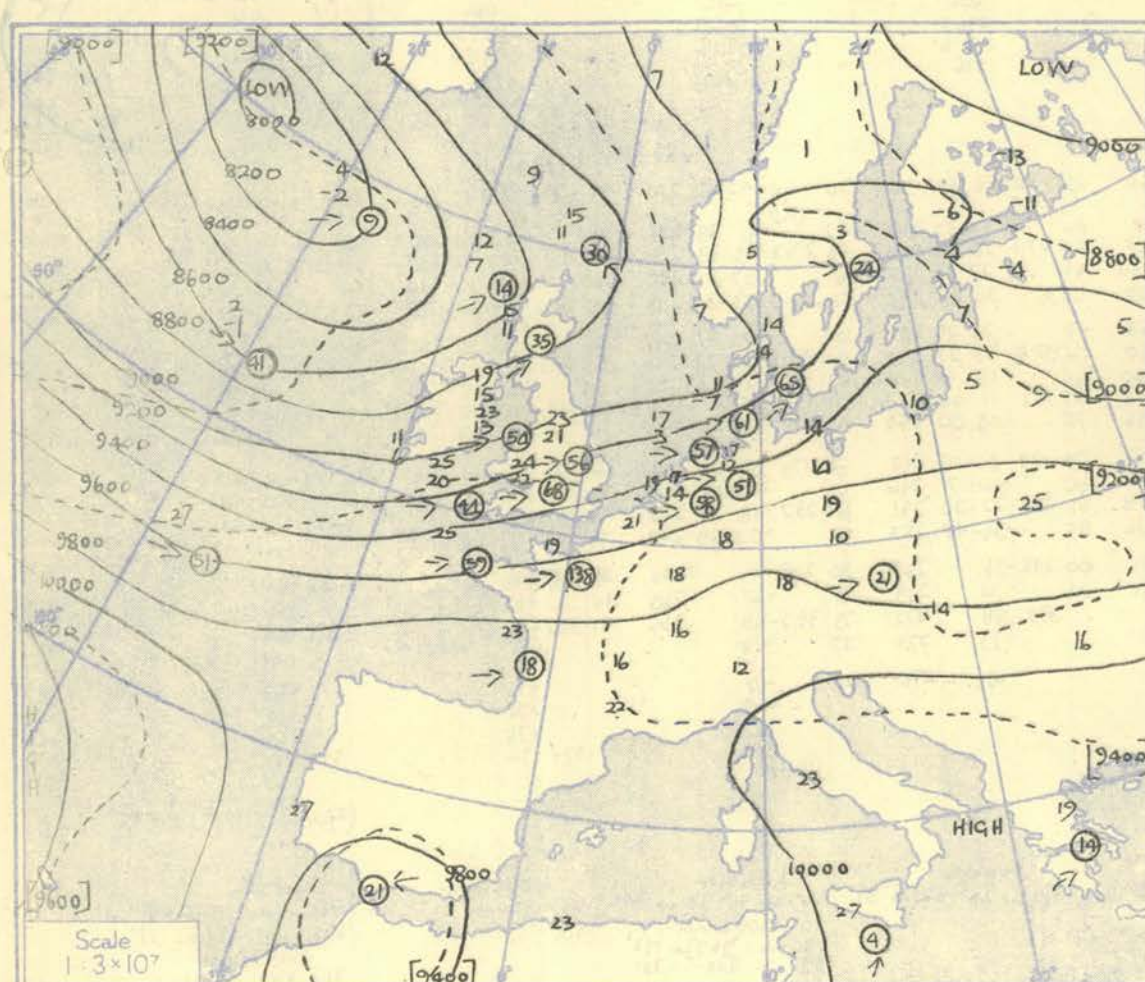


Tropopause	II 270 mb -61° 3200'	I 281 mb -60°30'500' 3210 mb -71°3200'	I 202 mb -73° 3700'	I 270 mb -59° 31500'	I 195 mb -82° 28500'	II 220 mb -63° 36000'	I 186 mb -87° 39500'	100-675 mb 20° 650-625 mb 19° I 180 mb -94° 40300'	I 190 mb 81° 39600'	Tropopause
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Pogo

HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



Thursday 11th January 1951.

TEOROLOGIC Page 3

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

		48°N 17°0'W			47°N 12°3'W			43°24' 17°0'W			39°5'N 12°2'W			53°14'N 01°3'E												
		1230L			1415L			1230L			15L			15L												
Time	M.S.L.	999.2 mb			999.7 mb			1013 mb			1017 mb			984 mb												
Surf	Freezing	992.0 mb			992.5 mb			1008 mb			1016 mb			982 mb												
Pressure	mb	900 mb			885 mb			815 mb			720 mb			810 mb												
Height	ft./100	2.0			2.0			3.7			4.5			5.5												
Temp.	°F.	43			46			51			57			58												
Dew	°F.	29			39			45			49			46												
Wind	Dir. Vel.	279 31			282 34			39 38			46 46			40 40												
Cloud.		58.3 16			58.7 18			31			39 37			55.4 31												
Surf	1000	2.0			2.0			3.7			4.5			5.5												
950	900	27.9 31			28.2 34			39 38			46 46			40 40												
850	800	58.3 16			58.7 18			31			39 37			55.4 31												
750	700	91.7 03			92.4 05			98.1 22			100 29			89.8 19												
650	600	129 -13			130 -09			21 15			14 11			128 04												
550	500	172 -31			173 -22			182 -07			186 03			173 -15												
450	400																									
350	300																									
250	200																									
170	150																									
130	110																									
100	90																									
80	70																									
60	50																									

DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

Place	Barkhill.		Leuchars.		Liverpool.		Aldergrove.		Shorebury												Place
Time	09L		09L		15L.		15L		15L		16L										Time
Type	Pilar.		Pilar		Pilar.		Pilar.		Pilar												Type
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet
Surf.	210	30	190	05					210	35	210	16									Surf.
1,000	215	38	200	15					220	48	230	34									1,000
2,000	222	39	220	16					231	57	230	37									2,000
3,000	232	48	228	17					248	57	240	36									3,000
4,000	236	48	232	22					257	66	240	35									4,000
5,000	241	51	226	24					262	65	250	25									5,000
6,000	244	51	221	28					268	60	250	30									6,000
8,000	241	55	223	32					274	57	250	35									8,000
10,000	248	56	222	35					276	51	240	48									10,000
14,000	241	72	218	38					262	46	240	67									14,000
18,000	228	76	236	58	193	56			262	52	230	30									18,000
24,000	230	99	230	71	201	59	216	105	226	48	220	104									24,000
30,000	239	103	210	54	213	48	215	84	234	64	220	112									30,000
40,000	243	103	241	52	233	41			234	51	240	52									40,000
50,000	(32.000)		223	27	264	35			(31.000)		230	40									50,000
			(46.000)		(48.000)						(49.000)										

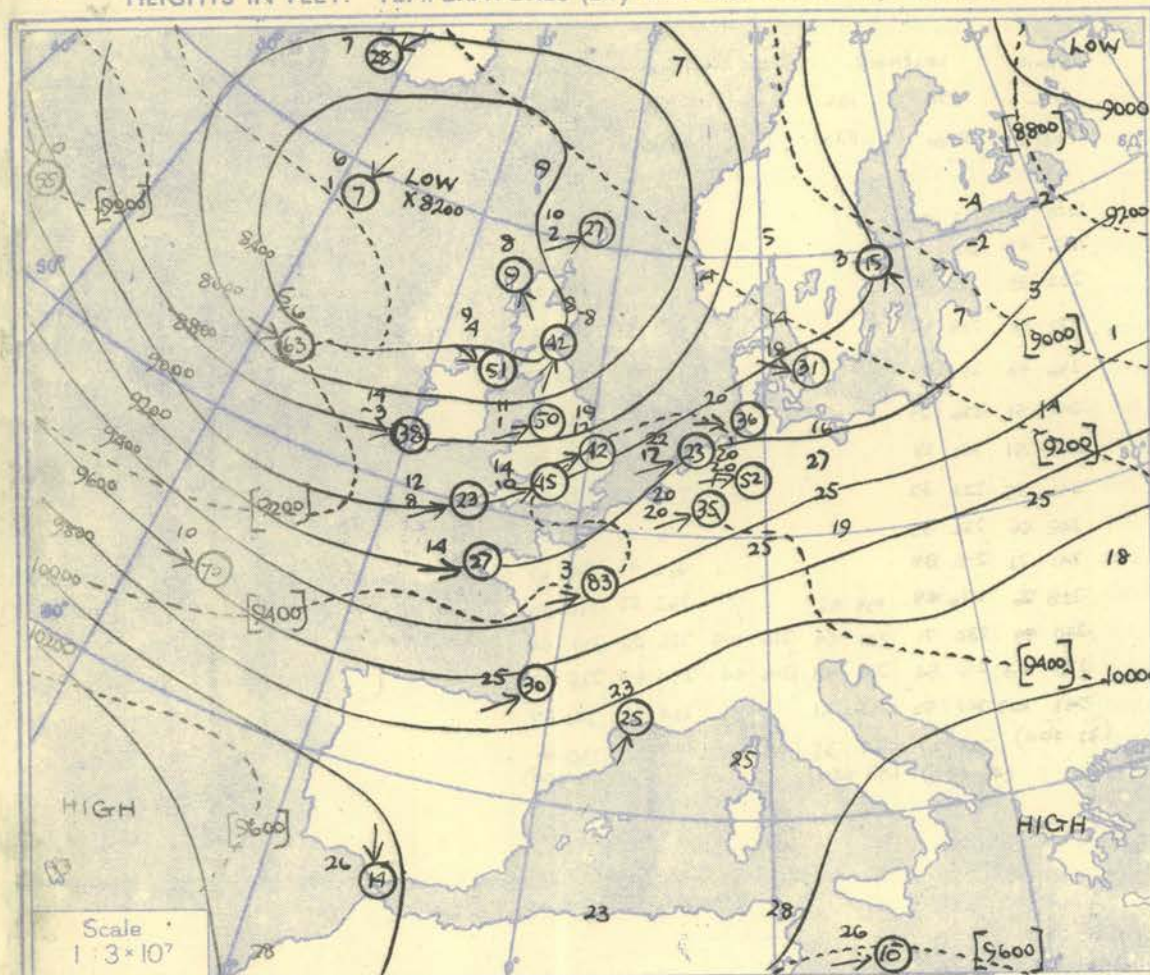
NEPHOSCOPE OBSERVATIONS

Place	Time	Type	Dir.	Vel.	Place	Time	Type	Dir.	Vel.

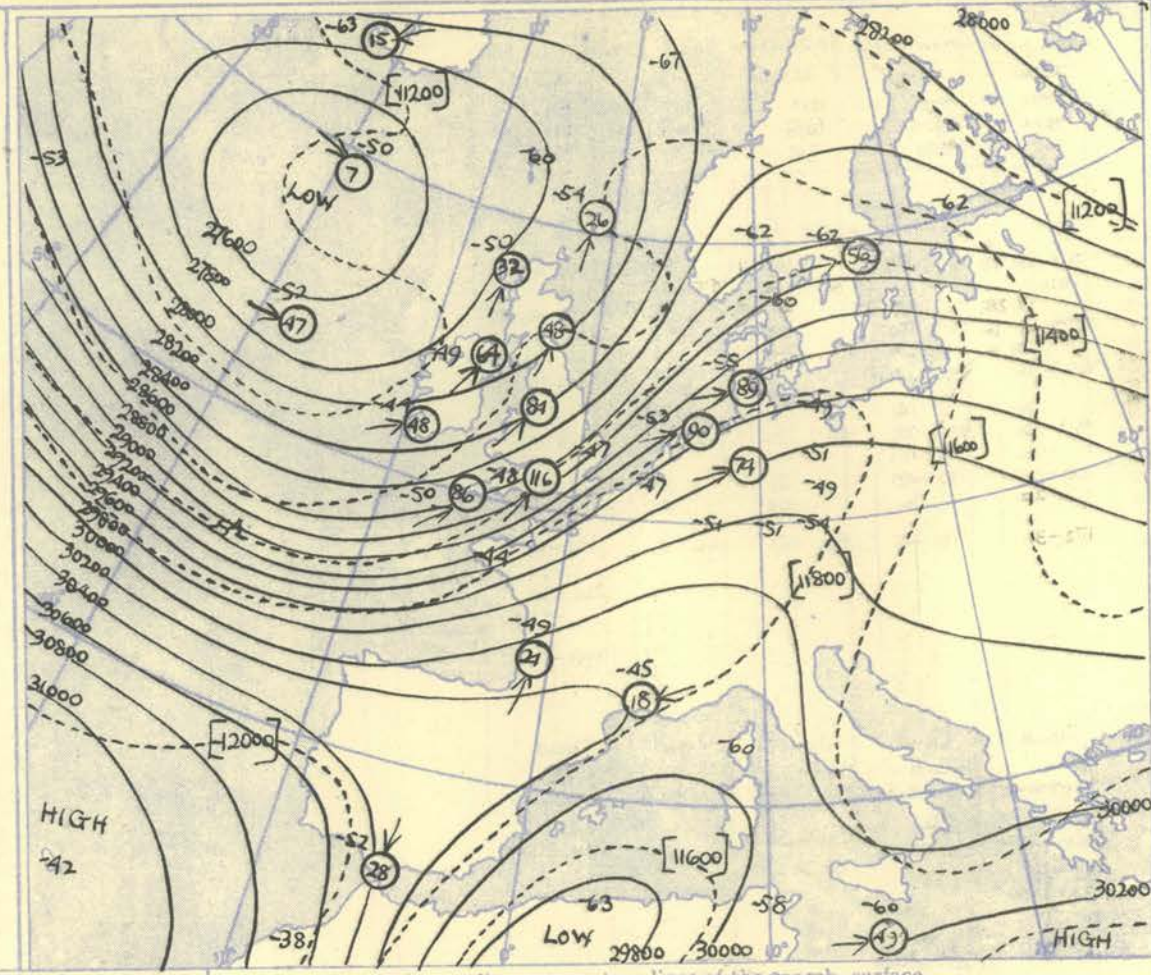
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.

Ship	WEATHER RECORDER				WEATHER RECORDER				WEATHER OBSERVER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				Ship																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h. G.M.T.



The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb

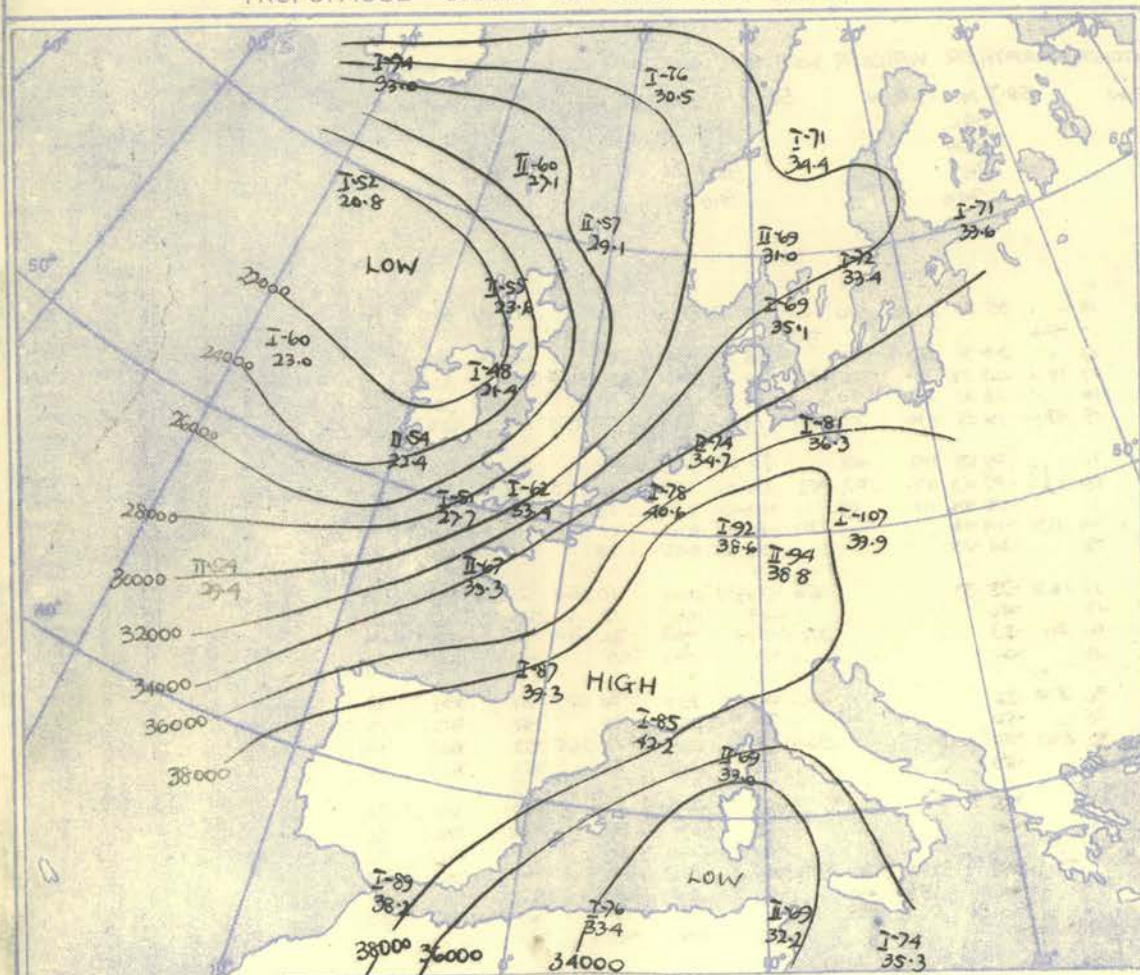


The continuous lines are contour lines of the 300 mb. surface.
The dotted lines are isopleths of the thickness of the layer 500-300 mb.

Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. $52\frac{1}{2}^\circ$ N.

100 80 60 40 20 10 5 knots

TROPOPAUSE CHART at about 15h. G.M.T.



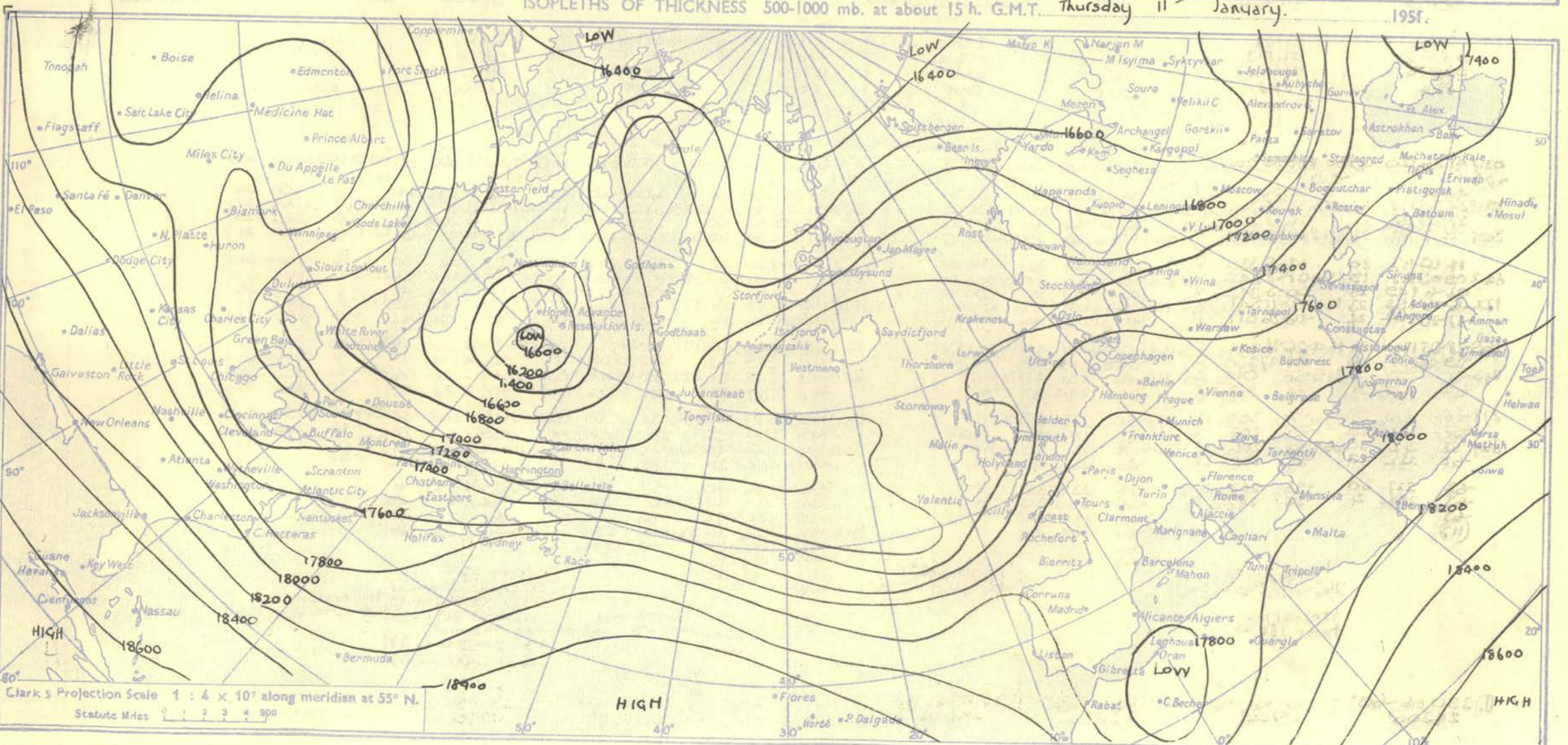
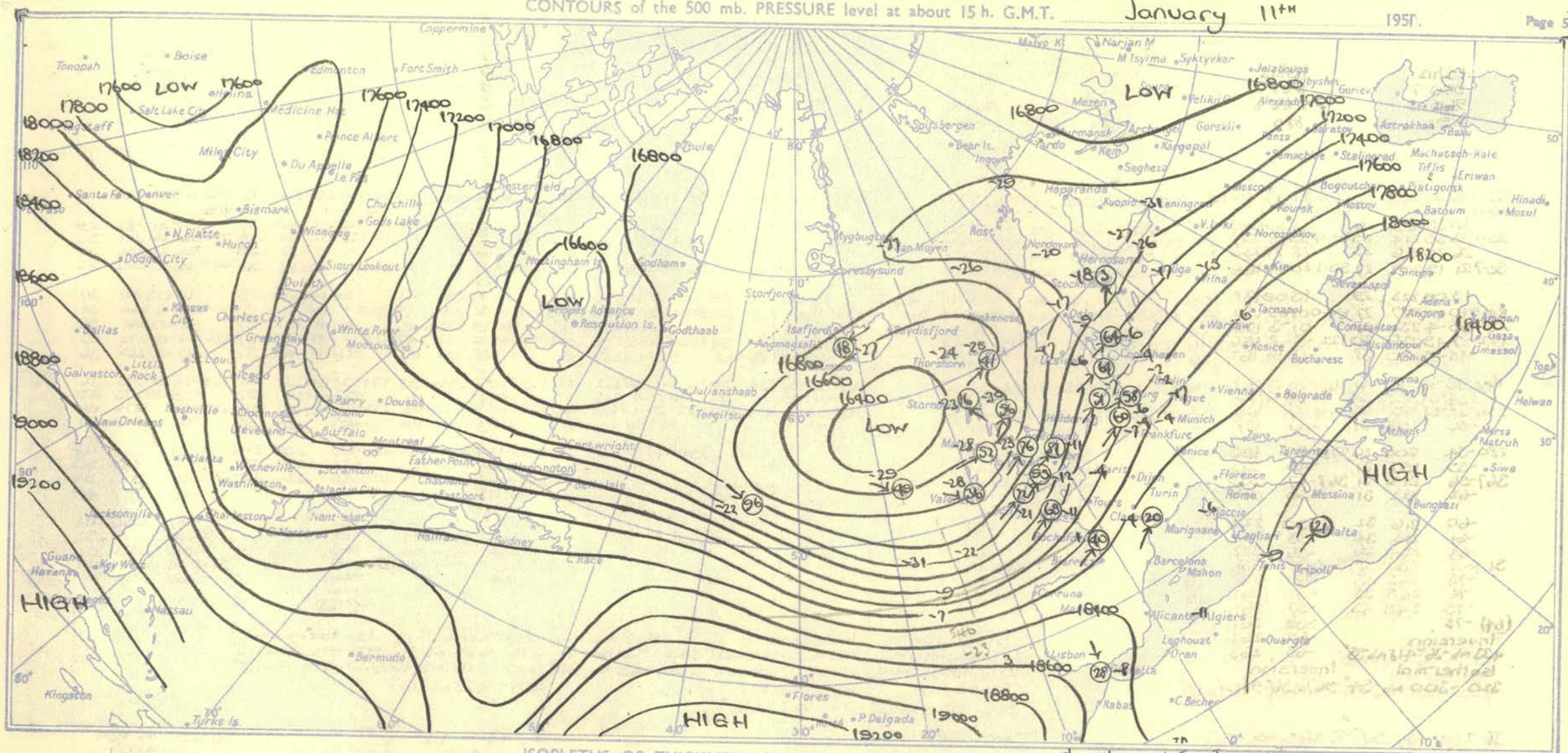
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The cold air from the Davis Straits spread to the west of Ireland. The deep depression south of Iceland moved eastwards in association with the eastward spread of cold air to its south.

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Meteorological Office, Air Ministry, Kingway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



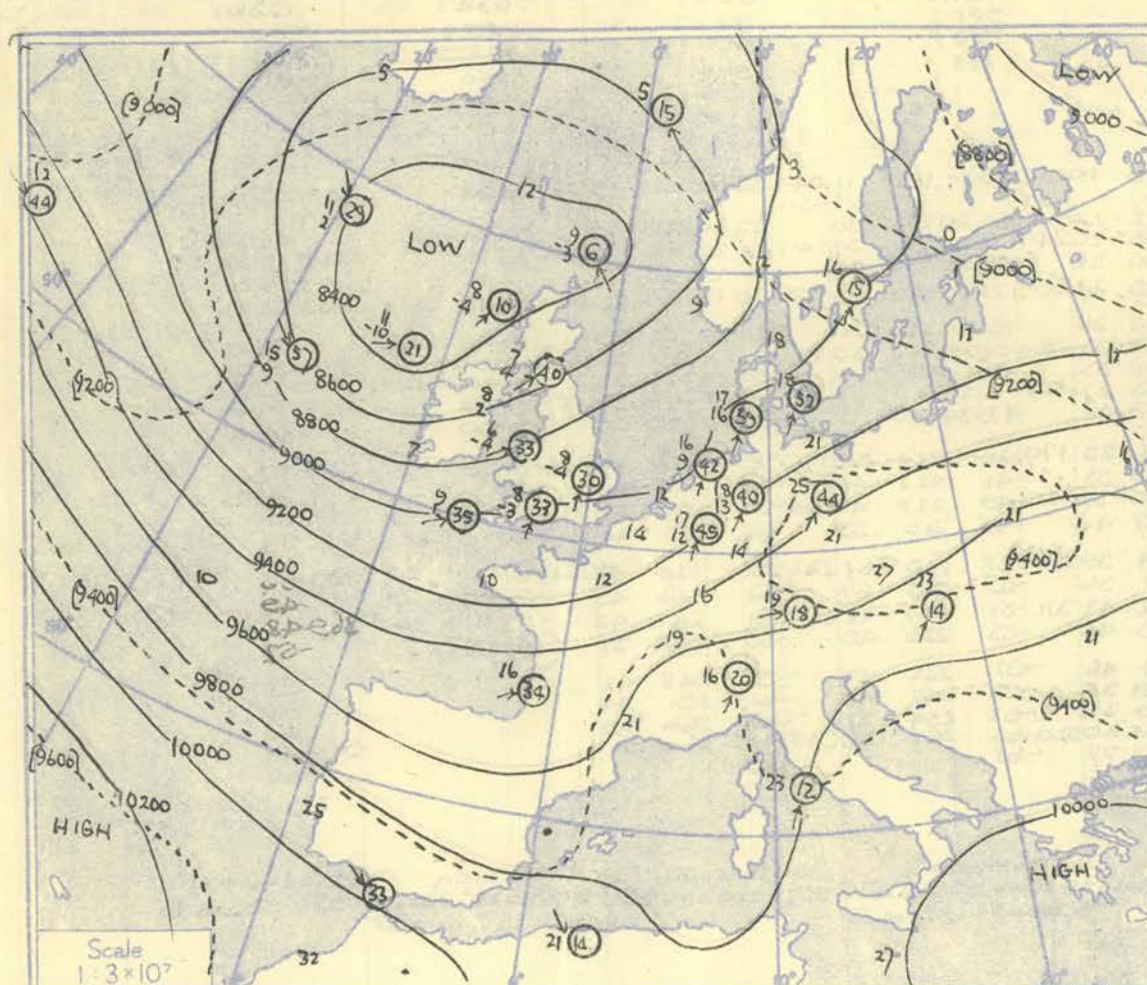
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				Valentia				STATION					
Pressure mb	Time	15hrs			Time	16hrs			Time	15hrs			Time	15hrs			Time	15hrs			Time	15hrs			Time	15hrs			Time	15hrs			Time	G.M.T.								
	M.S.L.	970.7			M.S.L.	968.2			M.S.L.	971.1			M.S.L.	963.0			M.S.L.	979.8			M.S.L.	985.4			M.S.L.	986.2			M.S.L.	988.6			M.S.L.	982.8			M.S.L.	mb				
	Surf	960.8			Surf	966.6			Surf	970.2			Surf	963.0			Surf	977.8			Surf	981.0			Surf	970.4			Surf	978.0			Surf	982			Surf	mb				
Freezing	898				Freezing	880			Freezing	884			Freezing	928			Freezing	860			Freezing	827			Freezing	828			Freezing	854.0			Freezing	900			Freezing	mb				
Height ft./100	Temp.	Wind			Height ft./100	Temp.	Wind			Height ft./100	Temp.	Wind			Height ft./100	Temp.	Wind			Height ft./100	Temp.	Wind			Height ft./100	Temp.	Wind			Height ft./100	Temp.	Wind			Height ft./100	Temp.	Wind					
Pressure mb	Dir.	Vel.		Dir.	Temp.	°F.		Dir.	Temp.	°F.		Dir.	Temp.	°F.		Dir.	Temp.	°F.		Dir.	Temp.	°F.		Dir.	Temp.	°F.		Dir.	Temp.	°F.		Dir.	Temp.	°F.								
Surf	02.740	36	200	12	0.436	34	calm		00.239	34	230	18	02.6	33	30		00.646	35	240	28	01.247	45	190	13	04.445	43	250	10	02.9	42	270	15	0.342	34	290	16	Surf					
1000	8.0	39	35	213	26	8.6	38	35	010	06	7.9	38	32	220	35	7.3	42	31	238	37	4.0	44	41	221	33	43	39	262	18	4.0	38	269	27	4.6	38	31	283	29	1000			
950		20.1	33	30	214	25	19.4	35	31	327	07	20.1	34	24	220	41	22.8	34	24	238	41	24.4	39	260	36	24.7	38	29	260	27	25.1	35	32	288	29	23.5	36	26	271	33	950	
900		26	24	216	23	28	21	230	10	28	14	219	44	23	21		53.5	20	09	246	43	55.6	30	26	238	38	55.7	28	19	254	36	55.6	21	20	285	31	54.8	20	13	262	33	900
850		50.7	21	19	222	27	50.2	22	14	166	10	50.8	20	09	214	44	50.9	20	09	246	43	55.6	30	26	238	38	55.7	28	19	254	36	55.6	21	20	285	31	54.8	20	13	262	33	850
800		13	09	223	29	15	09	218	09	13	44	44	15	11	see p3		13	05	236	49	25	19	230	42	22	17	247	41	16	14	269	28	13	05	267	37	750					
750		84.5	10	02	227	27	84.0	08	03	122	09	84.5	08	8	207	42	84.8	11	01	228	50	80.1	19	12	226	49	80.0	14	10	241	45	89.5	12	08	244	23	88.0	06	3	266	38	700
700		00	4	231	27	01	3	123	12	1	16	191	43	01	5	winds	01	13	220	50	21	40	228	47	10	04	235	45	08	00	251	27	1	12	261	35	650					
650		122	7	19	236	20	122	8	156	16	122	10	24	183	48	123	7	15	236	54	129	05	5	225	54	129	01	3	233	47	128	4	11	248	37	126	8	18	272	23	600	
600		15	33	240	38	13	16	161	16	15	32	173	52	17	24		15	32	243	68	15	19	233	80	7	14	233	43	12	21	241	51	17	27	263	36	550					
550		166	25	45	231	41	168	23	27	167	16	165	30	45	185	51	166	28	25																				500			
500		34	54	208	34	34	38	183	20	34	50		216	47			34	54	208	34	34	38	183	20	34	50		216	47		34	54	208	34	34	38	183	20	450			
450		216	38	68	183	34	216	47	174	20	216	47					216	38	68	183	34	216	47	174	20	216	47		34	54	208	34	34	38	183	20	400					
400		50	194	31	53	178	30						44				50	194	31	53	178	30					54	311	20	58		47	255	57	41	257	48	350				
350		280	54	200	26	279	50	193	32				See p3	279	49		280	54	200	26	279	50	193	32				290	48	222	116	286	50	225	96	282	44	250	48	300		
300		53	197	31	49	213	33						for	369	41		53	197	31	49	213	33					56	204	112	54	54	238	73	43	259	50	250					
250		367	56	212	31	368	47	209	30				of winds	47			367	56	212	31	368	47	209	30			56	204	112	54	54	238	73	43	259	50	200					
200		62	222	31	50	216	29										62	222	31	50	216	29					56	204	112	54	54	238	73	43	259	50	170					
150		60	216	32	50	223	25						51				60	216	32	50	223	25					54	311	20	58		47	255	57	150							
130		61	214	34	53	233	30						55				61	214	34	53	233	30					59	302	14	61		54	271	52	130							
110		64	244	36	56	227	35						60				64	244	36	56	227	35					66	234	04	64		56	283	51	110							
100		314	71	250	38	518	37						519	63			314	71	250	38	518	37					66	234	04	523	68		56	283	51	100						
90		73	243	35	60	248	40						63				73	243	35	60	248	40					69	237	05	523	68		60	277	42	90						
80		74	240	33	57	261	39										74	240	33	57	261	39					69	237	05	523	68		60	277	42	80						
70		75	245	43	59	261	33										75	245	43	59	261	33					69	237	05	523	68		60	277	42	70						
60		(64)	75		59	261	33											75			59	261	33					69	237	05	523	68		60	277	42	60					
Inversion				433 mb - 26° 418 mb 25°	Inversion				407 mb - 20° 375 mb 18°	Inversion				825 mb - 20° 810 mb 21°	Inversion				870 mb - 30° 860 mb 32°	Isothermal				550 - 532 mb - 5°	Isothermal				676 - 654 mb - 11°	Isothermal				978 - 965 mb - 42°								
Isothermal				320 - 300 mb - 54°	Isothermal				363 - 350 mb - 33°	Isothermal				363 - 350 mb - 33°	Isothermal				682 - 668 mb - 6°	Isothermal				375 - 363 mb - 34°	Isothermal				530 - 516 mb - 10°	Isothermal				735 - 718 mb - 15°								
Tropopause				II 284 mb - 57°	Tropopause				NR	Tropopause				I 407 mb - 47° 21200'	Tropopause				NR	Tropopause				NR	Tropopause				I 244 mb - 62°	Tropopause				I 312 mb - 51° 27700'								
STATION				LERWICK	STATION				STORNOWAY	STATION				ALDERGROVE	STATION				LIVERPOOL	STATION				DOWNHAM MARKET	STATION				LARKHILL	STATION				CAMBORNE								
Time	21hrs			Time	21hrs			Time	21hrs			Time	21hrs			Time	21hrs			Time	21hrs			Time	21hrs			Time	21hrs			Time	G.M.T.									
M.S.L.	969.3			M.S.L.	968.2			M.S.L.	967.6			M.S.L.	976.0			M.S.L.	980.8			M.S.L.	987.0			M.S.L.	987.9			M.S.L.	990.0			M.S.L.	mb									
Surf	959.6			Surf	966.6			Surf	966.7			Surf	966.3			Surf	978.8			Surf	982.6			Surf	981.9			Surf	979.4			Surf	mb									
Freezing	884			Freezing	898			Freezing	928			Freezing	904			Freezing	900			Freezing	894			Freezing	890			Freezing	898			Freezing	mb									
Height ft./100	Temp.	Wind		Height ft./100	Temp.	Wind		Height ft./100	Temp.	Wind		Height ft./100	Temp.	Wind		Height ft./100	Temp.	Wind		Height ft./100	Temp.	Wind		Height ft./100	Temp.	Wind		Height ft./100	Temp.	Wind		Height ft./100	Temp.	Wind								
Pressure mb	Dir.	Vel.		Dir.	Temp.	°F.		Dir.	Temp.	°F.		Dir.	Temp.	°F.		Dir.	Temp.	°F.		Dir.	Temp.	°F.		Dir.	Temp.	°F.		Dir.	Temp.	°F.		Dir.	Temp.	°F.								
Surf	02.741	36	120	09	00.435	33	calm		0.236																																	

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				Valentia			
Time		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.	
M.S.L.		966.3		mb		968.4		mb		972.3		mb		975.5		mb		981.1		mb		988.2		mb		988.3		mb		989.5		mb		979.2		mb	
Surf		956.5		mb		966.8		mb		971.4		mb		965.5		mb		979.1		mb		983.8		mb		972.1		mb		978.9		mb		978.0		mb	
Freezing		890		mb		879		mb		930		mb		923		mb		911		mb		888		mb		911		mb		890		mb		880		mb	
Pressure		02.737		32		120		05		00.236		33		250		2002.637		30		0.6		38		33		180		100.2		35		31		190		11	
Height		ft./100		Temp.		Temp.		Temp.		Temp.		Temp.		Temp.		Temp.		Temp.		Temp.		Temp.		Temp.		Temp.		Temp.		Temp.		Temp.		Temp.		Temp.	
Dew		Dew		Dew		Dew		Dew		Dew		Dew		Dew		Dew		Dew		Dew		Dew		Dew		Dew		Dew		Dew		Dew		Dew		Dew	
Wind		Wind		Wind		Wind		Wind		Wind		Wind		Wind		Wind		Wind		Wind		Wind		Wind		Wind		Wind		Wind		Wind		Wind		Wind	
Dir.		Dir.		Dir.		Dir.		Dir.		Dir.		Dir.		Dir.		Dir.		Dir.		Dir.		Dir.		Dir.		Dir.		Dir.		Dir.		Dir.		Dir.		Dir.	
Vel.		Vel.		Vel.		Vel.		Vel.		Vel.		Vel.		Vel.		Vel.		Vel.		Vel.		Vel.		Vel.		Vel.		Vel.		Vel.		Vel.		Vel.		Vel.	
knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots	
Surf		02.737		32		120		05		00.236		33		250		2002.637		30		0.6		38		33		180		100.2		35		31		190		11	
1000		-9.1		37		32		120		-8.4		33		222		06		20		43		21		24		36		35		30		23		25		31	
950		18.8		33		28		142		15		33		21		220		08		20		43		27		24		36		35		30		23		25	
900		26.23		144		16		15		33		21		220		08		20		43		27		24		36		35		30		23		25		31	
850		49.3		20		13		141		18		30.1		21		05		22		07		50		9		18		15		24		6		41		51	
800		14		03		137		16		14		26		227		06		13		07		244		4		14		09		10		89		6		07	
750		53.1		09		3		140		16		83		8		08		4		245		10		89		6		07		4		245		40		85	
700		01.8		140		16		83		8		08		4		245		10		89		6		07		4		245		40		85		6		09	
650		12.1		18		139		20		122		7		28		246		12		122		9		26		250		39		12		4		6		15	
600		16		25		135		22		17		40		272		09		19		38		260		28		15		23		15		09		15		09	
550		164		26		120		25		165		28		50		244		05		165		30		50		269		21		167		25		36		167	
500		215		44		094		42		40		60		256		05		42		279		20		37		48		170		30		170		25		41	
450		49		118		25		64		260		10		68		272		24		272		24		62		217		57		240		49		228		40	
400		278		51		143		182		76		62		227		12		276		59		237		27		279		58		50		217		57		228	
350		367		52		206		158		64		53		244		12		363		54		235		32		367		51		54		53		53		53	
300		56		23		29		58		238		31		58		237		37		53		249		38		53		247		45		61		251		42	
250		66		24		36		63		254		37		61		244		37		53		254		47		53		264		46		67		73		73	
200		515		70		231		40		512		63		511		66		67		73		73		73		73		73		73		73		73		73	
150		70		240		48																															
100		Continued on																																			
50		P. 3.																																			
0		Inversion																																			
		957 mb 31-937 mb 38																																			
		Isothermal																																			
		755-735 mb 14°																																			
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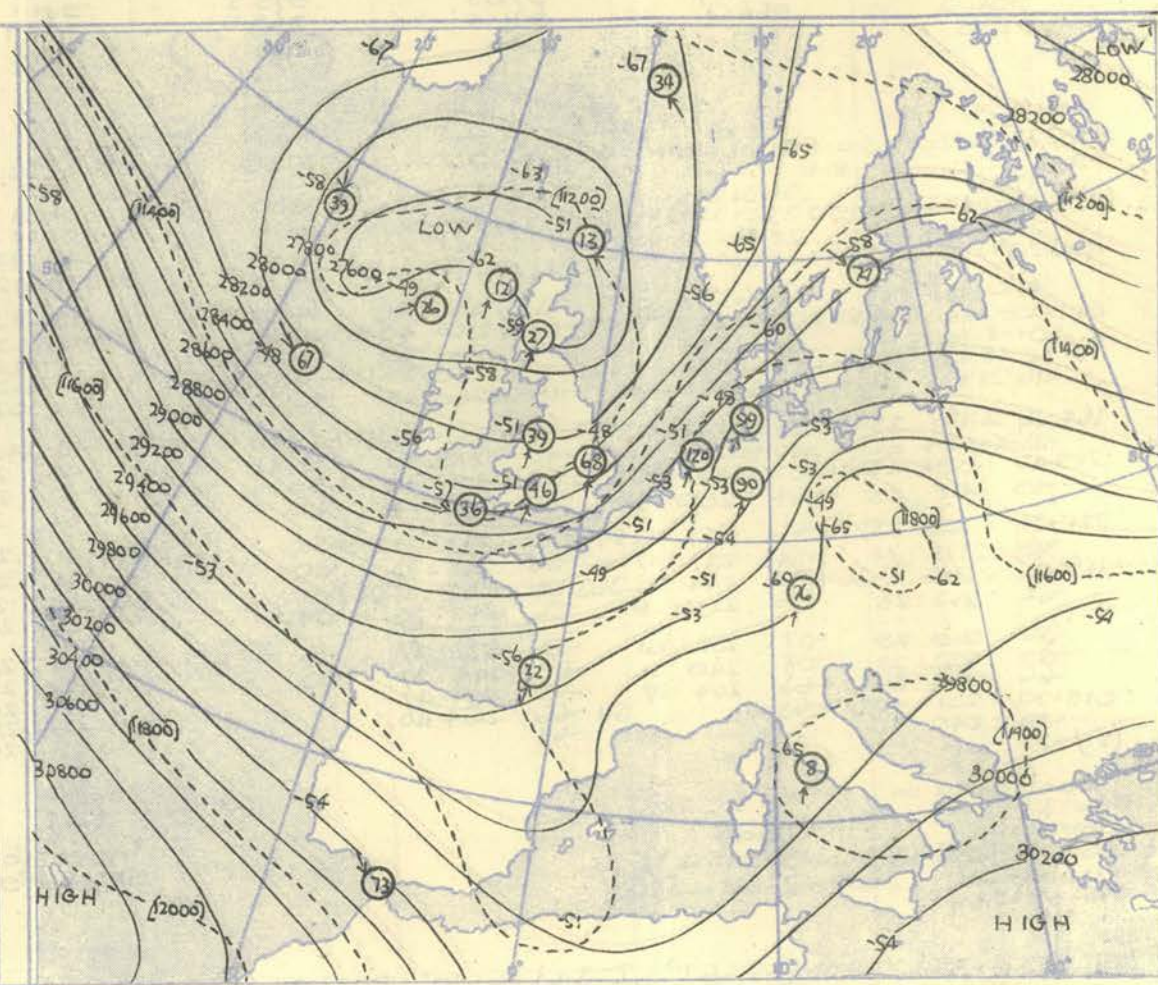
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



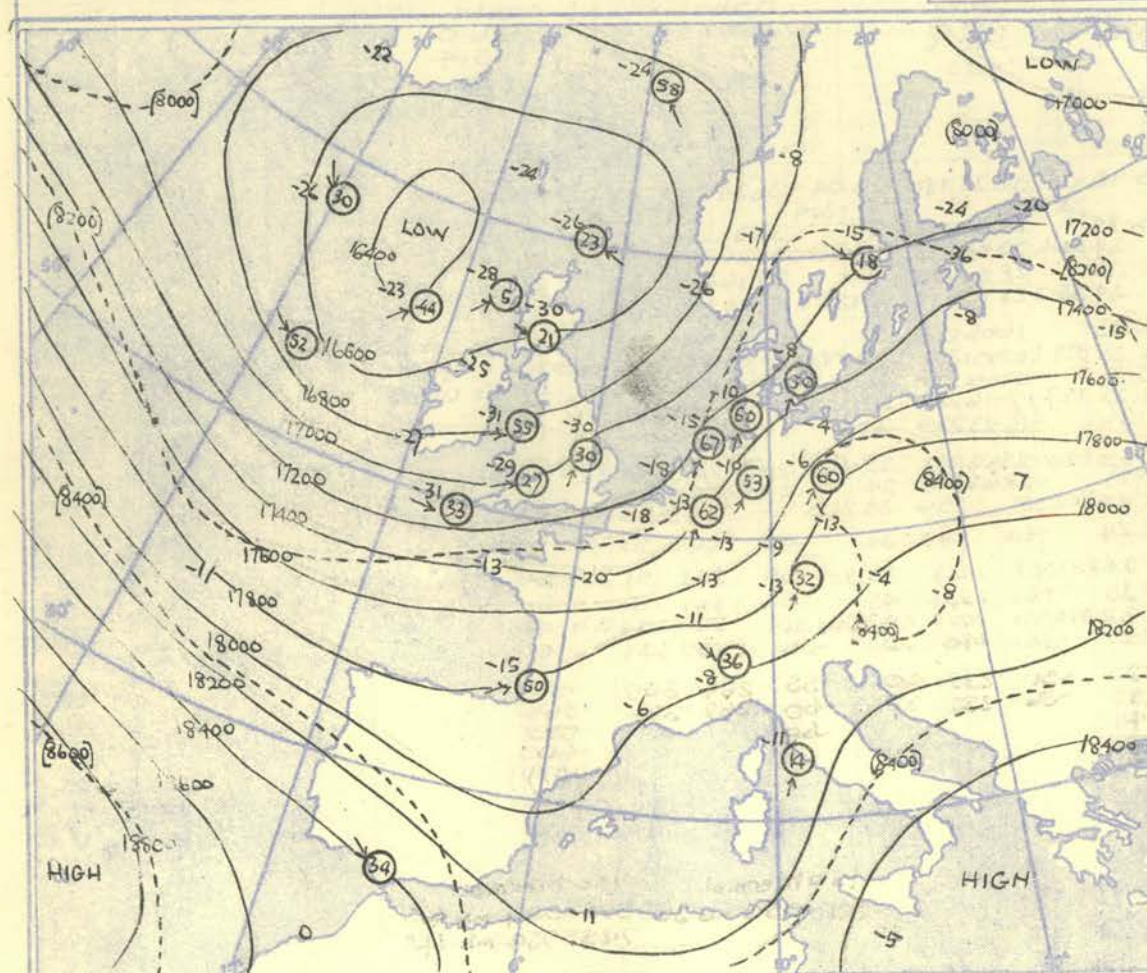
The continuous lines are contour lines of the 700 mb. surface
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52½° N.

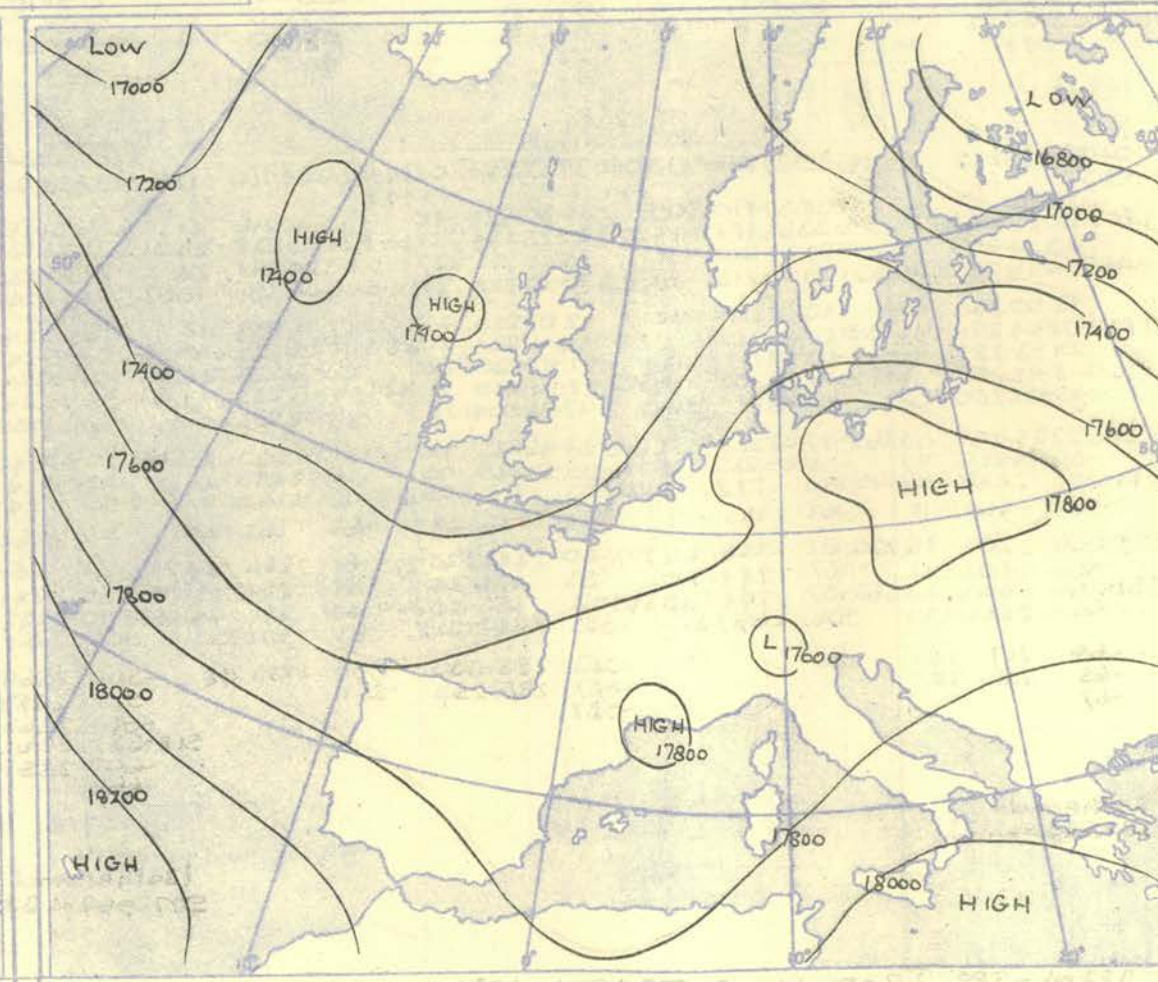
100 80 60 40 20 10 knots



The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500—300 mb.



The continuous lines are contour lines of the 500 mb. surface
The dotted lines are isopleths of the thickness of the layer 700—500 mb.



Isopleths of Thickness 500—1000 mb.

Page 3

DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

[illegible]

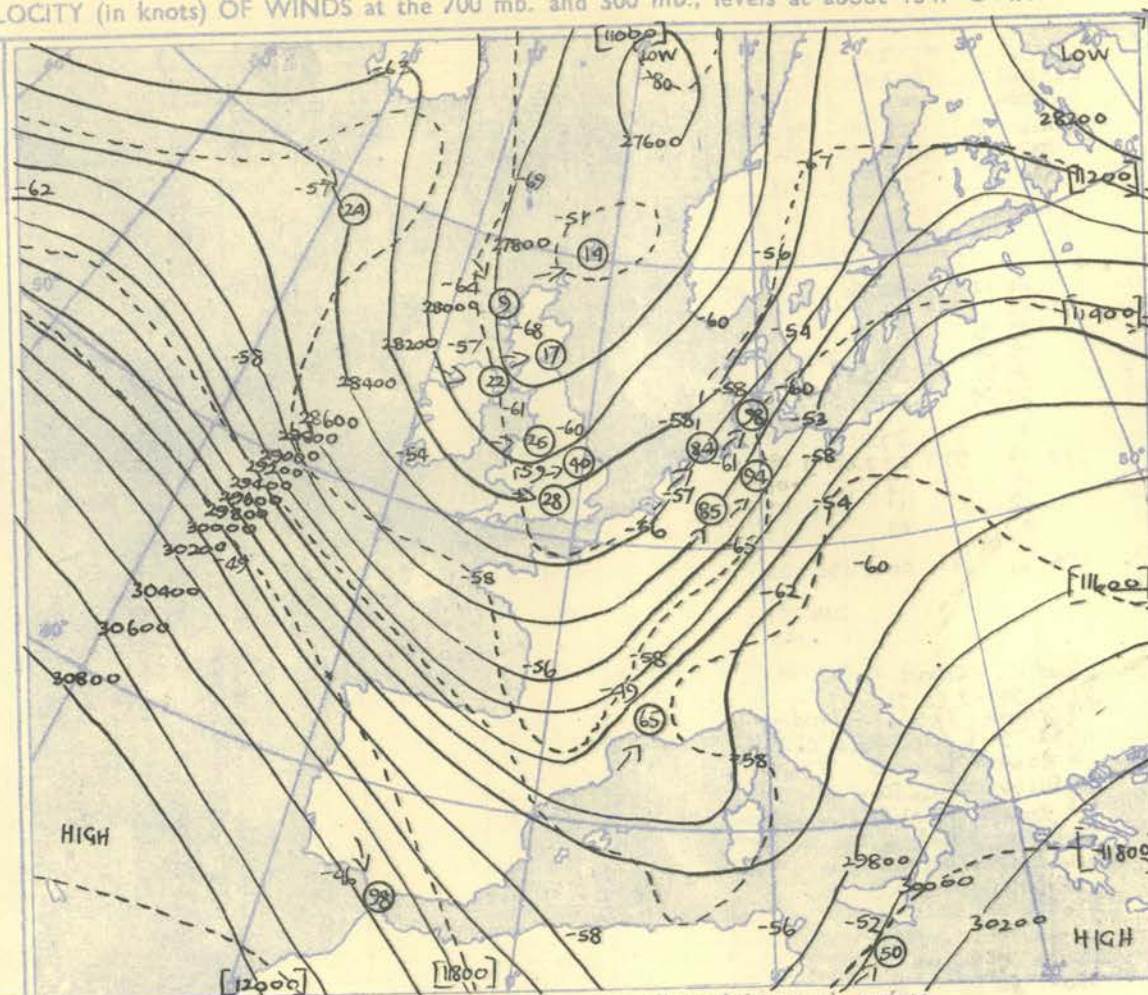
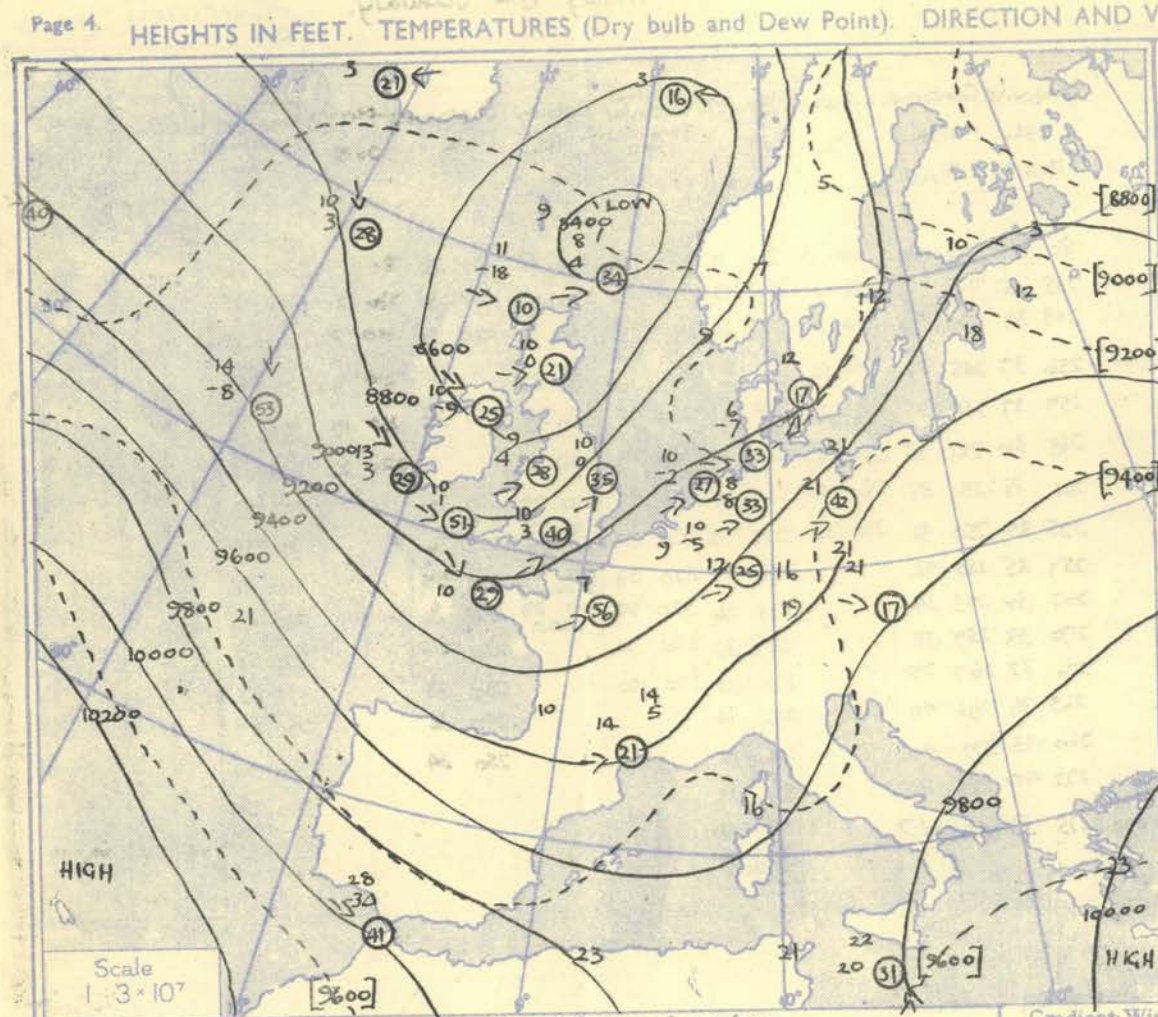
NEPHOSCOPE OBSERVATIONS

[illegible]

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.

WEATHER WATCHER										WEATHER WATCHER										WEATHER WATCHER										WEATHER WATCHER										WEATHER WATCHER										WEATHER OBSERVER										WEATHER OBSERVER										WEATHER OBSERVER										WEATHER OBSERVER										WEATHER EXPLORER										Ship	
59-0N 18-9W										58-9N 18-9W										59-0N 19-0W										59-0N 18-9W										53-3N 17-3W										53-0N 18-0W										52-9N 18-2W										52-9N 19-0W										56-7N 11-0W																					
03h G.M.T. mb 966 mb 966 mb 860										09h G.M.T. mb 975 mb 975 mb 885										15h G.M.T. mb 982 mb 982 mb 880										21h G.M.T. mb 983 mb 983 mb 905										08h G.M.T. mb 976 mb 973 mb 875										09h G.M.T. mb 976 mb 976 mb 890										15h G.M.T. mb 988 mb 988 mb 860										21h G.M.T. mb 993 mb 993 mb 880										03h G.M.T. mb 965 mb 965 mb 880																					
Time M.S.L. Surf Freezing										Time M.S.L. Surf Freezing										Time M.S.L. Surf Freezing										Time M.S.L. Surf Freezing										Time M.S.L. Surf Freezing										Time M.S.L. Surf Freezing										Time M.S.L. Surf Freezing										Time M.S.L. Surf Freezing										Time M.S.L. Surf Freezing										Time M.S.L. Surf Freezing										Time M.S.L. Surf Freezing	
Pressure mb										Pressure mb										Pressure mb										Pressure mb										Pressure mb										Pressure mb										Pressure mb										Pressure mb										Pressure mb										Pressure mb										Pressure mb	
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Temp. °F.										Temp. °F.										Temp. °F.										Temp. °F.										Temp. °F.										Temp. °F.										Temp. °F.										Temp. °F.										Temp. °F.										Temp. °F.										Temp. °F.	
Dew °F.										Dew °F.										Dew °F.										Dew °F.										Dew °F.										Dew °F.										Dew °F.										Dew °F.										Dew °F.										Dew °F.										Dew °F.	
Wind Dir. Vel. knots										Wind Dir. Vel. knots										Wind Dir. Vel. knots										Wind Dir. Vel. knots										Wind Dir. Vel. knots										Wind Dir. Vel. knots										Wind Dir. Vel. knots										Wind Dir. Vel. knots										Wind Dir. Vel. knots										Wind Dir. Vel. knots										Wind Dir. Vel. knots	
Surf										Surf										Surf										Surf										Surf										Surf										Surf										Surf										Surf										Surf										Surf	
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Tropopause										Tropopause										Tropopause										Tropopause										Tropopause										Tropopause										Tropopause										Tropopause										Tropopause										Tropopause											
395 mb - 57°										293 mb - 64°										227 mb - 68°										215 mb - 70°										358 mb - 54°										386 mb - 54°										267 mb - 65°										250 mb - 72°										965 mb - 22°										965 mb - 22°											
24,600'										28,500'										34,400'										35,100'										24,200'										23,300'										31,200'										340 mb - 57°										340 mb - 57°																					
Isothermal										Isothermal										Isothermal										Isothermal										Isothermal										Isothermal										Isothermal										Isothermal										Isothermal																					
682 - 869 mb 100°										682 - 869 mb 100°										682 - 869 mb 100°										682 - 869 mb 100°										682 - 869 mb 100°										682 - 869 mb 100°										682 - 869 mb 100°										682 - 869 mb 100°																															
451 - 450 mb -28°										451 - 450 mb -28°										451 - 450 mb -28°										451 - 450 mb -28°										451 - 450 mb -28°										451 - 450 mb -28°										451 - 450 mb -28°										451 - 450 mb -28°																															
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Isothermal										Isothermal										Isothermal										Isothermal										Isothermal										Isothermal										Isothermal										Isothermal										Isothermal																					
965 - 950 mb 41°										965 - 950 mb 41°										965 - 950 mb 41°										965 - 950 mb 41°										965 - 950 mb 41°										965 - 950 mb 41°										965 - 950 mb 41°										965 - 950 mb 41°																															
340 mb - 57°										340 mb - 57°										340 mb - 57°										340 mb - 57°										340 mb - 57°										340 mb - 57°										340 mb - 57°										340 mb - 57°																															
Tropopause										Tropopause										Tropopause										Tropopause										Tropopause										Tropopause										Tropopause										Tropopause										Tropopause																					

HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h G.M.T.

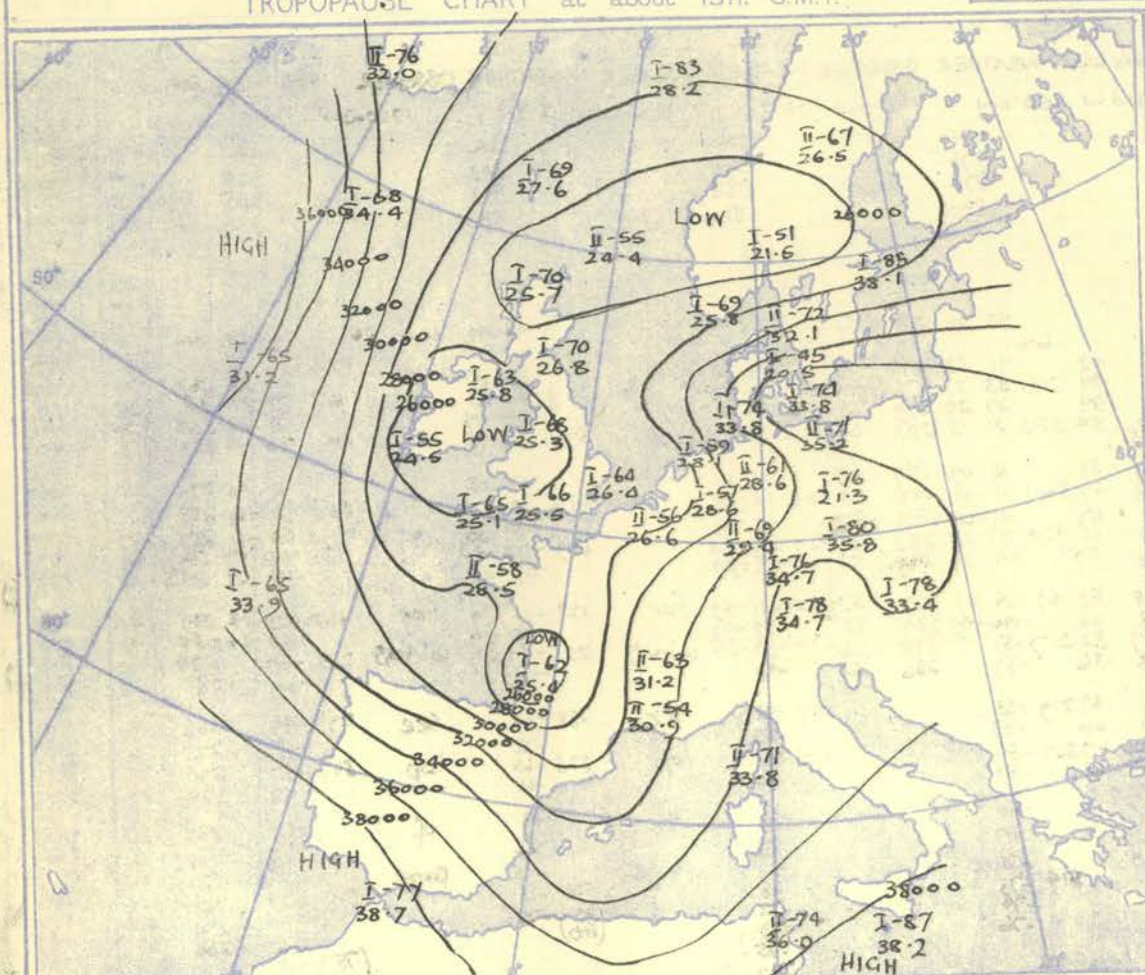


Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52½° N.

100	80	40	30	20	15	10 knots
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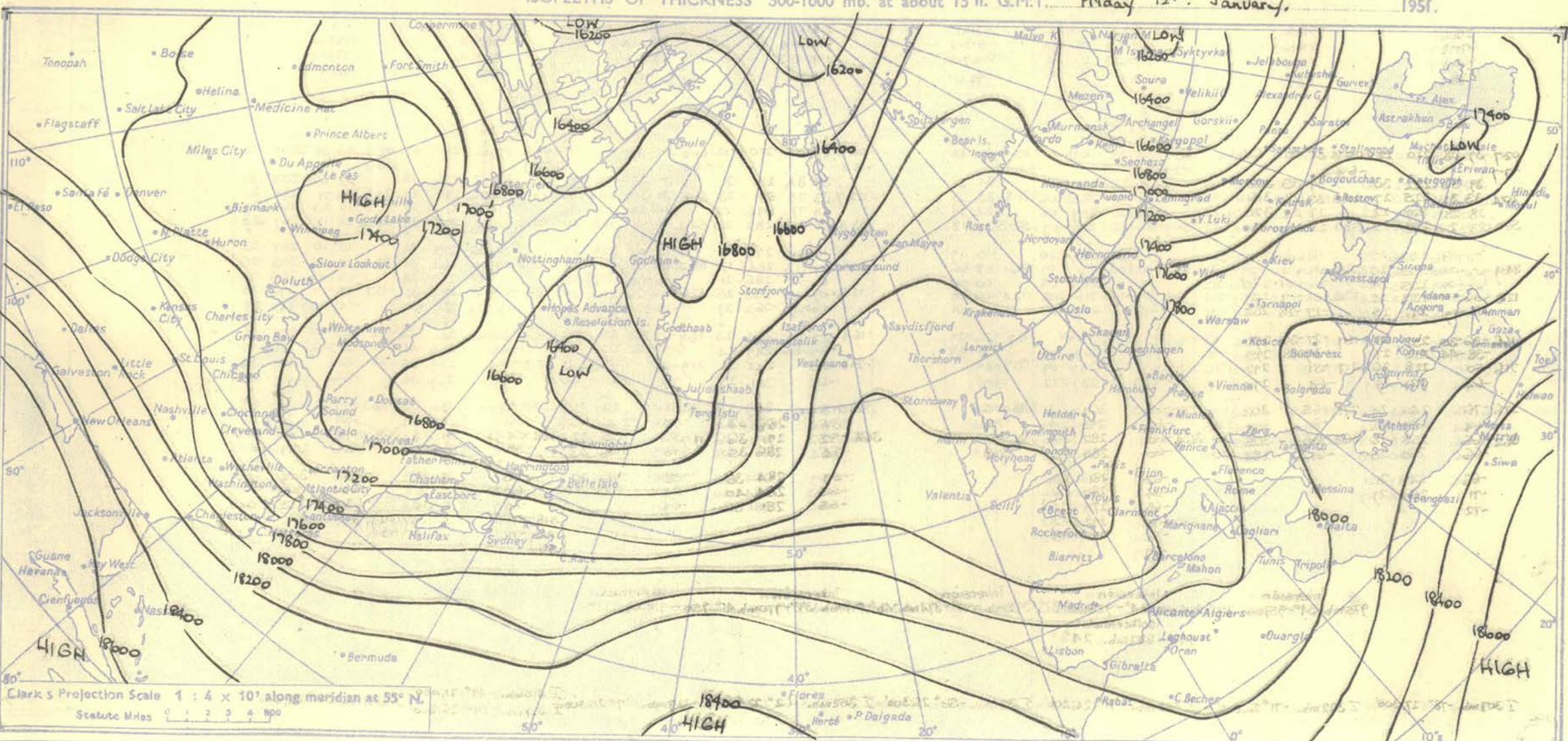
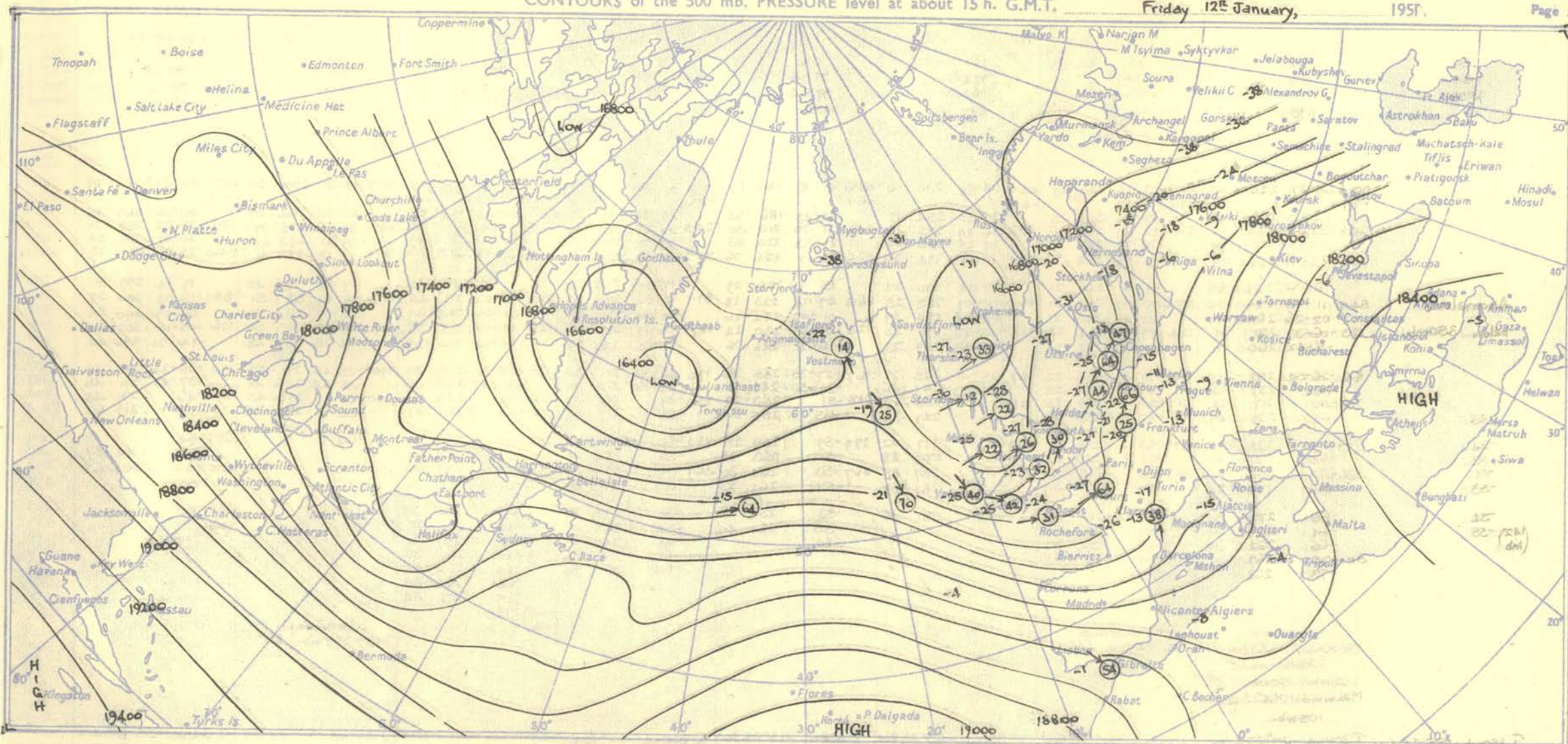
NOTES ON THE AEROLOGICAL SITUATION.

Considerable warming occurred over the eastern Atlantic associated with subsidence in the northwesterly air stream and the filling of the low to the north of Scotland. Little change is to be noticed elsewhere over the Atlantic with the strong westerly thermal being maintained over Newfoundland and to the east thereof.



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Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



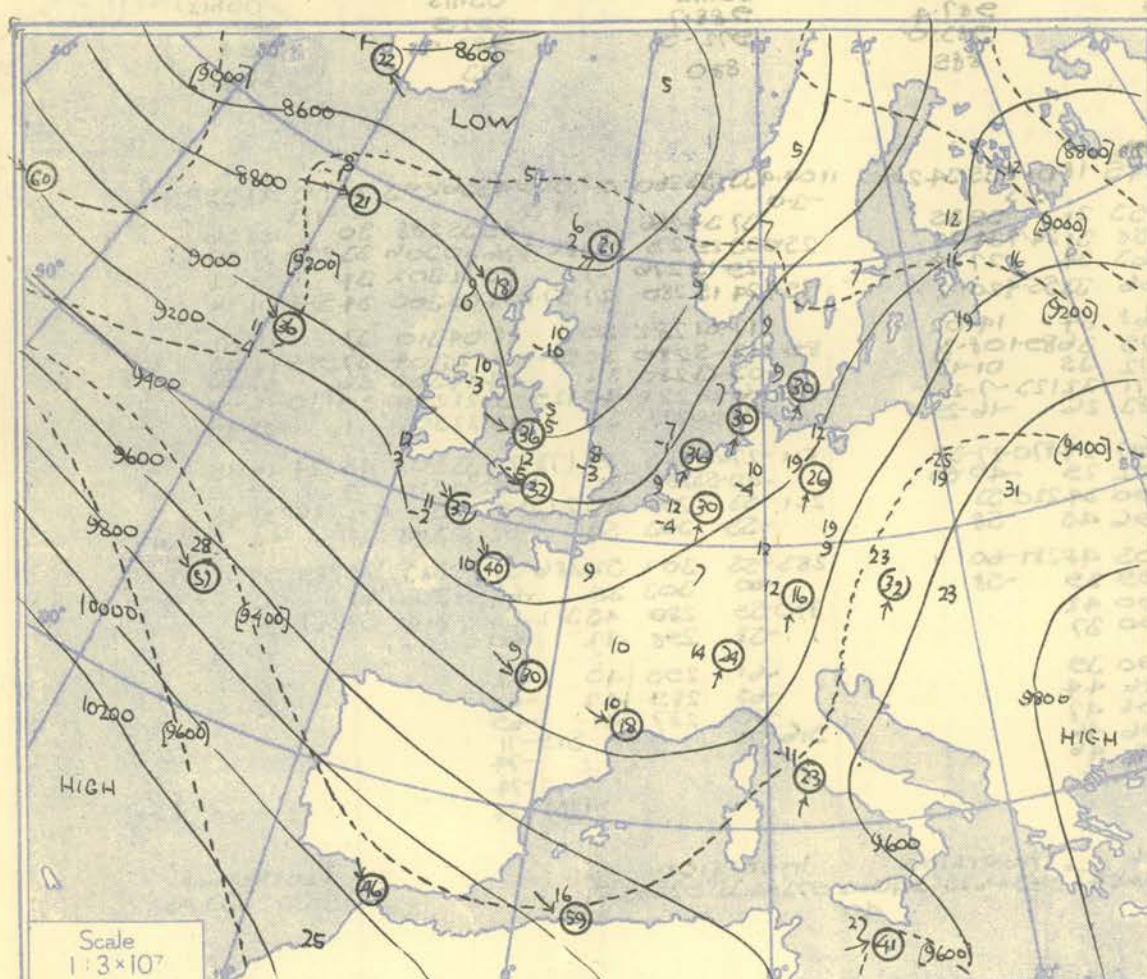
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION
Pressure mb	Time M.S.L.	Surf Freezing	15h.		G.M.T.		Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel.	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel.	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel.	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel.	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel.	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel.	Time M.S.L.	Surf Freezing	Pressure mb				
			15h.	G.M.T.	15h.	G.M.T.																												15h.	G.M.T.	15h.	G.M.T.
			968.9	mb																																	
			959.0	mb																																	
				mb																																	
				mb																																	

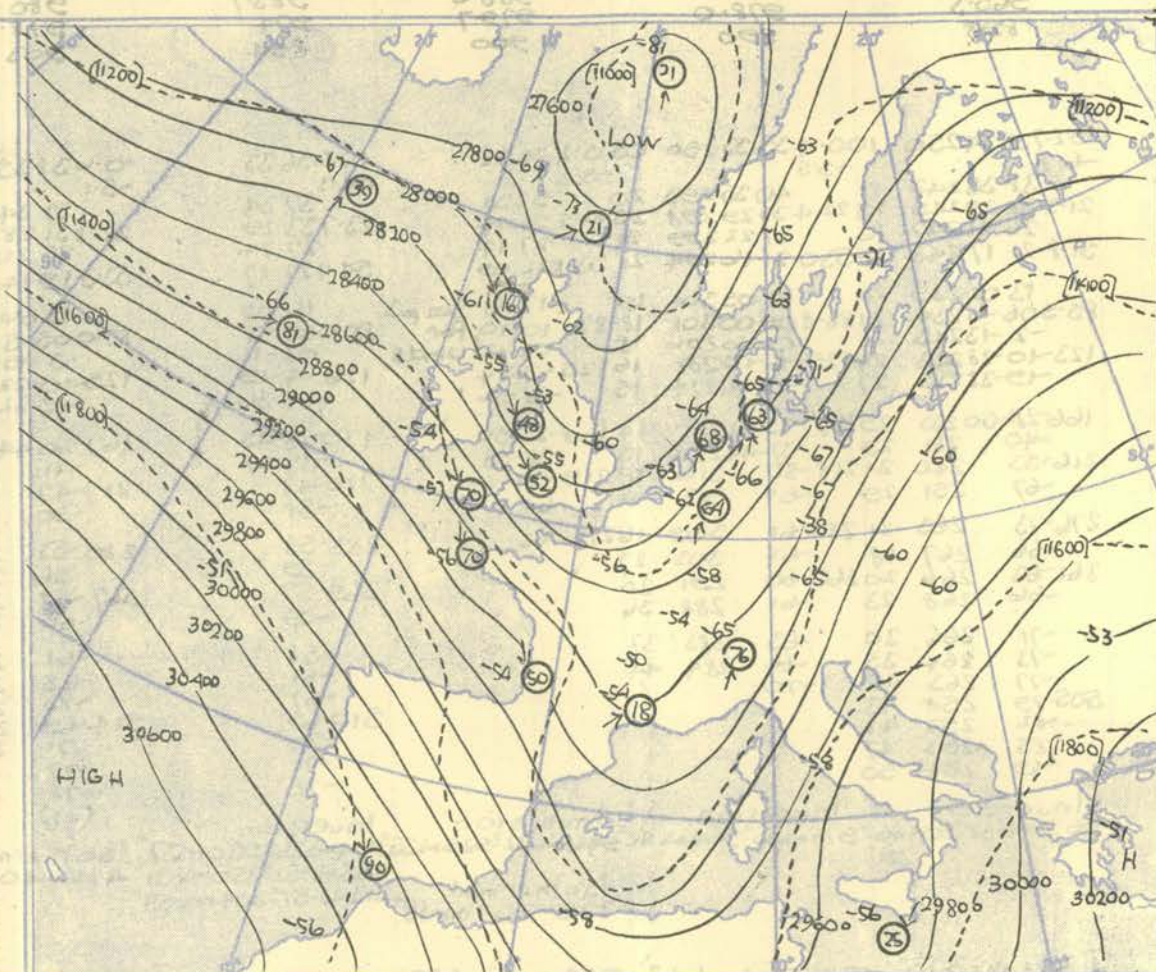
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)																																									
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				Valentia				STATION				
Time M.S.L.	03hrs				03hrs				03hrs				03hrs				03hrs				03hrs				03hrs				03hrs				03hrs				03hrs				Time M.S.L.
Surf	975.2				979.6				980.6				983.7				980.9				987.4				988.7				992.9				995.2				995.2				Surf
Freezing	858				890				900				894				903				865				880				873				860				860				Freezing
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb								
Surf	02.738	34.250			100.435	33.230			05.0.2	31.32			02.636	33			0.638	35.245	18	01.235	34.200	11	04.435	33.260	08	01.945	36.293	20	0.3	41.39			Surf								
1000	6.7				5.5				5.2				04.3				5.1			3.3			3.0			1.3							1000								
950	38	35.247	21		40	35.293	20		32.31				37	34			37	34.253	21	39	35				37	34.266	21					950									
900	21.3	32.28.249	15		22.433	29.293	20		22.5	32.24			23.7	33.29			22.8	31.28.258	31	24.7	34.27				25	33.29.273	25						900								
850	26	21.247	16		27	22.299	21		27	14			27	24			25	21.263	34	27	19				29	19.276	27						850								
800	51.8	21.17.243	19		53.0	21.16.294	21		53.8	22.09			54.4	22.17			53.3	19.14.266	33	55.4	20.12				55.7	24.15.280	27						800								
750	13	02.239	20		15	03.301	19		17	6			16	09			13	06.268	34	14	02				17	01.282	30						750								
700	85.506	6.234	21		86.8	09.00.301	18		87.1	10.10			88.0	10.3			87.0	05.3.275	36	85.1	08.3				89.7	12.5.280	32						700								
650	2	13.243	21		01	16.236	18		03	13			03	11			3	15.272	35	01	13				03	13.280	36						650								
600	123	10.28.243	24		125	6.16.288	16		125	7.24			126	4.19			125	10.22.271	32	125	7.26				128	6.24.281	40						600								
550	15	38.233	27		15	22.274	13		16	36			14	36			15	32.283	26	16	29				16	30.277	35						550								
500	166	28.50.233	23		168	23.32.258	14		168	25.50			170	23.45			167	30.44.297	24	170	27.38				171	27.41.283	39						500								
450	40	231	23		37	44.258	13		38	58			220	47			41	292	29	46	00				40	53.288	37						450								
400	216	53	240		31	218	50		310	07.219	50		217	47			50	290	34	210	53				221	53	290	40						400							
350	67	251	29		64	313	11		61				283	53			60	296	48	58					255	303	54						350								
300	276	73	263		21	280	61		309	16.278	62		283	53			280	53	303	48	271	60				283	53	302	52					300							
250	66	267	18		62	303	27		291	30			369	57			56	299	39	58						303	39	63						250							
200	362	63	266		20	366	60		288	36			369	57			60	290	37							370	59	289	45					200							
170	66	268	23		61	288	36		283	37			369	57			61	290	39							370	59	298	42					170							
150	71	266	30		63	283	37		284	44			369	57			63	290	39							370	59	298	42					150							
130	73	264	38		66	284	44		284	44			369	57			65	296	44							370	59	298	42					130							
110	77	263	42		70	284	44		284	44			369	57			65	296	44							370	59	298	42					110							
100	803	79	258		43	70			284	44			369	57			65	296	44							370	59	298	42					100							
90	71	252	42		70	284	44		284	44			369	57			65	296	44							370	59	298	42					90							
80	73	253	47		70	284	44		284	44			369	57			65	296	44							370	59	298	42					80							
70	78	258	50		70	284	44		284	44			369	57			65	296	44							370	59	298	42					70							
60	78	258	50		70	284	44		284	44			369	57			65	296	44							370	59	298	42					60							
Inversion	965 mb 38.55 fms				Inversion	978 mb 33.96 fms			Inversion	985 mb 32.92 fms			Inversion	985 mb 32.92 fms			Inversion	985 mb 32.92 fms							Inversion	985 mb 32.92 fms								Inversion							
Tropopause	I 321 mb -75°				I 350 mb -64°				I 339 mb -65°				I 280 mb -59°				I 266 mb -58°			I 264 mb -62°					I 355 mb -54°									Tropopause							
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE								STATION				
Time M.S.L.	03hrs				03hrs				03hrs				03hrs				03hrs				03hrs				03hrs				03hrs								Time M.S.L.				
Surf	975.0				983.5				985.8				990.4				988.2				989.2				992.9				998.6								Surf				
Freezing	900				889				909				892				905				919				890				890								Freezing				
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb								
Surf	2.7	36.33	230	07	0.4	34.31			0.2	30.92	270		0.9	02.636	34.260	12	0.6	37.35	300	15	01.235	35.225	15	04.435	36.250	16	02.945	38.290	12			Surf									
1000	56				4.5				3.8				3.8				3.2			2.9				4.8			0.4						1000								
950	38	32.270	12		40	31			35	30.291	21		36	33.282	27		38	31.308	27	36	33.268	28			37	33.285	33						950								
900	22.3	32.28.270	15		25.5	34.27			23.9	31.78.311	16		25.6	33.28.300	28		24.8	31.26.306	27	25.1	30.28.278	33			33	26.2	33.28.294	36					900								
850	26	21.284	16		27	21			27	77.303	13		27	73.305	29		25	26.304	27	24	21.283	33</																			

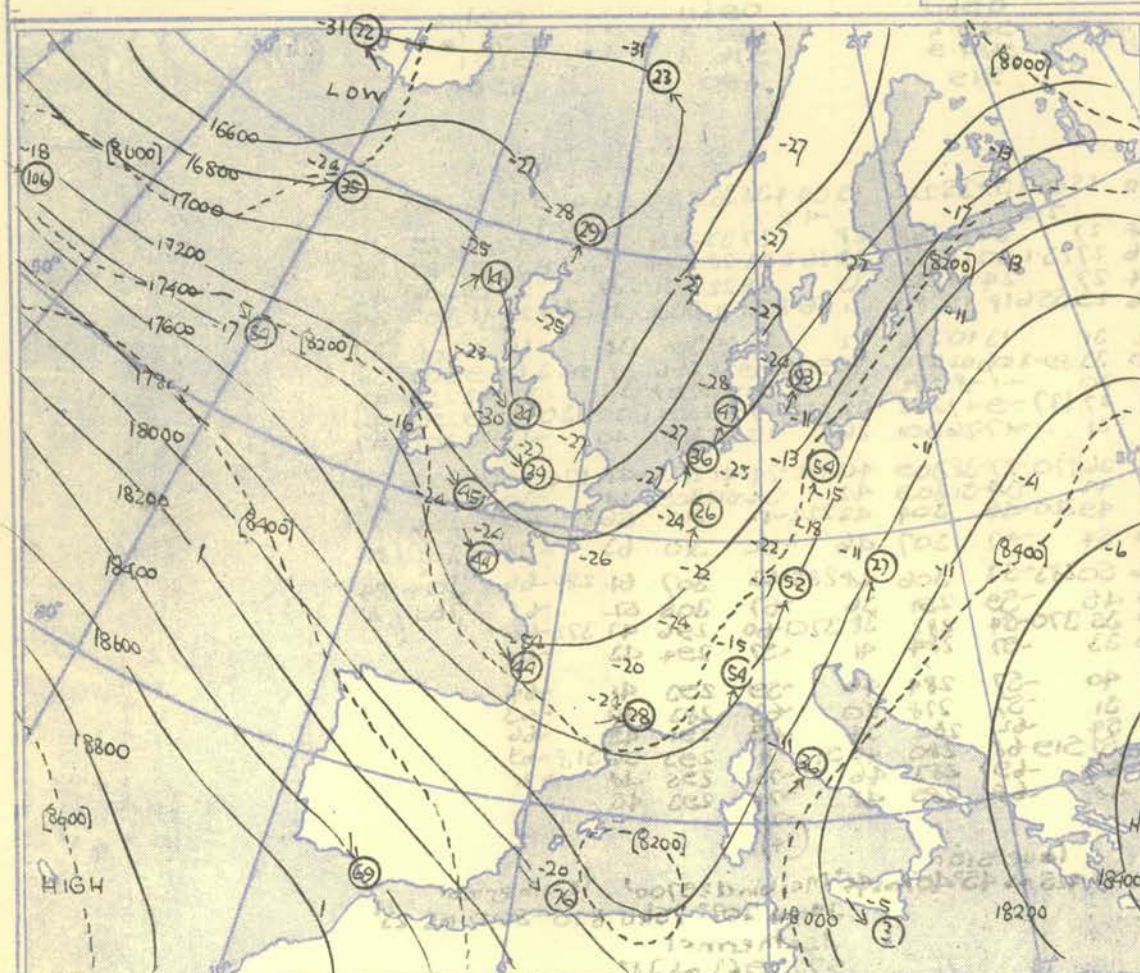
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb. levels at about 03 h G.M.T.



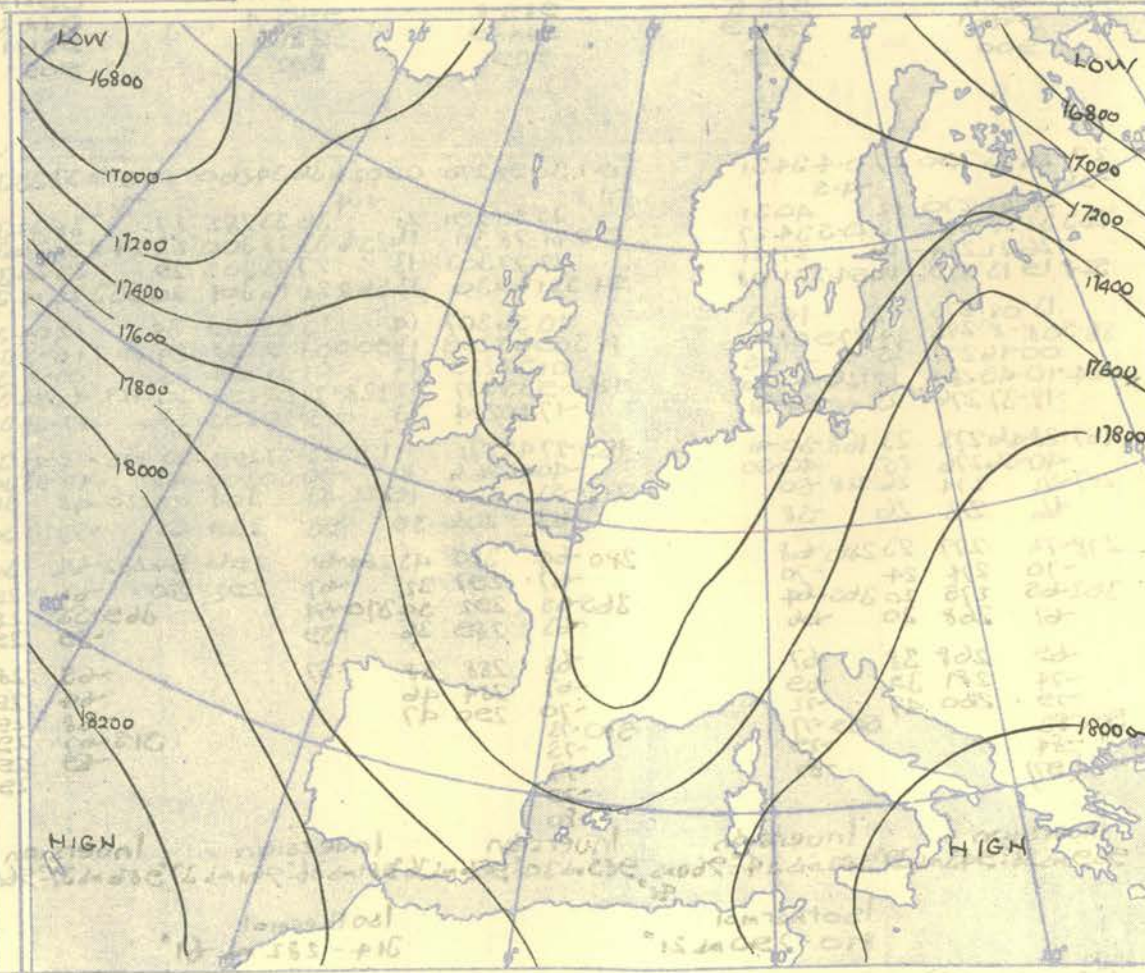
The continuous lines are contour lines of the 700 mb. surface
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.



The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 - 300 mb



The continuous lines are contour lines of the 500mb. surface
The dotted lines are isopleths of the thickness of the layer 700-500 mb.

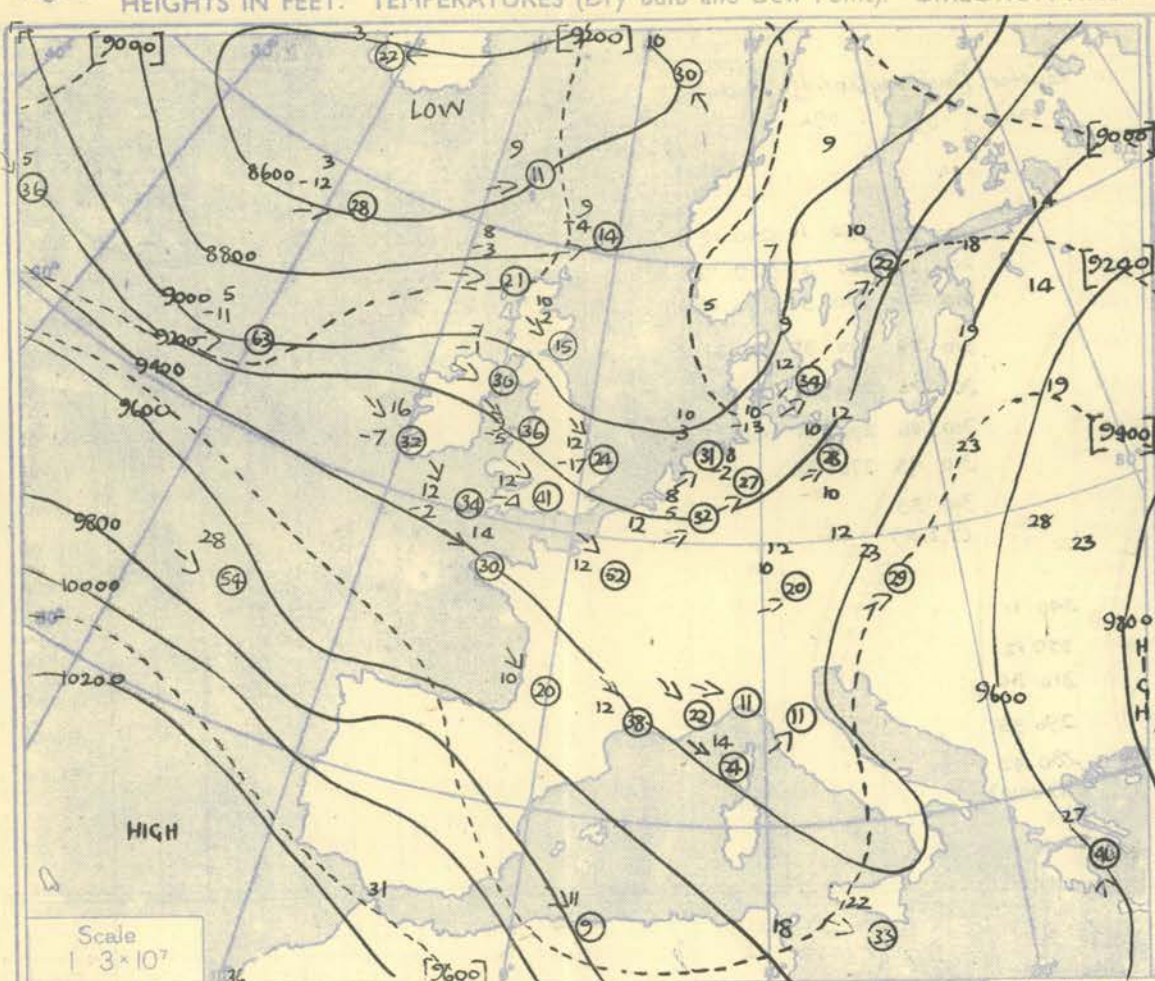


Isopleths of Thickness 500-1000mb

DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.

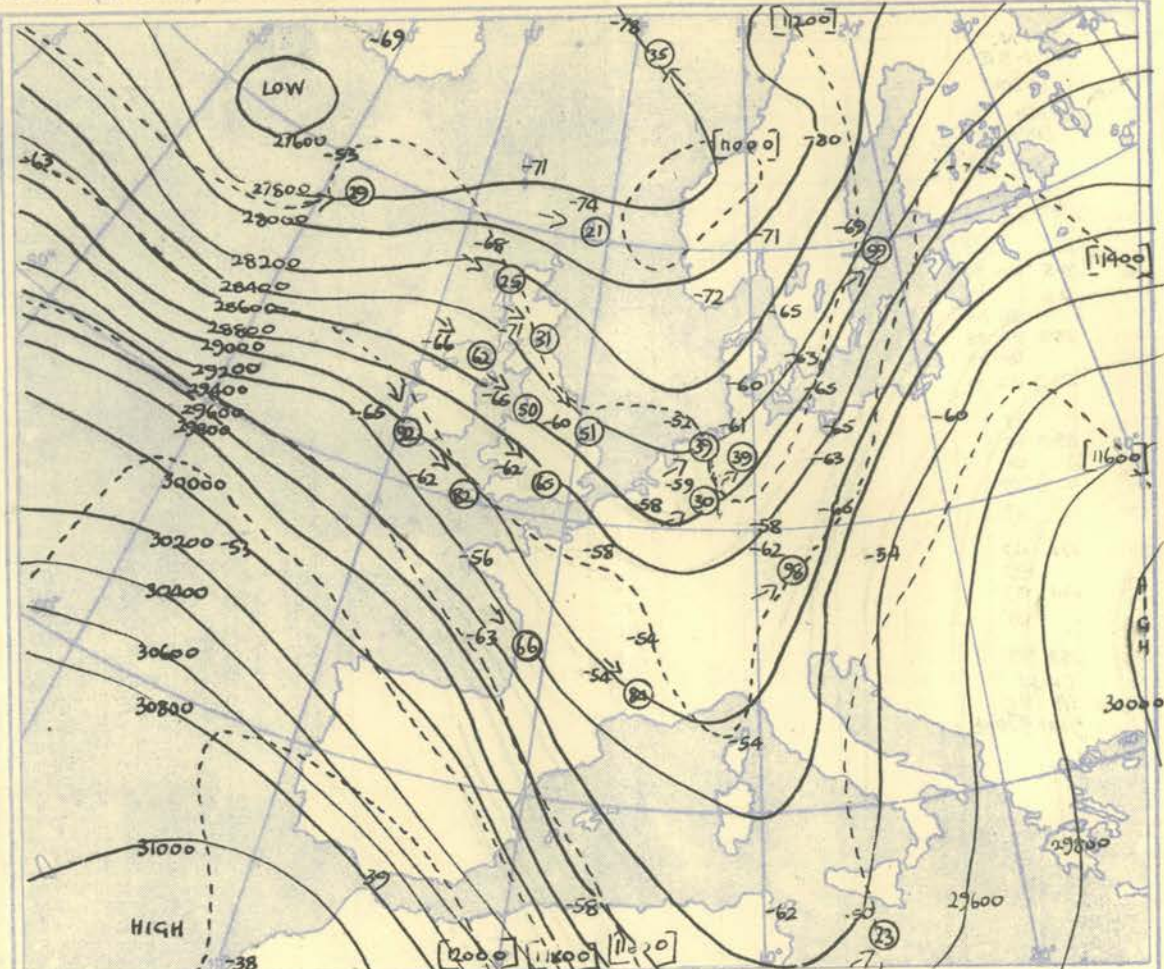
Ship	WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				Ship																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Lat/Long	53°5N 18°6				53°4N 19°2W				53°2N 19°9W				53°1N 20°3W				59°0N 18°9W				59°9N 18°8W				59°0N 19°1W				59°0N 18°8				Lat/Long																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
Pressure M.S.L. Surf Freezing	03L 996 996 920				09L 997 997 930				15L 995 995 930				21L 997 997 925				03L 984 984 900				09L 983 983 920				15L 981 981 935				21L 980 980 Surf				G.M.T. mb mb mb				Time M.S.L. Surf Freezing																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
	G.M.T. mb mb mb				G.M.T. mb mb mb				G.M.T. mb mb mb				G.M.T. mb mb mb				G.M.T. mb mb mb				G.M.T. mb mb mb				G.M.T. mb mb mb				G.M.T. mb mb mb																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
Surf	1000	-1.1	43	35	300	32	-9	41	41	270	33	-13	42	34	290	33	-9	41	33	270	32	-4.4	41	35	217	17	38	31	250	24	-5.6	38	26	250	18	32	32	245	22	Surf																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
950		36	23	288	35	34	34	260	37	34	34	260	37	35	26	282	39	35	26	257	33	-4.5	35	29	266	25	35	29	266	21	-5.6	34	25	252	18	31	29	268	22	1000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
900		29	19	285	35	29	29	270	31	29	29	270	31	27	21	277	44	29	19	255	40	-4.4	32	27	267	25	29	24	264	24	22.2	27	22	251	22	22.4	26	22	274	24	950																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
850		23	15	285	35	22	22	268	30	22	22	268	30	23	18	257	47	23	18	257	42	-4.5	25	20	268	24	23	19	252	28	52.4	19	18	251	24	19	17	283	32	900																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
800		16	09	285	34	18	18	269	35	18	18	269	35	15	11	258	54	15	11	258	45	-4.2	19	13	272	22	16	12	244	28	52.4	11	10	252	26	52.4	13	13	288	33	850																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
750		11	02	285	36	14	09	269	38	08	00	258	57	07	01	264	47	15	08	274	21	09	05	242	25	04	04	252	28	04	04	252	28	06	06	284	30	750																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
700		11	04	285	36	12	14	265	45	05	11	251	63	07	12	269	58	08	01	269	21	87.1	09	01	247	20	85.4	03	12	250	28	85.6	00	02	270	26	700																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
650		05	14	286	36	08	16	267	49	01	28	250	78	04	41	274	69	01	11	264	24	-0.1	11	264	24	-0.4	11	246	22	-11	24	237	31	-0.9	14	269	21	650																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
600		00	16	285	44	03	17	271	62	00	30	251	81	03	34	274	87	03	19	254	27	125	09	22	233	27	122	19	35	233	33	123	18	24	261	16	600																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
550		08	20	282	53	04	25	268	62	07	40	257	99	05	36	274	96	15	30	255	29	-1.5	30	255	29	-1.7	36	230	32	-28	46	238	27	-28	31	258	13	550																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
500		17	28	279	54	15	35	268	78	17	41	257	96	17	36	274	96	16	39	260	35	168	27	47	224	35	164	37	50	242	27	165	38	41	247	10	500																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
450		27	43	275	70	25	48	266	93	25	49	264	99	22	41	273	98	34	50	256	41	-3.4	39	256	40	218	48	217	34	214	50	236	26	50	243	09	450																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
400		37	54	273	81	36	52	267	98	36	58	267	109	32	50	270	111	46	59	256	46	-5.9	46	256	40	218	48	217	34	214	50	236	26	50	243	09	400																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
350		51		270	81	47		267	99	48		267	109	48		270	111	59		255	46	-5.9	59	255	46	218	48	210	43	210	43	215	22	53	279	10	350																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

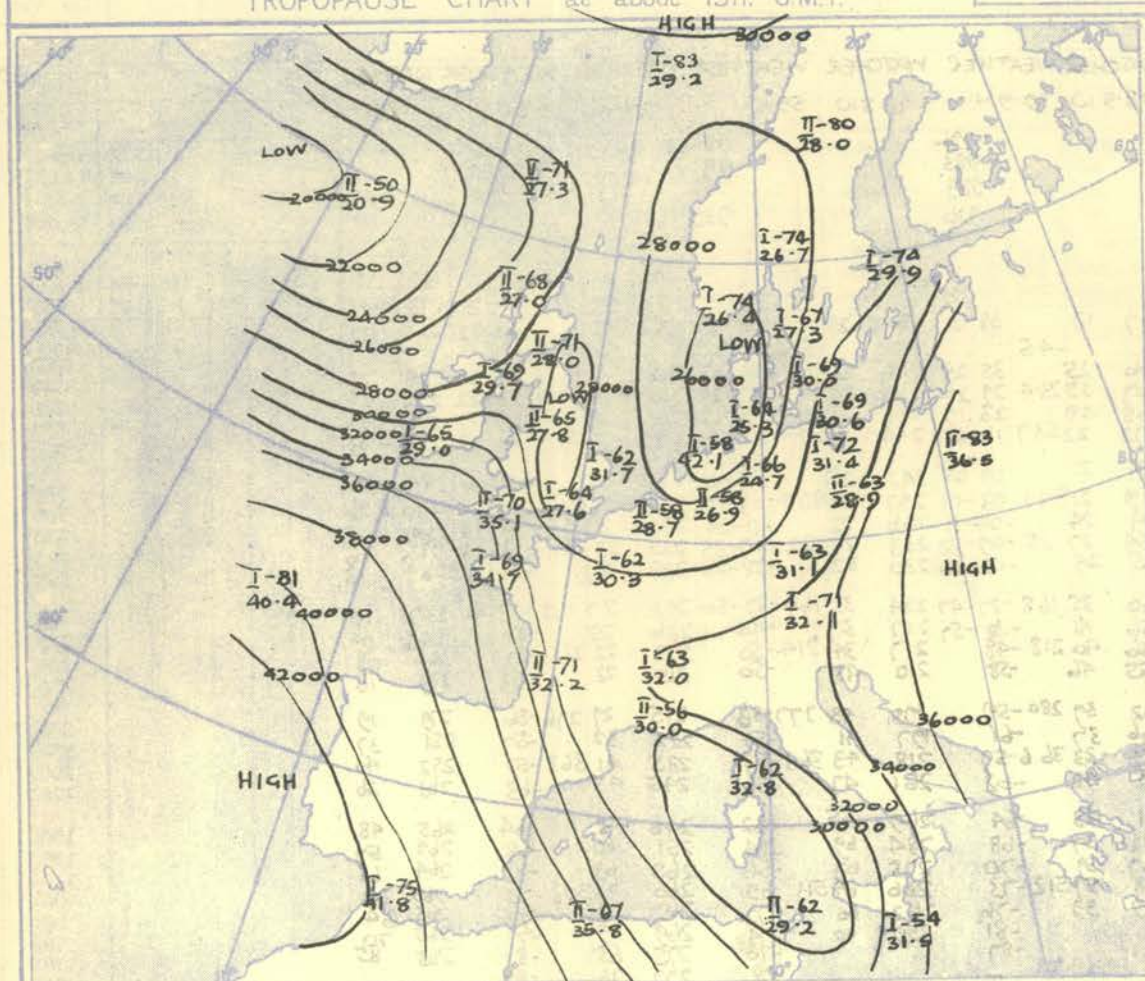
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. $52\frac{1}{2}^\circ$ N.

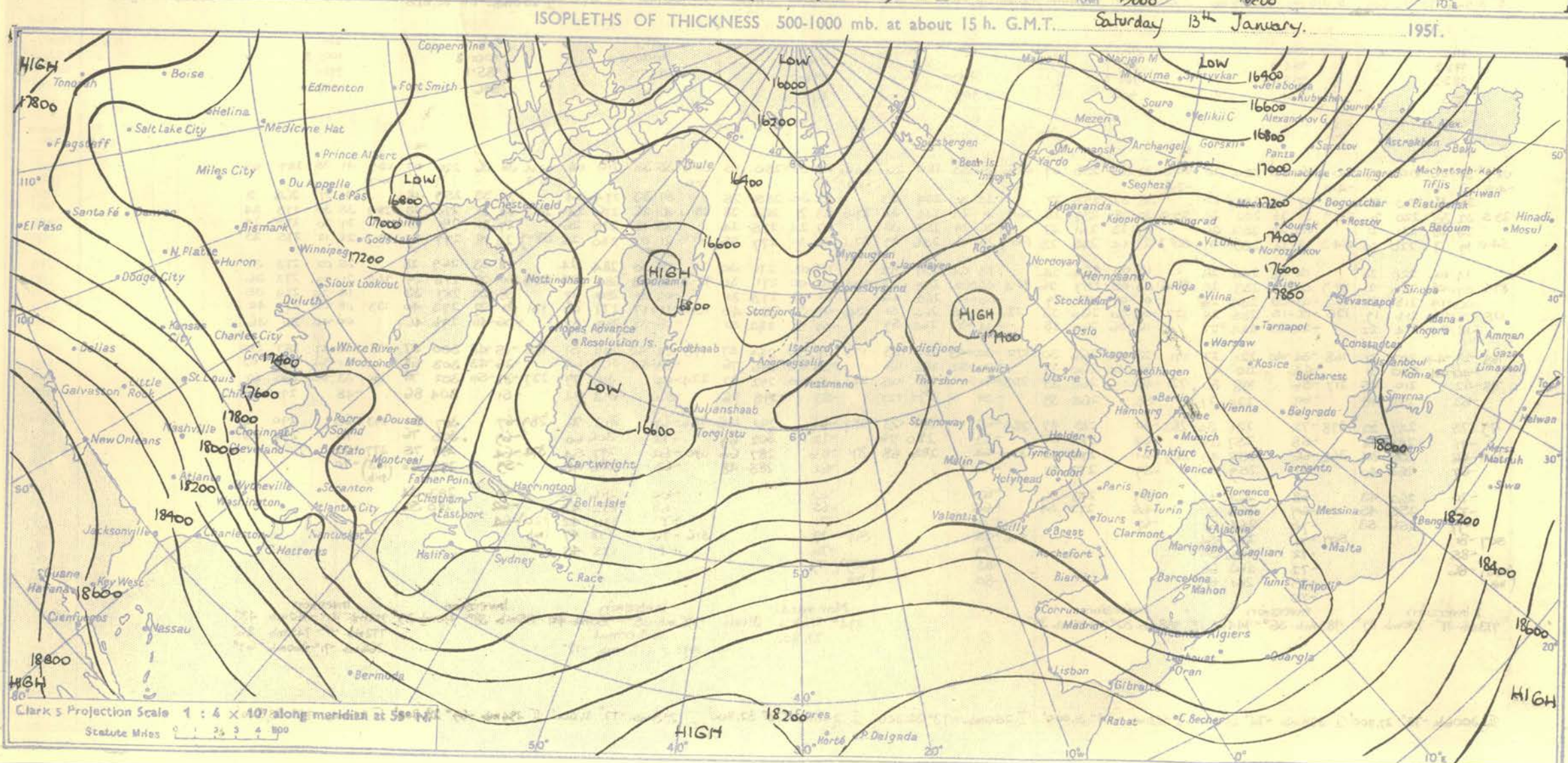
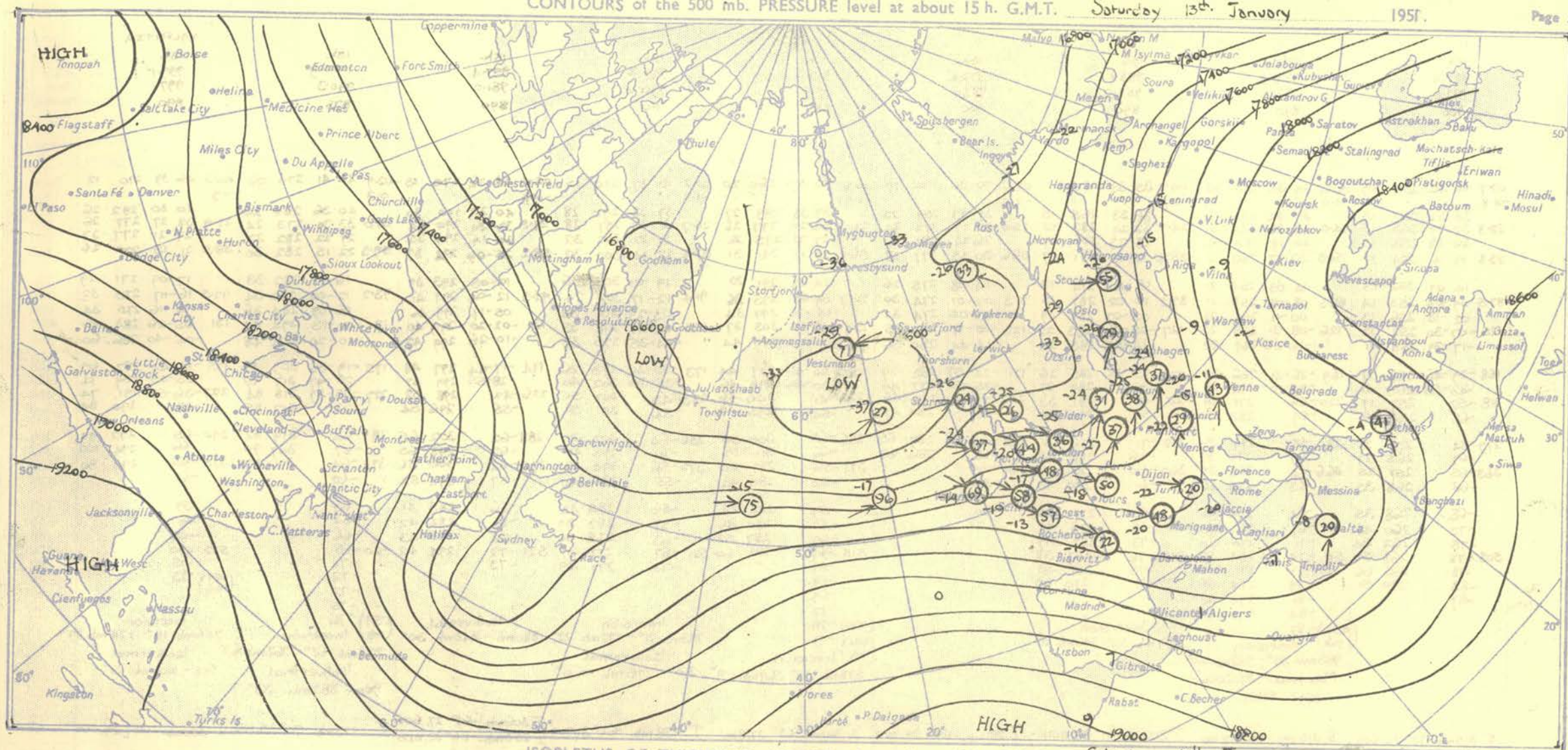
100 80 60 40 20 10 0 knots



The continuous lines are contour lines of the 300 mb. surface.
The dotted lines are isopleths of the thickness of the layer 500-300 mb.

TROPOPAUSE CHART at about 15h. G.M.T.



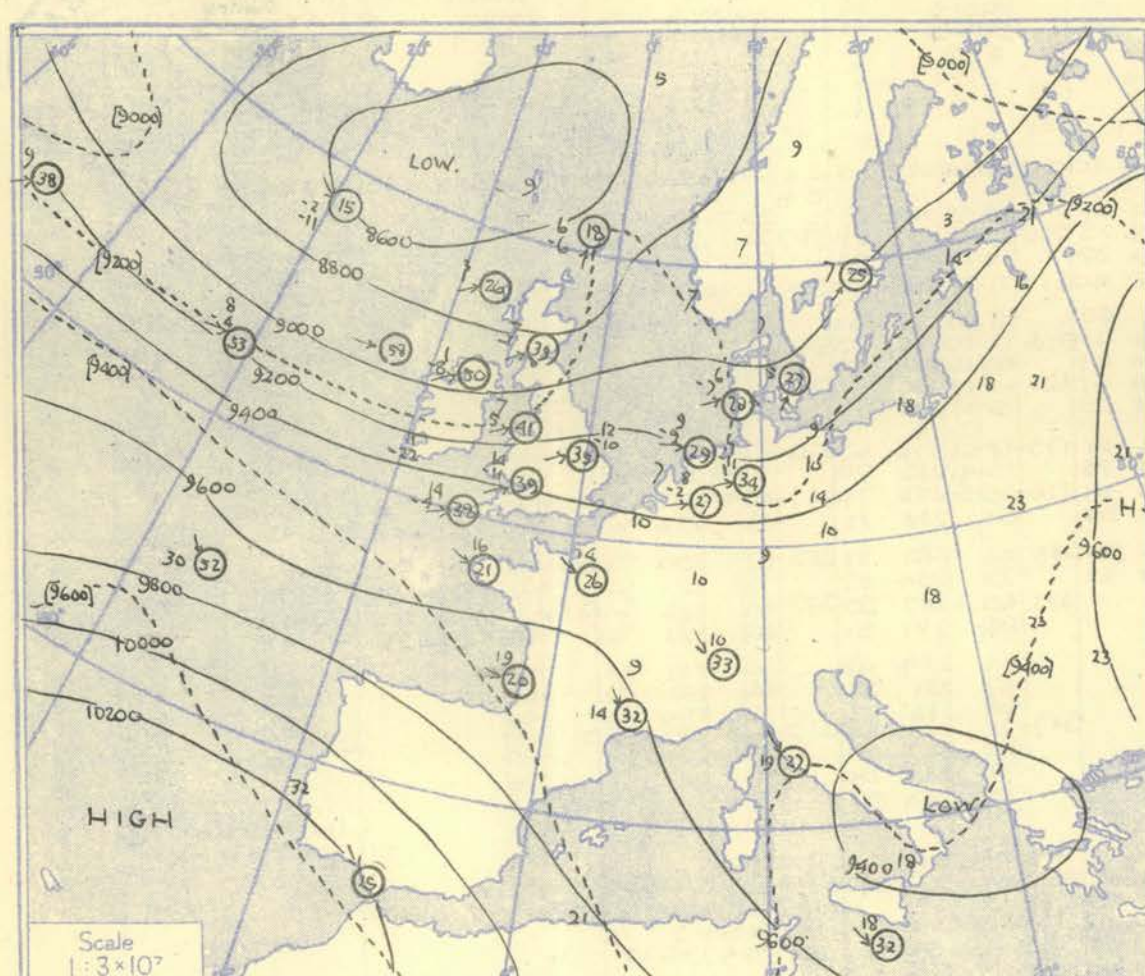


RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)																																																																																																																																																																																																																																																																																																																																																																																																								
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION																																																																																																																																																																																																																																																																																																																																																																		
Pressure mb	Time M.S.L. Surf Freezing	15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		Time M.S.L. Surf Freezing																																																																																																																																																																																																																																																																																																																																																																						
		982.4		mb		984.3		mb		988.1		mb		992.4		mb		993.0		mb		995.8		mb		997.4		mb		1000.9		mb			999.1		mb																																																																																																																																																																																																																																																																																																																																																																			
		972.5		mb		983.3		mb		987.2		mb		983.1		mb		991.0		mb		990.6		mb		981.2		mb		990.3		mb			997		mb																																																																																																																																																																																																																																																																																																																																																																			
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Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F.	Dew °F.	Wind		Height ft./100	Temp. °F

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION										LERWICK										STORNOWAY										LEUCHARS										ALDERGROVE										LIVERPOOL										DOWNHAM MARKET										LARKHILL										CAMBORNE										STATION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Time M.S.L.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M	

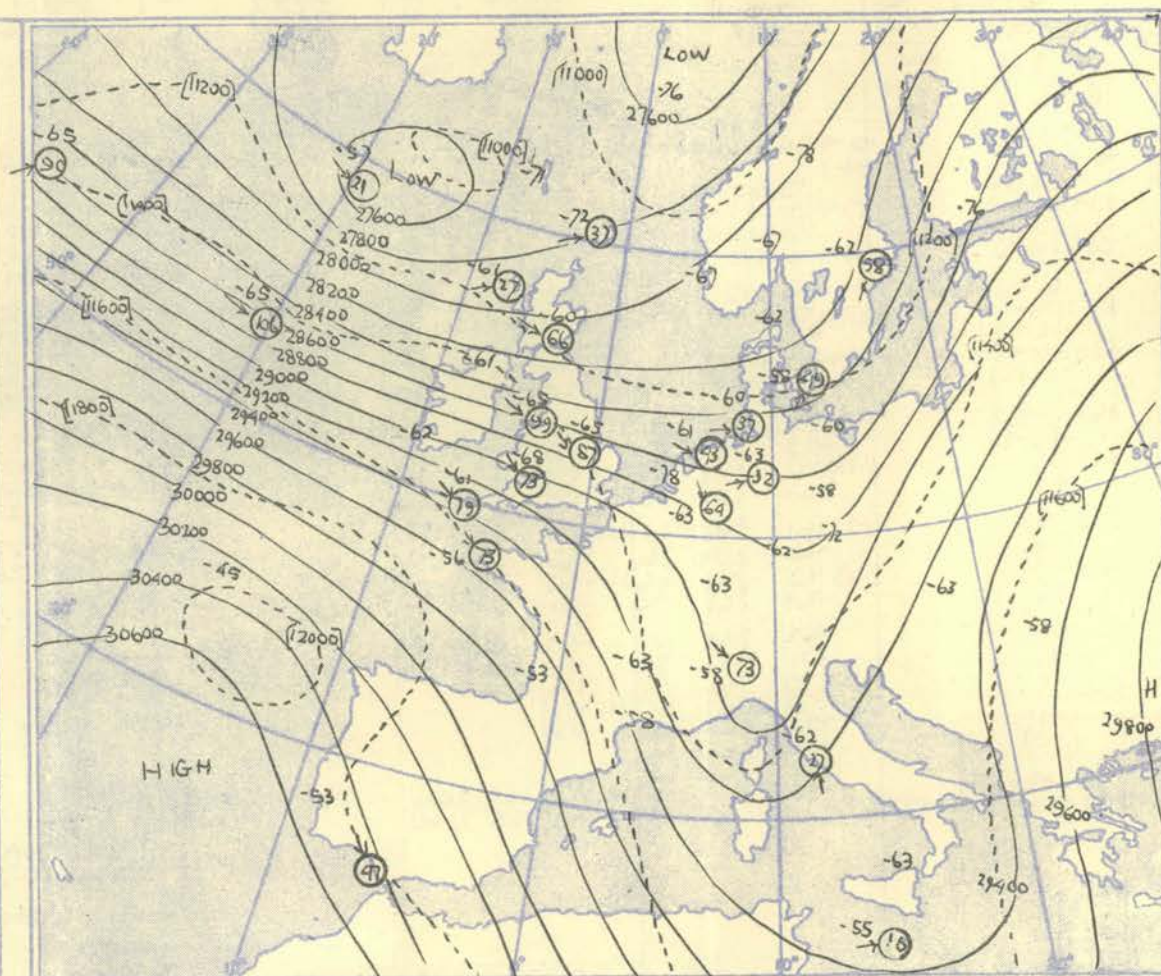
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



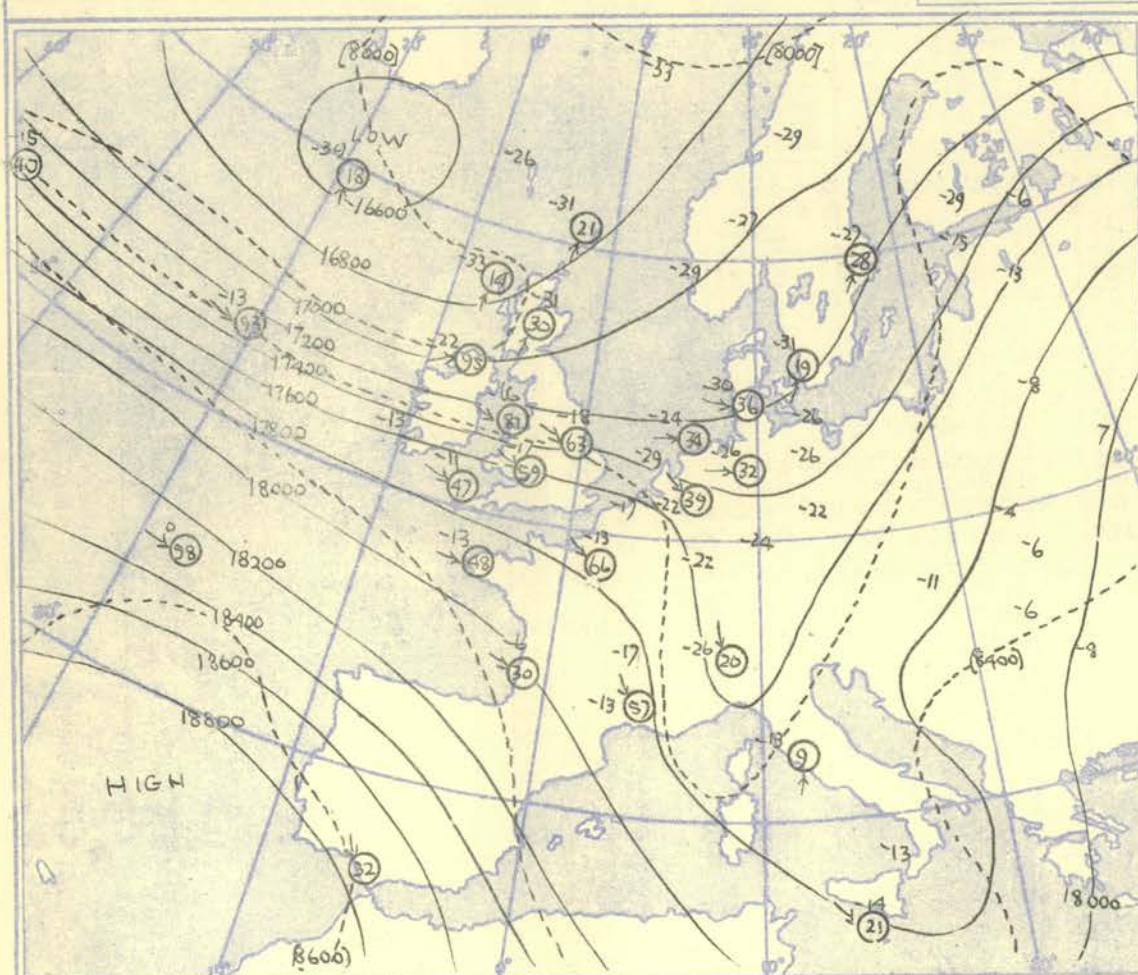
The continuous lines are contour lines of the 700 mb. surface
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. $52\frac{1}{2}^\circ$ N.

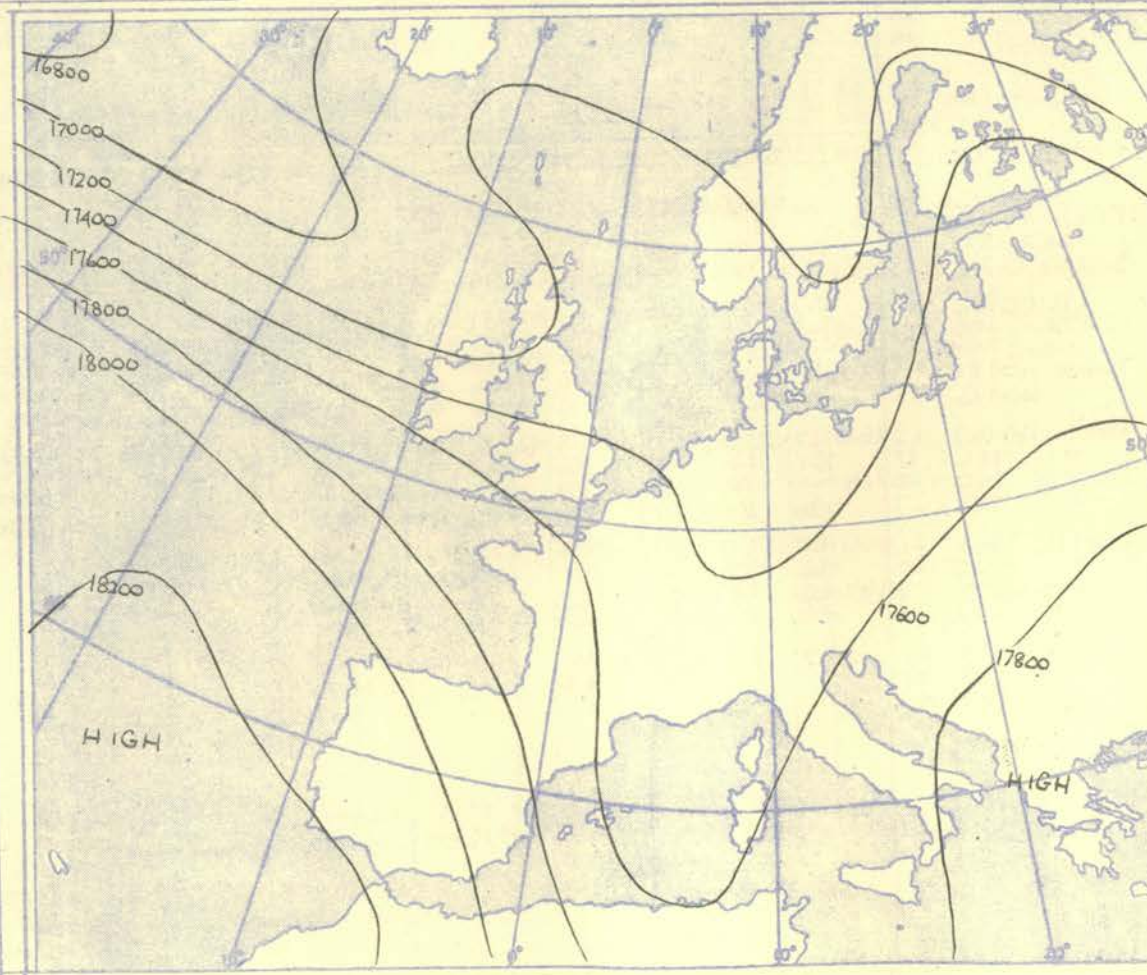
100 60 40 20 10 knots



The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500—300 mb.



The continuous lines are contour lines of the 500 mb. surface
The dotted lines are isopleths of the thickness of the layer 700—500 mb.

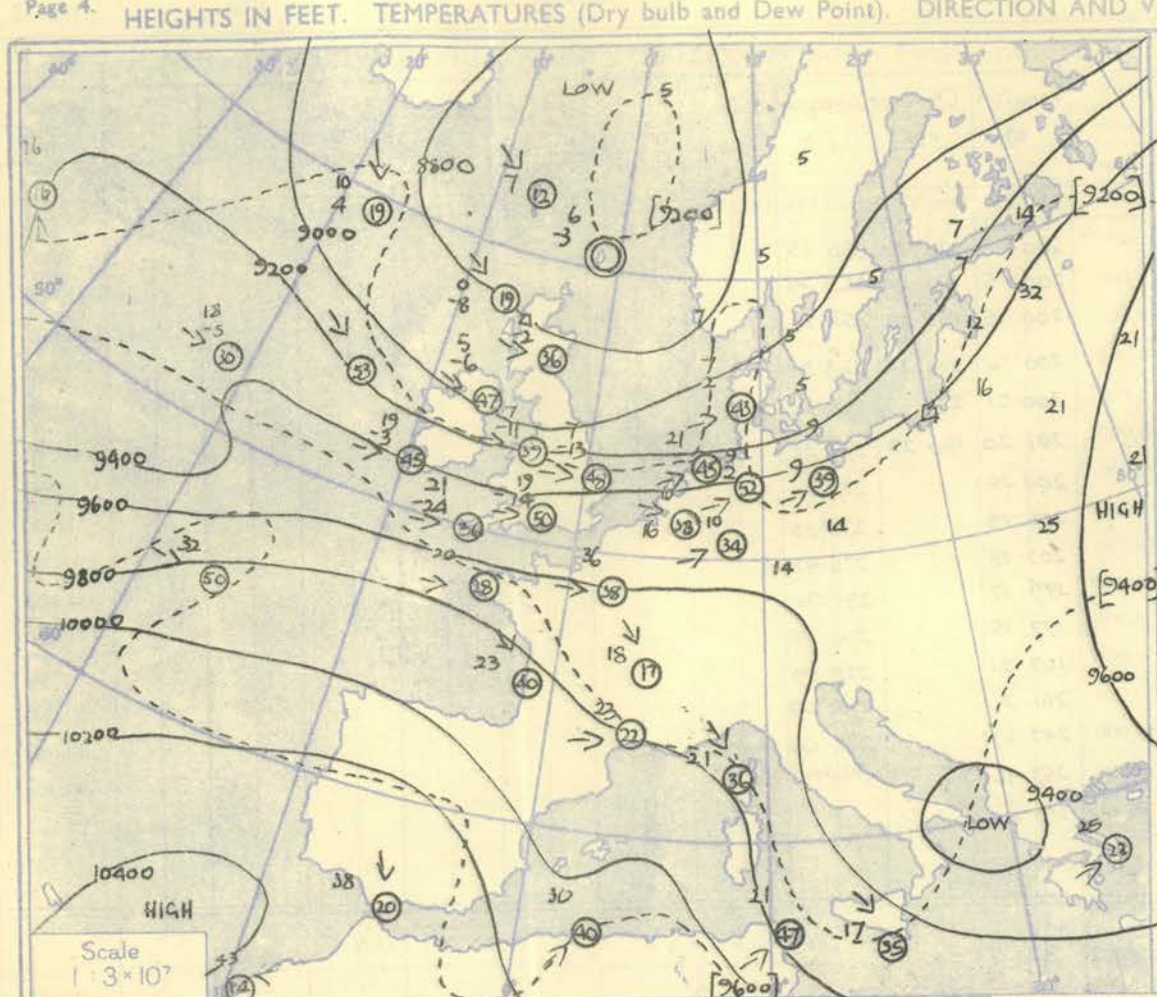


Isopleths of Thickness 500-1000mb.

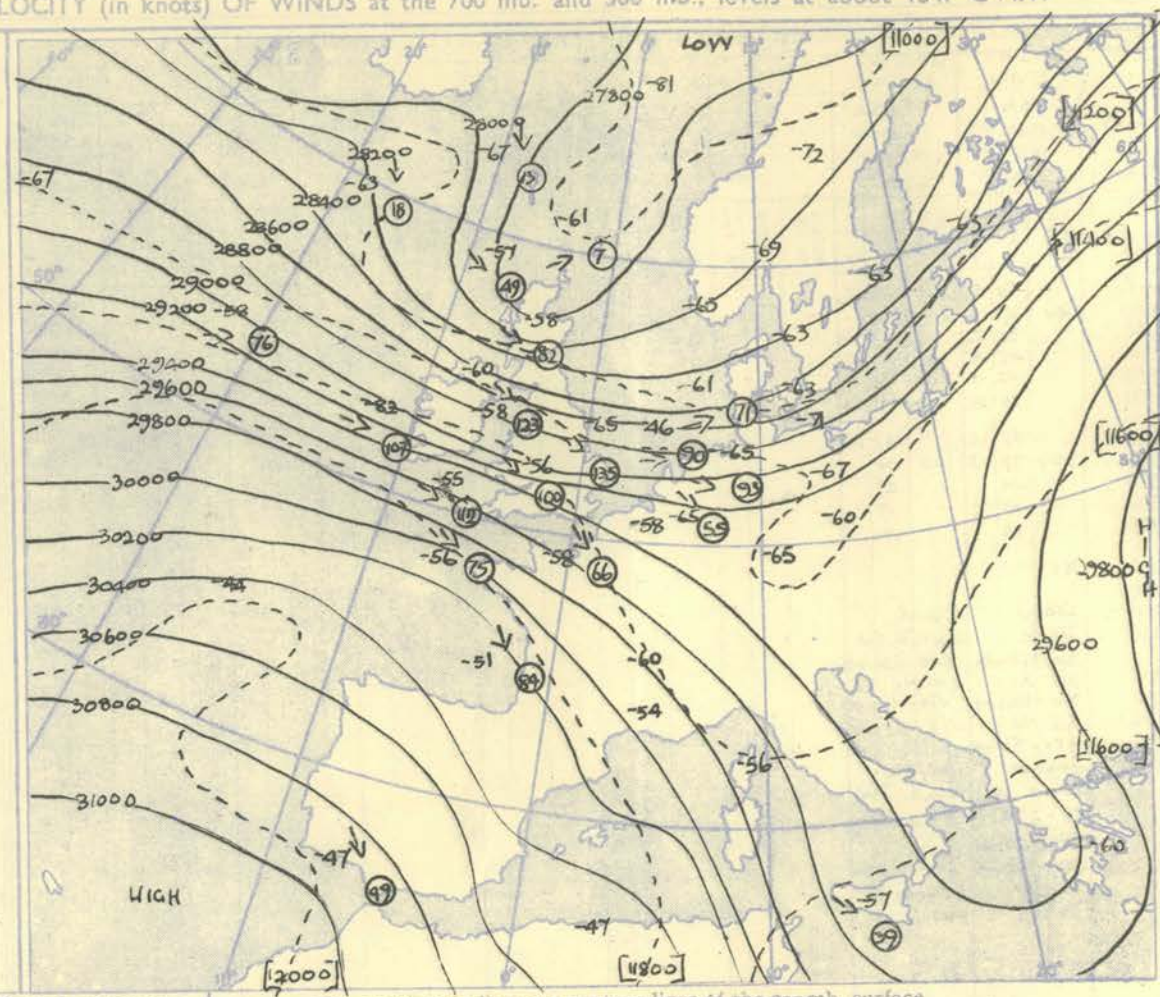
DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS

Ship	WEATHER WATCHER										WEATHER WATCHER										WEATHER WATCHER										WEATHER WATCHER										WEATHER OBSERVER										WEATHER OBSERVER										WEATHER OBSERVER										WEATHER OBSERVER										Ship
Lat/Long	59.3N 18.3W					59.4N 17.8W					59.8N 16.9W					60.1N 16.1W					53.1N 20.6W					53.0N 21.2W					52.7N 21.1W					52.7N 20.4W					Lat/Long																																								
Pressure (Freezing)	Time		M.S.L.		Surf		03L G.M.T.		09L G.M.T.		15L G.M.T.		21L G.M.T.		03L G.M.T.		09L G.M.T.		15L G.M.T.		21L G.M.T.		03L G.M.T.		09L G.M.T.		15L G.M.T.		21L G.M.T.		G.M.T.		Time																																																
	03L		09L		15L		21L		03L		09L		15L		21L		03L		09L		15L		21L		03L		09L		15L		21L		G.M.T.		M.S.L.																																														
	03L		09L		15L		21L		03L		09L		15L		21L		03L		09L		15L		21L		03L		09L		15L		21L		G.M.T.		M.S.L.																																														
	03L		09L		15L		21L		03L		09L		15L		21L		03L		09L		15L		21L		03L		09L		15L		21L		G.M.T.		M.S.L.																																														
Pressure mb	Height		Temp.		Dew		Wind		Height		Temp.		Dew		Wind		Height		Temp.		Dew		Wind		Height		Temp.		Dew		Wind		Height		Temp.																																														
	ft./100		°F.		°F.		Dir. Vel.		ft./100		°F.		°F.		Dir. Vel.		ft./100		°F.		°F.		Dir. Vel.		ft./100		°F.		°F.		Dir. Vel.		ft./100		Temp.																																														
	ft./100		°F.		°F.		Dir. Vel.		ft./100		°F.		°F.		Dir. Vel.		ft./100		°F.		°F.		Dir. Vel.		ft./100		°F.		°F.		Dir. Vel.		ft./100		Temp.																																														
	ft./100		°F.		°F.		Dir. Vel.		ft./100		°F.		°F.		Dir. Vel.		ft./100		°F.		°F.		Dir. Vel.		ft./100		°F.		°F.		Dir. Vel.		ft./100		Temp.																																														
Surf	39		26		210		19		38		37		275		12		37		36		330		12		42		36		330		12		41		35																																														
1000	-5.3		35		24		272		21		23.1		27		21		281		15		24.4		32		29		332		26		23		333		20																																														
950	22.6		27		20		270		21		27.1		14		283		18		54.9		20		16		337		22		56.3		21		17		341																																														
900	52.8		12		08		275		21		53.3		15		09		286		18		54.9		20		16		337		22		56.3		21		17																																														
850	750		05		-02		283		19		09		03		289		18		16		08		337		21		15		09		341		13		12																																														
800	700		01		-11		298		15		86.6		03		303		28		88.7		10		04		333		19		90.1		08		02		345																																														
750	650		09		-21		287		13		05		-12		313		31		02		-03		324		19		00		-06		349		15		05																																														
700	600		12		-18		33		10		124		-13		-21		335		31		127		-07		-19		318		20		128		-09		-16																																														
650	550		28		-42		180		15		23		-31		340		30		-17		-28		307		19		-19		-26		352		17		-04																																														
600	500		165		-39		-50		183		18		166		-33		40		332		28		170		-29		-40		307		18		171																																																
550	450		51		-52		174		08		-43		342		30		-39		48		310		18		-41		356		17		-23		-32																																																
500	400		52		-52		248		07		216		-52		018		33		220		-47		311		22		221		-47		001		18		225																																														
450	350		56		-56		272		10		-59		030		39		-53		322		23		-56		23		-56		354		16		-49		274																																														
400	300		276		-57		290		2		278		-59		015		33		282		-63		344		8		288		-68		336		15		288																																														
350	250		362		-63		276		30		-63		291		18		276		-65		344		8		288		-68		336		15		288																																																
300	200		66		-66		265		38		-70		286		39		-73		285		34		344		8		288		-68		336		15		288																																														
250	170		70		-70		264		48		-73		285		34		-73		285		34		344		8		288		-68		336		15		288																																														
200	130		73		-73		261		63		-75		280		40		-75		280		40		344		8		288		-68		336		15		288																																														
150	110		76		-76		259		67		-77		279		50		-77		279		50		344		8		288		-68		336		15		288																																														
100	90		81		-81		262		63		-79		278		63		-80		278		63		344		8		288		-68		336		15		288																																														
80	70		83		-83		269		72		-81		265		76		-81		265		76		344		8		288		-68		336		15		288																																														
60	(76 mb)		84		-84		272		63		-83		282		70		-83		282		70		344		8		288		-68		336		15		288																																														
Inversion 383 mb - 50° - 367 mb - 49° 419° Isothermal 780 mb 10° - 150 mb 12° 788 mb 15° - 766 mb 18° 831 mb 22° - 810 mb 25° 864 mb 23° - 850 mb 25°																																																																																	
Tropopause II 430 mb - 66° 19,400' I 238 mb - 67° 32,700'																																																																																	

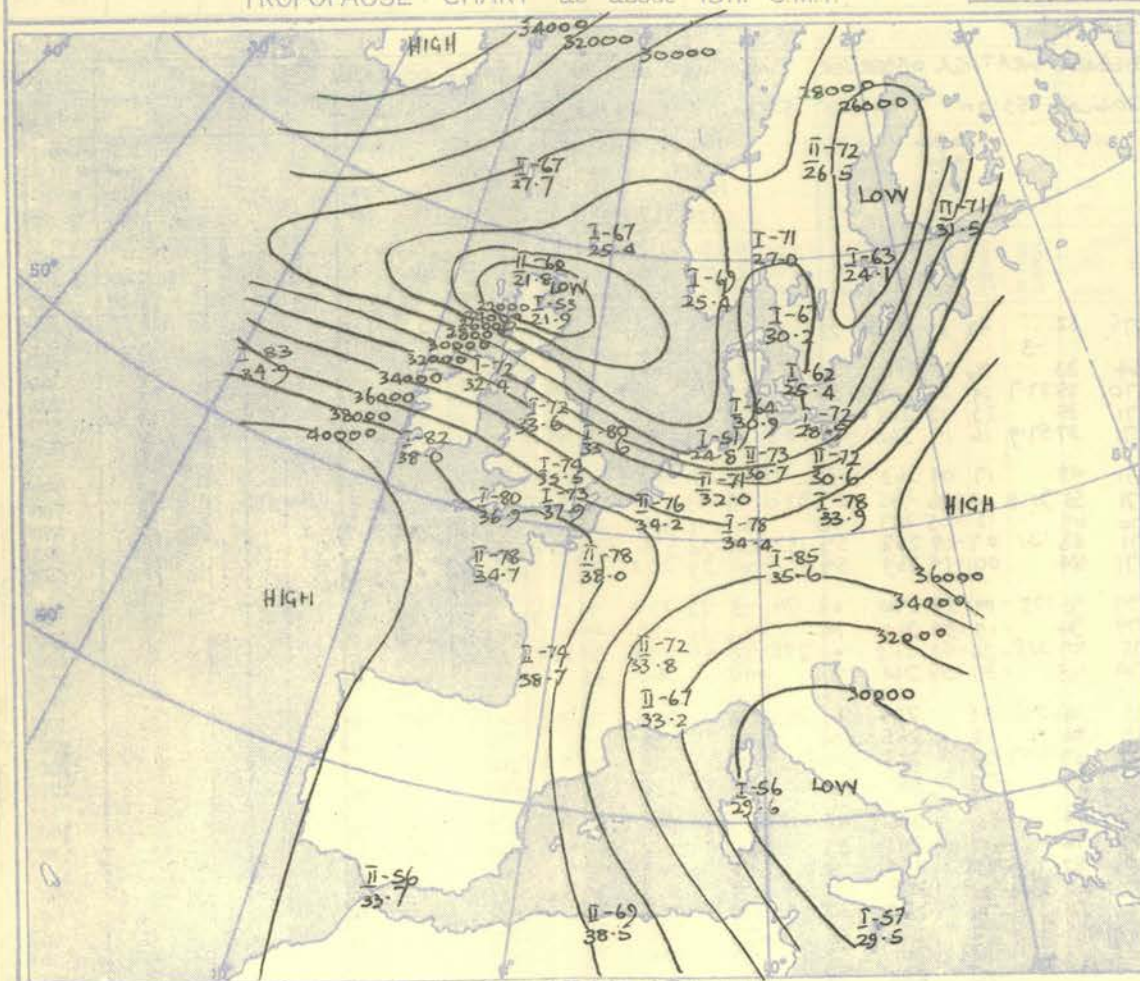


The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb



The continuous lines are contour lines of the geomb. surface
The dotted lines are isopleths of the thickness of the layer 500-300 mb.

TROPopause CHART at about 15h. G.M.T.



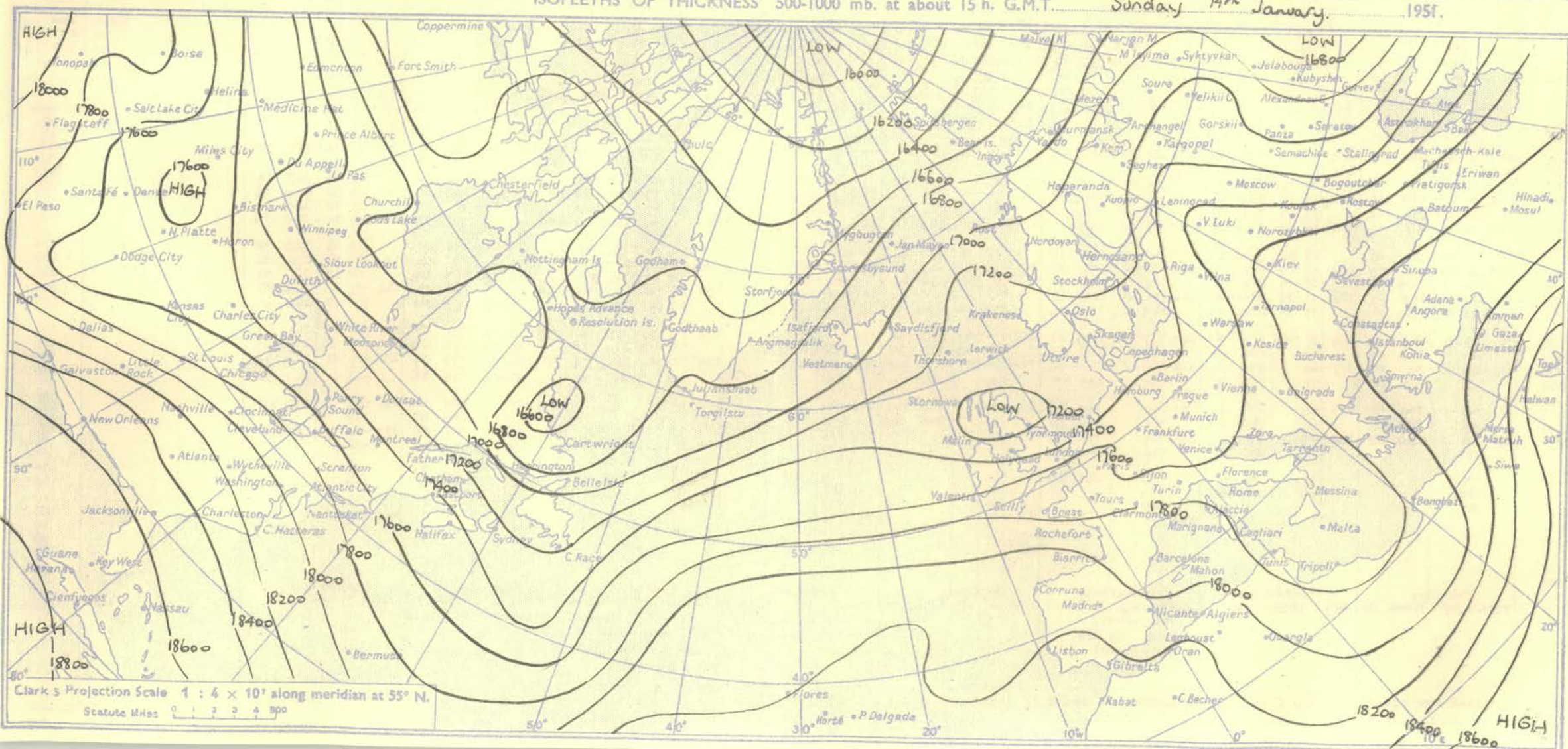
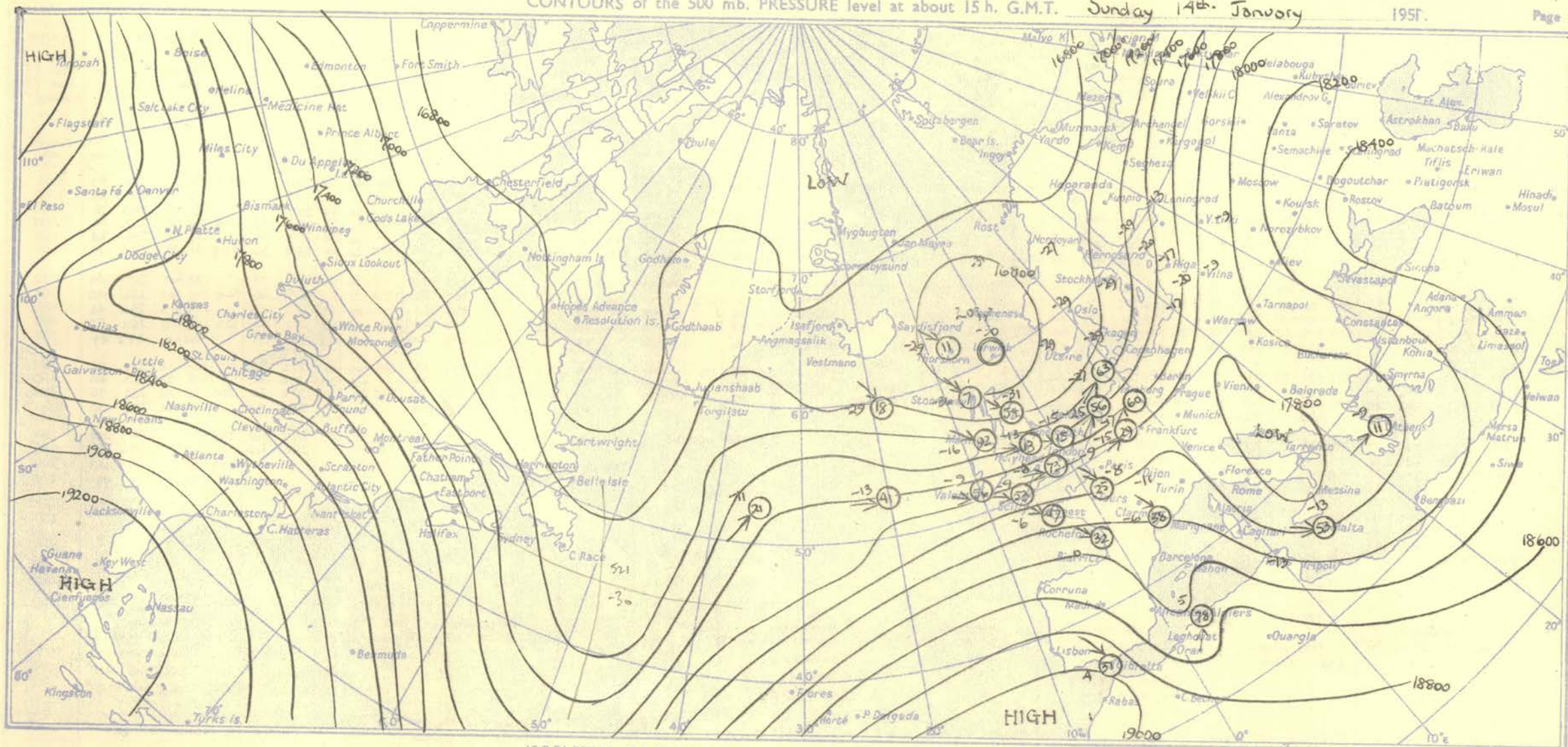
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

A cold pool, associated with the depression north of Scotland, became detached over Scotland with warming to the west of it. The cold trough from the Dan's Straits to Newfoundland and southwards moved east and became accentuated to the rear of the depression, whilst the pronounced thermal belt across the Atlantic was maintained.

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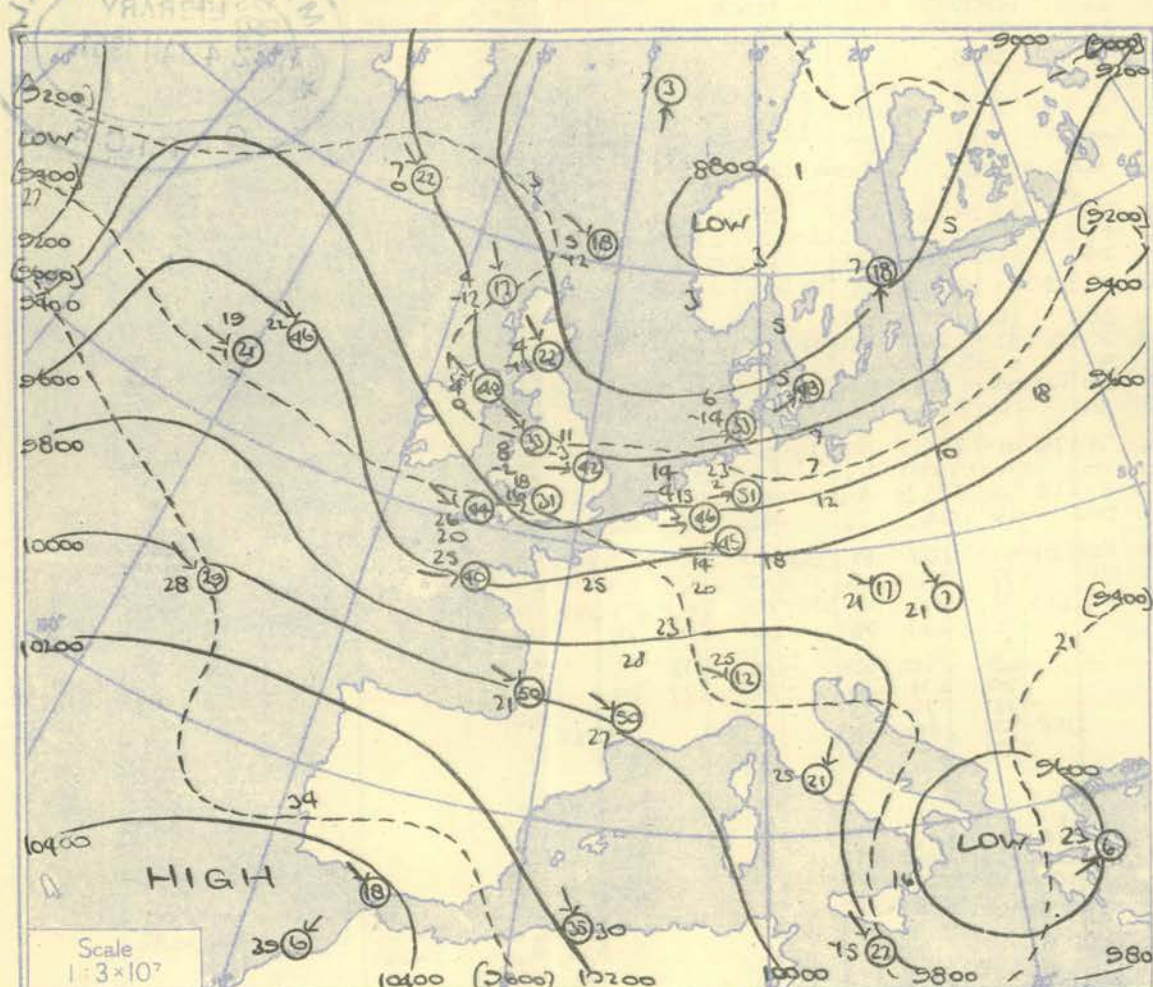
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE												
Pressure	Time	03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.														
		M.S.L.	Surf	Freezing	Temp.	Dew	Wind	Temp.	Dew	Wind	Temp.	Dew	Wind	Temp.	Dew	Wind	Temp.	Dew	Wind	Temp.	Dew	Wind	Temp.	Dew	Wind	Temp.	Dew	Wind														
		978.1	978.0	310	mb	995.4	995.8	319.0	mb	996.6	995.7	340	mb	1000.1	991.0	317	mb	1000.1	998.0	302	mb	1003.0	998.7	303	mb	1002.1	985.9	883	mb	1000.9	990.2	773	mb									
		02.7	32	315	05	0.4	34	31	280	07	0.2	29	27	260	10	0.2	33	31	260	18	0.6	33	31	260	10	0.2	33	31	260	10	0.2	33	31	260								
Surf		02.7	32	315	05	0.4	34	31	280	07	0.2	29	27	260	10	0.2	33	31	260	18	0.6	33	31	260	10	0.2	33	31	260	10	0.2	33	31	260								
1000		73.2																																								
950		26	31	300	15																																					
900		24	7	26	300	13	26	7	20	26	23	26	27	20	30	25	28	0	30	25	28	0	30	25	28	0	30	25	28	0	30	25	28	0								
850		23	18	300	15																																					
800		55	0	17	300	16	37	2	18	06	30	5	12	57	2	18	06	30	5	12	57	2	18	06	30	5	12	57	2	18	06	30	5	12	57							
750		11	7	300	18																																					
700		88	6	05	12	302	18	50	8	04	12	32	8	17	50	7	04	13	32	5	18	51	9	04	13	32	5	18	51	9	04	13	32	5	18	51						
650		2	19	305	17																																					
600		126	12	303	06	21	128	14	31	33	8	17	128	3	26	308	17	128	3	26	308	17	128	3	26	308	17	128	3	26	308	17	128	3	26	308						
550		23	40	310	20																																					
500		16	3	33	14	18	17	33	50	317	10	7	32	43	305	11	17	2	30	43	288	45	17	4	34	274	71	17	6	11	42	68	58	17	5	14	22					
450		46	30	309	16																																					
400		218	53	236	16	22	0	56	003	21	22	0	47	288	57	22	0	41	274	75	22	0	30	57	265	87	28	32	265	64	23	0	25	36	272	42	23	2	28	279		
350		71		304	17																																					
300		278	63	316	24	28	1	63	309	33	2	13	57	281	58	28	5	63	273	77	29	0	58	83	29	16	1	25	8	23	60	270	53	29	6	39	28	2	5	62	294	61
250		68		304	25																																					
200		362	63	288	35	36	7	0	289	49	36	7	0	282	67	37	1	68	282	64	37	5	65	278	70	37	5	65	278	70	37	5	65	278	70	37	5	65	278	70		
170		76		283	37																																					
150		74		285	40																																					
130		77		277	48																																					
110		78		276	55																																					
100		50	4	83																																						
90		54	8	83																																						
80		55																																								
70																																										
60																																										
Inversion		978ms 31-267ms 38°		Inversion		994ms 34-970ms 39°		Inversion		996ms 29-975ms 33°		Inversion		991ms 33-960ms 26°		Inversion		999ms 35-965ms 40°		Inversion		998ms 39-988ms 41°		Inversion		999ms 35-965ms 40°		Inversion		999ms 35-965ms 40°		Inversion		999ms 35-965ms 40°								
Tropopause		I 334ms -73°		25500'		I 381ms -59°		23000'		I 416ms -53°		21200'		I 266ms -67°		31000'		I 241ms -75°		33700'		I 235ms -80°		33800'		I 223ms -75°		35500'		I 250ms -71°		33100'		Tropopause								
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE												
Pressure	Time	03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.														
		M.S.L.	Surf	Freezing	Temp.	Dew	Wind	Temp.	Dew	Wind	Temp.	Dew	Wind	Temp.	Dew	Wind	Temp.	Dew	Wind	Temp.	Dew	Wind	Temp.	Dew	Wind	Temp.	Dew	Wind														
		991.8	991.7	317	mb	1003.5	1001.8	312	mb	1002.0	1001.1	877	mb	1007.1	998.6	320	mb	1007.1	1004.0	316	mb	1006.1	1001.6	328	mb	1007.0	990.5	310	mb	1013.3	1002.6	300	mb									
Surf		02.7	36	33	09	0.4	39	34		0.2	31	26	280	12	0.2	34	32		0.6	40	37		0.4	23	32		4.4	36	34	22	08	02	34	36	33	20						
1000		2.1								0.5	31	26							0.1				0.1					0.1														
950		25	3	31	316	15				34	25	29	33		35	28			36	33		35	31				36	33	21	29	33	32	33									
900		25	3	30	26	342	12	28	8	30	27								29	0	20		29	4	29	25		29	8	31	22	32	5	33								
850		24	23	335	05					28	2	18	316	29	30	0	28	23		29	0	20		29	4	29	25		29	8	31	22	32	5	33							
800		55	3	17	331	08	59	2	19	08									23	12			23	12				25	15	322	34	55	19	324	40							
750																																										
700		11	09	334	07					14	13	322	16		13	0			13	07			13	07				60	3	20	02	316	35	62	2	20	04	318	38			
650		63	4	05	02	334	08	51	8	07	10								23	00	7		23	00	7			34	0	07	7	306	37	96	3	90	34	307	66			
600		12	7	12	4	338	11	13	0	5	24								00	16			00	16				04	18	291	51	13	4	33	08	73						
550		21	23	341	12					30	11	33	29	23	13	1	37		13	10	28		13	10	28			13	1	47	285	66	13	5	31	293	73					
500		16	5	33	36	335	10	17	3	28	44								19	45			19	45				7	50	286	77	2	37	296	73							
450		45								41									17	4			17	4				17	6	5	36	283	85	18	0	52	296	72				
400		219	56	325	06					22	3	53	357</																													

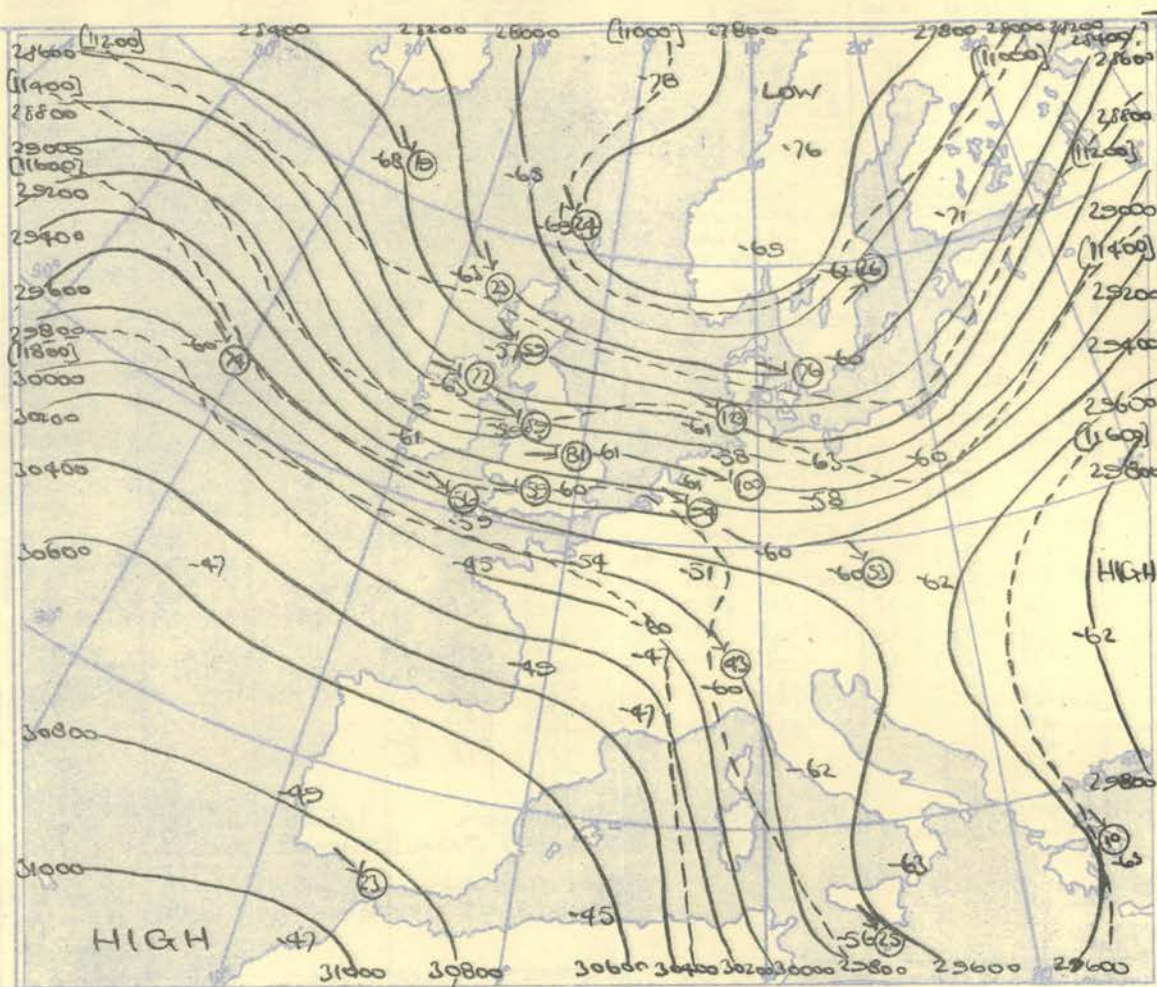
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



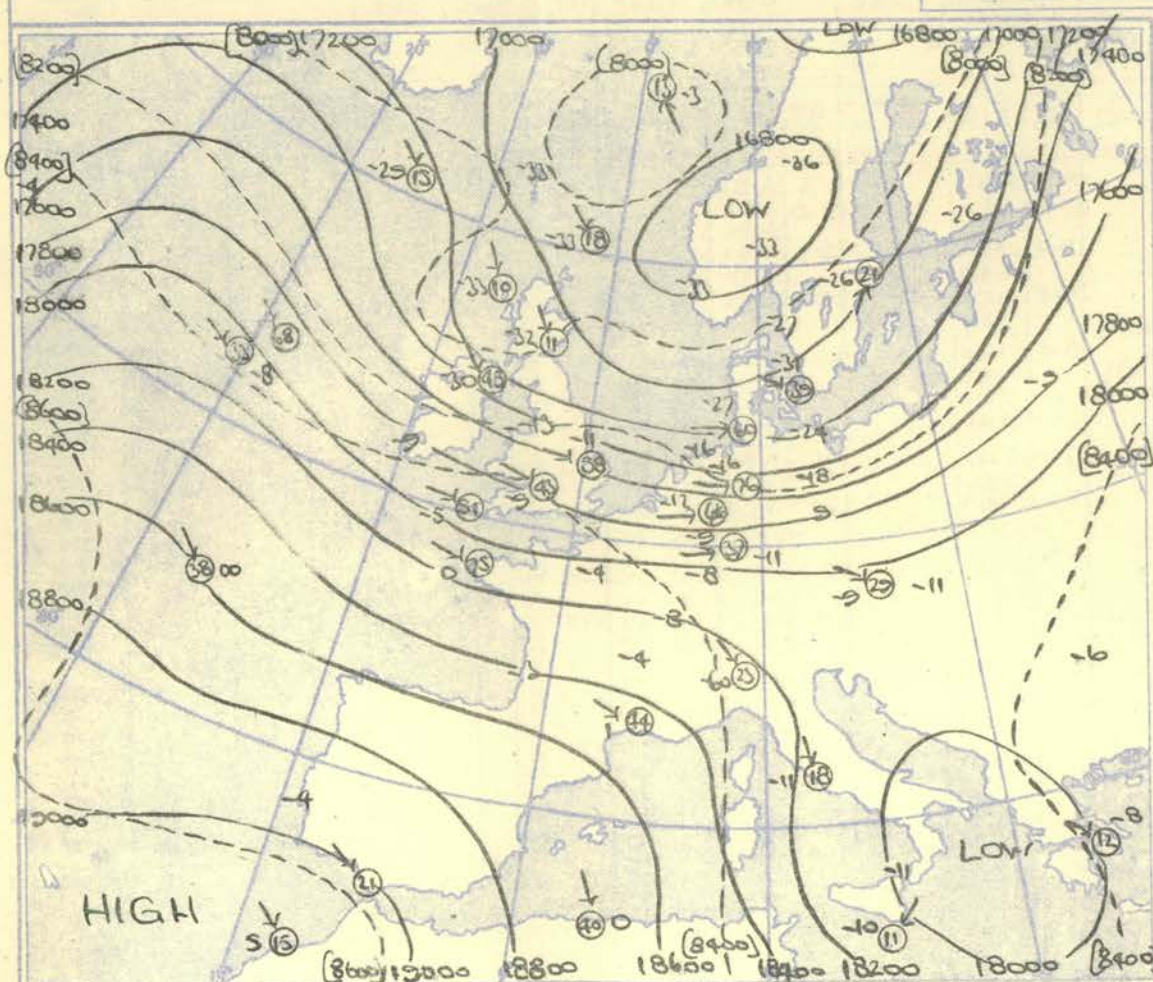
The continuous lines are contour lines of the 700 mb. surface
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

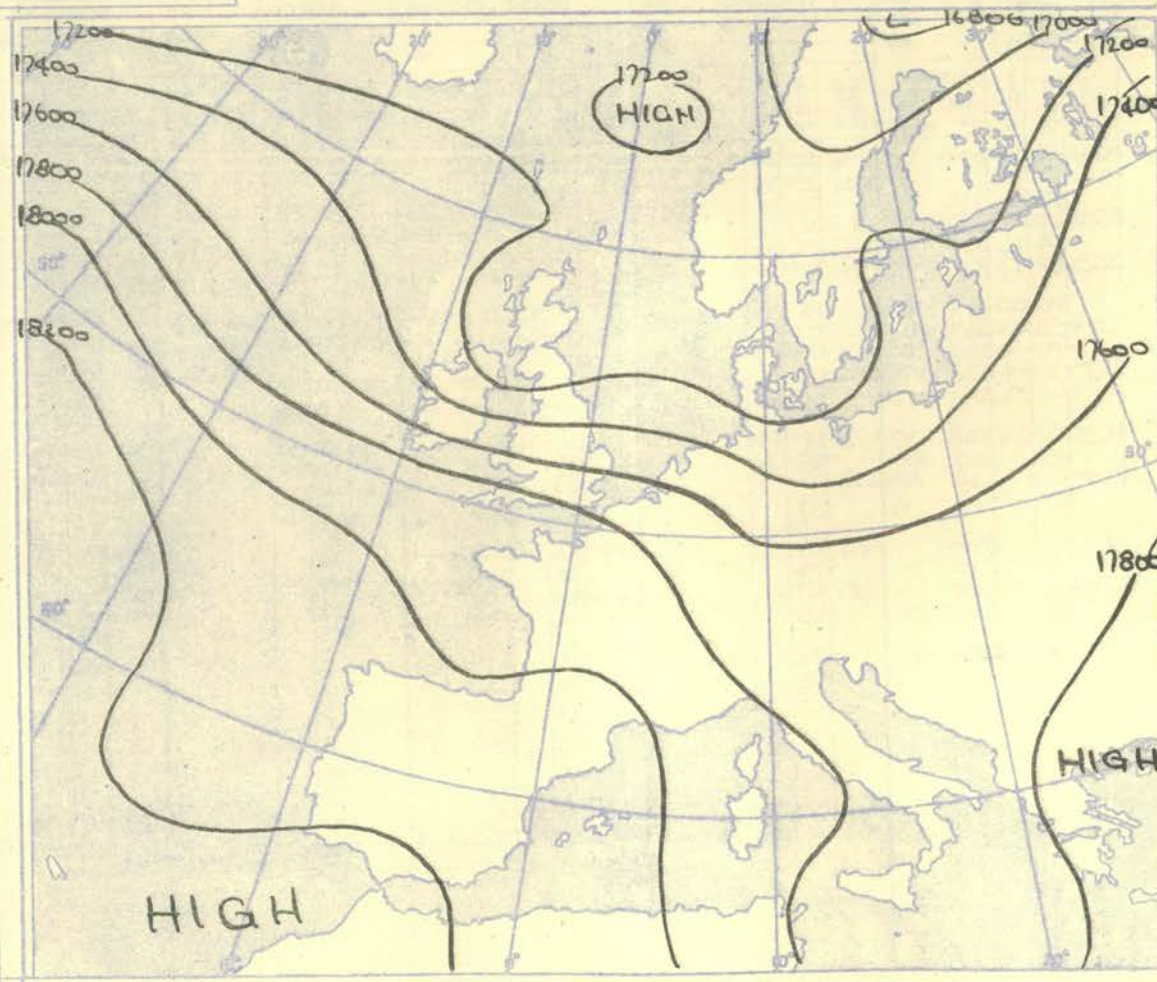
100 80 60 40 20 10 knots



The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500-300 mb.



The continuous lines are contour lines of the 500 mb. surface
The dotted lines are isopleths of the thickness of the layer 700-500 mb.

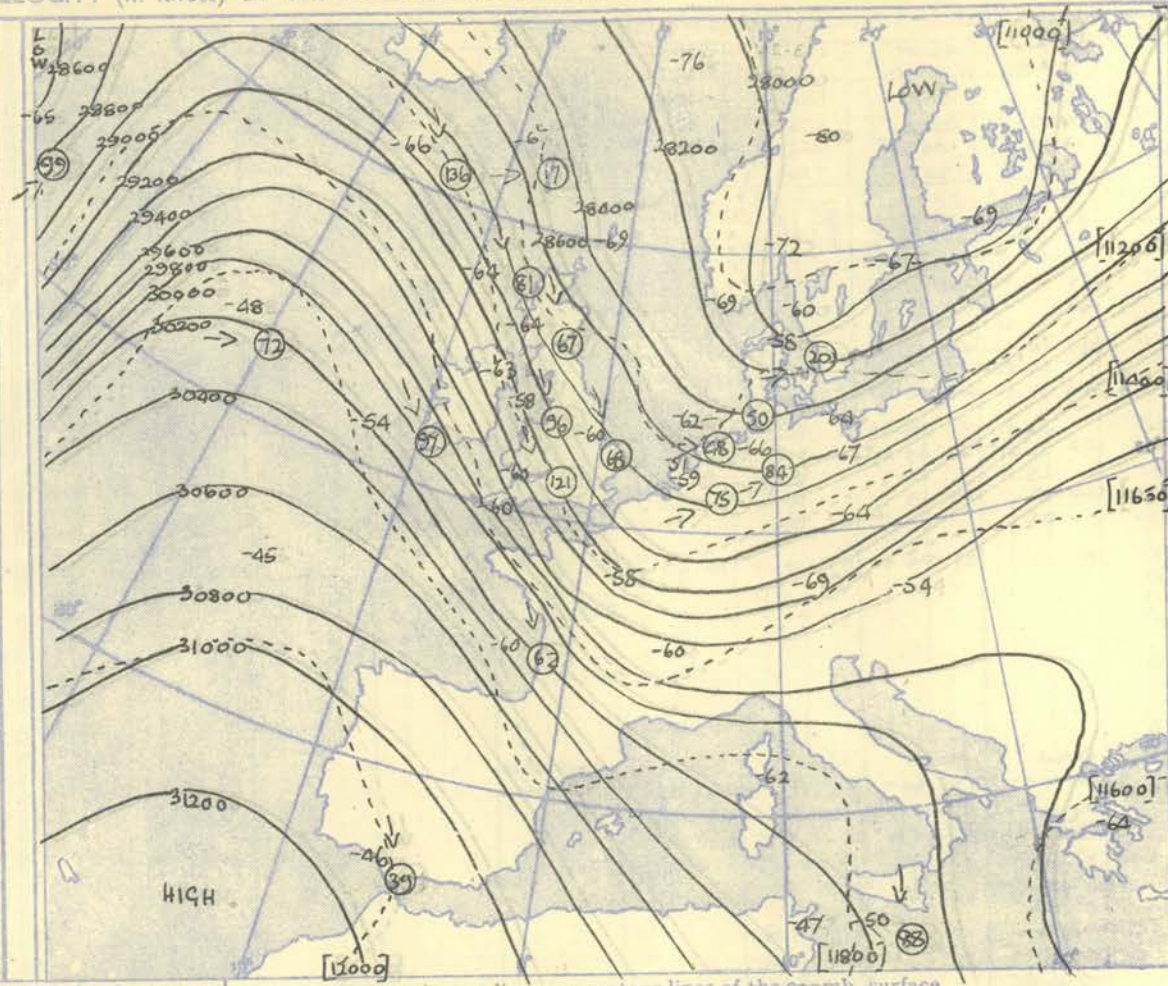
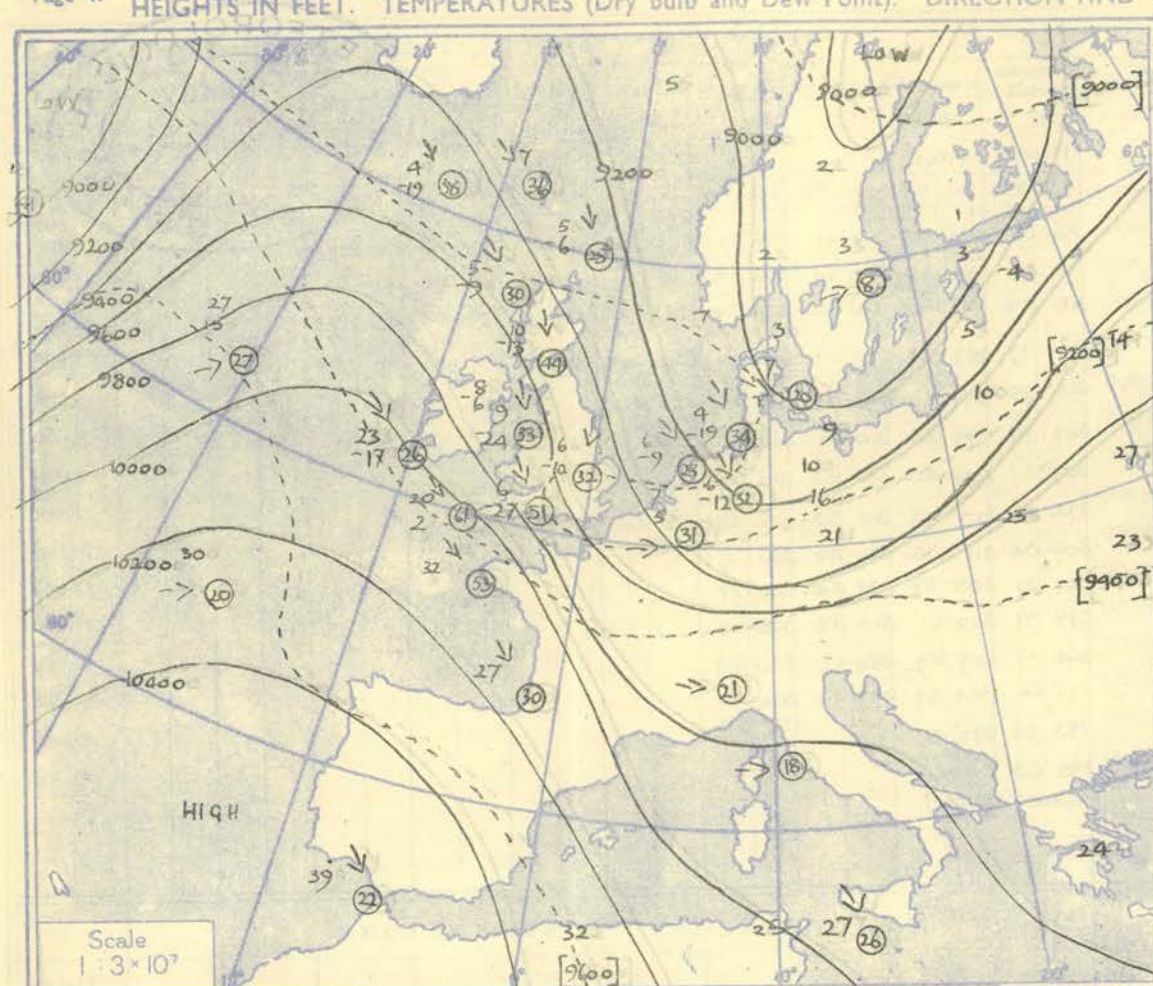


Isopleths of Thickness 500-1000mb.

DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights 1000 M S L

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS

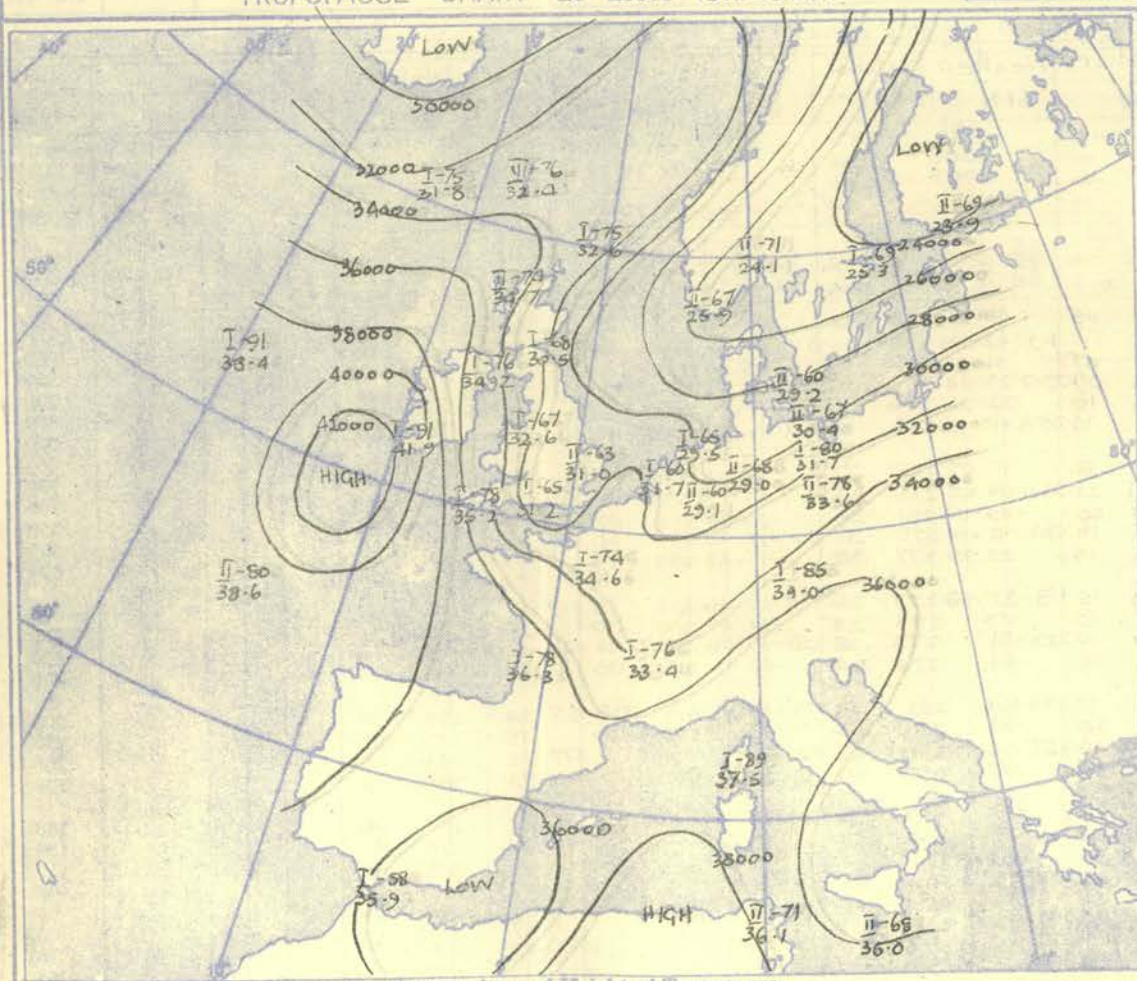
Ship	Weather Observer	Weather Observer	Weather Observer	Weather Observer	Weather Watcher	Weather Watcher	Weather Watcher	Weather Watcher	Ship
Lat/Long	52.6N 19.9W	52.6N 19.6W	52.4N 19.4W	52.7N 19.7W	60.6N 15W	61N 14W	61N 14W	61N 14W	Lat/Long
Time M.S.L. Surf Freezing	03h 1011 1011 905 and 840 mb	09h 1016 1015 785	15h 1013 1013 735	21h 1008 1008 700	03h 999 999 710	09h 1005 1005 920	15h 1011 1011 930	21h 1016 1016 950	Time M.S.L. Surf Freezing
Pressure mb	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Pressure mb
Surf	44 31 180 01	46 36 150 18	50 47 160 30	52 51 180 27	44 26 019 05	43 25 260 12	43 30 300 23	40 28 320 11	Surf
1000	3.0 43 30 195 03	3.9 44 36 140 20	3.6 49 45 143 48	2.2 51 49 190 44	03 37 31 011 07	1.2 42 25 36 25 256 15	3.0 41 32 299 24	4.4 39 27 282 08	1000
950	3.0 37 28 195 03	3.7 34 143 18	4.3 40 156 42	5.1 49 190 44	4827.7 30 26 008 09	2.2 29 24 256 15	3.0 28 24 296 25	3.2 27 285 09	950
900	3.0 31 24 198 03	3.2 37 18 151 18	3.0 45 43 188 40	3.0 51 47 210 45	23 21 002 10	2.2 21 256 15	2.2 14 300 28	2.8 24 289 14	900
850	3.0 25 21 214 04	3.5 22 172 15	4.4 42 197 45	4.9 43 209 54	58.1 18 14 328 14	59.5 16 15 266 15	56.1 2 16 06 300 30	62.5 20 01 298 10	850
800	6.1 8 31 05 233 09	6.3 2 34 34 209 17	6.7 37 28 204 39	6.3 1 46 33 207 54	58.1 18 14 328 14	59.5 16 15 266 15	56.1 2 16 06 300 30	62.5 20 01 298 10	800
750	25 06 256 16	28 24 227 25	34 23 217 32	38 29 205 50	14 05 316 18	11 09 265 22	10 07 300 36	15 10 304 24	750
700	26 42 264 21	28 1 24 20 238 36	29 0 27 15 223 27	28 7 33 24 206 54	91 8 07 00 312 22	93 0 04 02 275 27	94 7 04 19 298 38	96 3 11 16 306 33	700
650	15 03 257 21	10 09 242 37	18 11 227 30	25 15 209 48	00 07 309 20	05 06 281 30	04 29 298 42	09 18 310 45	650
600	15 07 06 259 15	13 09 07 240 30	16 11 238 33	20 03 210 53	09 18 305 16	12 14 278 31	13 2 13 40 298 50	35 00 21 312 49	600
550	01 18 265 14	01 01 243 30	09 04 246 40	12 12 211 55	19 29 304 15	22 25 277 30	17 42 298 65	06 21 309 57	550
500	180 08 22 265 33	182 07 09 256 40	184 02 04 248 50	185 04 18 214 48	72 29 40 303 15	73 32 36 277 26	175 20 46 298 84	79 14 27 307 59	500
450	21 32 268 54	17 20 268 57	07 13 245 64	07 28 215 51	40 51 301 10	43 273 24	28 49 300 90	23 38 302 55	450
400	233 29 41 273 66	235 19 33 269 63	238 19 25 239 61	238 18 36 216 56	222 51 286 10	223 51 272 28	226 37 56 309 114	231 32 46 304 66	400
350	43 278 76	41 276 72	33 39 236 63	32 46 218 57	57 272 18	61 275 34	49 319 130	44 302 75	350
300	296 40 280 74	299 56 279 78	303 48 237 72	304 49 221 59	284 68 291 19	284 69 282 53	289 66 315 136	295 58 298 91	300
250	(284 46 mb) 73 274 89	274 84	388 85 243 60	388 88 225 68	367 75 293 46	367 76 290 65	373 81 303 106	75 295 101	250
200	382 32 274 84	388 85 243 60	388 88 225 68	367 75 293 46	367 76 290 65	367 76 290 65	373 81 303 106	75 295 101	200
170	91 272 84	90 251 20	90 255 90	77 288 58	79 300 54	79 301 53	81 301 64	86 298 64	170
150	83 270 91	85 255 90	85 255 90	77 288 58	79 300 54	79 301 53	81 301 64	86 298 64	150
130	82 269 84	79 260 72	79 260 72	77 288 58	79 300 54	79 301 53	81 301 64	86 298 64	130
110	80 266 75	78 263 63	78 263 63	77 288 58	79 300 54	79 301 53	81 301 64	86 298 64	110
100	81 268 72	527 71	73 268 75	81 292 55	83 301 63	83 301 63	85 301 63	87 298 66	100
90	84 269 79	73 268 75	73 268 75	81 292 55	83 301 63	83 301 63	85 301 63	87 298 66	90
80	84 270 71	77 271 69	77 271 69	81 292 55	83 301 63	83 301 63	85 301 63	87 298 66	80
70	84 268 62	57(072 62 mb) 62	57(072 62 mb) 62	81 292 55	83 301 63	83 301 63	85 301 63	87 298 66	70
60	86 264 57	57(072 62 mb) 62	57(072 62 mb) 62	81 292 55	83 301 63	83 301 63	85 301 63	87 298 66	60
Inversion 888 mb 28° - 863 mb 34° 818 .. 29° - 800 - 31° Isothermal 723 - 700 mb 22° Inversion 918 mb 35° - 870 mb 39° 854 .. 33° - 817 .. 35° Isothermal 834 - 818 mb 35° 760 - 724 .. 28° 623 - 610 .. 11° Inversion 938 mb 42° - 908 mb 45° 882 .. 37° - 830 .. 39° Isothermal 934 - 918 mb 35° 760 - 724 .. 28° 623 - 610 .. 11° Inversion 950 mb 52° - 900 mb 58° 805 mb 17° - 792 mb 19° Inversion 964 mb 57° - 900 mb 61° 805 mb 17° - 792 mb 19° Inversion 964 mb 57° - 90									



Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 20 10 knots

TROPOPAUSE CHART at about 15h. G.M.T.

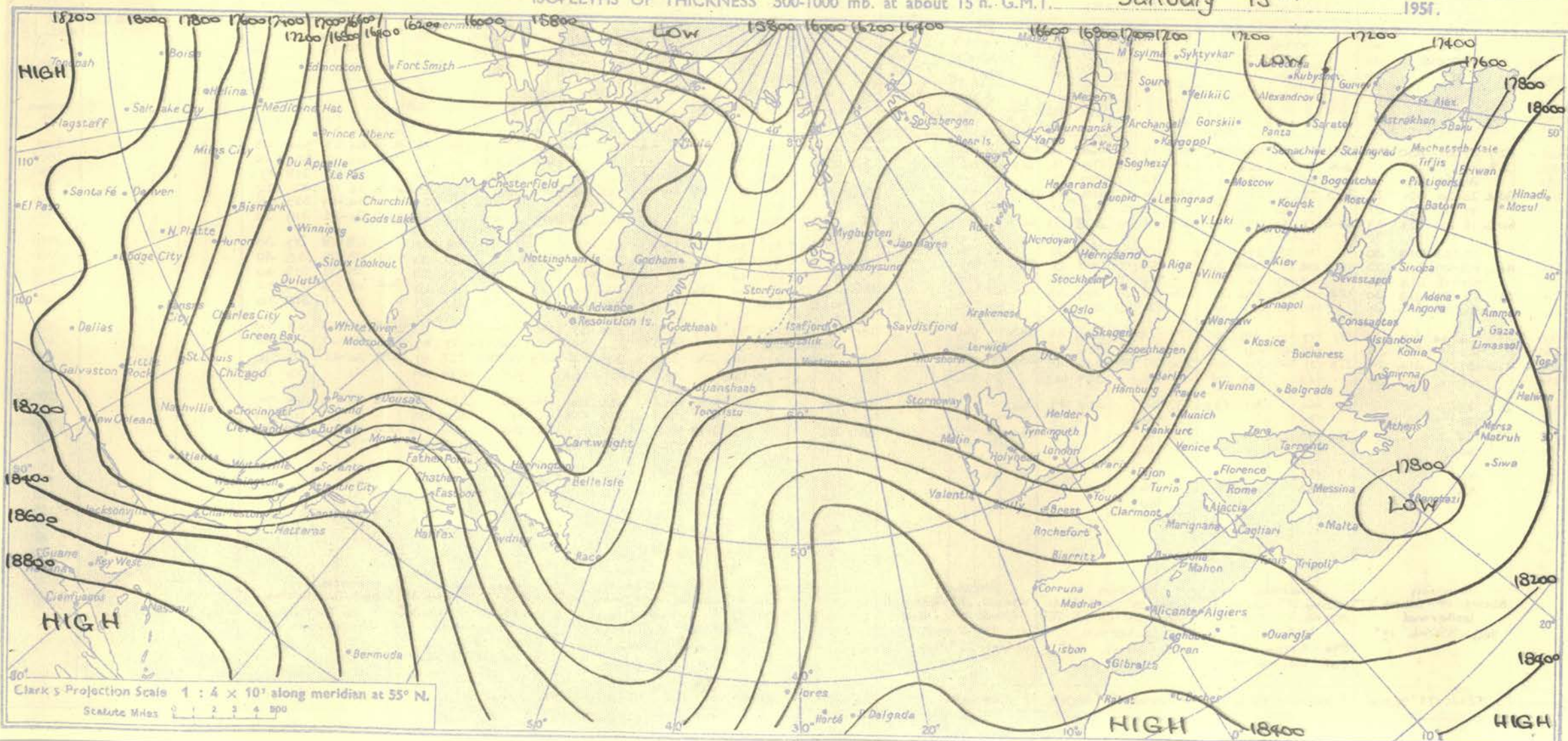
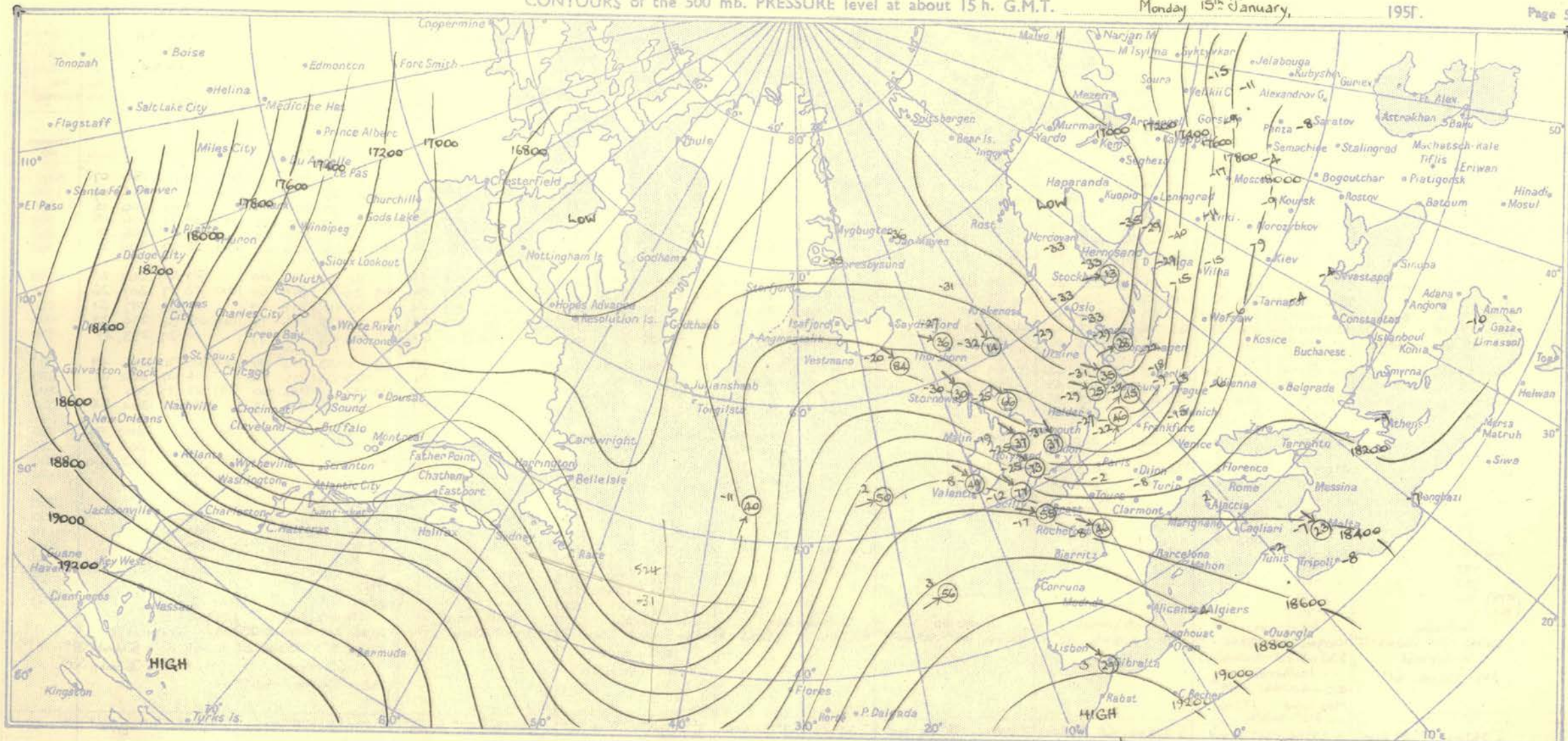


NOTES ON THE AEROLOGICAL SITUATION.

A large rise of pressure over a large belt west of Iberia and the British Isles led to strong deformation of the strong zonal thermal belt across the east Atlantic. The cold trough in west Atlantic continued to move steadily east.

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Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.

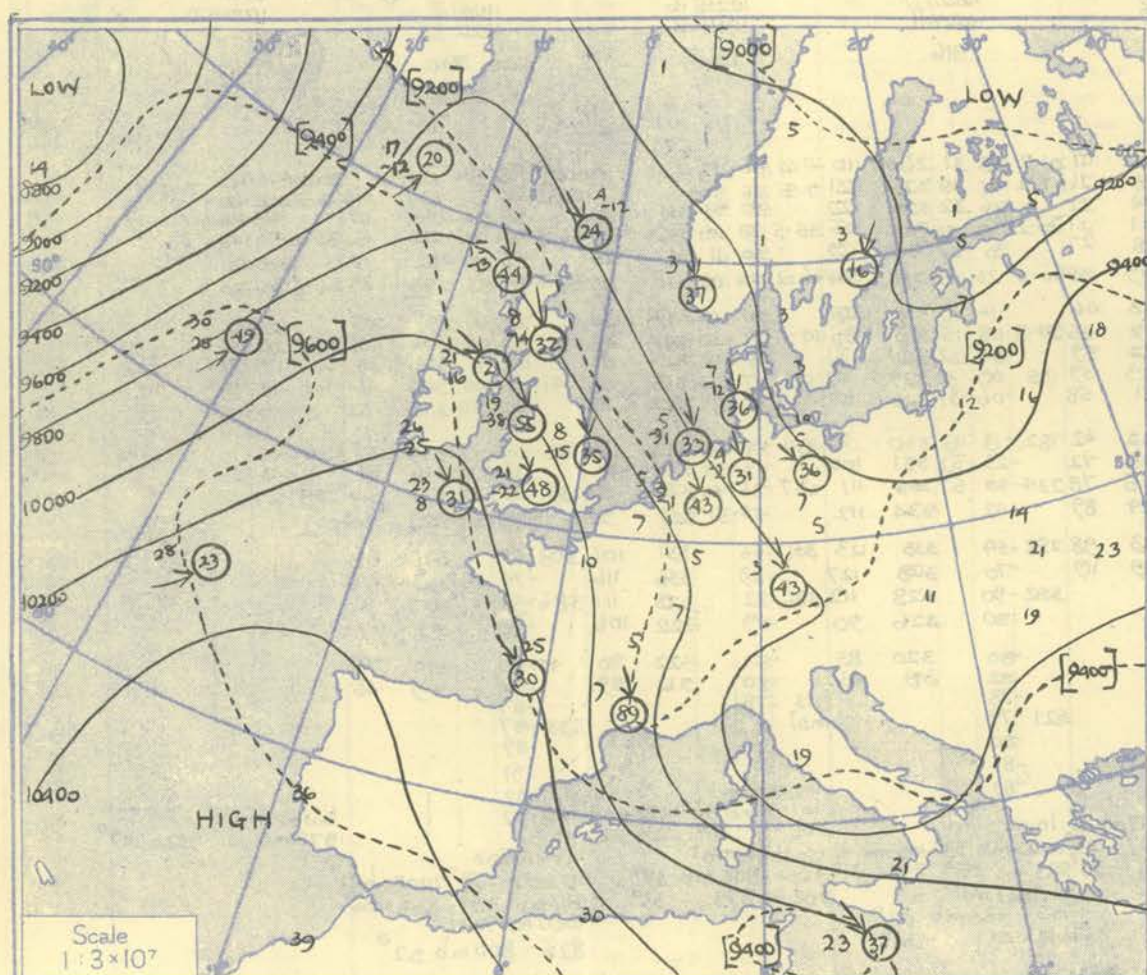


RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

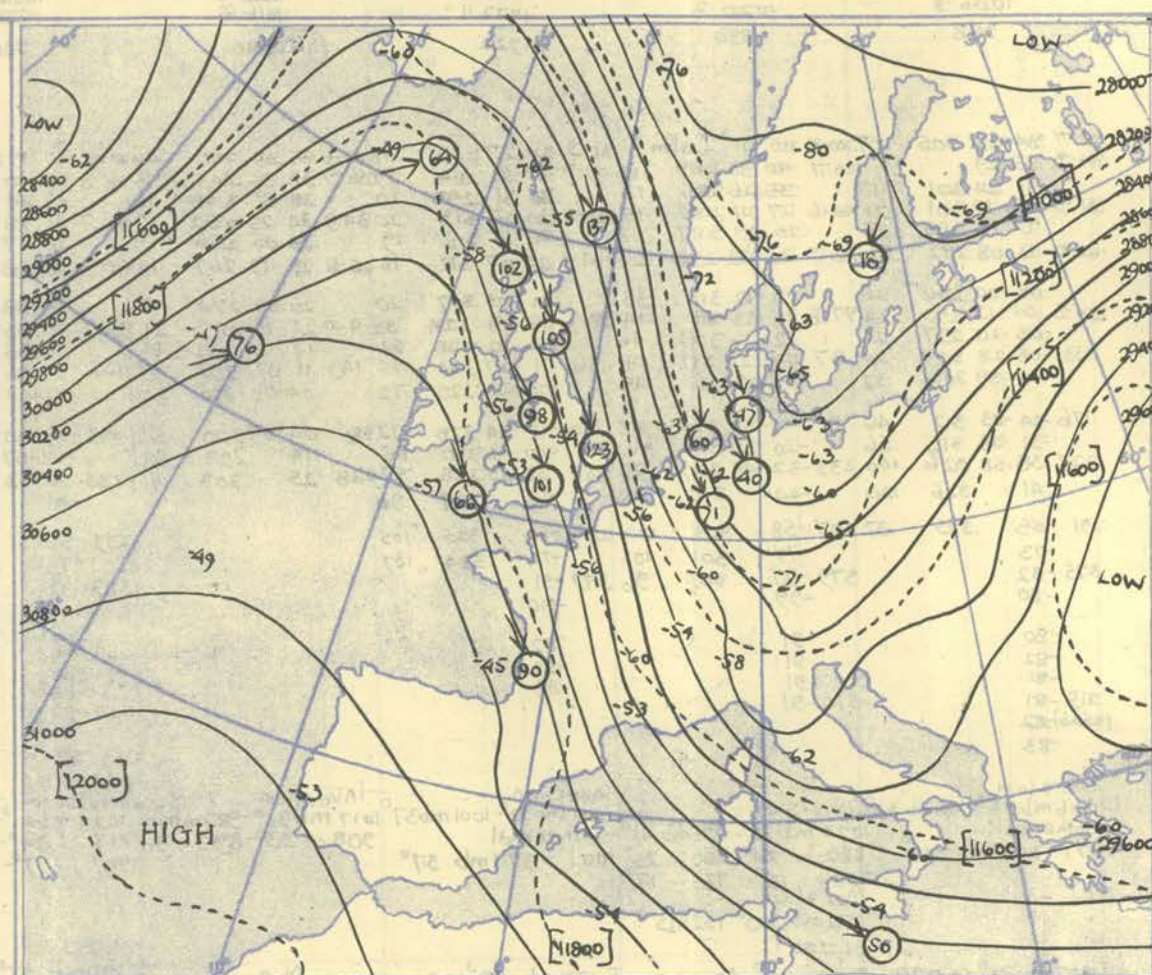
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION																																																																																																																																																																																																																																																												
Time M.S.L. Surf Freezing	15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		Time M.S.L. Surf Freezing																																																																																																																																																																																																																																																																
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Surf	1002.3	mb	1009.5	mb	1007.8	mb	1015.1	mb	1014.2	mb	1012.3	mb	1014.4	mb	1022.1	mb	1023.8	mb	1022.3	mb	1022.3	mb	1022.3	mb	1022.3	mb	1022.3	mb	1022.3	mb	1022.3	mb	Surf																																																																																																																																																																																																																																																																
1000	992.2	mb	1009.5	mb	1006.9	mb	1005.2	mb	1012.2	mb	1008.0	mb	998.1	mb	1011.4	mb	1022.3	mb	1022.3	mb	1022.3	mb	1022.3	mb	1022.3	mb	1022.3	mb	1022.3	mb	1022.3	mb	1000																																																																																																																																																																																																																																																																
950	929	mb	916	mb	907	mb	912	mb	919	mb	930	mb	911	mb	910	mb	830	mb	830	mb	830	mb	830	mb	830	mb	830	mb	830	mb	830	mb	950																																																																																																																																																																																																																																																																
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Inversion 270mb. -73°-266mb.-72° Isothermal 347-332mb. -61°																																Inversion 1009mb.-40°-988mb.-42° Isothermal 830mb.-22°-815mb.-23° Isothermal 412-400mb. -49° Max wind:- 277mb. 312° 9knts.																																Isothermal 850-808mb. 25°																																Inversion 550mb. -18°-515mb.-17°																																Inversion 883mb.-27°-860mb.-28° Isothermal 454mb.-40°-434mb.-37° Isothermal 863-850mb. 25°																																Isothermal 859-833mb. 23°																																Inversion 825mb. 24°-800mb. 25° Isothermal 707mb. 18°-695mb. 21° Isothermal 285-275mb. -65°																																Inversion 900mb. 33°-874mb. 37° Isothermal 791mb. 27°-763mb. 30°																																Tropopause																																	
Tropopause I 243mb. -75° 32,600'																																II 225mb. -74° 34,700'																																I 278mb. -68° 30,500'																																I 236mb. -76° 34,200'																																I 254mb. -67° 32,600'																																II 271mb. -63° 31,000'																																I 270mb. -65° 31,200'																																I 230mb. -78° 35,200'																																I 170mb. -91° 45,900'																																Tropopause	
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE								STATION																																																																																																																																																																																																																																																												
Time M.S.L. Surf Freezing	21h.		G.M.T.		21h.		G.M.T.		21h.		G.M.T.		21h.		G.M.T.		21h.		G.M.T.		21h.		G.M.T.		21h.		G.M.T.		21h.		G.M.T.		Time M.S.L. Surf Freezing																																																																																																																																																																																																																																																																
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Surf	1010.8	mb	1017.3	mb	1018.0	mb	1024.3	mb	1021.5	mb	1022.0	mb	1024.6	mb	1028.0	mb	1028.0	mb	1028.0	mb	1028.0	mb	1028.0	mb	1028.0	mb	1028.0	mb	1028.0	mb	1028.0	mb	Surf																																																																																																																																																																																																																																																																
1000	1000.5	mb	1015.6	mb	1017.1	mb	1014.7	mb	1019.4	mb	1017.6	mb	1007.9	mb	1017.6	mb	1017.6	mb	1017.6	mb	1017.6	mb	1017.6	mb	1017.6	mb	1017.6	mb	1017.6	mb	1017.6	mb	1000																																																																																																																																																																																																																																																																
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Tropopause I 295mb. -74° 28,500'																																I 200mb. -93° 37,400'																																I 220mb. -84° 38,700'																																II 188mb. -94°																																I 193mb. -88° 38,700'																																I 247mb. -72° 33,500'																																II 217mb. -84° 36,400'																																I 177mb. -92° 40,900'																																Tropopause																																	

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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400	227	38	58	326	100	233	32	48	309	75	233	32	53	328	97	238	25		303	61	235	30	63	325	78	234	30	57	338	111	237	26	44	323	81	239	25	36	321	60	239	27	40																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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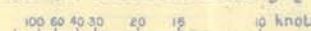
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



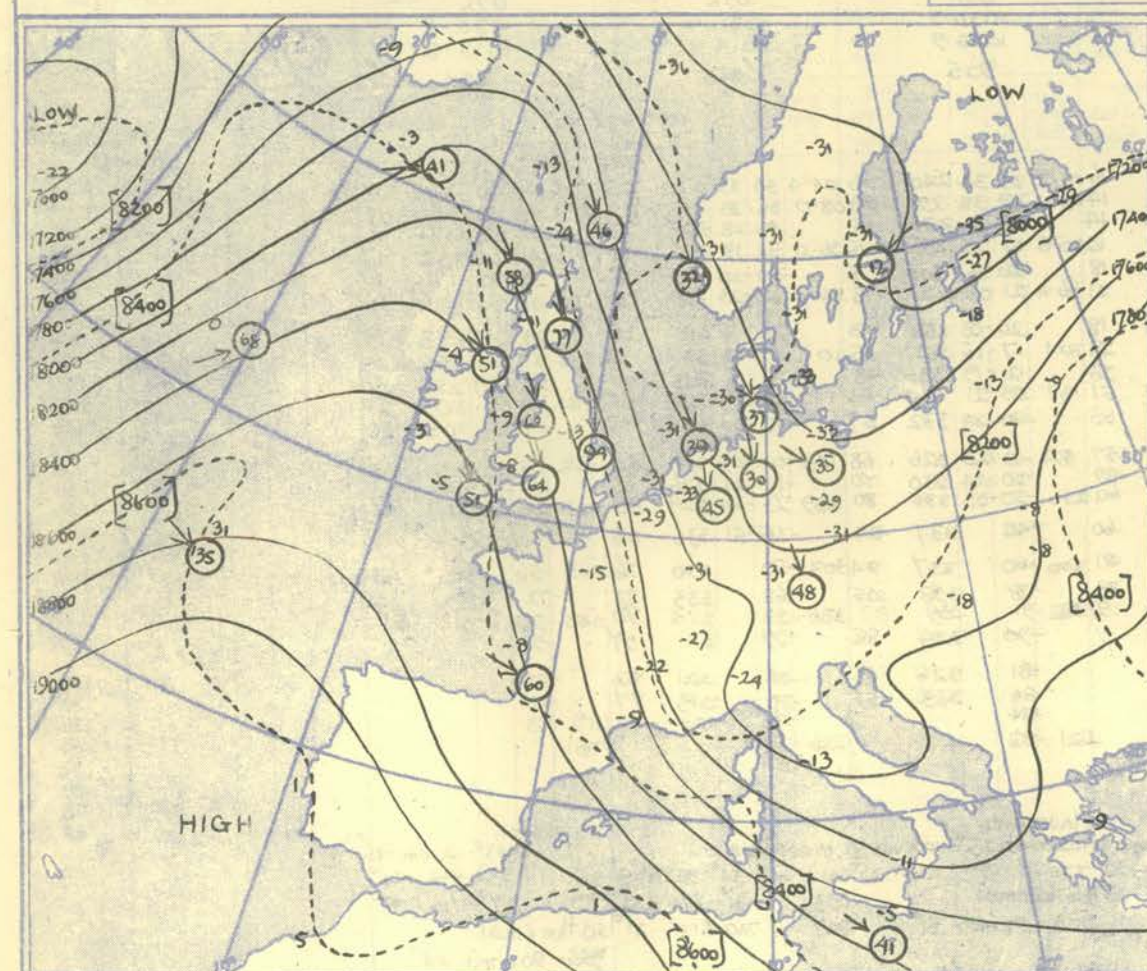
The continuous lines are contour lines of the 700 mb. surface
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.



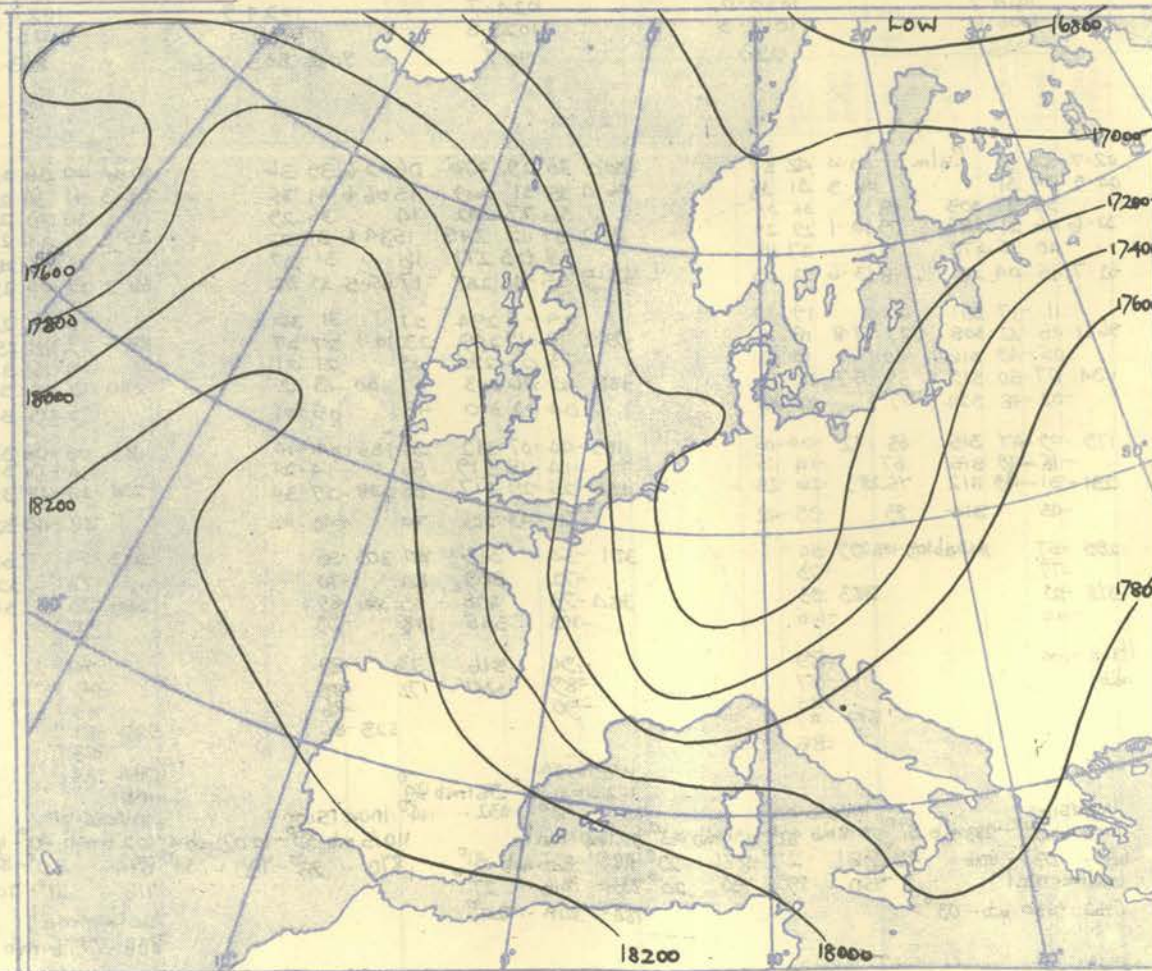
Gradient-Wind Scale for Contours
at intervals of 200 ft. at Lat. $52\frac{1}{2}^{\circ}$ N.



The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 - 300 mb



The continuous lines are contour lines of the 500mb. surface
The dotted lines are isopleths of the thickness of the layer 700-500 mb.

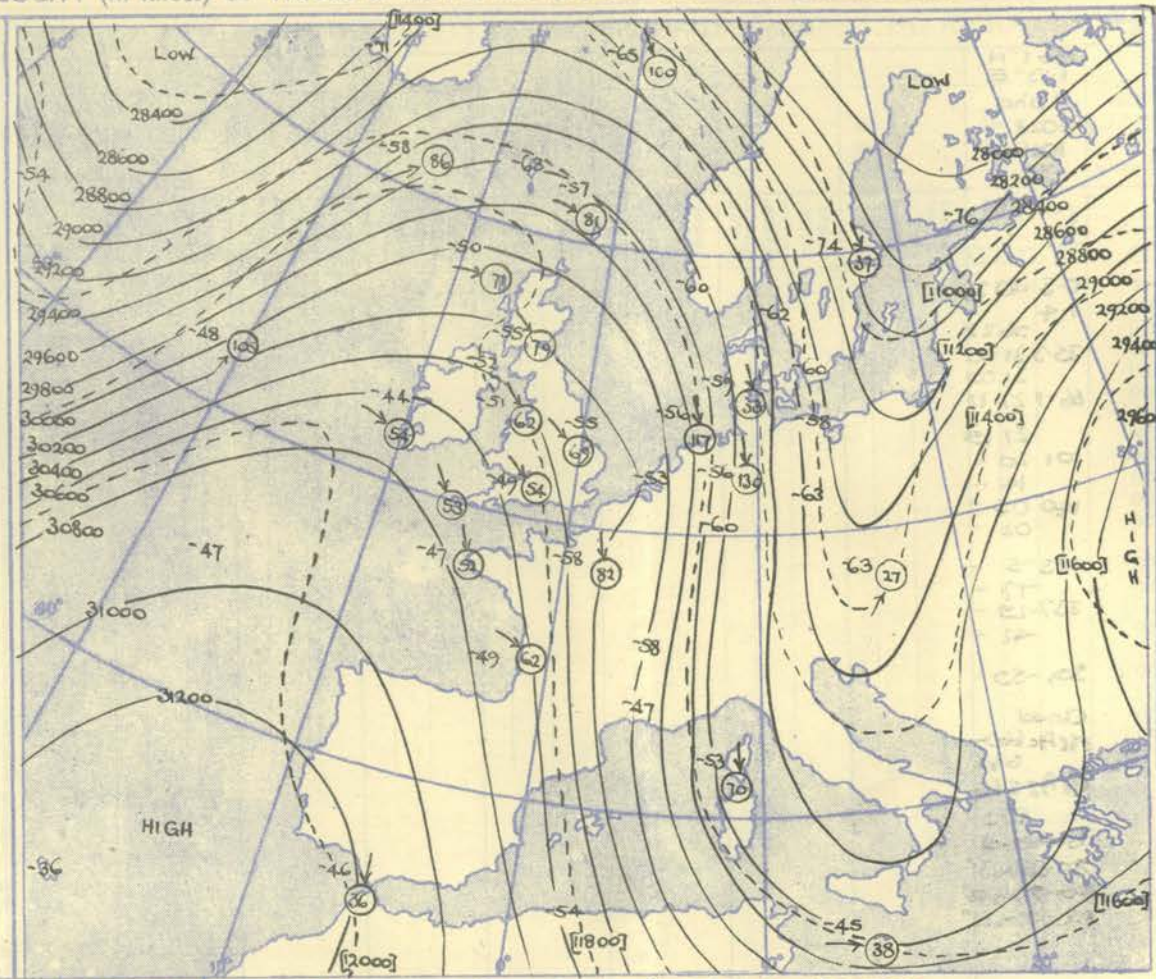
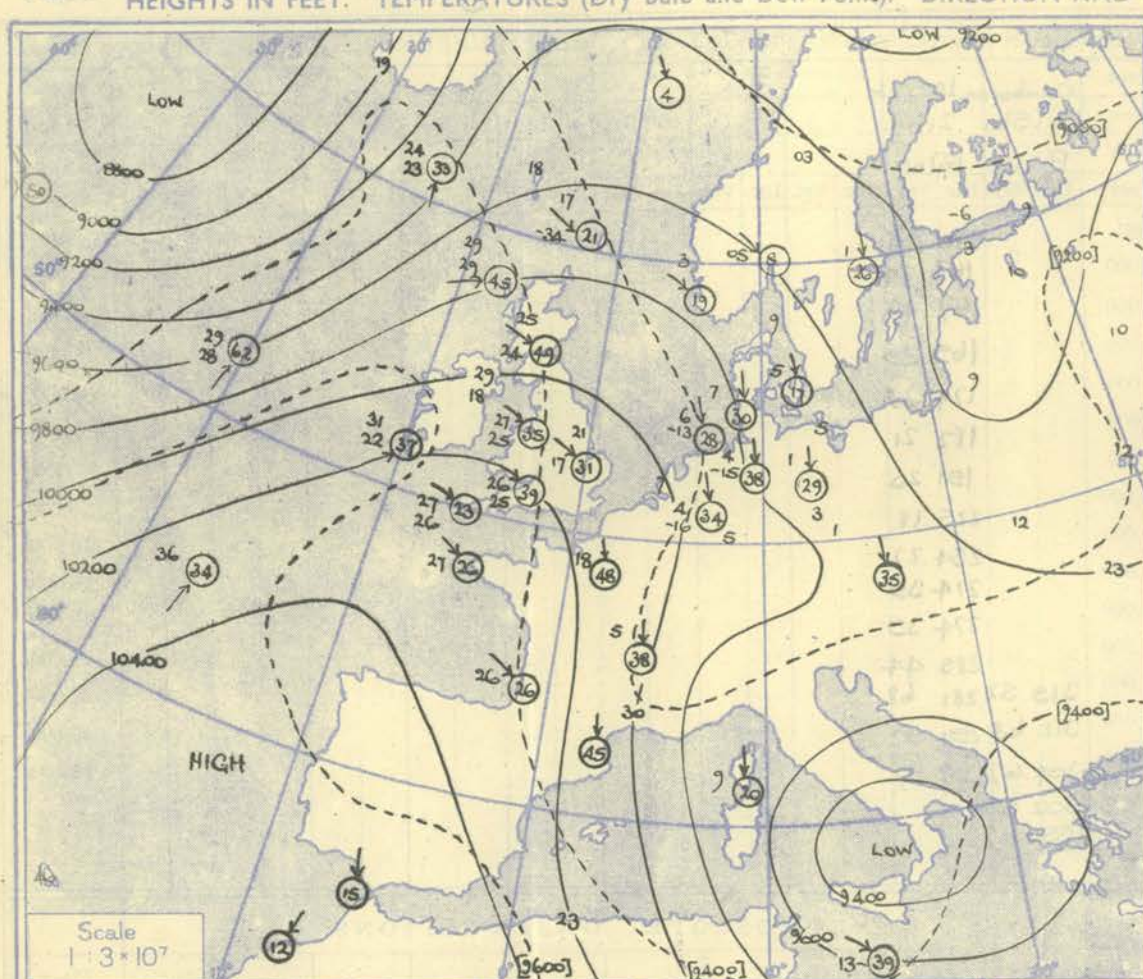


Isopleths of Thickness 500-1000mb.

DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS

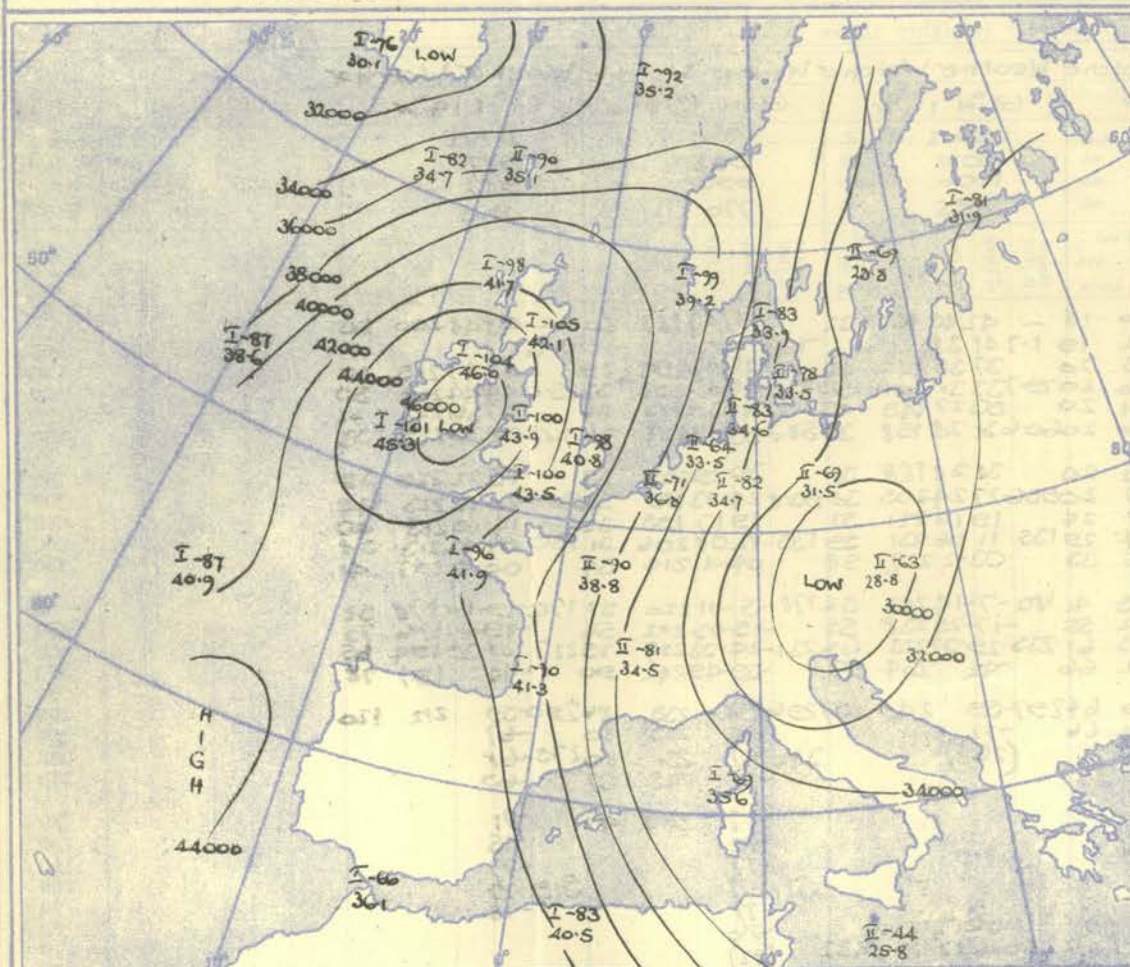
[illegible]



Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

100 60 40 30 20 15 10 knots

TROPOPAUSE CHART at about 15h. G.M.T.

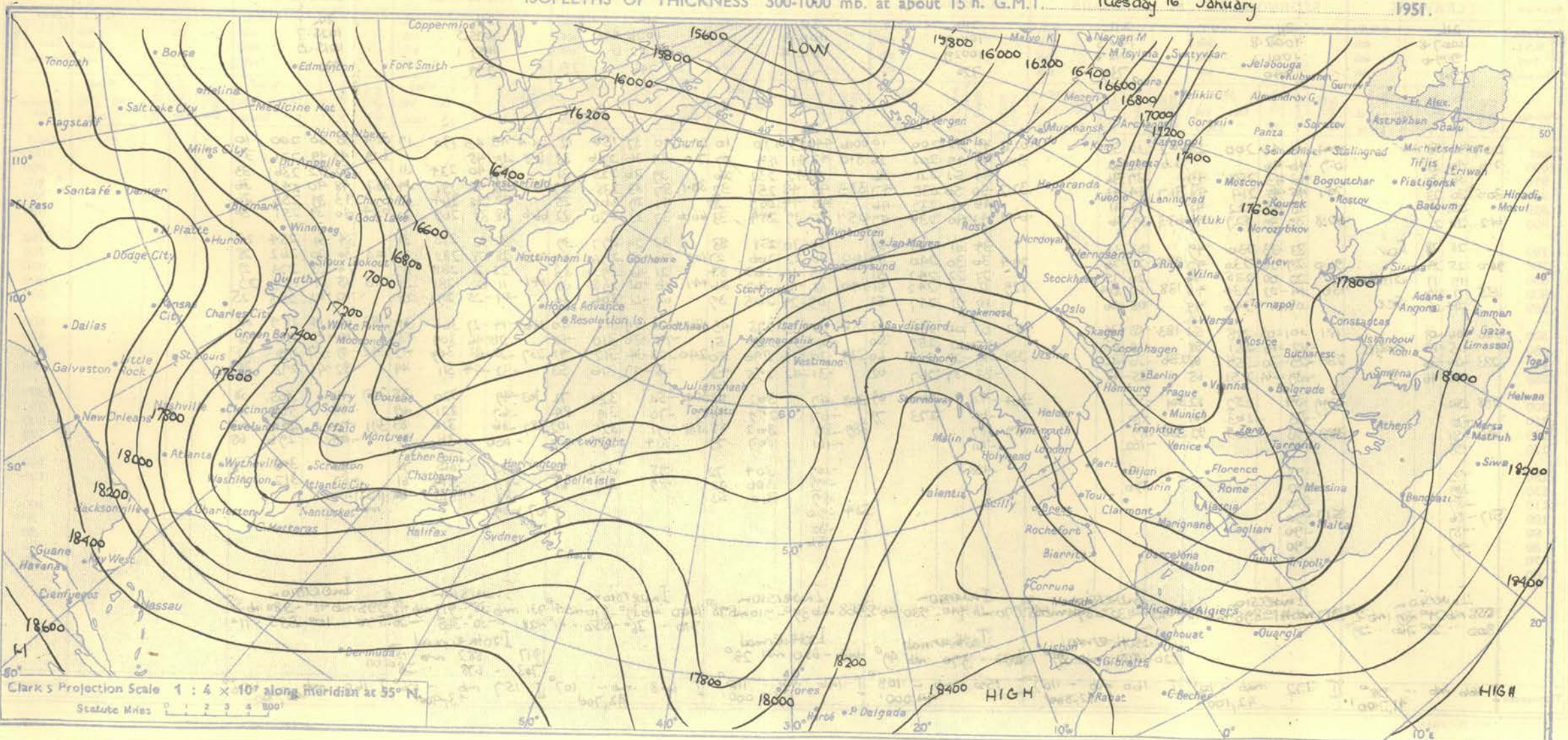
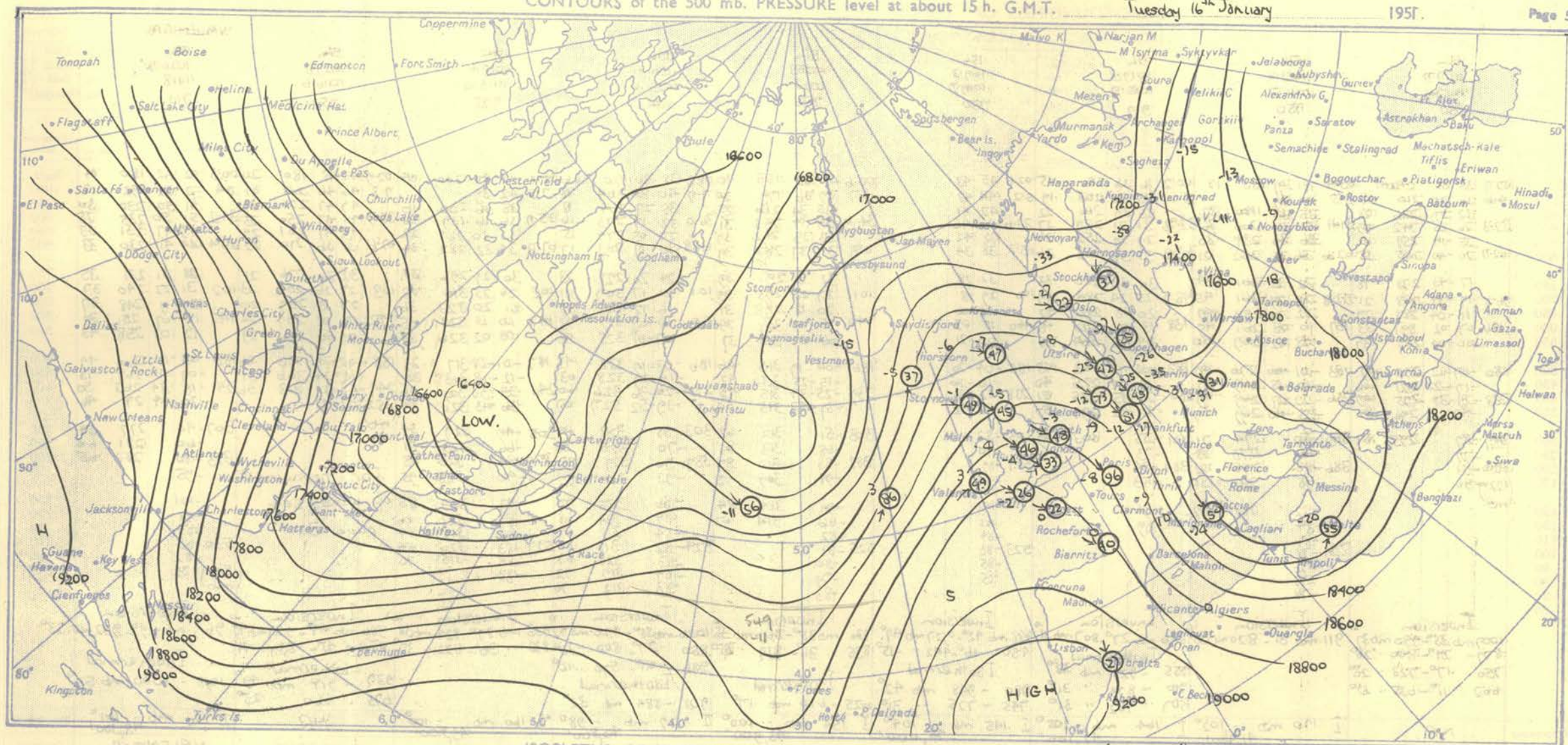


NOTES ON THE AEROLOGICAL SITUATION.

The large amplitude wave pattern moved steadily east. There was some reduction in the intensity of the cold trough in Mid-Atlantic associated with the rapid advance of a warm ridge South of Newfoundland, and the cold trough over central Europe intensified.

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Meteorological Office, Air Ministry, Kingway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON

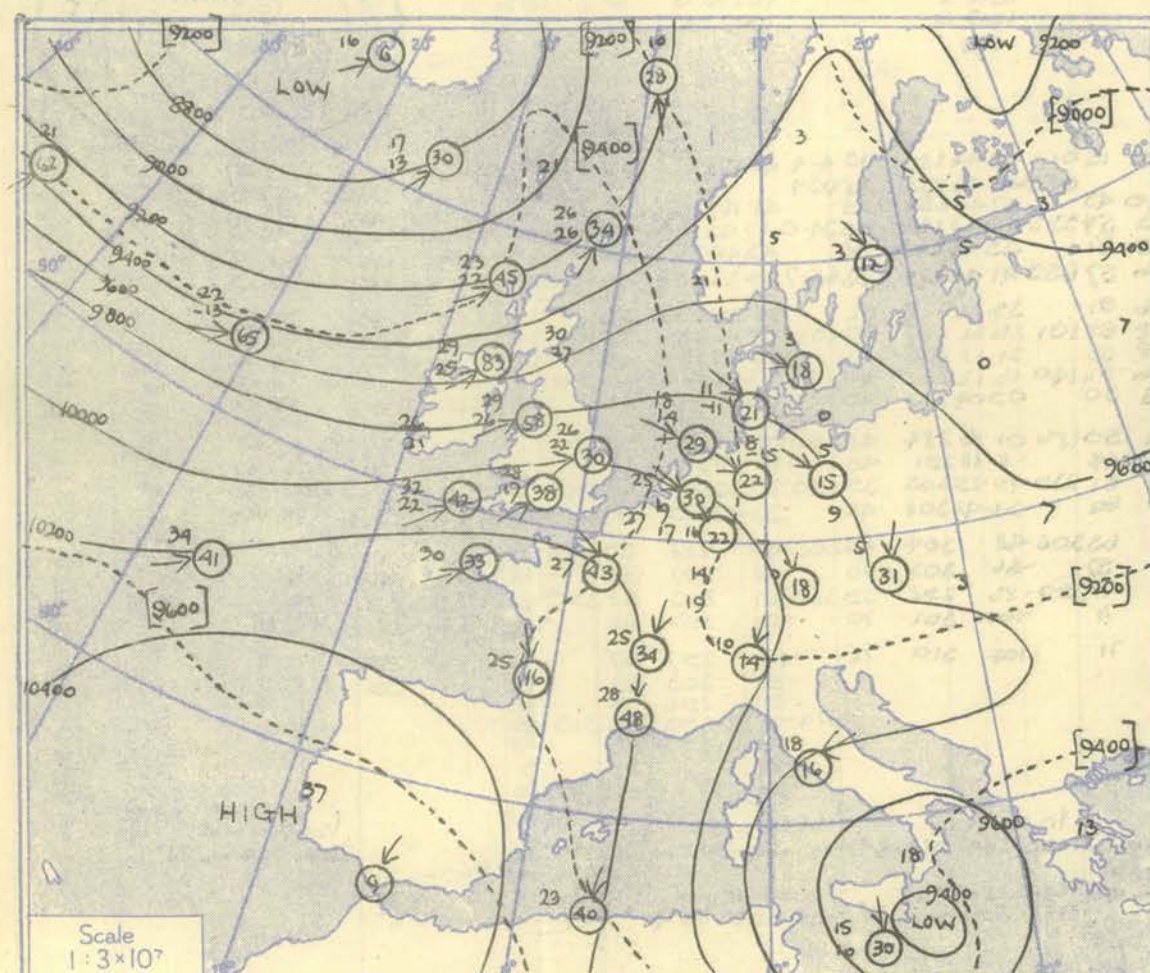
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION							
Pressure mb	Time M.S.L.	Surf Freezing	15L	G.M.T.	15L	G.M.T.	15L	G.M.T.	15L	G.M.T.	15L	G.M.T.	15L	G.M.T.	15L	G.M.T.	15L	G.M.T.	15L	G.M.T.	15L	G.M.T.	15L	G.M.T.	15L	G.M.T.	15L	G.M.T.	15L	G.M.T.	Time													
			1017.7	mb	1013.4	mb	1019.8	mb	1019.3	mb	1025.1	mb	1030.1	mb	1029.6	mb	1027.3	mb	1020.9	mb	1020.9	mb	1018	mb	1018	mb	1018	mb	1018	mb	M.S.L.													
			1007.4	mb	1011.7	mb	1018.9	mb	1009.9	mb	1023.1	mb	1025.6	mb	1013.0	mb	1016.6	mb	710	mb	710	mb	710	mb	710	mb	710	mb	710	mb	Freezing													
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb											
Surf	02.7	35	32	CALM	00.4	41	39	180	18	00.2	36	36	280	05	02.6	45	43	00.6	41	38	155	10	01.2	38	36	190	06	04.4	43	40	230	04	02.9	48	48	180	20	00.3	52	52	180	14	Surf	
1000	4.6	36	29	210	08	3.5	40	39	180	18	5.1	35	35	202	19	5.2	44	43	6.7	39	36	179	20	7.9	40	35	264	18	7.8	42	39	230	16	7.3	46	46	205	31	54	52	52	192	18	1000
950		32	27	226	08		35	34	180	33		33	33	216	22		42	41		35	34	216	25		38	27	264	18		38	36	230	16		47	47	221	31		51	50	230	30	950
900	32.3	26	20	242	09	31.4	32	31	206	36	32.9	31	31	227	27	33.6	46	46	34.6	34	34	243	31	36.0	32	17	273	16	35.9	36	16	237	16	35.9	48	47	250	25	34.2	51	50	235	35	900
850		25	19	259	12		36	36	234	30		29	29	252	26		42	42		33	33	262	37		27	05	274	15		32	20	269	22		43	41	261	24		49	47	231	33	850
800	62.7	20	14	265	15	62.6	26	36	262	21	63.8	31	31	263	26	65.2	58	34	65.9	37	37	283	39	66.8	30	17	283	17	67.0	34	32	282	34	67.6	38	36	270	22	66.4	44	41	230	33	800
750		17	13	278	18		32	32	261	34		30	30	280	33		32	28		32	31	291	39		24	20	293	23		30	29	296	38		32	30	276	21		38	31	231	35	750
700	96.8	17	13	288	21	97.8	29	29	261	45	98.7	25	24	284	49	100	29	18	101	27	25	293	55	101	21	17	307	31	102	26	25	314	39	103	27	26	284	23	102	31	22	240	37	700
650		11	04	288	27		22	20	259	49		20	18	292	42		23	06		20	18	298	31		16	12	315	39		21	20	323	36		27	15	287	20		24	9	248	37	650
600	136	07	02	291	33	137	16	08	261	49	138	13	08	302	48	140	15	03	140	15	10	308	34	140	10	05	319	43	142	16	13	327	35	142	17	02	287	20	142	19	07	251	39	600
550		00	04	287	37		08	02	269	50		04	08	304	58		06	21		06	04	315	37		07	01	325	48		08	02	326	33		09	00	296	29		12	03	258	43	550
500	180	07	12	292	47	183	01	06	276	49	183	05	15	303	45	185	04	20	186	04	17	315	46	186	03	19	328	48	187	01	08	317	33	188	02	23	296	26	188	03	10	260	49	500
450		17	22	293	66		10	15	269	51		14	24	295	40		16	26		15	25	313	43		14	26	328	63		12	18	313	38		10	24	306	31		07	16	267	48	450
400	233	24	34	295	84	236	22	27	269	49	236	25	35	288	51	238	23	31	239	25	34	315	43	239	26	36	326	60	241	24	30	329	46	241	23	31	313	36	241	18	34	263	50	400
350		42		296	84		35	40	269	57		40	52	294	57		36	42		37	47	313	54		39	52	327	67		36	43	321	54		35	42	312	36	241	30	44	271	46	350
300	297	57		295	81	302	50		274	71	301	55		303	79	303	52		308	51		312	62	303	55		328	69	305	49		327	54		307	44		393	80	282	65	300		
250		77					66		273	88		73			70		70			66			84			70		328	88		66		323	71		60							250	
200	380	23				386	86		278	102	384	94			89		89		388	88		310	87	387	90		327	97	390	84		326	88		80							200		
170	192	96				198			281	121	193				99		99		198	98		309	95		98		326	93		96		325	95		95								170	
150						192			288	119		96			103		86			94			314	84		86		325	77		91		324	85		101							150	
130						184						89			82		82			86			314	62		84		324	68		88		323	66		84							130	
110						181						89			84		82			82							318	68	527	83		83		319	84		84							110
100						178						85			85		80			80							323	67		84		315	84		82								100	
90						178						85			85		79			79							319	72		83		312	70		83								90	
80						178						85			85		83			83							312	70		70													80	
70						178						85			85		83			83							312	70		70													70	
60						178						85			85		83			83							312	70		70													60	

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

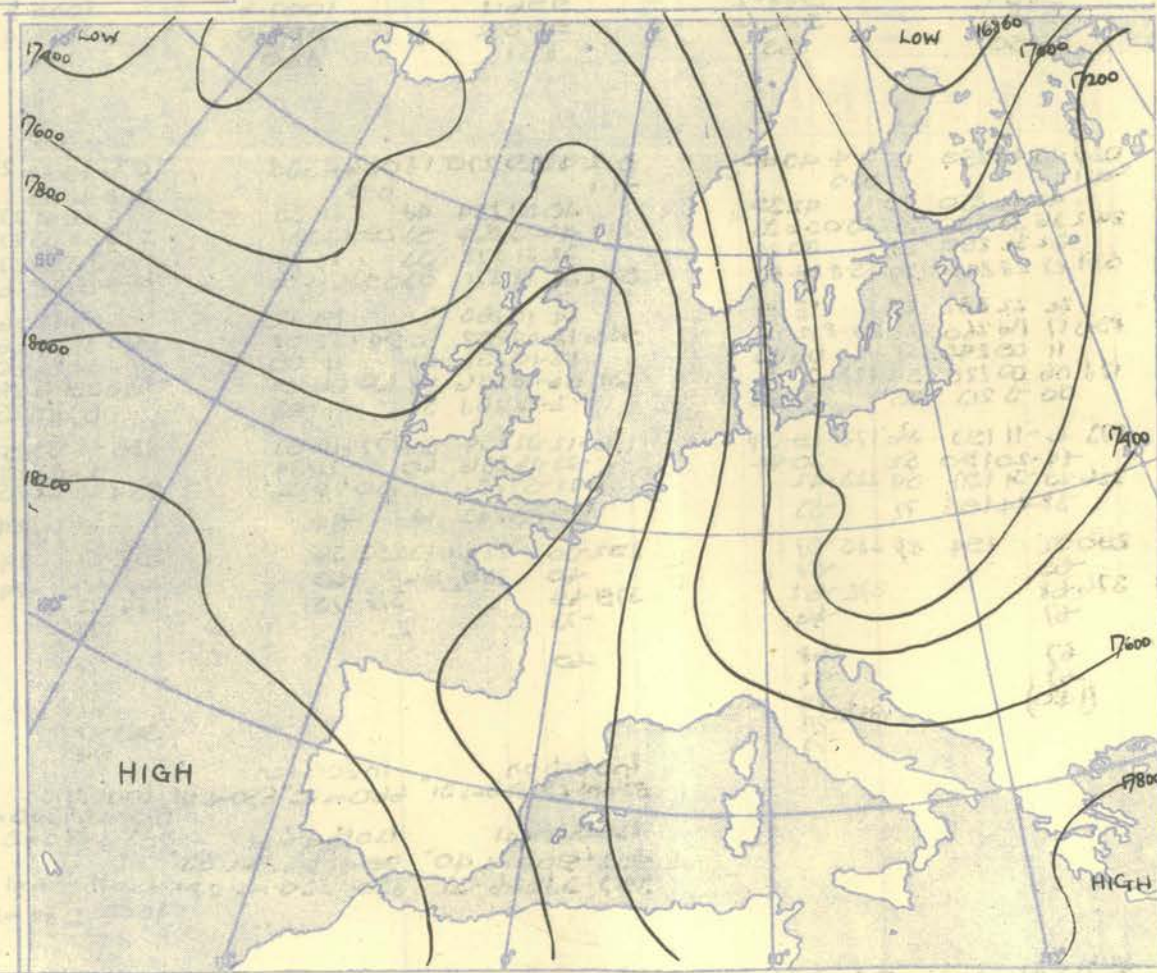
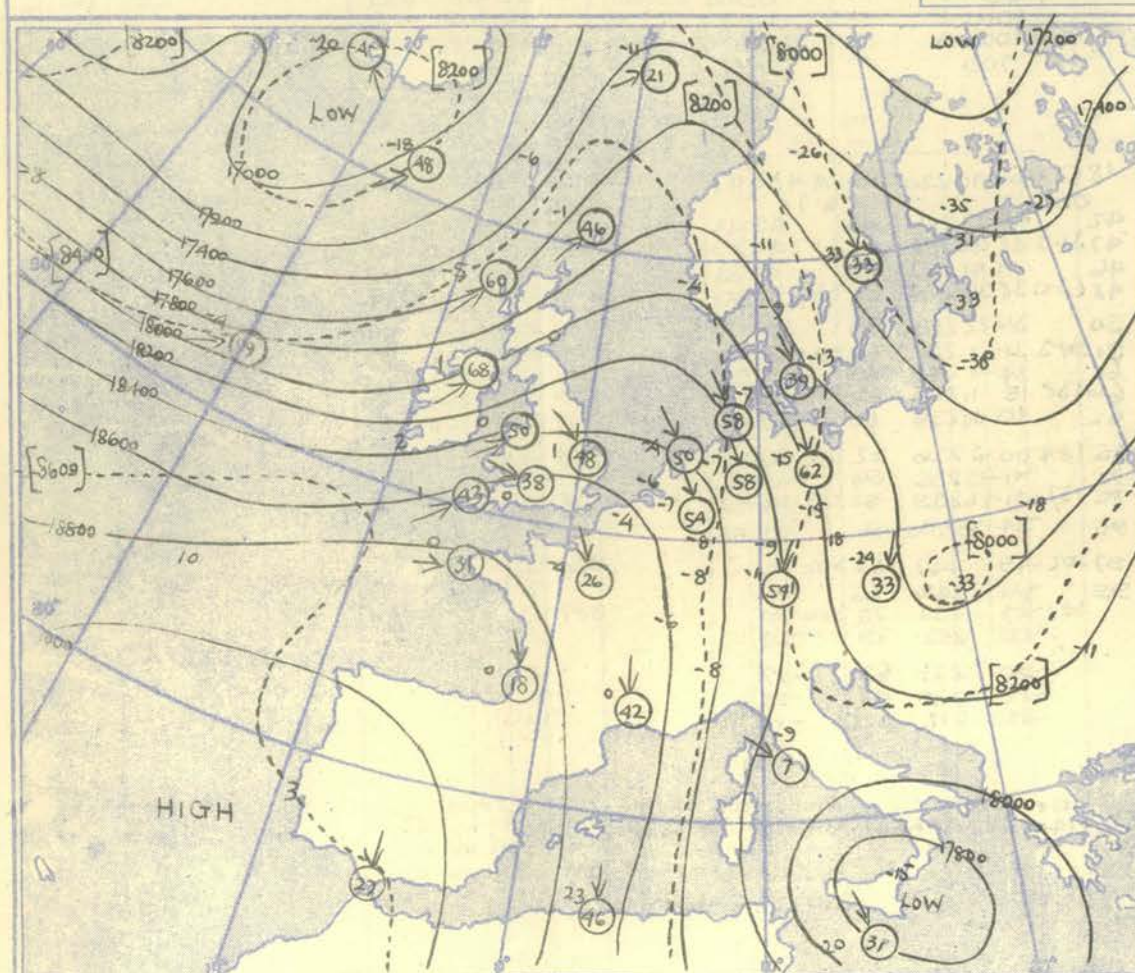
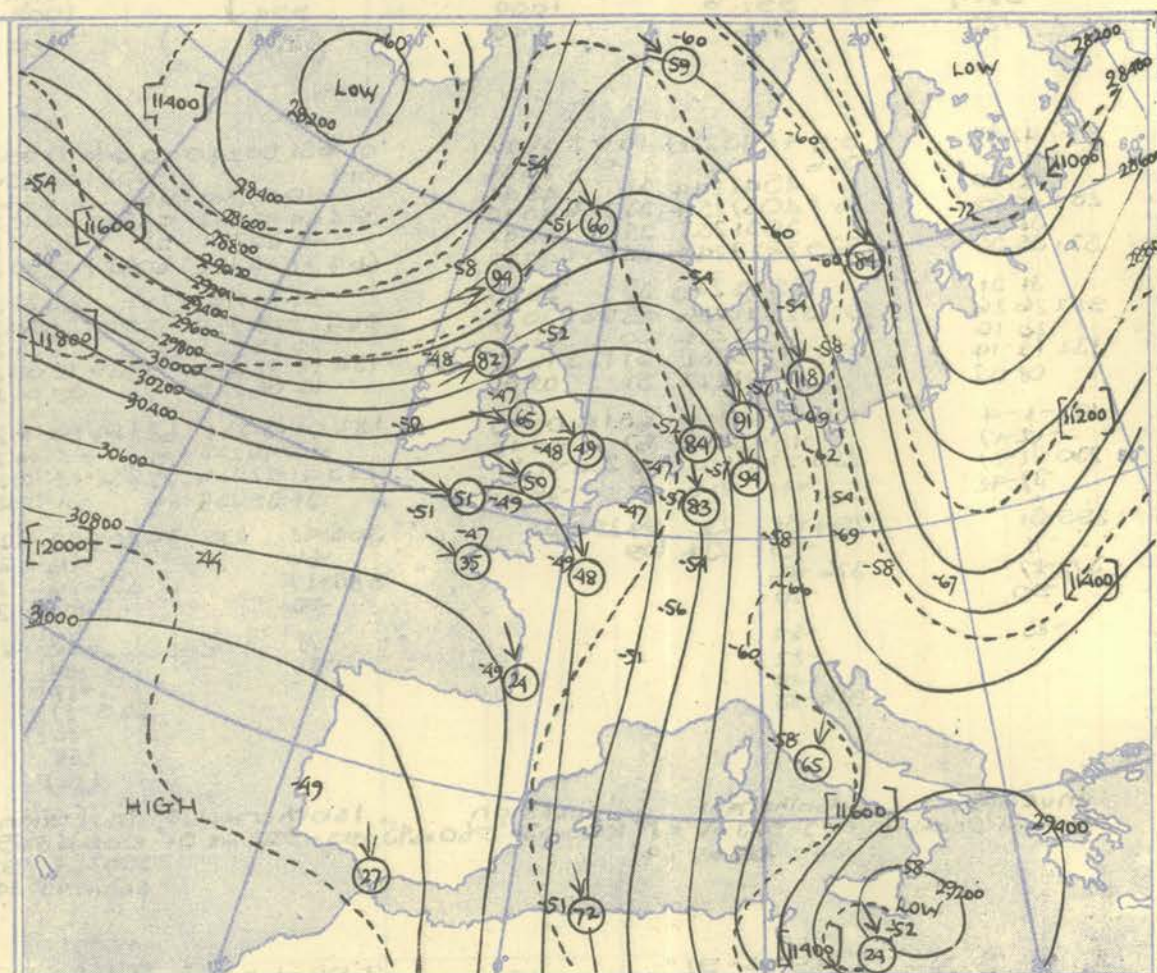
STATION	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	STATION
Time M.S.L.	03hrs 991.7 Surf 755	03hrs 994.3 Surf 836	03hrs 1000.9 Surf 740	03hrs 1002.7 Surf 728	03hrs 1011.1 Surf 720	03hrs 1018.2 Surf 738	03hrs 1020.0 Surf 737	03hrs 1021.9 Surf 700	Time M.S.L.
Pressure mb	991.7 Surf 755	994.3 Surf 836	1000.9 Surf 740	1002.7 Surf 728	1011.1 Surf 720	1018.2 Surf 738	1020.0 Surf 737	1021.9 Surf 700	Pressure mb
Height ft/100	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	Height ft/100
Temp. °F	42.42	45.23	26.36	50.24	52.40	52.40	52.40	52.40	Temp. °F
Dew °F	42.42	45.23	26.36	50.24	52.40	52.40	52.40	52.40	Dew °F
Wind Dir. Vel. knots	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	Wind Dir. Vel. knots
Surf	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	Surf
1000	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	1000
950	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	950
900	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	900
850	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	850
800	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	800
750	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	750
700	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	700
650	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	650
600	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	600
550	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	550
500	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	500
450	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	450
400	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	400
350	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	350
300	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	300
250	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	250
200	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	200
170	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	170
150	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	150
130	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	130
110	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	110
100	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	100
90	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	90
80	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	80
70	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	70
60	02.7 42.42	6.4 44.8	10.0 2.2	02.6 51.5	03.1 52.4	03.1 52.4	03.1 52.4	03.1 52.4	60
Inversion	926 mb 38° 900 mb 40°	993-973 mb 48° 735-706 mb 24°	1000 mb 36° 760 mb 36° 955 mb 51°	1009 mb 52° 983 mb 52° 950 mb 48° 921 mb 49°	1009 mb 52° 983 mb 52° 950 mb 48° 921 mb 49°	1009 mb 52° 983 mb 52° 950 mb 48° 921 mb 49°	1009 mb 52° 983 mb 52° 950 mb 48° 921 mb 49°	1009 mb 52° 983 mb 52° 950 mb 48° 921 mb 49°	Inversion
Tropopause	193 mb -39° 38500'	1219 mb -92° 35800'	NR	116 mb -97° 41200'	116 mb -102° 42500'	116 mb -104° 43200'	115 mb -109° 43700'	116 mb -104° 42300'	Tropopause
STATION	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	STATION
Time M.S.L.	09hrs 985.1 Surf 850	09hrs 986.2 Surf 866	09hrs 996.1 Surf 851	09hrs 1002.6 Surf 880	09hrs 1006.8 Surf 822	09hrs 1010.8 Surf 709	09hrs 1013.8 Surf 713	09hrs 1017.4 Surf 765	Time M.S.L.
Pressure mb	985.1 Surf 850	986.2 Surf 866	996.1 Surf 851	1002.6 Surf 880	1006.8 Surf 822	1010.8 Surf 709	1013.8 Surf 713	1017.4 Surf 765	Pressure mb
Height ft/100	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	Height ft/100
Temp. °F	43.45	27.0	18.0	26.4	26.4	26.4	26.4	26.4	Temp. °F
Dew °F	43.45	27.0	18.0	26.4	26.4	26.4	26.4	26.4	Dew °F
Wind Dir. Vel. knots	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	Wind Dir. Vel. knots
Surf	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	Surf
1000	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	1000
950	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	950
900	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	900
850	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	850
800	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	800
750	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	750
700	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	700
650	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	650
600	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	600
550	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	550
500	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	500
450	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	450
400	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	400
350	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	350
300	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	300
250	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	250
200	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	200
170	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	170
150	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	150
130	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	130
110	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	110
100	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	100
90	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	90
80	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	80
70	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	70
60	02.7 43.45	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	0.2 42.39	60
Inversion	936 mb 29° 800 mb 31°	993-973 mb 48° 735-706 mb 24°	1000 mb 36° 760 mb 36° 955 mb 51°	1009 mb 52° 983 mb 52° 950 mb 48° 921 mb 49°	1009 mb 52° 983 mb 52° 950 mb 48° 921 mb 49°	1009 mb 52° 983 mb 52° 950 mb 48° 921 mb 49°	1009 mb 52° 983 mb 52° 950 mb 48° 921 mb 49°	1009 mb 52° 983 mb 52° 950 mb 48° 921 mb 49°	Inversion
Tropopause	218 mb -70° 35700'	1308 mb -57° 28000'	1173 mb -74° 40700'	1224 mb -74° 35600'	1174 mb -78° 41200'	1170 mb -99° 41500'	1182 mb -96° 40700'	1182 mb -96° 40700'	Tropopause

HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52½° N.

100 80 60 40 20 10 0 knots

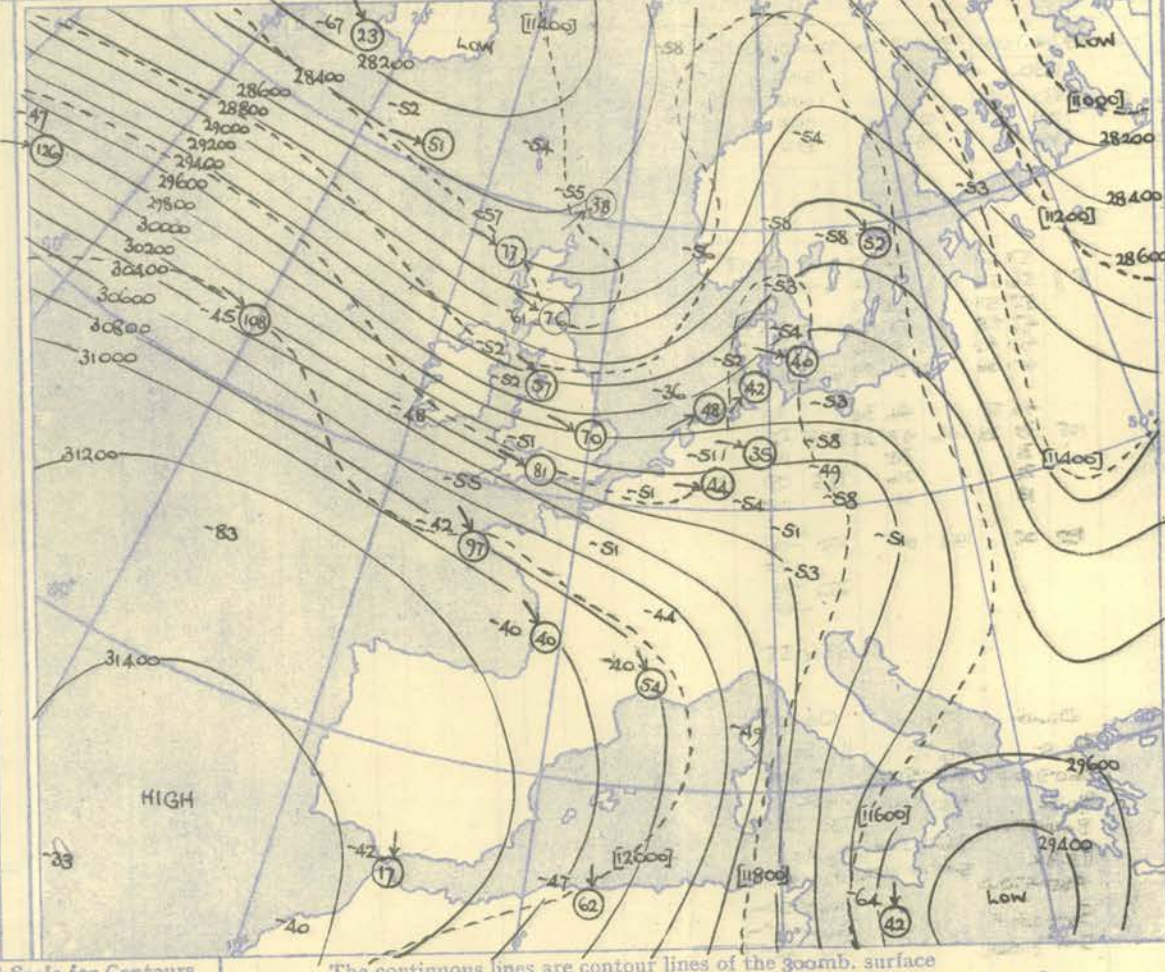
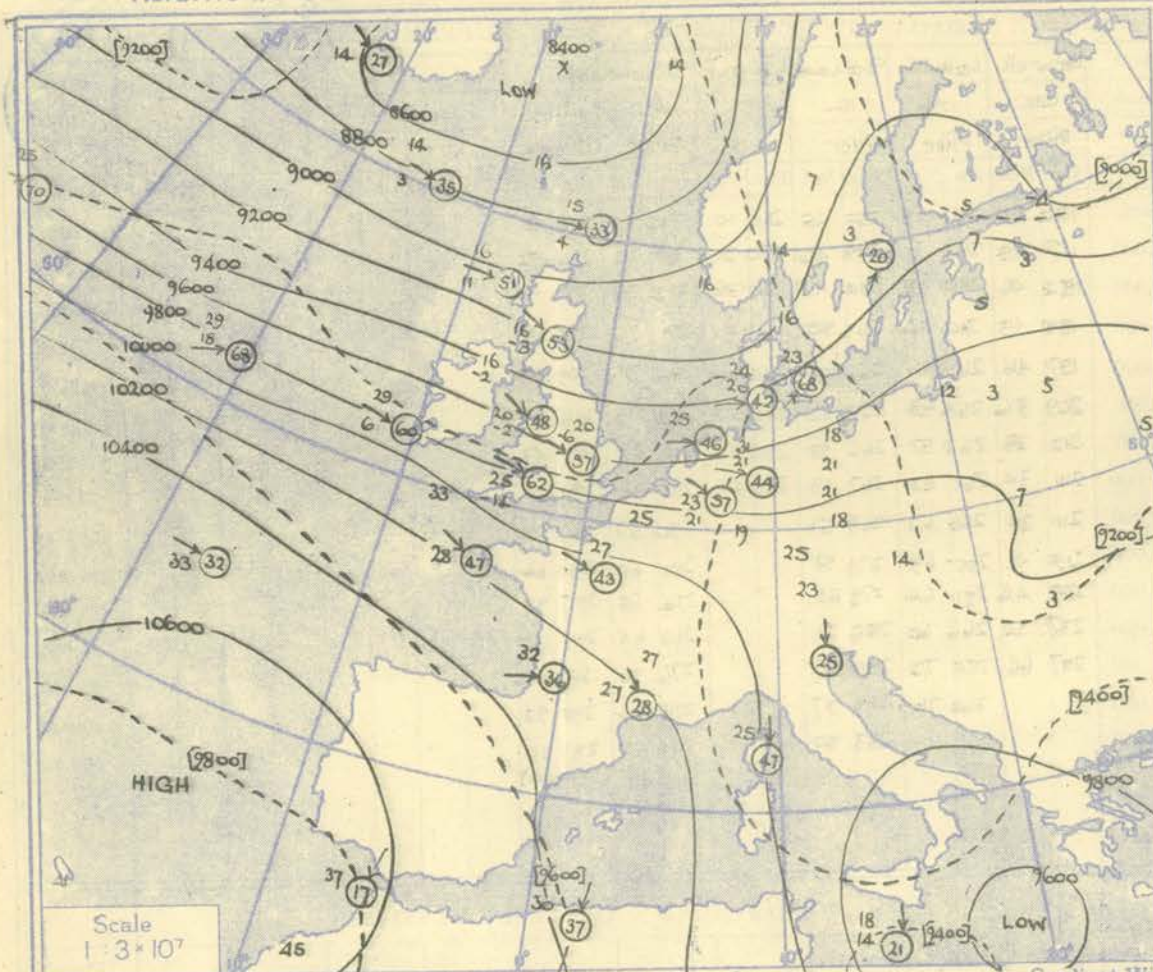


DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above MSL

[illegible]

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.

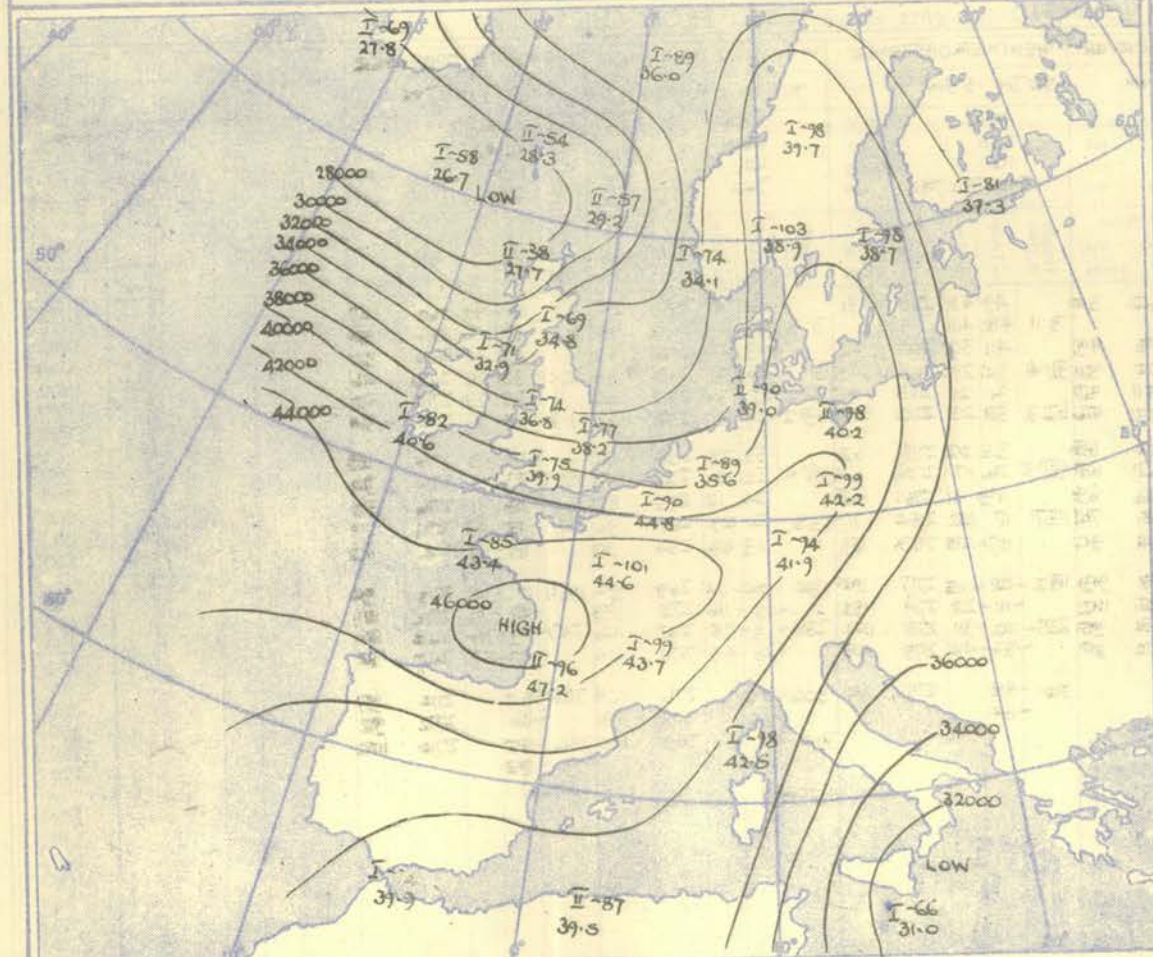
Ship	WEATHER WATCHER.				WEATHER WATCHER.				WEATHER WATCHER				WEATHER WATCHER				WEATHER OBSERVER.				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER								Ship	
Lat/Long	60°N 14°W.				61°N 14°W.				61°N 14°W.				61°N 14°W.				52°N 19°3'W.				52°N 19°3'W				52°N 19°4'W.				52°N 19°7'W								Lat/Long	
Pressure (Time M.S.L. Surf Freezing)	03h G.M.T.				09h G.M.T.				15h G.M.T.				21h G.M.T.				03h G.M.T.				09h G.M.T.				15h G.M.T.				21h G.M.T.								G.M.T.	Time
	mb				mb				mb				mb				mb				mb				mb				mb								mb	M.S.L.
	mb				mb				mb				mb				mb				mb				mb				mb								mb	Surf
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb					
Surf																																	Surf					
1000	56	47	44	200 18	70	45	42	260 21	63	47	41	260 29	62	44	39	280 20	14	48	44	260 30	31	49	43	260 31	33	51	47	250 28	51	49	260 27							
950		44	43	219 26		43	40	265 21		43	35	267 43		41	37	276 19		42	36	248 49		41	32	255 44		43	37	246 52	42	37	49	46	256 50					
900	22	39	39	221 32	21	37	35	264 26	22	36	28	265 40	22	36	32	275 36	29	35	30	250 51	31	34	25	258 48	31	41	35	248 63	32	0	38	26	263 46					
850	33	26	222 33		32	31	263 30		31	23	265 38		30	27	272 31		30	22	251 57		31	21	213 53		40	34	252 60	35	23	273 45								
800	53	28	24	224 30	52	27	23	264 30	52	27	18	265 37	52	25	22	272 32	60	24	08	255 56	62	33	23	270 58	63	40	31	252 63	63	2	35	26	276 59					
750		22	15	221 30		21	14	266 28		22	10	269 35		19	14	259 32		28	03	258 68		33	22	273 62		33	25	253 64	27	19	278 69							
700	88	17	13	218 30	86	14	08	269 30	87	14	03	272 35	87	13	06	278 32	95	22	13	262 65	97	26	17	276 64	98	29	18	252 68	98	0	23	15	276 70					
650		09	01	218 34		06	02	273 32		06	12	272 35		14	33	266 69		19	11	281 68		19	11	281 68		24	12	255 87	19	11	276 75							
600	127	01	10	220 37	125	02	09	277 31	125	00	20	271 35	125	02	16	289 29	134	17	02	284 74	137	17	02	284 77	138	21	09	259 96	137	15	07	276 79						
550		08	16	224 42		11	21	271 35		09	34	272 32		05	40	264 90		07	09	283 81		13	03	263 81		13	03	263 81	65	03	276 82							
500	171	18	26	226 48	168	23	29	265 35	169	19	50	262 35	169	21	38	299 31	179	04	35	263 99	182	01	15	277 90	184	04	04	269 90	183	03	08	275 90						
450		26	39	225 52		32	42	263 37		31	58	255 44		32	48	287 40		15	35	265 112		11	22	274 95		05	16	272 93	07	25	272 87							
400	222	35	49	224 53	219	40	55	255 41	220	41		260 39	220	43		283 48	232	27	46	268 95	235	20	31	273 101	238	15	28	267 106	237	19	36	268 84						
350		40	53		45			258 32	53			264 47	52			286 51		39	59	270 90		33	44	273 123		28	43	270 114	33	53	267 88							
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Gradient Wind Scale for Contours at intervals of 200 ft. at Lat. 52° N.

100	60	40	30	20	15	10	knots
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TROPOPAUSE CHART at about 15h. G.M.T.

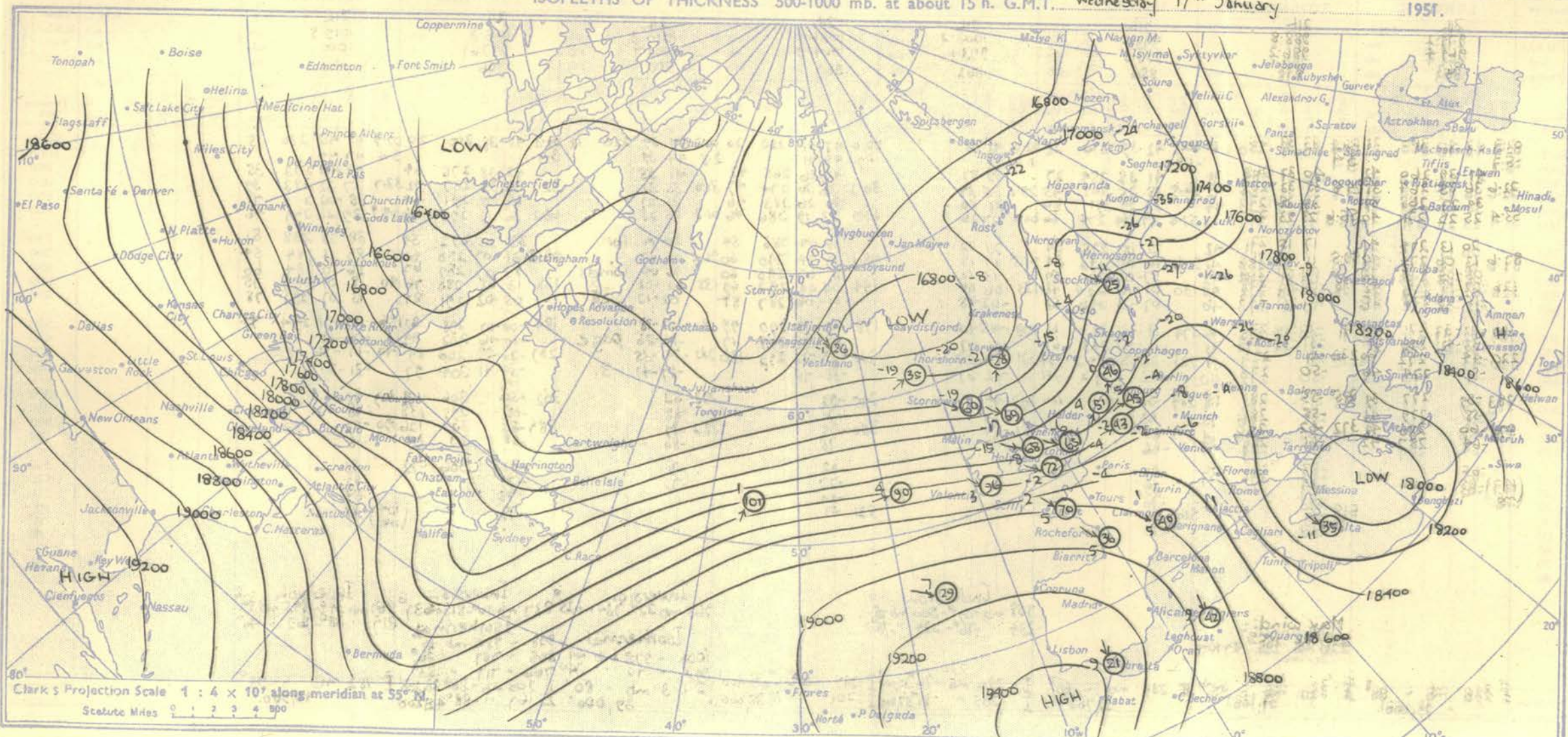
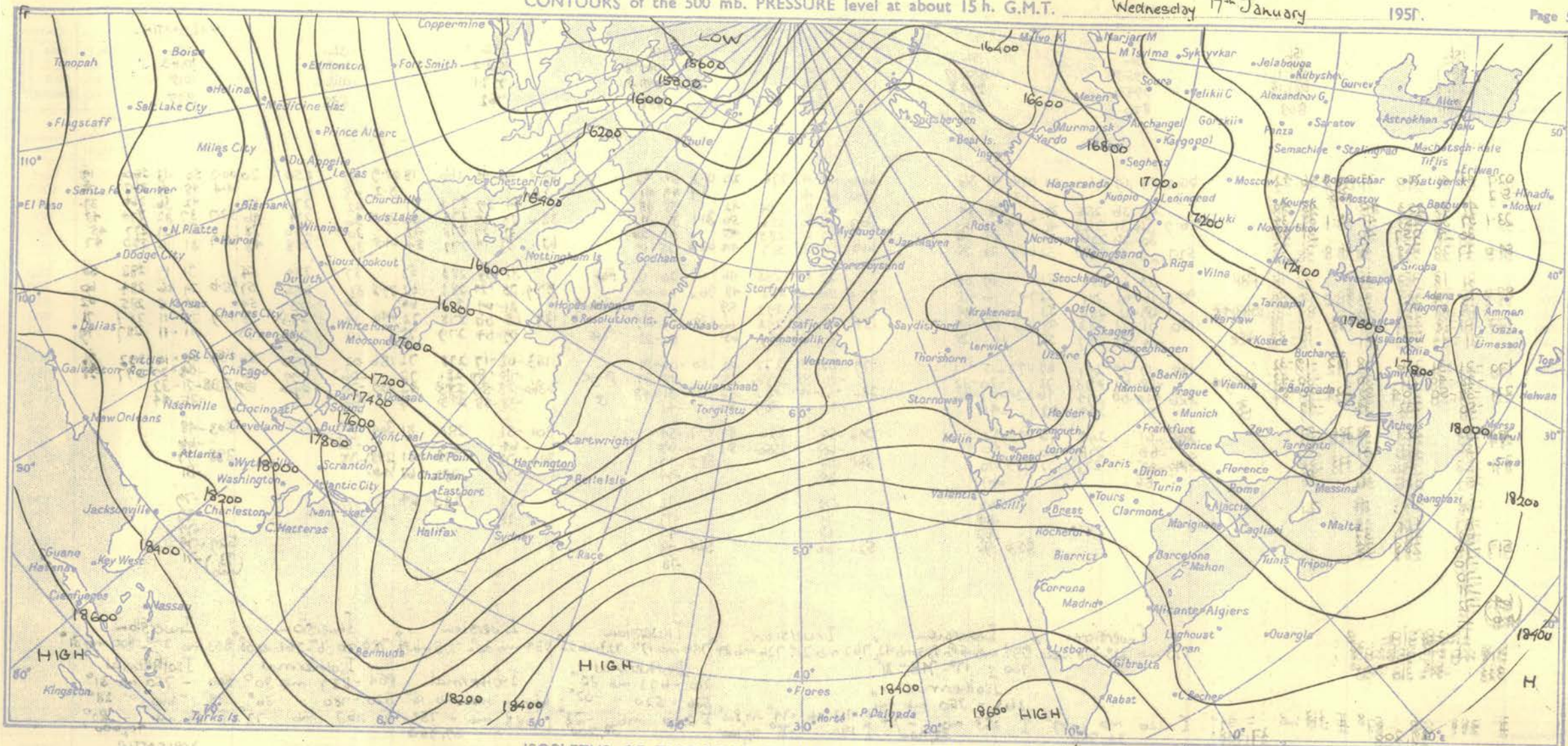


NOTES ON THE AEROLOGICAL SITUATION.

The cold trough over Europe relaxed and moved steadily eastwards and the warm ridge, greatly reduced in intensity by occlusion, travelled over six hundred miles east in the past 24 hours. With the complete disappearance north of 45° N. of the cold trough in mid-Atlantic the large amplitude pattern has reverted to the strong zonal thermal of 14th January from the British Isles to Newfoundland.

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Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.

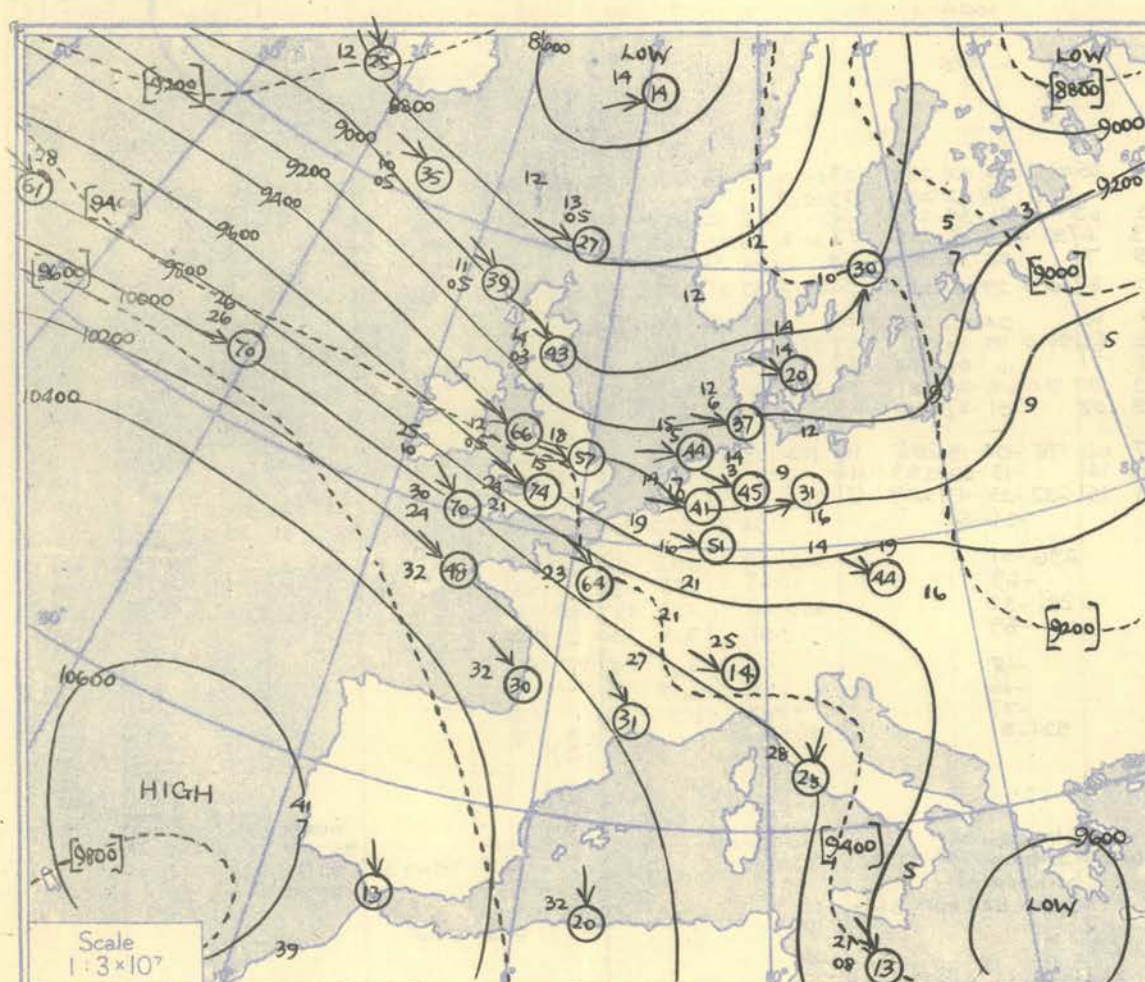


10-11-2000

HMSO Press, MO., Dunstable.

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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Pressure M.S.L. Surf (Freezing)	Time	03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		Time																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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950		42	276	34	41	37	280	42	38	35	291	30		40	34					43	40	272	60	41	39	249	50	43	42	279	49	04.7	48	47			43	40	950																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
900	22.5	37	277	31	24.8	35	32	282	42	25.3	35	31	299	43	28.6	34	29			28.6	37	34	283	67	29.4	36	33	275	57	31.2	26	35	282	51	33.0	38	36	288	50		43	900																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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Pressure M.S.L. Surf (Freezing)	Time	09h		G.M.T.		09h		G.M.T.		09h		G.M.T.		09h		G.M.T.		09h		G.M.T.		09h		G.M.T.		09h		G.M.T.		09h		G.M.T.		Time																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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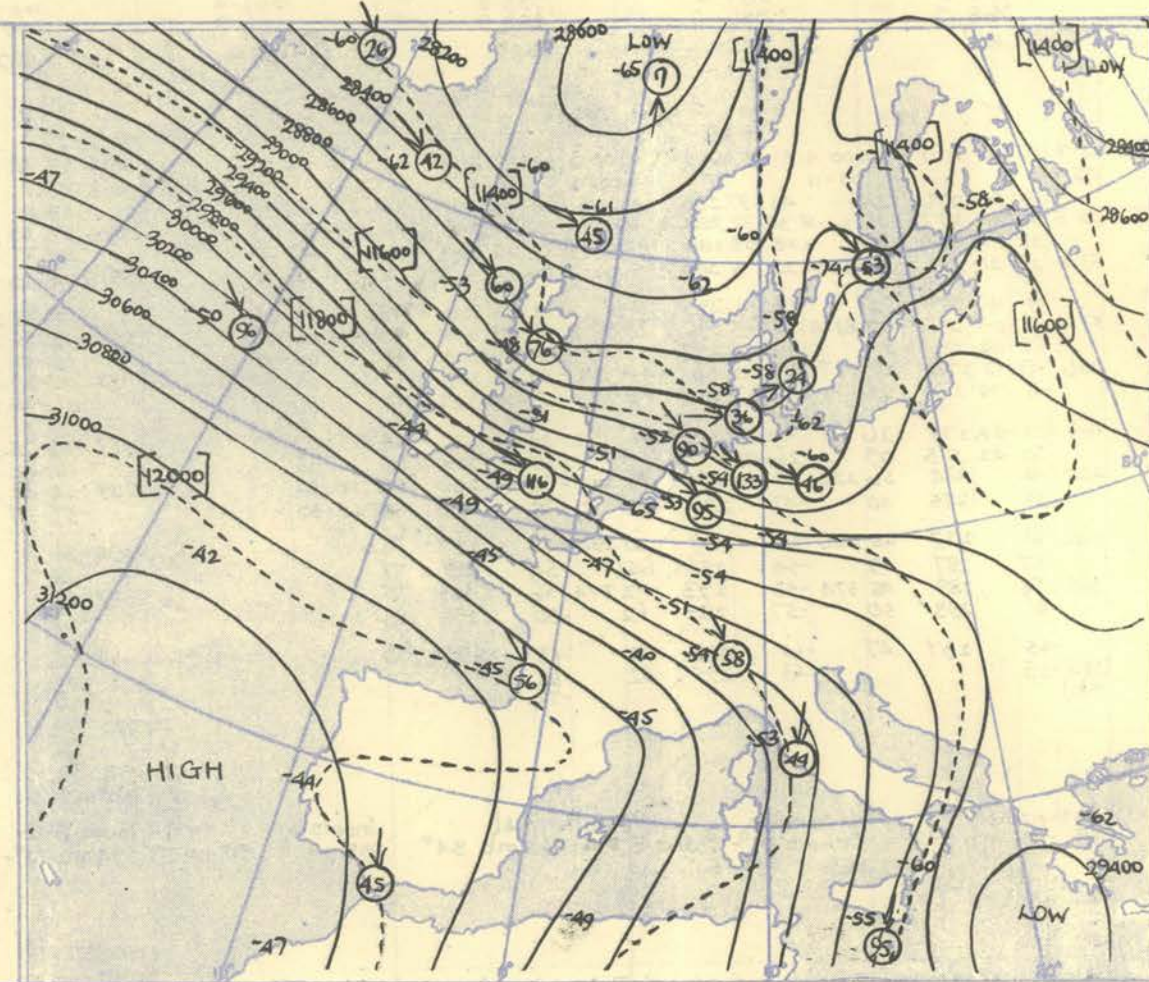
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



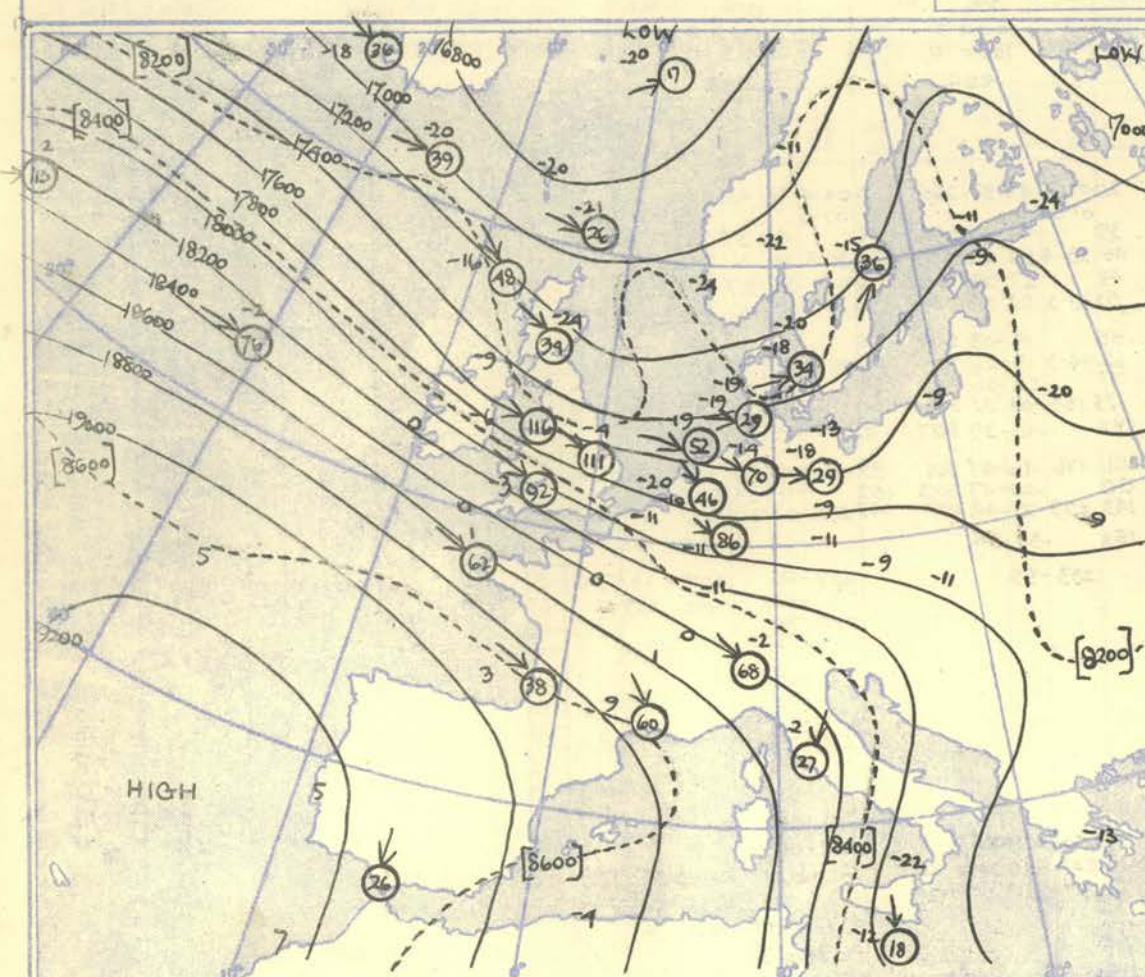
The continuous lines are contour lines of the 700 mb. surface
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

Gradient-Wind Scale for Contours
at intervals of 200 ft. at Lat. $52\frac{1}{2}^\circ$ N.

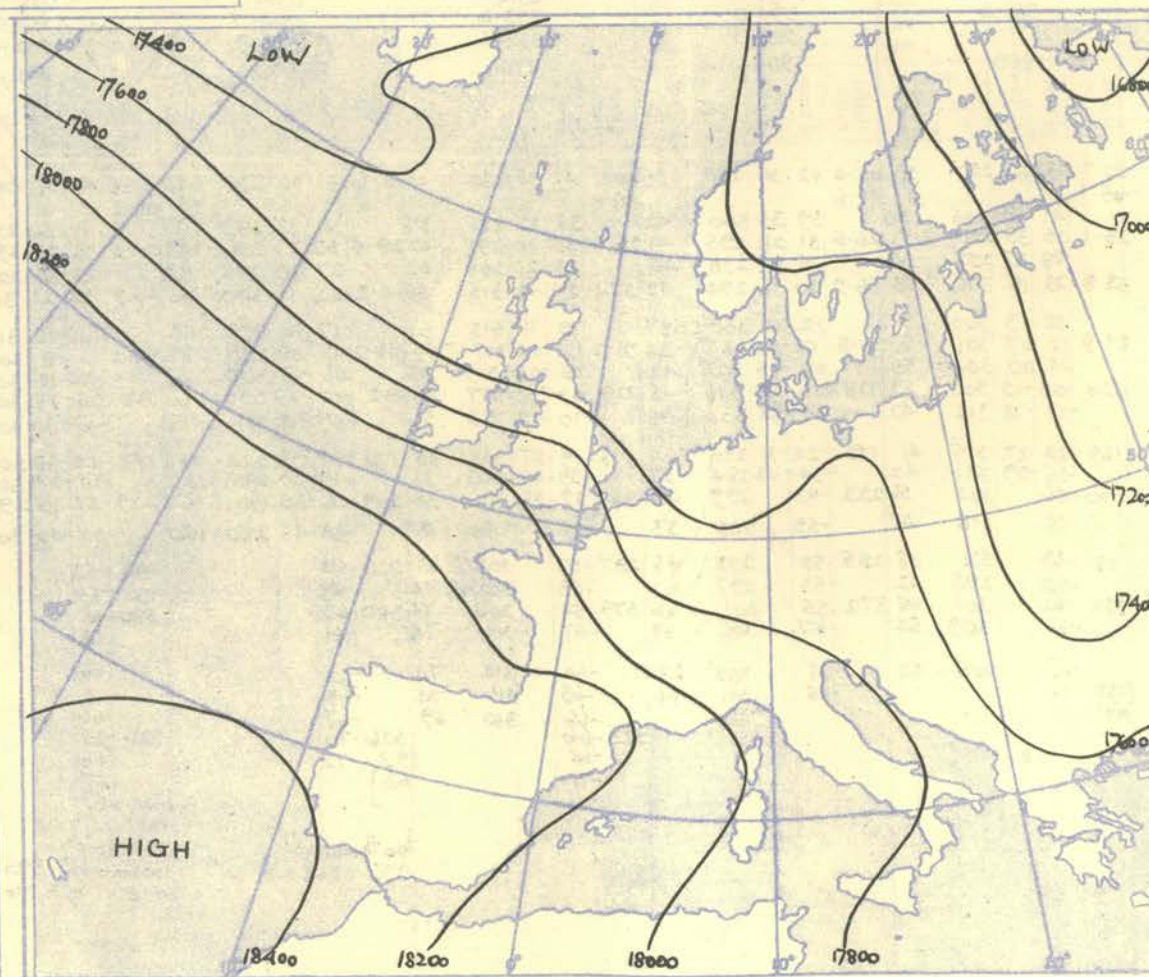
100 80 60 40 20 10 knots



The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500-300 mb



The continuous lines are contour lines of the 500 mb. surface
The dotted lines are isopleths of the thickness of the layer 700-500 mb.

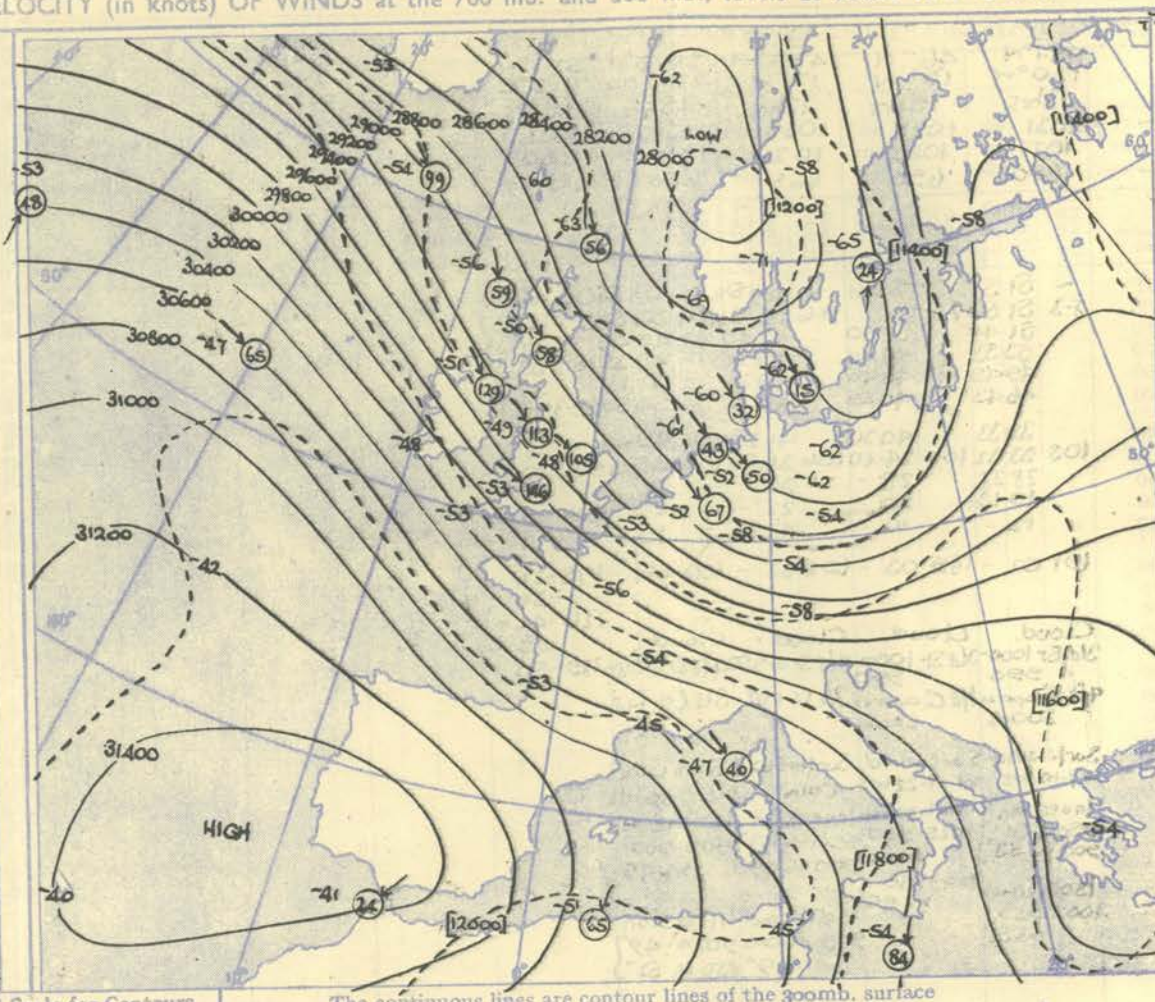
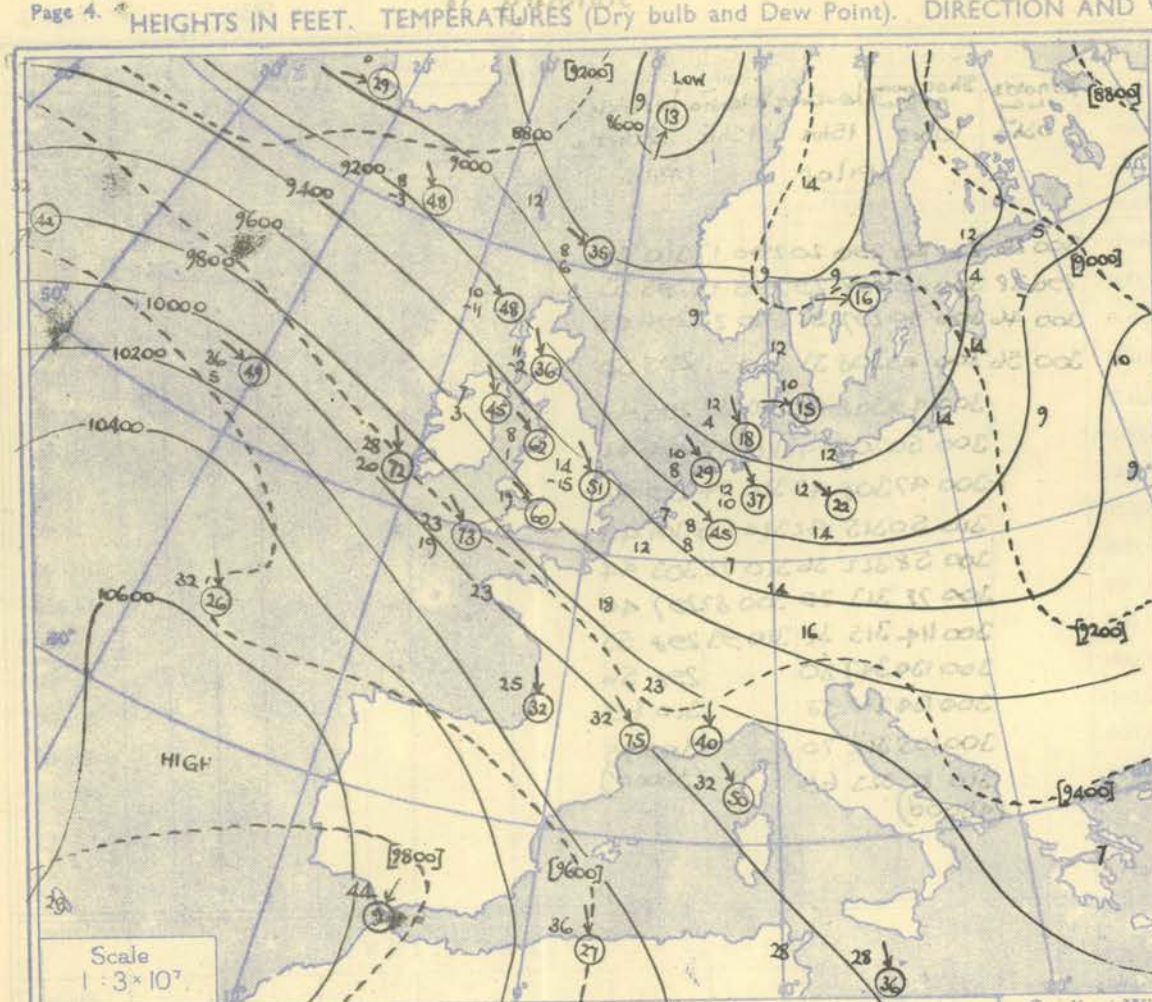


Isopleths of Thickness 500-1000mb.

DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS

Ship		Weather Watcher				Weather Watcher				Weather Watcher				Weather Observer				Weather Observer				Weather Observer				Ship																	
Lat/Long		60°N 14.1°W				60.8°N 14.2°W				60.7°N 14.5°W				60.7°N 15.1°W				52.3°N 20.0°W				52.4°N 20.7°W				52.3°N 19.7°W				52.4°N 20°W													
Pressure	Time	03hrs		G.M.T.		03hrs		G.M.T.		15hrs		G.M.T.		21hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		15hrs		G.M.T.		21hrs		G.M.T.		Time									
	M.S.L.	984		mb		989		mb		998		mb		1002		mb		1017		mb		1018		mb		1021		mb		1023		mb			M.S.L.								
	Surf	984		mb		989		mb		998		mb		1002		mb		1017		mb		1018		mb		1021		mb		1023		mb				Surf							
	Freezing	900		mb		890		mb		900		mb		910		mb		750		mb		750		mb		680		mb		685		mb					Freezing						
Pressure	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Pressure										
mb	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	mb										
Surf	-	43	32	280	36	-	44	21	290	35	-	44	35	285	33	-	44	37	280	24	-	51	49	265	19	-	52	52	265	25	-	52	51	260	23	-		51	51	255	18		
1000	48	38	29	297	42	39	30	290	45	38	34	286	38	38	37	284	31	44	44	261	31	45	46	267	40	45	51	48	268	45	55	50	275	36	61	45	45	243	21				
950	21	6	31	24	297	44	25	1	278	54	27	6	32	25	231	42	28	7	283	32	33	0	42	42	263	35	33	6	47	44	265	48	34	3	47	43	273	45	31	48	243	30	
900	28	20	295	53	25	16	293	53	26	23	293	47	24	22	282	25	39	38	262	43	42	38	266	58	44	27	275	45	34	8	48	44	252	27	43	37	271	26					
850	54	19	17	292	50	55	6	18	16	292	60	58	2	20	14	298	52	21	14	282	36	65	8	37	262	55	65	8	37	270	57	65	9	37	24	372	42	66	7	44	23	271	31
800	17	12	282	37	17	07	293	58	15	01	308	48	14	05	280	46	32	32	263	60	32	25	274	62	41	12	273	38	35	21	281	33	35	21	281	33	35	21	281	33			
750	88	0	05	277	35	89	5	12	2	300	49	92	0	08	273	305	48	92	9	11	00	278	48	93	6	26	264	70	100	32	04	277	60	101	36	05	276	45	102	34	17	275	36
700	01	00	276	38	06	13	303	56	06	7	301	58	08	15	279	50	20	20	266	78	26	5	278	70	28	10	276	40	102	34	17	275	36	28	14	264	34						
650	126	-3	-13	185	34	128	-2	13	303	47	130	01	-16	299	62	131	02	-24	278	48	135	15	12	266	71	140	21	-8	278	60	142	21	-4	281	54	142	19	04	263	33			
600	-11	-21	282	34	10	-22	295	40	-2	-24	298	65	-1	-21	283	82	08	00	268	73	12	-17	283	84	11	-20	280	52	03	-2	256	35	03	-2	256	35	03	-2	256	35			
550	170	-20	-27	272	39	171	-17	28	303	41	175	-11	-33	294	67	176	-7	-17	290	103	185	-2	-18	272	76	186	04	-24	281	84	187	05	-30	280	59	188	01	-13	247	36			
500	-30	-25	270	35	-24	-37	301	36	-21	-42	287	73	-15	-22	290	117	-5	-14	272	79	117	-5	-14	272	79	-7	-34	283	93	-8	-35	276	65	-9	-24	247	32						
450	221	41	272	27	223	37	49	292	36	227	-30	48	294	78	229	-25	-33	291	111	238	-21	-25	272	81	240	-18	-42	278	87	241	-18	-42	278	62	242	-13	-39	245	43				
400	-50	286	48	284	48	-50	284	29	-53	294	84	-28	-45	286	125	-34	-43	275	80	-32	-52	284	84	-33	-53	283	68	-33	-53	283	68	-32	-46	245	44	-32	-46	245	44				
350	283	62	294	42	286	52	293	36	291	54	303	99	293	31	303	50	280	96	305	46	286	86	307	47	280	63	307	47	255	60	307	47	255	60	307	47	255	60					
300	370	57	293	57	293	59	293	54	303	97	303	97	293	31	303	50	280	96	305	46	286	86	307	47	280	63	307	47	255	60	307	47	255	60	307	47	255	60					
250	370	57	293	57	293	59	293	54	303	97	303	97	293	31	303	50	280	96	305	46	286	86	307	47	280	63	307	47	255	60	307	47	255	60	307	47	255	60					
200	58	283	63	56	298	69	55	314	84	57	317	75	57	317	75	57	317	75	57	317	75	57	317	75	57	317	75	57	317	75	57	317	75	57	317	75	57	317	75				
170	58	283	63	56	298	69	55	314	84	57	317	75	57	317	75	57	317	75	57	317	75	57	317	75	57	317	75	57	317	75	57	317	75	57	317	75	57	317	75				
150	60	283	70	59	297	63	59	317	75	57	317	75	57	317	75	57	317	75	57	317	75	57	317	75	57	317	75	57	317	75	57	317	75	57	317	75	57	317	75				
130	63	284	70	59	297	70	59	317	75	57	317	75	57	317	75	57	317	75	57	317	75	57	317	75	57	317	75	57	317	75	57	317	75	57	317	75	57	317	75				
110	66	284	73	62	296	70	60	304	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63				
100	69	284	70	52	296	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63				
90	69	284	70	52	296	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63				
80	69	284	70	52	296	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63				
70	69	284	70	52	296	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63				
60	69	284	70	52	296	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63	52	303	63				
Isothermal		712-750ms 17°				Isothermal				800-758ms 18°				(53) Isothermal				Isothermal				Isothermal				Isothermal				Isothermal				Isothermal				Isothermal					
650-633ms 1°						Inversion				665ms 52° 650ms 6°				Inversion				1002-1000ms 44°				330-883ms 42°				333-317ms 48°				(49) Inversion				810ms 36° 750ms 41°				800ms 51° 765ms 51°					
						Inversion				481ms 20° 475ms 19°				Isothermal				305-300ms -54°				Inversion				722ms 610° 631ms 12°				622-604ms 22°				750-688ms 22°				668ms 45° 650ms 47°					
Tropopause		I 296ms -63°				I 332ms -54°				I 250ms -63°				I 185ms -71°				I 200ms -81°				NR.				I 157ms -90°				I 191ms -89°													
		28800'				26400'				33000'				29400'				35700'								44200'				40200'													

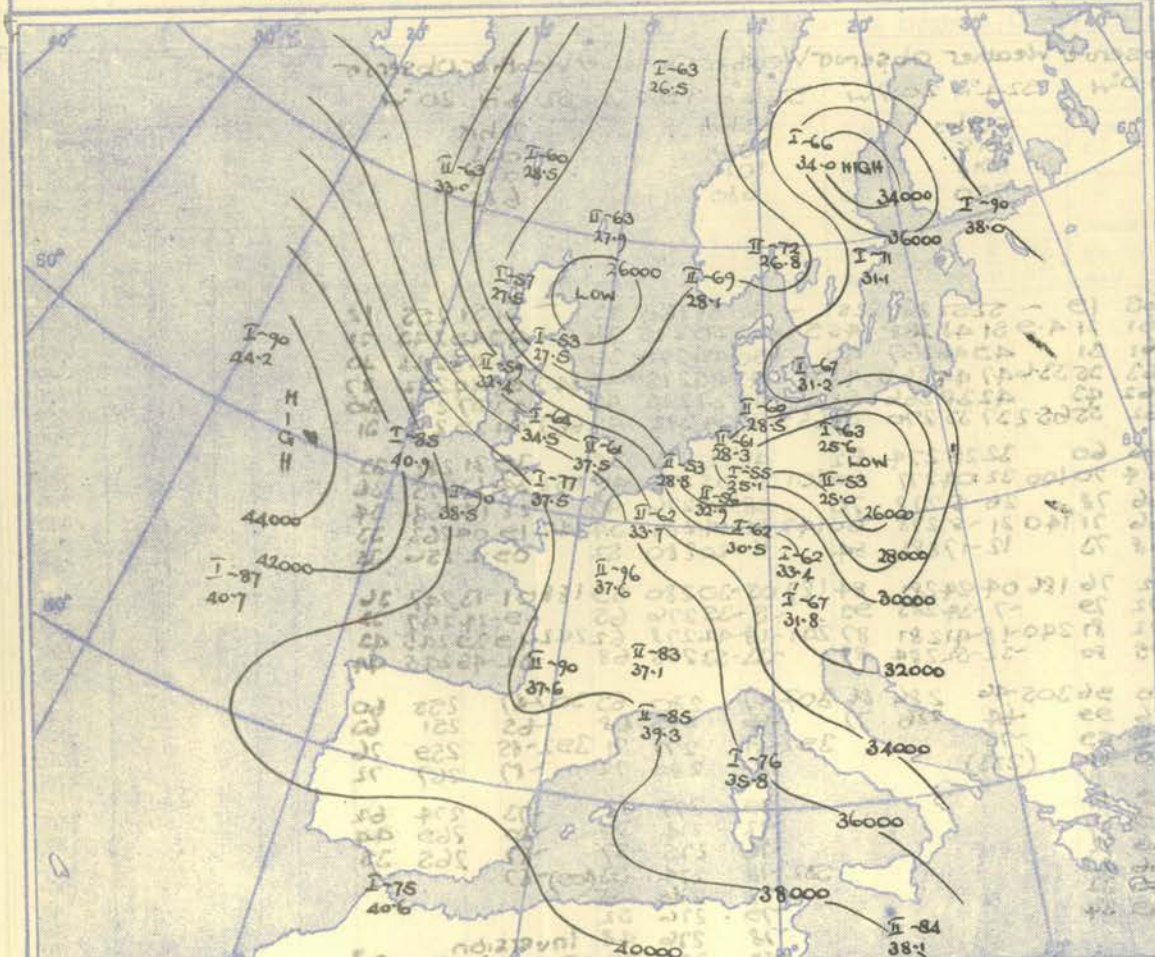


Gradient Wind Scale for Contours at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 20 10 knots

TROPOPAUSE CHART at about 15h. G.M.T.

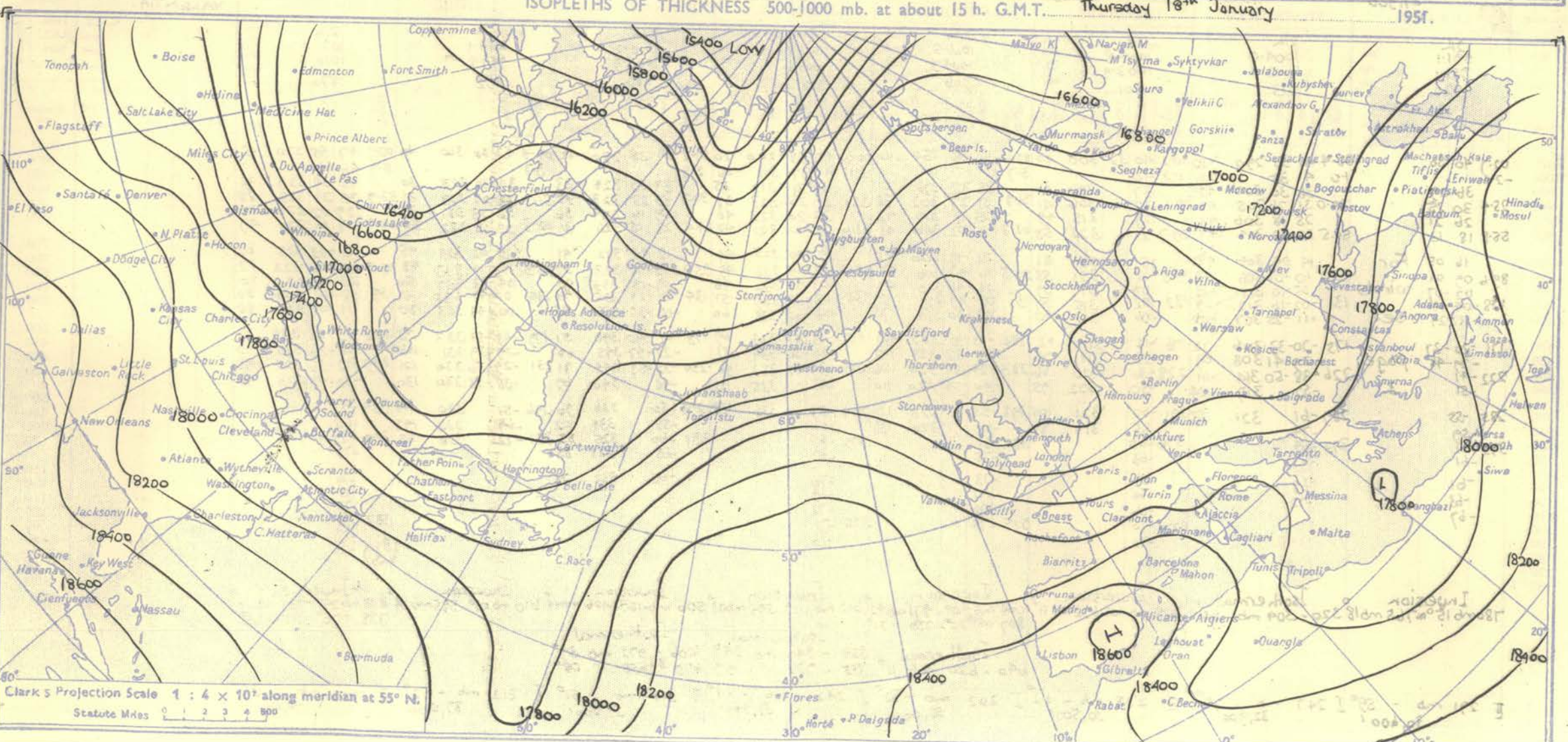
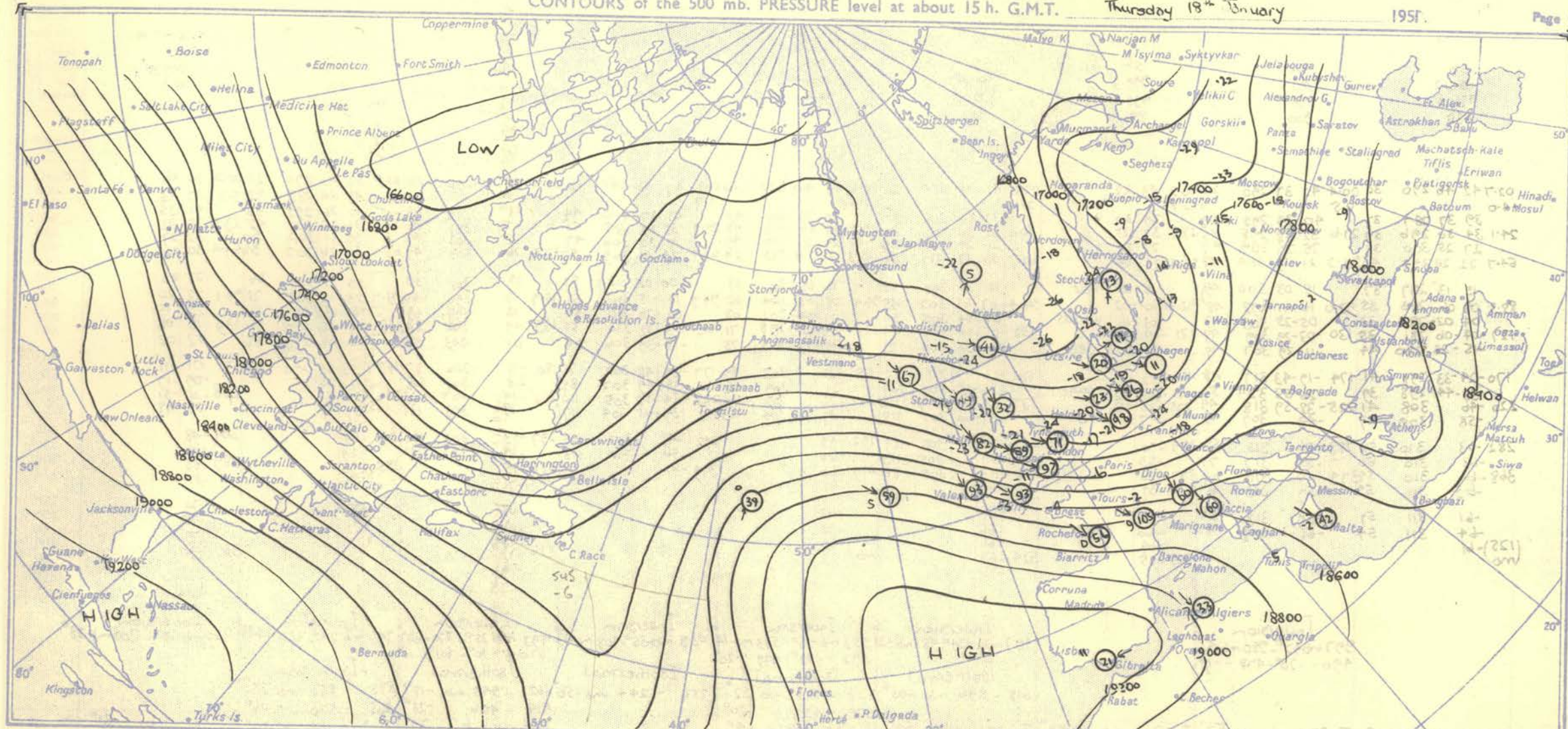
NOTES ON THE AEROLOGICAL SITUATION.



Warm air in the Central Atlantic moved steadily northward and a cold trough reformed over Eastern Europe. In consequence a tight westerly thermal gradient was produced in the Northern Atlantic with a strong northwesterly thermal gradient across Northern Ireland, Wales, Southwest England and France. This strong northwesterly thermal gradient was reinforced by a strong pressure gradient to give very strong winds at high levels from Iceland to France.

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Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



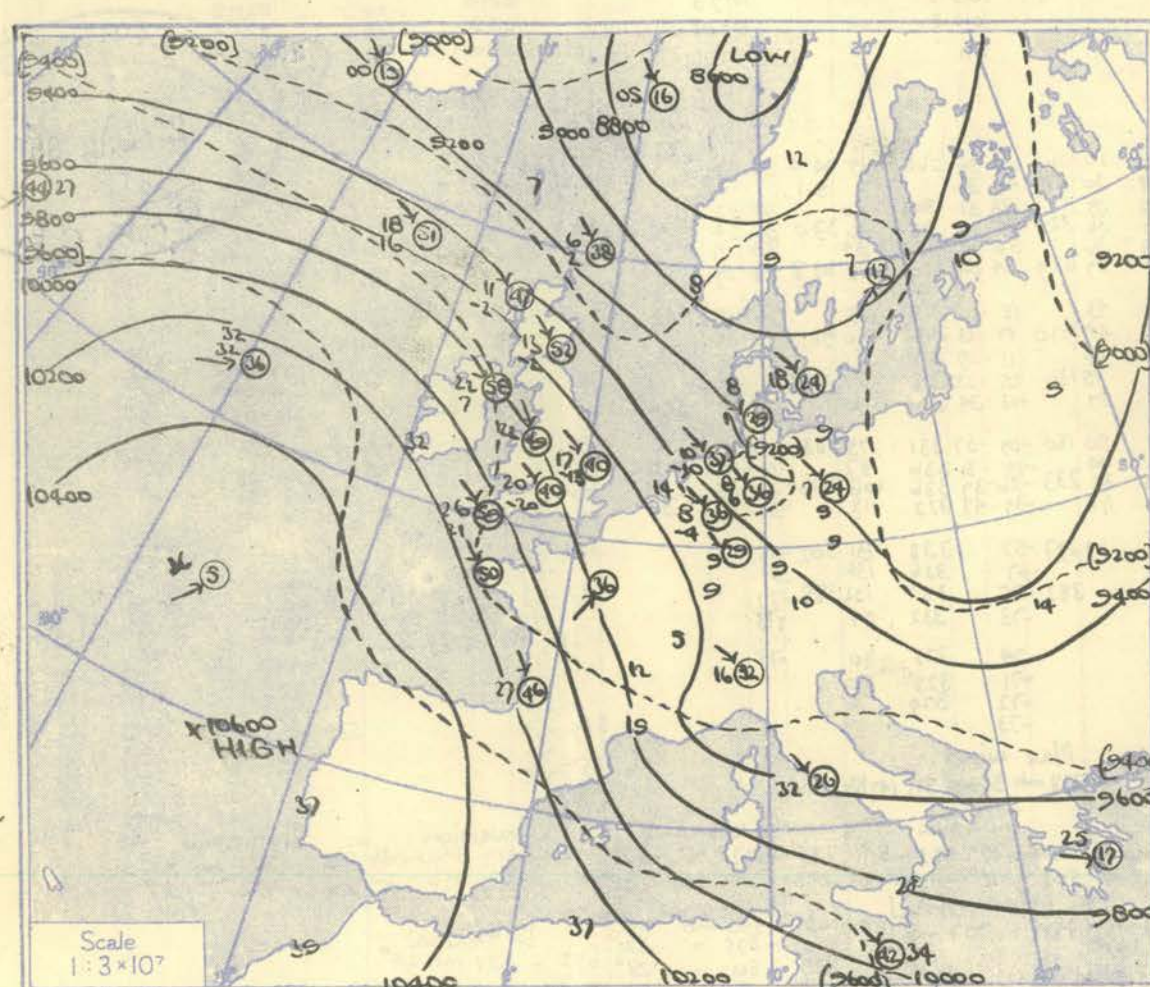
STATION

HMSO Press, MO., Durstahle

Friday 19th January. 1951. Page 1.

U.S. WEATHER BUREAU
SAN FRANCISCO
27 JAN 1951
Wind 1000
Pressure 1000
Surf 1000
Tide 1000

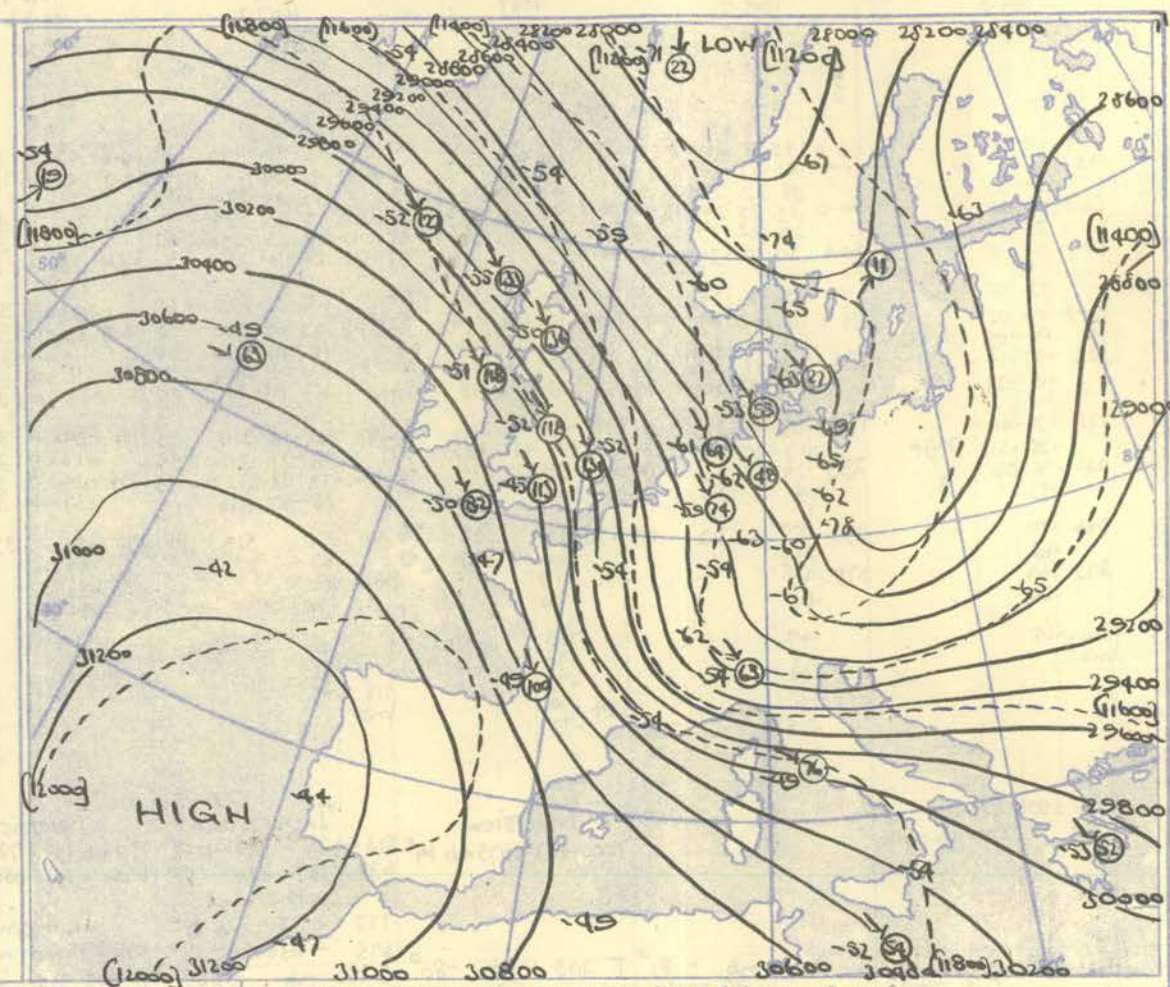
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03h G.M.T.



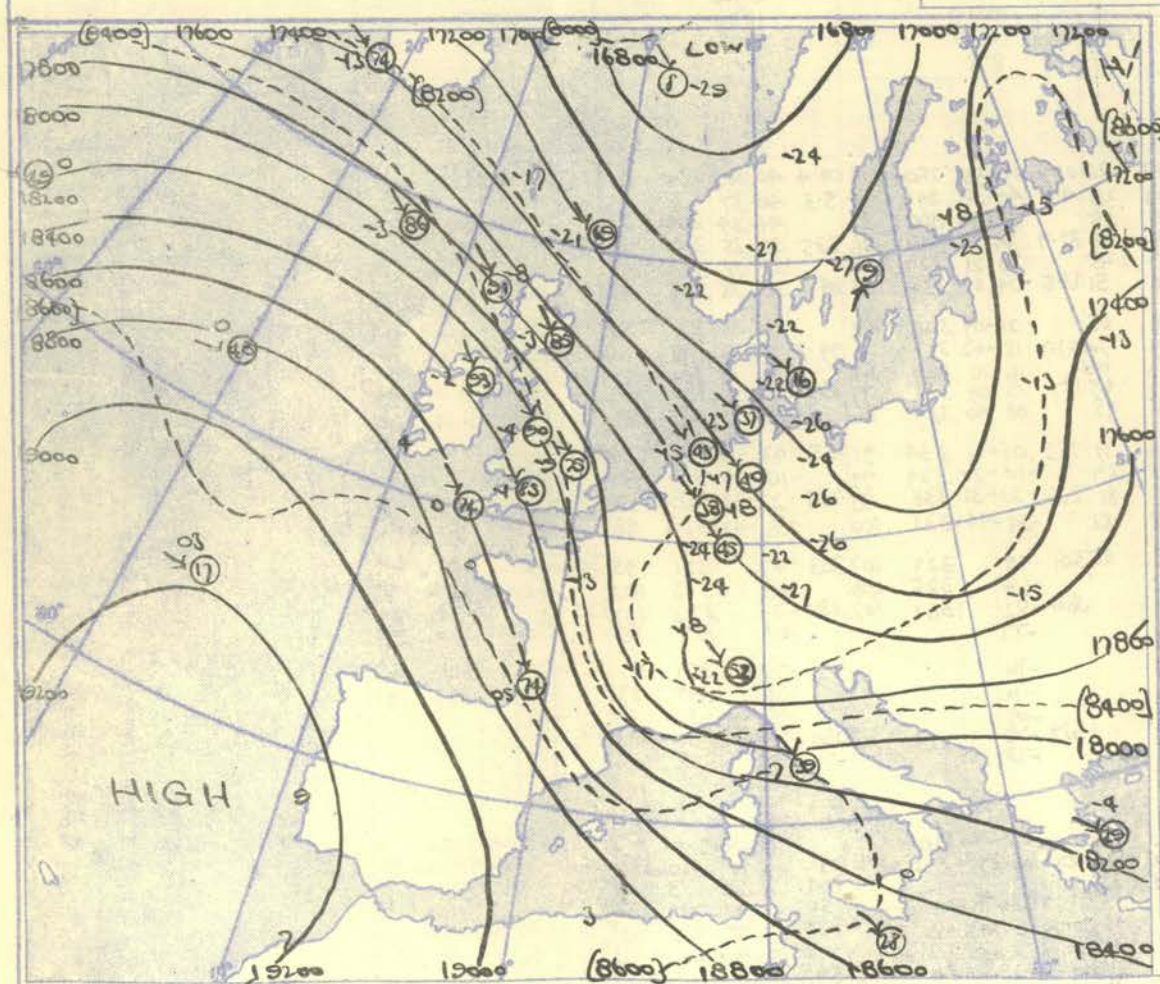
The continuous lines are contour lines of the 700 mb. surface
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

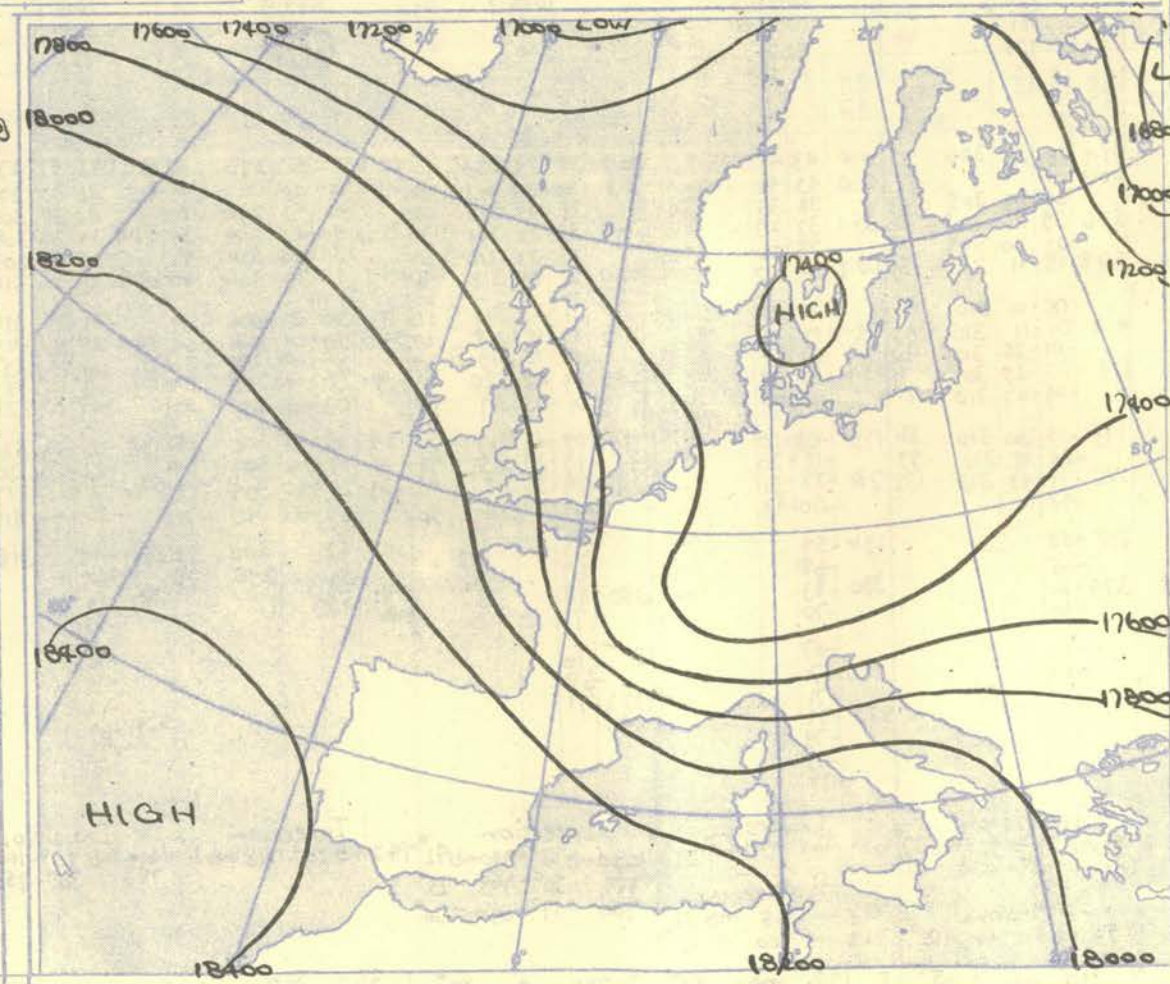
100 60 40 20 10 knots



The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500-300 mb.



The continuous lines are contour lines of the 500 mb. surface
The dotted lines are isopleths of the thickness of the layer 700-500 mb.



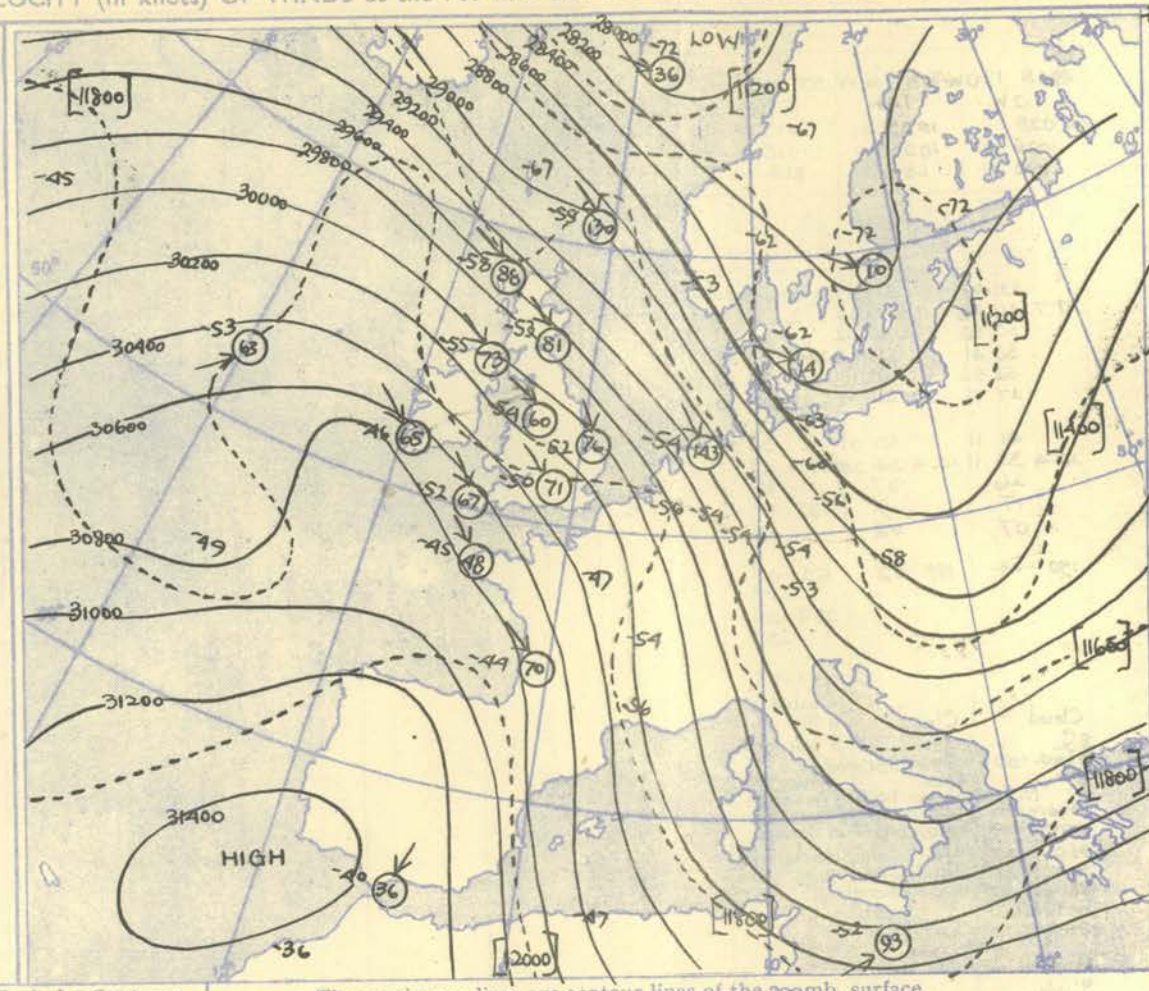
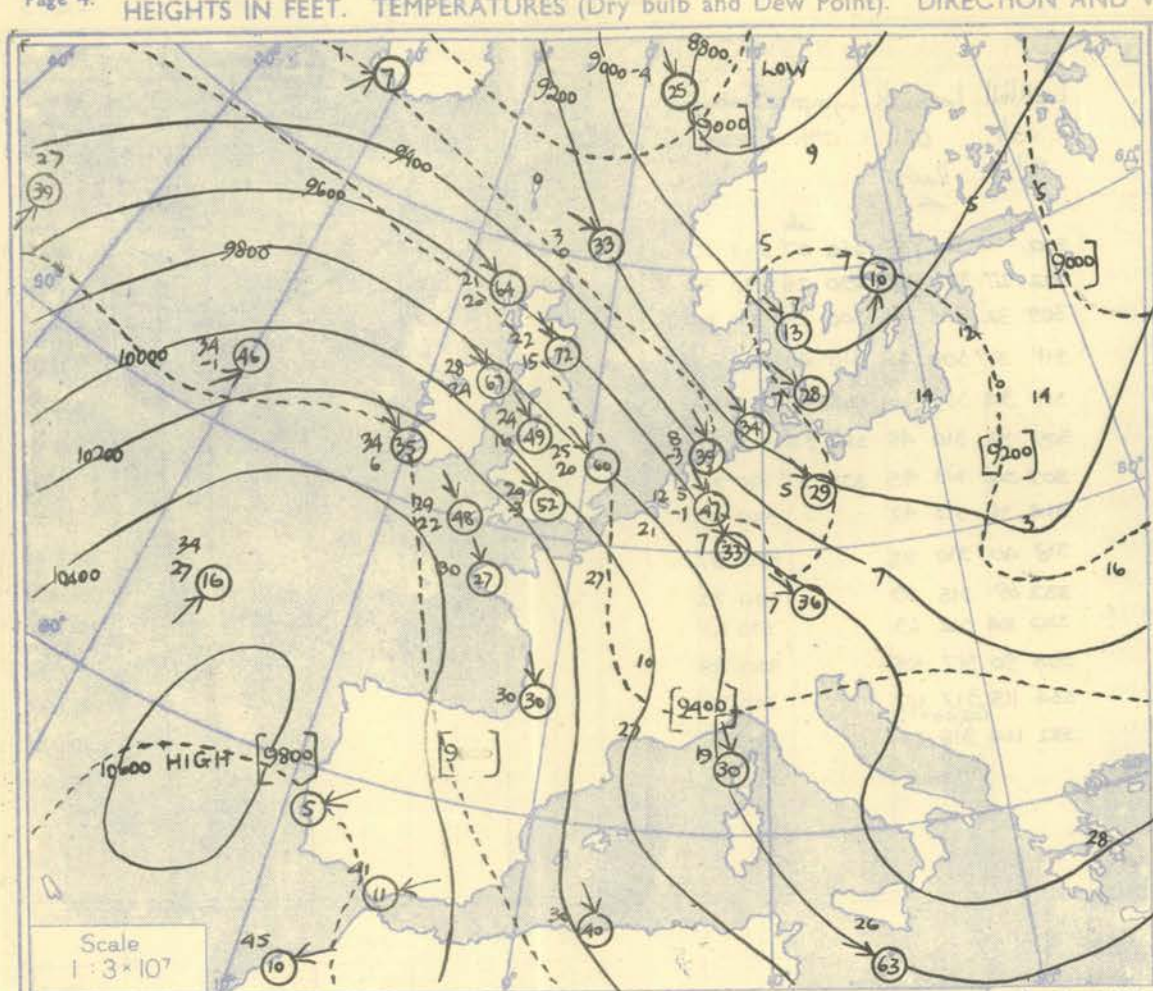
Isopleths of Thickness 500-1000mb.

DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

NEPHOSCOPE OBSERVATIONS

NONE REPORTED

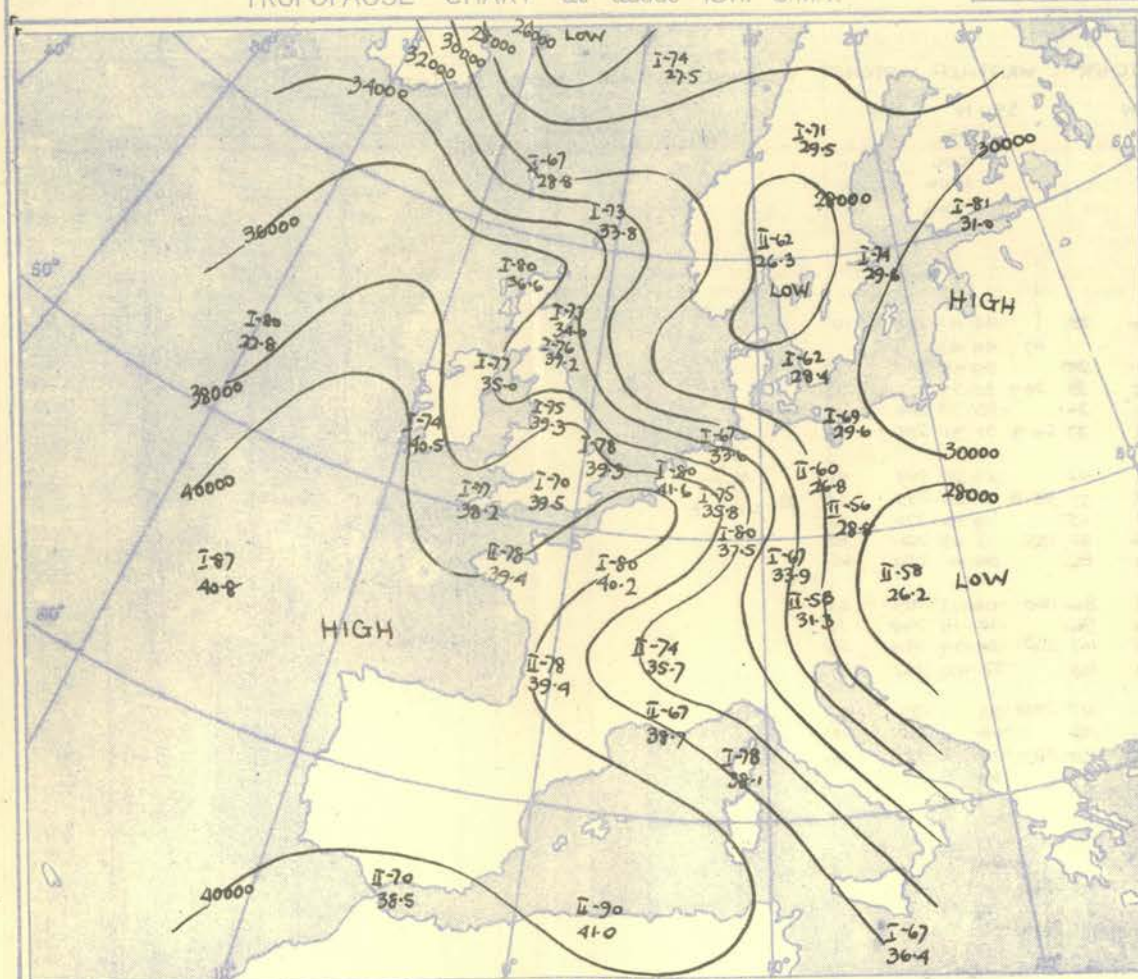
Ship	WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				Ship
Lat/Long	52.3 N 20.1 W.				52.3 N 20.0 W				52.5 N 19.5 W.				52.4 N. 19.4 W.				59.0 N 13.0 W				59.1 N 12.6 W												Lat/Long
Pressure	Time	03h. G.M.T.			09h. G.M.T.			15h. G.M.T.			21h. G.M.T.			03h. G.M.T.			09h. G.M.T.			15h. G.M.T.			21h. G.M.T.			G.M.T.	Time						
	M.S.L.	1024 mb			1023 mb			1022 mb			1019 mb			1006 mb			1006 mb			mb			mb			mb	M.S.L.						
	Surf	1024 mb			1023 mb			1022 mb			1019 mb			1006 mb			1006 mb			mb			mb			mb	Surf						
	Freezing	700 mb			700 mb			675 mb			720 mb			900 mb			830 mb			mb			mb			mb	Freezing						
Pressure	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb				
	Surf	52 52	230	17	50 49	240	18	51 47	208	15	51 49	210	15	46 39	260	25	44 43	270	10										Surf				
1000	65	52 51	228	27	61	47 47	231	19	61 49	210	27	15	45 37			44 43												1000					
950		50 47	241	27		41 41	232	35		43 37	213	27		48 42	222	19												950					
900	35.2	49 41	246	30	34.6	52 34	233	36	34.3	38 33	116	28	33.7	41 40	237	31	29.6	32 28	275	33	29.9	35 34	277	25				900					
850		48 34	249	28		47 24	235	28		49 15	219	32		46 16	244	36		27 24	278	34		33 33	280	26				850					
800	67.2	46 21	249	33	66.4	44 17	237	32	66.0	45 11	224	42	65.4	41 08	245	40	60.3	23 15	273	37	60.9	31 31	286	30				800					
750		40 12	246	35		39 16	235	35		39 04	229	41		37 19	236	48		23 20	276	40		29 28	289	46				750					
700	103	32 22	245	36	102	32 10	234	33	102	34 01	231	46	101	29 20	232	48	94.6	18 16	283	51	95.8	25 23	285	64				700					
650		26 08	242	42		25 05	232	32		27 06	232	32		19 13	230	45		17 15	287	65		19 16	278	68				650					
600	143	18 01	242	46	142	18 02	232	33	141	16 02	232	44	140	10 00	228	49	134	14 12	286	81	135	12 08	280	63				600					
550		08 12	248	49		10 03	233	39		06 11	232	39		01 07	225	46		07 05	289	86		04 01	284	65				550					
500		00 21	251	48	187	00 08	232	47	187	03 21	229	45	185	08 15	218	44	179	03 06	282	86	180	06 12	289	63				500					
450		-08 35	252	55		10 24	234	40		-12 25	226	50		-13 25	224	35		-13 18	280	96		-14 18	294	71				450					
400	242	-21 49	254	59	241	-21 37	234	42	240	-23 34	213	57	237	-31 38	250	41	232	-25 32	285	107	233	-24 29	294	81				400					
350		-35	257	60		-33 43	234	55		-35 47	213	66		-44	230	42		-37 44	289	108		-37 42	287	87				350					
300	307	49	259	63	306	49	234	54	305	53	218	63	301	-60	236	42	297	52	290	127	298	52	283	81				300					
250		-61				-67	235	61		-71	298	63		-63	232	43		-68	282	128		-68	284	82				250					
200	(235 mb)	64			391	-72	235	62	389	-68	214	57	387	-68	264	36	381	-73	290	110	383	-75	281	90				200					
170						-65	235	48		-61	220	36		-66	269	39		-73	295	97		-64						170					
150	Isothermal					-61	235	50		-71	222	30		-66	272	39		-67				-63							150				
130	1024 - 1000 mb 52°					-68	236	45		-67	220	30		-73	275	33		-68				-67							130				
110	Inversion					-73	238	45		-72	220	33		-79	287	35		-74				-69							110				
90	918 mb 16° - 890 mb 51°				536	-74	239	27	535	-75	220	27	530	-81	293	34	525	-75				528	-70						90				
80	823 - 46° - 815 - 47°					-78	237	26		-77	220	21		-81	299	27		-75				(83 mb)	-71						80				
70	Inversion					-80	238	30		-77	236	18		-81				-75											70				
60	944 mb 40° - 900 mb 52°					-76				-76								-75											60				
	Inversion																																
	886 mb 37° - 858 mb 49°																																
	Isothermal																																
	858 - 850 mb 49°																																
	700 - 686 - 34°																																
	Inversion																																
	991 mb 49° - 969 mb 60°																																
	887 - 39° - 862 - 47°																																
	Isothermal																																
	813 mb 22° - 764 mb 24°																																
	670 - 15° - 630 - 18°																																
	1006 - 1000 mb 44°																																
	900 - 865 - 35°																																
	826 - 800 - 31°																																
Tropopause	N.R.				I 224 mb - 72° 36,800'				I 228 mb - 80° 34,200'				II 279 mb - 64° 31,600'				I 192 mb - 80° 39,000'				I 200 mb - 75° 38,300'								Tropopause				



Gradient Wind Scale for Contours at intervals of 200 ft. at Lat. 52° N.

100	60	40	20	15	10	knots
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TROPOPAUSE CHART at about 15h. G.M.T.

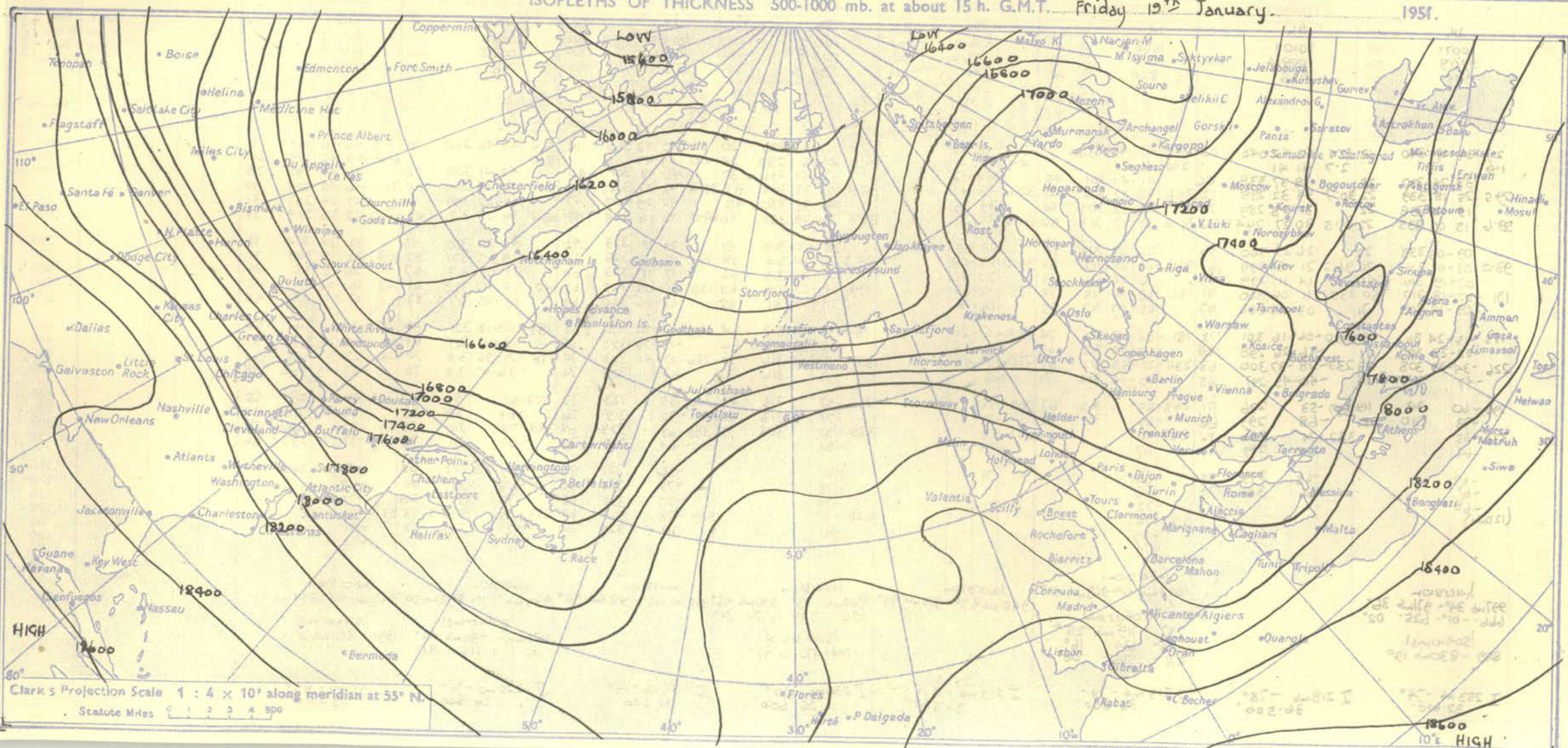
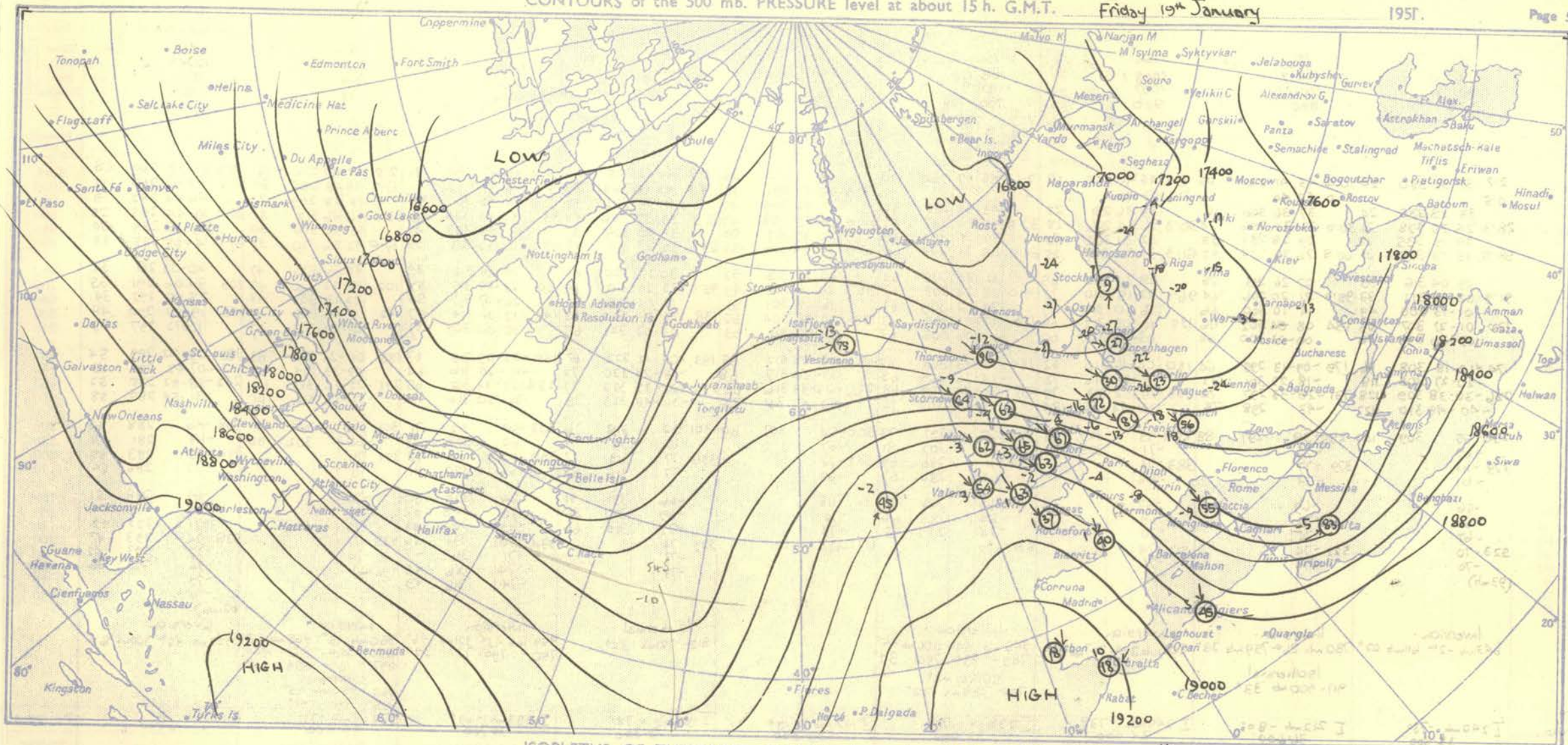


NOTES ON THE AEROLOGICAL SITUATION.

Broadly the thermal pattern of 18th January was maintained and moved about four hundred miles east during the period. There was further intensification of the tight thermal gradient by advection of colder air down the Norwegian Sea. A minor cold trough formed to the west of station JIG apparently by convection.

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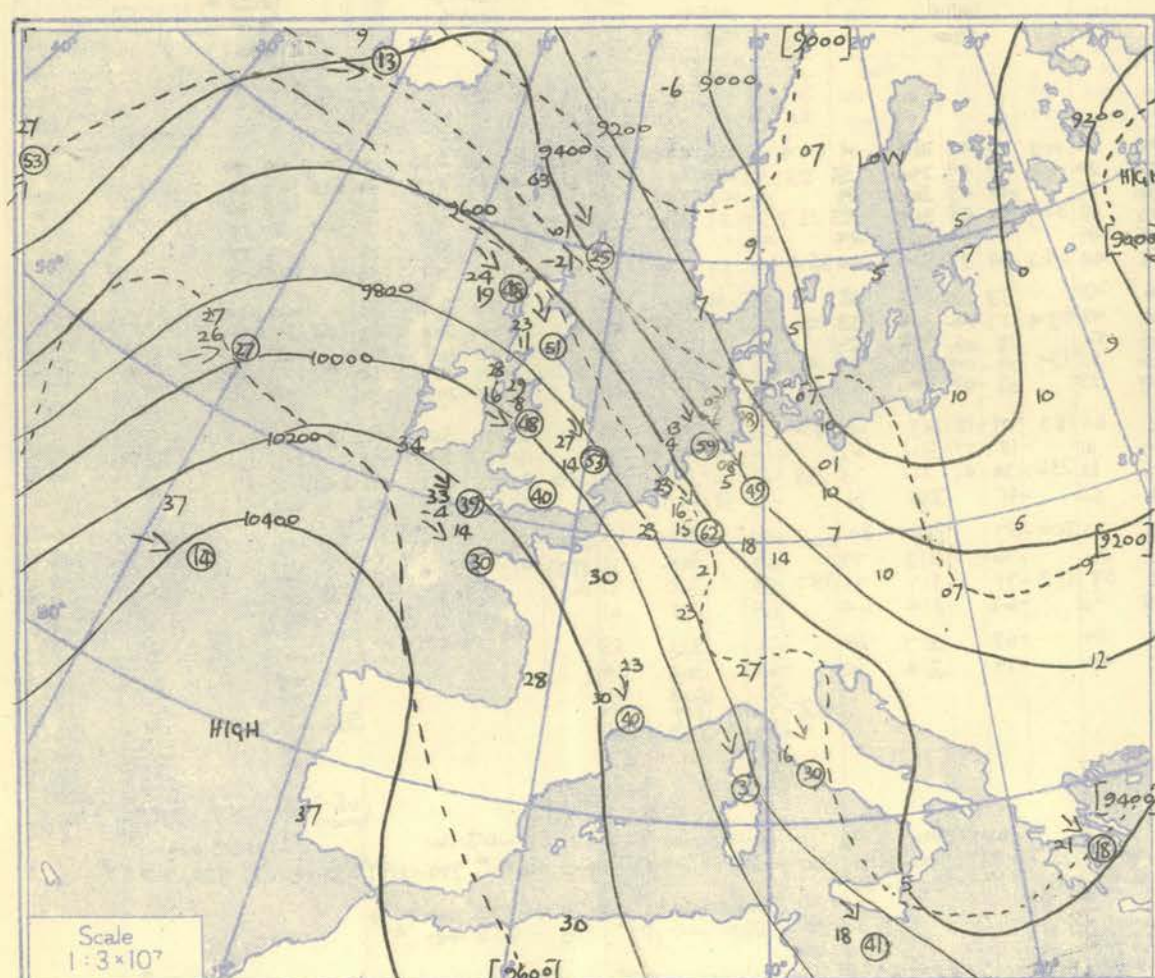
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION									
Pressure (Freezing)	Time	ISL	G.M.T.		Time	ISL	G.M.T.		Time	ISL	G.M.T.		Time	ISL	G.M.T.		Time	ISL	G.M.T.		Time	ISL	G.M.T.		Time	ISL	G.M.T.		Time	ISL	G.M.T.		Time													
	M.S.L.	1002.0	mb		1007.9	mb		1008.1	mb	1005.0	mb		1014.3	mb		1016.1	mb	1019.0	mb		1025.1	mb		1024.5	mb		1023	mb		1024.5	mb		M.S.L.													
	Surf	991.9	mb		1006.2	mb		1007	mb	1005.9	mb		1012.3	mb		1011.7	mb	1002.8	mb		1014.3	mb		1023	mb		1023	mb		1024.5	mb		Surf													
Pressure	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Pressure													
mb	ft/100	°F.	°F.	Dir. Vel. knots	ft/100	°F.	°F.	Dir. Vel. knots	ft/100	°F.	°F.	Dir. Vel. knots	ft/100	°F.	°F.	Dir. Vel. knots	ft/100	°F.	°F.	Dir. Vel. knots	ft/100	°F.	°F.	Dir. Vel. knots	ft/100	°F.	°F.	Dir. Vel. knots	ft/100	°F.	°F.	Dir. Vel. knots	mb													
Surf	2.7	37	32	330	20	0.4	43	41	270	05	0.2	43	40	250	10	2.6	48	47	260	20	0.6	48	47	270	25	1.2	44	42	225	13	4.4	48	47	290	12	2.9	49	49	270	12	0.3	50	48	260	08	Surf
1000	0.5					2.0	42	40			2.2	43	40			4.0					3.9	48	47	281	36	4.3	43	40	268	33	5.1	48	47		6.8	48	48	284	30	6.6	49	47	266	12	1000	
950		33	28	335	24		37	36	300	16		39	36	281	22		45	42	283	37		47	46	299	47		41	39	286	32		44	42	300	35		48	48	299	30		46	44	282	19	950
900	28.3	28	25	328	24	30.0	33	32	286	24	30.3	36	34	296	28	32.5	45	34	297	42	32.4	44	43	308	47	32.5	39	37	306	44	33.6	45	43	306	41	35.4	46	46	312	30	35.2	46	45	285	25	900
850		24	19	335	28		29	28	281	35		32	31	302	45		39	31	301	48		40	39	312	50		34	30	309	37		41	39	305	43		40	37	314	30		45	38	285	30	850
800	58.5	15	13	320	31	60.8	26	25	293	42	61.3	31	30	307	55	64.0	35	31	294	60	63.9	35	34	316	53	63.7	32	27	317	49	65.1	35	32	303	38	67.0	42	26	320	39	67.0	44	05	285	33	800
750		09	04	316	35		27	26	295	58		28	24	310	65		32	30	295	63		30	26	318	52		30	25	320	60		29	24	312	39		38	26	320	47		40	02	287	34	750
700	91.9	03	00	312	33	95.3	21	20	296	64	96.1	22	19	310	72	99.0	28	24	303	67	98.7	24	16	309	49	95.5	25	20	319	60	100	29	03	317	52	102	29	22	320	48	103	34	06	291	35	700
650		01	13	308	49		14	10	300	66		16	10	312	67		16	09	301	51		16	09	301	51		19	14	318	60		20	07	317	50		22	13	320	48		28	05	292	34	650
600	130	01	27	307	63	134	08	04	302	66	135	10	05	312	68	139	17	01	309	65	138	12	07	322	65	140	12	07	322	65	140	12	07	322	65	142	11	06	315	57	143	19	01	290	48	600
550		03	20	309	76		08	03	300	68		03	05	307	60		09	06	305	63		04	02	311	63		04	03	321	67		05	00	309	57		08	07	317	57		11	12	297	53	550
500	174	12	18	308	96	179	09	13	295	64	180	04	16	310	62	184	03	15	303	62	183	03	08	312	65	183	04	12	322	67	185	02	09	315	63	188	01	24	319	63	188	03	22	299	54	500
450		20	27	308	118		18	22	301	72		15	21	316	72		14	26	304	68		13	20	317	68		14	24	320	72		11	20	316	64		09	33	314	65		07	42	293	45	450
400	226	30	38	309	128	231	28	33	297	70	233	25	32	313	79	237	25	40	308	68	236	25	33	316	64	236	23	35	322	77	238	22	34	315	65	241	22	42	313	68	242	18	52	285	52	400
350		40	48	310	122		43		298	78		38	43	306	84		40	47	311	74		40	47	311	72		36	48	323	78		36	50	316	70		35	53	314	61		31	54	285	58	350
300	290	55		309	130	295	58		297	88	298	53		309	81	302	55		297	73	300	54		307	60	301	52		318	76	303	50		32	71	306	52	312	67	308	46	288	65	300		
250		69					74					71		305	82		73		302	81		67					39	71		308	73		64		308	73		66		302	90		63	281	71	250
200	329	63				379	77				383	73				386	71		296	69		74					319	77		389	69		314	78		69		314	78		71	283	65	200		
170		61					73					68					65		286	67		69					316	88			88		66		320	91		71		286	54	170				
150		56					69					67					67		288	72		68						331	91			91		64		325	80		74			288	51	150		
130		61					74					70					74		288	66		74						327	80			66		70		328	62		78			291	54	130		
110		67					74					70					74		289	78		74						315	66			66		69		332	65		79			293	49	110		
100	523	70				522	74				527	74				531	72											34	70			70		71		334	66	533	77		76			293	47	100
90		70					74					76					76												31	47			76		331	47		76			293	42	90			
80	(93mb)						74					76					76												316	45			74		316	45		74			293	36	80			
70																																												70		
60																																												60		
Inversion 643mb -24° 611mb 02°				Inversion 780mb 26° 759mb 28°				Inversion 808mb 32° 787mb 33°				Inversion 948mb 44° 900mb 45° 789 -33° 780 -31°				Isothermal 750-738mb 32°				Isothermal 812-781mb 32°				Inversion 959mb 43° 921mb 46° 750 -29° 728° 32°				Inversion 980mb 45° 965mb 48° 850° 40° 816° 44° 597° 10° 585° 11°				Inversion 922mb 45° 900mb 46°														
Isothermal 917-900mb 33°																																														

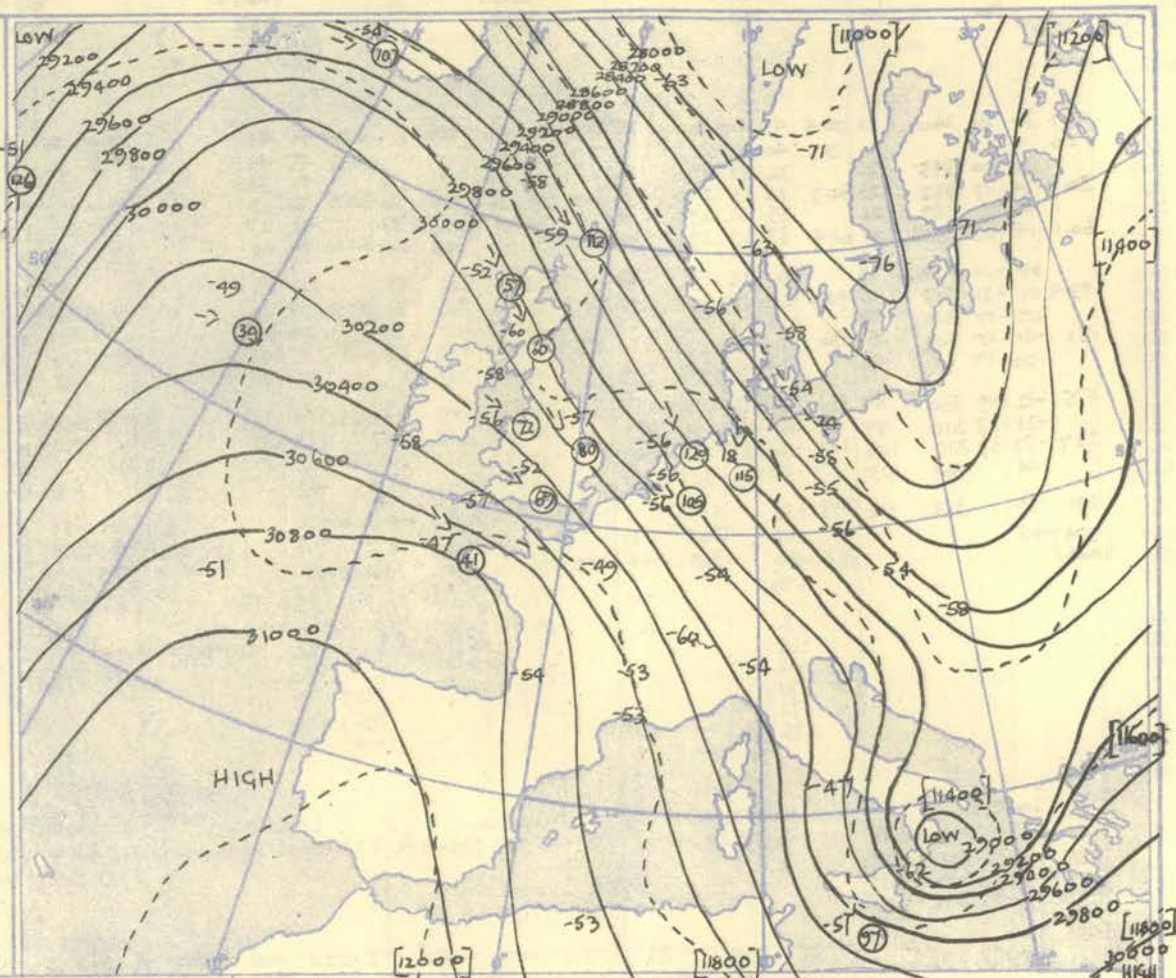
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



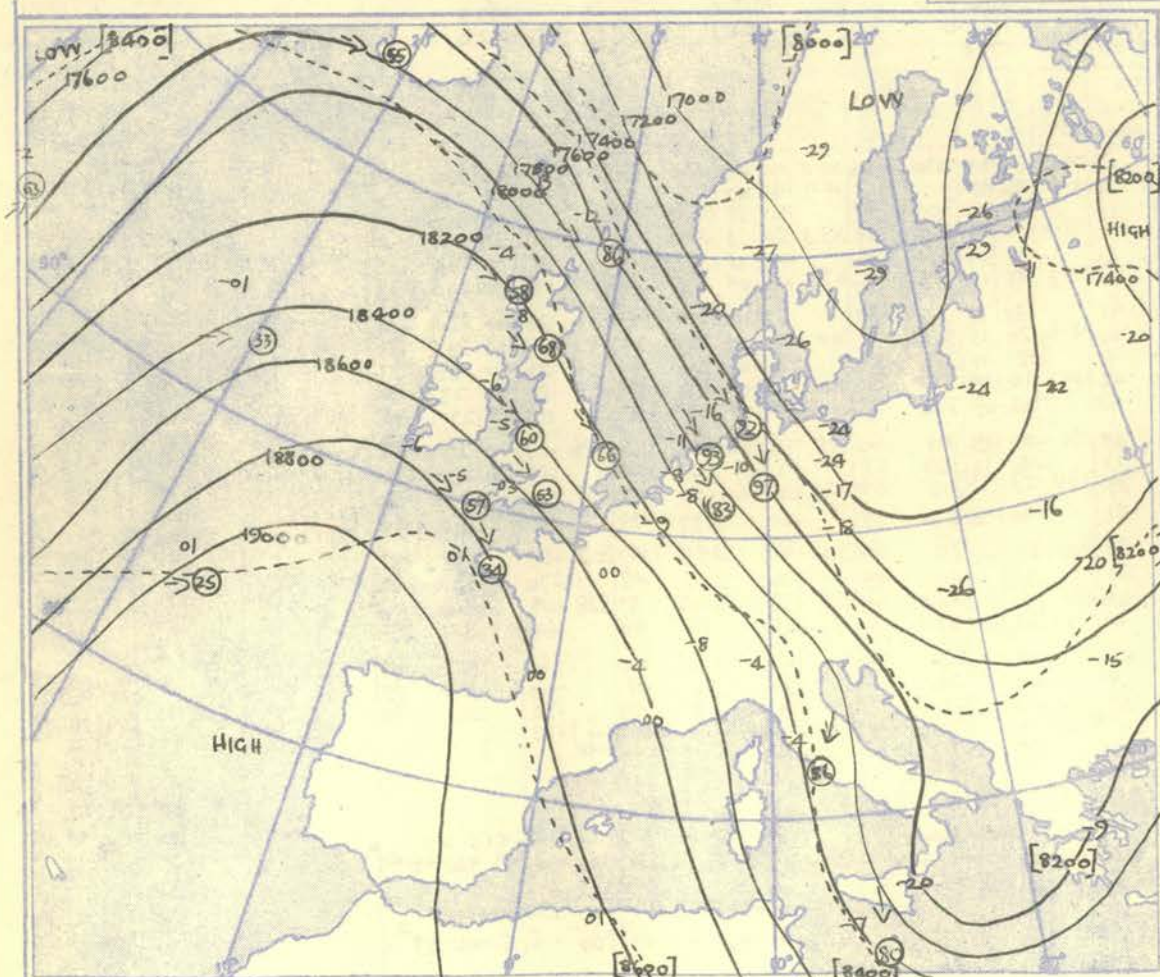
The continuous lines are contour lines of the 700 mb. surface
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. $52\frac{1}{2}^\circ$ N.

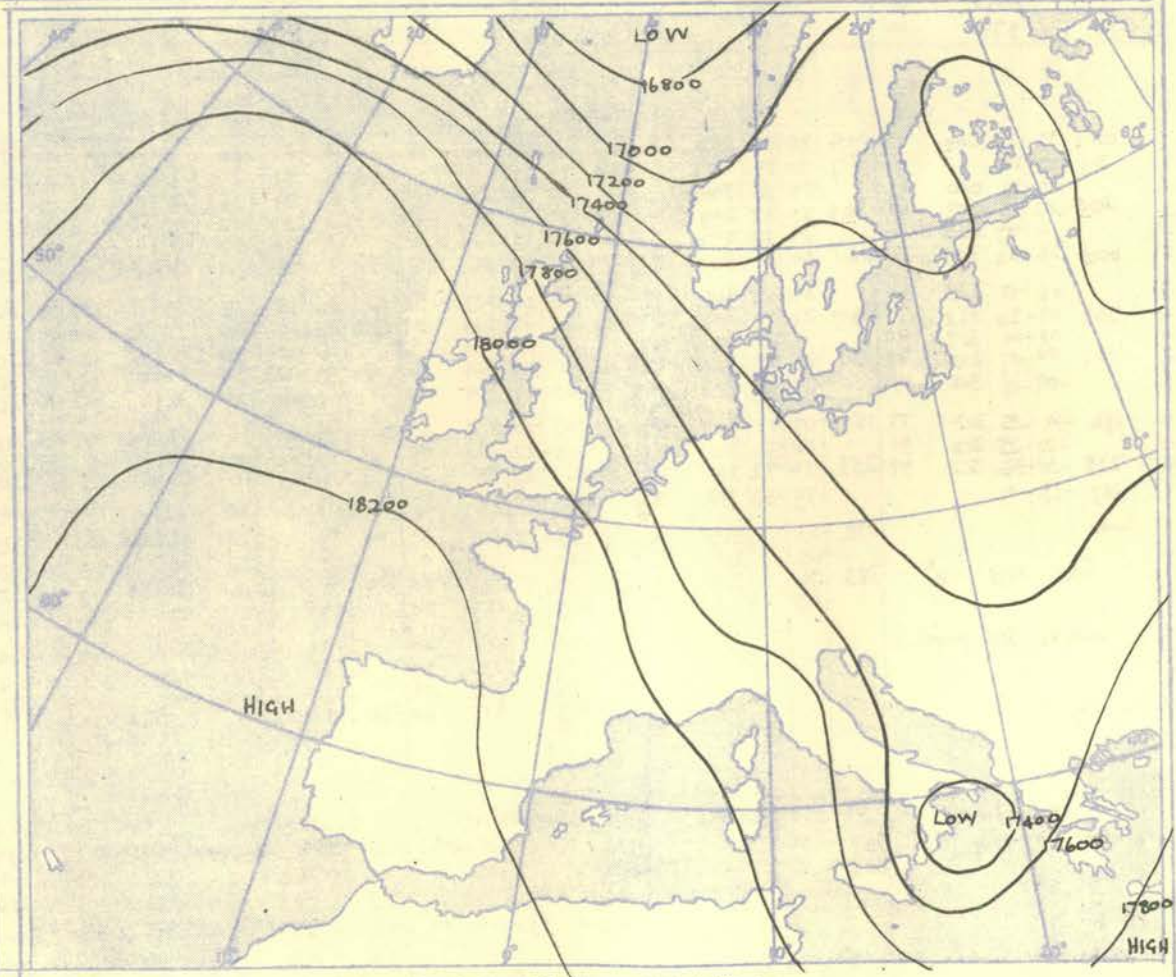
100 80 60 40 20 10 knots



The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500-300 mb.



The continuous lines are contour lines of the 500 mb. surface
The dotted lines are isopleths of the thickness of the layer 700-500 mb.



Isopleths of Thickness 500-1000mb.

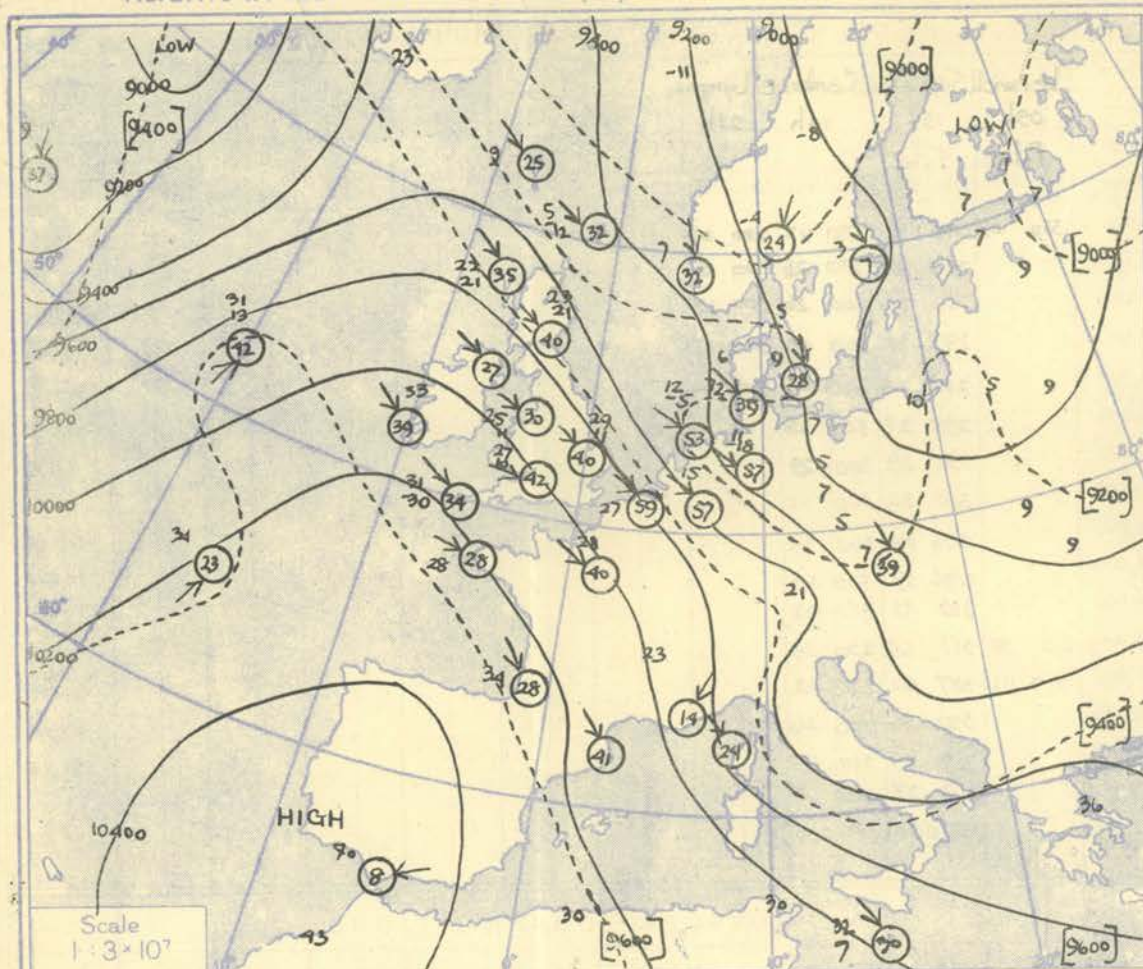
Figure 18

DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

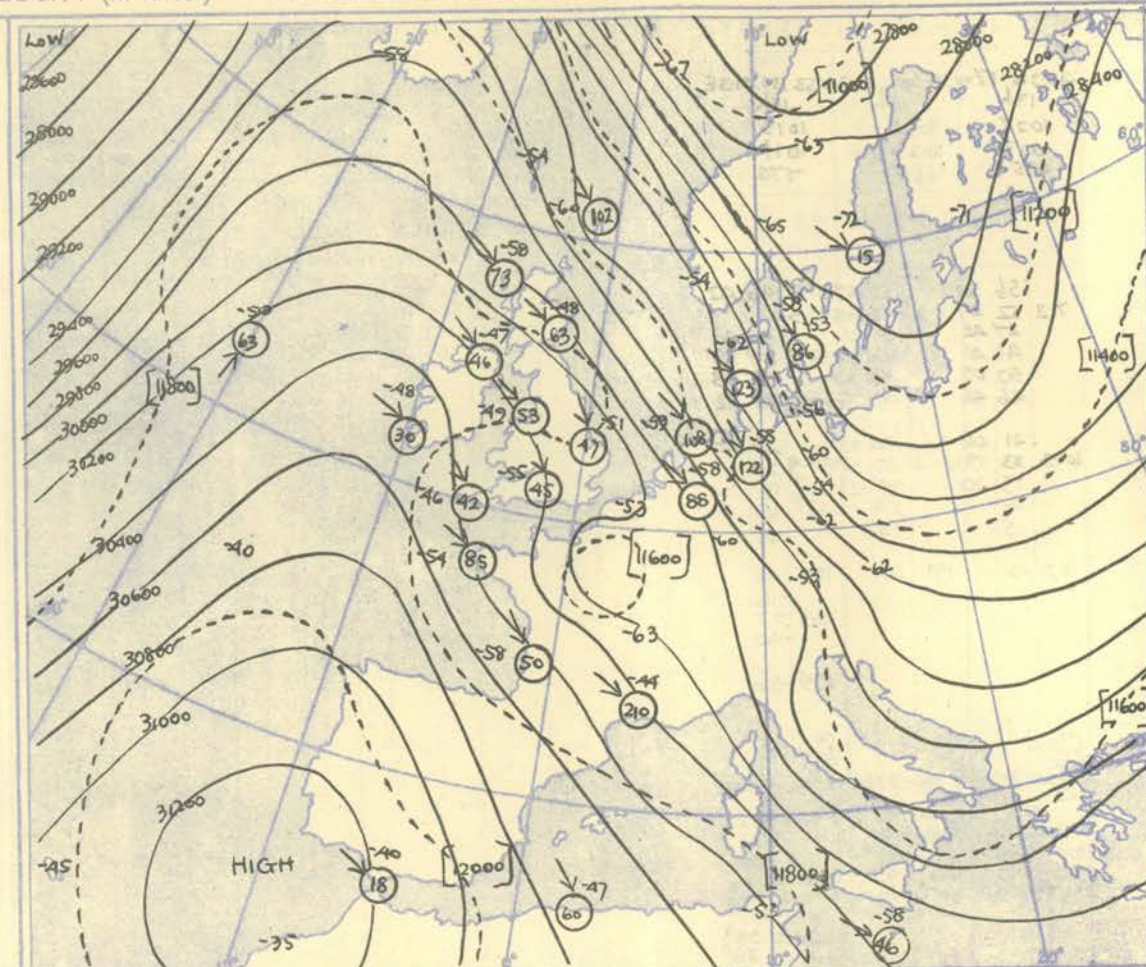
NEPHOSCOPE · OBSERVATIONS

NEPHOSCOPE · OBSERVATIONS

[illegible]



The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

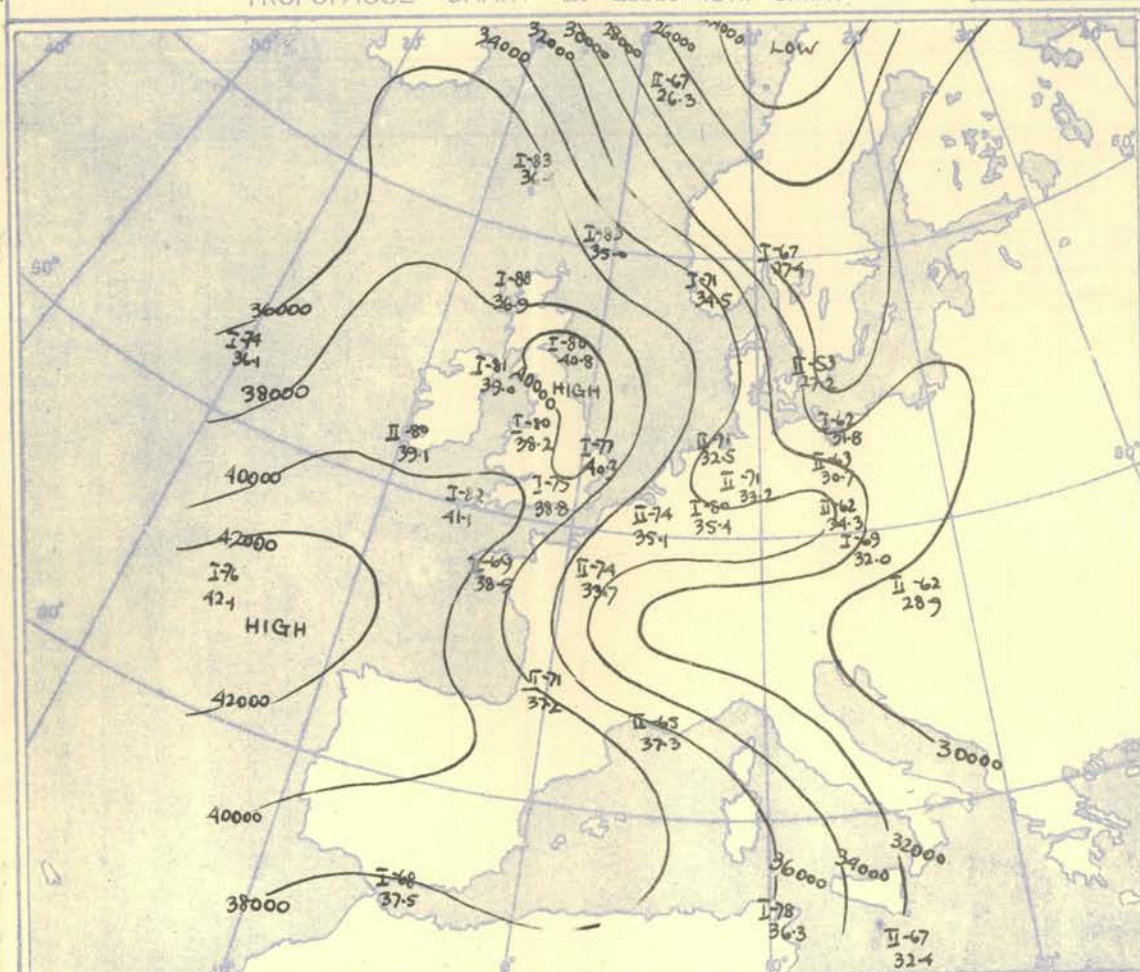


Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 20 10 0 knots

The continuous lines are contour lines of the 300 mb. surface.
The dotted lines are isopleths of the thickness of the layer 500-300 mb.

TROPOPAUSE CHART at about 15h. G.M.T.



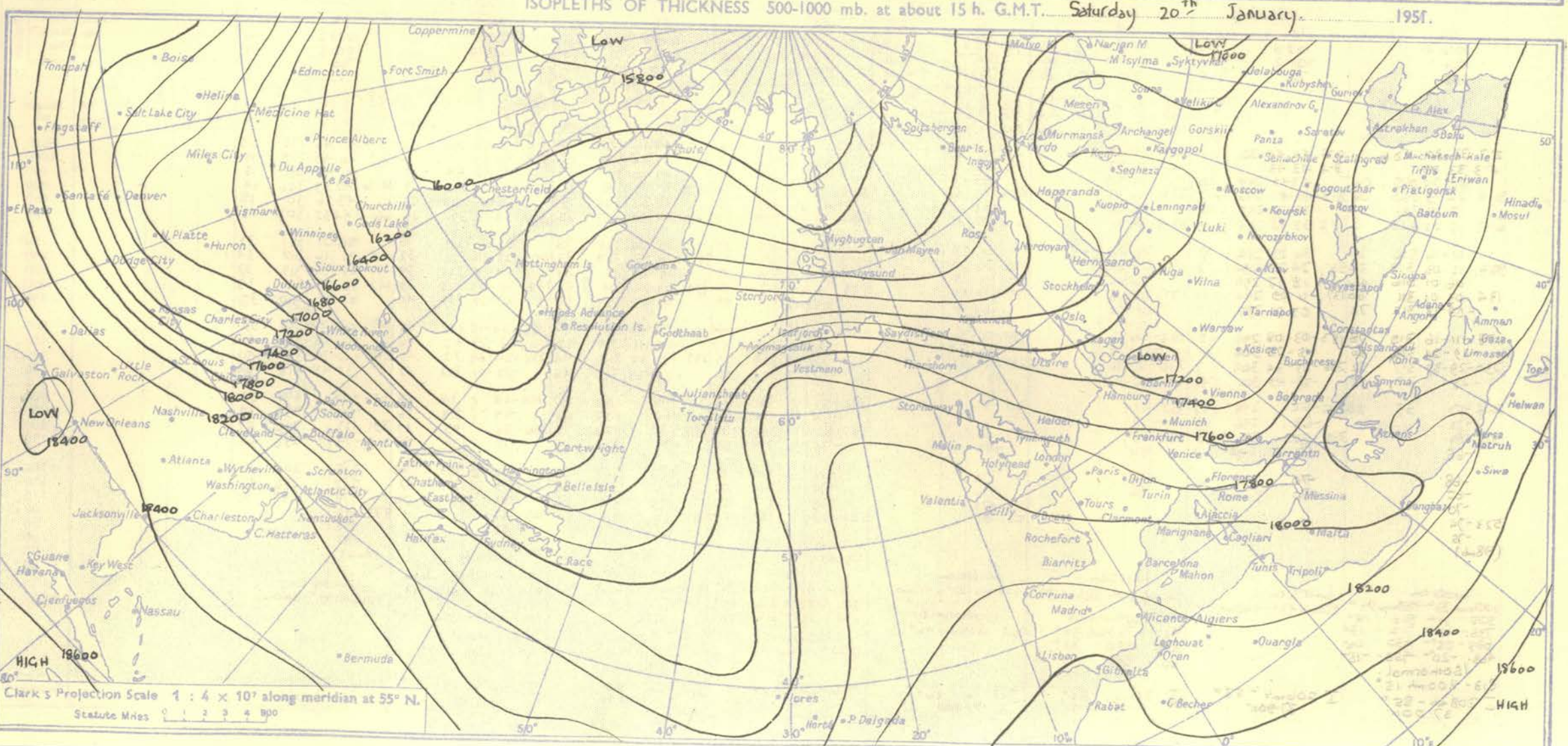
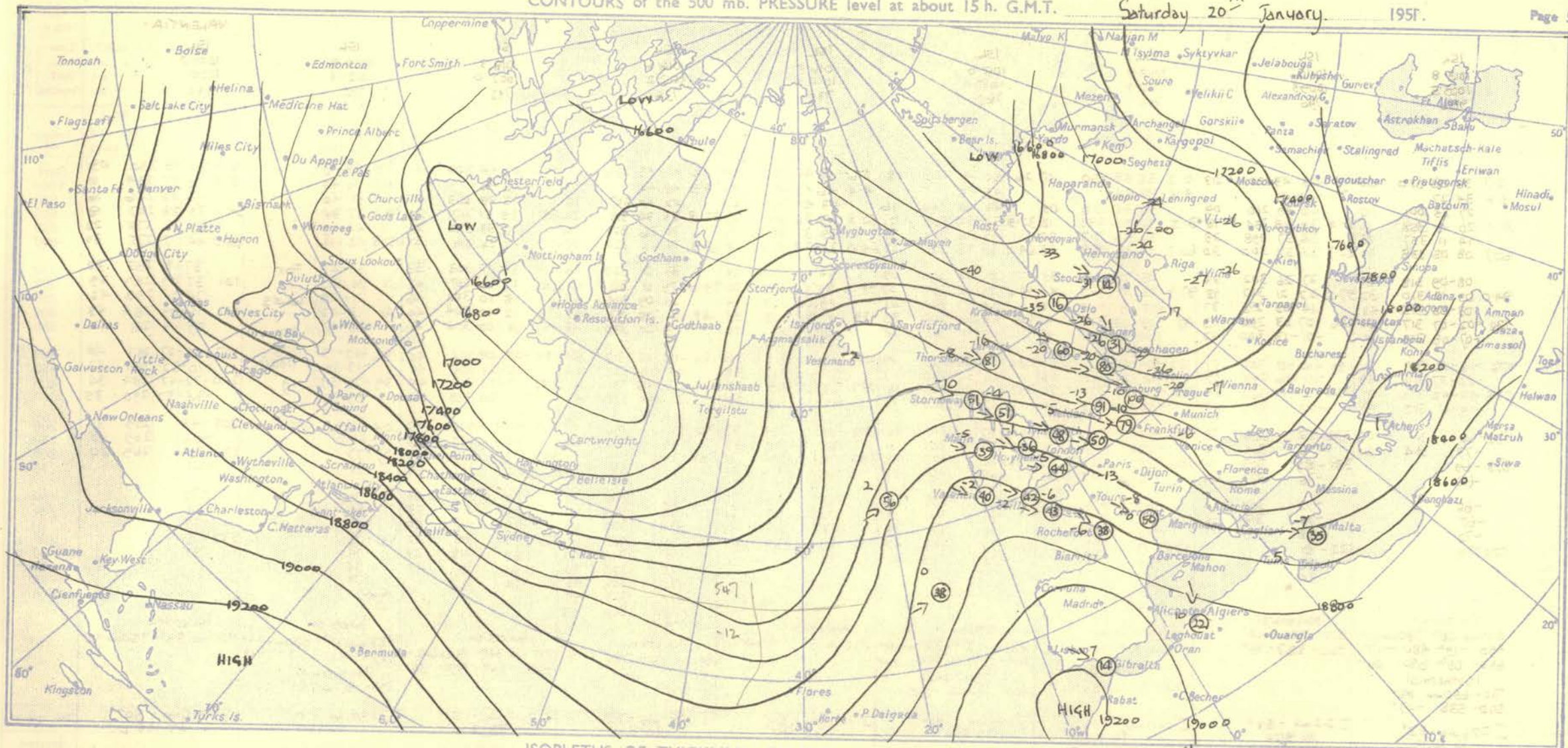
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

A cold trough over Eastern Europe showed little change. The thermal ridge in the Atlantic moved slowly west and cooled a little in its central values. The strong thermal gradient from Iceland to Shetland to Germany was maintained. A cold trough formed on the Western Atlantic.

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Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.

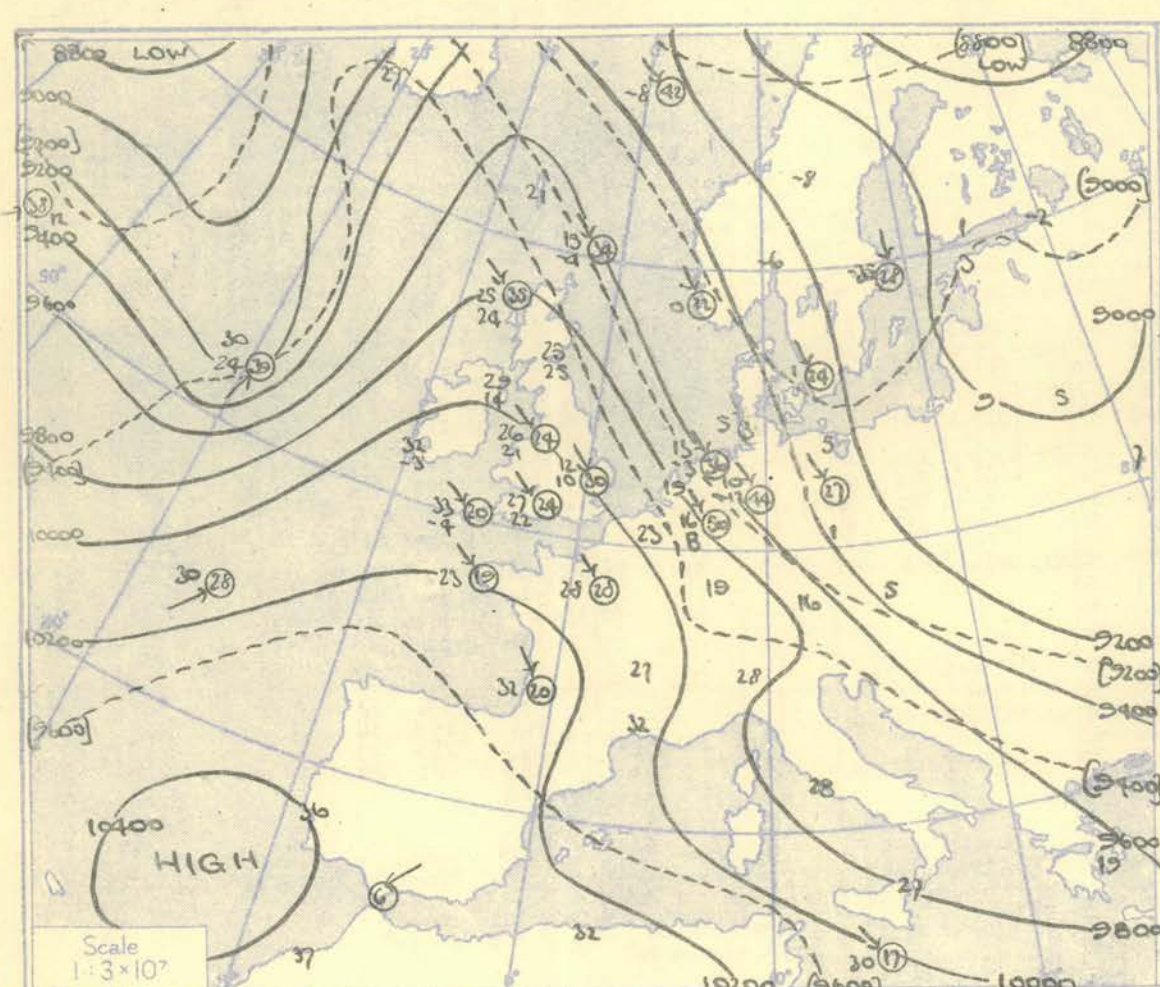


HMSO Press, MO, Downloadable

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION																																																																																																													
LERWICK										STORNOWAY										LEUCHARS										ALDERGROVE										LIVERPOOL										DOWNHAM MARKET										LARKHILL										CAMBORNE										VALENTIA										STATION																			
03h G.M.T. mb mb mb 1017.7 1007.3 960										03h G.M.T. mb mb mb 1011.8 1010.2 755										03h G.M.T. mb mb mb 1015.5 1001 790										03h G.M.T. mb mb mb 1017.7 1007.9 730										03h G.M.T. mb mb mb 1018.7 1016.7 745										03h G.M.T. mb mb mb 1020.6 1016.2 772										03h G.M.T. mb mb mb 1021.1 1004.8 740										03h G.M.T. mb mb mb 1023.5 1012.8 695										03h G.M.T. mb mb mb 1017.9 1017 700										03h G.M.T. mb mb mb 1017.9 1017 700										03h G.M.T. mb mb mb 1017.9 1017 700									
Pressure mb Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots										Pressure mb Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots										Pressure mb Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots										Pressure mb Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots										Pressure mb Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots										Pressure mb Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots										Pressure mb Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots										Pressure mb Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots										Pressure mb Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots										Pressure mb Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots																			
Surf 1000 950 900 850 800 750 700 650 600 550 500 450 400 350 300 250 200 170 150 130 110 100 90 80 70 60										Surf 1000 950 900 850 800 750 700 650 600 550 500 450 400 350 300 250 200 170 150 130 110 100 90 80 70 60										Surf 1000 950 900 850 800 750 700 650 600 550 500 450 400 350 300 250 200 170 150 130 110 100 90 80 70 60										Surf 1000 950 900 850 800 750 700 650 600 550 500 450 400 350 300 250 200 170 150 130 110 100 90 80 70 60										Surf 1000 950 900 850 800 750 700 650 600 550 500 450 400 350 300 250 200 170 150 130 110 100 90 80 70 60										Surf 1000 950 900 850 800 750 700 650 600 550 500 450 400 350 300 250 200 170 150 130 110 100 90 80 70 60										Surf 1000 950 900 850 800 750 700 650 600 550 500 450 400 350 300 250 200 170 150 130 110 100 90 80 70 60										Surf 1000 950 900 850 800 750 700 650 600 550 500 450 400 350 300 250 200 170 150 130 110 100 90 80 70 60																																							
Inversion 1007 mb 30° - 995 mb 36° 971 - 928 mb 44° 828 - 140° - 710 - 16° 875 - 850 - 41° Isothermal 950 mb 38° - 900 mb 40° Isothermal 1015 - 950 mb 38°										Inversion 1007 mb 30° - 995 mb 36° 971 - 928 mb 44° 828 - 140° - 710 - 16° 875 - 850 - 41° Isothermal 950 mb 38° - 900 mb 40° Isothermal 1015 - 950 mb 38°										Inversion 1007 mb 30° - 995 mb 36° 971 - 928 mb 44° 828 - 140° - 710 - 16° 875 - 850 - 41° Isothermal 950 mb 38° - 900 mb 40° Isothermal 1015 - 950 mb 38°										Inversion 1007 mb 30° - 995 mb 36° 971 - 928 mb 44° 828 - 140° - 710 - 16° 875 - 850 - 41° Isothermal 950 mb 38° - 900 mb 40° Isothermal 1015 - 950 mb 38°										Inversion 1007 mb 30° - 995 mb 36° 971 - 928 mb 44° 828 - 140° - 710 - 16° 875 - 850 - 41° Isothermal 950 mb 38° - 900 mb 40° Isothermal 1015 - 950 mb 38°										Inversion 1007 mb 30° - 995 mb 36° 971 - 928 mb 44° 828 - 140° - 710 - 16° 875 - 850 - 41° Isothermal 950 mb 38° - 900 mb 40° Isothermal 1015 - 950 mb 38°										Inversion 1007 mb 30° - 995 mb 36° 971 - 928 mb 44° 828 - 140° - 710 - 16° 875 - 850 - 41° Isothermal 950 mb 38° - 900 mb 40° Isothermal 1015 - 950 mb 38°										Inversion 1007 mb 30° - 995 mb 36° 971 - 928 mb 44° 828 - 140° - 710 - 16° 875 - 850 - 41° Isothermal 950 mb 38° - 900 mb 40° Isothermal 1015 - 950 mb 38°										Inversion 1007 mb 30° - 995 mb 36° 971 - 928 mb 44° 828 - 140° - 710 - 16° 875 - 850 - 41° Isothermal 950 mb 38° - 900 mb 40° Isothermal 1015 - 950 mb 38°																													
Tropopause I 191 mb - 91°										Tropopause I 177 mb - 87°										Tropopause I 190 mb - 81°										Tropopause I 200 mb - 84°										Tropopause II 195 mb - 82°										Tropopause NR.										Tropopause NR.										Tropopause I 226 mb - 78°										Tropopause II 211 mb - 73°										Tropopause																			
STATION LERWICK										STATION STORNOWAY										STATION LEUCHARS										STATION ALDERGROVE										STATION LIVERPOOL										STATION DOWNHAM MARKET										STATION LARKHILL										STATION CAMBORNE										STATION VALENTIA										STATION																			
09h G.M.T. mb mb mb 1016.9 1006.6 954										09h G.M.T. mb mb mb 1011.2 1009.5 734										09h G.M.T. mb mb mb 1014.8 1001 760										09h G.M.T. mb mb mb 1016.3 1007.0 707										09h G.M.T. mb mb mb 1018.6 1016.6 725										09h G.M.T. mb mb mb 1021.1 1016.7 768										09h G.M.T. mb mb mb 1021.8 1005.5 722										09h G.M.T. mb mb mb 1023.0 1012.2 708										09h G.M.T. mb mb mb 1017.9 1017 700										09h G.M.T. mb mb mb 1017.9 1017 700										09h G.M.T. mb mb mb 1017.9 1017 700									
Pressure mb Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots										Pressure mb Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots										Pressure mb Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots										Pressure mb Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots										Pressure mb Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots										Pressure mb Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots										Pressure mb Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots										Pressure mb Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots										Pressure mb Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots										Pressure mb Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots																			
Surf 1000 950 900 850 800 750 700 650 600 550 500 450 400 350 300 250 200 170 150 130 110 100 90 80 70 60										Surf 1000 950 900 850 800 750 700 650 600 550 500 450 400 350 300 250 200 170 150 130 110 100 90 80 70 60										Surf 1000 950 900 850 800 750 700 650 600 550 500 450 400 350 300 250 200 170 150 130 110 100 90 80 70 60										Surf 1000 950 900 850 800 750 700 650 600 550 500 450 400 350 300 250 200 170 150 130 110 100 90 80 70 60										Surf 1000 950 900 850 800 750 700 650 600 550 500 450 400 350 300 250 200 170 150 130 110 100 90 80 70 60										Surf 1000 950 900 850 800 750 700 650 600 550 500 450 400 350 300 250 200 170 150 130 110 100 90 80 70 60										Surf 1000 950 900 850 800 750 700 650 600 550 500 450 400 350 300 250 200 170 150 130 110 100 90 80 70 60										Surf 1000 950 900 850 800 750 700 650 600 550 500 450 400 350 300 250 200 170 150 130 110 100 90 80 70 60																																							
Inversion 880 mb 22° - 850 mb 24° 827 mb 37° - 788 mb 39° 739 - 20° - 713 - 22° Isothermal 1007 - 988 mb 37° 900 - 827 mb 37° 829 - 800 - 22°										Inversion 880 mb 22° - 850 mb 24° 827 mb 37° - 788 mb 39° 739 - 20° - 713 - 22° Isothermal 1007 - 988 mb 37° 900 - 827 mb 37° 829 - 800 - 22°										Inversion 880 mb 22° - 850 mb 24° 827 mb 37° - 788 mb 39° 739 - 20° - 713 - 22° Isothermal 1007 - 988 mb 37° 900 - 827 mb 37° 829 - 800 - 22°										Inversion 880 mb 22° - 850 mb 24° 827 mb 37° - 788 mb 39° 739 - 20° - 713 - 22° Isothermal 1007 - 988 mb 37° 900 - 827 mb 37° 829 - 800 - 22°										Inversion 880 mb 22° - 850 mb 24° 827 mb 37° - 788 mb 39° 739 - 20° - 713 - 22° Isothermal 1007 - 988 mb 37° 900 - 827 mb 37° 829 - 800 - 22°										Inversion 880 mb 22° - 850 mb 24° 827 mb 37° - 788 mb 39° 739 - 20° - 713 - 22° Isothermal 1007 - 988 mb 37° 900 - 827 mb 37° 829 - 800 - 22°										Inversion 880 mb 22° - 850 mb 24° 827 mb 37° - 788 mb 39° 739 - 20° - 713 - 22° Isothermal 1007 - 988 mb 37° 900 - 827 mb 37° 829 - 800 - 22°										Inversion 880 mb 22° - 850 mb 24° 827 mb 37° - 788 mb 39° 739 - 20° - 713 - 22° Isothermal 1007 - 988 mb 37° 900 - 827 mb 37° 829 - 800 - 22°										Inversion 880 mb 22° - 850 mb 24° 827 mb 37° - 788 mb 39° 739 - 20° - 713 - 22° Isothermal 1007 - 988 mb 37° 900 - 827 mb 37° 829 - 800 - 22°																													
Tropopause I 179 mb - 89°										Tropopause II 238 mb - 78°										Tropopause II 200 mb - 79°										Tropopause II 176 mb - 77°										Tropopause II 207 mb - 79°										Tropopause II 212 mb - 81°										Tropopause II 200 mb - 77°										Tropopause I 190 mb - 78°										Tropopause																													

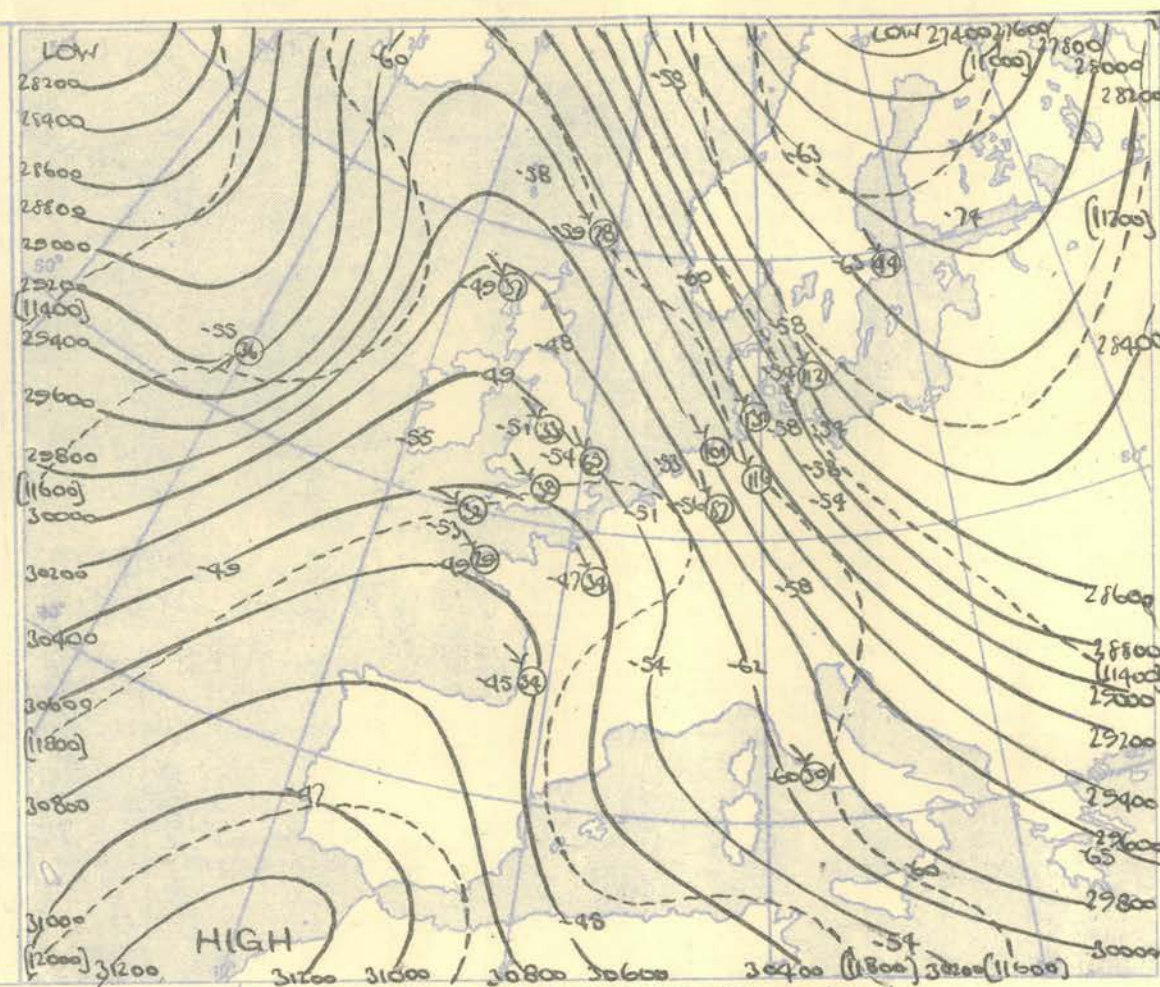
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h. G.M.T.



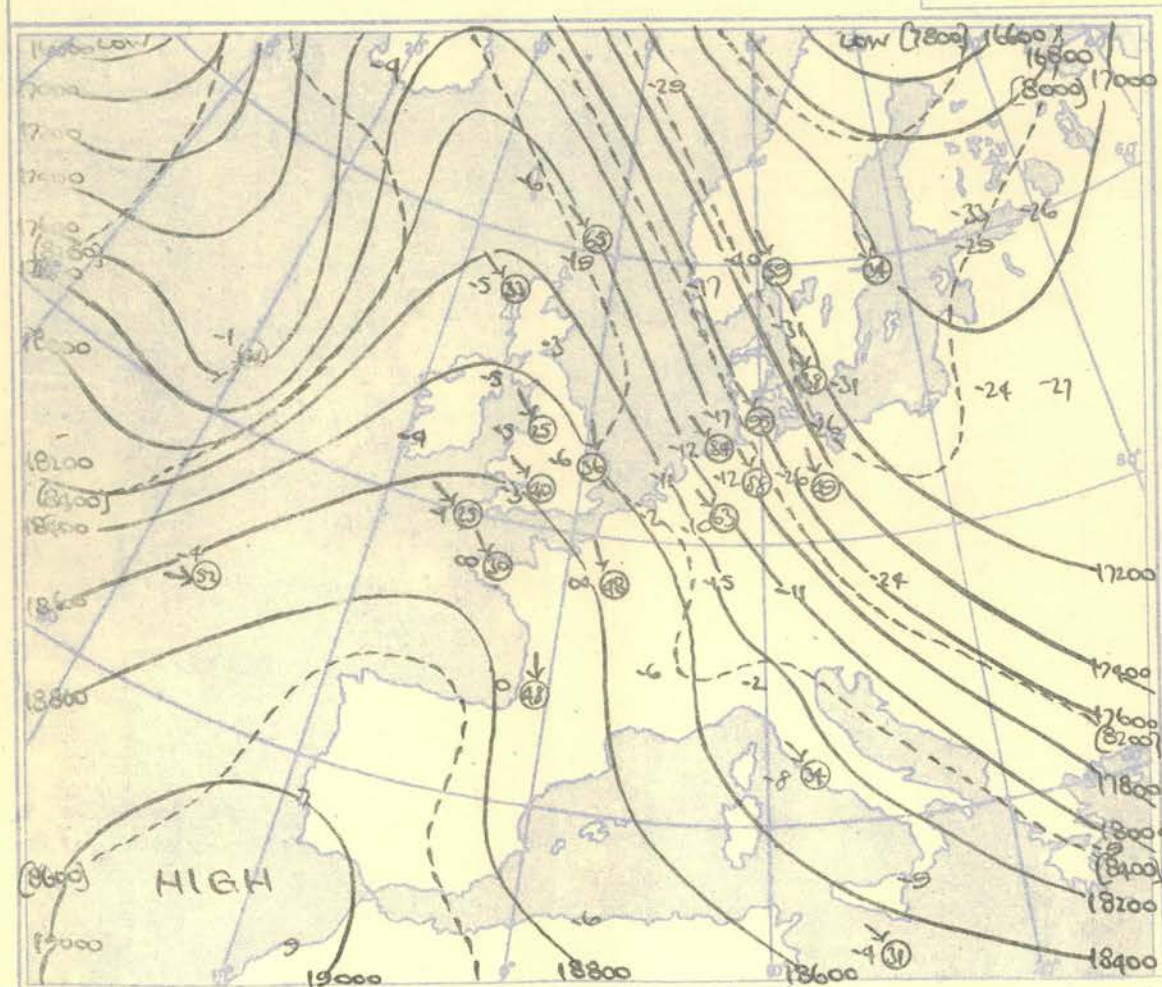
The continuous lines are contour lines of the 700 mb. surface
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. $52\frac{1}{2}^\circ$ N.

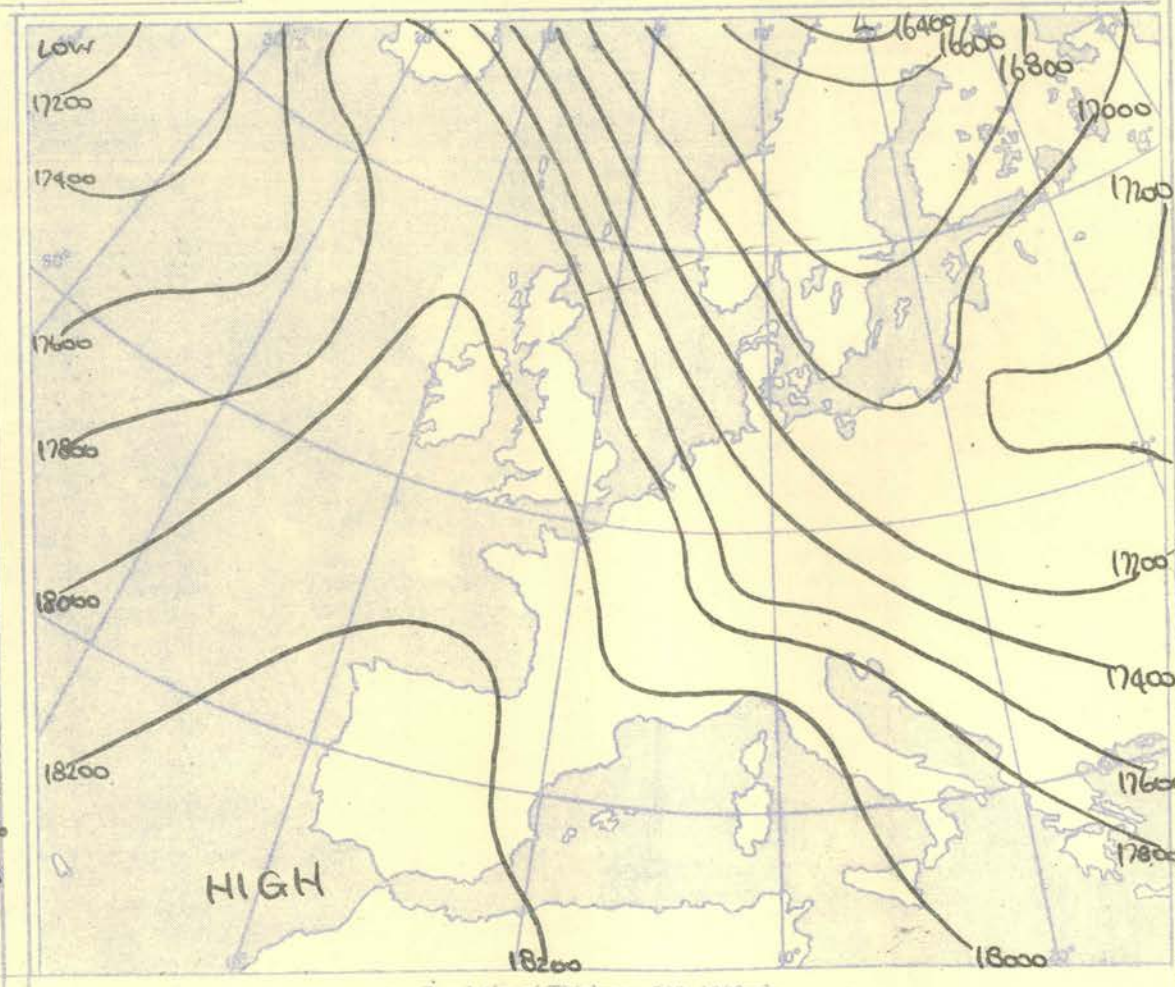
100 80 60 40 20 10 knots



The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500-300 mb.



The continuous lines are contour lines of the 500 mb. surface
The dotted lines are isopleths of the thickness of the layer 700-500 mb.



Isopleths of Thickness 500-1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

48°-1N. 17°-0W.										47°-6N. 12°-3W.										39°55'N. 12°-2W.																																																	
Pressure mb	Time M.S.L. Surf Freezing	123ch.			1410h.			15h.																					Time M.S.L. Surf Freezing																																								
		1021.4 mb			1020.6 mb			1025 mb			mb			mb			mb			mb			mb			mb																																											
		1017.8 mb			1017.0 mb			1021 mb			mb			mb			mb			mb			mb			mb																																											
		856, 790 mb			735 mb			685 mb			mb			mb			mb			mb			mb			mb																																											
Pressure mb	Height ft./100	Temp. °F	Dew °F	Height ft./100	Temp. °F	Dew °F	Height ft./100	Temp. °F	Dew °F	Height ft./100	Temp. °F	Dew °F	Height ft./100	Temp. °F	Dew °F	Height ft./100	Temp. °F	Dew °F	Height ft./100	Temp. °F	Dew °F	Height ft./100	Temp. °F	Dew °F	Height ft./100	Temp. °F	Dew °F	Pressure mb																																									
Surf	01.0	51	48	01.0	52	51	6.7	52	46																		Surf																																										
1000	5.9			5.6				49	45																		1000																																										
950		42	40		42	42		46	41																		950																																										
900	34.2	37	35	33.9	36	36		52	39																		900																																										
850		30	29		37	31		48	18																		850																																										
800	65.2	33	04	65.2	38	16		45	09																		800																																										
750		27			31			40	27																		750																																										
700	100	20		100	25		103	34	21																		700																																										
650		14			19			26																			650																																										
600	139	06		140	10			18																			600																																										
550		-03			02			04																			550																																										
500	183	13		185	-08		188	-01																			500																																										
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	Cloud. 7/8 Sc 9m-9mb. 9/8 As 440- 50omb. 4/8 Cs Inversion 85omb. 30°- 80omb. 33°			Cloud. 7/8 Sc 900- 86omb. 7/8 St. 950- 93omb. 2/8 Cs Inversion 87omb. 35°- 83omb. 39°			Cloud. 7/8 Sc 970- 95omb. 2/8 Ae N.R. Inversion 95omb. 46°- 90omb. 52°																																																														

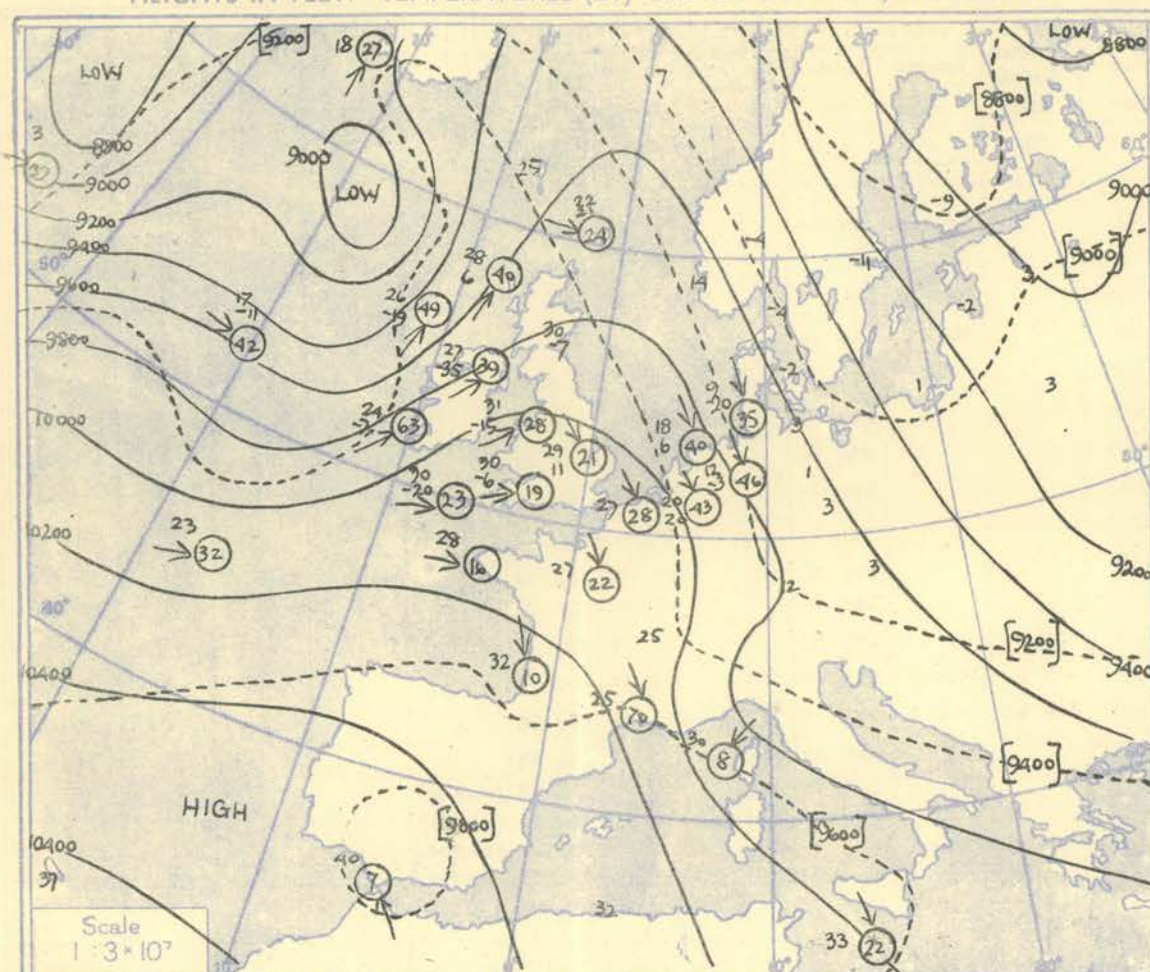
DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

[illegible]

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.

Ship	Weather Observer	Weather Observer	Weather observer	Weather Observer	Weather Watcher	Weather Watcher	Weather Watcher	Weather Watcher	Ship													
Lat/Long	52-3 N 20-0 W	52-3 N 20 W	52-1 N 20-3 W	52-2 N 20-3 W			56-6 N 10-8 W	56-8 N 11-6 W														
Time	03h	09h	15h	21h	03h	09h	15h	21h														
M.S.L.	994	1003	1012	1011			1000	987														
Surf	994	1003	1012	1011			1000	987														
Freezing	720	900	900	865 and 800			850 and 775	775														
Pressure	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Pressure	
mb	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	mb	
Surf	1-7	50	48	195	32	46	39	275	43	46	37	280	33	51	42	160	23				Surf	
1000		46	42	188	45	09	39	36	257	45	3-1	45	36	260	39	3-0	49	40	197	32	1000	
950		43	39	191	49	29-1	32	32	261	54	31-3	32	28	261	40	31-3	36	27	206	27	950	
900	26-8	44	38	195	43		28	27	264	52		30	16	258	45	30	23	207	29		900	
850		58-5	39	33	197	42	59-6	22	21	273	48	62-2	32	06	258	39	62-3	32	10	213	33	850
800																					800	
750		34	28	198	42		18	17	277	45		25	-06	261	33		27	00	216	36	750	
700	93-8	30	24	202	39	93-8	16	13	269	46	9-6	17	-11	270	42	96-9	19	-11	218	38	700	
650		24	15	204	36		09	07	260	44		09	-18	278	43		10	-19	214	32	650	
600	133	17	05	205	42	132	03	01	258	45	135	02	-26	291	42	135	02	-22	208	30	600	
550		09	-02	208	42		-02	-09	258	42		-07	-36	286	35		-08	-31	201	32	550	
500		179	-01	-14	207	44	177	-11	-27	245	34	179	-18	-47	278	31	179	-19	-41	196	33	500
450		-12	-28	207	44		-23	-32	224	38		-29	-55	277	33		-31	-55	201	24	450	
400	232	-25	-38	209	36	229	-35	-42	217	30	230	-39	-59	277	24	230	-45		207	22	400	
350		-39	-50	212	39		-46		222	21		-48		278	22		-59		214	23	350	
300		297	45		36	292	-57		228	26	293	-62		262	18	292	-70		217	36	300	
250		-53		211	48		-64		213	27		-67		221	14		-64		218	38	250	
200	384	-60		211	50	378	-59		205	46	379	-61		212	26	377	-56		223	33	200	
170		-59		213	55		-59		205	49		-56		210	53		-56		227	30	170	
150		-54		213	54		-60		205	52		-57		214	48		-59		230	28	150	
130		-57		211	45		-59		202	60		-56		234	36		-59		231			

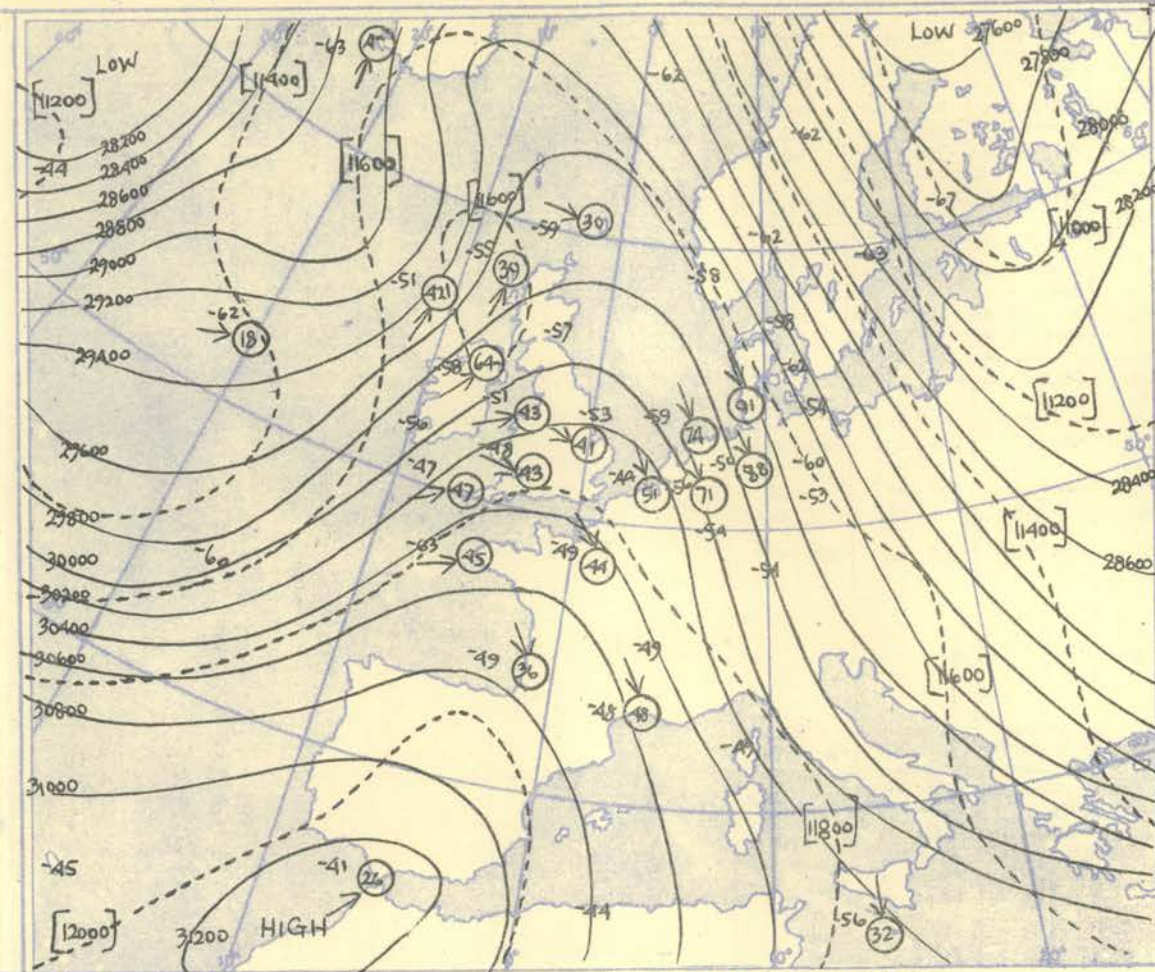
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb. levels at about 15 h G.M.T.



The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb

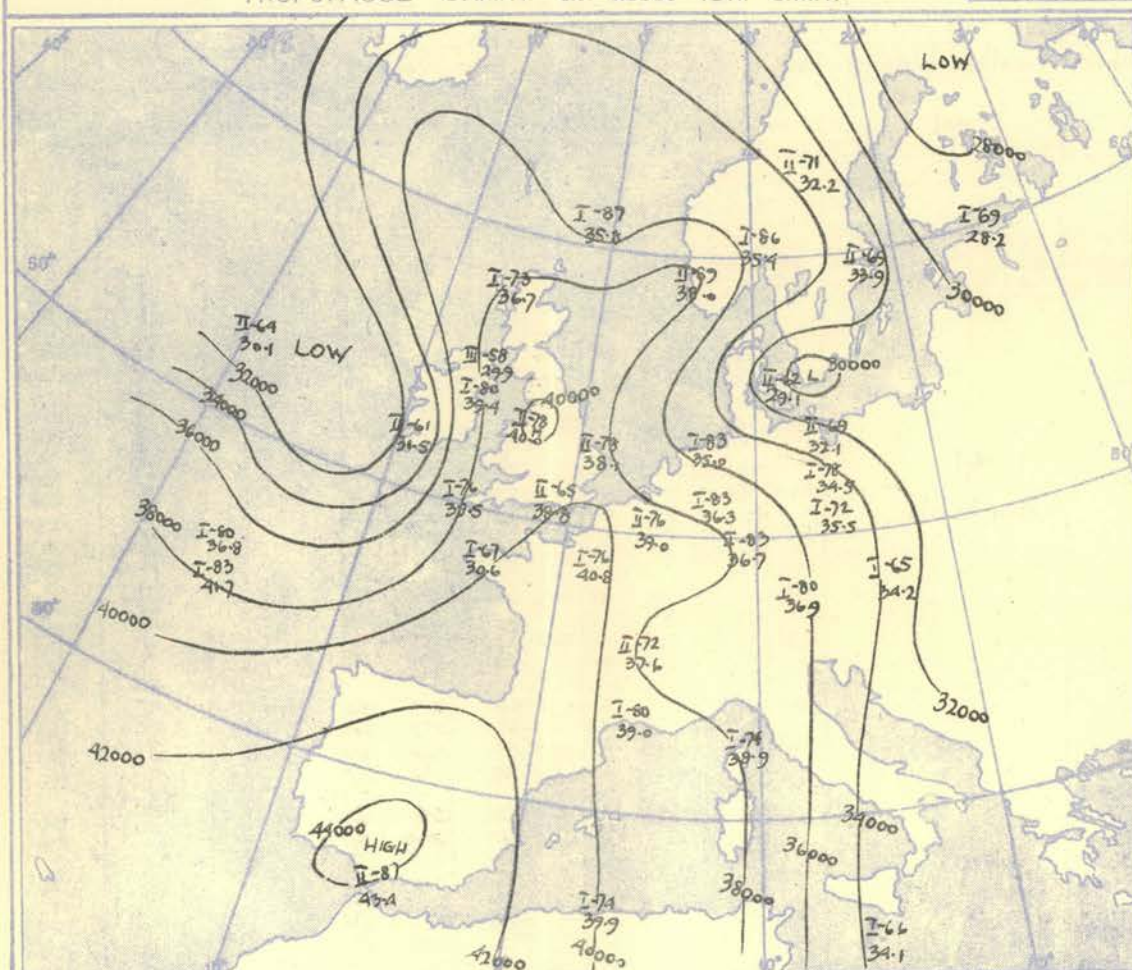
Gradient-Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

100 60 40 20 10 5 knots



The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500-300 mb.

TROPOPAUSE CHART at about 15h. G.M.T.



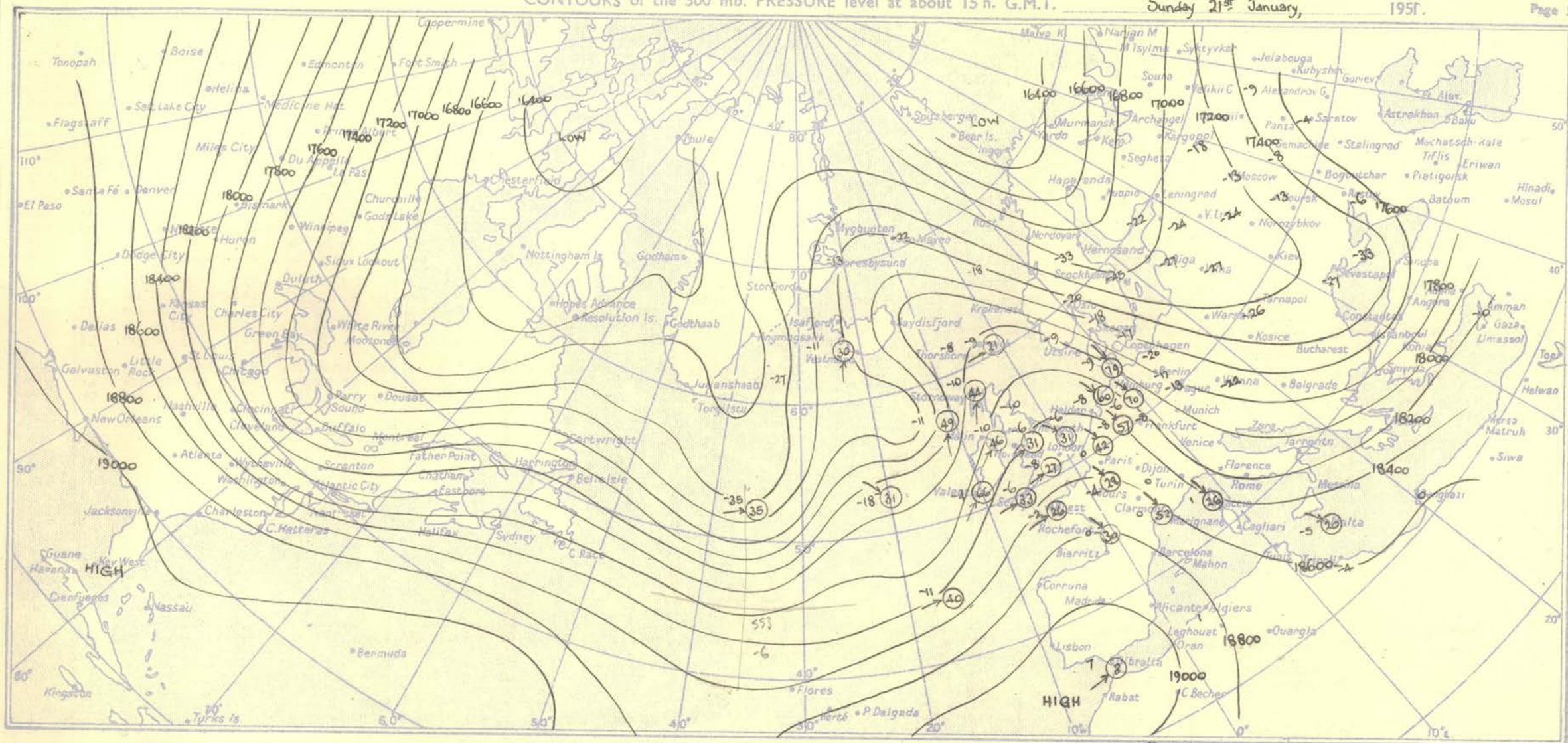
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

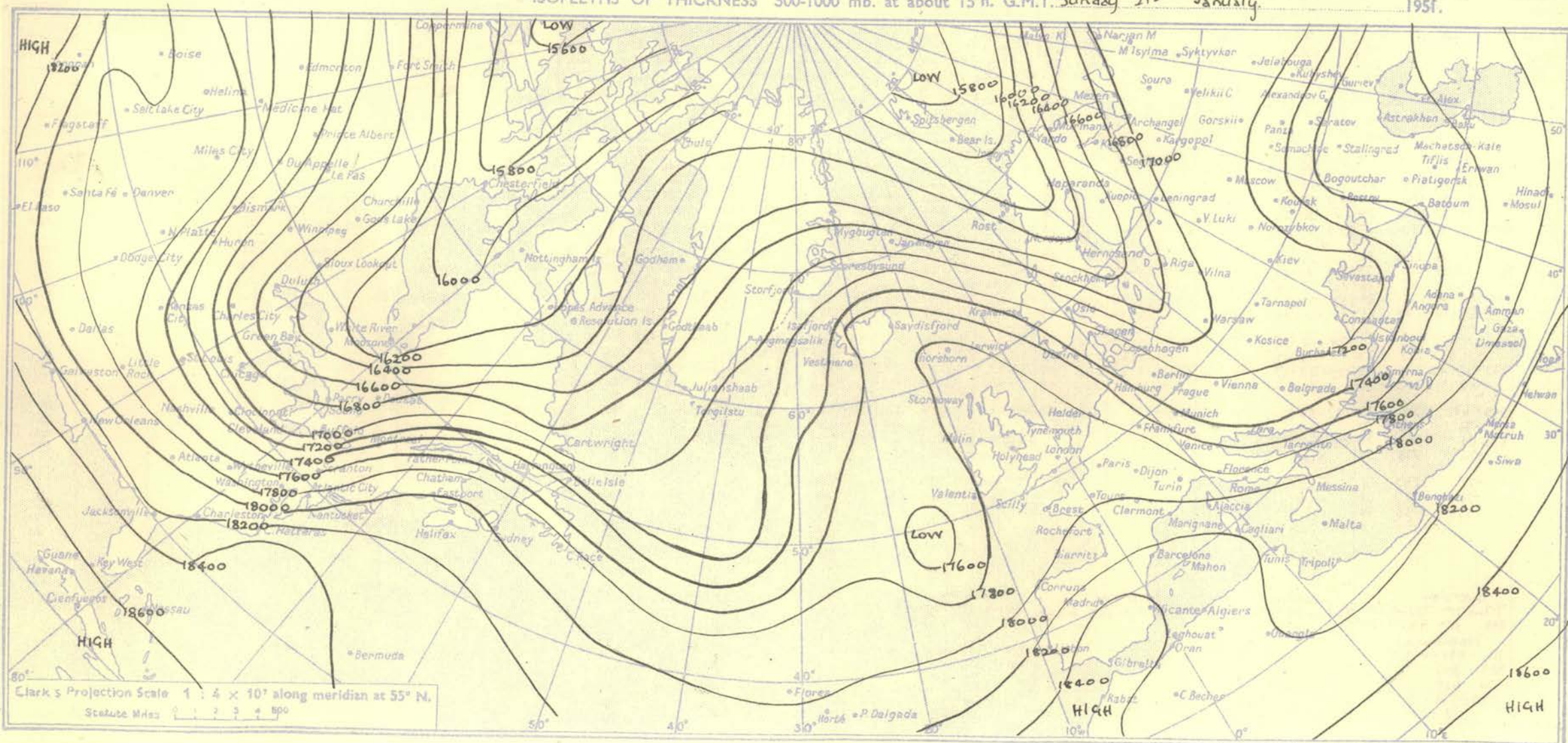
The cold trough persisted across Eastern Europe whilst the warm ridge from Ireland to Iceland moved very slowly east. Between the ridge and trough a strong thermal gradient persisted. Through the ridge there was a gradual cooling due to the slow occlusion of the surface warm sector over the British Isles. The cold trough in the Atlantic became rather more pronounced.

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Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Sunday 21st January.



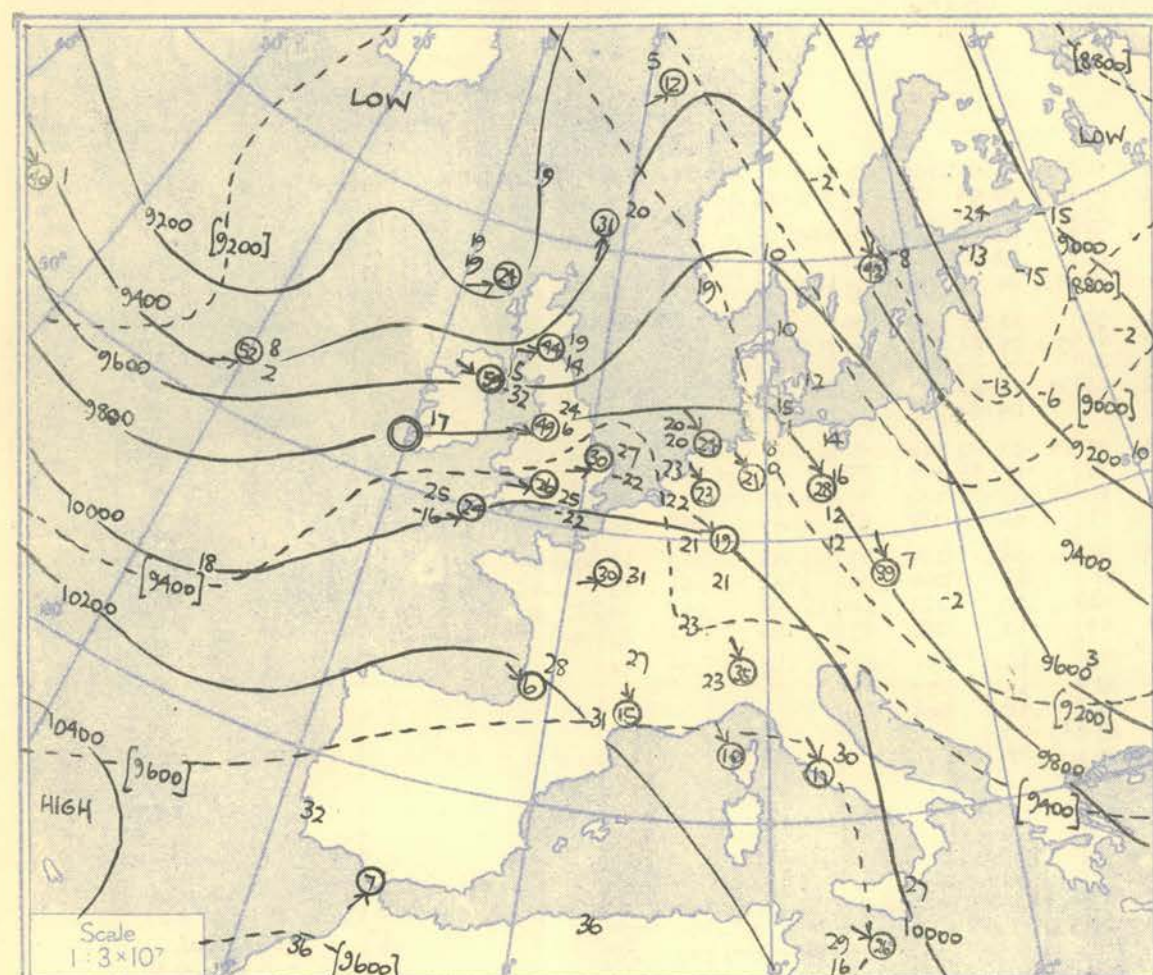
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION							
Time M.S.L. Surf (Freezing)	15k		G.M.T.		15k		G.M.T.		15k		G.M.T.		15k		G.M.T.		15k		G.M.T.		15k		G.M.T.		15k		G.M.T.		15k		G.M.T.		Time M.S.L. Surf (Freezing)											
	1014.5	mb	1007.8	mb	1003.7	mb	1013.5	mb	1018.0	mb	1019.7	mb	1022.4	mb	1022.7	mb	1016.3	mb																										
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb											
Surf	2.7	38	37	180	28	0.4	47	44	180	09	0.2	41	40	2.6	48	45	210	12	0.6	49	45	Cal	1.2	49	47	220	09	4.4	46	43	250	06	2.9	49	48	210	10	0.3	52	48	221	07	Surf	
1000	3.9	38	37	180	28	2.1	46	44	180	09	3.7	41	40	4.0	47	44	183	04	5.3	48	45	183	04	5.3	48	45	254	15	5.8	45	42	226	27	6.1	47	46	226	27	4.4	50	45	225	20	1000
950		32	32	164	32		41	40	192	29		39	38		46	42	217	28		42	39	231	09		43	42	247	14		39	37	258	15		43	41	248	20		44	40	237	31	950
900	31.6	27	27	170	28	30.4	37	36	206	34	31.8	37	35	32.4	41	38	231	30	33.2	37	33	244	15	33.6	38	37	253	10	34.0	35	30	259	16	34.4	39	36	263	18	32.9	39	36	237	40	900
850		28	28	194	21		36	34	222	31		39	38		35	35	235	34		42	22	244	23		42	36	262	12		44	18	256	18		36	30	272	23		33	29	233	40	850
800	62.2	28	28	242	15	61.5	31	29	217	30	63.1	36	16	67.3	34	17	227	38	64.8	42	07	240	23	65.1	39	33	285	15	65.4	41	10	250	22	65.8	41	03	264	21	63.9	25	15	219	48	800
750		27	27	278	18		32	26	212	33		34	04		34	24	222	41		38	14	245	28		36	25	299	18		36	01	256	20		34	14	247	22		28	02	219	60	750
700	96.8	22	21	276	24	96.5	28	06	204	40	98.3	30	07	98.7	27	35	231	39	100	31	15	241	28	100	29	11	301	21	101	30	06	262	19	101	30	20	243	23	98.5	24	07	231	63	700
650		15	08	277	32		20	06	199	43		22	06		19	41	227	40		22	12	239	26		21	15	302	23		21	11	261	21		21	12	251	23		20	10	232	67	650
600	136	06	06	273	36	136	11	10	199	44	138	12	10	138	10	18	233	43	140	13	11	238	32	140	13	11																		

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION
Time	03h				03h				03h				03h				03h				03h				03h				03h				03h				Time
M.S.L.	1002.3				991.6				1005.1				1009.4				1015.0				1017.8				1019.7				1021.6				1017				M.S.L.
Surf	992.2				990.1				1004.2				1000.8				1013.0				1013.2				1003.3				1010.8				1015				Surf
Freezing	850				838				860				888				888				743				761				873, 827, 764				875, 795				Freezing
Pressure	mb				mb				mb				mb				mb				mb				mb				mb				mb				Pressure
Height	ft./100				ft./100				ft./100				ft./100				ft./100				ft./100				ft./100				ft./100				ft./100				Height
Temp.	°F.				°F.				°F.				°F.				°F.				°F.				°F.				°F.				°F.				Temp.
Dew	°F.				°F.				°F.				°F.				°F.				°F.				°F.				°F.				°F.				Dew
Wind	knots				knots				knots				knots				knots				knots				knots				knots				knots				Wind
Dir.	°				°				°				°				°				°				°				°				°				Dir.
Vel.	knots				knots				knots				knots				knots				knots				knots				knots				knots				Vel.
Temp.	°F.				°F.				°F.				°F.				°F.				°F.				°F.				°F.				°F.				Temp.
Dew	°F.				°F.				°F.				°F.				°F.				°F.				°F.				°F.				°F.				Dew
Wind	knots				knots				knots				knots				knots				knots				knots				knots				knots				Wind
Dir.	°				°				°				°				°				°				°				°				°				Dir.
Vel.	knots				knots				knots				knots				knots				knots				knots				knots				knots				Vel.
Temp.	°F.				°F.				°F.				°F.				°F.				°F.				°F.				°F.				°F.				Temp.
Dew	°F.				°F.				°F.				°F.				°F.				°F.				°F.				°F.				°F.				Dew
Wind	knots				knots				knots				knots				knots				knots				knots				knots				knots				Wind
Dir.	°				°				°				°				°				°				°				°				°				Dir.
Vel.	knots				knots				knots				knots				knots				knots				knots				knots				knots				Vel.
Temp.	°F.				°F.				°F.				°F.				°F.				°F.				°F.				°F.				°F.				Temp.
Dew	°F.				°F.				°F.				°F.				°F.				°F.				°F.				°F.				°F.				Dew
Wind	knots				knots				knots				knots				knots				knots				knots				knots				knots				Wind
Dir.	°				°				°				°				°				°				°				°				°				Dir.
Vel.	knots				knots				knots				knots				knots				knots				knots				knots				knots				Vel.
Temp.	°F.				°F.				°F.				°F.				°F.				°F.				°F.				°F.				°F.				Temp.
Dew	°F.				°F.				°F.				°F.				°F.				°F.				°F.				°F.				°F.				Dew
Wind	knots				knots				knots				knots				knots				knots				knots				knots				knots				Wind
Dir.	°				°				°				°				°				°				°				°				°				Dir.
Vel.	knots																																				

HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

[illegible]

DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

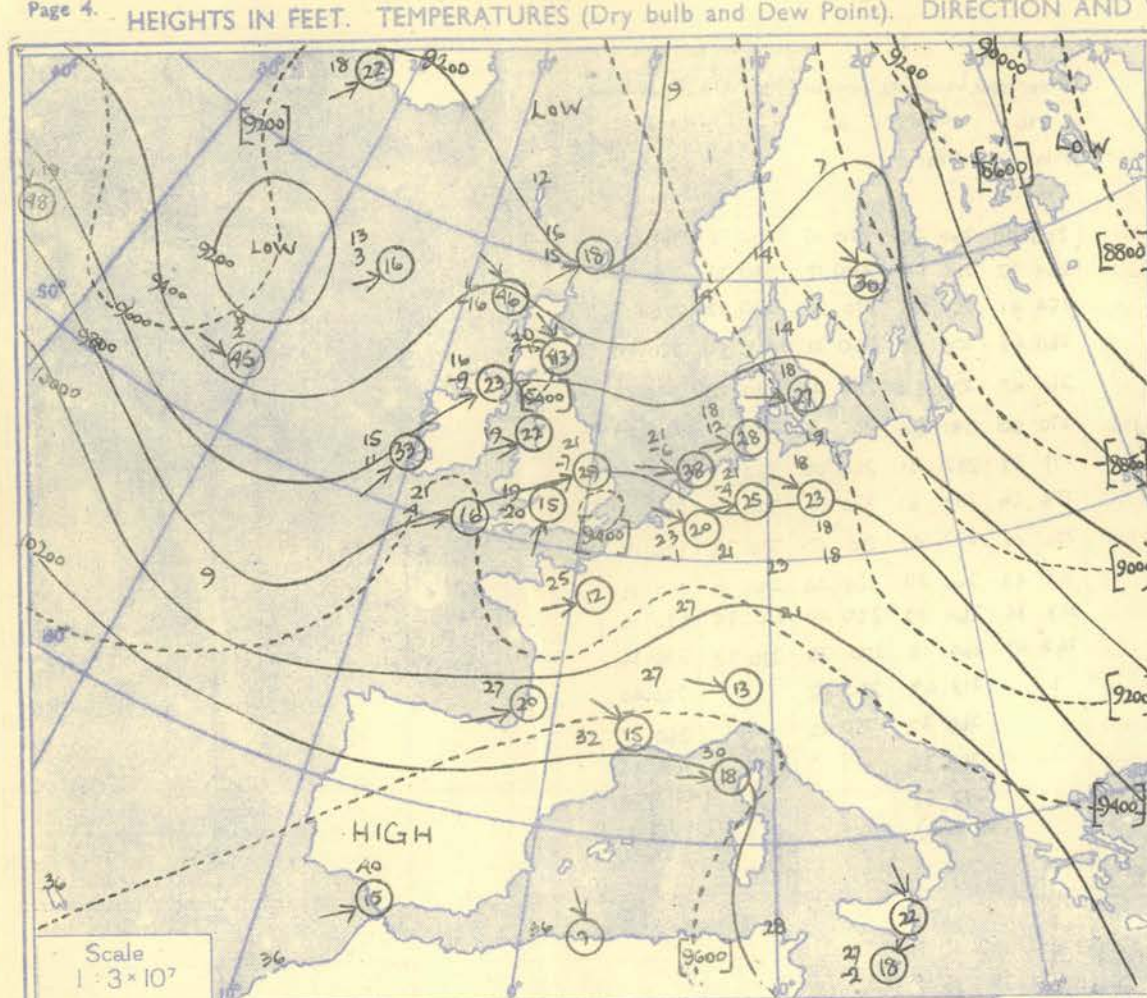
[illegible]

NEPHOSCOPE OBSERVATIONS

[illegible]

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.

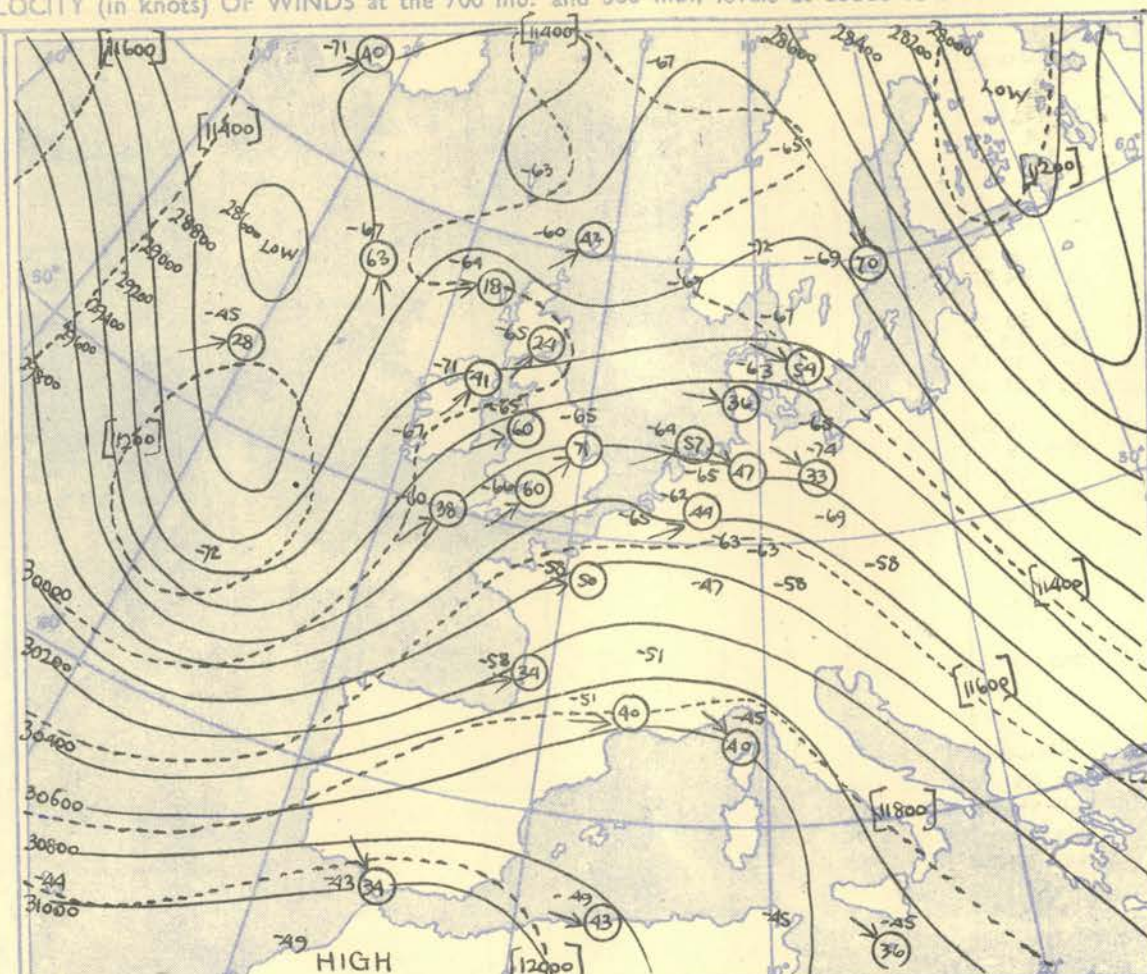
Ship	Weather Watcher				Weather Watcher				Weather Watcher				Weather Watcher				Weather Observer				Weather Observer				Weather Observer				Weather Observer				Ship									
Lat/Long	57N 12-6W				57-2N 13-5W				57-4N 14-7W				57-7N 15-9W				52-3N 20-3W				52-5N 19-8W				52-5N 19-9W				52-5N 20W				Lat/Long									
Pressure	Time	03h G.M.T.			Time	09h G.M.T.			Time	15h G.M.T.			Time	21h G.M.T.			Time	03h G.M.T.			Time	09h G.M.T.			Time	15h G.M.T.			Time	21h G.M.T.												
	M.S.L.	999 mb			M.S.L.	1001 mb			M.S.L.	998 mb			M.S.L.	1000 mb			M.S.L.	1006 mb			M.S.L.	1004 mb			M.S.L.	1003 mb			M.S.L.	1005 mb												
	Surf	999 mb			Surf	1001 mb			Surf	998 mb			Surf	1000 mb			Surf	1006 mb			Surf	1004 mb			Surf	1003 mb			Surf	1005 mb												
	Freezing	880 mb			Freezing	880 and 810 mb			Freezing	870 mb			Freezing	900 mb			Freezing	905 mb			Freezing	895 mb			Freezing	910 mb			Freezing	920 mb												
Pressure	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Pressure									
	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	mb									
Surf																																Surf										
1000	-02	47	46	275	27	02	47	41	205	10	-6	47	41	245	15	00	46	37	300	04	1-5	43	41	230	21	1-1	47	38	276	23	08	44	39	270	32	1-5	42	40	305	45		
950		41	37	277	46		42	38	231	27		41	37	241	18		39	32	258	05		37	36	229	29		46	37			08	43	38			41	39					
900	28-1	34	31	281	43	28-5	34	35	230	24	27-7	35	31	241	21	28-1	32	27	267	08	29-5	31	31	235	33	29-2	33	25	256	33	28-9	31	30	267	46	29-4	30	30	299	51		
850		30	27	285	44		31	27	227	22		30	26	242	20		25	20	260	10		25	22	241	36		26	21	255	33		26	21	274	45		24	24	297	51		
800	59-0	29	24	290	68	59-5	31	14	223	23	58-5	26	21	232	14	58-7	18	10	234	07	60-0	20	16	245	37	59-7	18	13	253	33	59-4	20	16	276	44	59-8	18	18	295	51		
750		25	17	298	49		26	03	229	24		20	12	218	14		13	02	199	07		16	12	239	45		13	02	253	36		14	09	275	46		11	09	295	45		
700	73-5	18	06	299	51	74-0	18	06	238	27	72-7	13	03	211	16	72-3	07	05	186	08	73-9	08	02	231	52	73-4	06	08	249	36	73-1	08	02	274	46	73-4	06	01	296	44		
650		10	01	293	47		09	13	236	29		05	05	209	20		01	10	187	09		01	03	227	64		03	16	243	34		01	04	269	39		01	10	296	48		
600	132	04	02	284	43	133	00	10	232	21	131	02	14	210	25	130	11	17	Land V		132	05	08	215	80	131	12	24	236	36	131	08	13	265	35	131	10	16	296	44		
550	04	09	279	33		11	29	227	21		07	20	207	32		21	25		11	12	193	72		22	32	240	40		17	26	261	38		20	26	296	44		
500	176	15	19	271	25	176	19	36	221	23	175	16	29	194	45	173	31	35	175	21	22	183	74	173	33	45	247	42	174	28	36	263	32	174	29	34	296	44		
450		27	31	253	23		30	47	203	22		27	39	182	59		27	42			175	23	35	179	76		39	47	234	45		39	47	250	42		40	46	298	52		
400	228	41		264	28	227	41		189	21	226	39	52	170	68	222	47					137	10	226	45		51		223	46	224	49		51		255	35	224	40	50	304	54
350	52			274	24		53		207	25		53		161	74		48					131	17		181	100		54	214	46		48		253	34		41		314	72		
300	290	68		225	14	290	67		204	25	289	67		157	63	285	50					288	67		192	59		51	207	46	287	45		253	28	288	46		329	78		
250		77		177	17		68		182	29		53		154	41		51						56		197	33		51	203	45		44		263	24		50		340	69		
200	374	61		242	24	375	58		194	31	376	53		179	25	374	54					375	56		204	29		52	230	36	(229	44										
170		61		248	20		57		196	32		55		215	18		58						60		220	29		55	250	33	mb)											
150		63		238	33		61		191	21		56		278	14		60				(16		62					59	251	30												
130		62		240	28		60		232	20	138	55					63				mb)							63	250	22												
110		69		269	23		66		276	21	mb)						65											62	252	18												
100	521	71		171	30	522	67		260	22							66											61	254	32												
90		74		253	30		68		273	27							68											65	256	27												
80		75		243	30		69		266	18							69											68	259	21												
70		77		262	30		71		307	31							70											69	264	19												
60	(063	78				(063	72																						70													
	mb)					mb)																																				
	Isothermal 862-812 mb 30°				Inversion 858 mb 29°-835 mb 34°												Isothermal 1006-1000 mb 43°				(058 mb) Inversion 400 mb -51°-293 mb -50° Isothermal 786-765 mb 16°				Isothermal 905-900 mb 31°																	
Tropopause	I 257 mb-79° 32,400'				I 275 mb-74° 30,900'				I 296 mb-69° 29,100'				I 375 mb-49° 23,700'				I 309 mb-68° 28,100'				I 350 mb-54° 25,100'				I 402 mb-50° 22,000'				I 446 mb-41° 20,100'				Tropopause									



The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb

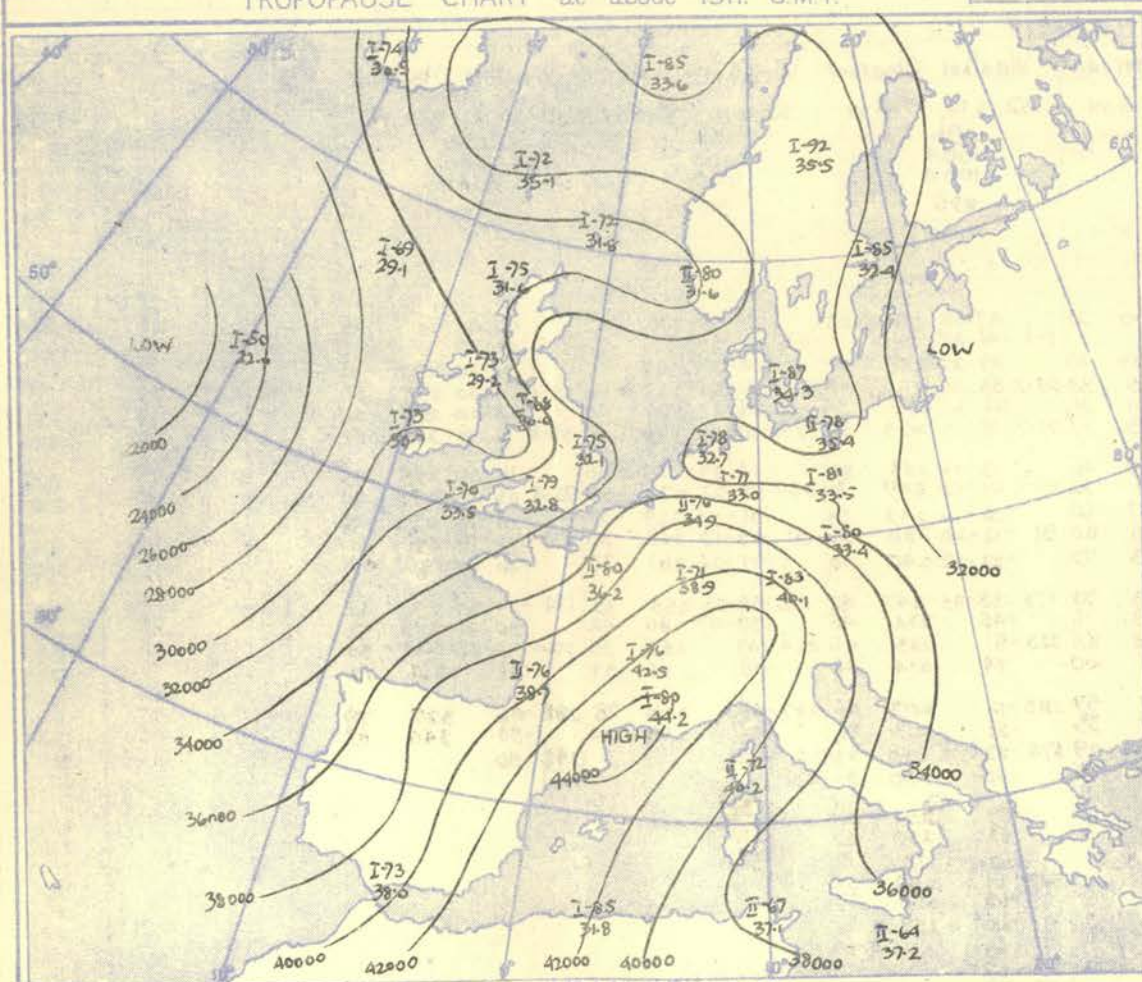
Gradient-Wind Scale for Contours
at intervals of 200 ft. at Lat. 52½° N.

100 80 60 40 20 10 0 knots



The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500-300 mb.

TROPOPAUSE CHART at about 15h. G.M.T.



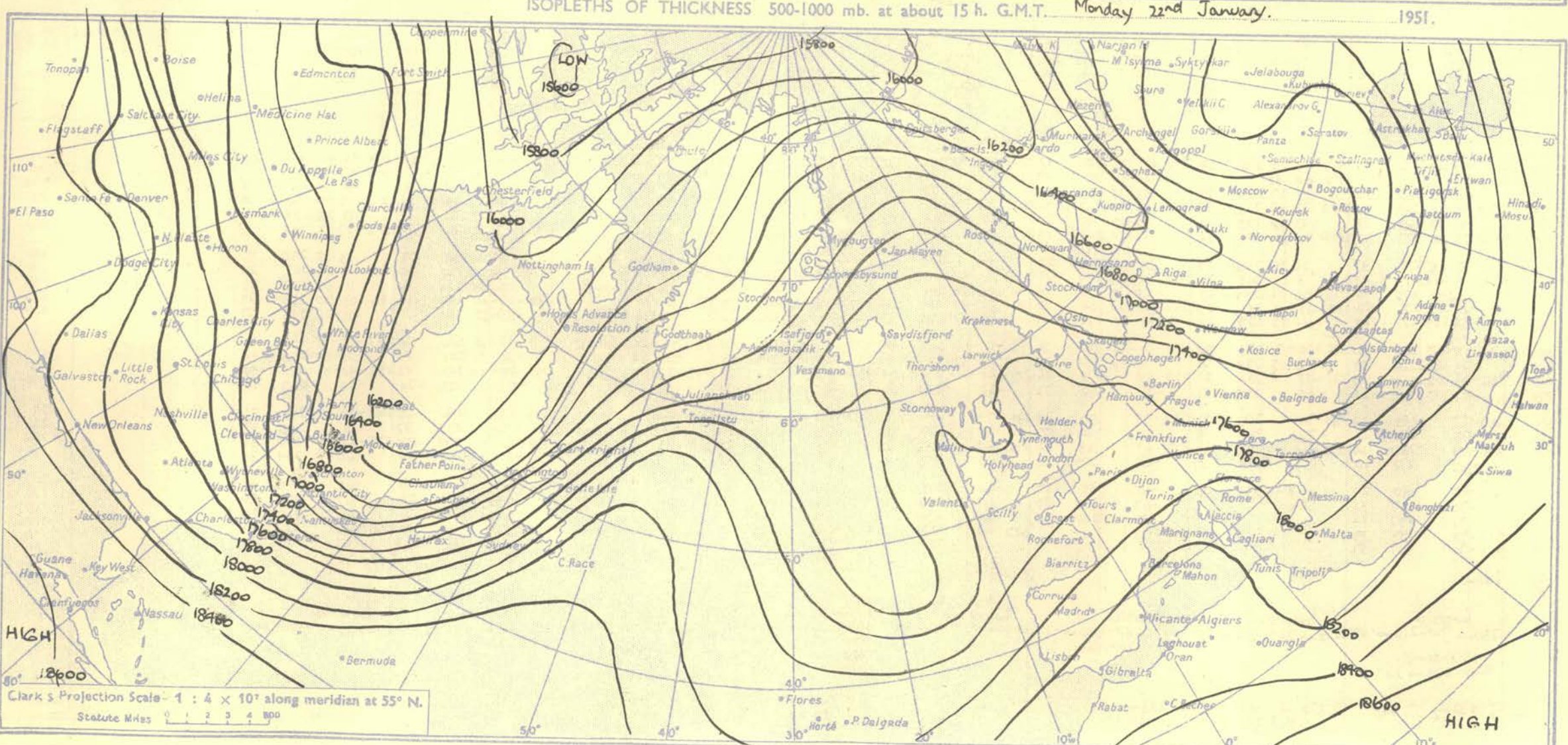
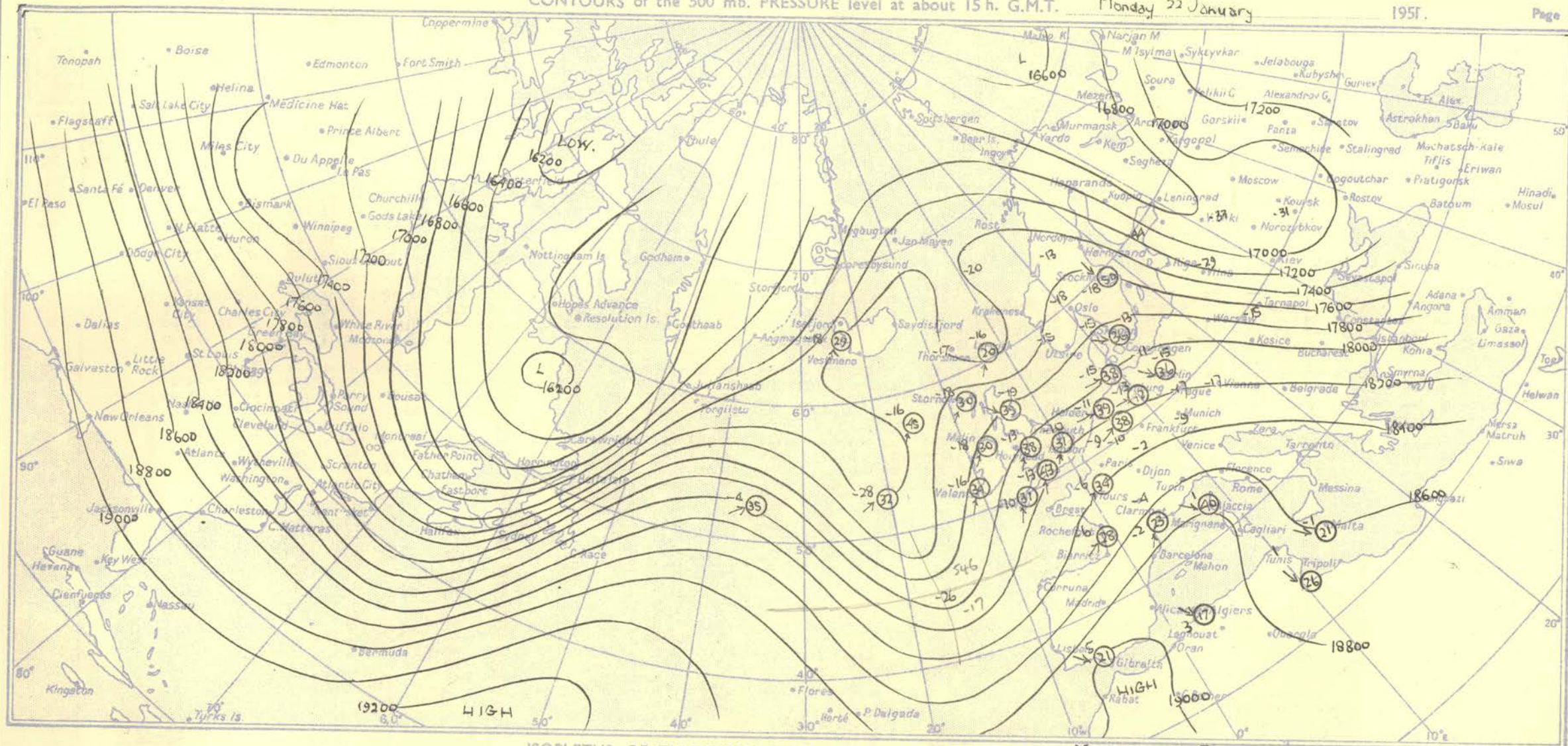
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The cold trough over Eastern Europe moved slightly eastwards whilst the ridge across the British Isles gradually cooled out. The cold trough in the Atlantic became sharper and elongated due to cooling in the South. The northeastward motion of the Newfoundland surface depression brought warmer air into the Northwest Atlantic and resulted in a pronounced warm ridge extending northwards across the Western Atlantic.

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Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



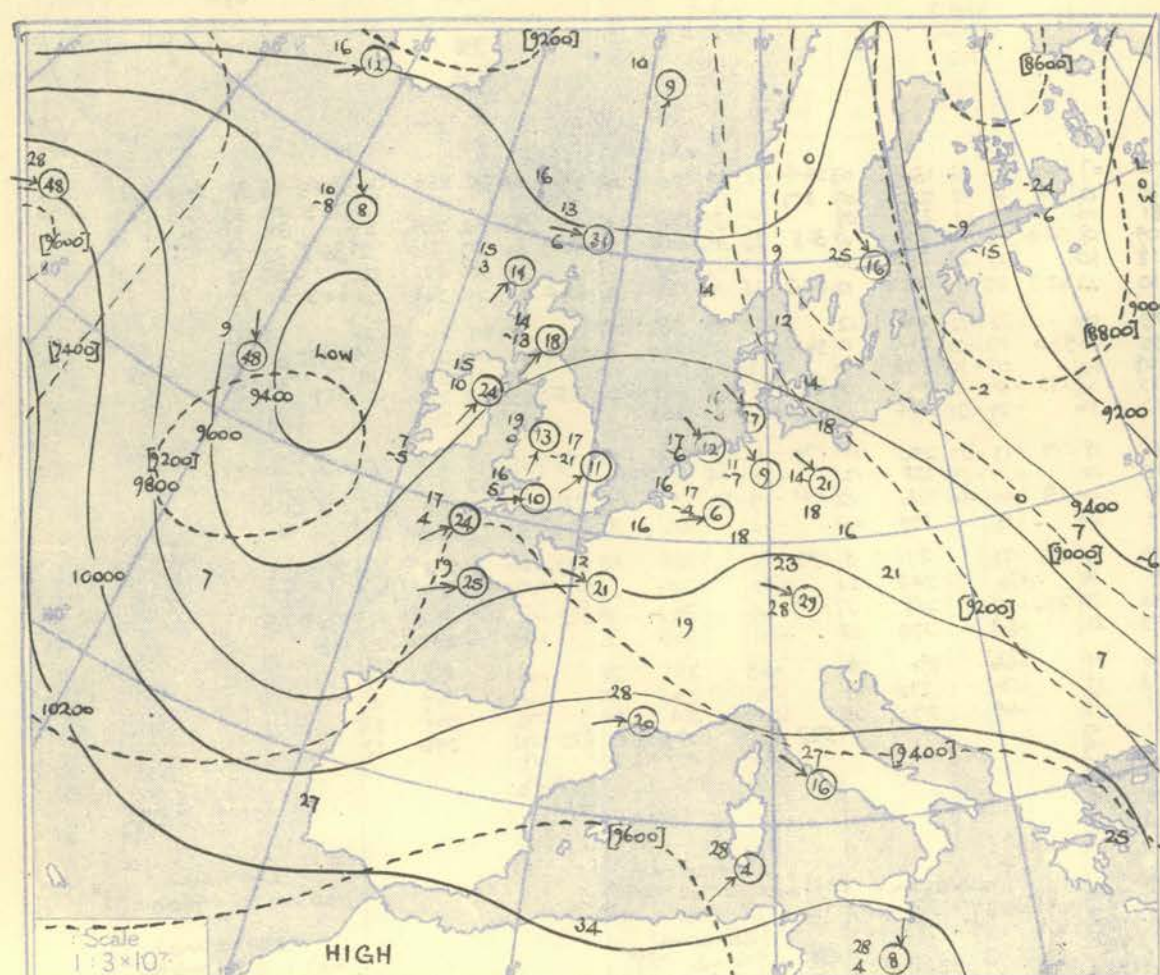
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION																																																		
Pressure Time M.S.L. Surf Freezing	ISL		G.M.T.		ISL		G.M.T.		ISL		G.M.T.		ISL		G.M.T.		ISL		G.M.T.		ISL		G.M.T.		ISL		G.M.T.		ISL		G.M.T.		Time																																																						
	992.5		mb		1002.0		mb		1005.8		mb		1010.3		mb		1013.8		mb		1015.9		mb		1017.0		mb		1016.2		mb		M.S.L.																																																						
	982.6		mb		1000.3		mb		1004.9		mb		1000.9		mb		1011.8		mb		1014.3		mb		1010.7		mb		1005.6		mb		Surf																																																						
Pressure	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Pressure																																																						
mb	ft/100	°F.	°F.	Dir. Vel. knots	ft/100	°F.	°F.	Dir. Vel. knots	ft/100	°F.	°F.	Dir. Vel. knots	ft/100	°F.	°F.	Dir. Vel. knots	ft/100	°F.	°F.	Dir. Vel. knots	ft/100	°F.	°F.	Dir. Vel. knots	ft/100	°F.	°F.	Dir. Vel. knots	ft/100	°F.	°F.	Dir. Vel. knots	mb																																																						
Surf	2.7	42	42	280	16	0.4	45	38	288	20	0.2	49	37	270	20	2.6	47	39	200	06	0.6	47	38	200	08	1.2	45	41	210	11	4.4	45	41	240	05	2.9	48	44	190	05	0.3	47	44	Surf																																											
1000	-2.0				0.5	45	38			1.5	48	36			2.7	47	39			3.8	46	36			4.3	44	40			4.5	45	41			4.4	48	44			2.5	46	43	1000																																												
950		39	39	274	26		39	32	265	22		42	33	265	40		41	34	232	27		40	32	263	15		39	38	257	16		39	36	253	12		43	39	230	17		40	38	950																																											
900	26.1	34	34	283	24	28.6	33	28	262	40	29.8	36	29	271	40	30.9	34	29	230	24	31.9	33	28	275	16	32.4	34	28	253	16	32.6	33	28	256	13	32.8	37	33	242	15	30.8	35	32	900																																											
850		30	28	281	24		28	21	266	40		30	24	278	40		27	22	229	23		26	17	268	18		26	13	252	16		28	14	246	16		31	27	244	15		30	26	850																																											
800	56.9	26	22	273	24	59.6	30	11	277	40	60.8	34	11	284	48	61.7	30	12	224	22	62.8	32	14	263	16	63.5	31	02	258	20	63.3	30	00	244	16	63.7	27	22	257	17	61.6	28	26	800																																											
750		21	19	263	21		23	08	275	43		29	05	283	43		25	07	225	24		26	21	258	18		27	02	262	21		25	11	253	15		25	11	253	17		22	20	750																																											
700	91.1	16	15	241	18	94.0	16	16	275	46	93.0	20	15	288	43	96.2	16	09	228	23	97.4	19	34	258	22	98.1	21	07	254	29	97.8	19	20	226	15	98.2	21	04	248	16	96.0	15	11	700																																											
650		08	06	238	19		09	24	278	46		10	23	289	40		07	11	224	26		11	20	256	28		14	12	248	23		10	28	227	17		13	06	228	24		09	05	650																																											
600	130	00	14	240	22	132	01	33	280	43	134	01	24	282	37	135	01	18	237	26	136	01	18	251	30	137	04	08	238	27	136	01	33	231	23	137	05	08	212	29	135	02	00	600																																											
550		06	37	245	27		12	35	279	40		10	30	264	41		07	29	248	23		07	25	262	33		02	08	249	27		07	36	232	33		04	12	218	22		06	10	550																																											
500		174	16	45	247	30	176	18	35	265	30	178	19	43	273	35	179	18	38	252	30	180	13	46	266	38	182	10	14	252	31	180	13	28	234	43	181	10	14	228	31	179	16	70	500																																										
450		25	55	249	37		28	40	260	30		29	43	277	26		31	48	254	32		24	57	266	41		21	25	245	37		25	34	236	44		21	26	229	27		26	30	450																																											
400	225	34	57	246	45	227	39	50	252	26	229	40	52	245	14	230	44		259	33	232	37	60	248	48	234	33	38	245	43	232	38	46	233	39	234	33	38	227	31	230	38	43	400																																											
350		44		248	49		51		243	20		54		232	08		58		254	39		50		242	57		49		242	57		52		231			51		46		266	31		52	350																																										
300	289	60		245	42	290	64		208	18	291	68		224	24	291	71		244	41	294	65		242	60	297	65		242	71	295	66		229	60	297	60		209	38	293	67		300																																											
250		71		249	30		71		218	16		70		254	38		65		235	33		64		248	31		75		245	60		70		237	52		218	41		70	250																																														
200	374	65		253	08	374	63		252	24	375	64		257	28	376	63		245	29	380	63		249	10	381	64		258	36	378	66		258	36	378	66		234	40	379	53		200																																											
170		66		264	21		61		250	24		64		256	30		61		259	31		61		254	34		64		263	33		66		258	33		258	33		256	170																																														
150		65		281	27		63		260	27		64		246	31		59		250	33		60		258	34		67		266	34		69		253	35		60		260	29		150																																													
130		68		286	29		61		284	20		65		268	32		61		285	25		60		269	30		68		262	35		69		267	35		66		260	25		130																																													
110		69		299	39		64		269	33		66		299	32		67		260	25		65		276	24	526	69		284	26	523	71		293	27	529	65		254	27		110																																													
100	519	71		306	39	521	66				521	69		298	30	524	70				527	68		276	24	526	69		284	26	523	71		293	27	529	65		254	27		100																																													
90		71		315	28							71		297	25		71		280	25		71		280	25		71		281	30		74		281	21		66		262	27		90																																													
80		73										73		293	35		73		286	32		72		286	32		72		293	28		76		282	28		78		272	27		80																																													
70	(83mb)											72		294	32		70				(73mb)																						70																																												
60												72																															60																																												
Isothermal.				840-830mb 29°				Inversion.				857mb 26°-835mb 32°				Inversion.				839mb 30°-821mb 36°				Inversion.				844mb 26°-806mb 31°				Inversion.				862mb 28°-845mb 38°				Inversion.				905mb 32°-878mb 38°				Inversion.				815mb 28°-800mb 30°				Inversion.				768mb 24°-736mb 26°				Inversion.				550-528mb -4°				Isothermal.				790-778mb 30°				Isothermal.				858			

Tuesday 23rd January.

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA.				STATION								
Time M.S.L.	Surf Pressure	03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		Time M.S.L.	Surf Pressure											
		mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb													
1004.1	994.1	879				1007.2	1005.5	878		1010.5	1009.6	875		1009.1	999.9	869		1011.5	1009.4	884		1014.8	1010.2	902		1012.8	997.4	861		1009.0	998.4	830		1008.5	1007.1	951										
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb									
Surf	1000	02.7	43	40	265	22	00.4	45	235	05	00.2	33	32	CALM	02.6	42	40	200	08	00.6	40	37	170	07	01.2	37	36	130	03	04.4	41	41	120	04	02.9	48	48	180	10	02.3	40	38	290	03		
950	950	39	35	264	36	39			257	21	37	32	261	5	2.6	42	40	210	10	3.1	40	37	170	12	3.9	39	38	225	09	3.7	41	41	120	04	2.5	48	48	180	10	2.3	40	38	275	04		
850	850	29.2	33	270	33	30.1	35		250	16	30.7	31	261	16	30.7	35	31	202	12	31.2	35	36	181	10	32.0	38	33	226	08	31.8	39	39	185	07	30.9	39	37	210	21	30.3	32	28	294	10		
800	800	60.1	27	275	27	61.0	27		234	18	61.4	26	255	16	61.6	26	22	199	12	61.9	24	00	210	10	62.7	25	13	222	12	62.7	26	14	284	07	62.0	29	24	211	23	60.3	20	15				
750	750	21	16	273	28	21			232	17	20	03	216	24	21	17	187	20	26	02	198	14	23	-11	213	12	23	-11	213	12	23	-11	213	12	23	-11	213	12	23	-11	213	12	23	-11	213	12
700	700	94.3	13	06	275	31	95.2	15	212	14	95.6	14	13	216	18	95.8	15	10	186	20	96.5	26	02	198	14	23	-11	213	12	23	-11	213	12	23	-11	213	12	23	-11	213	12	23	-11	213	12	
650	650	08	15	278	36	08			208	15	08	23	216	10	06	00	192	30	10	03	208	10	07	-21	218	11	06	05	260	10	96.4	17	04	217	24	94.5	07	-05								
600	600	133	02	27	277	38	134	01	212	21	134	02	217	08	134	02	194	32	135	03	05	225	13	135	01	22	243	09	135	03	-30	261	22	135	02	01	216	28	132	-10	-15					
550	550	-11	-34	274	39	-10			214	22	-10	-36	225	13	-11	-24	195	31	-03	-18	242	16	-09	-21	254	12	-06	-31	255	23	-05	-11	208	30	-19	-30										
500	500	176	-20	-37	267	42	177	-20	217	23	178	-22	-37	225	21	178	-21	-35	198	38	179	-12	-20	247	18	179	-17	-27	250	14	179	-16	-38	253	25	179	-15	-23	217	32	175	-30	-43			
450	450	227	-44	-51	267	38	-32		210	24	-32	-43	231	21	-33	-48	199	39	-23	-38	235	20	-27	-35	255	12	-28	-44	258	28	-26	-35	213	30	-26	-35	213	30	-25	-52						
400	400	-56	267	260	26	-59			199	22	-56	225	23	-60	203	42	-48	239	20	-55	257	10	-53	259	10	-53	256	35	-52	220	39	-56														
350	350	289	-70		243	19	289	-73	200	19	290	-72	226	24	290	-72	193	38	295	-62	234	21	293	-71	271	18	293	-70	258	45	293	-60	219	50	287	-55										
300	300	372	-72		287	14	374	-69	266	11	374	-64	279	16	375	-60	232	20	-78	237	24	293	-76	248	20	293	-74	248	35	293	-60	219	50	287	-55											
250	250	-70	301	18	-63				296	20	-62	293	19	-61			274	21	-64	248	21	-64	274	28	-61	265	21	-63	257	24	-63	257	24	-63	257	24	-63	257	24	-63	257	24	-63	257	24	
200	200	-68	307	21	-66	303	19	-66	294	18	-66	294	18	-66	294	18	-66	294	18	-66	294	18	-66	294	18	-66	294	18	-66	294	18	-66	294	18	-66	294	18	-66	294	18	-66	294	18			
150	150	-72	312	26	-67	301	14	-68	294	20	-68	294	20	-68	294	20	-68	294	20	-68	294	20	-68	294	20	-68	294	20	-68	294	20	-68	294	20	-68	294	20	-68	294	20	-68	294	20			
110	110	-72	310	32	-69	301	21	-68	294	20	-68	294	20	-68	294	20	-68	294	20	-68	294	20	-68	294	20	-68	294	20	-68	294	20	-68	294	20	-68	294	20	-68	294	20	-68	294	20			
100	100	-73	309	33	-70	298	21	-69	298	21	-69	298	21	-69	298	21	-69	298	21	-69	298	21	-69	298	21	-69	298	21	-69	298	21	-69	298	21	-69	298	21	-69	298	21	-69	298	21			
90	90	-78	307	39	-70	298	21	-69	298	21	-69	298	21	-69	298	21	-69	298	21	-69	298	21	-69	298	21	-69	298	21	-69	298	21	-69	298	21	-69	298	21	-69	298	21	-69	298	21			
80	80	(83)	-81																																											
70	70																																													
60	60																																													
Isothermal		850 - 815 mb 29°								Inversion		1010 mb 33° - 987 mb 41°		835 - 24° - 800 - 29°				Inversion		1000 mb 42° - 982 mb 44°		815 - 72°																								
Tropopause		I 276 mb - 75°		30,700'		I 265 mb - 78°		34,500'		I 275 mb - 80°		30,900'		I 292 mb - 74°		29,500'		I 283 mb - 76°		30,400'		I 258 mb - 81°		32,510'		I 257 mb - 82°		32,500'		I 382 mb - 96°		23,300'		Tropopause												
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA.				STATION								
Time M.S.L.	Surf Pressure	09h		G.M.T.		09h		G.M.T.		09h		G.M.T.		09h		G.M.T.		09h		G.M.T.		09h		G.M.T.		09h		G.M.T.		09h		G.M.T.		Time M.S.L.	Surf Pressure											
		mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb													
1009.4	999.4	868				1012.9	1011.2	891		1013.8	1012.9			1012.0	1002.8	883		1012.9	1010.8	878		1014.8	1010.3	885		1013.3	977	854		1008.7	998.0	835														
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb									
Surf	1000	02.7	44	42	230	20	00.4	38	27	00.2	29	29	260	03	02.6	41	41	030	03	00.6	41	40	120	05	01.2	37	36	105	06	04.4	42	42	140	05	02.9	46	45	CALM								
950	950	2.5	40	39	252	25	3.4	41	40	3.5	32	31	262	14	3.2	41	41	100	10	3.4	39	38	120	13	4.0	40	39	168	06	04.4	42	42	140	05	2.3	43	42	148	10							
850	850	30.7	36	36	265	23	31.4	33	26	31.5	35	28	286	11	31.4	38	38	123	18	31.8	34	33	147	15	32.1	38	33	159	06	04.4	42	42	140	05	2.3	43	42	148	10							
800	800	61.5	24	21	274	26	62.1	26	06	62.3	27	19	297	06	62.2	24	22	154	12	62.1	28	17	188	11	62.8	23	18	231	10	62.6	26	26	199	09	61.6	28	25	174	18							
750	750	20	13	276	30	21	06			23	08	219	03	23	03	19	17	159	12	23	02	179	09	22	06	161	12	21	20	164	06	22	14	182	22											
700	700	95.7	16	04	277	32	96.4	18	04	96.5	16	02	219	13	96.3	12	09	156	15	96.4	16	07	168	11	97.1	17	23	114	04	96.9	16	14	163	07	95.9	17	03	181	22							
650	650	09	13	282	29	08	06			07	10	189	03	06	01	151	35		35	11	-16	174																								

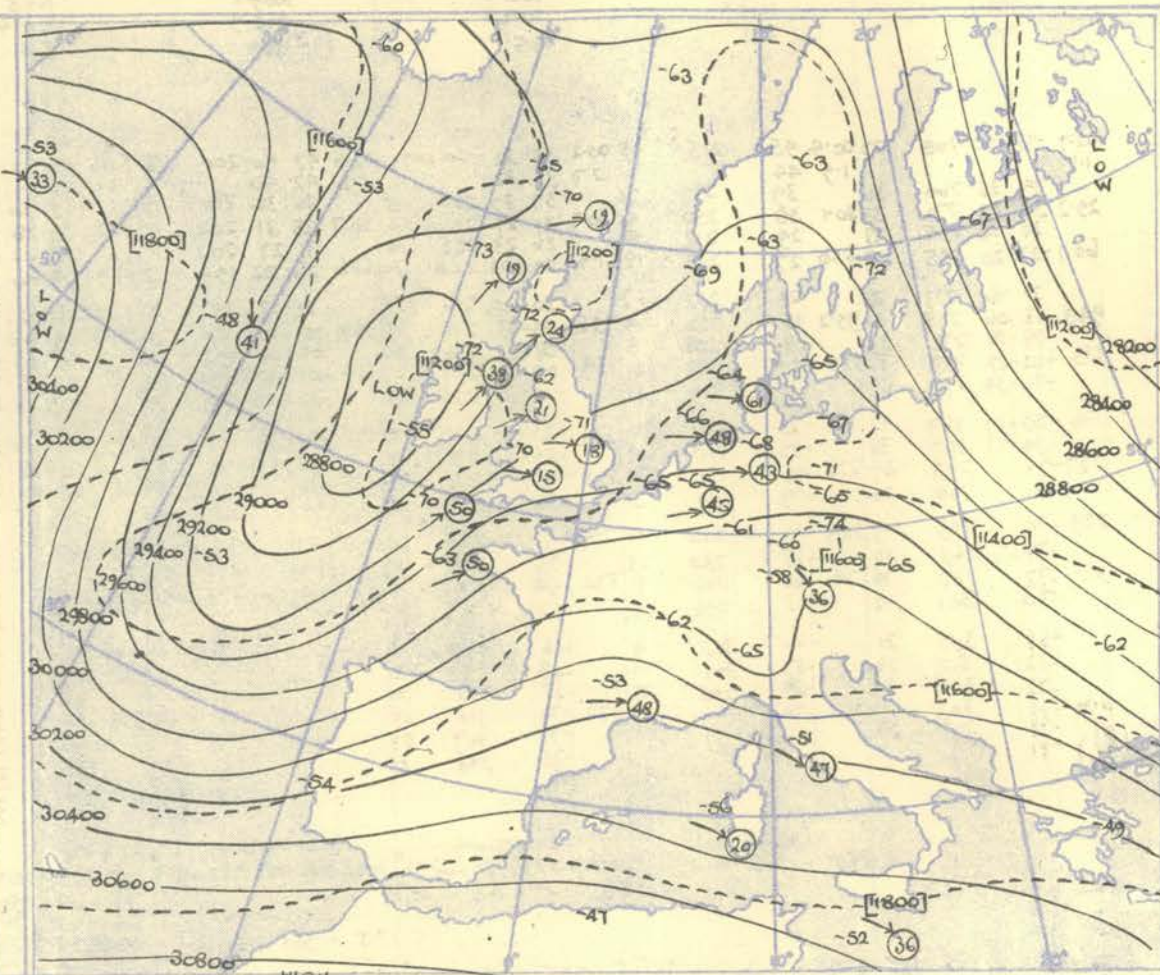
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03h G.M.T.



The continuous lines are contour lines of the 700 mb. surface
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 30 20 10 knots



AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

[illegible]

DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights/above M.S.L.

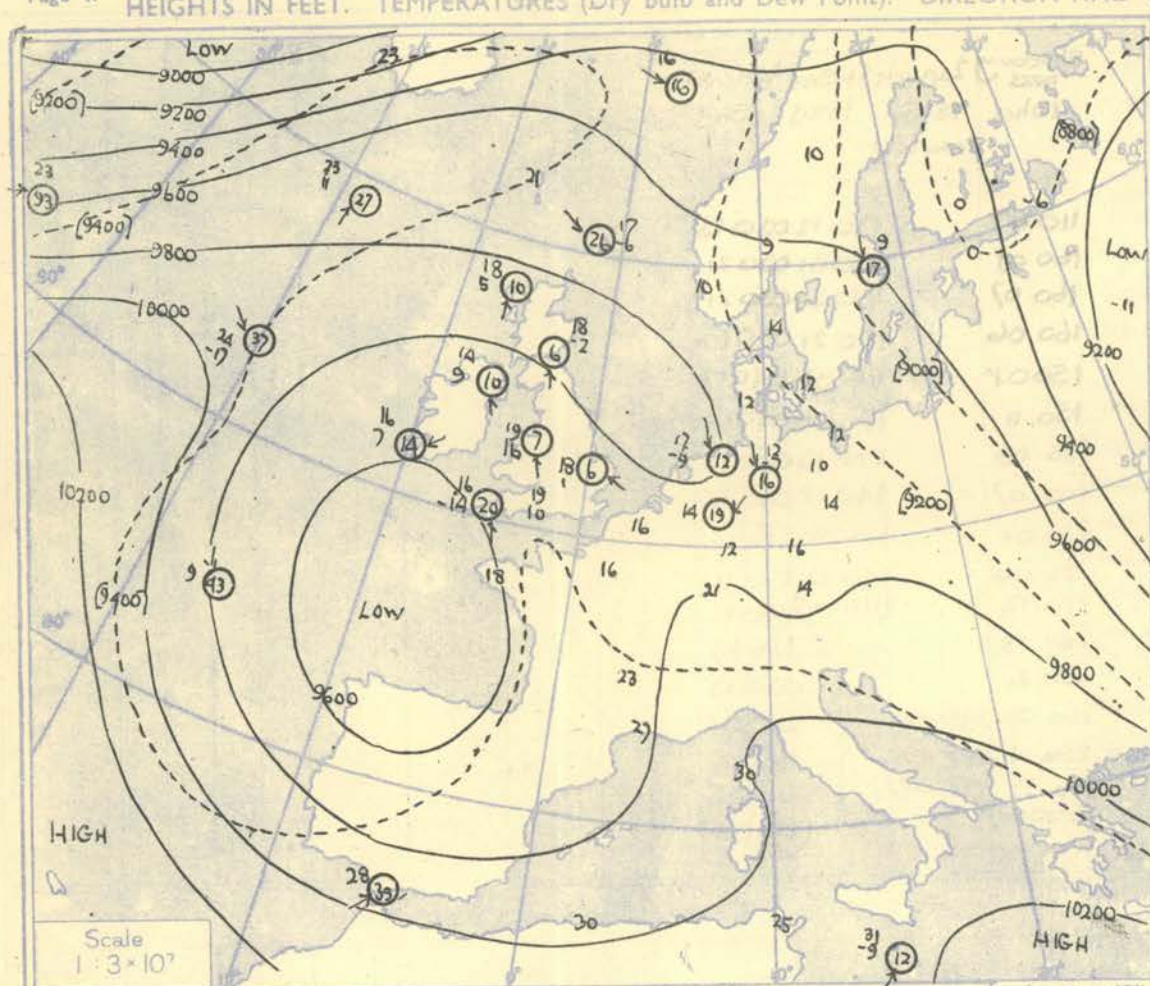
[illegible]

NEPHOSCOPE OBSERVATIONS

[illegible]

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.

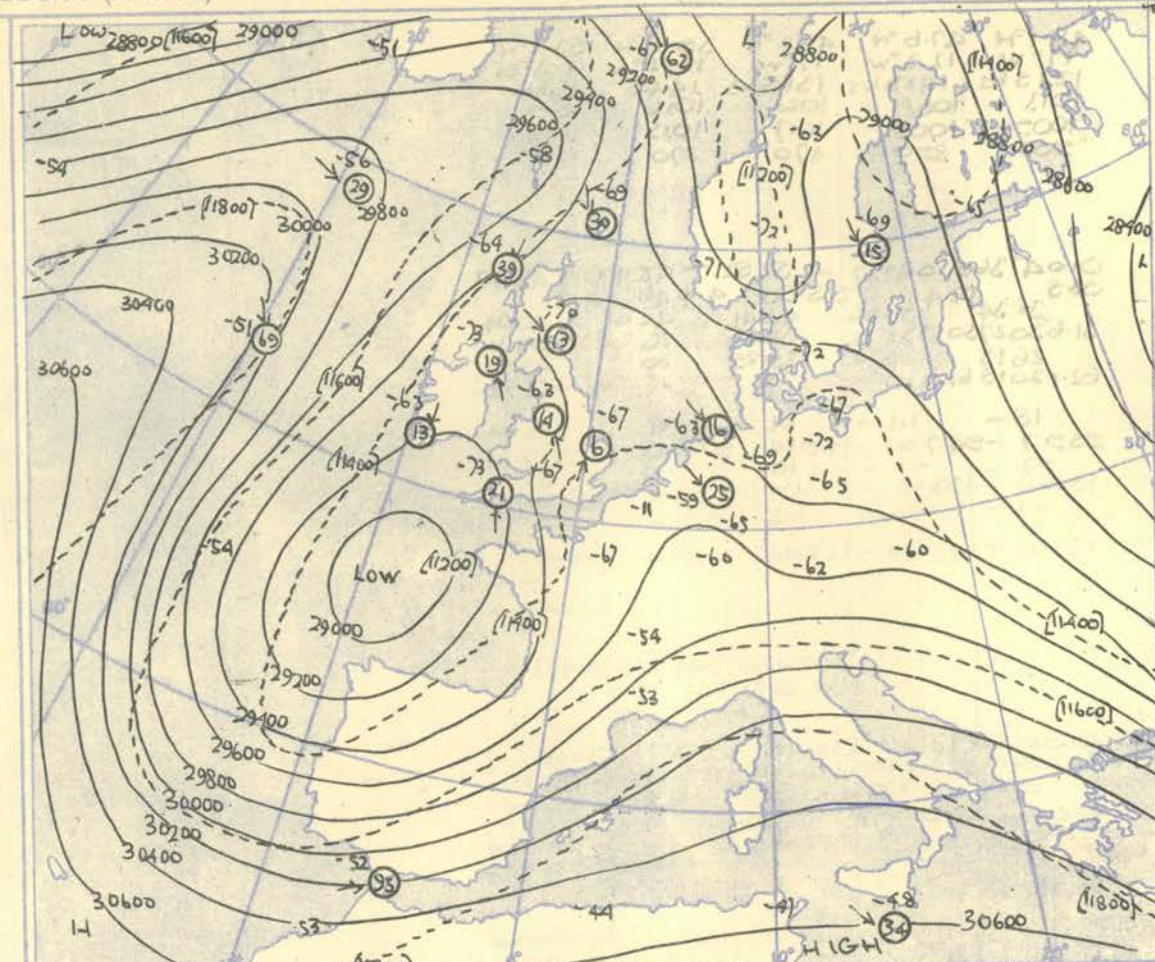
[illegible]



The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb

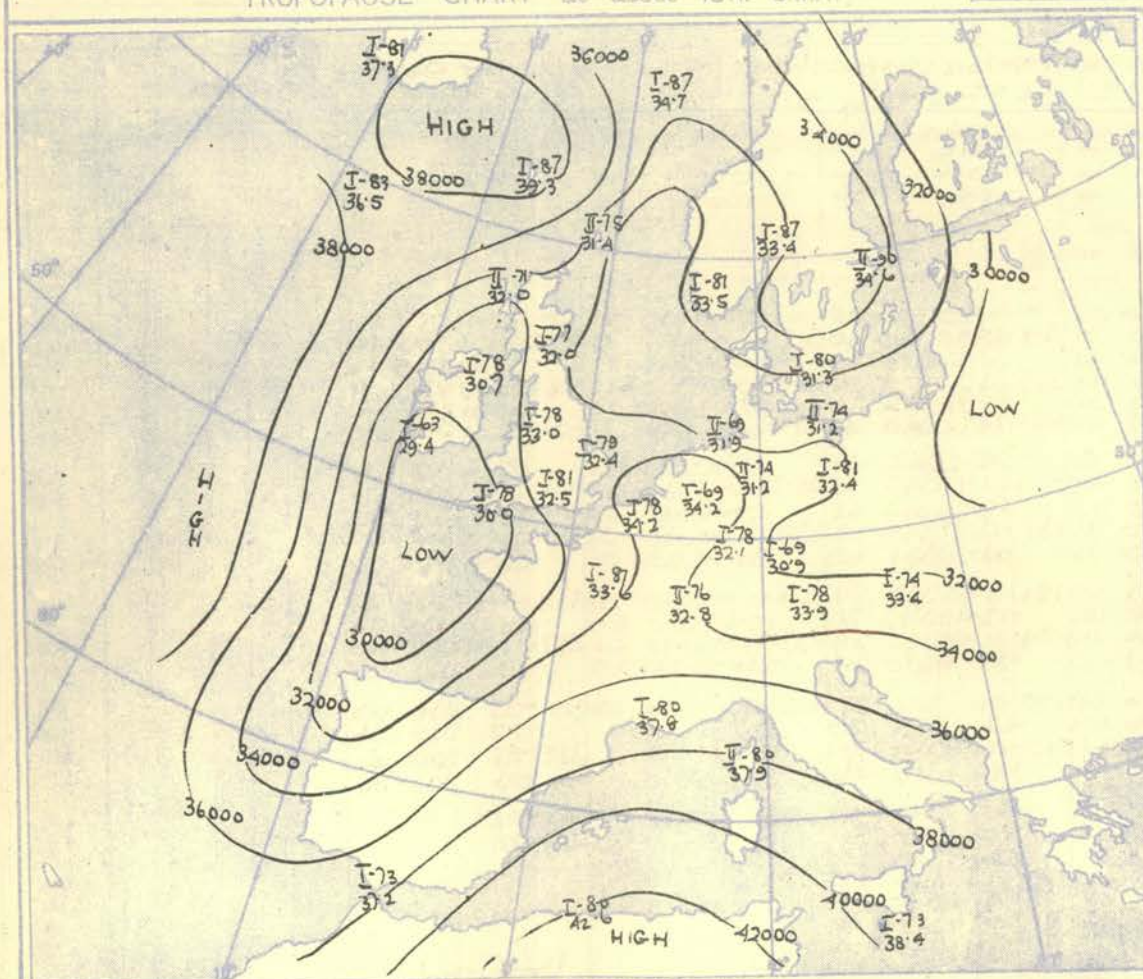
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 20 15 10 knots.



The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 300-300 mb.

TROPOPAUSE CHART at about 15h. G.M.T.



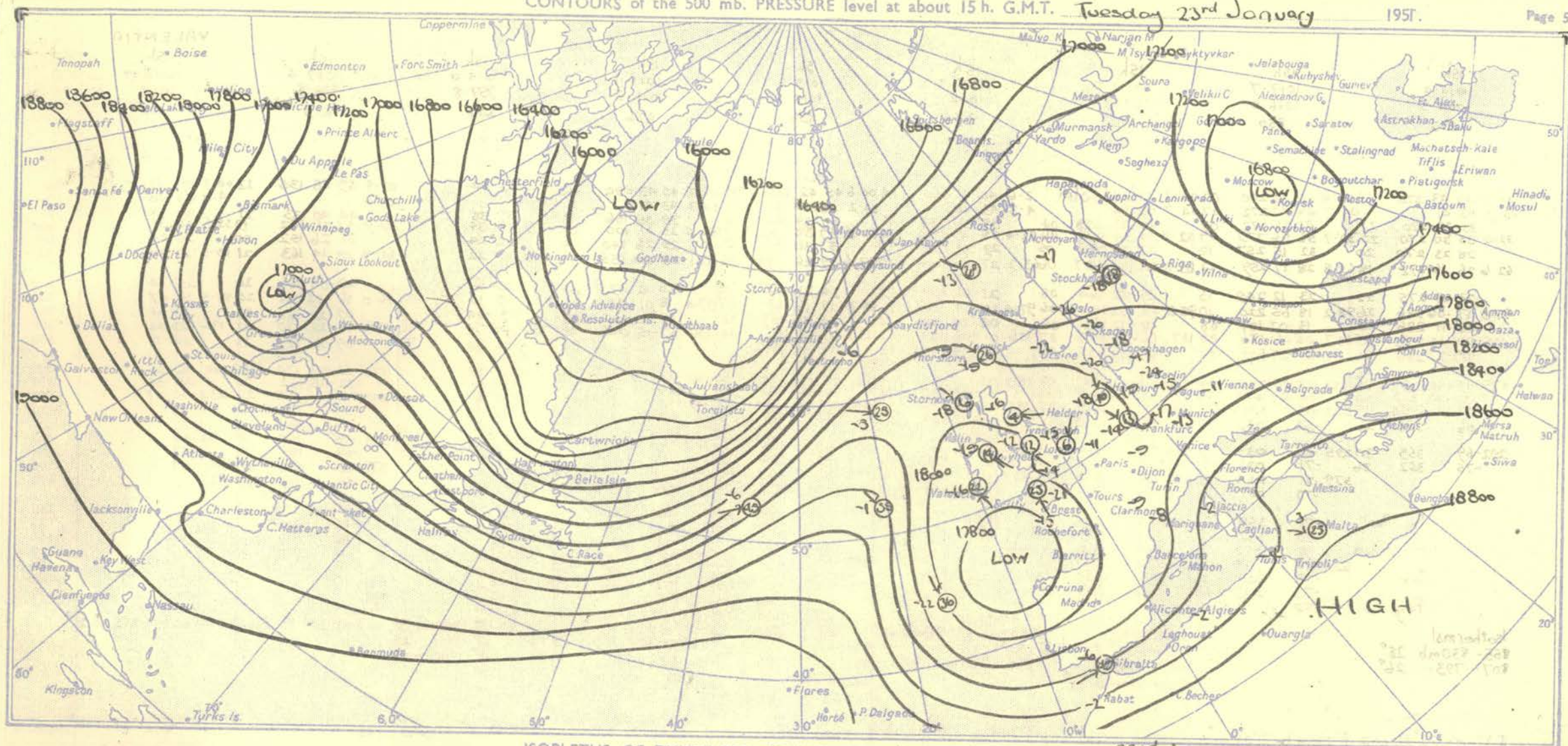
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

A detached cold pool broke from the Atlantic cold trough and moved Southeast to the Bay of Biscay. The warm ridge in the West Atlantic moved rapidly east in the North but only very slowly in the South so becoming orientated in a SW.-N.E. direction and giving a very strong Southwesterly upper flow from Newfoundland to Iceland.

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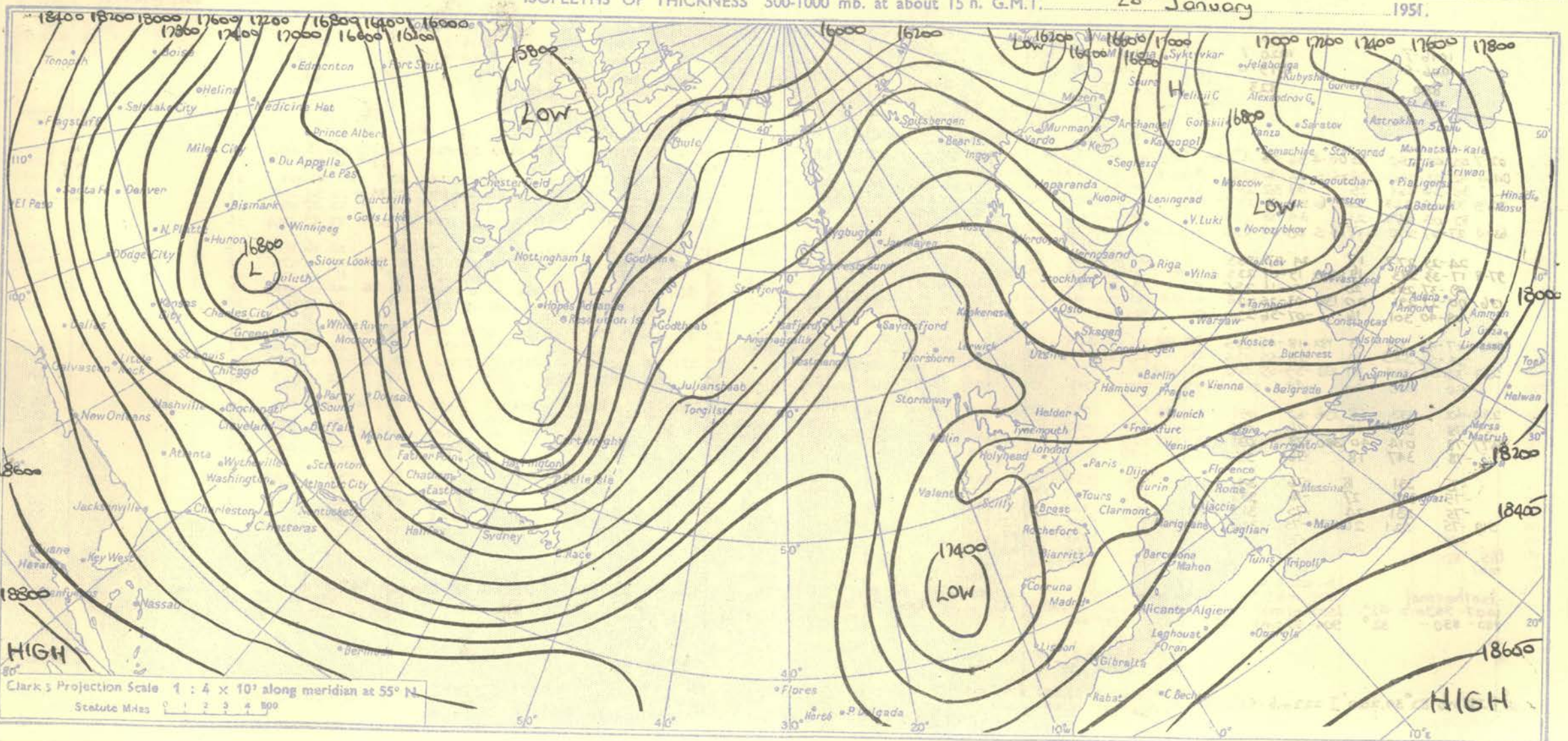
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T.

23rd January

1951.

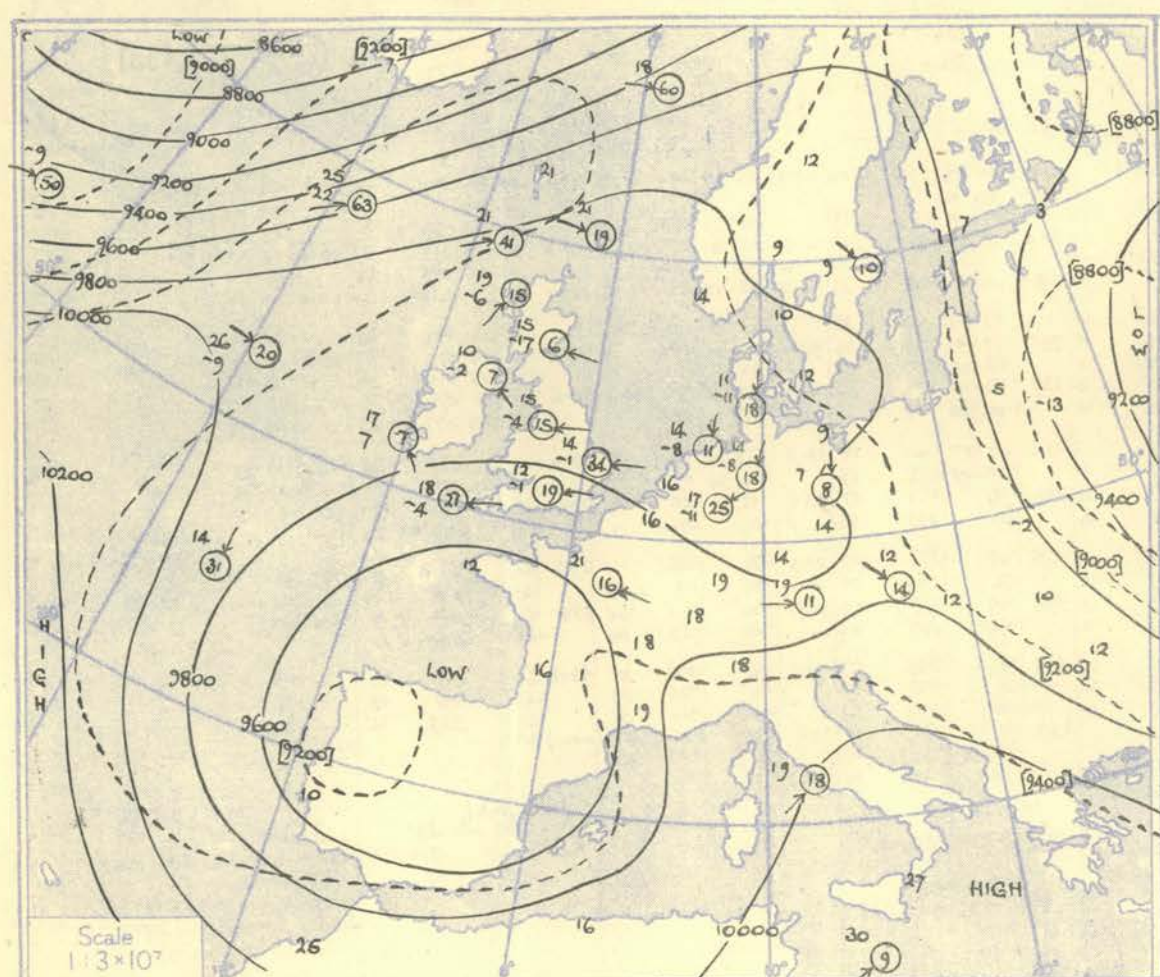


RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)																								
STATION					LERWICK					STORNOWAY					LEUCHARS					ALDERGROVE				
Time					03h.					03h.					03h.					03h.				
M.S.L.					1018.1					1021.1					1023.0					1021.6				
Surf					1008.0					1019.3					1022.1					1012.4				
Freezing					800					847					853					873				
Pressure					mb					mb					mb					mb				
Height					ft./100					ft./100					ft./100					ft./100				
Temp.					°F.					°F.					°F.					°F.				
Dew					°F.					°F.					°F.					°F.				
Wind					Dir. Vel.					Dir. Vel.					Dir. Vel.					Dir. Vel.				
knots					knots					knots					knots					knots				
Surf					1000					1000					1000					1000				
1000					950					950					950					950				
950					900					900					900					900				
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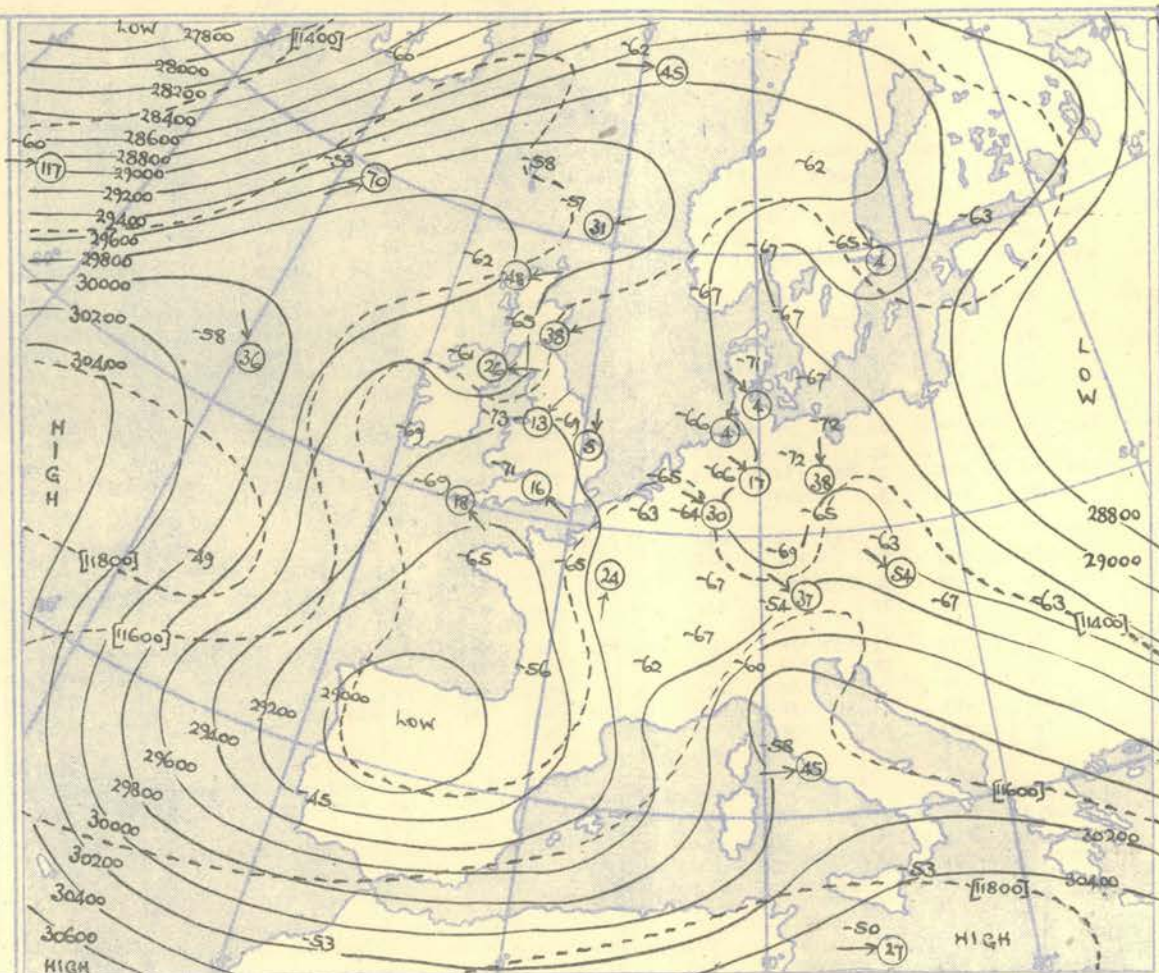
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



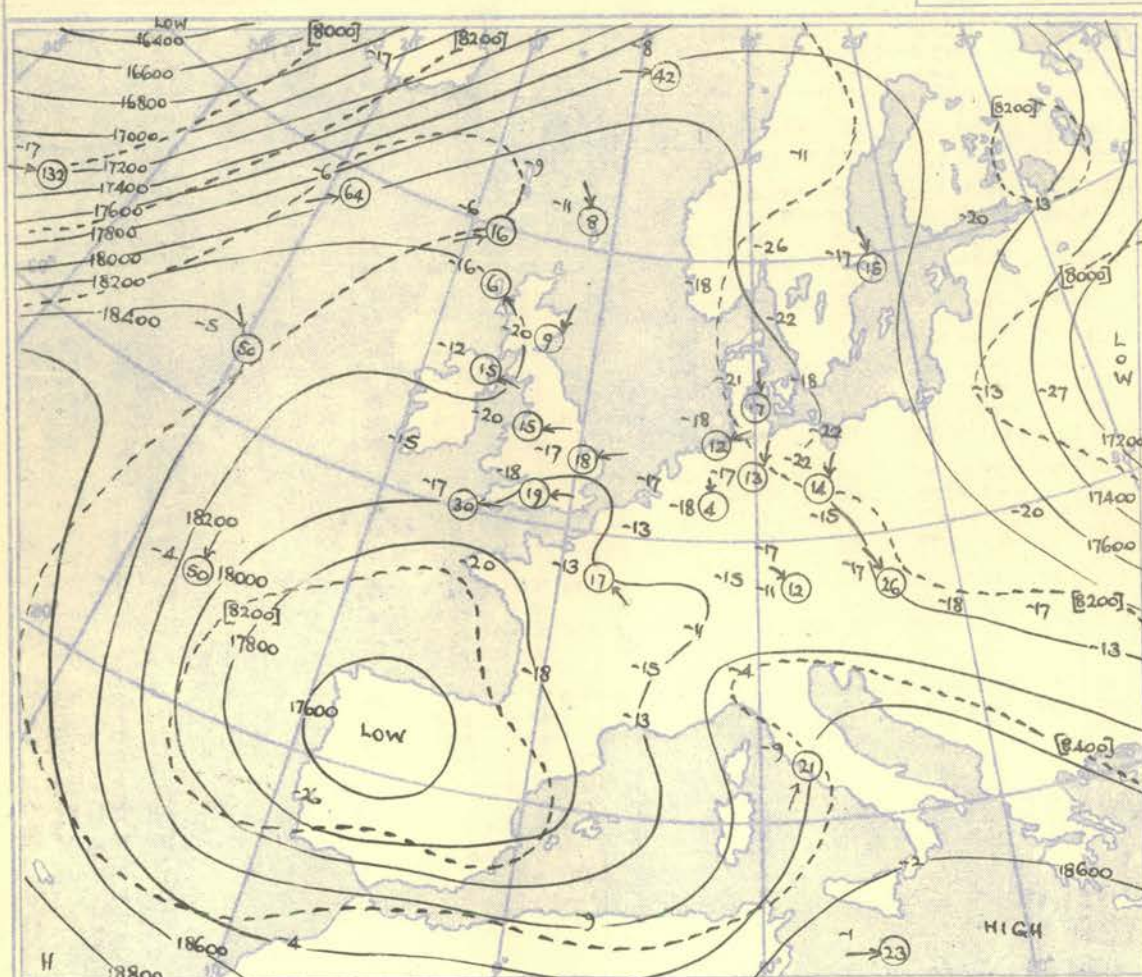
The continuous lines are contour lines of the 700 mb. surface
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

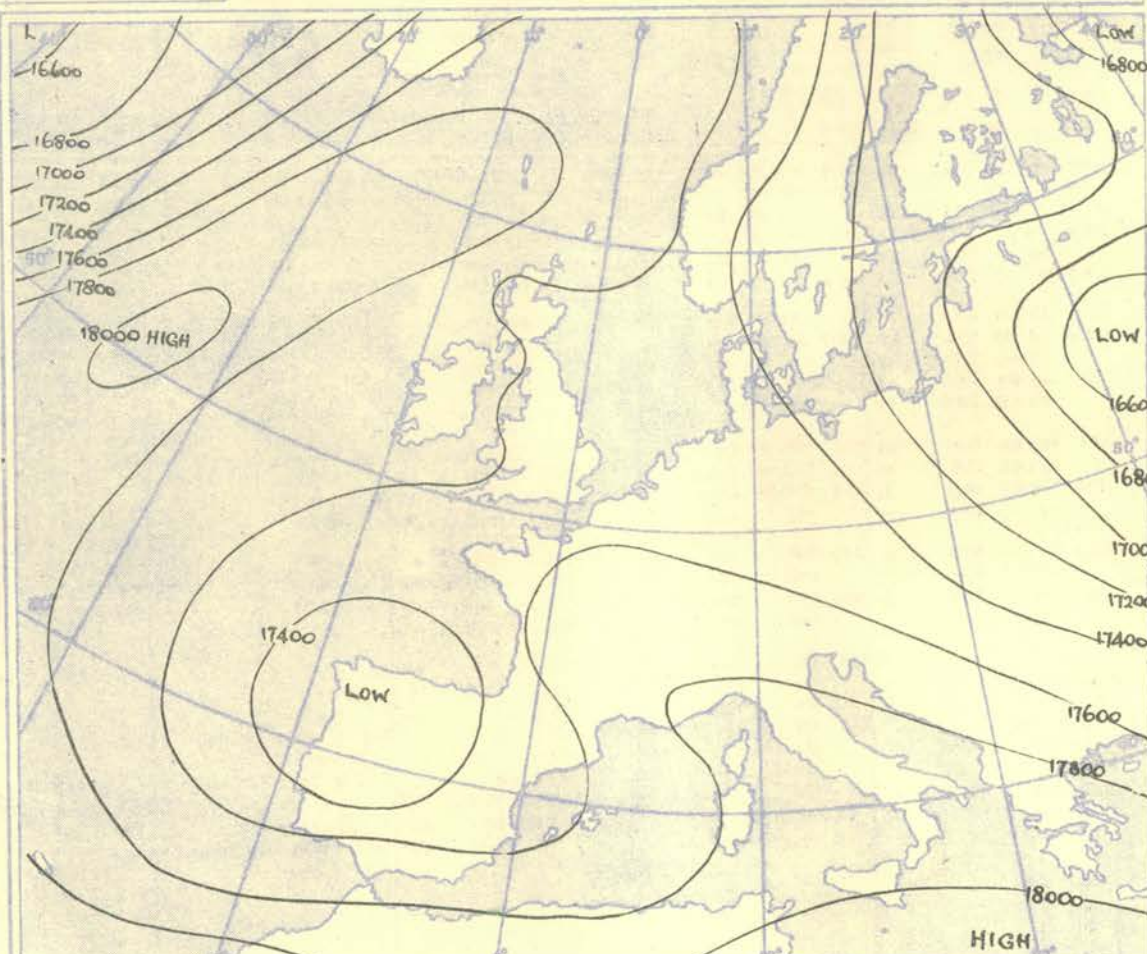
100 80 60 40 20 10 knots



The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500-300 mb.



The continuous lines are contour lines of the 500 mb. surface
The dotted lines are isopleths of the thickness of the layer 700-500 mb.



Isopleths of Thickness 500-1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

[illegible]

DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

Place	Aldergrove		Aldergrove		Downham		Shoburness		W. Observer		W. Watcher		Downham		MET		OFFICE		Place
Time	03h.		09h.		09h.		11h.		15h.		15h.		21h.						Time
Type																			Type
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet
Surf.	CALM		CALM				070	15	310	15	230	28	080	10					Surf.
1,000	095	03	133	12			080	30	310	12	230	43	100	15					1,000
2,000	103	04	166	17			080	28	290	15	230	46	110	17					2,000
3,000	119	04	170	09			080	25	270	18	230	48	110	18					3,000
4,000	129	05	174	07			090	30	250	24	230	48	110	20					4,000
5,000	133	05	166	07			100	32	230	26	230	48	110	21					5,000
6,000	136	06	159	07			100	26	220	28	220	48	110	20					6,000
8,000	133	06	162	08			100	36	230	36	210	57	110	18					8,000
10,000	134	07	146	06			110	35	230	46	210	65	120	17					10,000
14,000	134	14	114	06			110	32	240	48	210	76	110	20					14,000
18,000	098	15	104	07			110	07	230	48	210	82	130	12					18,000
24,000	107	12	072	09			140	10	230	58	210	92	230	10					24,000
30,000	072	26	072	18			030	20	250	66	200	104	240	15					30,000
40,000	034	18	024	11	068	06	L+V		240	69	210	80	250	16					40,000
50,000			332	09	355	11	L+V		(34,000)				280	10					50,000
60,000			293	11	314	12							280	15					
70,000			(SS,000)		(SS,000)								320	12					

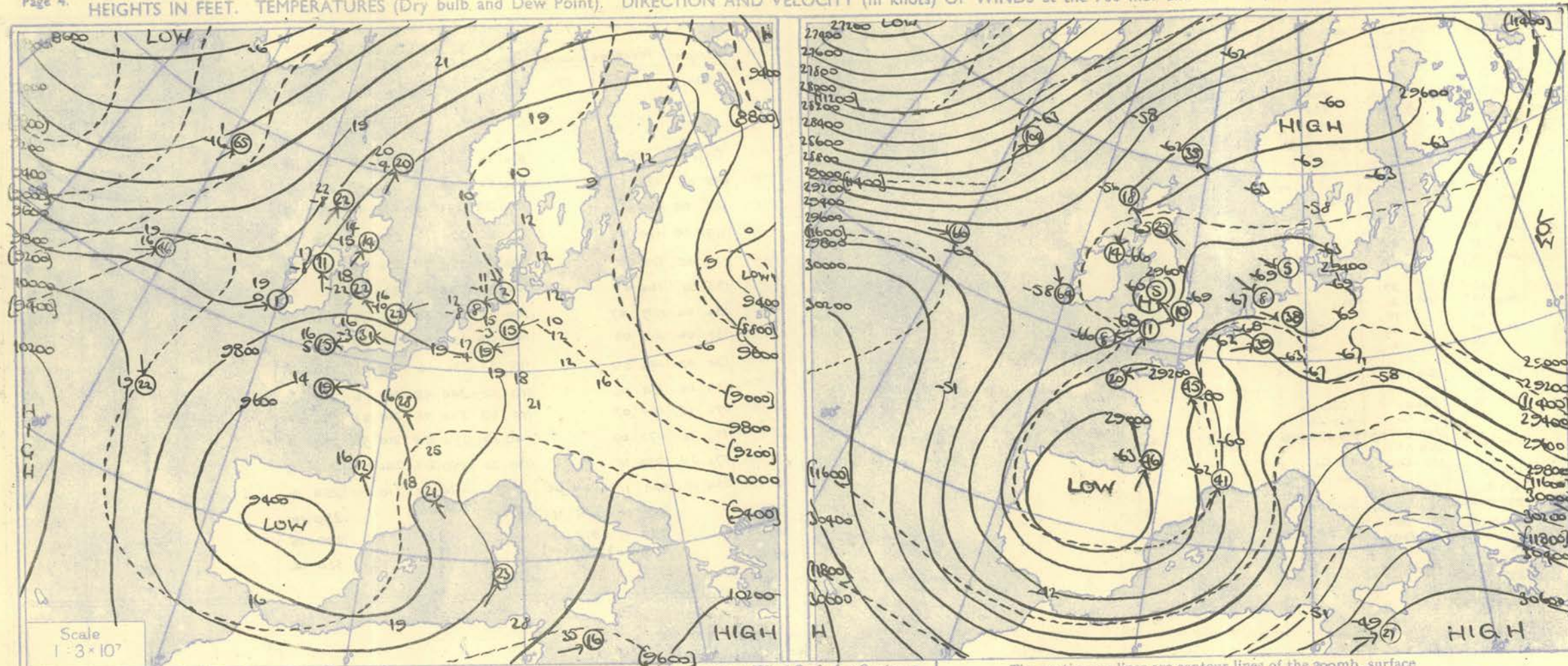
NEPHOSCOPE OBSERVATIONS

[illegible]

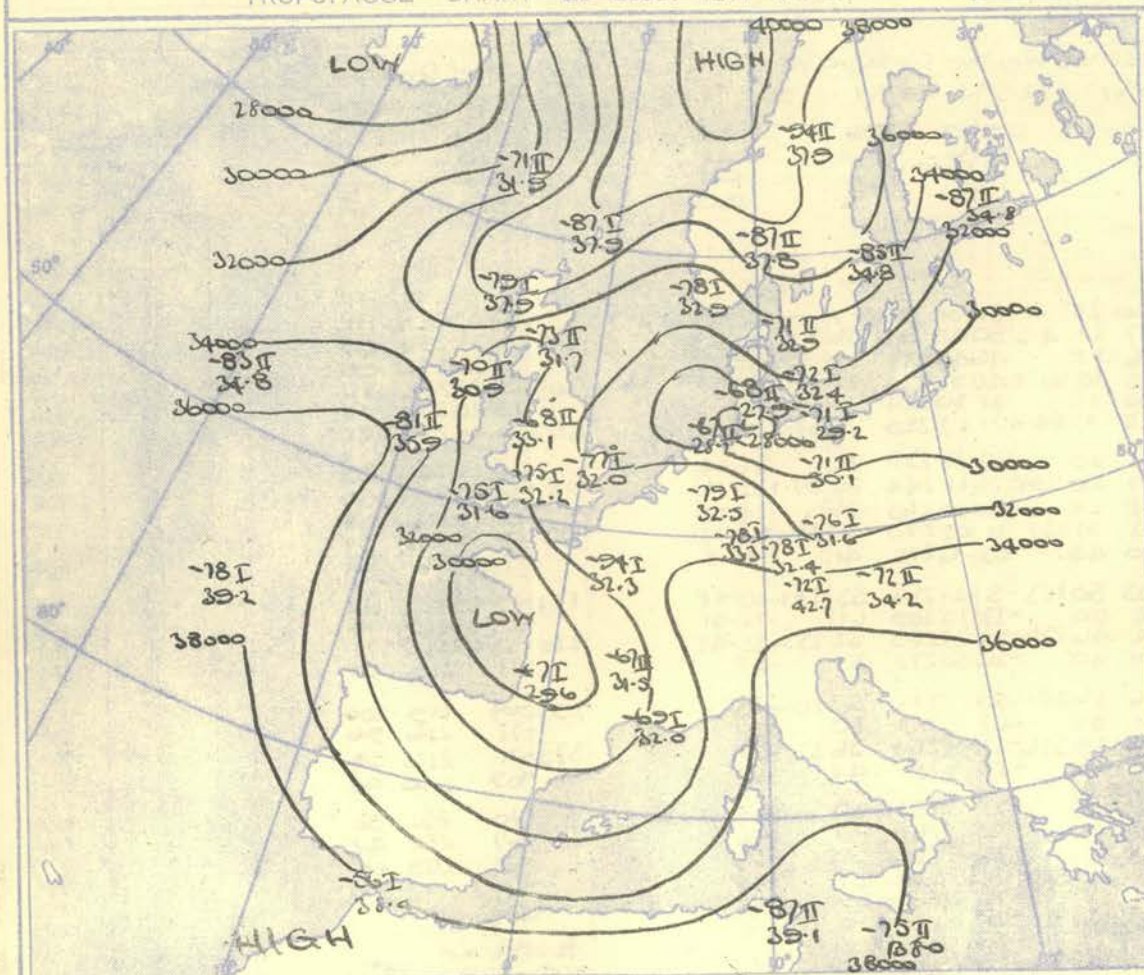
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.

[illegible]

HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h G.M.T.



TROPOPAUSE CHART at about 15h. G.M.T.

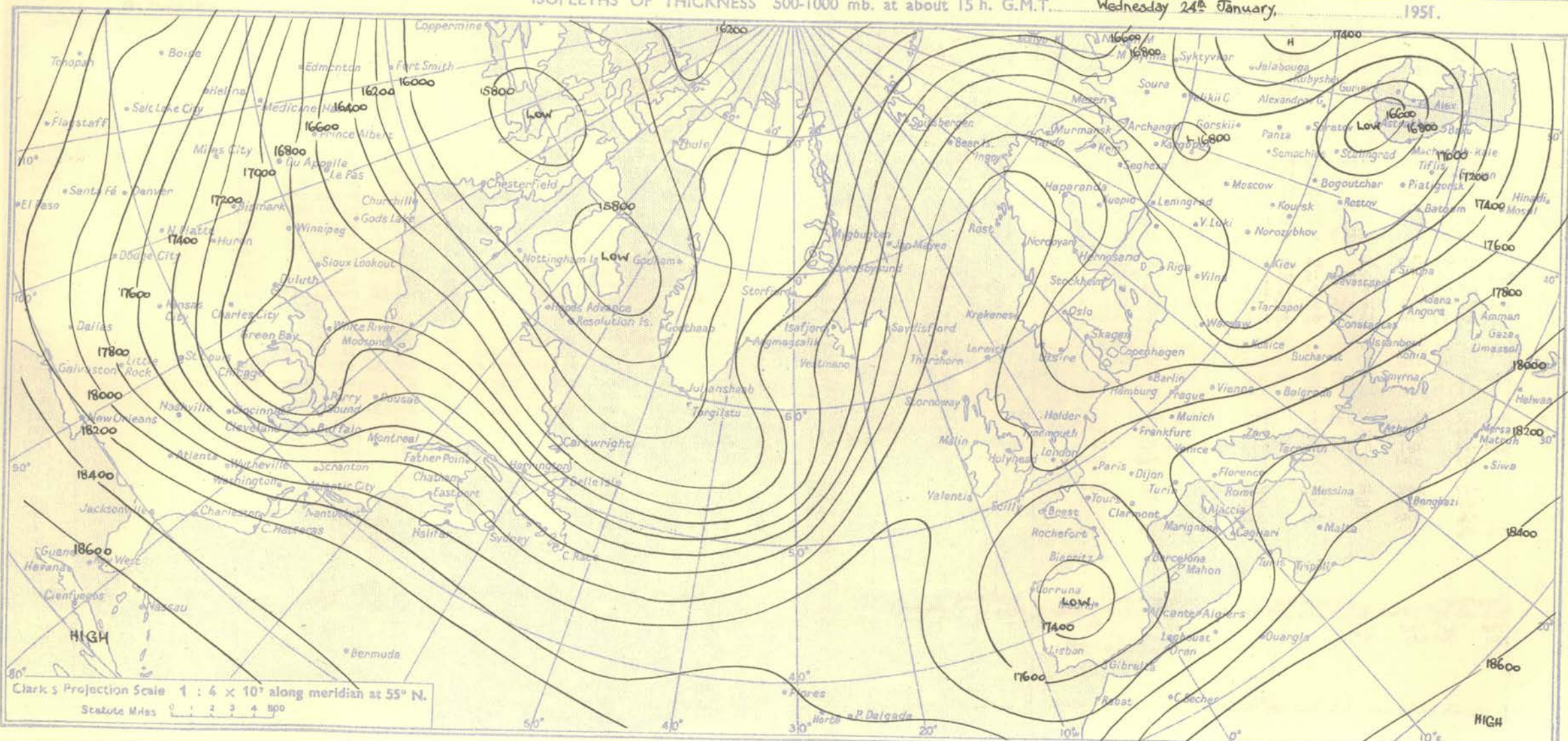
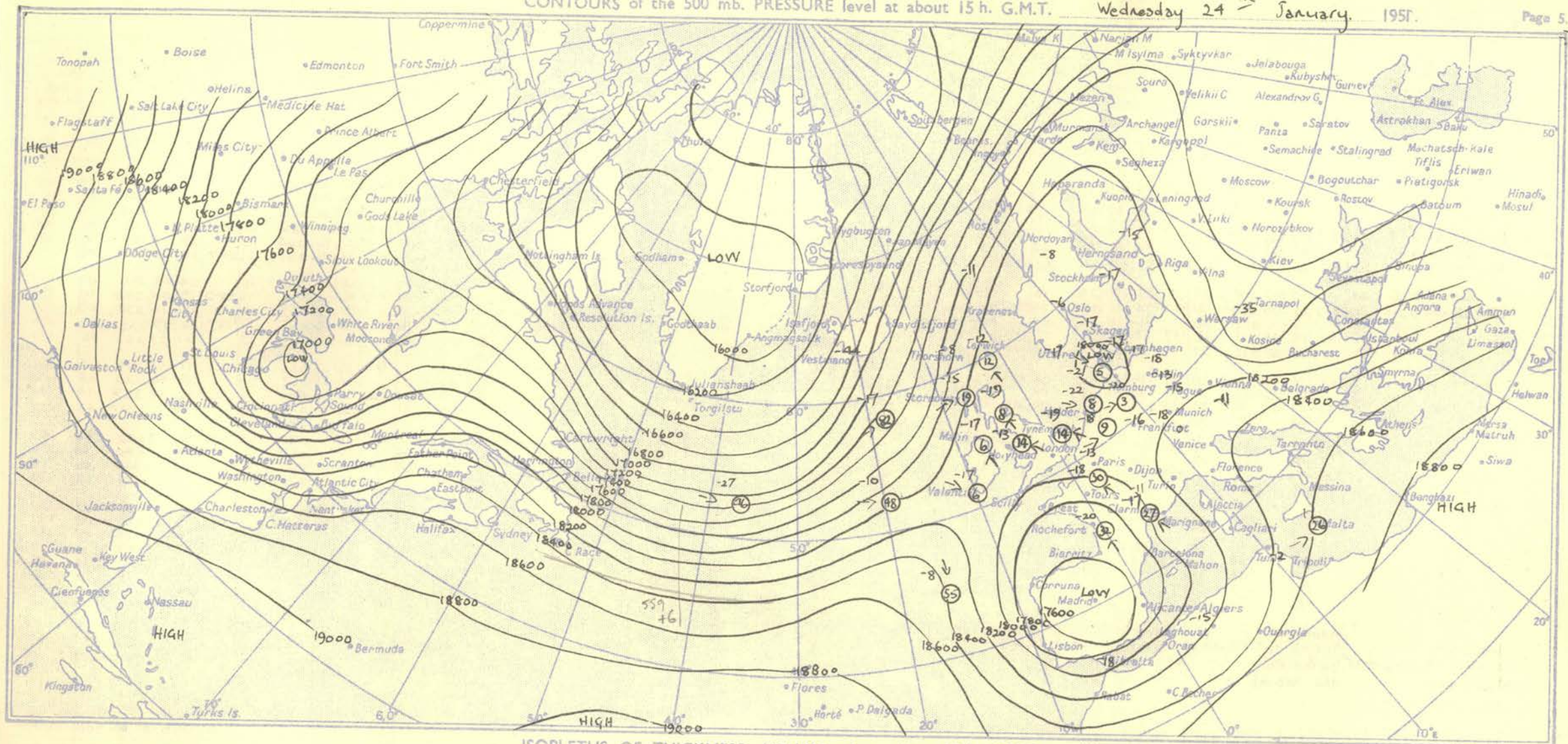


NOTES ON THE AEROLOGICAL SITUATION.

No marked change during the day. The ascent made by the ship at 52°N 35°W show very cold air up to about 6000mb with dry subsided air above.

RATES of SUBSCRIPTION: Single copy 2d. or post free 3d. One calendar month 7/- One quarter 18/- One year 70/-
For special arrangements for supply to schools and colleges, see Form 2452.

Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
Time M.S.L. Surf Freezing	Pressure mb	15h G.M.T.				15h G.M.T.				15h G.M.T.				15h G.M.T.				15h G.M.T.				15h G.M.T.				15h G.M.T.				15h G.M.T.				Time M.S.L. Surf Freezing																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
		Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
1016.0 1005.9	800	62.7	43	40	200	10	00.4	44	40	205	10	00.2	34	32	Cal m	02.6	43	38	160	15	00.6	41	37	120	03	01.2	43	34	100	12	04.4	42	37	090	08	02.9	47	55	090	15	00.3	48	42	260	04	Surf																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
1000	1000	64.2	43	40	200	10	04.1	42	38	205	10	05.2	37	34	230	09	05.1	43	37	163	16	05.3	40	36	116	14	05.2	41	32	095	22	04.5	42	37	095	25	04.3	46	40	240	07	1000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
950	950	33.3	38	34	209	25	32.1	30	32	203	30	33.1	37	33	204	10	43.3	40	31	180	07	33.1	36	32	141	12	34	26	093	19	32.6	30	26	067	27	32.5	34	23	066	22	33.0	34	33	172	08	950																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
900	900	37	26	207	26	32.1	30	26	210	35	33.1	32	27	200	14	33.2	34	28	203	07	33.1	30	26	149	15	33.0	28	18	100	19	32.6	30	26	090	27	32.5	34	23	066	22	33.0	34	33	172	08	900																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
850	850	34	21	210	27	37	22	204	29	38	16	213	22	33	12	183	11	37	00	143	18	35	10	105	26	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101	29	33	14	101</

Tropopause		200mb-87°37,900'				202mb-79°37,900'				269mb-73°31,700'				280mb-70°30,900'				254mb-68°33,100'				264mb-77°32,000'				263mb-75°32,200'				270mb-75°31,600'				221mb-81°35,900'				Tropopause	
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION	
Time		21h G.M.T.				21h G.M.T.				21h G.M.T.				21h G.M.T.				21h G.M.T.				21h G.M.T.				21h G.M.T.				21h G.M.T.				Time					
M.S.L.		1014.0 mb				1012.0 mb				1018.3 mb				1017.2 mb				1018.8 mb				1018.3 mb				1015.4 mb				1015.4 mb				M.S.L.					
Surf		1003.8 mb				1010.3 mb				1017.4 mb				1007.8 mb				1016.7 mb				1013.7 mb				999.0 mb				1004.6 mb				Surf					
Freezing		836				830				830				900				841				828				838				903				Freezing					
Pressure		836				830				830				900				841				828				838				903				Pressure					
Height		ft/100				ft/100				ft/100				ft/100				ft/100				ft/100				ft/100				ft/100				Height					
Temp.		°F.				°F.				°F.				°F.				°F.				°F.				°F.				°F.				Temp.					
Dew		°F.				°F.				°F.				°F.				°F.				°F.				°F.				°F.				Dew					
Dir.		°F.				°F.				°F.				°F.				°F.				°F.				°F.				°F.				Dir.					
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Wind		knots				knots				knots				knots				knots				knots				knots				knots				Wind					
Vel.		knots				knots				knots				knots				knots				knots				knots				knots				Vel.					
Dir.		knots				knots				knots				knots				knots				knots				knots				knots				Dir.					
Vel.		knots				knots				knots				knots				knots				knots				knots				knots				Vel.					
Wind		knots				knots				knots				knots				knots				knots				knots				knots				Wind					
Vel.		knots				knots				knots				knots				knots				knots				knots				knots				Vel.					
Dir.		knots				knots				knots				knots																									

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION							
Pressure mb	Time M.S.L. Surf Freezing	03h. 1011.5 1001.3 842				03h. 1007.1 1005.5 893				03h. 1015.8 1014.9 838				03h. 1013.0 1003.0 921				03h. 1015.9 1013.8 830				03h. 1016.4 1011.8 955				03h. 1013.8 997.3 888				03h. 1013.4 1002.6 910				03h. 1010 1008 2875				Time M.S.L. Surf Freezing							
		G.M.T. mb mb mb				G.M.T. mb mb mb				G.M.T. mb mb mb				G.M.T. mb mb mb				G.M.T. mb mb mb				G.M.T. mb mb mb				G.M.T. mb mb mb				G.M.T. mb mb mb															
		Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots												
Surf	1000	02.7	41	38	190	25	44	39	190	25	00.2	36	34	CALM	02.6	40	36	150	05	00.6	37	32	110	15	01.2	38	35	070	05	1.4	37	25	060	09	02.9	40	38	00.3	45	41	170	13	Surf		
950	03.0	36	33	185	30	1.9	44	37	190	25	04.1	34	32	76	03.4	39	36	162	12	04.2	35	31	113	21	04.3	37	34			3.6	37	25	060	09	03.6	40	38	2.7	45	41	170	13	950		
900	31.0	28	25	174	26	30.0	38	32	197	42	04.7	29	26	157	15	36	30	168	21	04.3	39	36	130	19	04.3	37	34			3.6	37	25	060	09	03.6	40	38	2.7	45	41	170	13	900		
850	23.0	20	20.3	26	26	26	26	20.7	41	04.7	23	20	199	19	31.3	29	24	168	24	04.7	26	21	180	18	04.7	26	21	180		18	31.3	31	090	14	31.6	36	34	30.9	35	28	190	33	850		
800	61.8	28	14	214	27	60.7	27	15	209	40	62.5	28	23	203	31	61.6	17	09	186	20	62.6	29	05	136	22	62.8	28	04	113		17	62.3	28	15	121	10	62.4	26	22	61.7	26	14		800	
750	21	09	21.4	25	24	08	20.9	35	20	15	20.3	29	12	10	186	36	20	10	141	22	22	08	113	12	22	08	113		12	22	08	113	13	21	09	131	13	19	17		750				
700	13	01	21.2	27	95.1	17	01	20.8	28	90.7	12	08	20.5	28	95.4	15	09	185	37	96.8	13	16	139	18	97.1	17	13	125		12	96.6	15	09	145	11	96.6	16	10		700					
650	11	01	21.1	22	10	10	20.7	24	10	05	01	20.5	26	09	15	186	39	08	146	29	08	126	146	15	08	119	134		14	08	0.3	147	09	08	0.3	147	10	10	02		650				
600	01	20	20.6	18	134	00	16	20.3	22	135	02	06	20.7	20	134	03	29	200	20	135	00	30	154	17	136	10	31	143		14	13.5	02	08	143	08	135	01	09		600					
550	09	31	20.4	18	10	28	200	22	11	15	21.6	15	07	40	210	19	09	39	150	16	09	39	150	16	07	38	169		10	07	19	157	06	08	19	157	06	08	19		550				
500	178	19	40	209	14	177	19	38	206	26	178	22	26	216	14	178	18	49	214	15	179	19	49	218	12	180	16	38	195		09	179	18	31	152	07	179	18	31		500				
450	29	47	20.6	15	228	30	48	20.4	24	33	37	21.4	11	29	56	211	11	29	56	211	11	29	56	211	07	28	44	203		11	28	44	203	07	28	44	203	07	28	44		450			
400	40	57	19.5	12	54	21.6	15	22.9	45	23.2	09	22.9	45	23.2	09	22.9	45	23.2	09	22.9	45	23.2	09	22.9	45	23.2	09	22.9	45		12	23.0	40	52	136	07	23.0	40	52	136	07	23.0	40		400
350	50		18.5	12	54	21.6	15	22.9	45	23.2	09	22.9	45	23.2	09	22.9	45	23.2	09	22.9	45	23.2	09	22.9	45	23.2	09	22.9	45		12	23.0	40	52	136	07	23.0	40	52	136	07	23.0	40		350
300	29.2	63		06	291	64	246	22	291	66	306	10	291	66	306	10	291	66	306	10	291	66	306	10	291	66	306	10	291	66		06	291	66	306	10	291	66	306	10	291	66		300	
250	74		19.1	14	373	76	209	28	375	72	259	10	376	82	252	18	377	70	308	12	377	68	268	09	377	63	282		12	377	63	282	09	376	75		250								
200	274	74	19.6	14	373	76	209	28	375	72	259	10	376	82	252	18	377	70	308	12	377	68	268	09	377	63	282		12	377	63	282	09	376	75		200								
170	71		20.2	12	68	223	28	75	236	14	71	61	245	17	71	61	245	17	71	61	245	17	71	61	245	17	71	61		12	71	61	245	17	71	61	245	17	71	61		170			
150	69		22.9	16	103	68	234	27	134	70	227	16	435	69	244	15	66	241	06	437	67	244	11	437	67	244	11	437	67		16	244	11	437	67	244	11	437	67	244	11		150		
130	71		24.6	24	70	238	28	71	245	20	71	245	20	71	245	20	71	245	20	71	245	20	71	245	20	71	245	20		16	244	11	437	67	244	11	437	67	244	11		130			
110	71		24.6	25	70	238	28	71	245	20	71	245	20	71	245	20	71	245	20	71	245	20	71	245	20	71	245	20		16	244	11	437	67	244	11	437	67	244	11		110			
90	71		25.0	27	67																																						90		
80	71		25.0	27	67																																						80		
70	71		26.9	25																																							70		
60	626	70	27.6	23																																							60		
60	71		29.0	30																																								60	
Inversion		886 mb 26° - 850 mb 33°		693 - 12° - 680 - 13°		Inversion		886 mb 22° - 865 mb 35°		Inversion		738 mb 10° - 725 mb 19°		Inversion		910 mb 24° - 860 mb 35°		273 - 70° - 263 - 68°		Isothermal		263 - 250 mb - 68°		Inversion		933 mb 31° - 900 mb 32°		933 mb 31° - 900 mb 32°		Inversion		888 mb 29° - 863 mb 30°		750 - 19° - 724 - 20°		Isothermal		1008 - 1000 mb 45°							
Tropopause		I 246 mb - 78°		33,300'		I 215 mb - 83°		35,900'		I 246 mb - 77°		33,000'		II 250 mb - 76°		33,000'		I 273 mb - 70°		31,100'		I 266 mb - 78°		31,800'		I 288 mb - 72°		29,900'		II 275 mb - 72°		31,000'		II 240 mb - 79°		34,000'		Tropopause							
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				STATION											
Pressure mb	Time M.S.L. Surf Freezing	09h. 1009.3 999.1 931				09h. 1003.4 1001.7 917				09h. 1012.8 1011.9 988				09h. 1013.5 1008.3 929				09h. 1011.9 1009.8 840				09h. 1013.2 1008.7 948				09h. 1011.6 995.3 866				09h. 1010.9 1000.1 880				STATION											
		G.M.T. mb mb mb				G.M.T. mb mb mb				G.M.T. mb mb mb				G.M.T. mb mb mb				G.M.T. mb mb mb				G.M.T. mb mb mb				G.M.T. mb mb mb				G.M.T. mb mb mb															
		Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots								
Surf	1000	02.7	39	35	195	28	43	37	190	25	00.2	35	30	CALM	02.6	38	34	150	10	00.6	37	32	140	10	01.2	39	35	080	07	04.4	38	36	100	05	02.9	40	36	160	02	Surf					
950	02.5	35	32	186	33	00.9	43	37	190	25	03.3	34	29		02.4	38	34	150	10	03.1	38	32	157	16	03.5	38	34			03.1	38	36	100	05	02.9	40	36	160	02	950					
900	30.4	27	24	186	36	28.9	30	26	26	30.7	28	23	175	20	30.3	29	24	168	27	30.8	26	21	154	22	31.2	27	24	177		16	31.0	34	32	100	10	31.0	38	34	220	09	900				
850	25.20	19.9	36		36	26.22	21	18	610	28	01	179	30	60.8	17	09	192	25	61.7	29	10	161	21	61.8	28	01	120		14	61.9	24	21	165	09	61.8	27	23	208	07	850					
800	60.9	26	02	213	38	59.5	21	18	19	11	181	30	20	06	186	33	24	09	159	21	23	12	121	15	23	12	121		15	21	17	163	09	25	20	233	08	800							
750	21	08	21.4	37	93.8	14	03	95.2	12	20	182	32	94.9	15	02	190	32	96.1	16	15	160	18	96.2	16	19	131		16	96.1	15	07	159	09	96.2	19	08	225	06	750						

Scale 1:3 x 10⁷

HIGH

LOW

10000

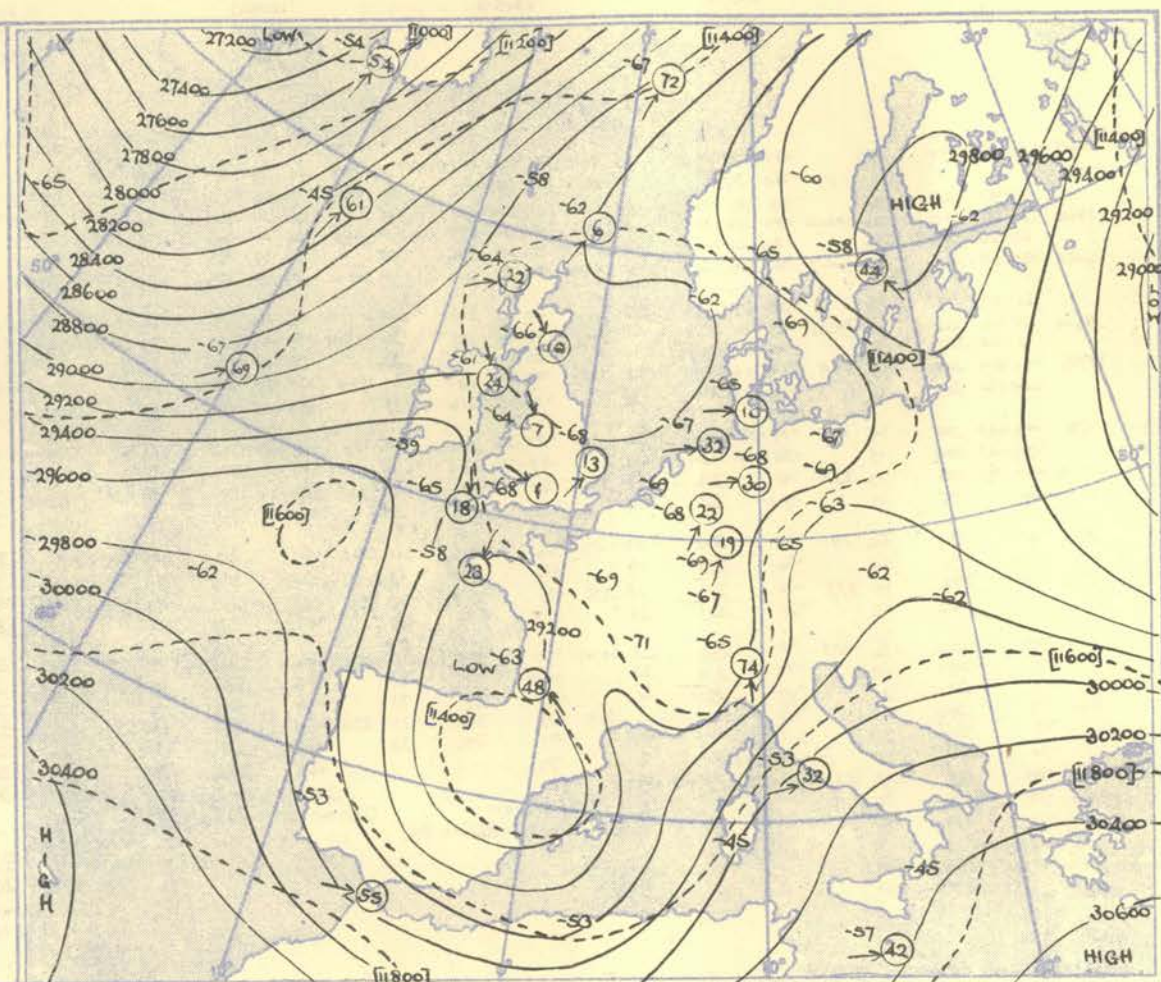
9600

9800

10200

HIGH

100 50 40 30 20 15 10 knots



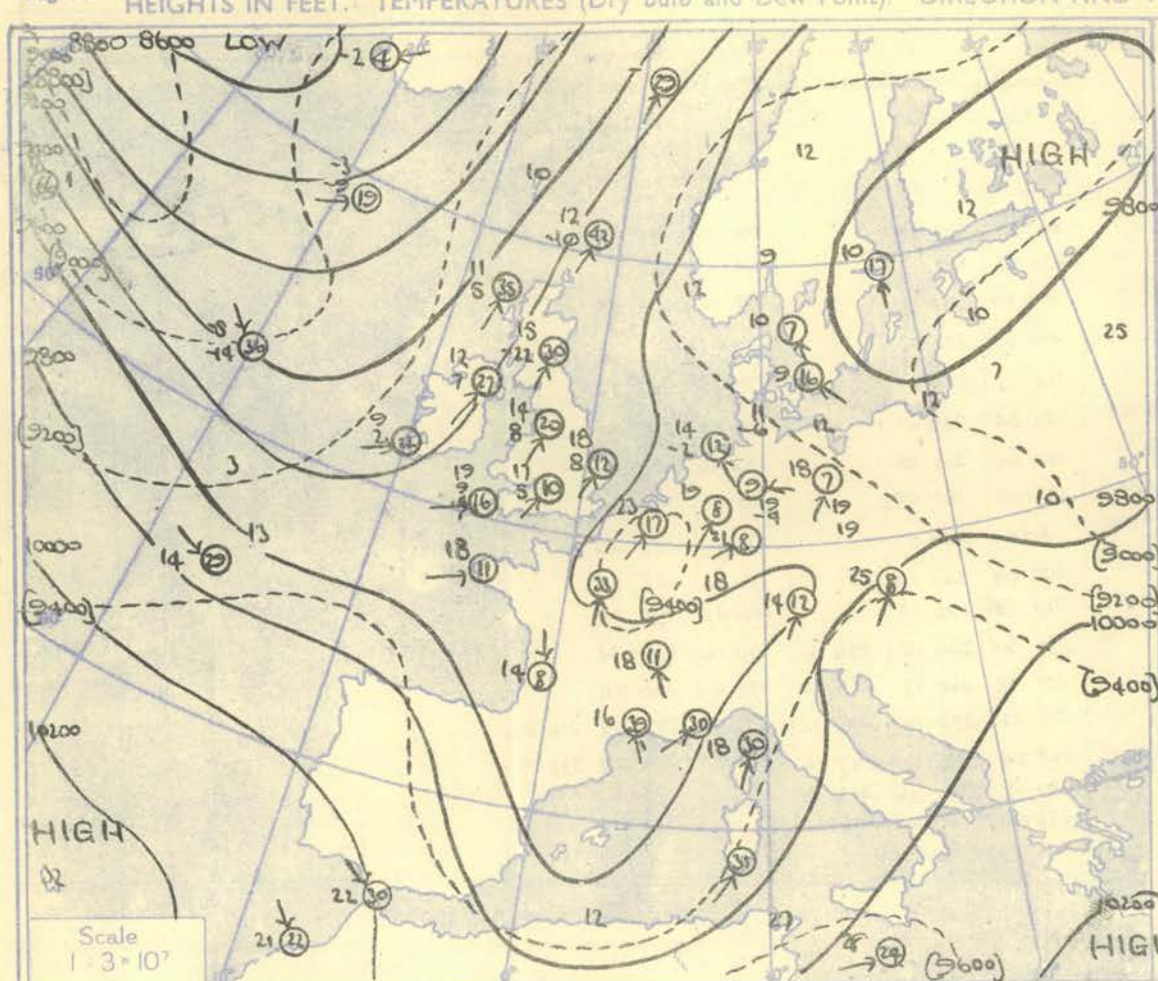
This is a detailed weather map of Europe and surrounding regions, showing isobars, isotherms, and various weather symbols. The map includes labels for 'LOW' and 'HIGH' pressure systems, as well as numerical values for pressure (e.g., 1000, 1040, 1080) and temperature (e.g., -10, -15, -20). The map is oriented with North at the top.

This map displays the North Atlantic region with isobars and isotherms. Isotherms are labeled with values such as 16400, 16600, 16800, 17000, 17200, 17400, 17600, 17800, and 18000. High and Low pressure systems are marked. The map includes the outlines of North America, Europe, and Africa.

Isopleths of Thickness 500-1000mb.

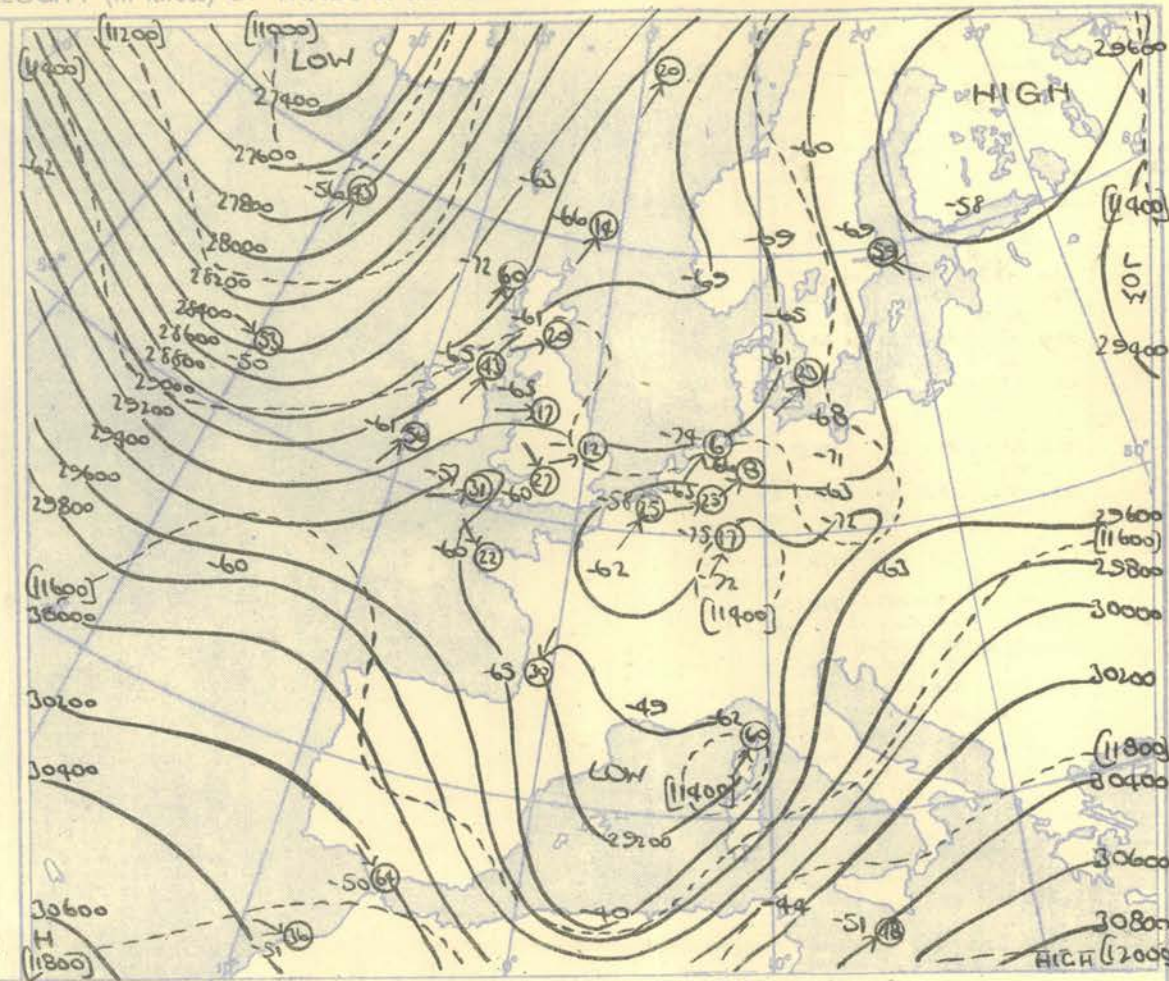
DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.[illegible]



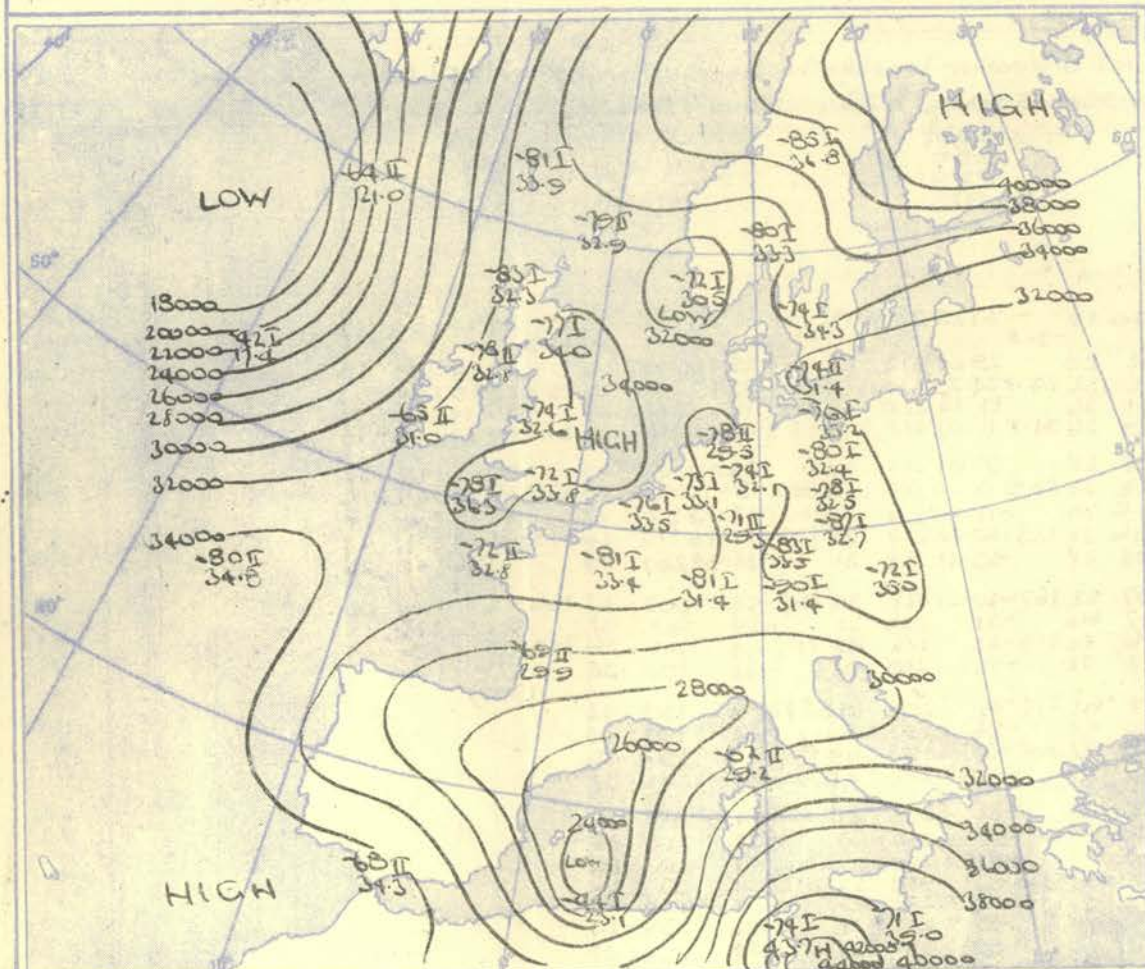
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52½° N.
100 80 60 40 20 10 0 10 20 30 40 50 60 70 80 90 knots



The continuous lines are contour lines of the 300 mb. surface.
The dotted lines are isopleths of the thickness of the layer 500-300 mb.

TROPOPAUSE CHART at about 15h. G.M.T.



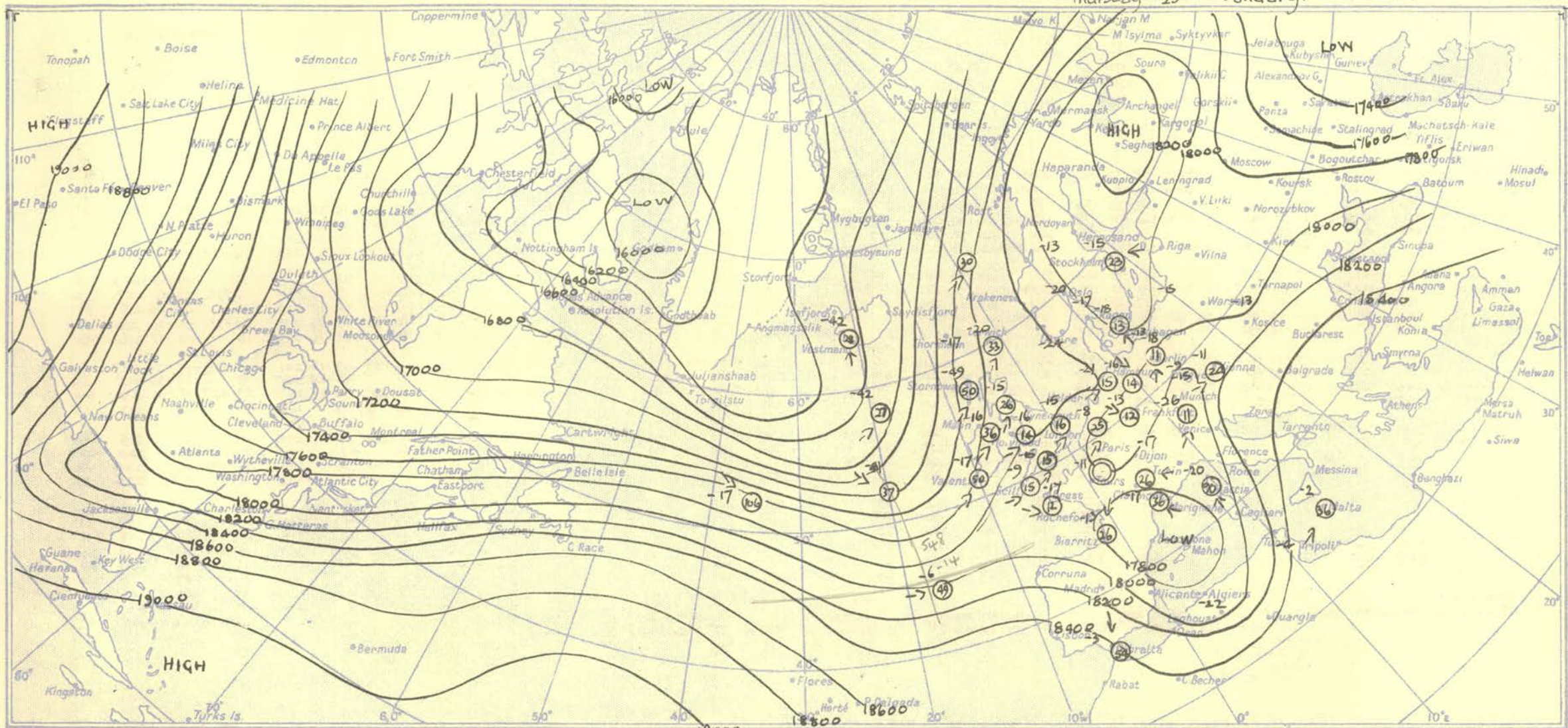
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Sharpening of the Atlantic trough due to advection of warmer air on its Southwest flank.

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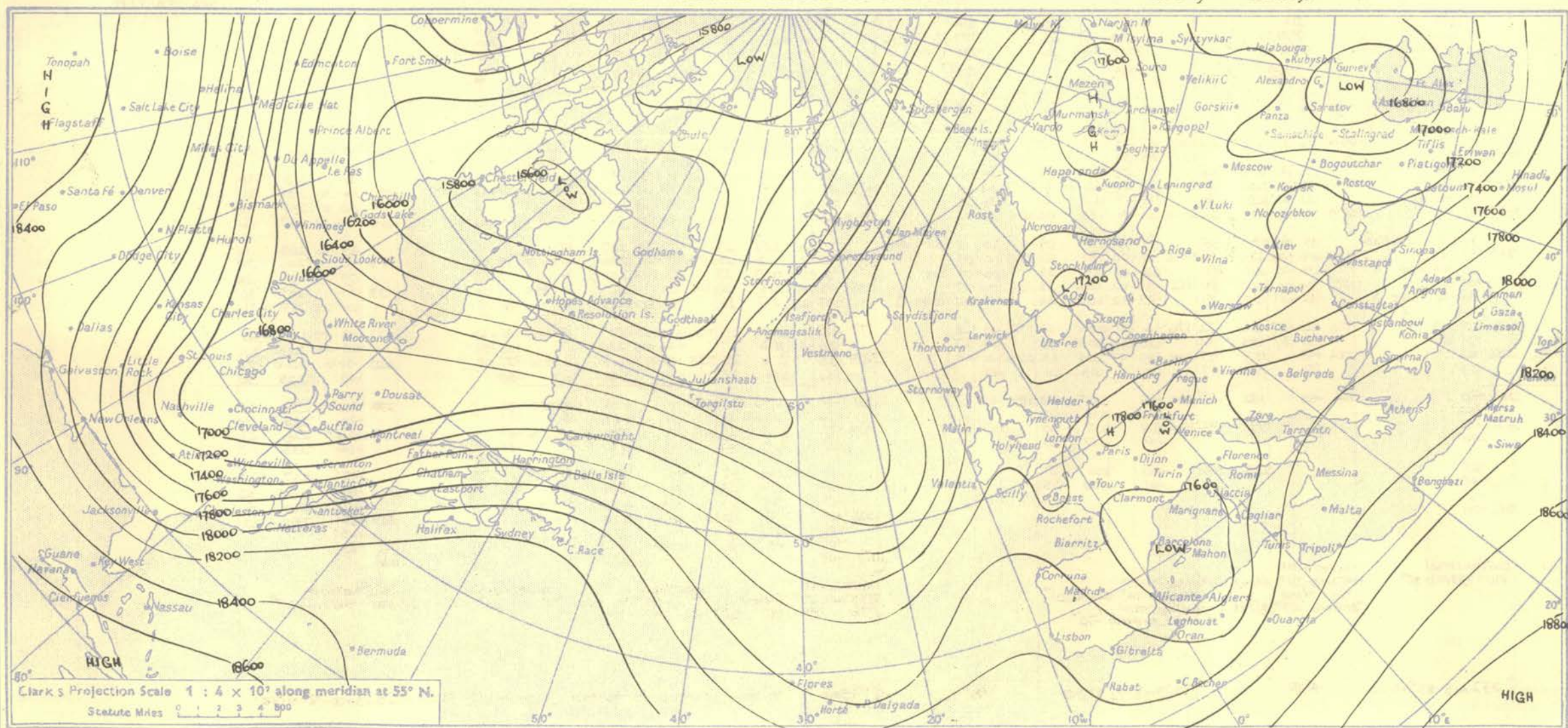
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T.

Thursday 25th January,

1951.

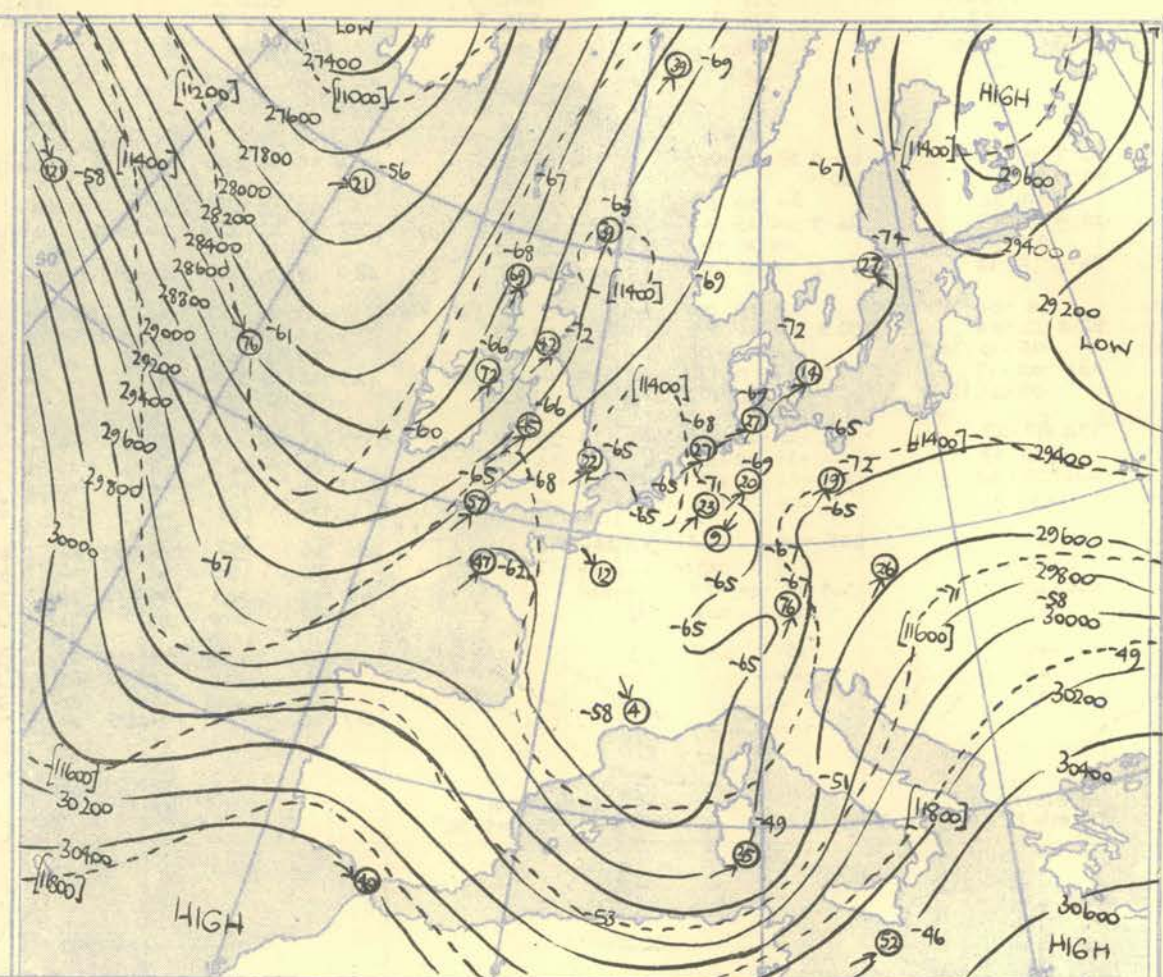
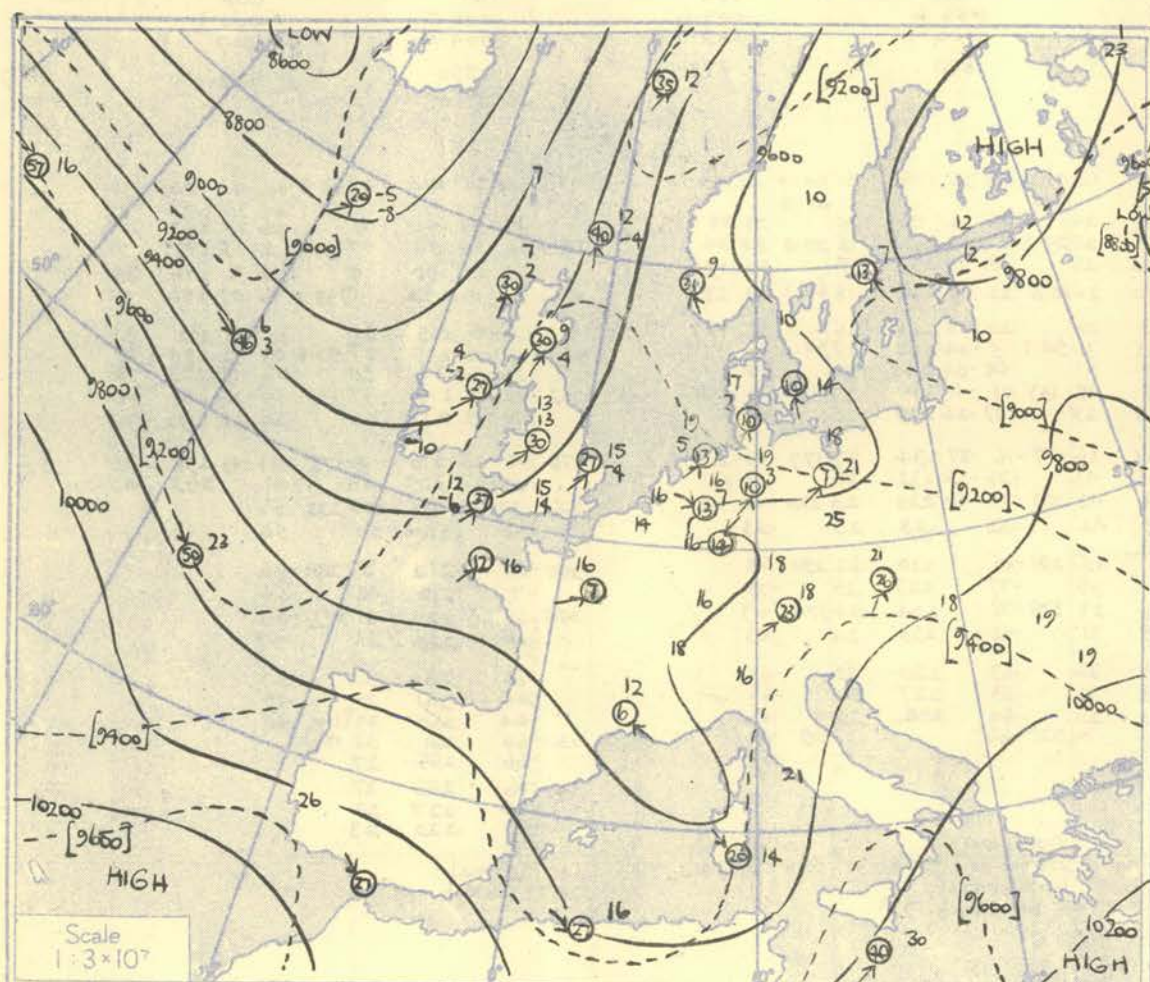


RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
LERWICK												STORNOWAY												LEUCHARS												ALDERGROVE												LIVERPOOL												DOWNHAM MARKET												LARKHILL												CAMBORNE												VALENTIA												STATION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Time		M.S.L.		Surf		Pressing		15h		G.M.T.		15h		G.M.T.		15h		G.M.T.		15h		G.M.T.		15h		G.M.T.		15h		G.M.T.		15h		G.M.T.		15h		G.M.T.		15h		G.M.T.		15h		G.M.T.		Time		M.S.L.		Surf		Pressing																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
1007.4		mb		997.2		mb		840		mb		1001.9		mb		999.2		mb		1009.2		mb		1008.3		mb		996.2		mb		1001.6		mb		995.2		mb		1008.4		mb		1006.3		mb		992.8		mb		1009.1		mb		997.0		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		895		mb		1001.8		mb		1000		mb		89	

January 1951
METEOROLOGIC

[illegible]

HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.

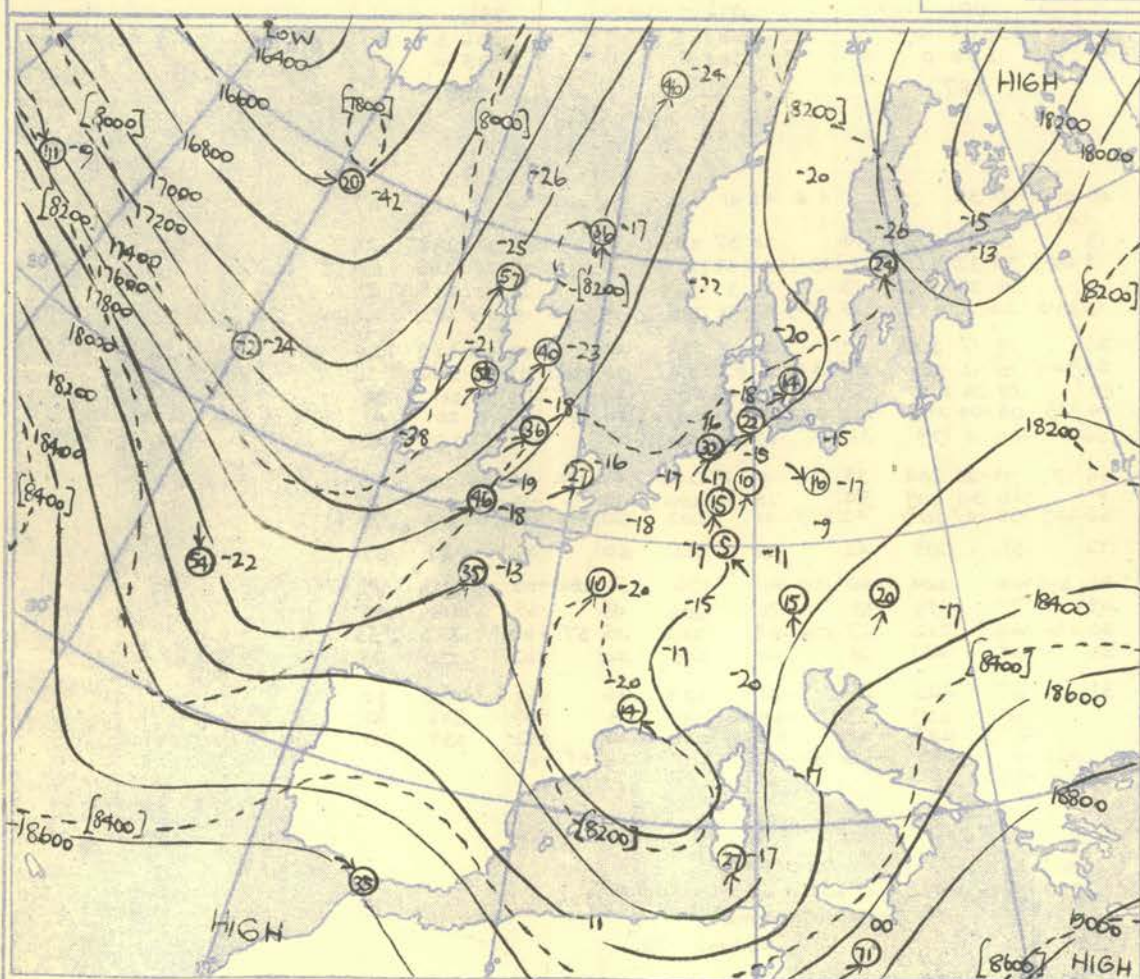


The continuous lines are contour lines of the 700 mb. surface
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

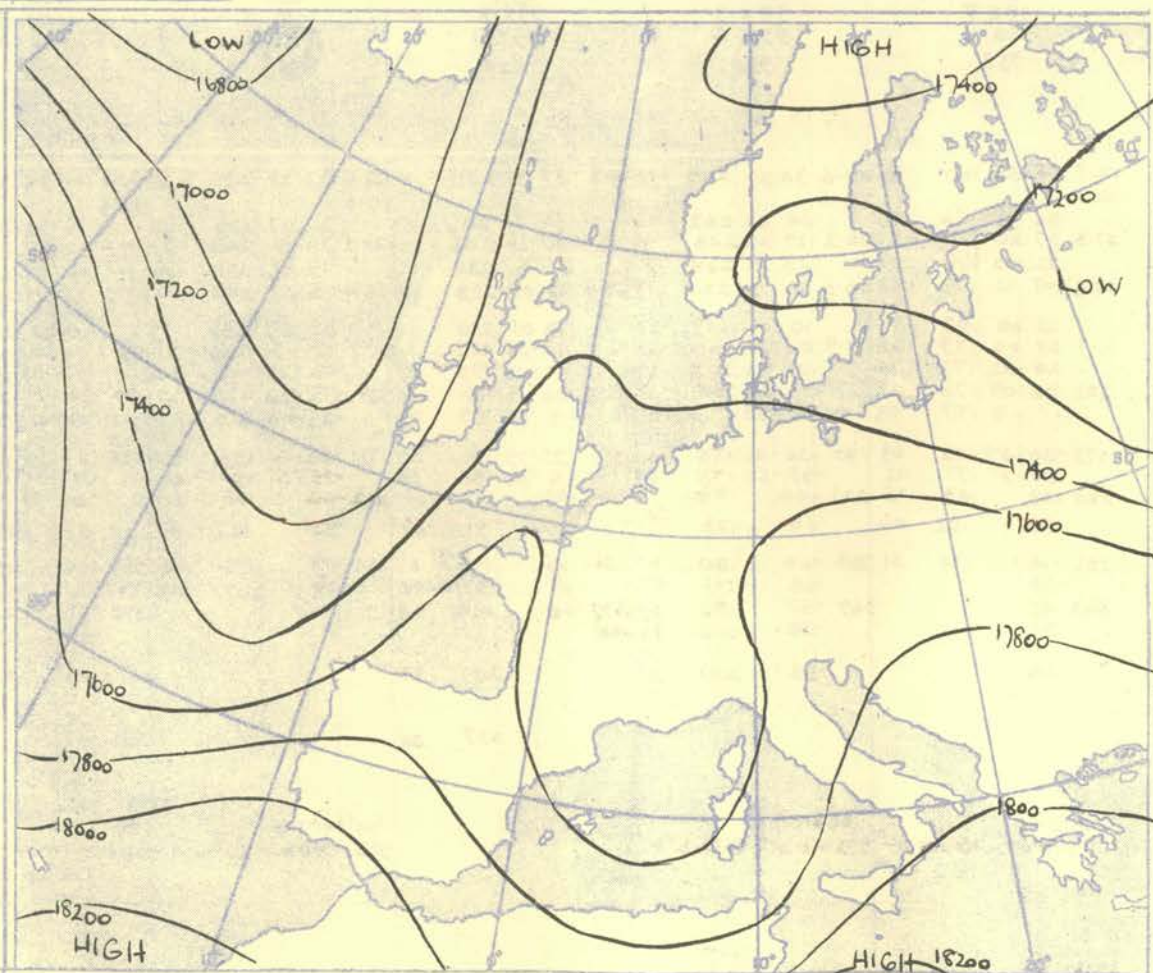
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52½° N.

100 80 60 40 20 10 0 knots

The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500-300 mb.



The continuous lines are contour lines of the 500 mb. surface
The dotted lines are isopleths of the thickness of the layer 700-500 mb.



Isopleths of Thickness 500-1000mb.

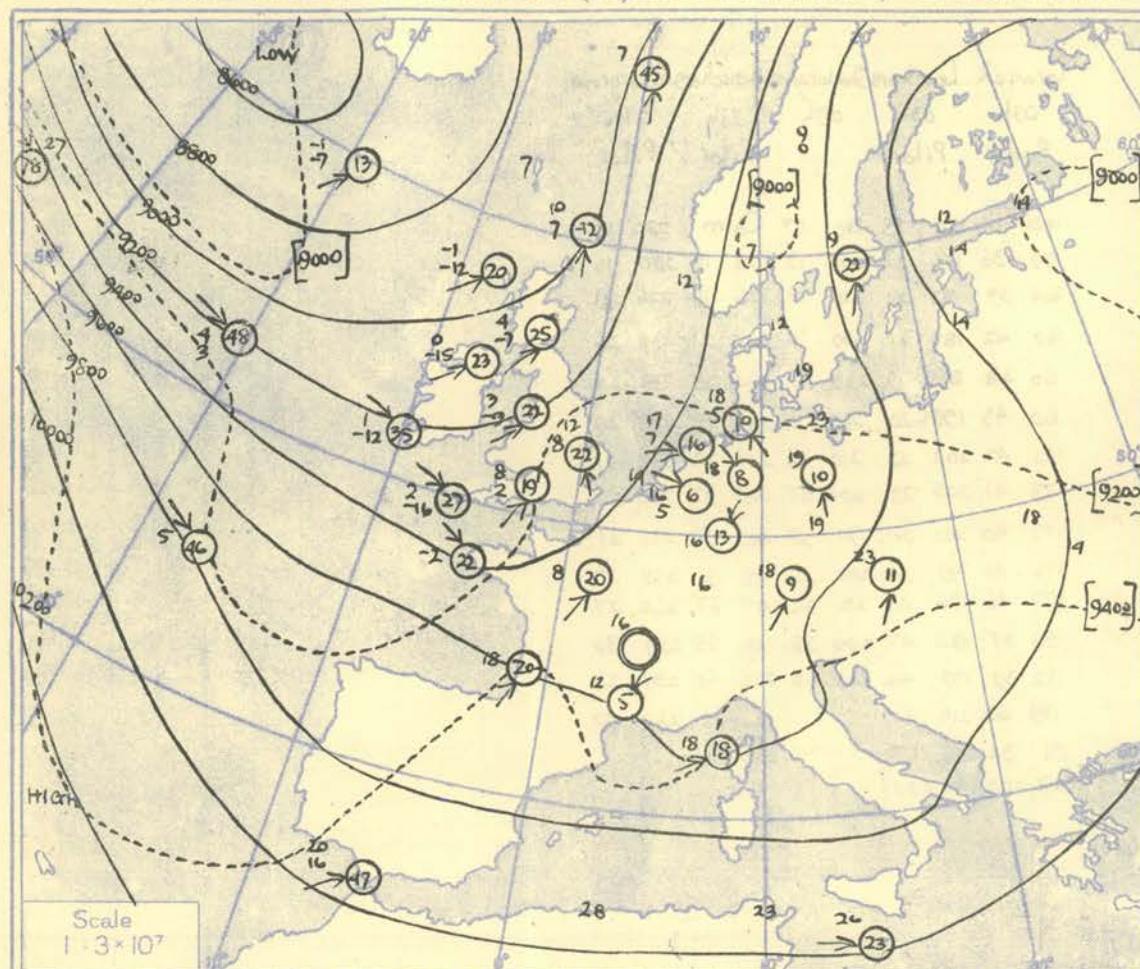
AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

[illegible][illegible]

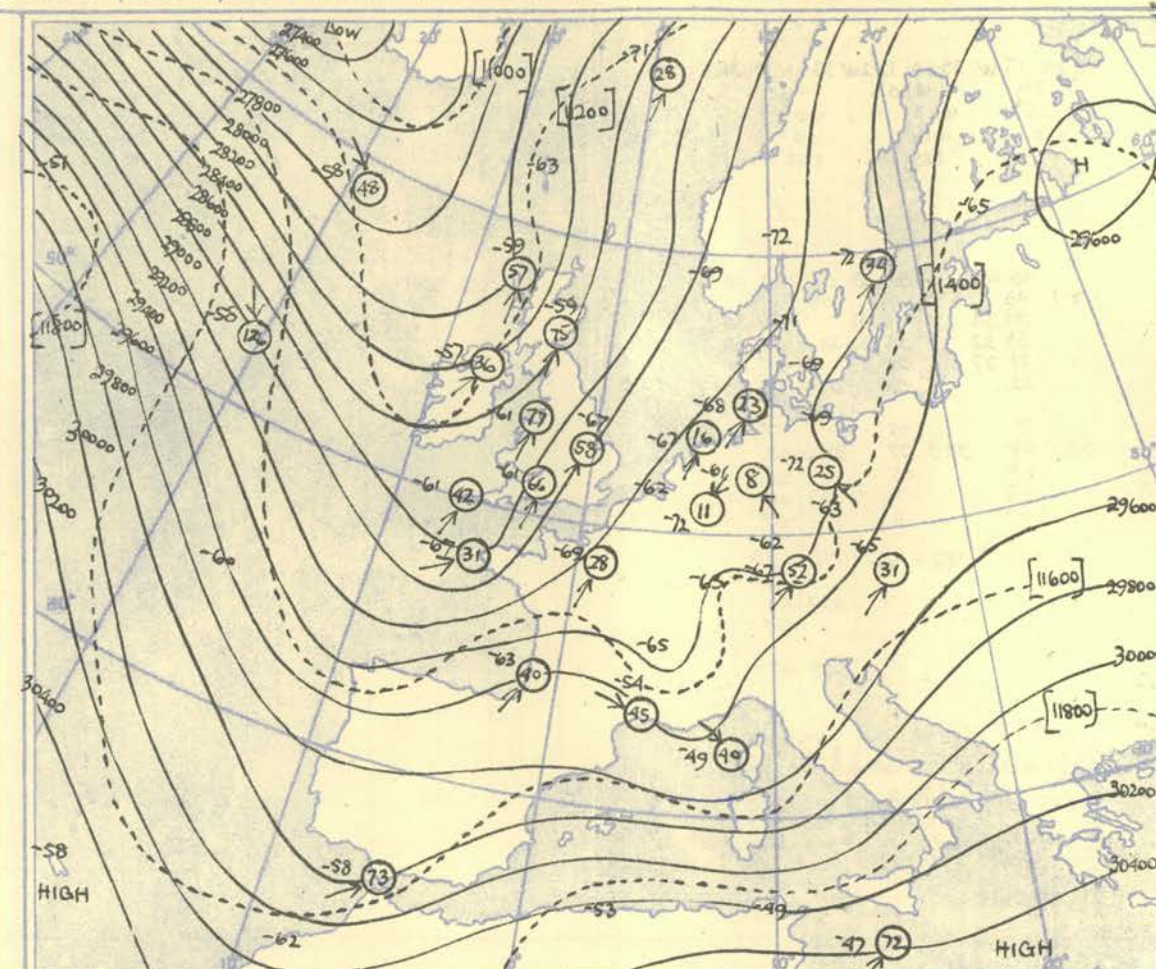
NEPHOSCOPE OBSERVATIONS

[illegible]

Ship	WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				Ship											
Lat/Long	52-2 N 20-0 W				52-2 N 20-3 W				52-3 N 20-3 W				52-3 N 20-4 W				59-1 N 18-6 W				59-0 N 18-8 W				59-1 N 18-8 W				59-0 N 18-7 W				Lat/Long											
Pressure	Time	03h	G.M.T.		09h	G.M.T.		15h	G.M.T.		21h	G.M.T.		03h	G.M.T.		09h	G.M.T.		15h	G.M.T.		21h	G.M.T.			G.M.T.	Time																
	M.S.L.	1006	mb		1006	mb		1004	mb		997	mb		989	mb		988	mb		987	mb		985	mb			mb	M.S.L.																
	Surf	1006	mb		1006	mb		1004	mb		997	mb		989	mb		988	mb		987	mb		985	mb			mb	Surf																
	Freezing	935	mb		920	mb		935	mb		870	mb		980	mb		950	mb		965	mb		960	mb			mb	Freezing																
Pressure	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Pressure															
	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	mb															
Surf	1.7	39	34	300	33	42	34	300	28	43	33	270	23	-07	46	44	300	25	-2-8	33	30	290	18	-3-2	36	20	270	12	-3-4	35	30	260	20	-4-1	35	29	260	18	Surf					
1000		38	34			41	34			42	32				40	40	285	28		27	26	220	21		32	21	254	11		29	25	262	21		31	23	262	23	1000					
950		34	33	293	39	36	30	285	36	34	31	276	26		40	40	285	28		27	26	220	21		32	21	254	11		29	25	262	21		31	23	262	23	950					
900	29-5	27	25	295	40	29-5	28	285	36	28-9	27	26	277	27	27-5	34	24	286	31	24-7	21	20	216	22	24-4	26	20	262	13	24-0	22	18	264	24	23-6	25	17	263	19	900				
850		23	23	298	40	21	16	287	42	21	21	276	37		29	29	287	36		16	13	213	19		19	14	267	14		16	12	264	23		19	08	269	19	850					
800	59-8	18	18	299	45	59-7	15	09	289	42	59-2	16	15	277	42	58-2	24	24	287	26	54-6	09	05	218	17	54-6	12	03	270	15	53-9	11	07	259	22	53-7	12	01	270	19	800			
750		14	13	299	46	09	06	290	39	11	10	279	46		13	17	287	36		03	01	221	20		05	04	270	18		05	00	241	16		05	06	270	19	750					
700	935	06	03	297	46	93-1	02	12	289	40	92-7	04	03	287	48	92-5	11	11	283	38	87-5	-05	-08	226	20	87-7	-02	-12	268	18	87-0	-01	-07	227	13	86-8	-02	-10	269	21	700			
650		04	09	296	42	-04	-13	283	51	-04	-01	293	54		04	03	279	45		-13	-19	231	18		-11	-20	261	15		-10	-17	225	13		-10	-18	268	23	650					
600	131	-11	-19	297	48	131	-08	-18	291	54	131	-06	-08	301	60	131	-02	-12	291	60	124	-12	-29	239	17	125	-20	-28	252	13	124	-19	-27	231	16	124	-18	-26	269	22	600			
550		-17	-27	297	67	-14	-21	293	95	-13	-15	302	79		-06	-19	292	89		-32	-40	245	19		-31	-39	232	14		-28	-39	237	18		-25	-35	270	31	550					
500	174	-24	-30	298	72	174	-21	-34	294	66	174	-18	-31	302	95	175	-10	-37	299	108	166	-42	235	20	166	-38	-47	230	19	166	-36	-48	233	26	166	-34	-44	269	33	500				
450		-34	-42	298	81		-30	-46	295	82		-27	-30	303	111		-19	-36	303	145		-45	239	22		-46	233	23		-42	237	33		-45	268	38		-45	268	38	450			
400	226	-45		298	95	225	-37	-57	298	98	225	-36	-40	304	126	227	-28	-32	309	139	215	-54	251	20	216	-54	246	29	215	-52	250	40	215	-53	267	42		-53	267	42	400			
350	SS		309		91		-50		303	98		-47		310	144		-39	-49	310	147		-58	259	18		-56	262	36		-57	268	41		-55	262	46		-55	262	46	350			
300	287	-41		302	76	288	-59		317	120	289	-58		319	126	291	-55		305	147	277	-56	252	21	278	-55	274	34	277	-58	297	48	278	-55	270	39		-55	270	39	300			
250		-59		308	75		-64		321	120		-72		326	141		-74		303	136		-56	246	33		-52	275	31		-54	299	46		-51	288	39		-51	288	39	250			
200	373	-60		305	64	374	-60		321	75	374	-65		332	105	376	-72		301	80	364	-85	266	27	366	-83	277	34	365	-52	287	42	366	-51	290	44		-51	290	44	200			
170		-59		311	54		-61		320	61		-63		307	82		-67		302	63		-56	249	19		-54	273	34		-55	283	44		-54	291	49		-54	291	49	170			
150		-63		306	50		-62		316	56		-62		306	72		-67		302	58	(160b)	-57				-52	270	34		-57	286	43		-55	290	49		-55	290	49	150			
130		-63		301	50		-64		311	60		-64		305	50		-68		302	43						-55	272	36		-55	290	42		-56	292	41		-56	292	41	130			
110		-63		301	45		-65		305	60		-64		304	45				304	45						-55					-51	290	30		-57	292	36		-57	292	36	110		
100	520	-63		301	33	521	-68		304	45	520	-68		303	45				303	45						-55				515	-51	285	25	516	-59	291	38		-59	291	38	100		
90	(98nb)	-63					-69		306	30		-61		307	30				303	33						-54				-59	278	24		-60	292	41		-61	292	41	90			
80							-67		310	32	(78nb)	-69		310	30				301	30						-59				-59	268	26	(72nb)	-63					298	36	80			
70							-64		315	30																-59				-59	264	29								298	36	70		
60							-61		317	15																														298	36	60		
							-62																																					
Tropopause	I 303 nb -62°				II 270 nb -63°				I 263 nb -72°				I 231 nb -78°				I 357 nb -59°				I 382 nb -56°				II 350 nb -57°				II 400 nb -53°				Tropopause											
	28,500'				31,100'				31,700'				34,500'				23,800'				22,300'				24,100'				21,500'															



The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb

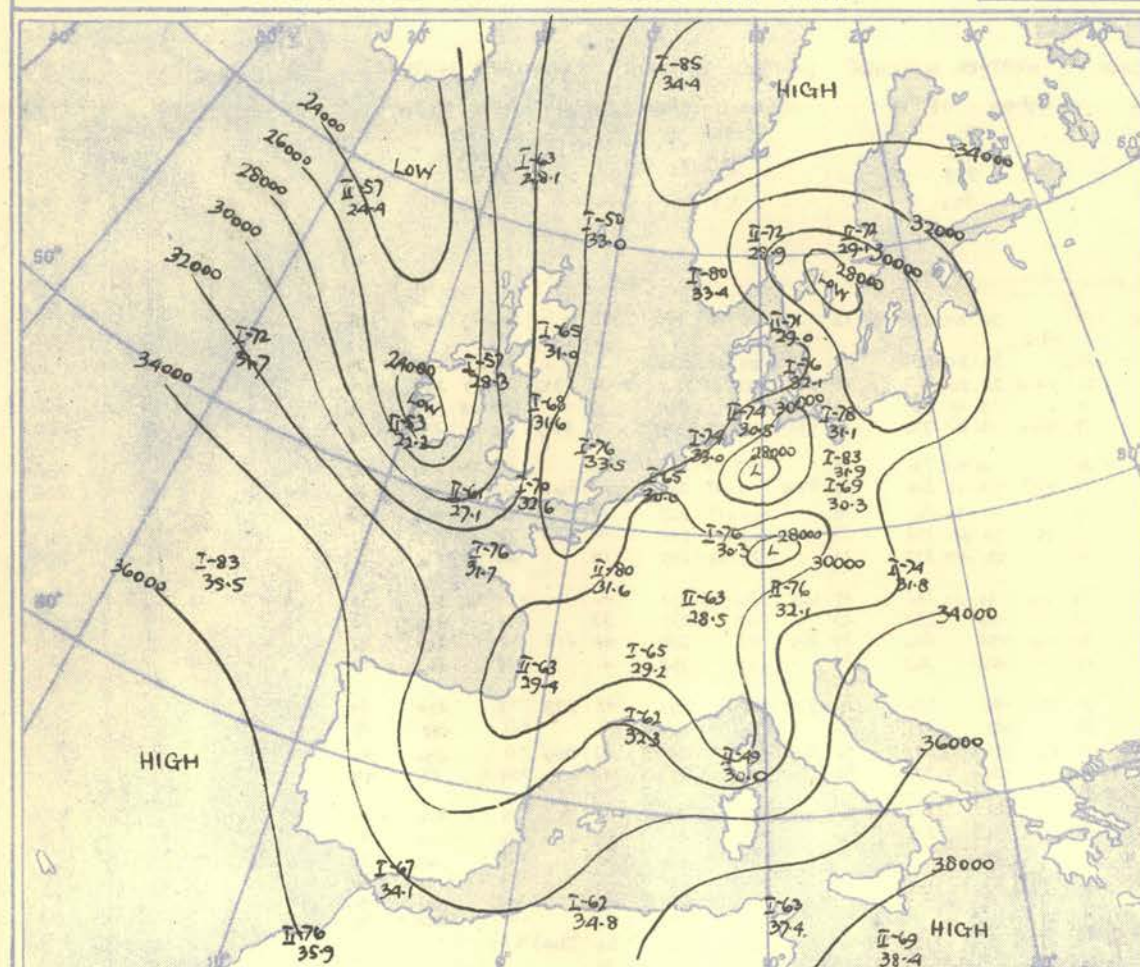


The continuous lines are contour lines of the 300mb. surface
The dotted lines are isopleths of the thickness of the layer 500 - 300 mb.

Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. $52\frac{1}{2}^{\circ}$ N.

100 50 40 30 20 15 10 knots

TROPopause CHART at about 15h. G.M.T.



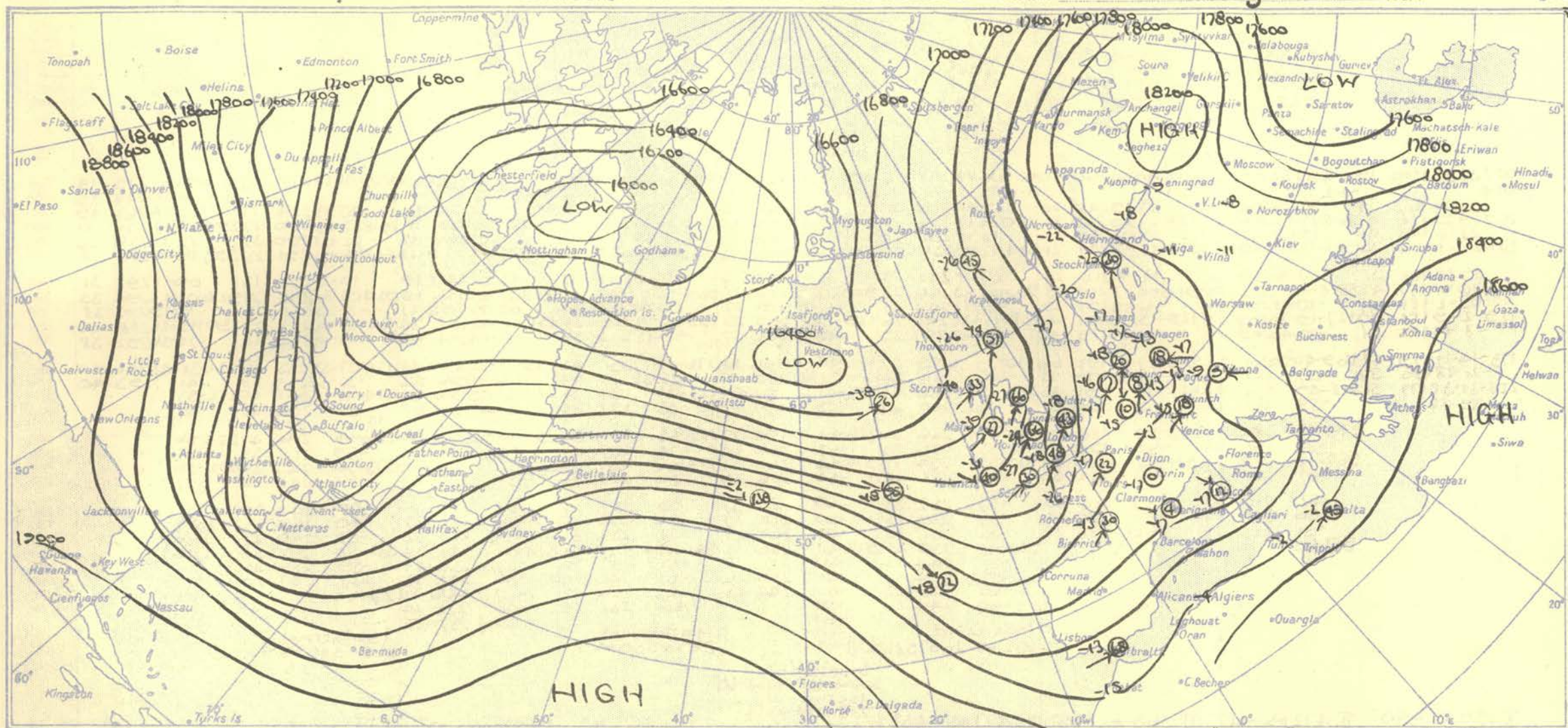
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Eastward propagation of the thermal jet-stream over the Atlantic,
otherwise little change.

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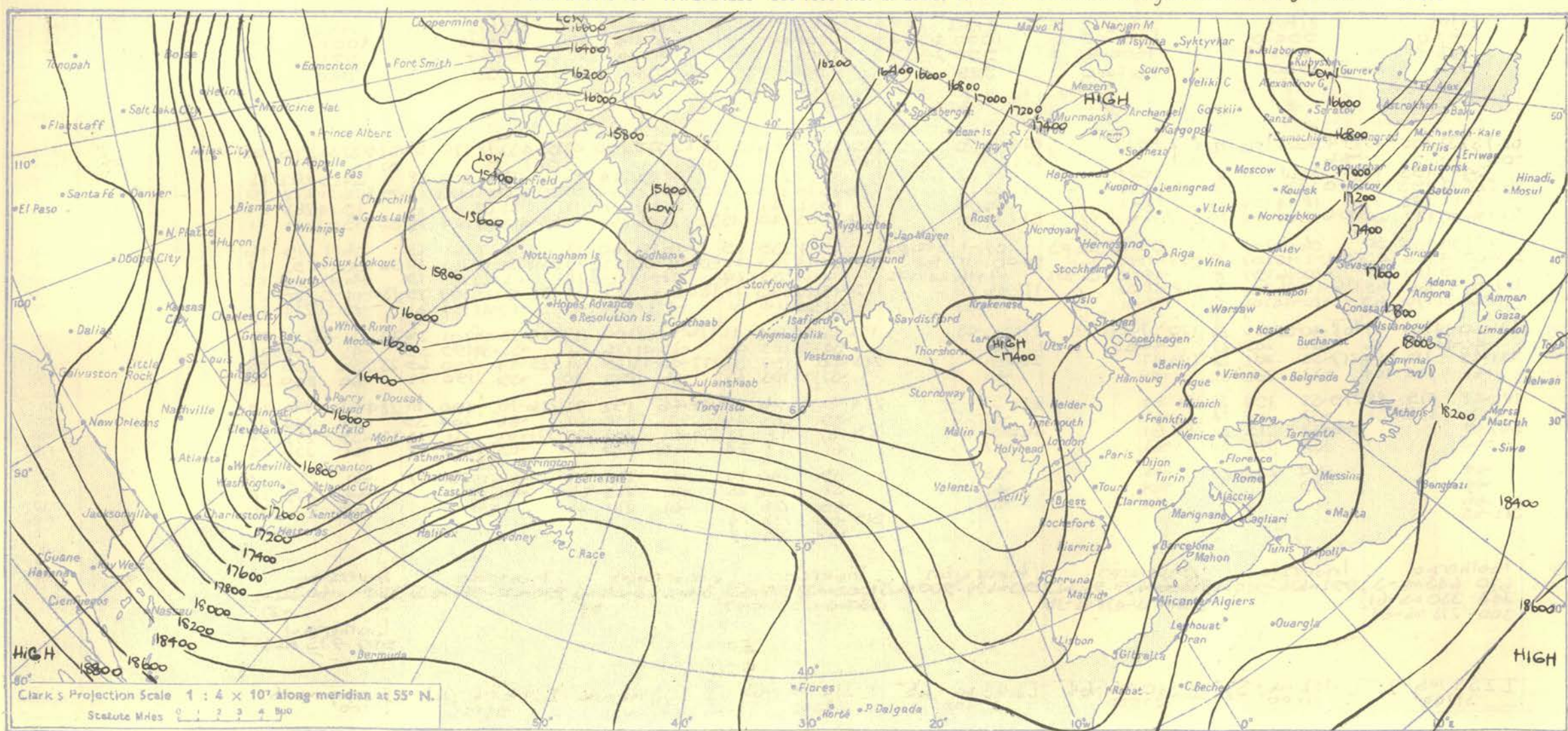
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T.

Friday 26th January.

1951.

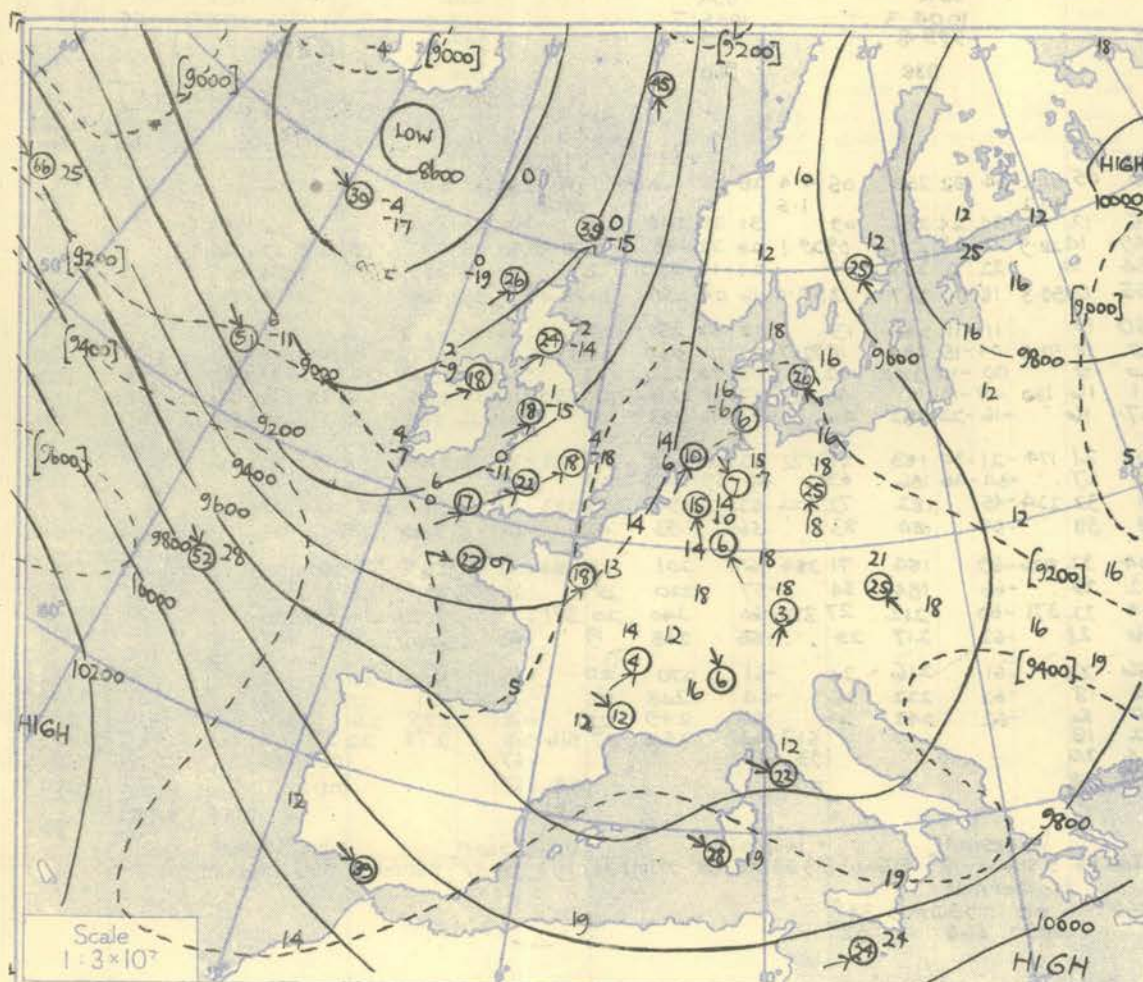


RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				Valentia				STATION									
Pressure	Time M.S.L. Surf Pressing	15hrs		G.M.T.	mb	15hrs		G.M.T.	mb	15hrs		G.M.T.	mb	15hrs		G.M.T.	mb	15hrs		G.M.T.	mb	15hrs		G.M.T.	mb	15hrs		G.M.T.	mb	15hrs		G.M.T.	mb	Time M.S.L. Surf Pressing													
		995.0	985.0			995.5	985.8			995.8	985.9			1001.3	991.7			1003.0	1000.9			1003.2	998.7			1004.4	988.2			1007.4	996.7				1009.1	1003.1											
		241				265				239				270				242				888			910			934			925																
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Pressure mb													
Surf	02.7	37	37	120	39	0.4	37	32	210	06	0.2	40	34	260	100	0.6	35	270	07	01.2	42	41	150	05	04.4	41	35	260	09	02.9	41	28	270	07	0.3	42	31	275	14								
1000	01.4					1.2				0.1				0.4				0.8						01.2				02.0					1.1	41	30	274	13										
950		04	04	167	54			30	24	214	13			33	29	240	20			38	37	227	12			37	33	297	14			35	23	284	21			33	24	263	19						
900	26.5	25	25	174	51	26.5	26	18	216	13	27.6	27	20	239	22	28.0	24	17	226	20	28.3	27	212	25	15	28.9	33	22	20	29	28.8	15	29	20	27	29	0.2	28	17	271	21						
850		27	26	185	46			13	09	212	20			23	07	234	22			18	11	231	20			26	15	266	16			22	08	290	33			22	11	276	23						
800	57.0	22	21	154	39	56.6	21	03	219	20	57.9	18	3	227	21	58.1	12	03	231	21	58.7	14	03	241	13	59.5	23	20	22.8	18	59.7	19	12	249	19	60	06	02	291	23	59.3	16	07	280	28		
750		15	14	188	38			07	4	219	21			11	4	212	24			10	1	213	17			13	08	247	19			10	5	253	13			00	1	292	31						
700	90.8	10	07	187	42	89.8	10	12	223	20	91.0	04	7	200	25	91.3	00	13	246	23	92.1	03	12	08	177	22	93.4	08	02	212	19	93.4	02	16	295	27	92.6	01	12	294	33						
650		03	2	181	47			10	21	220	21			6	13	198	29			8	23	244	21			05	00	206	24			5	23	288	27			6	19	293	38						
600	129	2	3	181	47	127	19	30	208	23	129	13	28	191	41	128	18	31	241	26	129	13	21	203	38	132	00	4	213	31	131	1	1	192	33	131	13	32	283	27	130	15	26	288	40		
550		8	14	182	51			29	40	209	28			19	34	183	63			28	42	242	23			16	31	201	57			8	14	201	44			18	41	265	18			24	36	292	38
500	173	14	21	179	57	169	40	50	201	33	172	27	47	192	66	170	39	51	235	27	172	24	40	196	66	176	17	27	201	43	175	18	25	201	48	174	27	53	233	30	172	31	43	296	40		
450		21	28	180	57			47	43			35	52	190	73			46	34			31	46	193	77		28	38	200	44			26	34	196	52			25	58	229	28					
400	215	31	38	177	51	218	43	174	53	222	43	191	83	220	43	200	56	223	41	197	91	221	41	197	91	227	37	43	196	61	224	47	208	40	222	53			41	59	23	40					
350		39	46			54	183	66		53	190	81		52	200	44		53	197	87		53	198	54		51	198	68			58	203	48			54											
300						280	53	181	57	285	53	185	73	283	57	206	36	286	61	190	77	289	65	192	58	290	61	190	66	286	61	216	42	284	56												
250						367	54	203	33	371	63	206	39	370	53	234	19	372	63	209	37	374	62	207	38	373	57	219	30	373	56	247	30	272	56												
200						57		219	20		53	214	38		57	232	33		60		57	232	37		57	217	24		57	227	35		57	227	35												
170						56		233	24		57	234	24		57	229	23		60		57	242	28		58	213	30		58	223	30		58	223	30												
150						51		223	22		62	228	28		58	231	20		57		57	242	28		58	213	30		58	223	32		58	223	32												
130						51		223	22		62	228	28		58	231	20		57		57	242	28		58	213	30		58	223	32		58	223	32												
110						51		223	22		62	228	28		58	231	20		57		57	242	28		58	213	30		58	223	32		58	223	32												
90						51		223	22		62	228	28		58	231	20		57		57	242	28		58	213	30		58	223	32		58	223	32												
80						51		223	22		62	228	28		58	231	20		57		57	242	28		58	213	30		58	223	32		58	223	32												
70						51		223	22		62	228	28		58	231	20		57		57	242	28		58	213	30		58	223	32		58	223	32												
60						51		223	22		62	228	28		58	231	20		57		57	242	28		58	213	30		58	223	32		58	223	32												
		Isothermal 670-643mb-5°				Inversion 992mb-36-984mb-3°				Inversion 1000mb-29-960mb-3°				Inversion 913mb-24-900mb-23°				Inversion 1002mb-23-988mb-26°				Inversion 916mb-13-910mb-64°				Inversion 990mb-12-968mb-35°				Inversion 950mb-1-603mb-57°																	
		348-330mb-61°				310mb-37-478mb-36°								554mb-22-533mb-19°																Isothermal 997-973mb-37°																	
Tropopause		I 250 mb -50°				II 472 mb -47°				II 265 mb -65°				II 477 mb -45°				I 258 mb -68°				I 241 mb -76°				I 253 mb -70°				II 322 mb -61°				II 400 mb -53°				Tropopause									
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				STATION													
Pressure	Time M.S.L. Surf Pressing	21hrs		G.M.T.	mb	21hrs		G.M.T.	mb	21hrs		G.M.T.	mb	21hrs		G.M.T.	mb	21hrs		G.M.T.	mb	21hrs		G.M.T.	mb	21hrs		G.M.T.	mb	21hrs		G.M.T.	mb	Time M.S.L. Surf Pressing													
		997.0	986.8			994.0	992.4			1001.0	1000.1			1000.4	990.7			1004.0	1001.9			1004.4	1000.0			989.8	1006.3			989.8	1007.8				997.1												
		926				950				Surface				989				950				981			939			940																			
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Pressure mb													
Surf	02.7	37	33	203	10	0.4	36	31	180	20	0.2	29	27			02.6	33	30		01.2	40	38	230	07	04.4	32	28	270	06	02.9	37	32	270	05													
1000	00.9					1.6				0.2				01.0		01.0				01.2				01.2					02.1																		
950		34	27	195	18			32	28	186	23			32	23	238	11			34	32	314	13			33	23	303	18			34	29	262	13												
900	26.8	28	23	195	18	26.0	25	23	187	26	27.7	24	20			27.6	25	22		28.6	26	20	235	13	29.1	30	27	294	10	29.4	27	12	303	16	29.8	26	21	272	19								
850		22	12	183	27			18	14	194	24			19	12	242	12			26	22	272	11			22	05	301	13			19	14	268	24												
800	57.1	16	07	187	30	40	6	12	07	204	24	57.7	12	03			58.7	14	03	245	15	59.7	21	16	264	12	59.6	17	4	284	15	59.9	13	04	271	21											
750		08	00	193	30			06	2	207	25			09	4	239	19			16	10	240	13			11	7	267	13			06	1	279	16												
700	90.4	00	4	186	40	89.2	2	15	202	23	90.8	1	12			91.0	01	14	248	22	93.6	11	03	182	17	93.1	04	19	268	10	93.1	00	10	293	17												
650		3	9	180	58			10	26	197	21			6	21	253	24			08	1	180	28			5	28	240	19			6	13	294	22												
600	128	10	13	166	63	126	19	36	201	21	128	18	32			129	13	29	250	21	132																										

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)																																																
STATION		LERWICK					STORNOWAY					LEUCHARS					ALDERGROVE					LIVERPOOL					DOWNHAM MARKET					LARKHILL					CAMBORNE					VALENTIA					STATION	
Pressure mb	Time M.S.L.	Surf Freezing	03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		Time M.S.L.	Surf Freezing												
			996.5	mb	992.9	mb	1000.3	mb	998.5	mb	1002.1	mb	1004.3	mb	1005.7	mb	1002.5	mb	999.8	mb	999.0	mb	999.8	mb	999.0	mb	999.8	mb	999.0	mb	999.8	mb	999.0	mb			999.8	mb										
			940	938	938	938	938	938	938	938	938	938	938	938	938	938	938	938	938	938	938	938	938	938	938	938	938	938	938	938	938	938	938	938			938	938										
Temp.	Wind	Temp.	Wind	Temp.	Wind	Temp.	Wind	Temp.	Wind	Temp.	Wind	Temp.	Wind	Temp.	Wind	Temp.	Wind	Temp.	Wind	Temp.	Wind	Temp.	Wind	Temp.	Wind	Temp.	Wind	Temp.	Wind	Temp.	Wind	Temp.	Wind	Temp.	Wind													
Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.													
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HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

Time	1430h	1645h	1807h	1957h	2101h	Time	1430h	1645h	1807h	1957h	2101h
Pressure	1017 mb	1014 mb	1007.1 mb	995.7 mb	1001 mb	Pressure	1017 mb	1014 mb	1007.1 mb	995.7 mb	1001 mb
Time	1017	1014	1007.1	995.7	1001	Time	1017	1014	1007.1	995.7	1001
Surf	740	730	920	880	946	Surf	740	730	920	880	946
Freezing						Freezing					
Height	ft/100	ft/100	ft/100	ft/100	ft/100	Height	ft/100	ft/100	ft/100	ft/100	ft/100
Temp.	°F	°F	°F	°F	°F	Temp.	°F	°F	°F	°F	°F
Dew	°F	°F	°F	°F	°F	Dew	°F	°F	°F	°F	°F
Wind	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Wind	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Cloud						Cloud					
Surf	35 52	57 54	110 46	210 31	015 39	Surf	35 52	57 54	110 46	210 31	015 39
1000	48 54	410 55	210 31	110 46	015 39	1000	48 54	410 55	210 31	110 46	015 39
950	49 49	50 50	33 30	39 30	32 19	950	49 49	50 50	33 30	39 30	32 19
900	46 46	46 46	30 28	271 34	28 0 21	900	46 46	46 46	30 28	271 34	28 0 21
850	38 37	43 42	24 24	25 25	22 17	850	38 37	43 42	24 24	25 25	22 17
800	37 24	39 32	60 4 18	57 3 19	58 2 16	800	37 24	39 32	60 4 18	57 3 19	58 2 16
750	33 21	33 31	13 13	15 15	69 69	750	33 21	33 31	13 13	15 15	69 69
700	100 28	99 7 31	34 2 16	31 7 08	91 6 02	700	100 28	99 7 31	34 2 16	31 7 08	91 6 02
650	24 24	26 26	16 16	06 06	05 05	650	24 24	26 26	16 16	06 06	05 05
600	17 17	17 17	13 13	13 13	13 13	600	17 17	17 17	13 13	13 13	13 13
550	9 9	7 7	64 64	02 02	22 22	550	9 9	7 7	64 64	02 02	22 22
500	185 0	185 -2	178 -07	175 -05	172 -30	500	185 0	185 -2	178 -07	175 -05	172 -30
450					-36	450					-36
400					222 -49	400					222 -49
350					-54	350					-54
300	Cloud.	Cloud.	Cloud.	Cloud.	284 -61	300	Cloud.	Cloud.	Cloud.	Cloud.	284 -61
250	51g Cu	81g Sc	51g Cu	51g Cu		250	51g Cu	81g Sc	51g Cu	51g Cu	
200	970-900mb	960-900mb	940-900mb	940-900mb		200	970-900mb	960-900mb	940-900mb	940-900mb	
170	71g Ci NR.	21g Cu	71g Ci NR.	51g Ag		170	71g Ci NR.	21g Cu	71g Ci NR.	51g Ag	
	Surf wind.	71g Ci NR.	Inversion	71g Ci NR.			Surf wind.	71g Ci NR.	Inversion	71g Ci NR.	
	N.W. 21-27kts	Surf wind	700-1600	Inversion			N.W. 21-27kts	Surf wind	700-1600	Inversion	
		W. 17-21kts	1800-1600	600-08°				W. 17-21kts	1800-1600	600-08°	

DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

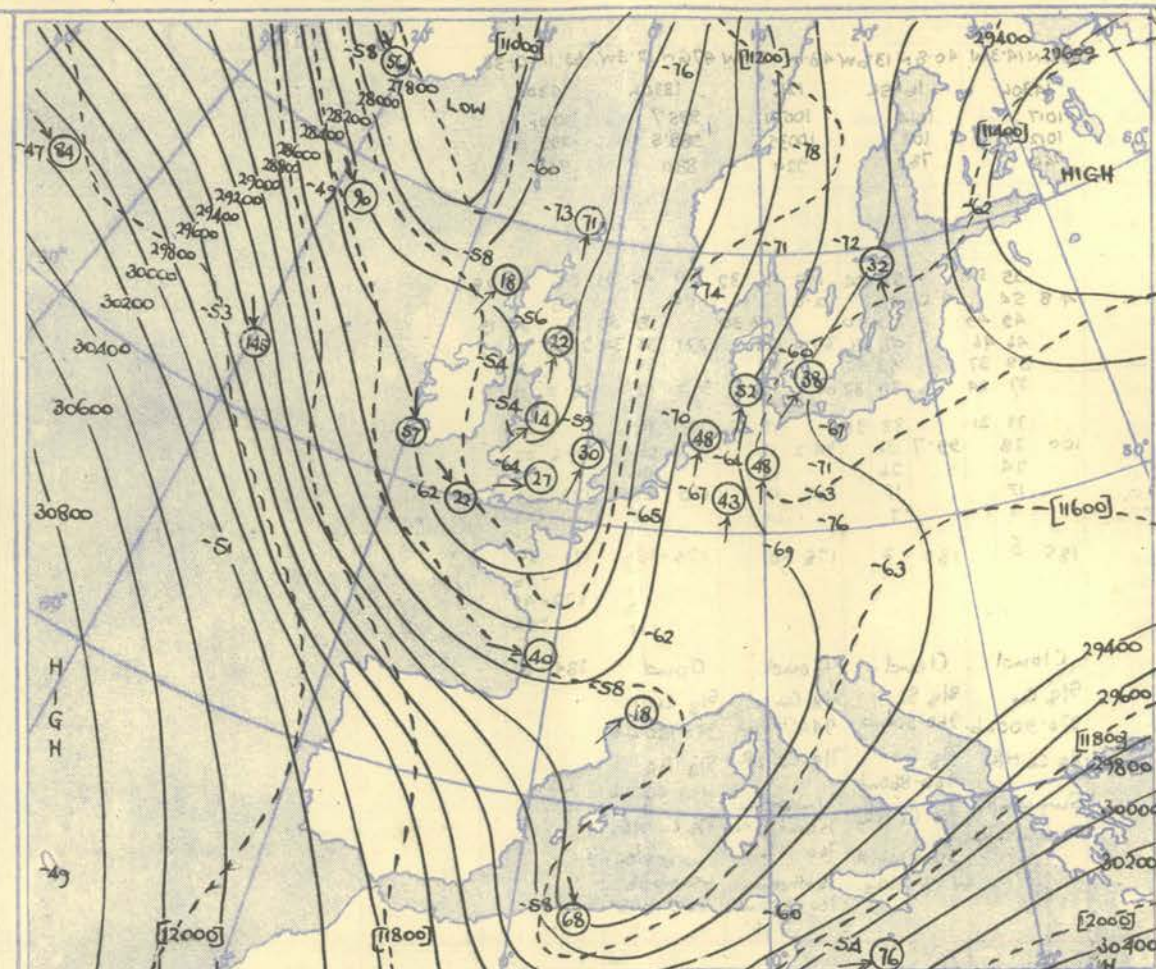
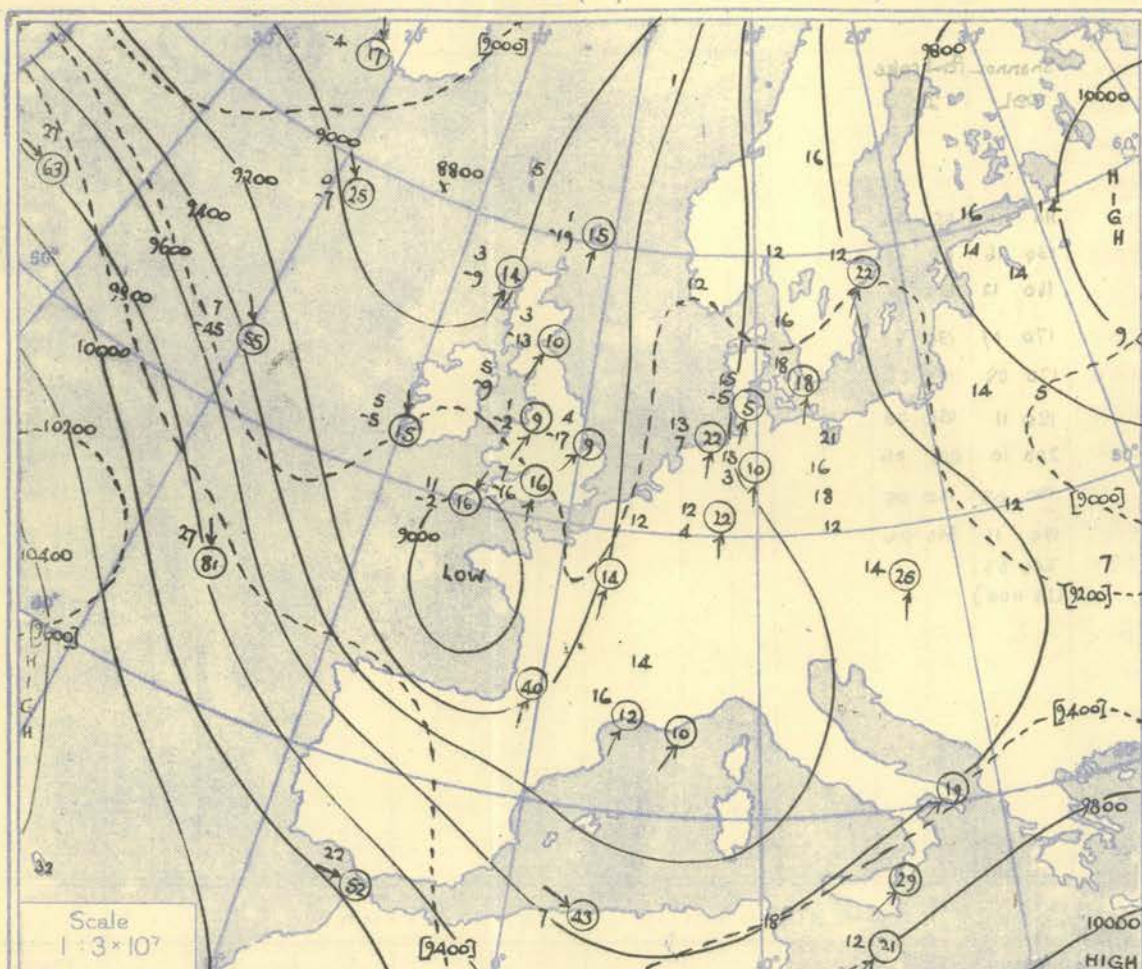
Place	Shannon	Pembroke	Place	Shannon	Pembroke
Time	09L	21L	Time	09L	21L
Type			Type		
Feet	Dir. Vel.	Dir. Vel.	Feet	Dir. Vel.	Dir. Vel.
Surf.	110 10	050 06	Surf.	110 10	050 06
1,000	130 16	110 23	1,000	130 16	110 23
2,000	160 12	130 16	2,000	160 12	130 16
3,000	170 07	130 09	3,000	170 07	130 09
4,000	170 08	120 06	4,000	170 08	120 06
5,000	180 11	080 09	5,000	180 11	080 09
6,000	200 10	010 06	6,000	200 10	010 06
8,000	190 08	130 05	8,000	190 08	130 05
10,000	190 11	340 06	10,000	190 11	340 06
14,000	240 08		14,000	240 08	
18,000	(13-000)		18,000	(13-000)	
24,000			24,000		
30,000			30,000		
40,000			40,000		
50,000			50,000		

NEPHOSCOPE OBSERVATIONS

Place	Shannon	Pembroke	Place	Shannon	Pembroke
Time Type			Time Type		
Dir. Vel.			Dir. Vel.		

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.

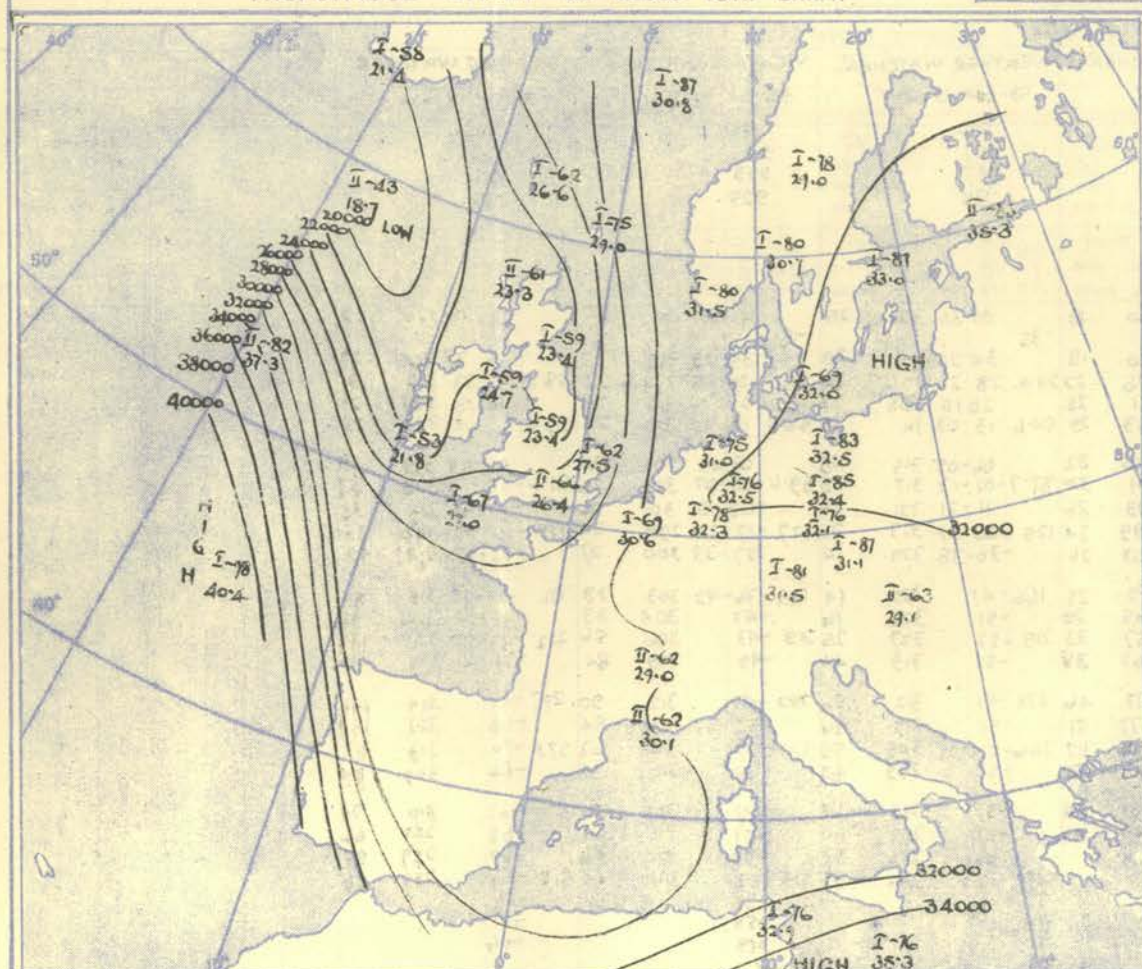
Ship	WEATHER OBSERVER	WEATHER OBSERVER	WEATHER OBSERVER	WEATHER OBSERVER	WEATHER WATCHER	WEATHER WATCHER	WEATHER WATCHER	WEATHER WATCHER	Ship
Lat/Long	52°4N 19°7W.	52°1N 19°6W.	52°2N 20°1N.	52°5N 20°0W.	59°0N 18°7W.	59°0N 19°0W.	59°0N 18°8W.	59°0N 18°6W.	Lat/Long
Time	03L	09L	15L	21L	03L	09L	15L	21L	Time
M.S.L.	996	1002	1007	1012	984	993	993	1001	M.S.L.
Surf	996	1002	1007	1012	984	993	993	1001	Surf
Freezing	910	930	935	920	950	935	925	935	Freezing
Pressure	Height	Height	Height	Height	Height	Height	Height	Height	Pressure
mb	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	mb
Temp.	°F	°F	°F	°F	°F	°F	°F	°F	Temp.
Dew	°F	°F	°F	°F	°F	°F	°F	°F	Dew
Wind	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Wind
Cloud									Cloud
Surf	43 37	41 29	43 32	44 34	37 30	39 30	41 39	41 38	Surf
1000	36 30	34 24	34 23	35 30	32 28	34 24	35 29	34 27	1000
950	26 9	27 21	27 19	28 24	25 23	28 20	29 25	28 22	950
900	25 21	26 16	26 13	27 20	25 18	26 14	26 14	26 18	900
850	19 10	13 11	14 08	16 09	19 18	13 03	15 09	18 09	850
800	12 04	10 01	12 30	15 08	11 10	13 03	15 09	18 09	800
750	91 0	91 8	93 2	97 04	87 7	87 7	88 6	91 6	750
700	06 11	05 11	07 45	16 14	04 07	02 13	00 07	00 18	700
650	00 20	01 18	06 50	14 08	13 16	11 21	08 15	10 35	650
600	129 03	129 07	131 06	134 09	124 23	125 23	127 24	129 18	600
550	07 32	05 23	04 34	04 01	34 39	30 26	27 33	20 57	550
500	173 14	174 06	176 05	179 02	166 41	166 41	169 36	171 27	500
450	21 38	13 30	13 25	12 19	26 29	26 29	26 29	26 29	450
400	225 29	227 22	229 23	230 24	257 33	215 52	215 52	222 27	400
350	19 44	152 158	174 315	133 30	263 38	319 51	319 51	319 51	350
300	289 58	150 292	145 294	145 298	273 46	278 51	312 56	287 51	300
250	71 309	141 58	138 70	138 62	277 51	278 51	312 56	287 51	250
200	374 66	308 86	378 81	319 117	295 67	366 56	305 59	373 70	200
170	63 307	75 66	77 73	320 98	300 50	299 57	310 59	309 84	170
150	65 307	68 322	70 320	61 320	283 44	283 44	311 58	310 74	150
130	67 306	65 318	69 321	49 321	283 44	283 44	311 58	310 74	130
110	73 306	69 316	66 316	48 320	283 44	283 44	311 58	310 74	110
100	73 306	68 314	67 314	48 320	283 44	283 44	311 58	310 74	100
90	73 306	68 314	67 314	48 320	283 44	283 44	311 58	310 74	90
80	73 306	68 314	67 314	48 320	283 44	283 44	311 58	310 74	80
70	73 306	68 314	67 314	48 320	283 44	283 44	311 58	310 74	70
60	73 306	68 314	67 314	48 320	283 44	283 44	311 58	310 74	60
Isotermal.	650-630mb 0°	650-630mb 0°	650-630mb 0°	650-630mb 0°	650-630mb 0°	650-630mb 0°	650-630mb 0°	650-630mb 0°	Isotermal.
Tropopause	II 255mb -71°	I 44mb -52°	I 205mb -82°	NR.	I 340mb -56°	I 206mb -74°	I 463mb -43°	I 240mb -67°	Tropopause



Gradient Wind Scale for Contours at intervals of 200 ft. at Lat. 52½° N.

100 80 60 40 20 15 10 knots

TROPOPAUSE CHART at about 15h. G.M.T.

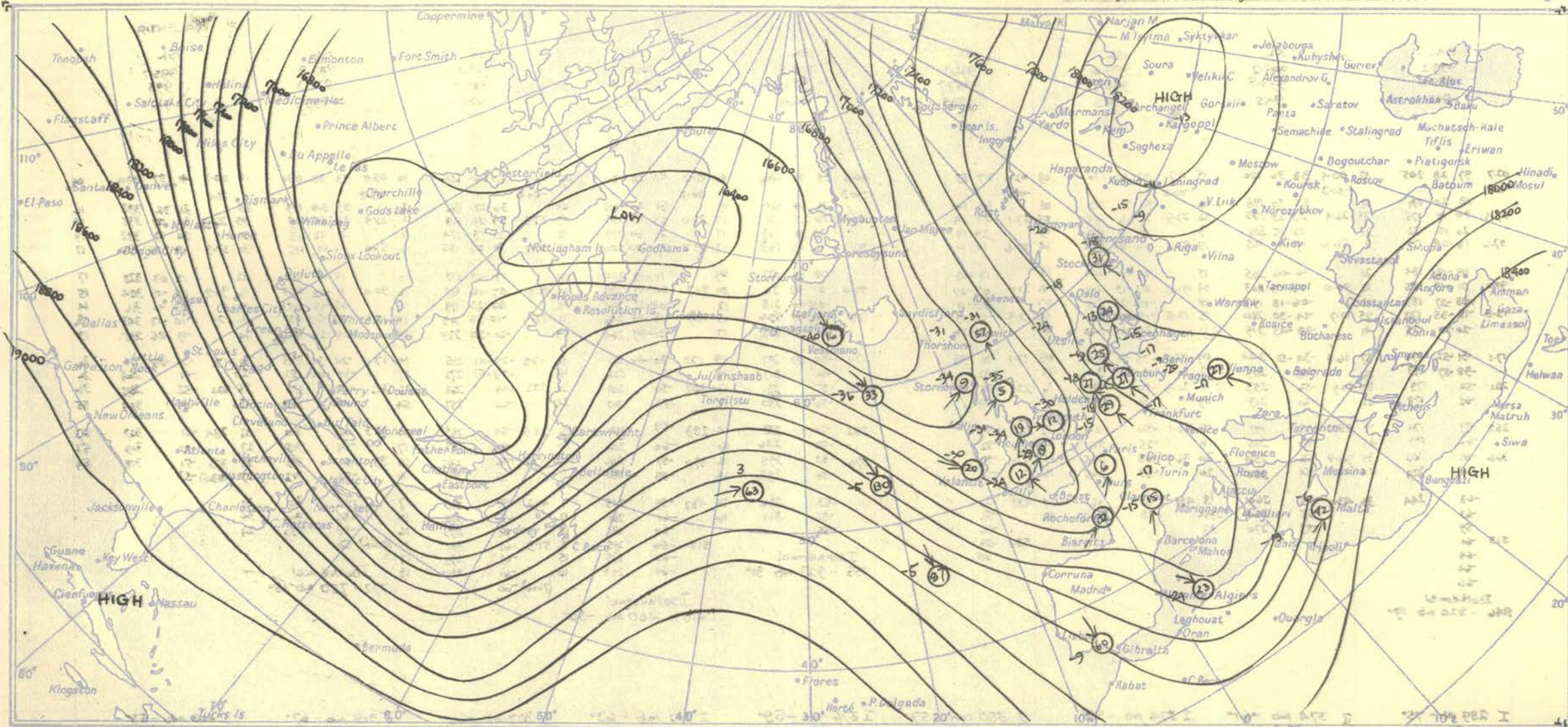


NOTES ON THE AEROLOGICAL SITUATION.

A well marked jet stream from the Labrador coast to the Bay of Biscay veered in the eastern Atlantic during the day. Winds of 140 kts. at 500 mb. were reported from the weather ship "J". The cold trough persisted from Iceland to the English Channel area.

RATES of SUBSCRIPTION: Single copy 2d. or post free 3d. One calendar month 7/- One quarter 18/- One year 70/-
For special arrangements for supply to schools and colleges, see Form 2452.

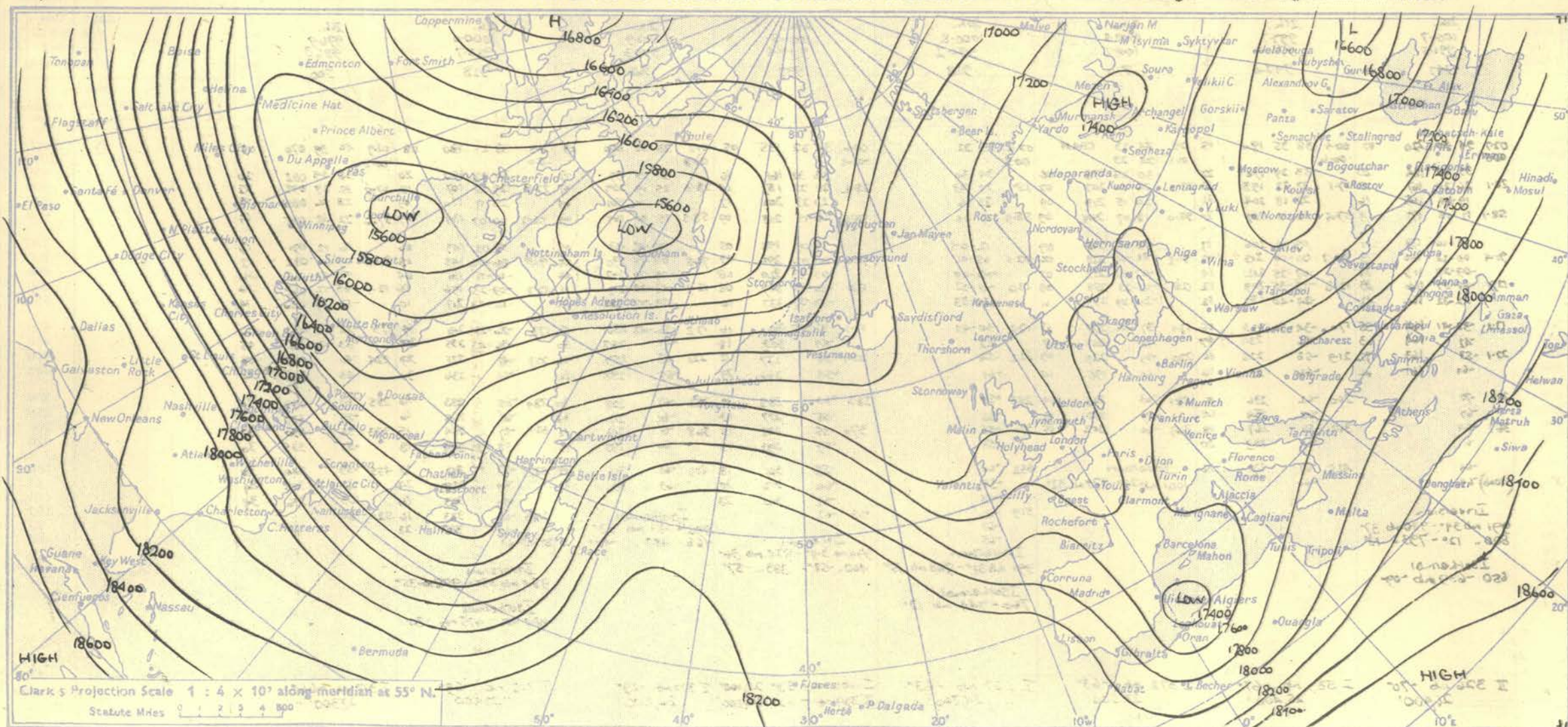
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T.

Saturday 27th January

1951.



[illegible]

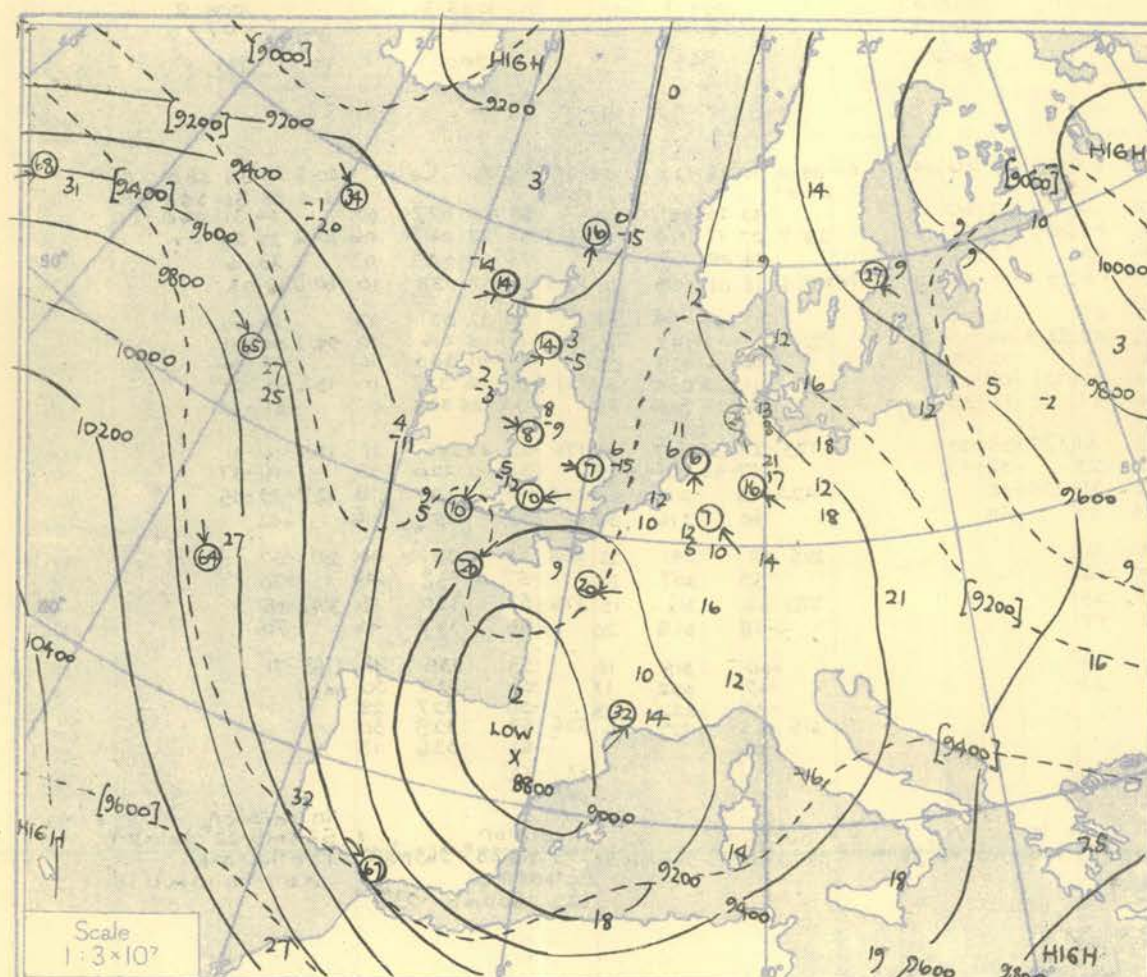
Tropopause	I 289 mb - 75° 29,000'	II 374 mb - 61° 23,300'	I 374 mb - 59° 23,400'	I 350 mb - 59° 24,200'	I 376 mb - 59° 23,400'	I 312 mb - 62° 27,500'	II 327 mb - 66° 26,400'	I 318 mb - 67° 27,000'	I 405 mb - 53° 21,800'	Tropopause
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STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				STATION									
	Time M.S.L. Surf Freezing	21h. 1001.7 991.5 942	G.M.T. mb mb mb	21h. 997.7 996.0 942.0	G.M.T. mb mb mb	21h. 1002.1 1001.2 970	G.M.T. mb mb mb	21h. 1000.8 991.2 928	G.M.T. mb mb mb	21h. 1001.5 999.4 937	G.M.T. mb mb mb	21h. 1002.9 998.3 962	G.M.T. mb mb mb	21h. 1000.0 983.7 928	G.M.T. mb mb mb	21h. 996.9 986.3 900	G.M.T. mb mb mb	Time M.S.L. Surf Freezing																								
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb													
Surf	02.9	34	30	220	05	00.4	38	35	190	15	0.2	24	23	CALM	02.6	33	32		00.6	34	32	135	05	0.2	33	28	090	05	4.4	33	23	120	08	02.9	40	39	070	05	Surf			
1000	00.5				00.6					00.3					00.4					00.8					00.8				00.8						00.8				1000			
950		33	24	184	20		33	29	190	22		30	25	198	06	34	30			33	32	161	16		31	25	07		34	27	100	20	36	34	082	20	950					
900	28.1	26	20	167	15	27.1	27	23	198	23	27.9	26	20	207	07	28.1	29	23		28.2	28	28	182	14	28.3	25	19	07	27.8	29	25	107	15	27.0	32	29	092	22	900			
850		19	14	165	16		22	18	204	22		2.0	15	213	09	23	16			23	23	202	12		20	11	184	04	25	7	120	09	2.8	26	088	7	850					
800	58.1	12	05	177	15	57.4	16	12	202	21	58.0	12	07	214	09	58.5	17	06		58.6	16	15	218	09	58.5	15	00	169	04	58.2	20	07	139	07	57.6	22	18	085	14	800		
750		08	10	178	14		09	01	206	17		08	02	218	09		12	0.4			10	09	192	05		09	08	153	05		13	03	143	06	16	12	091	13	750			
700	91.4	00	20	160	13	90.7	00	14	215	15	91.2	01	09	228	06	92.1	05	0.1		92.0	04	02	290	03	91.8	03	15	230	06	91.9	06	06	148	05	91.5	09	04	082	12	700		
650		09	28	163	24		07	25	212	14		07	16	239	07		02	0.9			03	13	320	08		05	22	237	06		01	11	151	04	02	02	065	16	650			
600	12.9	14	27	166	38	12.8	15	35	209	12	12.8	16	23	258	08	13.0	11	2.2		13.0	12	25	319	08	12.9	13	28	212	11	12.9	09	23	196	06	12.9	05	12	067	16	600		
550		22	32	166	42		24	40	182	12		26	29	273	11		20	3.3			22	37	337	10		23	37	222	14		16	23	217	10	13	27	026	14	550			
500	17.1	32	41	164	55	17.0	34	52	223	06	17.1	37	41	277	13	17.2	30	4.2		17.2	32	45	311	16	17.2	36	48	236	18	17.3	26	33	241	14	17.3	22	33	023	06	500		
450		42		164	63		46		234	09		48		267	11		42				44		303	18		43		262	30		36	43	235	24		33	42	128	05	450		
400	22.1	53		163	72	21.9	58		225	10	22.0	59		229	09	22.2	54			22.1	58		277	22	22.1	53		253	46	22.3	48		221	29	22.4	46		154	08	400		
350		64		161	06		66		221	16		62		195	14		61				58		266	29		58		258	42		61		236	30		58		257	12	350		
300	28.2	70				28.0	62		236	11	28.1	63		208	14	28.3	59			28.3	62		285	19	28.2	67		228	30	28.4	65		253	16	28.5	62		299	20	300		
250		67					62		254	14		59		232	13		54				55		277	13		61		217	14		63		265	16		55		327	33	250		
200	36.7	64				36.7	58		267	18	36.7	60		242	15	37.0	58			37.0	55		282	15	36.8	61		213	12	37.1	57		284	15	37.3	55		330	32	200		
170							61		283	20				242			58				59		293	15		60		292	15		58		299	18		57		325	30	170		
150		64				42.8	61		271	26						432	60				58		301	18	42.9	63		315	15	432	59		312	22	435	59		320	30	150		
130	(40mb)	74					60										58				60		312	20		63		336	12		60		329	24		61		328	34	130		
110																51.9	63				62		310	23	51.8	62					59		323	16		63		336	34	110		
100																					62											63		323	21					100		
90																																								90		
80																																								80		
70																																								70		
60																																								60		
Tropopause	II	326	mb	-70°		I	337	mb	-67°		I	372	mb	-63°		I	357	mb	-63°		I	400	mb	-58°	22,100'		I	310	mb	-29°		I	315	mb	-69°		I	317	mb	-66°		Tropopause
				26,400'					25,400'					23,500'					24,700'						24,200'					26,800'					27,400'				27,300'			

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA	STATION
Time M.S.L.	03h	03h	03h	03h	03h	03h	03h	03h	03h	Time M.S.L.
Surf	1003.0	1000.5	1004.3	1004.0	1004.0	1005.0	1004.1	1003.3	1008.8	Surf
Freezing	992.8	998.8	1003.2	994.5	1001.9	1000.3	987.5	992.6	1007	Freezing
Pressure	947	935	959	939	936	952	944	900	930	Pressure
Height ft./100	02.7	00.4	00.2	02.6	00.6	01.2	04.4	03.2	00.3	Height ft./100
Temp.	33	35	25	32	32	29	30	38	38	Temp.
Dew	30	33	24	30	30	26	28	36	34	Dew
Wind	Calm	220	24	Calm	16	045	120	Calm	34	Wind
Dir.										Dir.
Vel.										Vel.
knots										knots
Surf	02.7	00.4	00.2	02.6	00.6	01.2	04.4	03.2	00.3	Surf
1000	00.7	00.1	01.1	01.1	01.1	01.3	01.0	00.9	00.9	1000
950	33	35	25	32	32	29	30	38	38	950
900	28.3	26	27	28.7	28.8	28	27	28	28	900
850	19	12	14	20	23	21	17	20	20	850
800	58.4	12	15	58.1	59.1	17	18	18	18	800
750	07	05	12	08	13	07	12	14	12	750
700	00	01	14	02	08	09	05	09	05	700
650	08	06	13	06	01	18	02	02	01	650
600	129	15	19	129	131	11	13	13	13	600
550	23	24	24	23	20	17	18	14	14	550
500	171	35	35	172	173	31	173	175	175	500
450	42	47	46	42	43	43	43	42	42	450
400	221	51	51	220	223	53	224	225	227	400
350	62	63	64	62	61	61	60	53	42	350
300	282	66	66	282	284	59	285	288	291	300
250	63	63	63	63	59	59	59	57	57	250
200	367	63	63	368	371	57	370	376	376	200
170	63	63	63	63	56	56	58	53	42	170
150	64	64	64	64	57	57	60	53	36	150
130	62	62	62	62	59	59	63	53	30	130
110					62	62	64	56	28	110
100							515	526	30	100
90									13	90
80										80
70										70
60										60
Inversion	993 mb 33°-972 mb 36°	Inversion	Inversion	Inversion	Inversion	Inversion	Inversion	Inversion	Inversion	Inversion
		999 mb 35°-978 mb 36°	1003 mb 25°-974 mb 38°	995 mb 32°-950 mb 33°	1002 mb 32°-985 mb 33°	1000 mb 29°-984 mb 34°	987 mb 30°-966 mb 34°	993 mb 38°-963 mb 40°	538 mb 22°-461 mb 43°	
					Isenthal			Isenthal	Isenthal	
					776-745 mb 13°			622-600 mb -03°	1007-1000 mb 38°	
					Max Wind.					
					377 mb 23,500 245° 46 kts.					
Tropopause	I 337 mb -66° 25,800	I 400 mb -59° 22,000	I 345 mb -65° 26,300	I 400 mb -55° 22,180	I 340 mb -62° 25,700	I 292 mb -74° 29,100	I 293 mb -72° 28,900	I 339 mb -54° 26,200	I 257 mb -73° 34,200	Tropopause
STATION	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA	STATION
Time M.S.L.	09h	09h	09h	09h	09h	09h	09h	09h	09h	Time M.S.L.
Surf	1005.8	1003.9	1006.8	1008.9	1007.9	1008.6	1008.2	1008.9		Surf
Freezing	994.6	1002.3	1005.9	999.4	1005.8	1004.0	991.6	998.0		Freezing
Pressure	944	930	950	910	965	965	950	932		Pressure
Height ft./100	02.7	00.4	00.2	02.6	00.6	01.2	04.4	03.2		Height ft./100
Temp.	34	32	28	31	30	29	30	38		Temp.
Dew	26	27	27	26	27	26	27	36		Dew
Wind	205	31	27	26	27	26	310	270		Wind
Dir.										Dir.
Vel.										Vel.
knots										knots
Surf	02.7	00.4	00.2	02.6	00.6	01.2	04.4	03.2		Surf
1000	01.2	01.0	01.7	02.4	02.1	02.3	02.1	02.4		1000
950	33	35	32	34	31	30	32	33		950
900	28.9	25	28	28	29	28	27	28		900
850	19	14	22	22	24	23	22	24		850
800	58.9	15	15	106.4	60.0	17	19	15		800
750	07	08	11	10	12	01	13	13		750
700	00	01	03	08	06	19	07	07		700
650	08	07	05	04	03	32	00	01		650
600	129	16	13	131	131	12	132	132		600
550	26	24	24	22	22	35	18	17		550
500	171	36	35	174	174	32	175	175		500
450	47	47	47	47	44	43	43	42		450
400	220	51	51	222	223	55	225	225		400
350	61	61	60	60	55	55	61	53		350
300	282	63	63	284	285	54	285	288		300
250	61	61	61	61	55	55	60	55		250
200	368	66	66	370	372	63	370	376		200
170	65	65	65	65	60	60	59	53		170
150	67	67	67	67	55	55	60	53		150
130	67	67	67	67			60	53		130
110										110
100										100
90										90
80										80
70										70
60										60
Inversion	995 mb 34°-973 mb 36°	Inversion	Inversion	Inversion	Inversion	Inversion	Inversion	Inversion		Inversion
		1002 mb 32°-955 mb 36°	1006 mb 28°-977 mb 38°	999 mb 31°-980 mb 34°	1006 mb 30°-977 mb 33°	1004 mb 29°-978 mb 33°	992 mb 30°-962 mb 33°			
			Isenthal	Isenthal	Isenthal	Isenthal				
			790-775 mb 16°	796-780 mb 16°	796-780 mb 16°	796-780 mb 16°				
			780-920 mb 34°		711-700 mb 07°					
Tropopause	I 354 mb -61° 24,700	I 422 mb -46° 20,900	I 400 mb -60° 22,200	I 469 mb -38° 18,700	I 405 mb -55° 22,100	I 300 mb -72° 28,600	I 323 mb -68° 27,100	I 460 mb -41° 19,400		Tropopause

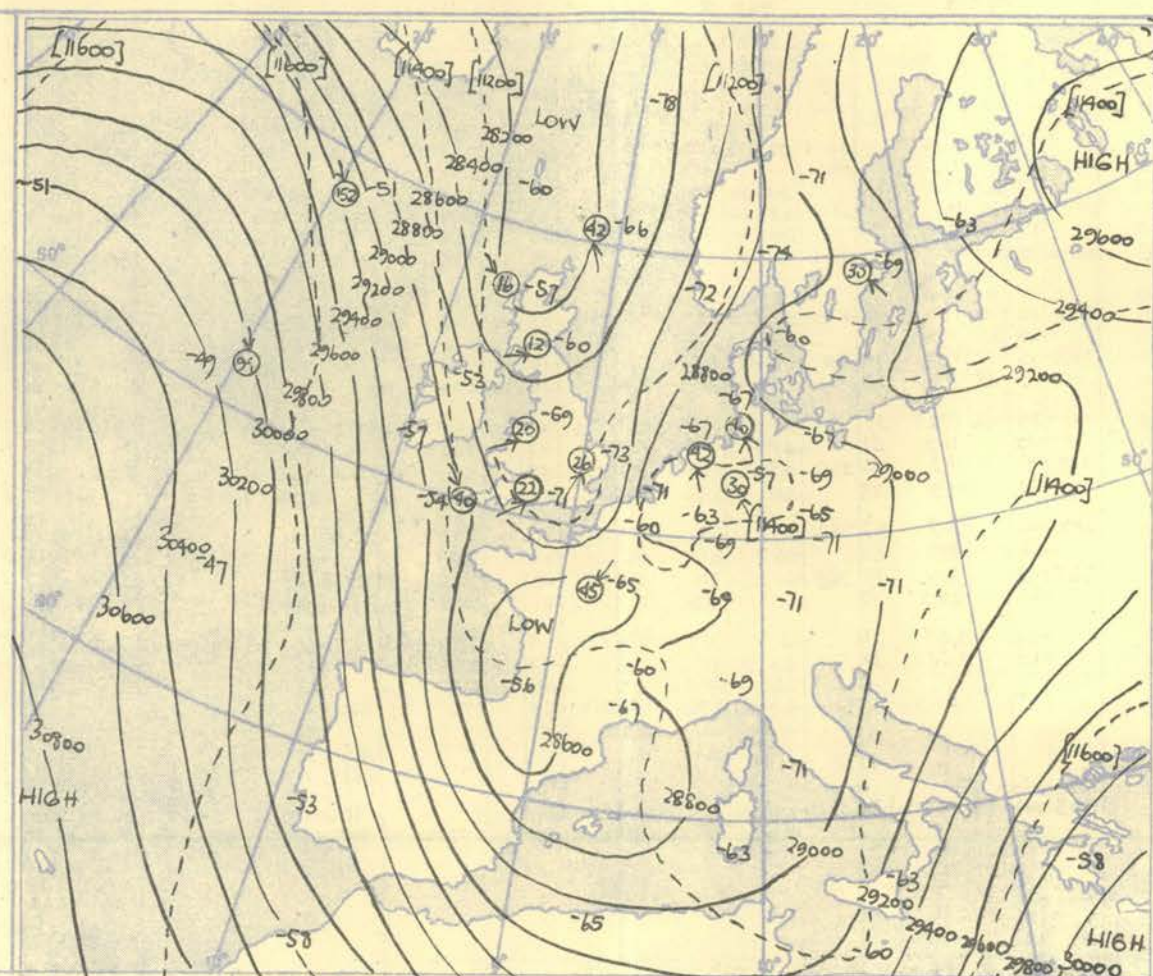
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



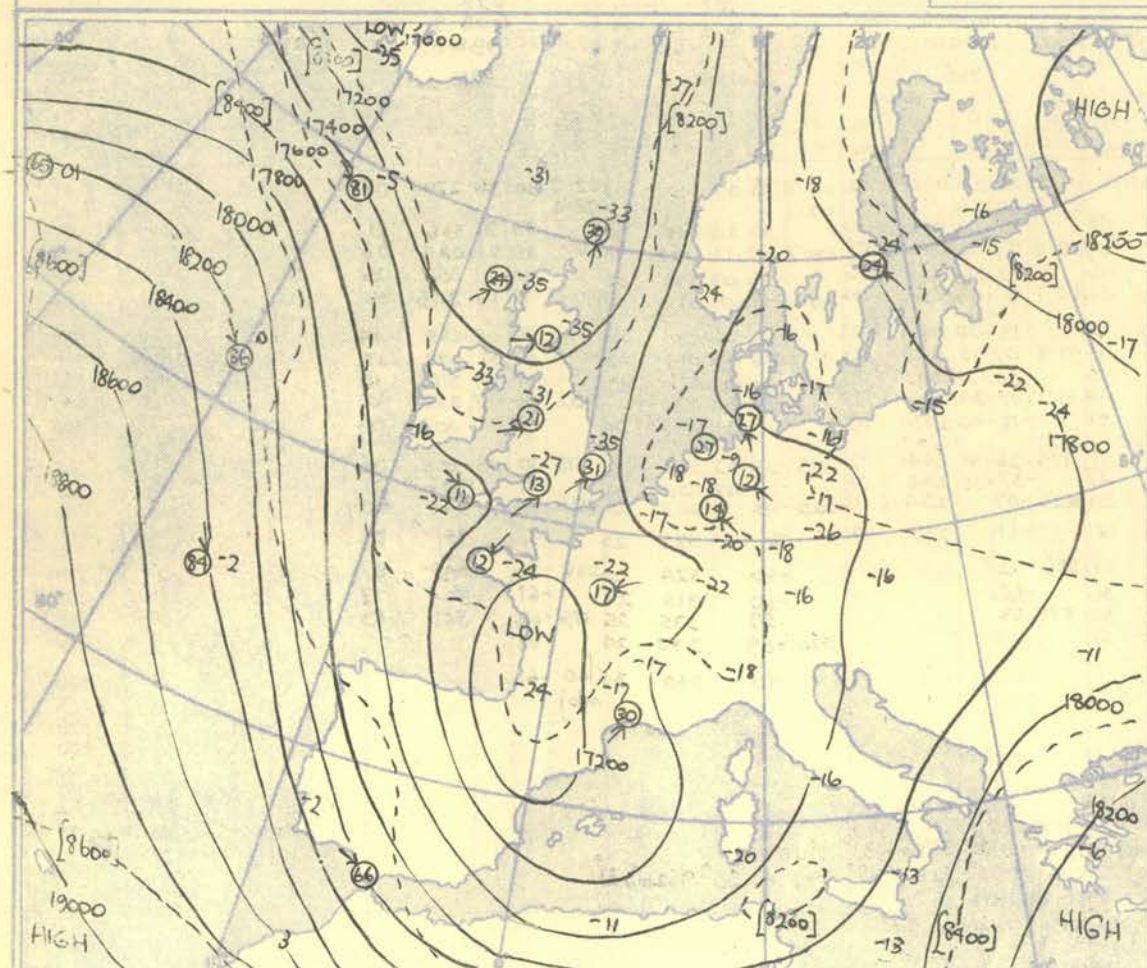
The continuous lines are contour lines of the 700 mb. surface
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. $52\frac{1}{2}^\circ$ N.

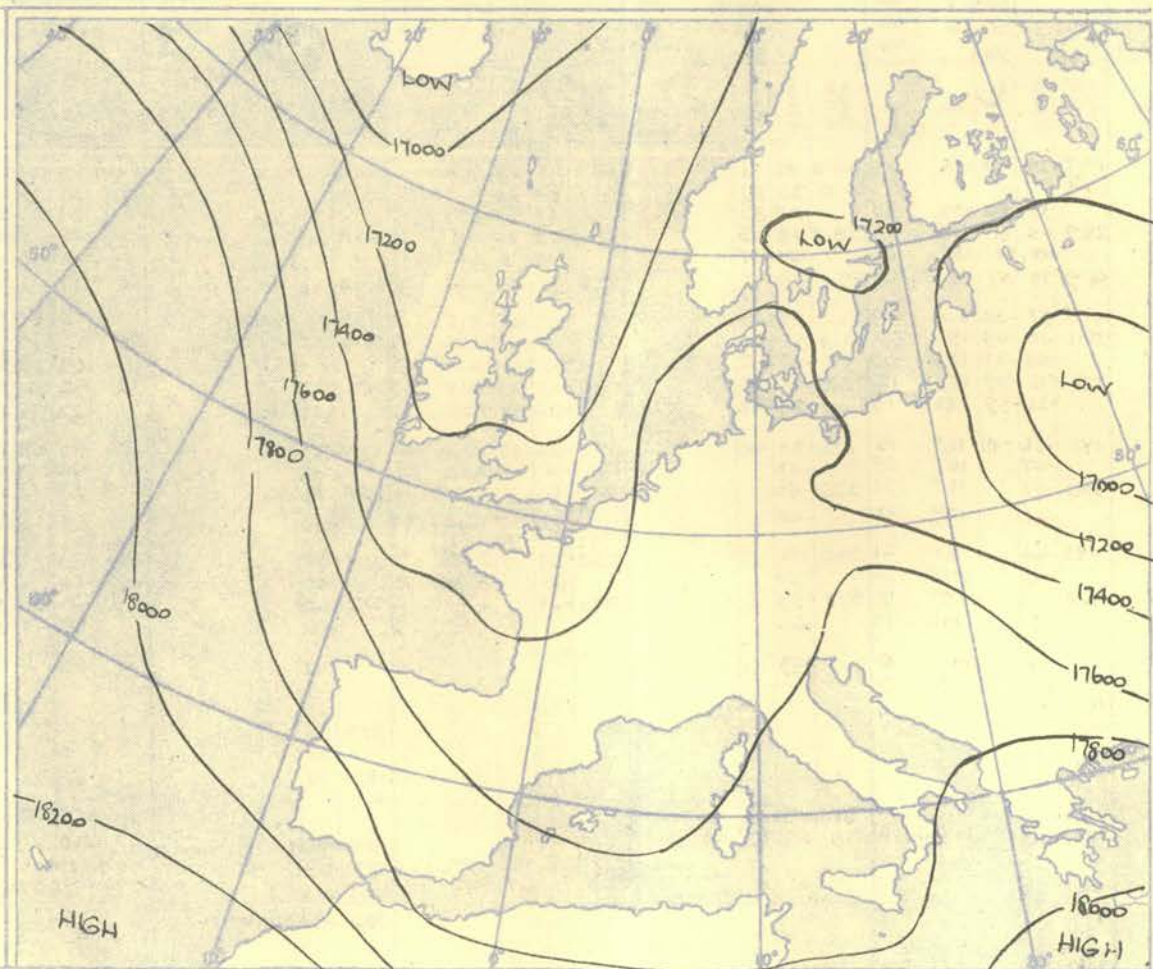
100 60 40 30 20 15 10 knots



The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500—300 mb.



The continuous lines are contour lines of the 500 mb. surface
The dotted lines are isopleths of the thickness of the layer 700—500 mb.



Isopleths of Thickness 500-1000mb.

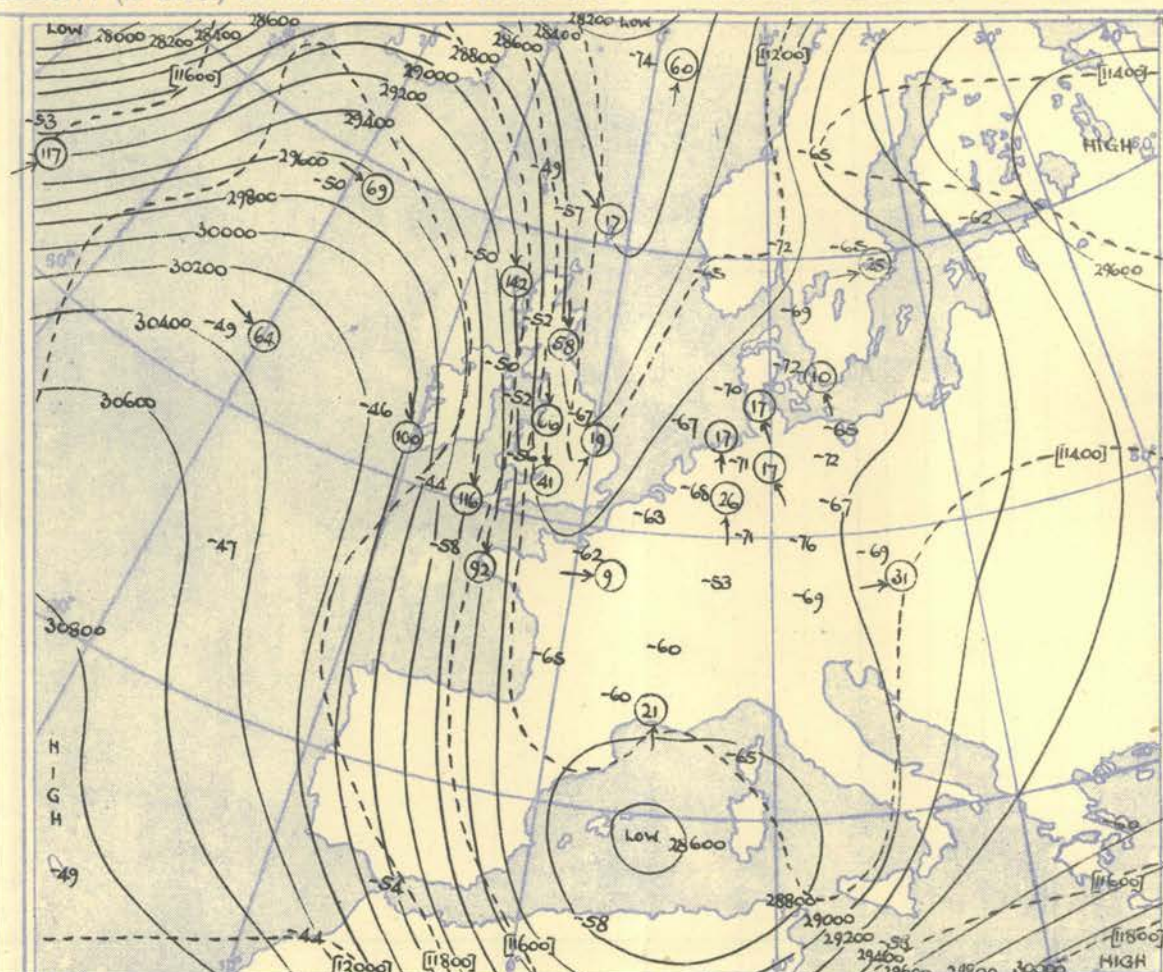
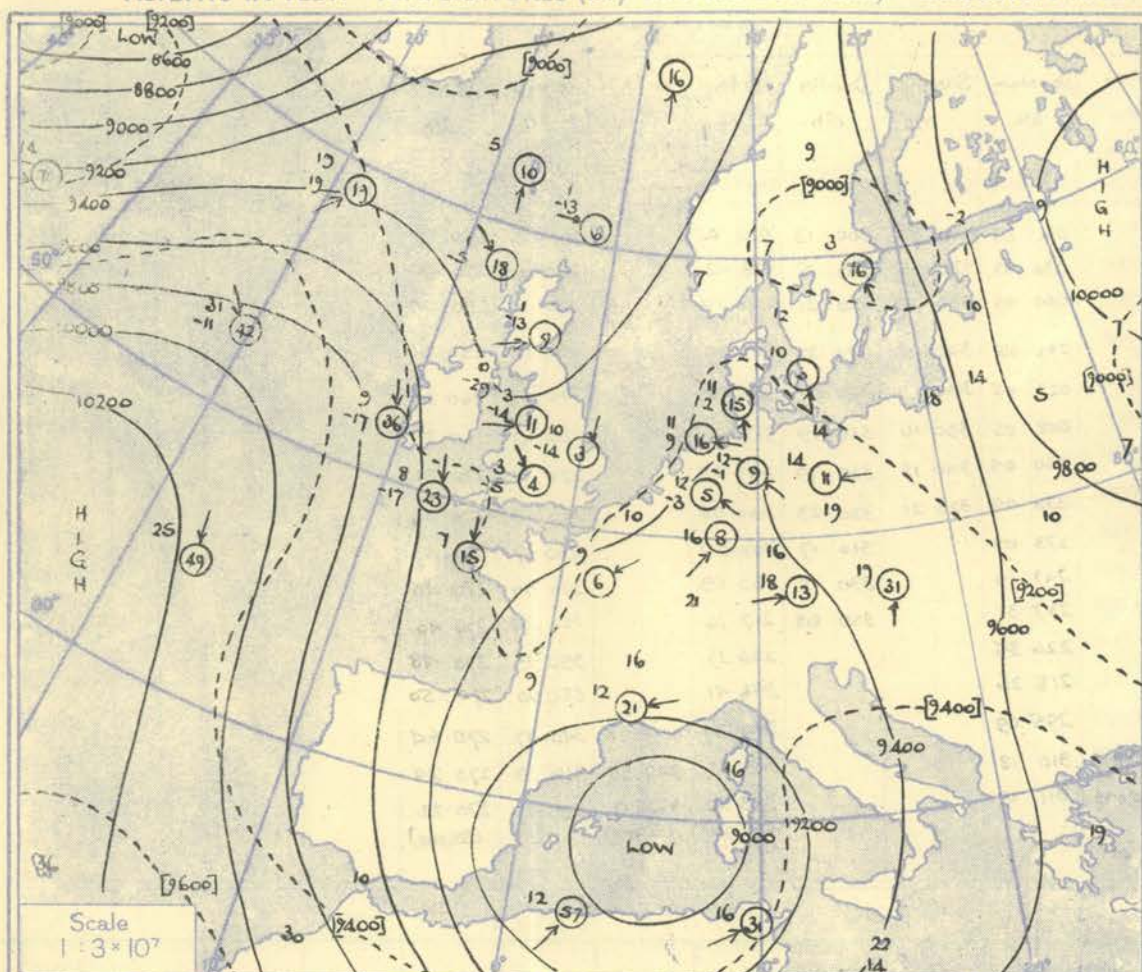
AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY															DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.														
Pressure (Time M.S.L. Surf Freezing)	mb			mb			mb			mb			mb			mb			mb			Time M.S.L. Surf Freezing	Pressure						
	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb										
Pressure mb	Height ft./100	°Temp.	Dew °F.	Height ft./100	°Temp.	Dew °F.	Height ft./100	°Temp.	Dew °F.	Height ft./100	°Temp.	Dew °F.	Height ft./100	°Temp.	Dew °F.	Height ft./100	°Temp.	Dew °F.	Height ft./100	°Temp.	Dew °F.	Pressure mb							
Surf																						Surf							
1000																						1000							
950																						950							
900																						900							
850																						850							
800																						800							
750																						750							
700																						700							
650																						650							
600																						600							
550																						550							
500																						500							
450																						450							
400																						400							
350																						350							
300																						300							
250																						250							
200																						200							
170																						170							

7 - FEB 1951																						
Place	Downham	Shannon	Dublin	Larkhill	Larkhill	Lewick	W. Observer															Place
Time	03h.	09h.	15h.	15h.	21h.	21h.	525N 19.8W															Time
Type																						Type
Feet	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Feet
Surf.	030 05	340 03	300 13	010 05				200 03	230 17													Surf.
1,000	038 05	320 15	310 15	023 12				220 12	250 22													1,000
2,000	034 05	330 20	320 21	012 10				220 11	250 27													2,000
3,000	026 05	340 18	330 22	003 10				220 11	250 30													3,000
4,000	023 05	330 17	330 20	355 09				220 09	260 30													4,000
5,000	008 05	330 16	330 19	353 09				220 10	260 39													5,000
6,000	360 04	340 18	320 19	343 09				220 11	270 37													6,000
8,000	338 04	320 21	320 23	336 06				220 10	270 36													8,000
10,000	273 07		310 17	308 04				200 47	270 33													10,000
14,000	247 14		330 15	163 03				270 04	280 40													14,000
18,000	237 31		350 68	217 16				350 24	270 40													18,000
24,000	226 34			226 27				350 93	270 48													24,000
30,000	218 26			346 41				350 90	270 50													30,000
40,000	295 09			346 39				340 47	270 64													40,000
50,000	310 18			343 22		348 35		310 39	270 24													50,000
60,000	311 18			333 22		352 17		280 47	270 22													
				(52,000')		(52,000')			(55,000')													

NEPHOSCOPE OBSERVATIONS																						
Place																						Place
Time Type																						Time Type
Dir. Vel.																						Dir. Vel.

NEPHOSCOPE OBSERVATIONS

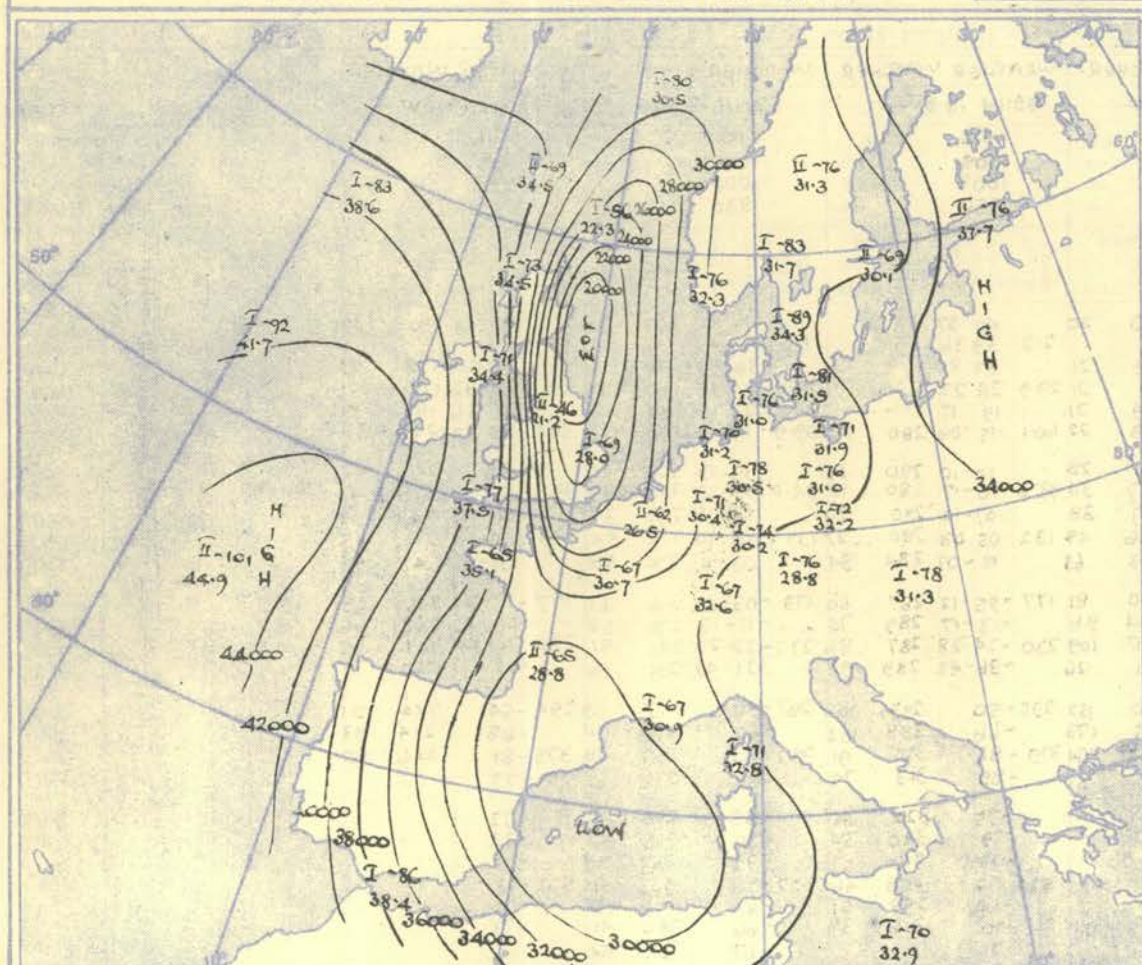
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.																																													
Ship	WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				Ship												
Lat/Long	52°5'N 19°1'W				52°7'N 20°3'W				52°4'N 19°8'W				52°5'N 19°8'W				59°0'N 18°5'W				59°1'N 18°9'W				59°1'N 18°8'W				59°2'N 19°0'W				Lat/Long												
Pressure	Time	03h G.M.T.			09L G.M.T.			15h G.M.T.			21h G.M.T.			03h G.M.T.			09L G.M.T.			15h G.M.T.			21h G.M.T.			G.M.T.			Time																
	M.S.L.	1015 mb			1014 mb			1014 mb			1013 mb			1006 mb			1008 mb			1006 mb			998 mb			mb			M.S.L.																
	Surf	1015 mb			1014 mb			1014 mb			1013 mb			1006 mb			1008 mb			1006 mb			998 mb			mb			Surf																
	Freezing	910 mb			725 mb			790 4710 mb			750 mb			935 mb			950 mb			930 mb			790 mb			mb			Freezing																
Pressure	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Pressure																
mb	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	mb																
Surf		45	35	300	13	45	40	150	17	51	50	265	13	51	51	225	18												Surf																
1000	39	43	34	304	15	38	43	35	158	15	37	50	50	37	40	36	320	20	22	40	37	Calim	15	43	42	160	18	-6	45	45	170	30	1000												
950		37	31	298	14		39	32	207	18		47	47	277	26		49	49			39	36	"	15	42	41			40	40	173	43	950												
900	31.9	30	26	293	15	31.9	39	32	257	21	32.3	45	45	284	27	32.4	46	46			29	32	"	29	5	29	28	160	25	27.6	36	36	177	52	900										
850		24	21	290	20		43	36	292	33		40	40	298	28		41	41			22	19	"	27		22	19	164	27		36	36	192	39	850										
800	62.5	26	24	292	32	63.4	38	31	301	48	63.8	33	32	289	32	64.0	36	38			59	4	14	14	319	22	60	1	15	09	280	07	59	9	17	16	173	25	58	8	33	30	228	38	800
750		26	24	293	50		34	20	312	50		33	15	296	38		32	32				06	05	313	28		10	10	280	14		19	19	200	20		28	24	242	42	750				
700	97.2	27	25	298	65	98.7	29	17	312	57	98.8	31	11	298	42	99.0	26	26			92	6	01	20	307	34	93	6	10	17	280	15	94	0	19	19	223	19	93	5	22	19	238	41	700
650		22	21	311	78		26	15	315	52		25	26	291	43		25	08				07	24	307	38		07	12	280	20		18	18	257	39		16	12	243	43	650				
600	137	16	16	316	89	139	19	09	315	51	139	19	33	289	39	139	17	05			130	10	29	306	48	132	05	03	280	27	133	13	10	272	54	133	10	19	242	45	600				
550		09	07	321	86		12	01	308	63		11	43	288	48		09	27				04	25	303	63		01	07	284	34		03	11	274	58		01	31	247	44	550				
500	182	60	03	322	86	184	03	10	304	51	184	01	50	292	52	185	01	14			174	05	26	300	81	177	05	12	287	60	179	03	12	276	61	177	08	38	245	53	500				
450		10	14	321	80		09	22	304	51		09	51	296	51		09	26				16	33	304	96		13	17	289	74		11	18	276	58		20	42	242	66	450				
400	236	21	28	323	80	238	20	35	309	49	238	21	34	296	48	238	21	38			227	25	38	307	109	230	24	28	287	86	232	22	29	281	51	230	30	54	247	65	400				
350		35	44	328	81		32	46	306	48		34	57	206	60		34	51				38	47	311	126		36	42	289	94		35	43	291	46		42		250	79	350				
300	301	49		330	94	303	47		313	54	303	49		274	64	303	49			291	51		310	152	295	50		293	108	297	50		277	69	294	54		244	91	300					
250		65		326	94		62		306	51		66		282	60		67					71		315	173		66		298	104		67		268	84		68		224	93	250				
200	386	83		325	96	389	82		305	60	388	83		279	50		73			376	82		322	104	379	88		305	91	382	82		267	79	378	81		246	85	200					
170		89		325	82		94		305	60		91		278	31	(233mb)						71					89		313	74		82		272	62		77				170				
150		89		322	72		91		305	48		88		278	32													75		322	56		85		273	55		73			150				
130		76		321	57		76					78		278	33													79		320	54		80		268	47		73			130				
110		78		322	48	(133mb)						74		292	33													73		310	57		72		267	39		75			110				
100	525	77		323	42						527	73		323	30													520	70		308	46	522	70		266	40	521	73			100			
90		76		324	33							72		297	27													69		298	51		67		271	42		72			90				
80	(85mb)	77										71		253	25													70		296	38		66		280	41		72			80				
70												71															71						67		282	54					70				
60																																	69								60				
		Isothermal.				Inversion.				(75mb) Inversion.				Isothermal.				Inversion.				(65mb) Inversion.				Inversion.				Isothermal.															
		861-844 mb 24°				910 mb 27°-850 mb 43°				763 mb 28°-746 mb 36°				968-930 mb 49°				600 mb 10°-560 mb 4°				740 mb 09°-700 mb 10°				800 mb 17°-750 mb 19°				908-850 mb 36°															
		809-800° 26°																				613° 04°-587° 06°				700° 19°-670° 20°																			
		727-708° 28°																																											
		Inversion.																																											
		844 mb 24°-809 mb 26°								958-914 mb 47°				692 mb 25°-674 mb 27°				560-503 mb 4°				500-490 mb 5°				750-700 mb 19°																			
		776° 25°-727° 28°																																											
Tropopause		I 161mb-91°				I 77mb-94°				I 175mb-82°				NR.				I 214mb-85°				II 170mb-89°				I 196mb-83°				NR.				Tropopause											
		43°200°				41°500°				41°700°								36°100°				41°300°				33°600°																			



Gradient Wind Scale for Contours at intervals of 200 ft. at Lat. 52½° N.

100 80 60 40 20 10 knots

TROPOPAUSE CHART at about 15h. G.M.T.

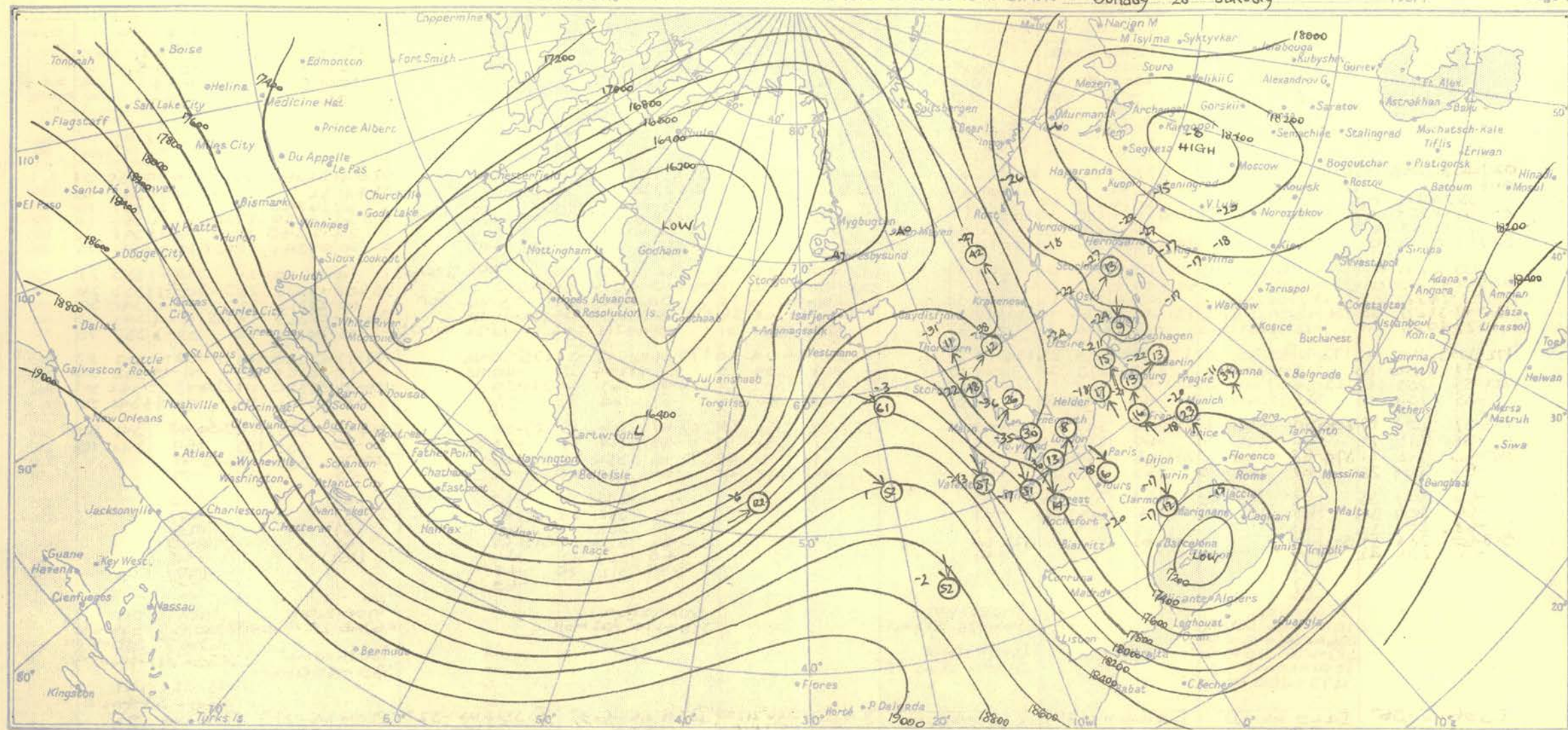


NOTES ON THE AEROLOGICAL SITUATION.

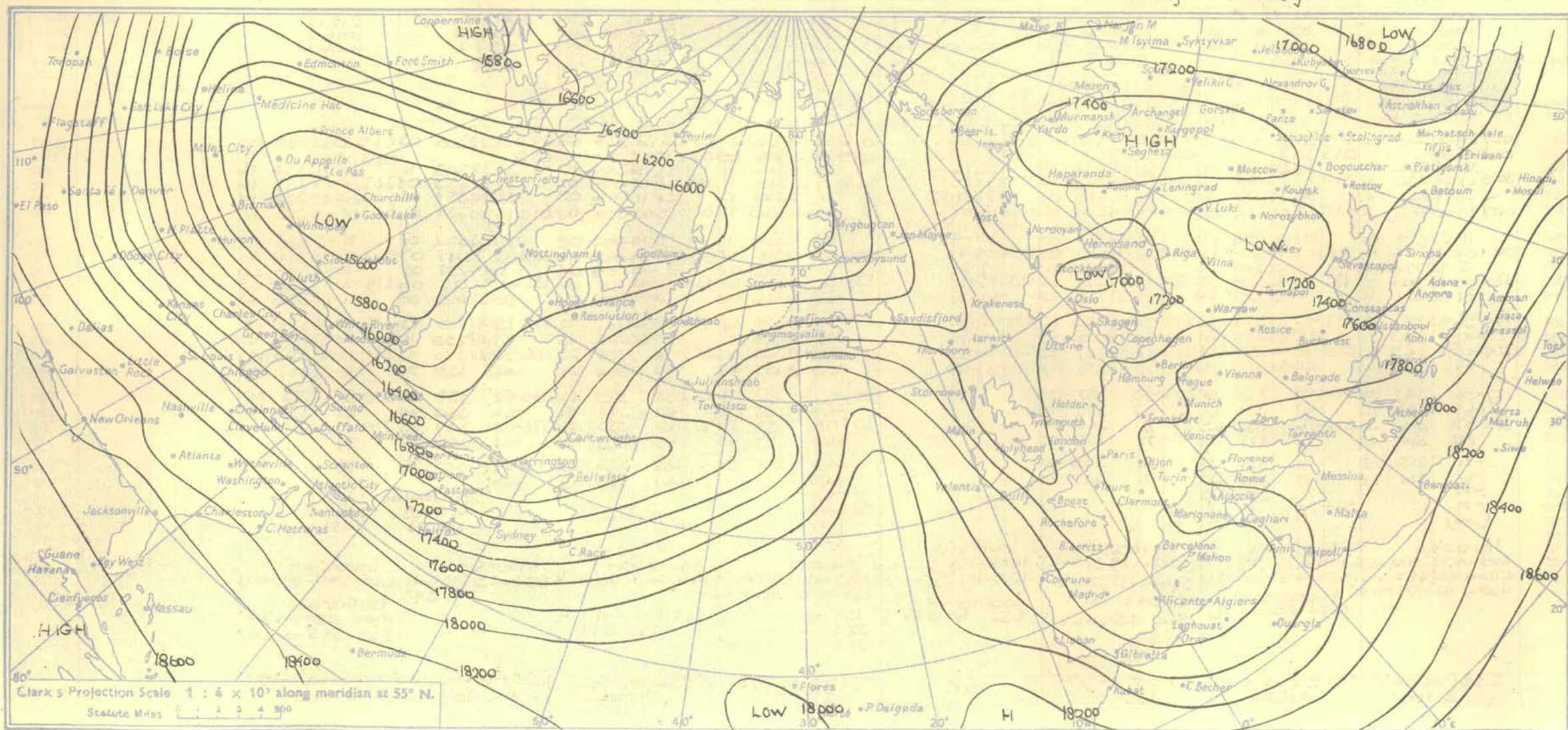
The thermal on the Atlantic became more twisted as a deepening depression moved slowly east northeast from south of Greenland. The well marked jet stream west of the British Isles veered and moved into western districts.

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Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T.



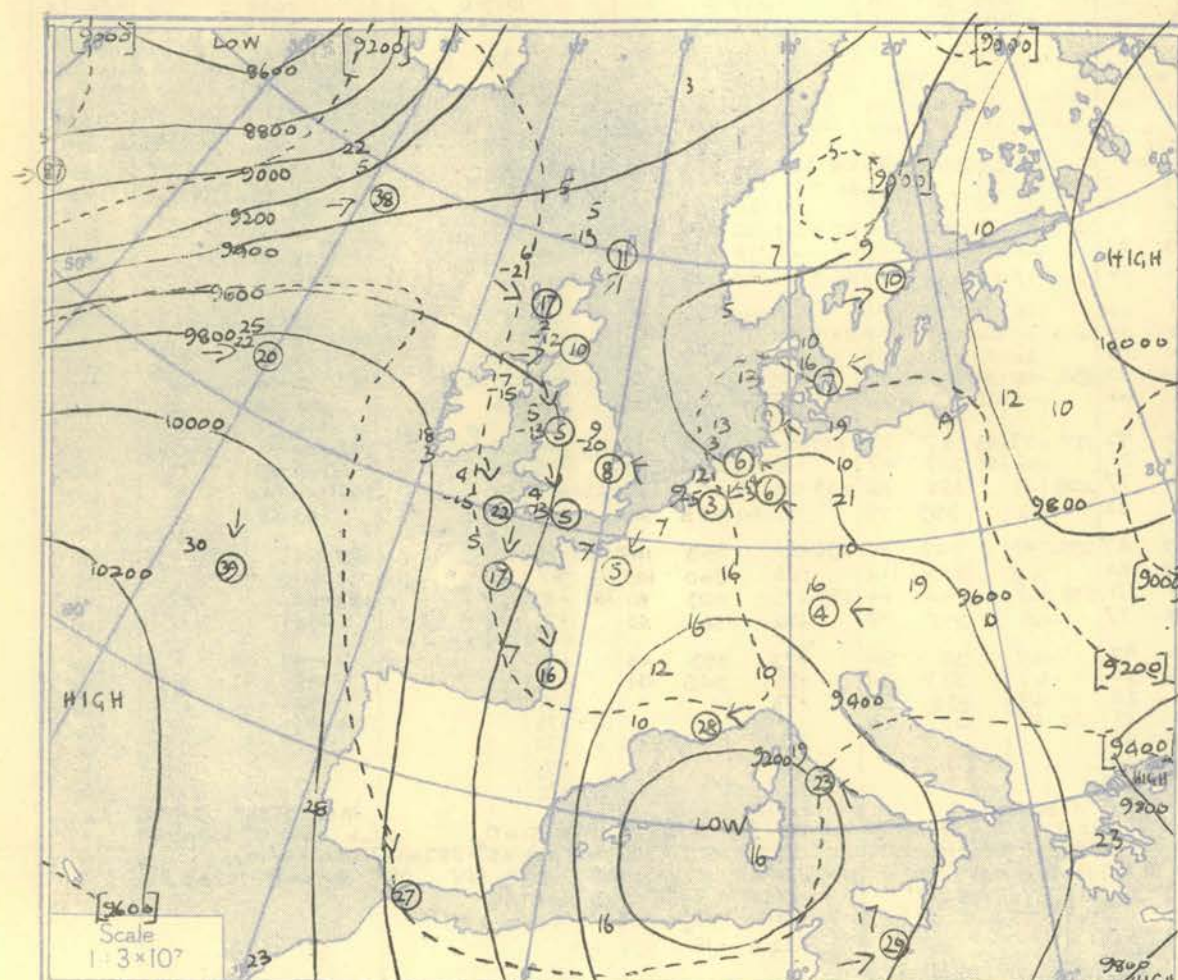
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				Valentia				STATION																																																																																																																																																																																																										
Pressure	Time	15hrs			G.M.T.	15hrs			G.M.T.	15hrs			G.M.T.	15hrs			G.M.T.	15hrs			G.M.T.	15hrs			G.M.T.	15hrs			G.M.T.	15hrs			G.M.T.	Time																																																																																																																																																																																																													
	M.S.L.	1007.1			mb	1006.1			mb	1009.8			mb	1011.4			mb	1010.7			mb	1010.7			mb	1011.7			mb	1012.7			mb	M.S.L.																																																																																																																																																																																																													
	Surf	996.7			mb	1006.4			mb	1002.9			mb	1002.2			mb	1008.6			mb	1006.2			mb	995.6			mb	1001.9			mb	Surf																																																																																																																																																																																																													
	Freezing	941			mb	934			mb	976			mb	956			mb	958			mb	954			mb	958			mb	926			mb	Freezing																																																																																																																																																																																																													
Pressure	Height	ft./100			Temp.	°F.			Dew	°F.			Wind	Dir. Vel.			Height	ft./100			Temp.	°F.			Dew	°F.			Wind	Dir. Vel.			Height	ft./100			Temp.	°F.			Dew	°F.			Wind	Dir. Vel.			Pressure																																																																																																																																																																																														
	mb																mb																mb								mb								mb																																																																																																																																																																																														
Surf	02.7	40	30	20.5	08	0.4	36	33	250	08	0.2	37	33	calm	02.6	38	33																Surf																																																																																																																																																																																																														
1000	01.8																																1000																																																																																																																																																																																																														
950		33	24	22.1	08																												950																																																																																																																																																																																																														
900	29.5	26	18	22.1	07	29	28	22.8	21	16	30	0.28	21	280	09	31	28																900																																																																																																																																																																																																														
850		21	05	21.8	07																												850																																																																																																																																																																																																														
800	59.7	14	05	21.3	08	60	1	15	05	30.9	14	60	2	15	05	26.0	09	61	1	15	08												800																																																																																																																																																																																																														
750		03	2	21.0	07																												750																																																																																																																																																																																																														
700	21.5	01	13	21.9	08	93	4	01	5	30.3	19	93	5	01	13	24.4	09	94	5	02	2												700																																																																																																																																																																																																														
650		7	24	28.2	08																													650																																																																																																																																																																																																													
600	130	17	32	27.7	09	131	13	20	29.8	17	131	16	29	23.6	14	132	17	31															600																																																																																																																																																																																																														
550		27	40	27.1	11																													550																																																																																																																																																																																																													
500	172	38	51	26.4	12	173	22	39	33.6	48	173	36	47	23.9	26	174	18	31															500																																																																																																																																																																																																														
450		47		25.6	10																													450																																																																																																																																																																																																													
400	221	53		25.5	13	223	34	57	34.0	101	222	45	33.8	36	226	30	48																400																																																																																																																																																																																																														
350		53		25.8	13																													350																																																																																																																																																																																																													
300	283	57		29.7	17	290	50		34.3	142	285	52	34.8	58	291	49																	300																																																																																																																																																																																																														
250		61		31.3	22																													250																																																																																																																																																																																																													
200	369	63		21.2	21	374	68		34.9	73	372	63	22.4	40	377	66																	200																																																																																																																																																																																																														
170		66		30.4	29				34.3	59			32.9	35																				170																																																																																																																																																																																																													
150		66		30.7	33				33.3	49			33.8	31																				150																																																																																																																																																																																																													
130		66		30.4	30				32.0	36			31.2	24																				130																																																																																																																																																																																																													
110		69		29.1	32																														110																																																																																																																																																																																																												
100	515	69		28.8	37	521	64																											100																																																																																																																																																																																																													
90		71		29.2	42																														90																																																																																																																																																																																																												
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Inversion 1006ms-993ms 526ms-475ms 387ms-310ms Isothermal 475-460ms-20°																														Inversion 556ms-513ms Isothermal 513-475ms 48°																														Inversion 725ms-705ms																														Inversion 467ms-450ms Isothermal 539-490ms-17°																														Inversion 8700ms-654ms Isothermal 550-544ms 8°																																																																																																																							
Tropopause 1136ms-56° 21300'																														Tropopause 1229ms-73° 34500'																														Tropopause 1444ms-49° 19800'																														Tropopause 1231ms-70° 34700'																														Tropopause 1423ms-46° 21200'																														Tropopause 1311ms-69° 28000'																														Tropopause 1206ms-77° 37500'																														Tropopause 1167ms-98° 42100'																													
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE								STATION																																																																																																																																																																																																										
Pressure	Time	21hrs			G.M.T.	21hrs			G.M.T.	21hrs			G.M.T.	21hrs			G.M.T.	21hrs			G.M.T.	21hrs			G.M.T.	21hrs			G.M.T.				G.M.T.	Time																																																																																																																																																																																																													
	M.S.L.	1010.7			mb	1012.4			mb	1014.2			mb	1013.7			mb	1014.3			mb	1014.4			mb	1013.0			mb				mb	M.S.L.																																																																																																																																																																																																													
	Surf	1000.4			mb	1010.7			mb	1013.3			mb	1006.3			mb	1012.8			mb	1009.7			mb	998.2			mb				mb	Surf																																																																																																																																																																																																													
	Freezing	942			mb	932			mb	956			mb	948			mb	945			mb	948			mb	958			mb				mb	Freezing																																																																																																																																																																																																													
Pressure	Height	ft./100			Temp.	°F.			Dew	°F.			Wind	Dir. Vel.			Height	ft./100			Temp.	°F.			Dew	°F.			Wind	Dir. Vel.			Height	ft./100			Temp.	°F.			Dew	°F.			Wind	Dir. Vel.			Pressure																																																																																																																																																																																														
	mb																mb																mb								mb								mb																																																																																																																																																																																														
Surf	02.7	34	30	22.0	04	0.4	33	30	calm	0.2	29	28	calm	02.6	33	30																		Surf																																																																																																																																																																																																													
1000	02.8	34	30																																	1000																																																																																																																																																																																																											
950		33	28	23.2	12																															950																																																																																																																																																																																																											
900	30.5	27	24	23.2	11	31	1	27	22	26.8	10	31	2	26	17	26.9	10	31	9	27	22														900																																																																																																																																																																																																												
850		21	14	22.7	10																															850																																																																																																																																																																																																											
800	60.7	13	09	22.3	10	61	2	14	02	27.8	09	61	4	16	04	30.8	06	62	1	16	02														800																																																																																																																																																																																																												
750		11	01	23.4	08																															750																																																																																																																																																																																																											
700	24	10	4	25.4	08	94	3	01	13	31.0	13	94	2	14	30.1	08	95	6	04	13															700																																																																																																																																																																																																												
650		5	19	27.4	08																															650																																																																																																																																																																																																											
600	131	13	27	30.4	07	132	12	33	28.9	33	132	13	28	27.3	15	133	13	28																	600																																																																																																																																																																																																												
550		24	38	29.3	11																															550																																																																																																																																																																																																											
500	174	36	49	29.7	13	177	46	33	34.4	63	175	21	43	00.3	63	178	5	30																	500																																																																																																																																																																																																												
450		42		34.0	23																															450																																																																																																																																																																																																											
400	224	40		34.9	63	229	29	41	33.9	73	227	27	57	35.7	83	231	26	33																	400																																																																																																																																																																																																												
350		46		35.0	102																															350																																																																																																																																																																																																											
300	287	56		34.7	96	294	54		32.5	88	292	50		35.7	120																				300																																																																																																																																																																																																												
250		65		34.3	70				33.1	78				35.2	104																				250																																																																																																																																																																																																												
200	373	69		32.6	58	378	86		33.9	69	377	73		34.8	80																				200																																																																																																																																																																																																												
170		69		33.0	44				32.7	43				35.9	49																				170																																																																																																																																																																																																												
150		71		32.5	28				32.4	40				34.9	40																				150																																																																																																																																																																																																												
130		68		32.3	32				31.0	37				34.2	28																				130																																																																																																																																																																																																												
110		70																																		110																																																																																																																																																																																																											
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RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

[illegible]

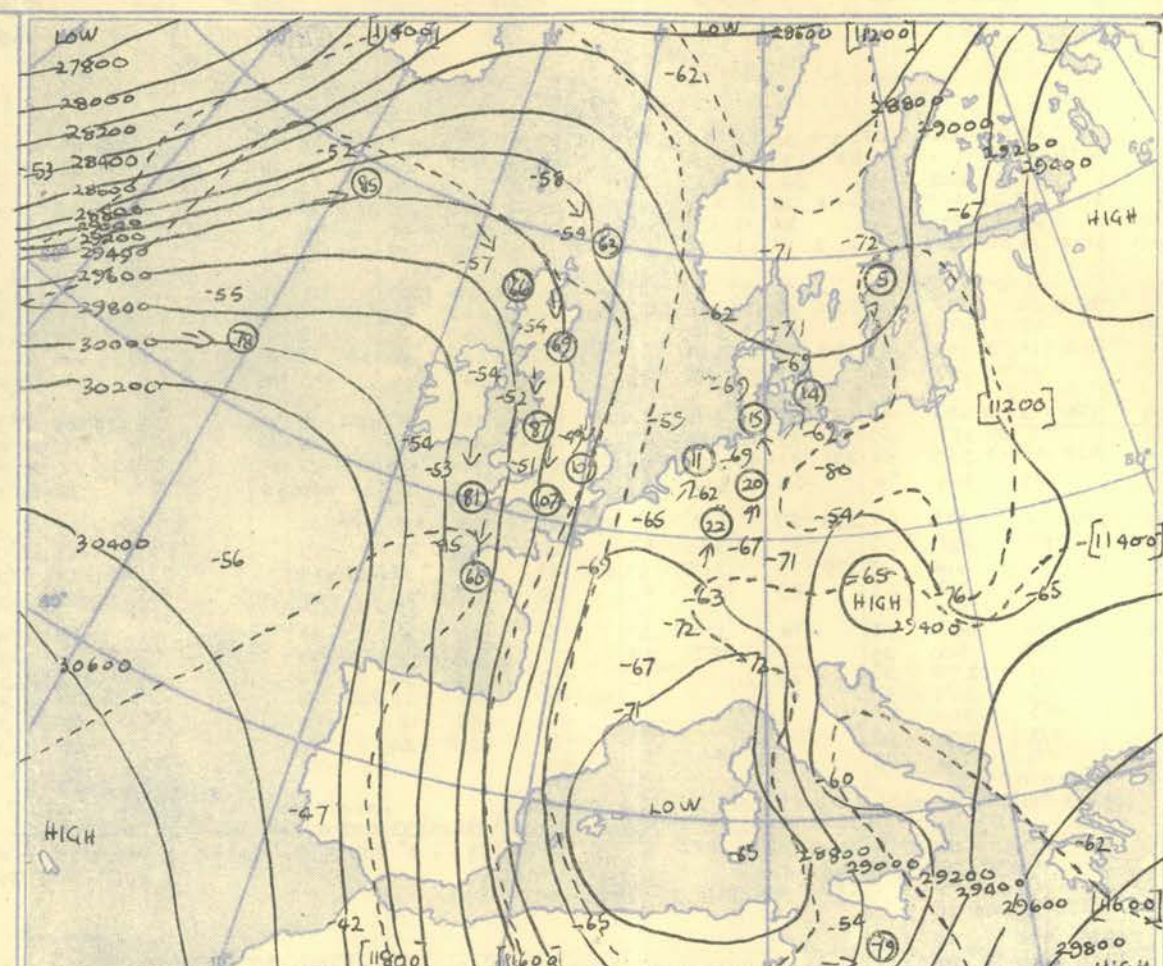
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



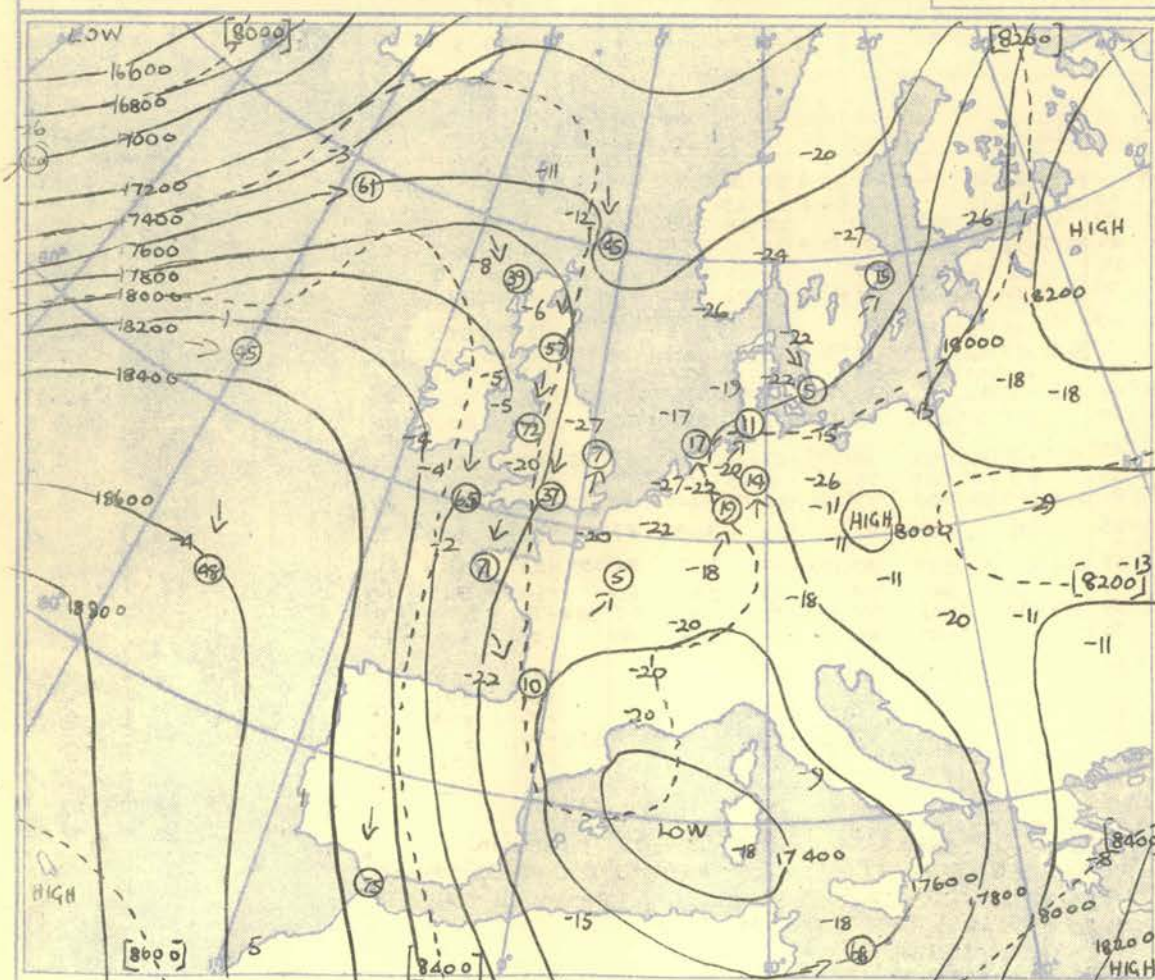
The continuous lines are contour lines of the 700 mb. surface
The dotted lines are isopleths of the thickness of the layer 1000 - 700 mb.

Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

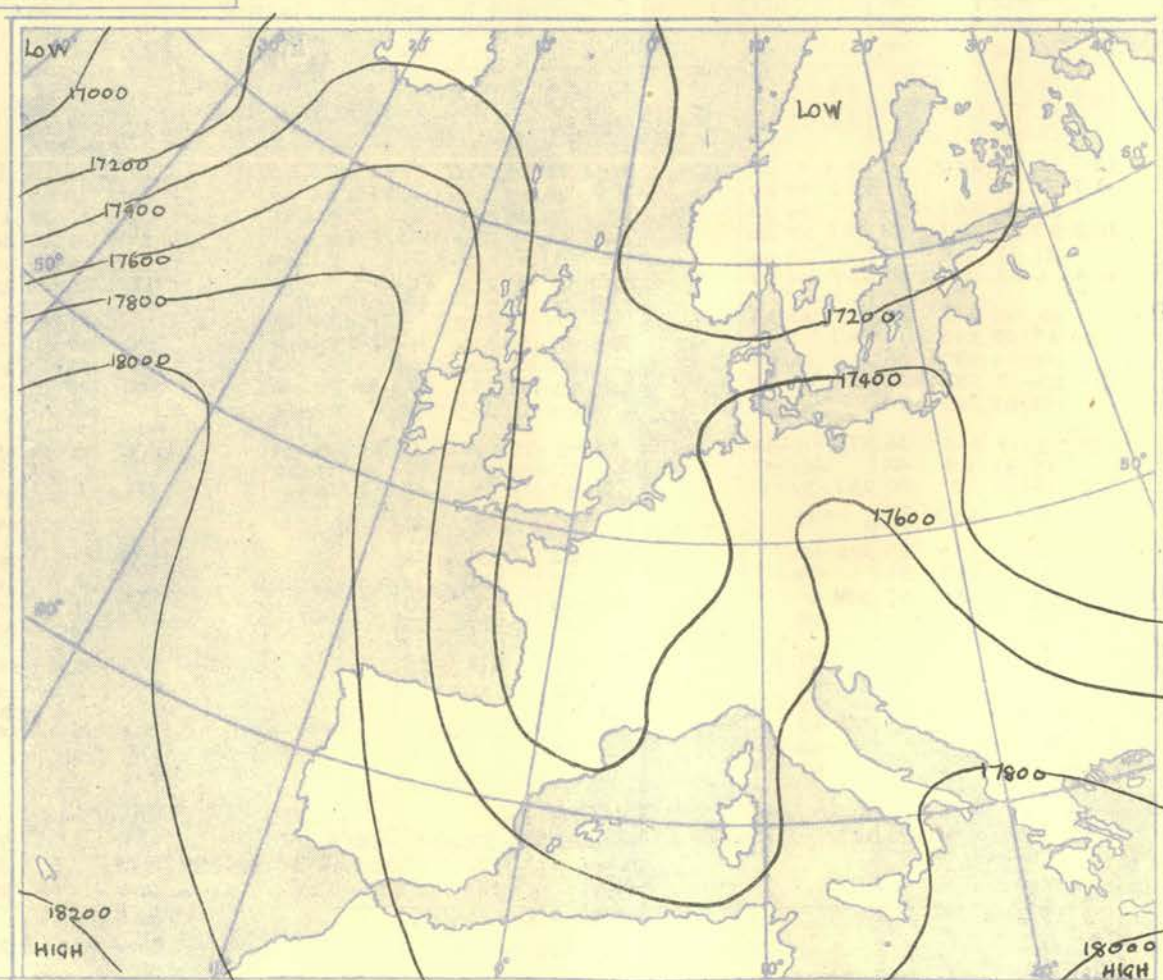
100 80 60 40 30 20 10 knots



The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 - 300 mb.



The continuous lines are contour lines of the 500 mb. surface
The dotted lines are isopleths of the thickness of the layer 700 - 500 mb.



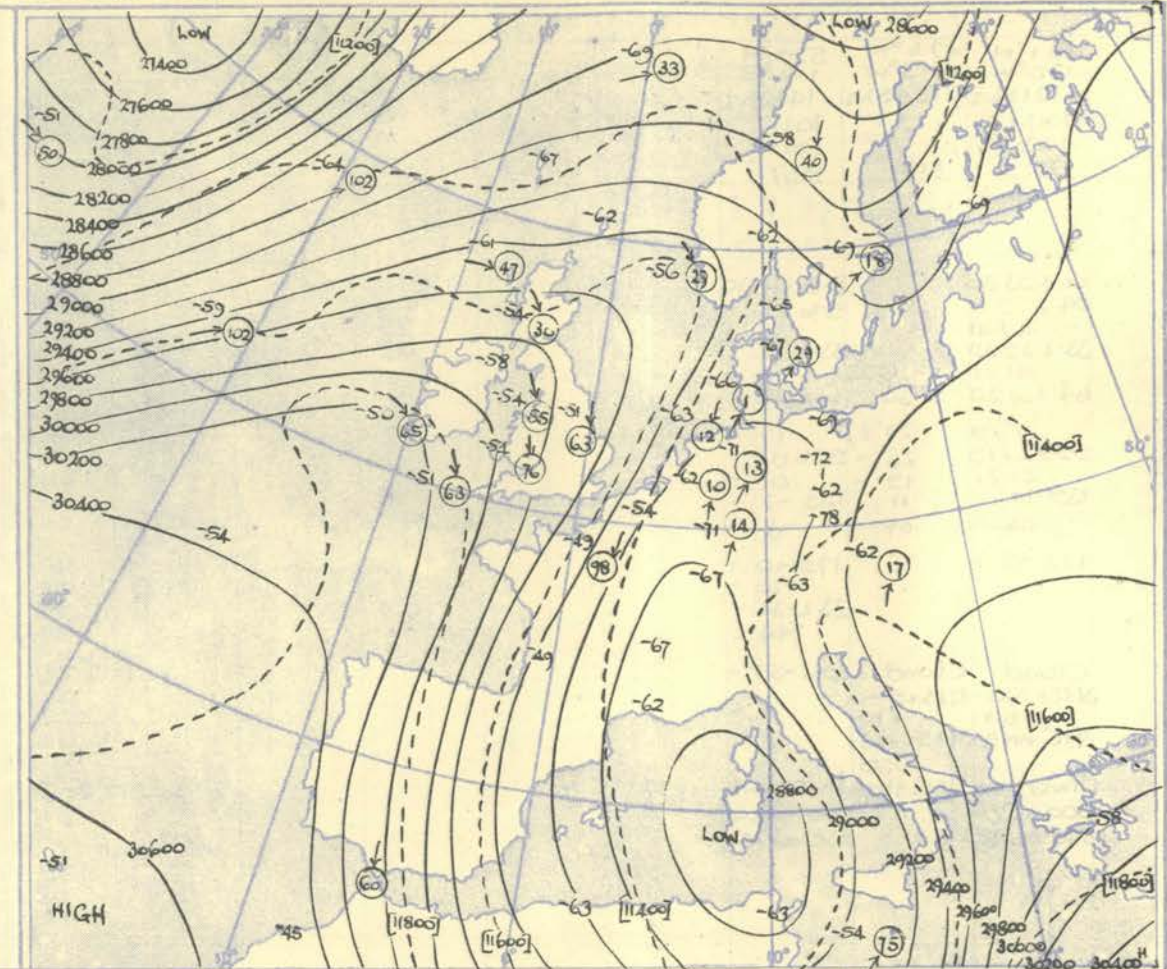
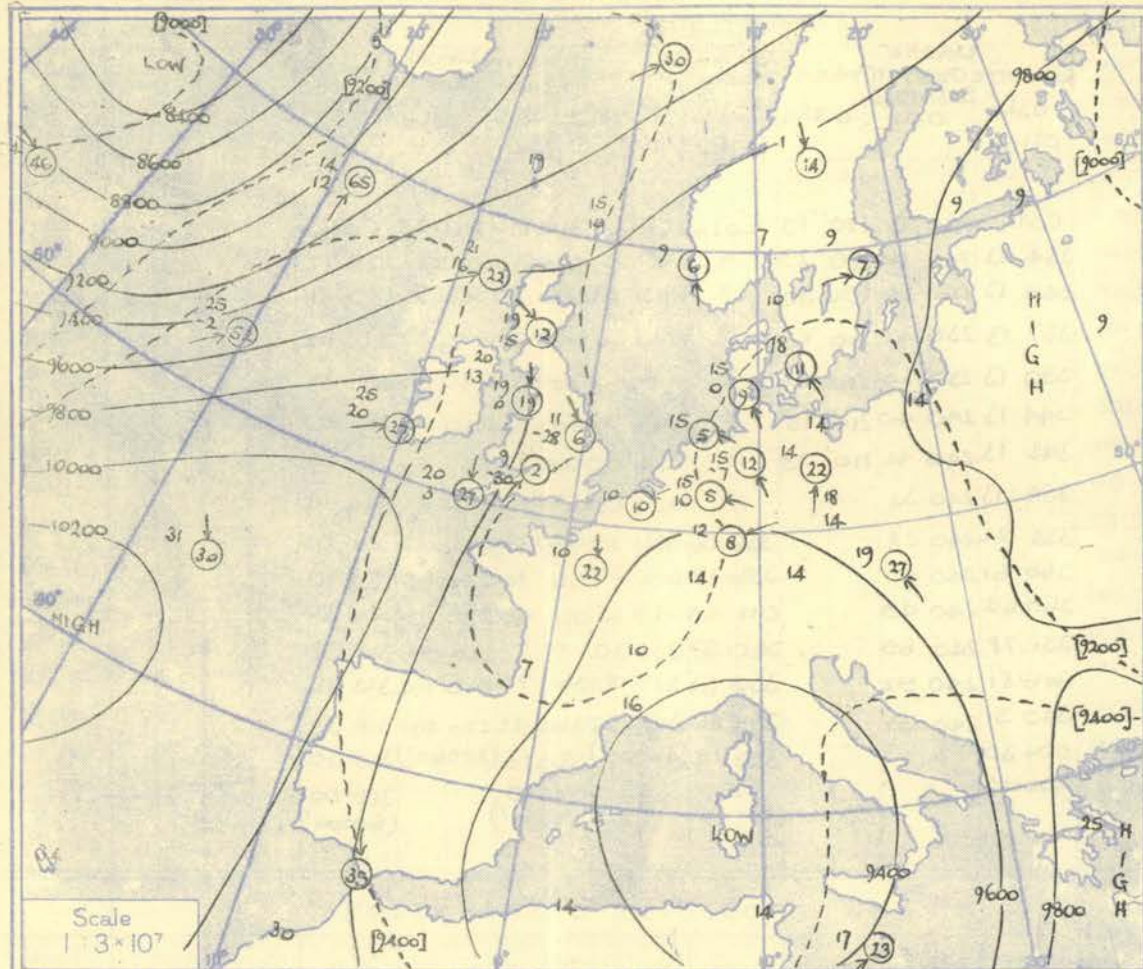
Isopleths of Thickness 500 - 1000 mb.

DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

NEPHOSCOPE OBSERVATIONS

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.

Ship	WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				Ship			
Lat/Long	57°2N. 18°8W.				57°2N. 18°7W.				59°0N. 19°1W.				57°2N. 18°8W.				52°5N. 19°7W.				52°3N. 19°6W.				52°2N. 19°6W.				52°1N. 19°7W.				Lat/Long			
Pressure	Time	03h.	G.M.T.		09h.	G.M.T.		15h.	G.M.T.		21h.	G.M.T.		03h.	G.M.T.		09h.	G.M.T.		15h.	G.M.T.		21h.	G.M.T.			G.M.T.	Time								
	M.S.L.	998	mb		998	mb		992	mb		932	mb		1012	mb		1010	mb		1002	mb		998	mb			mb	M.S.L.								
	Surf	998	mb		998	mb		992	mb		982	mb		1012	mb		1010	mb		1002	mb		998	mb			mb	Surf								
	Freezing	860	mb		900	mb		875	mb		850	mb		770	mb		780	mb		745	mb		998	mb			mb	Freezing								
Pressure	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Pressure							
	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	mb							
Surf	-5	46	35	240 17	-5	45	32	215 22	-2-2	46	38	180 27	-4-9	43	43	220 23	3-3	51	51	230 15	2-7	50	49	195 13	6	52	51	200 27	-5	49	43	Surf				
1000																															1000					
950																															950					
900	27-7	36	27	255 34	27-6	32	26	225 30	26-0	34	33	186 47	23-2	35	35	211 30	3-9	44	43	261 24	31-1	41	40	29-2	43	37	213 53	27-8	36	29	900					
850		30	23	260 33		24	19	226 35		30	21	191 53		32	32	214 35		39	38	260 30		38	32		39	32	215 56		32	26	850					
800	58-6	23	18	257 35	58-1	25	03	228 37	58-9	26	16	196 54	54-2	29	29	217 38	63-3	35	34	258 36	62-3	34	30	For	60-6	35	07	217 58	58-8	17	22	800				
750																															750					
700		27	05	244 39		21	01	229 38		20	15	200 54		23	23	211 41		30	29	255 39		30	18	winds		33	01	217 54		23	16	700				
650	93-0	21	05	223 38	92-3	14	02	229 46	91-1	14	12	197 65	88-7	18	17	204 49	98-2	25	22	250 40	97-1	24	09		95-6	25	02	217 52	93-1	17	02	650				
600		14	02	213 42		08	05	231 50		07	03	197 74		12	11	178 61		18	14	237 48		17	05	see		18	02	219 55		10	10	600				
550	132	07	07	217 53	131	00	15	236 56	129	01	01	206 67	128	05	03	164 67	138	13	09	239 47	136	10	04		135	10	10	220 60	132	05	14	550				
		00	17	219 60		10	24	235 64		07	09	210 60		03	06	182 64		05	08	244 46		00	11	Top		02	14	221 61		01	19					
500																															500					
450	177	03	32	221 61	175	19	29	234 79	173	16	19	212 66	172	11	14	194 78	183	01	08	250 45	181	09	17		180	07	24	223 69	176	09	25	450				
400		16	42	228 67		30	41	234 96		27	31	215 70		23	27	194 81		12	19	250 54		19	27			18	35	230 78		19	29	400				
350	230	27	42	226 72	226	40	32	235 97	225	37	42	216 80	224	36	40	193 85	236	24	33	250 54	233	29	40		232	32	48	233 81	229	29	34	350				
		39	44	230 81		48		239 92		49		218 96		50		185 93		38	49	250 65		41		page.		46		235 90	(39.4) 30	35						
300	294	52		230 85	289	62		241 92	288	64		221 102	287	60			301	55		246 78	298	55			295	59		235 102				300				
250		63		230 83		69		233 99		68		231 84		63				72		248 74		71				74		235 95				250				
200	380	63		231 61								227 90	373	59		373	59			249 73	382	55			379	78		235 72				200				
170		65		230 67		64				58				58				95		249 62		83				74		234 54				170				
150																															150					
130		67		232 58						56				55				80		250 36		78				69		232 46				130				
110		65		241 63						59				57				74		249 36		78				65		228 33				110				
100		66		248 33						60				62				77		249 25		74				69		226 15				100				
90	526	67		249 33						58				62				78		251 16		75				71		226 21				90				
80		65		250 34						63				63						255 09						70		226 21				80				
70		65		255 35						63				63												71		226 09				70				
60		66		273 37						63				65												73		226 08				60				
	665	65								63																74		226 12								
	mb Inversion 780mb. 20°-754mb. 28° 541mb. 1°-520mb. 0°				Inversion 841mb. 24°-785mb. 26° Isothermal 850-841mb. 24°												Isothermal 1012mb. -1000mb. 51° 927mb. -909mb. 45° 620mb. -591mb. 13°								Inversion 815mb. 32°-800mb. 34° Isothermal 920-882mb. 41°				(030) 72 (041) mb Inversion 800mb. 35°-780mb. 37°							
Tropopause	II 232mb. -67° 34, 900'				I 262mb. -74° 31, 700'				II 300mb. -64° 28, 800'				II 275mb. -64° 30, 600'				II 195mb. -91° 38, 000'				I 216mb. -88° 36, 500'				II 222mb. -82° 35, 700'								Tropopause			

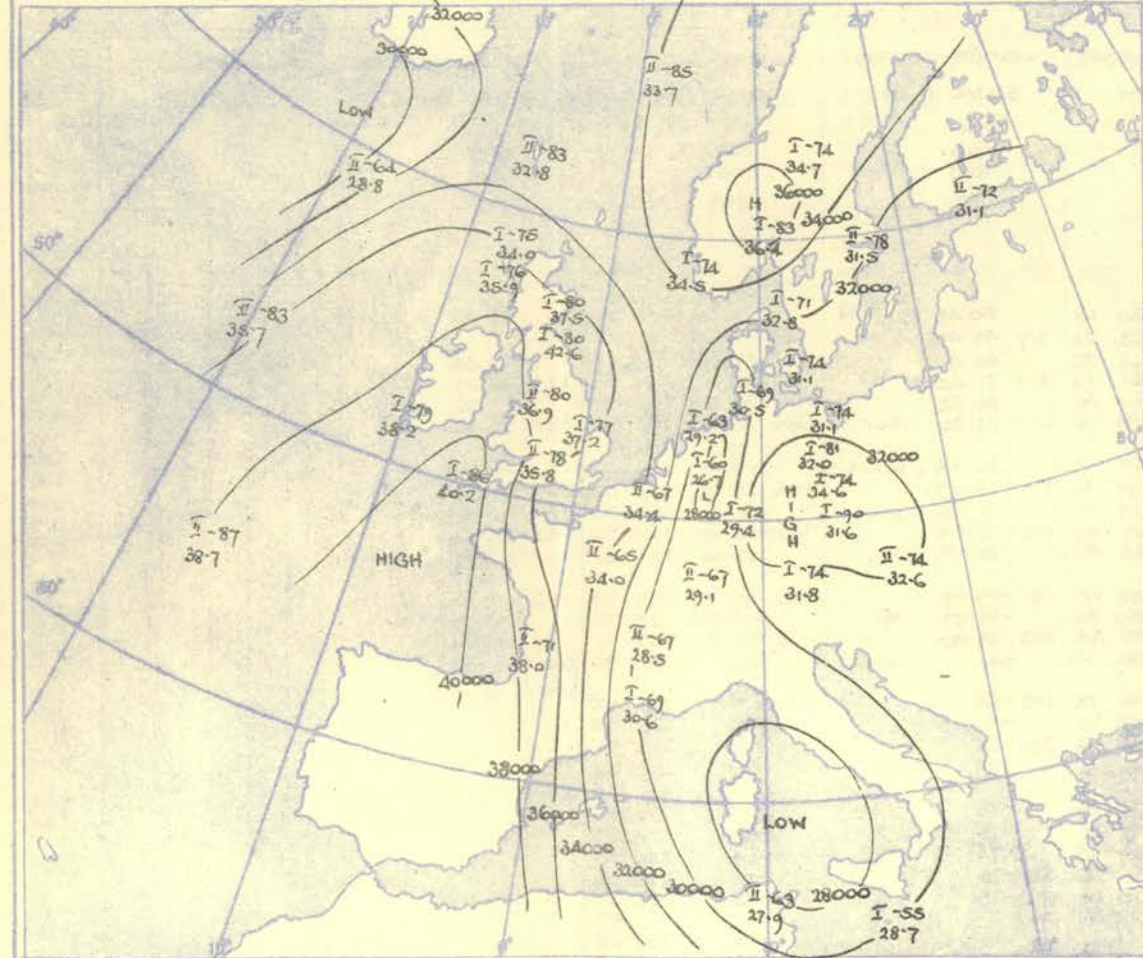


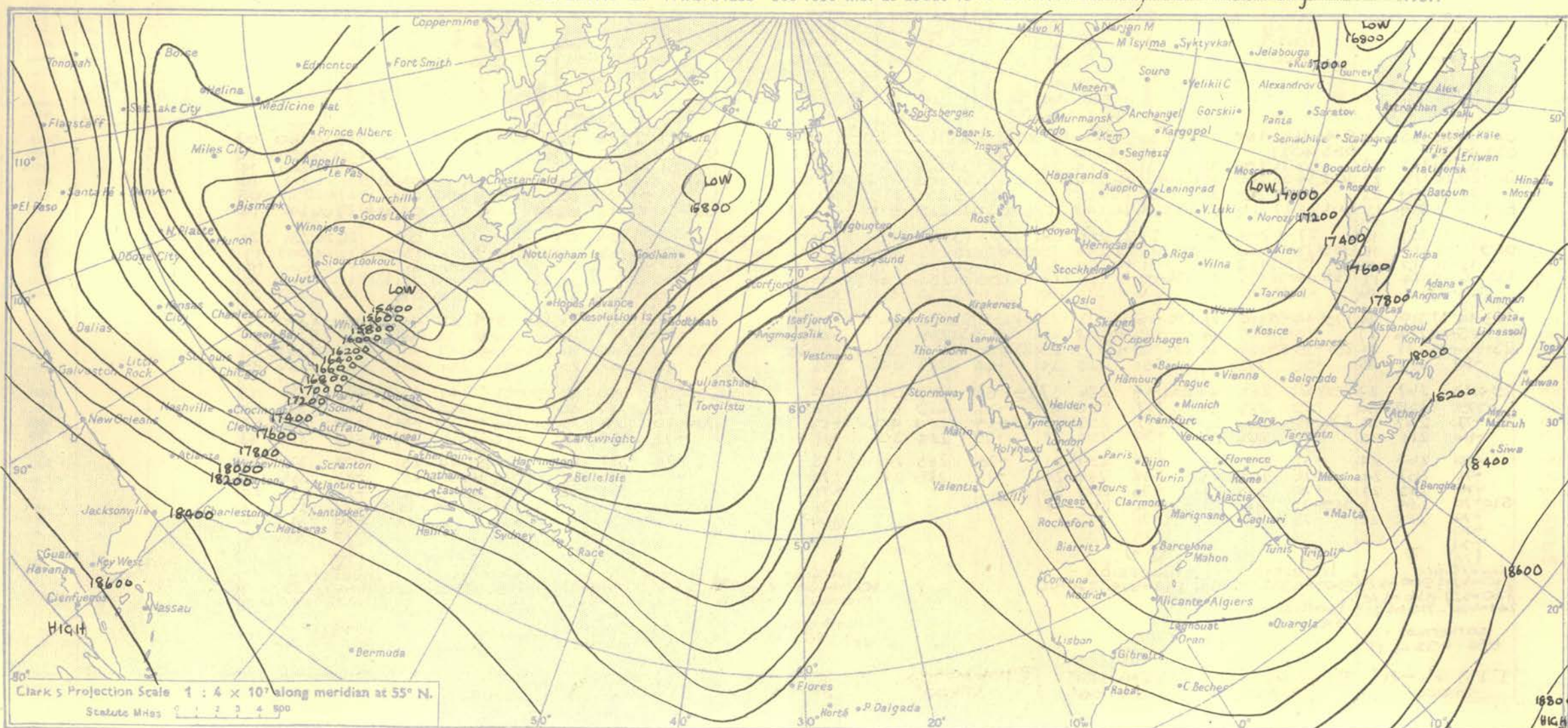
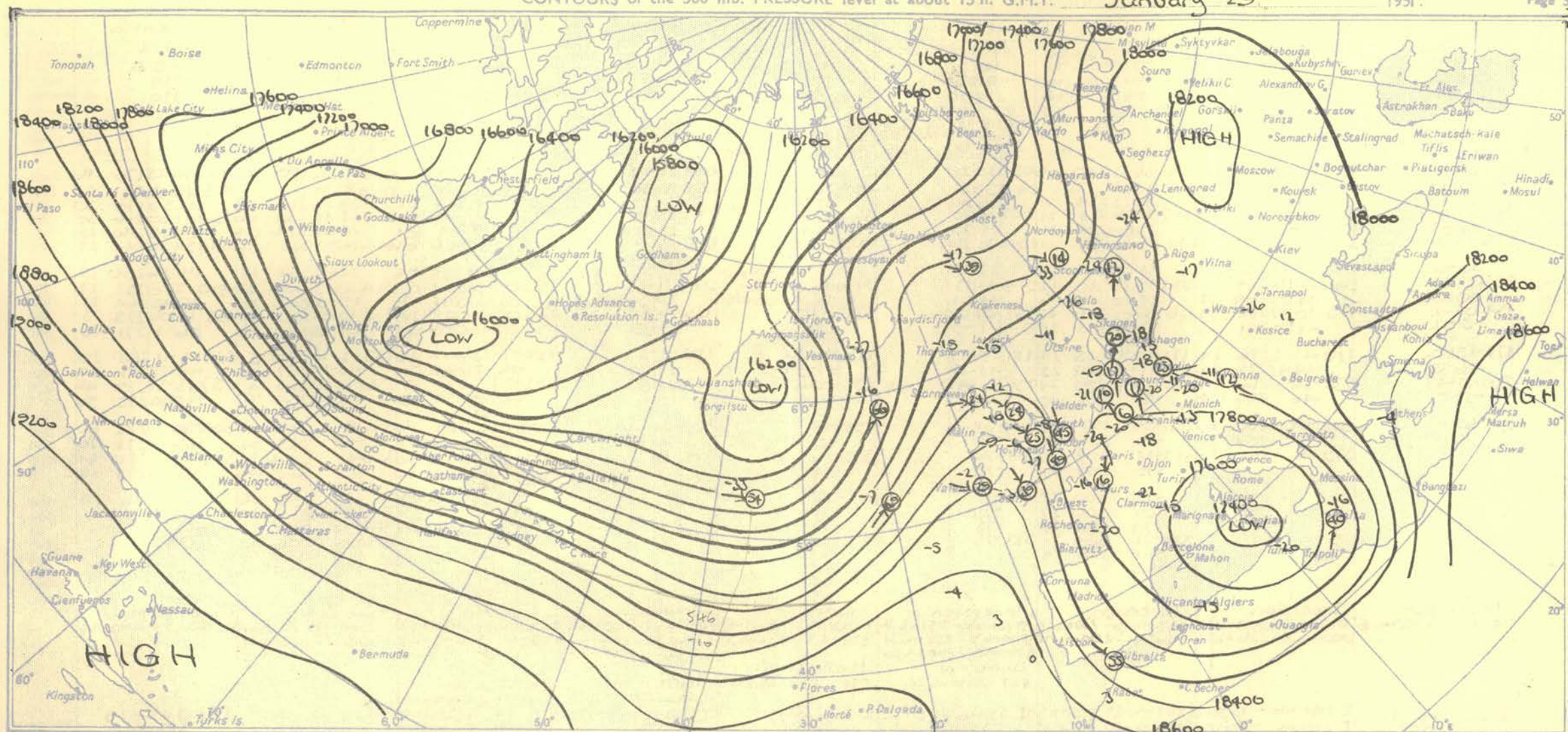
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb

Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.
100 80 60 40 20 10 knots

The continuous lines are contour lines of the 300mb. surface
The dotted lines are isopleths of the thickness of the layer 500-300 mb.

TROPOPAUSE CHART at about 15h. G.M.T.



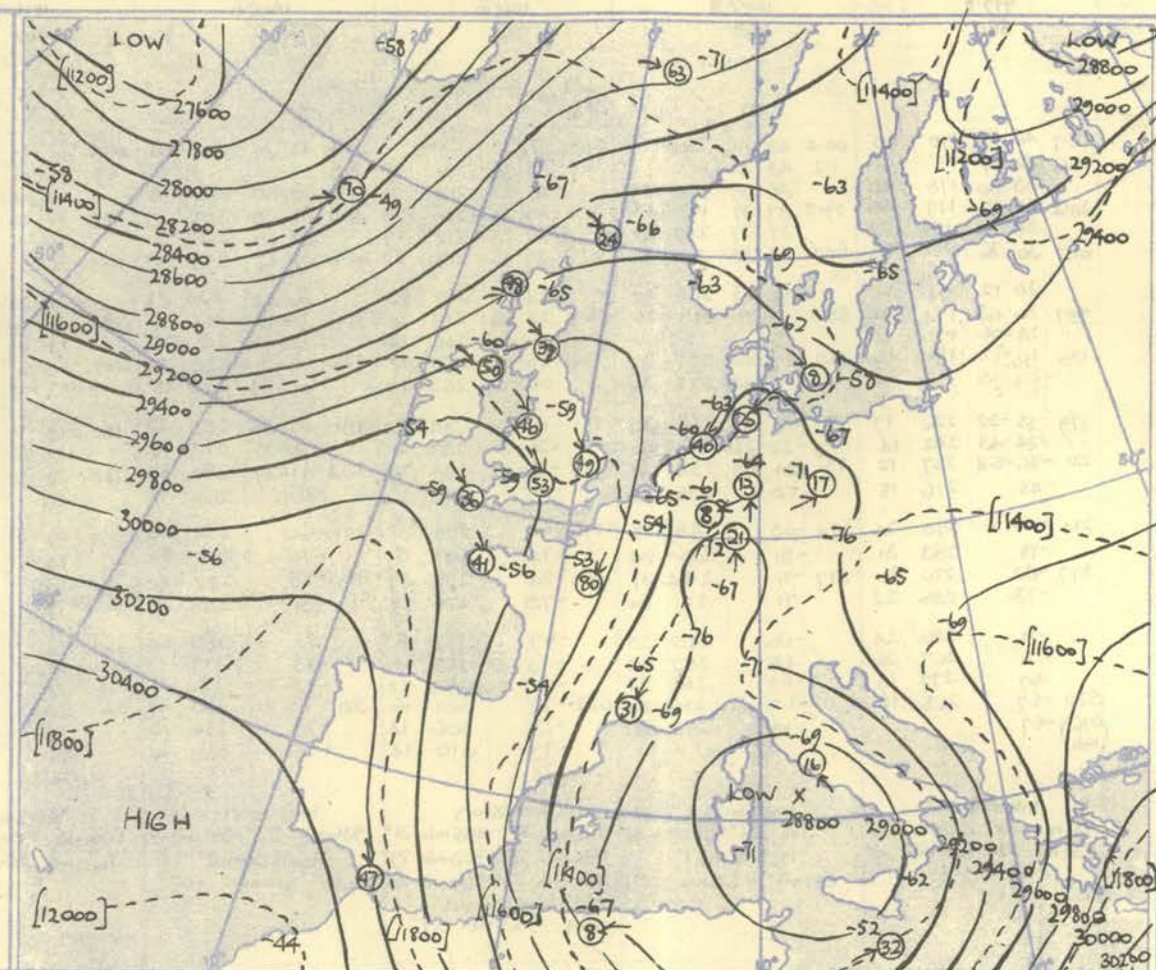


RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

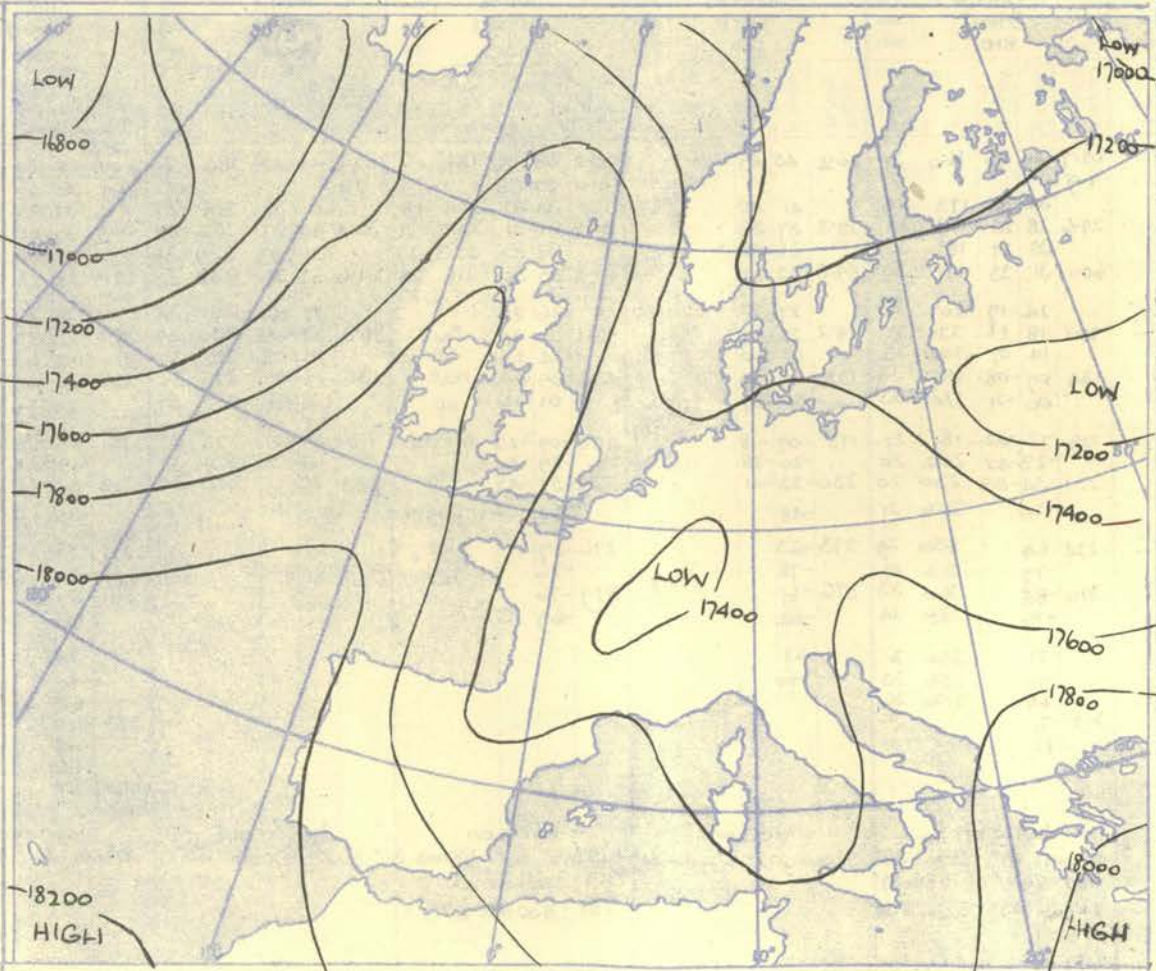
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				Valentia				STATION											
Pressure	Time	15hrs			Time	15hrs			Time	15hrs			Time	15hrs			Time	15hrs			Time	15hrs			Time	15hrs			Time	15hrs			Time															
	M.S.L.	1013.4			M.S.L.	1010.8			M.S.L.	1019.0			M.S.L.	1017.7			M.S.L.	1021.3			M.S.L.	1021.5			M.S.L.	1022.0			M.S.L.	1021.9			M.S.L.															
	Surf	1003.1			Surf	1008.8			Surf	1018.1			Surf	1008.6			Surf	1017.2			Surf	1016.6			Surf	1005.1			Surf	1011.1			Surf															
	Freezing	942			Freezing	810			Freezing	965			Freezing	890			Freezing	940			Freezing	956			Freezing	993			Freezing	991			Freezing															
Pressure	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Pressure															
	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	mb															
Surf	02.7	29	34		0.4	40	36	200	30	0.2	36	33	240	06	02.6	39	29		0.6	32	31		01.2	28	27		04.4	33	31	Calm	02.9	45	32	180	03	0.3	46	45	170	16	Surf							
1000	03.5	39	34		02.8	39	35		5.0	35	21		04.9	39	28		05.6	35	32		05.5	31	30		05.7	32	31		05.9	43	31		05.9	43	31		4.3	45	43	171	22	1000						
950	33	29			34	31	200	43	31	23	234	20	36	20		33	26			33	27		33	27		33	24	302	01	34	24	215	07	42	39	179	30	950										
900	31.2	29	20		30.6	33	22.1	39	32.7	28	16	228	20	32.7	31	10		33.2	27	20		33.2	25	16		33.2	25	17	294	01	33.8	28	230	06	32.7	42	39	216	30	900								
850	24	05			34	30	234	33	28	09	231	22	28	23					26	10			23	00		22	08	32.1	01	25	02	274	04	33	38	240	25	850										
800	61.6	19	01		61.6	31	26	239	27	63.1	20	0.2	24.8	21	63.4	30	26		63.9	22	18		63.5	23	12		63.5	19	1	006	03	64.2	20	1	338	06	64.1	34	30	248	21	800						
750	13	6			27	22	251	25	18	06	263	14	25	17					18	14	See p 3		17	20	See p 3		18	20	135	02	21	9	358	18	31	26	250	25	750									
700	55.4	13	10		26.3	16	254	22	27.2	19	15	310	12	27.9	20	13		28.0	19	00	For	27.5	11	28	For	27.3	09	30	230	02	28.4	20	3	006	27	29	0.25	20	252	27	700							
650	10	03			14	02	264	22	14	10	318	16	14	01				13	06			13	6	38		13	6	38		13	6	38		13	6	38		13	6	38		650						
600	104	04	2		133	10	17	283	23	136	06	02	311	23	137	07	00		137	07	00		136	6	38		136	07	31	001	28	138	13	01	359	30	138	19	06	273	23	600						
550	5	12			1	31	281	23	3	8	313	24	1	9				03	11			03	11			01	18	009	41	05	19	350	36	06	2	271	25	550										
500	178	15	22		180	12	36	276	24	181	10	17	315	24	181	9	18		182	6	30		180	8	32		180	7	23	002	45	183	3	20	340	39	184	2	11	266	29	500						
450	26	35			24	48	276	24	18	30	308	25	18	28				17	39			17	39			16	42	002	51	13	26	357	41	14	28	281	30	450										
400	230	37	47		232	36	57	266	53	233	25	40	298	24	234	31	42		235	29	47		232	27	45		233	27	51	360	57	236	24	3	350	47	237	73	38	289	46	400						
350	48				46		263	50	41		288	33	44					40	50			40	50			40	50	69		36	48	339	57	73	50	288	56	350										
300	293	62			295	61		263	47	297	54	297	36	297	58			299	54			297	51			297	54		353	76	301	51	331	63	302	50	282	60	300									
250	73				74		257	56	70		292	50	71				69				69				69				346	77	69		339	64	66		278	70	250									
200	377	78			379	71		268	26	382	78	257	42	381	76			383	80			382	76			382	80		347	50	385	83	344	51	387	77	280	61	200									
170	70				71				79		257	28	80				84				78				77				343	40	83		328	46	73		273	25	170									
150	68				68				75		300	28	72				76				75				74				354	27	83		299	36	66		271	26	150									
130	69				69				70		300	27	73				72				72				71				338	21	76		315	30	63				130									
110	69				70				70		318	19	73				73				73				70				336	20	78		013	18	63				110									
100	52	71			52	71			52	71			52	73				52	70			52	70			52	69		52	73		52	73		006	18	(124)				100							
90	69				68				68		291	24	68				68				68				68									340	17					90								
80	69				68				68				68				68				68				68										340	14					80							
70																																									70							
60																																									60							
Inversion	742ms-72.7ms16				Inversion				Inversion				Inversion				Inversion				Inversion				Inversion				Inversion				Inversion				Isothermal				Isothermal				Isothermal			
	800ms33-836ms34				800ms33-836ms34				800ms33-836ms34				800ms33-836ms34				800ms33-836ms34				800ms33-836ms34				800ms33-836ms34				800ms33-836ms34				800ms33-836ms34				800ms33-836ms34				800ms33-836ms34				800ms33-836ms34			
Tropopause	I 200ms-78° 37650'				I 241ms-75° 37650'				I 207ms-80° 37500'				I 251ms-79° 35200'				I 216ms-80° 36800'				I 209ms-77° 37200'				I 216ms-78° 35800'				I 184ms-86° 40200'				I 205ms-79° 38200'								Tropopause							
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE												STATION							
Pressure	Time	21hrs			Time	21hrs			Time	21hrs			Time	21hrs			Time	21hrs			Time	21hrs			Time	21hrs			Time	21hrs			Time															
	M.S.L.	1011.3			M.S.L.	1005.9			M.S.L.	1018.1			M.S.L.	1015.6			M.S.L.	1021.2			M.S.L.	1023.1			M.S.L.	1023.4			M.S.L.	1021.0			M.S.L.															
	Surf	1002.1			Surf	1007.2			Surf	1017.2			Surf	1006.1			Surf	1019.1			Surf	1018.3			Surf	1006.5			Surf	1011.1			Surf															
	Freezing	940			Freezing	842			Freezing	959			Freezing	824			Freezing	930			Freezing	963			Freezing	955			Freezing	921			Freezing															
Pressure	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Pressure											
	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	mb											
Surf	02.7	40	38	185	25	0.4	41	38	180	25	0.2	36	34	Calm	01.6	35	35	160	25	0.6	30	27		01.2	27	27	240	05	4.4	29	29	Calm	02.9	38	34	160	07			Surf								
1000	03.3	40	35		02.3	40	37		4.7	35	34	219	21	04.2	37	34	188	33	05.8	31	27		05.7	25	29																							

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION							
Pressure mb	Time		G.M.T.		Time		G.M.T.		Time		G.M.T.		Time		G.M.T.		Time		G.M.T.		Time		G.M.T.		Time		G.M.T.		Time		G.M.T.		Pressure mb											
	M.S.L.	Surf	mb	mb	M.S.L.	Surf	mb	mb	M.S.L.	Surf	mb	mb	M.S.L.	Surf	mb	mb	M.S.L.	Surf	mb	mb	M.S.L.	Surf	mb	mb	M.S.L.	Surf	mb	mb	M.S.L.	Surf	mb	mb												
	Freezing	Freezing	Freezing	Freezing	Freezing	Freezing	Freezing	Freezing	Freezing	Freezing	Freezing	Freezing	Freezing	Freezing	Freezing	Freezing	Freezing	Freezing	Freezing	Freezing	Freezing	Freezing	Freezing	Freezing	Freezing	Freezing	Freezing	Freezing	Freezing	Freezing	Freezing	Freezing												
03h.	1010.0	999.8	880		03h.	1004.5	1002.8	768		03h.	1014.9	1014.0	942		03h.	1011.6	1002.6			03h.	1018.8	1016.7	902		03h.	1022.4	1017.7	957		03h.	1022.6	1005.6	964		03h.	1019.9	1009.0	860		03h.	1008.5	1007.5	750	
03h.	1010.0	999.8	880		03h.	1004.5	1002.8	768		03h.	1014.9	1014.0	942		03h.	1011.6	1002.6			03h.	1018.8	1016.7	902		03h.	1022.4	1017.7	957		03h.	1022.6	1005.6	964		03h.	1019.9	1009.0	860		03h.	1008.5	1007.5	750	
03h.	1010.0	999.8	880		03h.	1004.5	1002.8	768		03h.	1014.9	1014.0	942		03h.	1011.6	1002.6			03h.	1018.8	1016.7	902		03h.	1022.4	1017.7	957		03h.	1022.6	1005.6	964		03h.	1019.9	1009.0	860		03h.	1008.5	1007.5	750	
03h.	1010.0	999.8	880		03h.	1004.5	1002.8	768		03h.	1014.9	1014.0	942		03h.	1011.6	1002.6			03h.	1018.8	1016.7	902		03h.	1022.4	1017.7	957		03h.	1022.6	1005.6	964		03h.	1019.9	1009.0	860		03h.	1008.5	1007.5	750	
03h.	1010.0	999.8	880		03h.	1004.5	1002.8	768		03h.	1014.9	1014.0	942		03h.	1011.6	1002.6			03h.	1018.8	1016.7	902		03h.	1022.4	1017.7	957		03h.	1022.6	1005.6	964		03h.	1019.9	1009.0	860		03h.	1008.5	1007.5	750	
03h.	1010.0	999.8	880		03h.	1004.5	1002.8	768		03h.	1014.9	1014.0	942		03h.	1011.6	1002.6			03h.	1018.8	1016.7	902		03h.	1022.4	1017.7	957		03h.	1022.6	1005.6	964		03h.	1019.9	1009.0	860		03h.	1008.5	1007.5	750	
03h.	1010.0	999.8	880		03h.	1004.5	1002.8	768		03h.	1014.9	1014.0	942		03h.	1011.6	1002.6			03h.	1018.8	1016.7	902		03h.	1022.4	1017.7	957		03h.	1022.6	1005.6	964		03h.	1019.9	1009.0	860		03h.	1008.5	1007.5	750	
03h.	1010.0	999.8	880		03h.	1004.5	1002.8	768		03h.	1014.9	1014.0	942		03h.	1011.6	1002.6			03h.	1018.8	1016.7	902		03h.	1022.4	1017.7	957		03h.	1022.6	1005.6	964		03h.	1019.9	1009.0	860		03h.	1008.5	1007.5	750	
03h.	1010.0	999.8	880		03h.	1004.5	1002.8	768		03h.	1014.9	1014.0	942		03h.	1011.6	1002.6			03h.	1018.8	1016.7	902		03h.	1022.4	1017.7	957		03h.	1022.6	1005.6	964		03h.	1019.9	1009.0	860		03h.	1008.5	1007.5	750	
03h.	1010.0	999.8	880		03h.	1004.5	1002.8	768		03h.	1014.9	1014.0	942		03h.	1011.6	1002.6			03h.	1018.8	1016.7	902		03h.	1022.4	1017.7	957		03h.	1022.6	1005.6	964		03h.	1019.9	1009.0	860		03h.	1008.5	1007.5	750	
03h.	1010.0	999.8	880		03h.	1004.5	1002.8	768		03h.	1014.9	1014.0	942		03h.	1011.6	1002.6			03h.	1018.8	1016.7	902		03h.	1022.4	1017.7	957		03h.	1022.6	1005.6	964		03h.	1019.9	1009.0	860		03h.	1008.5	1007.5	750	
03h.	1010.0	999.8	880		03h.	1004.5	1002.8	768		03h.	1014.9	1014.0	942		03h.	1011.6	1002.6			03h.	1018.8	1016.7	902		03h.	1022.4	1017.7	957		03h.	1022.6	1005.6	964		03h.	1019.9	1009.0	860		03h.	1008.5	1007.5	750	
03h.	1010.0	999.8	880		03h.	1004.5	1002.8	768		03h.	1014.9	1014.0	942		03h.	1011.6	1002.6			03h.	1018.8	1016.7	902		03h.	1022.4	1017.7	957		03h.	1022.6	1005.6	964		03h.	1019.9	1009.0	860		03h.	1008.5	1007.5	750	
03h.	1010.0	999.8	880		03h.	1004.5	1002.8	768		03h.	1014.9	1014.0	942		03h.	1011.6	1002.6			03h.	1018.8	1016.7	902		03h.	1022.4	1017.7	957		03h.	1022.6	1005.6	964		03h.	1019.9	1009.0	860		03h.	1008.5	1007.5	750	
03h.	1010.0	999.8	880		03h.	1004.5	1002.8	768		03h.	1014.9	1014.0	942		03h.	1011.6	1002.6			03h.	1018.8	1016.7	902		03h.	1022.4	1017.7	957		03h.	1022.6	1005.6	964		03h.	1019.9	1009.0	860		03h.	1008.5	1007.5	750	
03h.	1010.0	999.8	880		03h.	1004.5	1002.8	768		03h.	1014.9	1014.0	942		03h.	1011.6	1002.6			03h.	1018.8	1016.7	902		03h.	1022.4	1017.7	957		03h.	1022.6	1005.6	964		03h.	1019.9	1009.0	860		03h.	1008.5	1007.5	750	
03h.	1010.0	999.8	880		03h.	1004.5	1002.8	768		03h.	1014.9	1014.0	942		03h.	1011.6	1002.6			03h.	1018.8	1016.7	902		03h.	1022.4	1017.7	957		03h.	1022.6	1005.6	964		03h.	1019.9	1009.0	860		03h.	1008.5	1007.5	750	
03h.	1010.0	999.8	880		03h.	1004.5	1002.8	768		03h.	1014.9	1014.0	942		03h.	1011.6	1002.6			03h.	1018.8	1016.7	902		03h.	1022.4	1017.7	957		03h.	1022.6	1005.6	964		03h.	1019.9	1009.0	860		03h.	1008.5	1007.5	750	
03h.	1010.0	999.8	880		03h.	1004.5	1002.8	768		03h.	1014.9	1014.0	942		03h.	1011.6	1002.6			03h.	1018.8	1016.7	902		03h.	1022.4	1017.7	957		03h.	1022.6	1005.6	964		03h.	1019.9	1009.0	860		03h.	1008.5	1007.5	750	
03h.	1010.0	999.8	880		03h.	1004.5	1002.8	768		03h.	1014.9	1014.0	942		03h.	1011.6	1002.6			03h.	1018.8	1016.7	902		03h.	1022.4	1017.7	957		03h.	1022.6	1005.6	964		03h.	1019.9	1009.0	860		03h.	1008.5	1007.5	750	
03h.	1010.0	999.8	880		03h.	1004.5	1002.8	768		03h.	1014.9	1014.0	942		03h.	1011.6	1002.6			03h.	1018.8	1016.7	902		03h.	1022.4	1017.7	957		03h.	1022.6	1005.6	964		03h.	1019.9	1009.0	860		03h.	1008.5	1007.5	750	
03h.	1010.0	999.8	880		03h.	1004.5	1002.8	768		03h.	1014.9	1014.0	942		03h.	1011.6	1002.6			03h.	1018.8	1016.7	902		03h.	1022.4	1017.7	957		03h.	1022.6	1005.6	964		03h.	1019.9	1009.0	860		03h.	1008.5	1007.5	750	
03h.	1010.0	999.8	880		03h.	1004.5	1002.8	768		03h.	1014.9	1014.0	942		03h.	1011.6	1002.6			03h.	1018.8	1016.7	902		03h.	1022.4	1017.7	957		03h.	1022.6	1005.6	964		03h.	1019.9	1009.0	860		03h.	1008.5	1007.5	750	
03h.	1010.0	999.8	880		03h.	1004.5	1002.8	768		03h.	1014.9	1014.0	942		03h.	1011.6	1002.6			03h.	1018.8	1016.7	902		03h.	1022.4	1017.7	957		03h.	1022.6	1005.6	964		03h.	1019.9	1009.0	860		03h.	1008.5	1007.5	750	
03h.	1010.0	999.8	880		03h.	1004.5	1002.8	768		03h.	1014.9	1014.0	942		03h.	1011.6	1002.6			03h.</																								



The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 - 300 mb



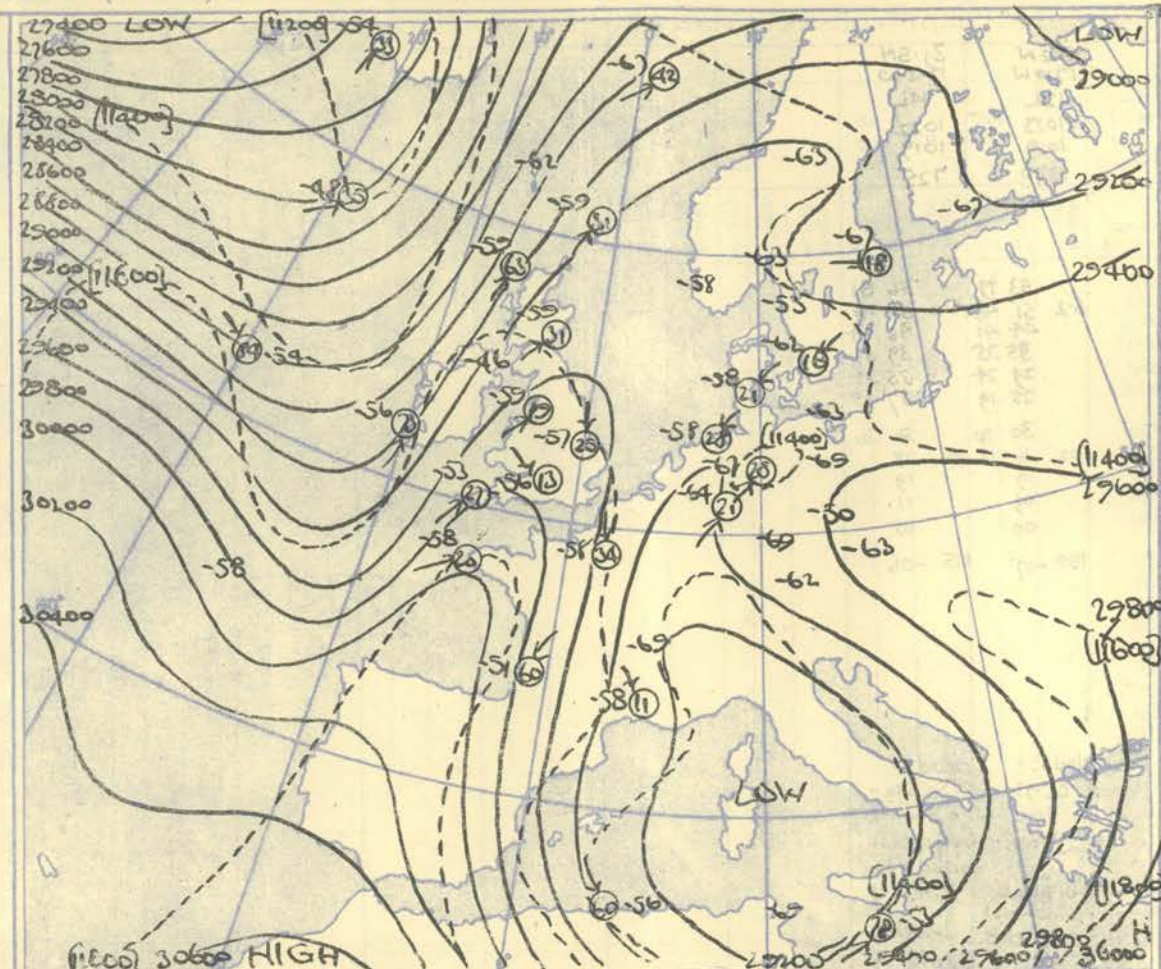
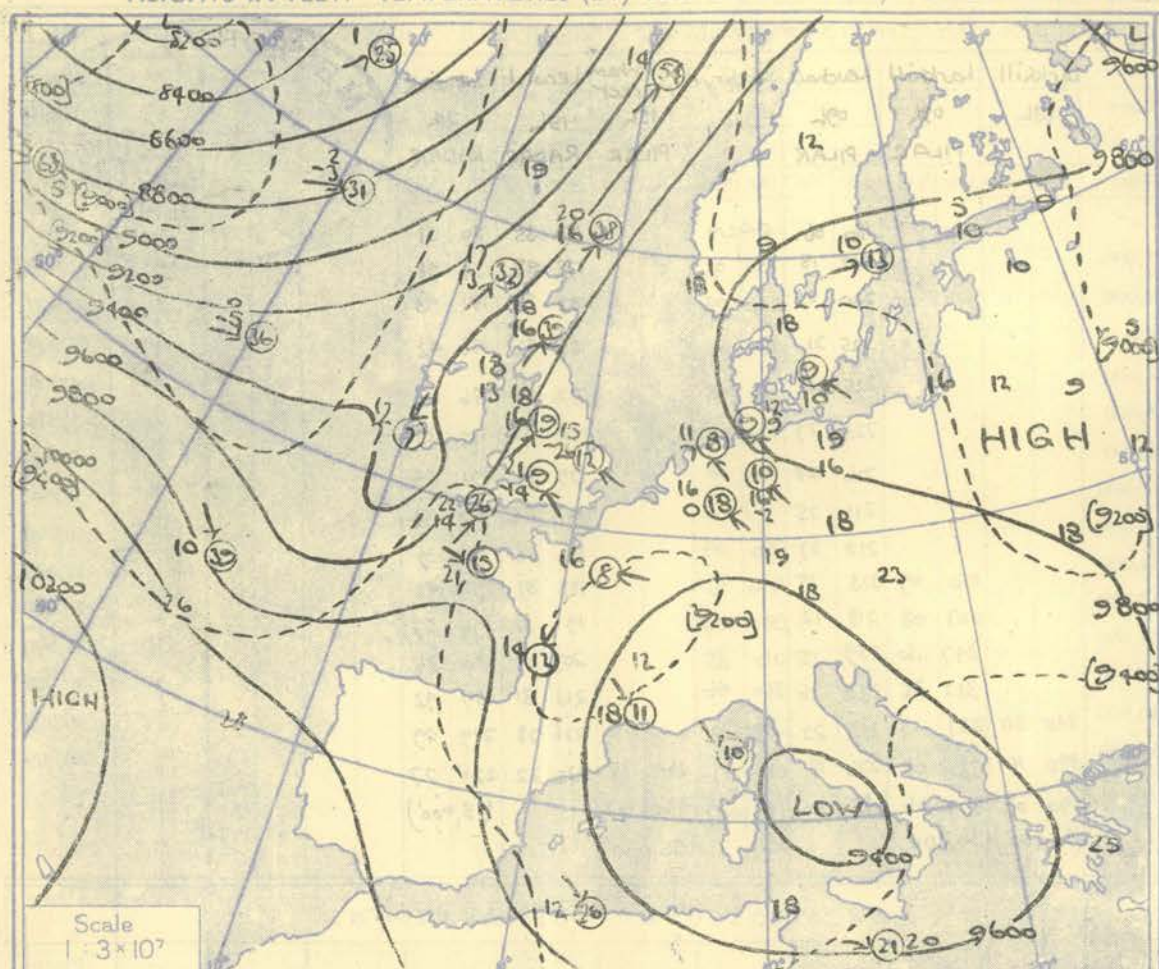
Isopleths of Thickness 500-1000mb

DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

NEPHOSCOPE OBSERVATIONS

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.

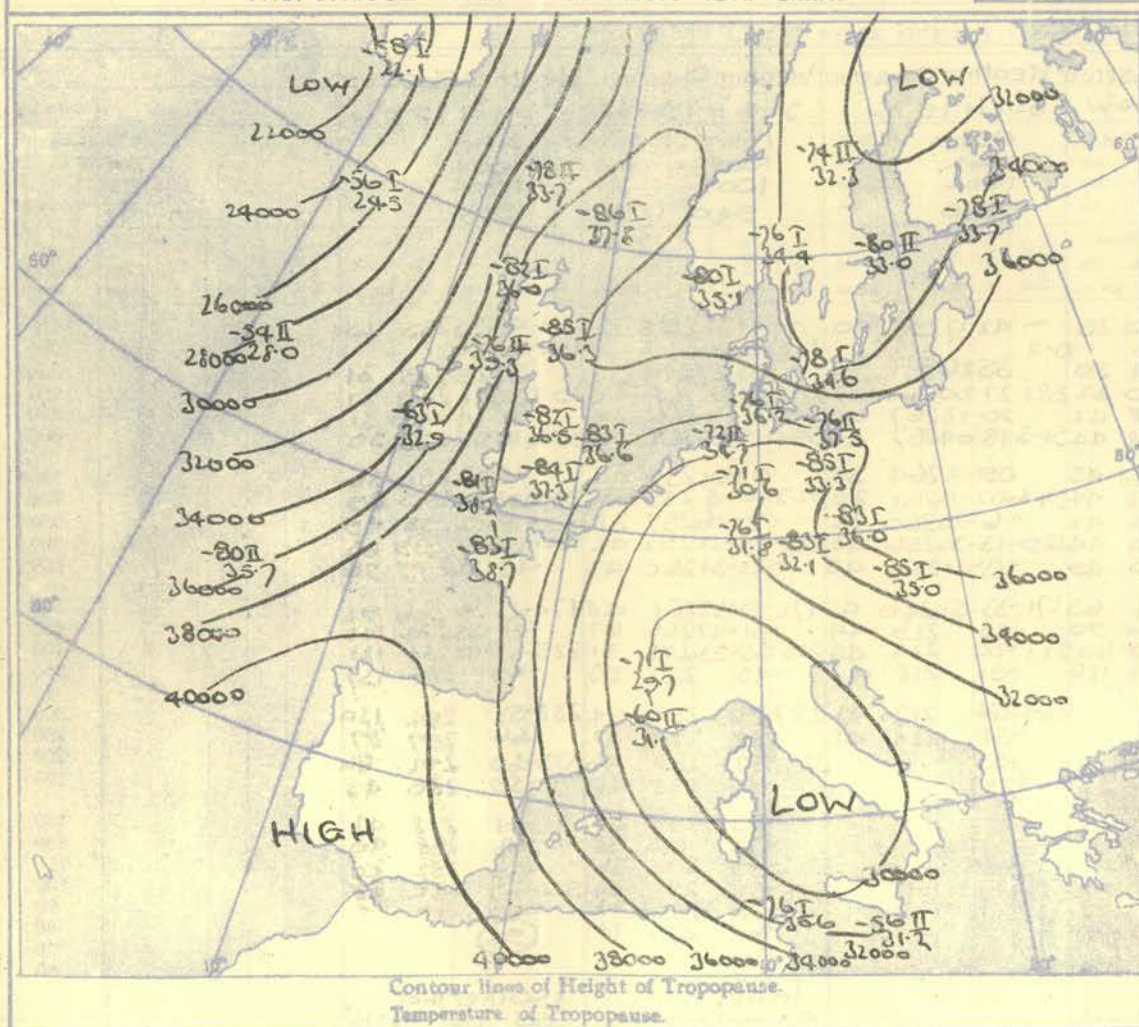
Ship				Weather Watcher				Weather Watcher				Weather Watcher				Weather Observer				Weather Observer				Weather Observer				Weather Observer				Ship																																																																																																																																																																																																																																																																																																																																																																																																																																					
Lat/Long				59°N 19°W				58°N 19°W				58°N 19°W				52°N 19°W				52°N 19°W				52°N 19°W				52°N 19°W				Lat/Long																																																																																																																																																																																																																																																																																																																																																																																																																																					
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Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 20 10 knots

TROPOPAUSE CHART at about 15h. G.M.T.

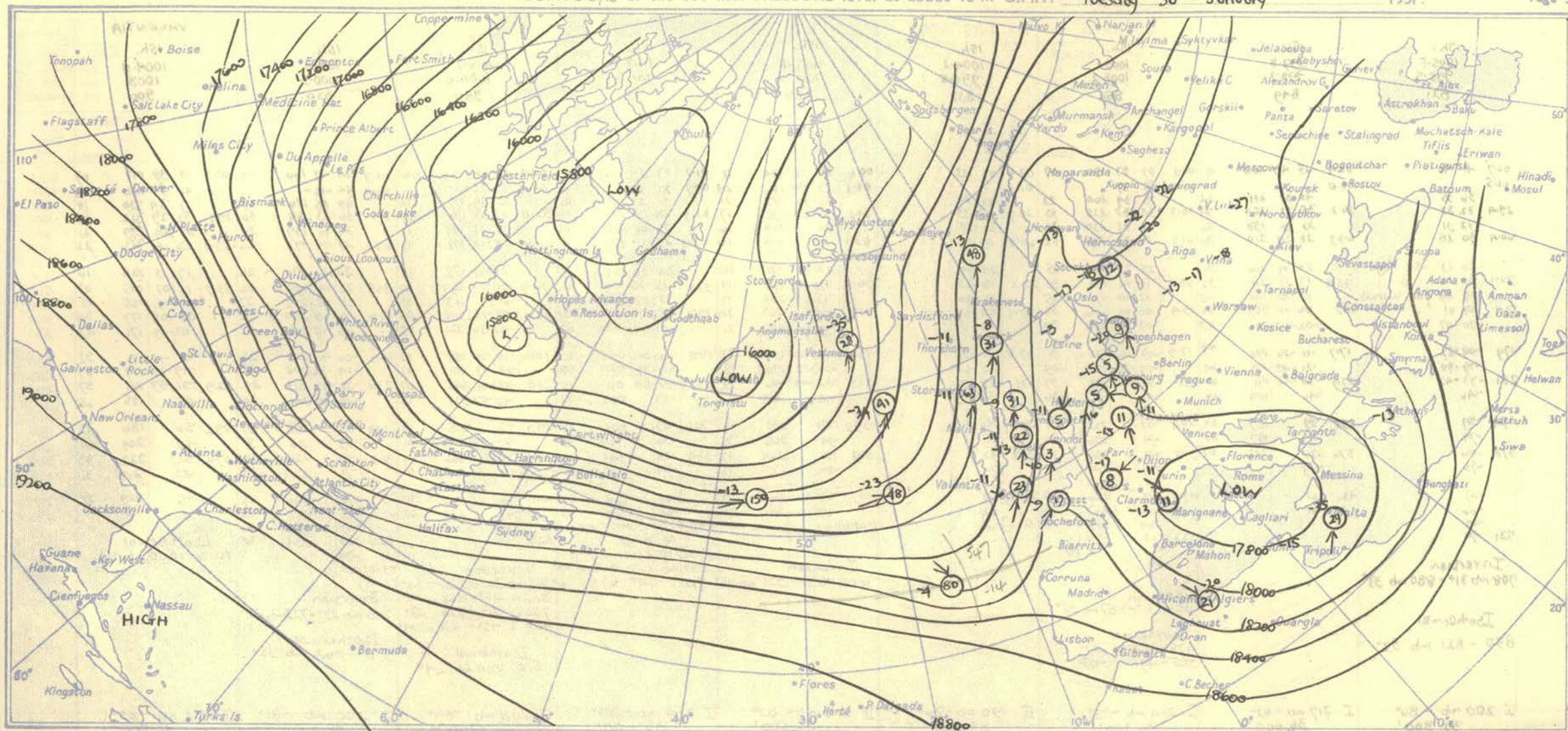


NOTES ON THE AEROLOGICAL SITUATION.

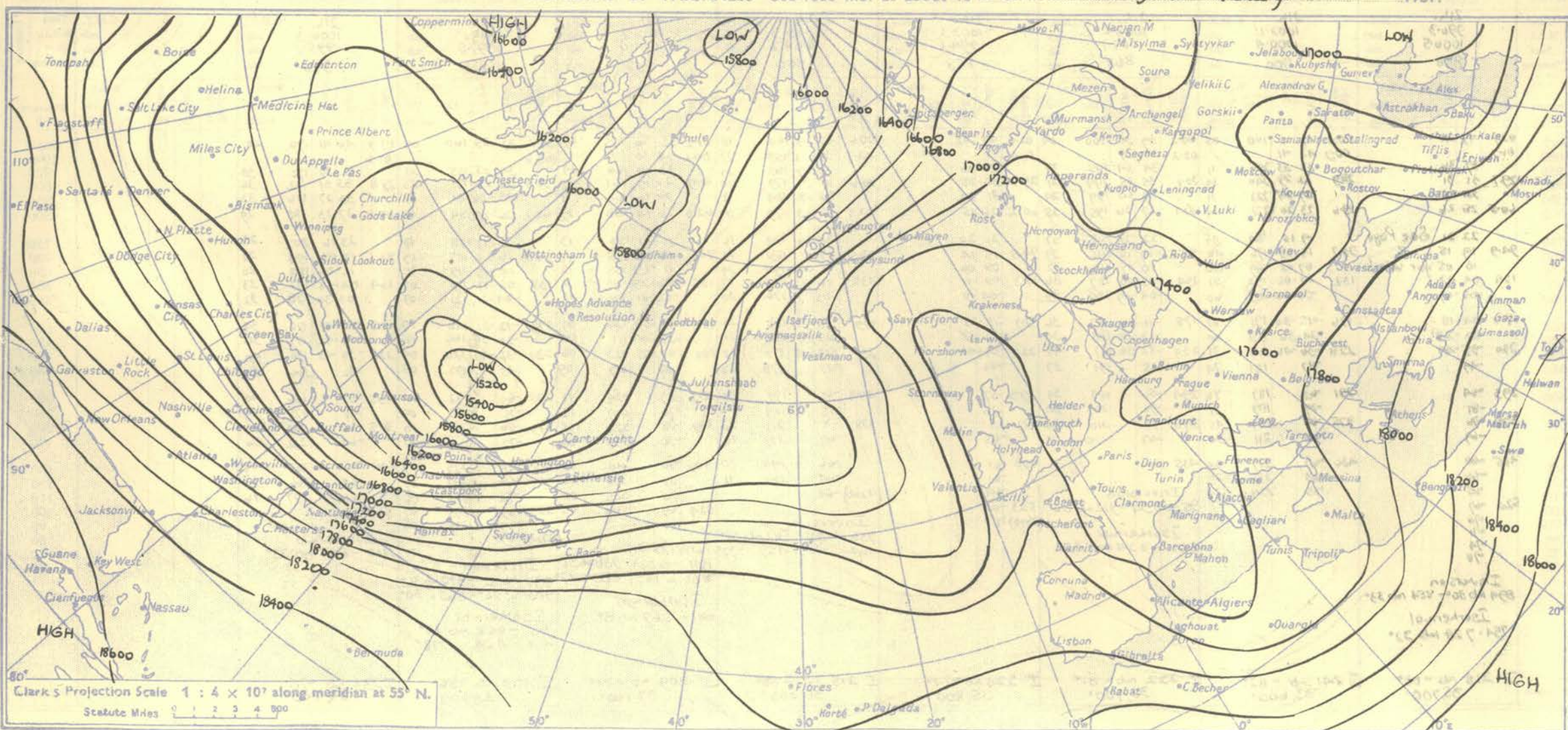
The warm ridge to the West of the British Isles moved slowly eastwards over the country and declined a little. The cold trough over Europe persisted whilst cold air penetrated Southeastwards behind the cold front off our Western districts with the formation of a well marked cold trough from the tip of Greenland to near Northwest Spain. Another jet stream was established over the Western and Central Atlantic.

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Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Tuesday 30th January 1951.

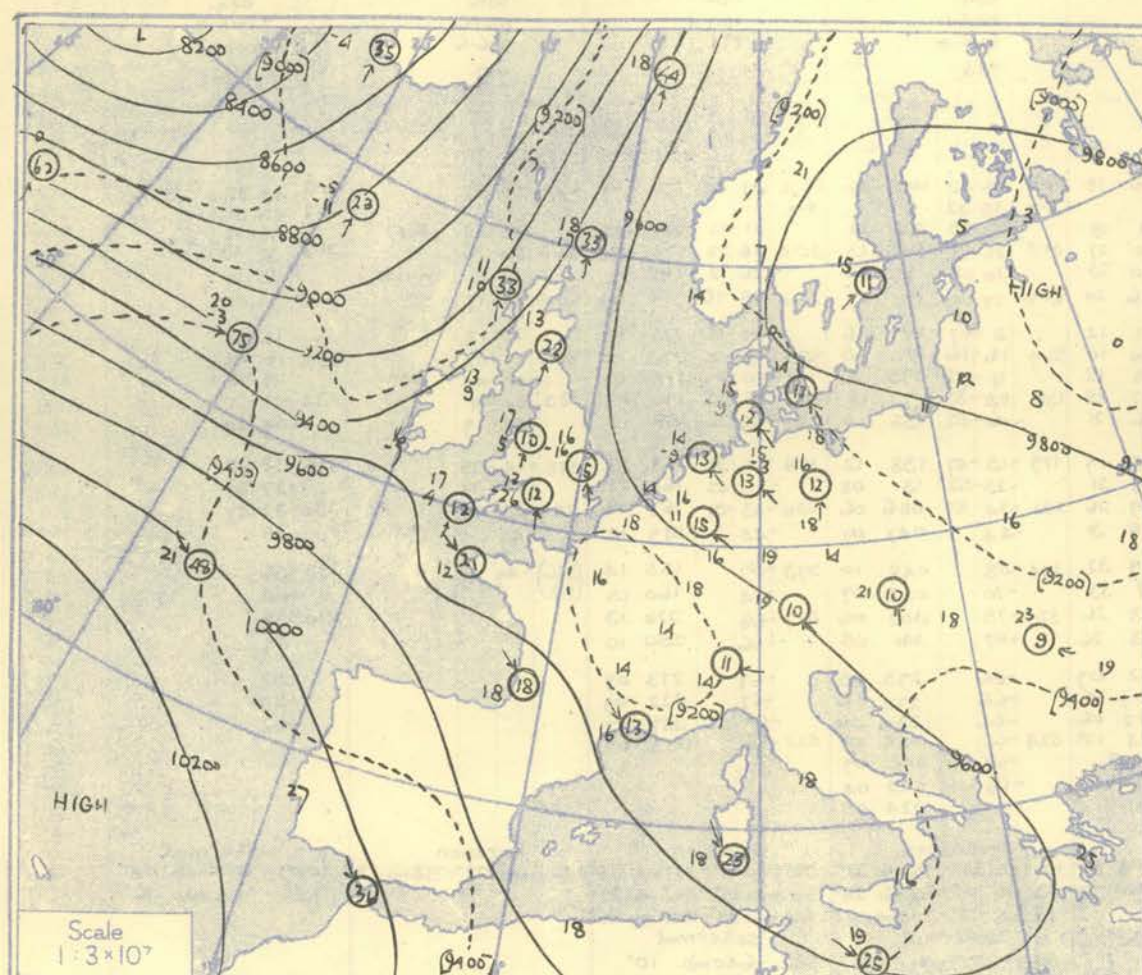


RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

[illegible]

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)																																									
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				STATION							
Pressure	Time	03h.		G.M.T.		Surf	03h.		G.M.T.		Surf	03h.		G.M.T.		Surf	03h.		G.M.T.		Surf	03h.		G.M.T.		Surf	03h.		G.M.T.		Surf	Time									
	M.S.L.	1006.5		mb			M.S.L.	1003.0		mb		M.S.L.	1008.2		mb		M.S.L.	1006.2		mb		M.S.L.	1009.5		mb		M.S.L.	1011.4		mb		M.S.L.									
	Freezing	996.3		mb			Freezing	1001.3		mb		Freezing	1007.3		mb		Freezing	997.2		mb		Freezing	1007.4		mb		Freezing	994.7		mb		Freezing									
		841		mb				925		mb			881		mb			900		mb			918		mb			943		mb											
Pressure	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Pressure								
mb	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	mb								
Surf	02.7	40	40		00.4	38	37	22.5	05	00.2	37	36	14.0	06	02.6	38	36		00.6	35	31	18.0	18	01.2	34	32	10.0	06	04.4	32	30	17.0	10	02.9	42	38	Surf				
1000	1.7				00.8	38	37			1.2	37	37			1.9	35	31		2.5	35	31			3.7	35	32			2.7	31	25	161	23	2.0	42	38	1000				
950		36	36			33	31	24.1	15		33	33	17.7	16		31	27	18.2	28		31	19	19.0	27		33	33	16.6	12		31	25	161	23		36	32	950			
900	29.7	32	32	For	28.5	30	38	13.2	14	29.1	33	33	17.9	17	29.8	32	24		30.1	31	19	20.3	22		31.3	26	16.7	13		30.8	26	22	177	19	30.0	30	26	900			
850		32	32			25	23	22.0	13		31	31	20.3	22		24	17			29	02	19.0	27			26	18	16.7	13		26	12	188	17		25	21	850			
800	60.6	28	25	winds	59.0	21	19	17.6	14	60.0	26	26	2.09	24	60.3	20	15		60.8	25	18	18.6	20		61.6	27	04	17.0	13		61.0	25	16	185	16	60.5	22	17	800		
750		22	21			16	12	17.8	15		21	21	20.5	21		16	14			21	14	17.1	14			21	07	16.9	16		19	16	175	13		23	12	750			
700	95.0	18	17	See	92.8	11	06	18.0	33	94.3	13	13	20.2	22	94.2	13	09		95.0	17	05	18.4	10		95.9	16	16	17.2	15		95.1	13	26	173	12		94.8	17	04	700	
650		11	10			06	01	18.8	50		09	09	18.2	25		10	04			09	04	19.8	12			11	16	19.3	14		10	29	17.8	07		09	04	650			
600	134	04	01	page	131	00	05	18.9	60	133	04	04	18.9	31	133	02	04		134	01	03	16.7	18		135	05	33	17.3	18		134	05	33	17.0	09		133	09	04	600	
550		-03	-08			-09	-14	191	65		-05	-06	183	41		-05	-11			-06	-10	16.6	21			-06	-42	1.55	15		-02	-26	1.58	12		-04	-19	3.	-09	-20	550
500	178	-14	-19	3.	175	-15	-23	18.9	71	177	-14	-15	17.8	34	177	-13	-22		178	-15	-20	17.4	19		179	-13	-47	1.38	12		178	-12	-35	1.53	13		178	-14	-28	500	
450		-24	-33			-26	-35	18.4	67		-26	-28	18.5	37		-23	-32			-26	-32	17.9	21			-23	-52	1.31	08		-23	-42	1.64	12		-25	-38	450			
400	230	34	43		227	36	46	18.2	75	229	34	36	18.9	37	229	35	44		229	35	42	17.9	26		231	34	-57	0.86	06		230	-33	-51	1.67	13		229	-33	-49	400	
350		-45				-48		18.1	82		-45		18.2	46		-45				-47		17.8	31			-44		0.47	09		-45		1.49	12		-47		229	-33	-49	350
300	293	-61			297	-62		18.1	81	292	-58		19.3	39	292	-59			292	-60		17.9	32		294	-58		0.48	10		293	-59		1.55	14		(346)	-49	293	-56	300
250		-75				-72		18.9	77		-71		18.7	40		-67				-72		17.7	33			-70		0.32	07		-74		1.60	15				-64	250		
200	(218)	-85			374	-65		19.5	49	376	-76		20.3	46	377	-67			377	-74		22.3	26		379	-75		3.02	06		377	-68		2.20	13				-58	200	
170						-60					-65					-59				-66		22.3	26			-67			2.91	05		-66		2.50	10				-59	170	
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60																																									

HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

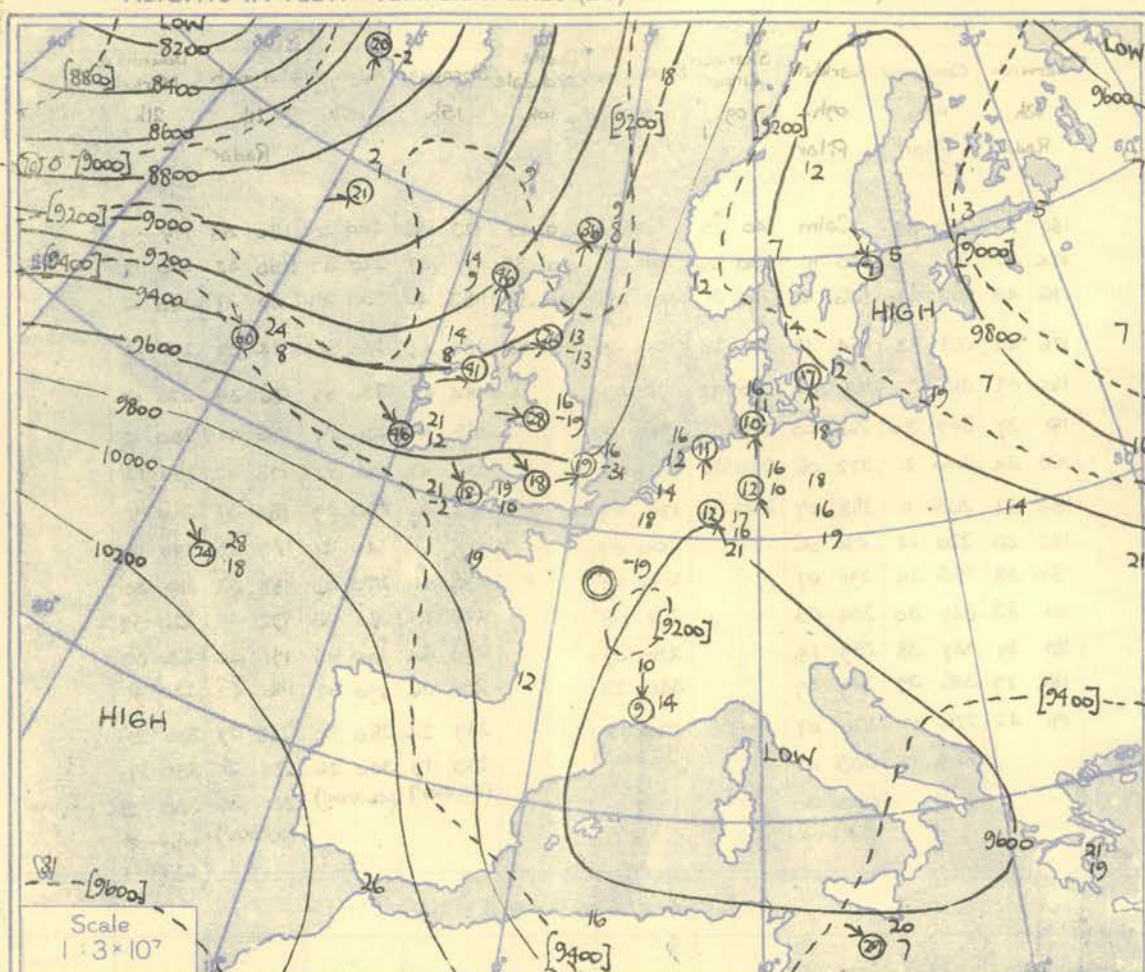
48° IN. 17.0W.										47° 6' N. 12.3W.										53° IN. 01.3E.																																																																															
1245h.										1430h.										1445h.																																																																															
1015.8 mb										1015.2 mb										1015 mb																																																																															
1012.2 mb										1011.6 mb										1013 mb																																																																															
740										830+740										947																																																																															
Surf										Surf										Surf																																																																															
1000										950										900										850										800										750										700										650										600										550									
4.3										32.9										64.2										750										700										650										600										550																													
48										42										37										33										25										19										13										03																													
51										47										41										37										33										23										13										04																													
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870mb.										790mb.										845mb.																																																																															
7/8 As 4xx-										1/8 C 3xx-										Inversion																																																																															
4xx										3xxmb.										850mb. 20°-																																																																															
Inversion										Inversion										845mb. 28°-																																																																															
800mb. 32°-										800mb. 28°-																																																																																									
750mb. 33°										780mb. 36°																																																																																									

Place		Lerwick		Camborne		Larkhill		Shannon Airport		Shoeburyness		Castle Archdale		Stornoway		Aldergrove		Lerwick		Downham Market		Place	
Time		03h.		03h.		09h.		09h.		11h.		10h.		15h.		15h.		21h.		21h.		Time	
Type		Radar		Pillar		Pillar												Radar				Type	
Feet		Dir. Vel.		Dir. Vel.		Dir. Vel.		Dir. Vel.		Dir. Vel.		Dir. Vel.		Dir. Vel.		Dir. Vel.		Dir. Vel.		Dir. Vel.		Feet	
Surf.		180 32		280 35		Calm		140 15		Calm		150 12		173 35		200 20		180 33		170 07		Surf.	
1,000		174 42		311 39		130 11		200 26		200 05		190 38		177 37		220 33		180 42		220 17		1,000	
2,000		176 43		313 42		146 12		210 31		170 06		190 34		183 40		230 39		173 37		230 15		2,000	
3,000		176 42		313 43		154 12		210 28		150 07		210 28		185 44		230 30		174 32		250 13		3,000	
4,000		180 39		312 33		167 09		210 22		140 09				184 42		230 30		176 39		270 12		4,000	
5,000		181 37		309 30		265 05		220 26		150 10				185 42		230 29		176 41		280 12		5,000	
6,000		183 34		306 21		272 06		220 32		170 06				186 42		230 32		178 42		280 12		6,000	
8,000		184 32		265 11		288 07		240 30		170 09				185 46		230 39		184 37		260 11		8,000	
10,000		182 33		220 12		290 06				200 07				199 43		240 41		179 28		280 12		10,000	
14,000		180 38		185 24		291 07				200 09				195 41		250 40		188 33		310 30		14,000	
18,000		181 33		347 30		254 05				210 08				220 45		280 60		192 40		320 32		18,000	
24,000		181 29		347 38		289 14				270 07				223 44		280 69		191 40		330 39		24,000	
30,000		186 39		346 39		249 09				340 22				250 36		290 67		196 42		330 40		30,000	
40,000		191 42		276 12		320 07				020 13				239 24		280 30		228 29		330 21		40,000	
50,000				308 12		333 10				(36,000')				233 19		300 26		238 21		350 17		50,000	
						005 06								(54,000')		(46,000')		281 35		330 08		(64,000')	
						(54,000')								(52,000')				090 08		(67,000')			

NEPHOSCOPE OBSERVATIONS																									
Place																								Place	
Time Type																								Time Type	
Dir. Vel.		None reported.																						Dir. Vel.	

Ship		WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				Ship								
Lat/Long		59.0N		18.9W		58.9N		18.7W		59.0N		18.7W		59.0N		18.7W		52.3N		19.7W		52.2N		20.0W		52.2N		20.3W		52.3N		20.3W		Lat/Long								
Pressure	Time	03L		G.M.T.		09L		G.M.T.		15L		G.M.T.		21L		G.M.T.		03L		G.M.T.		09L		G.M.T.		15L		G.M.T.		21L		G.M.T.		Time								
	M.S.L.	990		mb		988		mb		990		mb		989		mb		994		mb		1001		mb		1004		mb		1000		mb			M.S.L.							
	Surf	990		mb		988		mb		990		mb		989		mb		994		mb		1001		mb		1004		mb		1000		mb				Surf						
	Freezing	965		mb		930		mb		950		mb		920		mb		855		mb		860		mb		865		mb		774		mb					Freezing					
Pressure	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Pressure									
mb	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	mb									
Surf	1000	-2.7	37	34	240	18	3.2	39	20	120	10	2.7	37	30	270	18	-2.9	40	28	230	23	-1.7	50	42	270	37	0.1	46	38	290	33	1.2	49	44	22S	21		0	53	51	210	26
950	950	25.0	24	20	241	19	24.6	27	13	116	14	25.0	26	22	261	28	25.0	29	23	226	33	26.7	38	31	260	56	28.3	35	29	272	50	29.5	37	31	229	33	28.6	48	47	210	44	950
900	900	55.0	17	14	239	20	54.8	21	03	121	18	55.3	20	44	257	36	55.2	21	14	227	38	57.7	30	22	261	54	59.1	31	18	272	54	60.5	31	26	239	39	60.1	40	36	234	54	900
850	850	55.0	10	08	236	24	54.8	16	12	130	15	55.3	13	11	256	35	55.2	15	09	230	42	57.7	30	06	263	60	59.1	25	05	271	53	60.5	27	20	246	42	60.1	35	32	234	57	850
800	800	55.0	10	08	236	24	54.8	16	12	130	15	55.3	13	11	256	35	55.2	15	09	230	42	57.7	30	06	263	60	59.1	25	05	271	53	60.5	27	20	246	42	60.1	35	32	234	57	800
750	750	55.0	10	08	236	24	54.8	16	12	130	15	55.3	13	11	256	35	55.2	15	09	230	42	57.7	30	06	263	60	59.1	25	05	271	53	60.5	27	20	246	42	60.1	35	32	234	57	750
700	700	55.0</																																								

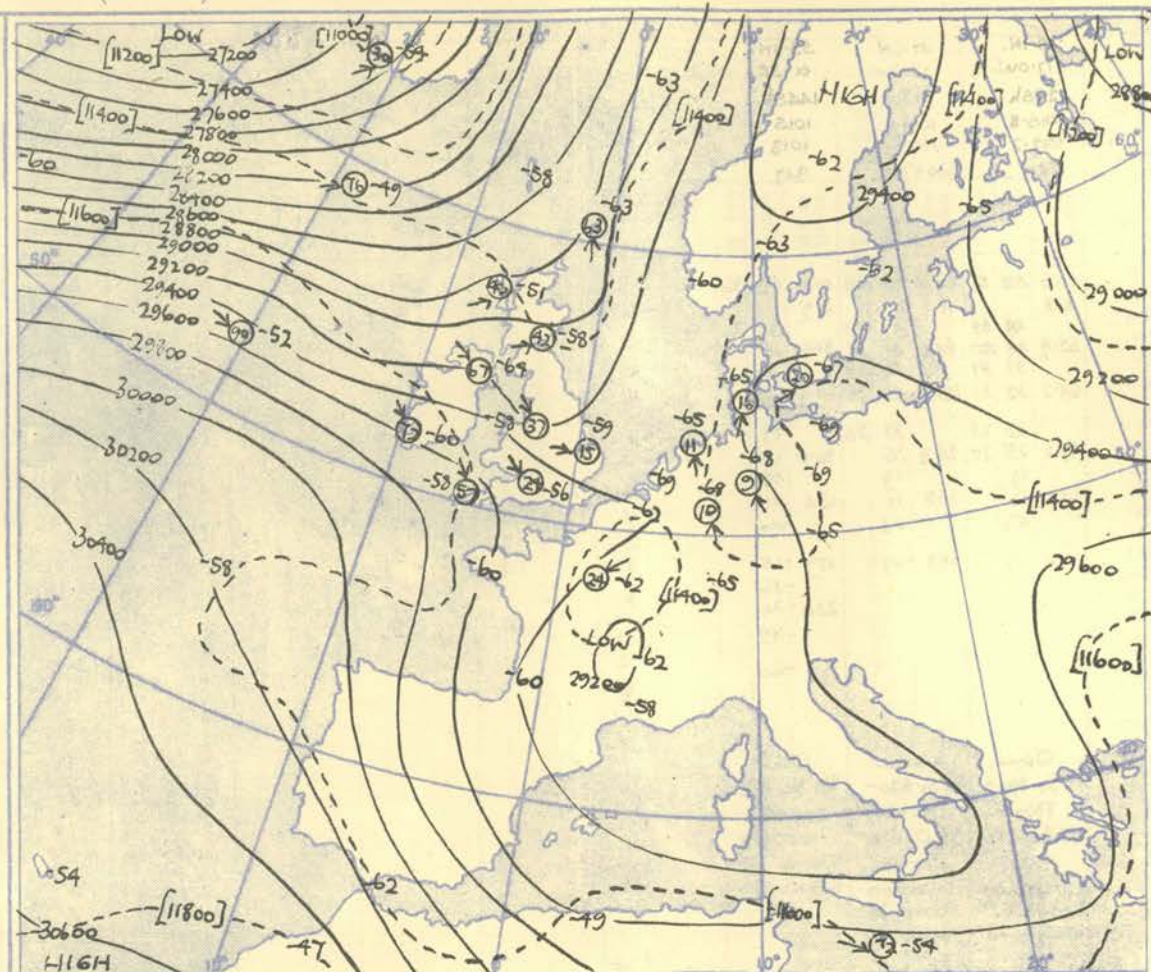
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15h G.M.T.



The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

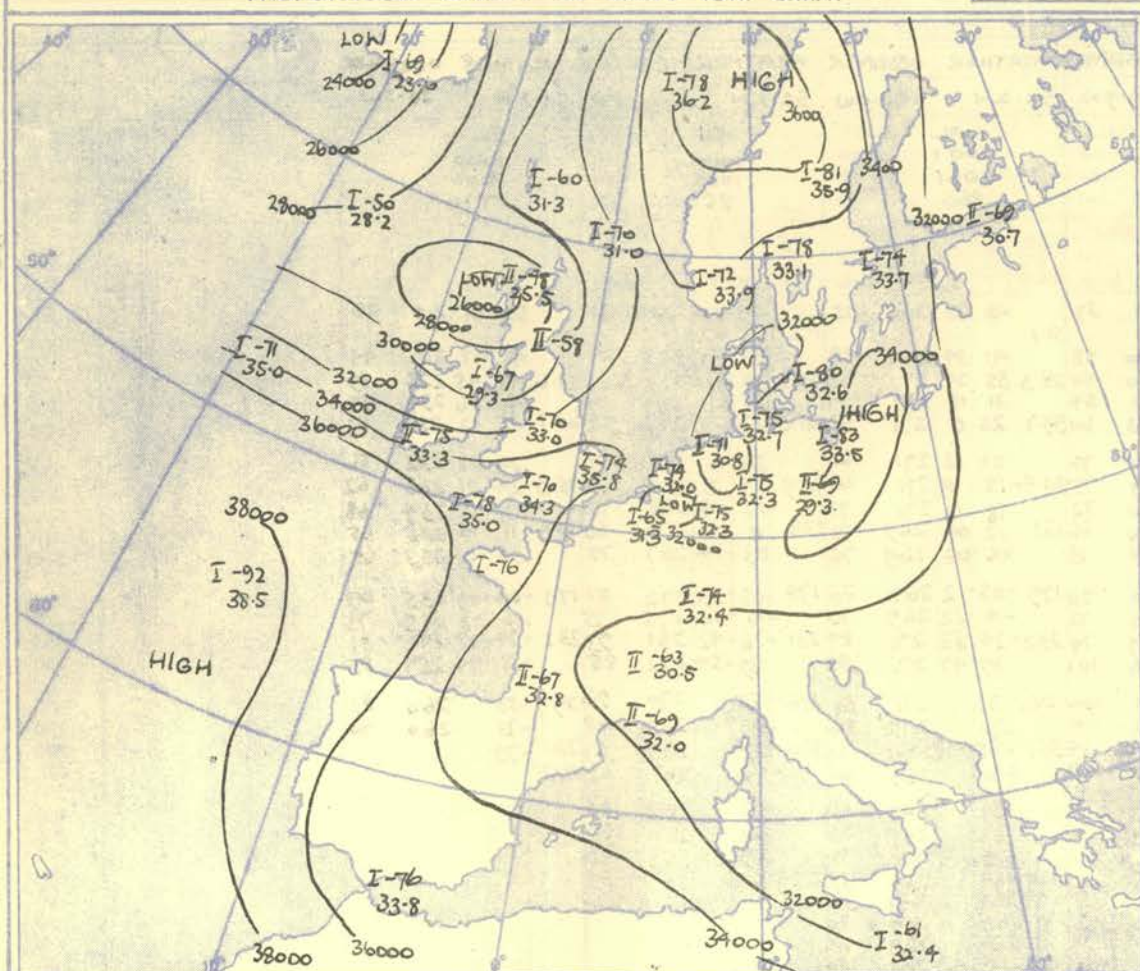
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 20 10 knots.



The continuous lines are contour lines of the 300 mb. surface.
The dotted lines are isopleths of the thickness of the layer 500-300 mb.

TROPOPAUSE CHART at about 15h. G.M.T.



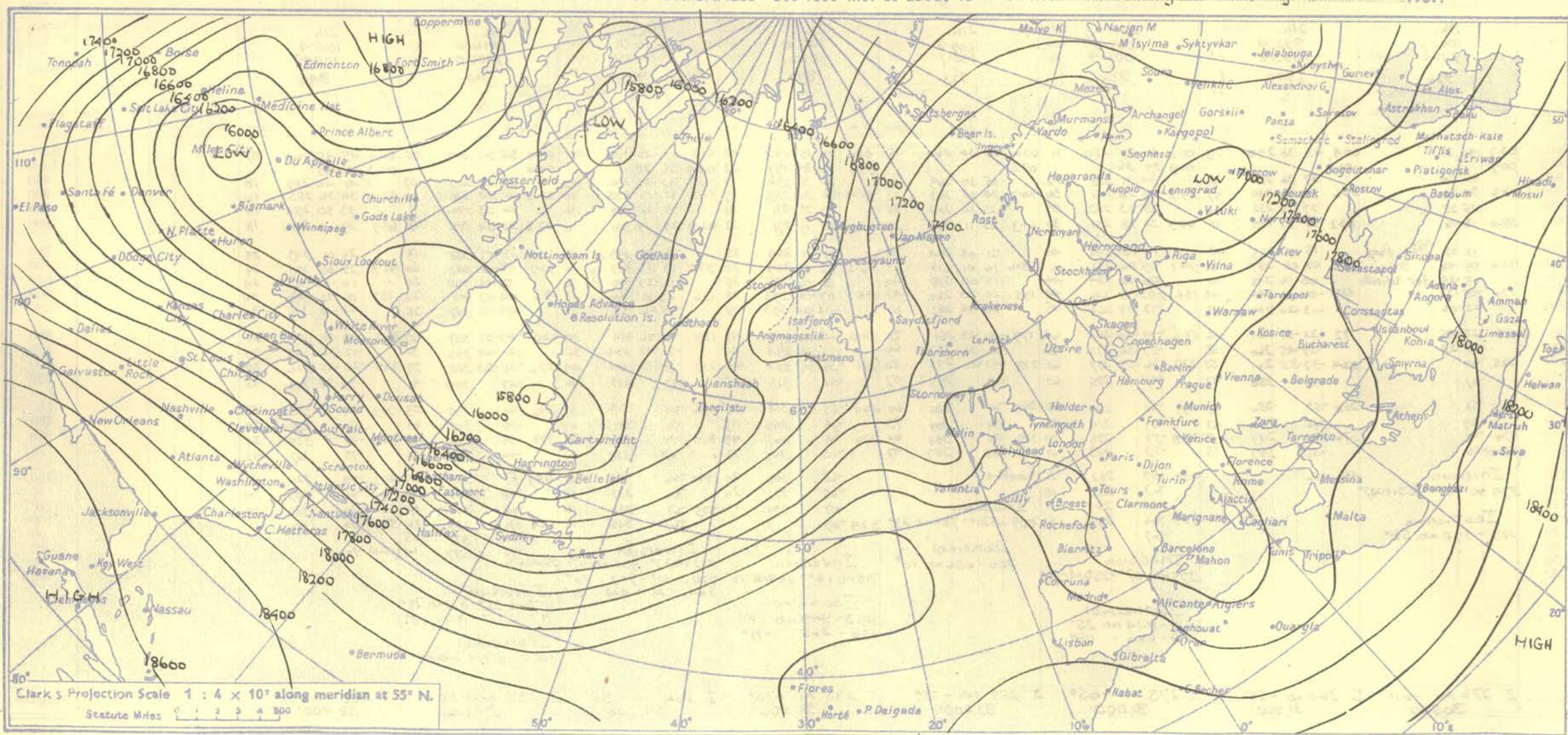
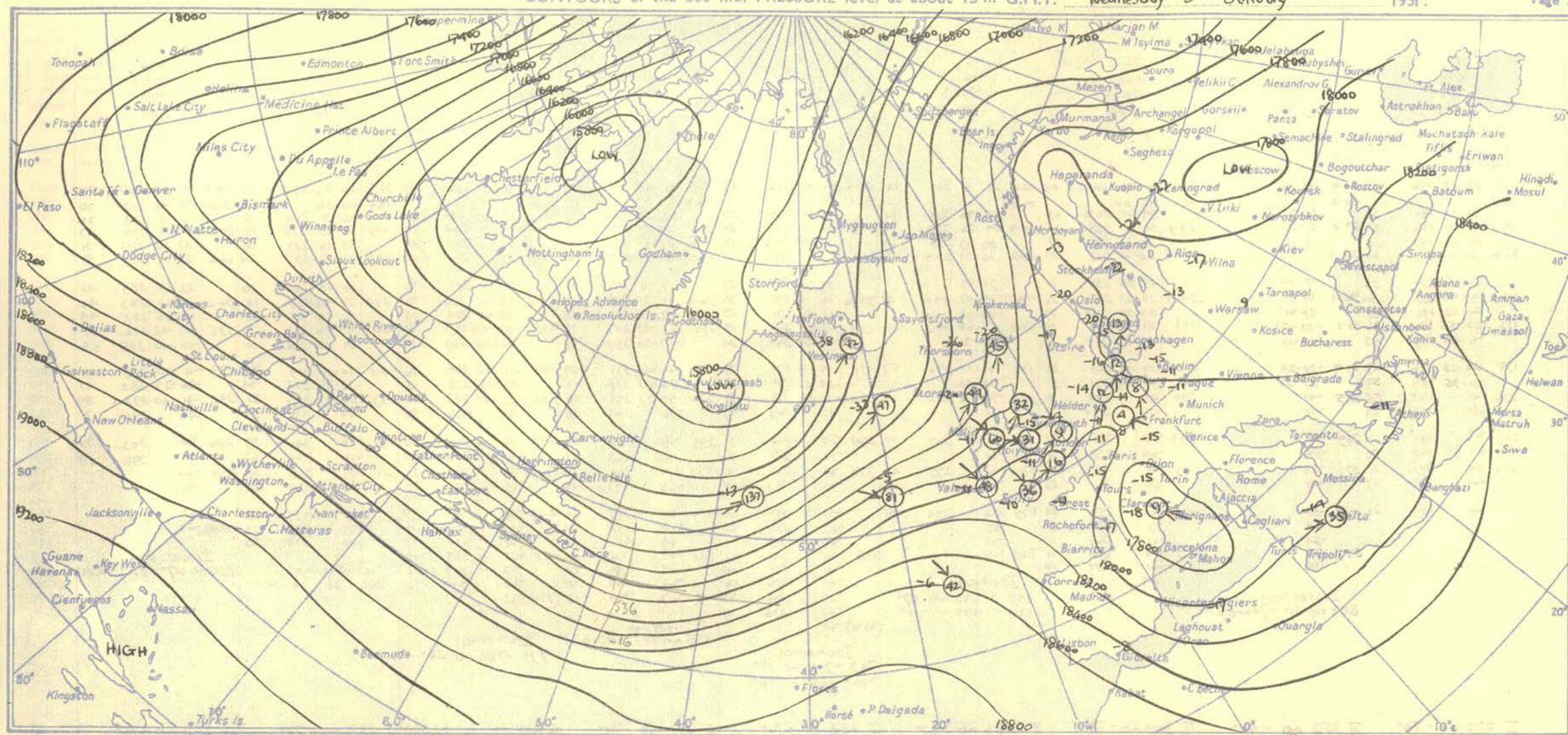
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The warm ridge persisted off Scandinavia with a cold trough over Western Europe and the Western Mediterranean. Warming occurred over the Atlantic in association with the eastward movement of the depression.

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Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK					STORNOWAY					LEUCHARS					ALDERGROVE					LIVERPOOL					DOWNHAM MARKET					LARKHILL					CAMBORNE					VALENTIA					STATION																																																																																																																																																																																														
Pressure mb	Time M.S.L. Surf Freezing	15h. 1006.3 996.1 958	G.M.T. mb mb mb	15h. 1000.2 998.5 920	G.M.T. mb mb mb	15h. 1008.0 1007.1 930	G.M.T. mb mb mb	15h. 1006.6 997.3 940	G.M.T. mb mb mb	15h. 1011.6 1009.5 915	G.M.T. mb mb mb	15h. 1014.7 1010.1 953	G.M.T. mb mb mb	15h. 1013.8 997.4 929	G.M.T. mb mb mb	15h. 1013.8 1003.1 850	G.M.T. mb mb mb	15h. 1009.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885	G.M.T. mb mb mb	15h. 1007.6 1008 885