

419638



# THE DAILY AEROLOGICAL RECORD

1st April to 30th June

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.



Scale 1:5,000,000.

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  $32^\circ\text{F}$  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  $32^\circ\text{F}$ .

**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  $45^\circ$  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  $0^\circ\text{C}$ . 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  $1^\circ\text{F}$ . 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  $1^\circ\text{F}$ . 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).

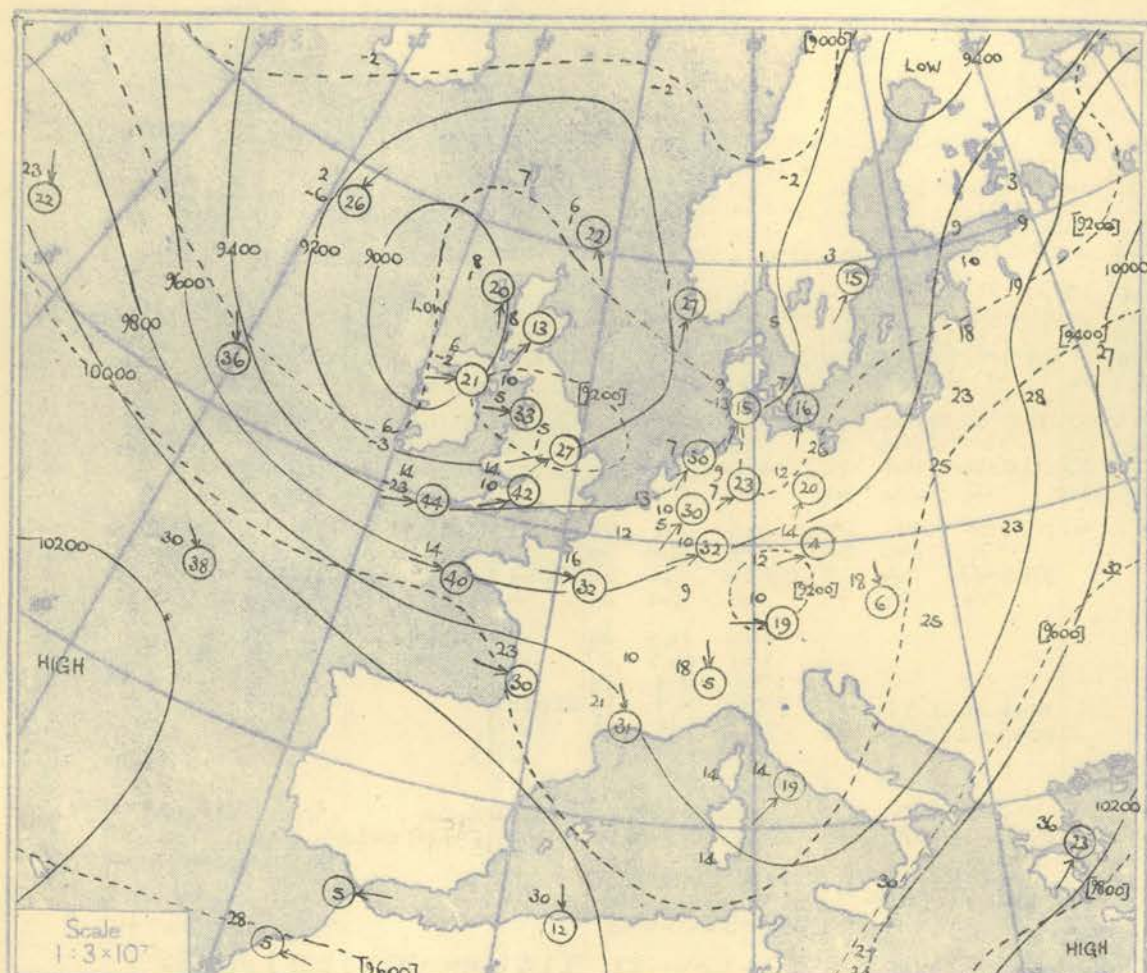


RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	Valentia	STATION			
Time M.S.L.	03hrs 999.0	03hrs 996.7	03hrs 993.9	03hrs 993.6	03hrs 997.6	03hrs 1001.2	03hrs 1003.2	03hrs 1004.4	03hrs 997.8	Time M.S.L.			
Surf	988.7	995.0	993.0	983.9	995.3	996.7	987.1	993.8	996	Surf			
Pressure	948	940	902	930	900	898	888	880	910	Pressure			
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	Pressure mb
Surf	02.737 30	0.4 28 33 160 20	0.2 31 31	calm	02.638 35 180 10	0.6 40 36 210 05	01.2 38 36 210 08	04.4 41 37 240 10	02.9 45 41 230 10	02.3 42 35	Surf		
1000	0.3	33 29	27	26.1 29 24 230 21	0.7	38 32 228 14	0.4	39 35 248 21	01.1	41 38 242 27	37 30	1000	
950	27.3 28 24	26.9 28 23 170 27	26.1 32 27	26.1 29 24 230 21	27.3 32 28 242 19	28.4 33 27 261 26	29.0 34 25 257 25	29.4 35 23 253 21	29.4 35 23 253 21	27.3 37 30	950		
900	20 18	22.9 19 179 23	27 24	25 20 235 21	26 21 257 22	26 21 260 31	28 24 256 31	28 24 256 31	28 24 256 31	23 17	900		
850	57.4 15 13	57.3 20 16 187 21	56.8 19 19	56.6 18 14 238 22	58.0 21 16 264 22	59.0 19 14 259 28	59.6 22 16 256 24	60.0 21 20 262 38	57.7 17 12	850			
800										800			
750	09 05	15 10 127 13	14 09	11 07 248 23	11 12 264 29	12 07 261 26	15 09 256 37	19 12 260 42	13 06	750			
700	09 06 01	01.110 08 222 18	00 07	00 00 224 21	01.9 10 03 261 33	02.4 08 01 256 27	03.5 14 10 257 41	04.1 14 23 261 54	03 06 03	700			
650	128.5 8 14	128.2 3 9 250 18	128.3 5 16	128.0 6 28 233 24	130.0 1 19 264 31	130.4 4 30 264 39	131.8 2 12 257 41	132.5 01 6 262 43	128.8 12 19	650			
600	15 21	11 18 252 21	15 26	14 20 232 27	14 20 262 36	12 31 265 46	16 12 262 47	17 13 265 54	21 28	600			
550										550			
500	1716 23 33	172.8 21 28 255 27	171.5 26 33	171.4 25 38 238 27	173.8 19 28 262 43	173.9 20 29 263 49	175.8 15 23 265 51	176.5 16 22 263 59	171.5 30 38	500			
450	221.5 30	223.5 43 24 235 26	221.9 47	222.0 48 238 30	225.2 38 46 259 55	225.0 41 267 72	227.4 36 47 269 63	228.3 34 48 264 68	221.7 42	450			
400	65	57 235 24	60	54 250 35	51 262 69	55 266 71	49 271 73	49 266 73	43	400			
350	282.6 73	285.6 65 240 24	283.5 63	284.0 58 256 30	288.0 62 265 67	287.2 66 277 84	290.0 65 272 89	291.1 63 271 73	283.2 53	350			
300	66	61 277 24	57	58 256 30	58 256 30	71 269 54	79 269 79	79 266 73	51	300			
250	365.0 55	371.4 60 300 15	370.3 54	371.0 53 274 24	371.0 53 274 24	371.5 67 266 31	373.8 66 266 46	374.7 68 268 46	373.1 56	250			
200	58	300 15	57	58 260 24	58 260 24	66 252 31	63 264 32	67 264 46	60	200			
170	(188)	60 303 18	54	60 303 18	60 303 18	66 252 31	63 264 32	67 264 46	56	170			
150		58 305 20	58	58 305 20	58 305 20	66 252 31	63 264 32	67 264 46	58	150			
130		61 301 18	59	61 301 18	61 301 18	66 252 31	63 264 32	67 264 46	58	130			
110		518.6 62 322 15	519.3 60	518.6 62 322 15	518.6 62 322 15	518.6 62 322 15	518.6 62 322 15	518.6 62 322 15	518.6 62 322 15	110			
100		66	61	66	66	66	66	66	61	100			
90										90			
80										80			
70										70			
60										60			
Isothermal 881-800 mb 20° Inversion 993 mb 31-930 mb 36°													
Isothermal 995-977 mb 40° Inversion 997 mb 37-974 mb 42° Isothermal 662-618 mb 1° Inversion 987-965 mb 41° 994-962 mb 3°													
Isothermal 735 mb 15° 713 mb 16° Inversion 773 mb 16-740 mb 20° 764 mb 12-750 mb 15° 443 mb 41-413 mb 40° Isothermal 400-371 mb 42°													
Tropopause	I 305 mb 74° 27500'	I 309 mb 70° 28300'	I 333 mb 65° 26000'	II 583 mb 52° 23000'	I 300 mb 62° 28800'	I 265 mb 74° 30900'	I 242 mb 82° 33500'	I 246 mb 80° 33300'	I 287 mb 55° 29500'	Tropopause			
STATION	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE		STATION			
Time M.S.L.	09hrs 999.6	09hrs 992.0	09hrs 994.2	09hrs 991.2	09hrs 994.1	09hrs 999.3	09hrs 999.6	09hrs 1001.3		Time M.S.L.			
Surf	989.4	990.3	993.3	982.0	992.0	994.8	983.5	990.7		Surf			
Pressure	950	900	930	928	892	855	882	900		Pressure			
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	Pressure mb
Surf	02.737 33 130	17.0 4 40 38 120 12	0.2 36 36	calm	02.635 34	0.6 41 38 170 10	01.2 41 39 170 16	04.4 41 40 210 13	02.9 44 40 170 15	Surf			
1000	0.1	32 29 119 18	36 34 154 11	33 33	36 32	37 34 193 15	38 31 211 24	40 38 231 27	40 34 263 32	1000			
950	27.6 26 23 116	25.5 8 32 30 151	19 26 28 23 19	25.6 30 26	26.4 33 20 215	27.8 33 21 218	28.1 34 32 240 24	28.5 32 26 270 36	28.5 32 26 270 36	950			
900	21 17 116	22 14 211 09	24 20	24 18	28 25 223 18	27 24 216 22	29 26 242 38	28 15 268 43	28 15 268 43	900			
850	57.8 13 10 116	27.5 6 4 22 115	06 56 6 18 13	56.1 18 10	57.1 21 18 224 18	58.4 22 18 224 18	58.8 24 20 234 37	59.2 22 10 269 47	59.2 22 10 269 47	850			
800										800			
750	11 03 120	16 11 124 06	14 03	14 03	15 13 232 21	16 11 237 22	19 15 249 34	16 5 276 48	16 5 276 48	750			
700	01.3 07 1 122	19.0 2 03 03 03 07	01.0 10 04 02	00 07 6	00 08 03 242 25	01.3 10 03 218 28	02.8 12 08 252 38	03.0 09 18 276 44	03.0 09 18 276 44	700			
650	00 7 118	01 3 08 03 07	02 11	00 13	00 4 236 27	04 1 236 33	06 01 248 39	01 24 273 45	01 24 273 45	650			
600	125.1 6 16 119	13 12.1 7 12 088	04 12 5 7 19	128.0 8 22	128.7 9 12 220 35	130.4 3 9 234 33	131.0 3 10 245 42	130.9 8 31 273 47	130.9 8 31 273 47	600			
550	15 25 111	12 15 23 086	07 16 40	14 40	14 24 219 43	12 15 236 33	11 19 250 47	16 39 271 52	16 39 271 52	550			
500	172.3 23 33 096	11 17.3 25 38 078	10 17.1 23 45	171.0 21 49	171.8 26 35 219 48	174.0 19 26 238 45	174.7 15 27 240 60	174.0 24 31 270 57	174.0 24 31 270 57	500			
450	222.5 47	19 22.1 6 49 025	07 22 52	222.0 41	222.2 45 225 36	225.2 40 48 235 63	225.9 39 49 238 88	225.0 37 60 256 81	225.0 37 60 256 81	450			
400	60	12.1 17 60 016	05 36	51	49 223 36	52 236 72	48 241 105	47 258 87	47 258 87	400			
350	284.1 72	17 28.9 71 356	08 28.5 60	285.0 52	285.0 53 250 33	287.9 53 244 71	288.9 59 247 93	288.2 57 258 76	288.2 57 258 76	350			
300	62	172 03 58	232 06	32	257 29	241 55	62 247 59	62 259 70	62 259 70	300			
250	370.1 57	09 36.6 51	272 12	370.0 48	372.3 51 282 28	374.8 54 244 32	375.2 59 261 40	374.8 58 264 38	374.8 58 264 38	250			
200	56	24.4 10	272 10	51	54 263 22	56 253 19	58 261 30	60 263 38	60 263 38	200			
170										170			
150	56	09 52 273 10	54	54	53 263 19	55 249 30	58 258 31	62 263 33	62 263 33	150			
130	57	11 53 273 10	53	53	51 250 19	53 250 22	57 261 32	63 264 32	63 264 32	130			
110	58	12 54 273 10	54	54	54 256 22	56 246 18	58 265 26	62 267 28	62 267 28	110			
100	58	520.8 54	520.8 54	520.8 54	523.5 54 265 19	524.5 57 247 18	525.8 58 266 18	522.4 63	522.4 63	100			
90	(57)				58					90			
80										80			
70										70			
60										60			
Inversion 364 mb 50-352 mb 48° 325 mb 53-313 mb 52° Isothermal 1364 mb 50-29300' 1325 mb 53-26700'													
Inversion 291 mb 60-275 mb 58° Isothermal 888-874 mb 30° 765-758 mb 18°													
Tropopause	II 303 mb 72° 28200'	I 258 mb 72° 28300'	II 367 mb 56° 26800'	I 342 mb 53° 25600'	I 304 mb 54° 28200'	I 290 mb 60° 29500'	I 281 mb 64° 30200'	I 250 mb 62° 32700'		Tropopause			



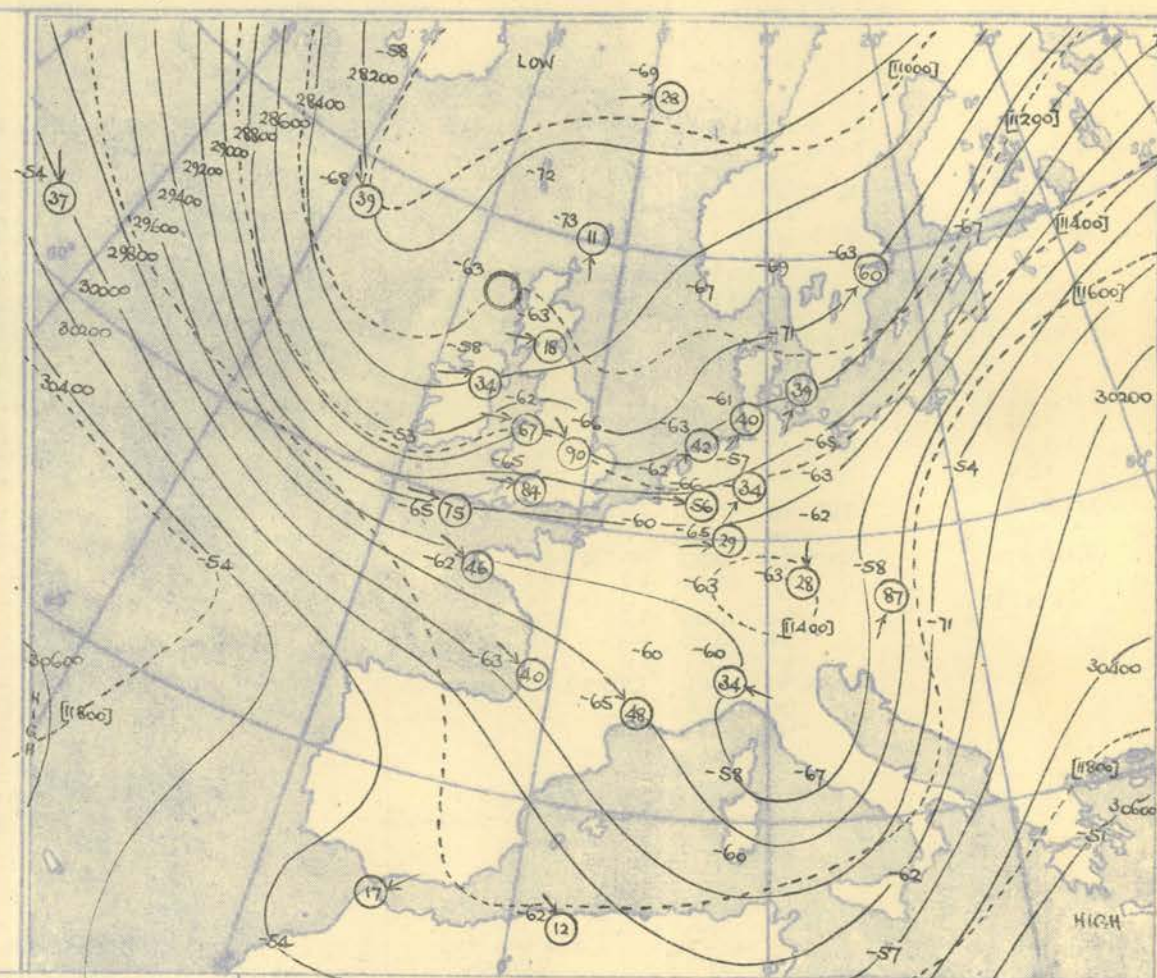
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



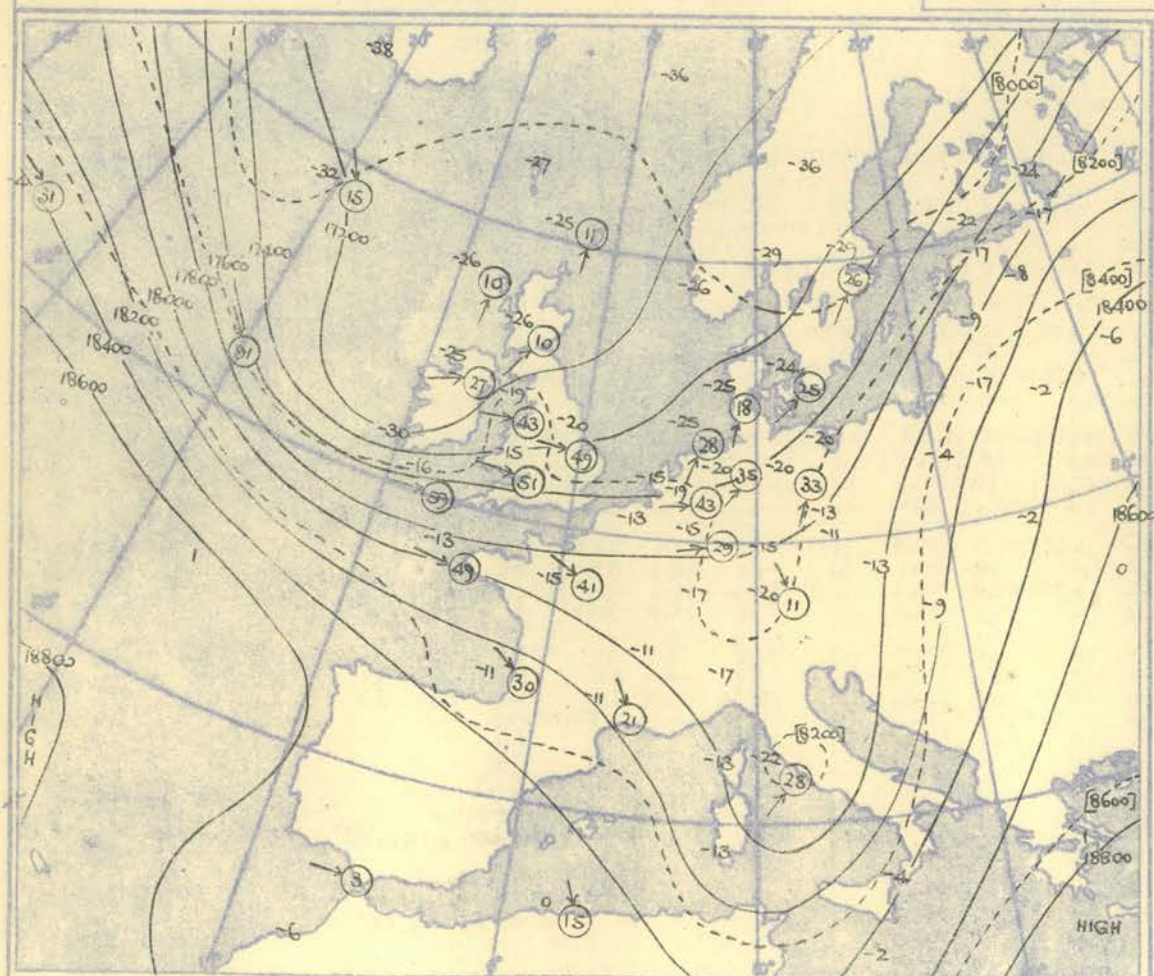
The continuous lines are contour lines of the 700 mb. surface  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

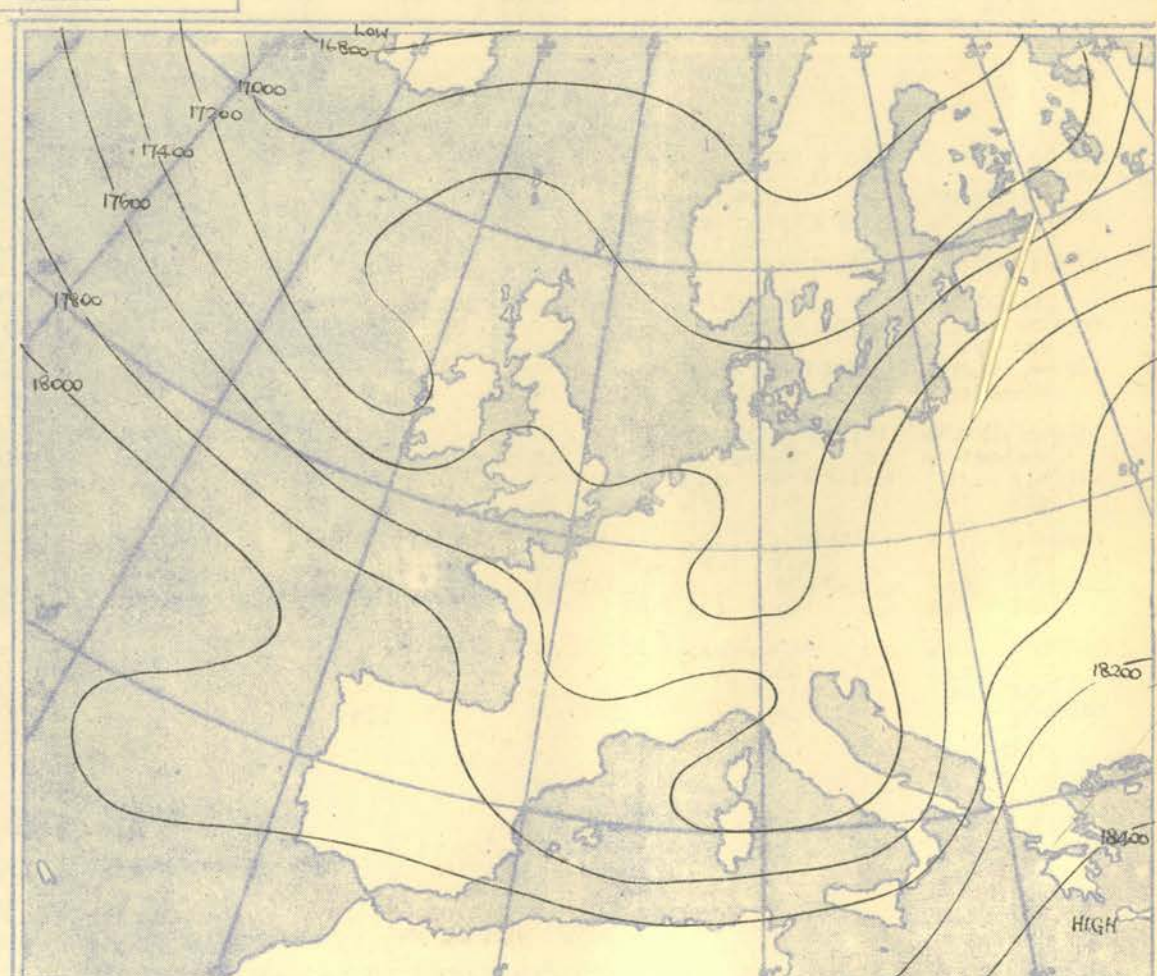
100 80 60 40 20 10 0 knots



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.

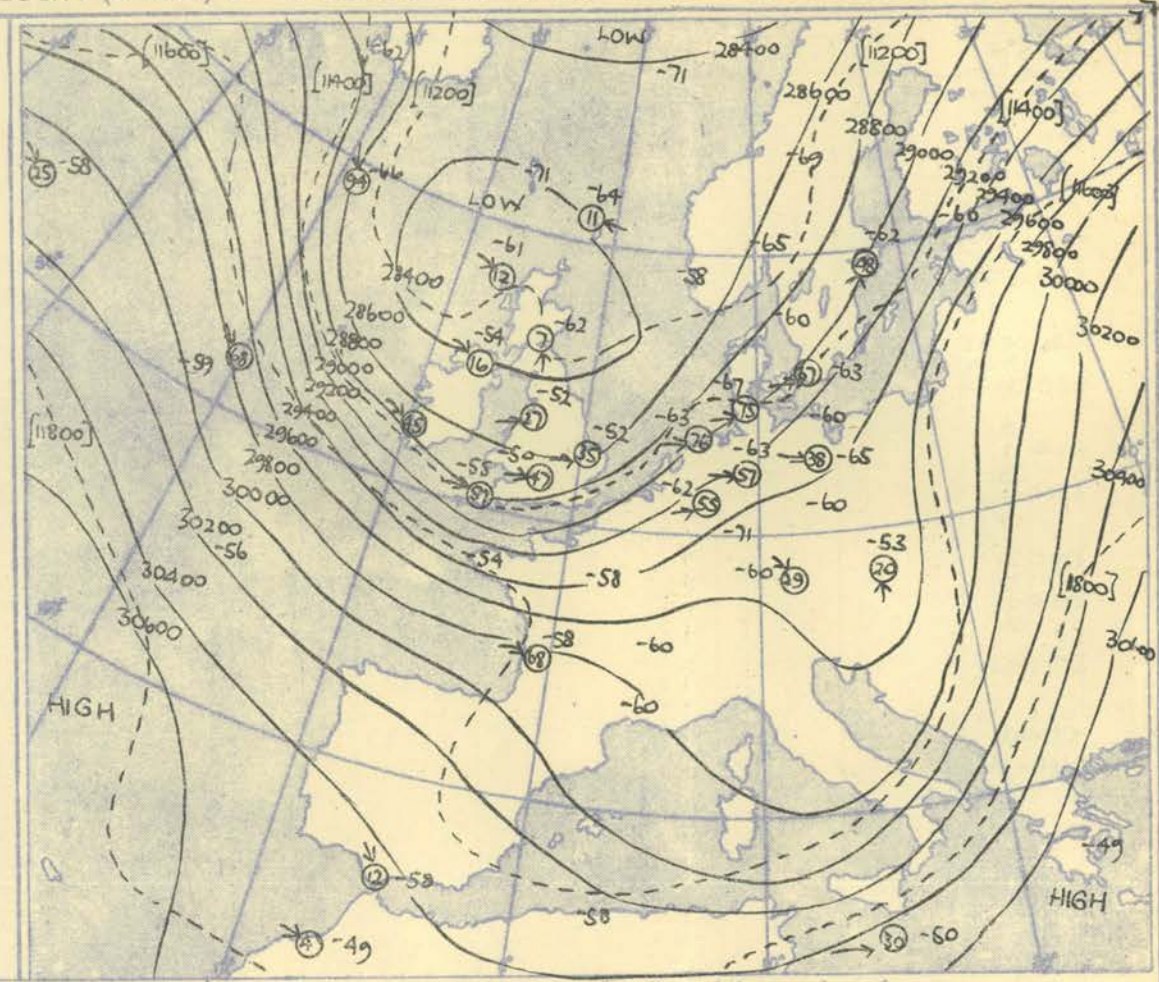
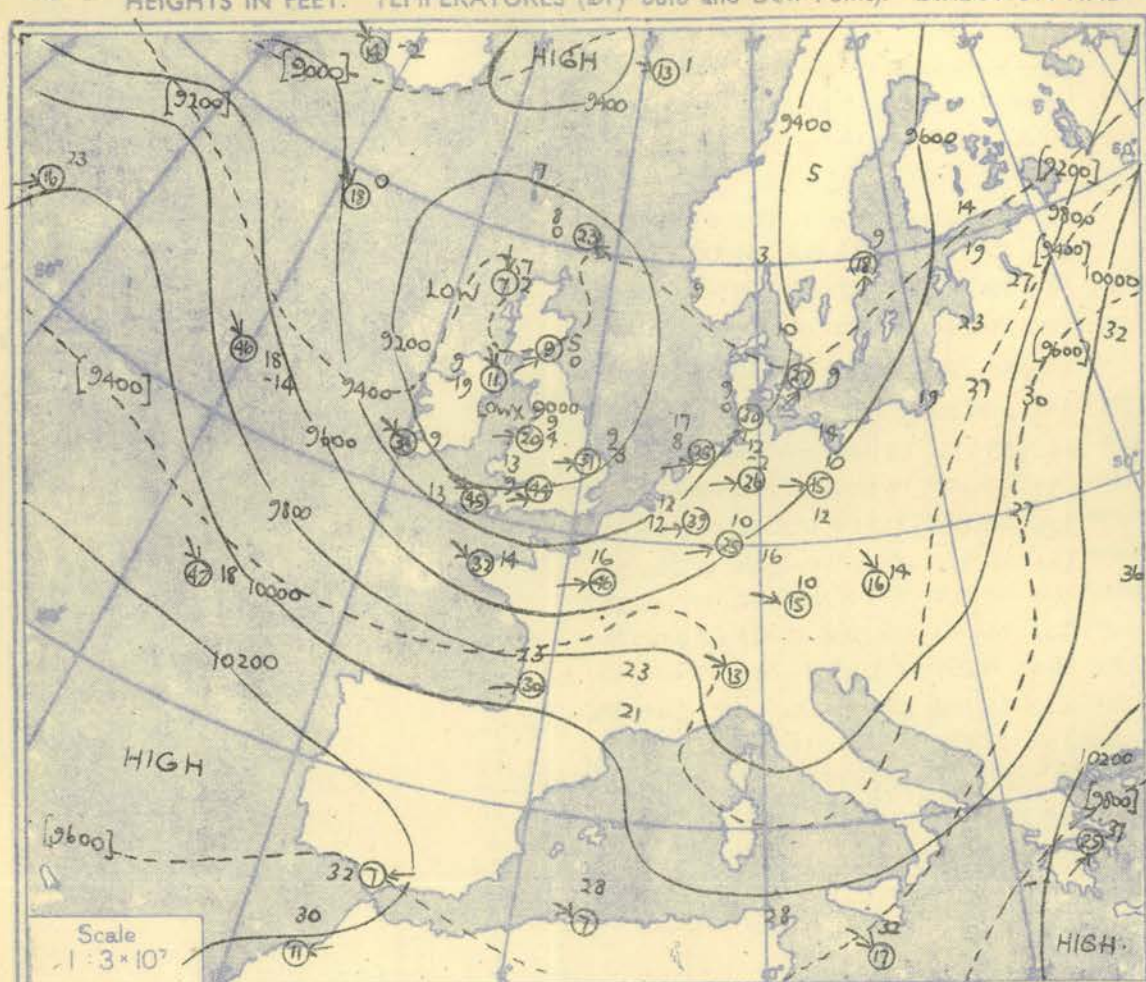


NEPHOSCOPE OBSERVATIONS

## 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		59°N 19°2'W				59°2'N 19°W				59°3'N 19°1'W				59°2'N 19°2'W				52°2'N 19°9'W				52°2'N 20°2'W				51°8'N 20°2'W				52°2'N 20°1'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.						
	M.S.L.	1003		mb		1005		mb		1011		mb		1015		mb		1008		mb		1013		mb		1017		mb		1019		mb						
	Surf	1003		mb		1005		mb		1011		mb		1015		mb		1008		mb		1013		mb		1017		mb		1019		mb						
	Freezing	930		mb		930		mb		950		mb		960		mb		900		mb		910		mb		915		mb		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					
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	0-7	41	37	350	35	42	35	340	23	43	33	360	17	39	37	330	12	46	34	187	40	45	37	300	32	44	25	305	28	45	33	305	23	Surf				
1000	0-7	41	37	350	35	42	35	340	23	43	33	360	17	39	37	330	12	46	34	187	40	45	37	300	32	44	25	305	28	45	33	305	23	1000				
950	3-4	30	004	28	34	31	359	15	32	27	360	18	31	30	333	15	39	31	310	44	38	31	305	33	36	29	318	32	37	35	323	27	950					
900	28-5	27	23	009	30	27-3	26	25	002	24	30-5	24	21	357	17	31-5	25	24	322	31	31-4	31	29	312	31	32-5	30	25	310	35	33-3	27	20	323	28	900		
850	20	17	022	30	19	16	008	30	19	16	348	16	18	17	321	16	26	19	310	42	24	17	309	30	26	20	305	35	22	15	320	28	850					
800	58-7	13	10	008	29	59-5	16	08	007	31	60-7	14	06	333	15	61-7	13	09	332	16	61-1	21	05	310	40	61-8	19	11	308	29	63-1	21	15	320	30	800		
750	07	02	007	28	09	01	008	30	08	04	333	16	07	06	333	12	15	06	310	39	11	03	308	31	20	01	312	39	20	12	322	31	750					
700	91-9	02	06	004	26	92-9	04	11	357	33	93-9	00	06	324	18	94-9	00	03	322	15	94-9	09	16	310	36	95-6	11	36	308	34	97-2	18	14	315	46	97-7	16	700
650	05	14	355	27	05	26	358	30	08	14	322	19	05	12	322	22	01	04	310	40	02	48	308	40	13	13	312	48	13	16	312	48	11	02	322	37	650	
600	129-3	12	24	348	24	150-2	15	31	355	27	131-1	17	24	319	22	132-3	08	20	323	34	136-7	02	54	309	59	136-1	07	17	312	48	136-4	07	10	322	49	600		
550	22	23	348	15	26	39	342	29	28	36	315	25	09	25	330	48	07	50	310	74	03	53	313	68	01	20	301	61	03	15	322	57	550					
500	171-9	32	44	327	15	172-4	38	49	334	27	173-1	35	45	322	40	176-0	16	29	333	50	176-6	13	54	310	91	178-1	11	53	324	63	180-8	06	24	307	69	500		
450	44	287	18	48	337	24	37	50	341	58	24	33	336	57	21	54	310	111	21	54	310	111	21	54	310	111	21	54	310	111	21	54	310	111	450			
400	221-3	57	317	19	221-5	53	342	28	23	3	343	93	227-7	32	59	510	105	230-3	29	98	315	76	233-6	28	74	310	75	233-8	30	47	323	53	400					
350	64	328	21	58	330	38	57	342	95	356	40	47	329	64	228-7	32	59	510	103	230-3	29	98	315	76	233-6	28	74	310	75	233-8	30	47	323	53	350			
300	282-1	68	306	39	283-2	59	330	45	285-3	66	350	94	mb	(329	54	mb	mb	294-1	58	313	73	297-4	59	312	68	297-5	59	312	68	297-5	59	312	68	300				
250	59	315	32	59	330	44	64	323	54	64	323	54	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	250				
200	368-5	59	319	25	368-5	59	313	33	371-1	63	346	30	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	200				
170	59	313	25	60	328	33	61	333	24	61	333	24	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	170				
150	59	312	21	60	327	30	62	322	22	62	322	22	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	150				
130	62	308	12	62	307	32	64	308	14	64	308	14	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	130				
110	63	304	11	63	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	110				
100	55-8	66	305	17	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	100				
90	1093	66	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	90				
80	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	mb	80				
70	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	mb	70				
60	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	mb	60				
Tropopause		II 350mb-69° 24,800'				II 350mb-58° 24,800'				I 300mb-50° 28,500'				N.R.				N.R.				I 236mb-80° 39,300'				I 247mb-76° 33,700'				I 217mb-85° 36,800'				Tropopause				



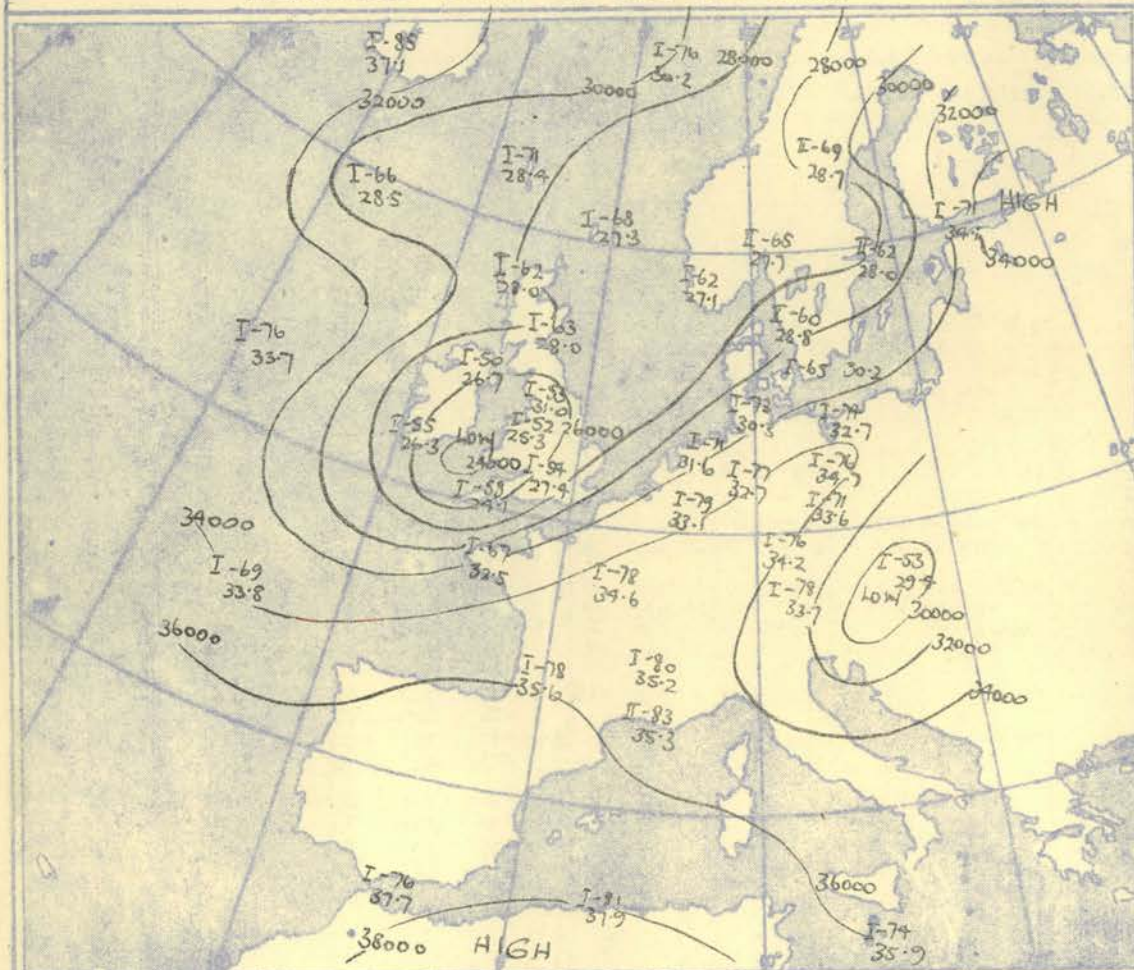


The continuous lines are contour lines of the 700 mb. surface.  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb

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



Contour lines of Height of Tropopause.  
Temperature of Tropopause.

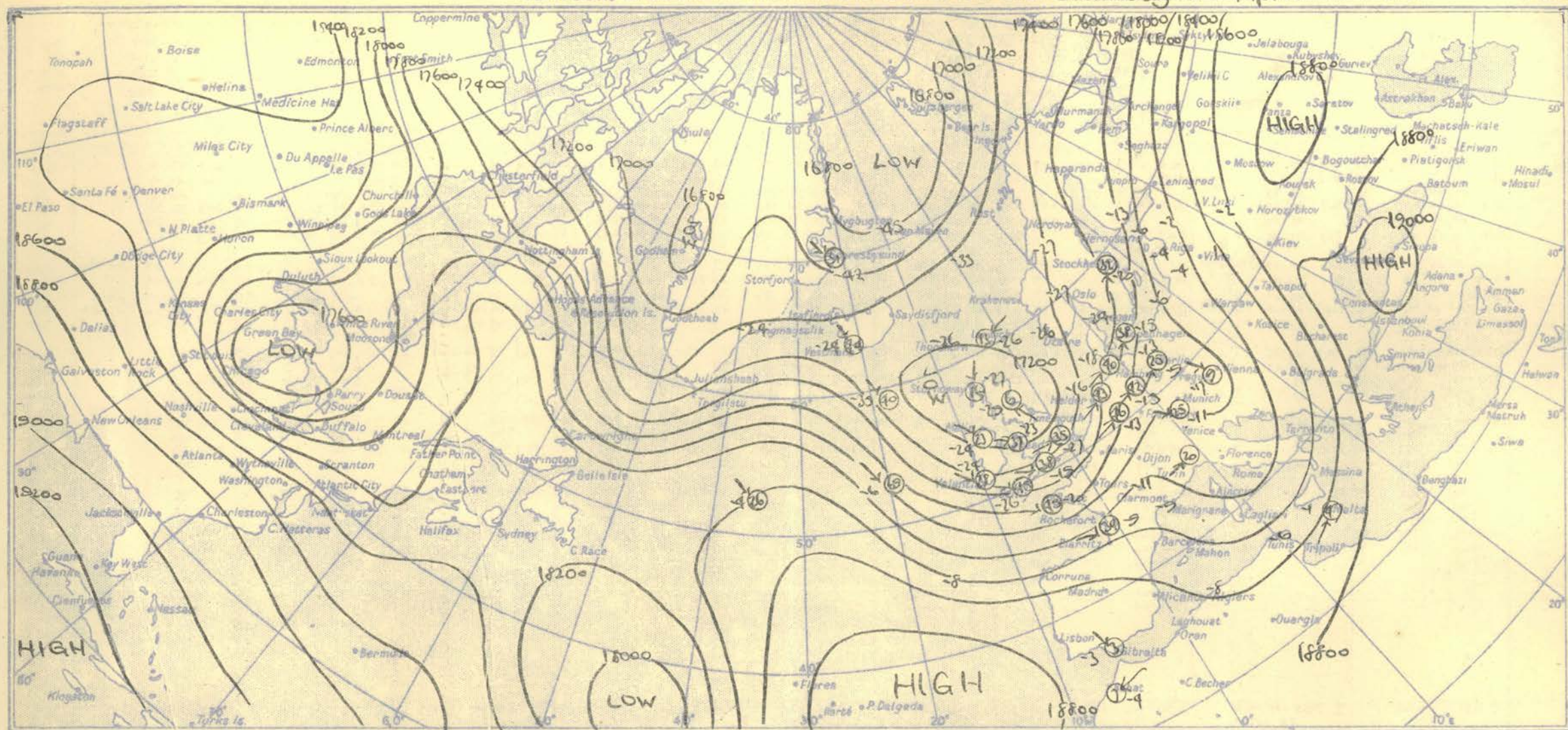
NOTES ON THE AEROLOGICAL SITUATION.

The cold trough forming over the Atlantic has moved quickly east and has become almost merged with the remains of the former cold trough over to Europe, leading to a regression of the main cold trough about ten degrees westwards.

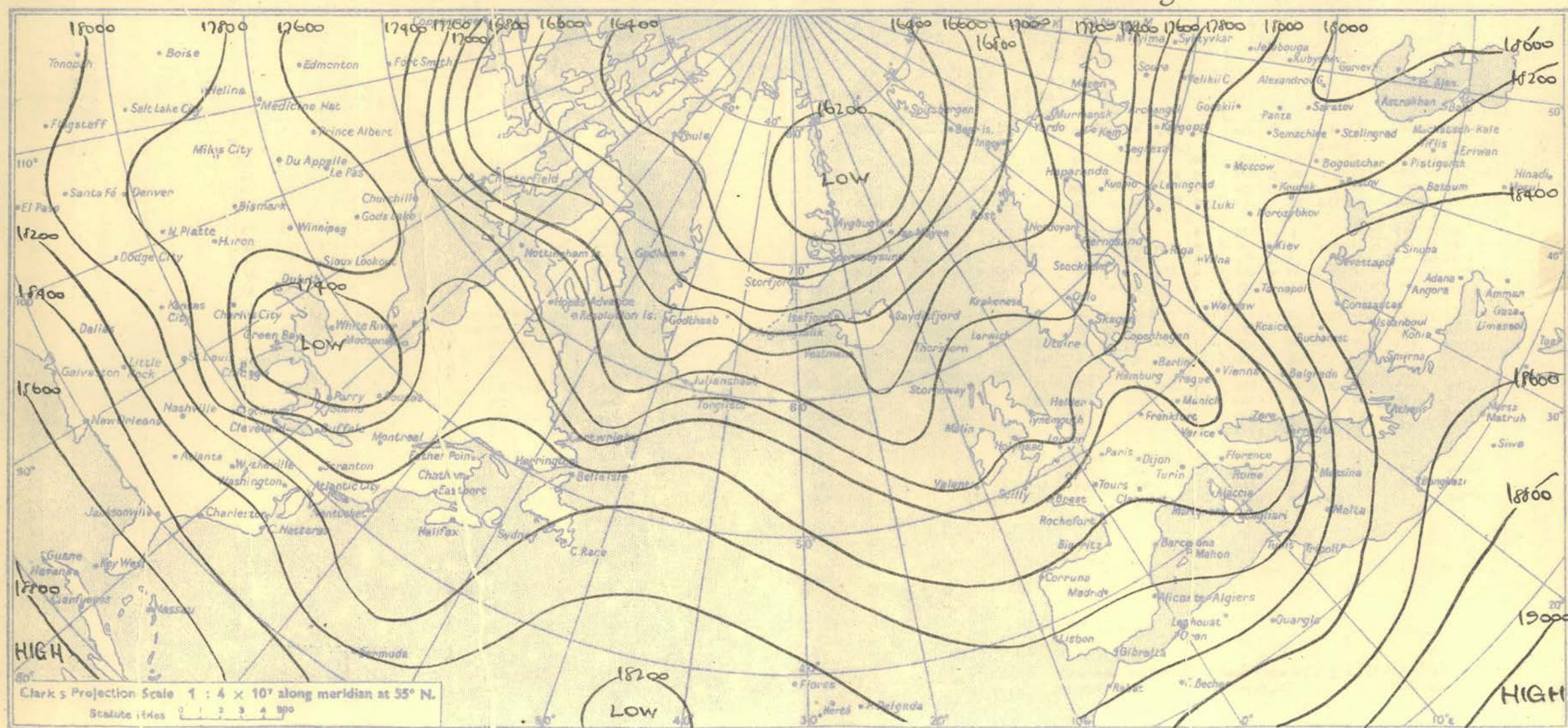
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Meteorological Office, Air Ministry, Kingsway, London, W.C.2  
NELSON K. JOHNSON, K.C.B., D.Sc., Director.





ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Sunday 1<sup>st</sup> April. 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.	Surf	Freezing	15h.		G.M.T.		Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel.	knots	15h.		G.M.T.		Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel.	knots	15h.		G.M.T.		Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel.	knots	15h.		G.M.T.		Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel.	knots	15h.		G.M.T.		Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel.	knots	Pressure mb			
				1000.1	mb	999.7	mb						993.9	mb	991.4	mb						992.8	mb	995.5	mb						997.2	mb	1000.9	mb						1004	mb	1002	mb							895	mb	
				945	mb	918	mb						908	mb	900	mb						920	mb	900	mb						900	mb	900	mb						875 + 855	mb	895	mb									
Surf	02.7	37	35	100	26	00.4	41	40					00.2	44	38	110	08	02.6	48	37	Calm			00.6	49	35	150	06	01.2	47	38	210	20	04.4	44	40	230	20	02.9	43	44	270	25	00.3	47	41	Surf					
1000	00.6					-01.2							-01.7					-02.3						-01.9					-01.2					-00.7					00.3					1000								
950		33	30	090	31	36	35						38	32	075	09		41	32	008	09			35	32	156	06		40	31	230	30		39	36	232	30		36	39	276	40		40	35	950						
900	27.8	28	24	095	30	26.7	30	29					26.2	31	27	088	07	25.9	32	24	008	08	26.0	31	28	190	08	27.0	32	27	233	30	27.4	32	30	238	35	28.6	36	32	282	42	29.2	33	29	900						
850		23	18	099	28	25	24						23	18	102	05		25	18	004	07			26	23	209	13		27	20	242	27		28	26	249	36		31	26	286	40		27	24	850						
800	58.1	19	12	100	27	57.2	21	19					56.7	19	12	110	03	56.5	19	13	358	07	56.5	21	18	213	16	57.5	19	14	243	22	58.1	24	22	248	37	59.5	26	19	286	39	59.9	21	17	800						
750		13	05	105	27		14	09	See Page 3 for Winds					12	06	216	05		15	01	342	07			16	13	234	19		13	07	249	24		19	15	254	44		19	05	285	42		15	08	750					
700	91.8	08	00	105	33	90.9	07	02						90.3	05	00	225	09	90.2	09	09	338	11	90.4	09	04	250	20	91.2	09	03	247	31	92.1	13	09	254	44	93.6	13	01	285	45	93.6	09	04	700					
650		00	-12	102	17	00	-04							-02	-09	220	07		02	-18	330	21			02	-10	256	26		02	-10	244	36		06	02	252	45		04	-13	285	45	-02	-10	650						
600	129.6	-08	-20	102	13	128.7	-08	-13						127.9	-09	-18	155	06	128.1	-07	-28	326	19	128.4	-06	-16	257	29	129.1	-08	-18	243	33	130.4	00	-04	251	41	131.8	-04	-22	285	40	131.6	-04	-16	600					
550		-16	-27	084	11	-17	-21						-18	-25	151	07		-14	-38	330	23			-14	-32	260	29		-17	-25	245	33		-09	-15	258	29		-14	-30	283	50		-14	-26	550						
500	172.7	-24	-37	074	13	171.7	-27	-32					170.8	-29	-36	145	06	171.3	-24	-49	330	23	171.7	-23	-42	268	37	172.1	-27	-35	248	35	174.2	-19	-26	260	36	175.4	-26	-39	279	45	175.0	-24	-35	500						
450	223.0	-48		077	16	221.7	-49	-45					220.8	-52		084	01	221.7	-45		322	15	222.5	-43		262	30	223.7	-48		262	36	225.1	-43	-53	258	42	225.2	-49		276	44	225.6	-43		450						
400		-62		078	18	-57							-59			162	07		-53		304	14		-51		260	27		-51		245	35		-49		257	46		-54		276	56		-53		400						
350	284.3	-64		104	11	283.5	-61						282.4	-62		176	07	284.2	-54		290	16	285.3	-52		260	27	285.1	-52		238	35	288.1	-50		252	47	287.1	-55		273	57	288.1	-53		350						
300		-57		211	08	-55							-56			257	14		-51					-51		260	26		-53		241	37		-50		153	47		-54		274	54		-53		300						
250	37.1	-56		222	08	37.0	-52						369.6	-54		255	12	372.4	-50				374.0	-49		269	20	373.0	-53		248	20	376.9	-49		254	37	374.3	-56		271	42	376.0	-53		250						
200		-56		227	12	-54							-55			259	18		-52					-52		261	18		-55		248	25		-52		251	35		-56		276	30		-57		200						
170																																															170					
150		-54		226	14	433.4	-54						431.7	-56		248	18	435.0	-52					-50		257	19	435.2	-55		246	24	439.6	-51		260	31		-57		277	30		-59		150						
130		-56		260	13	-54							-57			261	22		-57					-53		259	19		-55		255	21		-54		262	30		-60		278	30		-63		130						
110		-56		234	14								-59			277	16		-57					-54		255	13		-54		252	20		-52		259	25		-60		266	30				110						
100	510.6	-57		258	08								518.6	-60		246	12		-53				S14.7	-53		250	16	S12.7	-55		253	18	512.7	-54		258	24	512.7	-61		270	30				100						
90		-60		237	04								-59			238	21		-59					-54		244	17		-59		254	15		-56		258	24		-62		277	30				90						
80	(55mb)	-62											-60			242	24		-56					-59		228	15		-61		257	15						-63							80							
70													637.4	-63		254	12																													70						
60													(50mb)	-64																																60						
Tropopause				I 351 mb -68° 27,300'					I 305 mb -62° 28,000'					I 304 mb -63° 28,000'					I 325 mb -56° 26,700'					II 346 mb -52° 25,300' I 267 " -53° 31,000'					II 405 mb -48° 21,900'					I 320 mb -54° 27,400'					I 373 mb -58° 24,100'					I 335 mb -55° 26,300'					Tropopause			
STATION	LERWICK					STORNOWAY					LEUCHARS					ALDERGROVE					LIVERPOOL					DOWNHAM MARKET					LARKHILL					CAMBORNE					VALENTIA					STATION						
Pressure mb	Time M.S.L.	Surf	Freezing	21h.		G.M.T.		Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel.	knots	21h.		G.M.T.		Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel.	knots	21h.		G.M.T.		Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel.	knots	21h.		G.M.T.		Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel.	knots	21h.		G.M.T.		Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel.	knots	Pressure mb			
				1001.5	mb	999.9	mb						996.9	mb	997.7	mb						993.1	mb	994.8	mb						998.2	mb	1004.7	mb						994.0	mb	873	mb									
				950	mb	916	mb						900	mb	906	mb						918	mb	866	mb						878	mb	873	mb																		
Surf	01.7	37	35	100	27	00.4	41	36	020	15	00.2	38	38	Calm			00.6	39	36					01.2	44	40	210	06	04.4	45	39						02.9	45	38	270	25				Surf							
1000						00.0											-00.8							-01.3					-01.4					-00.9					01.3					1000								
950		32	31	091	33	36	32	038	20				31	31	068	09		37	28	360	13			35	31			40	35	239	27		41	35		41	34	280	35				950									
900	28.1	27	26	096	27	27.8	30	26	040	19	26.9	26	25	060	11		27.3	31	21	356	12	26.6	30	27			26.7	36	33	245	24	27.8	35	31		29.5	35	30	292	34				900								
850		22	20	097	25	25	21	036	16				20	18	036	11		25	17	356	13			24	21			30	27	247	23		29	25		30	25	295	35				850									
800	58.3	17	15	097	28	58.2	20	15	029	15	57.1	14	10	030	13		57.8	20	12	358	16	57.0	17	16			57.5	24	23	245	24	58.5	23	18		60.3	23	18	292	36				800								
750		11	07	103	27		16	11	026	15			07	03	023	13		14	03	350	16			13	07			19	16	248	27		18	11			18	03	290	37				750								
700	91.8	05	01	103	23	92.1	10	04	030	14	90.4	03	-01	052	06		91.5	07	-08	366	17	90.6	06	-03			91.5	11	06	249	29	92.5	10	-01		94.3	11	-04														

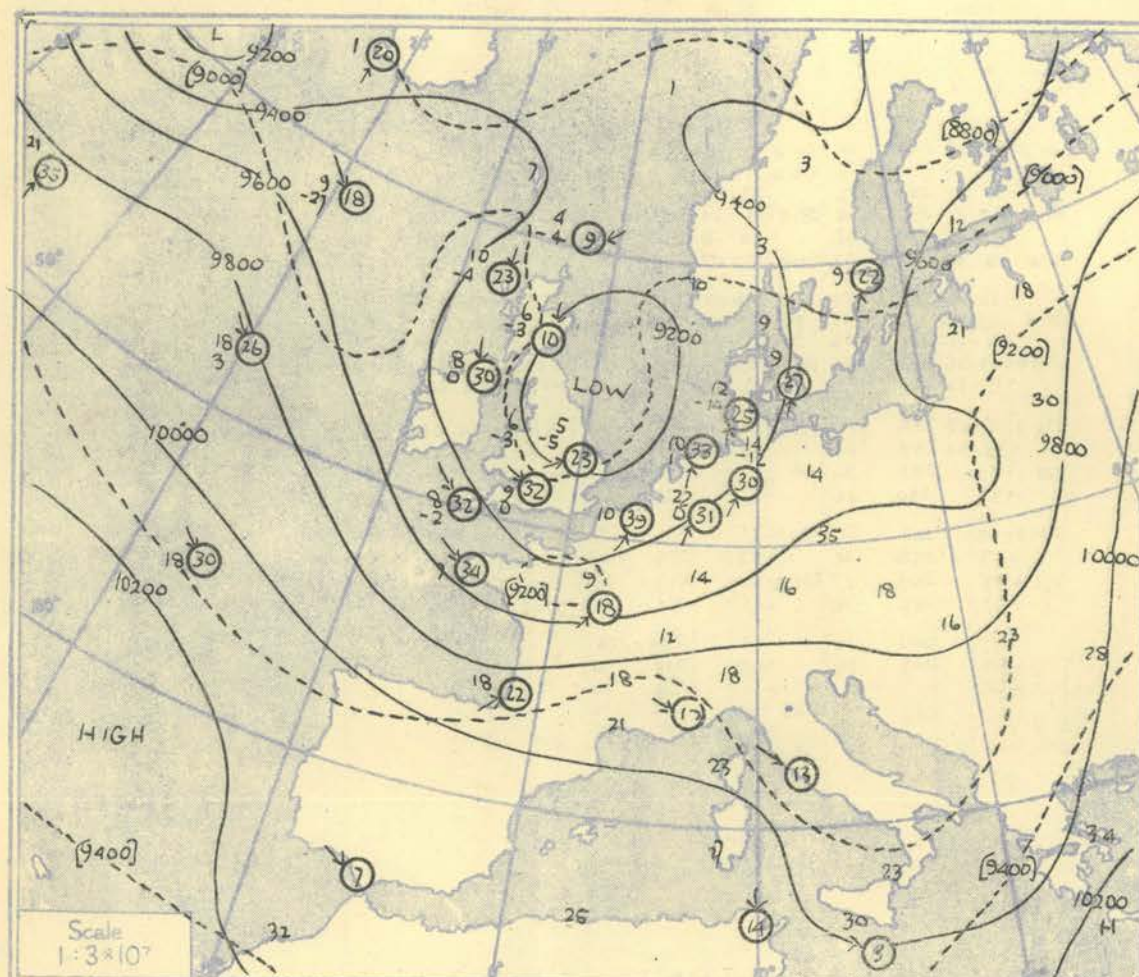


## RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

[illegible]



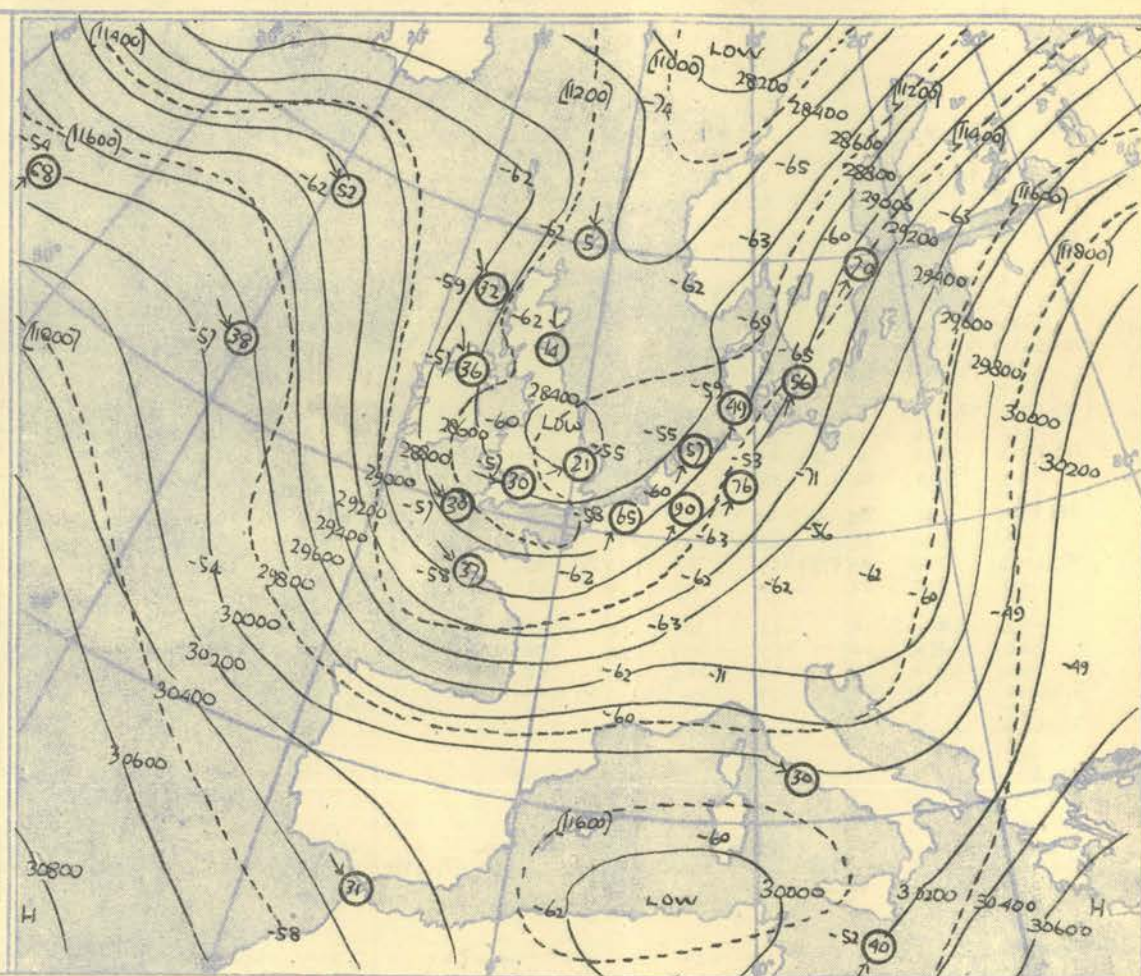
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



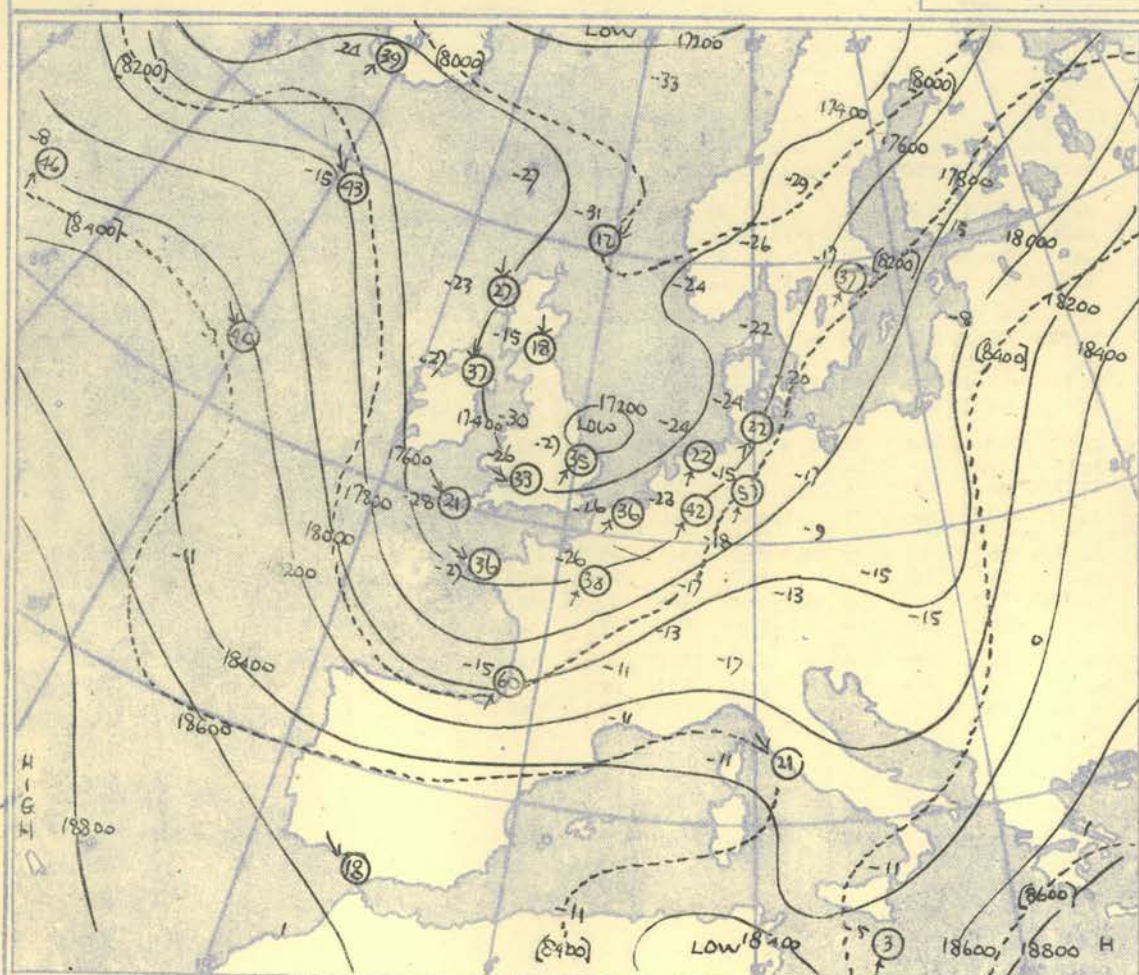
The continuous lines are contour lines of the 700 mb. surface  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

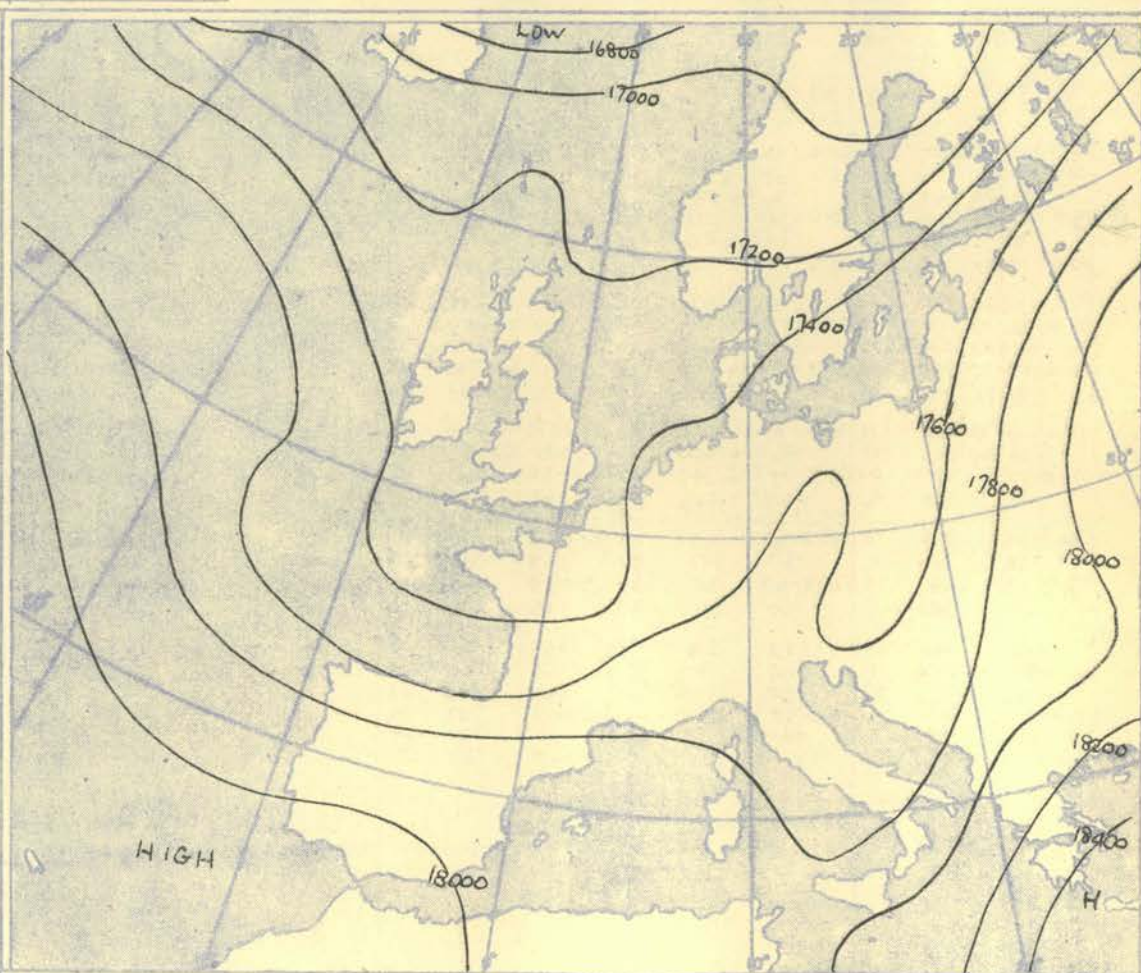
100 80 60 40 20 10 knots



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																	DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.																						
48.1 N 17.0 W.				47.7 N 12.3 W.				51.3 N 00.4 E.																															
Pressure (Forecasting)	Time M.S.L. Surf	13h.		15h.		15h.																										Time M.S.L. Surf Forecasting							
		1019	mb	1019	mb	1010.2	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb									
		1023	mb	1023	mb	998.8	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb									
		910	mb	905	mb	880	mb	mb	mb	mb	mb	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. °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	Height ft./100	Temp. °F	Dew °F	Pressure mb								
Surf		47.46	01.0	47	03.1	46.36																								Surf									
1000	6.0	44.43	06.0	45	02.8																									1000									
950		37.27		38																										950									
900		30	34.0	31	30.9	33																								900									
850		31		25		27																								850									
800		28	64.5	22	61.5	21																								800									
750		27		17		15																								750									
700	94.4	22	98.5	17	95.3	06																								700									
650		17		15		02																								650									
600		09	13.7	09	133.0	09																								600									
550		02		00		19																								550									
500	183.5	07	18.2	09	175.8	29																								500									
450						40																								450									
400	Surface		Surface		225.8	49																								400									
350	Wind W'y 7-11 kts		Wind W'y 7-11 kts		-53																									350									
300	Cloud		Cloud																											300									
250	3/8 Sc		3/8 Sc																											250									
200	860-850 mb		940-810 mb		900-730 mb																									200									
170	2/8 Ci.NR.		Isotermal		4/8 Cu																									170									
			750-700 mb		900-600 mb																																		
	Inversion																																						
	900 mb 30°																																						
	850 " 31°																																						

11 APR 1951

OFFICE

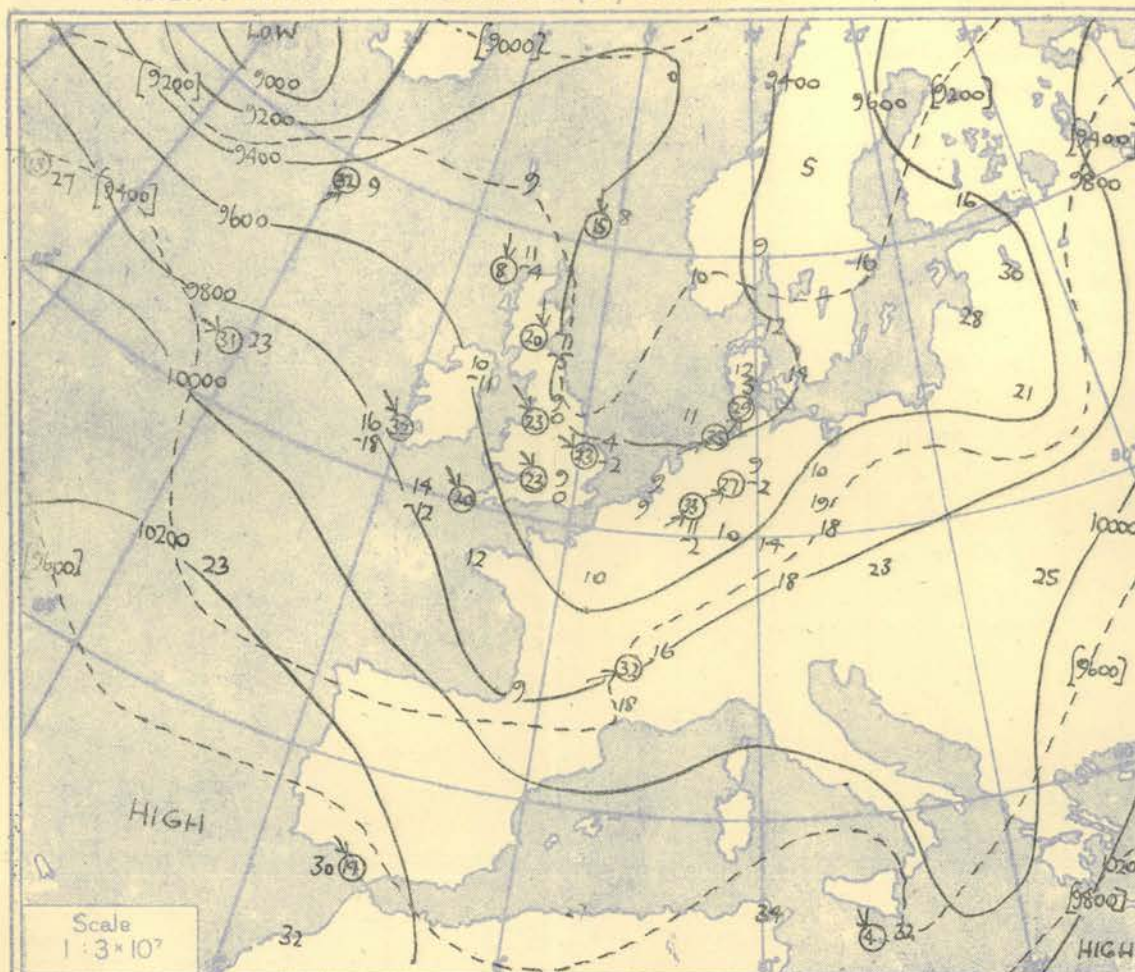
NEPHOSCOPE OBSERVATIONS																
Place																Place
Time Type																Time Type
Dir. Vel.																Dir. Vel.

## NEPHOSCOPE OBSERVATIONS

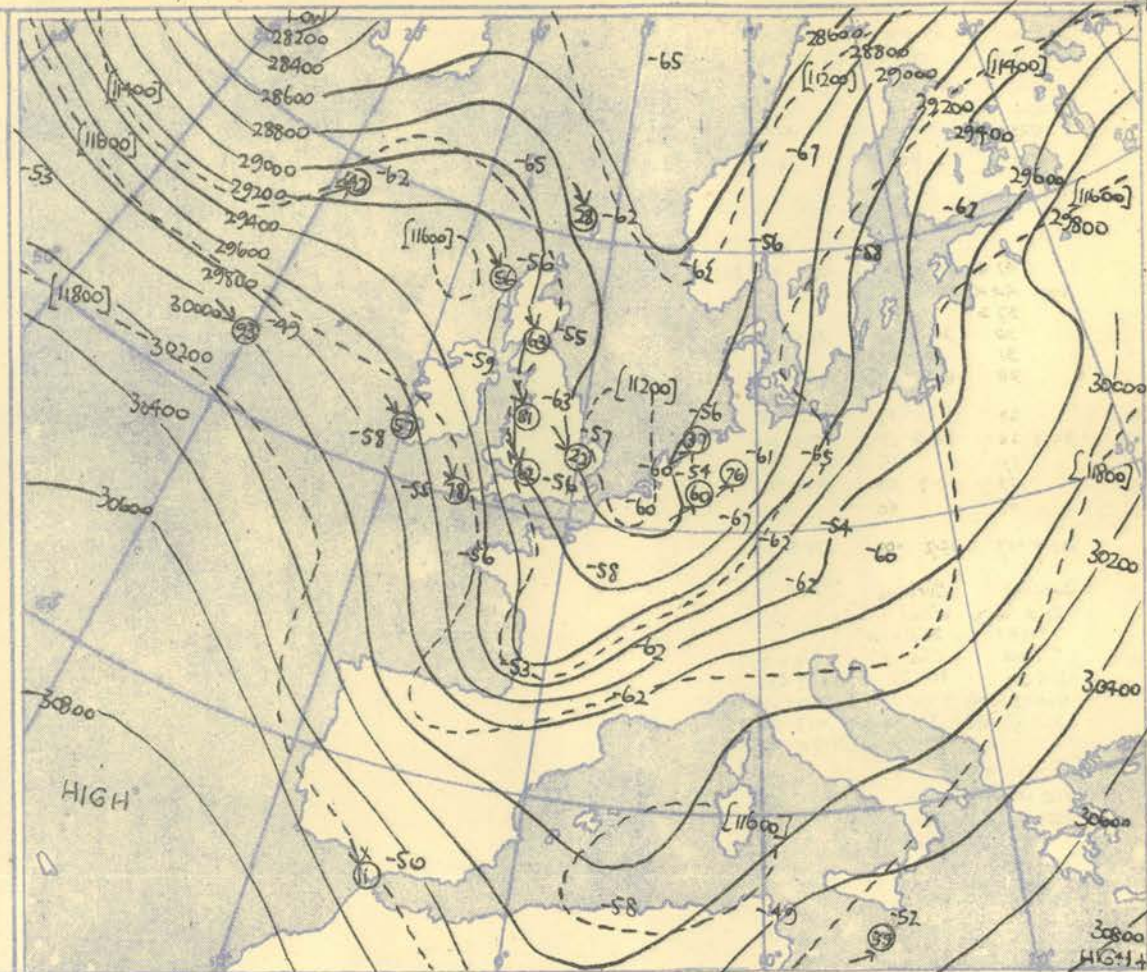
## RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.

Ship	WEATHER EXPLORER				WEATHER EXPLORER				WEATHER EXPLORER				WEATHER EXPLORER				WEATHER EXPLORER				WEATHER EXPLORER				WEATHER EXPLORER				Ship							
Lat/Long	52.4 N 19.9 W				52.4 N 19.9 W				52.4 N 19.3 W				52.5 N 19.6 W				52.1 N 19.2 W				52.0 N 19.1 W				52.1 N 19.0 W				Lat/Long							
Pressure (Freezing)	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.	Time		
	M.S.L.	1021			mb	1021			mb	1020			mb	1016			mb	1016			mb	1014			mb	1008			mb	999			mb	M.S.L.		
	Surf	1021			mb	1021			mb	1020			mb	1016			mb	1016			mb	1014			mb	1008			mb	999			mb	Surf		
	Freezing	910			mb	920			mb	910			mb	850			mb	955			mb	940			mb	930			mb	920			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	45	43	320	20	45	31	235	10	46	34	230	21	44	46	42	230	16	43	320	15	40	28	210	07	40	38	220	22	43	38	240	18	Surf			
1000	5.6	43	40	313	21.5	43	41	275	10.5	44	30	239	21	44	46	42	230	16.4	43	38	32	312	15	43	39	28	245	06	40	37	220	22	1000			
950		37	35	318	17	37	29	275	09	37	27	241	23	40	37	231	19	31	27	312	12	33	26	240	06	34	31	197	21	35	31	240	24	950		
900	33.6	30	29	324	15.3	36	29	276	09.3	32	30	25	246	24	42	36	231	26.3	32	0	24	23	309	11	31.5	28	25	232	09.3	30	29	240	31	900		
850		24	20	328	12	25	18	276	09	27	13	260	25	32	30	234	33	18	18	287	10	24	17	232	10	24	22	203	27	24	21	240	32	850		
800	64.2	26	12	336	18	64.3	29	12	277	13	63.9	32	06	267	27	63.5	27	24	260	41	62.1	12	08	274	07	61.9	24	01	238	12	60.5	17	200	27.5	800	
750		23	01	329	24	27	05	278	23	27	06	268	30	21	19	275	42	12	15	290	12	21	02	258	15	44	12	200	28	5	10	240	28	750		
700	98.5	18	03	317	26	98.9	23	01	283	28	98.6	23	00	267	31	97.9	20	08	275	37	95.6	07	27	302	18	96.1	16	11	269	15	94.3	09	07	201	32.9	700
650		17	05	309	31	15	02	285	31	18	09	267	33	14	23	279	39	05	19	306	27	05	19	306	27	05	19	306	27	05	19	306	27	650		
600	137.6	11	03	305	34	137.9	07	07	285	33	137.8	09	24	268	39	133.7	03	12	305	27	134.8	05	02	278	21	132.4	00	03	215	30	130.0	03	13	240	30	600
550		01	06	302	35	02	12	282	33	03	41	276	43	01	38	268	41	08	16	310	39	00	04	286	30	09	12	226	30	11	22	240	28	550		
500	182.4	07	40	301	40	182.7	07	25	284	36	182.7	06	60	291	51	181.3	21	44	278	47	177.6	15	23	311	43	179.4	09	46	273	28	176.2	18	21	216	34	500
450		16	34	305	37	18	35	281	41	16	57	302	66	21	52	282	52	22	30	306	43	19	24	260	32	28	32	202	36	26	37	245	40	450		
400	235.1	27	38	307	38	235.2	30	46	269	44	235.5	27	59	294	66	233.5	31	58	284	60	229.7	33	39	276	44	231.8	30	34	252	45	227.5	38	43	202	37	400
350		42		303	35		42	271	49		38	58	279	76		41	283	79		46			295	47		43		248	48		50	206	42		350	
300	299.1	57		298	38	299.2	55	278	69	300.1	49		278	93	297.5	55	275	84	292.9	62	297		52	295.5	58	253	62	290.2	62	205	42	281.9	58	263	44	300
250		73		290	40		70	281	91		67	278	104		67	277	82		76		276	57		68	257	47		59	246	38		56	261	46	250	
200	383.1	79		297	53	383.5	80	286	69	384.8	79		278	74	380.9	89	274	78	376.1	78	294		46	380.5	66	264	41	376.7	57	269	44	375.2	55	268	40	200
170		73		305	44		78	287	77		73	278	56		81	274	50		70		288	30		65	280	36		58	270	29		57	281	37	170	
150		72		304	38		74	288	63		69	278	48		77	274	40		63		283	28		61	278	30		59	260	29		62	286	36	150	
130		71		304	30		72	292	33		67	278	36		75	274	38		68		274	38		60	276	28		59	272	32		63	267	39	130	
110		69		304	25		71				66	278	35		74	274	33				274	33		60	278	23		60	283	25		63			110	
100	(108) mb								529.0	66		278	24		522.1	76	274						527.6	61		281	18								100	
90										65		278	25		93.7	77							57		287	13									90	
80										63		278	24										58		283	24									80	
70																							57		213	30									70	
60																																				60
Inversion				Inversion				Inversion				Isothermal				Inversion				Isothermal				Inversion				Isothermal								
822 mb 24° - 800 mb 26°				860 mb 23° - 830 mb 29°				860 mb 26° - 800 mb 32°				750 - 706 mb 21°				786 mb 10° - 742 mb 13°				363 - -09° - 550 - -08°				850 mb 24° - 811 mb 25°				1008 - 1000 mb 40°								
Isothermal				Isothermal				Isothermal								Isothermal				Isothermal																
850 - 822 mb 24°				830 - 785 mb 29°				800 - 795 mb 32°								542 - 530 mb -09°				864 - 850 mb 24°																
700 - 660 "																																				
I 281 mb -78° 35,300'				I 208 mb -81° 37,800'				I 210 mb -80° 37,400'				I 195 mb -91° 38,600'				I 210 mb -81° 36,500'				I 262 mb -87° 32,400'				I 284 mb -64° 30,200'				I 290 mb -59° 29,400'								
Tropopause																																Tropopause				





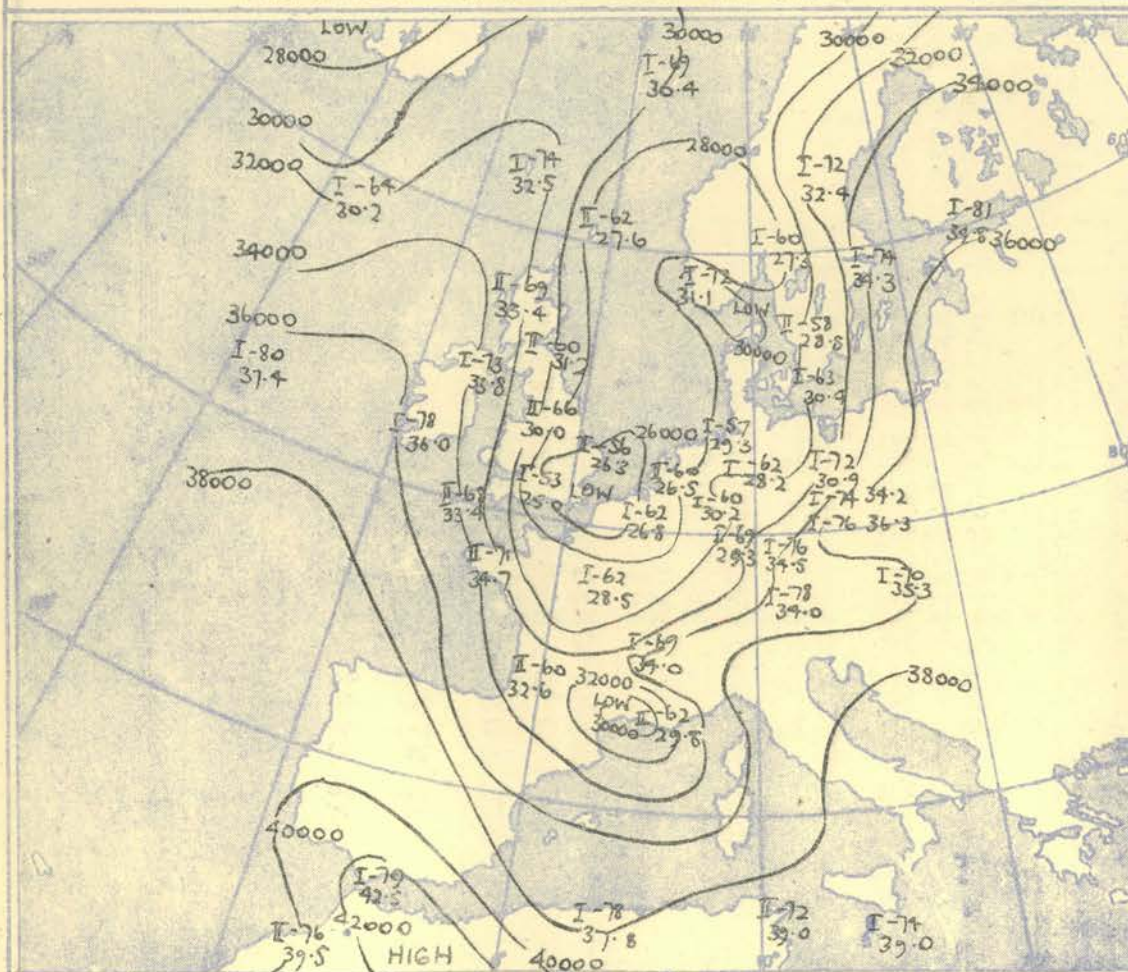
The continuous lines are contour lines of the 700 mb. surface.  
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.



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

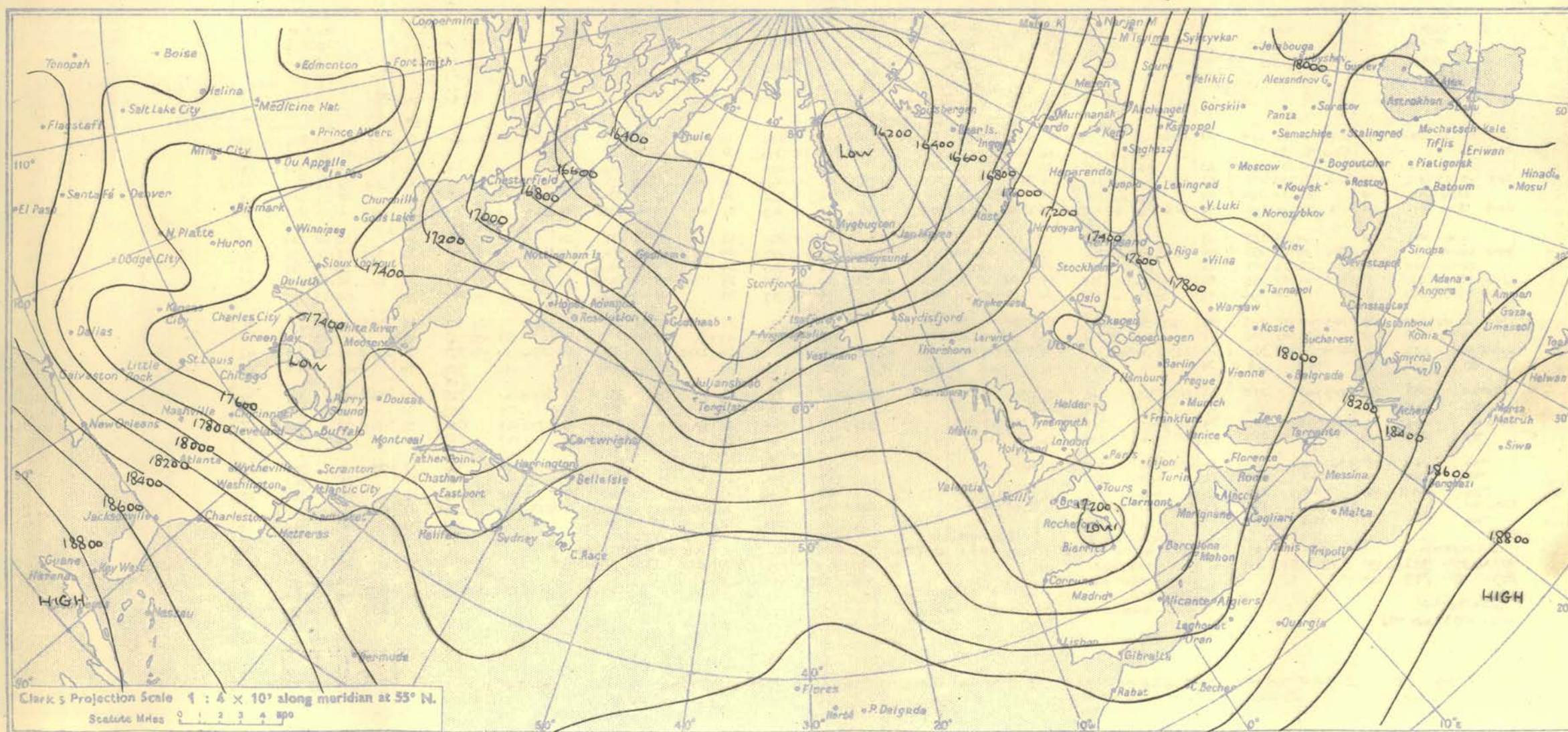


Contour lines of Height of Tropopause.  
Temperature of Tropopause.

### NOTES ON THE AEROLOGICAL SITUATION.

Some shrinking of the cold trough centred near the Greenwich meridian occurred mainly due to the advance of warm subsided air ahead of the frontal system of a slow moving depression west of Iceland.







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	ISk.	G.M.T.		Time	ISk.	G.M.T.		Time	ISk.	G.M.T.		Time	ISk.	G.M.T.		Time	ISk.	G.M.T.		Time	ISk.	G.M.T.		Time	ISk.	G.M.T.		Time	ISk.	G.M.T.		Time				
	M.S.L.	1008.1	mb		M.S.L.	1010.3	mb		M.S.L.	1008.0	mb		M.S.L.	1011.6	mb		M.S.L.	1010.2	mb		M.S.L.	1007.9	mb		M.S.L.	1009.7	mb		M.S.L.	1014.9	mb		M.S.L.				
	Surf	998.1	mb		Surf	1008.7	mb		Surf	1007.2	mb		Surf	1001.9	mb		Surf	1008.2	mb		Surf	1003.4	mb		Surf	993.7	mb		Surf	1004.3	mb		Surf				
Freezing	923	mb		Freezing	900	mb		Freezing	900	mb		Freezing	893	mb		Freezing	911	mb		Freezing	883	mb		Freezing	882	mb		Freezing	837	mb		Freezing					
Height ft./100	Temp.	Temp.	Wind	Height ft./100	Temp.	Temp.	Wind	Height ft./100	Temp.	Temp.	Wind	Height ft./100	Temp.	Temp.	Wind	Height ft./100	Temp.	Temp.	Wind	Height ft./100	Temp.	Temp.	Wind	Height ft./100	Temp.	Temp.	Wind	Height ft./100	Temp.	Temp.	Wind	Height ft./100					
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.				
Surf	02.7	42	36	030	16	00.4	47	41	040	08	00.2	48	32	350	14	02.6	47	36	00.6	48	39	230	08	01.2	47	38	290	08	04.4	49	35	300	18				
1000	02.2	36	29	026	18	02.7	46	41	037	11	02.2	46	31	350	14	03.1	46	39	02.8	46	39	283	12	02.2	46	37	290	08	02.7	49	35	300	18				
950	30.0	29	22	030	13	30.8	38	31	039	09	30.3	39	25	353	14	31.3	40	27	30.8	38	31	283	21	30.4	41	24	299	16	30.9	43	31	299	23				
900	23.16	23	16	026	15	23.8	30	25	027	07	23.7	31	20	353	14	24.1	32	23	23.8	30	25	353	21	23.4	35	26	303	18	23.9	35	26	303	21				
850	60.3	17	09	015	15	61.4	22	14	008	07	60.7	18	12	360	16	61.9	20	15	61.2	19	10	323	21	61.0	20	12	306	20	61.6	22	15	313	21				
800																																					
750	13	03	005	14	16	07	002	08	13	04	356	18	17	02					11	03	322	20	12	04	299	19	15	09	319	21	20	03	313	20			
700	93.9	08	05	005	15	95.3	11	04	352	08	94.7	07	05	356	20	95.8	10	11	94.9	09	00	322	23	94.6	04	02	291	23	95.4	09	00	319	23				
650	01.16	01	16	011	14	05	13	354	10	00	15	357	24	05	21				02	09	331	25	03	07	289	22	03	14	320	26	06	20	316	23			
600	131.8	06	15	011	12	133.5	03	24	346	14	132.2	07	24	357	26	133.9	04	31	132.8	07	20	334	28	132.2	09	19	289	21	133.5	04	18	319	30				
550	15	41	005	12	11	34	386	15	15	35	358	26	12	39				16	31	338	32	18	30	295	20	14	29	322	34	11	38	322	32				
500	175.0	26	53	007	15	177.1	20	42	338	16	175.4	23	46	351	31	177.4	22	50	176.0	27	41	337	37	175.1	28	40	313	18	176.7	23	40	318	41				
450	35	58	005	19	35	45	337	35	35	45	337	35	35	45	337	35	35	45	35	35	45	337	35	35	45	337	35	35	45	337	35	35	45	337	35		
400	225.4	48	359	19	228.8	33	51	334	43	226.3	43	348	53	229.2	34	56			226.1	47	337	48	225.1	49	323	18	227.4	45	329	44	231.4	28	56	340	74		
350	59	354	27	42	333	46	47	346	69	47	346	69	47	346	69	47	346	69	47	346	69	47	346	69	47	346	69	47	346	69	47	346	69	47	346	69	
300	287.2	62	347	28	292.7	56	323	56	289.5	55	340	63	292.5	59	340	63	292.5	59	288.3	63	343	81	287.3	56	322	28	290.0	56	335	62	295.6	55	340	78	296.6	58	
250	61	331	20	68	319	48	319	48	60	347	53	60	347	53	60	347	53	60	60	347	53	60	347	53	60	347	53	60	347	53	60	347	53	60	347	53	
200	373.5	58	306	14	378.1	61	313	30	376.3	57	315	26	377.1	62	315	26	377.1	62	373.5	64	329	37	374.7	57	315	22	376.8	59	321	33	380.9	67	332	52	380.8	75	
170	58	290	13	58	304	20	56	319	21	56	319	21	56	319	21	56	319	21	64	314	24	54	291	17	61	315	28	63	330	36	76	308	44	76	308	44	
150	58	263	14	439.7	59	288	20	438.3	55	303	18	438.0	62	303	18	438.0	62	65	65	305	19	436.8	58	285	18	438.1	62	309	21	441.7	63	326	30	71	309	39	
130	57	253	14	43	284	19	43	284	19	43	284	19	43	284	19	43	284	19	62	283	18	62	283	18	62	283	18	62	283	18	62	283	18	62	283	18	
110	60	247	13	56	274	20	56	274	20	56	274	20	56	274	20	56	274	20	64	277	18	64	277	18	64	277	18	64	277	18	64	277	18	64	277	18	
100	522.1	60	247	13	526.8	56	273	15	525.3	60	266	10	Inversion	775 mb 16° - 758 mb 18°				519.9	66	299	13	523.1	61	270	09	524.1	62	308	14	527.7	64	315	20	525.0	68	300	25
90	62	245	14	56	249	14	56	249	14	56	249	14	56	249	14	56	249	14	67	285	12	67	285	12	67	285	12	67	285	12	67	285	12	67	285	12	
80	59	224	12	58	238	14	59	224	12	58	238	14	59	224	12	58	238	14	65	295	09	65	295	09	65	295	09	65	295	09	65	295	09	65	295	09	
70	631.0	64	225	15	636.0	63	243	08	<																												

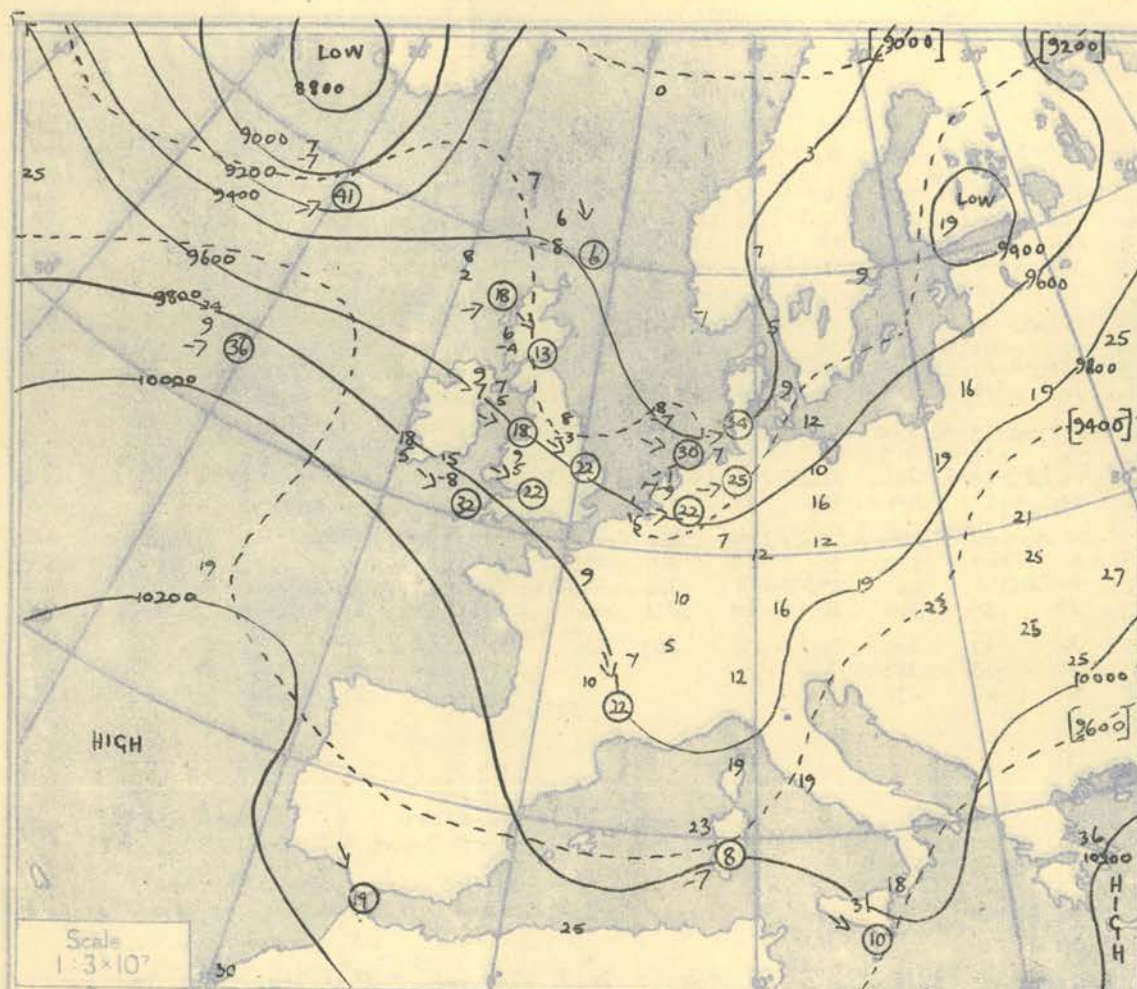


VALENTIA		STATION
021- 1019 1018	G.M.T. 1 APR 1954 mb	Time M.S.L. Sight

[illegible]



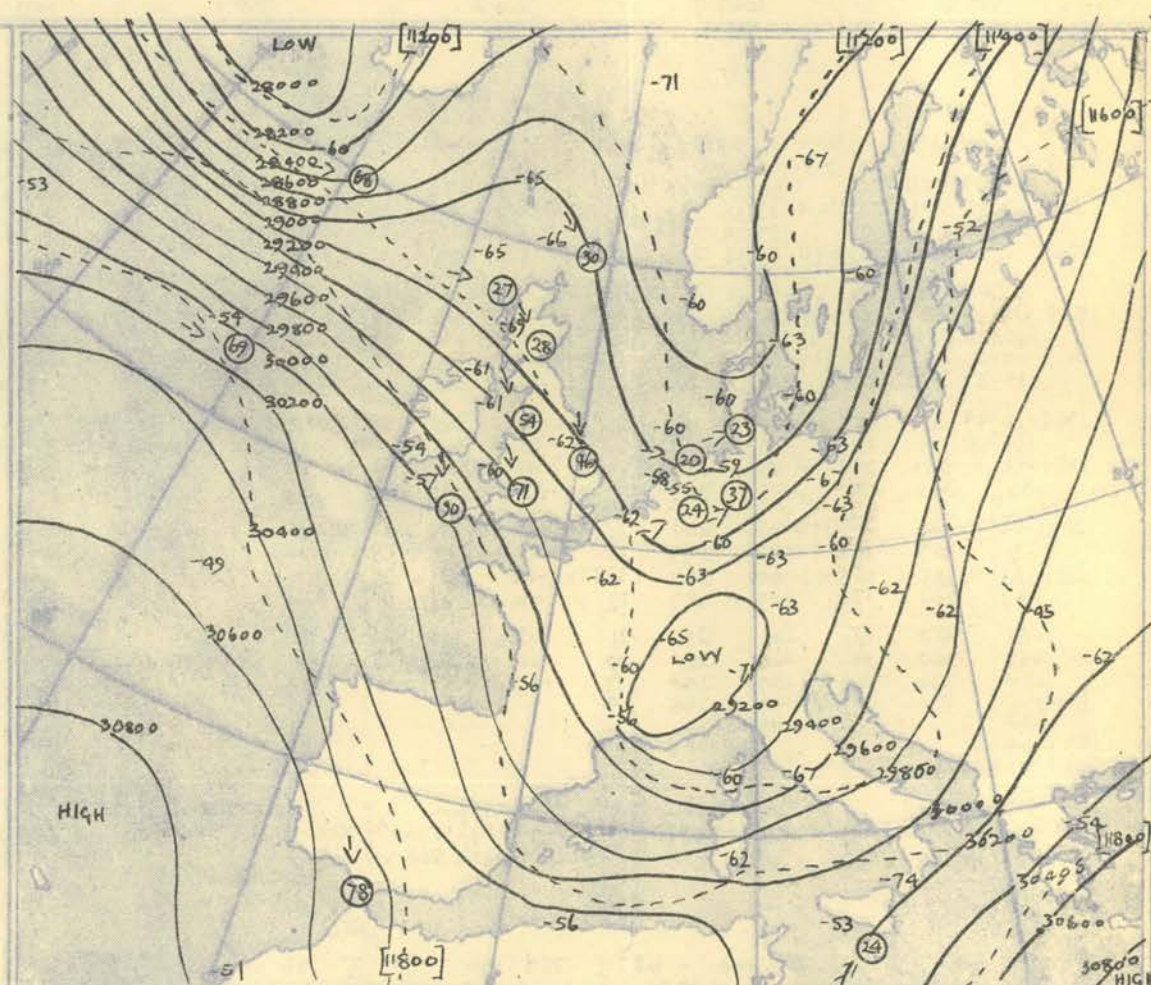
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03h G.M.T.



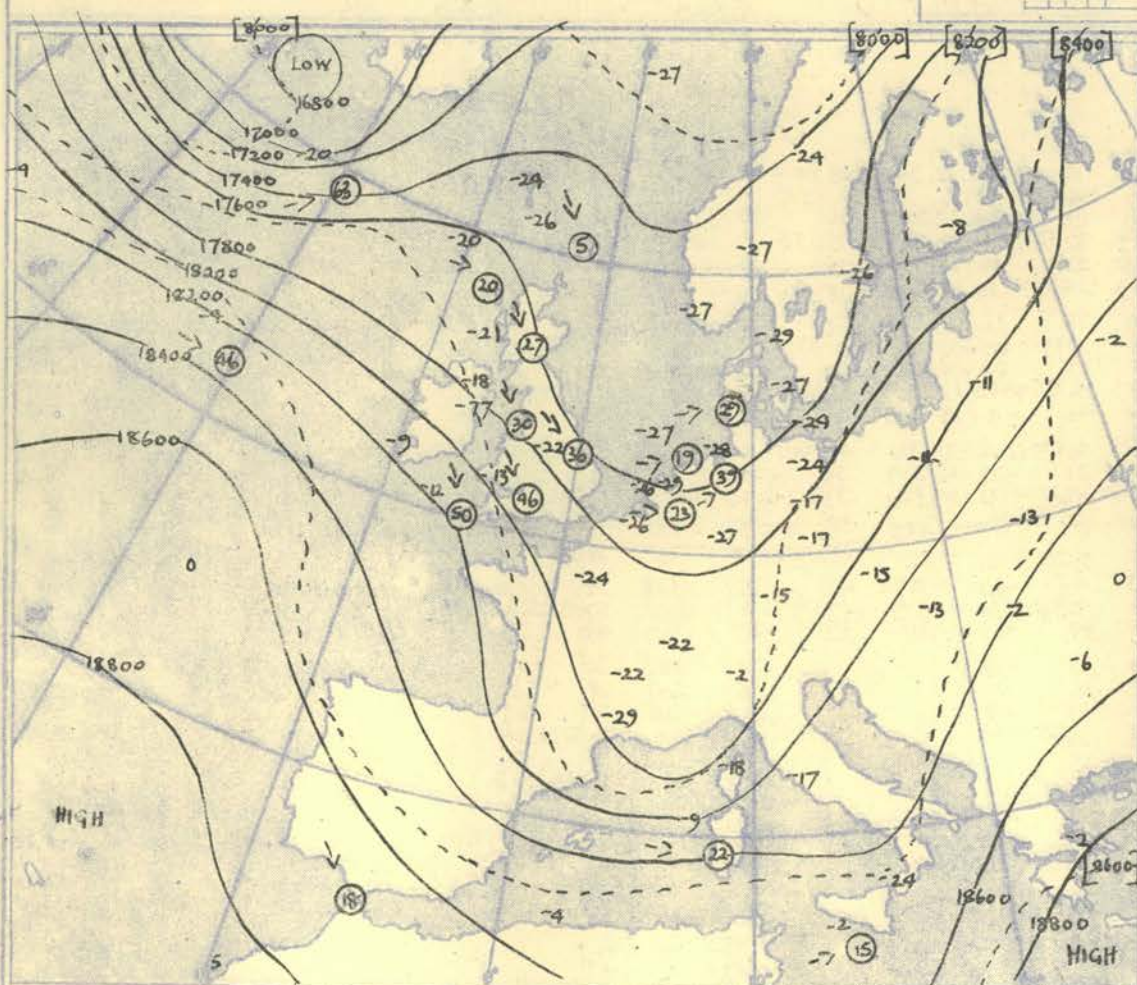
The continuous lines are contour lines of the 700 mb. surface  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

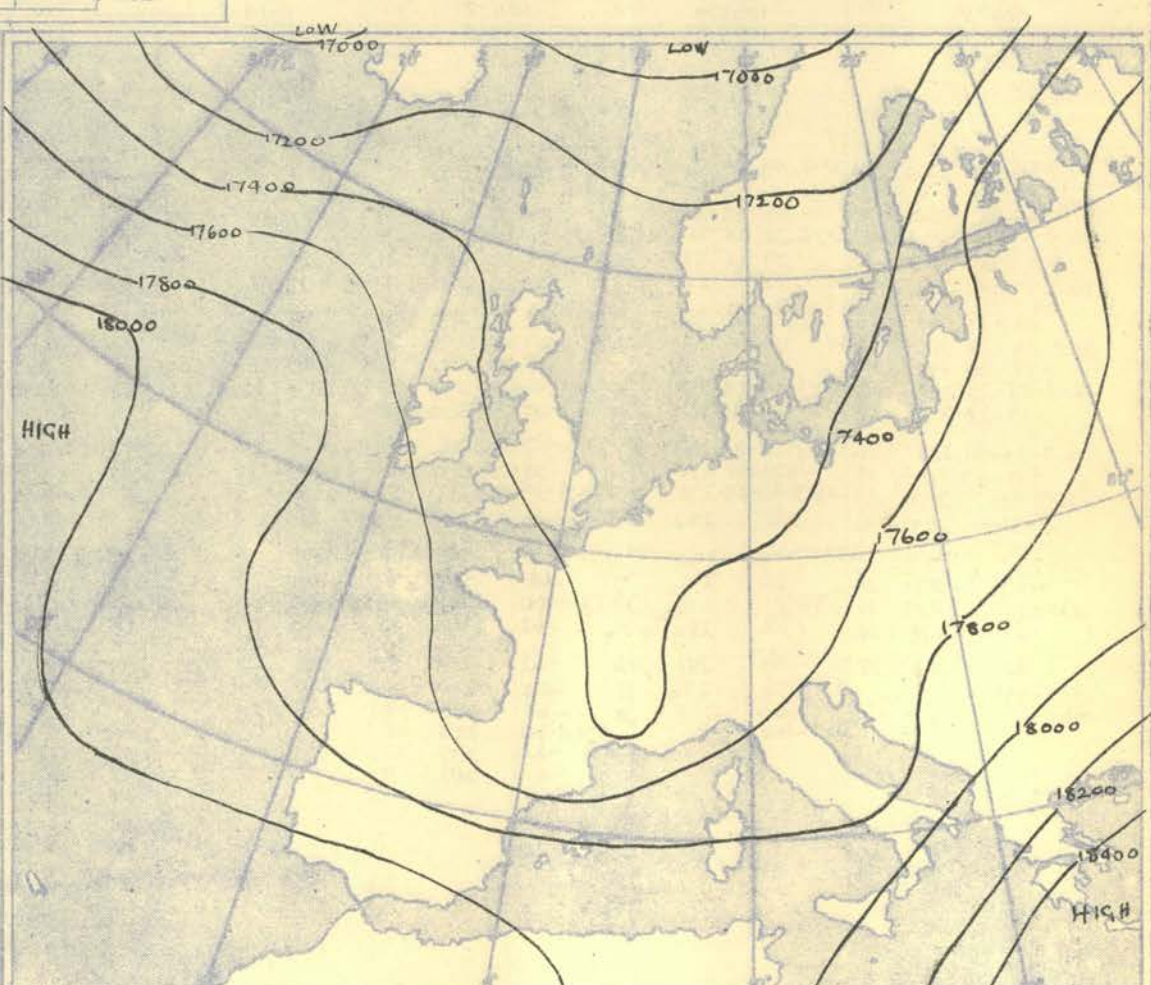
100 80 60 40 20 10 0 knots



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.

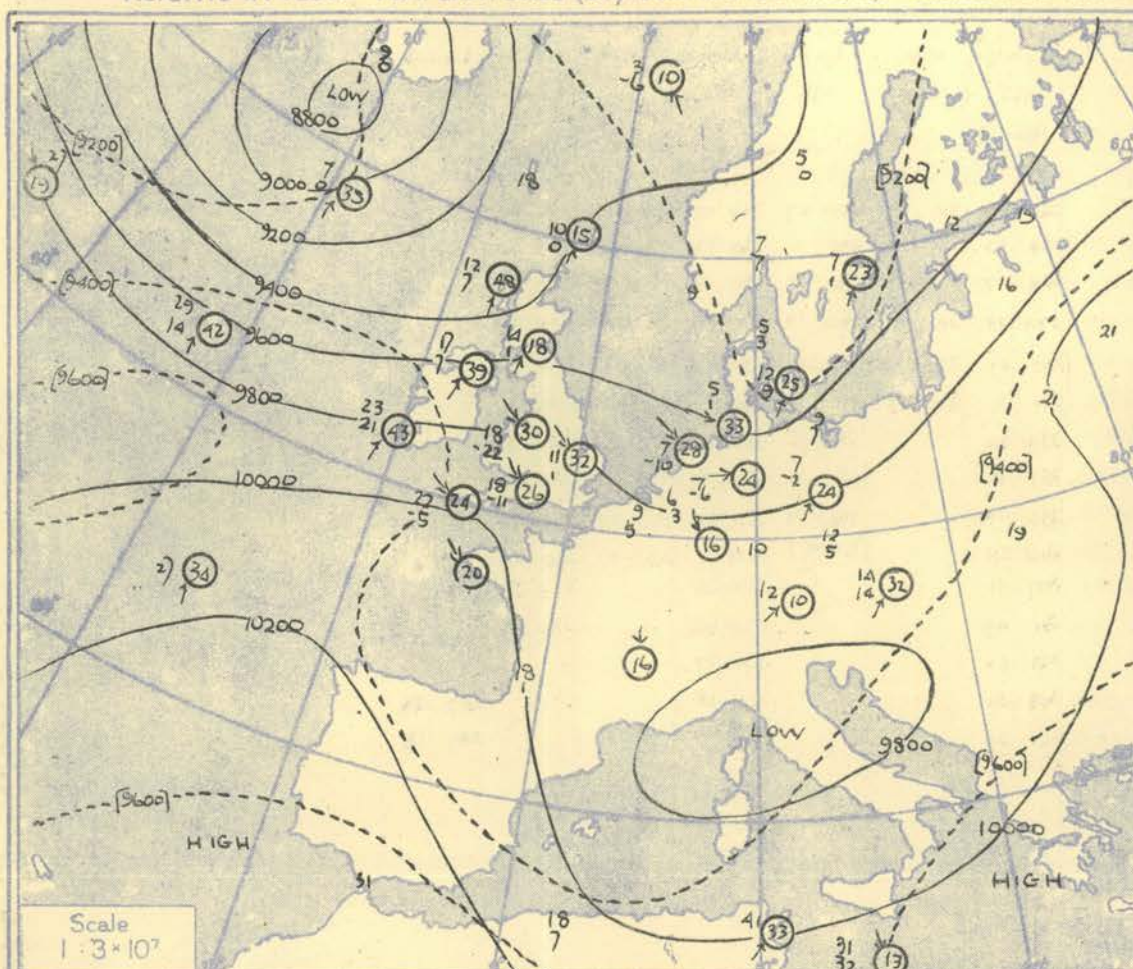


Isopleths of Thickness 500-1000mb.

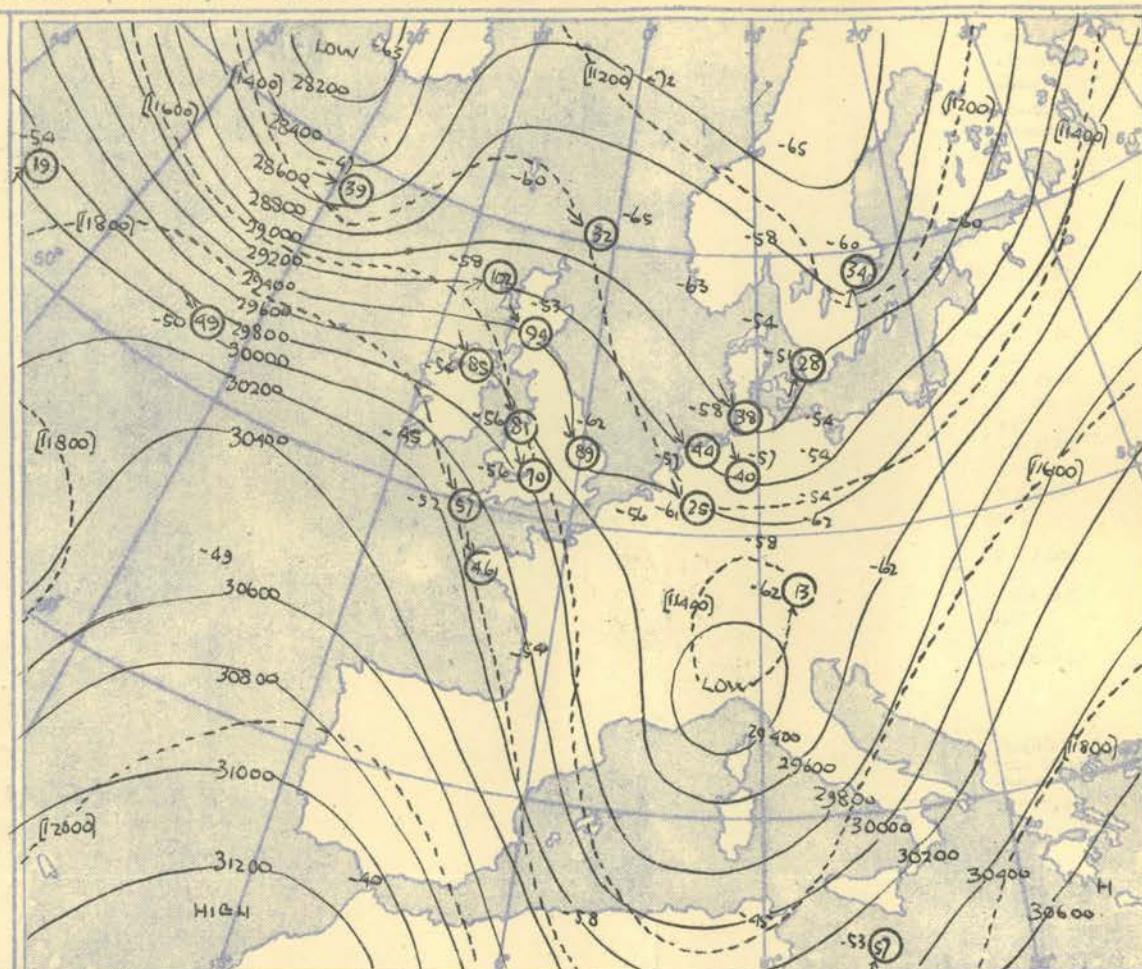


11 APR 195





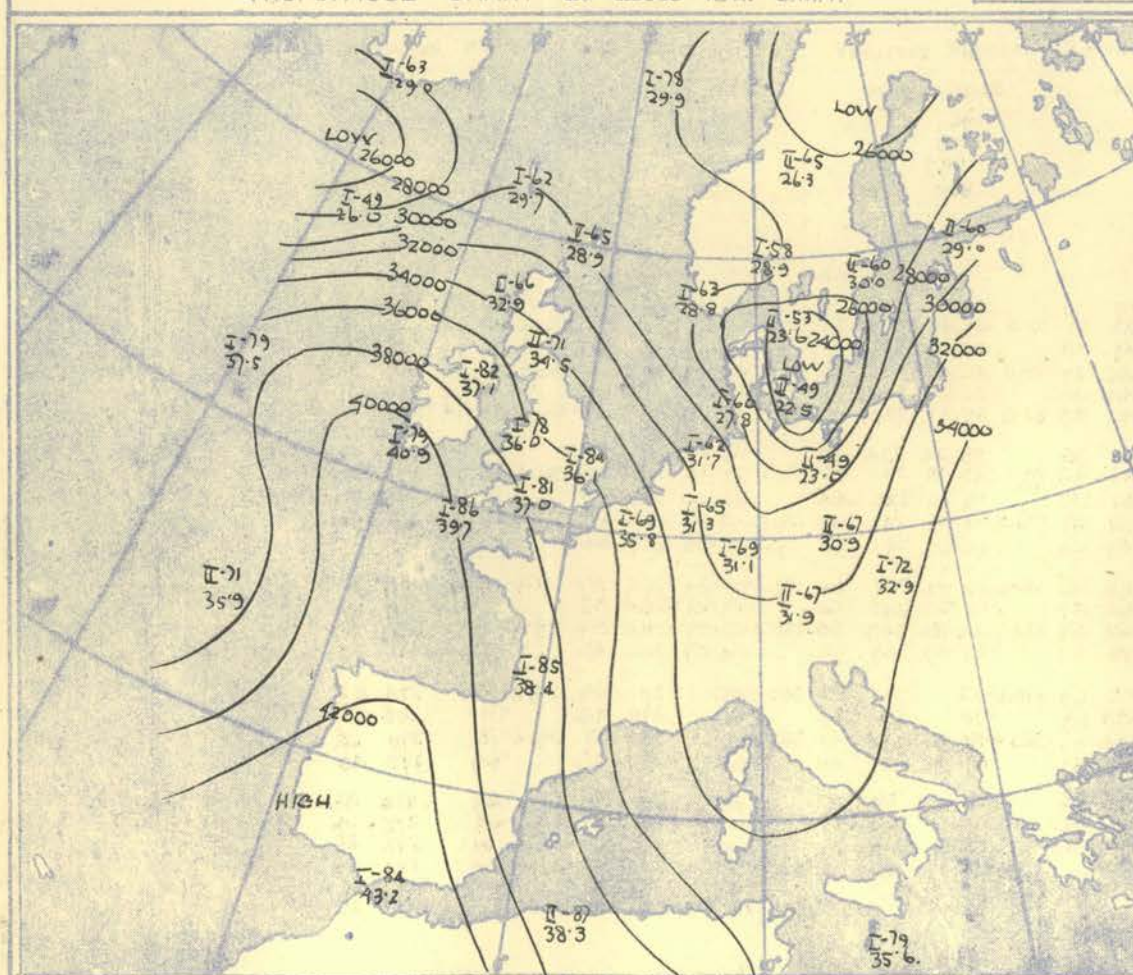
The continuous lines are contour lines of the 700 mb. surface.  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb



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

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



Contour lines of Height of Tropopause.  
Temperature of Tropopause.

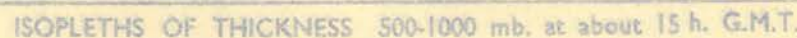
## NOTES ON THE AEROLOGICAL SITUATION.

Some warming occurred in the cold trough over Europe,  
Otherwise little 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.





1954.









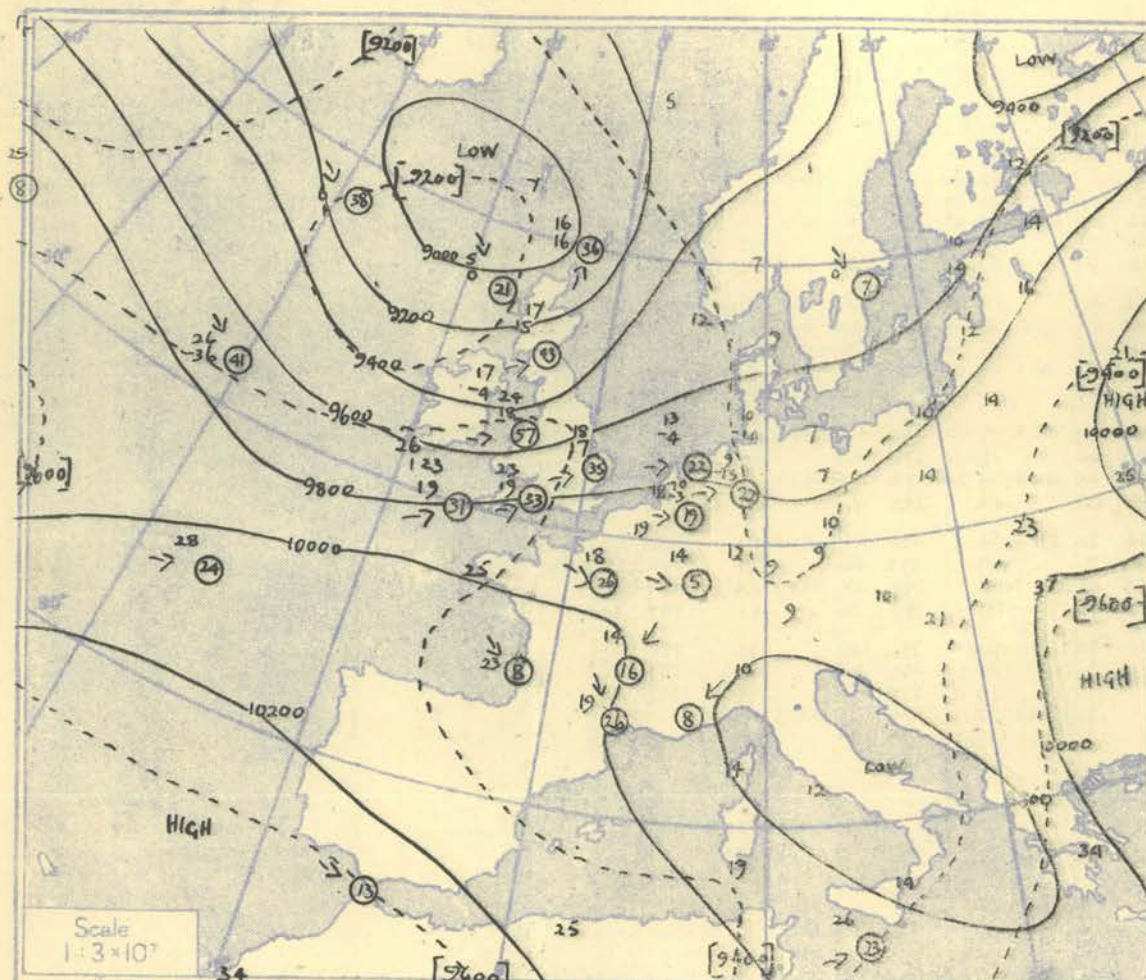
## RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

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.					
		993.3	mb			992.8	mb			993.2	mb			1000.1	mb			1003.9	mb			1012.9	mb			1014.3	mb			1014.3	mb						
		983.3	mb			991.1	mb			992.3	mb			990.4	mb			1001.9	mb			1008.4	mb			999.0	mb			1003.7	mb						
		877	mb			924	mb			841	mb			898	mb			808	mb			816	mb			850	mb			774	mb						
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			
02.7	11.8	38	38	34	30	22	16	14	09	05	01	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
41	38	34	30	27	24	22	18	16	12	10	08	06	04	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
41	38	34	30	27	24	22	18	16	14	12	10	08	06	04	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
175	165	175	179	181	182	188	196	197	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196				
25	31	41	37	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38				
00.4	01.9	35	30	24	18	12	05	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
39	35	34	29	24	18	12	05	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
38	34	30	24	18	12	07	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
270	286	286	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287				
08	01.7	27	26	24	21	18	14	12	09	07	05	03	01	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
00.2	01.7	41	36	32	27	23	17	12	05	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
44	41	40	36	32	27	23	17	12	05	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
43	40	36	32	27	23	17	12	05	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
210	214	214	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245				
25	49	56	47	37	27	17	07	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
02.6	00.0	38	32	27	22	17	12	07	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
42	38	36	32	28	24	20	16	12	08	04	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
40	36	32	28	24	20	16	12	08	04	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
250	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281				
15	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28				
02.6	00.0	42	38	34	30	26	22	18	14	10	06	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
39	35	34	30	26	22	18	14	10	06	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
35	32	28	24	20	16	12	08	04	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
250	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281				
15	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28				
00.6	01.0	42	38	34	30	26	22	18	14	10	06	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
45	41	38	34	30	26	22	18	14	10	06	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
40	36	32	28	24	20	16	12	08	04	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
210	216	224	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246				
25	51	58	51	42	32	22	12	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
01.2	03.5	40	37	33	29	25	21	17	13	09	05	01	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
43	40	37	33	29	25	21	17	13	09	05	01	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
41	37	33	29	25	21	17	13	09	05	01	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
170	225	231	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246				
20	39	42	38	34	30	26	22	18	14	10	06	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
04.4	03.8	41	39	36	32	28	24	20	16	12	08	04	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
45	43	40	36	32	28	24	20	16	12	08	04	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
47	43	40	36	32	28	24	20	16	12	08	04	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
230	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320				
25	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38				
02.9	03.8	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43				
48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48				
180	231	231	231	231	231	231	231	231	231	231	231	231	231	231	231	231	231	231	231	231	231	231	231	231	231	231	231	231	231	231	231	231	231				
18	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48				
00.3	02.5	47	42	36	31	25	19	13	07	01	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00												



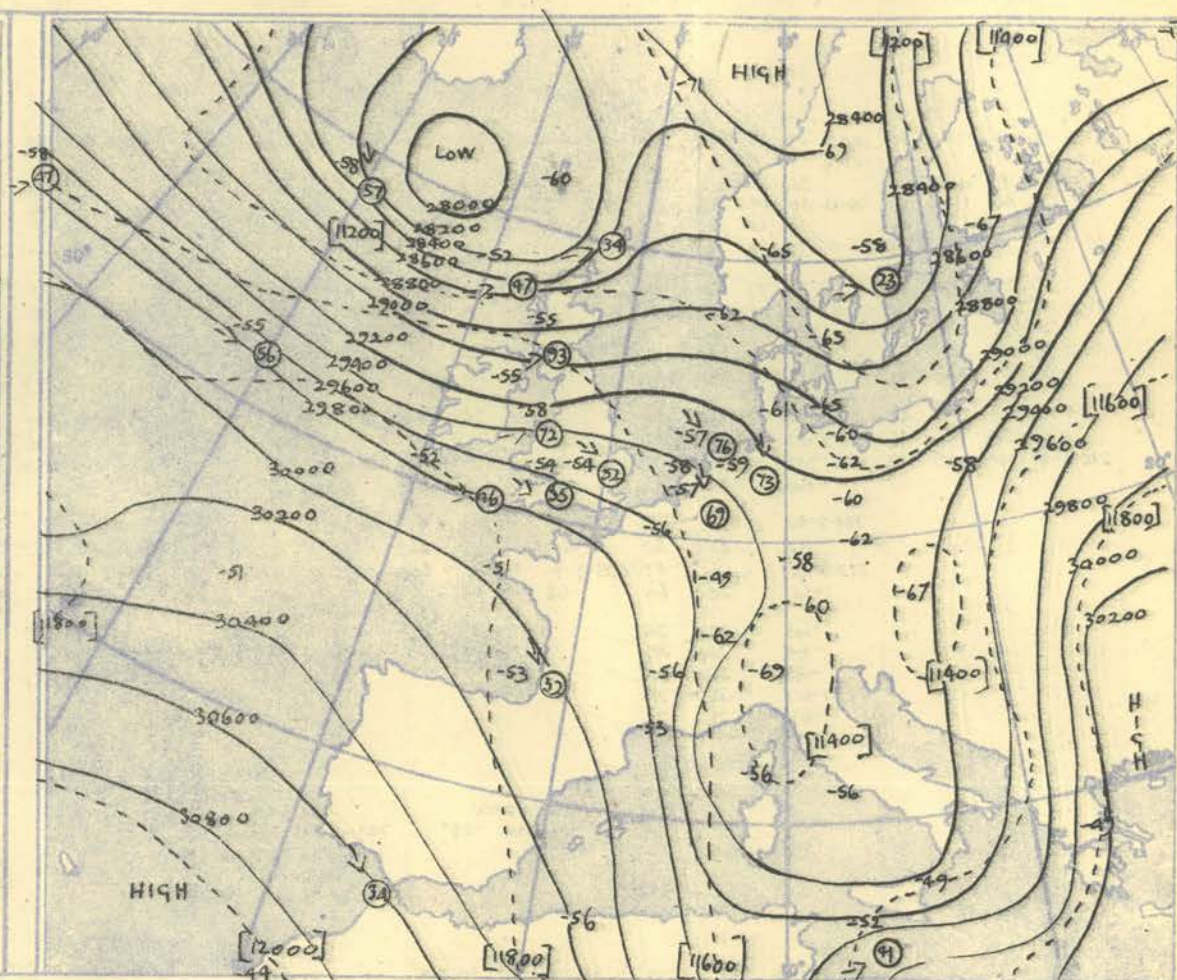
Wednesday 4<sup>th</sup> April 1951.

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.

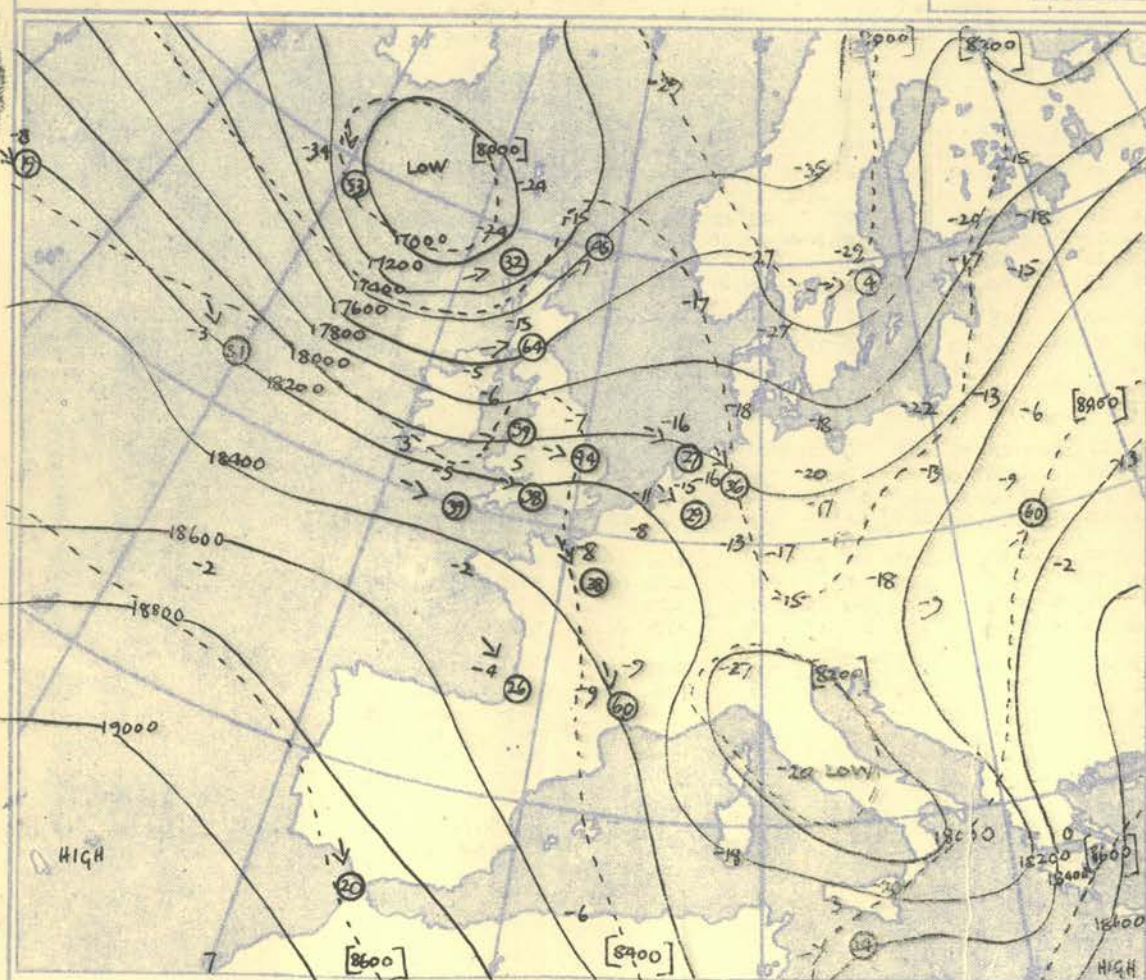


Scale  $1:3 \times 10^4$   
 The continuous lines are contour lines of the 700 mb. surface  
 The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

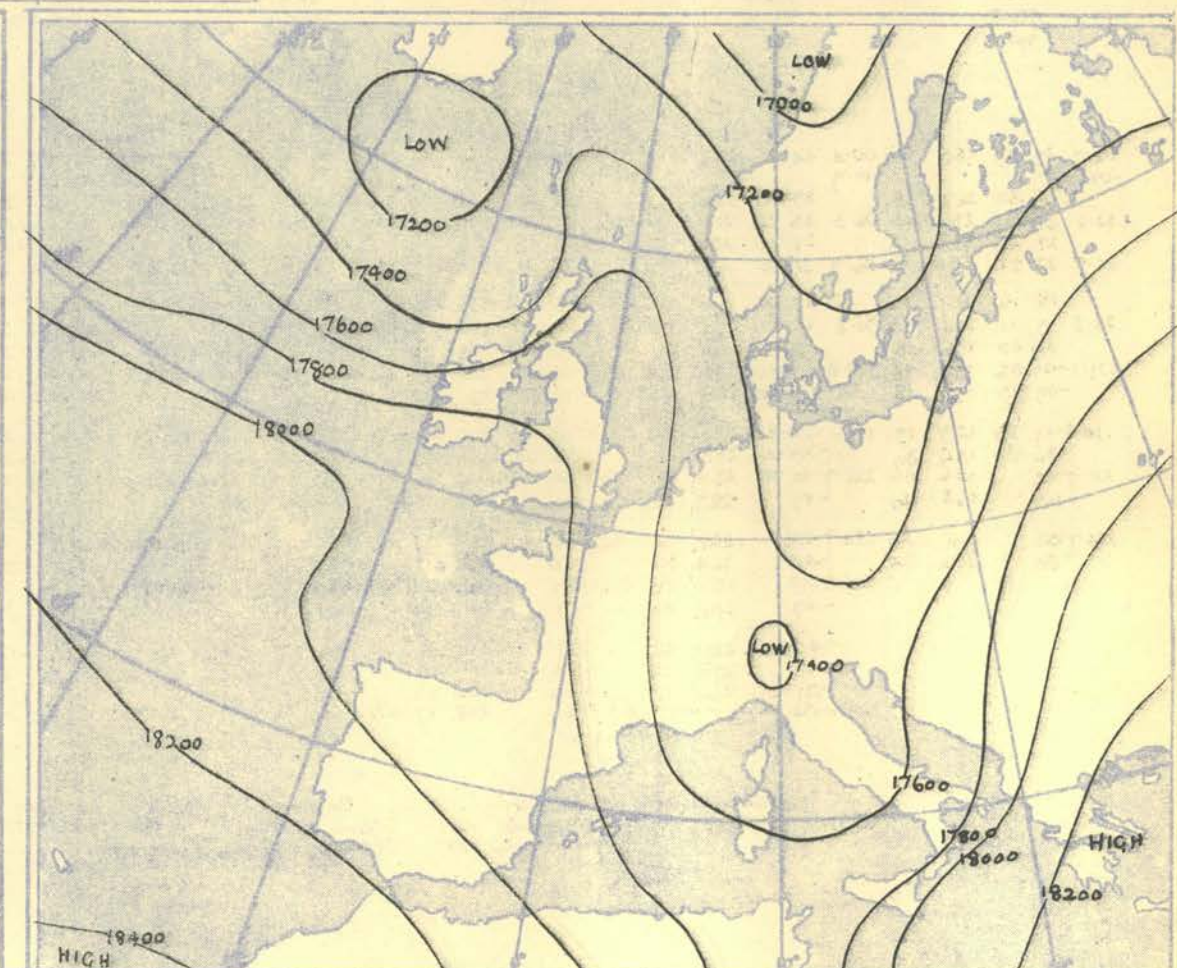
Gradient Wind Scale for Contours  
 at intervals of 200 ft. at Lat:  $52\frac{1}{2}^\circ$  N.  
 100 80 60 40 20 0 knots



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.

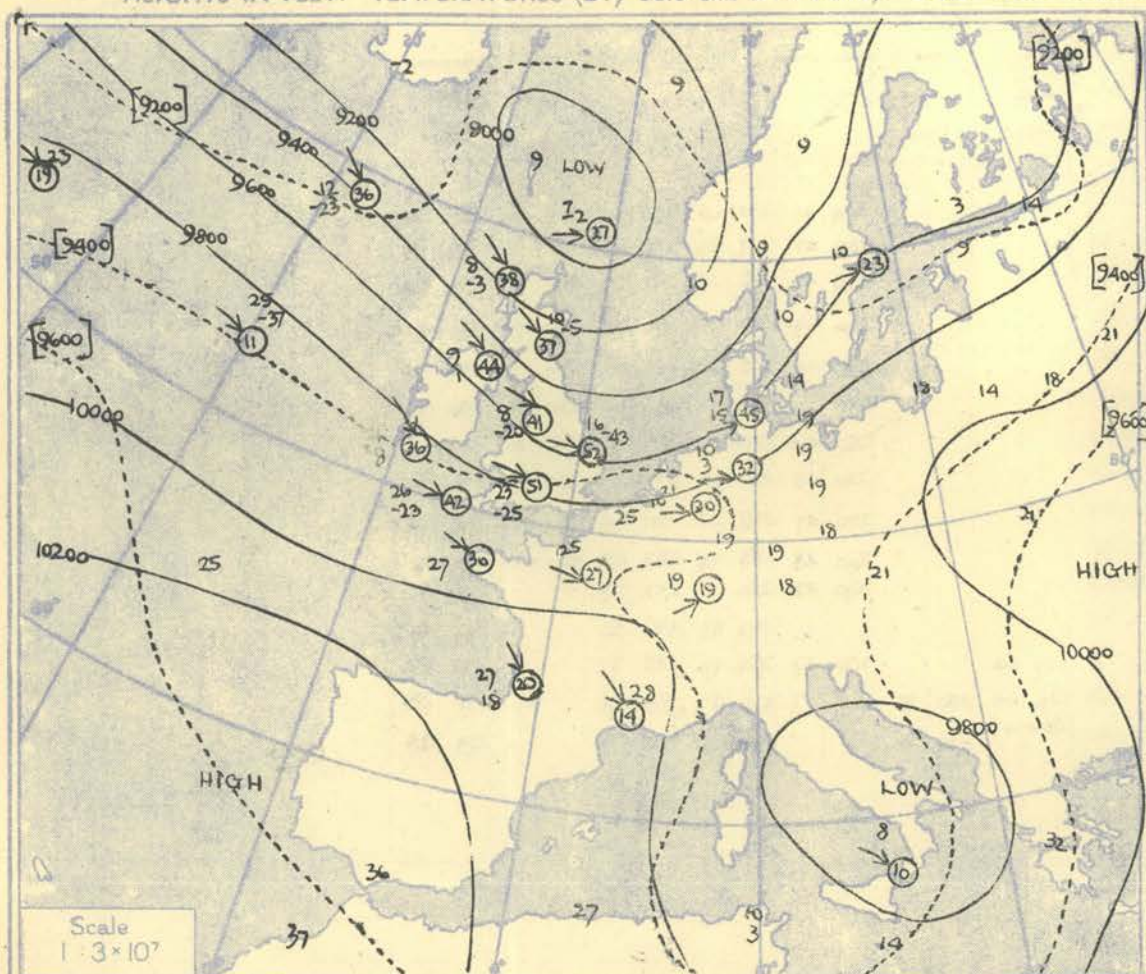


## DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

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



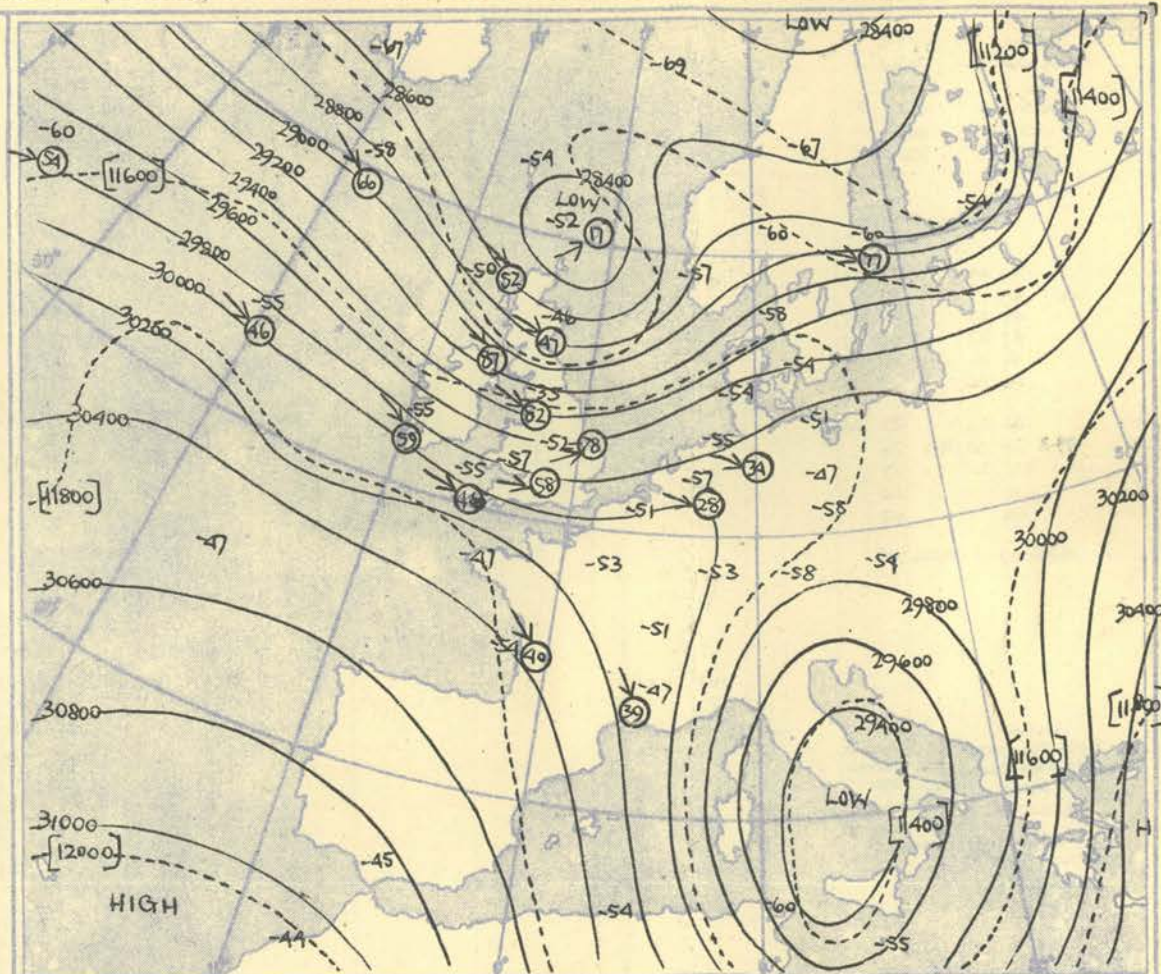
Page 4. HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h G.M.T.



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.

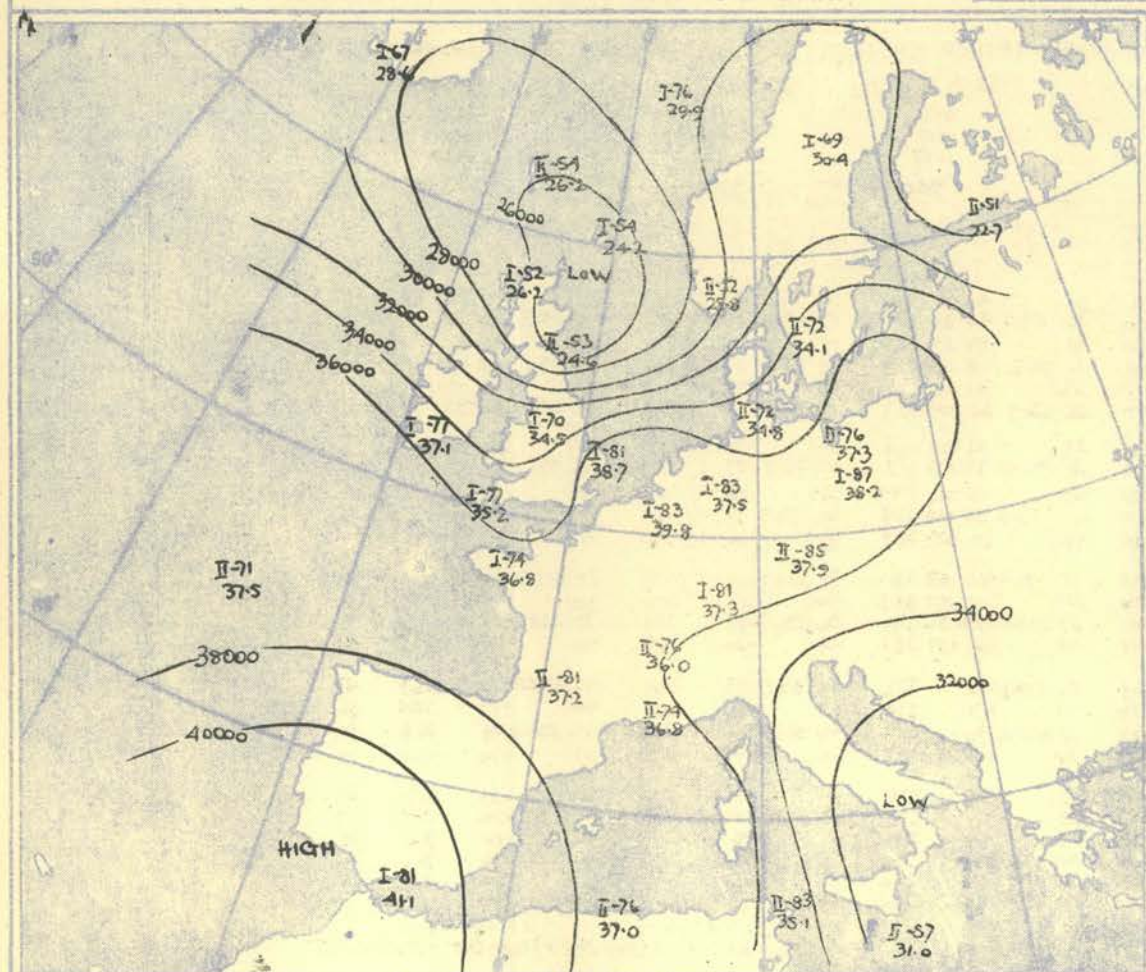
Gradient-Wind Scale for Contours  
at intervals of 200 ft. at Lat.  $52\frac{1}{2}^\circ$  N.

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 300-700 mb.

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



Contour lines of Height of Tropopause.  
Temperature of Tropopause.

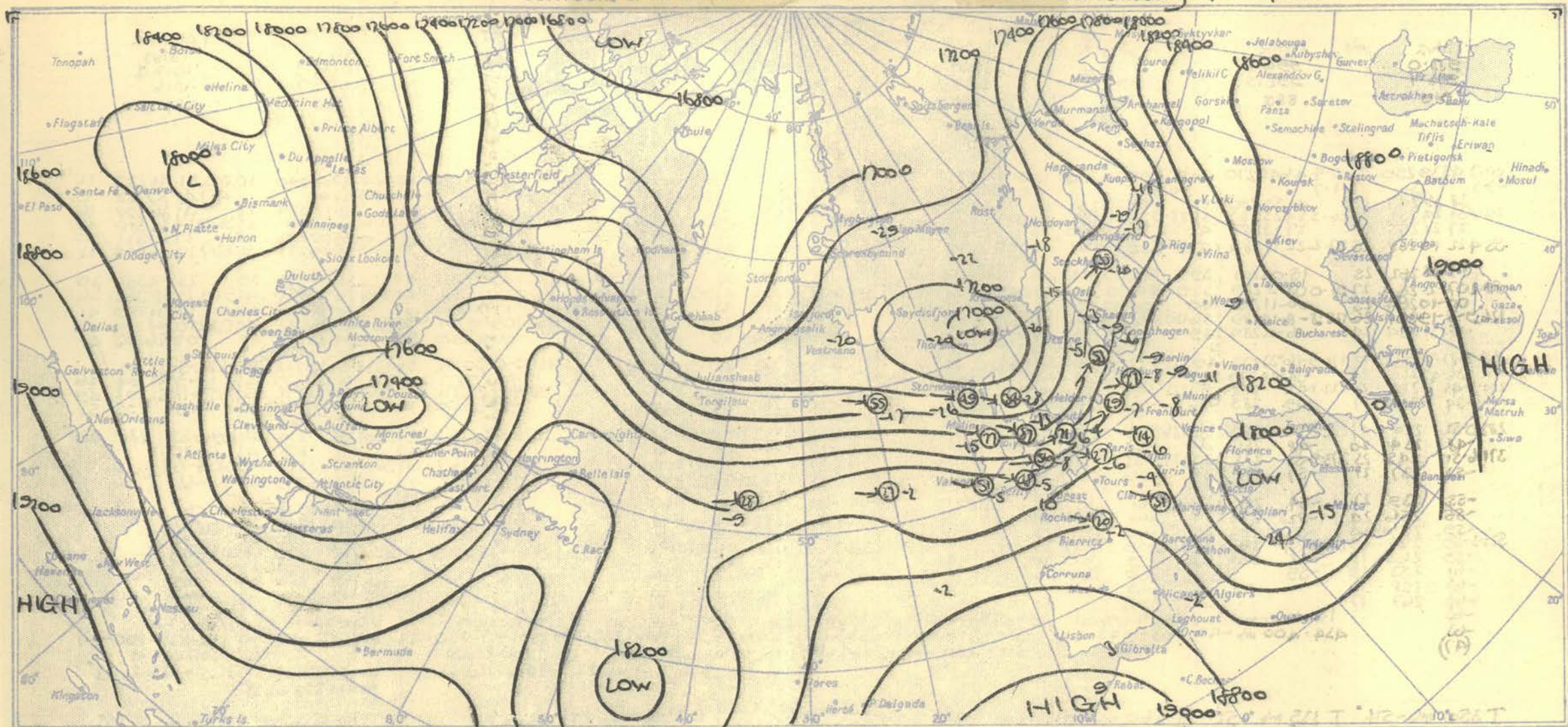
### NOTES ON THE AEROLOGICAL SITUATION.

Warming by subsidence over the Continent with the formation of a shallow cold pool over the Western Mediterranean.  
A shallow thermal trough moved east across the country in the rear of the frontal system associated with the depression north of Scotland.

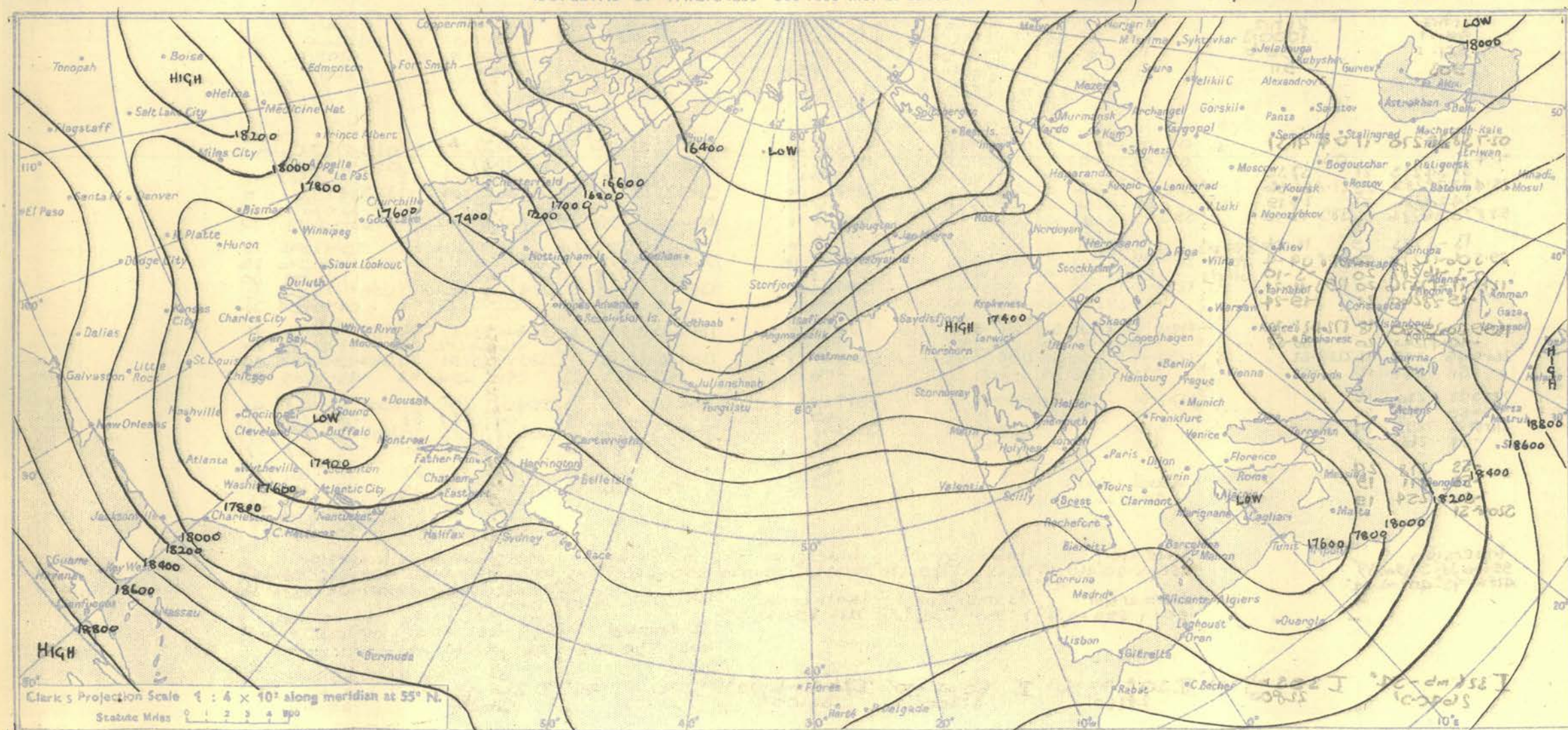
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Meteorological Office, Air Ministry, Kingsway, London, W.C.2  
NELSON K. JOHNSON, K.C.B., D.Sc., Director.





ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Wednesday 4<sup>th</sup> April.





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	G.M.T.	Time M.S.L.	Surf	Freezing	G.M.T.	Time M.S.L.	Surf	Freezing	G.M.T.	Time M.S.L.	Surf	Freezing	G.M.T.	Time M.S.L.	Surf	Freezing	G.M.T.	Time M.S.L.	Surf	Freezing	G.M.T.	Time M.S.L.	Surf	Freezing	G.M.T.	Time M.S.L.	Surf	Freezing	G.M.T.															
	15hrs	988.0	978.1	mb	15hrs	994.1	992.5	mb	15hrs	999.1	998.3	mb	15hrs	1007.8	997.6	mb	15hrs	1009.3	1007.3	mb	15hrs	1009.0	1004.3	mb	15hrs	1012.0	996.0	mb	15hrs	1016.3	1005.7	mb	15hrs	1017.4	1016	mb											
	910			mb	883			mb	897			mb	885			mb	899			mb	879			mb	875			mb	760			mb	870			mb											
Height ft./100	Temp.	Dew	Wind	Dir.	Temp.	Dew	Wind	Dir.	Temp.	Dew	Wind	Dir.	Temp.	Dew	Wind	Dir.	Temp.	Dew	Wind	Dir.	Temp.	Dew	Wind	Dir.	Temp.	Dew	Wind	Dir.	Temp.	Dew	Wind	Dir.	Temp.	Dew	Wind	Dir.											
Pressure mb	Temp.	Dew	Wind	Dir.	Temp.	Dew	Wind	Dir.	Temp.	Dew	Wind	Dir.	Temp.	Dew	Wind	Dir.	Temp.	Dew	Wind	Dir.	Temp.	Dew	Wind	Dir.	Temp.	Dew	Wind	Dir.	Temp.	Dew	Wind	Dir.	Temp.	Dew	Wind	Dir.											
Surf	02.7	453	250	21	0.4	464	270	20	0.2	493	250	13	0.6	463	250	13	0.6	503	260	18	0.2	513	33	4	4	513	36	290	20	0.2	494	4340	100.3	51	41	180	12	Surf									
1000	-3.3	38	33	247	25	-1.7	41	35	280	27	-0.3	41	35	251	20	-0.3	42	33	250	30	-0.3	43	33	24	31	-0.3	43	33	295	21	-0.4	48	39	283	13	1000											
950	24.8	31	24	252	23	26.5	34	232	25	38.2	032	28	48	303	24	48	303	24	30.7	33	21	286	39	30.8	35	24	31	-0.3	43	33	24	18	950														
900	27	21	255	27	27	18	283	42	26	23	260	48	25	24	48	25	24	48	25	25	18	292	37	28	21	28	20	293	27	35	09	293	28	22	38	034	18	900									
850	55.4	22	10	258	23	57.2	22	11	286	42	58.6	20	16	267	45	61	0	23	16	61	2	21	10	293	38	61	5	21	19	62	4	28	-7	275	39	63	7	24	-10	288	23	850					
800	17	05	262	23	15	03	281	39	15	08	274	40	16	06	See p3	13	-4	293	35	19	00	See p3	27	-17	267	43	31	-16	283	39	23	-2	308	30	750												
750	89.2	07	-2	264	27	91.0	08	-3	289	38	92.4	10	-5	278	37	94.9	09	01	for	94	90	8	-26	286	41	95	5	16	-43	for	97	0	23	-25	276	42	96	1	21	-8	305	36	700				
700	00	-10	264	23	00	-11	285	40	00	-13	273	33	-2	-7	Winds	01	-23	290	43	13	-46	Winds	17	-31	270	54	20	-24	278	43	17	-11	295	41	650												
650	126	5	-8	192	24	128	8	-8	152	36	130	3	-7	248	28	130	7	-29	132	8	-6	-27	288	49	134	3	09	49	54	138	0	13	-23	281	43	137	2	10	-18	294	46	600					
600	-18	-31	254	24	-16	-24	284	39	-17	-32	273	26	-14	-35	26	-12	-35	286	60	02	-54	02	-54	60	02	-54	55	04	-43	278	48	02	-26	293	48	550											
550	16	59	-7	233	18	171	9	-26	33	275	49	175	3	-28	329	34	176	0	-15	44																				500							
500	-36	-47	213	14	-38	-44	279	49	-36	-42	263	41	-26	-49	41	-21	-48	283	92	-16	60	-16	60	92	-16	60	60	-14	-35	279	45	-13	-41	284	45	-13	-41	284	45	450							
450	22	-5	243	21	22	-4	272	46	22	-3	274	46	20	-5	272	46	20	-5	272	46	20	-5	272	46	20	-5	272	46	20	-5	272	46	20	-5	272	46	20	-5	272	46	400						
400	-59	22	1	17	-49	28	1	17	-49	28	1	17	-49	28	1	17	-49	28	1	17	-49	28	1	17	-49	28	1	17	-49	28	1	17	-49	28	1	17	-49	28	1	17	-49	350					
350	283	0	51	226	17	285	3	50	253	52	286	5	46	271	47	287	6	43	271	47	287	6	43	271	47	287	6	43	271	47	287	6	43	271	47	287	6	43	271	47	300						
300	371	6	51	245	23	373	5	53	283	33	375	5	51	273	42	376	6	48	272	41	377	7	45	271	40	378	8	42	270	39	379	9	39	269	38	380	10	36	268	250							
250	-52	23	7	21	-57	27	8	21	34	-56	28	1	39	27	41	39	27	41	39	27	41	39	27	41	39	27	41	39	27	41	39	27	41	39	27	41	39	27	41	39	200						
200	-55	23	9	23	-54	26	3	23	61	-54	26	3	23	61	29	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	150						
150	-55	23	9	23	-54	26	3	23	61	-54	26	3	23	61	29	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	130						
130	-55	23	9	23	-54	26	3	23	61	-54	26	3	23	61	29	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	110						
110	-55	23	9	23	-54	26	3	23	61	-54	26	3	23	61	29	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	90						
100	-55	23	9	23	-54	26	3	23	61	-54	26	3	23	61	29	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	80						
90	-55	23	9	23	-54	26	3	23	61	-54	26	3	23	61	29	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	70						
80	-55	23	9	23	-54	26	3	23	61	-54	26	3	23	61	29	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	60						
70	-55	23	9	23	-54	26	3	23	61	-54	26	3	23	61	29	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	50						
60	-55	23	9	23	-54	26	3	23	61	-54	26	3	23	61	29	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	27	43	62	40						
Isothermal				Isothermal				Isothermal				Isothermal				Inversion				Inversion				Inversion				Inversion				Inversion				Inversion				Inversion							
434-400 mb -42				463-443 mb -36				538-518 mb -16				563 mb -13				563 mb -13				563 mb -13				563 mb -13				563 mb -13				563 mb -13				563 mb -13				563 mb -13							
511-465 mb -15				524 mb -10				524 mb -10				524 mb -10				524 mb -10				524 mb -10				524 mb -10				524 mb -10				524 mb -10				524 mb -10				524 mb -10				524 mb -10			
611-637 mb 13				611-637 mb 13				611-637 mb 13				611-637 mb 13				611-637 mb 13				611-637 mb 13				611-637 mb 13				611-637 mb 13				611-637 mb 13				611-637 mb 13				611-637 mb 13				611-637 mb 13			
I 350 mb -54				I 335 mb -52				I 360 mb -53				N.R.				I 24 mb -70				I 195 mb -81				I 218 mb -79				I 252 mb -77				I 242 mb -77				I 242 mb -77				I 242 mb -77							
24900				26200				24600				N.R.				244 mb -69				38700				26300				35200				37100				37100				37100							
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				Valentia				STATION										
Pressure mb	Time M.S.L.	Surf	Freezing	G.M.T.	Time M.S.L.	Surf	Freezing	G.M.T.	Time M.S.L.	Surf	Freezing	G.M.T.	Time M.S.L.	Surf	Freezing	G.M.T.	Time M.S.L.	Surf	Freezing	G.M.T.	Time M.S.L.	Surf	Freezing																								

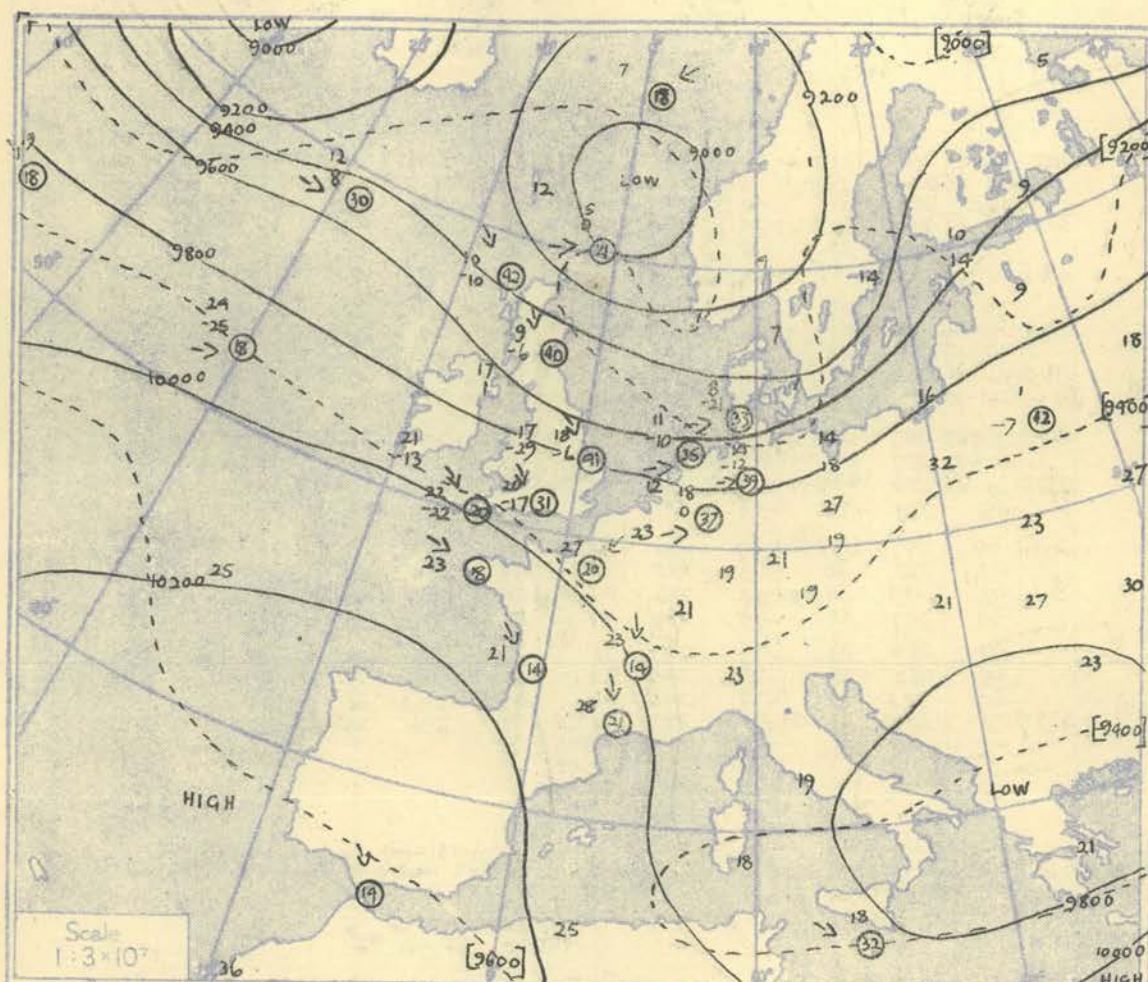


RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

[illegible]



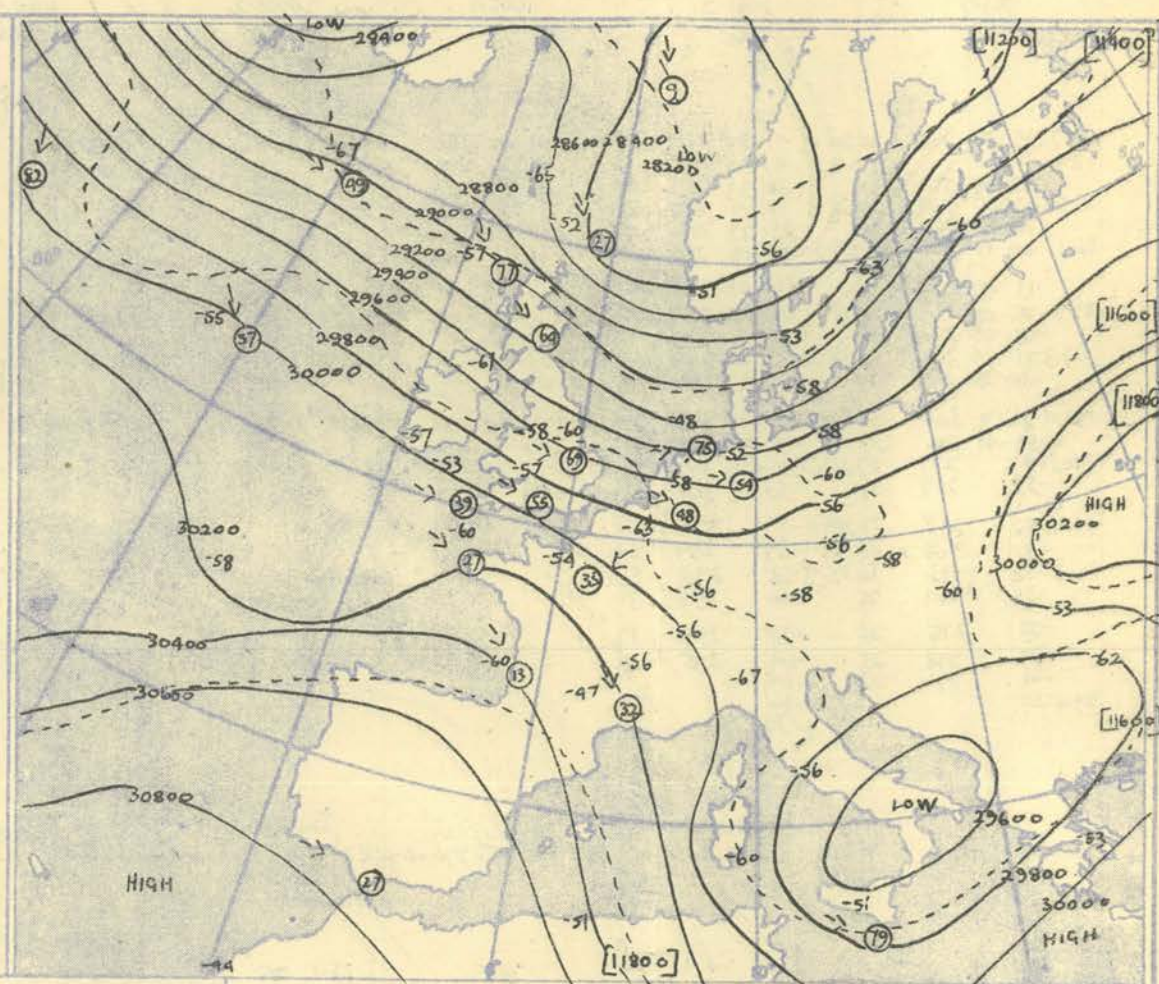
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb. levels at about 03 h. G.M.T.



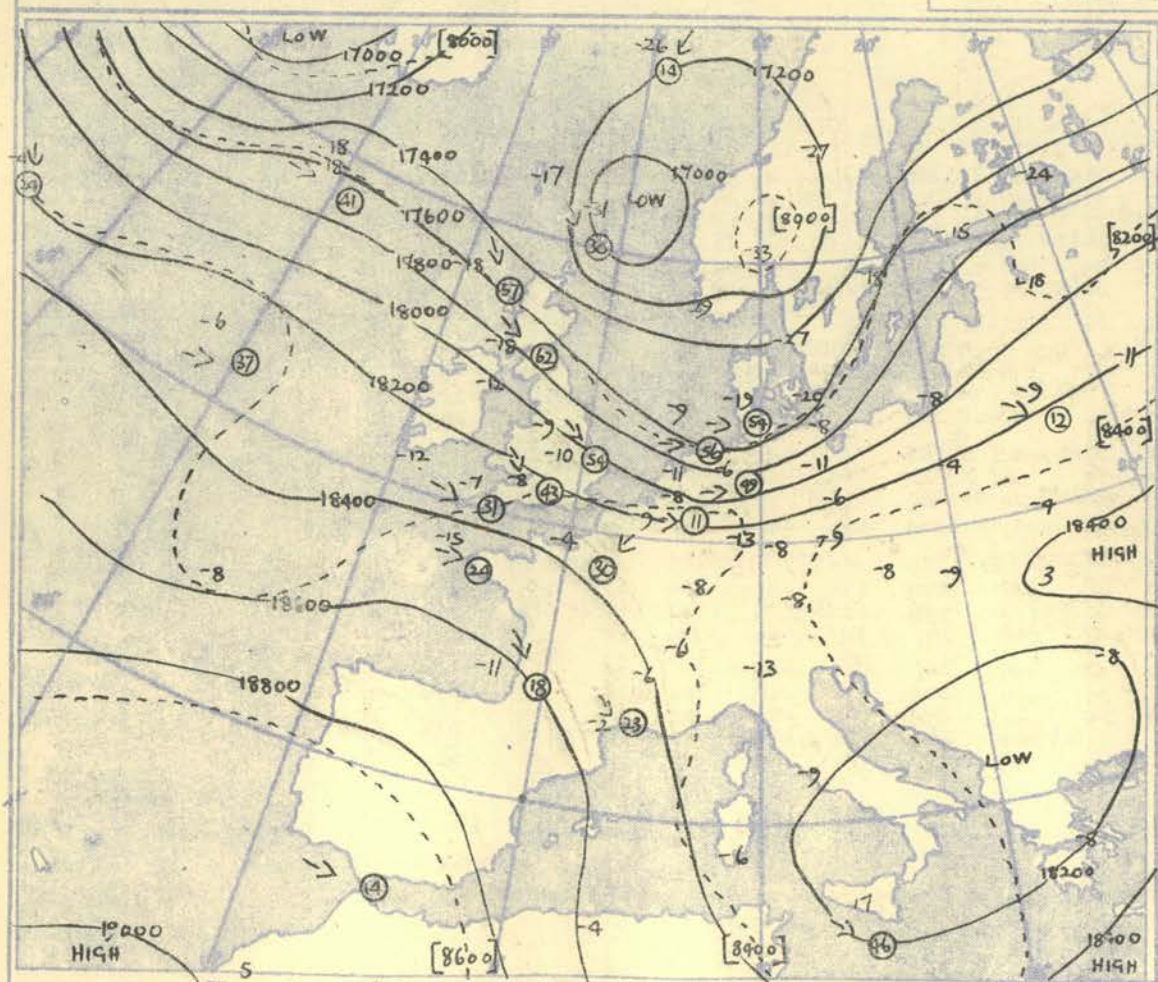
The continuous lines are contour lines of the 700 mb. surface  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

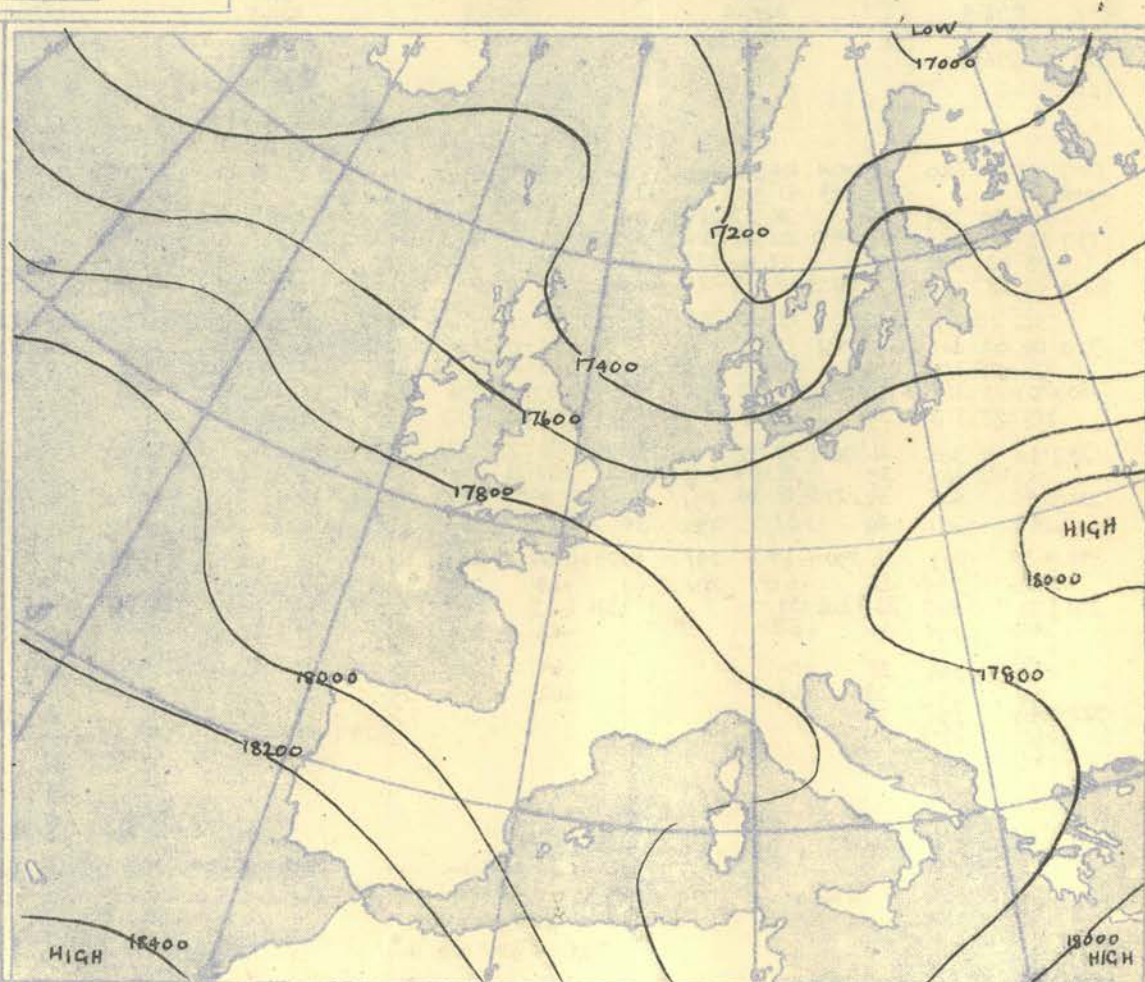
100 80 60 40 20 10 0 knots



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.

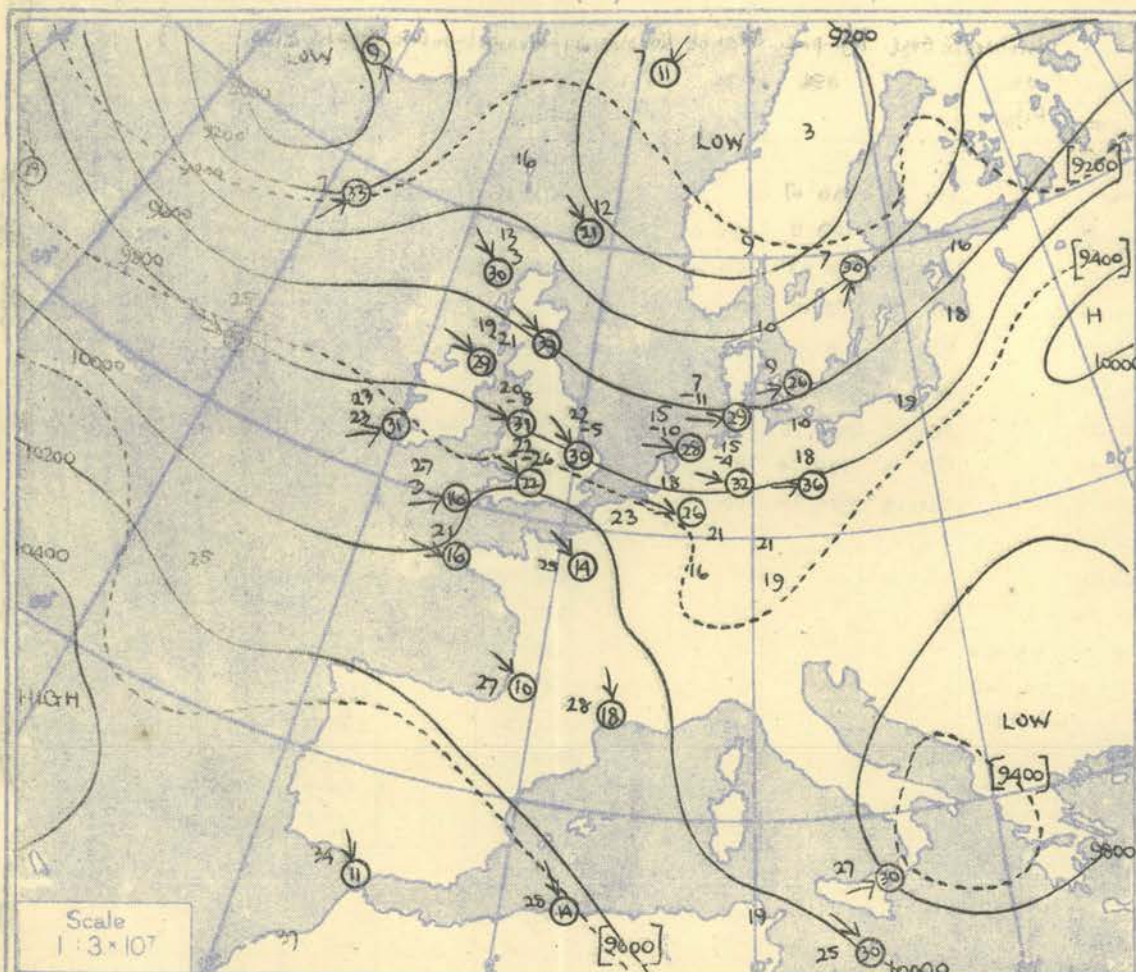
NEPHOSCOPE OBSERVATIONS

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								
[Lat/Long]	58°N 18°W.						59°N 18°W						58°N 18°W						59°N 18°W.						52°N 20°W.						52°N 20°W						52°N 20°W						52°N 20°W								
Time M.S.L. Surf Freezing	03L G.M.T. 1009 mb 1009 mb 230 mb						09L G.M.T. 1007 mb 1007 mb 920 mb						15L G.M.T. 1003 mb 1003 mb 915 mb						21L G.M.T. 997 mb 997 mb 900 mb						03L G.M.T. mb 1018 mb 910 mb						09L G.M.T. mb 1015 mb 910 + 850 mb						15L G.M.T. mb 1015 mb 830 mb						21L G.M.T. mb 1015 mb 830 + 740 mb						G.M.T. mb mb mb	Time M.S.L. Surf Freezing	Pressure
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		



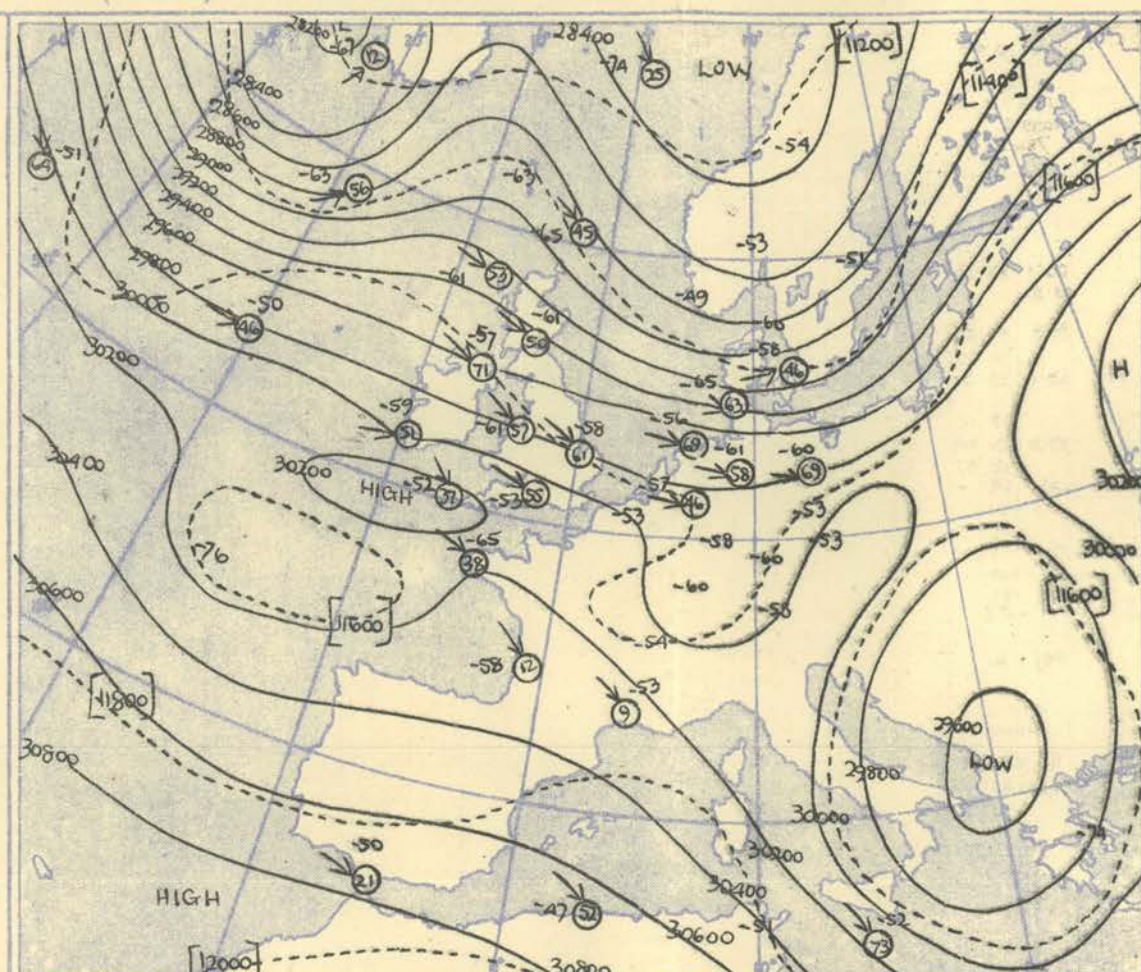
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h G.M.T.



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.

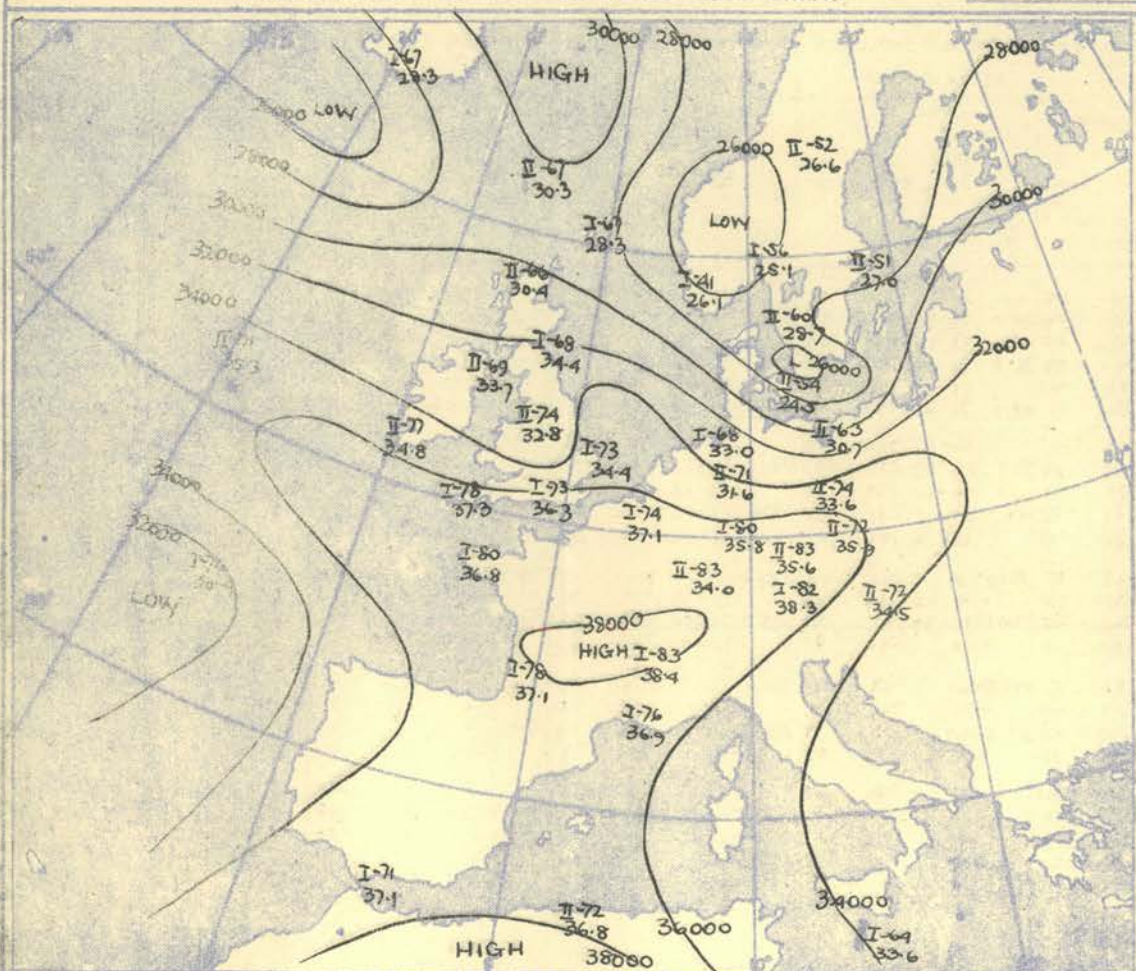
Gradient Wind Scale for Contours  
at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 20 10 up 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.

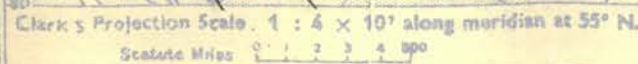
NOTES ON THE AEROLOGICAL SITUATION.

Little change today

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









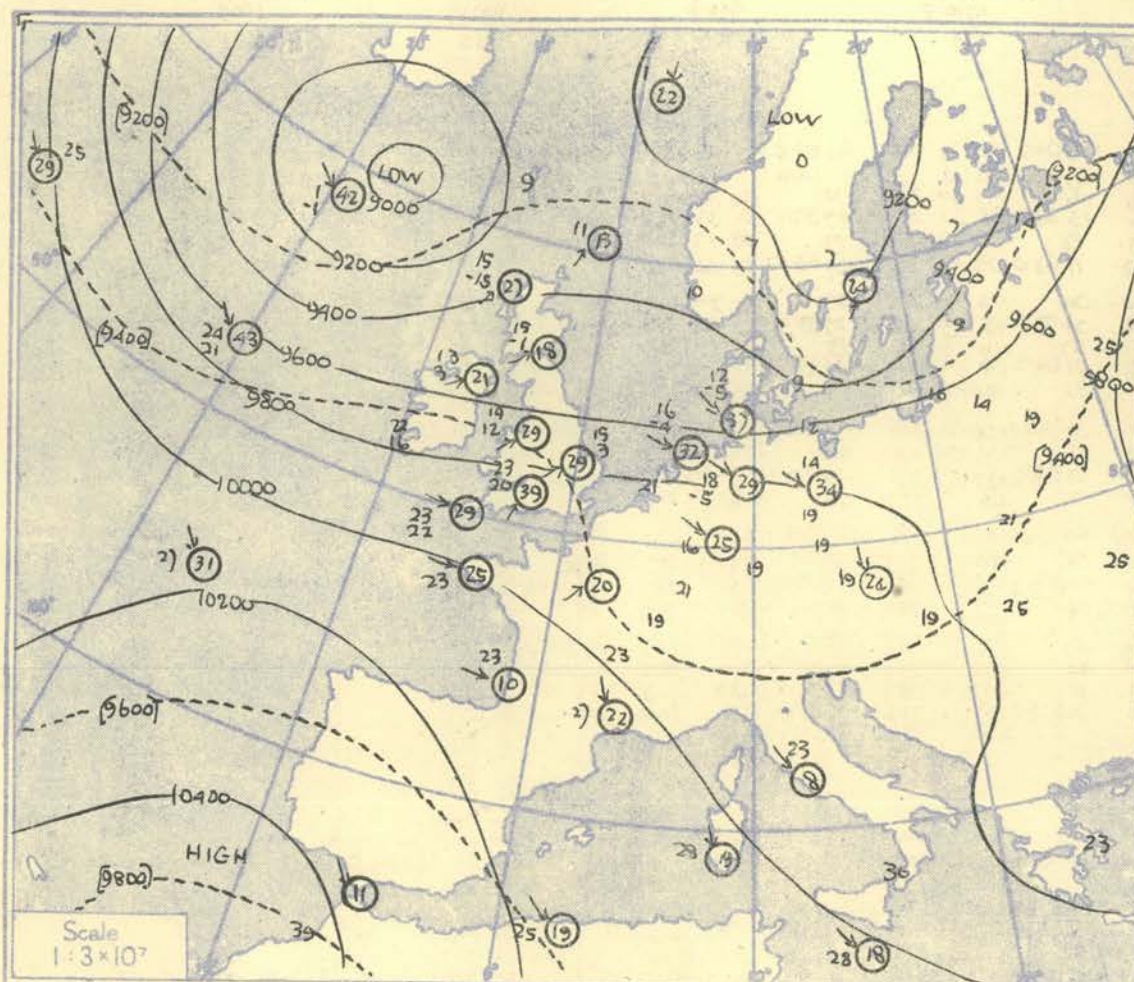


RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION						
Time M.S.L.	03h				03h				03h				03h				03h				03h				03h				03h				03h				Time M.S.L.						
Surf	1003.7				1004.9				1009.2				1010.4				1013.0				1015.0				1014.9				1013.7				1009.1				Surf						
Pressure	993.6				1003.2				1008.3				1000.3				1010.9				1010.5				998.6				1003.1				1007.1				Pressure						
Freezing	917				890				900				889				918				879				787				780				810				Freezing						
Height ft./100																																					Height ft./100						
Temp. °F.																																					Temp. °F.						
Dew °F.																																					Dew °F.						
Wind Dir.																																					Wind Dir.						
Wind Vel. knots																																					Wind Vel. knots						
Pressure mb																																					Pressure mb						
Surf	02.7	41	37		00.4	42	39	220	08	00.2	36	35	230	05	02.6	42	38	CALM	00.6	42	36	190	15	01.2	40	37	180	03	04.4	42	40	185	14	02.9	49	47	180	15	00.3	47	47	Surf	
1000	0.7				0.3	42	38			2.4	37	35			2.7	39	30	218	12	3.5	41	32	194	23	4.0	41	38		4.0				3.7	49	49		2.4	47	47	1000			
950		37	34			37	32	222	24		37	31	250	22		39	30	218	12		35	28	196	16		41	34	235	10		40	35	207	26		50	45	45	950				
900	28.8	30	27		29.3	33	29	227	30	30.4	32	25	254	20	30.8	34	25	218	21	31.3	30	23	216	13	32.2	35	32	286	19	32.1	39	36	225	30	3.7	49	49	246	31	2.4	47	47	900
850		24	23			28	21	229	38		23	19	247	18		27	22	218	9		28	22	219	12		30	17	255	19		38	35	247	35		38	37	255	35		37	37	850
800	59.3	20	18		60.0	22	15	233	25	60.8	19	09	242	15	61.4	21	16	228	20	61.8	23	17	222	11	63.0	28	00	241	27	63.5	33	30	255	37	63.6	34	33	270	32	62.2	30	30	800
750		15	06	For		21	00	236	21		22	00	238	17		21	03	248	22		22	16	250	20		22	09	238	24		30	27	261	38		29	28	278	30		26	25	750
700	93.1	11	-11	winds	94.1	15	-05	233	27	95.0	15	-01	240	18	95.5	13	03	240	21	96.1	12	12	258	29	97.3	15	03	238	29	98.3	23	26	260	39	98.5	23	22	272	29	96.9	22	16	700
650		04	-22			08	-13	228	28		07	-08	246	18		13	02	255	21		12	05	261	27		16	13	243	35		17	12	259	39		18	11	259	36		16	06	650
600	131.3	-02	-29		132.5	-01	-08	225	31	133.4	-01	-10	245	20	134.3	-11	-13	256	31	134.9	-06	-02	262	31	136.2	-08	04	245	41	137.5	-11	05	265	46	137.7	-12	03	258	28	126.0	-10	02	600
550		-09	-35	see		-06	-15	231	34		-06	-16	259	21		00	-35	258	34		-01	-11	271	32		00	-02	261	49		03	-04	270	39		02	-07	265	25		01	-08	550
500	175.1	-19	-38		176.6	-14	-28	232	40	177.5	-12	-30	270	30	179.0	-10	-44	262	38	179.5	-08	-24	271	39	180.9	-09	-13	268	48	182.5	-07	-15	272	39	182.6	-05	-22	257	27	180.8	-08	-20	500
450		-29	-44	page		-25	-36	234	38		-24	-41	275	32		-21	-54	259	40		-19	-34	269	51		-19	-24	271	47		-19	-28	271	40		-15	-31	260	34		-18	-36	450
400	226.3	-43		3.	228.3	-37	-44	247	49	229.3	-36	-52	278	40	231.1	-34	-57	268	40	231.9	-31	-43	267	51	233.2	-33	-39	271	44	235.1	-29	-39	265	43	235.4	-27	-43	265	37	233.3	-30	-44	400
350		-55				-50		249	61		-49		288	48		-47		270	45		-46		255	57		-46		277	54		-43		265	48		-40	-53	265	35		-41		350
300	288.1	-71			291.0	-64		250	66	292.1	-64		288	59	294.3	-61		274	44	295.2	-63		261	60	296.4	-63		276	62	298.9	-60		270	52	299.7	-55		272	39	297.3	-54		300
250		-77				-76		251	60		-76		289	49		-74		277	55		-75		271	58		-80		275	67		-71		282	49		-75		292	31		-72		250
200	571.8	-65			575.4	-64		271	43	576.2	-71		277	47				276	44	578.9	-72		276	44	579.2	-76		284	47	582.2	-73		285	44	583.3	-78		286	27	581.4	-77		200
170		-63				-62		271	36		-64		280	40				289			-67		289			-72		286			-68		286			39		-68		-73		170	
150		-63				-61		265	28		-65		275	37				289	42		-68		289	42		-71		288	35		-69		295	34	153	-65		-70		-70		150	
130		-62				-61		265	23		-66		276	35				284	40		-71		284	40		-71		288	40		-71		302	30	mb		-68		-68		130		
110		-65				-63		268	23		-67		276	29				277	35		-72		277	35		-72		287	42		-73		302	27		-71		-71		110			
100	518.3	-67			522.3	-68		274	21	524.8	-68		275	24				276	22		-71		276	22		-74		286	13		-74		300	24		-74		-74		100			
90		-66				-66		274	21		-68		276	22				276	22		-74		276	22		-74		286	13		-74					-74		-74		90			
80						-67		267	20		-68		277	27																									-74		80		
70						-68		253	21		-68																														70		
60																																									60		
<p>Isenthal 792 - 750 mb 21° Inversion 1008 mb 36° - 778 mb 40° 803 mb 16° - 770 mb 27° Isothermal 534 - 520 mb - 09°</p> <p>Inversion 803 mb 20° - 780 mb 26° 674 mb 09° - 643 mb 15° Isothermal 776 - 745 mb 22°</p> <p>Inversion 865 mb 26° - 848 mb 28° Isothermal 698 - 14° - 668 - 18° Isothermal 863 - 812 mb 30°</p> <p>Inversion 1011 mb 40° - 975 mb 44° 698 - 14° - 668 - 18° Isothermal 863 - 812 mb 30°</p> <p>Inversion 924 mb 37° - 884 mb 44° Isothermal 998 - 782 mb 42°</p> <p>Inversion 970 mb 49° - 950 mb 50° Isothermal 826 - </p>																																											



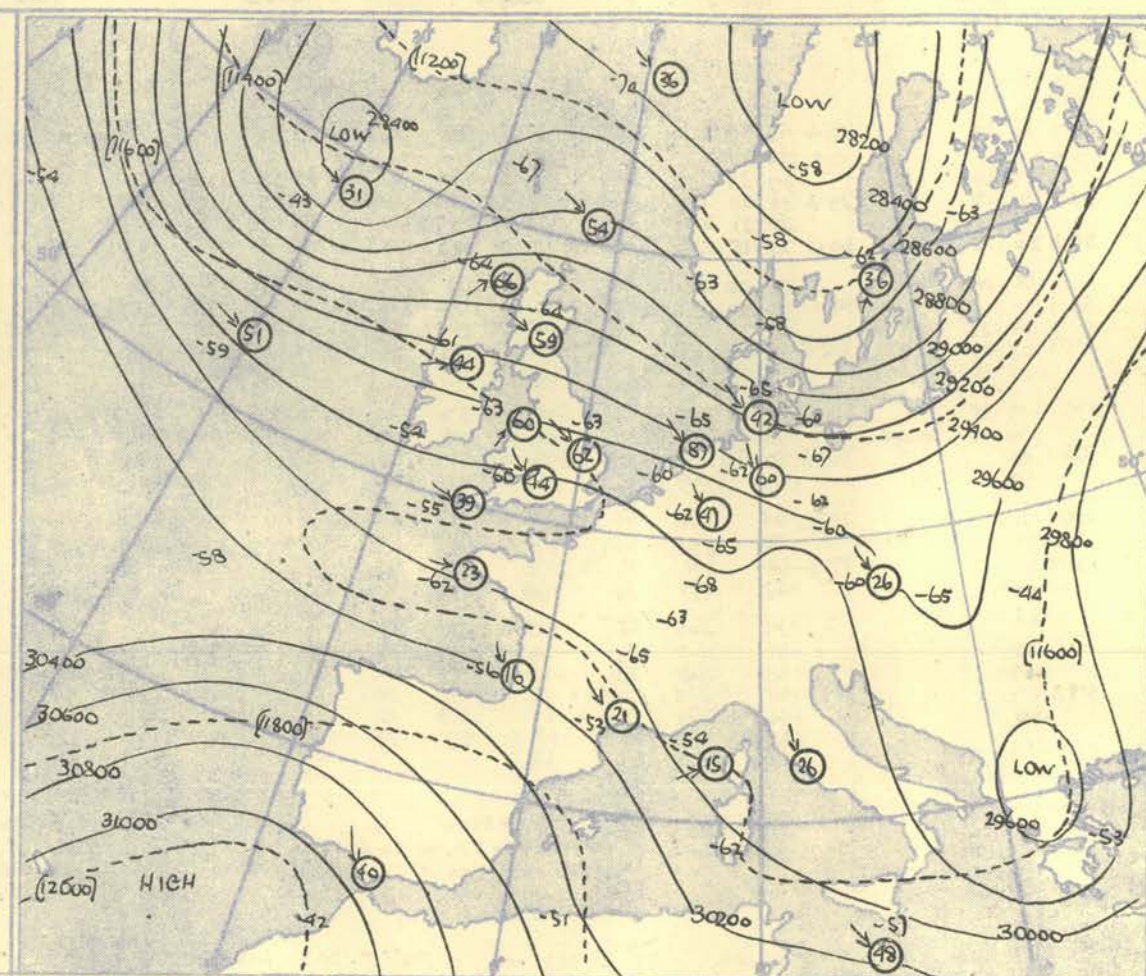
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



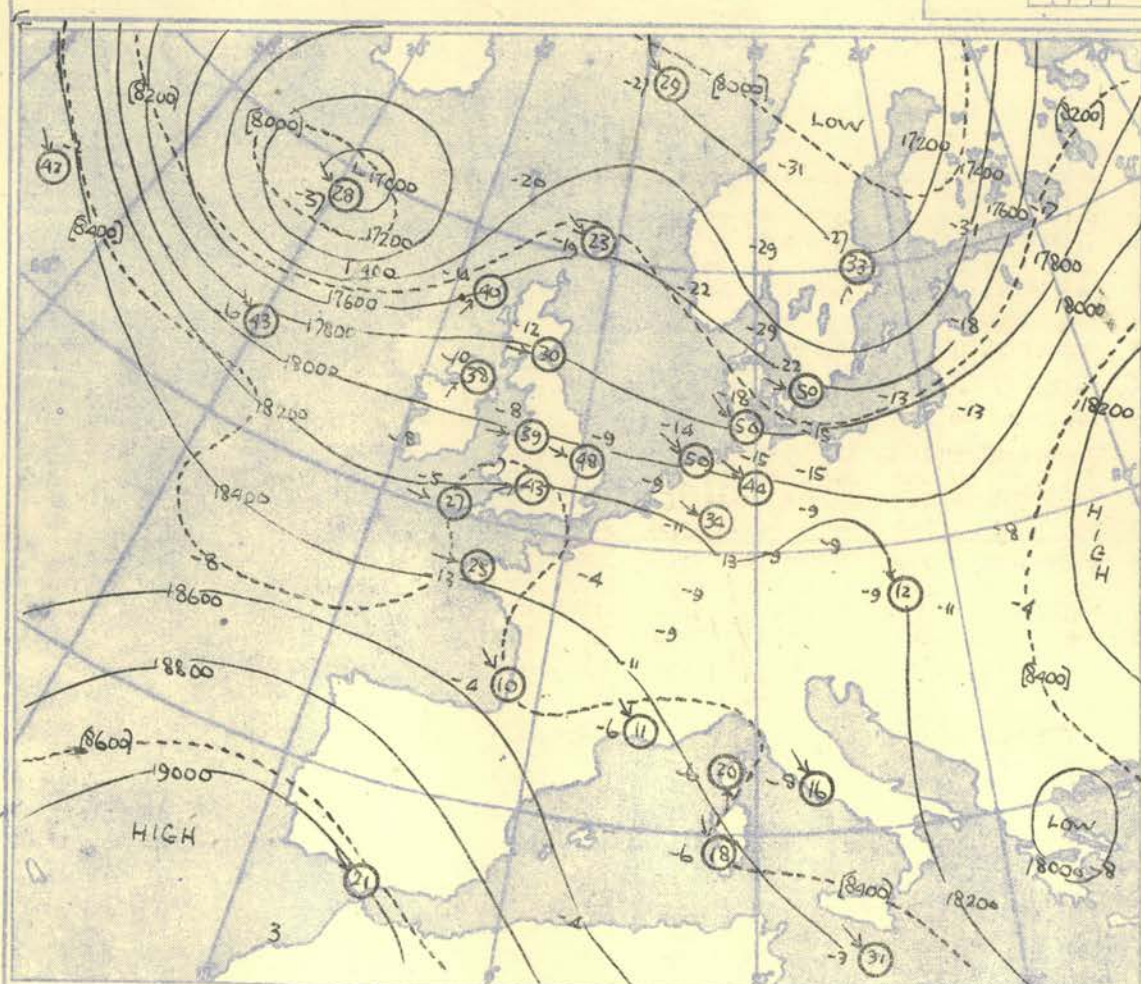
The continuous lines are contour lines of the 700 mb. surface  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

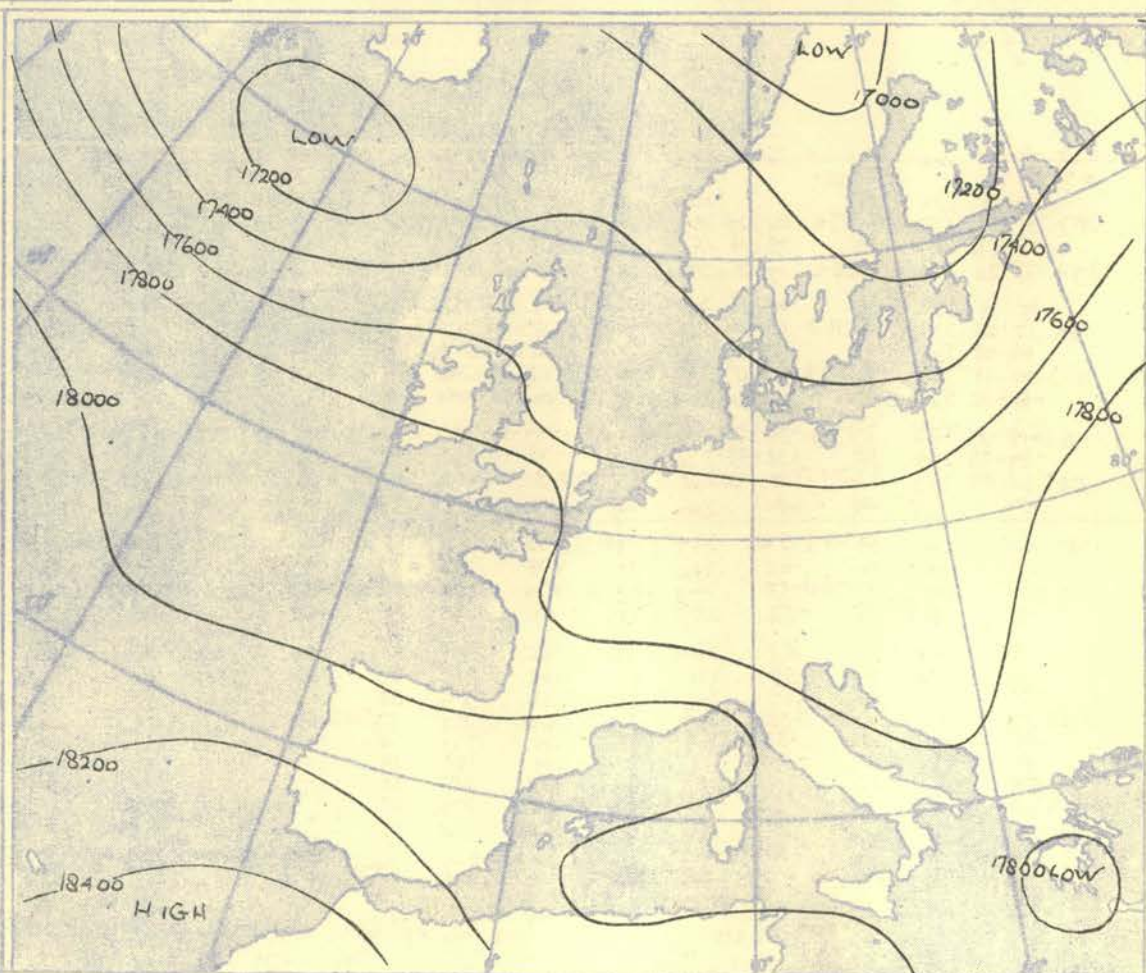
100 80 60 40 20 10 0 knots



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

[illegible]

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

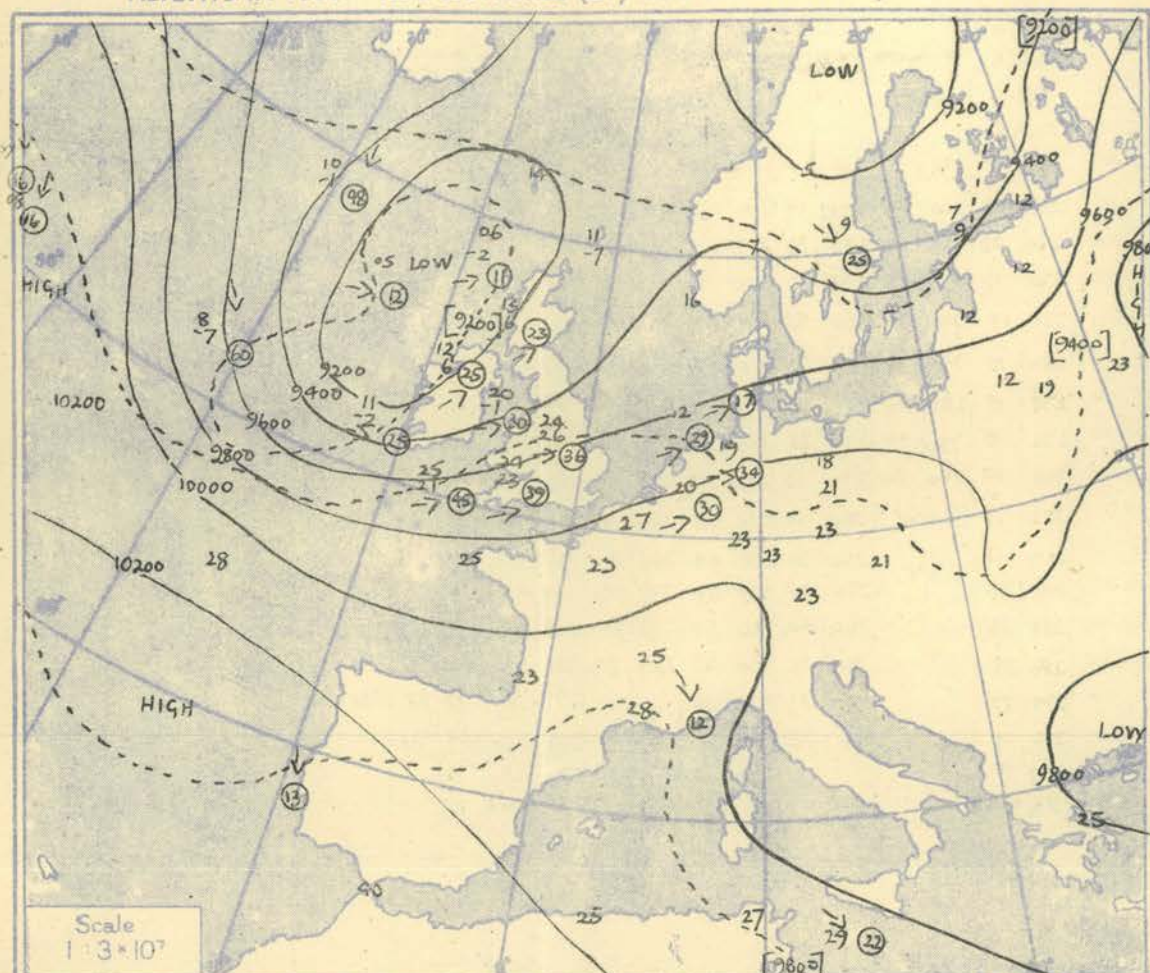
Place	Lerwick	Turnhouse	Shoeburyness	Leuchars	Stornoway	Lerwick	Dunham Market	Stornoway	Place
Time	03L	09L	10L	15L	15L	15	15L	21L	Time
Type	PILAR			PILAR	PILAR	RAJAR	RAJAR	PILAR	Type
Feet	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Feet.
Surf.	265 10	210 13	220 14	200 06	210 03	185 14			Surf.
1,000	260 22	200 16	240 32	197 16	216 08	186 21			1,000
2,000	272 19	230 26	250 27	200 20	223 05	188 19			2,000
3,000	281 18	240 23	250 42	206 20	232 13	193 18			3,000
4,000	280 18	240 20	260 41	213 21	238 12	197 18			4,000
5,000	278 15	250 20	260 37	222 20	244 10	188 16			5,000
6,000	272 12	250 25	270 35	230 21	261 07	175 13			6,000
8,000	260 14	260 20	270 33	230 21	268 07	166 12			8,000
10,000	256 13	(7,000')	260 31	233 23	236 11	181 21			10,000
14,000	267 18		260 37	234 44	202 32	194 27			14,000
18,000	276 23		260 40	233 53	213 64	214 43			18,000
24,000	282 36		260 40	236 54	219 88	226 58	199 60		24,000
30,000	286 54		280 35	230 63	223 59	234 67	252 40	206 31	30,000
40,000	274 27		280 39	252 36		251 26	272 35	261 14	40,000
50,000	276 17		280 20	263 21		272 20	267 31		50,000
	252 18			290 33		270 15			
	(53,000')			(56,000')		(55,000')			

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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				WEATHER WATCHER				Ship														
Lat/Long	52.3 N 20.0W				52.3N 19.9W.				52.0N 20.0W				52.2N 19.9W.				59.0N 18.8W				59.0N 19.2W				59.0 N 19.6				59.1 N 19.4W				56.4N 10.7W.				Lat/Long														
Pressure	Time	09h.		G.M.T.	mb	Time	09h.		G.M.T.	mb	Time	15h.		G.M.T.	mb	Time	21h.		G.M.T.	mb	Time	03h.		G.M.T.	mb	Time	09h.		G.M.T.	mb	Time	15h.		G.M.T.	mb	Time	21h.		G.M.T.	mb											
	M.S.L.	1014		1013		1012	1013	996	994		1004	1013	1000	1013		1000	1000																																		
	Surf	1014		1013		1012	1014	996	994		1004	1013	1000	1013		1000	1000																																		
	Freezing	910		920		915	880 + 835	960	910		905	925	900																																						
Pressure	Height ft./100	Temp.	Dew	Wind	Height ft./100	Temp.	Dew	Wind	Height ft./100	Temp.	Dew	Wind	Height ft./100	Temp.	Dew	Wind	Height ft./100	Temp.	Dew	Wind	Height ft./100	Temp.	Dew	Wind	Height ft./100	Temp.	Dew	Wind	Height ft./100	Temp.	Dew	Wind	Height ft./100	Temp.	Dew	Wind	Pressure														
Surf	46	37	280	23	45	34	280	28	45	39	290	41	48	39	310	41	36	33	270	32	40	37	300	18	45	37	360	38	43	32	360	38	44	28	275	22	Surf														
1000	03.8	44	36	297	27	03.4	43	34	280	28	03.4	43	37	300	41	03.9	46	38	311	42	01.1	31	30	284	33	36	35	336	26	01.2	44	37	360	38	03.5	42	31	360	36	00.1	28	26	275	21	1000						
950	07	31	288	27	35	31	290	38	37	34	300	46	40	33	336	47	26	24	289	43	26.3	30	29	342	20	29.1	31	29	013	45	31.4	29	21	005	30	28.0	31	22	275	31	950										
900	31.8	31	27	284	26	31.3	29	25	290	38	31.2	30	27	312	50	32.1	34	28	345	51	26.6	26	24	294	47	25	24	341	26	29.1	26	23	017	48	21	14	007	23	24	18	274	20	900								
850	26	22	284	29	22	20	290	37	25	20	319	52	32	24	339	48	20	20	294	47	56.8	14	14	289	43	56.8	20	15	350	31	59.8	20	16	014	52	61.7	17	12	010	27	58.5	17	09	272	19	850					
800	62.5	31	08	286	32	61.6	17	16	290	37	61.7	20	16	324	53	63.1	27	07	342	52	56.8	14	14	289	43	56.8	20	15	350	31	59.8	20	16	014	52	61.7	17	12	010	27	58.5	17	09	272	19	800					
750	29	27	286	35	17	01	287	51	15	05	330	57	20	02	345	53	07	06	273	44	13	05	356	32	16	07	015	48	14	05	013	40	10	01	250	17	750														
700	97.2	24	21	283	43	95.5	17	30	279	60	95.5	08	07	329	60	97.2	13	14	347	58	90.2	01	01	279	42	90.5	06	02	359	34	92.7	10	01	010	48	95.4	08	05	010	42	91.9	02	08	235	19	700					
650	19	19	282	48	13	24	271	66	01	15	346	60	07	18	346	60	07	18	346	60	07	12	231	39	01	08	006	50	01	12	009	43	01	12	009	43	01	12	009	43	01	12	009	43	01	12	009	43	650		
600	136.5	12	24	279	49	134.4	10	32	267	67	133.3	03	24	341	72	135.6	00	24	343	64	127.4	15	23	284	39	128.1	10	14	011	41	131.6	08	18	003	48	133.3	04	18	002	57	129.2	13	19	252	39	600					
550	02	24	276	46	03	31	274	65	08	30	327	73	08	31	343	67	08	31	343	67	26	34	283	38	20	25	018	46	18	28	359	45	13	28	357	46	14	31	245	52	550										
500	181.4	06	24	279	43	179.3	06	32	280	60	177.2	17	39	315	78	179.5	15	43	343	78	169.6	37	45	283	28	170.9	31	36	021	48	174.6	27	38	005	45	176.7	22	38	355	52	172.4	19	45	231	71	500					
450	17	34	283	48	17	40	280	64	28	49	307	55	17	51	343	104	18	51	343	104	241	41	283	28	220.6	49	015	45	225.0	46	003	47	227.5	40	56	358	85	224.2	32	58	239	94	450								
400	234.1	29	45	282	44	231.9	30	53	280	69	228.7	35	55	311	90	231.9	28	56	347	118	219.5	39	53	283	28	220.6	49	015	45	225.0	46	003	47	227.5	40	56	358	85	224.2	32	58	239	94	400							
350	41	281	46	281	44	280	63	40	60	317	84	40	60	345	124	40	60	345	124	43	294	32	47	294	32	47	007	39	54	007	39	54	007	39	54	007	39	54	007	39	54	007	39	54	007	39	350				
300	297.9	59	271	51	295.7	50	280	67	292.9	49	360	88	296.3	53	352	124	283.7	43	285	31	284.0	44	342	33	287.5	55	001	57	290.7	58	337	99	287.8	58	247	92	245	63	245	63	245	63	245	63	245	63	300				
250	71	274	56	280	70	278.4	49	360	88	296.3	53	352	124	283.7	43	285	31	284.0	44	342	33	287.5	55	001	57	290.7	58	337	99	287.8	58	247	92	245	63	245	63	245	63	245	63	245	63	245	63	250					
200	382.7	70	283	52	381.4	63	280	59	382.6	60	346	72	382.6	60	346	72	382.6	60	346	72	382.6	60	346	72	382.6	60	346	72	382.6	60	346	72	382.6	60	346	72	382.6	60	346	72	382.6	60	346	72	200						
170	66	289	49	280	40	280	40	280	40	280	40	280	40	280	40	280	40	280	40	280	40	280	40	280	40	280	40	280	40	280	40	280	40	280	40	280	40	280	40	280	40	280	40	280	40	170					
150	64	285	42	280	51	613 mb	05°	590 mb	02°	63	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	150					
130	65	282	39	280	46	613 mb	05°	590 mb	02°	63	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	130					
110	70	282	35	280	46	613 mb	05°	590 mb	02°	63	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	110					
100	(107mb)	71		280	46	613 mb	05°	590 mb	02°	63	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	100					
90				280	46	613 mb	05°	590 mb	02°	63	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	90					
80				280	46	613 mb	05°	590 mb	02°	63	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	80					
70				280	46	613 mb	05°	590 mb	02°	63	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	70					
60				280	46	613 mb	05°	590 mb	02°	63	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	64	280	27	60					
	Inversion	850 mb 26° - 811 mb 31°				Inversion	767 mb 13° - 750 mb 17°				Inversion	634 mb 11° - 616 mb 12°				Inversion	857 mb 30° - 842 mb 33°				Inversion	(977mb) 63				Inversion	785 - 770 mb 19°				Inversion	800 mb 17° - 784 mb 18°				Inversion	(65mb) 63				Inversion	818 - 800 mb 17°				Inversion	570 mb 16° - 555 mb 13°				
		33,600'					33,400'					N.R.					36,200'					18,200'					21,100'					26,500'					31,800'					39,700'					Tropopause				
Tropopause	II 250 mb - 72°				I 250 mb - 67°				N.R.				I 221 mb - 65°				I 476 mb - 55°				II 420 mb - 49°				I 330 mb - 56°				I 263 mb - 66°				I 176 mb - 60°				Tropopause														

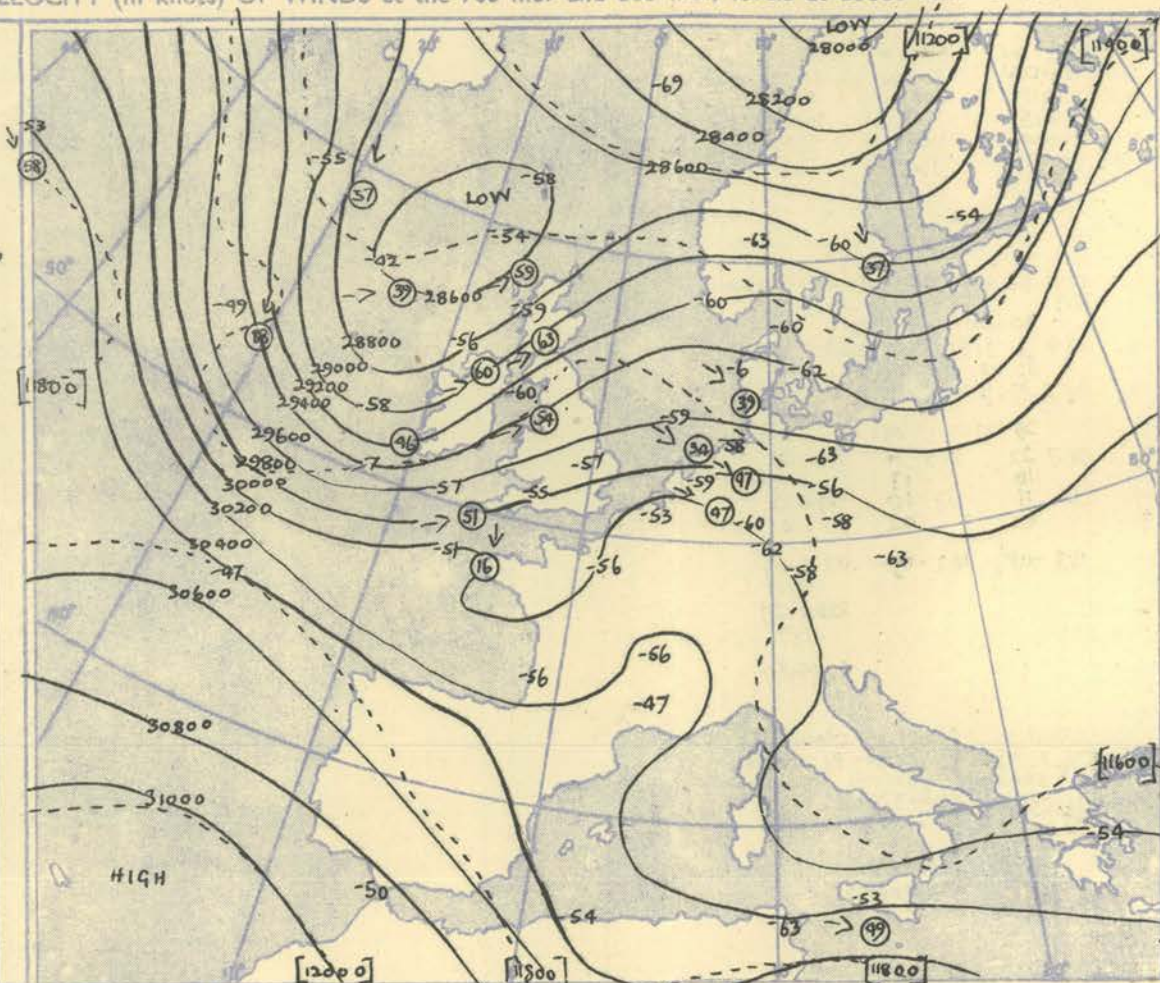




The continuous lines are contour lines of the 700 mb. surface.  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

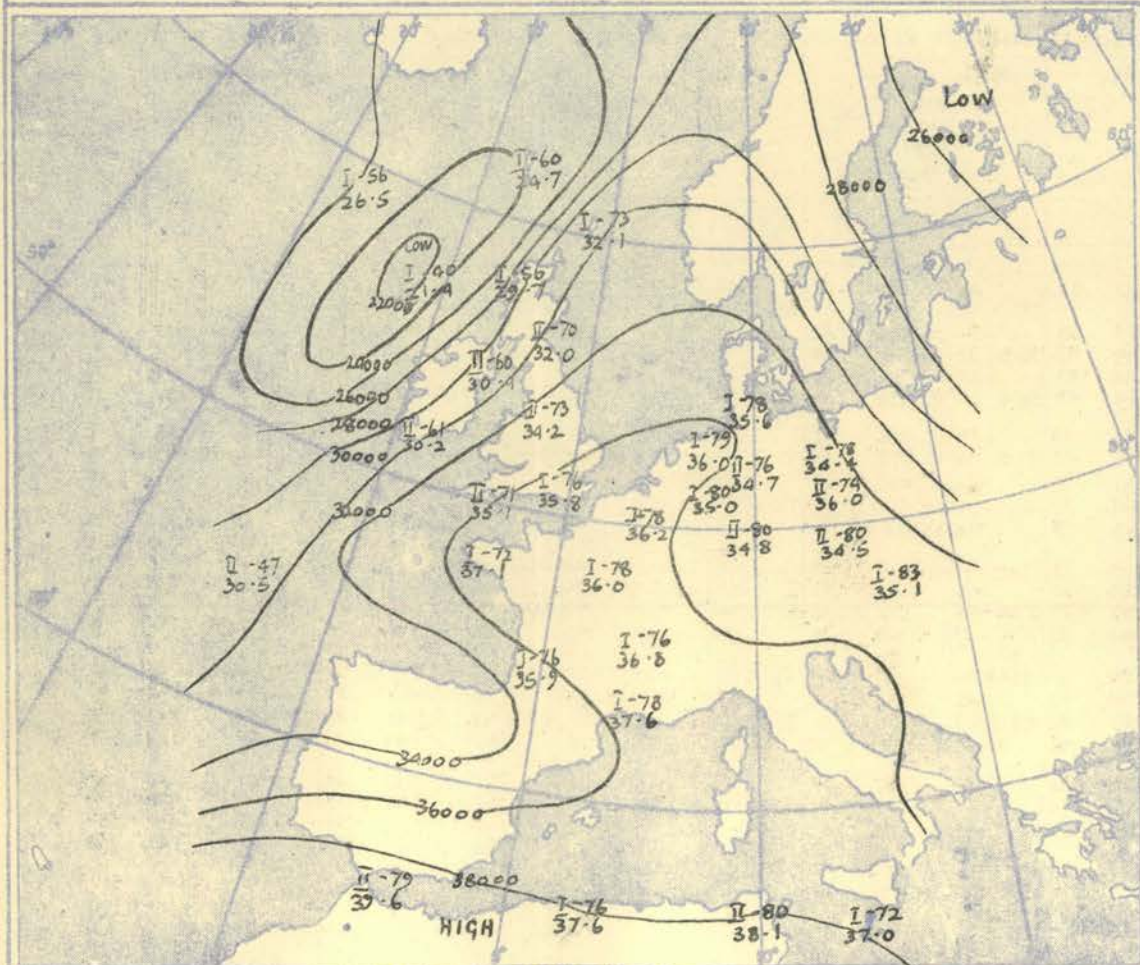
Gradient Wind Scale for Contours at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 20 10 knots



The continuous lines are contour lines of the 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.  
Temperatures of Tropopause.

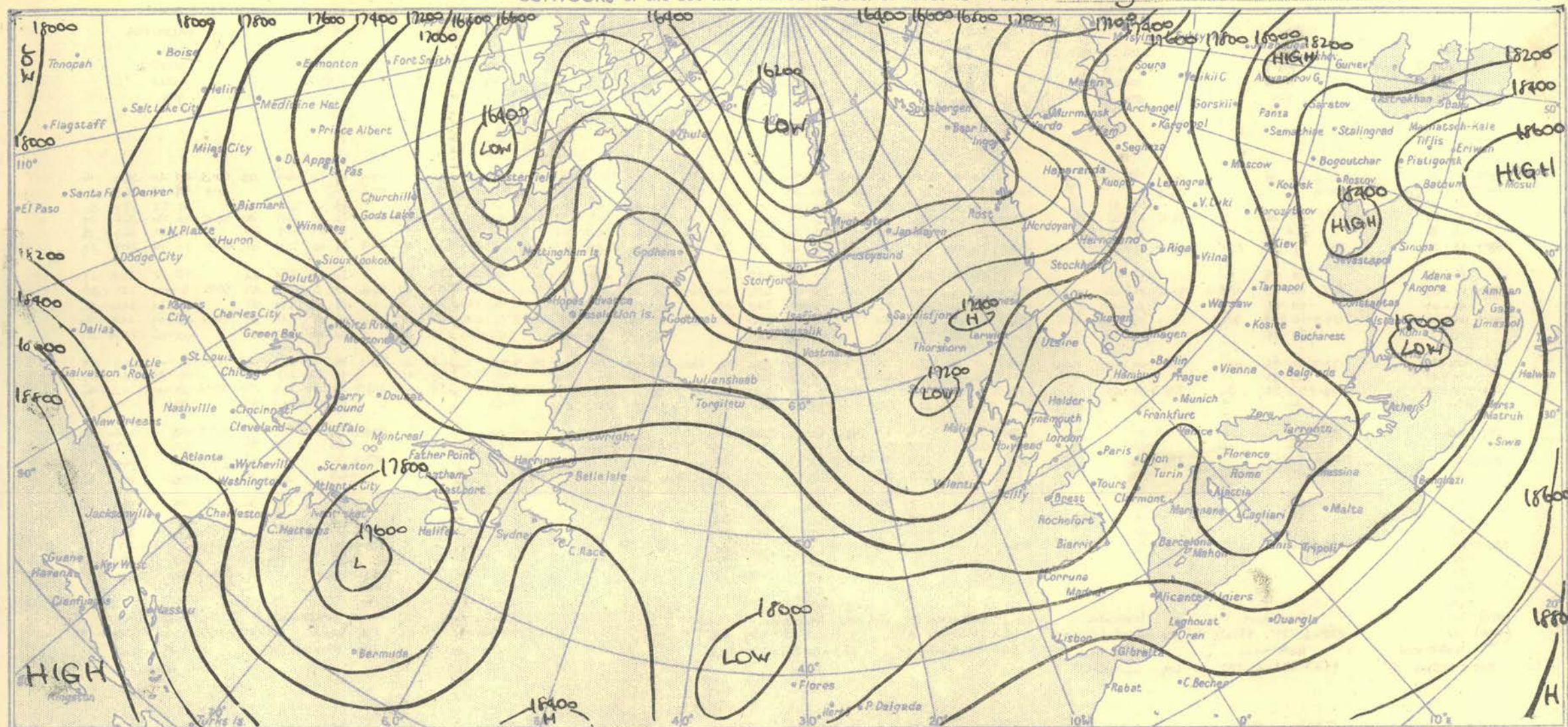
### NOTES ON THE AEROLOGICAL SITUATION.

The cold trough in the Eastern Atlantic moved to the west of the British Isles and became very sharp. There was pronounced cooling, partly advective but there was also considerable dynamical cooling associated with the developing surface depression.

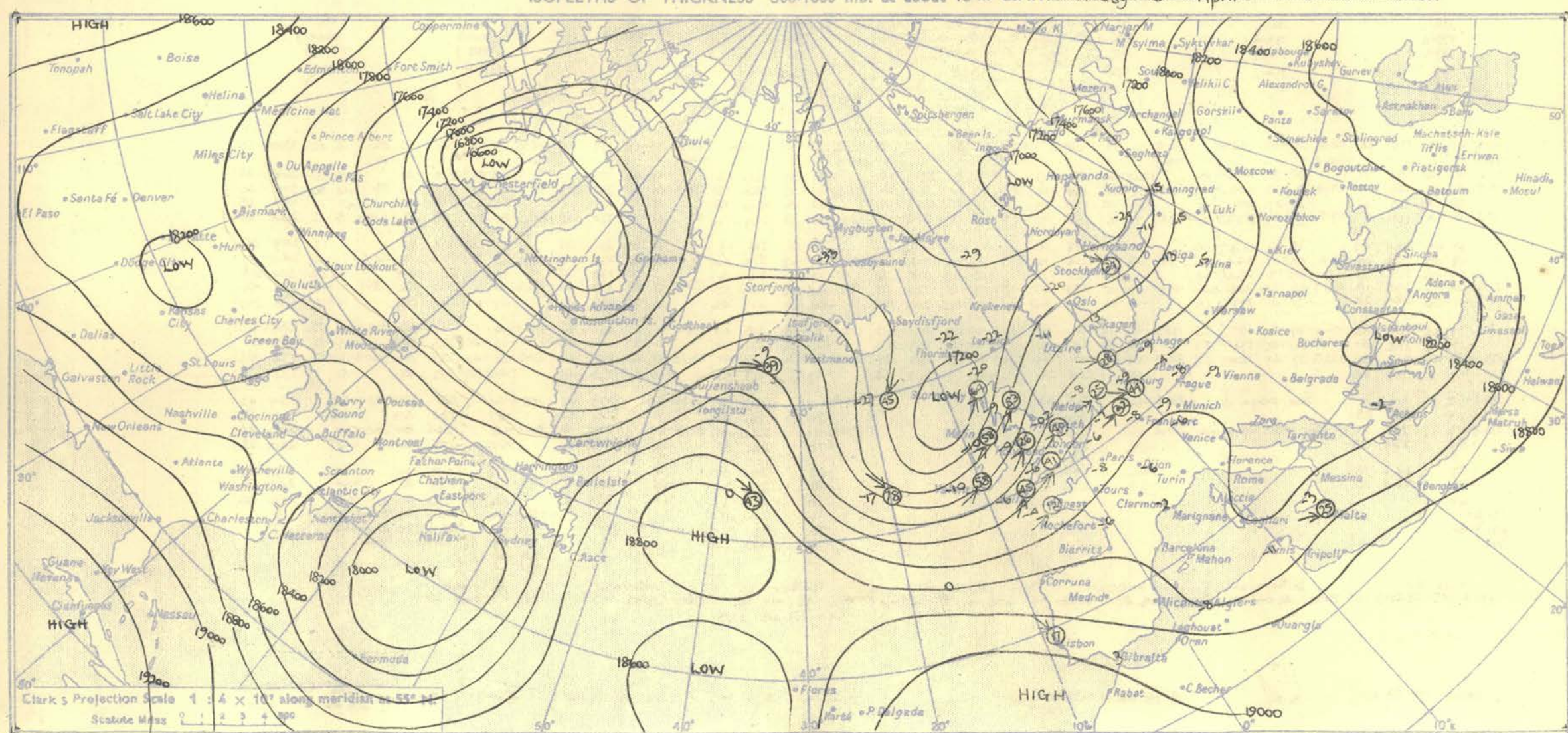
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Meteorological Office, Air Ministry, Kingsway, London, W.C.2  
NELSON K. JOHNSON, K.C.B., D.Sc., Director.





ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Friday 6<sup>th</sup> April





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.	15h.		G.M.T.	Wind Dir. Vel.	15h.		G.M.T.	Wind Dir. Vel.	15h.		G.M.T.	Wind Dir. Vel.	15h.		G.M.T.	Wind Dir. Vel.	15h.		G.M.T.	Wind Dir. Vel.	15h.		G.M.T.	Wind Dir. Vel.	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
1000	991.3	1001.3	mb			998.7	mb			1001.5	mb			1000.7	mb			1002.0	mb			1004.4	mb			1005.5	mb			1007.4	mb		1005.5	mb					
950	991.3	991.3	mb			997.0	mb			1000.6	mb			991.2	mb			1000.0	mb			999.8	mb			989.6	mb			996.8	mb		1004	mb					
900	92.9	92.9	mb			92.2	mb			89.9	mb			88.7	mb			82.1	mb			71.2	mb			76.5	mb			79.0	mb		91.5	mb					
850																																							
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		Inversion 800-77.5mb. 18"				Inversion 500mb. -29°-474mb. -28° Isothermal 844-834mb. 23°				Inversion 720mb. 12°-699mb. 13° Isothermal 699-668mb. 13°				Isothermal 663-633mb. 8° 581-568mb. 0°				Inversion 871mb. 33°-859mb. 26° Isothermal 785mb. 26°-770mb. 28°				Isothermal 935-900mb. 45°				Isothermal 954-940mb. 45° 760-740mb. 30°				Inversion 687mb. 10°-650mb. 11° Isothermal 650-638mb. 11°									
Tropopause		I 256mb. -73° 32,100'				I 285mb. -56° 29,700'				II 264mb. -70° 32,000'				II 283mb. -60° 30,400'				II 239mb. -73° 34,100'				N.R.				I 226mb. -76° 35,800'				II 234mb. -71° 35,100'				II 288mb. -61° 30,200'				Tropopause	
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				STATION					
Pressure mb	Time M.S.L.	21h.		G.M.T.	Wind Dir. Vel.	21h.		G.M.T.	Wind Dir. Vel.	21h.		G.M.T.	Wind Dir. Vel.	21h.		G.M.T.	Wind Dir. Vel.	21h.		G.M.T.	Wind Dir. Vel.	21h.		G.M.T.	Wind Dir. Vel.	21h.		G.M.T.	Wind Dir. Vel.	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
1000	999.4	999.4	mb			998.4	mb			996.9	mb			997.4	mb			998.2	mb			999.3	mb			1001.8	mb			1004.9	mb								
950	989.6	989.6	mb			996.7	mb			996.0	mb			987.9	mb			996.2	mb			994.7	mb			985.9	mb			994.1	mb								
900	908	908	mb			912	mb			900	mb			925	mb			850	mb			810	mb			810	mb			872	mb								
850																																							
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70																																							
60																																							
		Inversion 771mb. 14°-744mb. 16°				Isothermal 500-460mb. -29°				Inversion 776mb. 42°-980mb. 44°				Inversion 605mb. -8°-585mb. 8°				Isothermal 996-985mb. 44° 769-731mb. 22°				Isothermal 261-250mb. -71°				Isothermal 845-828mb. 33°													
Tropopause		I 243mb. -74° 33,300'				N.R.				I 250mb. -71° 32,600'				N.R.				II 252mb. -76° 32,000'				I 223mb. -76° 35,500'				II 226mb. -72° 35,600'				I 254mb. -65° 32,800'				I 268mb. -67° 37,100'				Tropopause	

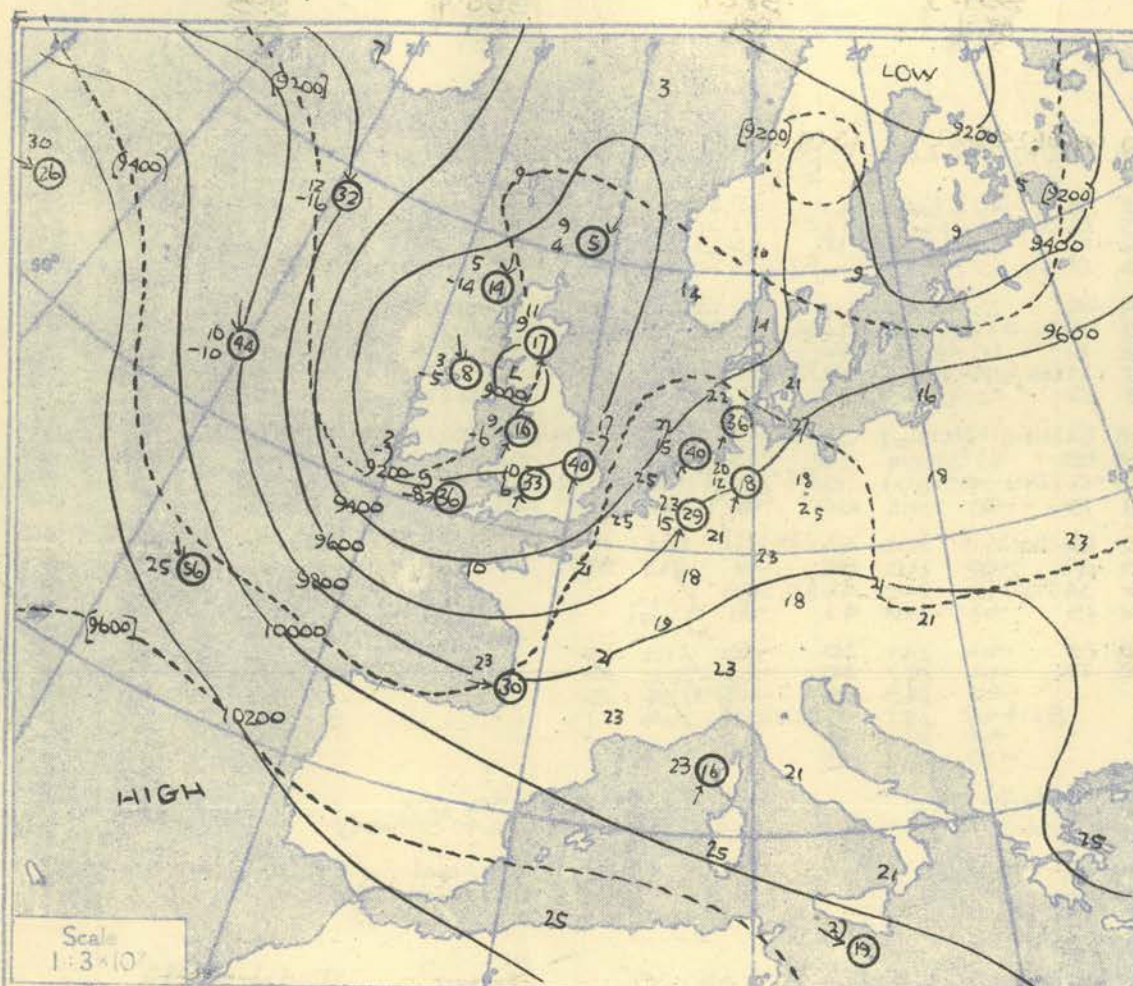


## RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	Valencia O.L.G.	STATION
Time M.S.L.	03hrs 03.3	03hrs 03.7	03hrs 03.2	03hrs 03.2	03hrs 03.2	03hrs 03.8	03hrs 03.3	03hrs 00.1	03hrs 00.0	Time M.S.L.
Surf	03.3	03.7	03.2	03.2	03.2	03.8	03.3	00.1	00.0	Surf
Pressure	996.3	996.1	992.3	992.3	992.1	991.3	992.2	990.4	990.4	Pressure
Wet-bulb	50.0	52.2	50.4	50.4	50.4	50.4	50.4	50.4	50.4	Wet-bulb
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	02.741 38	0.3 36 34 350	05 0.2 40 40	02.6 35 33 310	08 0.6 40 38 240	10 01.2 44 42 220	13 04.4 42 40 230	08 02.9 40 35 225	10 0.3 39 37	Surf
1000	0.5	0.6	1.9	1.2	1.3	1.2	0.4	0.2	0.0	1000
950	37 34	35 30 012	21 37 37 232	31 30 311	35 34 268	40 37 244	39 37 247	40 31 252	27 34 28	950
900	27.4 32 28	27.5 29 21 017	18 26.1 31 31 199	07 26.3 26 25 310	10 26.6 30 29 285	18 26.9 36 33 243	17 27.7 33 31 231	21 28.4 33 26 260	28 27.8 27 23	900
850	27 23	23 14 018	15 26 26 182	09 21 19 212	12 25 23 266	20 30 21 229	18 29 27 249	21 26 21 262	34 21 16	850
800	58.0 20 18	57.6 17 03 015	14 56.8 23 23 179	09 56.8 17 13 216	14 57.0 18 13 250	28 57.7 23 21 216	26 58.3 23 20 247	24 58.9 21 13 263	34 58.0 13 10	800
750	15 11	13 -2 024	14 17 17 179	13 10 04 318	13 14 10 234	24 23 07 214	34 16 13 237	27 16 04 265	36 09 03	750
700	31.7 09 04	31.2 03 14 030	14 30.8 11 09 181	17 30.2 03 5 333	08 30.1 09 06 193	16 30.0 17 7 217	40 30.2 10 06 235	39 30.7 03 8 261	36 31 40 1.7	700
650	01 -5	3 -20 030	11 02 -2 178	21 -05 -13 342	11 02 -1 186	21 10 -14 215	46 02 -2 233	36 03 -13 271	37 -5 -16	650
600	12.7 -5 -11	12.8 6.13 -26 031	09 12.8 -8 -11 179	24 12.9 14 -21 241	14 12.8 -6 -9 158	24 13.0 6 04 -13 213	49 13.0 3 -2 7 218	49 13.0 8 -5 -21 273	41 12.7 -14 -27	600
550	-14 -20	-21 -22 158	10 -17 -19 183	28 -23 -30 346	13 -14 -17 198	33 -5 -15 269	58 -8 -14 214	62 -16 -31 278	49 -25 -36	550
500	17.0 -19 -25	17.1 29 -37 163	24 17.0 23 -26 183	36 16.9 24 -42 347	16 17.0 22 -27 195	52 17.4 8 -14 -21 204	59 17.4 18 -23 214	67 17.4 0 26 40 214	55 17.2 -30 43	500
450	-25 -35	-39 -43 156	36 -27 -30 151	51 -43 245	02 -30 -35 194	69 -23 -37 204	59 -25 -33 208	70 -32 -47 268	53 -42	450
400	24.2 -35 -43	22.1 5.44 180	36 22.1 13 -35 43	58 21.9 7.42 204	14 22.1 13 -48 193	81 22.8 34 -50 207	55 22.7 35 -47 198	81 22.8 35 -55 251	47 22.1 -24 3	400
350		-51 184	34 -51 183	66 -46 213	15 -48 187	75 -48 208	60 -46 207	82 -42	-46	350
300		28.4 3.54 156	19 28.5 6.1 187	64 28.4 4.8 214	12 28.6 2.56 189	66 29.0 2.60 203	63 28.9 5.57 208	78 28.4 6.46	28.4 6.46	300
250		35 21.8 08	20 35 20.1 33	33 -49 254	14 -57 260	42 -69 210	55 -61 213	57	-47	250
200		31.7 5.8 242	06 31.2 1.59 224	21 31.0 5.53 268	16 31.3 4.53 223	34 31.5 7.65 219	46 31.5 3.05 219	41.4	23.4 5.8	200
170		58 264 09	-59 229 21	21 -57 276	16 -59 236	29 -63 219	42 -61	31.4	-58	170
150		58 274 12	-60 235 14	14 -60 279	16 -62 250	29 -62 241	30 -63 210	30	-61	150
130		61 256 13	-62 264 16	16 -60 256	17 -61 258	27 -62 247	30 -63 232	29	-63	130
110		60 232 13	-63 276 18	18 -64 279	17 -61 258	27 -62 247	30 -63 232	29	-63	110
100		51.9 6.1 299	15 51.9 6.6	51.00 -64	252 11 52.0 5.66	52.1 6.7 248	52.2 5.68	266 27	52.0 5.63	100
90		62 303 14				68 24.9 24	68 24.9	266 27	68 24.9	90
80						70 26.4 18			70 26.4	80
70										70
60										60
Inversion		996 mb - 585 mb 39. 800 mb - 750 mb 10. 442 mb - 433 mb 35			Inversion 190 mb - 167 mb 17 Isothermal 300 - 262 mb - 56					Inversion 190 mb - 167 mb 17 Isothermal 300 - 262 mb - 56
Tropopause	NR.	II 32.5 mb - 54° 26700'	I 26.8 mb - 68° 30900'	I 45.4 mb - 44° 19000'	I 25.1 mb - 57° 32400'	I 24.7 mb - 70° 33200'	I 28.3 mb - 59° 30000'	NR.	I 43.6 mb - 45° 20100'	Tropopause
STATION	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE		STATION
Time M.S.L.	09hrs 09.5	09hrs 09.0	09hrs 09.0	09hrs 09.4	09hrs 09.8	09hrs 09.4	09hrs 09.6	09hrs 09.4		Time M.S.L.
Surf	09.5	09.0	09.0	09.4	09.8	09.4	09.6	09.4		Surf
Pressure	997.5	995.3	995.8	993.5	990.7	989.9	990.0	990.0		Pressure
Wet-bulb	51.7	50.0	51.2	51.8	51.4	51.1	51.3	51.0		Wet-bulb
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	02.741 38	04 0.5 42 36 360	18 0.2 39 39	02.6 38 31 340	13 0.6 40 33 260	15 01.2 39 38 235	08 04.4 40 34	02 9.3 37 350	13	Surf
1000	0.7	0.9	1.5	1.8	1.9	1.5	1.0	1.4		1000
950	38 37 068	38 34 011	31 36 36 034	39 35 30 333	39 35 29 264	17 35 32 273	21 37 29 185	12 35 32 333	26	950
900	27.2 29 26 066	27.2 27 25 019	32 25.4 31 30 046	20 26.0 28 23 336	44 25.9 27 21 271	15 26.4 31 27 274	21 26.9 30 24 193	15 26.5 30 27 333	31	900
850	24 20 035	27 23 026	30 26 25 080	18 22 17 344	43 21 18 287	16 26 22 273	28 24 19 200	20 25 21 330	36	850
800	57.6 15 15 046	08 57.8 22 20 031	27 56.0 22 21 047	18 56.4 17 07 347	42 56.1 15 05 282	17 56.9 26 17 213	21 57.4 21 16 204	22 57.0 19 15 338	34	800
750	12 10 04	09 17 13 042	24 15 13 014	20 12 01 348	44 11 -4 269	20 15 13 264	18 16 11 208	26 12 06 325	38	750
700	31.2 01.5 031	10 31.7 11 06 047	23 30.1 06 02 044	18 30.9 04 -6 346	40 30.6 05 -13 257	22 30.7 08 04 232	20 31.2 10 02 210	27 30.6 06 00 311	34	700
650	01 -8 026	15 03 -2 048	20 01 -3 063	13 -5 -11 350	34 -3 -24 3	27 01 -4 232	30 02 -6 210	29 00 -5 308	33	650
600	12.9 -1.7 -4 023	16 12.9 -5 -10 033	23 12.8 -3 -8 078	12 12.3 -12 -19 348	33 12.1 -11 -26 233	38 12.6 -6 -13 258	36 12.9 -6 -12 210	30 12.4 -7 -13 313	32	600
550	-13 -4.9 119	05 -14 -20 055	22 -12 -18 087	11 -21 -32 340	30 -21 -35 232	38 -15 -29 243	41 -14 -20 220	41 -17 -24 316	27	550
500	17.3 21 -25 184	16 17.3 21 -30 064	14 17.3 21 -28 120	12 16.9 32 42 351	28 16.9 30 44 266	42 17.5 23 44 249	56 17.5 23 31 222	52 17.4 28 38 310	24	500
450	-25 -34 183	13 -33 -41 107	08 -32 -40 122	22 -44 003	27 -40 -53 233	48 -33 -53 238	57 -34 -43 218	57 -37 -47 313	27	450
400	24.3 40 46 193	30 24.3 42 102	07 22.1 43 142	29 24.4 30 001	22 24.5 6 43	29 22.8 37 59 212	63 22.3 47 223	57 22.1 8 41 286	31	400
350	-53 193	42 -53 091	07 -48 148	23 -46 352	19 -46 218	21 -41 207	54 -47 223	48 -41 277	28	350
300	26.9 6.8 193	46 26.8 4.58	07 11 25.3 53	15 22 -48 004	18 25.2 4.7	20 21 26.5 45	20 31 28.6 47	22 34 28.3 42	28 32	300
250	31.2 6.4 228	12 31.3 5.58	12 31.3 5.50	21 31.3 5.50	21 31.3 5.50	21 31.3 5.50	21 31.3 5.50	21 31.3 5.50	21 31.3 5.50	250
200	62 241	13 -54 237	12 -52 253	06	06	06	06	06	06	200
170										170
150	62 265 11	-58 328 12	-53 317 07							150
130	66 258 11	-56 328 12	-53 317 07							130
110	66 257 15	-57 328 12	-53 317 07							110
100	64 269 17	-57 328 12	-53 317 07							100
90	64 266 14									90
80										80
70										70
60										60
Inversion		542 - 333 mb - 14°			Inversion 406 mb - 350 mb 43 333 mb - 46 - 317 mb 43 Isothermal 362 - 333 mb - 46° I 40.8 mb - 50° 21600'					Inversion 409 mb - 350 mb 43 350 mb - 46 - 317 mb 43 Isothermal 362 - 333 mb - 46° I 40.8 mb - 50° 21600'
Tropopause	I 26.5 mb - 73° 31200'	II 32.9 mb - 58° 26600'	I 31.5 mb - 54° 27400'	I 40.6 mb - 34° 21500'	I 28.8 mb - 50° 27200'	II 31.5 mb - 41° 27600'	I 38.0 mb - 49° 23400'	I 39.5 mb - 42° 21300'		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.

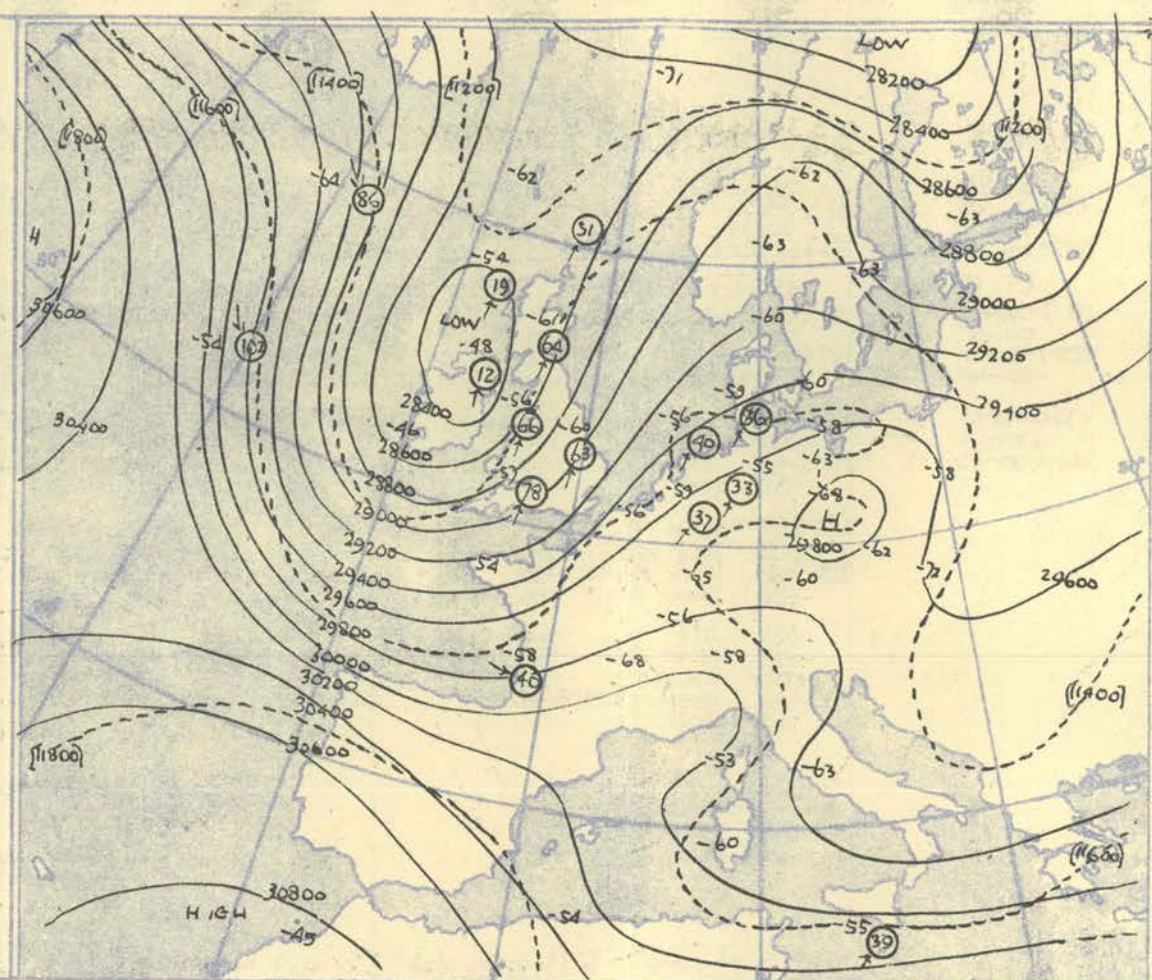


Scale  
1:3x10

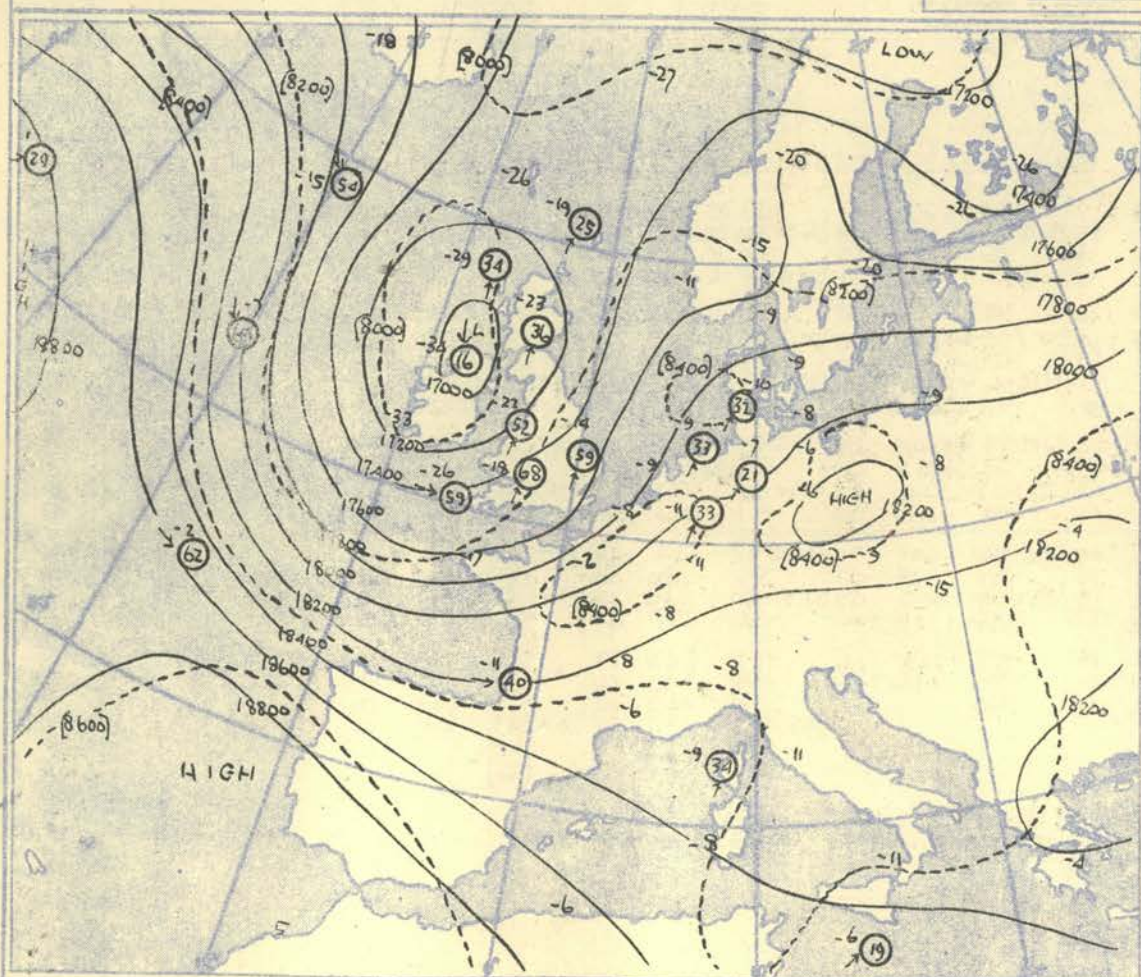
The continuous lines are contour lines of the 400 mb. surface  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

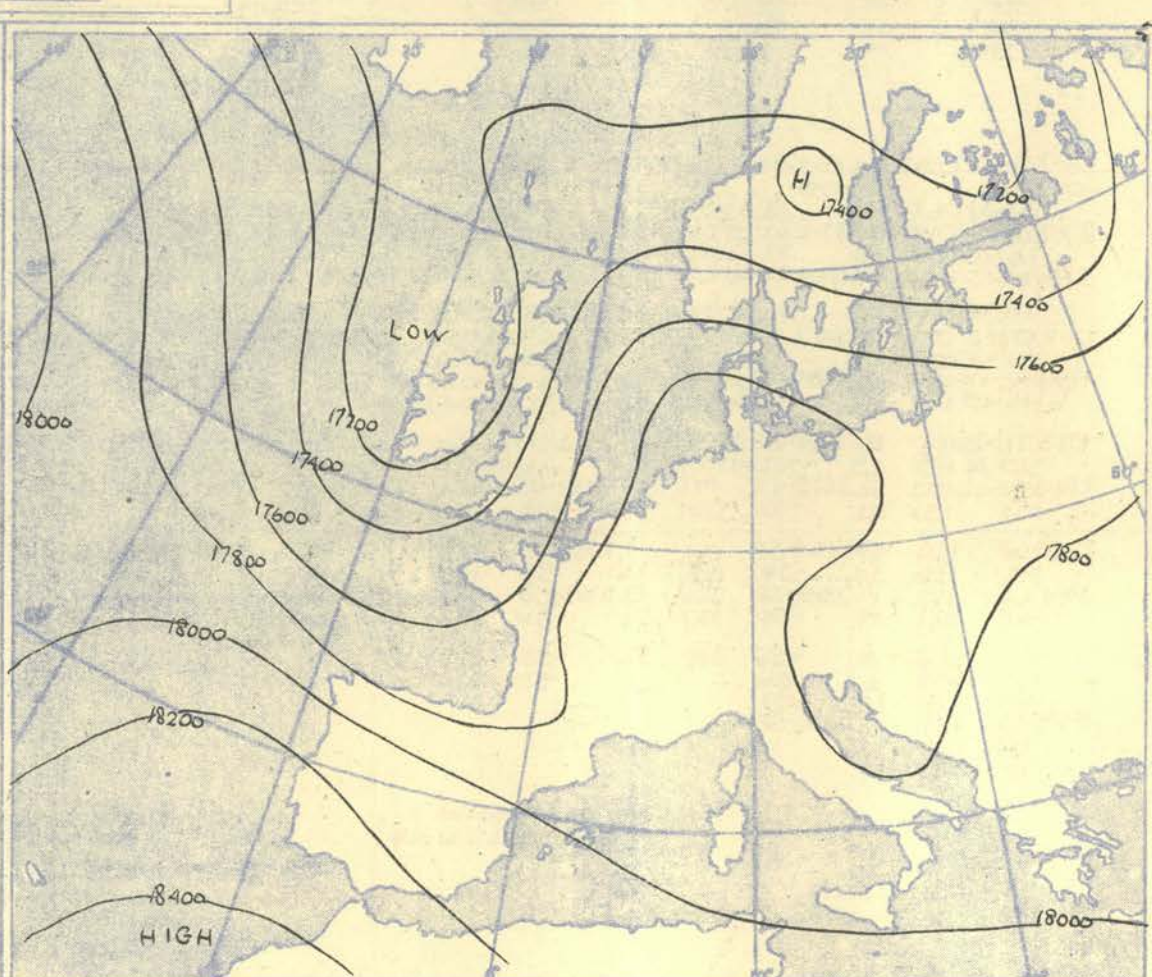
100 60 40 20 10 knots



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.



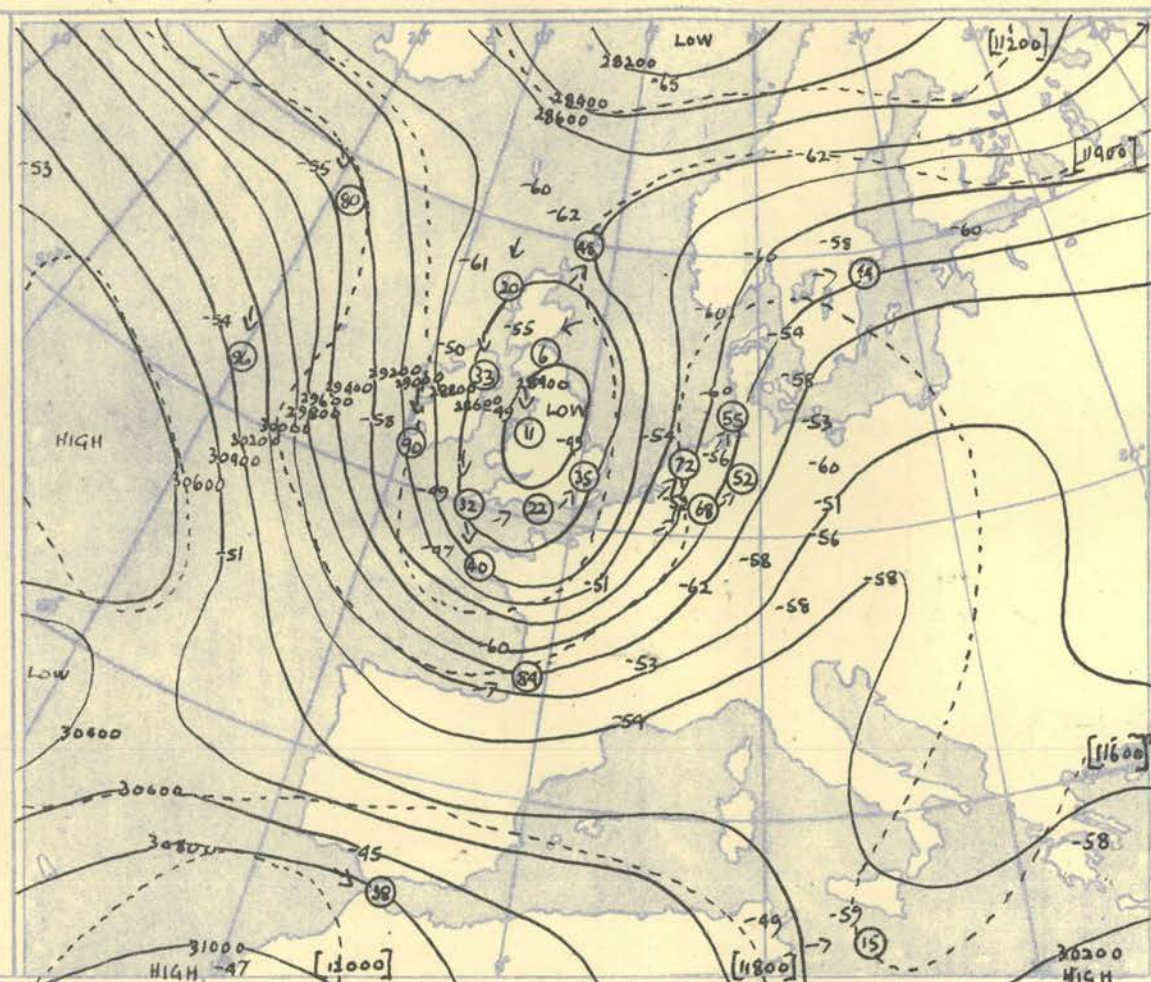
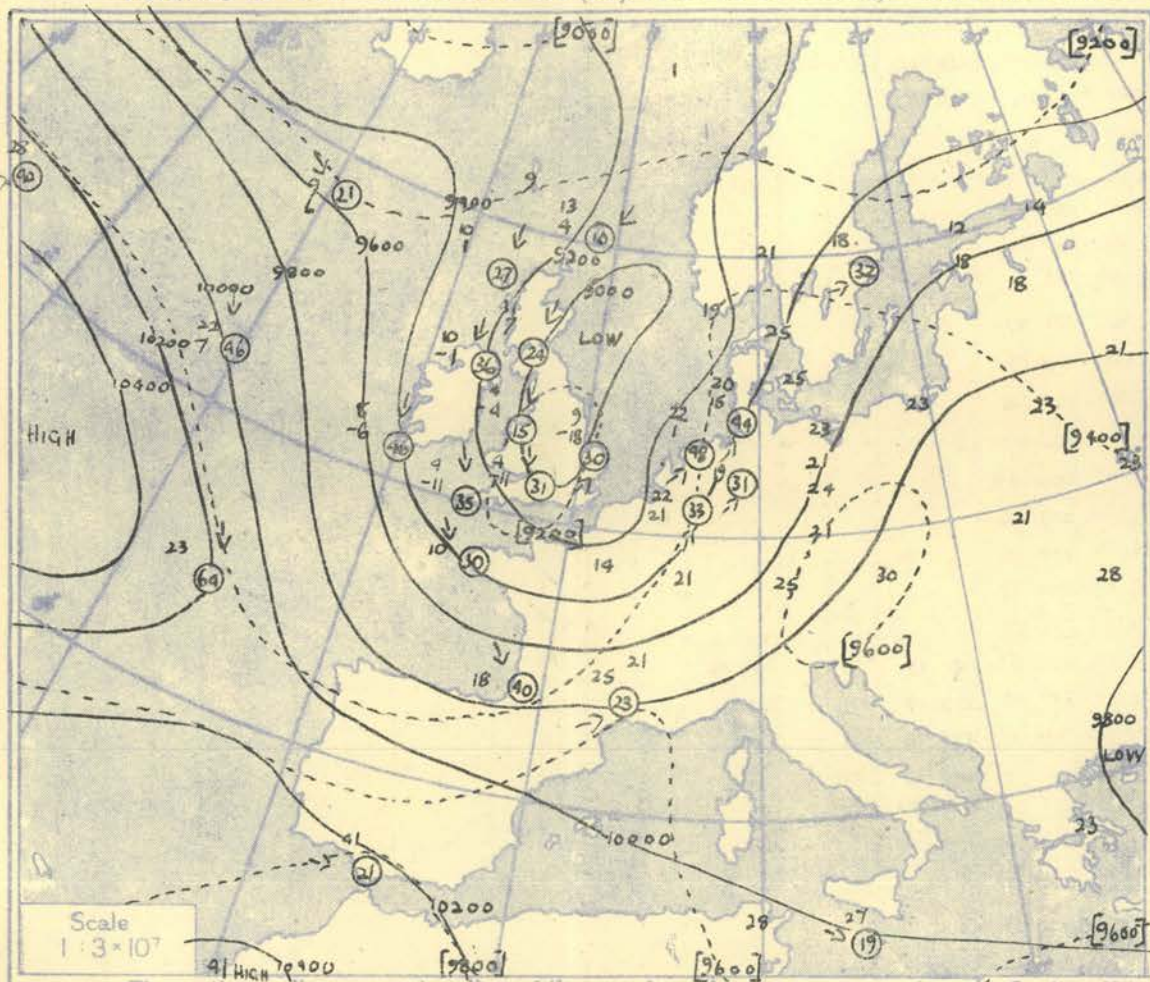
## DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

NEPHOSCOPE OBSERVATIONS

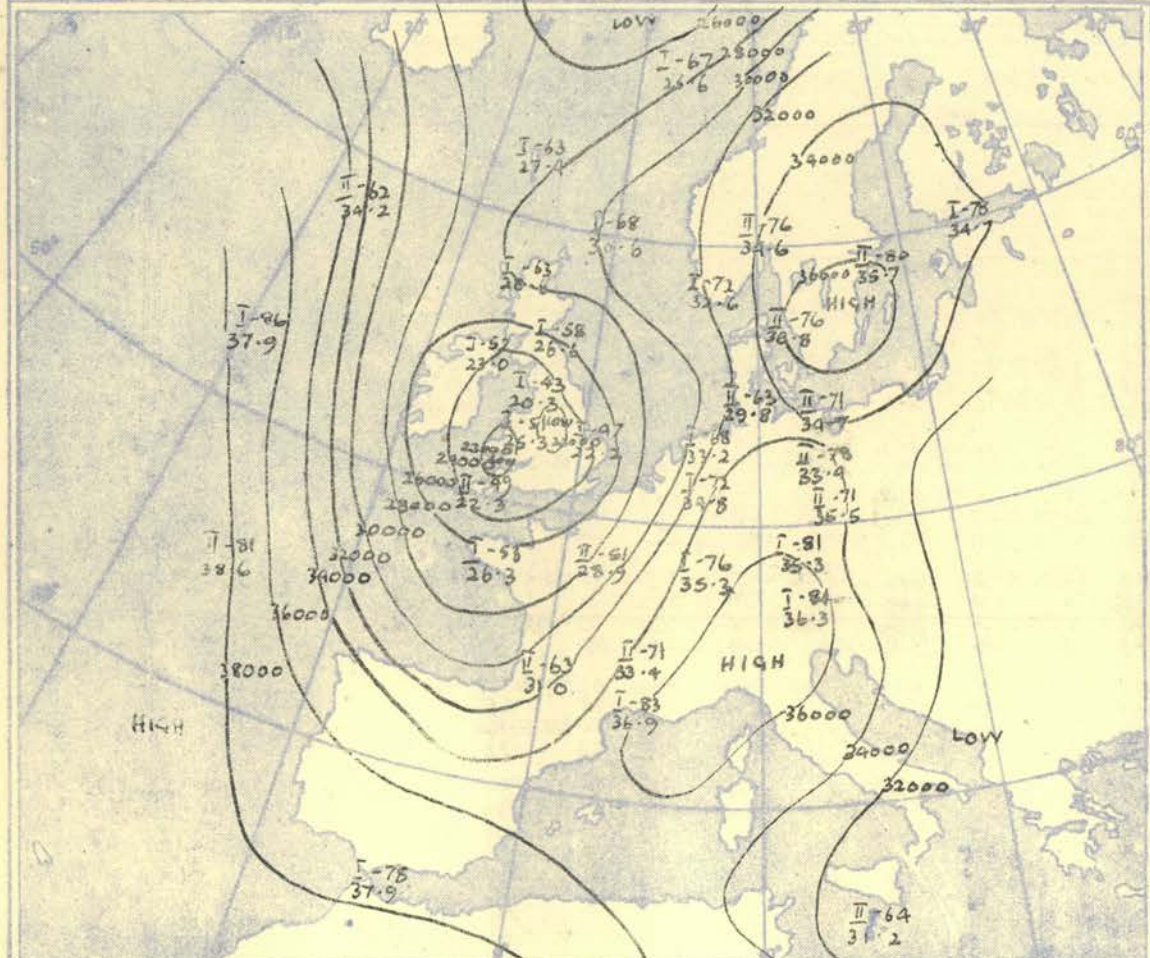
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.

Inversion  
791 mb 22° -  
764 " 27°  
500 mb -05°  
490 " -04°





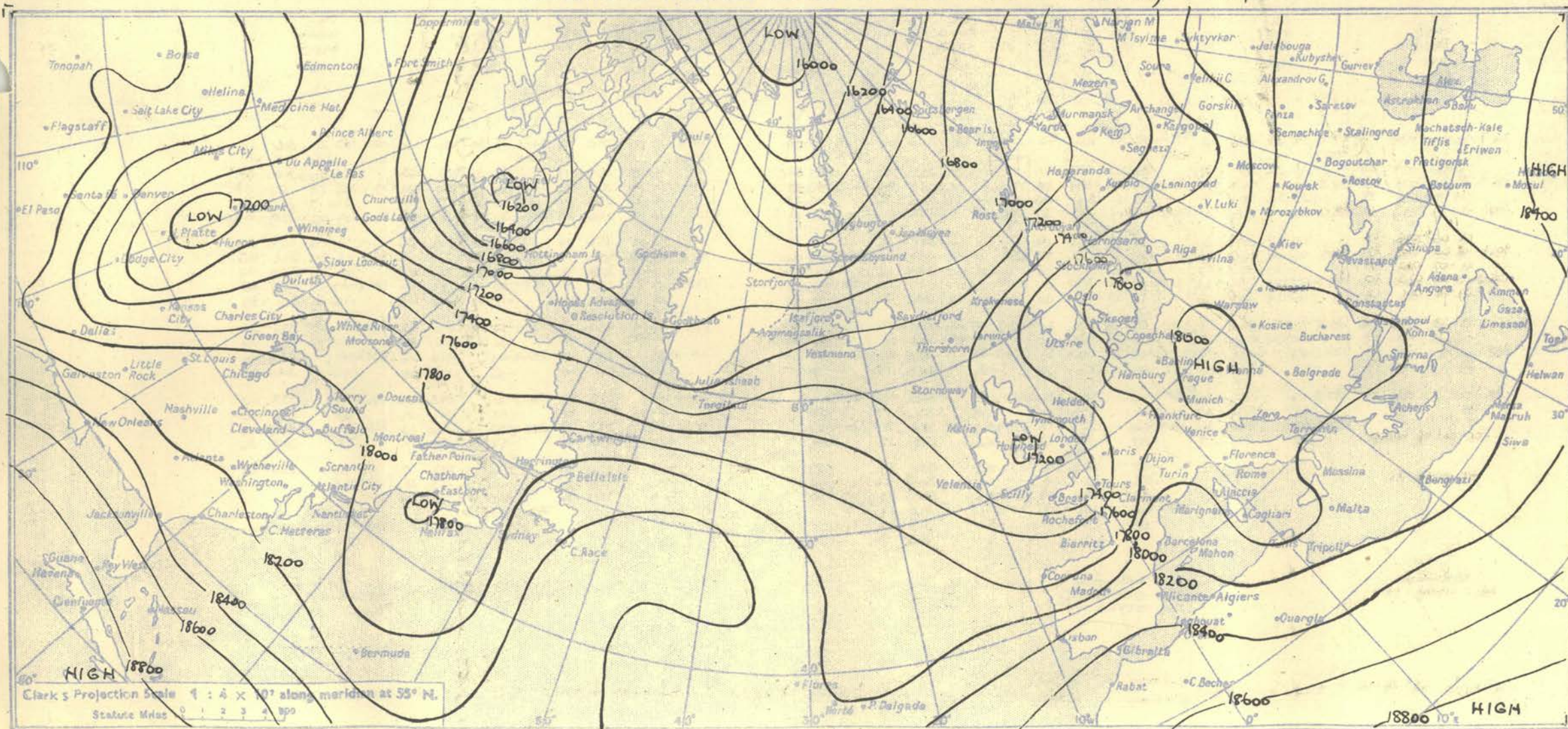
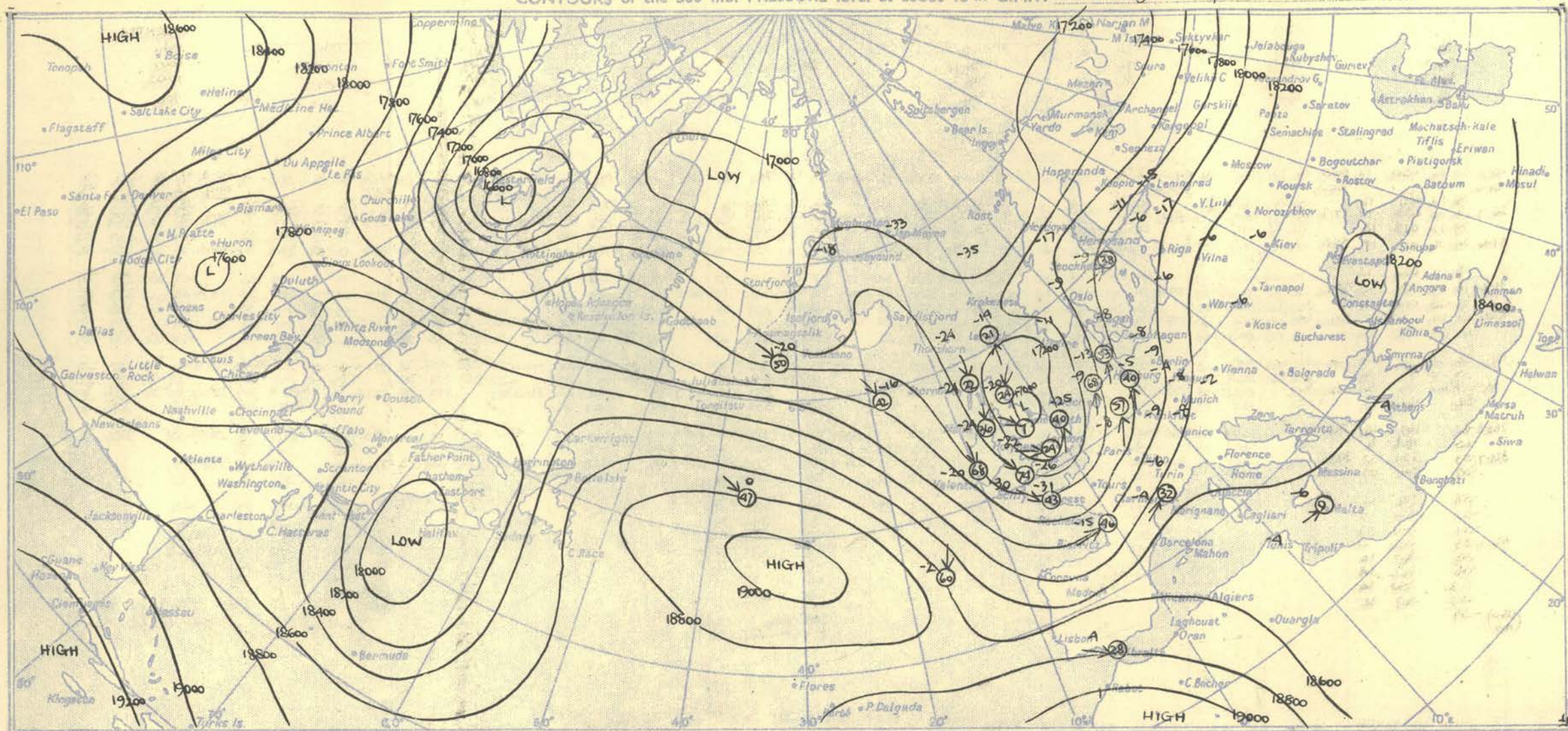
TROPOPAUSE CHART at about 15h. G.M.T.



NOTES ON THE AEROLOGICAL SITUATION.

The cold trough moved east in the south but remained stationary in the north resulting in the formation of a separate cold pool over southern England. Changes slight elsewhere.







## 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.	15h.	G.M.T.	mb		15h.	G.M.T.	mb		15h.	G.M.T.	mb		15h.	G.M.T.	mb		15h.	G.M.T.	mb		15h.	G.M.T.	mb		15h.	G.M.T.	mb		15h.	G.M.T.	mb		15h.	G.M.T.	mb		Time M.S.L.					
Surf	996.3		mb		999.0		mb		990.4		mb		996.1		mb		991.8		mb		993.0		mb		994.8		mb		992.0		mb		1007		mb		Surf					
Freezing	896		mb		893		mb		900		mb		910		mb		947		mb		916		mb		924		mb		902		mb		900		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	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb					
Surf	02.7	42	38	050 12	00.5	46	39	010 18	00.2	42	41	030 07	02.6	40	36	330 25	00.6	39	37	290 02	01.2	41	39	230 07	04.4	39	35	310 12	02.9	44	36	280 18	00.3	47	39	335 31	Surf					
1000	01.0				00.3				02.6				01.1				02.2				01.9				01.5				00.7				01.9				1000					
950	38 34	041	16		39 33	008	21		37 36	356	21		37 33	336	39		32 28	283	06		36 33	192	10		35 32	308	19		38 31	286	30		38 33	332	38	950						
900	26.9	30	25	035 17	27.9	30	27	007 32	25.4	32	31	014 25	26.9	31	27	345 42	25.6	27	24	298	04		30 27	195	10		26.4	30 25	307	27	28.8	32 27	197	31	29.9	32 26	334	35	900			
850	29 25	028	15		27 20	011	31		27 26	017	28		25 21	352	36		23 20	340	04		25 22	204	16		24 19	311	29		25 17	300	32		27 27	337	52	850						
800	57.6	24	16	018 17	58.5	22	15	012 28	56.0	21	20	016 31	57.3	21	16	358 25	56.2	18	14	352 07	56.4	20	17	207 20	56.8	18	03	315	26	59.2	18	08	303 32	60.5	21	20	339	46	800			
750	18 11	024	13		16 08	011	27		16 11	014	34		15 10	358	34		11 05	351	12		15 13	204	26		11 07	314	29		11 01	306	33		15 10	337	47	750						
700	91.7	13	04	037 10	92.4	10	01	010 27	89.9	11	07	007 24	91.2	10	01	350 36	89.7	04	04	349	15		90.2	09	18	199	30		90.3	04	11	316 31	92.7	04	11	308 35	94.3	08	06	333	46	700
650	07 03	013	10		03 06	009	22		04 00	023	20		03 07	356	35		03 11	329	14		02 13	192	36		00 09	304	25		02 13	310	39		00 11	332	46	650						
600	130.1	01 09	Calm		130.4	05 17	014	20	128.0	03 08	032	20	129.2	05 15	006	38	127.2	12 16	326	10	128.1	07 17	188	44	128.0	08 17	293	22	130.3	11 21	319	48	132.1	07 21	332	50	600					
550	06 15	170	09		14 27	003	25		11 16	036	20		13 23	009	36		21 28	322	07		16 24	186	48		16 25	295	23		20 31	324	61		14 34	331	59	550						
500	174.2	14	22	176 21	173.7	24	35	354 23	171.6	20	25	039 24	172.5	24	33	015 26	169.9	32	41	305	07		171.3	25	37	183	40		171.1	26	35	296 24	173.1	30	42	320 74	175.4	21	43	333	68	500
450	25 33	178	34		34 44	349	11		31 36	046	22		37 46	022	36		40 51	334	13		36 45	193	39		37 46	299	23		37 46	299	23		28 50	337	80	450						
400	228 37 45	171	39	224 42	006	03		222 52	059	26		222 9 49	028	32		220 11 41	352	15		221 7 47	193	40		221 3 47	292	18		221 3 47	292	18		226 7 39	339	87	400							
350	50	167	43		55	127	05		53	047	17		50	004	42		50	334	14		48			204	36							322 49			340	97	350					
300	288.8	62		169 48	286.5	61		353 20	285.1	55		060 06	285.7	50		344 33	283.2	49		327 11	284.9	49		201 35								315 32	287.5	58	340	90	300					
250	65	184	21		57			351 18	51			070 03	51			352 30	50			300 07	49											308 35					250					
200	374.7	59		229 12	373.4	56		347 12	373.3	50		323 07	374.2	50		345 23	371.7	53		276 14	373.7	49		228 25								297 34	375.9	59			200					
170	57	241	09					52	262	08			54			327 24	55			287 14	53											301 31					170					
150	58	226	10					54	270	13			57			325 18	56			278 13												293 27			62		150					
130	57	256	15					54	285	13			56			315 11	58			294 16												289 27			62		130					
110	59	266	14					56	276	12							60			289 11												283 25			62		110					
100	523.1	54		266 15				523.2	58								520.5	59			277 11											272 22			103 62		100					
90	58	267	10					55	282	12							63			274 12												176 22			62		90					
80	58	261	14														64																176 22			62		80				
70	59	252	14														64																287 25					70				
60	57	267	14														64																					60				
(553) mb																																										
Inversion 432mb. -43° - 402mb. -41°																																										
Isothermal 514-484mb. -21°																																										
Tropopause	I 275mb. -68° 30,600'				I 360mb. -63° 28,600'				I 329mb. -58° 26,600'				I 388mb. -52° 23,000'				I 432mb. -43° 20,300'				I 345mb. -51° 25,300'				II 400mb. -47° 22,100'				N.R.				II 400mb. -49° 22,300'				N.R.				Tropopause	
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE								STATION					
Time M.S.L.	21h.	G.M.T.	mb		21h.	G.M.T.	mb		21h.	G.M.T.	mb		21h.	G.M.T.	mb		21h.	G.M.T.	mb		21h.	G.M.T.	mb		21h.	G.M.T.	mb		21h.	G.M.T.	mb						Time M.S.L.					
Surf	993.7		mb		999.7		mb		993.2		mb		999.6		mb		993.2		mb		992.4		mb		996.4		mb		1004.0		mb						Surf					
Freezing	983.7		mb		998.0	</																																				

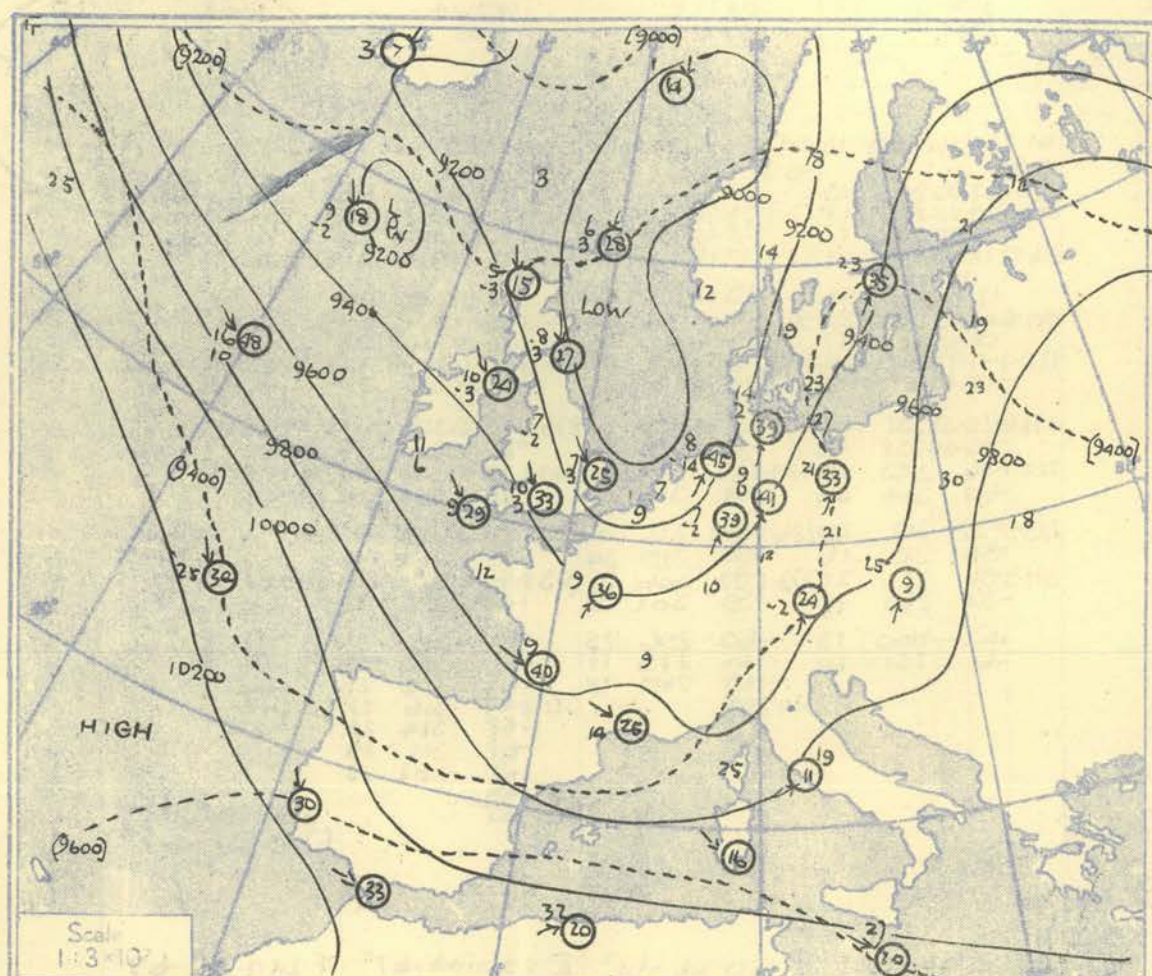


## RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	Valentia	STATION							
Pressure Time M.S.L. Surf Freezing	03hrs 992.2 982.1 935	G.M.T. mb mb mb	03hrs 998.8 997.1 914	G.M.T. mb mb mb	03hrs 992.9 991.0 903	G.M.T. mb mb mb	03hrs 994.8 990.3 901	G.M.T. mb mb mb	03hrs 1007.1 996.4 905	G.M.T. mb mb mb	03hrs 1008.5 1008 890	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	Pressure mb
	Surf 1000 950 900 850 800	02.7 36 35 360 15 -2.1 34 31 007 24 25.5 28 27 011 24 55.5 15 17 015 24	0.4 40 34 350 14 -0.3 36 27 342 24 24.27.6 30 24 349 24 24.58.1 16 11 350 18	0.2 40 34 310 08 -1.9 37 30 308 30 25.26.1 31 27 354 30 18.56.6 21 14 353 30	0.6 40 37 300 15 0.2 36 32 312 26 25.28.2 32 28 315 26 33.58.8 20 16 316 35	0.6 42 37 280 20 -0.9 36 33 295 23 26.52.9 28 29 18 27 23.20.290 18	0.2 38 36 250 13 -0.3 34 33 295 23 26.52.9 28 29 18 27 23.20.290 18	0.4 38 36 200 15 -0.3 34 33 295 23 26.52.9 28 29 18 27 23.20.290 18	0.9 44 39 200 18 01.9 39 34 313 30 26.30.0 31 27 318 29 26.22.32 29	0.3 44 38 285 08 2.8 44 38 286 06 28.22.32 29 25.21.302 29	0.3 44 38 285 08 2.8 44 38 286 06 28.22.32 29 25.21.302 29	0.3 44 38 285 08 2.8 44 38 286 06 28.22.32 29 25.21.302 29	0.3 44 38 285 08 2.8 44 38 286 06 28.22.32 29 25.21.302 29	0.3 44 38 285 08 2.8 44 38 286 06 28.22.32 29 25.21.302 29	0.3 44 38 285 08 2.8 44 38 286 06 28.22.32 29 25.21.302 29	Surf 1000 950 900 850 800	
	750 700 650 600 550	12 10013 25 89.5 06 03015 27 127.1 12 021 18 -15.17 018 06	10 06348 17 28.31.6 15 3 348 18 00.13 343 16 12.29.8 28 340 17	15 09347 31 18.30.4 08 03 342 27 00.4 347 20 -7.12 346 25	15 06314 34 27.2.6 10 3 322 29 03.19 320 28 -12.346 25	12 06 34 91.3 07 -2 01.5 318 27 -15.21 333 37	12 06 34 91.3 07 -2 01.5 318 27 -15.21 333 37	15 13322 34 22 91.2 10 03 323 29 03.19 320 28 -13.19 320 28	16 08313 30 28.34.5 09 -1 316 29 02.10 318 34 -12.34 315 29	17 13 29.35.3 11 06 34 07 02 -4.12	17 13 29.35.3 11 06 34 07 02 -4.12	17 13 29.35.3 11 06 34 07 02 -4.12	17 13 29.35.3 11 06 34 07 02 -4.12	17 13 29.35.3 11 06 34 07 02 -4.12	17 13 29.35.3 11 06 34 07 02 -4.12	17 13 29.35.3 11 06 34 07 02 -4.12	750 700 650 600 550
500 450 400 350	170.4 23 26360 07 31.38 012 11 22.13 43 008 11 -55 016 11	172.4 24 43352 23 34.43 345 24 22.22.1 45 337 20 -55 339 30	171.4 25 33322 23 33.42 343 21 22.22.1 45 337 20 -55 336 21	174.1 21 38312 29 25.37 308 34 22.25.4 42 312 34 -55 308 39	171.1 27 39 34 -38 47 22.14.6 343 36 -60 343 36	171.6 25 33331 42 25.44 338 45 22.14.6 343 36 -60 343 36	175.22 32306 28 28.48 316 26 22.22.2 39 318 40 -48 334 84	176.0 19 33323 51 28.39 325 54 22.22.2 39 318 40 -48 334 84	178.0 12 49 51 28.39 325 54 22.22.2 39 318 40 -48 334 84	178.0 12 49 51 28.39 325 54 22.22.2 39 318 40 -48 334 84	178.0 12 49 51 28.39 325 54 22.22.2 39 318 40 -48 334 84	178.0 12 49 51 28.39 325 54 22.22.2 39 318 40 -48 334 84	178.0 12 49 51 28.39 325 54 22.22.2 39 318 40 -48 334 84	178.0 12 49 51 28.39 325 54 22.22.2 39 318 40 -48 334 84	178.0 12 49 51 28.39 325 54 22.22.2 39 318 40 -48 334 84	500 450 400 350	
300 250 200 170	283.2 67 002 06 -55 125 02 36.6 58 252 07 -60 244 09	285.0 43 342 24 -62 335 23 31.2 58 318 23 -55 311 20	283.8 55 328 20 -55 336 21 37.8 59 306 18 -55 292 17	287.6 56 311 37 -55 314 41 37.4 58 314 40 -55 320 39	284.1 61 31 41 -60 314 41 37.0 59 314 40 -60 320 39	284.1 61 31 41 -60 314 41 37.0 59 314 40 -60 320 39	286.0 60 313 47 -56 315 34 37.3 56 282 21 -58 268 15	286.0 60 313 47 -56 315 34 37.3 56 282 21 -58 268 15	286.0 60 313 47 -56 315 34 37.3 56 282 21 -58 268 15	286.0 60 313 47 -56 315 34 37.3 56 282 21 -58 268 15	286.0 60 313 47 -56 315 34 37.3 56 282 21 -58 268 15	286.0 60 313 47 -56 315 34 37.3 56 282 21 -58 268 15	286.0 60 313 47 -56 315 34 37.3 56 282 21 -58 268 15	286.0 60 313 47 -56 315 34 37.3 56 282 21 -58 268 15	286.0 60 313 47 -56 315 34 37.3 56 282 21 -58 268 15	286.0 60 313 47 -56 315 34 37.3 56 282 21 -58 268 15	300 250 200 170
150 130 110 100 90 80 70 60	16 244 11 -62 267 13 -62 267 13 (115)	16 244 11 -62 267 13 -62 267 13 518.9-63 -62 267 13															



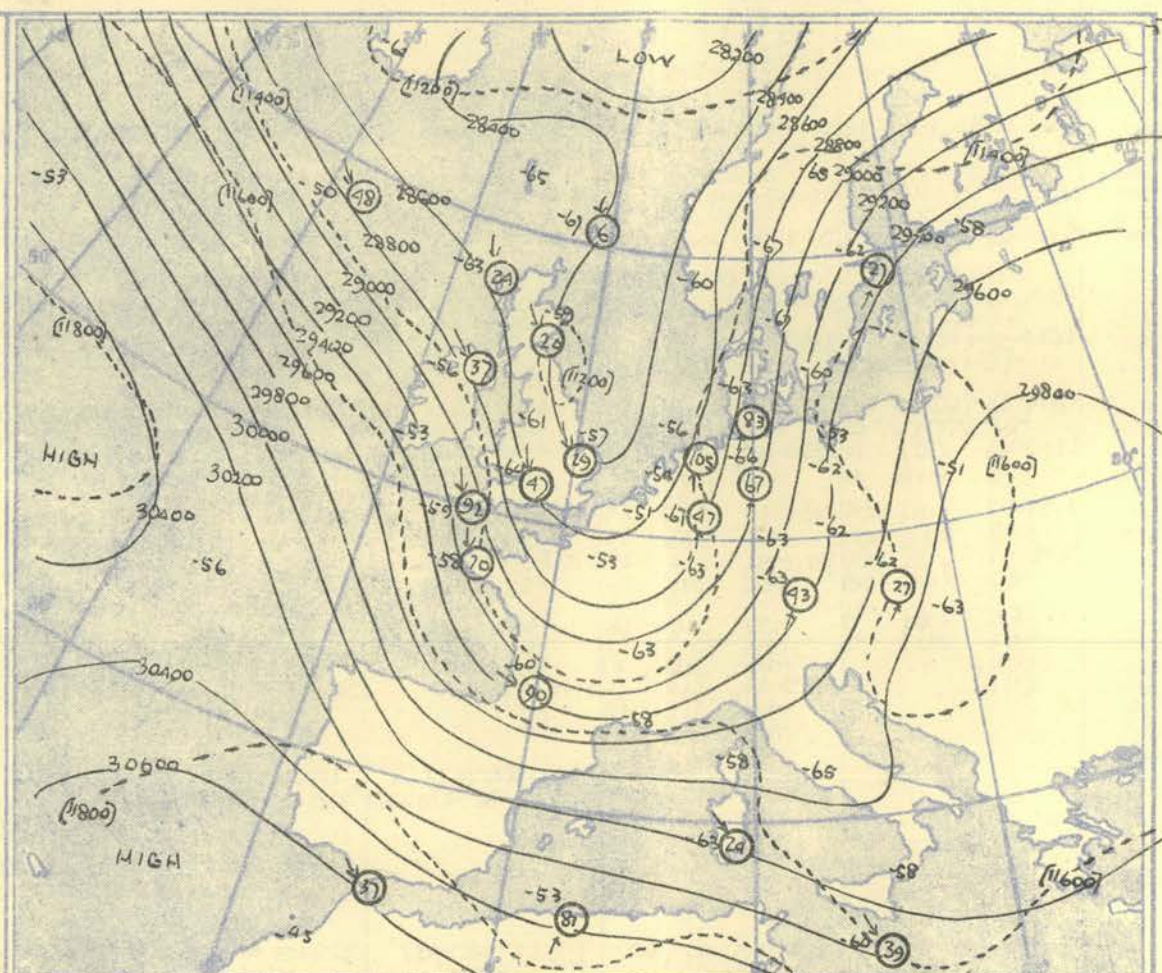
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



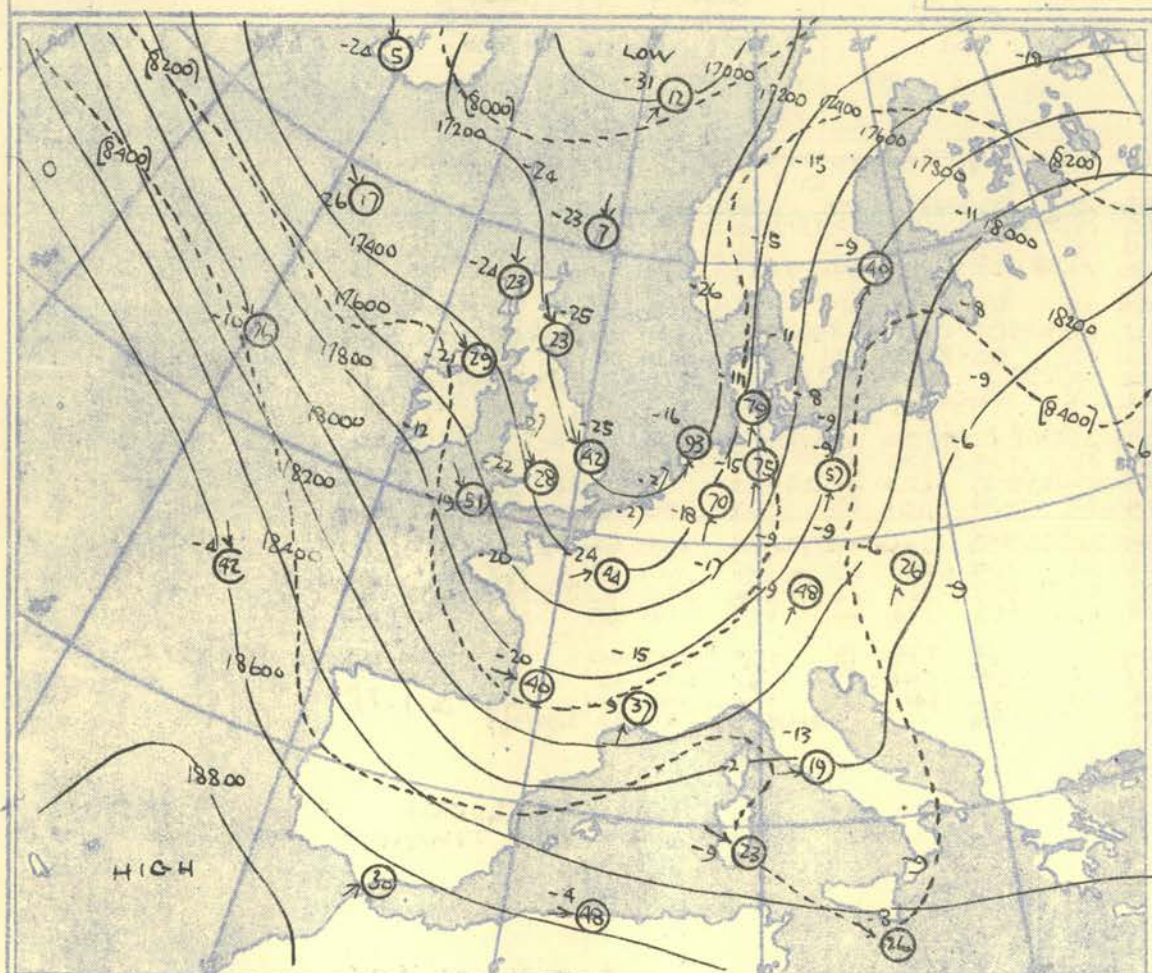
The continuous lines are contour lines of the 700 mb. surface  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

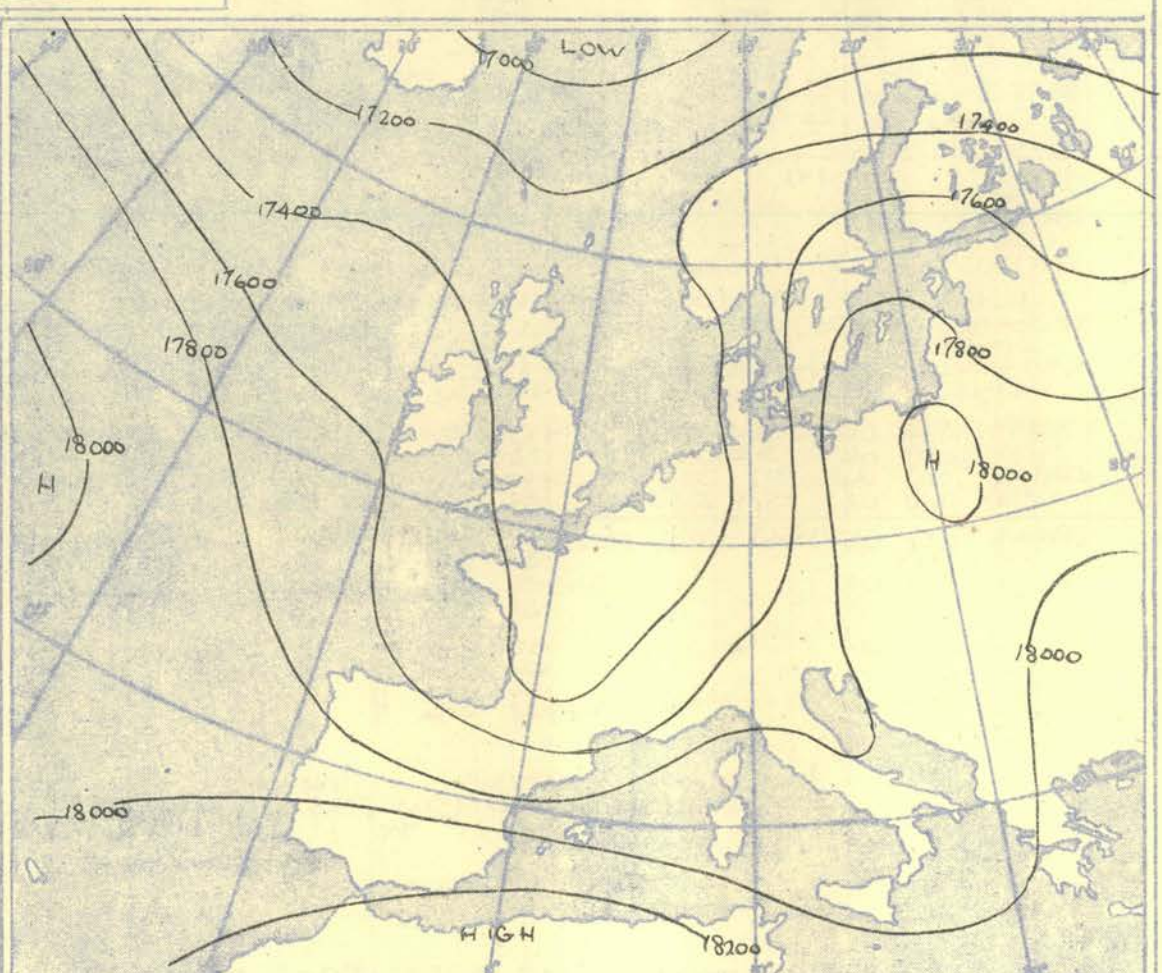
100 80 60 40 20 10 5 knots



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.



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															DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
Pressure (Time M.S.L. Surf Freezing)	48-1N			47-6N			51-3N																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																



cloud:-  
8/ Sc 940-  
1/8 820 mb  
Inversion  
850 mb 31°  
820 - 36°  
Isothermal  
800-750  
26°

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

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

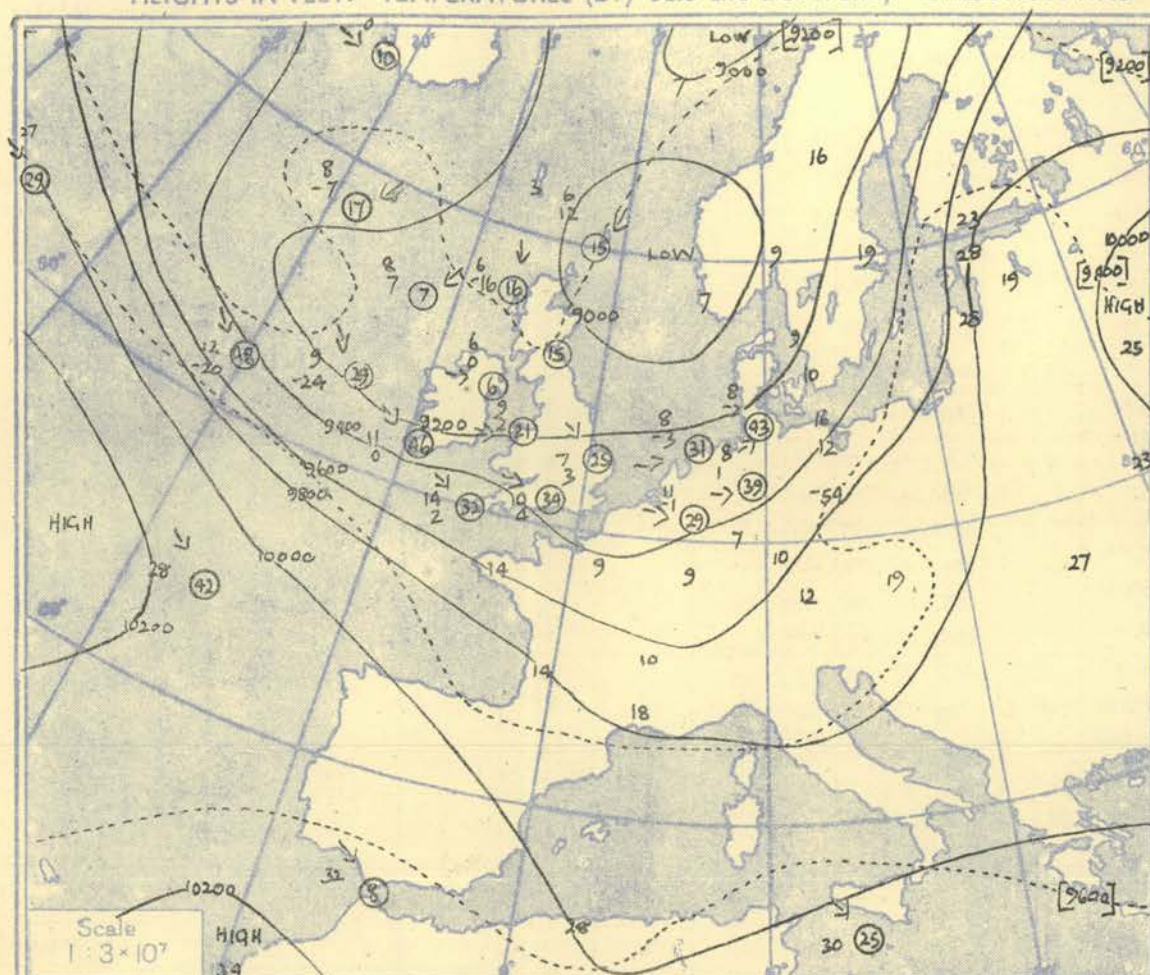
Ship	WEATHER WATCHER.				WEATHER WATCHER				WEATHER WATCHER				CUMULUS				CUMULUS				CUMULUS				CUMULUS				WEATHER RECORDER				Ship													
Lat/Long	58-6N		18-1W		58-7N		18-3		58-8N		18-7W		58-9N		19-0W		52-5N		20-0W		52-8N		20-0W		52-5N		20-0W		52-5N		20-0W		57-2N		13-3W		Lat/Long									
Pressure (Time M.S.L. Surf Freezing)	08L		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.		09L		G.M.T.		Time									
	998		mb		995		mb		999		mb		1005		mb		1015		mb		1007		mb		1004		mb		1004		mb		997		mb		M.S.L.									
	998		mb		995		mb		999		mb		1005		mb		1015		mb		1007		mb		1004		mb		1004		mb		997		mb		Surf									
	900		mb		895		mb		900		mb		930		mb		710		mb		850		mb		890		mb		900		mb		920		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		43	38	300	14	40	40	040	18	44	34	060	20	42	27	045	25	46	42	280	32	48	44	280	36	46	37	320	28	46	36	310	36	41	35	110	12	Surf								
1000	-0.7				-1.3				-0.4				-1.3				4.0	43	40	280	36	2.2	47	43	278	26	1.0	45	36	329	28	1.1	46	36	311	37	08	1000								
950		38	34	292	18	36	36	046	11	38	29	060	23	35	24	042	22	37	34	280	50	42	40	282	25	39	30	324	37	39	30	317	43	35	35	112	12	950								
900	27.4	32	28	294	19	26.7	32	32	053	12	27.7	32	23	060	25	29.1	27	32	280	52	30.6	36	36	284	29	31.3	33	24	321	44	29.2	32	24	319	12	27.0	29	29	104	13	900					
850		25	22	303	19	27	27	057	16	27	16	060	19	22	14	033	18	25	25	285	40	32	32	289	35	32	27	19	312	46	24	18	322	43	24	24	109	12	850							
800	58.0	22	15	309	19	57.4	22	21	064	18	58.4	21	10	062	18	59.4	21	62.5	19	18	286	40	61.6	28	28	287	33	60.1	20	13	302	51	59.7	19	05	325	12	57.4	20	20	143	08	800			
750		16	05	312	18	16	15	063	16	15	02	056	17	11	02	025	25	21	14	287	38	23	23	283	29	19	10	293	45	14	05	328	52	15	15	186	06	750								
700	92.0	09	-02	310	18	91.4	10	09	047	14	92.2	08	07	039	17	92.9	03	04	010	25	96.6	16	10	288	48	96.1	18	19	284	31	94.1	12	-20	295	48	93.5	07	-12	315	42	91.2	09	08	208	05	700
650		07	08	307	16	03	01	020	16	02	-12	353	27	06	-12	360	22	13	05	291	52	12	12	285	38	03	-28	293	60	-01	-18	320	48	07	00	213	05	650								
600	130.0	-07	-17	303	15	129.4	-06	-09	010	16	130.1	-06	-20	346	28	130.3	-13	-19	353	22	136.5	06	-09	293	56	134.9	04	04	288	40	132.2	-04	-38	295	63	131.2	-05	-26	339	52	129.1	-06	-09	228	04	600
550		-16	-29	303	12	-16	-19	016	15	-15	-50	346	24	-21	-28	347	27	-01	-18	295	68	-04	-14	288	42	-12	-47	304	66	-14	-35	322	56	-14	-18	196	05	550								
500	173.1	-26	-40	304	17	172.5	-27	-30	040	16	173.4	-24	-40	347	16	172.9	-28	-35	351	27	180.2	-10	-20	295	76	179.4	-10	-17		176.0	-10	-46	298	90	174.6	-23	-45	321	57	172.4	-24	-29	205	03	500	
450		-36	-52	298	30	-38	-42	056	11	-35	-51	355	10	-39	-45	346	27	-20	-28			-17	-29			-18					-33	-53	323	63	-37	-42	300	12	450							
400	223.4	-46		295	31	222.7	-48		030	08	223.9	-46		358	13	222.9	-52		004	24	232.4	-30	-38			232.0	-25	-38			228.6	-26			323	76	222.8	-47		317	17	400				
350		-50		295	37		-50		358	10		-51		360	17		-59		026	20		-41	-49			-39	-51				-40		-37		-51		304	25	350							
300	286.5	-50		294	48	285.6	-47		314	38	286.8	-47		358	18	284.5	-58		009	21					296.4	-56					293.0	-51								285.6	-50		313	27	300	
250		-51		299	50		-46		308	46		-44		330	28		-49		34.2	39						-66						-53		-41		-47		207	48	250						
200	374.8	-53		299	46	375.0	-47		314	53	376.6	-44		321	50	372.9	-49		329	38					382.5	-58					381.4	-49				-53		-49		300	17	400				
170		-56		299	48		-47		319	51		-46		325	57		-51		328	70						-63						-53		-52		-50		304	25	350						
150		-59		299	42		-51		320	50		-47		325	57		-57		325	74						-67						-59		-59		-52		320	44	150						
130		-62		315	40		-60		322	50		-50		332	55				332	55																				130						
110		-65		330	41		-62		323	48		-52		325	51				325	51																				110						
100	522.7	-67		319	43	524.5	-63		326	42	528.1	-58		324	48				324	48																				100						
90																																									90					
80																																									80					
70																																									70					
60																																									60					
Tropopause	II 350 mb		-50°		I 374 mb		-51°		I 375 mb		-52°		NR. 350 mb		-41°		I 243 mb		-67°		II 288 mb		-54°		II 445 mb		-34°		II 364 mb		-51°		Tropopause													
	25,200'				23,800'				23,900'				26,200'				34,200'				30,200'				20,200'				24,400'																	

Inversion  
856 mb 21°-835 mb 23°  
Inversion  
778 mb 17°-750 mb 21°  
Isothermal  
710 - 677 mb 16°

Inversion  
775 mb 17°-750 mb 12°  
841 - 12° 523 - 08°  
Isothermal  
553 - 541 mb -12°  
494 - 480 mb -26°  
393 - 350 mb -40°  
288 mb -54°  
Isothermal  
1004 - 1000 mb 46°

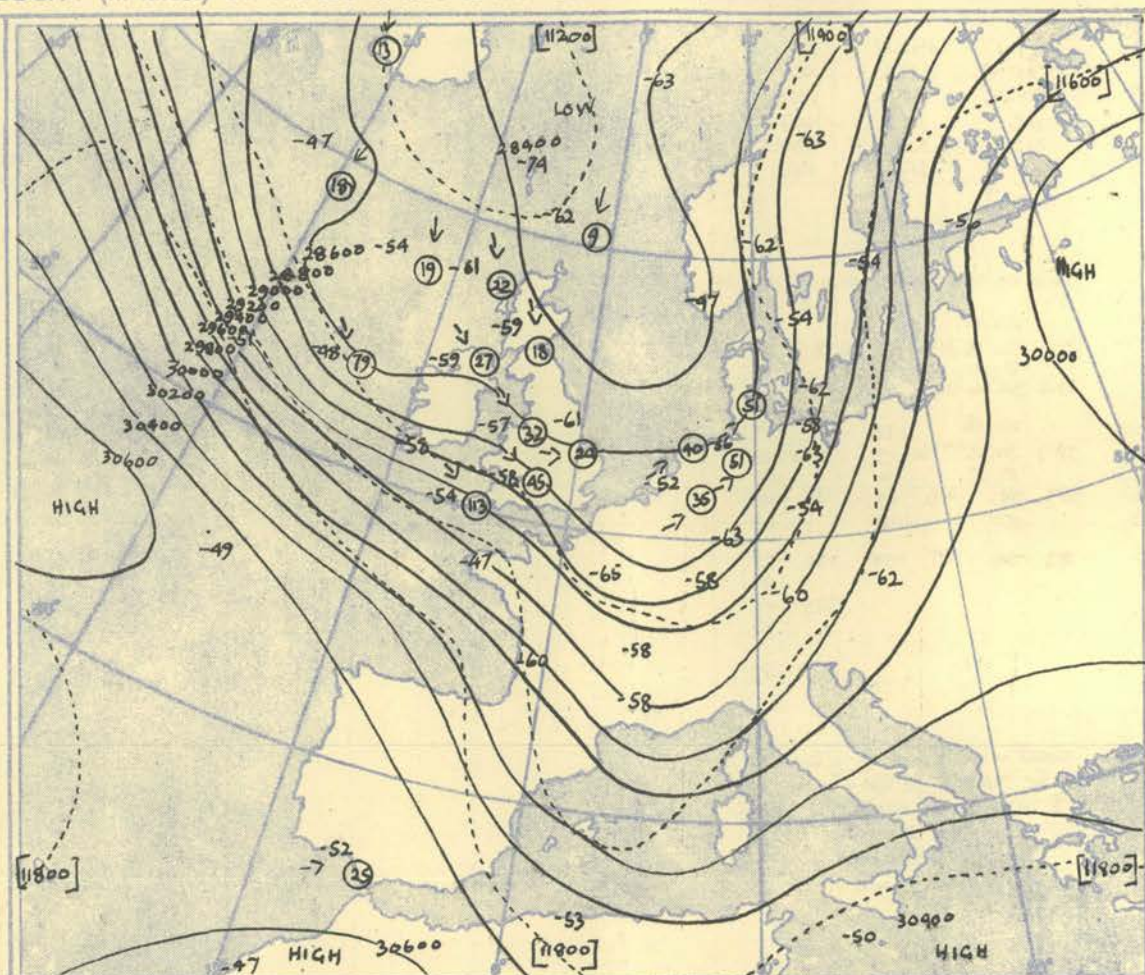
Tropopause	II 350 mb -50° 25,200'	I 374 mb -51° 23,800'	I 375 mb -52° 23,900'	NR. 350 mb -41° 26,200'	I 243 mb -67° 34,200'	II 288 mb -54° 30,200'	II 364 mb -51° 24,400'	Tropopause
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Gradient Wind Scale for Contours at intervals of 200 ft. at Lat. 52° N.

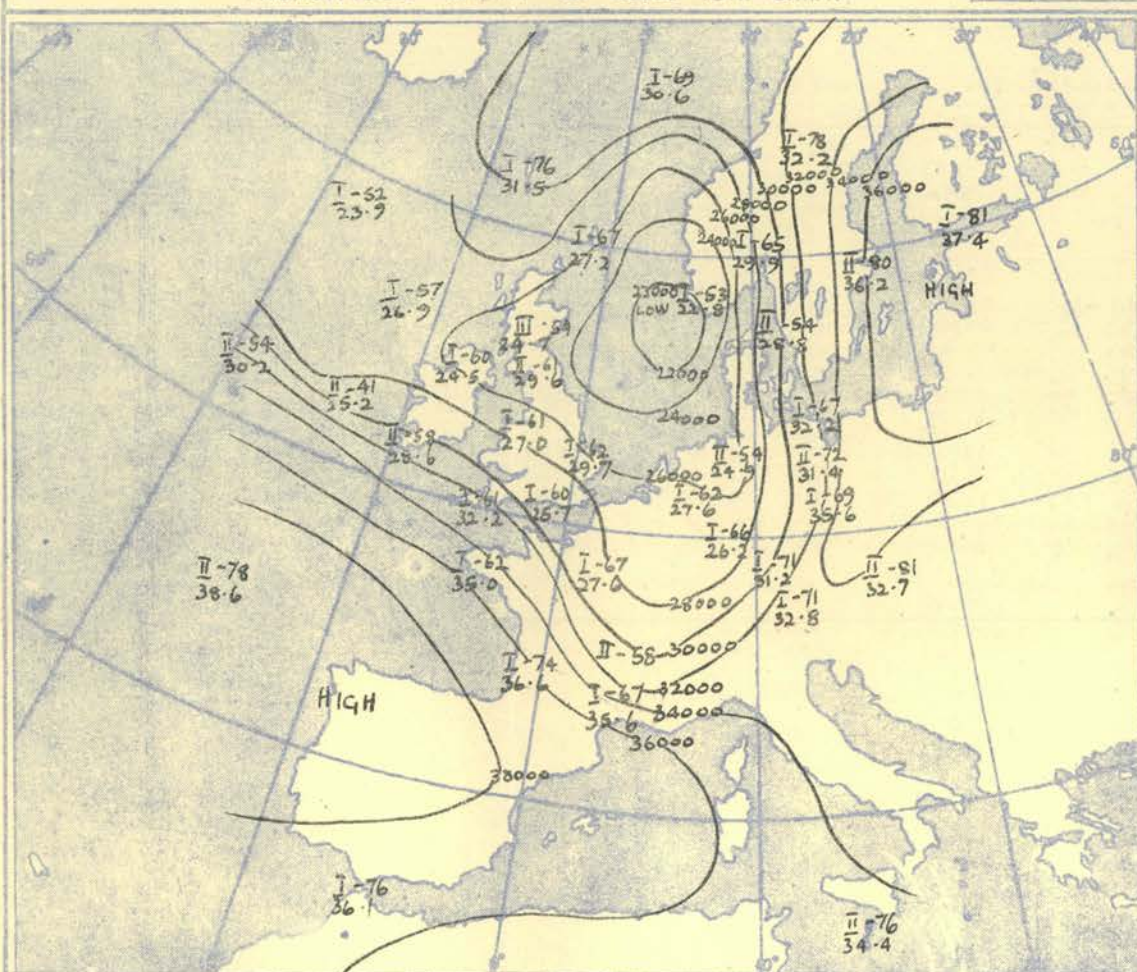
100 80 60 40 20 10 knots



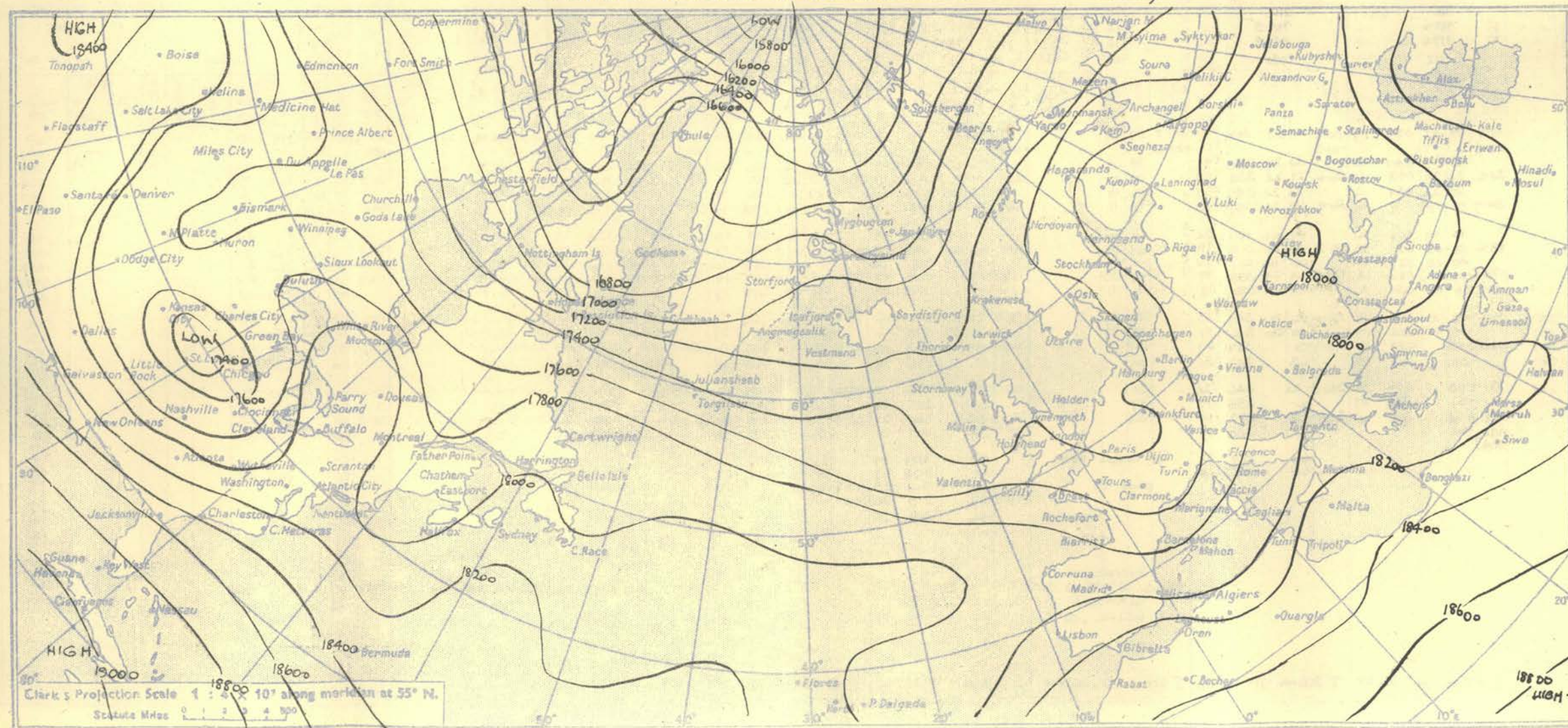
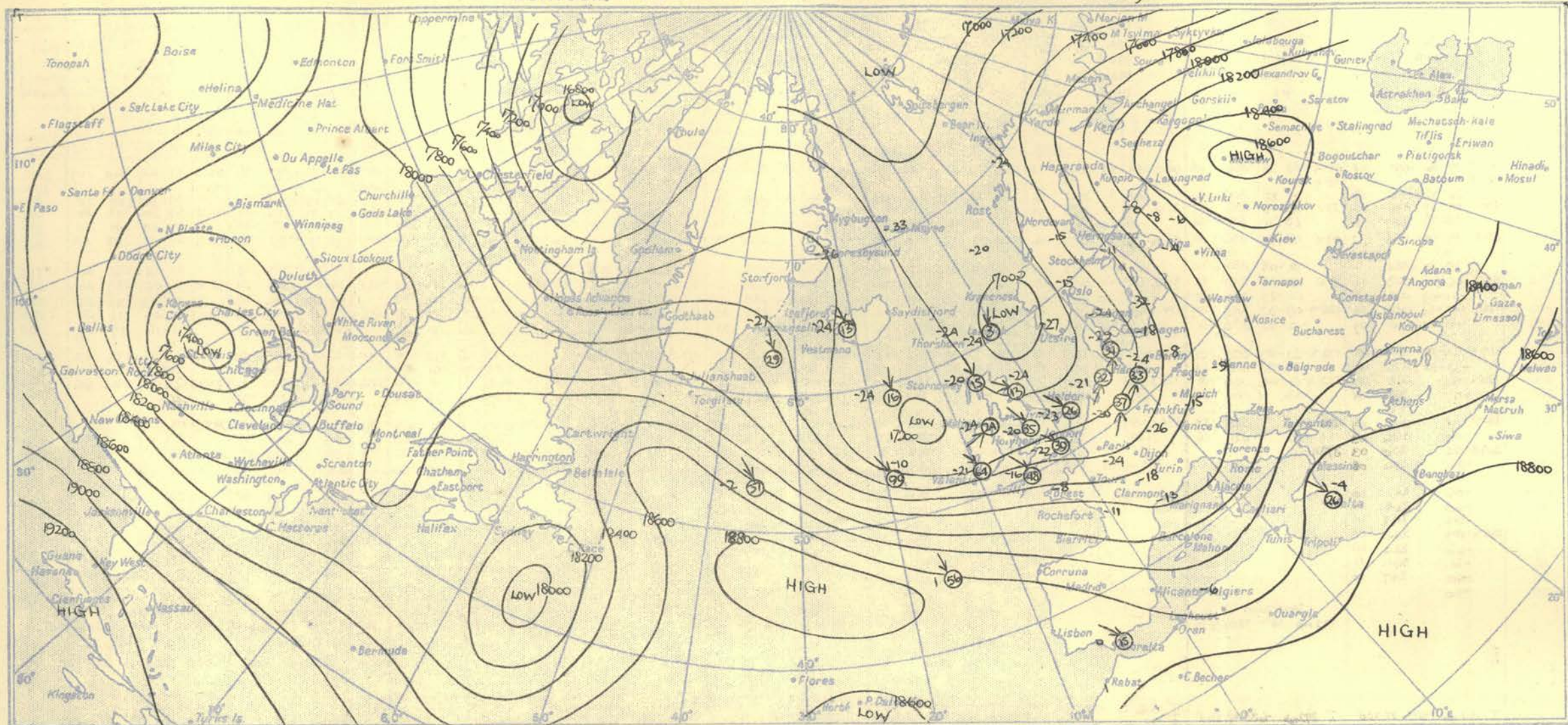
TROPOPAUSE CHART at about 15h. G.M.T.

NOTES ON THE AEROLOGICAL SITUATION.

The cold trough across eastern England and Scotland moved slowly east across the North Sea and northwest Europe. The advective changes around the depression approaching the British Isles from the northwest resulted in the formation of a minor warm ridge in south west districts and a second cold trough west of Ireland.









## 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.	ISH.		G.M.T.	Wind Dir. Vel.	ISH.		G.M.T.	Wind Dir. Vel.	ISH.		G.M.T.	Wind Dir. Vel.	ISH.		G.M.T.	Wind Dir. Vel.	ISH.		G.M.T.	Wind Dir. Vel.	ISH.		G.M.T.	Wind Dir. Vel.	ISH.		G.M.T.	Wind Dir. Vel.	ISH.		G.M.T.	Time M.S.L.						
		Surf	Prevailing	Surf		Prevailing	Surf	Prevailing		Surf	Prevailing	Surf		Prevailing	Surf	Prevailing		Surf	Prevailing	Surf		Prevailing	Surf	Prevailing		Surf	Prevailing	Surf		Prevailing	Surf	Prevailing		Surf	Prevailing	Surf	Prevailing	Surf	Prevailing
		920		996.7			993.8			996.0		997.6			998.8			1002.3		993.8			999.9																
		920				912				893				900				885				880				905				880			890						
																												</											

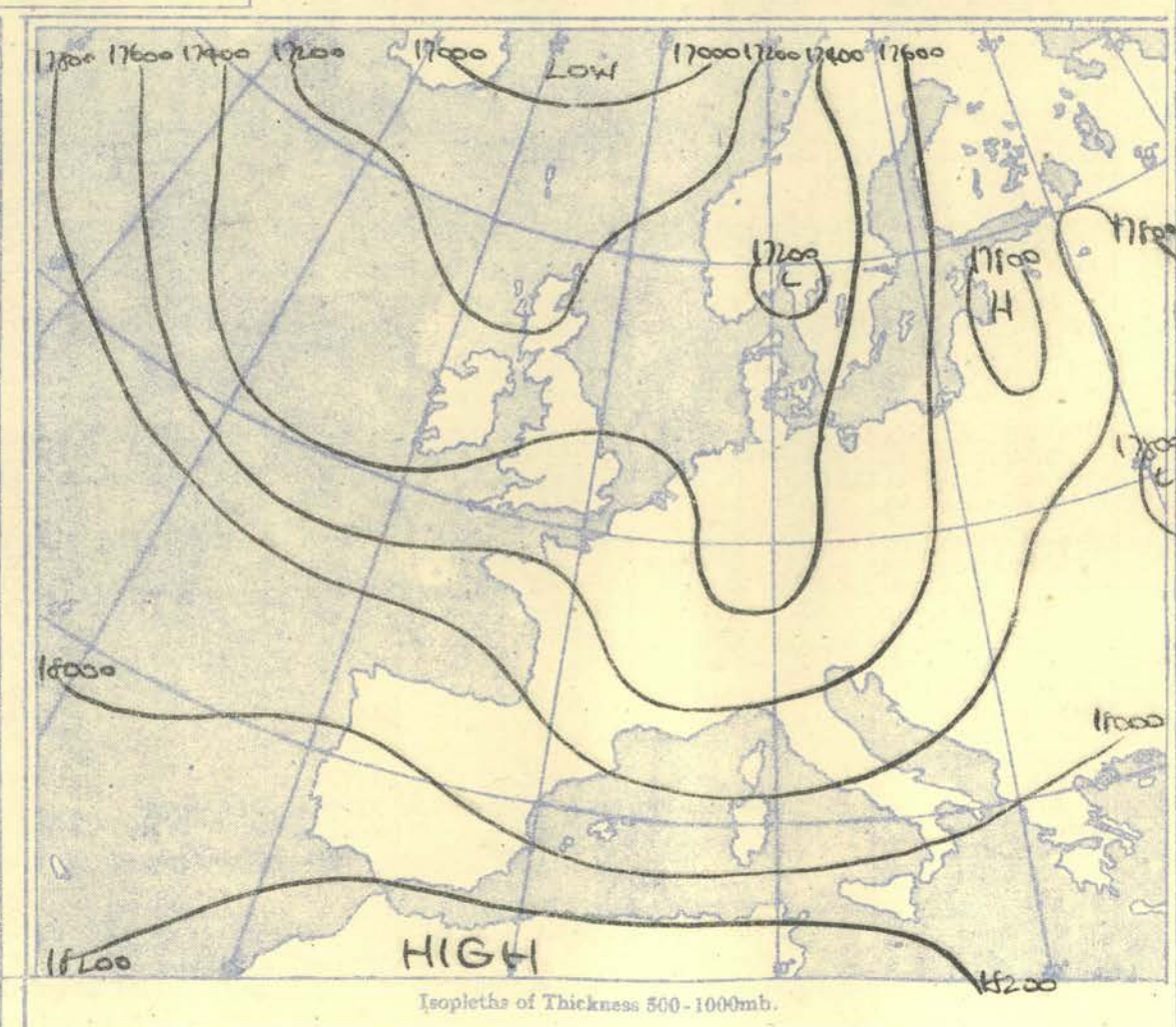
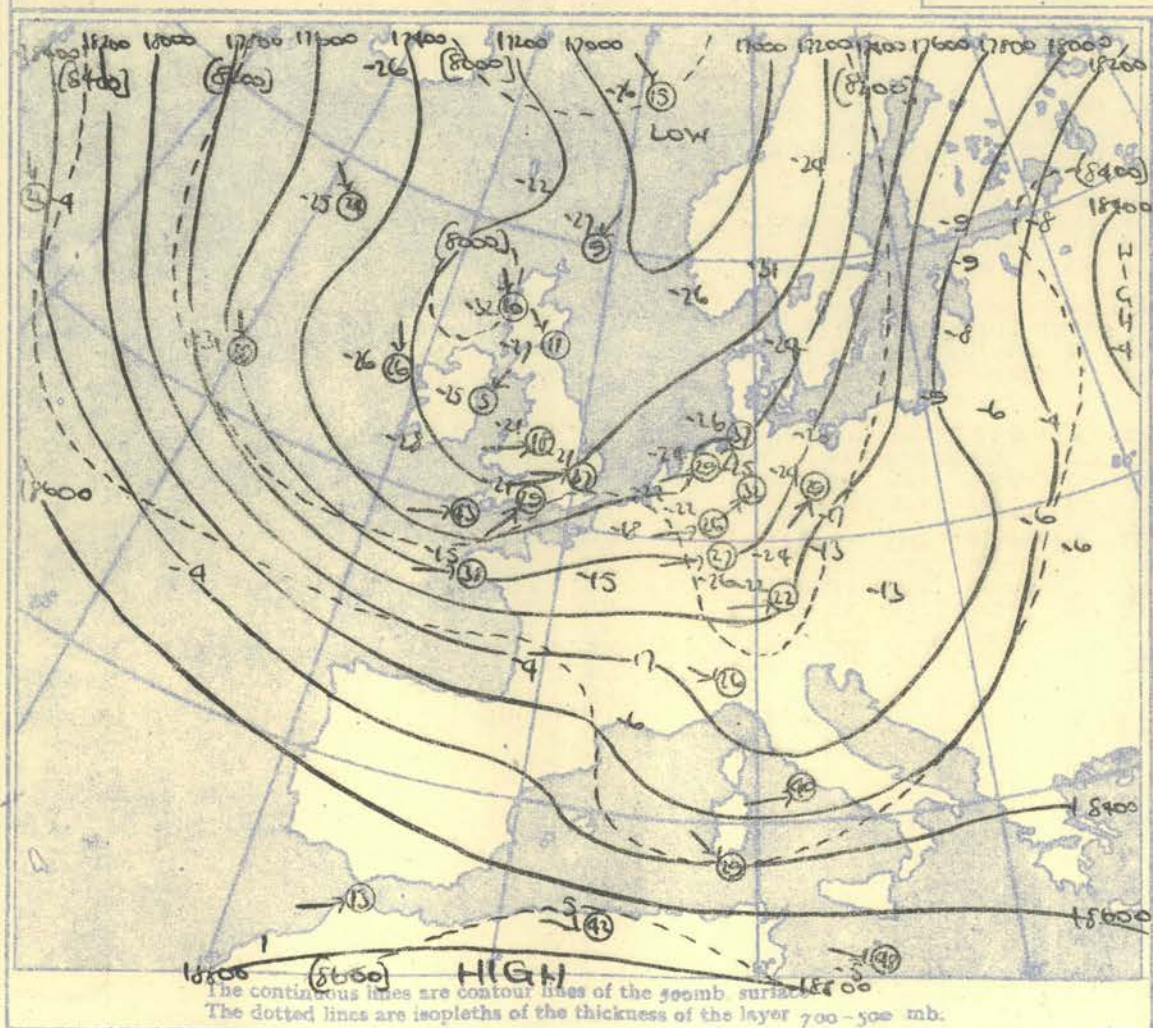
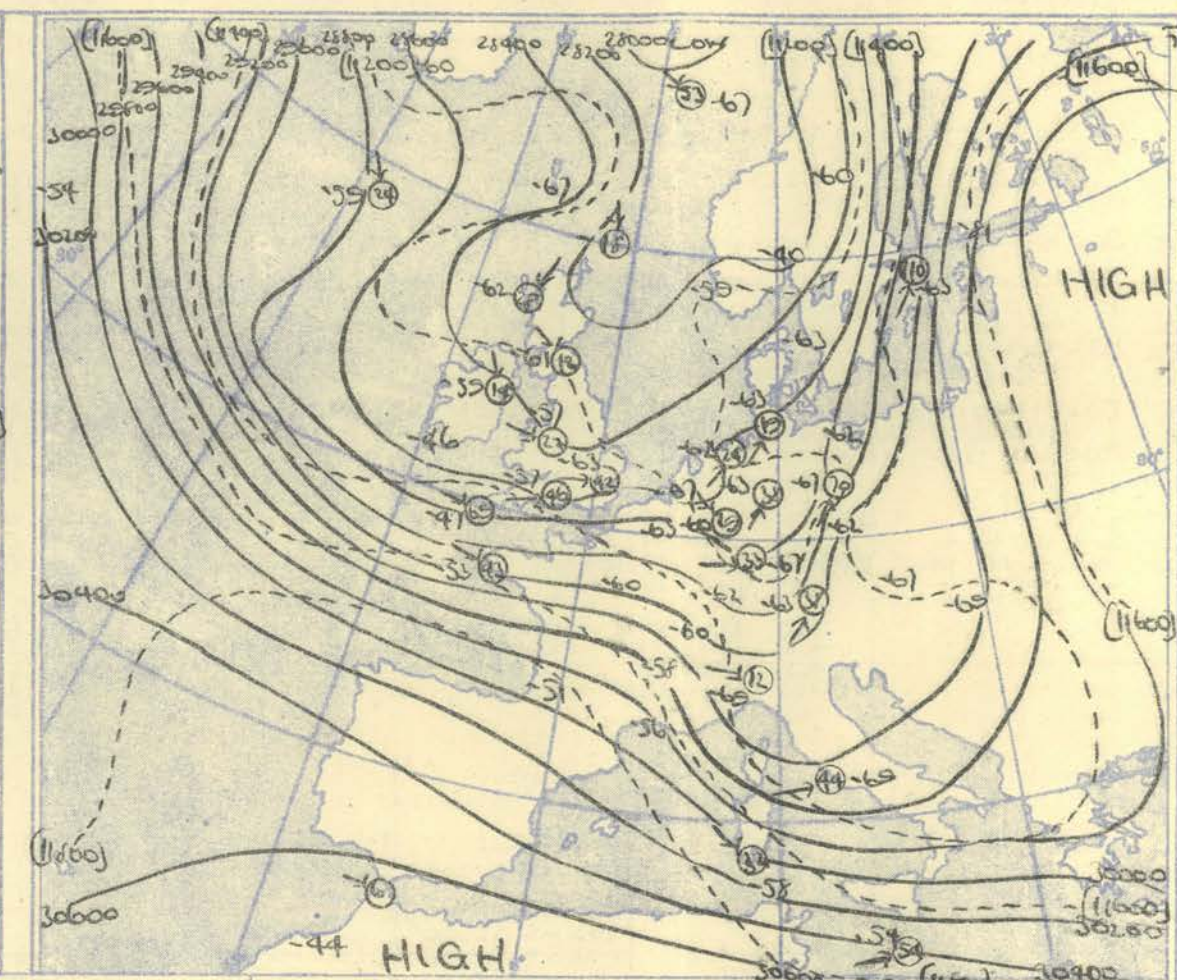
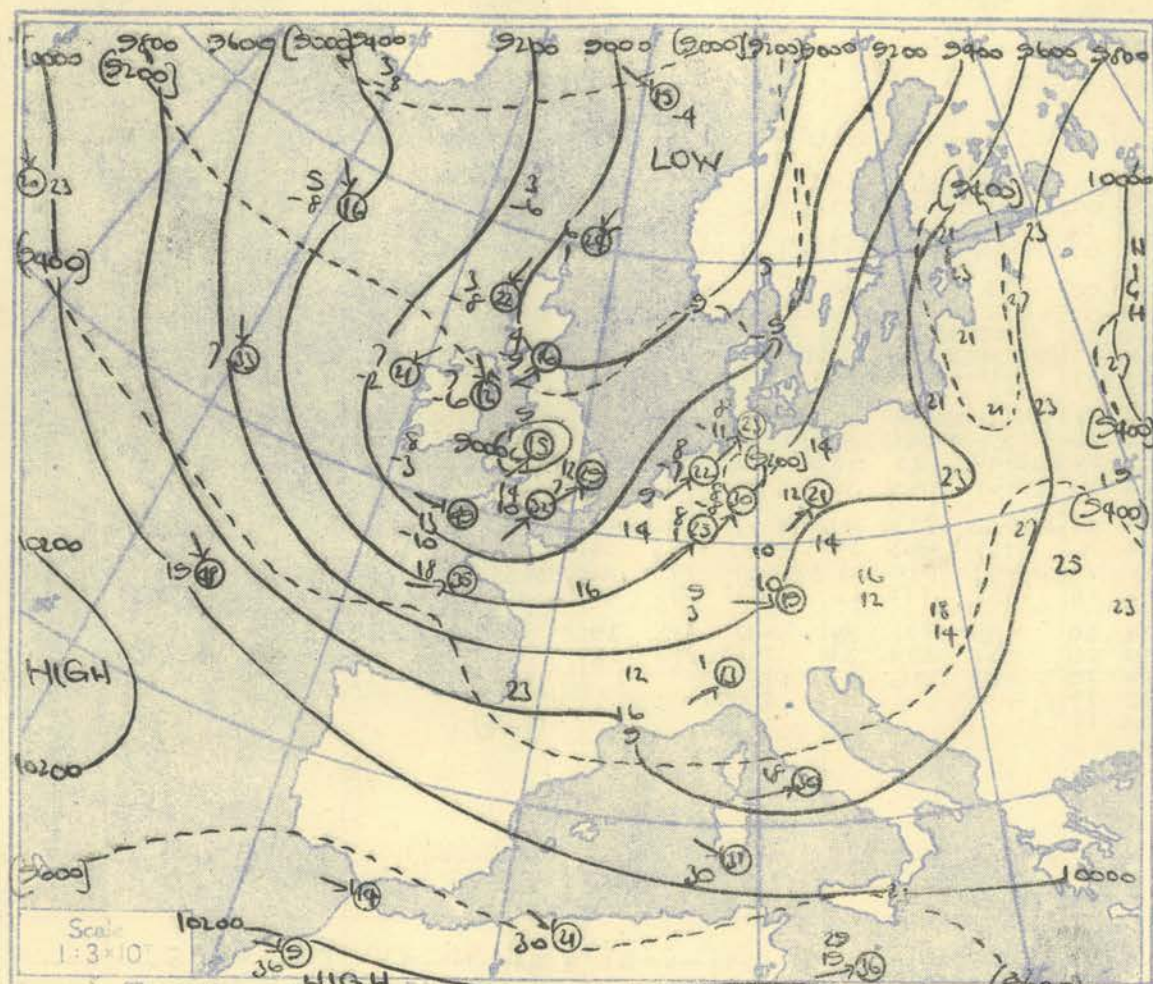


## RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

[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 03h G.M.T.





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

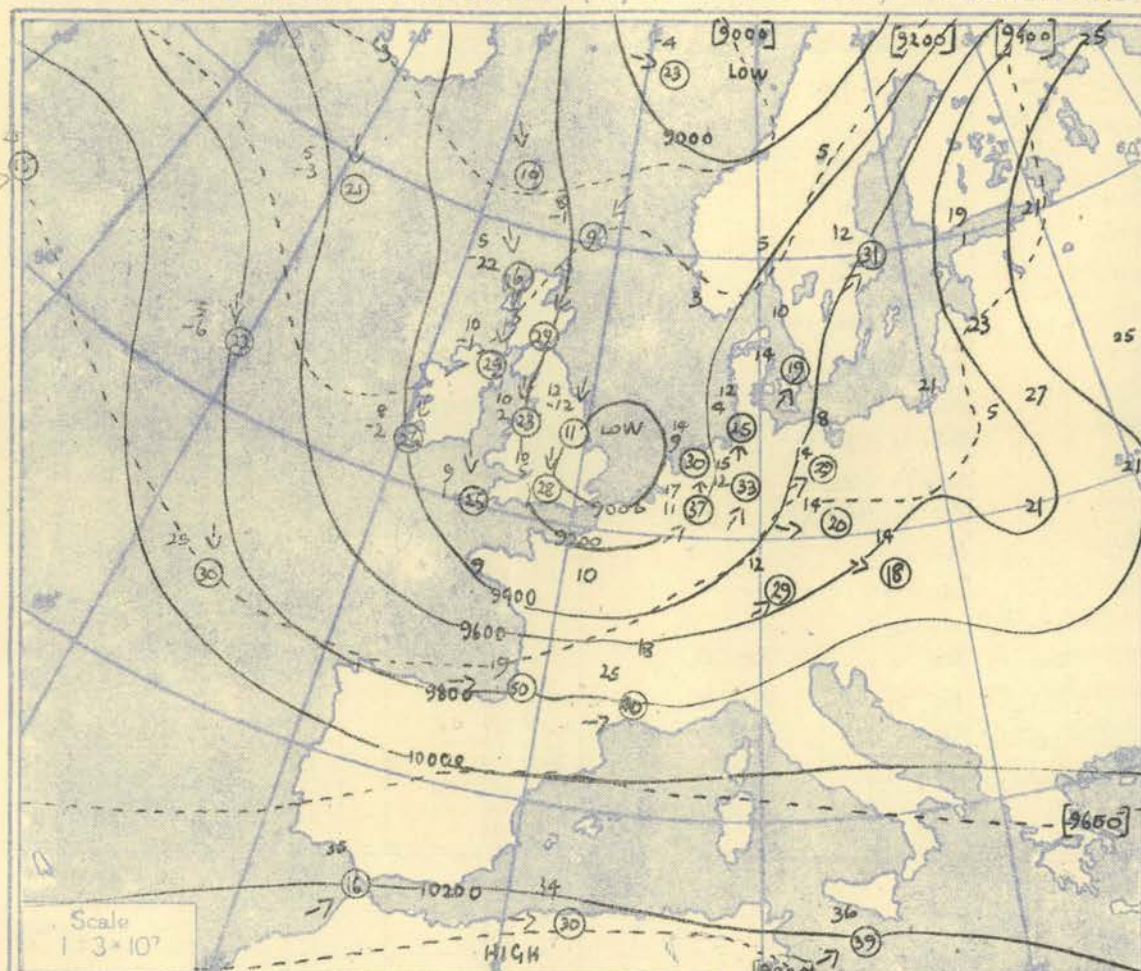
NEPHOSCOPE OBSERVATIONS

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

[illegible]



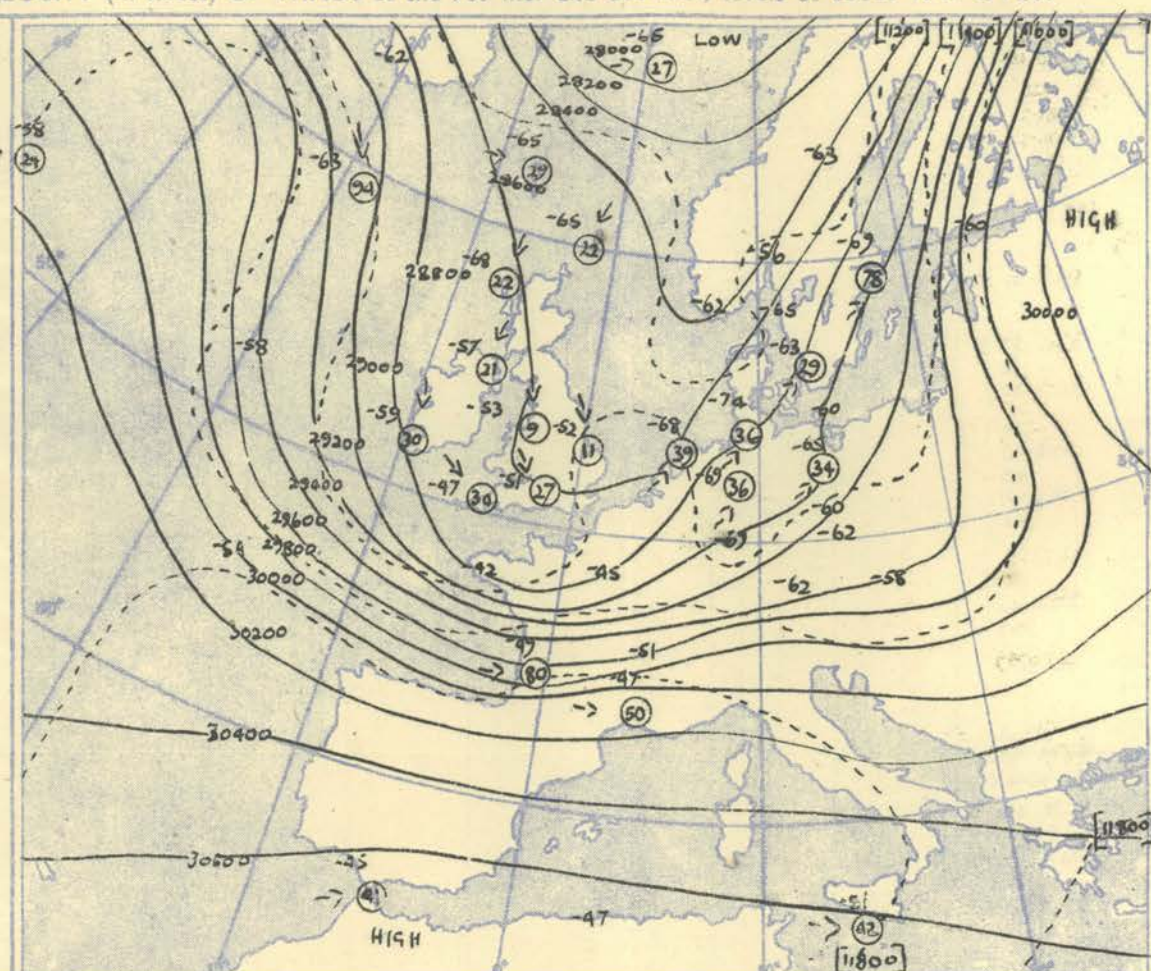
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h G.M.T.



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

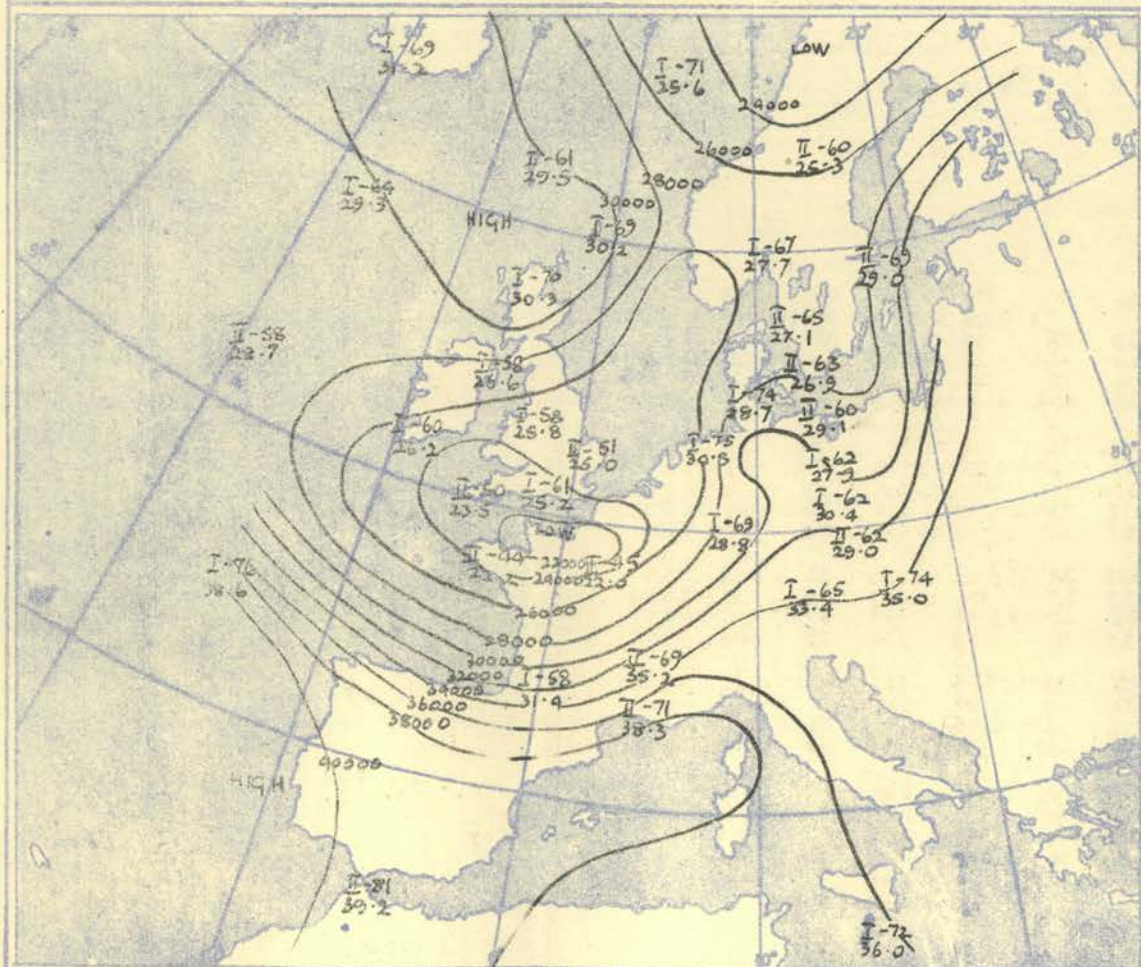
Gradient Wind Scale for Contours  
at intervals of 200 ft. at Lat. 52½° N.

100 60 40 20 15 10 knots



# NOTES ON THE AEROLOGICAL SITUATION.

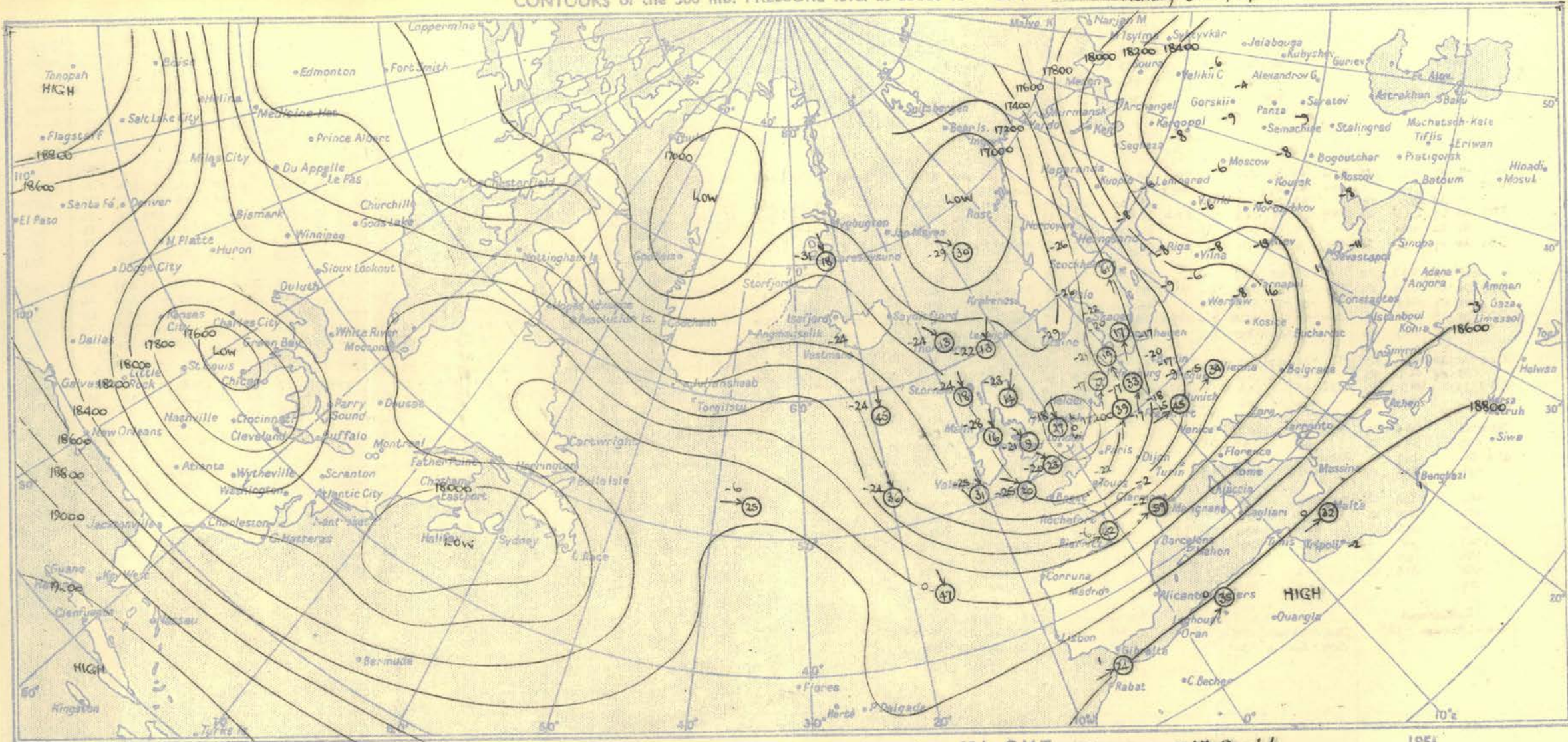
The cold trough over Europe collapsed and lost its identity as the new cold trough to the west of Ireland developed in the rear of the depression which moved across England into the North Sea.  
A warm ridge south of Greenland moved towards Iceland.



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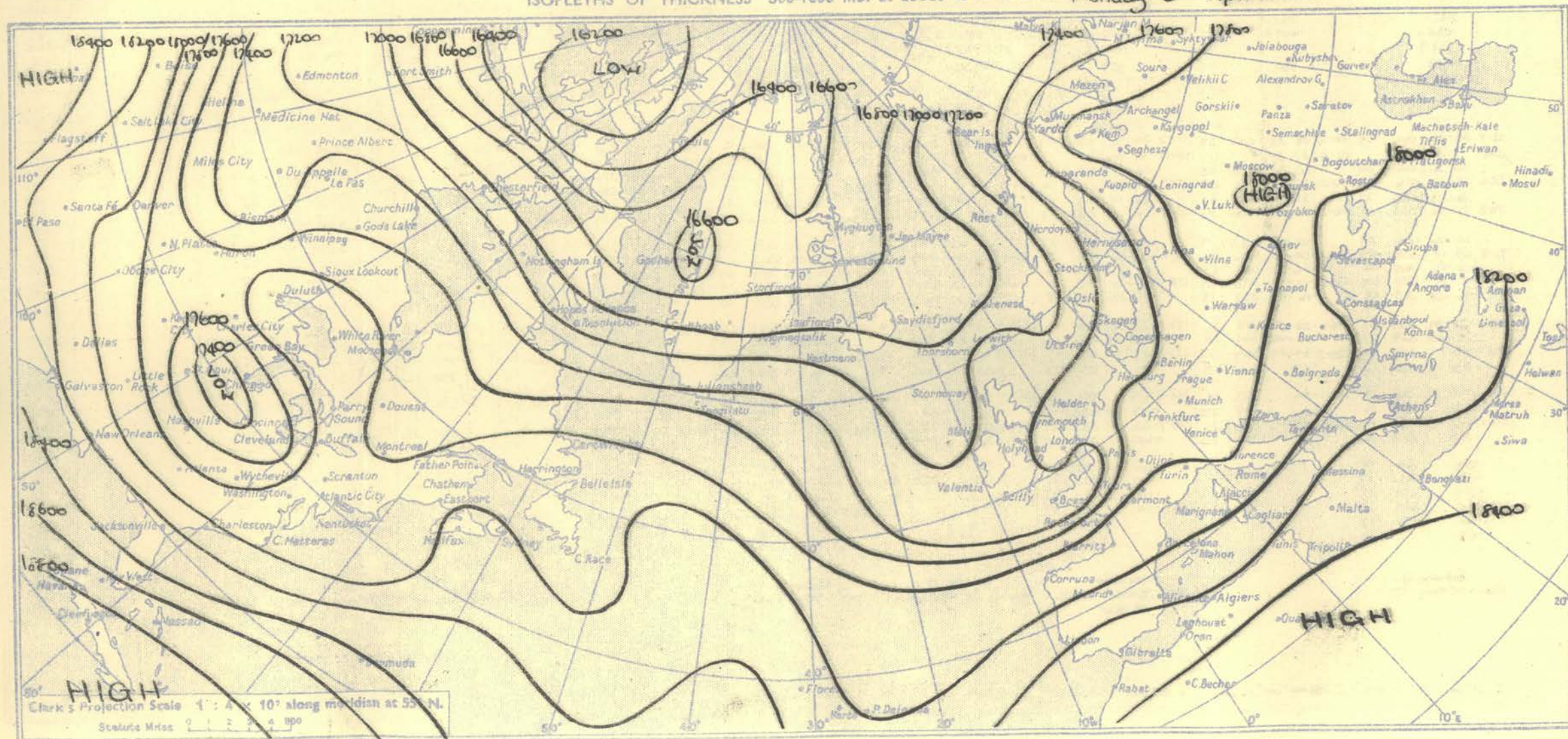
Meteorological Office, Air Ministry, Kingsway, London, W.C.2  
Nelson K. Johnson, K.C.B., D.Sc., Director.





ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Monday 9<sup>th</sup> April

1951.



HIGH

Clark's Projection Scale 1" = 4 x 10<sup>3</sup> along meridian at 55° N.

Statute Miles 0 1 2 3 4 5 6 7 8 9 10



# 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	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	Pressure				
		M.S.L.	Surf	M.S.L.	Surf	M.S.L.	Surf	M.S.L.	Surf	M.S.L.	Surf	M.S.L.	Surf	M.S.L.	Surf	M.S.L.	Surf	M.S.L.	Surf	M.S.L.	Surf	M.S.L.	Surf	M.S.L.	Surf	M.S.L.	Surf	M.S.L.	Surf	M.S.L.	Surf	M.S.L.	Surf						
		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						
999.2	989.1	925		1004.3		997.4		1000.1		994.2		986.1		992.2		981.7		992.1		976.1		990.2		1000.2		989.6		1007		1005		905							
980	970	960	950	940	930	920	910	900	890	880	870	860	850	840	830	820	810	800	790	780	770	760	750	740	730	720	710	700	690	680	670	660	650						
970	960	950	940	930	920	910	900	890	880	870	860	850	840	830	820	810	800	790	780	770	760	750	740	730	720	710	700	690	680	670	660	650	640						
960	950	940	930	920	910	900	890	880	870	860	850	840	830	820	810	800	790	780	770	760	750	740	730	720	710	700	690	680	670	660	650	640	630						
950	940	930	920	910	900	890	880	870	860	850	840	830	820	810	800	790	780	770	760	750	740	730	720	710	700	690	680	670	660	650	640	630	620						
940	930	920	910	900	890	880	870	860	850	840	830	820	810	800	790	780	770	760	750	740	730	720	710	700	690	680	670	660	650	640	630	620	610						
930	920	910	900	890	880	870	860	850	840	830	820	810	800	790	780	770	760	750	740	730	720	710	700	690	680	670	660	650	640	630	620	610	600						
920	910	900	890	880	870	860	850	840	830	820	810	800	790	780	770	760	750	740	730	720	710	700	690	680	670	660	650	640	630	620	610	600	590						
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900	890	880	870	860	850	840	830	820	810	800	790	780	770	760	750	740	730	720	710	700	690	680	670	660	650	640	630	620	610	600	590	580	570						
890	880	870	860	850	840	830	820	810	800	790	780	770	760	750	740	730	720	710	700	690	680	670	660	650	640	630	620	610	600	590	580	570	560						
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870	860	850	840	830	820	810	800	790	780	770	760	750	740	730	720	710	700	690	680	670	660	650	640	630	620	610	600	590	580	570	560	550	540						
860	850	840	830	820	810	800	790	780	770	760	750	740	730	720	710	700	690	680	670	660	650	640	630	620	610	600	590	580	570	560	550	540	530						
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830	820	810	800	790	780	770	760	750	740	730	720	710	700	690	680	670	660	650	640	630	620	610	600	590	580	570	560	550	540	530	520	510	500						
820	810	800	790	780	770	760	750	740	730	720	710	700	690	680	670	660	650	640	630	620	610	600	590	580	570	560	550	540	530	520	510	500	490						
810	800	790	780	770	760	750	740	730	720	710	700	690	680	670	660	650	640	630	620	610	600	590	580	570	560	550	540	530	520	510	500	490	480						
800	790	780	770	760	750	740	730	720	710	700	690	680	670	660	650	640	630	620	610	600	590	580	570	560	550	540	530	520	510	500	490	480	470						
790	780	770	760	750	740	730	720	710	700	690	680	670	660	650	640	630	620	610	600	590	580	570	560	550	540	530	520	510	500	490	480	470	460						
780	770	760	750	740	730	720	710	700	690	680	670	660	650	640	630	620	610	600	590	580	570	560	550	540	530	520	510	500	490	480	470	460	450						
770	760	750	740	730	720	710	700	690	680	670	660	650	640	630	620	610	600	590	580	570	560	550	540	530	520	510	500	490	480	470	460	450	440						
760	750	740	730	720	710	700	690	680	670	660	650	640	630	620	610	600	590	580	570	560	550	540	530	520	510	500	490	480	470	460	450	440	430						
750	740	730	720	710	700	690	680	670	660	650	640	630	620	610	600	590	580	570	560	550	540	530	520	510	500	490	480	470	460	450	440	430	420						
740	730	720	710	700	690	680	670	660	650	640	630	620	610	600	590	580	570	560	550	540	530	520	510	500	490	480	470	460	450	440	430	420	410						
730	720	710	700	690	680	670	660	650	640	630	620	610	600	590	580	570	560	550	540	530	520	510	500	490	480	470	460	450	440	430	420	410	400						
720	710	700	690	680	670	660	650	640	630	620	610	600	590	580	570	560	550	540	530	520	510	500	490	480	47														

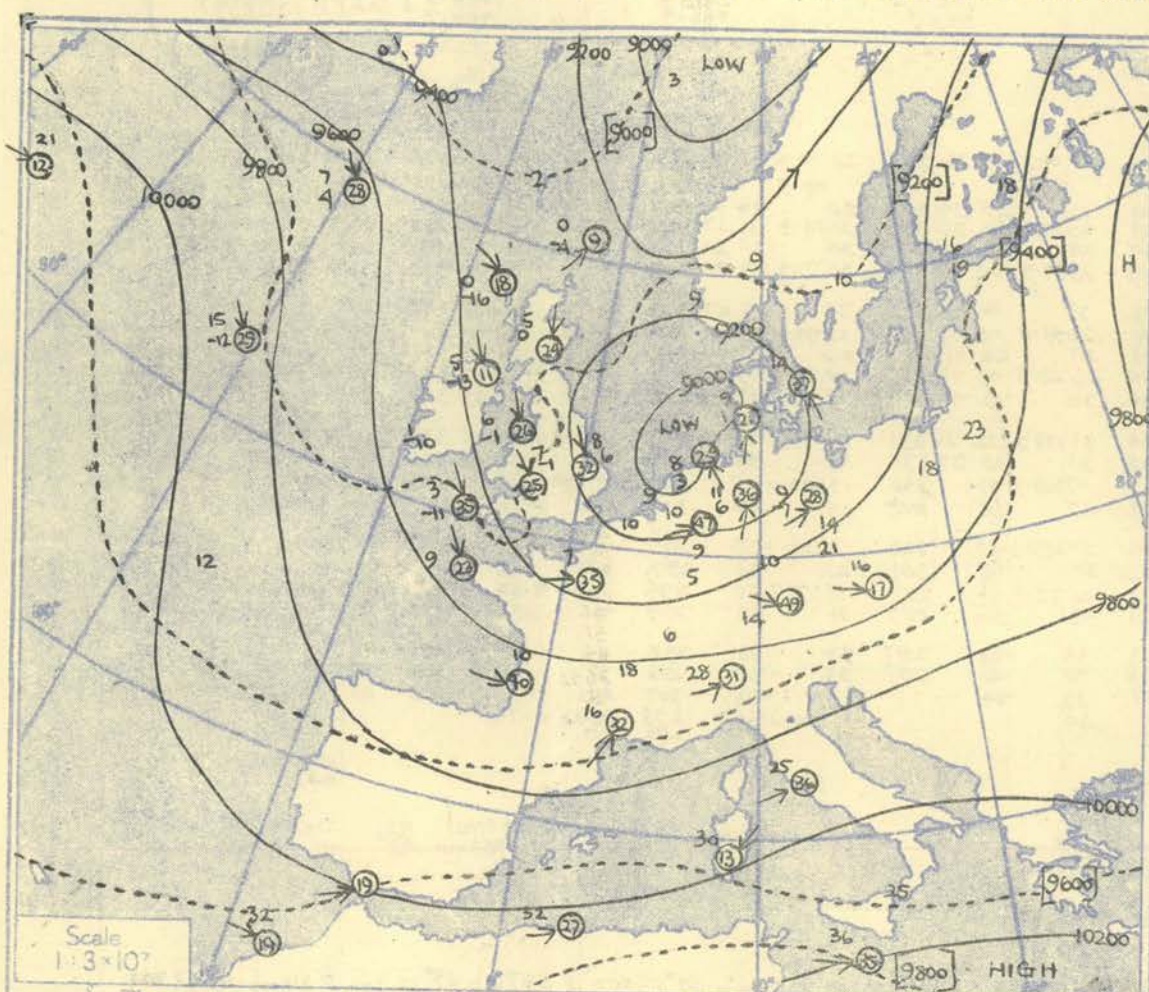


METEOROLOGICAL VALENTIA  
 03k 1009.5 228.7 922 mb 03k 1014 925  
 OFFICE

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION																																																																																																																																																																																																																																																																																																																																																						
Pressure (Freezing)	Time M.S.L. Surf	03h 1006.6 996.3 Surf 996	G.M.T. mb mb mb	03h 1011.2 1009.5 960	G.M.T. mb mb mb	03h 1004.7 1003.8 941	G.M.T. mb mb mb	03h 1008.4 998.5 939	G.M.T. mb mb mb	03h 1003.3 1001.2 915	G.M.T. mb mb mb	03h 998.1 993.7 914	G.M.T. mb mb mb	03h 1003.5 986.9 910	G.M.T. mb mb mb	03h 1009.5 998.7 922	G.M.T. mb mb mb	03h 1011.2 1009.5 922	G.M.T. mb mb mb	03h 1008.4 998.5 939	G.M.T. mb mb mb	03h 1003.3 1001.2 915	G.M.T. mb mb mb	03h 998.1 993.7 914	G.M.T. mb mb mb	03h 1003.5 986.9 910	G.M.T. mb mb mb	03h 1009.5 998.7 922	G.M.T. mb mb mb	03h 1011.2 1009.5 922	G.M.T. mb mb mb	03h 1008.4 998.5 939	G.M.T. mb mb mb																																																																																																																																																																																																																																																																																																																																																										
																																		Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100	Temp. °F.	Wind Dir. Vel. knots	Pressure mb	Height ft./100



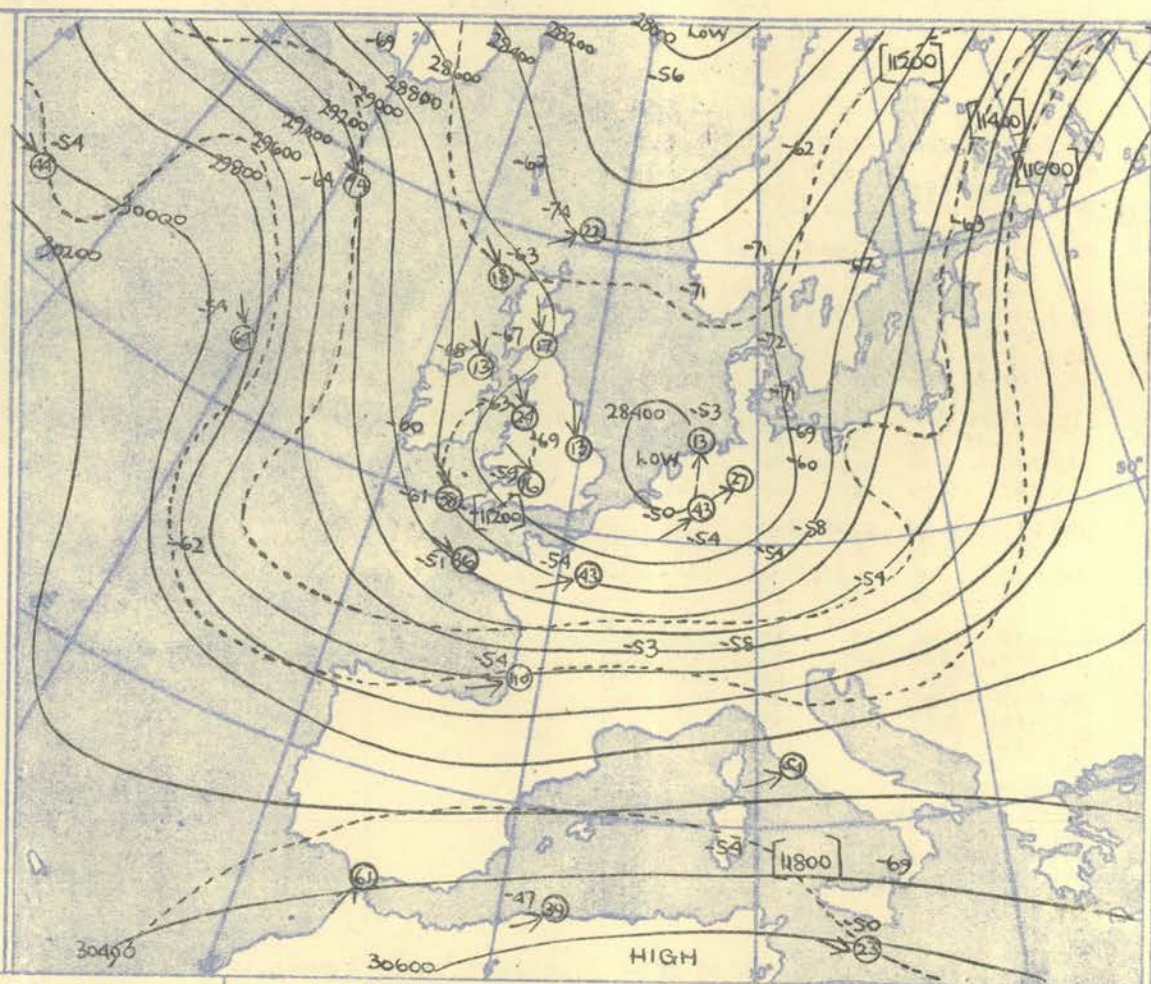
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point), DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03h G.M.T.



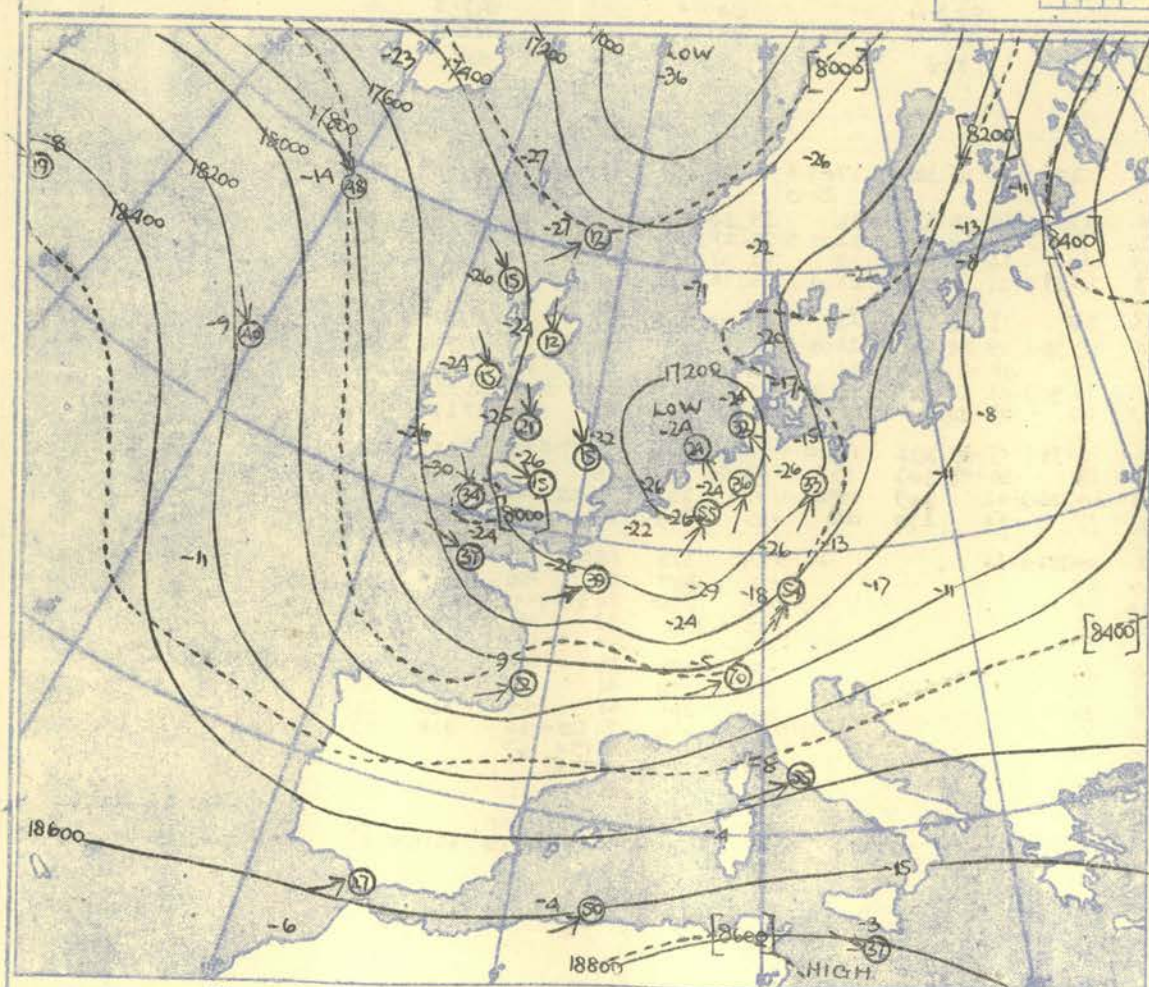
The continuous lines are contour lines of the 700 mb. surface  
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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

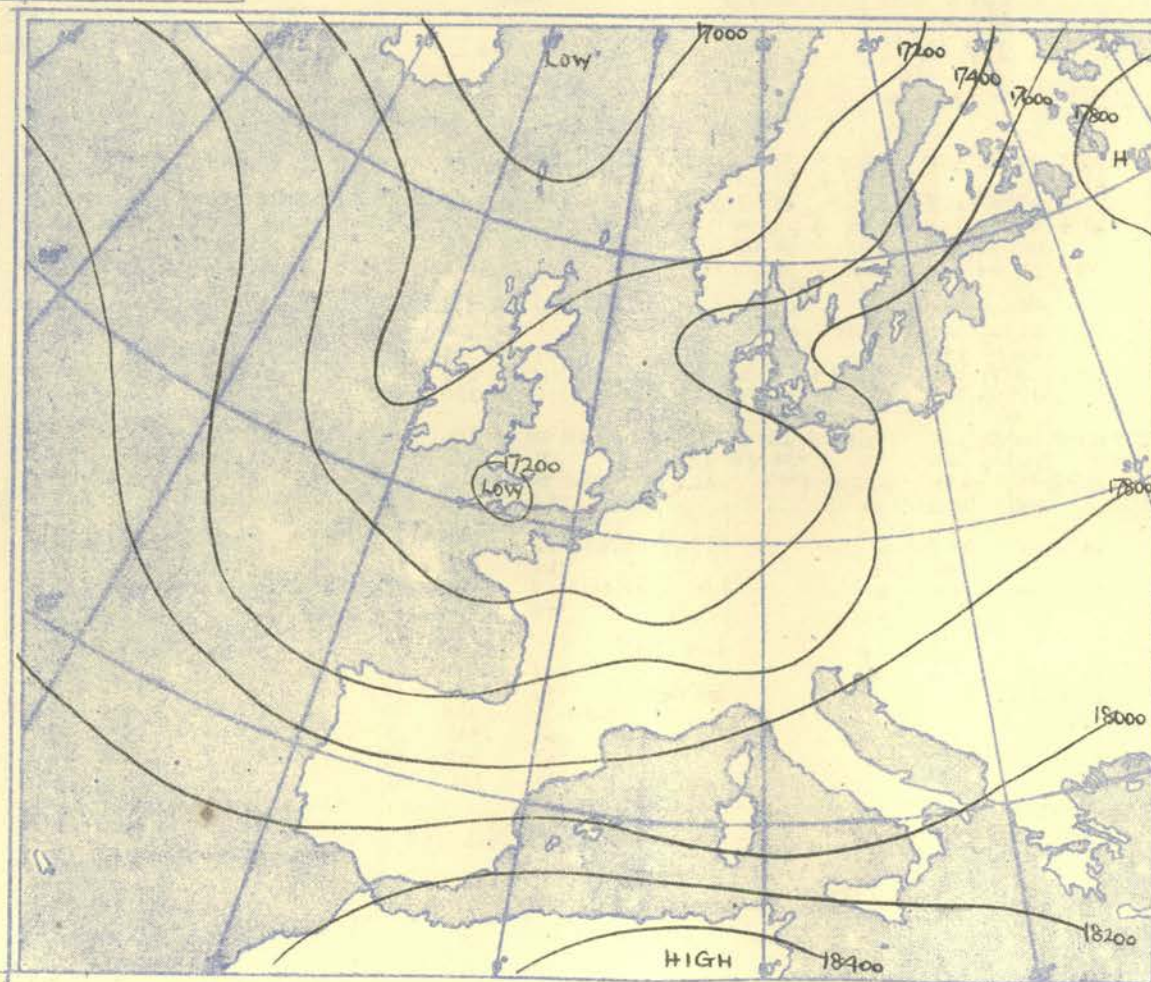
100 80 60 40 20 10 5 knots



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.



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]

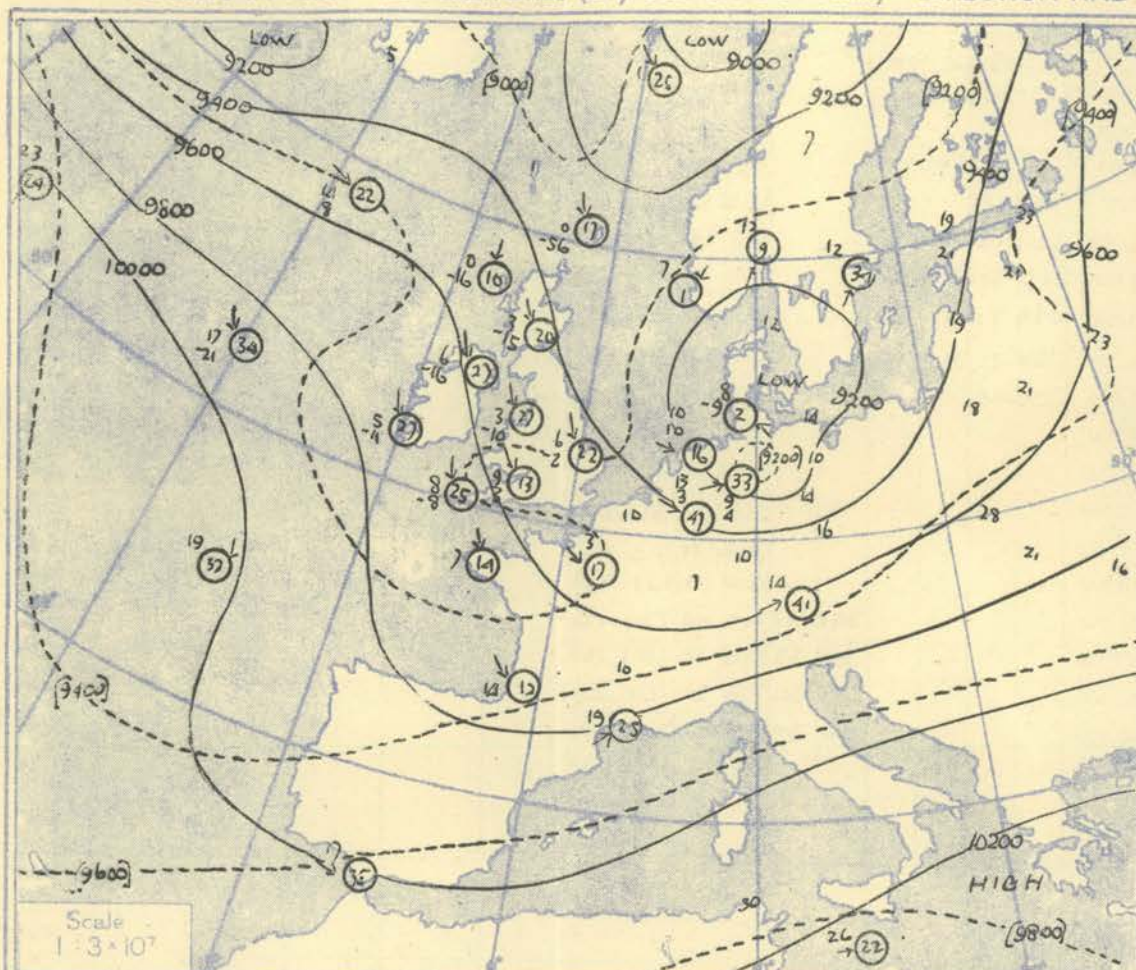
## DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

[illegible]

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

Ship	Weather Watcher				Weather Watcher				Weather Watcher				Weather Watcher				Cumulus				Cumulus				Cumulus				Cumulus								Ship							
Lat/Long	58°N 19°2'W				58°N 19°0'W				58°N 19°0'W				58°N 18°8'W				52°S 20°W				52°S 20°W				52°S 20°W				52°S 20°W								Lat/Long							
Pressure (Freezing)	Time		M.S.L.		Surf		Freezing		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.		G.M.T.		Time	
	1018		mb		mb		mb		1018		mb		1015		mb		1011		mb		1007		mb		1024		mb		1023		mb		1023		mb		1022		mb		M.S.L.			
	1018		mb		mb		mb		1015		mb		1015		mb		1011		mb		1007		mb		1024		mb		1023		mb		1023		mb		1022		mb		Surf			
	950		mb		mb		mb		940		mb		940		mb		910		mb		890		mb		930		mb		930		mb		940		mb		920		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	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb							
	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	
				4-8 31 31 13 3																																								



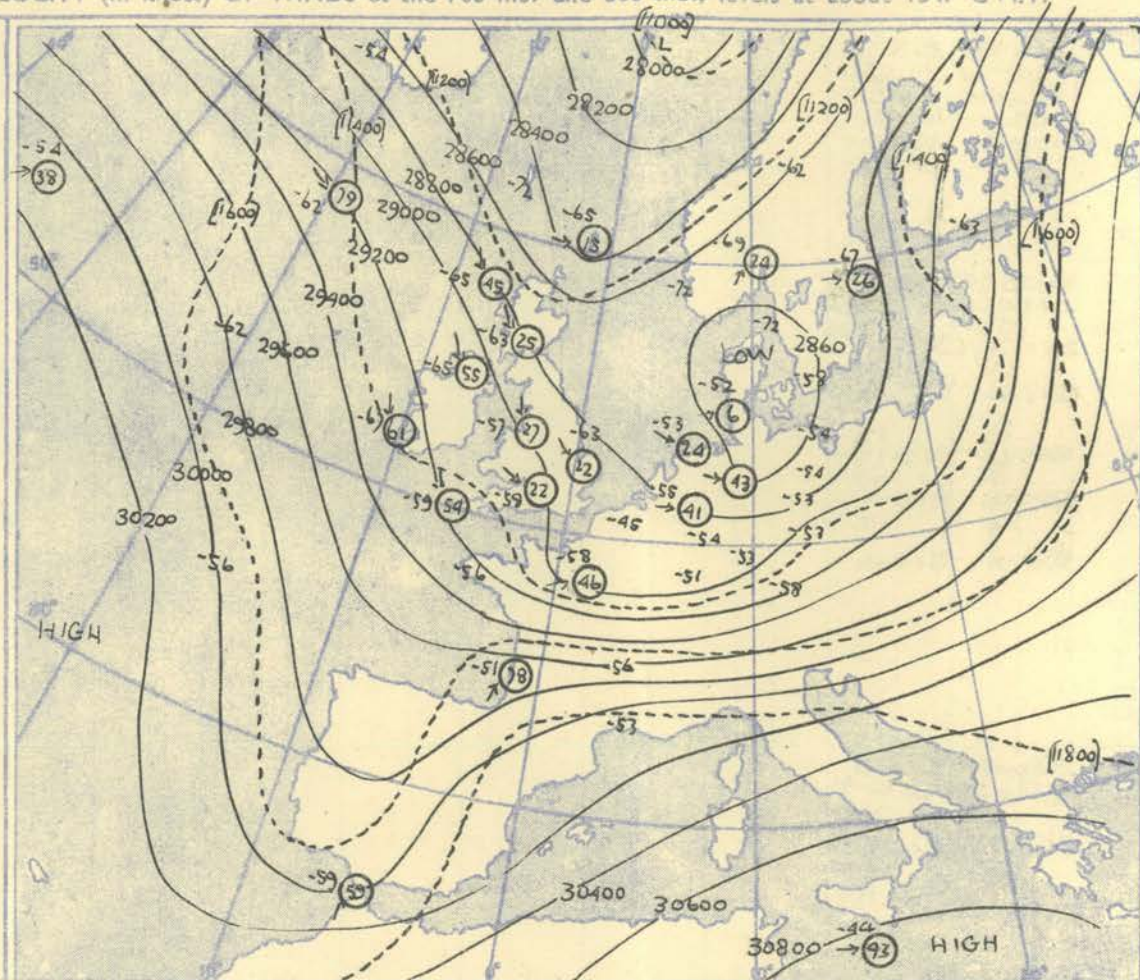


The continuous lines are contour lines of the 700 mb. surface.  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

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

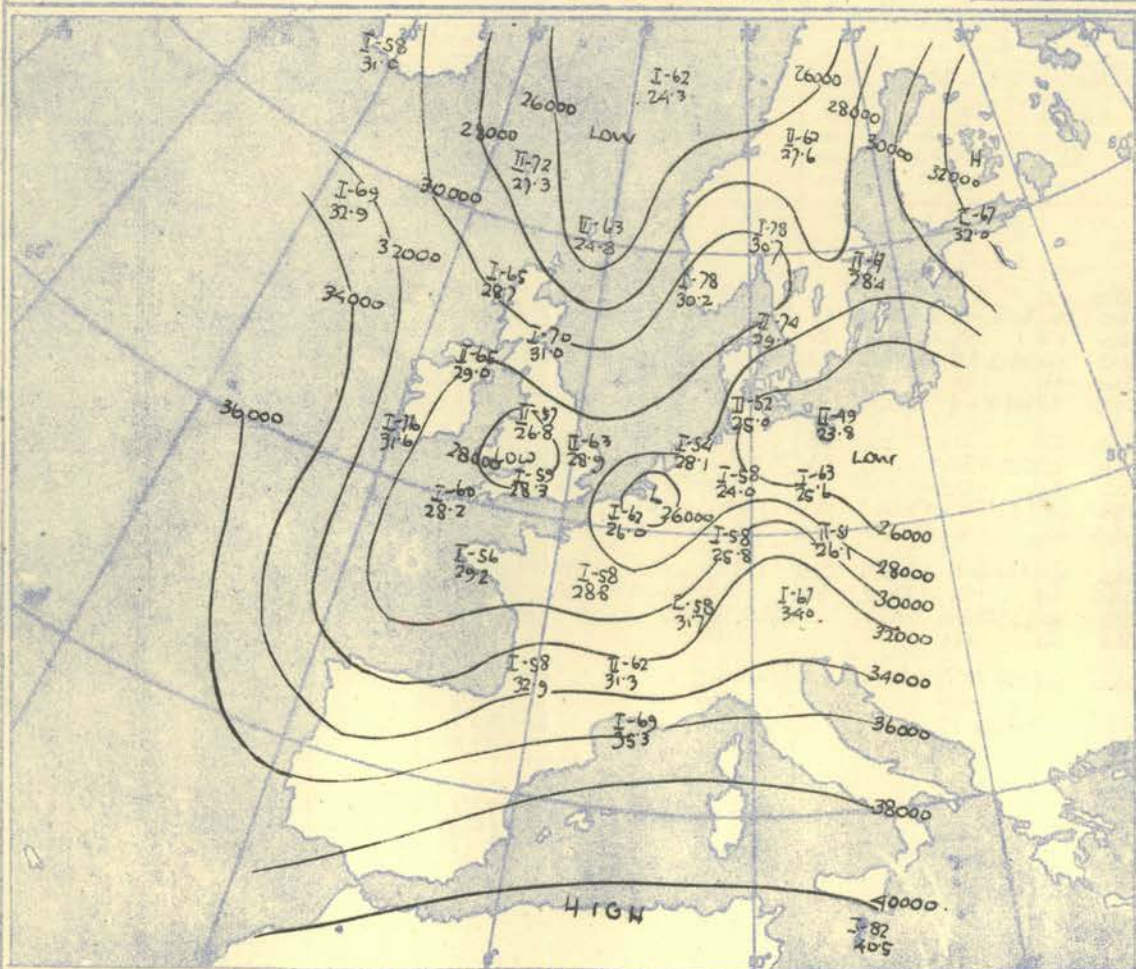
100 60 40 20 10 5 knots



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.

#### NOTES ON THE AEROLOGICAL SITUATION.

The cold trough over Ireland enveloped the British Isles the North Sea and France. The warm ridge on the Northern Atlantic moved to the Iceland area and a new cold trough began to develop to the east of Greenland.

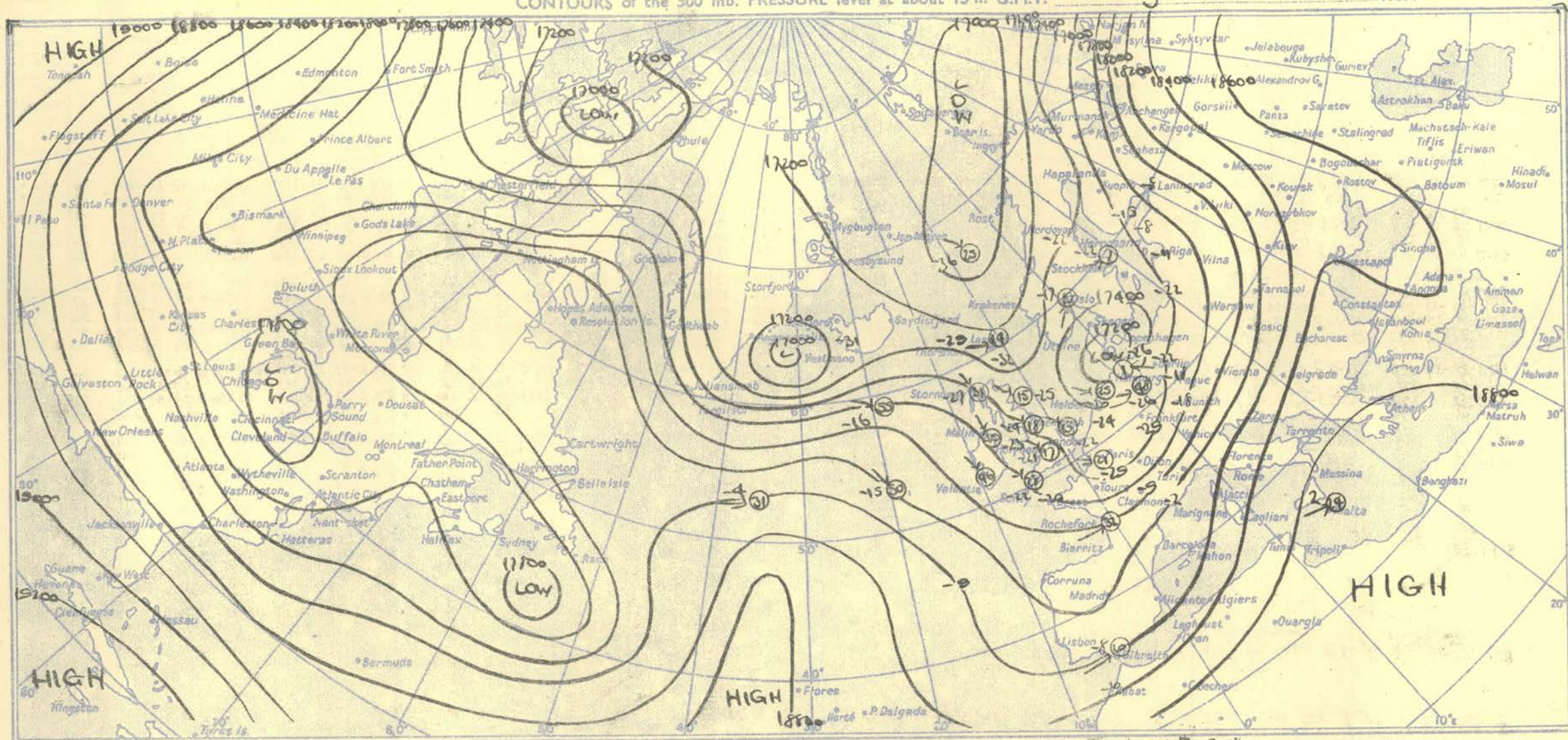


Contour lines of Height of Tropopause.  
Temperature of Tropopause.

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

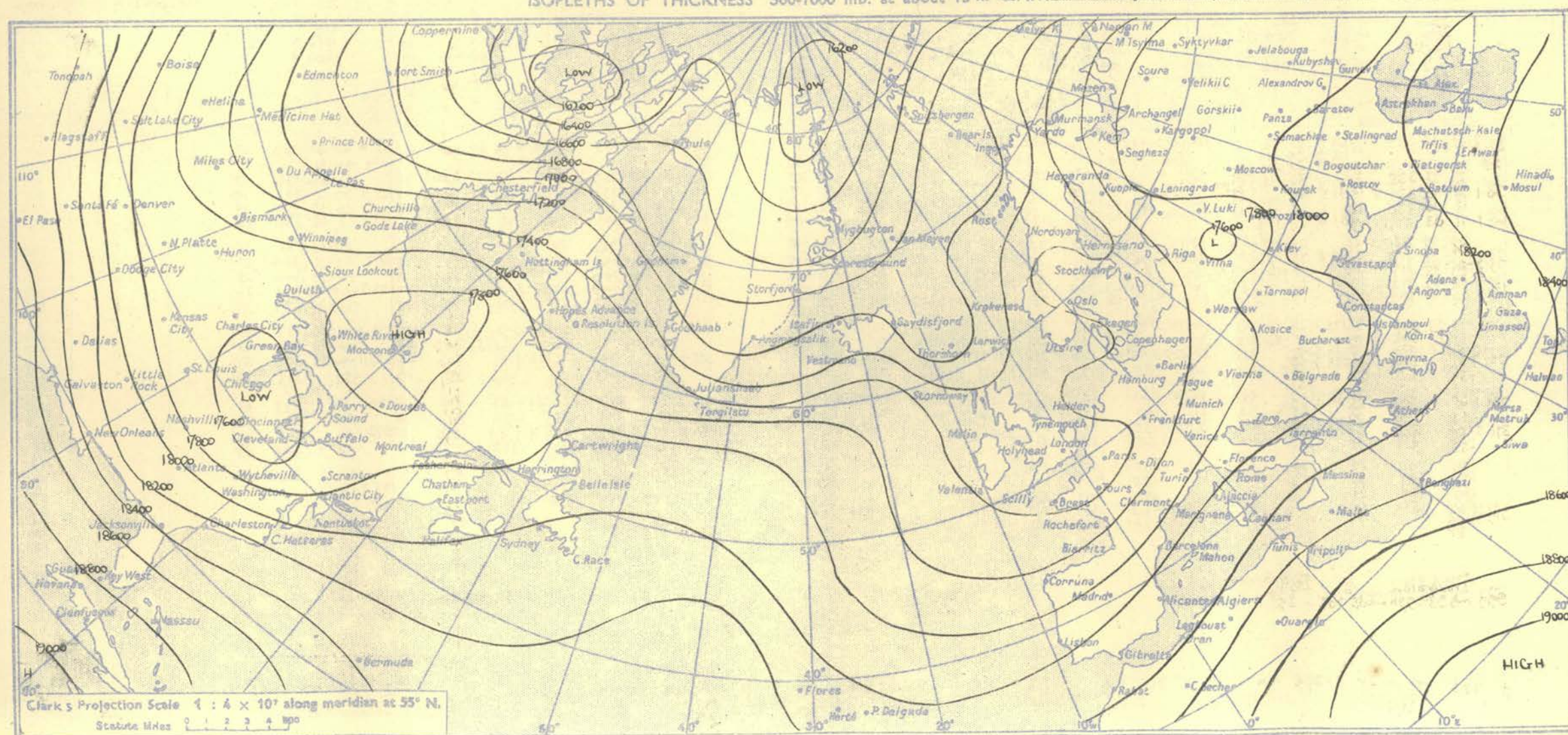




ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T.

Tuesday 10<sup>th</sup>. April

1951





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

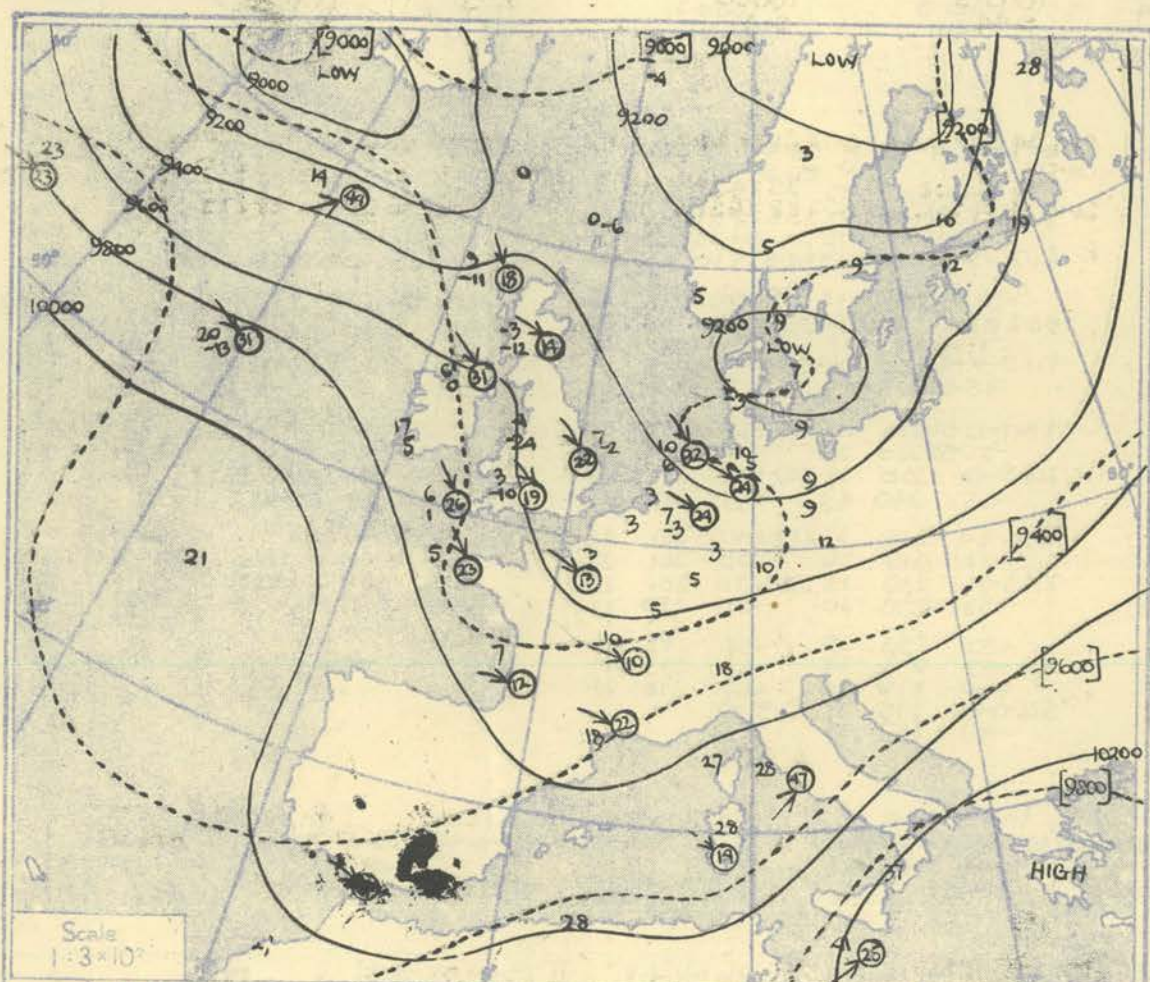
LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA.				STATION															
Time M.S.L. Surf Pressure	15h 1007.7 997.6 943	G.M.T. mb mb mb	15h 1014.0 1012.3 947	G.M.T. mb mb mb	15h 1011.2 1010.3 930	G.M.T. mb mb mb	15h 1014.6 1005.0 924	G.M.T. mb mb mb	15h 1011.7 1009.7 918	G.M.T. mb mb mb	15h 1008.6 1004.1 930	G.M.T. mb mb mb	15h 1011.1 994.7 908	G.M.T. mb mb mb	15h 1016.2 1005.2 920	G.M.T. mb mb mb	15h 1020.0 1017 920	G.M.T. mb mb mb	Time M.S.L. Surf Pressure																																
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	33	030	22.0	41	28	330	08.0	42	27	360	12.0	44	29	330	18.0	46	33	300	18.0	43	39		04.4	42	36	340	14.0	45	32	315	12.0	47	33	280	08	Surf													
1000	2.1				3.7	39	27		2.9	42	26	318	15.3	43	29	330	3.1	43	31	305	24.2	43	38		2.9	37	28	325	19.4	44	31		5.4	45	32	289	10	1000													
950		33	20	343		32	22	326		35	20	316		35	19	325		36	27	317		35	32			31	24	329		36	24	317		36	27	312	14	950													
900	29.7	26	15	342	19.3	14	25	17	325	14.3	30.8	28	16	321	15.3	31.1	30	22	331	15.3	31.1	30	22	331	15.3	31.1	30	22	331	15.3	31.1	30	22	331	15.3	31.1	30	22	900												
850		18	10	336		17	11	343		12	21	11	329		20	12	327		20	12	338		20	24			31	24	326		20	13	319		20	13	319	19	850												
800	59.7	10	05	341	15.6	14	12	08	349	13.6	10	04	338	19.6	15	04	327	28.6	15	06	336	18.6	17	14		61.4	20	15	321	20.6	19	07	330	25.6	16	06	322	20	800												
750		08	-30	351		06	-02	005		10	04	-04	344		17	11	-04	325		33	10	-02	318		17	11	06	For		15	10	314		13	-02	331		26	10	03	323	23	750								
700	72.9	00	-56	354	17.9	00	-16	008	10.9	04	03	-15	337	20.9	06	-16	321	20.9	06	-16	321	20.9	06	-16		95.2	09	03	304	13.9	08	-08	336	25.9	05	-11	326	27	700												
650		-10	-43	344		-05	-34	327		15	-02	-16	332		23	-02	-25	322		27	-04	-15	305		27	00	-05			02	-04	305	13	04	-12	340		25	00	-05	328	30	650								
600	127.9	18	-34	302	13.3	10	-40	320	20.3	13.9	07	-20	331	20.3	13.9	07	-20	331	20.3	13.9	07	-20	331	20.3	13.9	07	-20	331	20.3	13.9	07	-20	331	20.3	13.9	07	-20	331	20.3	13.9	07	600									
550		-23	-57	292		-18	-47	321		22	-16	-28	330		16	-12	-41	334		32	-16	-29	305		19	-12	-40	see		-12	-26	287	15	-13	-20	335	22	-10	-16	332	40	550									
500	172.3	-32	-57	256	14.7	17.9	-27	-57	334	31.7	17.5	-25	-37	321	15.7	17.6	-23	-46	333	40.7	17.5	-24	-38	303	18.7	17.5	-22	-47	page	176.5	-21	-36	301	17.7	17.8	-22	-39	336	28.7	17.6	-16	-23	338	46	500						
450		-43		278		-35	-58	329		37	-36	-48	299		18	-29	-46	332		46	-26	-43	289		18	-31	-57			-30	-48	321	21	-29	-46	345	45	-27	-35	336	50	450									
400	221.9	-54		242	24.2	25.3	-46		327	46.2	25.4	-45		291	18.2	27.9	-39	-52	336	48.2	26.2	-43		270	15.2	26.3	-42		3.	227.6	-39	-55	310	23.2	29.0	-38	-56	350	53.2	30.0	-39	-48	335	79	400						
350		-63		241		-58		328		54		-53	311		17		-57	334		57		-53	306	22		-53				-53		293	23		-50		348	60	-52		337	52	350								
300	282.9	-65		264	15.8	17.1	-65		325	45.8	17.8	-63		320	25.8	19.5	-65		332	55.8	18.6	-57		320	27.8	18.8	-63			290.3	-58		294	22.8	19.8	-59		341	54.2	19.3	-67		336	61	300						
250		-61		295		-60		319		34		-62	320		25		-60		336		37		-57	316	29		-55			-56		306	28		-59		324	35		-71		337	58	250							
200	369.3	-58		308	24.3	17.0	-51		317	28.3	17.3	-52		312	28.7	16.8	-53		310	40.7	16.1	-50		310	30.7	16.1	-51			378.5	-47		299	33.7	17.3	-51		305	29.7	17.0	-60		319	43	200						
170		-58		311		-52		309		29		-50	310		28		-50		307		30		-49	311	31		-51			-46		295	32		-51		295	32		-58		311	36	170							
150		-58		316		-55		307		33		-52	322		30		-52		315		33		-49	304	30		-52			-51		290	33		-50		286	24		-57		303	31	150							
130		-60		319		-56		306		31		-54	322		34		-56		310		29		-50	303	36		-54			-52		289	37		-55		283	27		-60		299	26	130							
110		-63		319		-59		307		28		-56	324		39		-56		284		27		-57	306	31		-57			-58		300	32		-63		288	22		-64		290	30	110							
100	517.1	-65																														529.5	-62		305	26.5	17.6	-66		27	(92)	-69		278	28	100					
90																																															90				
80																																															80				
70																																															70				
60																																															60				
Isothermal				Isothermal				Inversion								Inversion																(54) mb																			
803 - 773 mb 10°				478 - 466 mb -31°				750 mb 04°-28 mb 00°								345 mb -54°-33 mb 53°																																			
Tropopause II 350 mb - 63°				I 300 mb - 65°				I 271 mb - 70°				II 302 mb - 65°				I 331 mb - 57°				I 275 mb - 65°				I 311 mb - 59°				I 314 mb - 60°				I 269 mb - 76°																			
25,000'				28,700'				31,000'				29,000'				26,800'				30,700'				28,300'				28,200'				31,600'																			
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE																																						



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.		1010.3		mb		1010.8		mb		1014.4		mb		1017.8		mb		1015.5		mb		1015.3		mb		1017.1		mb		1015.4		mb		1015.7		mb					
Surf		1000.0		mb		1012.1		mb		1013.5		mb		1007.7		mb		1010.4		mb		1010.5		mb		1000.3		mb		1008.5		mb		1015.7		mb					
Freezing		950		mb		966		mb		974		mb		950		mb		950		mb		944		mb		948		mb		940		mb		905		mb					
Pressure		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.					
mb		ft/100		°F		ft/100		°F		ft/100		°F		ft/100		°F		ft/100		°F		ft/100		°F		ft/100		°F		ft/100		°F		ft/100		°F					
Surf		02.731		30.330		15		0.430		29.240		05		0.231		28.240		25		0.621		29.220		05		0.624		29		01.234		34		04.431		28		07			
1000		02.733		30		03.633		32		03.733		29		04.5		32.28		04.138		30		04.0		33.2308		13		35.24310		15		37.30290		18		38.24272		11			
950		30.26344		21		30.16241		04		29.23226		48		32.28262		06		32.24		29		31.6		26.4312		12		32.32816316		17		31.25292		20		33.2318275		14			
900		30.12419330		18		31.22419248		05		31.218233		49		32.32622287		10		31.7		28.20		31.6		26.4312		15		32.13322		19		31.25292		24		35.22252		12			
850		15.14336		16		18.14359		08		17.13242		50		21.19303		15		17.09		15		13.02312		15		16.2515		10		31.3		22		19.14202		23		63.8191793		11	
800		60.21206343		13		61.2100764		12		61.1106249		47		62.61611316		21		61.7		11.03		06.3307		18		09.02311		23		13.08309		25		19.00		15		19.00		750	
750		05.01332		13		05.13274		18		05.4251		46		12.06327		27		00.73		00.73		35.20726307		22		35.950010310		19		06.01311		26		27.71105		05		700			
700		30.3006322		08		30.460511289		18		31.12254		44		36.060330		20		35.00424		20		35.20726307		22		35.950010310		19		06.01311		26		27.71105		05		650			
650		-8.14015		03		-4.9303		21		-7.28255		50		-1.6321		34		-1.24		34		-1.41297		18		-5.24310		21		00.4317		26		07.01		600					
600		130.51525337		05		132.11044308		27		131.31328254		56		134.048330		36		132.7627		23		132.948305		24		133.4830320		23		-4.9331		35		136.0214		550					
550		-10.44315		18		-14.21310		33		-19.29252		54		-10.16326		42		-14.20		42		-15.56325		27		-17.3131		24		-11.16333		28		-7.29		500					
500		173.2843310		28		175.4243110		42		174.1234244		55		176.2123328		43		175.91336		30		176.12356300		34		176.5253631		30		-1.831306		42		180.11734		450					
450		-27.57317		30		-31.35302		44		-37.4248		55		-30.36328		54		-32.46		39		-32.5330		39		-32.4327		39		-29.26333		47		-26.39		400					
400		22.548		313		32.216441		305		47.24349		254		60.2874047334		54		42.2646		44		24.943		30		27.1453327		44		-39.46333		53		23.73662		350					
350		-60		310		39		313		51		-63		253		66		-53		332		63		-57		329		47		-51		338		61		-48		300			
300		284.867		311		36.288657		313		69.85372		253		65.290963		335		74.288265		45		285.160		325																	



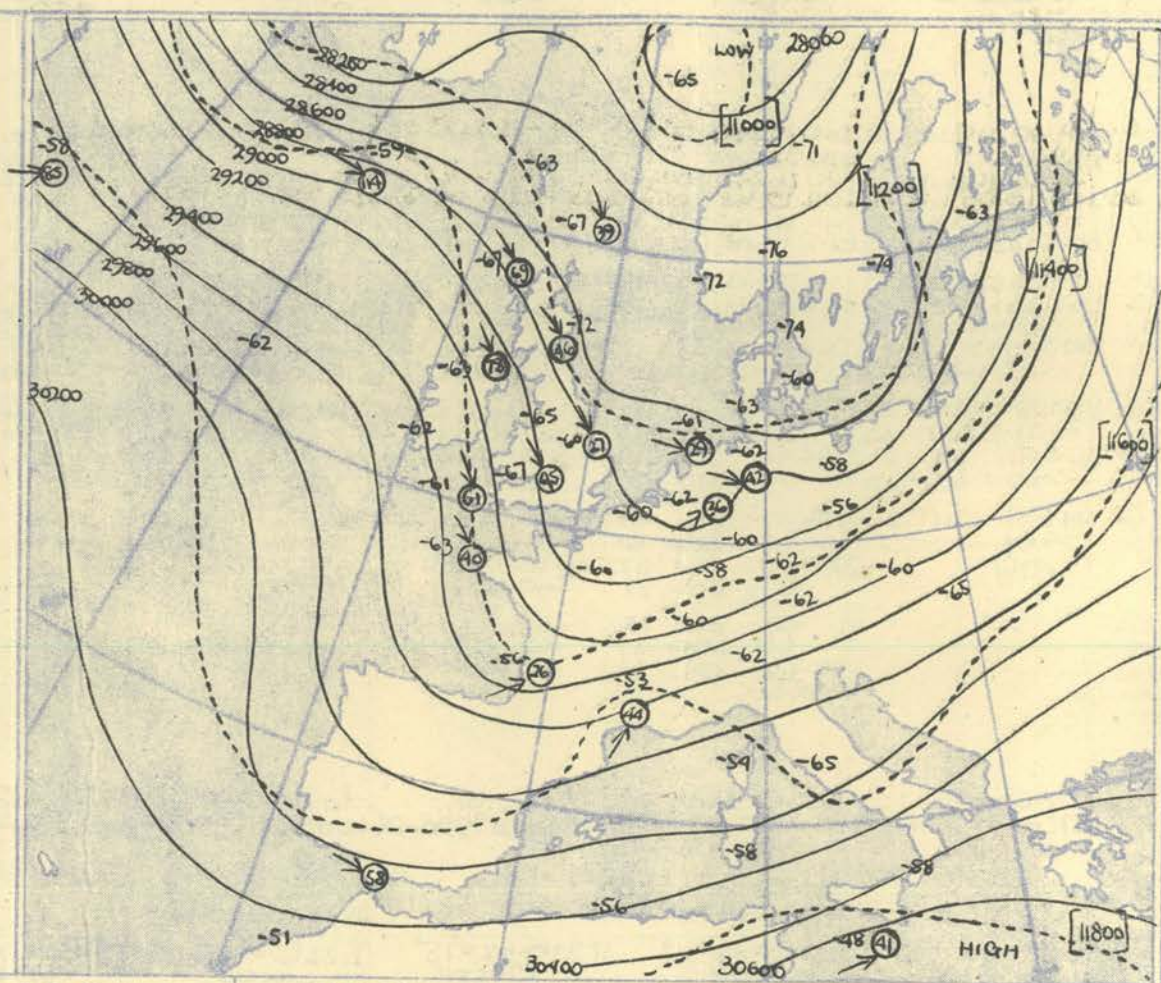
HEIGHTS IN FEET TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h. G.M.T.



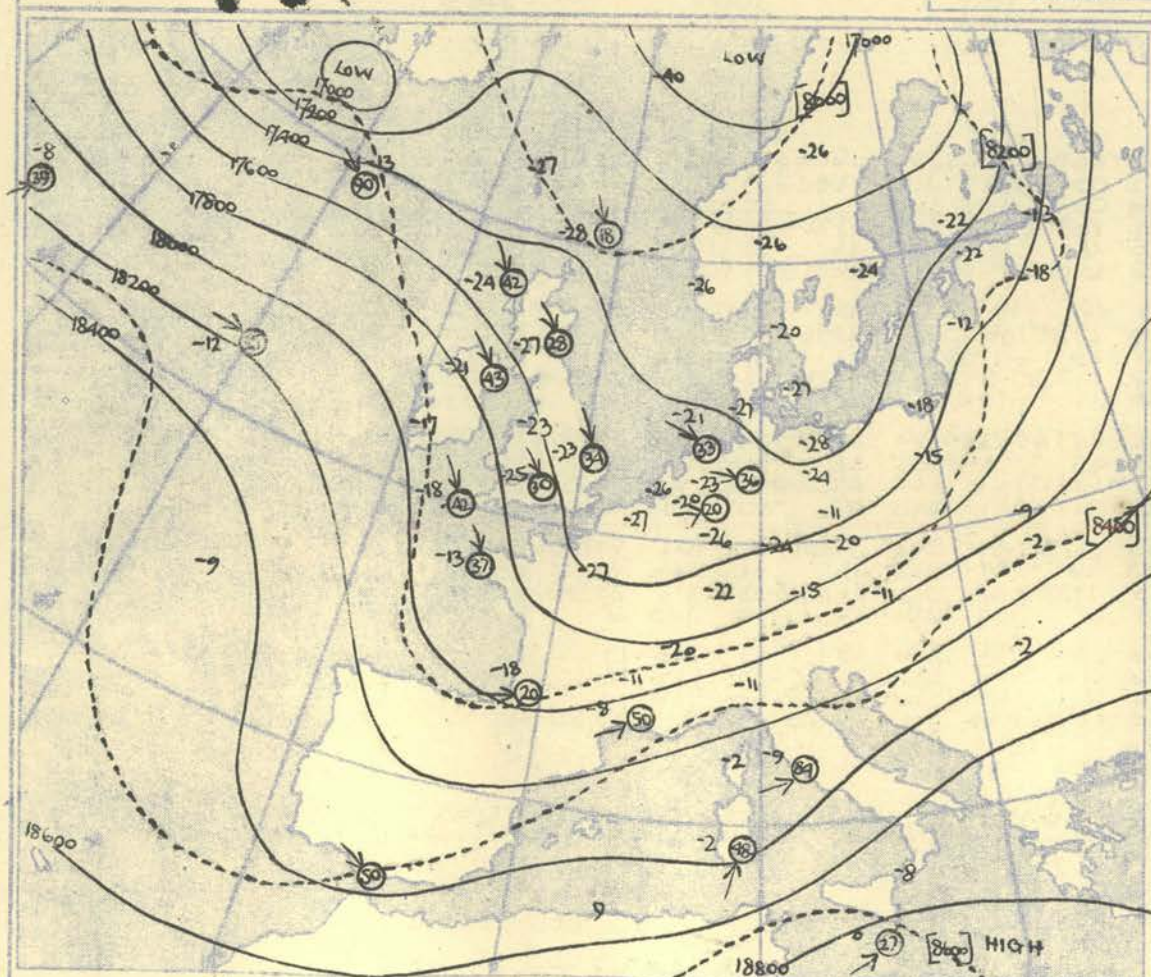
The continuous lines are contour lines of the 700mb. surface  
The dotted lines are isopleths of the thickness of the layer 1000 - 700 mb.

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

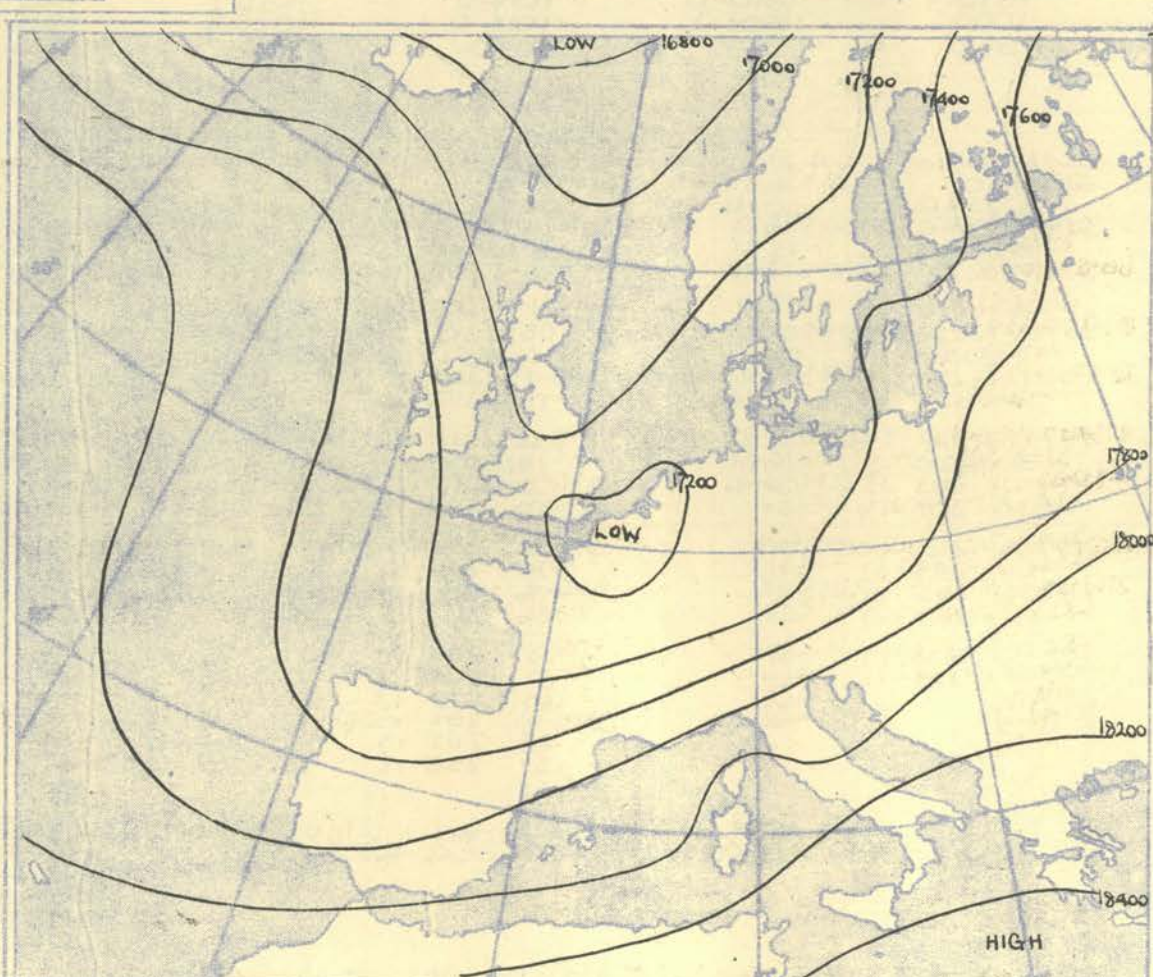
100 80 60 40 20 10 0 knots



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 500mb. 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

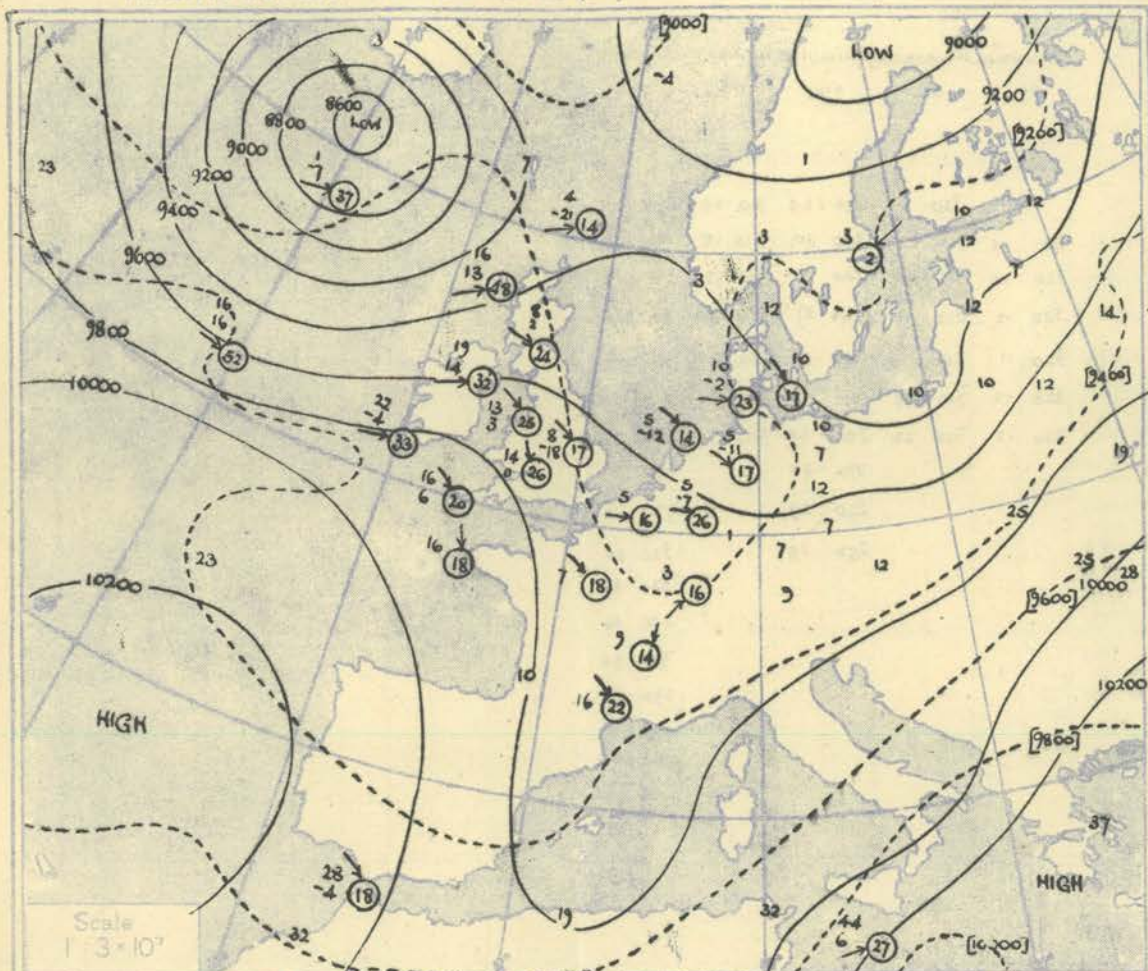
DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

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

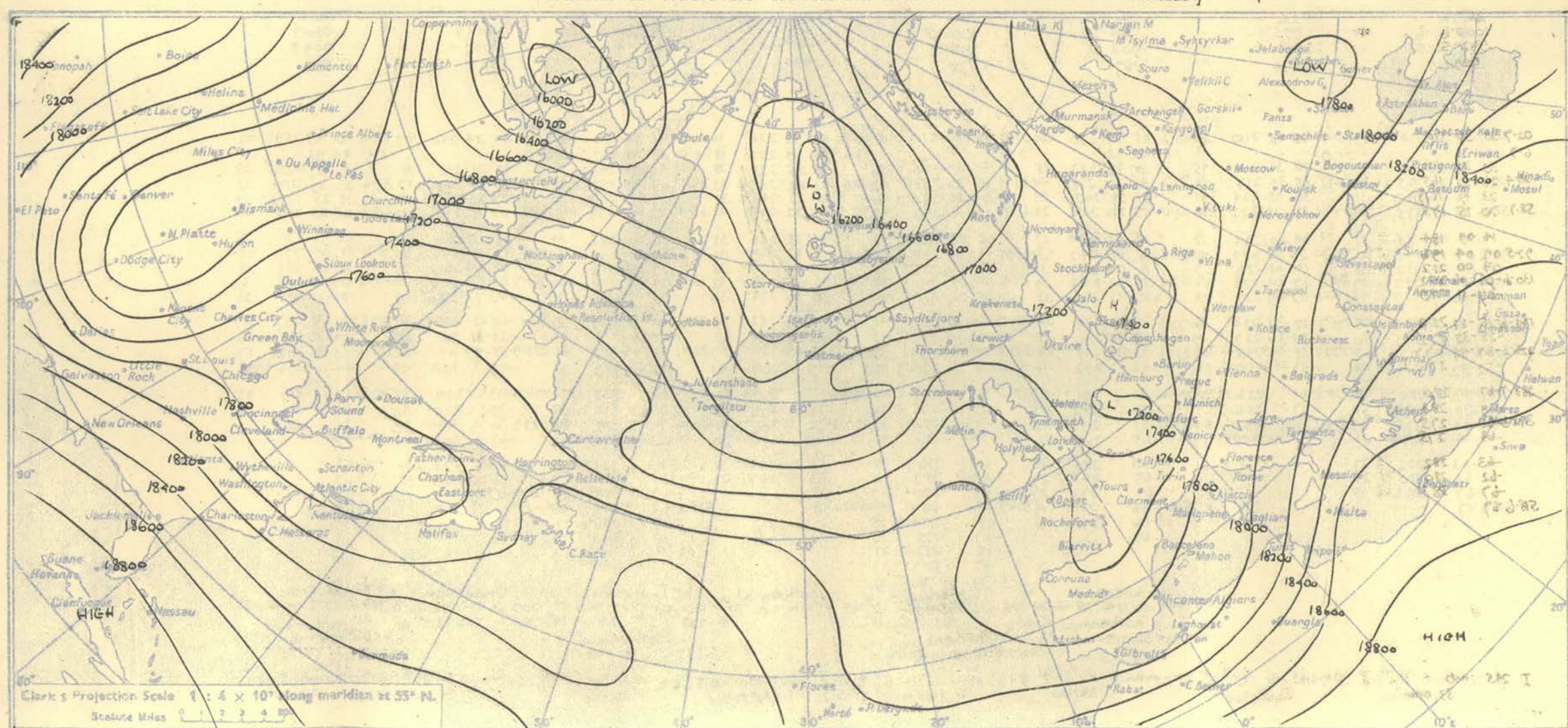
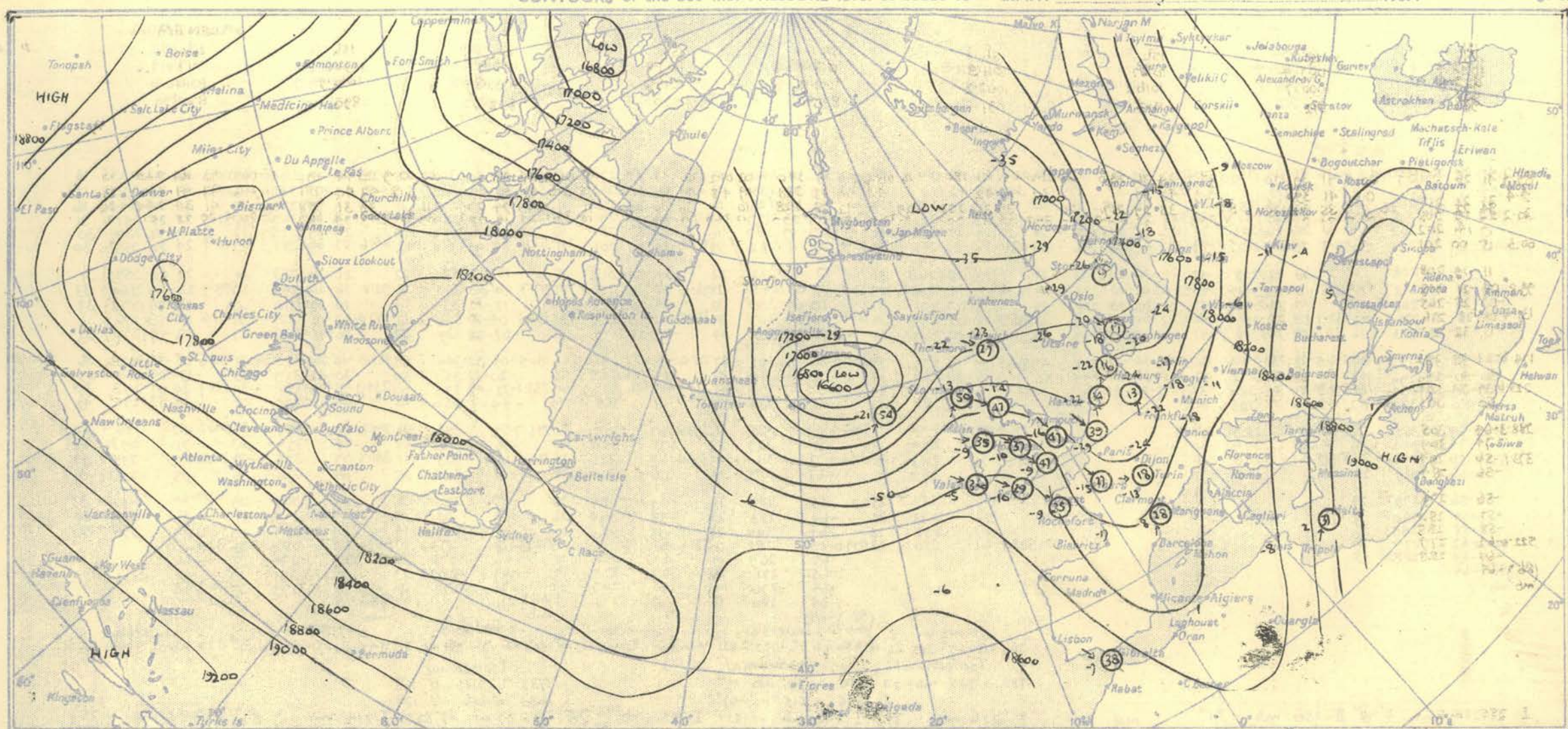
[illegible]



Page 4. 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.









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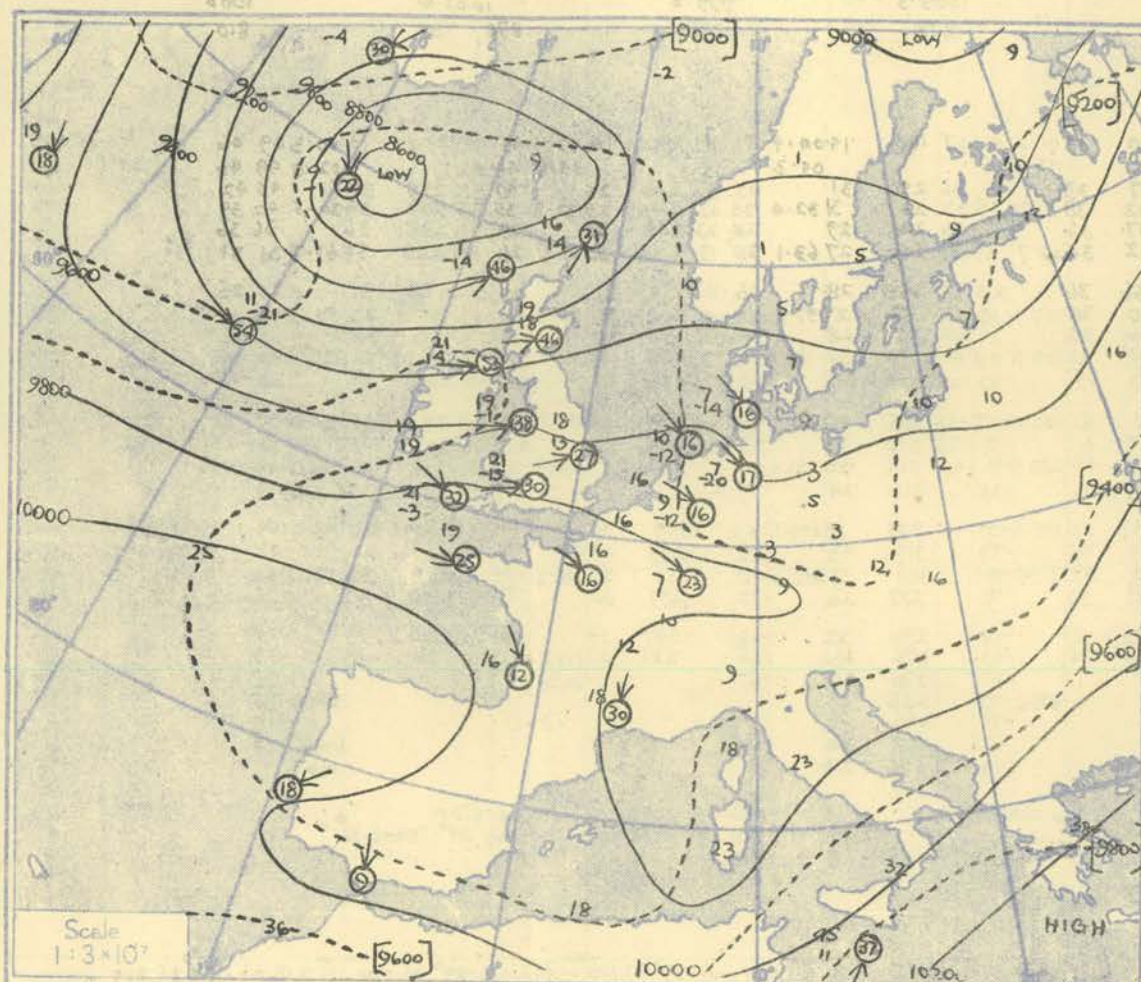
## RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION				
Time M.S.L.	03h 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.				Time M.S.L.				
Surf	988.6 mb				988.9 mb				996.5 mb				999.3 mb				1008.5 mb				1003.8 mb				1016.2 mb				1017.1 mb				1007.4 mb				Surf				
Freezing	978.6 mb				987.3 mb				995.6 mb				989.7 mb				1006.4 mb				1009.3 mb				999.9 mb				1006.4 mb				1006.4 mb				Freezing				
Pressure mb	900				900				831				830				880				878				878				878, 784				810				Pressure mb				
Height ft./100	02.7				00.4				00.2				00.6				00.6				01.2				01.2				02.9				00.3				Height ft./100				
Temp. °F.	41				39				45				46				40				41				41				45				49				Temp. °F.				
Dew °F.	41				34				40				42				220				27				39				44				49				Dew °F.				
Wind Dir. Vel. knots																																					Wind Dir. Vel. knots				
Surf	02.7	41	41		00.4	39	34	240	08	00.2	45	40	240	25	02.6	46	42		00.6	46	40	220	18	01.2	41	27	190	14	04.4	41	39	230	14	02.9	45	44	230	15	00.3	49	46
1000	02.7	41	41		00.4	39	34	240	08	00.2	45	40	240	25	02.6	46	42		00.6	46	40	220	18	01.2	41	27	190	14	04.4	41	39	230	14	02.9	45	44	230	15	00.3	49	46
950	02.7	41	41		00.4	39	34	240	08	00.2	45	40	240	25	02.6	46	42		00.6	46	40	220	18	01.2	41	27	190	14	04.4	41	39	230	14	02.9	45	44	230	15	00.3	49	46
900	02.7	41	41		00.4	39	34	240	08	00.2	45	40	240	25	02.6	46	42		00.6	46	40	220	18	01.2	41	27	190	14	04.4	41	39	230	14	02.9	45	44	230	15	00.3	49	46
850	02.7	41	41		00.4	39	34	240	08	00.2	45	40	240	25	02.6	46	42		00.6	46	40	220	18	01.2	41	27	190	14	04.4	41	39	230	14	02.9	45	44	230	15	00.3	49	46
800	02.7	41	41		00.4	39	34	240	08	00.2	45	40	240	25	02.6	46	42		00.6	46	40	220	18	01.2	41	27	190	14	04.4	41	39	230	14	02.9	45	44	230	15	00.3	49	46
750	02.7	41	41		00.4	39	34	240	08	00.2	45	40	240	25	02.6	46	42		00.6	46	40	220	18	01.2	41	27	190	14	04.4	41	39	230	14	02.9	45	44	230	15	00.3	49	46
700	02.7	41	41		00.4	39	34	240	08	00.2	45	40	240	25	02.6	46	42		00.6	46	40	220	18	01.2	41	27	190	14	04.4	41	39	230	14	02.9	45	44	230	15	00.3	49	46
650	02.7	41	41		00.4	39	34	240	08	00.2	45	40	240	25	02.6	46	42		00.6	46	40	220	18	01.2	41	27	190	14	04.4	41	39	230	14	02.9	45	44	230	15	00.3	49	46
600	02.7	41	41		00.4	39	34	240	08	00.2	45	40	240	25	02.6	46	42		00.6	46	40	220	18	01.2	41	27	190	14	04.4	41	39	230	14	02.9	45	44	230	15	00.3	49	46
550	02.7	41	41		00.4	39	34	240	08	00.2	45	40	240	25	02.6	46	42		00.6	46	40	220	18	01.2	41	27	190	14	04.4	41	39	230	14	02.9	45	44	230	15	00.3	49	46
500	02.7	41	41		00.4	39	34	240	08	00.2	45	40	240	25	02.6	46	42		00.6	46	40	220	18	01.2	41	27	190	14	04.4	41	39	230	14	02.9	45	44	230	15	00.3	49	46
450	02.7	41	41		00.4	39	34	240	08	00.2	45	40	240	25	02.6	46	42		00.6	46	40	220	18	01.2	41	27	190	14	04.4	41	39	230	14	02.9	45	44	230	15	00.3	49	46
400	02.7	41	41		00.4	39	34	240	08	00.2	45	40	240	25	02.6	46	42		00.6	46	40	220	18	01.2	41	27	190	14	04.4	41	39	230	14	02.9	45	44	230	15	00.3	49	46
350	02.7	41	41		00.4	39	34	240	08	00.2	45	40	240	25	02.6	46	42		00.6	46	40	220	18	01.2	41	27	190	14	04.4	41	39	230	14	02.9	45	44	230	15	00.3	49	46
300	02.7	41	41		00.4	39	34	240	08	00.2	45	40	240	25	02.6	46	42		00.6	46	40	220	18	01.2	41	27	190	14	04.4	41	39	230	14	02.9	45	44	230	15	00.3	49	46
250	02.7	41	41		00.4	39	34	240	08	00.2	45	40	240	25	02.6	46	42		00.6	46	40	220	18	01.2	41	27	190	14	04.4	41	39	230	14	02.9	45	44	230	15	00.3	49	46
200	02.7	41	41		00.4	39	34	240	08	00.2	45	40	240	25	02.6	46	42		00.6	46	40	220	18	01.2	41	27	190	14	04.4	41	39	230	14	02.9	45	44	230	15	00.3	49	46
170	02.7	41	41		00.4	39	34	240	08	00.2	45	40	240	25	02.6	46	42		00.6	46	40	220	18	01.2	41	27	190	14	04.4	41	39	230	14	02.9	45	44	230	15	00.3	49	46
150	02.7	41	41		00.4	39	34	240	08	00.2	45	40	240	25	02.6	46	42		00.6	46	40	220	18	01.2	41	27	190	14	04.4	41	39	230	14	02.9	45	44	230	15	00.3	49	46
130	02.7	41	41		00.4	39	34	240	08	00.2	45	40	240	25	02.6	46	42		00.6	46	40	220	18	01.2	41	27	190	14	04.4	41	39	230	14	02.9	45	44	230	15	00.3	49	46
110	02.7	41	41		00.4	39	34	240	08	00.2	45	40	240	25	02.6	46	42		00.6	46	40	220	18	01.2	41	27	190	14	04.4	41	39	230	14	02.9	45	44	230	15	00.3	49	46
100	02.7	41	41		00.4	39	34	240	08	00.2	45	40	240	25	02.6	46	42		00.6	46	40	220	18	01.2	41	27	190	14	04.4	41	39	230	14	02.9	45	44	230	15	00.3	49	46
90	02.7	41	41		00.4	39	34	240	08	00.2	45	40	240	25	02.6	46	42		00.6	46	40	220	18	01.2	41	27	190	14	04.4	41	39	230	14	02.9	45	44	230	15	00.3	49	46
80	02.7	41	41		00.4	39	34	240	08	00.2	45	40	240	25	02.6	46	42		00.6	46	40	220	18	01.2	41	27	190	14	04.4	41	39	230	14	02.9	45	44	230	15	00.3	49	46
70	02.7	41	41		00.4	39	34	240	08	00.2	45	40	240	25	02.6	46	42		00.6	46	40	220	18	01.2	41	27	190	14	04.4	41	39	230	14	02.9	45	44	230	15	00.3	49	46
60	02.7	41	41		00.4	39	34	240	08	00.2	45	40	240	25	02.6	46	42		00.6	46	40	220	18	01.2	41	27	190	14	04.4	41	39	230	14	02.9	45	44	230	15	00.3	49	46
Inversion	987 mb 39° - 970 mb																																								



RTM 3JAV

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.





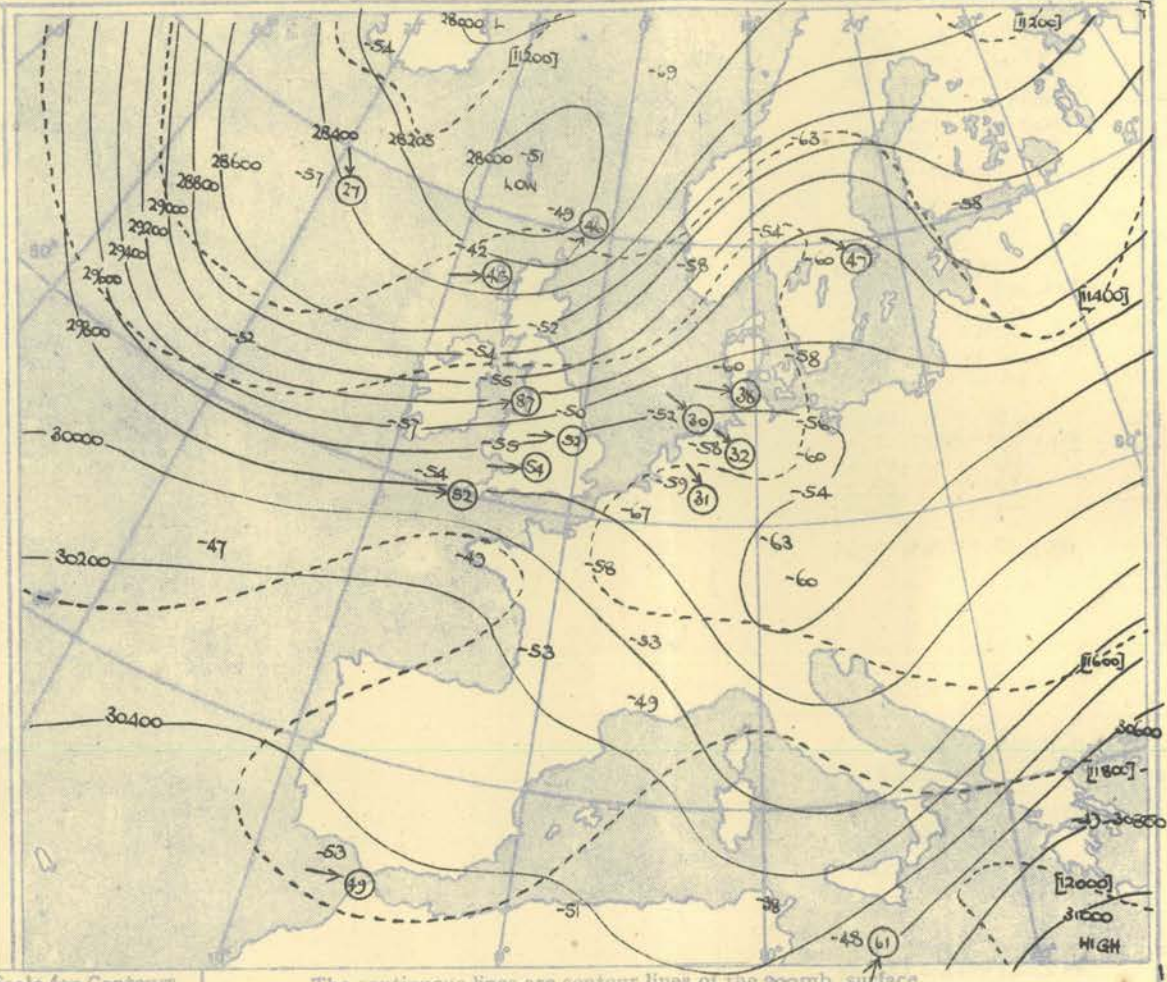
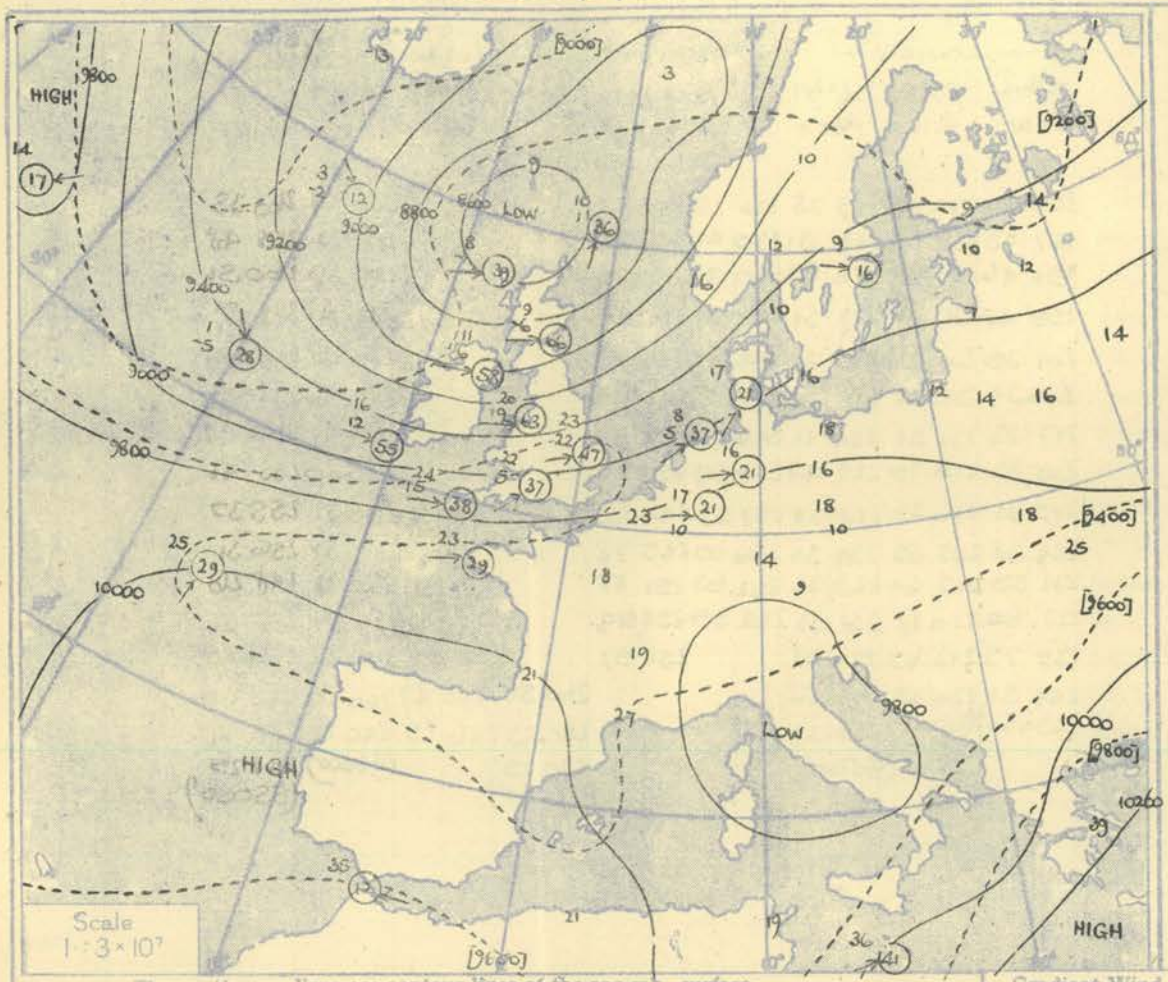
## DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

[illegible]

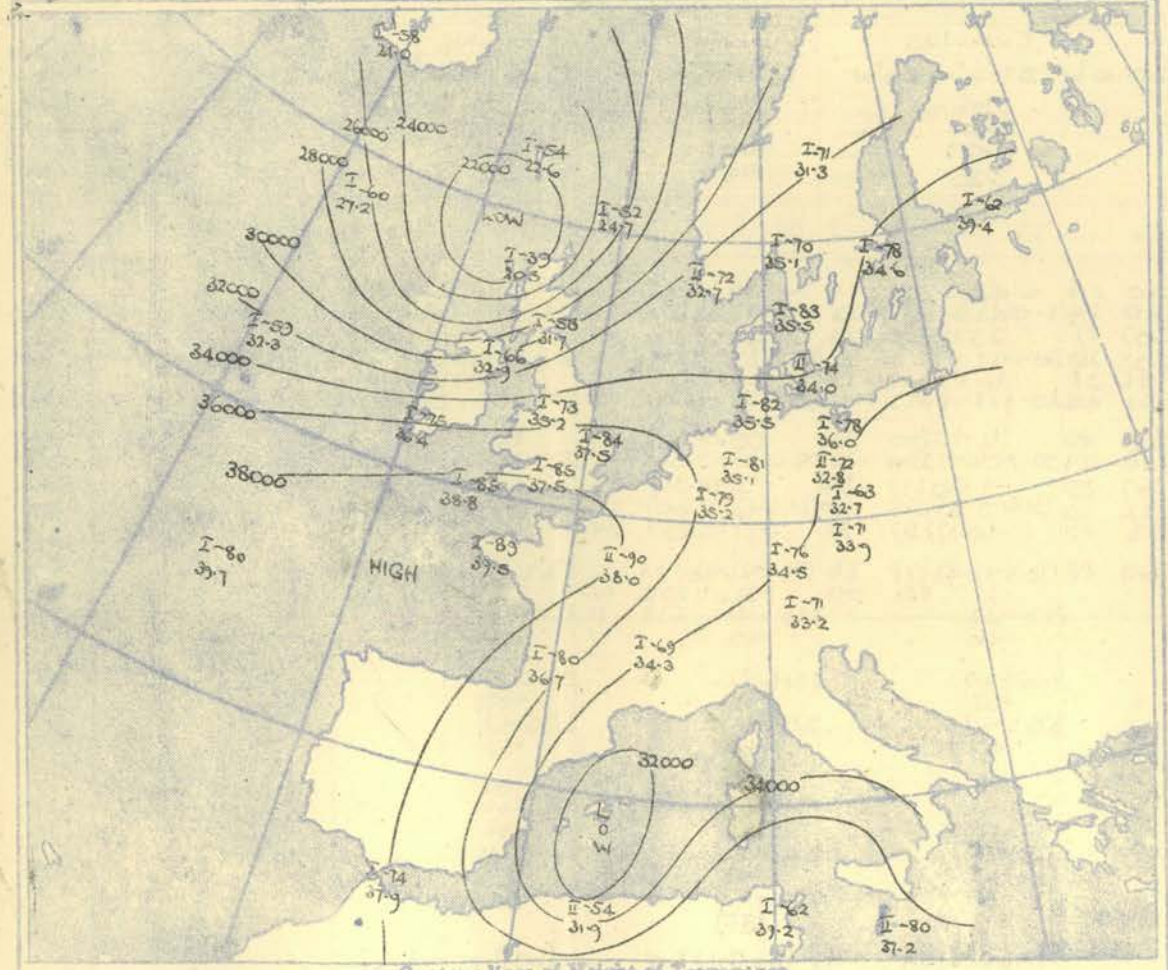
## NEPHOSCOPE OBSERVATIONS

[illegible]





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



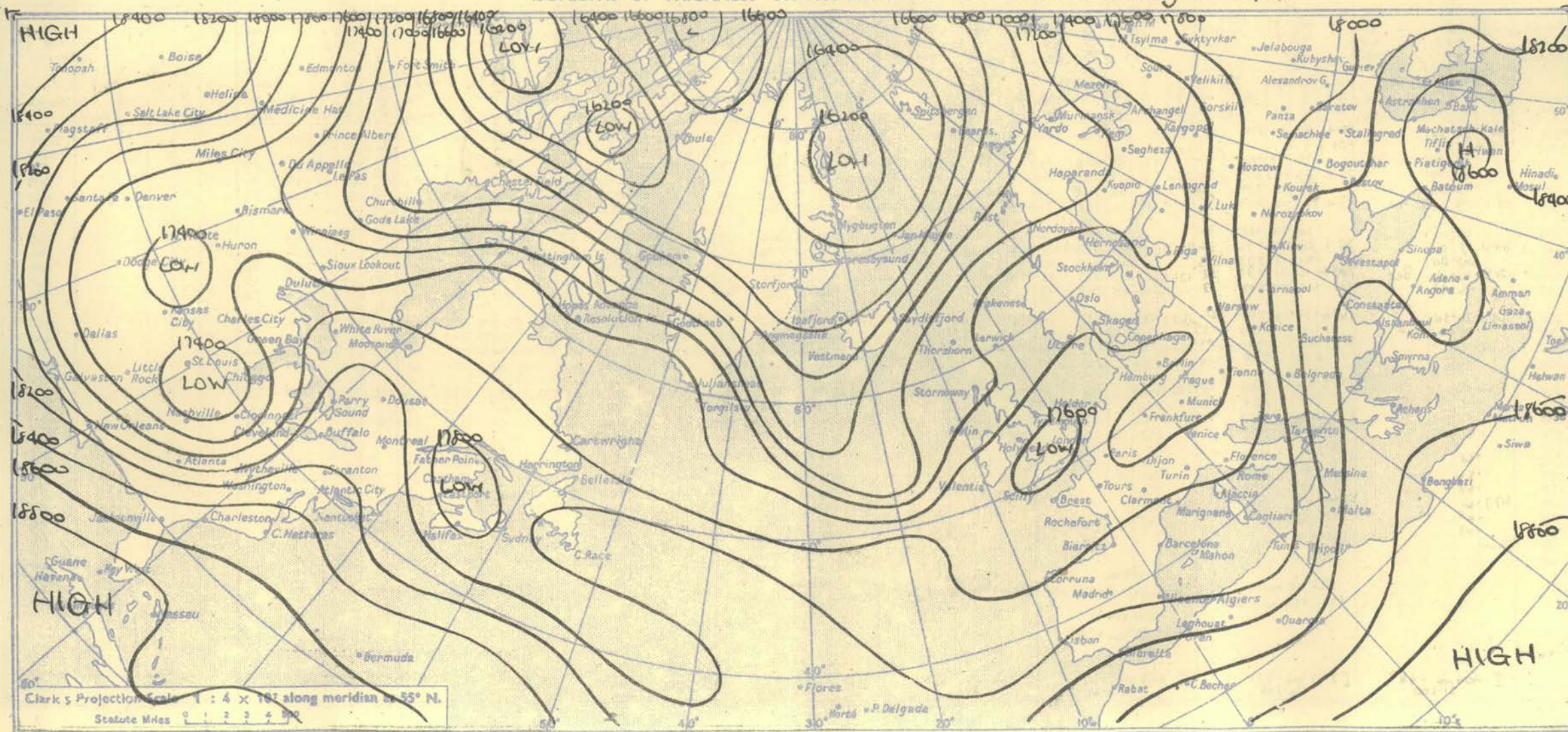
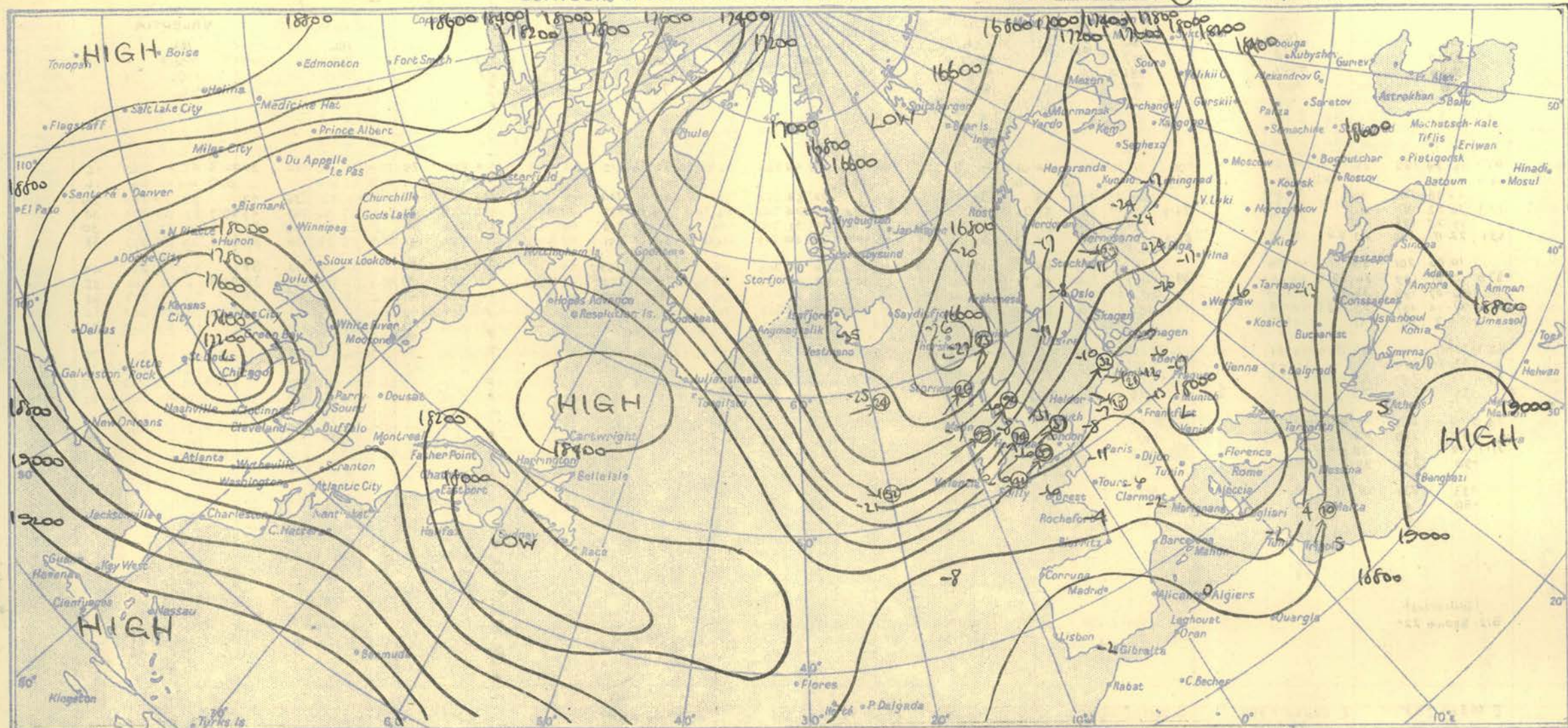
NOTES ON THE AEROLOGICAL SITUATION.

Pronounced sharpening during the day of the cold trough over the Eastern 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	5L		G.M.T.	M.S.L.	978.0	mb	Surf	974.3	mb	987.5	mb	993.3	mb	1000.5	mb	1006.4	mb	1003.7	mb	1012.1	mb	1006.3	mb	1005	mb	890	mb	1006.3	mb	1005	mb	890	mb	Time											
	Freezing	870		mb		974.6	mb		986.4	mb		993.6		mb		1000.8		mb		1006.7		mb		1004.0		mb		1003.7		mb		1006.6		mb		1005	mb	890	mb	1006.3	mb	1005	mb	890	mb	Freezing
	Pressure	870		mb		974.6	mb		986.4	mb		993.6		mb		1000.8		mb		1006.7		mb		1004.0		mb		1003.7		mb		1006.6		mb		1005	mb	890	mb	1006.3	mb	1005	mb	890	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	02.7	45	38	185	26	00.4	44	33		00.2	51	36	220	40	02.6	45	37	250	40	00.6	46	44	260	22	01.2	53	46	215	24	04.2	50	44	220	25	Surf											
1000	06.0				06.5					03.5					01.7					00.2					01.7					02.6			03.3	51	46		1000									
950		44	38	175	39					45	33	227	48		39	32	250	61		42	38	254	35		46	41	234	43		43	39	228	33		43	42	236	42	950							
900	22.3	36	32	187	41	21.7		32	23	24.9	36	27	231	57	26.4	33	29	246	52	28.4	37	34	248	44	30.2	39	36	237	45	31.0	38	36	238	37	31.7	37	36	237	43	29.7	33	29	274	30	900	
850		29	25	195	44					28	22	239	60		28	24	248	53		33	31	243	43		32	29	245	48		33	32	254	41		32	30	246	39		26	23	279	30	850		
800	53.1	22	17	200	43	52.1		19	12	55.5	22	16	248	64	57.1	22	18	258	52	59.5	30	30	242	44	61.3	34	17	251	47	62.1	29	24	256	41	62.7	28	28	270	36	60.3	22	20	277	33	800	
750		10	06	201	39					16	07	253	64		17	12	255	52		26	25	249	48		26	21	253	44		28	09	255	40		27	23	273	38		19	15	274	44	750		
700	87.0	10	01	199	36	85.8		08	01	89.3	09	06	254	66	91.1	11	06	261	58	94.2	20	19	253	63	96.0	23	22	255	42	96.9	22	05	267	37	97.4	24	15	259	38	94.3	16	12	264	55	700	
650		02	07	198	38					02	08	254	63		04	04	263	68		15	13	253	68		18	17	255	41		16	11	260	41		18	02	258	38		11	07	258	62	650		
600	72.5	07	14	197	35	72.8		06	18	127.3	05	14	255	65	129.1	00	16	254	77	135.2	09	05	253	71	135.2	12	10	254	42	135.9	10	08	256	40	136.6	10	02	257	40	133.1	08	03	254	74	600	
550		13	17	197	42					14	13	251	78		01	16	257	103		00	04	253	74		05	02	256	40		02	03	255	41		02	05	258	36		03	02	253	75	550		
500	168.3	23	17	200	46	170.0		25	32	170.7	20	42	244	90	173.8	17	26	256	99	177.9	08	13	253	74	180.4	03	06	257	37	180.8	06	13	258	39	181.4	06	11	258	41	178.1	06	12	252	78	500	
450		33	39	204	42					26	50	245	108		17	26				12	23	247	78		11	15	247	40		16	23	256	44		15	15	253	42		16	23	249	75	450		
400	219.0	45		215	37	217.6		37	48	222.2	34	57	246	132	226.4	29	37			23.0	4	29	246	78	233.7	21	26	241	47	233.5	28	35	257	49	234.2	26	30	257	51	230.8	26	40	252	83	400	
350		52		221	39					45		245	121		41					47		246	84		35	40	250	50		41		256	48		39	44	267	52		38	47	251	82	350		
300	281.9	49		223	46	281.8		42		285.8	52				54				294.4	55		280	87	298.7	50		255	52	297.6	55		265	54	298.6	52		264	52	295.3	51		251	91	300		
250		47		229	43					57					60					309.7	62		256	99		308.3	57		270	61		265	56		268	60		267				250				
200	371.1	49		235	38	372.1		44		373.0	61				57				379.7	62		254	72	383.3	57		267	60	381.3	76		269	48	383.3	83		270	56	380.4	70		262		200		
170		50		233	35					62					57					62		256	48		67		263	45		65		263	38		71		270	41				170				
150		53		234	28					55					57					62		257	45		67		256	42		64		260	38		69		252	42		61		150				
130		50								53					57					57		260	50		60		255	30		62		255	37		68		248	40		61		130				
110										60					55					55		258	31		63		241	30		64		247	33		68		254	36		61		110				
100						523.5		52							57				52.7	57		259	37	529.1	64		242	37	527.3	62		260	30	527.1	69		260	36	527.4	61		61		100		
90															59					59		257	37		64		257	37		65		263	30		69					61		90				
80															59					59		257	37		63		263	26		58		250	26						62		80					
70															60					60		263	21		63		263	21		56		255	17						64		70					
60																				63		269	9		63		269	9		63		262	15						64		60					
Isothermal. 812-800mb 22°										Isothermal. 465-445mb 26°					Inversion 607mb-02°-595mb 02°					Isothermal. 956mb-932mb 42°					Inversion. 850mb 32°-815mb 36°					Inversion. 809mb 28°-780mb 31°					Isothermal. 820-780mb 28°					Isothermal. 819-800mb 22° 761-750 18° Inversion. 750mb 18°-72mb 19°						
Tropopause I 353mb -53° 24.800										Tropopause I 426mb -39° 20.500											Tropopause I 260mb -58° 31.700																									

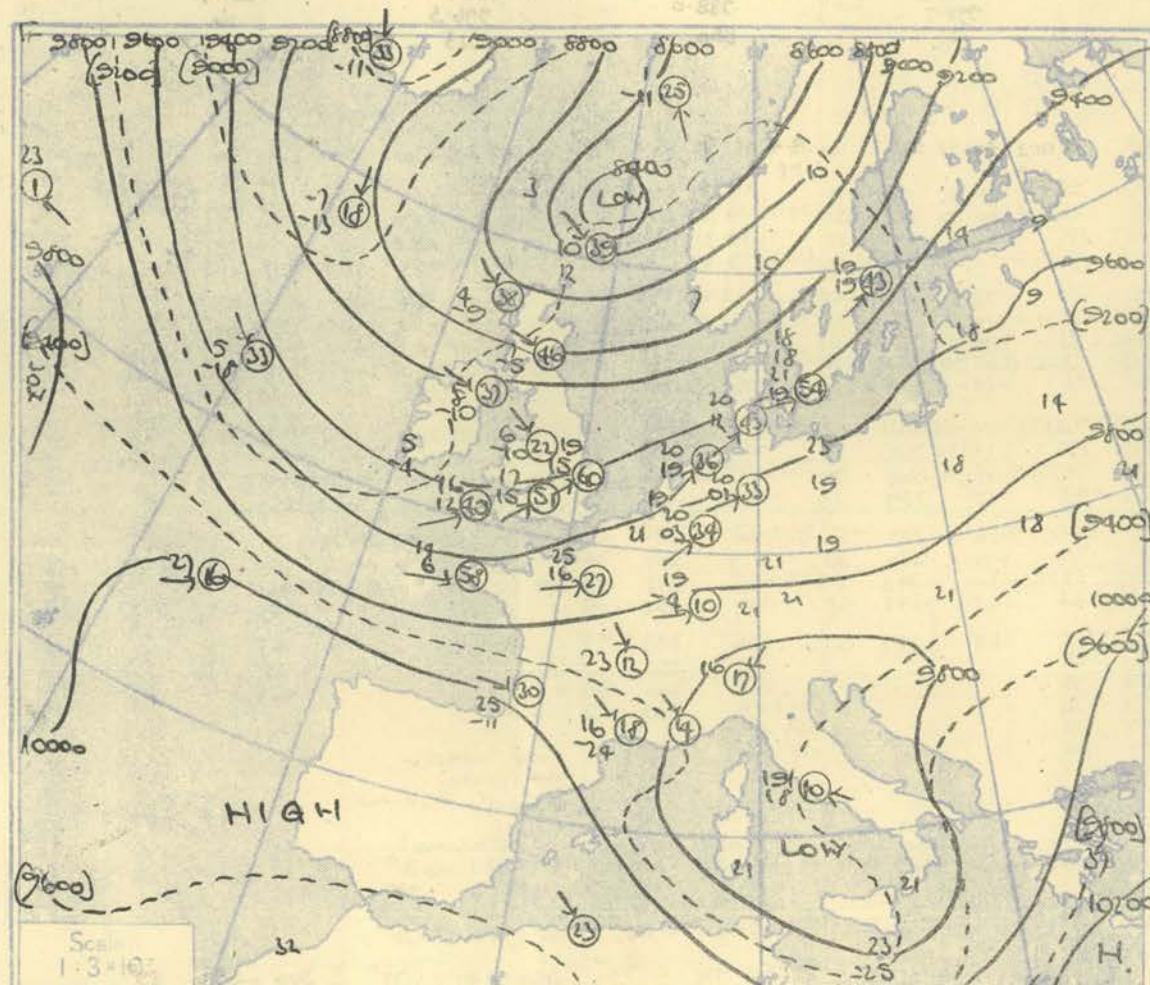


## RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

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.	911.7				987.0				991.7				999.6				1000.7				1003.2				1004.2				1007.0				1007.4				M.S.L.																																	
Surf	961.9				987.4				990.8				999.6				998.6				998.7				998.0				996.3				1006				Surf																																	
Pressure	988				923				902				900				900				919				850				923				920				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. knots				Dir. Vel. knots				Dir. Vel. knots				Dir. Vel. knots				Dir. Vel. knots				Dir. Vel. knots				Dir. Vel. knots				Dir. Vel. knots				Dir. Vel. knots				Wind																																	
Surf	02.7	39	35	290	21	00.4	38	32	290	18	00.2	38	32	280	20	02.6	39	33	270	10	00.6	43	39	265	12	01.2	40	38	265	10	04.4	41	39	330	10	02.9	42	39	270	15	00.3	41	36	Surf																										
1000	-7.7				-3.0					-2.3					0.1						0.4																						1000																											
950		39	35			36	29	302	39		35	28	276	43		38	29	279	18		38	34	283	23		34	32	278	18		37	36	284	11		36	33	282	21		35	31	950																											
900	20.2	34	30	286	33	24.9	29	28	301	40	25.1	32	25	293	50	27.9	32	25	280	27	28.4	32	25	302	21	28.8	30	28	280	23	29.1	36	35	233	22	29.9	31	28	282	25	29.8	30	27	900																										
850		27	20	291	34		22	17	305	39		26	17	287	48		26	15	283	32		26	17	298	19		30	27	247	31		32	31	232	42		28	24	284	32		24	23	850																										
800	50.8	21	13	288	36	55.1	16	08	306	39	56.2	21	08	286	46	58.5	20	06	281	32	59.0	19	11	293	18	59.6	27	24	214	39	60.1	28	27	236	49	60.5	23	19	277	48	60.2	18	16	800																										
750		16	10	288	38		11	-01	300	39		15	02	283	45		15	00	281	35		13	01	289	20		23	20	223	45		22	20	238	52		21	17	264	48		12	07	750																										
700	84.7	10	02	289	39	8.6	04	-09	289	38	8.9	07	-05	276	46	92.3	08	-10	274	37	92.7	06	-10	287	22	94.0	19	15	233	60	94.4	17	15	237	51	94.7	16	12	243	45	93.7	05	-04	700																										
650		03	-10	287	39		-03	-14	287	40		00	-13	276	45		-01	-17	267	37		-02	-15	289	22		12	07	236	61		09	01	240	53		11	07	243	63		-03	-14	650																										
600	22.7	-05	-18	285	39	26.1	-11	-22	286	40	27.7	-09	-26	275	43	30.1	-09	-23	264	37	33.0	-09	-17	275	23	33.8	05	-01	236	57	33.0	03	-07	248	56	33.3	04	-01	250	69	33.3	-11	-21	600																										
550	-15	-28	282	38		-20	-30	289	39		-19	-37	273	36		-19	-30	258	37		-16	-20	241	43		-04	-11	238	56		-05	-15	245	58		-03	-09	245	69		-20	-28	550																											
500	165.8	-26	-39	282	39	168.8	-31	-39	293	39	170.6	-29	-46	276	29	172.9	-30	-40	255	35	173.5	-21	-26	235	72	177.1	-14	-23	240	60	177.1	-15	-24	245	63	177.7	-13	-20	247	76	174.1	-29	-38	500																										
450		-38	-48	280	36		-39	-46	300	35		-42		276	28		-42		252	38		-30	-35	230	82		-24	-35	239	68		-27	-35	244	68		-20	-28	250	99		-39	-50	450																										
400	216.0	-51		271	35	218.8	-49		278	31	220.4	-52		258	41	222.6	-53		254	33	224.6	-41		231	94	228.9	-34	-46	238	76	228.6	-35	-45	248	80	229.9	-28	-38	249	93	224.3	-45		350																										
350		-53		253	27		-60		264	33		-58		248	52		-57		251	42		-50		235	99		-45		239	79		-44		248	87		-40	-53	251	90		-50		300																										
300	278.5	-51		243	32	280.5	-61		270	32	282.2	-54		241	54	284.4	-53		254	50	287.4	-57		229	106	292.5	-56		239	86	292.1	-60		246	85	294.0	-57		255	89	287.1	-55		250		250																								
250		-48		242	34		-52		263	29		-56		241	56		-49		256	54		-62		242	79		-70		239	85		-77		239	79		-72		247	92		-55		200																										
200	367.3	-49		238	29	368.4	-50		247	32	369.7	-53		241	51	373.1	-47		373	7	376.0	-62		250	52	376.7	-74		242	69	376.1	-68		253	55	378.8	-65		374.4	-61		-59		170																										
170		-50		241	35		-53		238	31		-52		249	42		-51							248	44		-63		248	58		-67		252	48									150																										
150		-52		241	32		-54		261	40		-52		258	36		-55							252	42		-65		247	52		-66		247	43		-64						130																											
130		-51		237	30		-51		267	30		-55		264	27		-62							250	48				250	48				250	32	140	-65						110																											
110		-55				519.0	-53		225	21		-61		255	36		-60							253	30				260	26				260	26									100																										
90																																													90																									
80																																													80																									
70																																													70																									
60																																													60																									
Isothermal				962 mb 39°-950 mb 39°				Inversion				Inversion				Inversion				Inversion				Inversion				Inversion				Isothermal				Isothermal				Max wind:-				25° 110 Kts.				21,500' + 28 mb																						
358 mb - 54°				320 mb - 66°				319 mb - 60°				391 mb - 55°				267 mb - 62°				220 mb - 79°				280 mb - 77°				280 mb - 72°				300 mb - 55°				Tropopause				23,900'				26,700'				26,200'				22,800'				31,300'				35,700'				33,000'				33,200'		



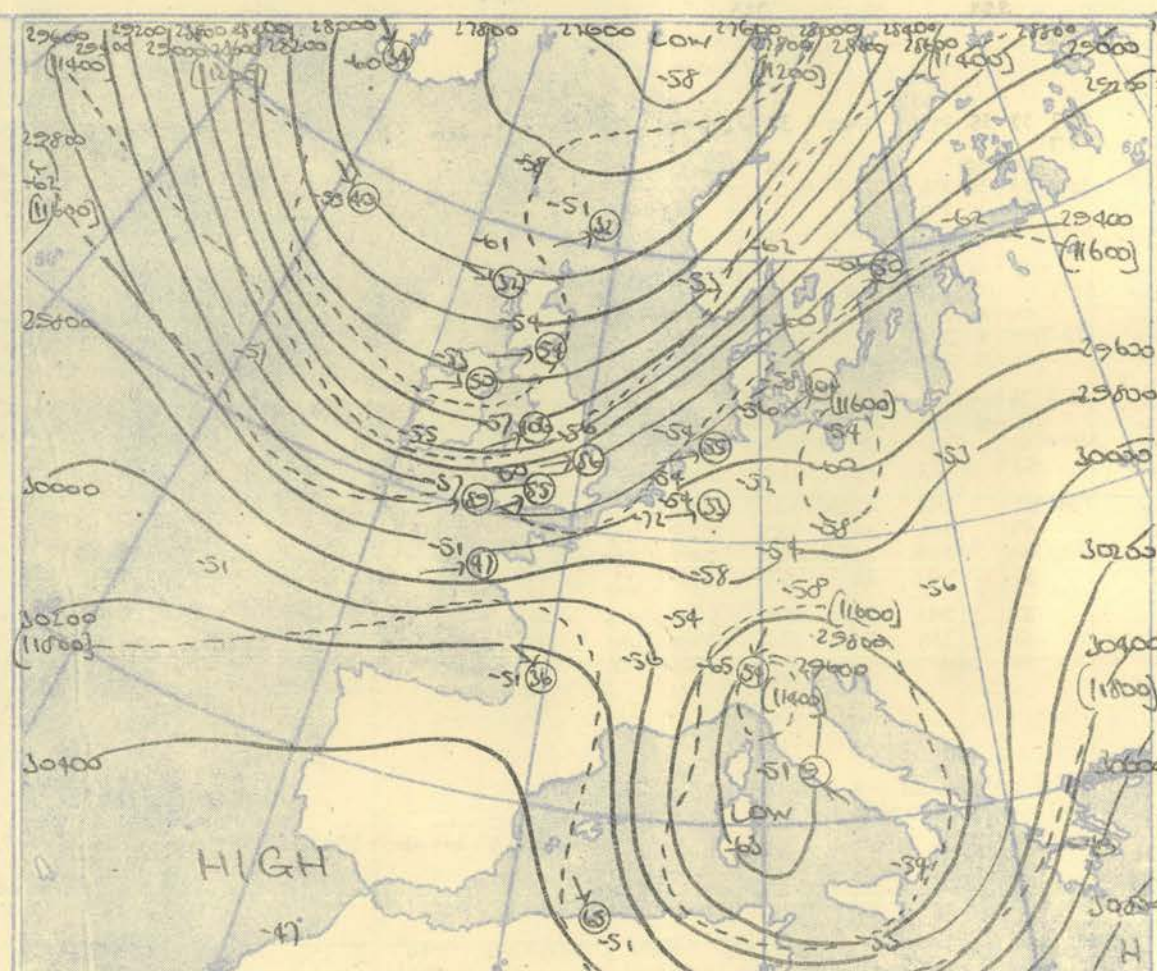
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



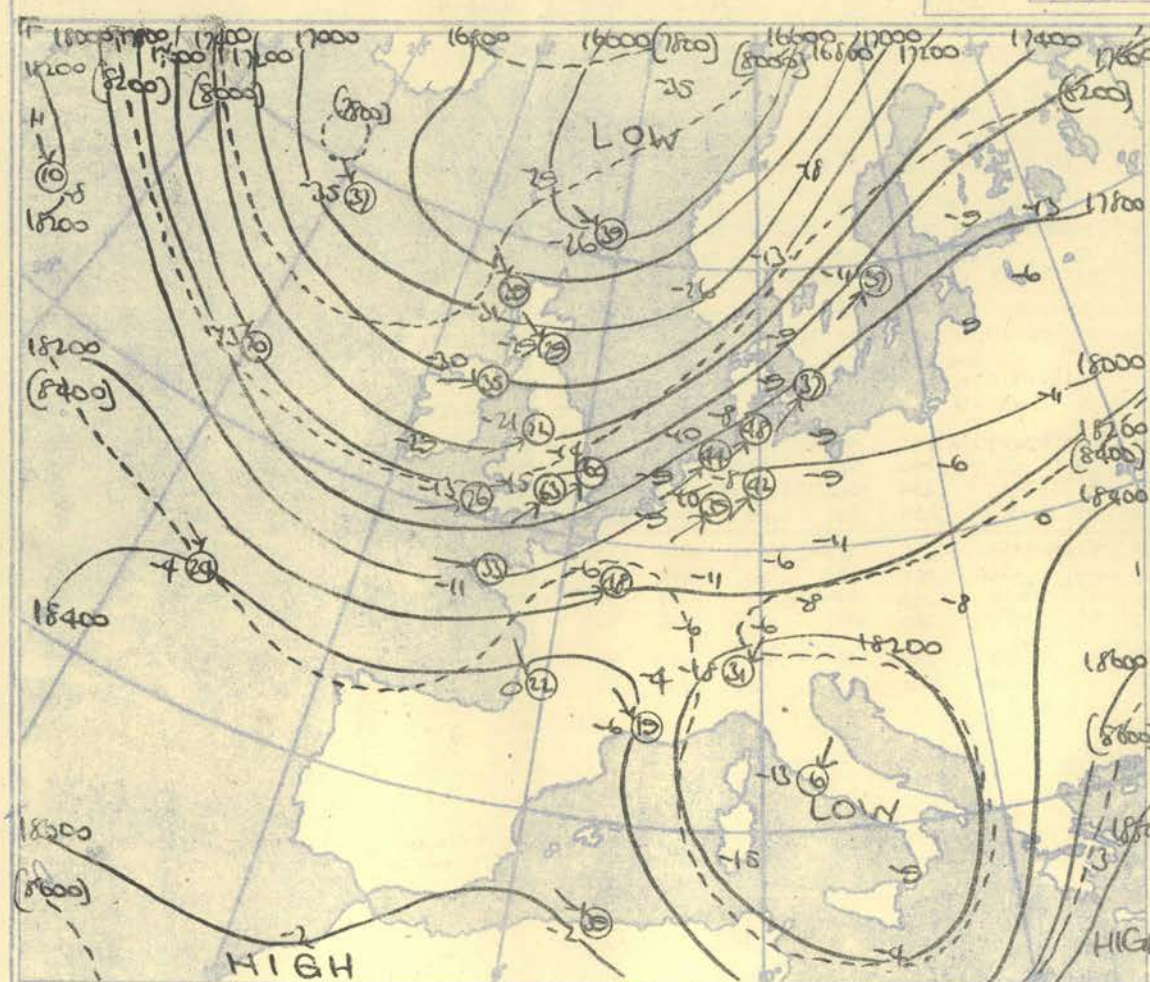
The continuous lines are contour lines of the 700 mb. surface.  
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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

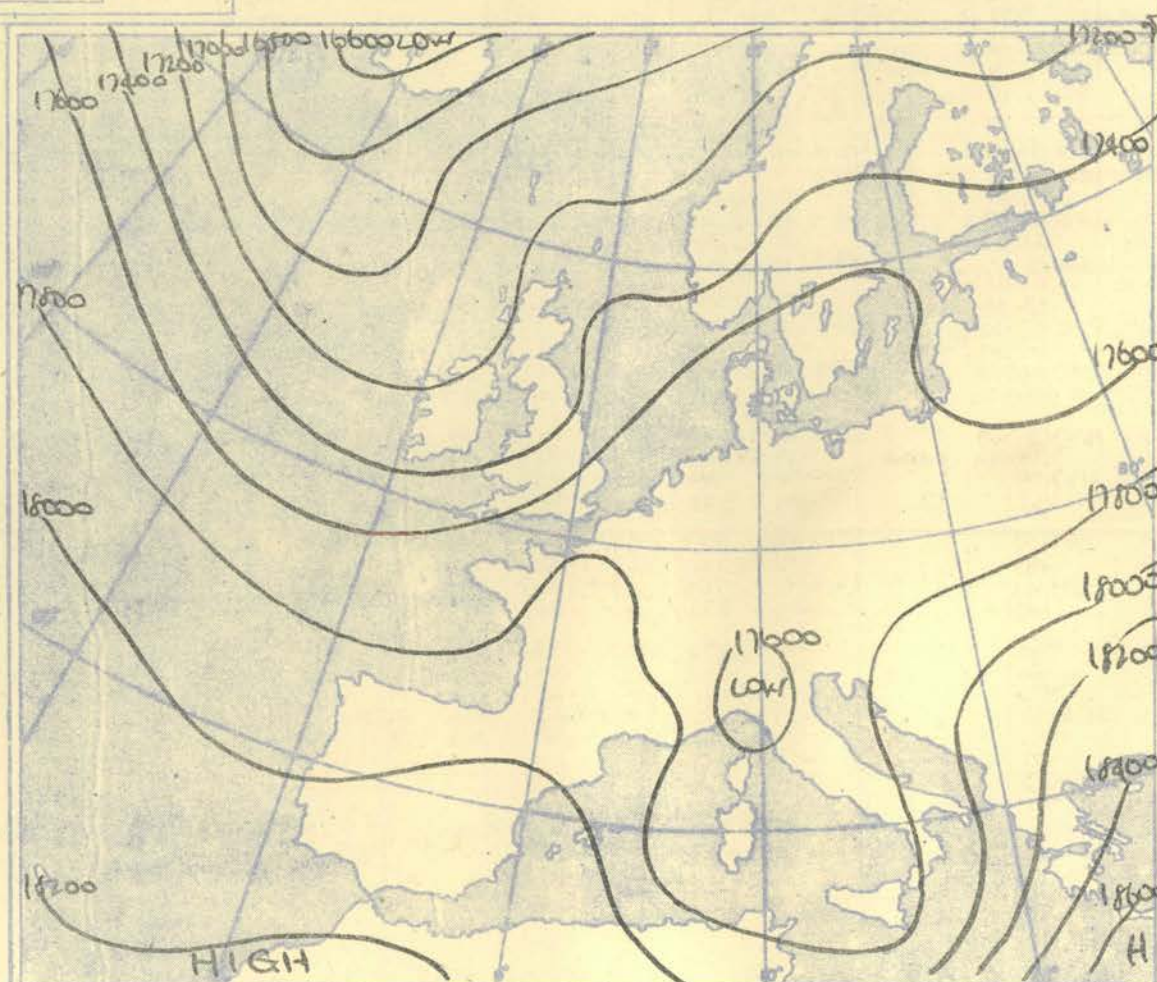
100 80 60 40 20 10 knots



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—1000 mb.

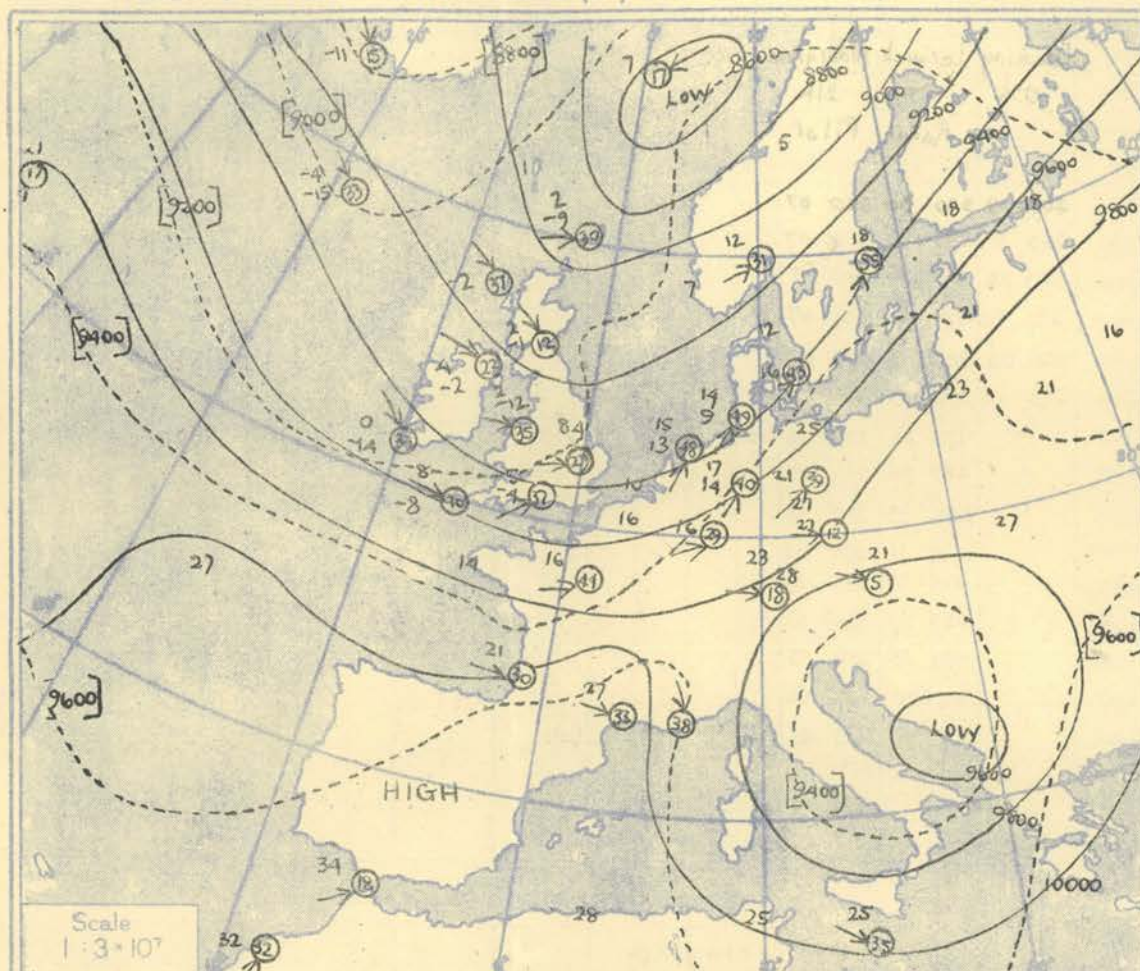


## DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

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

Ship	CUMULUS				CUMULUS				CUMULUS				CUMULUS				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				Ship	
Lat/Long	52° 5N. 20° 0W.				52° 5N. 20° 0W.				52° 5N. 20° 0W.				52° 5N. 20° 0W.				58° 9N. 18° 7W.				58° 8N. 18° 5W.				58° 9N. 18° 8W.				57° 9N. 18° 9W.				Lat/Long	
Pressure { Time M.S.L. Surf Freezing	03h.		C.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.		Time M.S.L. Surf Freezing	
	1014		mb		1015		mb		1018		mb		1019		mb		1001		mb		1006		mb		1011		mb		1013		mb			
	1014		mb		1016		mb		1018		mb		1019		mb		1001		mb		1006		mb		1011		mb		1013		mb			
	340		mb		955		mb		950		mb		930		mb		980		mb		990		mb		990		mb		980		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		42	32	310 22		42	32	320 20		43	33	320 11		44	31	320 12		35	27	320 35		34	31	340 32		35	29	330 30		35	23	320 15	Surf	
1000	03-6	40	30	315 24	04-3	40	30	318 20	04-8	40	31	319 12	05-2	41	29	319 19	00-3	28	24	322 39	01-6	33	30		02-9	33	28		03-3	34	23	327 14	1000	
950		33	23	315 31		31	23	314 21		32	26	315 14		34	25	315 12		26	22	338 31		26	21	325 26		26	21	325 26		28	20	329 18	950	
900	31-4	25	16	315 36	32-4	24	16	310 22	32-6	25	20	312 15	33-0	27	20	312 12	27-7	21	20	326 42	29-0	19	15	333 34	30-3	20	14	324 27	30-8	22	15	330 19	900	
850		18	09	315 30		17	10	303 23		17	14	308 17		20	16	300 12		14	14	330 36		13	09	319 30		13	09	319 30		15	09	329 20	850	
800	61-4	11	01	315 22	62-4	10	03	303 30	62-6	11	02	304 18	63-2	13	11	292 15	57-4	07	07	339 30	58-8	06	04	325 28	60-1	07	03	310 33	60-7	09	04	327 21	800	
750		09	-11	315 32		10	-13	307 31		08	-13	302 28		20	-07	302 25		-01	-01	349 24		01	-05	321 33		00	-07	306 36		02	-02	320 22	750	
700	94-8	05	-18	315 33	95-8	08	-21	303 41	96-1	11	-17	302 42	97-3	16	-12	310 35	90-1	-07	-13	360 18	91-5	-03	-17	320 31	92-9	-04	-15	308 33	93-6	-03	-10	294 31	700	
650		00	-16	312 50		05	-29	306 03		08	-14	307 46		-13	-18	307 34		-13	-28	355 14		-13	-28	320 32		-08	-21	309 36		-09	-19	283 47	650	
600	132-6	-04	-25	302 74	134-0	02	-36	317 60	134-5	02	-22	310 54	136-1	05	-24	299 55	126-8	-20	-37	318 18	128-3	-20	-36	316 37	130-0	-14	-27	306 39	130-8	-11	-22	293 48	600	
550		-05	-33	303 71		-04	-39	312 67		-05	-29	300 58		-04	-31	297 55		-28	-16	300 28		-28	-43	313 39		-21	-33	306 40		-15	-32	300 49	550	
500	176-7	-13	-40	309 70	177-7	-13	-44	312 72	178-6	-14	-36	297 59	180-4	-13	-38	294 61	168-8	-35	-53	283 37	170-3	-35	-50	313 42	172-7	-29	-41	307 44	173-9	-24	-41	302 64	500	
450		-22	-47	304 98		-23		312 70		-23	-34	307 61		-24	-45	290 58		-43		298 36		-44		316 44		-37	-48	311 62		-32	-44	305 74	450	
400	228-7	-32		304 78	229-6	-33			230-5	-34			232-4	-34		356 24	228-3	-53		316 36	219-7	-52		321 46	222-9	-49		308 69	224-7	-42		307 81	400	
350		-44				-44				-42				-43				-59		319 39		-57		321 63		-57				-53		304 99	350	
300	292-4	-57			293-2	-57			294-7	-53			296-2	-56			280-0	-55		322 40	281-7	-55		321 57					286-8	-67		302 106	300	
250		-72				-68				-67				-71				-50		322 42		-53		303 52						-59		299 74	250	
200	376-6	-74			377-7	-75			379-1	-84			379-9	-88							(236 mb)	-53				373-5	-54			373-5	-54		295 53	200
170		-68				-73				-89				-88																-55		294 61	170	
150		-68				-74				-89				-81																-50		294 48	150	
130		-69				-73				-86				-72																-55		294 36	130	
110		-69				-72				-72																				-56				110
100	521-0	-70			520-6	-71			518-6	-71																				523-4	-55		100	
90		-70				-71				-71																				-61			90	
80		-70				-70				-70																				-60			80	
70	(064 mb)	-70				-70				-69																				-58			70	
60																																		60



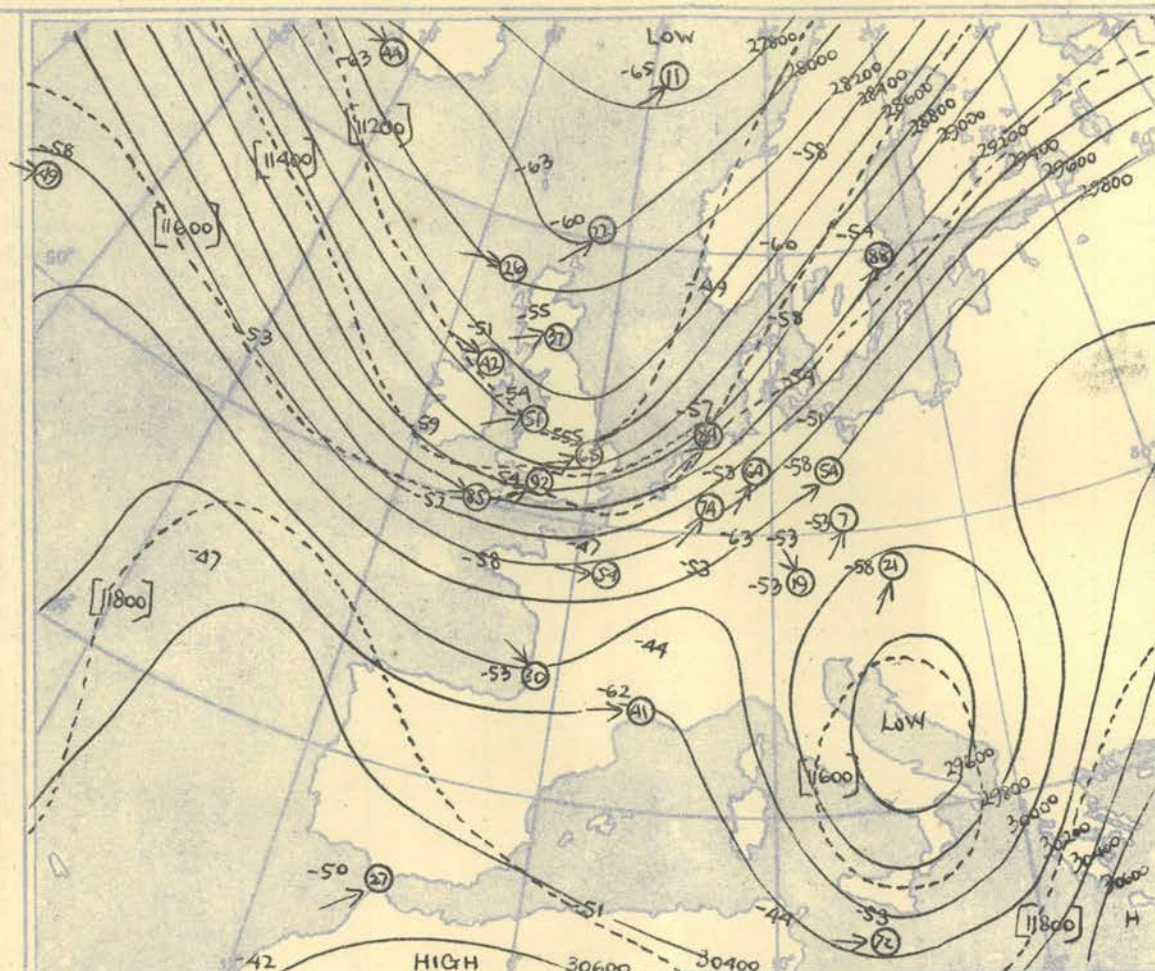


The continuous lines are contour lines of the 700 mb. surface.  
The dotted lines are isopleths of the thickness of the layer 1000—700 mb

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

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

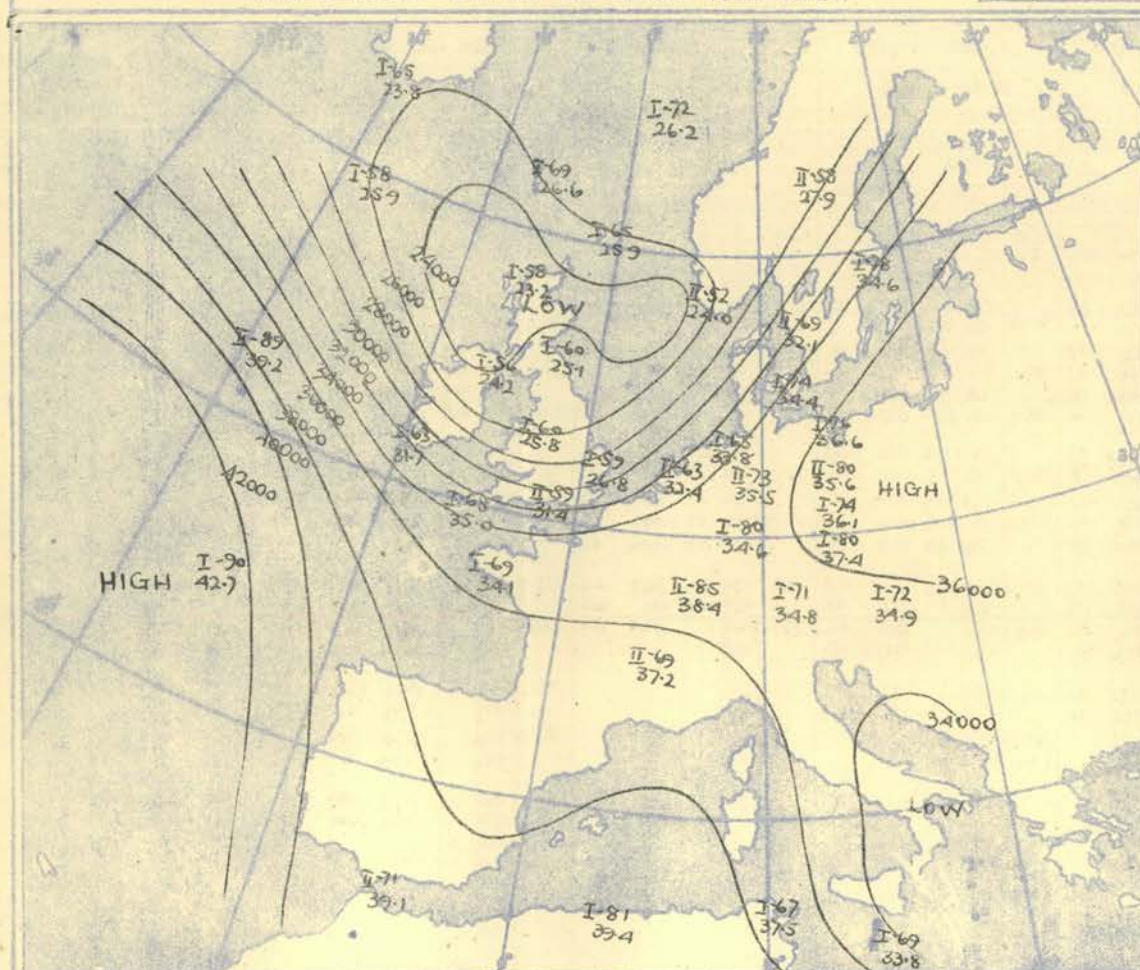
100 80 60 40 20 10 knots.



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.

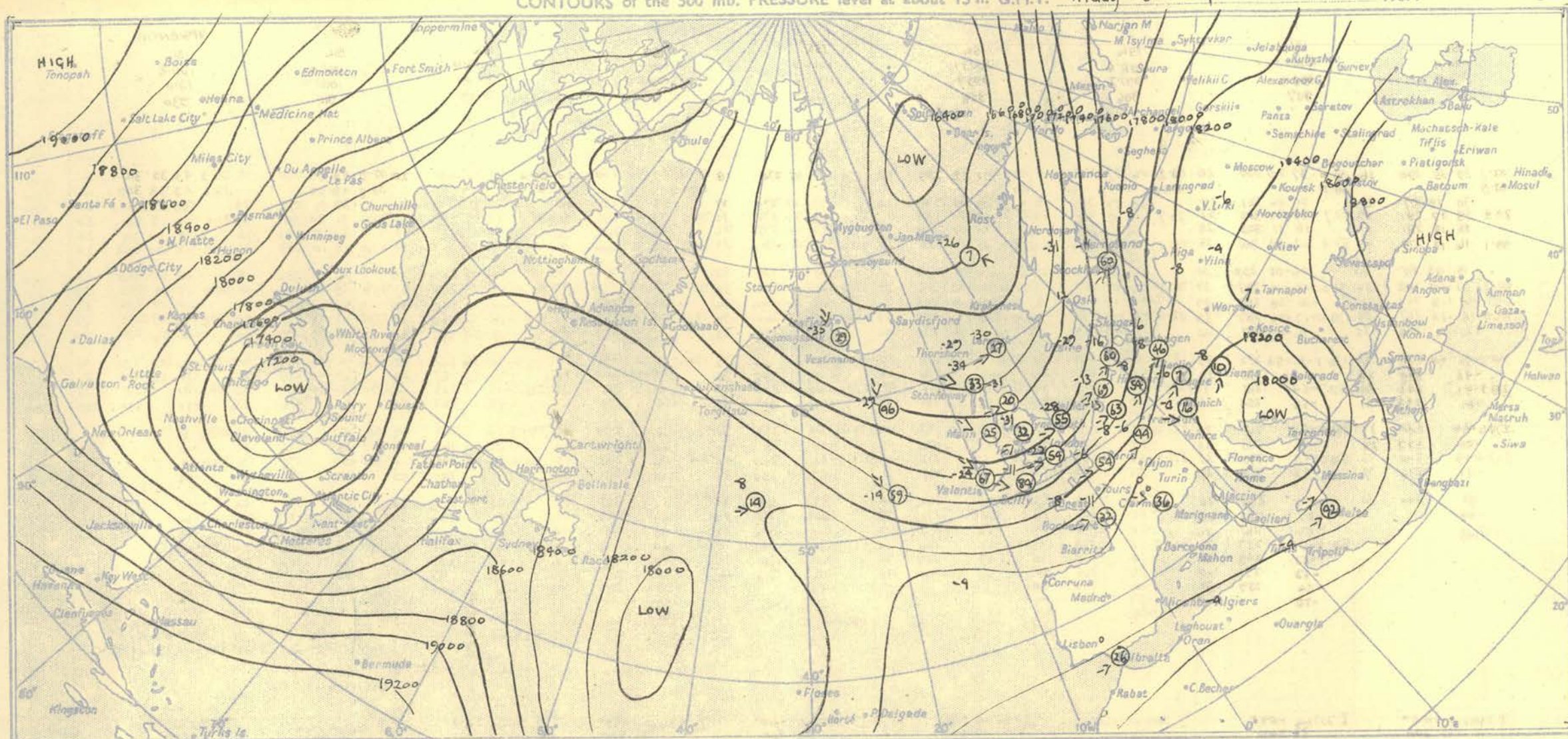
#### NOTES ON THE AEROLOGICAL SITUATION.

No material change during the day.



Contour lines of Height of Tropopause.  
Temperature of Tropopause.

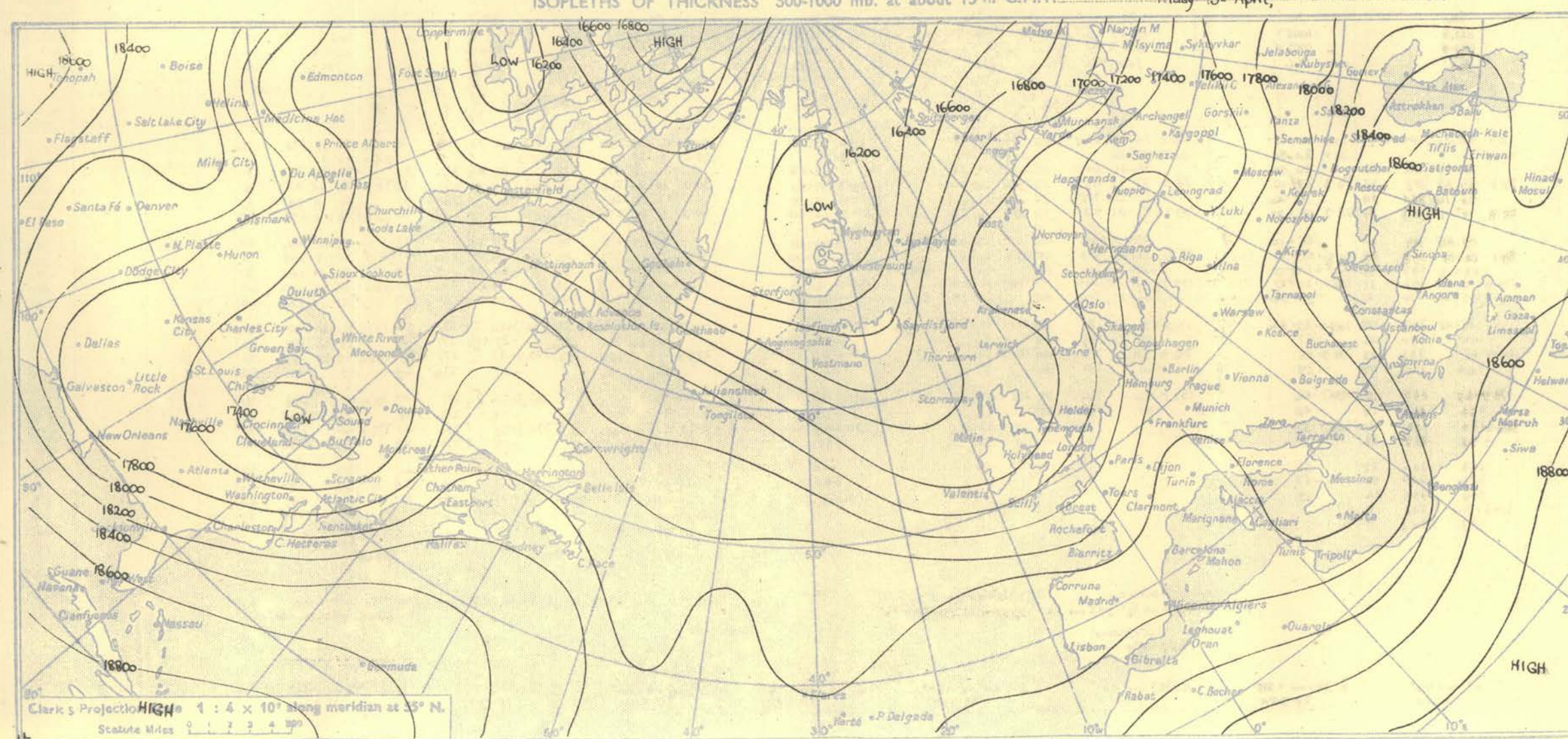




ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T.

Friday 13<sup>th</sup> April,

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. Surf Pressure	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 M.S.L. Surf Pressure													
		989.4	mb			1000.3	mb			998.6	mb			1003.1	mb			1004.0	mb			1005.3	mb			1008.0	mb			1012.9	mb																
		979.4	mb			998.6	mb			997.7	mb			993.3	mb			1002.0	mb			1000.9	mb			991.5	mb			1002.3	mb				1010	mb											
994		mb				997		mb		996		mb		999		mb		920		mb		894		mb		892		mb		910		mb		930													
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	39	35	290	26	00.4	37	29	330	20	00.2	46	37	320	17	02.6	42	38	285	10	00.6	47	35	270	18	01.2	44	40	230	24	04.4	47	32	260	20	02.9	48	39	270	12	00.3	43	32	310	16	Surf	
1000	02.9				00.0					00.7						01.1					01.1						01.4				02.1					03.5	48	39		03.2	43	33	309	17	1000		
950		34	29	277	33	31	26	322	25	27.7	31	27	312	18	28.7	29	24	295	16	29.1	29	21	275	32	29.5	33	29	162	31	30.3	40	27	269	26	38.3	31	278	28	35	27	304	24	950				
900	24.9	28	23	281	28	27.7	25	20	315	27	27.7	24	21	303	18	29.8	23	19	298	17	22	14	275	32	29.5	26	22	268	35	30.3	26	17	273	29	31.6	31	24	281	27	31.1	26	18	301	30	900		
850		22	15	281	31	18	11	309	28																																		850				
800	55.1	16	13	279	29	57.8	12	03	307	28	58.1	17	13	296	15	59.0	15	11	298	18	59.4	15	07	271	33	60.0	20	15	266	36	60.8	19	07	273	33	62.0	18	10	283	32	61.2	13	06	298	34	800	
750		10	03	275	30	06.02		299	30		09	07	296	14		10	04	290	21		09	02	270	33		14	10	264	32		11	02	268	35		13	01	282	25		08	00	289	39	750		
700	88.5	02	09	268	30	91.0	02	14	295	87	91.5	02	01	287	12	92.6	04	02	285	23	92.7	02	12	267	35	93.7	08	04	257	29	94.4	05	04	253	37	95.6	08	08	276	40	94.4	00	14	289	39	700	
650		05	18	264	29		10	29	297	39		06	12	290	12		03	09	284	24		05	21	266	36		00	03	252	31		01	10	245	34		01	18	271	44		04	20	296	38	650	
600	125.9	14	24	257	28	128.0	17	36	285	38	128.8	19	19	278	14	130.1	10	20	285	23	130.1	11	28	264	38	131.6	08	13	243	32	132.1	08	21	248	39	133.6	04	18	275	49	131.9	03	27	293	53	600	
550		22	32	258	25		26	45	277	40		22	25	254	17		20	34	290	24		21	243	32		17	21	243	29		18	30	255	45		07	28	279	54		14	36	294	62	550		
500	168.4	30	40	253	27	170.2	34	54	272	33	171.4	31	35	251	20	172.8	31	40	278	25	172.8	31	44	254	32	174.6	28	32	245	35	175.2	22	36	264	55	177.6	11	34	279	84	175.2	24	46	295	67	500	
450		42		239	28		44		270	33		42		241	26		43		278	28		41		255	32		35		246	42		31	45	267	62		20	42	280	87		32	51	295	81	450	
400	282.2	51		242	24	219.7	54		265	31	221.1	52		243	30	222.5	50		275	29	222.6	50		263	37	224.7	48		252	54	226.1	42		36	50	263	65	229.9	30	50	280	85	226.0	41	297	95	400
350		61		243	21		56		255	26		60		246	34		55		280	40		59		261	42		55		254	64		48		263	89		41		278	93		51		294	109	350	
300	279.6	60		240	22	281.6	56		267	26	283.0	55		257	37	284.7	51		292	42	284.5	54		263	51	286.7	55		255	65	289.3	54		263	92	294.1	52		276	85	288.5	59		61		300	
250		56		233	28		52		270	32		50		261	36		48		276	49		49		271	46		52		258	54		59		263	81		65		275	82		64		250			
200	367.4	48		240	26	370.0	49		270	33	371.5	48		259	31	373.6	48		272	40	372.5	51		260	42	374.9	54		245	45	376.4	54		263	54	380.0	62		275	78	374.8	54		62		200	
170		51		234	27		48		259	27		51		258	33		50		277	32		52		265	34		55		251	48		55		265	50		59		274	62		59		170			
150		51		236	30		49		254	26		52		254	35		52		262	30		57		260	31		56		253	45		59		258	43		59		274	49		63		150			
130		49					50		260	27		52		251	39		54		272	37		56		260	34		56		249	32		59		264	38		57		273	48		60		130			
110	(137 mb)						52		261	26		52		257	34		56		257	27		56		246	32		56		241	40		62		267	36		59		267	38		58		110			
100						521.5	52		257	21	522.5	52		258	27	524.1	56		256	24	522.7	54		243	34	524.5	60		247	40	524.8	61		254	38	528.0	61		264	30	523.3	59		27		100	
90							53		249	17		54		259	19		57		255	21		55		257	35		60		251	36		60		261	37		61		264	30		27		90			
80							53		253	19		54		254	20		55		261	27		55		279	24		59		251	30		61		249	35		65		267			27		80			
70							54		259	21		55		252	24		55					55					58		249	30		61		264	25	(77 mb)							70				
60							55					54					54					55					61					59												60			
Tropopause		I 330 mb -6.5° 25.900°				I 377 mb -58° 23.200°				I 348 mb -60° 25.100°				I 356 mb -56° 24.200°				I 340 mb -60° 25.800°				I 326 mb -59° 26.800°				II 267 mb -59° 31.400°				I 239 mb -69° 35.000°				I 262 mb -63° 31.700°				Tropopause									
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE								STATION									
Pressure mb	Time M.S.L. Surf Pressure	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 Pressure													
		993.0	mb			1005.1	mb			1004.7	mb			1007.5	mb			1005.9	mb			1007.5	mb			1011.0	mb			1015.2	mb																
		982.9	mb			1003.4	mb			1003.8	mb			997.7	mb			1003.8	mb			1003.0	mb			994.6	mb			1004.5	mb																
960		mb				966		mb		940		mb		932		mb		938		mb		918		mb		930		mb		920		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	02.7	34	32	300	27	00.4	34	25		00.2	36	26	330	05	02.6	35	33		00.6	39	34		01.2	41	38	290	10	04.4	40	32	270	18	02.9	43	32	270	25					Surf					
1000	01.9					01.3				01.2					02.0				01.6				02.0					02.9				04.1					04.1					1000					
950		31	29	298	33		30	20		33	21	311	17		33	28			33	28		36	28	279	22		36	28	271	32		37	25	292	31		37	20	297	31				950			
900	25.6	26	23	302	33	28.8	23	14		28.9	27	17	313	22	29.8	28	20		29.3	27	20		30.0	30	26	266	22	35.7	29	24	277	32															

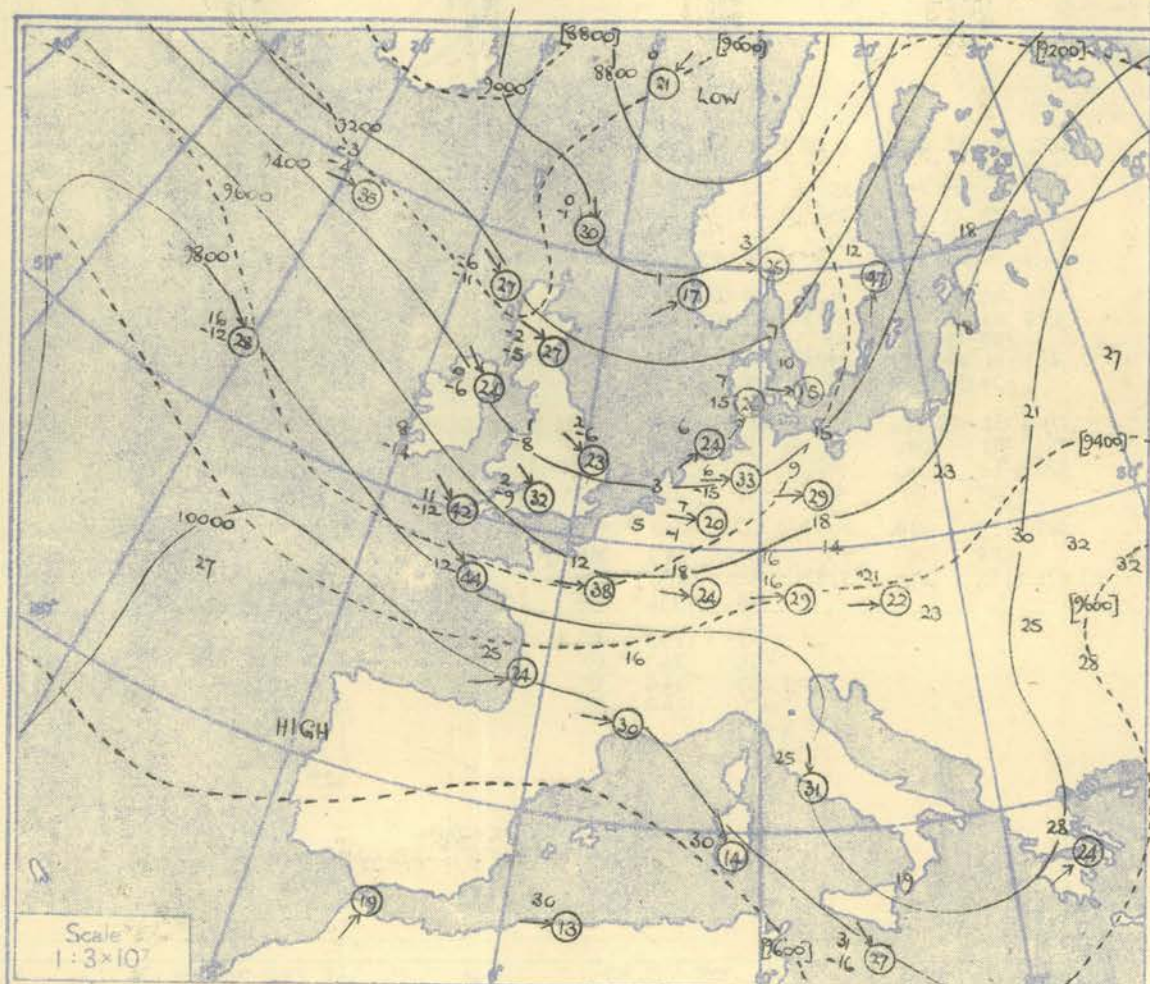


RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

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														
	994.4		mb		1008.4		mb		1008.0		mb		1011.1		mb		1010.0		mb		1009.5		mb		1012.7		mb		1018.7		mb																
	984.3		mb		1006.7		mb		1007.1		mb		1001.3		mb		1007.9		mb		1005.0		mb		996.2		mb		925		mb																
946				1000				955				978				941				943				942				933				925															
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	33	305	25	00.4	29	26	270	07	00.2	34	29	325	07	02.6	35	30			00.6	39	36		01.2	35	33	240	11	04.4	35	31	280	10	02.9	41	28	315	15	00.3	42	28	330	08	Surf		
1000	-1.5	32	31	318	41	2.2	32	28			2.1	34	28			3.0	28	24			2.7	39	36		2.5	35	32			3.3	33	29	286	29	4.9	40	27	295	21	5.3	41	28	328	09	1000		
950																																															950
900	26.1	27	26	326	40	29.6	19	12	315	23	29.6	26	15	289	21	30.5	24	19			30.4	26	22		30.2	27	22	298	22	31.0	27	23	294	33	32.8	27	15	307	27	33.1	28	19	310	19	900		
850		22	22	326	39		13	12	315	24		19	08	280	21		19	14				21	15				21	16	299	20		21	16	296	33		20	09	299	27		20	12	302	24	850	
800	56.4	16	16	328	38	57.3	07	05	310	24	59.7	12	03	276	20	60.6	13	04			60.5	14	09		60.4	16	10	294	20	61.3	16	09	295	33	62.9	14	08	290	29	63.2	14	07	294	27	800		
750		08	08	332	36		00	02	311	25		05	01	256	23		07	00				09	03	290	21		10	00	296	21		10	00	296	31		08	03	299	35		10	04		750		
700	89.7	00	01	341	30	92.0	06	11	306	27	92.8	02	05	289	27	93.8	00	06	For		93.8	01	08		93.8	02	06	291	23	94.7	02	09	299	32	96.5	11	12	300	42	96.7	08	24		700			
650		06	07	351	24		14	24	305	30		10	13	287	30		08	16				07	19		131.1	08	14	292	25		07	17	294	37		06	25	301	46		09	29		650			
600	126.7	15	16	343	25	128.7	21	36	301	32	129.8	19	22	276	35	131.0	14	31	winds		131.0	16	27		131.1	14	24	288	24	132.1	10	25	293	42	134.8	02	28	301	57	135.1	01	27		600			
550		25	27	326	22		28	45	302	33		29	32	274	35		20	40				27	36				24	34	283	24		18	35	295	52		05	32	302	63		01	33		550		
500	169.1	36	38	322	12	170.7	35	53	304	34	171.6	40	43	285	36	173.7	27	47	see		173.2	34	49		173.4	35	45	280	25	175.1	24	41	296	63	178.9	16	40	300	60	179.3	17	41		500			
450		46		346	05		43		304	34		49		296	33		51					43					43		286	35		35	51	297	77		27	49	299	69		28	50		450		
400	218.2	57		082	05	220.2	52		307	38	220.4	57		297	33	224.1	45		page		222.8	53			222.9	50		293	44	225.7	43		296	86	230.4	37	57	297	78	230.7	40	60		400			
350		61		290	06		56		305	35		64		298	46		56					60					55		292	49		54	297	96		78		299	79		52		350				
300	279.4	61		276	14	282.0	58		307	41	281.7	55		301	42	286.0	64		3.		284.4	58			285.0	55		288	50	287.9	62		293	93	315	57		293.2	63			300					
250		54		270	19		52		292	37		53		291	37		61					54					55		281	49		61	287	78	(mb)				70		250						
200	366.7	55		258	24	369.9	54		295	33	369.7	52		285	30	372.2	58				371.7	57			372.7	55		279	51	374.0	59		285	57				377.4	71		67		200				
170		53		258	25		51		300	33		56		286	30							61											276	44				67		67		170					
150		53		252	24		50		267	30		58		274	28							61																						150			
130		56		250	22		54		274	28		57		268	27							62																						130			
110		56		253	22		57		278	25		60		275	31							65																						110			
100	516.4	57		242	20	520.6	57		280	20	518.5	60		276	18						518.9	66																								100	
90	(mb)	59					57		286	24		61		270	14						(85 mb)	67																								90	
80																																															80
70																																															70
60																																															60
Inversion				984 mb 33° - 979 mb 34°				Inversion				1007 mb 29° - 1000 mb 32°				Isothermal				1007 - 976 mb 34°				Isothermal				800 - 790 mb 13°				Isothermal				1008 - 995 mb 39°											
Isothermal				979 - 964 mb 34°				Isothermal				397 - 376 " - 58°																																			
I 332 mb - 64°				25,800'				I 305 mb - 59°				27,900'				I 350 mb - 64°				24,800'				I 325 mb - 62°				26,800'				I 365 mb - 60°				24,300'				I 327 mb - 58°				26,700'			
I 313 mb - 64°				27,900'				NR.				I 253 mb - 71°				32,900'				Tropopause																											
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														
	1001.1		mb		1011.2		mb		1012.7		mb		1015.7		mb		1015.1		mb		1014.6		mb		1017.8		mb		1022.3		mb																
	990.9		mb		1009.5		mb		1011.8		mb		1005.9		mb		1013.0		mb		1010.1		mb		1001.4		mb		1011.4		mb																
991				988				970				945				953				955				950				936																			
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																															



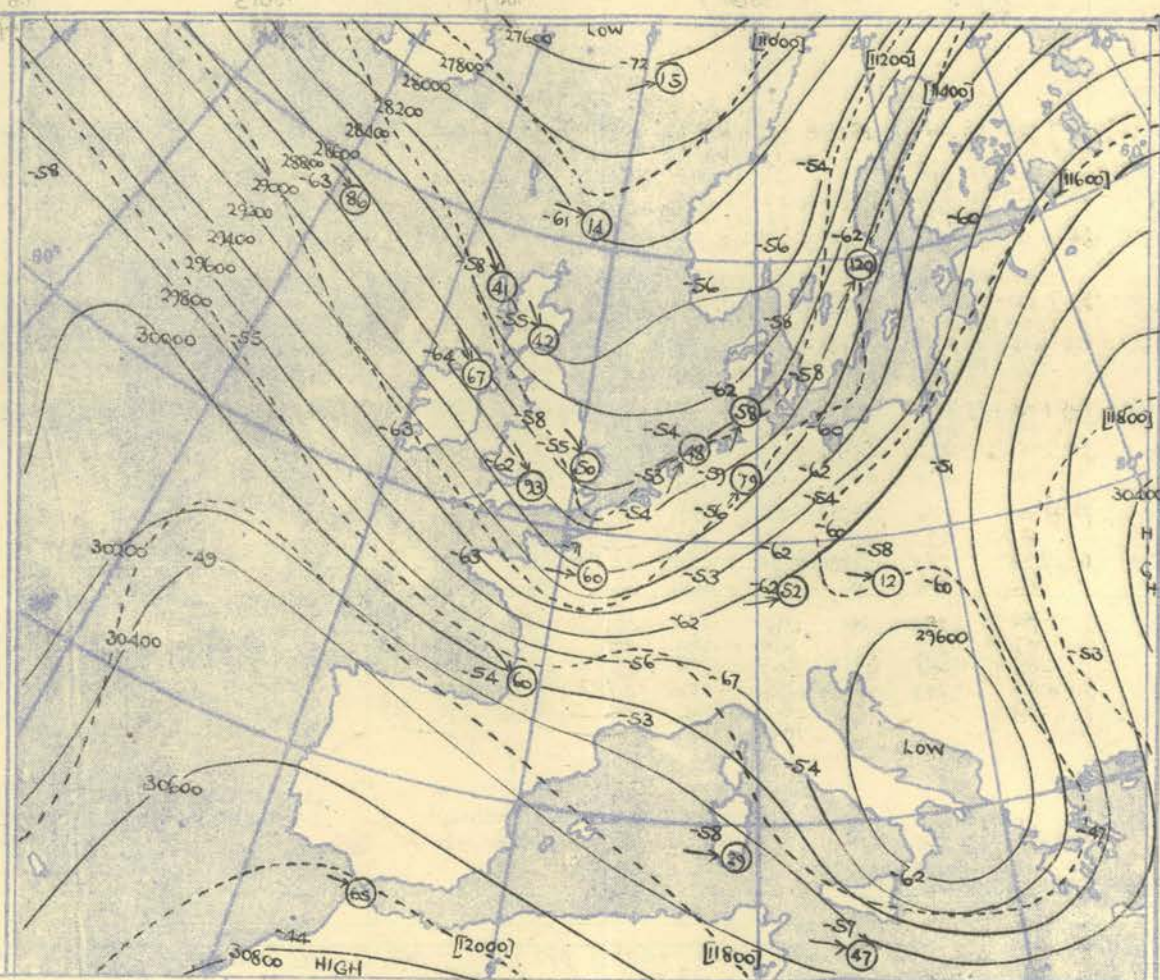
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Points). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03<sup>00</sup> G.M.T.



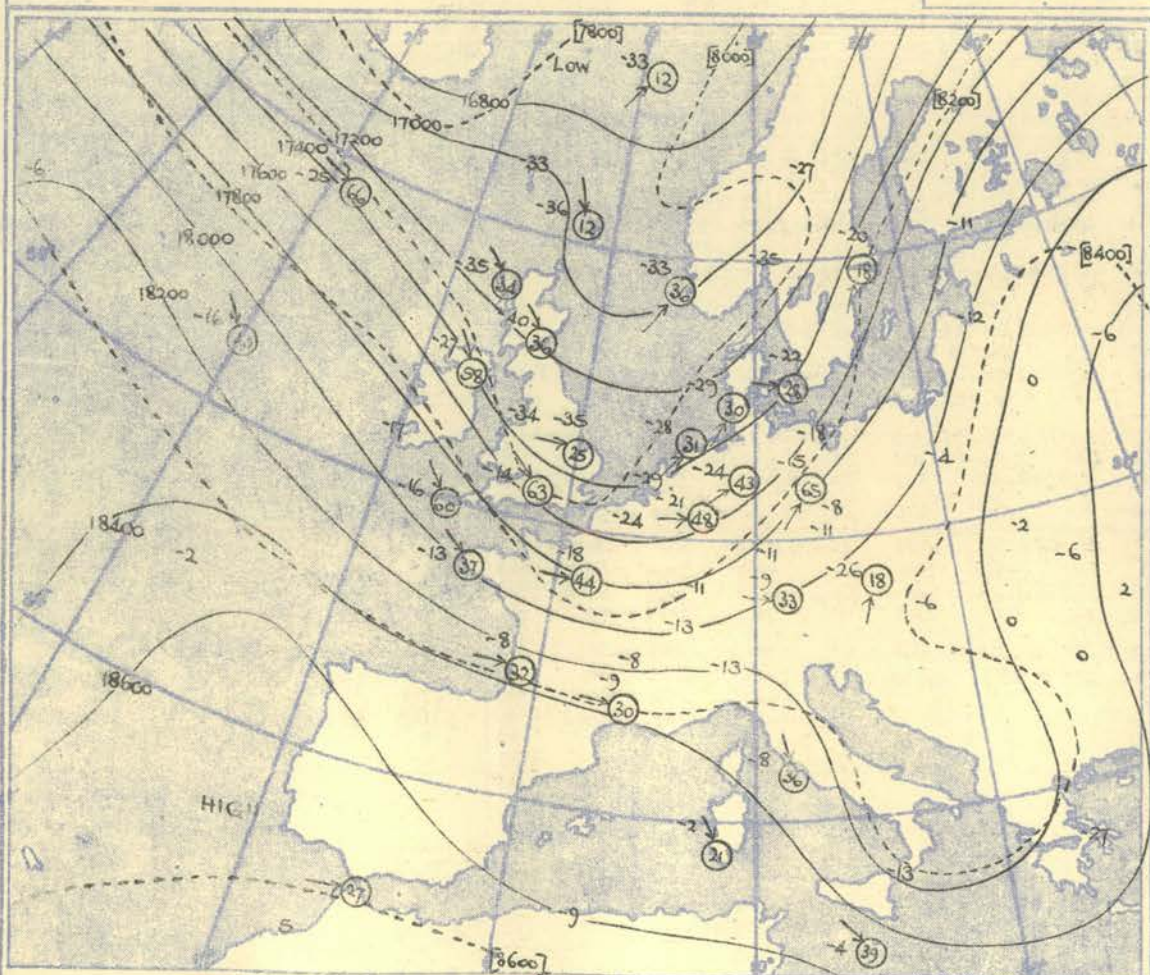
The continuous lines are contour lines of the 700 mb. surface  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

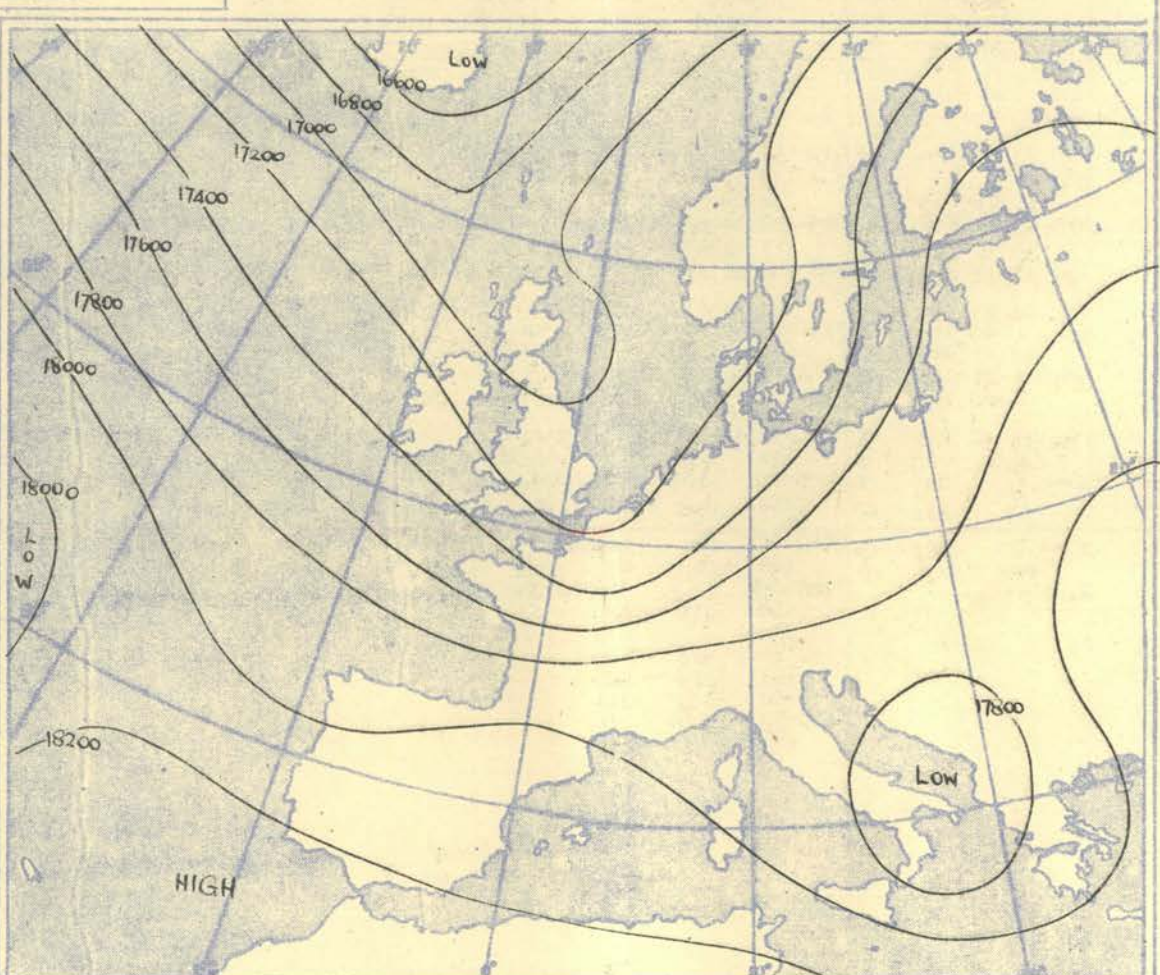
100 80 60 40 20 10 knots



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.

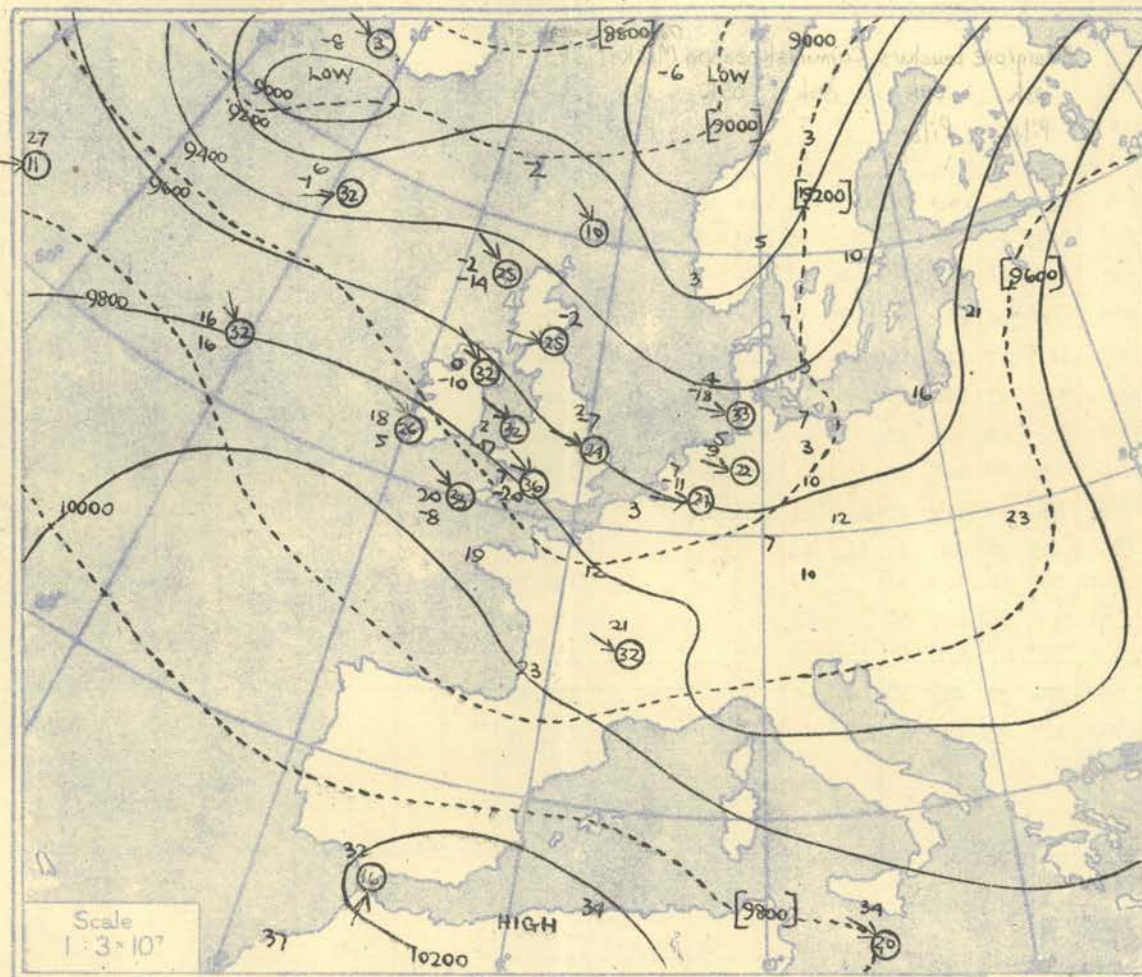


Isopleths of Thickness 500-1000mb.





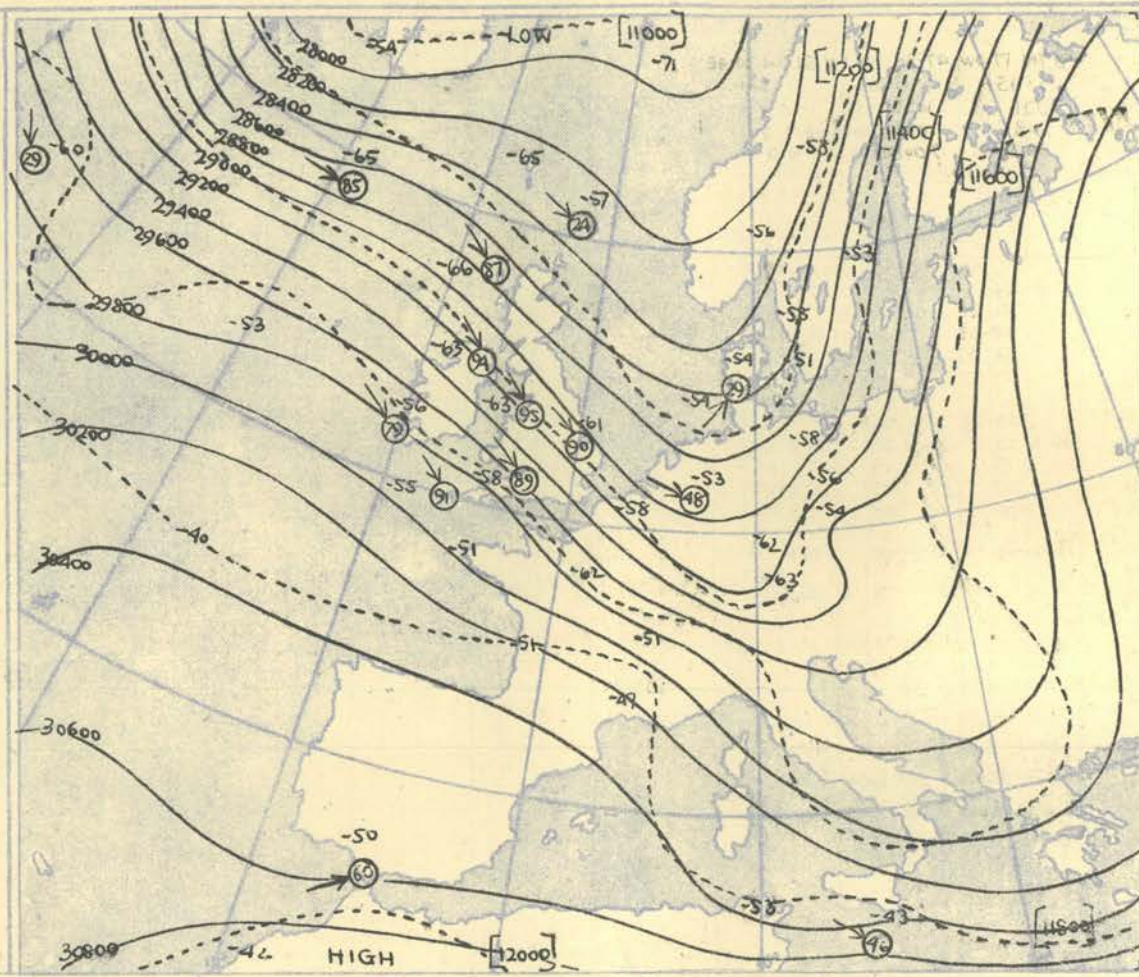




The continuous lines are contour lines of the 700 mb. surface.  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

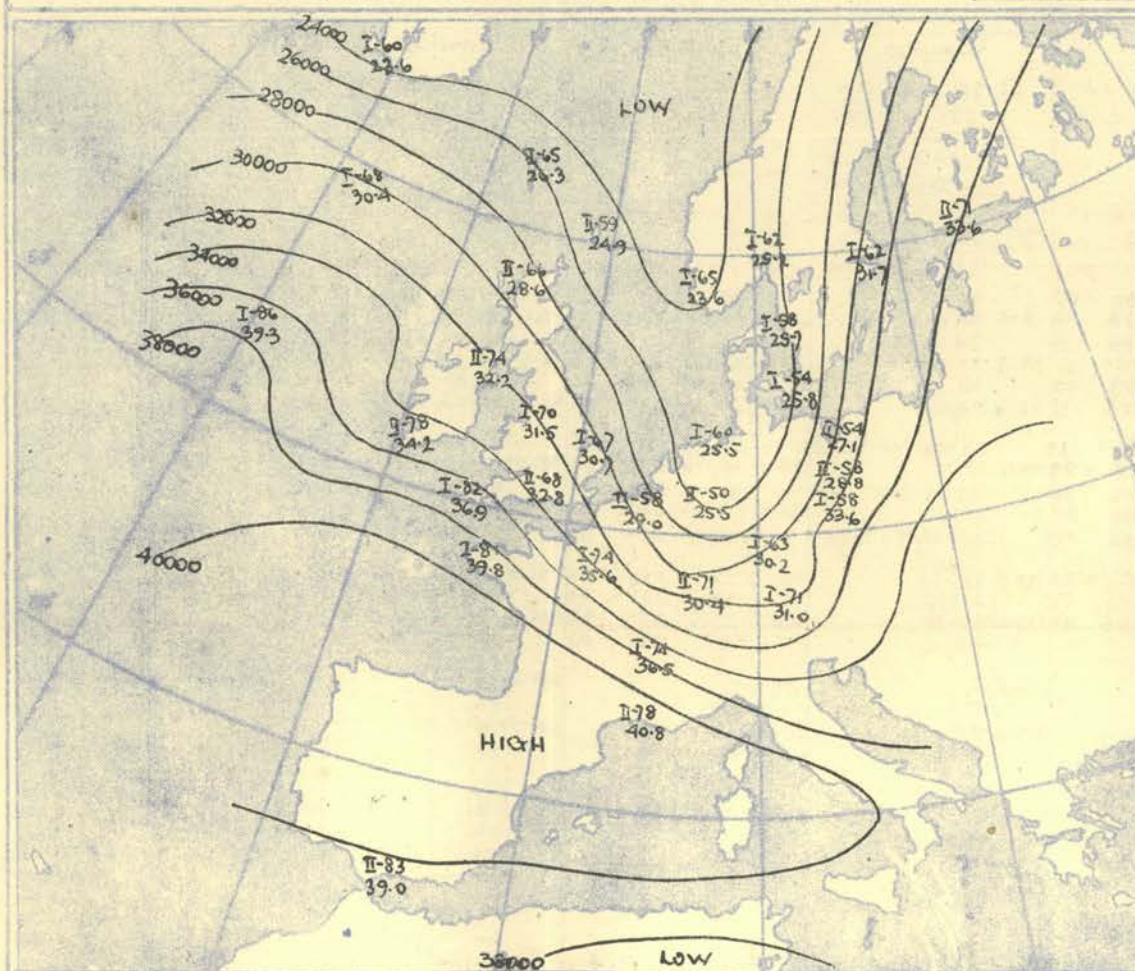
Gradient-Wind Scale for Contours  
at intervals of 200 ft. at Lat. 52° N.

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 300-700 mb.

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



Contour lines of Height of Tropopause.  
Temperature of Tropopause.

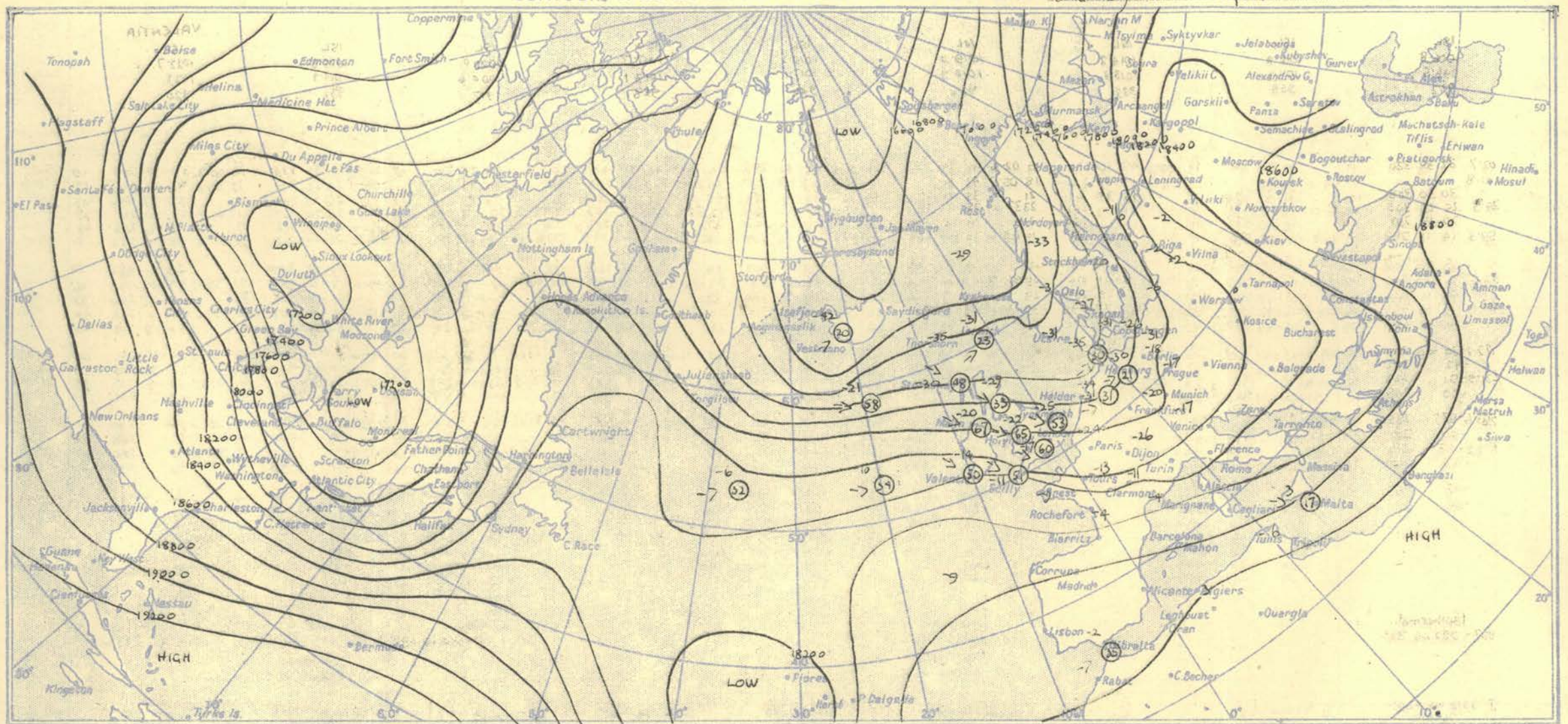
### NOTES ON THE AEROLOGICAL SITUATION.

Formation of a cold trough in the rear of the Iceland depression, and slow weakening of the North Sea cold trough.

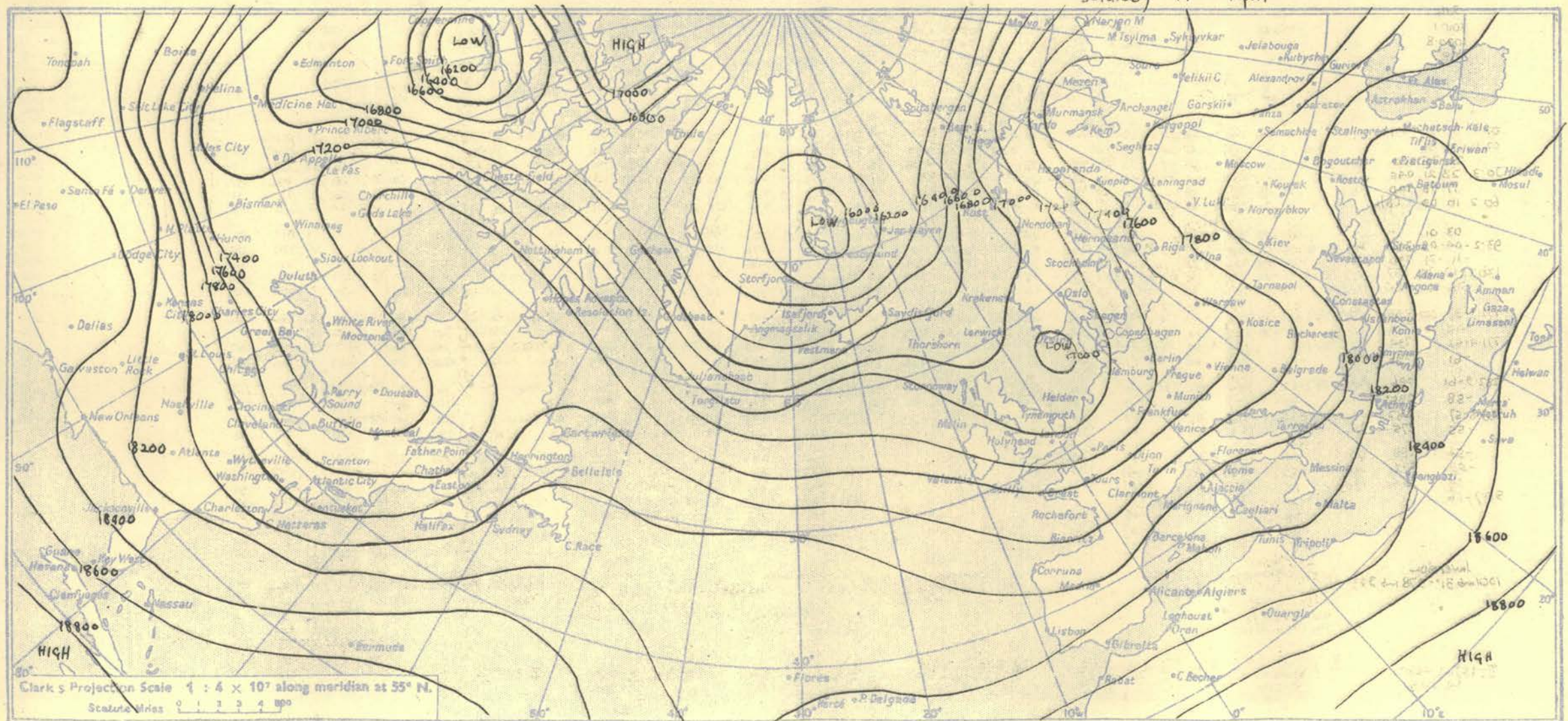
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Meteorological Office, Air Ministry, Kingsway, London, W.C.2  
NELSON K. JOHNSON, K.C.B., D.Sc., Director.





ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Saturday 14<sup>th</sup> April. 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 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 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	mb																												
	982	996.5	1006.8	955	1011.2	1012.9	1014.2	1013.3	924	1010.9	1019.3	940	1017.1	1013.1	1017.7	1004.6	932	1025.8	1021.7	1023	920																																						
Pressure mb	Height ft/100	Temp. °F	Temp. °F	Wind Dir. knots	Height ft/100	Temp. °F	Temp. °F	Wind Dir. knots	Height ft/100	Temp. °F	Temp. °F	Wind Dir. knots	Height ft/100	Temp. °F	Temp. °F	Wind Dir. knots	Height ft/100	Temp. °F	Temp. °F	Wind Dir. knots	Height ft/100	Temp. °F	Temp. °F	Wind Dir. knots	Height ft/100	Temp. °F	Temp. °F	Wind Dir. knots	Height ft/100	Temp. °F	Temp. °F	Wind Dir. knots	Pressure mb																										
Surf	02.7	32	32	320	11	41	26	270	12	00.2	47	40	270	22	02.6	46	28	270	10	00.6	45	32	280	20	01.2	46	37	290	20	04.10	46	23	310	15	02.9	46	34	230	10	00.3	48	37	230	10	Surf														
1000	01.8	30	30	308	14	03.4	39	25	03.9	44	37	276	18	05.5	42	26	276	10	05.1	42	28	285	30	04.7	43	33	293	30	05.7	45	23	15	06.9	44	32	291	12	06.4	44	33	233	13	1000																
950	29.3	25	25	303	10	31.0	31	21	31.7	36	22	251	21	33.4	28	17	280	19	32.9	34	19	292	28	32.6	35	23	304	26	33.7	38	18	297	23	34.7	35	25	296	15	34.5	37	37	246	13	950															
900	20.19	20	19	291	11	18	10	273	16	19	17	292	21	20	12	278	25	20	04	300	27	22	11	286	28	22	11	302	22	24	07	312	17	24	07	312	15	24	07	312	15	900																	
850	59.3	14	12	283	12	61.0	12	04	278	17	61.9	13	12	257	19	63.6	13	06	293	30	63.1	15	02	299	28	62.9	14	06	289	27	64.0	15	05	310	21	64.9	21	10	312	23	64.8	18	11	278	21	850													
800	08	05	289	12	04-07	285	21	07	07	261	23	06	98	288	32	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	800													
750	01-03	305	10	04-0	287	25	04-1	02-03	274	25	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	750												
700	06-11	332	06	10-22	284	27	09-09	289	29	06-17	299	44	03-21	304	35	05-18	297	24	04-17	307	39	04-17	307	39	04-17	307	39	04-17	307	39	04-17	307	39	04-17	307	39	04-17	307	39	04-17	307	39	04-17	307	39	700													
650	15-20	322	06	12-1	287	30	13-1	17-20	298	35	14-2	08-20	301	48	13-6	12-26	301	44	13-6	12-26	301	44	13-6	12-26	301	44	13-6	12-26	301	44	13-6	12-26	301	44	13-6	12-26	301	44	13-6	12-26	301	44	13-6	12-26	301	44	650												
600	29.3	20	19	291	11	18	10	273	16	19	17	292	21	20	12	278	25	20	04	300	27	22	11	286	28	22	11	302	22	24	07	312	17	24	07	312	15	24	07	312	15	900																	
550	08	05	289	12	04-07	285	21	07	07	261	23	06	98	288	32	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	550													
500	01-03	305	10	04-0	287	25	04-1	02-03	274	25	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	500												
450	06-11	332	06	10-22	284	27	09-09	289	29	06-17	299	44	03-21	304	35	05-18	297	24	04-17	307	39	04-17	307	39	04-17	307	39	04-17	307	39	04-17	307	39	04-17	307	39	04-17	307	39	04-17	307	39	04-17	307	39	450													
400	15-20	322	06	12-1	287	30	13-1	17-20	298	35	14-2	08-20	301	48	13-6	12-26	301	44	13-6	12-26	301	44	13-6	12-26	301	44	13-6	12-26	301	44	13-6	12-26	301	44	13-6	12-26	301	44	13-6	12-26	301	44	13-6	12-26	301	44	400												
350	29.3	20	19	291	11	18	10	273	16	19	17	292	21	20	12	278	25	20	04	300	27	22	11	286	28	22	11	302	22	24	07	312	17	24	07	312	15	24	07	312	15	900																	
300	08	05	289	12	04-07	285	21	07	07	261	23	06	98	288	32	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	300													
250	01-03	305	10	04-0	287	25	04-1	02-03	274	25	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	250												
200	06-11	332	06	10-22	284	27	09-09	289	29	06-17	299	44	03-21	304	35	05-18	297	24	04-17	307	39	04-17	307	39	04-17	307	39	04-17	307	39	04-17	307	39	04-17	307	39	04-17	307	39	04-17	307	39	04-17	307	39	200													
170	15-20	322	06	12-1	287	30	13-1	17-20	298	35	14-2	08-20	301	48	13-6	12-26	301	44	13-6	12-26	301	44	13-6	12-26	301	44	13-6	12-26	301	44	13-6	12-26	301	44	13-6	12-26	301	44	13-6	12-26	301	44	13-6	12-26	301	44	170												
150	29.3	20	19	291	11	18	10	273	16	19	17	292	21	20	12	278	25	20	04	300	27	22	11	286	28	22	11	302	22	24	07	312	17	24	07	312	15	24	07	312	15	900																	
130	08	05	289	12	04-07	285	21	07	07	261	23	06	98	288	32	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	130													
110	01-03	305	10	04-0	287	25	04-1	02-03	274	25	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	110												
100	06-11	332	06	10-22	284	27	09-09	289	29	06-17	299	44	03-21	304	35	05-18	297	24	04-17	307	39	04-17	307	39	04-17	307	39	04-17	307	39	04-17	307	39	04-17	307	39	04-17	307	39	04-17	307	39	04-17	307	39	100													
90	15-20	322	06	12-1	287	30	13-1	17-20	298	35	14-2	08-20	301	48	13-6	12-26	301	44	13-6	12-26	301	44	13-6	12-26	301	44	13-6	12-26	301	44	13-6	12-26	301	44	13-6	12-26	301	44	13-6	12-26	301	44	13-6	12-26	301	44	90												
80	29.3	20	19	291	11	18	10	273	16	19	17	292	21	20	12	278	25	20	04	300	27	22	11	286	28	22	11	302	22	24	07	312	17	24	07	312	15	24	07	312	15	900																	
70	08	05	289	12	04-07	285	21	07	07	261	23	06	98	288	32	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	08-11	300	29	70													
60	01-03	305	10	04-0	287	25	04-1	02-03	274	25	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	06-8	00-10	294	37	60												
Isothermal. 997-982mb 32°												Inversion 650mb-6° 67mb-5° Isothermal. 754-740mb 06°												Inversion 707mb-07° 690mb 08°								Inversion 821mb 20° 782mb 22° Isothermal. 877-857mb 26°								Inversion 800mb 18°-725mb 21°																			
Tropopause I 328mb-60° 26.400°								II 300mb-66° 28.600°				MR.								I 267mb-70° 31.500°								I 277mb-67° 30.700°								I 256mb-68° 32.800°								I 218mb-82° 36.900°								II 232mb-78° 34.200°				Tropopause			
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				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																										
	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																												
	1000.8																																																										



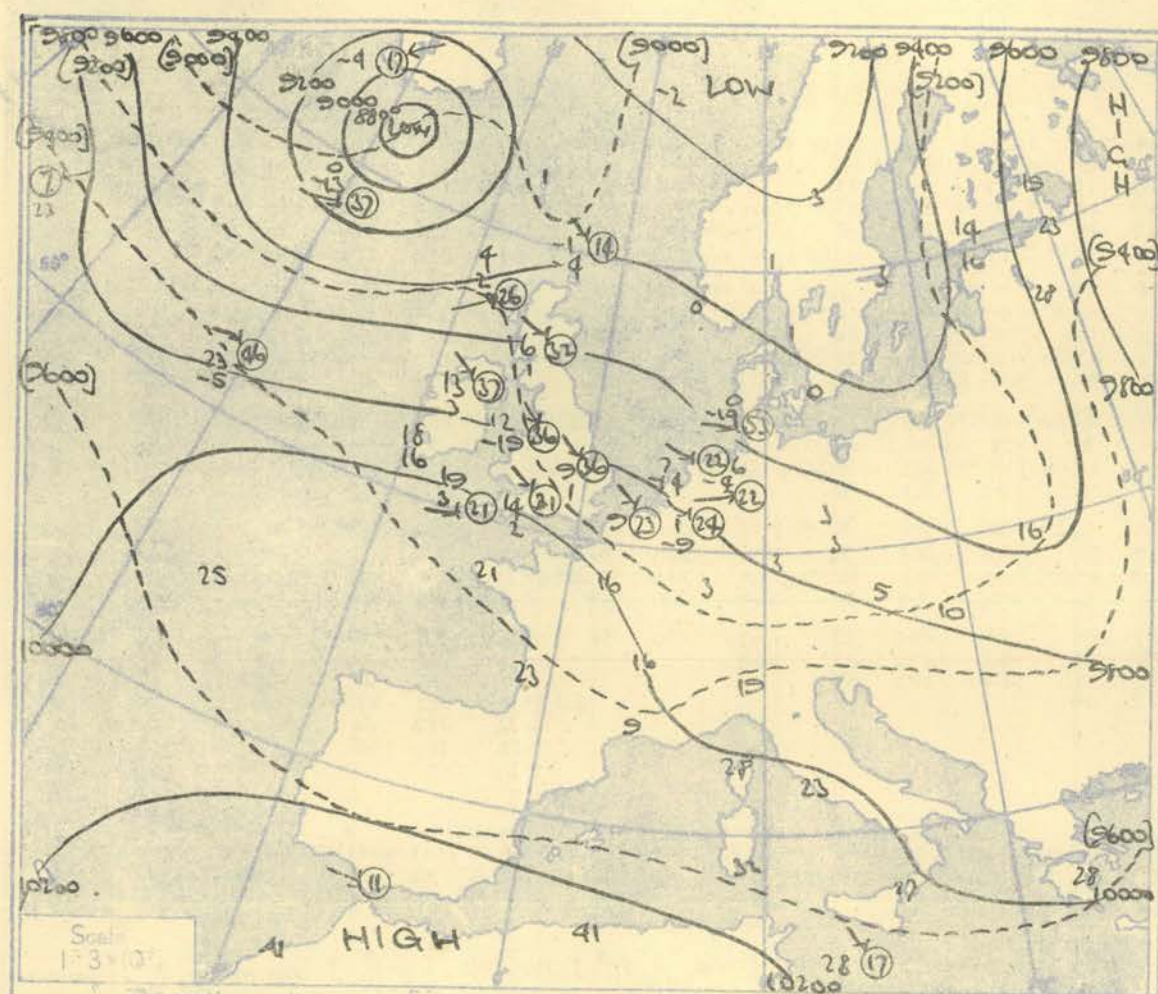
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA.				STATION												
Pressure Time M.S.L. Surf Freezing	03L G.M.T.				03L G.M.T.				03L G.M.T.				03L G.M.T.				03L G.M.T.				03L G.M.T.				03L G.M.T.				03L G.M.T.				03L G.M.T.				03L G.M.T.				Time M.S.L. Surf Freezing								
	1012.9 mb				1011.7 mb				1017.4 mb				1015.2 mb				1022.2 mb				1024.4 mb				1027.0 mb				1027.7 mb				1021.1 mb				Time M.S.L. Surf Freezing												
	1002.4 mb				1010.0 mb				1016.5 mb				1009.2 mb				1020.2 mb				1019.7 mb				1010.1 mb				1016.7 mb				1020 mb																
979 mb				950 mb				953 mb				906 mb				920 mb				915 mb				918 mb				920 mb				880 mb				880 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	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb																
Surf	02.7	25	25	CALM	00.4	40	36	130	20	00.2	34	31	CALM	01.6	41	37	230	10	00.6	43	39	CALM	01.2	34	31	190	09	04.4	32	30	CALM	02.9	39	35	CALM	00.3	46	40	200	08									
1000	3.3	27	26		3.0	38	34		3.6	35	32		5.0	36	32	243	28	6.0	42	36	230	09	6.4	38	30	271	18	7.0	35	32		7.3	42	35	212	12	5.8	44	38	204	18								
950		28	23	105	05	32	30	196	29	31	28	256	28	36	32	243	28		36	27	260	22	37	24	276	22	35	24	283	12	35	30	222	09	36	30	222	09	36	30	222	09							
900	30.7	22	18	110	05	30.8	27	26	204	29	31.3	21	258	20	31.0	27	256	29	33.8	30	22	267	29	34.4	30	19	279	23	34.9	30	17	272	10	35.3	30	20	239	12	34.0	34	31	203	21						
850		17	13	120	02	22	21	209	28	23	20	263	23	28	24	261	28		23	17	267	24	23	15	286	18	25	07	247	07	26	13	245	11	27	25	11	27	25	11	27	25							
800	60.7	12	06	CALM	61.0	16	14	220	28	61.6	16	13	271	23	63.7	20	16	263	29	64.1	16	11	267	25	64.7	17	08	283	17	65.3	18	06	263	10	65.8	27	10	243	17	64.7	24	17	17	64.7	24	17			
750		06	-02	270	02	10	08	234	25	11	06	289	23	14	09	272	33		08	03	278	27	10	01	275	22	20	06	289	22	24	07	299	20	24	07	299	20	24	07	299	20	24	07					
700	93.8	-01	-09	287	19	94.4	04	02	243	26	95.1	06	01	284	32	97.5	13	03	277	39	97.7	12	-19	288	36	98.2	09	01	296	36	99.2	14	02	296	31	100.2	19	03	254	21	99.1	18	16	16	99.1	18	16		
650		-09	-19	294	17	-02	-03	246	34	-04	-06	285	38	-07	276	39		07	-13	293	38		07	-13	293	38		04	-05	307	44	08	-04	299	38	12	-03	268	21	12	-03	268	21						
600	130.9	-16	-31	315	20	132.0	-09	-13	260	36	132.7	-07	-10	288	39	135.7	02	-11	276	41	136.0	00	-11	291	43	136.3	-02	-09	308	51	137.6	01	-11	300	40	139.1	06	-07	280	30	138.0	05	02	02	138.0	05	02		
550		-22	-38	322	34	-16	-21	263	42	-12	-15	289	45	-07	-18	276	45		-09	-19	270	48		-08	-16	307	56	-07	-20	298	45	01	-03	284	38	-03	-06	284	38	-03	-06	284	38	-03	-06	284	38		
500	173.3	-29	-43	303	44	175.1	-24	-29	273	58	176.2	-18	-22	296	51	179.5	-16	-23	285	55	179.9	-16	-27	301	52	180.2	-16	-25	309	59	181.7	-12	-24	301	46	183.7	-10	-14	280	38	182.4	-13	-16	16	182.4	-13	-16		
450		-37	-50	300	46	-34	-40	273	64	-25	-30	291	60	-27	-32	282	69		-26	-39	301	63		-28	-37	311	67	-23	-33	302	55	-17	-23	282	39	-21	-24	282	39	-21	-24	282	39	-21	-24	282	39		
400	223.6	-47	-50	300	46	-34	-40	273	64	-25	-30	291	60	-27	-32	282	69		-26	-39	301	63		-28	-37	311	67	-23	-33	302	55	-17	-23	282	39	-21	-24	282	39	-21	-24	282	39	-21	-24	282	39		
350		-57	-57	297	72	-59	-57	277	79	-51	-48	295	78	-48	-48	285	83		-49	-50	297	74		-47	-47	308	78	-46	-46	303	74	-40	-44	283	98	-45	-45	283	98	-45	-45	283	98	-45	-45	283	98		
300	284.9	-70	-70	294	65	-70	-75	277	87	-65	-65	293	92	-62	-62	282	93		-62	-62	295	90		-60	-60	309	78	-59	-61	301	76	-53	-53	282	51	-50	-50	282	51	-50	-50	282	51	-50	-50	282	51		
250		-58	-58	298	39	-71	-71	282	73	-72	-72	294	76	-76	-76	282	108		-79	-79	297	91		-74	-74	308	90	-76	-76	302	76	-69	-69	287	57	-74	-74	287	57	-74	-74	287	57	-74	-74	287	57		
200	371.1	-56	-56	276	32	-58	-58	273	46	-67	-67	291	62	-69	-69	280	69		-69	-69	291	50		-70	-70	304	51	-69	-69	291	54	-54	-54	284	53	-79	-79	284	53	-79	-79	284	53	-79	-79	284	53		
170		-56	-56	267	30	-59	-59	271	34	-65	-65	285	39	-70	-70	287	46		-68	-68	287	43		-68	-68	299	42	-67	-67	290	41	-75	-75	287	46	-76	-76	287	46	-76	-76	287	46	-76	-76	287	46		
150		-57	-57	277	25	-62	-62	270	21	-63	-63	276	24	-67	-67	287	39		-69	-69	287	39		-69	-69	292	34	-62	-62	272	30	-73	-73	286	42	-75	-75	286	42	-75	-75	286	42	-75	-75	286	42		
130		-58	-58	278	24	-61	-61	265	24	-62	-62	279	26	-68	-68	284	30		-70	-70	285	27		-65	-65	282	27	-65	-65	282	27	-70	-70	283	35	-75	-75	283	35	-75	-75	283	35	-75	-75	283	35		
110	520.0	-59	-59	280	14	-61	-61	265	24	-62	-62	279	26	-68	-68	284	30		-	-	282	24		-	-	282	24		-	-	282	24	-	-	282	24	-	-	282	24	-	-	282	24	-	-	282	24	
90		-58	-58	276	3					-63	-63	285	29	-67	-67	285	31		-68	-68	282	24		-68	-68	282	24		-68	-68	282	24	-	-	282	24	-	-	282	24	-	-	282	24	-	-	282	24	
80		-61	-61																-85	-85																													
70	Inversion				Inversion				Inversion				Inversion				Inversion				Inversion				Inversion				Inversion				Inversion																
60	1002 mb 25° - 988 mb 33°				1017 mb 34° - 982 mb 36°				746 mb 14° - 723 mb 15°				746 mb 08° - 715 mb 14°				1020 mb 34° - 988 mb 41°				1010 mb 32° - 988 mb 39°				1017 mb 39° - 997 mb 43				800 mb 24° - 770 mb 28°				Isothermal																
					648 - -84° - 635 - -01°				910 - 873 mb 27°																																								
					763 - 728 - 11°																																												
Tropopause	II 300 mb - 70°				II 295 mb - 76°				I 265 mb - 76°				I 222 mb - 83°				I 229 mb - 84°				I 228 mb - 79°				I 207 mb - 87°				I 170 mb - 90°				I 200 mb - 91°				Tropopause												
	28,500'				29,100'				31,700'				35,700'				35,000'				35,200'				37,300'				41,700'				38,100'																
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA.				STATION												
Pressure Time M.S.L. Surf Freezing	09L G.M.T.				09L G.M.T.				09L G.M.T.				09L G.M.T.				09L G.M.T.				09L G.M.T.				09L G.M.T.				09L G.M.T.				09L G.M.T.				09L G.M.T.				Time M.S.L. Surf Freezing								
	1010.8 mb				1002.0 mb				1013.7 mb				1014.1 mb				1020.6 mb				1024.0 mb</																												



15<sup>th</sup> April. 1951.

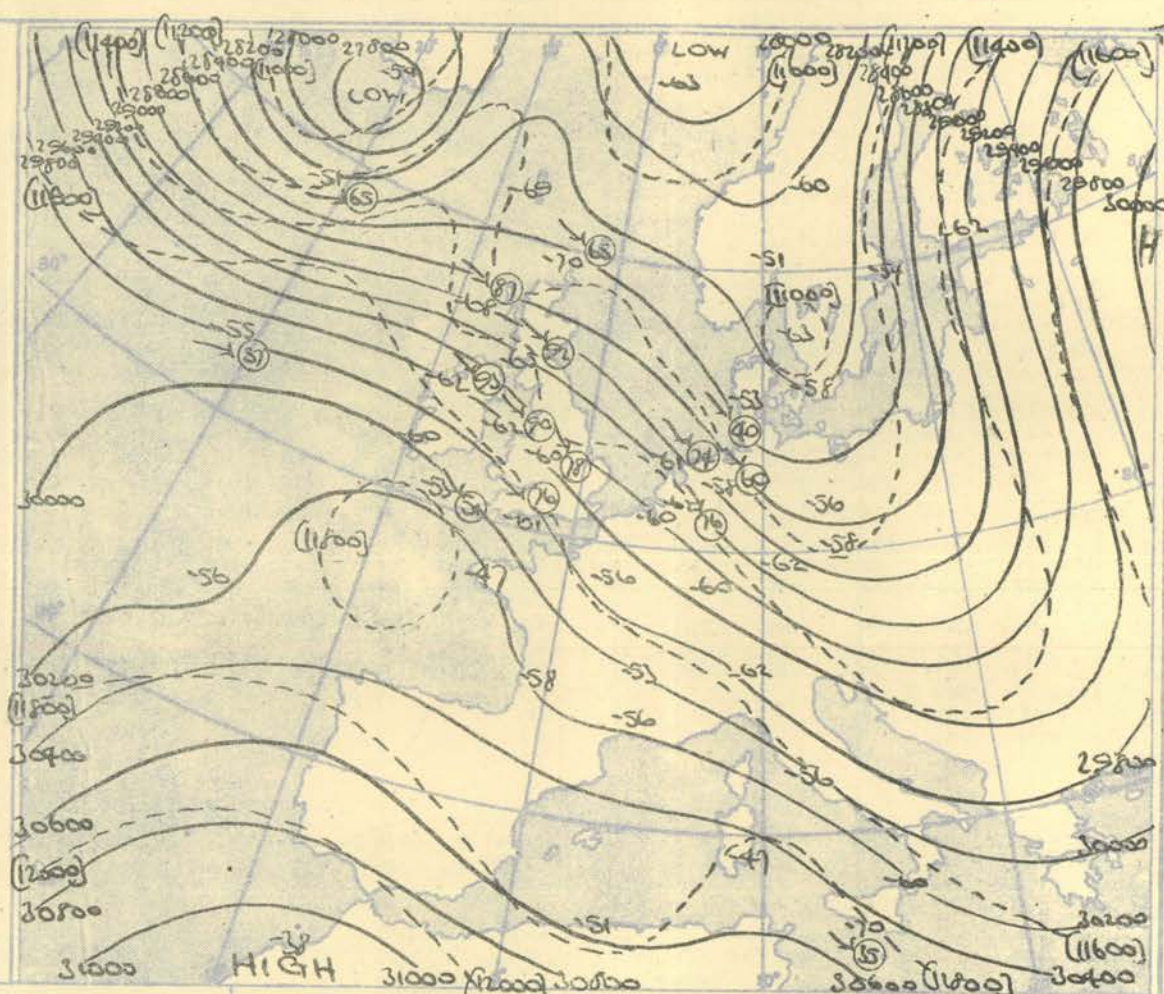
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



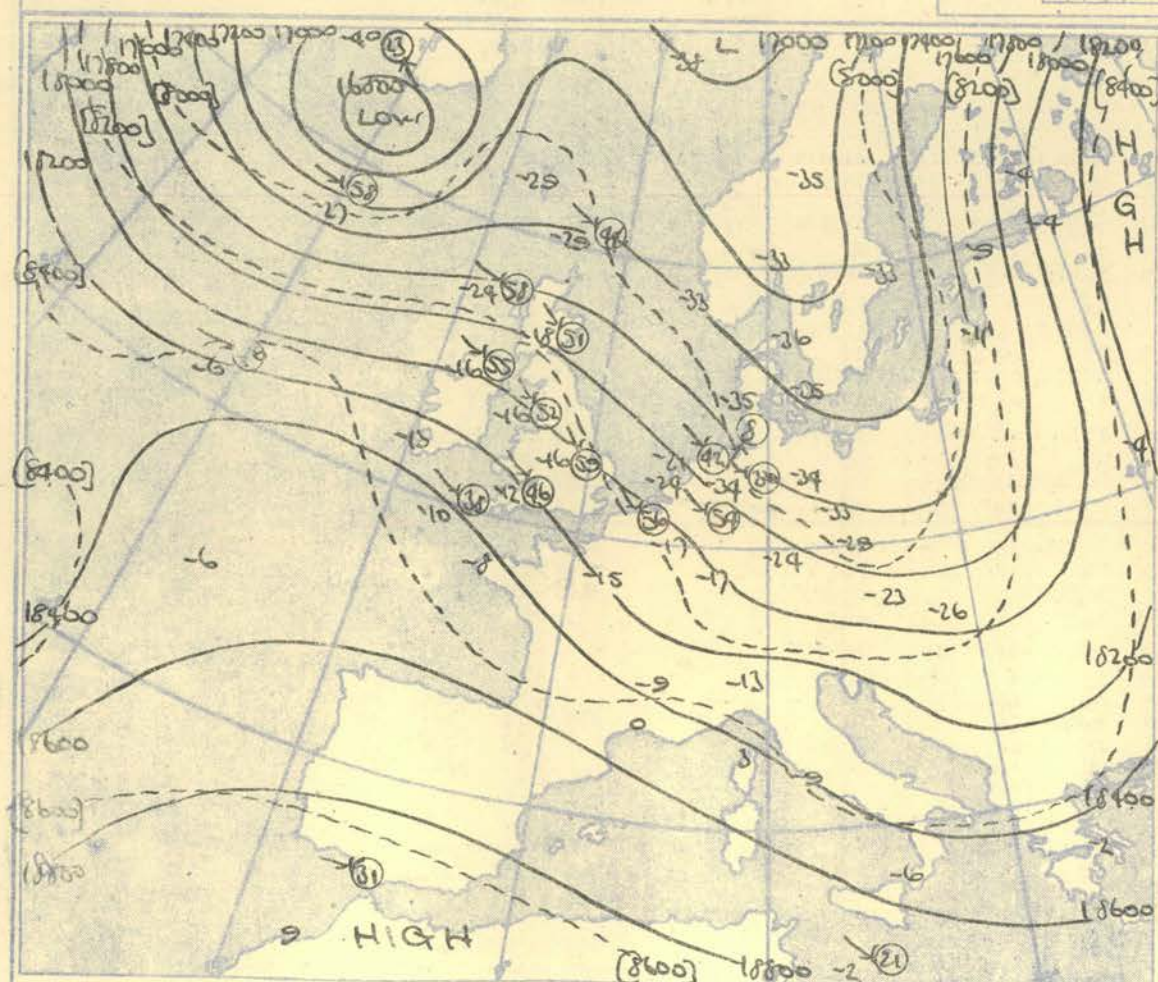
The continuous lines are contour lines of the 700 mb. surface  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

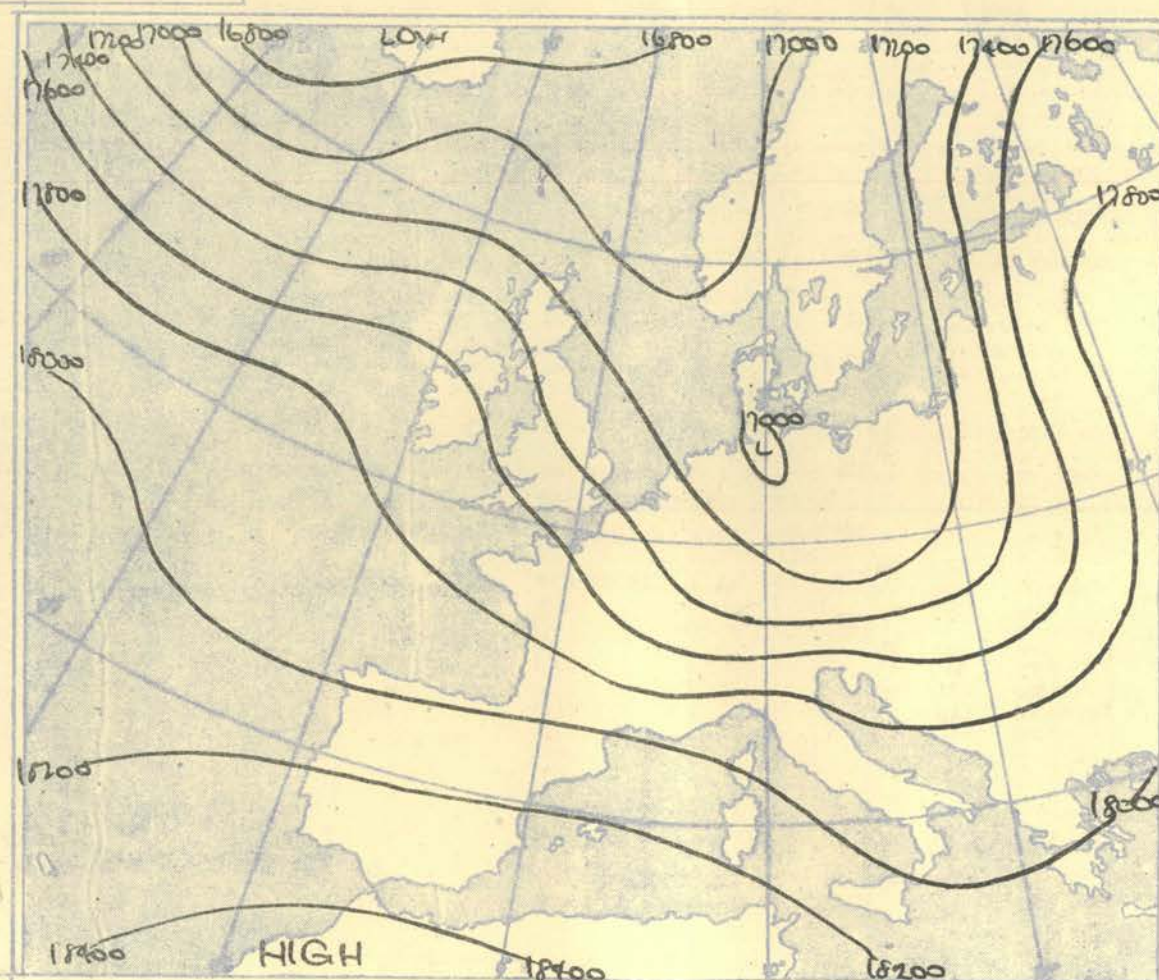
100 80 60 40 20 10 0 knots



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 1000'

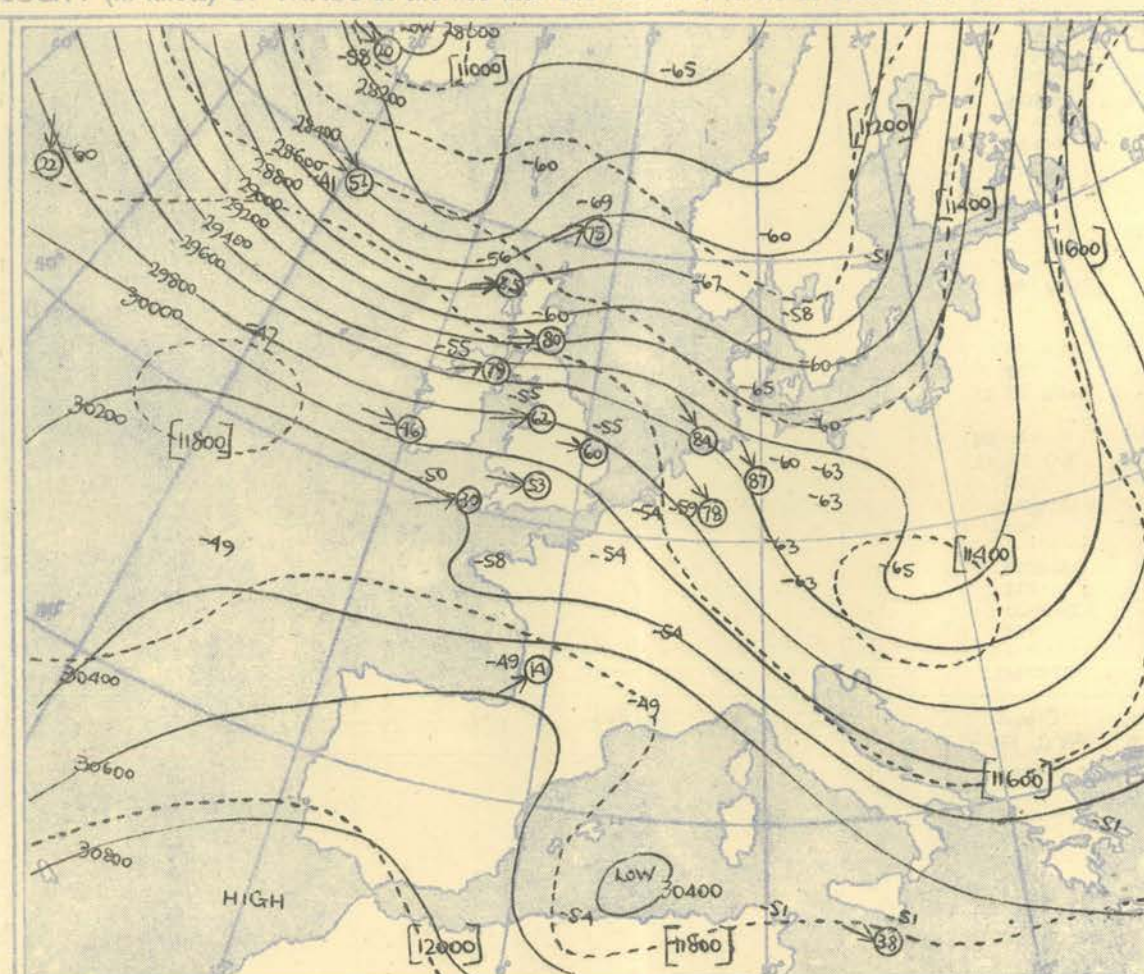
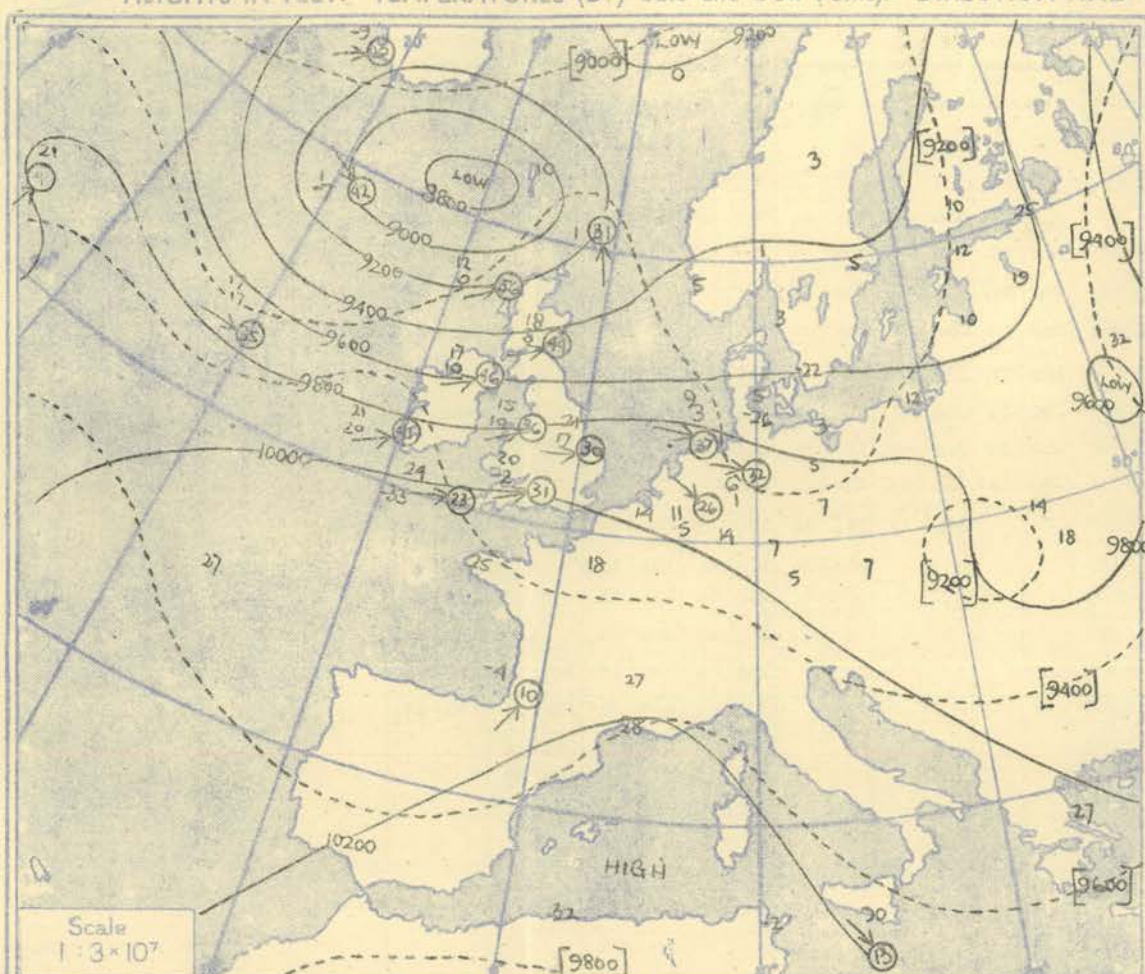
MEYER BIOLOGICAL  
LIBRARY  
25 APR 1951  
OFFICE

## NEPHOSCOPE OBSERVATIONS

Ship	WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				CUMULUS				CUMULUS				CUMULUS				CUMULUS				CUMULUS				Ship																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Lat/Long	59-ON. 19-W.				59-ON. 18-W.				58-9N. 18-6W.				58-8N. 18-0W.				52-5N. 20-0W.				52-5N. 20-0W.				52-5N. 20-0W.				52-5N. 20-0W.				52-5N. 20-0W.				Lat/Long																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Pressure (Reduced)	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.		03h.	G.M.T.		09h.	G.M.T.		15h.	G.M.T.		21h.	G.M.T.		G.M.T.	Time																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
	M.S.L.	999	mb		998	mb		995	mb		1002	mb		1013	mb		1012	mb		1015	mb		1018	mb		1013	mb		1012	mb		1015	mb		1018	mb		mb	M.S.L.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
	Surf	999	mb		998	mb		995	mb		1002	mb		1013	mb		1012	mb		1015	mb		1018	mb		1013	mb		1012	mb		1015	mb		1018	mb		mb	Surf																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
	Pressure	940	mb		970	mb		940	mb		950	mb		850	mb		860	mb		940	mb		940	mb		940	mb		940	mb		940	mb		940	mb		mb	Pressure																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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	Pressure																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Surf	1000	33	28	280	27	37	21	290	35	37	32	280	38	37	32	280	48	30	47	240	17	48	45	262	18	44	45	262	18	44	45	262	18	44	45	262	18	44	45	Surf																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
950	27-5	26	19	279	32	27	17	305	34	28	29	270	43	28	23	28	356	45	43	41	250	25	41	40	268	22	34	30	340	21	34	11	007	18	950																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
900	20	13	270	33	27	15	10	286	33	26	4	270	48	27	16	16	341	48	32	30	260	22	32	29	279	33	28	24	322	23	26	05	005	18	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. and 300 mb., levels at about 15 h G.M.T.

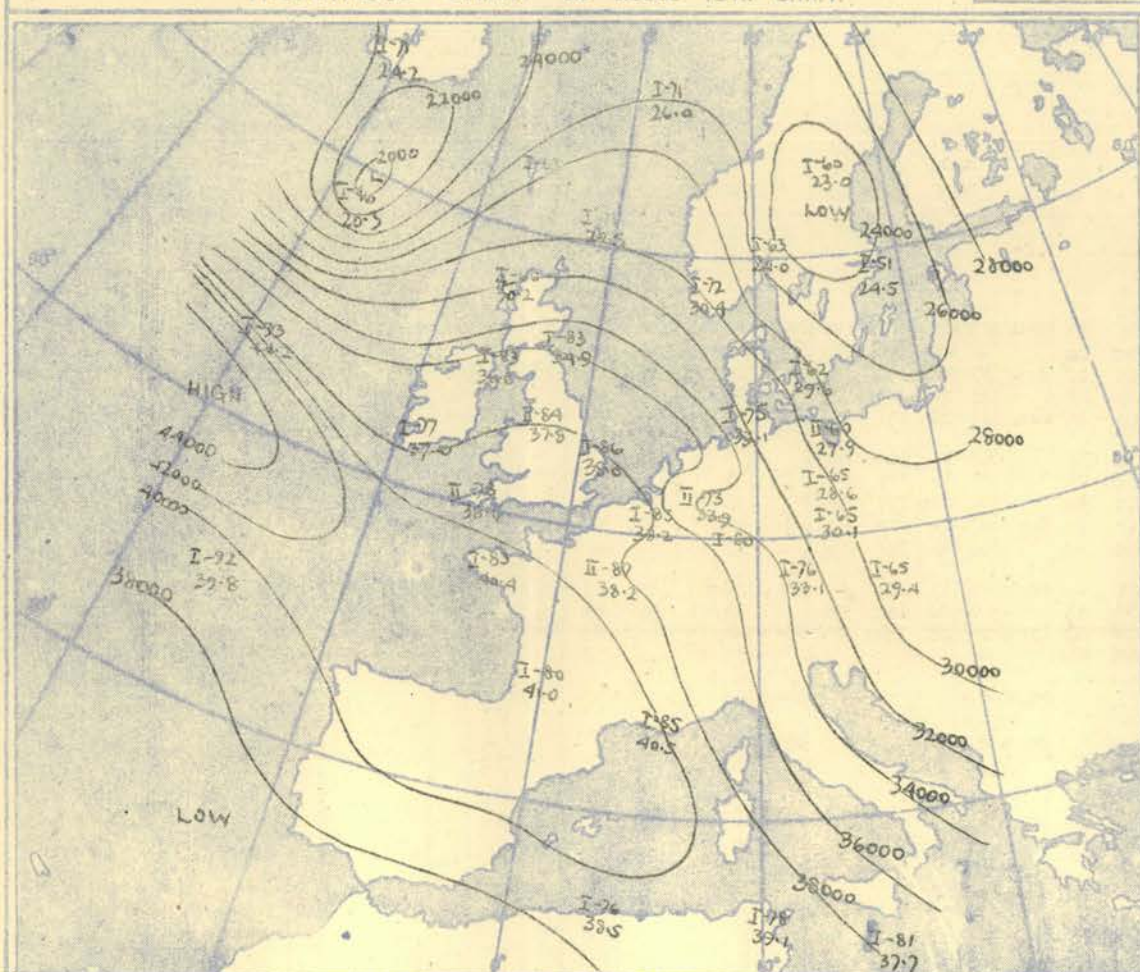


The continuous lines are contour lines of the 700 mb. surface.  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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



Contour lines of Height of Tropopause.  
Temperature of Tropopause.

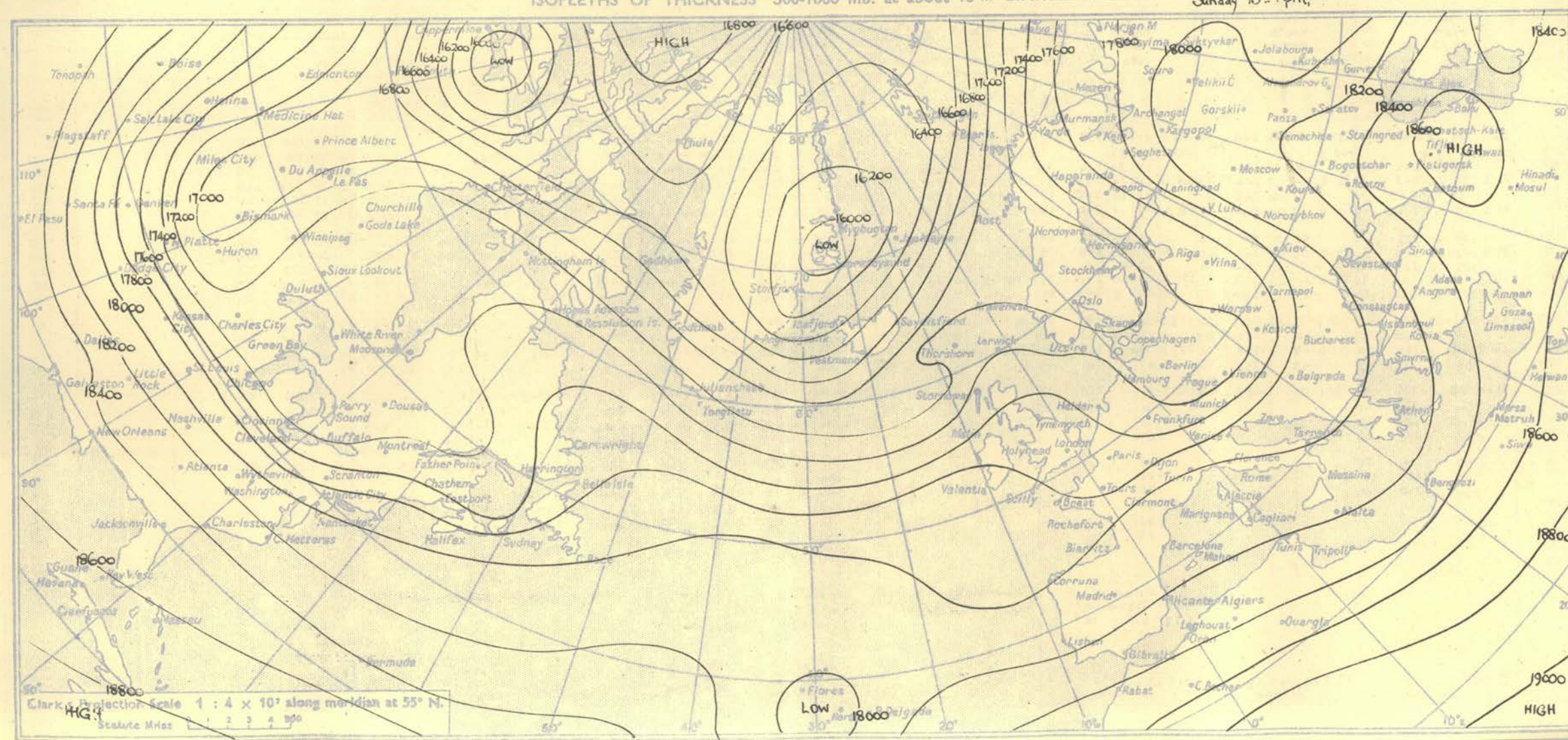
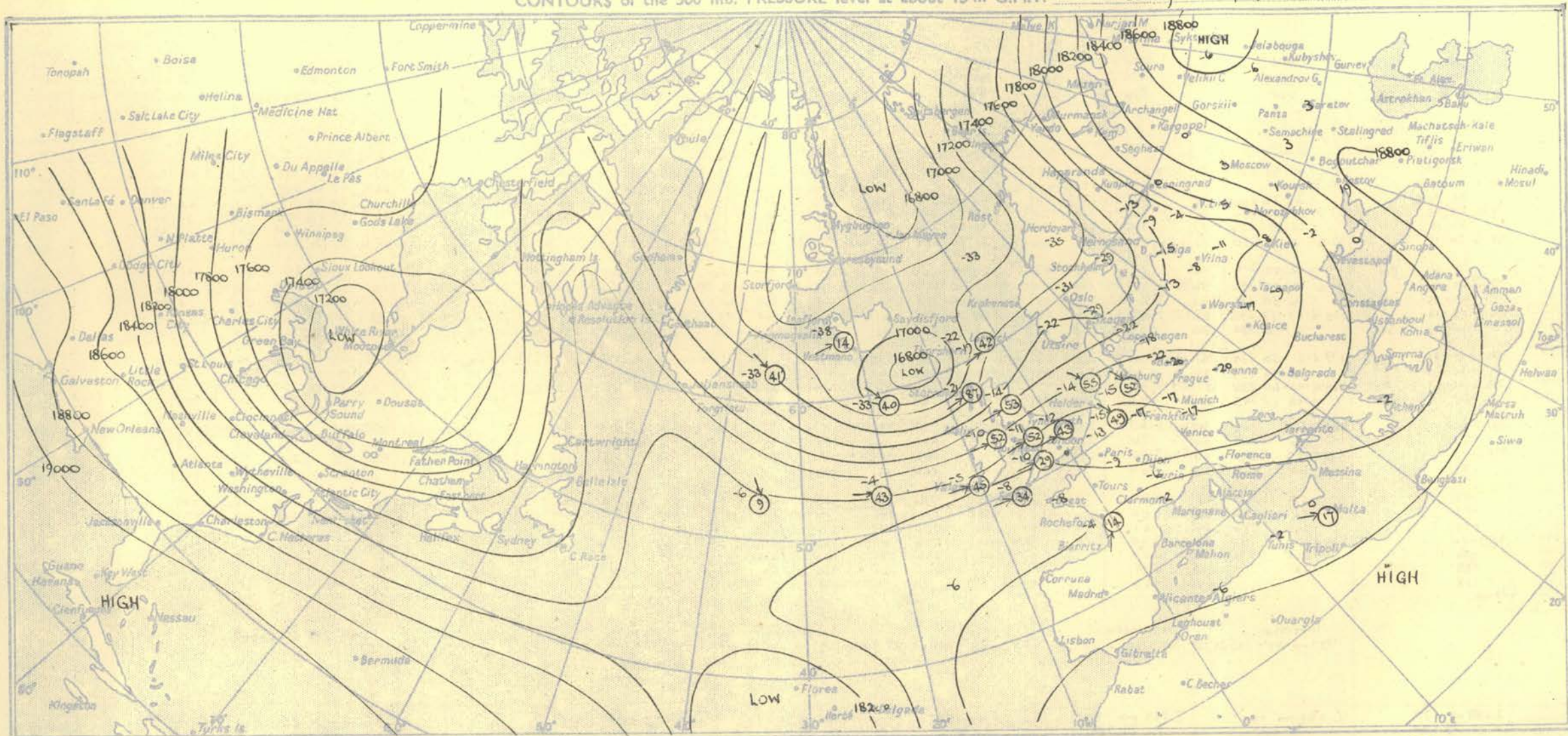
# NOTES ON THE AEROLOGICAL SITUATION.

The cold trough moving east across Germany continued to weaken and a cold pool has developed rapidly eastwards on the south side of the low moving towards the Feroes.

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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.)

[illegible]



VALENTIA		
03L	G.M.T.	TH
21016-6	mb	M.S.
1015	mb	Se
890	mb	Fr

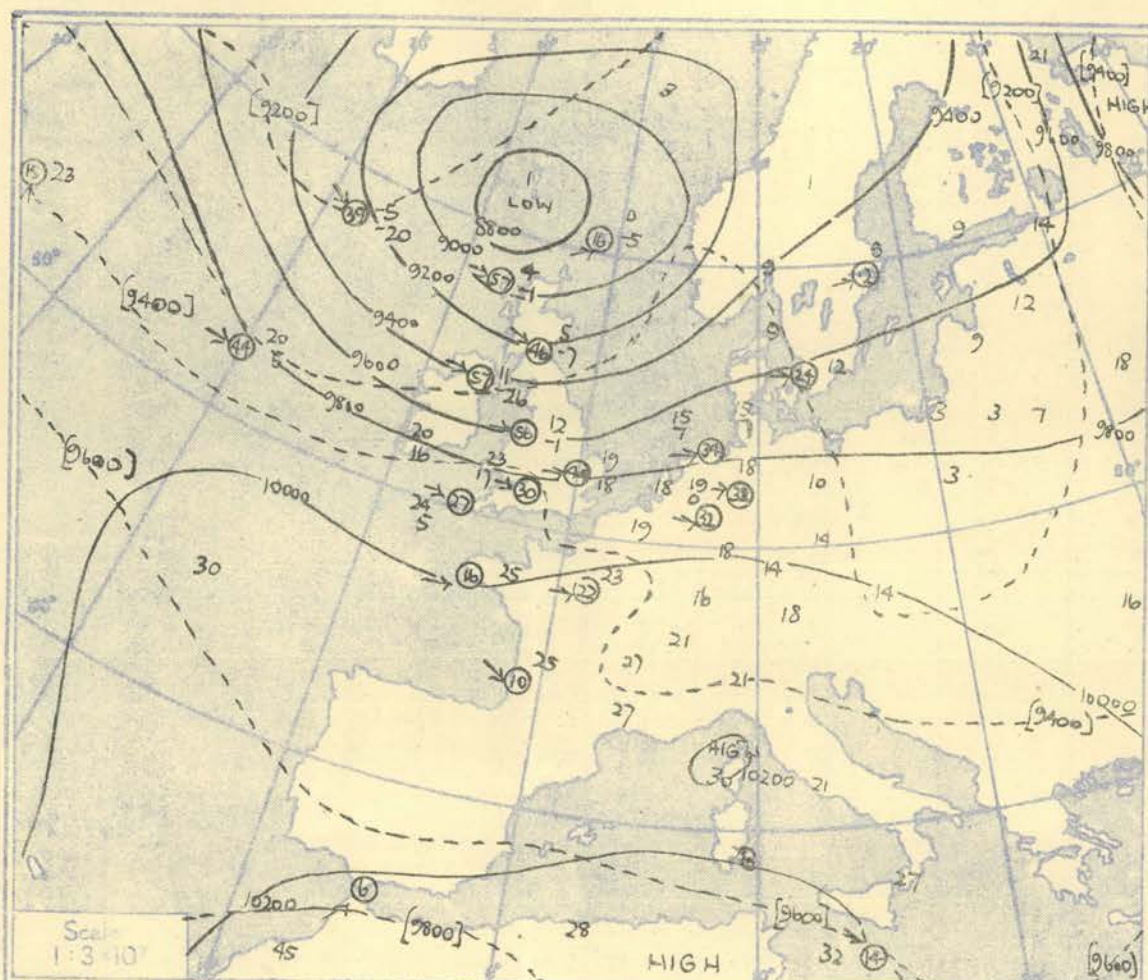
Time	}	Duration
M.S.I..		
Sari		
Freezing		

Творчество



Monday 16<sup>th</sup> April. 1951.

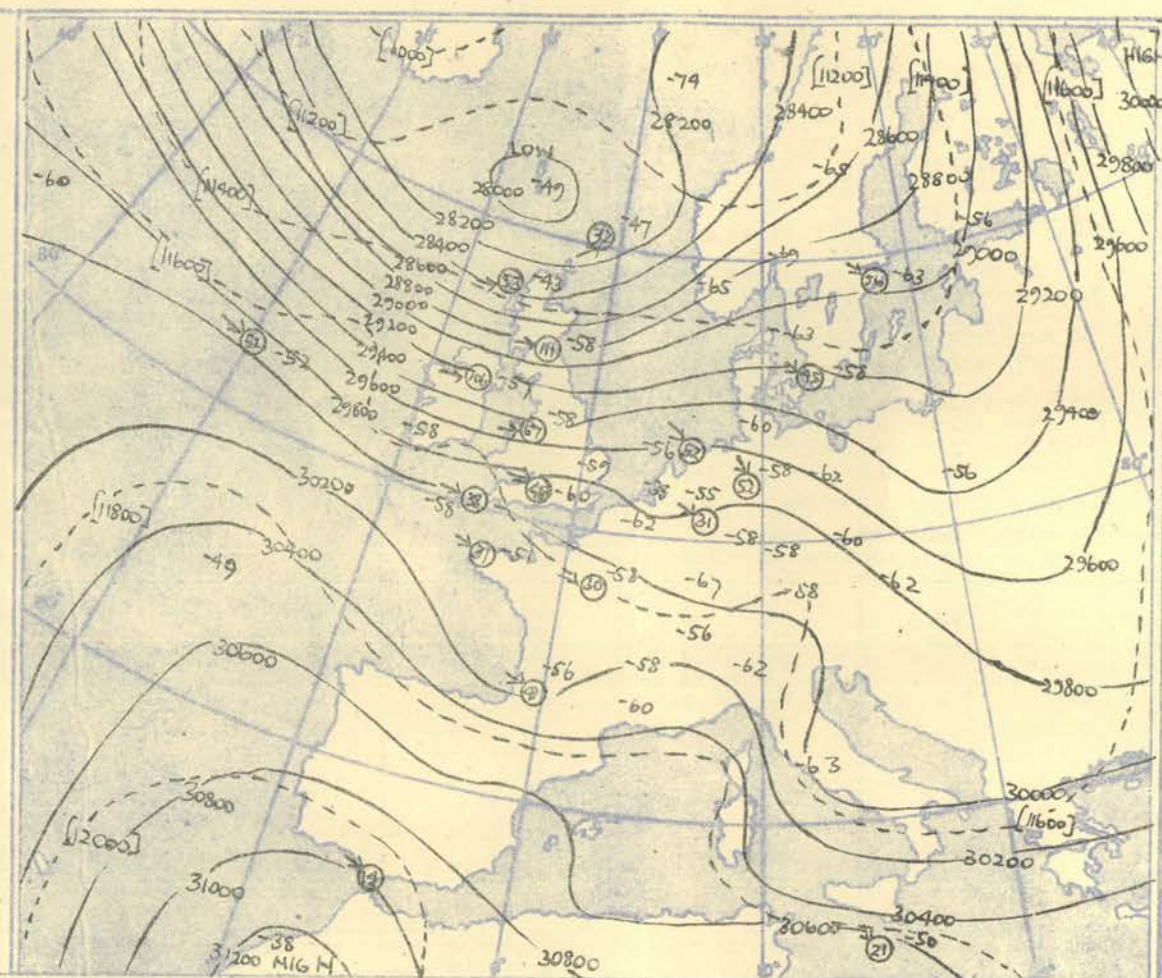
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb. levels at about 03 h G.M.T.



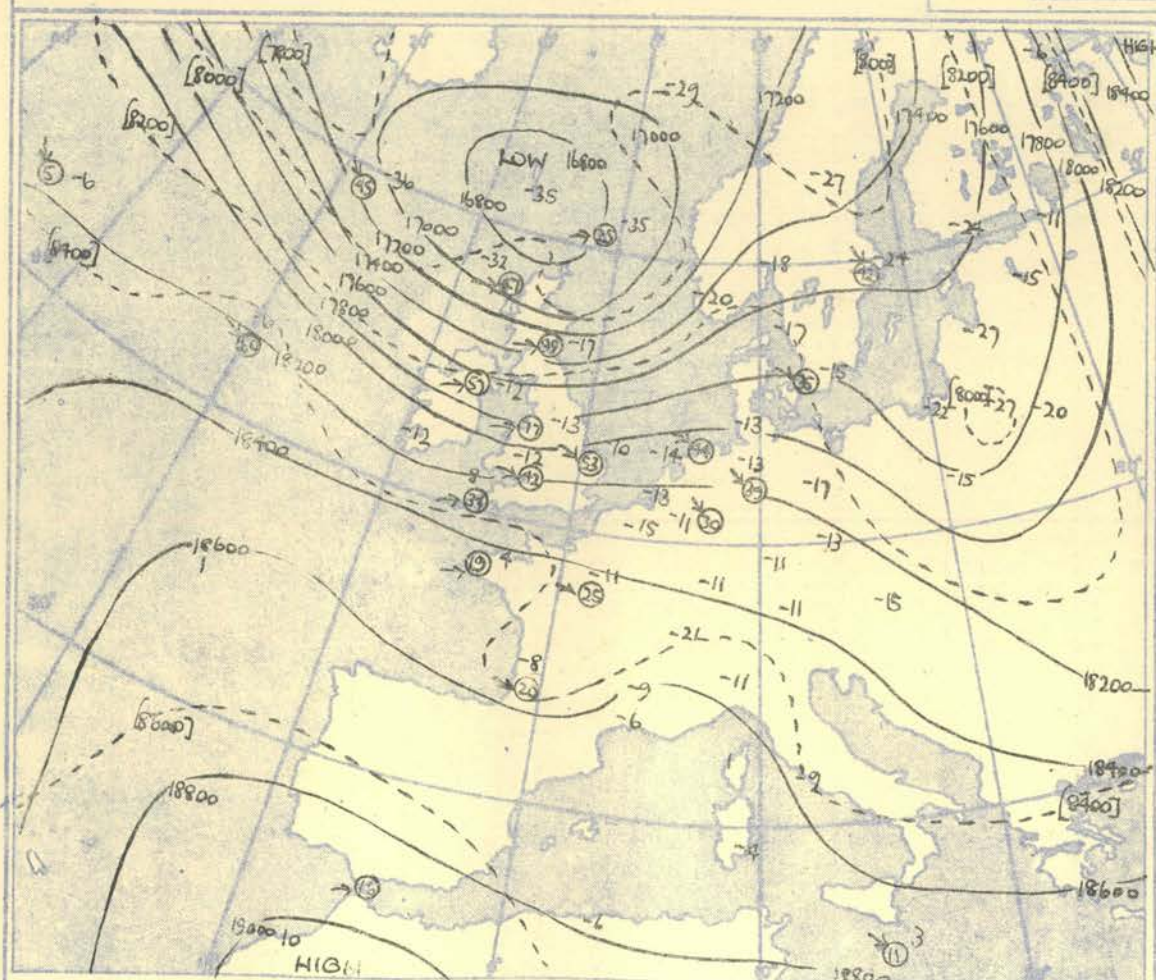
The continuous lines are contour lines of the 700 mb. surface  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

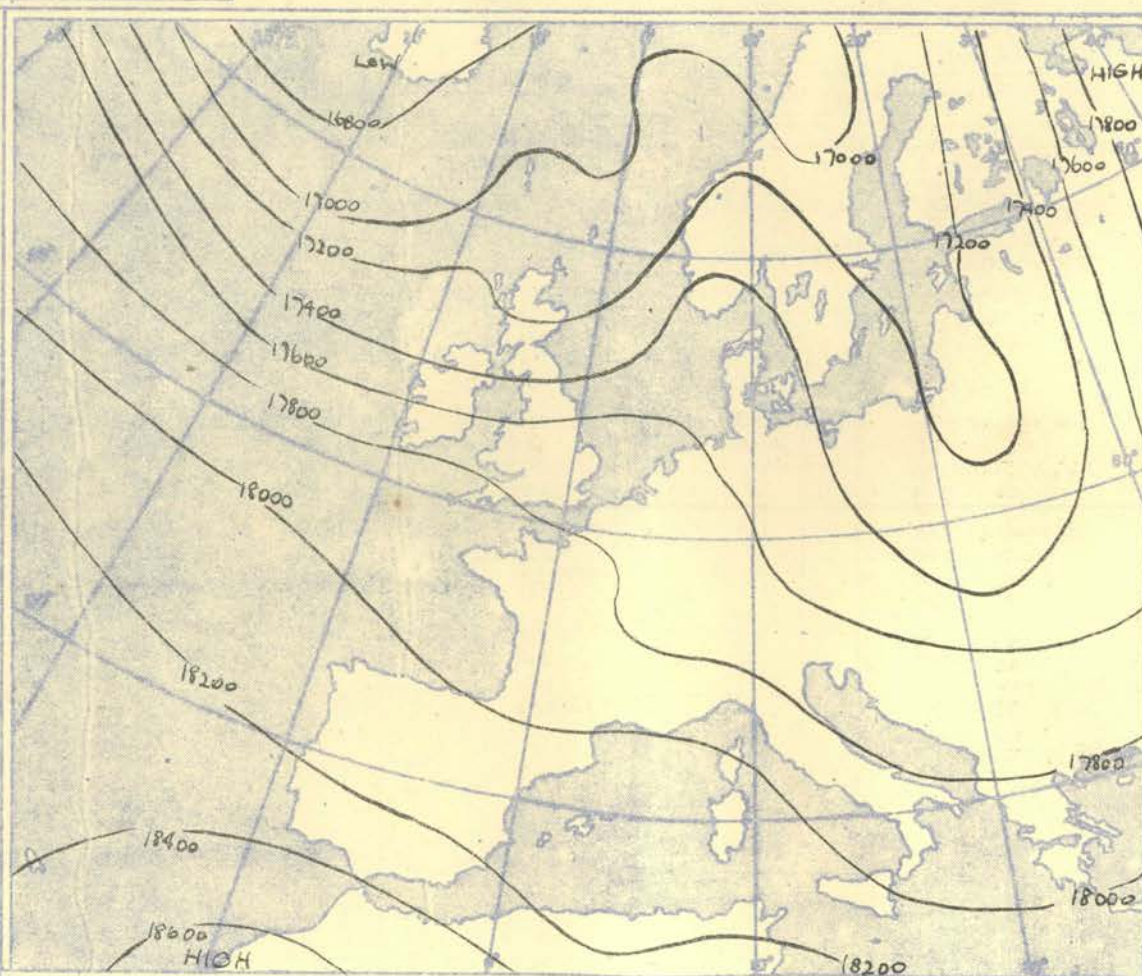
100 80 60 40 20 10 0 knots



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]

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

[illegible]

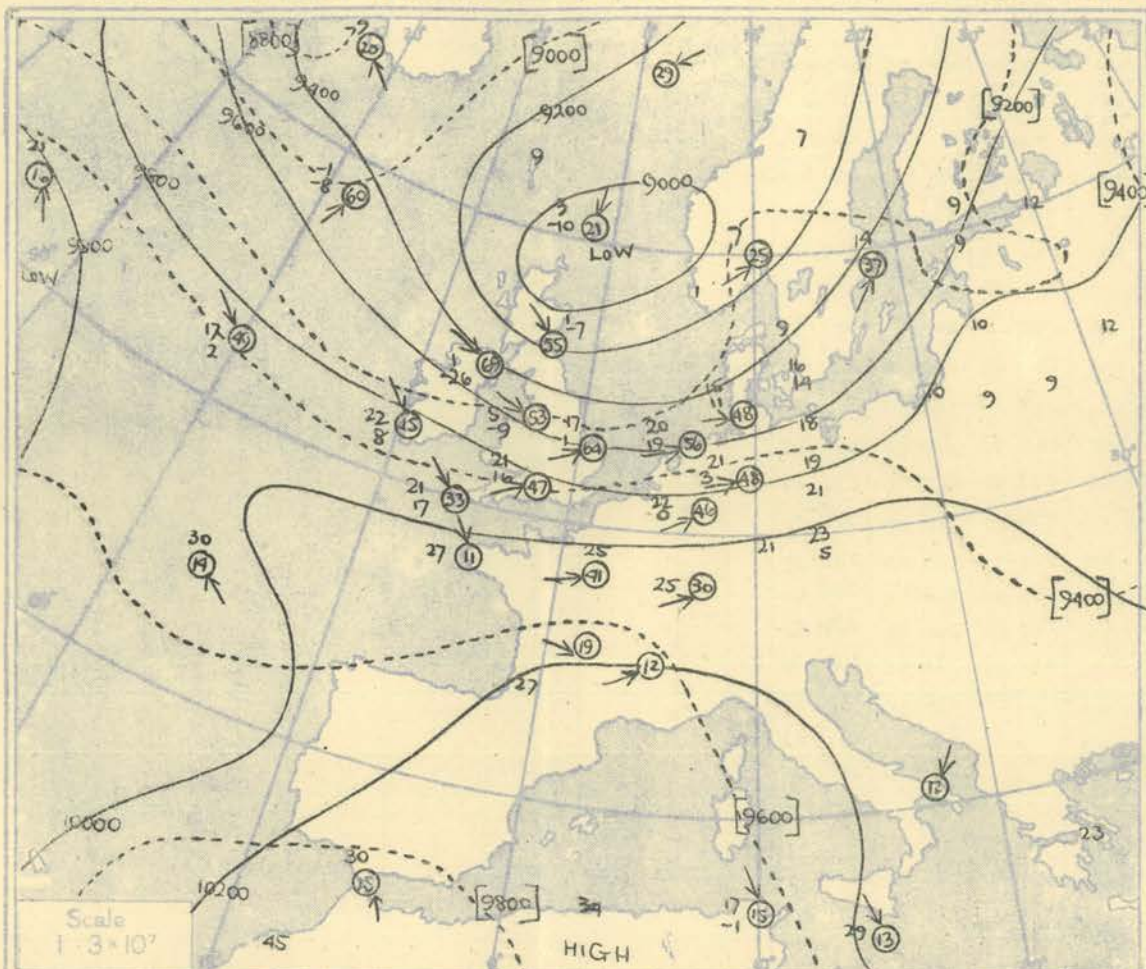
## NEPHOSCOPE OBSERVATIONS

[illegible]

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

[illegible]

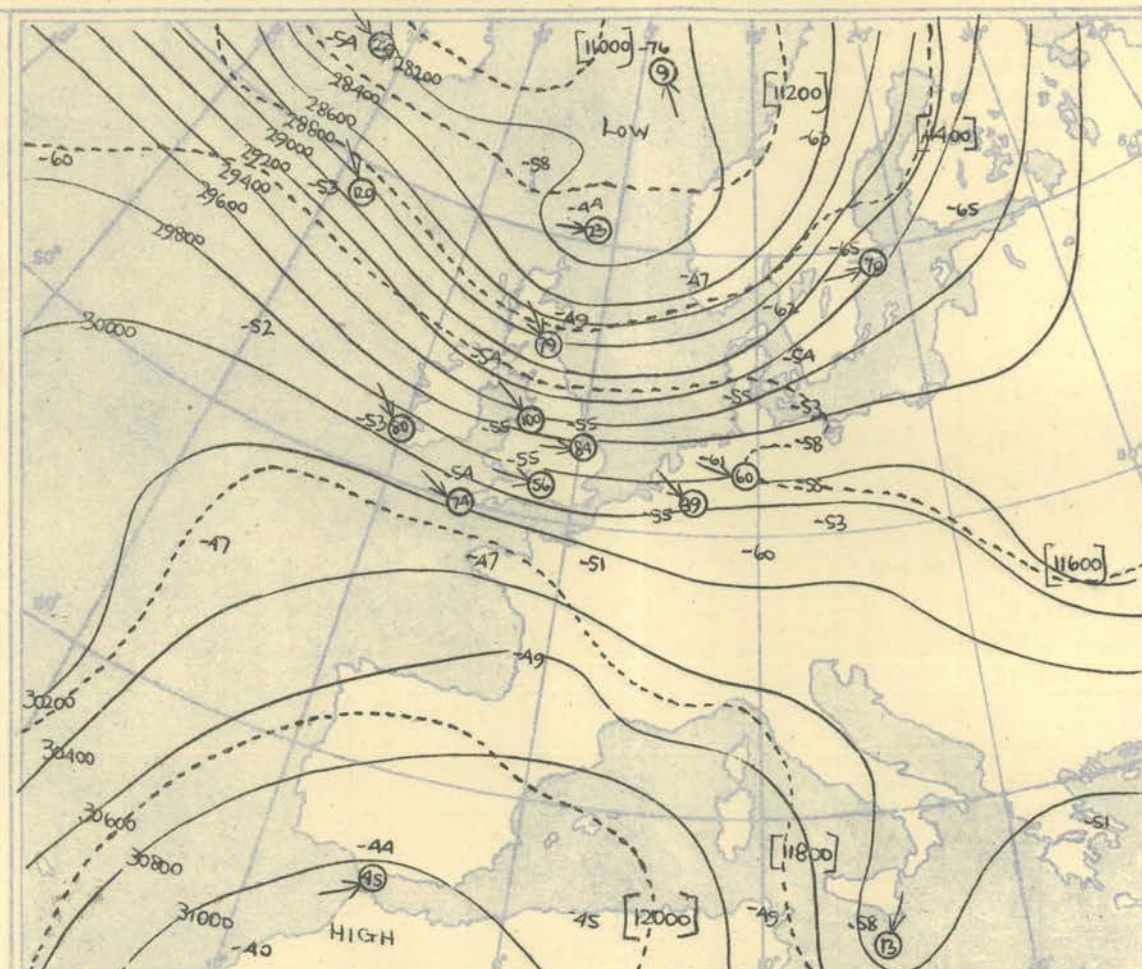




The continuous lines are contour lines of the 700 mb. surface.  
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

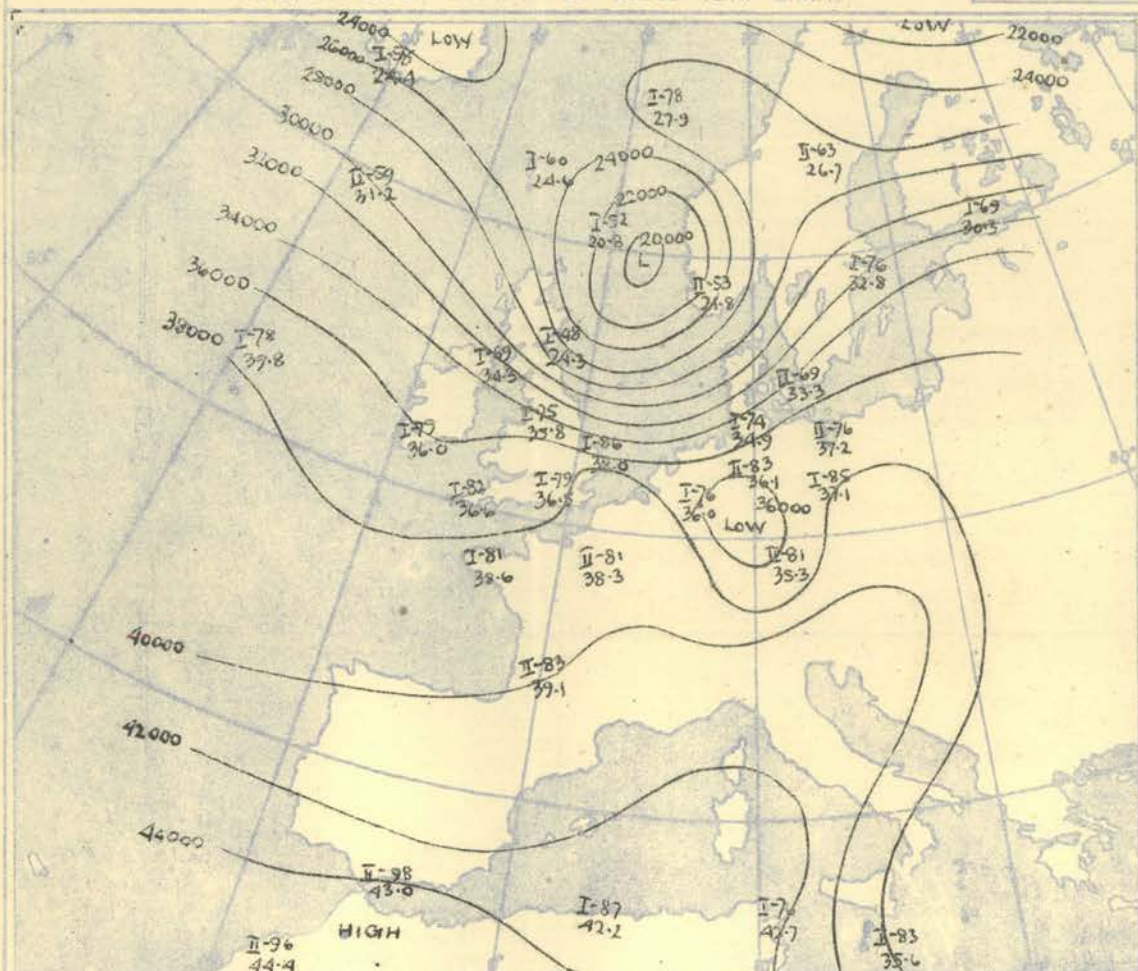
Gradient Wind Scale for Contours  
at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 20 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.

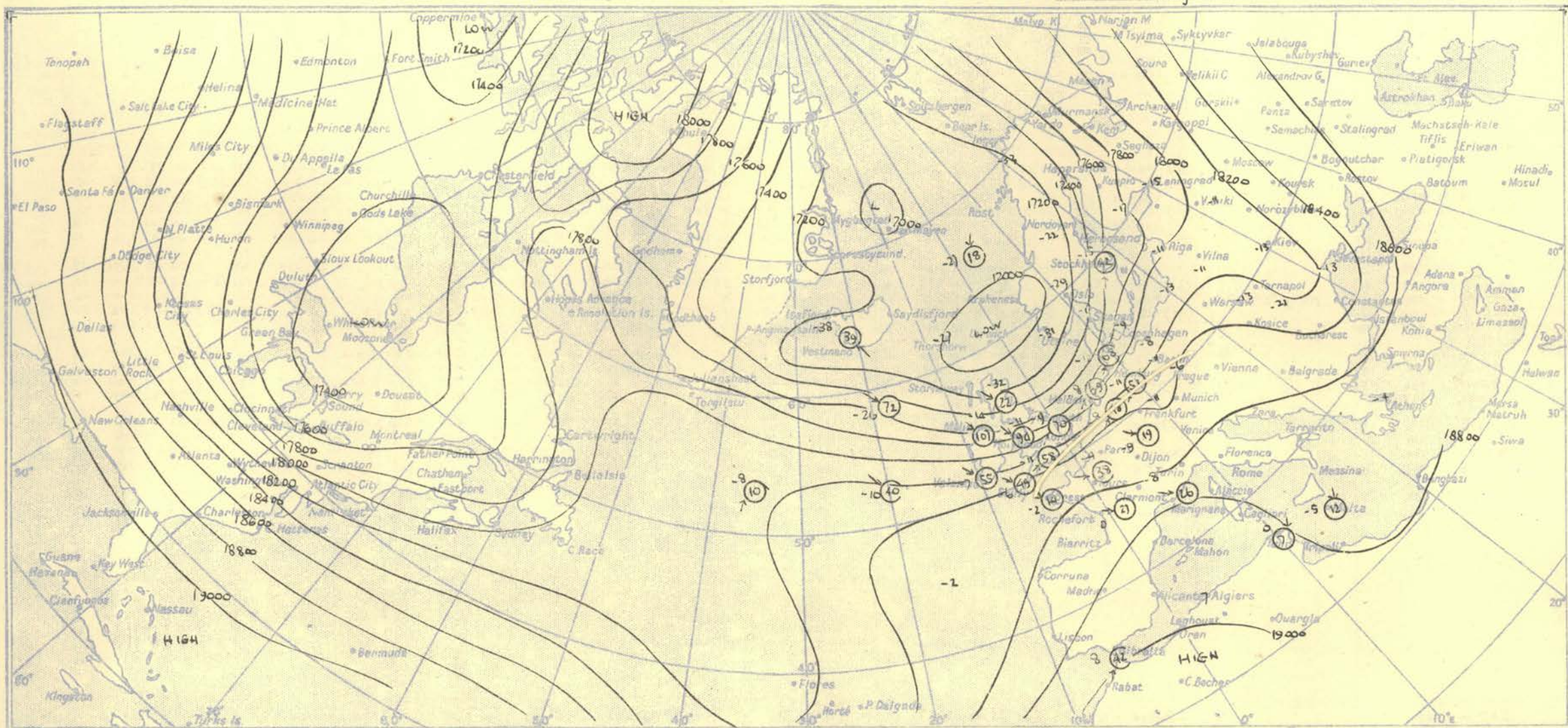


Contour lines of Height of Tropopause.  
Temperature of Tropopause.

### NOTES ON THE AEROLOGICAL SITUATION.

The cold trough moving east across East Europe continued to weaken slowly. The cold air moving southeast behind the low near Shetlands has not penetrated as far south as recent outbreaks, leading to a more zonal thermal gradient over the Atlantic and British Isles. Extremely cold air has moved down the east coast of Greenland.

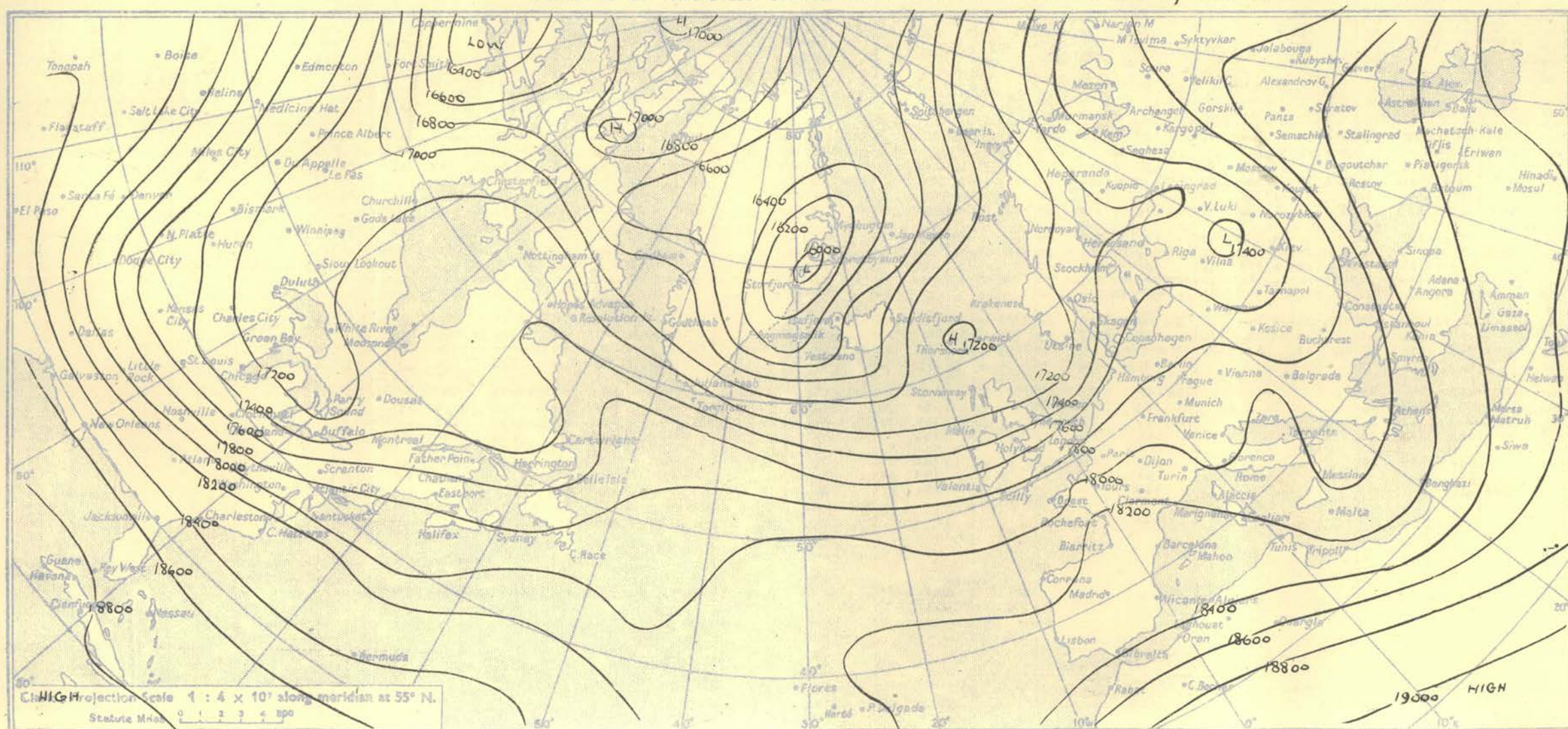




ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T.

Monday 16<sup>th</sup> April

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.	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.		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	mb	mb			mb									
			929	976.8	986.7	941	1000.8	1001.7	928	1003.1	1011.7	895	1003.0	884	1016.2	1000.1	799	1021.2	1020	910																										
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.	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										
Surf	02.7	39	34	052	12			00.2	46	34	280	30	02.6	44	37	300	30	00.6	49	37	270	20	01.2	50	41	260	12	04.2	49	41	270	12	02.9	46	46	360	03	00.3	49	38	340	13	Surf			
1000	-03.6							00.4	46	34		30	03.5				30	03.7	47	36	272	31	03.7					04.4	49	41	270	12	05.3	45	45	343	12	05.7	46	35	339	15	1000			
950		35	32	030	25				34	28	268	50		35	27	291	37		37	26	276	30		42	34	280	25		41	39	269	24		43	43	292	16		39	29	337	19	950			
900	24.3	29	25	020	24			28.3	29	19	273	54	31.4	27	20	288	38	31.7	32	15	284	30	32.0	35	31	281	21	32.7	37	33	269	30	33.7	42	42	276	21	33.8	39	22	334	17	900			
850		25	15	011	21				22	12	282	55		19	15	286	37		25	09	289	31		27	26	268	29		32	29	268	36		38	38	278	24		24	16	327	18	850			
800	54.7	19	08	005	20			58.7	16	04	285	56	61.6	11	10	287	45	62.1	18	05	288	34	62.7	21	17	266	40	63.6	29	27	267	42	66.0	32	32	285	28	64.2	24	11	304	26	800			
750		11	00	358	21				03-01	281	59		06-02	284	50		11-01	288	42		22-03	266	58		22-03	266	58		26	23	268	46		28	25	284	30		24	08	289	39	750			
700	88.2	03-10	003	21				92.0	01-07	278	55	94.8	01-26	274	69	95.7	05-09	279	53	97.0	17-01	262	64	98.2	21-16	267	47	99.8	21	17	282	33	98.6	22	08	284	48		22	08	284	48	700			
650		05-10	001	21					06-16	278	48		02-32	279	66		03-25	269	71		11-02	260	69		17-03	270	48		16	10	278	34		16	03	279	46		16	03	279	46	650			
600	125.6	14-22	352	21				129.3	12-27	286	39	132.3	10-41	282	65	133.7	00-37	271	77	135.7	05-11	261	70	137.3	07-04	268	50	138.9	11-03	266	50	138.9	11-03	266	50	137.7	08-05	282	50		08-05	282	50	600		
550		23-32	330	19					21-37	293	30		12-45	287	83		04-42	274	88		04-42	274	88		00-11	265	54		03-04	271	42		03-04	271	42		01-13	253	54		01-13	253	54	550		
500	168.6	32-39	322	15				171.9	32	293	22	175.8	14-29	286	107	178.0	11-49	276	94	180.2	09-30	263	70	181.9	11-20	262	58	183.9	14-14	279	49	182.5	07-22	282	55		07-22	282	55		07-22	282	55	500		
450		44							41	287	30		21-38	285	116		19-57	276	99		20-44	266	72		17-33	273	60		15-31	279	54		15-31	279	54		16-30	281	56		16-30	281	56	450		
400	217.5	49	296	15				221.9	48	284	56	227.9	31-58	280	120	230.4	29-56	276	98	236.7	55	26.7	84	23.4	29-46	275	59	236.8	25-34	284	62	235.2	27-40	280	62		27-40	280	62		27-40	280	62	400		
350		46	285	17					48	284	69		43				41			98		276	87		41		272	56		38-53	283	66		38-53	283	66		38-53	283	66		38-53	283	66	350	
300	281.0	44	272	23				285.1	49	280	79	291.8	54		65		294.5	55		100	296.7	55	26.7	84	298.9	55	26.8	56	301.2	54	278	74	299.5	53	278	80		53	278	80		53	278	80	300	
250		43	270	24					48	278	60		65				68			99		280	99		70		277	57		72	281	66		69	276	79		69	276	79		69	276	79	250	
200	371.0	44	268	21				373.9	50	272	66	377.6	66		6		379.4	71		283	72	380.0	86	28.0	11	382.9	73	280	57	385.1	77	282	60	384	74	275	62		74	275	62		74	275	62	200
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150		50	258	25					57	281	29		60				70			276	56	73		292	98		68	276	49		69	274	48		70	282	46		70	282	46		70	282	46	150
130		49	266	24					61	279	21		64				69			274	52	70					65	250	47		71	277	36		68	274	42		68	274	42		68	274	42	130
110		52							61				63				64			275	54		53.7	68			52.4	67	277	34	538.7	69	280	35	527.9	71		68					110			
90													63				64			275	54						65	266	32		64	266	32		65	266	32		65	266	32		65	266	32	90
80													62				64			275	54		53.7	68			52.4	67	277	34	538.7	69	280	35	527.9	71		68					80			
70													62				64			275	54						65	266	27		64	266	27		65	266	27		65	266	27		65	266	27	70
60																																														

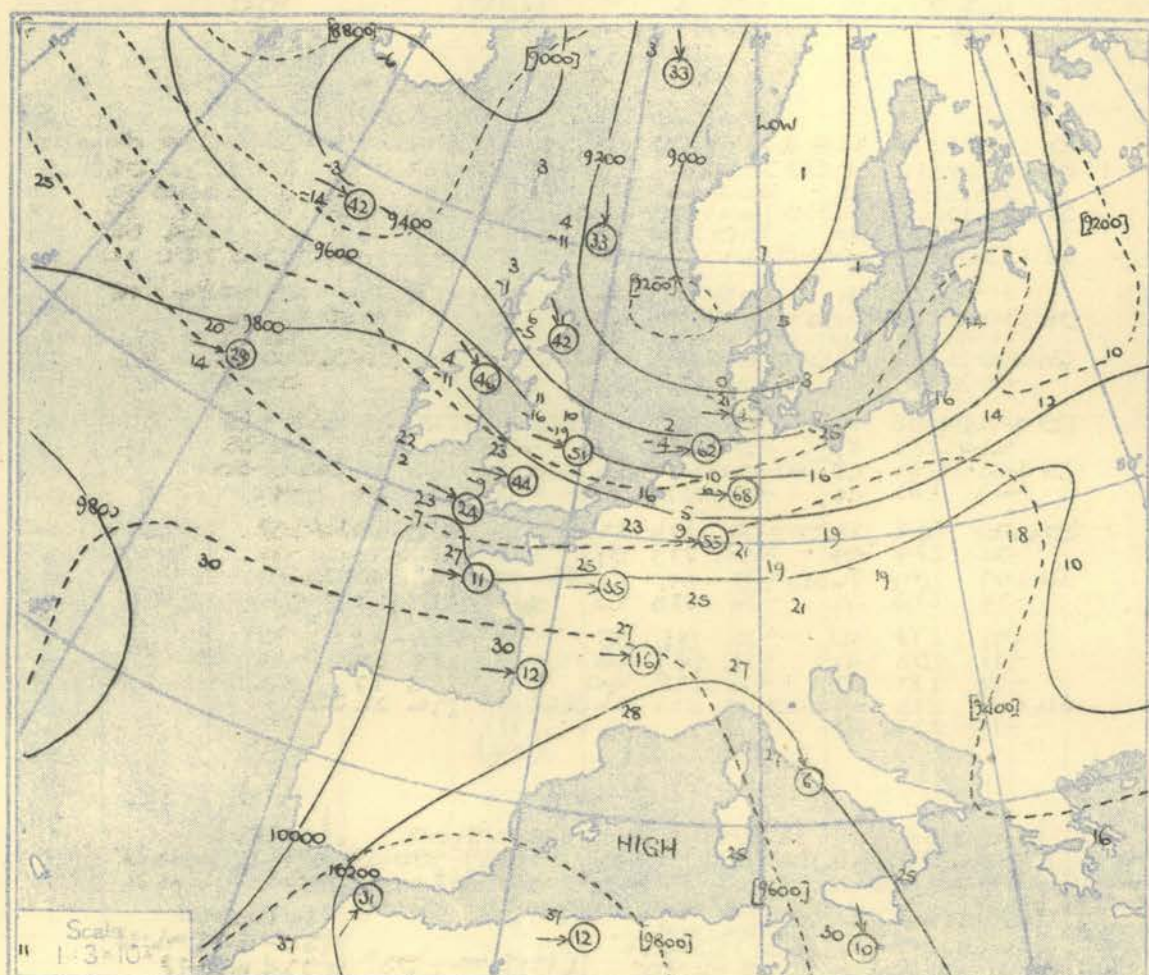


RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	Valencia	STATION
Time M.S.L.	03hrs	03hrs	03hrs	03hrs	03hrs	03hrs	03hrs	03hrs	03hrs	Time M.S.L.
Surf	999.6	1006.2	1007.8	1010.3	1018.6	1018.4	1021.5	1023.0	1023.4	Surf
Pressure	999.3	1006.5	1006.9	1011.8	1016.5	1015.9	1008.2	1012.1	1022.9	Pressure
Freezing	558	558	552	550	544	564	547	782	900	Freezing
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.
Surf	02.73524	0.43836	0.23931	0.23931	0.23931	0.23931	0.23931	0.23931	0.23931	0.23931
1000	0.1	2.63736	0.23931	0.23931	0.23931	0.23931	0.23931	0.23931	0.23931	0.23931
950	31.27	31.30	32.25	32.25	32.25	32.25	32.25	32.25	32.25	32.25
900	27.52723	29.82424	29.72626	29.72626	29.72626	29.72626	29.72626	29.72626	29.72626	29.72626
850	23.14	26.14	22.14	22.14	22.14	22.14	22.14	22.14	22.14	22.14
800	57.71908	60.01612	60.01907	60.01907	60.01907	60.01907	60.01907	60.01907	60.01907	60.01907
750	10.2	10.08	18.08	18.08	18.08	18.08	18.08	18.08	18.08	18.08
700	91.304	20.403	20.706	20.706	20.706	20.706	20.706	20.706	20.706	20.706
650	4.14	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11
600	12.743	12.812	13.13	13.13	13.13	13.13	13.13	13.13	13.13	13.13
550	23.31	21.23	20.31	20.31	20.31	20.31	20.31	20.31	20.31	20.31
500	171.23240	173.43040	174.02941	174.02941	174.02941	174.02941	174.02941	174.02941	174.02941	174.02941
450	41	41	34.48	34.48	34.48	34.48	34.48	34.48	34.48	34.48
400	220.251	222.247	224.835	224.835	224.835	224.835	224.835	224.835	224.835	224.835
350	59	53	45	45	45	45	45	45	45	45
300	262.658	285.659	288.455	288.455	288.455	288.455	288.455	288.455	288.455	288.455
250	56	64	61	61	61	61	61	61	61	61
200	370.51	371.760	375.058	375.058	375.058	375.058	375.058	375.058	375.058	375.058
170	51	60	59	59	59	59	59	59	59	59
150	56	61	61	61	61	61	61	61	61	61
130	56	63	63	63	63	63	63	63	63	63
110	56	63	63	63	63	63	63	63	63	63
100	507.59	518.61	525.764	525.764	525.764	525.764	525.764	525.764	525.764	525.764
90	59	62	62	62	62	62	62	62	62	62
80	59	62	62	62	62	62	62	62	62	62
70	59	62	62	62	62	62	62	62	62	62
60	59	62	62	62	62	62	62	62	62	62
Tropopause	I 260 mb - 59°	I 257 mb - 65°	I 276 mb - 60°	I 276 mb - 60°	I 276 mb - 60°	I 276 mb - 60°	I 276 mb - 60°	I 276 mb - 60°	I 276 mb - 60°	I 276 mb - 60°
STATION	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	Valencia	STATION
Time M.S.L.	09hrs	09hrs	09hrs	09hrs	09hrs	09hrs	09hrs	09hrs	09hrs	Time M.S.L.
Surf	1008.3	1014.6	1013.7	1011.7	1021.8	1020.2	1023.8	1023.8	1023.8	Surf
Pressure	990.1	1012.5	1012.8	1011.7	1019.7	1015.6	1007.3	1007.3	1007.3	Pressure
Freezing	945	955	934	922	950	952	900	755	755	Freezing
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.
Surf	02.73524	0.43836	0.23931	0.23931	0.23931	0.23931	0.23931	0.23931	0.23931	0.23931
1000	0.1	2.63736	0.23931	0.23931	0.23931	0.23931	0.23931	0.23931	0.23931	0.23931
950	33.19020	31.2198	34.21801	34.21801	34.21801	34.21801	34.21801	34.21801	34.21801	34.21801
900	29.82424	26.31425	26.31425	26.31425	26.31425	26.31425	26.31425	26.31425	26.31425	26.31425
850	18.01004	18.13304	26.13304	26.13304	26.13304	26.13304	26.13304	26.13304	26.13304	26.13304
800	59.81100001	16.61413	08.294	15.62021	08.320	33.64119	03.307	28.637	16.03329	36.633
750	09.16012	18	08.0269	11	15.01310	32	12.5302	29	13.5315	38
700	93.204	16.015	19.947	01.8238	09.25808	7.320	31.278	11.5298	33.274	12.13307
650	3.34018	20	6.13233	08	00.4310	28	10.14233	44	12.14304	52
600	1307.11	41.020	24	13.51323	09.1367	23.303	29.1365	10.6287	52.136	06.19203
550	20.50019	22	22.33263	19	11.31306	40	03.40287	55	2.48297	61
500	174.3057025	16	174.3057025	30	177.1338302	80	181.4616287	57	180.51126287	69
450	42	13	32.5289	70	21.26303	97	16.25284	63	22.39286	62
400	23.153	014	10.216242	287	21.294343001	94	234.22534282	72	231.63350287	62
350	64	346	14	52	287	105	44	301	101	36.45275
300	284.65	295	42.287.663	286	106.293.552	298	105.299.081	276	70.295.61	283
250	59	300	48	68	87	94	65	75	75	75
200	370.54	275	34.372.762	286	53.379.162	250	78.384.866	380.167	285	69.380.77
170	56	262	25	62	284	49	62	285	63	62
150	59	271	28	63	271	45	62	290	40	72
130	57	276	25	63	283	32	62	284	28	74
110	57	280	24	61	284	25	64	284	28	74
100	518.58	519.58	527.35	527.35	527.35	527.35	527.35	527.35	527.35	527.35
90	59	62	62	62	62	62	62	62	62	62
80	59	62	62	62	62	62	62	62	62	62
70	59	62	62	62	62	62	62	62	62	62
60	59	62	62	62	62	62	62	62	62	62
Tropopause	I 325 mb - 70°	I 264 mb - 71°	I 230 mb - 69°	I 238 mb - 67°	I 258 mb - 74°	I 233 mb - 78°	I 215 mb - 83°	I 193 mb - 83°	I 193 mb - 83°	I 193 mb - 83°



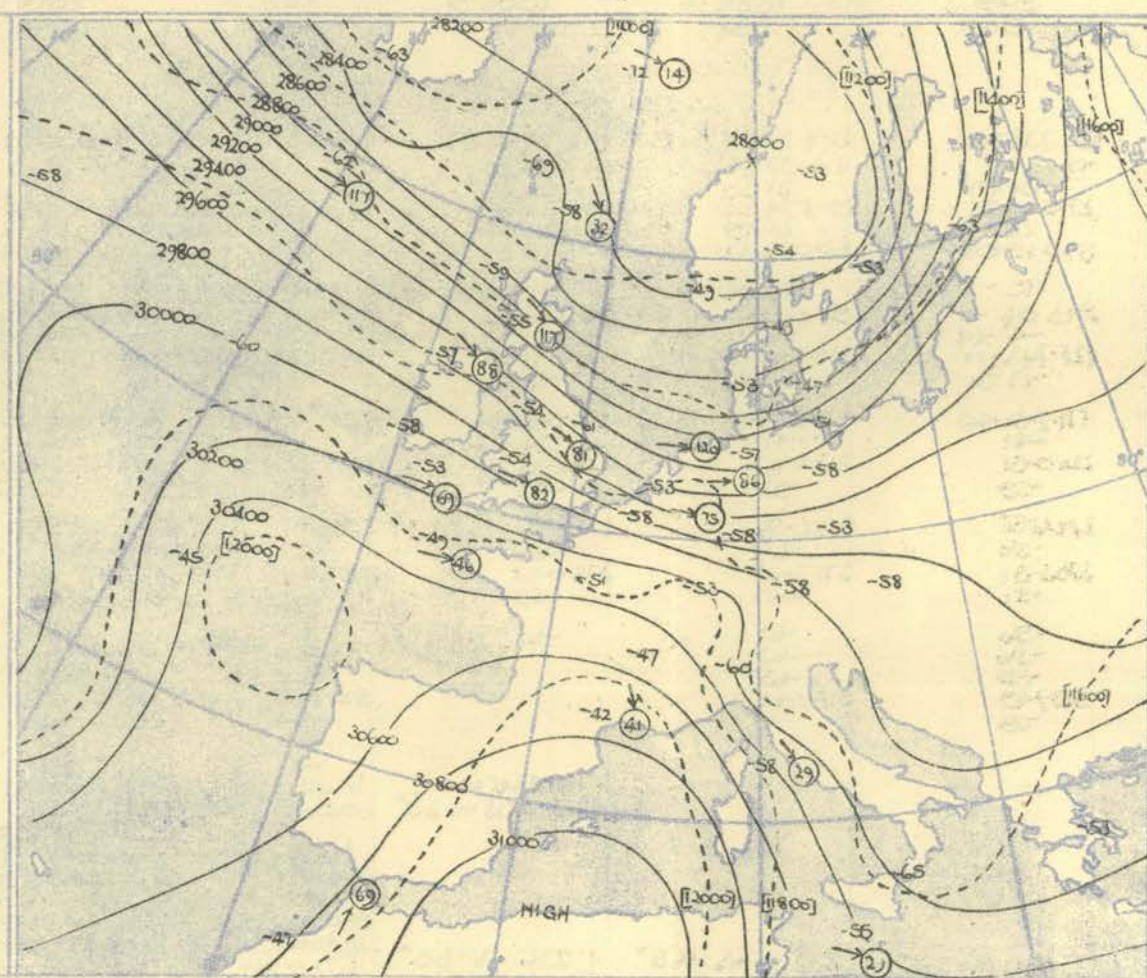
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



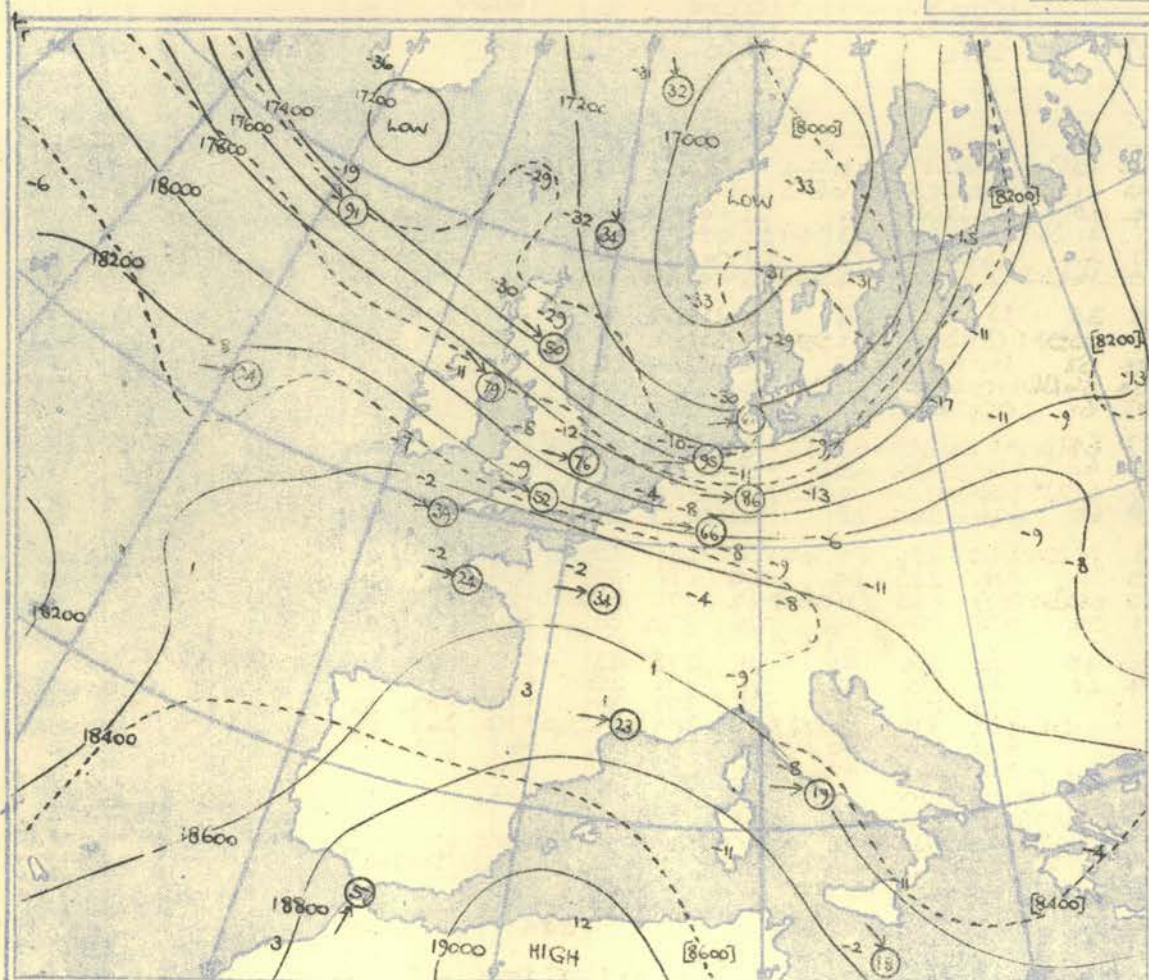
The continuous lines are contour lines of the 700 mb. surface  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

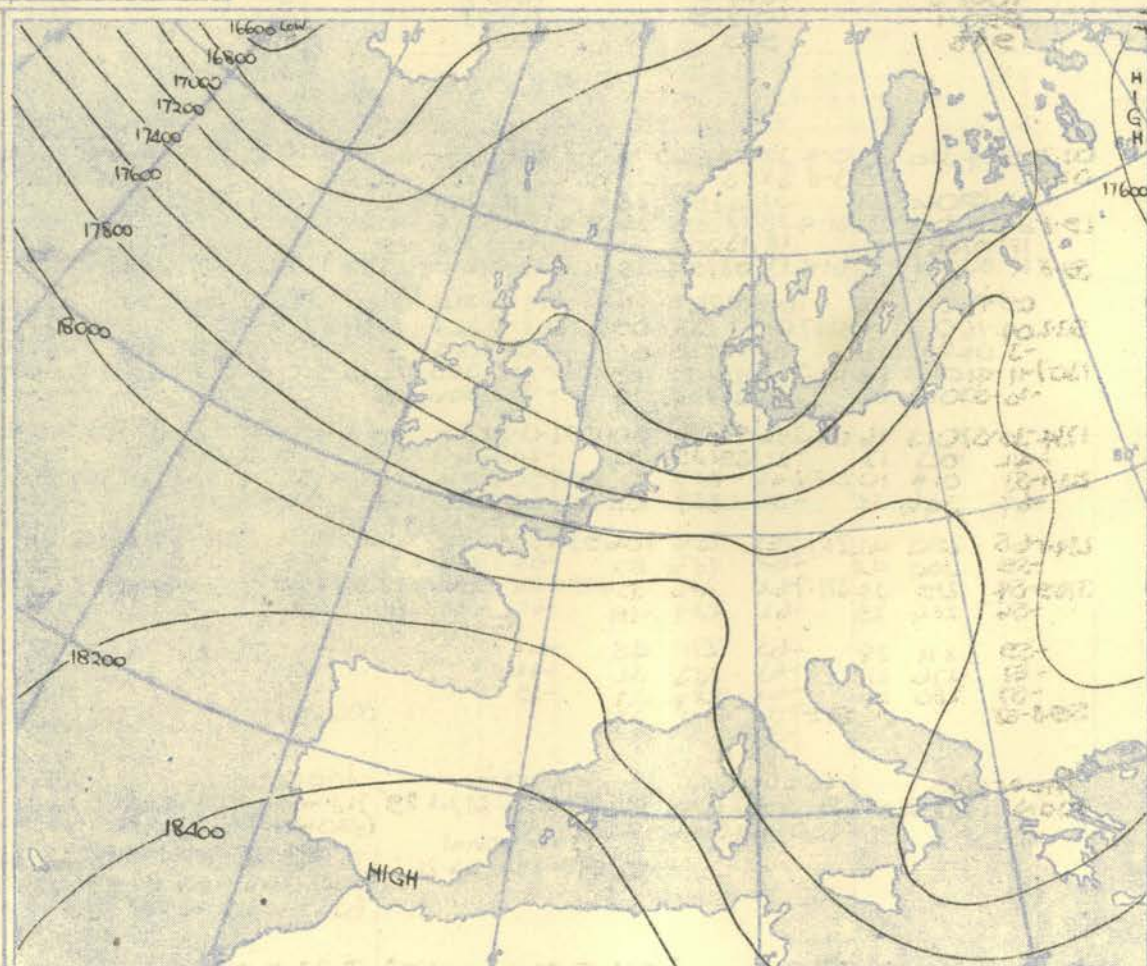
100 80 60 40 20 10 0 knots



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.



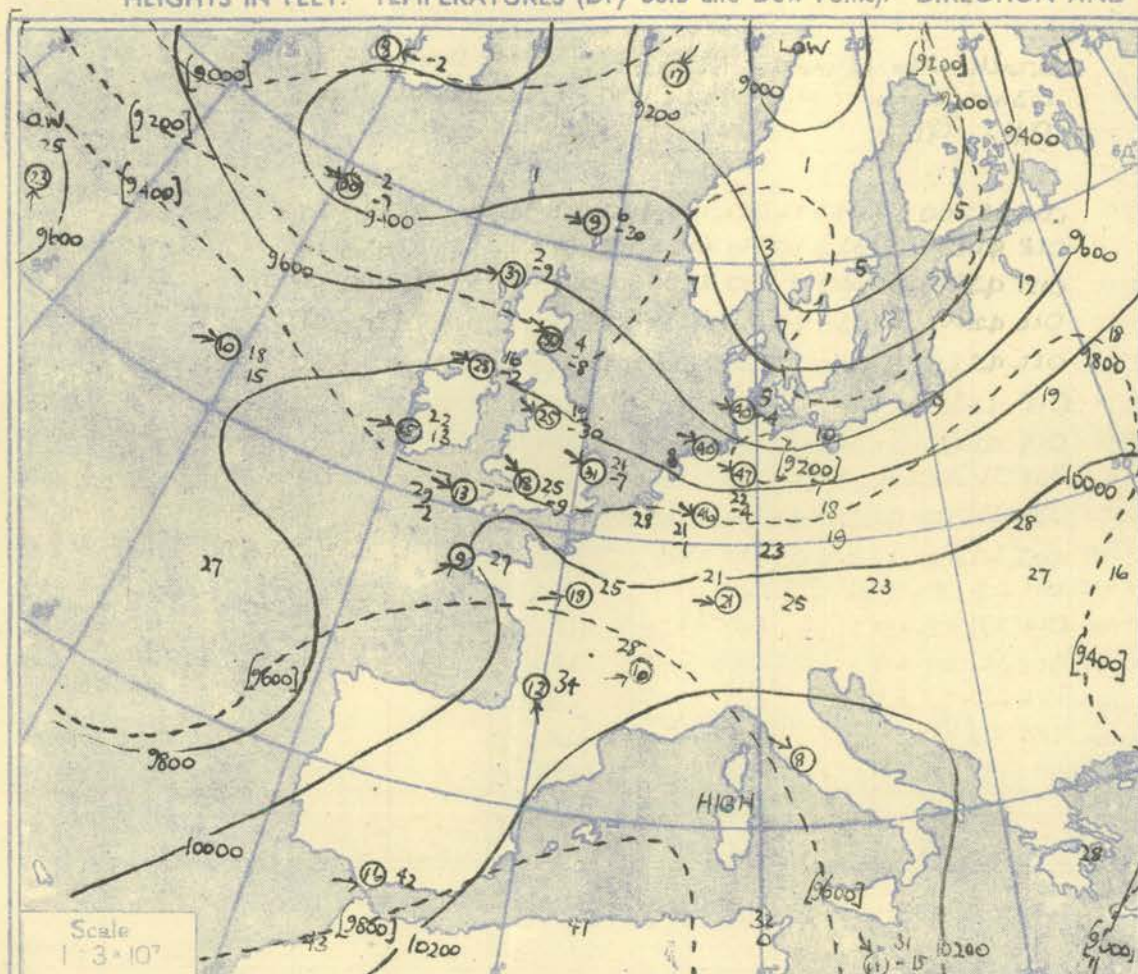
## DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

NEPHOSCOPE OBSERVATIONS

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

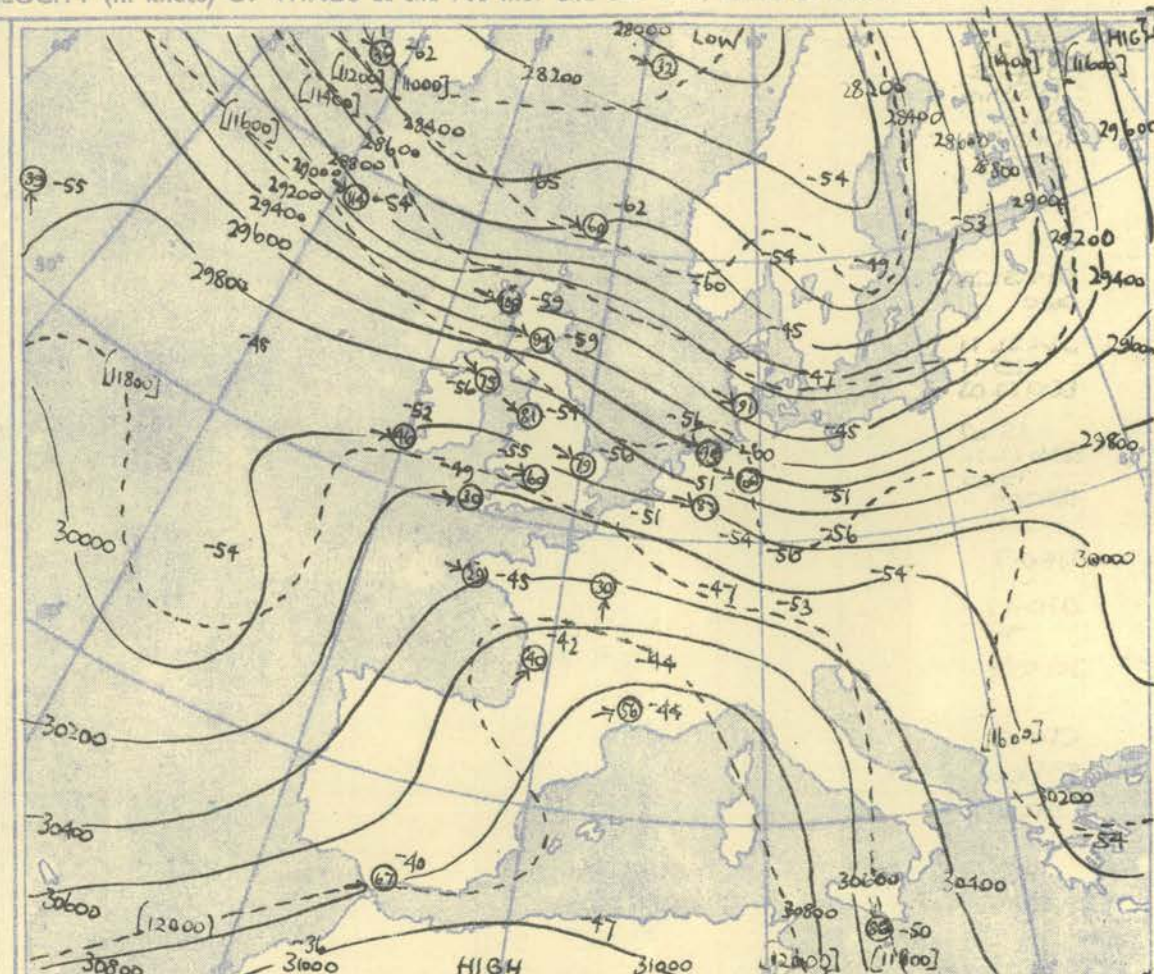
Ship	WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				CUMULUS				CUMULUS				CUMULUS				CUMULUS				CUMULUS				Ship				
Lat/Long	59-0N 19-0W				59-0N 19-0W				58-9N 18-5W				58-9N 18-3W				52-5N 20-6W				52-5N 20-0W				52-5N 20-0W				52-5N 20-0W								Lat/Long				
Pressure (Freezing)	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.		03L	G.M.T.		03L	G.M.T.		03L	G.M.T.		03L	G.M.T.		03L	G.M.T.	Time							
	M.S.L.	1018	mb		1013	mb		1010	mb		1007	mb		1018	mb		1015	mb		1015	mb		1013	mb		1011	mb		1011	mb		1011	mb	M.S.L.							
	Surf	1018	mb		1013	mb		1010	mb		1007	mb		1018	mb		1015	mb		1015	mb		1013	mb		1011	mb		1011	mb		1011	mb	Surf							
	Freezing	290	mb		SURF	mb		255	mb		260	mb		260	mb		260	mb		260	mb		260	mb		260	mb		260	mb		260	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		35	31	280	23	29	02	260	25	39	34	220	28	38	30	285	30	47	41	140	10	48	47	170	14	3.7	49	47	192	16	3.2	49	47	204	11	Surf					
1000	4.6	33	28	281	23	31	27	260	30	39	33	269	30	37	30	290	27	5.0	44	39	155	18	4.1	48	46	170	14	3.7	49	47	192	16	3.2	49	47	204	11	1000			
950		26	19	280	28	24	20	260	35	31	28	270	30	31	25	290	27		38	34	183	20		43	41	209	16		44	42	200	16		45	42	216	14	950			
900	31.9	19	13	276	31	30.7	17	13	260	38	30.2	23	22	272	29	29.4	24	20	31	33.2	34	30	214	21	32.5	39	37	245	19	32.2	39	36	208	18	31.8	44	37	219	18	900	
850		11	07	276	31	10	09	261	36	17	13	274	29	18	13	296	31		34	30	232	18		35	34	255	18		34	31	216	14		36	32	207	12	850			
800	615	05	02	273	36	60.3	05	04	263	33	60.2	12	08	275	29	59.5	12	09	296	34	64.2	30	25	237	18	63.7	30	29	273	28	63.3	28	27	221	13	63.0	31	26	215	15	800
750		02	05	271	38	01	01	264	33	05	01	276	28	06	03	297	32		26	21	270	28		25	24	261	19		23	23	229	17		26	20	253	14	750			
700	24.3	-03	-14	270	42	23.1	-07	-11	265	35	23.3	-02	-07	277	30	22.7	-00	-02	295	33	28.8	20	14	251	29	28.3	20	19	252	22	27.8	18	15	259	10	27.7	20	14	245	10	700
650		-11	-2	267	46	-12	-19	268	44	-10	-15	276	32	-09	-11	283	33		14	07	264	23		14	11	218	17		13	08	289	17		16	09	260	05	650			
600	131.4	-15	-35	266	48	129.9	-16	-24	267	65	130.4	-11	-20	275	50	130.0	-07	-25	279	60	131.8	07	00	145	16	137.3	07	02	218	17	136.8	08	01	283	17	138.9	08	01	258	07	600
550		-17	-38	269	60	-15	-25	267	76	-14	-28	277	67	-10	-34	283	70		00	-08	233	20		00	-08	256	27		00	-08	303	15		01	-09	271	16	550			
500	174.3	-19	-40	271	91	172.9	-25	-35	266	91	173.7	-21	-37	275	76	173.8	-15	-43	288	72	182.5	-08	-17	231	24	182.0	-07	-16	260	30	181.6	-08	-17	310	20	181.5	-06	-18	289	23	500
450		-25	-40	272	99	-30	-40	265	100	-26	-48	275	90	-22	-50	285	83		-16	-28	266	29		-19	-22	276	38		-17	-26	38		-15	-28	248	13	450				
400	225.9	-37	-47	279	117	224.0	-36	-56	266	123	225.4	-31	-49	275	107	225.8	-34	-57	276	72	235.2	-29	-42	266	40	234.9	-29	-39	263	27	234.3	-26	-37		229.6	-27	-40		400		
350		-48		282	111	-46		267	121	-42		225	110	-48		273	98		-44		258	32		-41		249	41		-35			-42			-42		350				
300	288.9	-62		279	117	287.4	-56		261	105	289.4	-54		225	114	289.0	-60		280	85	299.0	-60				298.9	-55							299.4	-48		298.6	-56	300		
250		-69		275	89	-55		272	52	-59		275	80	-65		283	75		-76								-70						-69		-72		250				
200	374.7	-57		275	67	-57		272	40	-56		275	62	-61		283	58		-85							383.7	-82							384.1	-79		383.0	-71	200		
170		-62		275	34	-57			-56			275	45	-61					-85								-74						-77		-66		170				
150		-62		215	30	524.0	-56			-57		275	40	-62					-80														-73		-64		150				
130						-57				-57				-62																				-72		-65		130			
110						-55				-55				-65																				-72		-61		110			
100						-55				-55				-65																				-72		-68		100			
90						-55				-55				-65																				-72		-70		90			
80						-61																														-71			80		
70																																							70		
60																																							60		
Inversion 800 mb - 05° - 790 mb - 06° 600 mb - 16° - 578 mb - 14° 635 mb - 12° - 580 mb - 10° 646 mb - 10° - 613 mb - 06° 920 - 850 mb 34° Isothermal 575 - 10° - 550 - 11° 673 - 660 mb - 11° 447 - 428 mb - 25° Isothermal 458 - 27° - 447 - 12° - 516 - 11° Isothermal 447 - 428 mb - 25° Isothermal 500 - 10° - 400 - 10° - 300 - 10° - 200 - 10° - 100 - 10° - 0 - 10° Isothermal 1015 - 1000 mb 48° (70°) - 7° Isothermal 700 - 699 mb 20°																																									
Tropopause II 270 mb - 68° 31,100' II 306 mb - 56° 23,600' I 276 mb - 60° 30,700' I 262 mb - 66° 31,800' I 208 mb - 91° 37,400' I 200 mb - 82° 38,300' II 238 mb - 76° 34,800' I 210 mb - 85° 37,200'																																									





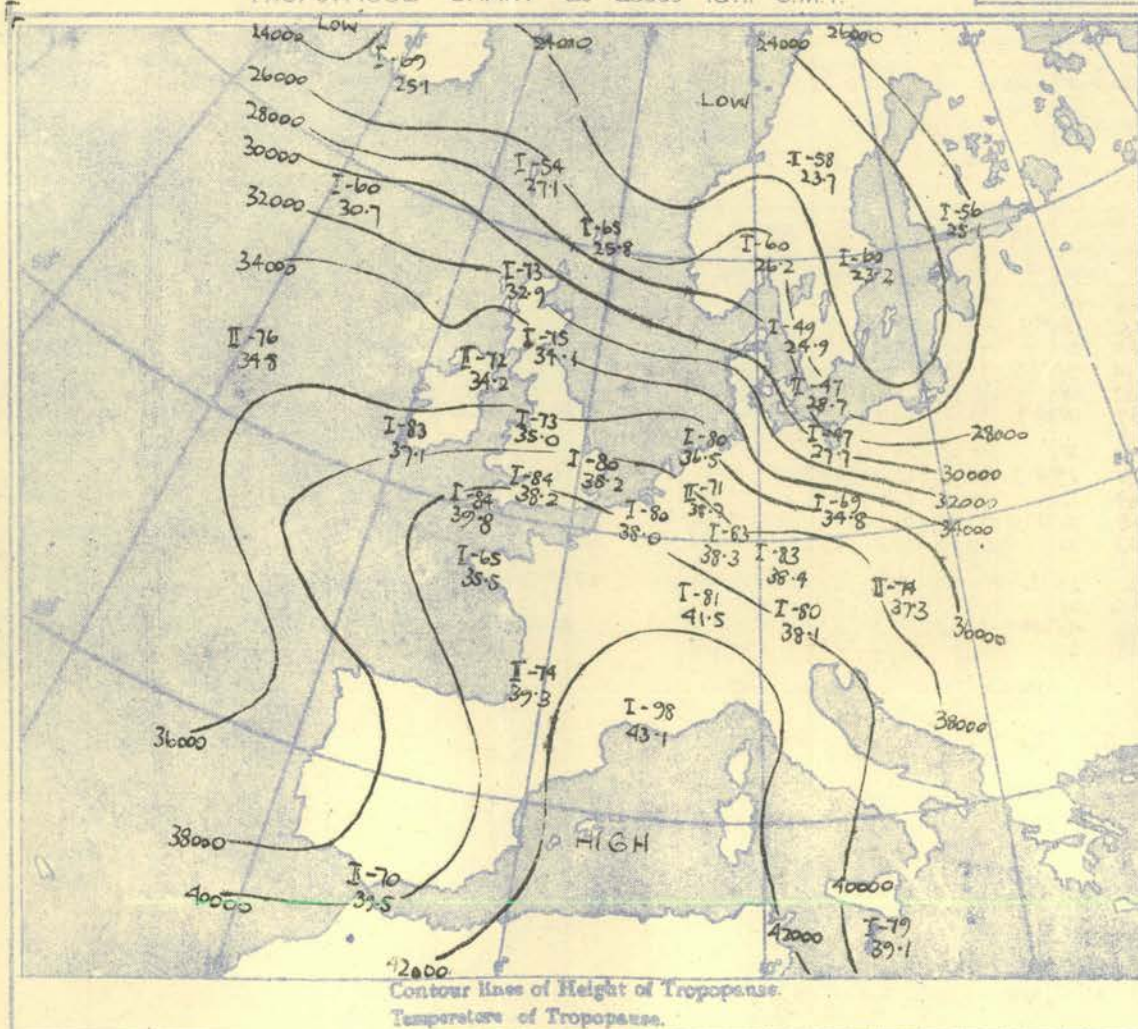
Gradient Wind Scale for Contours  
at intervals of 200 ft. at Lat. 52° N.

100	50	20	10	5
100	50	20	10	5
100	50	20	10	5



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.

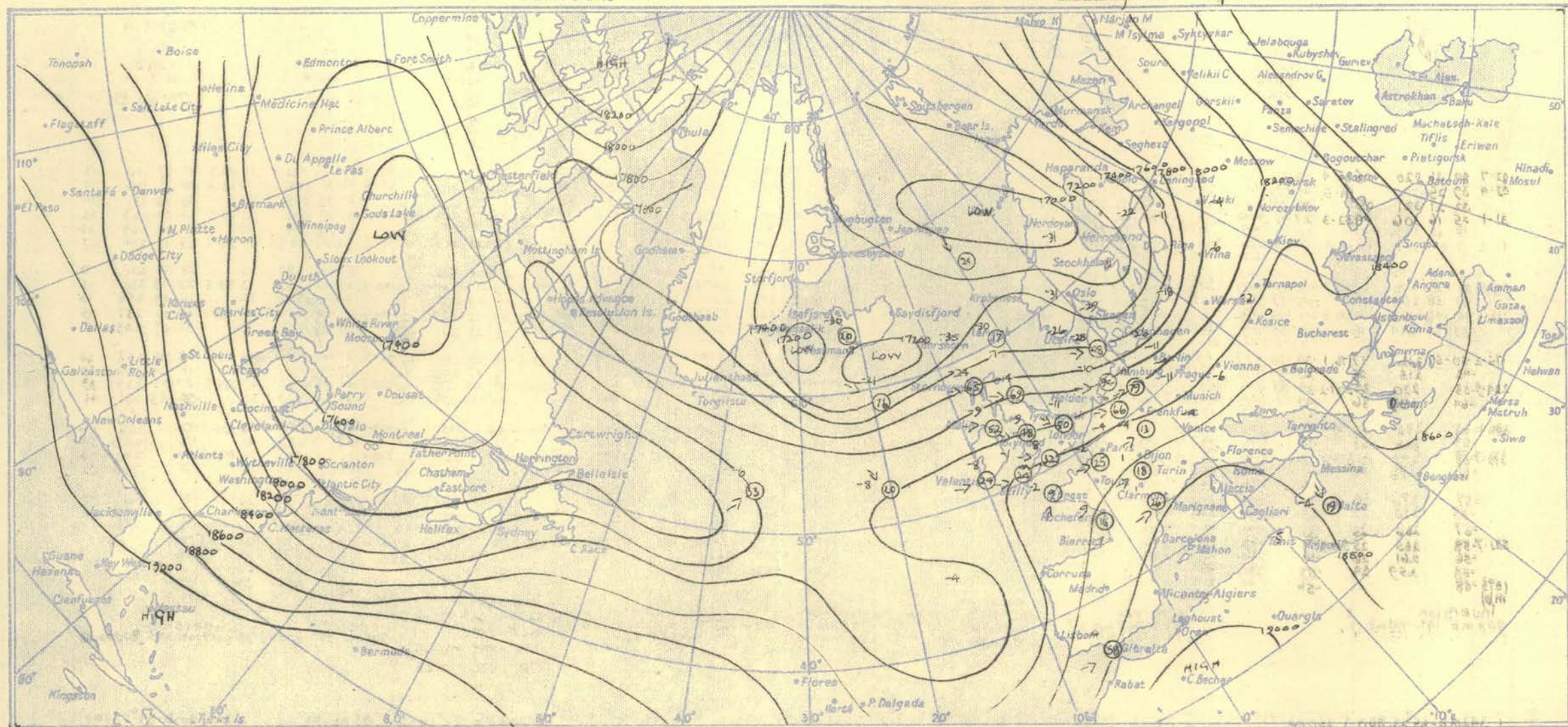
### TROPOPAUSE CHART at about 15h. G.M.T.



### NOTES ON THE AEROLOGICAL SITUATION.

Considerable warming has occurred between Iceland and Greenland. A zonal thermal gradient has been maintained across Eastern Atlantic with moderate confluence over North Sea and Northwest Germany.

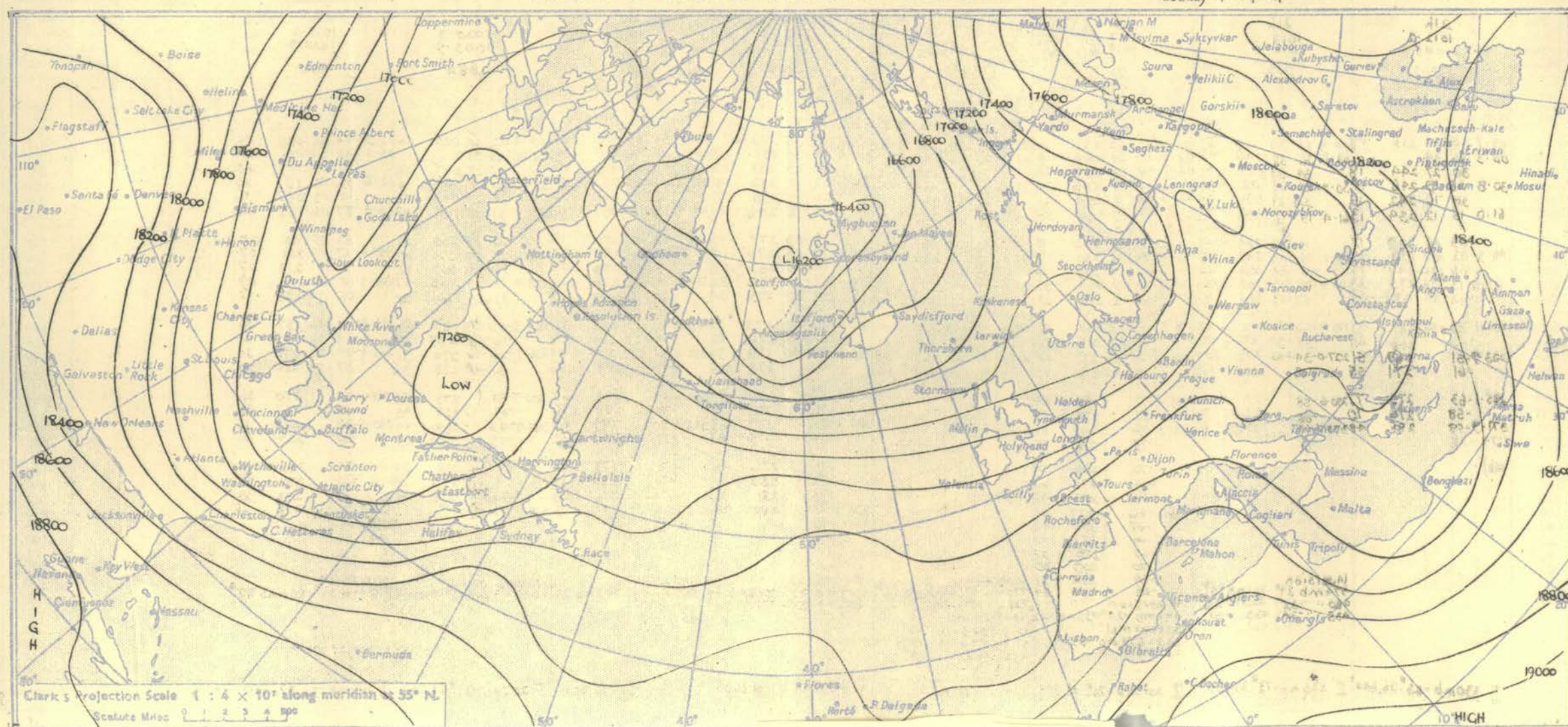




ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T.

Tuesday 17<sup>th</sup> April.

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 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																																																																																																																																																																																																																																																																																																																																																	
	1012.9		mb		1016.8		mb		1018.3		mb		1021.0		mb		1022.7		mb		1020.6		mb		1022.1		mb		1021.5		mb			1020.8		mb																																																																																																																																																																																																																																																																																																																																														
	1002.7		mb		1015.1		mb		1017.5		mb		1011.9		mb		1020.7		mb		1016.2		mb		1005.9		mb		1010.8		mb			1019		mb																																																																																																																																																																																																																																																																																																																																														
950				931				907				902				922				896				870				725				790 and 895																																																																																																																																																																																																																																																																																																																																																		
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	26	020	05	04.4	13	26	210	05	04.2	51	27	290	14	02.6	50	29	260	05	00.0	48	39	280	10	01.2	54	31	330	20	04.4	51	31	010	06	02.9	48	31	110	10	00.3	50	57	60	13	Surf																																																																																																																																																																																																																																																																																																																																				
1000	03.4	39	25		04.5	41	25		04.9	46	23	276	15	05.8	47	27		05.8	47	27		06.7	45	35	285	15	05.6	49	23	333	24	05.9	50	29		05.8	46	31	088	10	05.6	48	33	54	13	1000																																																																																																																																																																																																																																																																																																																																				
950		32	21	321	05		35	23	246	12		38	16	277	23		39	22	246	09		36	28	302	17		41	18	331	21		30	29		30	098	20		40	25	131	14	950																																																																																																																																																																																																																																																																																																																																							
900	31.1	25	16	306	04	32.3	27	17	244	13	32.9	31	16	288	24	33.8	32	19	251	10	34.7	31	25	319	14	33.8	33	14	322	17	34.2	34	23	032	10	34.0	36	19	096	21	33.9	33	22	123	12	900																																																																																																																																																																																																																																																																																																																																				
850		18	12	322	03		20	12	251	18		25	15	300	21		24	14	262	14		27	06	311	14		25	06	317	18		28	11	057	07		36	06	096	28		31	10	149	06	850																																																																																																																																																																																																																																																																																																																																				
800	61.2	15	04	314	05	62.4	13	05	262	24	63.3	19	10	304	28	64.2	18	08	263	17	65.2	21	06	304	15	64.2	19	01	324	21	64.8	27	04	343	07	65.2	38	07	087	09	64.7	33	15	214	07	800																																																																																																																																																																																																																																																																																																																																				
750		13	15	276	06		07	00	260	33		12	01	298	33		16	04	264	21		22	13	303	19		22	06	299	30		28	10	308	15		84	13	280	15		28	16	221	10	750																																																																																																																																																																																																																																																																																																																																				
700	94.8	06	30	270	09	95.7	02	09	263	37	96.9	04	08	296	30	98.1	16	02	272	28	99.5	19	30	299	25	98.5	21	07	288	31	99.5	25	09	289	18	00.4	29	02	273	13	99.4	22	13	230	15	700																																																																																																																																																																																																																																																																																																																																				
650		02	38	260	12		05	17	272	42		02	22	291	36		13	00	280	39		15	22	291	30		15	13	284	35		19	13	277	20		21	00	276	12		16	08	246	16	650																																																																																																																																																																																																																																																																																																																																				
600	132.9	10	46	236	14	133.0	12	25	278	46	134.9	02	18	297	48	136.9	07	02	281	49	138.5	10	23	286	37	137.5	09	16	286	38	138.7	09	18	277	23	140.0	14	04	279	15	138.4	09	01	237	15	600																																																																																																																																																																																																																																																																																																																																				
550		20	51	214	15		15	35	277	45		08	17	294	60		20	10	282	55		01	23	300	42		01	21	283	48		02	23	271	26		07	05	279	21		01	07	243	17	550																																																																																																																																																																																																																																																																																																																																				
500	175.2	30	57	212	17	176.1	24	52	277	63	176.8	14	22	290	67	181.6	09	00	280	52	183.3	09	26	299	48	182.1	11	31	284	50	183.5	08	28	286	32	185.3	01	06	259	24	183.3	08	16	252	24	500																																																																																																																																																																																																																																																																																																																																				
450		42		215	25		30	57	276	92		22	32	289	77		19	27	279	62		19	35	287	59		20	40	287	50		15	37	276	36		12	18	256	26		16	24	260	30	450																																																																																																																																																																																																																																																																																																																																				
400	224.9	53		220	32	227.2	38	50	272	102	230.7	32	43	288	78	234.9	28	40	281	63	235.8	29	45	280	54	234.4	31	51	286	62	236.2	29	48	272	40	238.6	22	28	260	29	235.9	27	35	264	33	400																																																																																																																																																																																																																																																																																																																																				
350		64		251	36		47		272	109		45		288	84		42		277	72		41		284	71		43		285	70		40	57	274	52		33		263	30	358.9	27	35	264	33	350																																																																																																																																																																																																																																																																																																																																				
300	286.1	62		276	60	290.4	59		274	108	294.2	59		284	94	298.2	56		279	75	299.9	54		278	81	298.2	56		285	79	300.4	55		275	60	303.8	49		263	30	300.4	52		258	46	300																																																																																																																																																																																																																																																																																																																																				
250		59		282	52		73		276	89		73		286	84		69		274	78		68		278	84		70		279	84		72		272	61		255	25		265	54	250																																																																																																																																																																																																																																																																																																																																								
200	372.7	58		275	41	375.2	63		277	79	378.9	66		289	60	383.0	71		277	69	384.8	72		67		382.4	80		278	67	381.3	83		267	56	388.8	81		250	26	384.8	80		262	44	200																																																																																																																																																																																																																																																																																																																																				
170		56		276	36		62		274	54		67		289	60	383.0	71		277	69		67		277	57		71		278	53		74		268	43		263	29		260	32	170																																																																																																																																																																																																																																																																																																																																								
150		57		276	34		65		274	32		69				357.3					67		280	48		69		276	48		75		276	41		265	36		261	32	150																																																																																																																																																																																																																																																																																																																																									
130		55		278	27		65		274	40		63									67		274	41		69		269	45		72		280	57		263	33		260	30	130																																																																																																																																																																																																																																																																																																																																									
110		57		266	25		55		282	33		65									69		268	33		67		289	36		72		274	37		267	32		267	32	110																																																																																																																																																																																																																																																																																																																																									
100	521.7	58		265	25	522.9	58		283	29	524.6	64									529.9	67		270	31	526.7	66		289	36	526.7	72		272	35	530.6	72		269	32	527.3	72		261	30	100																																																																																																																																																																																																																																																																																																																																				
90		56		261	26		60		284	26		62									65		280	36		69		280	36		70		281	35		274	24		269	24	90																																																																																																																																																																																																																																																																																																																																									
80		58		259	24		59		280	21		62									61		282	28		69		282	28		70		281	24		284	24		281	24	80																																																																																																																																																																																																																																																																																																																																									
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Inversion 808 mb 14° - 783 mb 17°																																	Isothermal 693 - 667 mb 03°																																	Inversion 727 mb 15° - 700 mb 16° Isothermal 700-690 mb 16°																																	Inversion 785 mb 19° - 752 mb 22° Isothermal 752 - 720 mb 22°																																	Inversion 775 mb 17° - 742 mb 24° Isothermal 742 - 720 mb 24°																																	Inversion 827 mb 26° - 790 mb 28° Isothermal 860 - 843 mb 28° 790 - 735 .. 28°																																	Inversion 900 mb 36° - 800 mb 38° Isothermal 887 mb 30° - 800 mb 33°																																																																																																																																																																												
Tropopause I 342 mb - 65° 25,800																																	I 250 mb - 73° 32,900																																	I 241 mb - 75° 34,100																																	I 244 mb - 72° 34,200																																	I 236 mb - 73° 35,000																																	I 200 mb - 80° 38,290																																	I 202 mb - 84° 38,200																																	I 190 mb - 84° 39,800																																	I 214 mb - 83° 37,100																																	Tropopause																																																																									
Station LERWICK																																	STORNOWAY																																	LEUCHARS																																	ALDERGROVE																																	LIVERPOOL																																	DOWNHAM MARKET																																	LARKHILL																																	CAMBORNE																																	VALENTIA																																	Station																																																																									
Pressure 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.		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.		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.		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.		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.		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.		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.		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.		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.		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.		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.		21h		G.M.T.		21h		G.M.T.		21h		G.M.T.		21h		G.M.T.		21h	

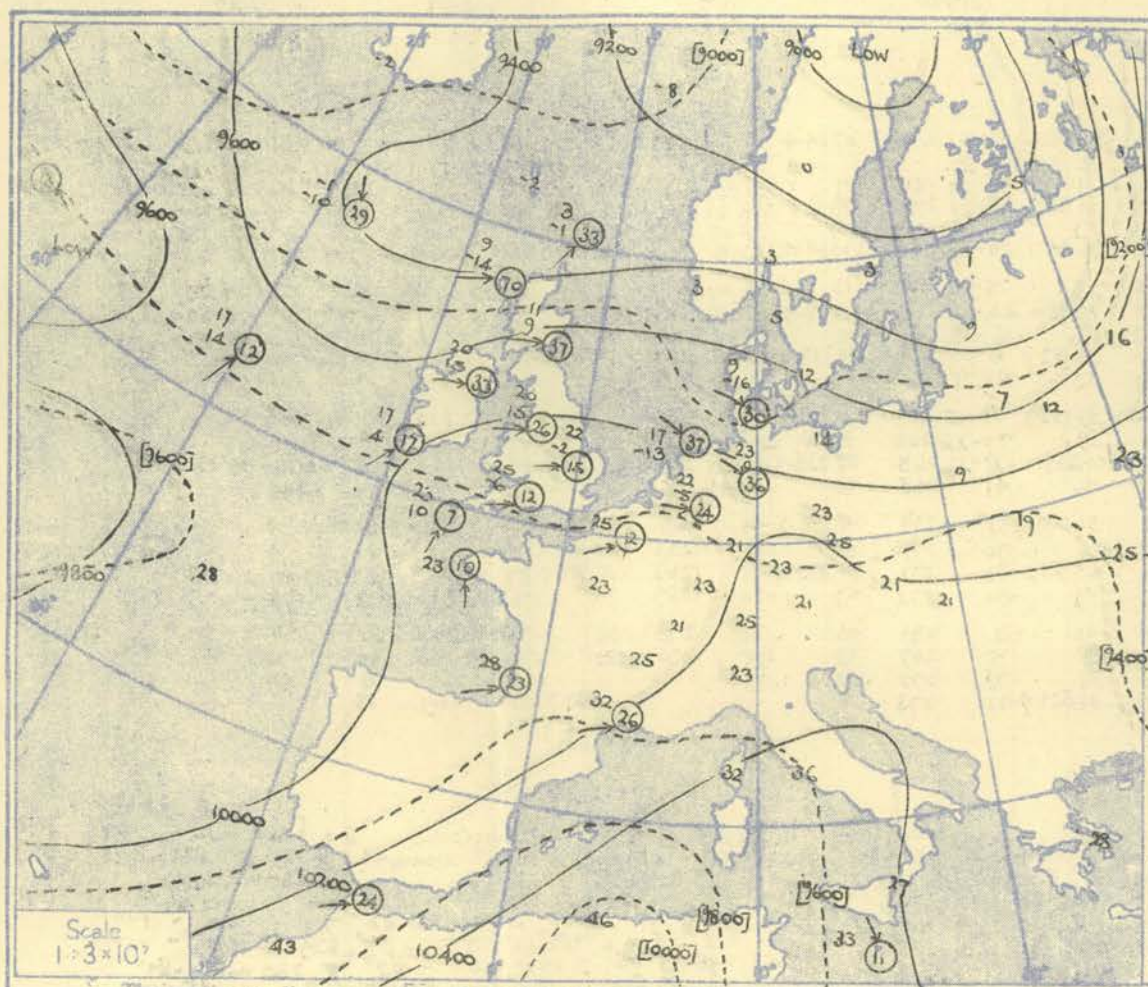


RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
Time		03L		G.M.T.		03L		G.M.T.		03L		G.M.T.		03L		G.M.T.		03L		G.M.T.		03L		G.M.T.		03L		G.M.T.		03L		G.M.T.		03L		G.M.T.		Time																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
M.S.L.		1009.8		mb		1010.1		mb		1015.8		mb		1017.1		mb		1018.7		mb		1020.2		mb		1019.3		mb		1015.5		mb		1015.1		M.S.L.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Surf		999.5		mb		1008.5		mb		1014.9		mb		1007.1		mb		1016.6		mb		1015.6		mb		1002.6		mb		1004.8		mb		Surf																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Freezing		999		mb		960		mb		930		mb		910		mb		885		mb		888		mb		784		mb		758		mb		Freezing																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Surf	02.7	32	32	150	02	00.4	36	34	220	05	00.2	40	32	270	10	02.6	41	29	190	07	00.6	40	34	CAWM	01.2	36	33	110	07	04.4	37	30	070	04	02.9	45	36	100	15	00.3	46	28	115	07	Surf																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
1000	2.5	29	29	166	2.7	35	32	258	4.1	37	32	219	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27	4.5	41	28	27



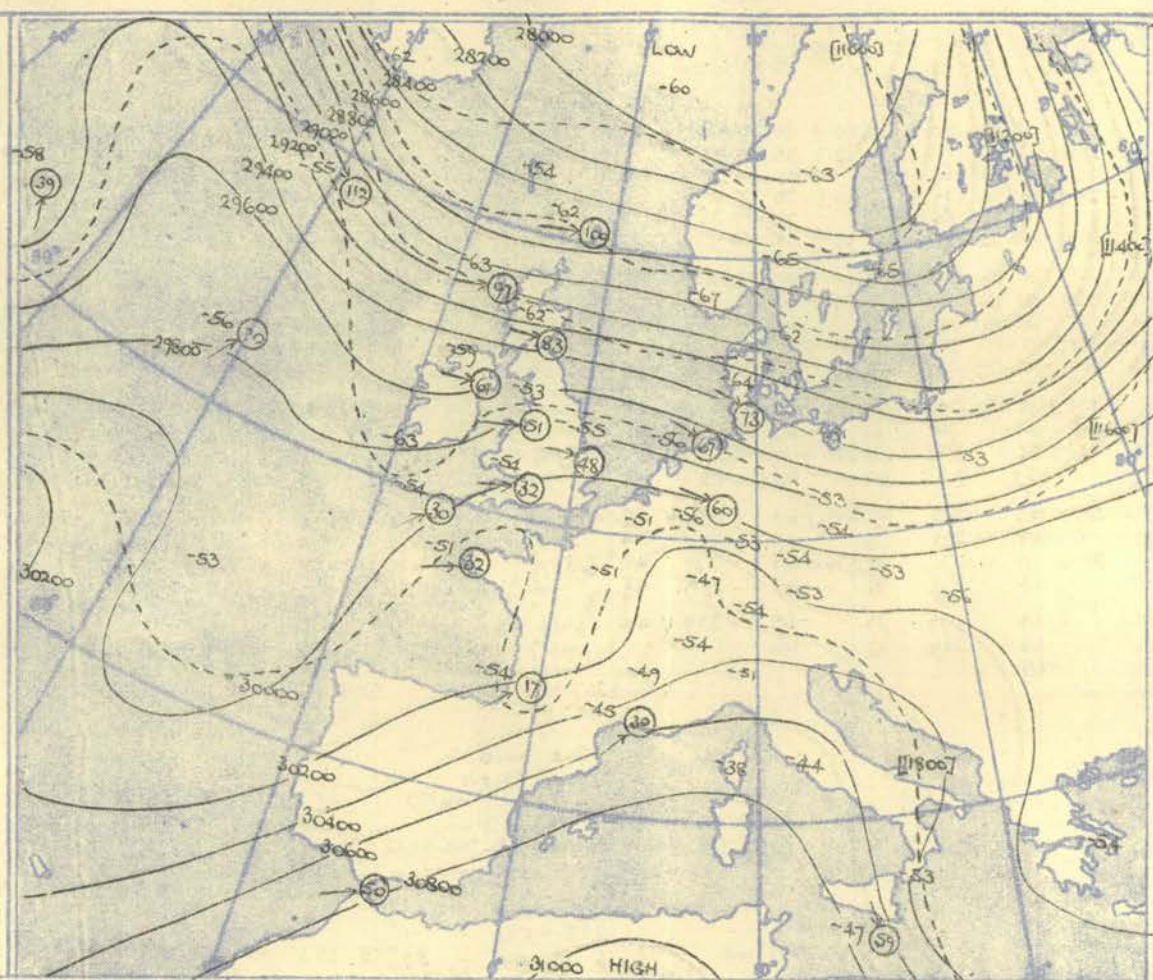
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



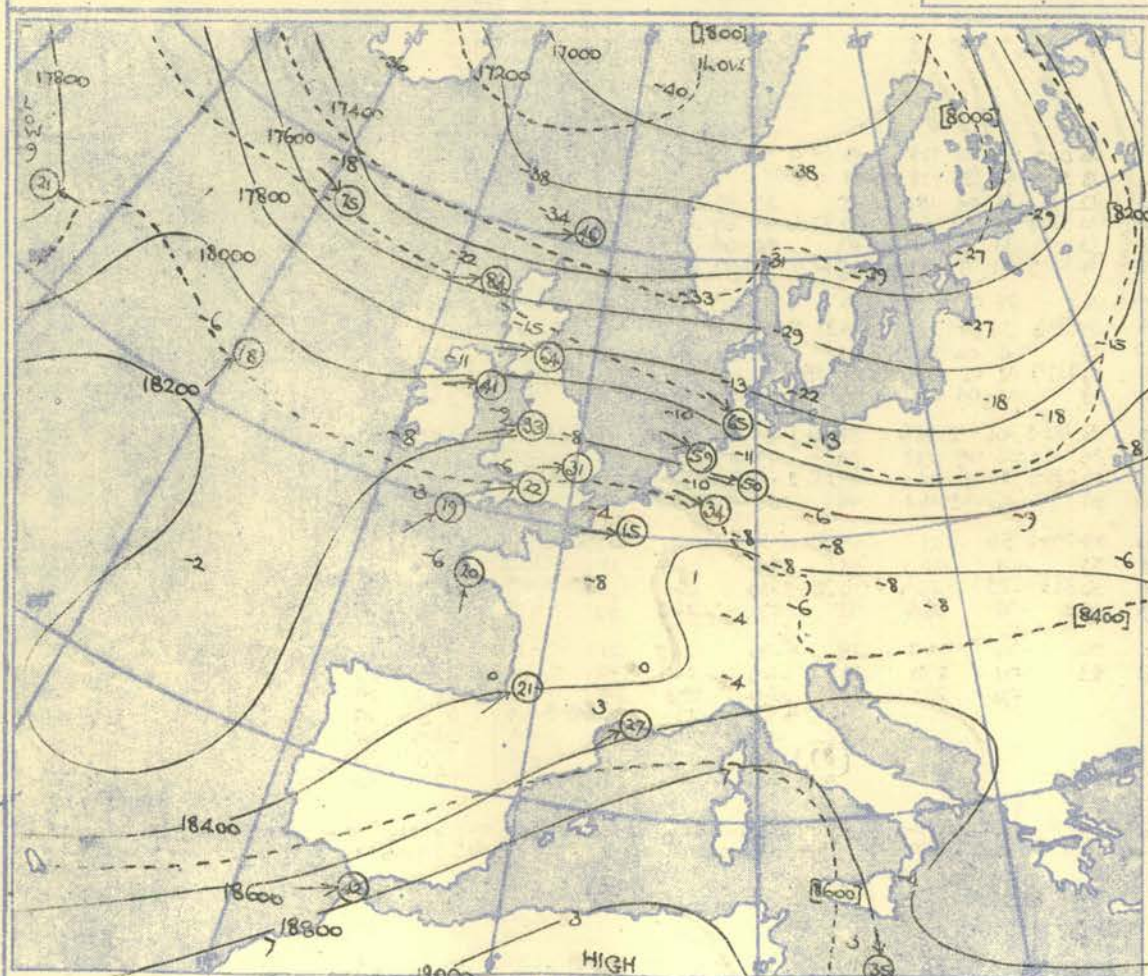
The continuous lines are contour lines of the 700 mb. surface  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

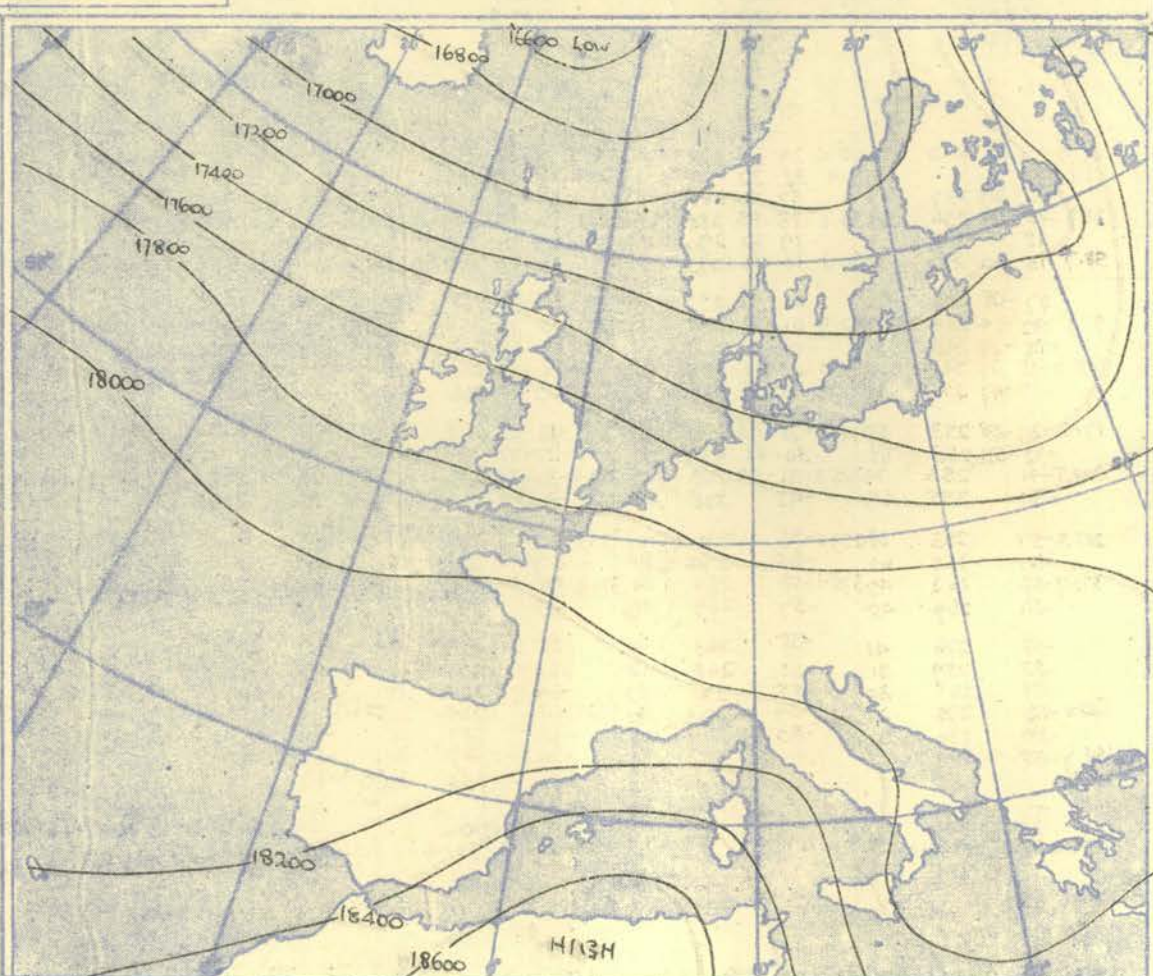
100 80 60 40 20 10 knots



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.

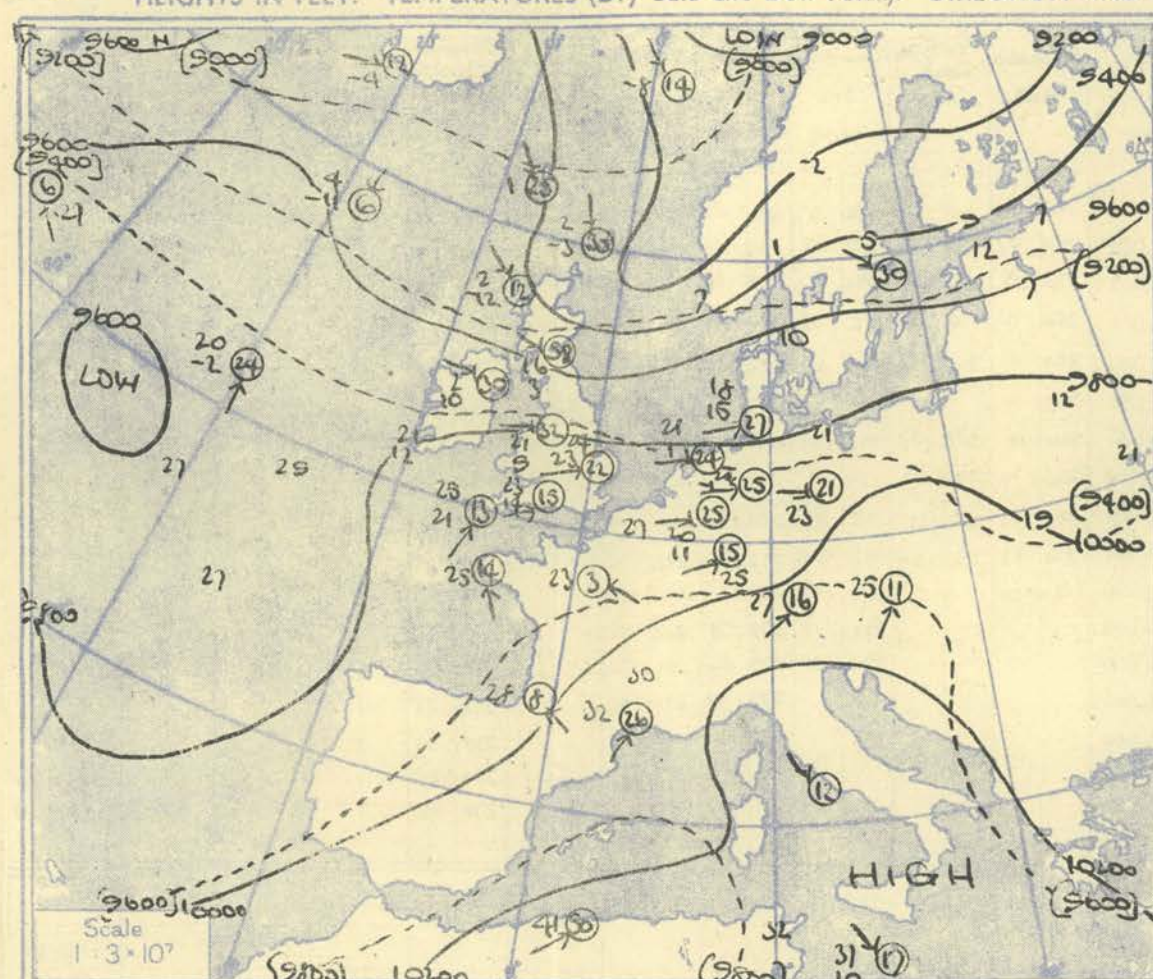
NEPHOSCOPE OBSERVATIONS

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

Ship	Weather Watcher				Weather Watcher				Weather Watcher				Weather Watcher				Cumulus				Cumulus				Cumulus				Cumulus				Ship										
Lat/Long	58.9°N 18.4°W				59°N 19°W				58.9°N 18.9°W				59°N 19.1°W				52.5°N 20°W				52.5°N 20°W				52.5°N 20°W				52.5°N 20°W				Lat/Long										
Pressure	Time	05hrs			G.M.T.	09hrs			G.M.T.	15hrs			G.M.T.	21hrs			G.M.T.	05hrs			G.M.T.	09hrs			G.M.T.	15hrs			G.M.T.	21hrs			G.M.T.	G.M.T.	Time								
	M.S.L.	1009			mb	1013			mb	1016			mb	1019			mb	1011			mb	1008			mb	1008			mb	1008			mb			M.S.L.							
	Surf	1009			mb	1013			mb	1016			mb	1019			mb	1011			mb	1008			mb	1008			mb	1008			mb				Surf						
	Freezing	940			mb	950			mb	935			mb	-			mb	835			mb	820			mb	835			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	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	-	39.32	332	20	-	41.31	360	15	-	43.18	010	06	-	42.33	170	09	-	50.48	150	10	-	50.48	110	10	-	50.47	118	16	-	48.45	100	20	Surf										
1000	2-5	36.32	332	19	3-5	35.30	017	14	2-4	41.28	010	06	3-1	49.47	178	10	2-3	49.47	111	11	2-5	49.46	118	13	2-4	47.47	110	22	47.44	100	20	1000											
950	30-2	26.24	332	19	23-1	25.18	015	13	23-1	27.24	008	07	31-5	39.37	169	08	30-1	38.36	128	12	21-5	37.36	103	22	20-7	38.36	103	22	38.36	100	22	950											
900	18-1	18.33	332	22	19-1	19.11	014	13	21-1	21.16	008	07	34-3	32.17	0	05	33-1	36.36	125	22	24-5	35.10	100	24	23-7	36.36	100	24	36.36	104	20	900											
850	60-4	13.07	331	21	61-2	13.03	014	13	62-3	17.05	008	07	62-6	28.26	195	11	62-0	30.29	130	15	62-0	32.21	135	20	61-9	31.23	126	26	31.23	126	26	850											
800	07-1	07.33	331	20	07-5	07.14	13	11-3	11.00	008	07	10-7	22.26	227	12	24-2	24.17	170	18	27-0	25.17	172	29	29-2	26.10	172	29	26.10	172	29	800												
750	23-6	1-03	330	25	24-4	1-01	12	25-8	1-04	11	008	06	27-0	17.14	223	12	26-6	18.16	198	12	26-7	20.17	173	24	26-7	21.13	173	24	21.13	173	24	750											
700	2-2	2-32	326	36	3-1	2-00	12	3-2	2-00	12	006	06	15-0	15.03	211	12	16-1	16.13	225	12	16-1	18.13	195	17	15-5	18.13	195	17	18.13	195	17	700											
650	12-1	12.31	317	40	13-1	12.26	37	20-4	12.29	35	25	41	13-0	13.00	200	12	13-8	13.08	195	17	13-5	15.00	197	19	13-5	16.00	197	19	16.00	197	19	650											
600	14-4	14.29	318	60	15-1	14.35	40	25-3	14.38	35	25	25	14-4	14.41	194	13	15-0	15.01	195	17	15-0				15-0							600											
550	17-4	17.45	273	75	17-5	17.41	31	32-48	53	17-4	11-36	33	49	17-8	17-35	29	63	18-8	18-19	21	18	18-0	18-5	17	18	18-0	18-4	18	18	18	18	550											
500	21-2	21-55	220	102	21-8	21-48	38	51	22-6	22-50	28	103	23-1	23-50	29	72	23-7	23-51	20	21	24-1	24-29	22	26	23-6	23-38	21	27	23-9	26-35	150	18	500										
450	42	220		45	23	132		45	29	78		48	40	22		40	22		25	25		25		25	26	25	26	25	26	25	26	450											
400	290	1-55	290	112	291	3-55	280	116	293	58	294	71	294	68	299	56	295	2-49	253	54	297	9-46	186	35	297	4-53						400											
350	64	294	32	71	288	54	72	293	81	293	71	291	73	293	73	293	64	384	43	383	57	5			382	8-56					350												
300	375	2-61	295	68	376	1-61	258	90	378	0-77	279	59	378	70	283	59	381	4-87														300											
250	60	295	32	61	250	79	61	278	47	64	280	54	64	280	54	64	280	54														250											
200	58	295	46	61	258	60	61	280	45	64	274	47	64	274	47	64	274	47														200											
150	61	290	38	60	262	44	63	282	43	65	264	40	65	264	40	65	264	40														150											
130	61	287	38	59	280	38	59	283	43	67	270	40	67	270	40	67	270	40														130											
110	53	260	287	34	523	7-59	283	37	525	109	275	31	524	61	282	36																110											
100	61	287	31	59	284	37	59	284	37	59	284	37	59	284	37	59	284	37														100											
90	61	287	31	59	284	37	59	284	37	59	284	37	59	284	37	59	284	37														90											
80	61	287	31	59	284	37	59	284	37	59	284	37	59	284	37	59	284	37														80											
70	61	287	31	59	284	37	59	284	37	59	284	37	59	284	37	59	284	37														70											
60	61	287	31	59	284	37	59	284	37	59	284	37	59	284	37	59	284	37														60											
(68)				(77)				(65)				(59)				(59)				(50)				(50)				(50)				(50)				(50)							
Inversion				Inversion				Inversion				Inversion				Isothermal				Isothermal				Isothermal				Inversion				Inversion				Inversion							
674mb-650mb-2°				660mb-4-650mb-2°				594mb-8-557mb-4°				650mb-10-625mb-4°				606-600mb-5°				690mb-17-675mb-18°				880-850mb-34°				858mb-24-832mb-33°				779mb-29-763mb-31°				779mb-29-763mb-31°							
Isothermal				Isothermal				Isothermal				Isothermal				Isothermal				Isothermal				Isothermal				Isothermal				Isothermal				Isothermal				Isothermal			
582-580mb-11°				582-580mb-11°				582-580mb-11°				582-580mb-11°				582-580mb-11°				582-580mb-11°				582-580mb-11°				582-580mb-11°				582-580mb-11°				582-580mb-11°				582-580mb-11°			
Tropopause				Tropopause				Tropopause				Tropopause				Tropopause				Tropopause				Tropopause				Tropopause				Tropopause				Tropopause				Tropopause			
11272mb-62°				1243mb-72°				1250mb-72°				1245mb-82°				NR				1185mb-87°				1207mb-76°				1200mb-86°				1200mb-86°				1200mb-86°							



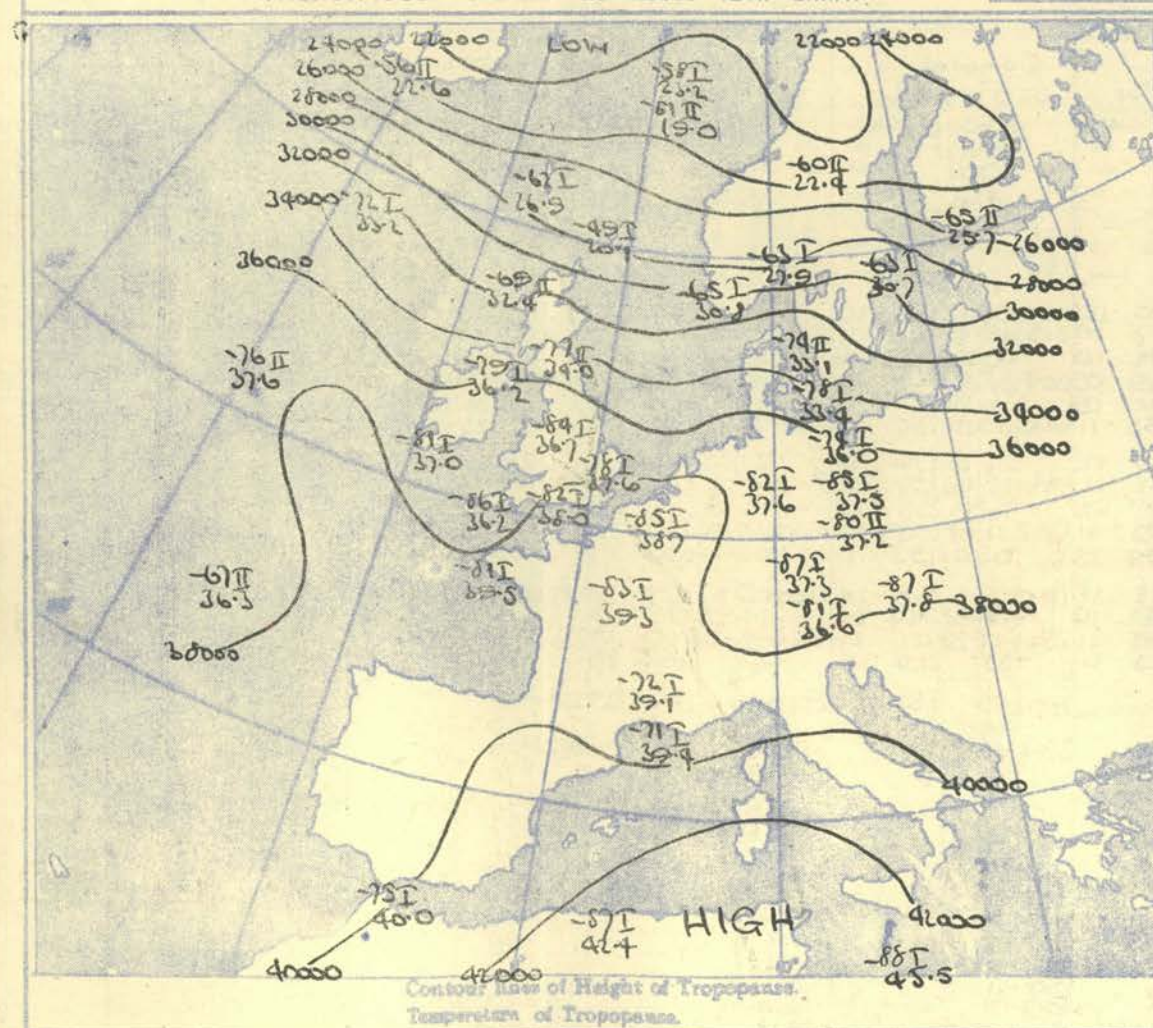
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb. levels at about 15 h G.M.T.



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

100 80 60 40 20 10 5 knots

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



Contours lines of Height of Tropopause.  
Temperatures of Tropopause.

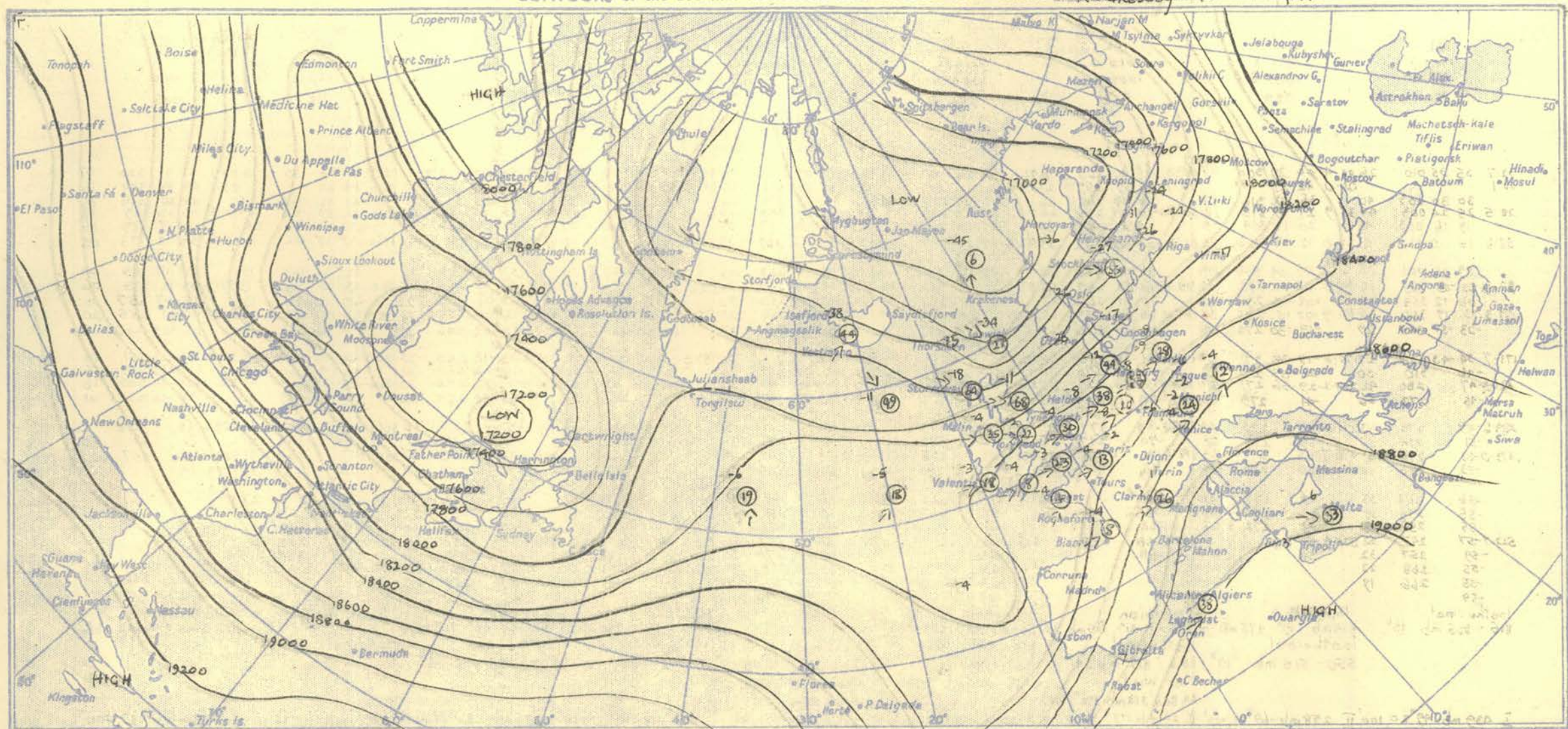
NOTES ON THE AEROLOGICAL SITUATION.

Nothing of note today.

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

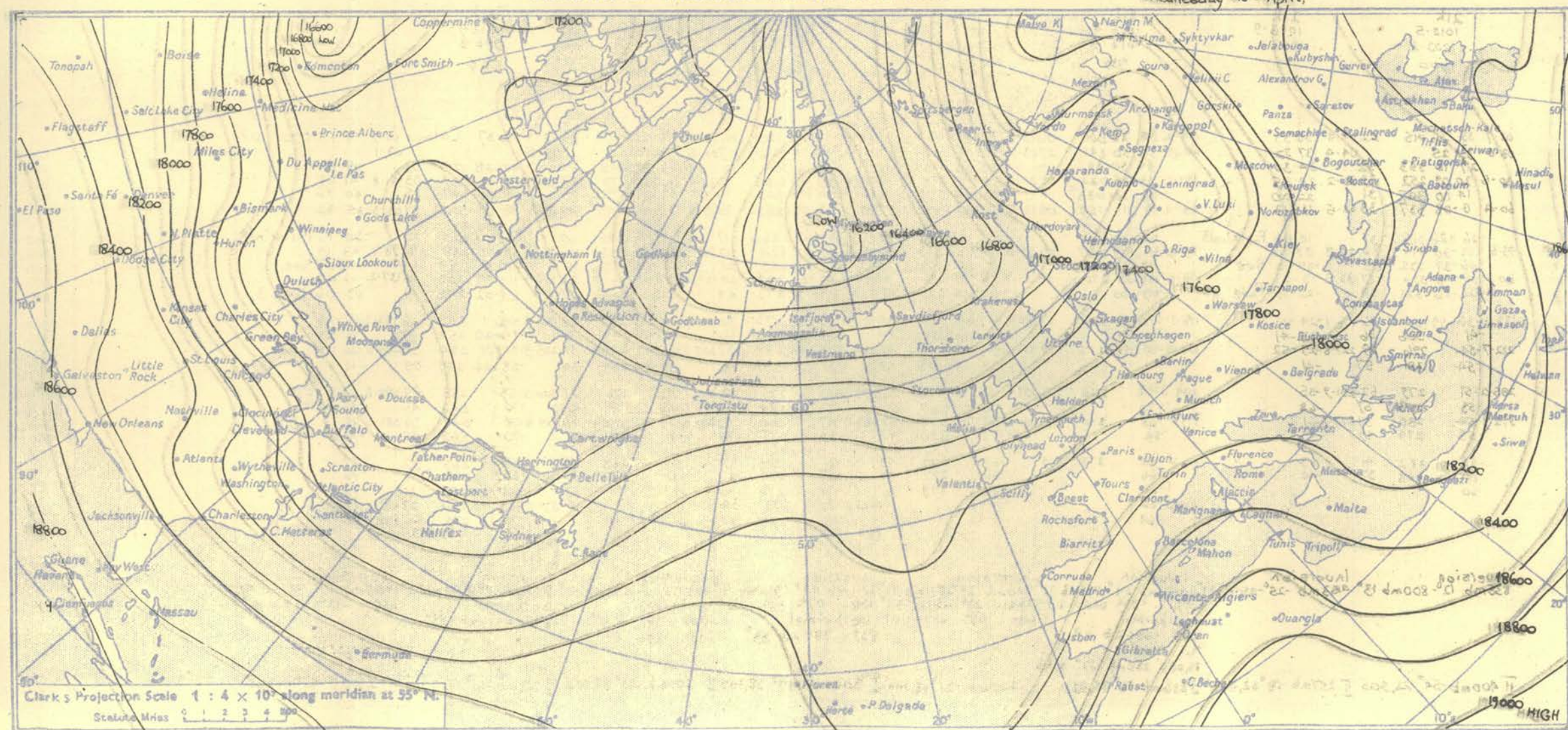




ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T.

Wednesday 18<sup>th</sup> April,

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.		15h		G.M.T.		Time M.S.L.	Pressure mb																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
		1003.9		mb		1011.3		mb		1010.4		mb		1012.7		mb		1013.2		mb		1013.9		mb		1013.5		mb		1012.7		mb		1010		mb																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
		993.6		mb		1009.6		mb		1009.5		mb		1003.1		mb		1011.2		mb		1010.5		mb		997.7		mb		1002.2		mb		1010		mb																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
		970		mb		930		mb		922		mb		882		mb		790		mb		766		mb		750		mb		768		mb		785		mb																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
Pressure		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Pressure																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
mb		ft./100		°F.		ft./100		°F.		ft./100		°F.		ft./100		°F.		ft./100		°F.		ft./100		°F.		ft./100		°F.		ft./100		°F.		ft./100		mb																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
Surf		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
1000		02.7		35		010		26		00.4		44		29		300		07		00.2		44		20		00.6		57		31		30		06		01.2		55		45		180		04		04.4		54		34		Calm		02.9		57		44		135		15		00.3		55		41		320		07																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
950		02.7		43		39		259		2703.4		26		280		12		00.6		57		31		30		06		04.1		53		44		160		12		43.7		03.5		54		44		135		15		00.3		55		41		320		07																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
900		03.6		55		28		133		06		04.1		53		44		160		12		43.7		03.5		54		44		135		15		00.3		55		41		320		07																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
850		28.5		30		30		003		40		35		23		316		14		36		33		268		26		25		278		15		32		275		18		32.1		40		19		243		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38		27		213		06		32.5		38</	

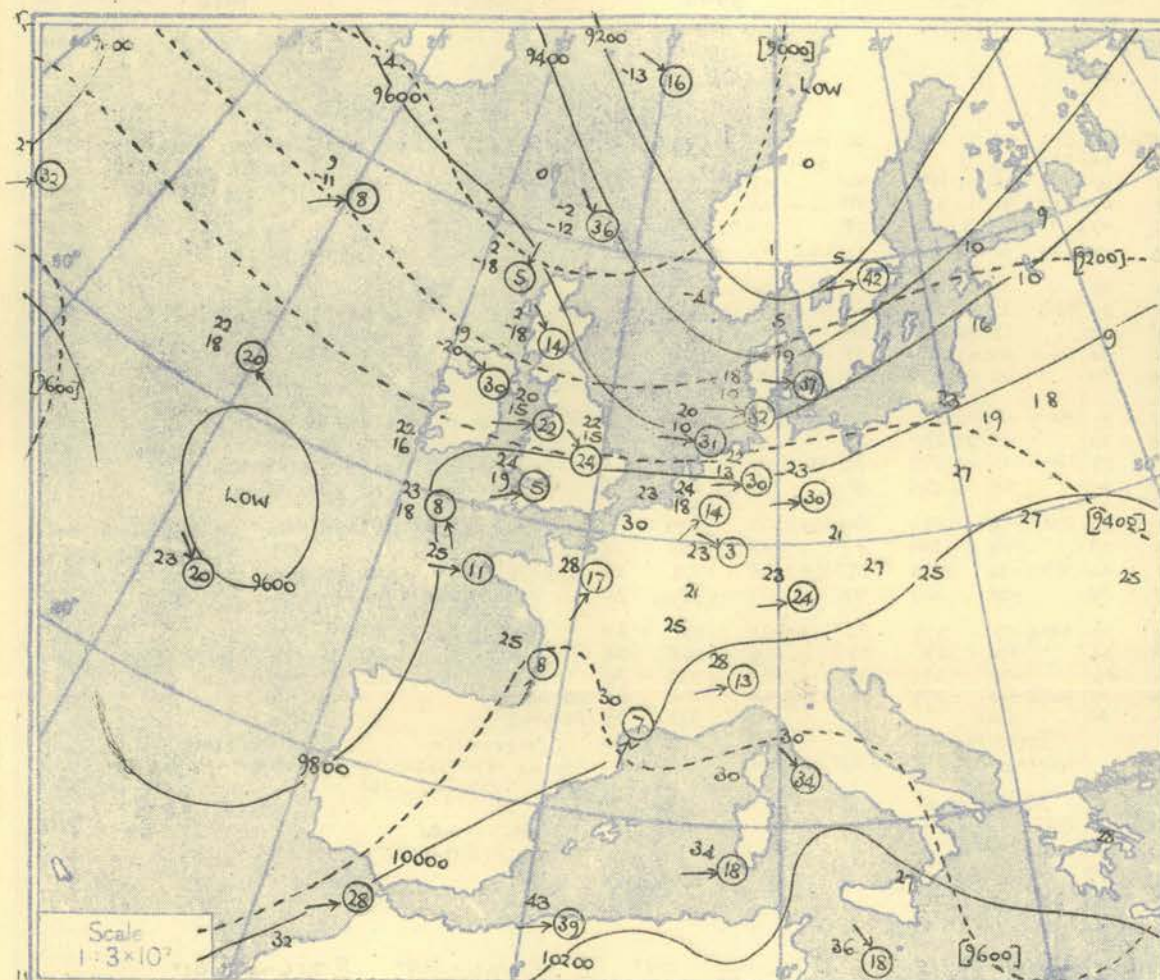


## RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
Time M.S.L. Surf 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.				03h. G.M.T.				Time M.S.L. Surf Pressure																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
	1017.5 mb 1007.0 mb 1007				1021.1 mb 1019.5 mb 962				1019.0 mb 1018.4 mb 949				1016.9 mb 1006.7 mb 920				1013.9 mb 1011.7 mb 815				1013.5 mb 1009.0 mb 776				1012.9 mb 996.6 mb 788				1011.2 mb 1000.6 mb 764				1011.1 mb 1010 mb 780																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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	31	28	355	21	00.4	39	24	040	10	00.2	36	39	030	03	02.4	34	29	070	05	00.6	41	38	CALM	01.2	40	37	105	03	04.4	43	35	040	03	02.9	47	42	CALM	00.3	40	37	CALM	Surf																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
1000	04.5	31	27	326	24	05.6	37	23		05.0	35	31	054	15	04.3	35	30			03.6	43	37	062	06	03.6	43	37		03	03.4	43	35	040	03	03.1	47	42	CALM	03.1	43	38	045	04	11	950																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
950		26	21	327	27		30	21	058	15		32	27	054	15		35	27	065	14		42	28	041	08		46	31	005	06		47	33	085	05		51	43	134	06	03.1	45	41	127	07	31.6	43	35	116	10	900																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
900	31.8	19	16	330	27	33.1	23	18	055	13	32.7	26	24	054	15	32.2	30	19	029	10	31.8	36	25	007	07	32.1	41	26	073	05	32.0	44	21	180	03	31.8	45	41	127	07	31.6	43	35	116	10	850																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
850		12	11	329	27		16	12	052	10		20	18	053	15		34	16	282	07		34	16	282	07		35	17	227	08		40	31	220	04		40	37	125	10		39	30		800																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
800	61.4	06	05	327	30	63.0	13	05	023	07	62.9	14	12	048	13	63.8	24	08	280	18	62.8	31	19	265	12	63.2	33	04	256	13	63.5	36	29	240	05	63.3	36	32	126	13	63.0	34	24																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														</



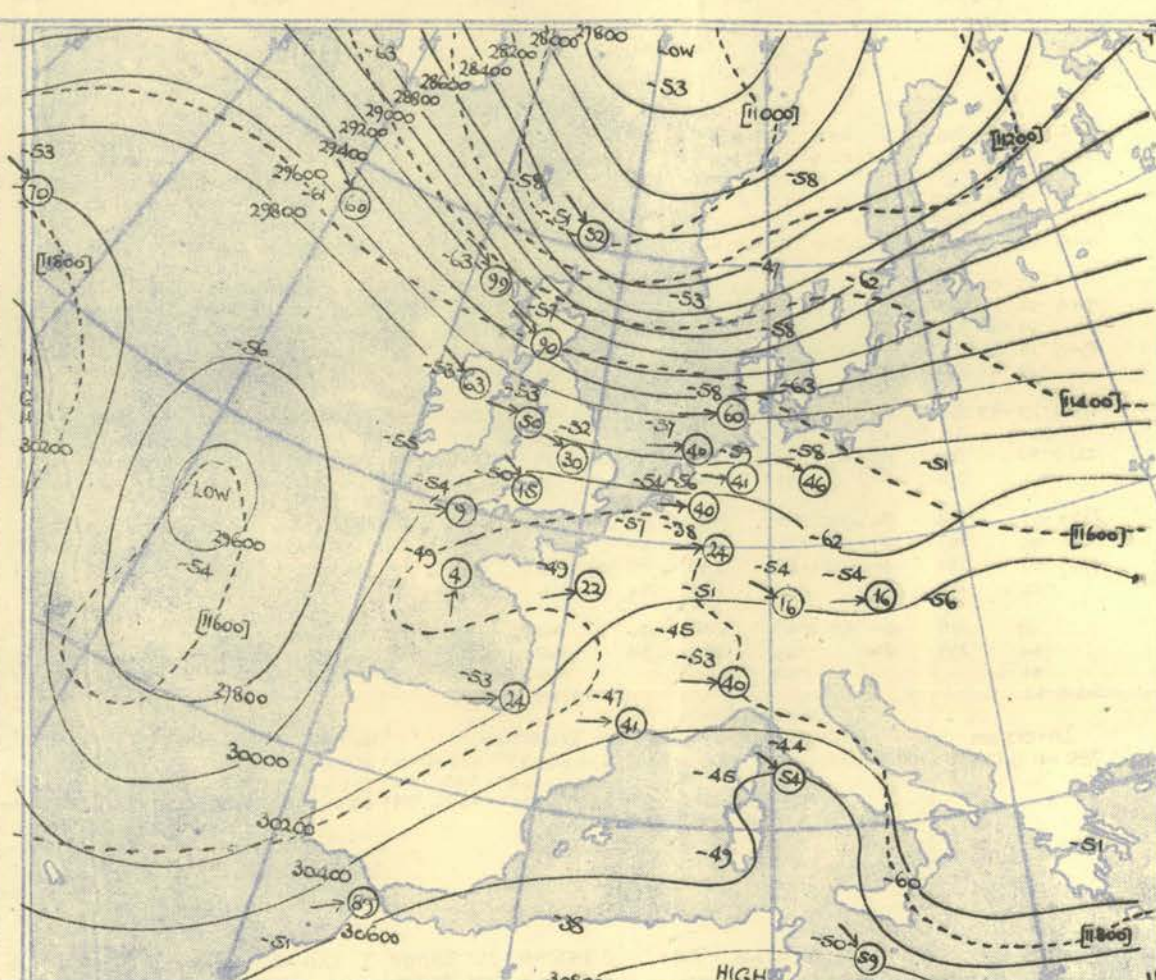
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (In knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



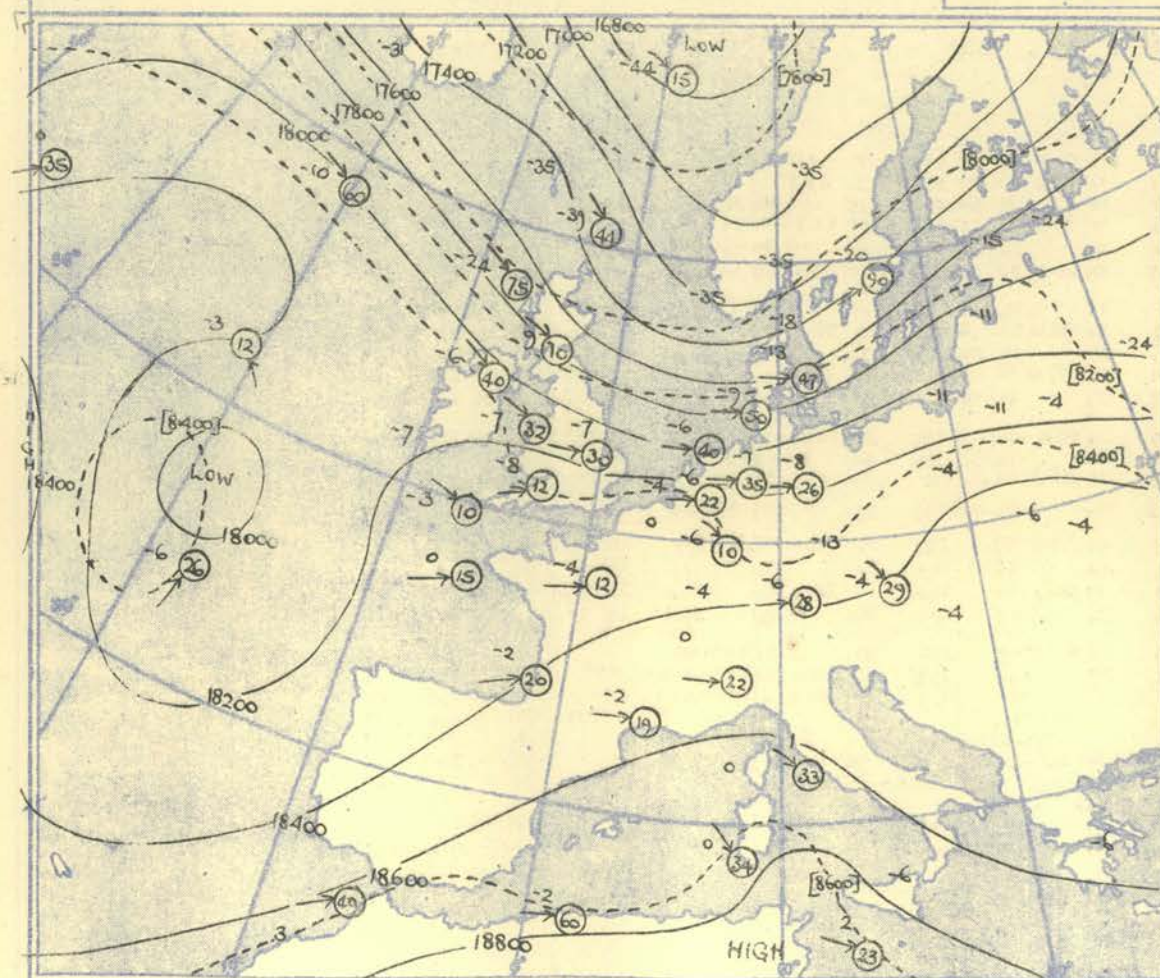
The continuous lines are contour lines of the 700 mb. surface  
The dotted lines are isopleths of the thickness of the layer 1000 - 700 mb.

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

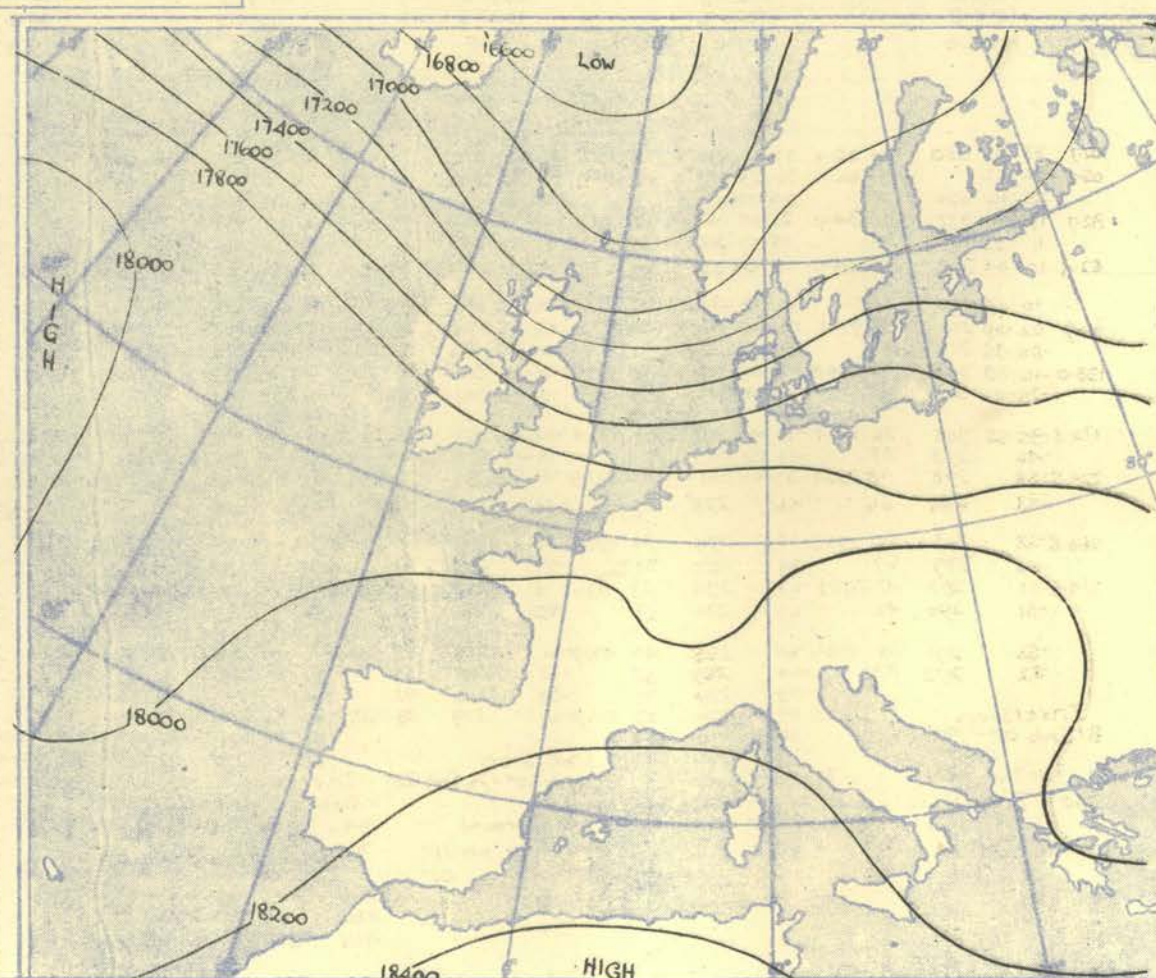
100 80 60 40 20 10 knots



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 - 1000 mb.

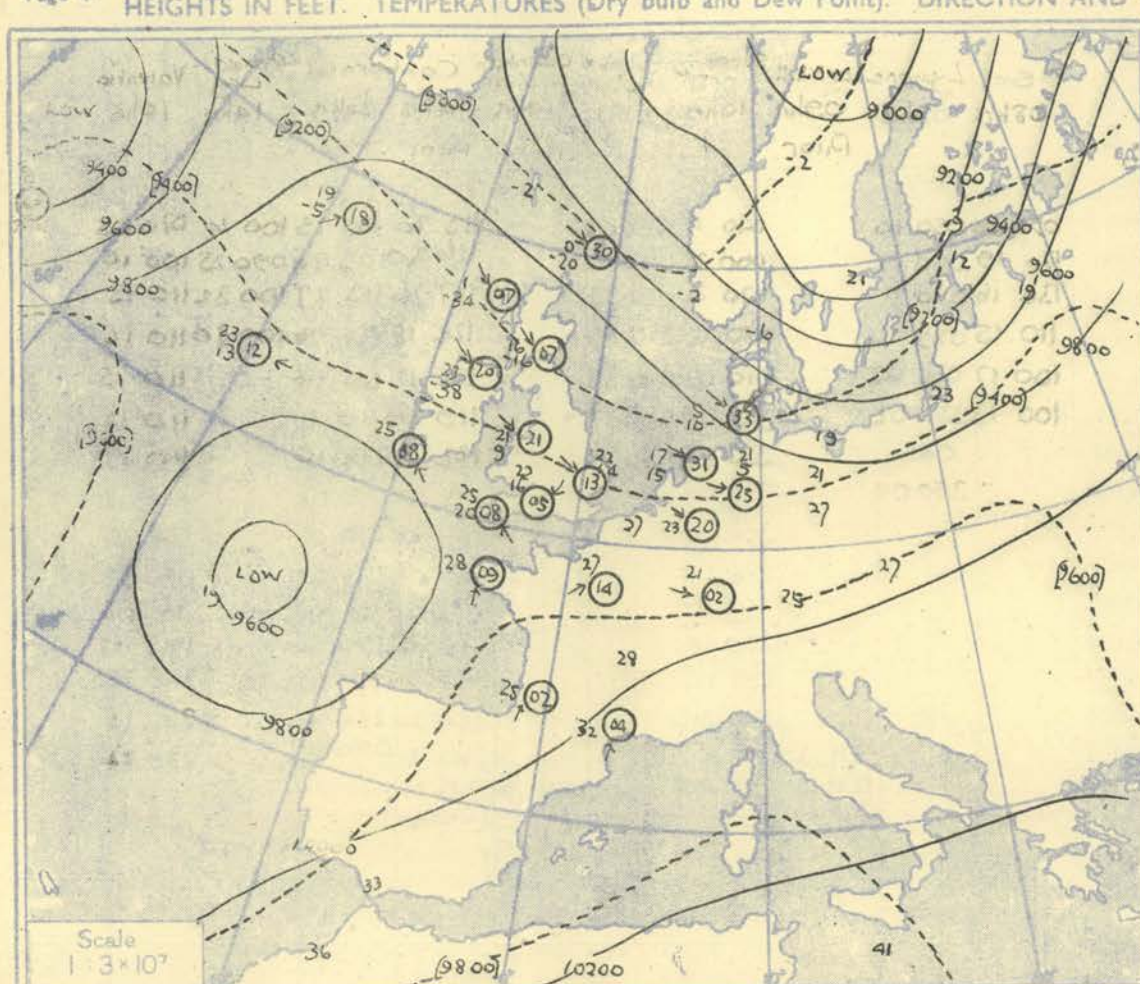


## DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

NEPHOSCOPE OBSERVATIONS[illegible]

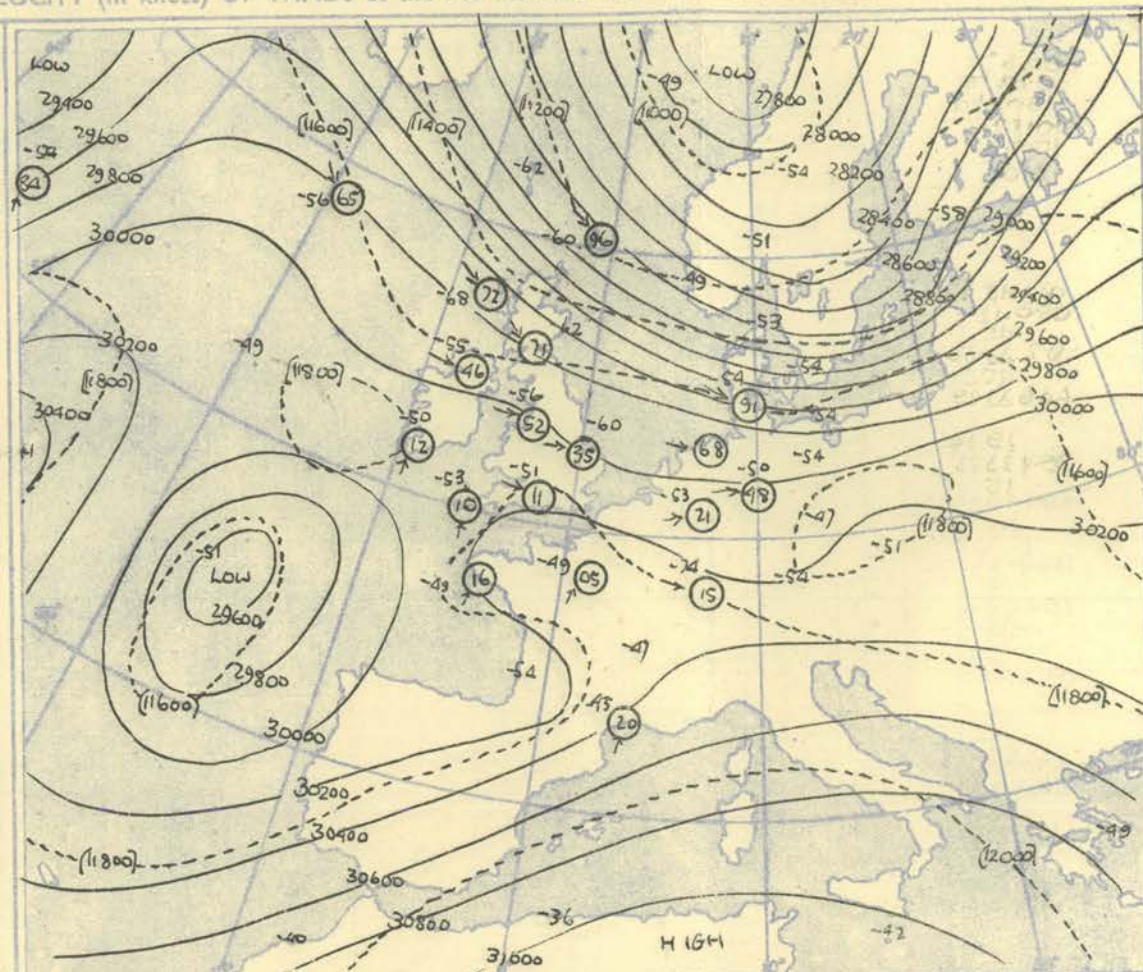
Ship	WEATHER WATCHER								WEATHER WATCHER								WEATHER WATCHER								WEATHER WATCHER								CUMULUS								CUMULUS								CUMULUS								CUMULUS								Ship
Lat/Long	59-0N 19-1W								58-9N 19-1W								58-8N 19-0W 58-9N 18-9W								52-5N 20-0W								52-5N 20-0W								52-5N 20-0W								52-5N 20-0W								Lat/Long								
Pressure { Time M.S.L. Surf Freezing	03h G.M.T. 1020 mb 1020 mb 940 mb								09h G.M.T. 1021 mb 1021 mb 350 mb								15h G.M.T. 1022 mb 1022 mb 930 mb								21h G.M.T. 1022 mb 1022 mb 940 mb								03h G.M.T. 1010 mb 1010 mb 170 mb								09h G.M.T. 1012 mb 1012 mb 82S mb								15h G.M.T. 1014 mb 1014 mb 875 mb								21h G.M.T. 1015 mb 1015 mb 770 mb								G.M.T. Time mb M.S.L. mb Surf mb 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	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	41	33	200	07	43	31	CALM	5.9	45	31	238	03	5.8	41	33	149	08	2.8	47	46	092	20	4.0	47	44	090	22	4.1	48	43	103	16	4.8	43	103	16	Surf																											
	1000	33	29	193	04	32	28		34	27	237	04	33	29	156	05	42	40	092	26	39	37	100	18	39	38	091	25	41	40	117	18	41	40	117	18	1000																												
950	27	23	201	05	33.4	26	22	28	25	235	05	33.6	27	25	168	05	31.2	36	35	092	24	31.5	36	28	108	17	32.2	39	26	094	25	32.6	45	38	129	19	950																												
900	21	19	210	04	20	17	253	07	24	15	235	06	24	20	184	07	38	27	095	23	33	20	105	16	33	20	112	17	20	112	17	20	112	17	20	112	17	900																											
850	63.3	17	09	225	04	18	02	267	12	24.4	23	01	239	06	63.9	23	03	192	09	62.5	35	25	099	19	62.4	31	16	082	15	63.4	32	18	111	13	64.0	36	26	138	09	850																									
800	11	06	232	05	17	-10	285	18	21	-11	249	12	23	-04	207	09	30	23	095	21	28	11	083	14	27	16	102	15	30	23	155	10	30	23	155	10	800																												
750	09	-11	237	08	97.5	16	-12	295	20	98.6	19	-08	263	18	-07	226	11	97.4	22	18	095	20	97.2	24	06	103	12	98.3	23	13	094	12	99.1	26	17	160	09	750																											
700	09	-15	248	18	12	-10	297	25	12	-11	290	25	13	-04	248	14	16	14	095	10	17	01	090	07	18	10	085	07	22	11	173	09	22	11	173	09	700																												
650	135.4	05	-14	256	05	136.3	05	-10	293	30	137.4	06	02	294	27	137.1	07	01	272	21	136.6	12	09	107	09	136.5	10	-06	090	07	137.6	14	04	040	02	138.7	15	03	195	07	650																								
600	-02	-19	264	49	-04	-16	289	32	01	-04	288	28	00	-03	277	25	06	01	102	10	05	14	090	08	05	-05	276	04	05	-08	195	07	05	-08	195	07	600																												
550	179.9	-10	-24	278	60	180.6	-10	-16	288	38	182.1	-08	-14	278	36	181.8	-08	-11	265	37	182.0	-07	-08	110	12	181.8	-02	-24	090	08	182.8	-04	-16	275	04	184.0	-04	-20	550																										
500	-19	-29	292	76	-20	-25	283	40	-19	-24	274	41	-16	-20	264	36	-12	-20	116	10	-15	-36	10	-15	-36	10	-15	-36	10	-15	-36	10	-15	-36	10	-15	-36	450																											
450	232.2	-31	-40	311	76	232.8	-32	-37	279	49	234.5	-30	-36	274	47	234.5	-26	-30	269	41	235.1	-25	-29	115	10	234.7	-28	-39	235	8	-26	-39	237	0	-26	-33	450																												
400	-45		327	76	-44		279	51	-40	-49	280	52	-38		271	51	-40		138	08	370	-37	-58													400																													
350	295.7	-61	303	60	296.5	-59	276	56	297.5	-56	297	65	299.0	-53	283	64	299.4	-56																		350																													
300	-78		288	65	-74		274	59	-68		313	84	-70		287	70	-68																			300																													
250	379.0	-73	291	59	380.5	-72	273	53	383.4	-71	334	65	383.7	-79	293	66	383.8	-80																		250																													
200	-69		288	51	-67		280	48	-65		316	54	-70		292	52	-66																			200																													
170	-66		290	51	-64		282	46	-62		303	41	-65		291	44	-60																			170																													
150	-64		276	45	-64		301	41	-60		283	41	-61		306	48	-74																			150																													
130	-65				-64		316	41	-59		268	39	-64		287	38																				130																													
110					-64		308	40	-62		266	37	-66		284	36																				110																													
100					-64		289	40	-62		267	35	-67		279	35																				100																													
90					-64		286	40	-61		278	32	-65																							90																													
80					-64		285	36	-62		290	25																								80																													
70					-64																																70																												
60					-64																																60																												
Tropopause	Inversion 700 mb 89°-662 mb 10								Isothermal 841-807 mb 19° 793-719 " 17°								Inversion 868 mb 22°-850 mb 29° 785 " 23°-759 " 21°								Inversion 900 mb 36°-873 mb 39°								(501 mb) Inversion 936 mb 37°-917 mb 39° 991 mb 39°-921 mb 47°								Inversion 850 " 27°-800 " 32°								Isothermal 312-300 mb 49° 196 mb 84° 29,000'																
	I 225 mb -83° 35,400'								II 250 mb -74° 33,600'								I 224 mb -74° 36,000'								I 225 mb -75° 35,900'								I 175 mb -87° 42,200'								HR.								II 205 mb -78° 32,100'								I 196 mb -84° 29,000'								



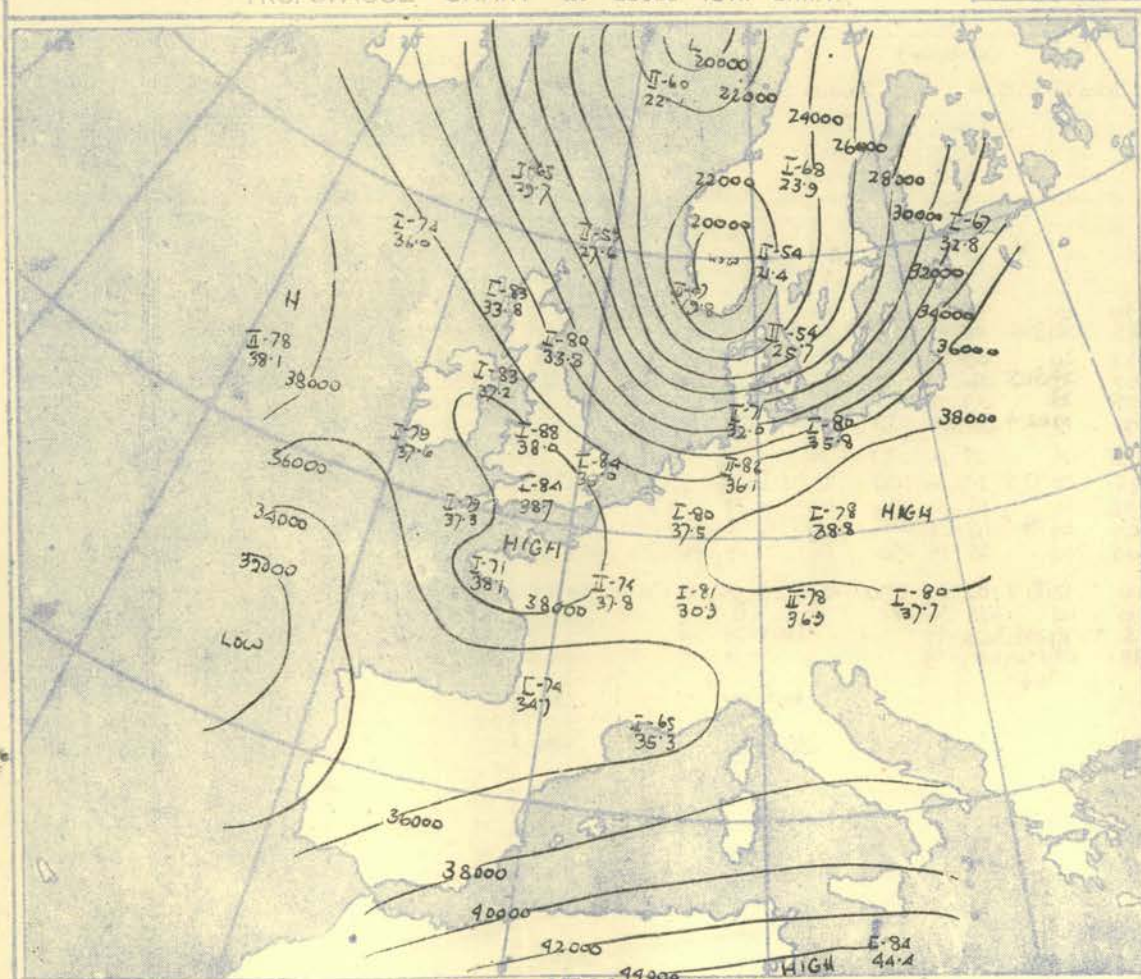


Gradient Wind Scale for Contours at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 20 10 knots



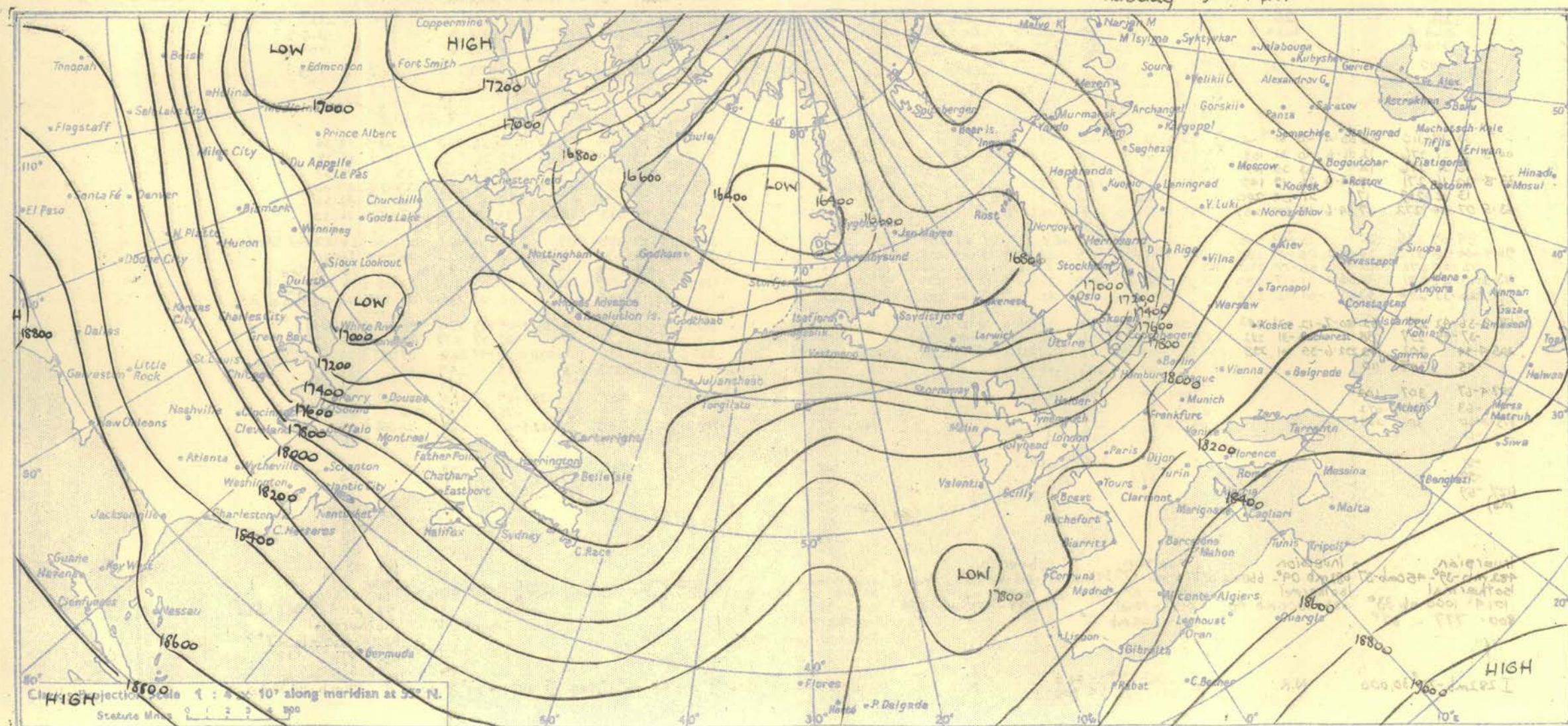
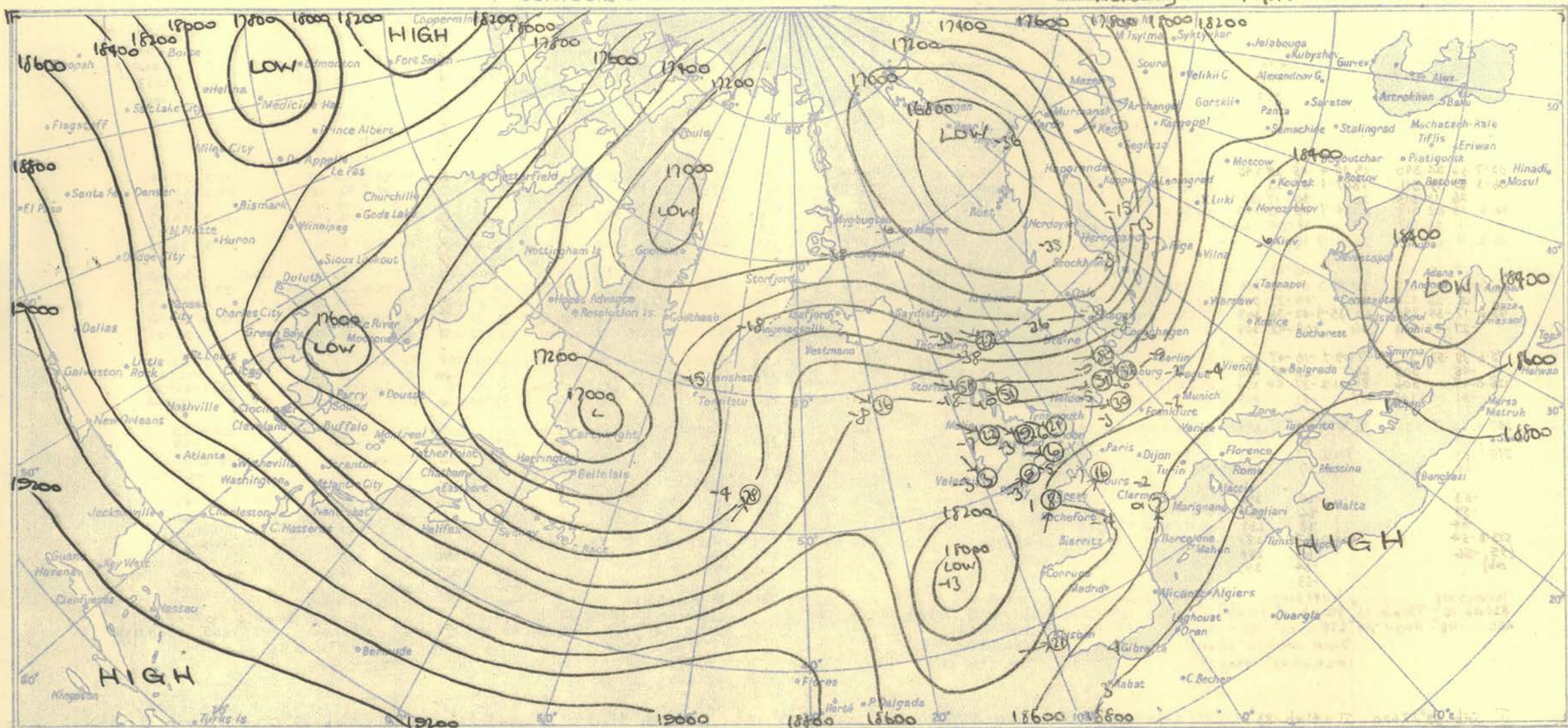
### TROPOPAUSE CHART at about 15h. G.M.T.



### NOTES ON THE AEROLOGICAL SITUATION.

Cooling by ascent associated with the depression southwest of the British Isles. Cooling by advection also occurred to some extent over the North Sea; otherwise little change.







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.	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	1024.1 mb				1025.2 mb				1026.1 mb				1020.9 mb				1020.4 mb				1020.2 mb				1015.5 mb				1013.6 mb				1014.7 mb				Surf			
Pressure	1013.7 mb				1023.5 mb				1025.3 mb				1011.5 mb				1018.4 mb				1015.6 mb				999.6 mb				1003.0 mb				1013 mb				Pressure			
Freezing	990				962				261				911				910				805				780				770				990				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	02.7	36	24	390	13	00.4	45	28	140	08	00.2	45	39	100	12	02.6	48	32	095	12	00.6	47	37	095	12	01.2	49	46	060	16	04.4	57	33	110	15	02.9	63	42	Surf	
1000	06.3	33	19	311	18	07.1	37	22		06	06.9	39	30	105	15	05.7	44	29	096	18	05.5	46	33	099	20	05.4	46	48	040	16	04.4	57	33	110	15	02.9	63	42	1000	
950		26	13	313	20		30	17	166	12		31	25	102	09		37	25	102	18		37	29	098	19		36	35	071	21	04.3	49	25	073	20	02.7	52	42	950	
900	33.5	18	08	315	20	34.7	22	10	250	05	34.5	23	20	102	08	33.7	30	22	107	18	33.6	31	27	108	12	33.4	31	30	070	18	32.9	42	20	075	20	32.4	46	43	900	
850		11	04	321	18		23	04	Calm			17	12	100	07		23	15	132	09		30	27	160	06		31	23	066	09		32	06	082	18		42	41	850	
800	63.3	11	03	317	25	64.9	18	14			64.6	17	01	100	06	64.2	26	02	347	05	64.3	28	25	250	08	64.4	31	21	302	05	64.1	34	20	100	10	64.0	35	34	800	
750	07	12	311	27		00	23				10	10	081	04		27	35	187	15		25	21	276	14		29	21	293	13		27	24	103	07		29	29	For Winds	750	
700	26.5	00	20	299	30	98.3	01	34	294	07	98.0	03	16	302	07	98.8	23	38	292	20	98.8	21	09	282	21	99.3	22	14	281	13	98.9	24	16	067	04	98.9	25	24	700	
650		08	26	291	30		24	39	303	23		04	19	320	21		17	43	298	19		17	13	294	19		16	06	292	15		17	11	089	03		19	17	See	650
600	33.6	17	38	294	30	135.9	02	38	309	41	136.1	05	21	306	37	138.0	11	45	299	19	138.0	11	20	296	19	138.4	11	02	292	16	138.1	10	03	292	04	138.4	14	13	600	
550		27	44	303	36		09	42	306	52		00	25	295	51		02	49	297	20		04	26	295	18		03	09	289	21		05	05	256	05		06	05	Page 3.	550
500	75.6	38	53	311	47	79.7	18	47	301	58	80.7	10	33	296	51	82.9	07	48	299	22	83.1	03	32	293	19	83.3	06	09	276	18	83.1	05	15	283	06	83.7	03	05	500	
450		48		308	63		26	49	298	62		21	41	298	55		17	53	293	27		15	42	287	23		17	33	291	18		16	30	260	07		13	15	450	
400	225.0	47		306	81	231.2	37	55	296	69	232.8	33	51	291	63	235.5	29	57	292	30	235.9	28	49	286	29	235.9	29	43	282	27	236.1	21	41	251	09	236.8	26	29	400	
350		51		306	107		52		293	74		45		297	69		42		284	36		40	56	284	34		42		276	30		35	55	260	07		40	43	350	
300	287.4	60		303	96	293.6	68		290	72	296.2	62		291	71	299.5	55		271	46	300.1	56		273	52	299.7	60		273	35	301.1	51		265	11	301.2	53	300		
250		60							287	72		78		286	70		71		279	51		74			270	40		78		269	36		258	13		258	13	250		
200	379.1	55			376.2	75			291	67	379.6	73		284	64	383.5	75		278	42	383.5	87		276	37	382.7	80		270	34	385.5	83		268	26	386.4	74	200		
170		55							292	54		67		296	55		69		286	38		76			278	37		71		276	36		270	26		268	16	170		
150		53							292	49		65		288	38		66		290	30		73			282	36		68		273	36		266	30		265	11	150		
130		59							289	41		66		291	36		63		295	31		71			283	33		68		271	36		267	29		268	29	130		
110		64							289	37		65		278	36		60		288	30		64			277	35		63		278	33		265	30		268	29	110		
100	523.8	54			521.0	67			287	31	525.1	61		292	35	528.8	63		288	30		64			275	35	527.3	64		278	31	529.8	64		270	34	532.0	63	100	
90	(95.56 mb)								288	30																														

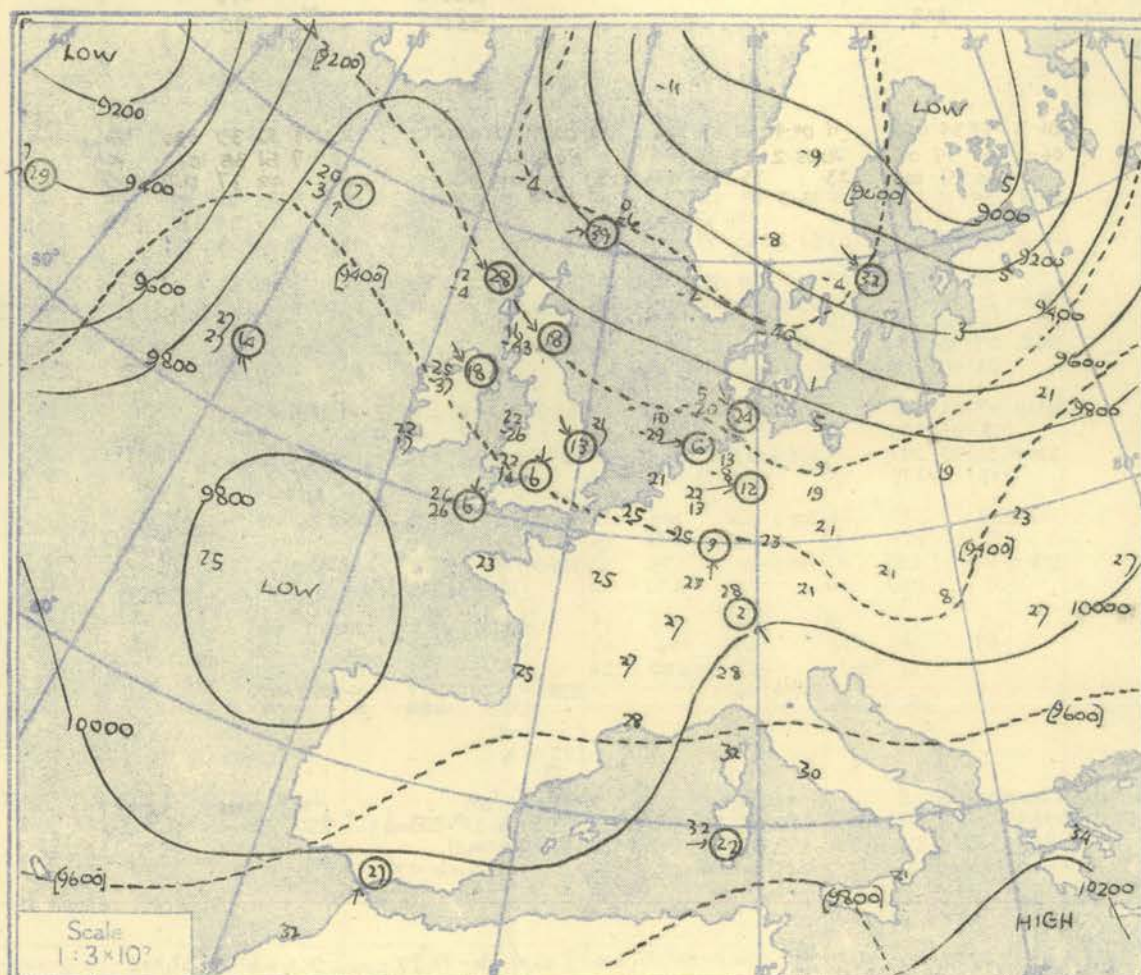


RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

Station	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				Station		
Pressure Time M.S.L. Surf Footings	03h G.M.T. 1021.2 mb 1010.8 mb 980 mb				03h G.M.T. 1024.1 mb 1022.4 mb 940 mb				03h G.M.T. 1026.0 mb 1025.1 mb 966 mb				03h G.M.T. 1022.8 mb 1012.7 mb 929 & 885 mb				03h G.M.T. 1023.9 mb 1021.8 mb 837 mb				03h G.M.T. 1022.7 mb 1018.1 mb 843 mb				03h G.M.T. 1019.9 mb 1003.3 mb 791 mb				03h G.M.T. 1016.9 mb 1006.2 mb 750 mb				03h G.M.T. 1017.3 mb 1016.7 mb 790 mb				Time M.S.L. Surf Footings		
	Height ft/100				Height ft/100				Height ft/100				Height ft/100				Height ft/100				Height ft/100				Height ft/100				Height ft/100				Height ft/100						
	Temp. °F.				Temp. °F.				Temp. °F.				Temp. °F.				Temp. °F.				Temp. °F.				Temp. °F.				Temp. °F.				Temp. °F.						
Pressure mb	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				Pressure mb		
	Surf				Surf				Surf				Surf				Surf				Surf				Surf				Surf										
	1000				1000				1000				1000				1000				1000				1000				1000										
950				950				950				950				950				950				950				950				950				950			
900				900				900				900				900				900				900				900				900				900			
850				850				850				850				850				850				850				850				850				850			
800				800				800				800				800				800				800				800				800				800			
750				750				750				750				750				750				750				750				750				750			
700				700				700				700				700				700				700				700				700				700			
650				650				650				650				650				650				650				650				650				650			
600				600				600				600				600				600				600				600				600				600			
550				550				550				550				550				550				550				550				550				550			
500				500				500				500				500				500				500				500				500				500			
450				450				450				450				450				450				450				450				450				450			
400				400				400				400				400				400				400				400				400				400			
350				350				350				350				350				350				350				350				350				350			
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250				250				250				250				250				250				250				250				250				250			
200				200				200				200				200				200				200				200				200				200			
170				170				170				170				170				170				170				170				170				170			
150				150				150				150				150				150				150				150				150				150			
130				130				130				130				130				130				130				130				130				130			
110				110				110				110				110				110				110				110				110				110			
100				100				100				100				100				100				100				100				100				100			
90				90				90				90				90				90				90				90				90				90			
80				80				80				80				80				80				80				80				80				80			
70				70				70				70				70				70				70				70				70				70			
60				60				60				60				60				60				60				60				60				60			
Inversion 564mb -20°-550mb -19° 533 -20°-518 -19°				Inversion 1022mb 34°-1005mb 39° 736 -11°-720 -13° Isothermal 720 -707mb 13°				Inversion 850mb 16°-820mb 19° 795 -16°-728 -18° Isothermal 783 -733mb 29°				Inversion 929mb 32°-914mb 35° 800 -23°-783 -29° Isothermal 783 -733mb 29°				Inversion 1022mb 35°-1011mb 37° 854 -28°-837 -32° Isothermal 948-871mb 30° 760-720 -24°				Inversion 963mb 33°-932mb 37° 825 -29°-812 -30° Isothermal 1018-1000mb 37° 885-855 -33°				Inversion 950mb 33°-940mb 41° 850 -38°-845 -39° Isothermal 885-850mb 38°				Inversion 952mb 42°-933mb 46° 850 -38°-845 -39° Isothermal 900-850mb 43° 703-676 -26°				Inversion 850-629mb 16° Isothermal 750 -24°-730 -26° 858-827mb 39°							
Tropopause I 271mb -69°31,100				Tropopause I 220mb -85°36,000				Tropopause I 242mb -76°34,200				Tropopause I 216mb -88°36,800				Tropopause II 234mb -78°35,100				Tropopause I 204mb -83°37,900				Tropopause I 205mb -84°37,800				Tropopause I 214mb -73°37,200				Tropopause I 206mb -78°37,700				Tropopause			
Station	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE								Station		
Pressure Time M.S.L. Surf Footings	09h G.M.T. 1020.4 mb 1009.9 mb 1010 mb				09h G.M.T. 1024.2 mb 1022.5 mb 950 mb				09h G.M.T. 1024.3 mb 1023.4 mb 951 mb				09h G.M.T. 1023.0 mb 1013.0 mb 882, 785 mb				09h G.M.T. 1023.1 mb 1021.0 mb 783 mb				09h G.M.T. 1021.8 mb 1017.2 mb 830 mb				09h G.M.T. 1019.3 mb 1003.0 mb 751 mb				09h G.M.T. 1018.1 mb 1007.4 mb 780 mb										
	Height ft/100				Height ft/100				Height ft/100				Height ft/100				Height ft/100				Height ft/100				Height ft/100				Height ft/100				Height ft/100						
	Temp. °F.				Temp. °F.				Temp. °F.				Temp. °F.				Temp. °F.				Temp. °F.				Temp. °F.				Temp. °F.				Temp. °F.						
Pressure mb	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										
	1000				1000				1000				1000				1000				1000				1000				1000										
950				950				950				950				950				950				950				950				950							
900				900				900				900				900				900				900				900				900							
850				850				850				850				850				850				850				850				850							
800				800				800				800				800				800				800				800				800							
750				750				750				750				750				750				750				750				750							
700				700				700				700				700				700				700				700				700							
650				650				650				650				650				650				650				650				650							
600				600				600				600				600				600				600				600				600							
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100				100				100				100				100				100				100				100				100							
90				90				90				90				90				90				90				90				90							
80				80				80				80				80				80				80				80				80							
70				70				70				70				70				70				70				70				70							
60				60				60				60				60				60				60				60				60							
Inversion 904mb 19°-887mb 21° Isothermal 762-733mb 07° 570-557 -09°				Inversion 773mb 15°-750mb 19° Isothermal 643-626mb 12°				Inversion 880mb 21°-860mb 27° Isothermal 808 -22°-753 -23° 523 -06°-506 -05°				Inversion 944mb 33°-922mb 35° 806 -27°-806 -32° Isothermal 806-785mb 32°				Inversion 927mb 30°-884mb 35° 845 -30°-783 -32°				Inversion 964mb 35°-938mb 40° 750 -24°-730 -26° Isothermal 902-871mb 36°				Inversion 970mb 39°-928mb 46° 760mb 40°-930mb 46° Isothermal 858-827mb 39°				Inversion 952mb 42°-933mb 46° 750 -24°-730 -26° Isothermal 900-850mb 43° 703-676 -26°											
Tropopause II 263mb -65°32,000				Tropopause I 198mb -82°38,500				Tropopause II 215mb -88°36,800				Tropopause I 195mb -87°59,000				Tropopause I 208mb -76°37,900				Tropopause I 235mb -79°35,200				Tropopause I 230mb -78°35,600				Tropopause I 220mb -76°36,500				Tropopause							



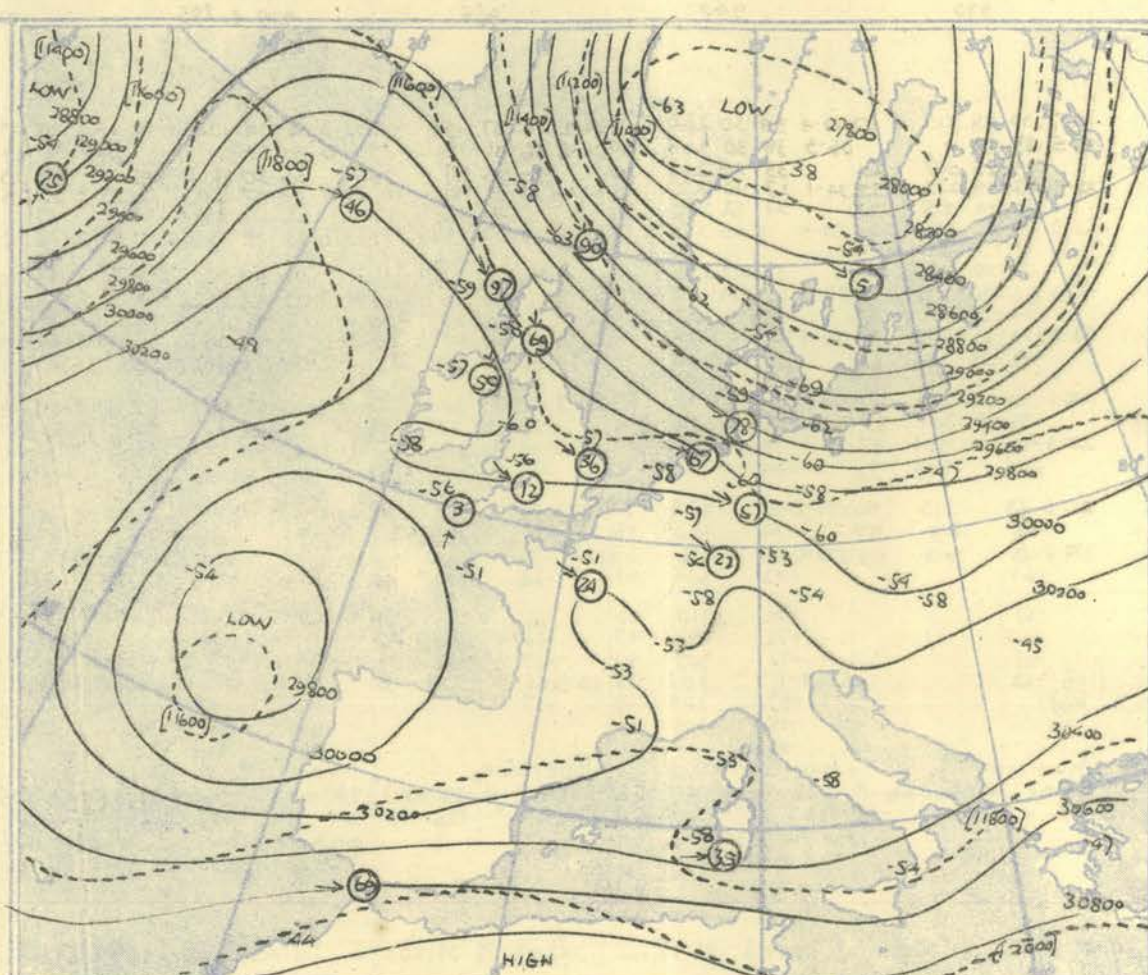
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h. G.M.T.



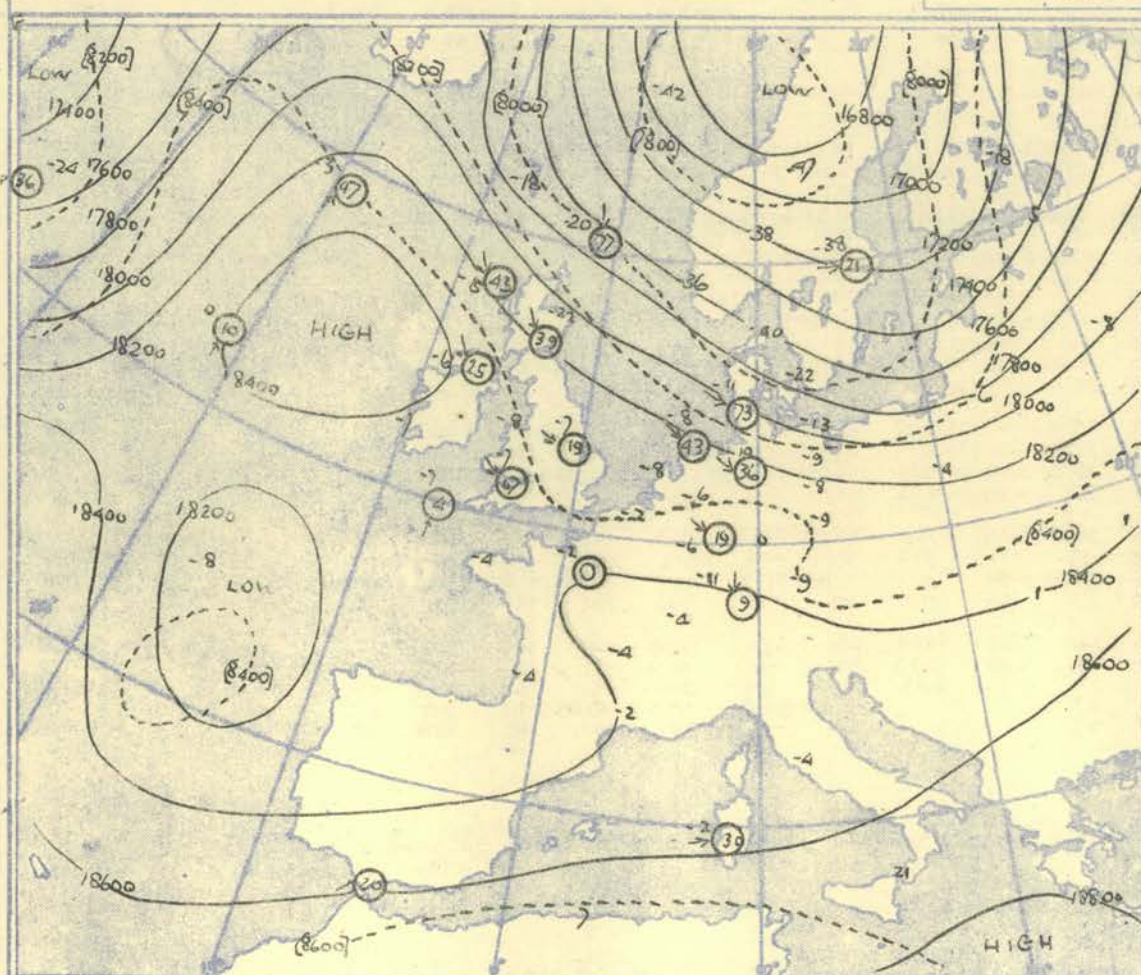
The continuous lines are contour lines of the 700 mb. surface  
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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

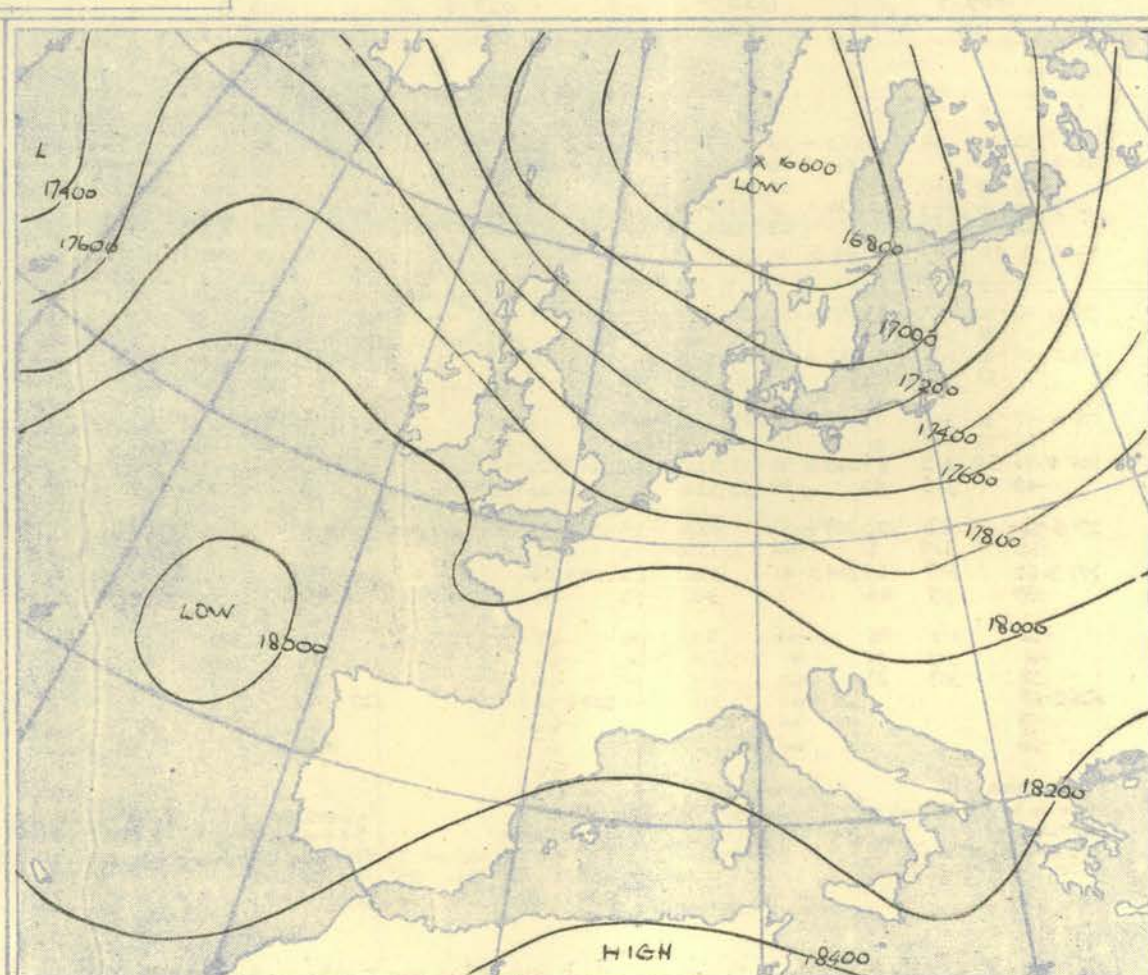
100 80 60 40 20 10 knots



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.



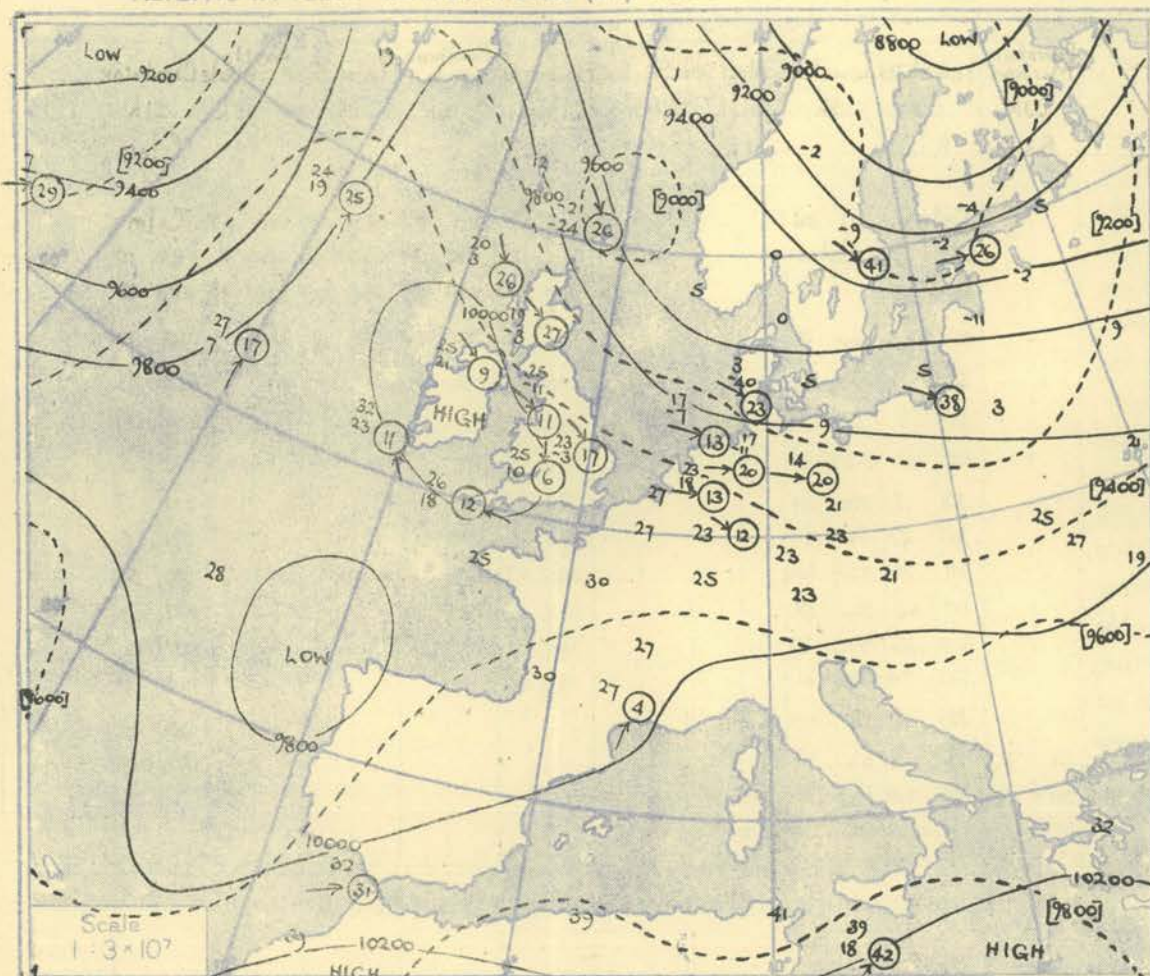
## DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

NEPHOSCOPE OBSERVATIONS

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

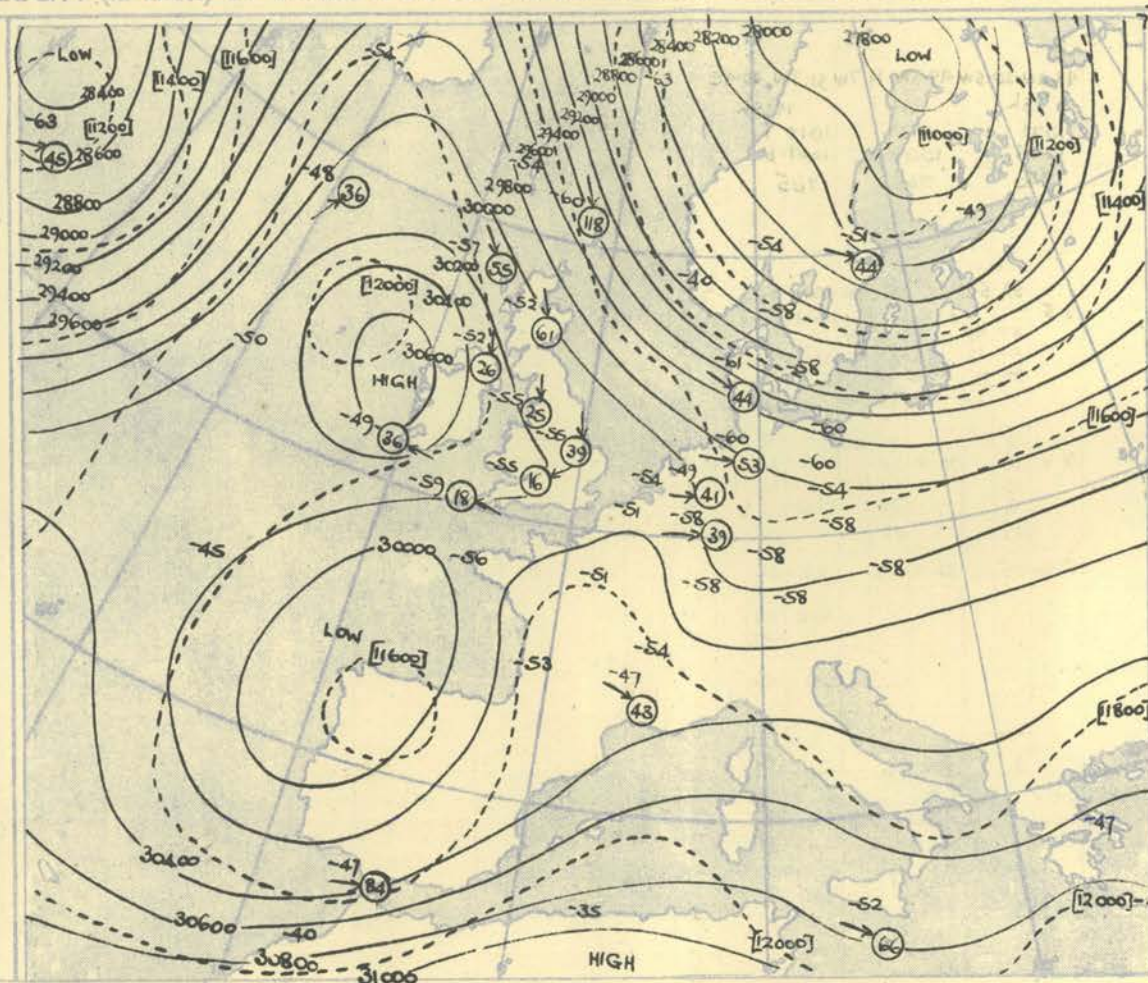
Ship	WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				CUMULUS				CUMULUS				CUMULUS				CUMULUS				Ship	
Lat/Long	58-9N. 18-9W.				59-0N. 19-0W.				59-1N. 19-2W.				59-1N. 19-2W.				52-5N. 20-0W.				52-5N. 20-0W.				52-5N. 20-0W.				52-5N. 20-0W.				Lat/Long	
Pressure Time M.S.L. 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
	mb				mb				mb				mb				mb				mb				mb				mb				mb	Freezing
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	Pressure mb					
Surf	45	36	130	14	45	42	140	22	47	39	140	26	48	47	145	27	50	47	130	14	50	48	170	11	50	49	170	06	Surf					
1000	45	36	130	14	45	42	140	22	47	39	140	26	48	47	145	27	50	47	130	14	50	48	170	11	50	49	170	06	1000					
950	45	36	130	14	45	42	140	22	47	39	140	26	48	47	145	27	50	47	130	14	50	48	170	11	50	49	170	06	950					
900	45	36	130	14	45	42	140	22	47	39	140	26	48	47	145	27	50	47	130	14	50	48	170	11	50	49	170	06	900					
850	45	36	130	14	45	42	140	22	47	39	140	26	48	47	145	27	50	47	130	14	50	48	170	11	50	49	170	06	850					
800	45	36	130	14	45	42	140	22	47	39	140	26	48	47	145	27	50	47	130	14	50	48	170	11	50	49	170	06	800					
750	45	36	130	14	45	42	140	22	47	39	140	26	48	47	145	27	50	47	130	14	50	48	170	11	50	49	170	06	750					
700	45	36	130	14	45	42	140	22	47	39	140	26	48	47	145	27	50	47	130	14	50	48	170	11	50	49	170	06	700					
650	45	36	130	14	45	42	140	22	47	39	140	26	48	47	145	27	50	47	130	14	50	48	170	11	50	49	170	06	650					
600	45	36	130	14	45	42	140	22	47	39	140	26	48	47	145	27	50	47	130	14	50	48	170	11	50	49	170	06	600					
550	45	36	130	14	45	42	140	22	47	39	140	26	48	47	145	27	50	47	130	14	50	48	170	11	50	49	170	06	550					
500	45	36	130	14	45	42	140	22	47	39	140	26	48	47	145	27	50	47	130	14	50	48	170	11	50	49	170	06	500					
450	45	36	130	14	45	42	140	22	47	39	140	26	48	47	145	27	50	47	130	14	50	48	170	11	50	49	170	06	450					
400	45	36	130	14	45	42	140	22	47	39	140	26	48	47	145	27	50	47	130	14	50	48	170	11	50	49	170	06	400					
350	45	36	130	14	45	42	140	22	47	39	140	26	48	47	145	27	50	47	130	14	50	48	170	11	50	49	170	06	350					
300	45	36	130	14	45	42	140	22	47	39	140	26	48	47	145	27	50	47	130	14	50	48	170	11	50	49	170	06	300					
250	45	36	130	14	45	42	140	22	47	39	140	26	48	47	145	27	50	47	130	14	50	48	170	11	50	49	170	06	250					
200	45	36	130	14	45	42	140	22	47	39	140	26	48	47	145	27	50	47	130	14	50	48	170	11	50	49	170	06	200					
170	45	36	130	14	45	42	140	22	47	39	140	26	48	47	145	27	50	47	130	14	50	48	170	11	50	49	170	06	170					
150	45	36	130	14	45	42	140	22	47	39	140	26	48	47	145	27	50	47	130	14	50	48	170	11	50	49	170	06	150					
130	45	36	130	14	45	42	140	22	47	39	140	26	48	47	145	27	50	47	130	14	50	48	170	11	50	49	170	06	130					
110	45	36	130	14	45	42	140	22	47	39	140	26	48	47	145	27	50	47	130	14	50	48	170	11	50	49	170	06	110					
100	45	36	130	14	45	42	140	22	47	39	140	26	48	47	145	27	50	47	130	14	50	48	170	11	50	49	170	06	100					
90	45	36	130	14	45	42	140	22	47	39	140	26	48	47	145	27	50	47	130	14	50	48	170	11	50	49	170	06	90					
80	45	36	130	14	45	42	140	22	47	39	140	26	48	47	145	27	50	47	130	14	50	48	170	11	50	49	170	06	80					
70	45	36	130	14	45	42	140	22	47	39	140	26	48	47	145	27	50	47	130	14	50	48	170	11	50	49	170	06	70					
60	45	36	130	14	45	42	140	22	47	39	140	26	48	47	145	27	50	47	130	14	50	48	170	11	50	49	170	06	60					
Inversion 880mb. 27°-833mb. 31°				Inversion 850mb. 25°-810mb. 32° Isothermal 650-635mb. 15°				Inversion 900mb. 33°-870mb. 38° Isothermal 870-844mb. 38° 586-574mb. 8°				Inversion 965mb. 42°-927mb. 46° Isothermal 760-727mb. 25°				Inversion 935mb. 40°-900mb. 43°				(050)-72 (040)-72 mb Inversion 905mb. 44°-883mb. 46° 805mb. 36°-784mb. 46°				(050)-63 (045)-63 mb Inversion 787mb. 53°-770mb. 35° Isothermal 900-868mb. 43°										
Tropopause	I 200mb. -85° 38,300'				I 195mb. -88° 40,100'				I 207mb. -78° 37,900'				I 181mb. -86° 40,400'				I 200mb. -80° 38,800'				II 137mb. -91° 47,000'				I 207mb. -88° 37,900'				I 177mb. -91° 40,800'				Tropopause	



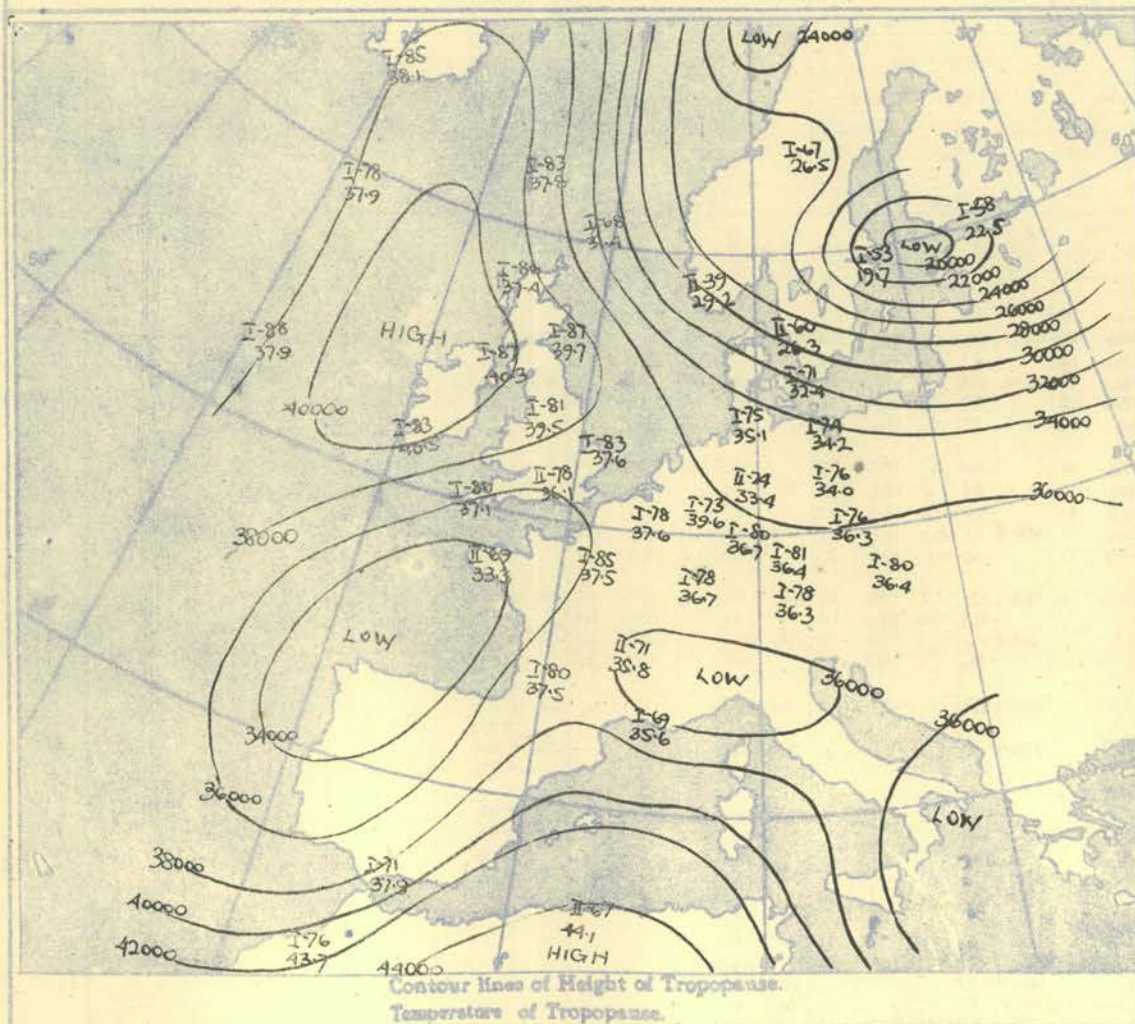


Gradient Wind Scale for Contours  
at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 20 10 knots



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



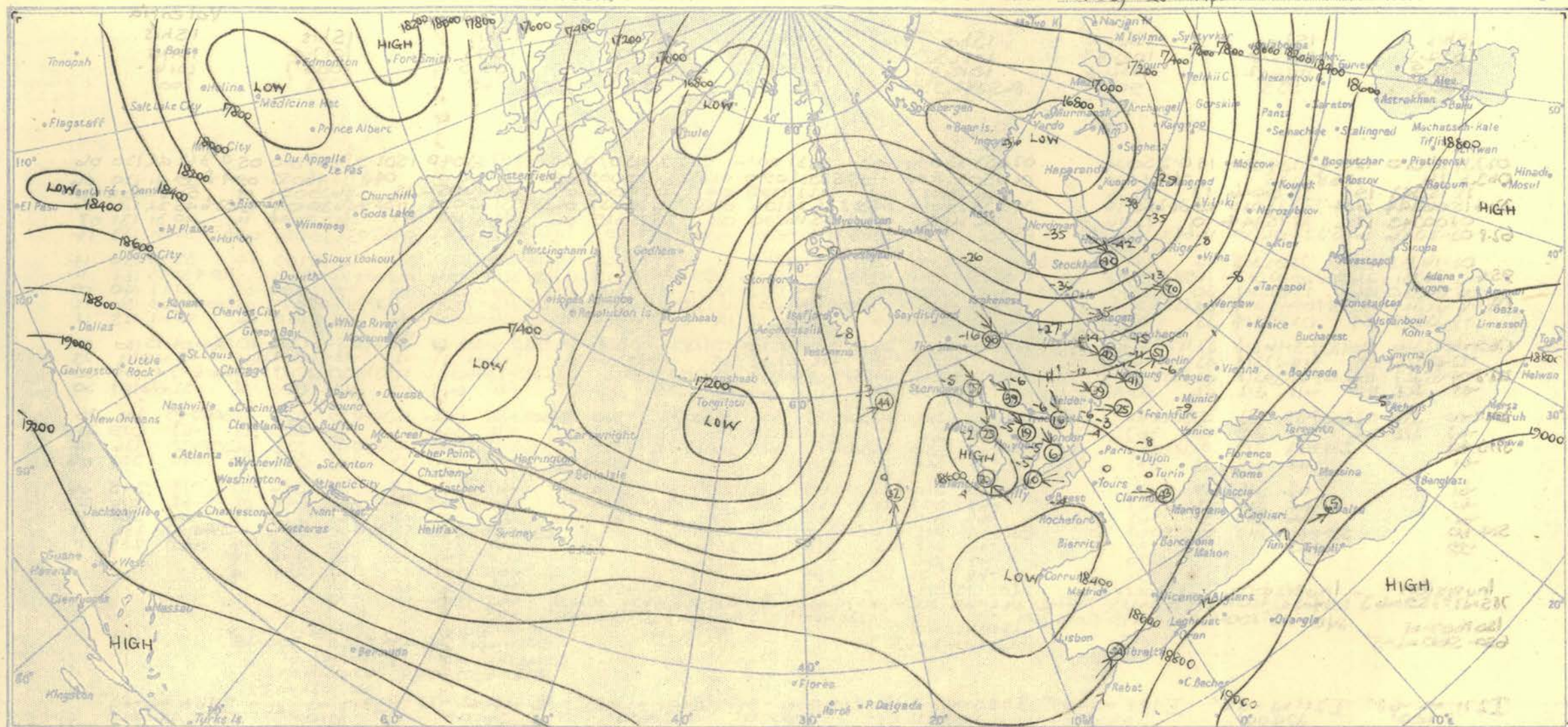
### NOTES ON THE AEROLOGICAL SITUATION.

Pronounced warming by advection around the depression in Denmark Straits resulted in a pronounced warm ridge west of the British Isles.

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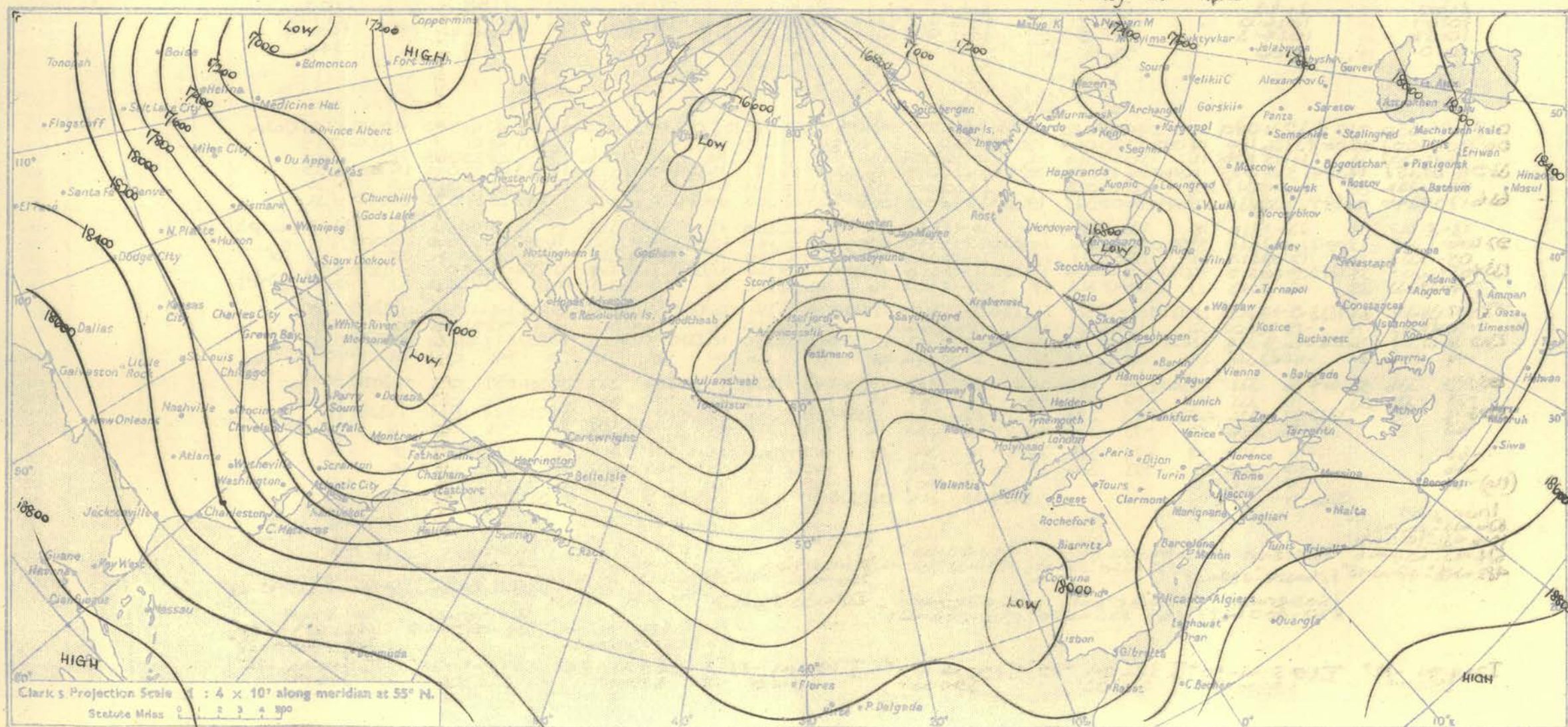
Meteorological Office, Air Ministry, Kingsway, London, W.C.2  
NELSON K. JOHNSON, K.C.B., D.Sc., Director





ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Friday 20<sup>th</sup> April

1951.





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

[illegible][illegible]

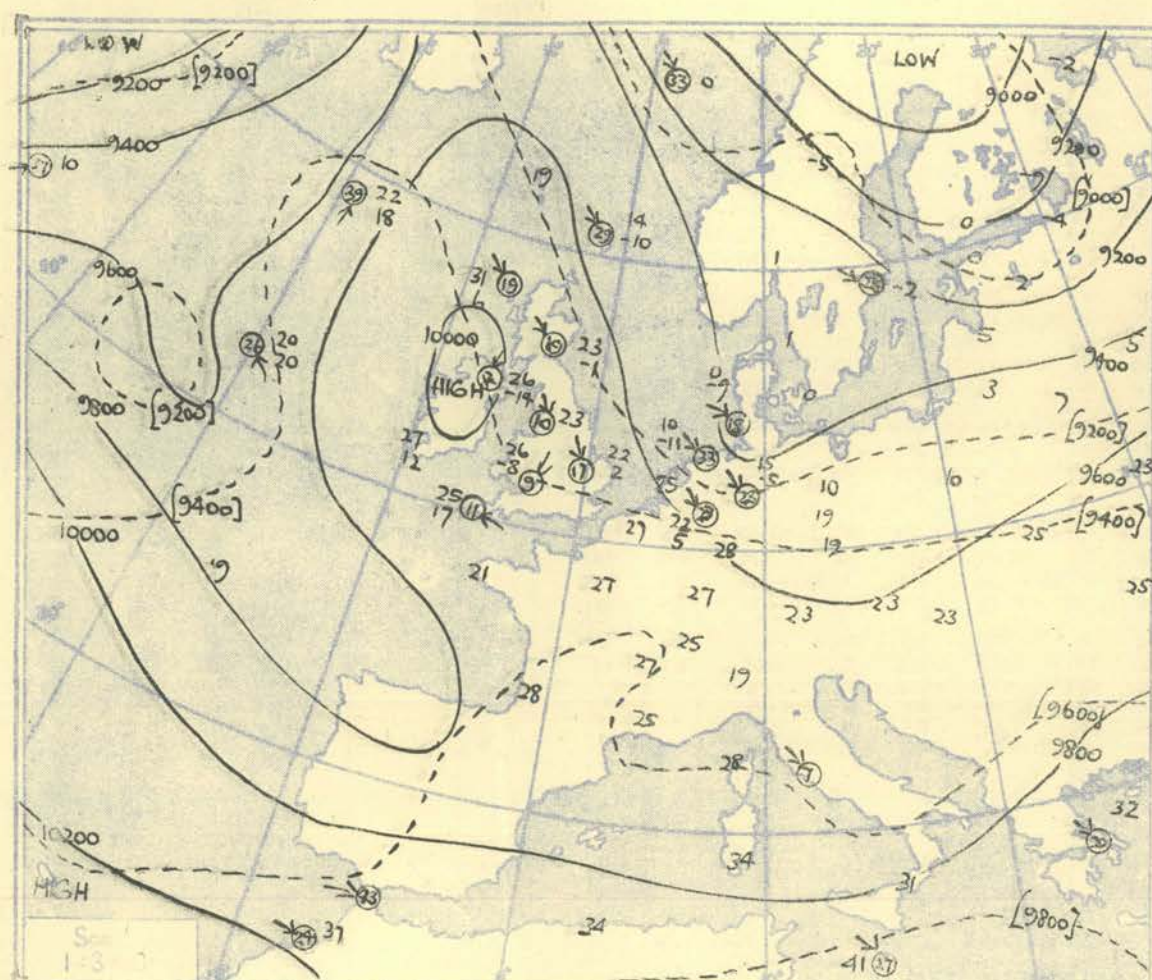


## RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTA				STATION																																																																																																																																																																																																																																																																																																				
Time M.S.L. Surf Freezing	03L		G.M.T.		03L		G.M.T.		03L		G.M.T.		03L		G.M.T.		03L		G.M.T.		03L		G.M.T.		03L		G.M.T.		03L		G.M.T.		Time M.S.L. Surf Freezing																																																																																																																																																																																																																																																																																																								
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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																																																																																																																																																																																																																																																																																																								
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Surf	02.7	31	24	300	01	00.4	27	31	081m	00.2	37	25	070	07	02.6	38	31	090	15	00.6	36	30	100	08	01.2	36	33	020	10	04.4	34	31	040	18	02.9	48	41	067	20	00.3	49	34	080	04	Surf																																																																																																																																																																																																																																																																																												
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650		11	11	338	37		16	10	309	19		17	01	328	21		19	01	317	03		19	04	334	15		17	02	333	19		20	06	025	10		23	07	096	13		25	08		650																																																																																																																																																																																																																																																																																												
600	136.1	06	17	336	43	138.7	11	05	316	15	139.3	61	10	328	24	139.4	12	01	296	05	138.8	12	07	339	16	138.1	09	09	330	18	138.8	12	10	023	14	139.0	15	04	007	11	139.6	17	00		600																																																																																																																																																																																																																																																																																												
550		02	23	332	49		04	05	316	20		03	16	322	22		06	13	329	10		06	09	340	16		03	10	331	20		05	16	360	14		07	11	111	08		09	08		550																																																																																																																																																																																																																																																																																												
500	180.5	10	27	331	50	183.8	05	19	310	28	183.3	05	23	328	25	184.7	02	26	336	11	184.1	04	31	340	21	183.0	06	18	334	18	183.9	04	23	346	09	184.3	02	15	126	08	185.1	00	16		500																																																																																																																																																																																																																																																																																												
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Tropopause I 202ms - 89° 37.800°																																	NR																																	I 197ms - 91° 38.600°																																	I 191ms - 90° 39.400°																																	I 184ms - 91° 40.300°																																	I 197ms - 99° 38.300°																																	I 216ms - 85° 37.000°																																	NR																																	I 214ms - 87° 36.300°																																	Tropopause																																
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTA				STATION																																																																																																																																																																																																																																																																																																				
Time M.S.L. Surf Freezing	09L		G.M.T.		09L		G.M.T.		09L		G.M.T.		09L		G.M.T.		09L		G.M.T.		09L		G.M.T.		09L		G.M.T.		09L		G.M.T.		Time M.S.L. Surf Freezing																																																																																																																																																																																																																																																																																																								
	1077.0	mb	1016.6	mb	1024.2	mb	1023.5	mb	1027.3	mb	1026.4	mb	1023.6	mb	1023.7	mb	1024.4	mb	1022.3	mb	1023.1	mb	1018.6	mb	1021.4	mb	1004.9	mb	1006.1	mb	1016.7	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. knots	ft/100	°F	°F	Dir. knots	ft/100	°F	°F	Dir. knots	ft/100	°F	°F	Dir. knots	ft/100	°F	°F	Dir. knots	ft/100	°F	°F	Dir. knots	ft/100	°F	°F	Dir. knots	ft/100	°F	°F	Dir. knots	mb																																																																																																																																																																																																																																																																																																								
Surf	02.7	34	24	Caln	00.4	41	32	Caln	06.2	41	31	130	05	02.6	42	34	090	15	00.6	42	35	110	10	01.2	43	36	055	10	04.4	44	34	060	15	02.9	46	38	100	10						Surf																																																																																																																																																																																																																																																																																													
1000	07.2	31	20		06.6	38	29		07.1	35	27	130	06	06.3	41	34			06.5	39	31	107	15	06.2	41	34	053	20	05.7	40	33		04.5	46	39	117	35						1000																																																																																																																																																																																																																																																																																														
950		24	15	331	06		34	25			29	24	080	04		35	30	107	18		32	26	106	19		34	28	054	18		31	27	067	18		52	44	113	21					950																																																																																																																																																																																																																																																																																													
900	34.4	17	09	339	06	34.5	31	22		34.7	23	20	060	08	34.3	36	28	115	09	34.1	30	20	096	16	34.0	27	24	046	16	33.6	38	17	062	16	33.3	49	40	111	12					900																																																																																																																																																																																																																																																																																													
850		15	09	349	13		30	05			28	06	035	12		34	17	146	07		36	17	057	08		31	05	018	15		38	18	035	11		42	36	112	04					850																																																																																																																																																																																																																																																																																													
800	64.4	22	06	348	12	65.3	32	02		65.3	30	14	358	14	65.4	37	09	152	08	65.2	34	12	353																																																																																																																																																																																																																																																																																																																		



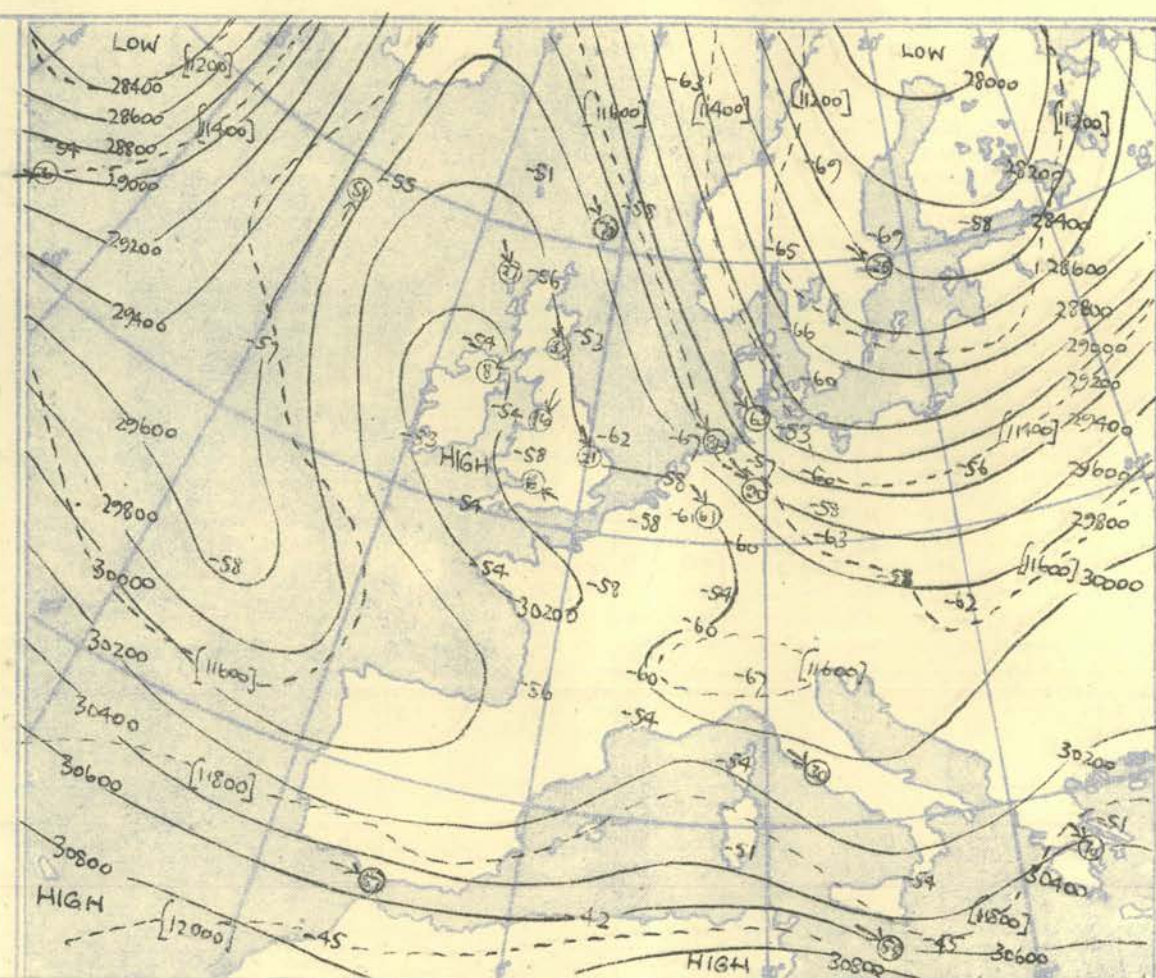
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



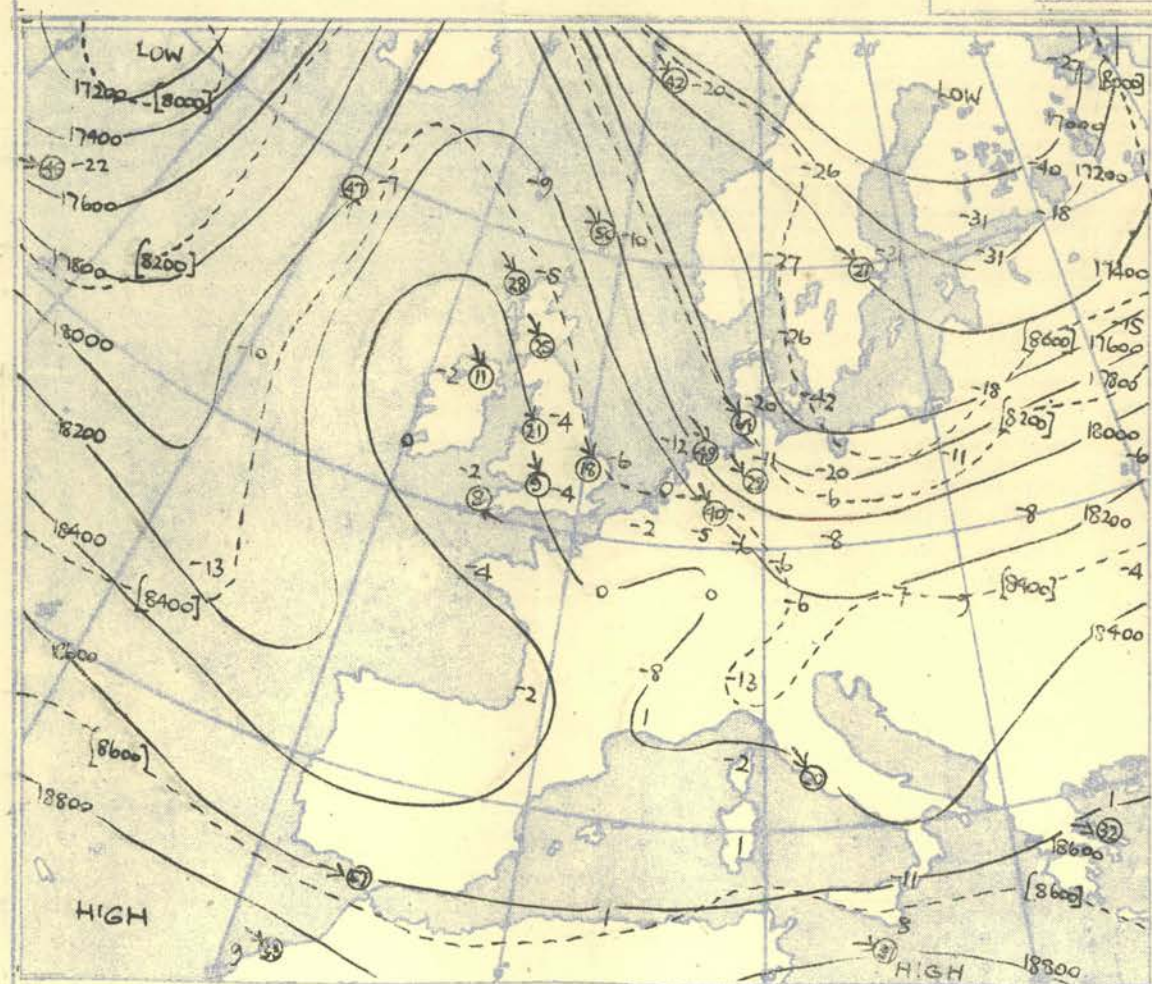
The continuous lines are contour lines of the 700 mb. surface  
The dotted lines are isopleths of the thickness of the layer 500 - 700 mb.

Gradient Wind Scale for Contours  
at intervals of 200 ft. at Lat. 54° N.

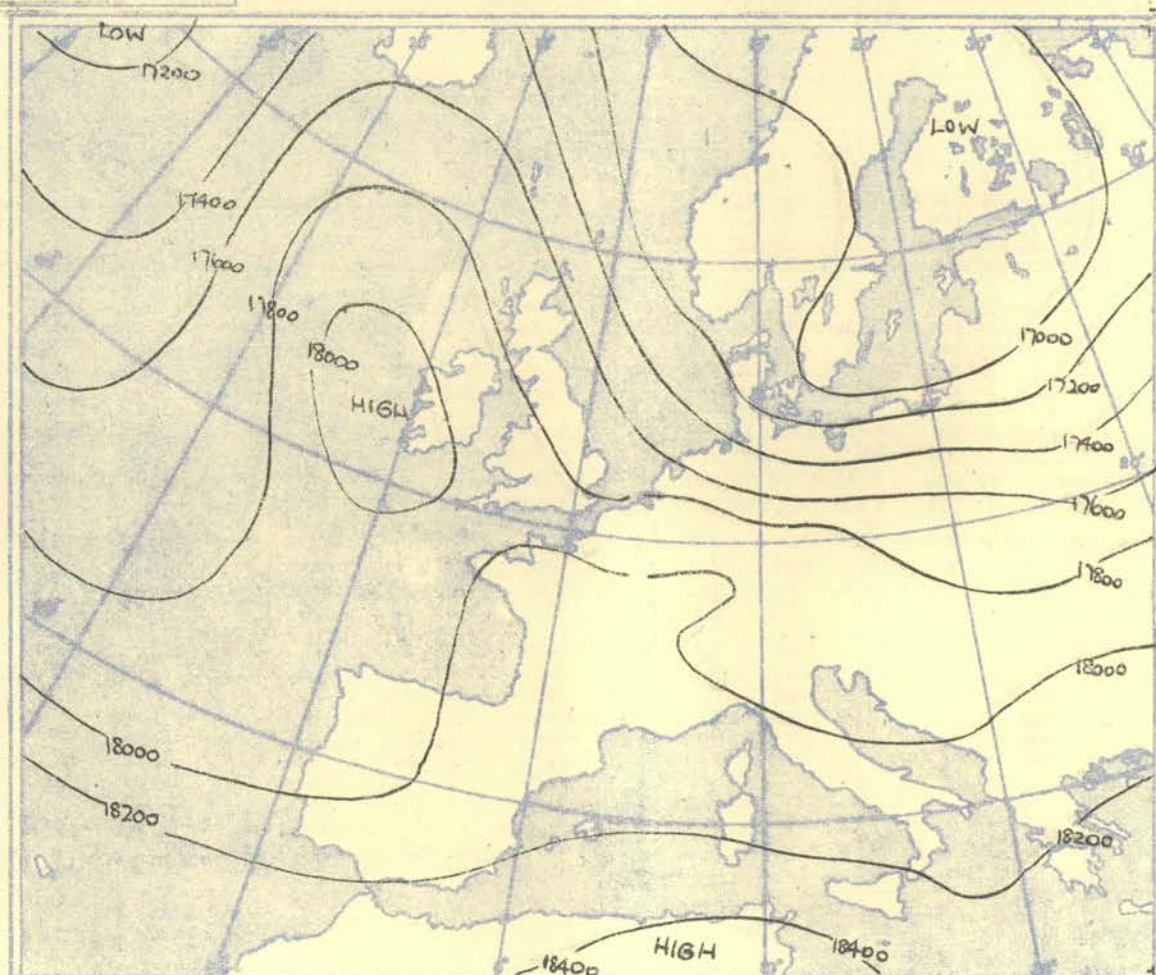
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The continuous lines are contour lines of the 300 mb. surface  
The dotted lines are isopleths of the thickness of the layer 500 - 300 mb.



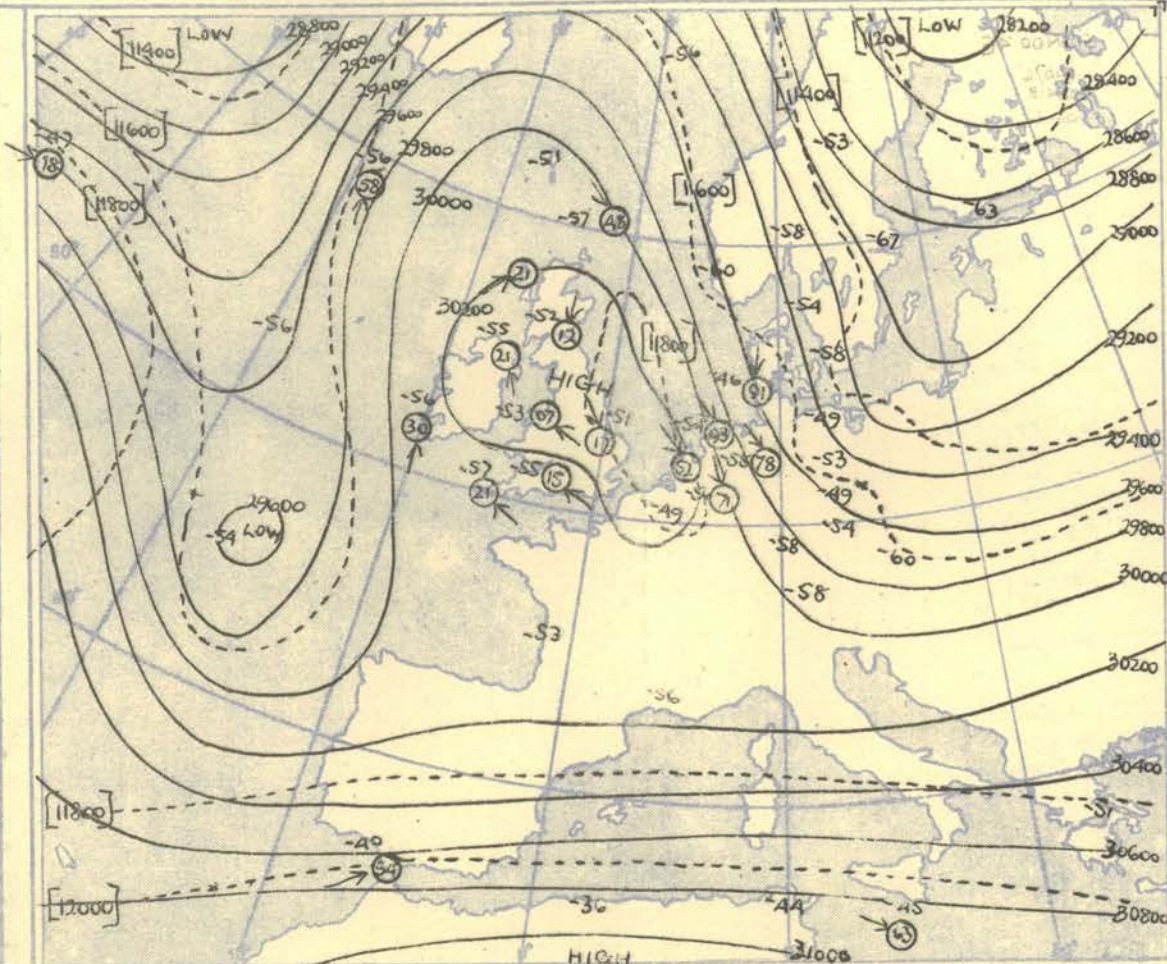
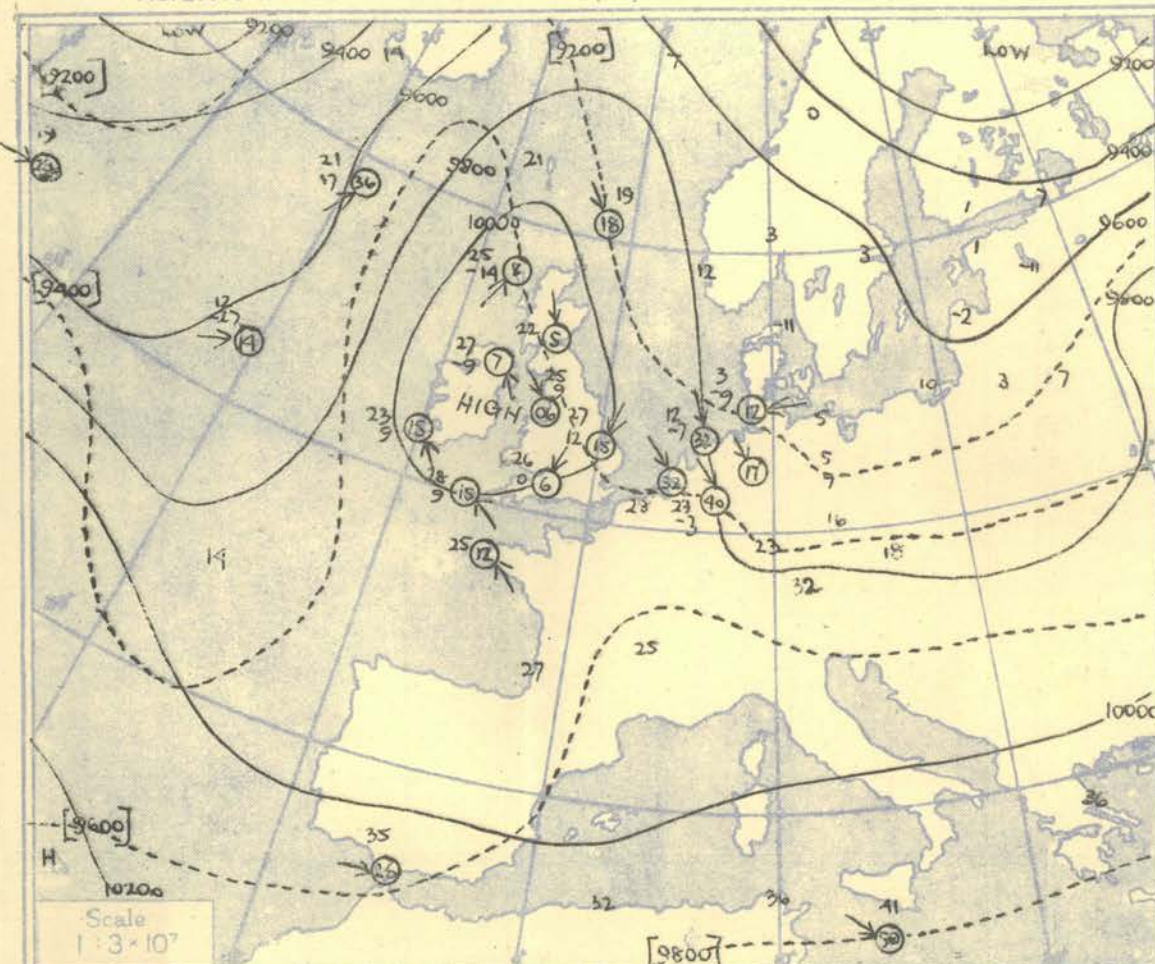
The continuous lines are contour lines of the 500 mb. surface  
The dotted lines are isopleths of the thickness of the layer 700 - 500 mb.



Isopleths of Thickness 500 - 1000 mb.



Page 4. 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.

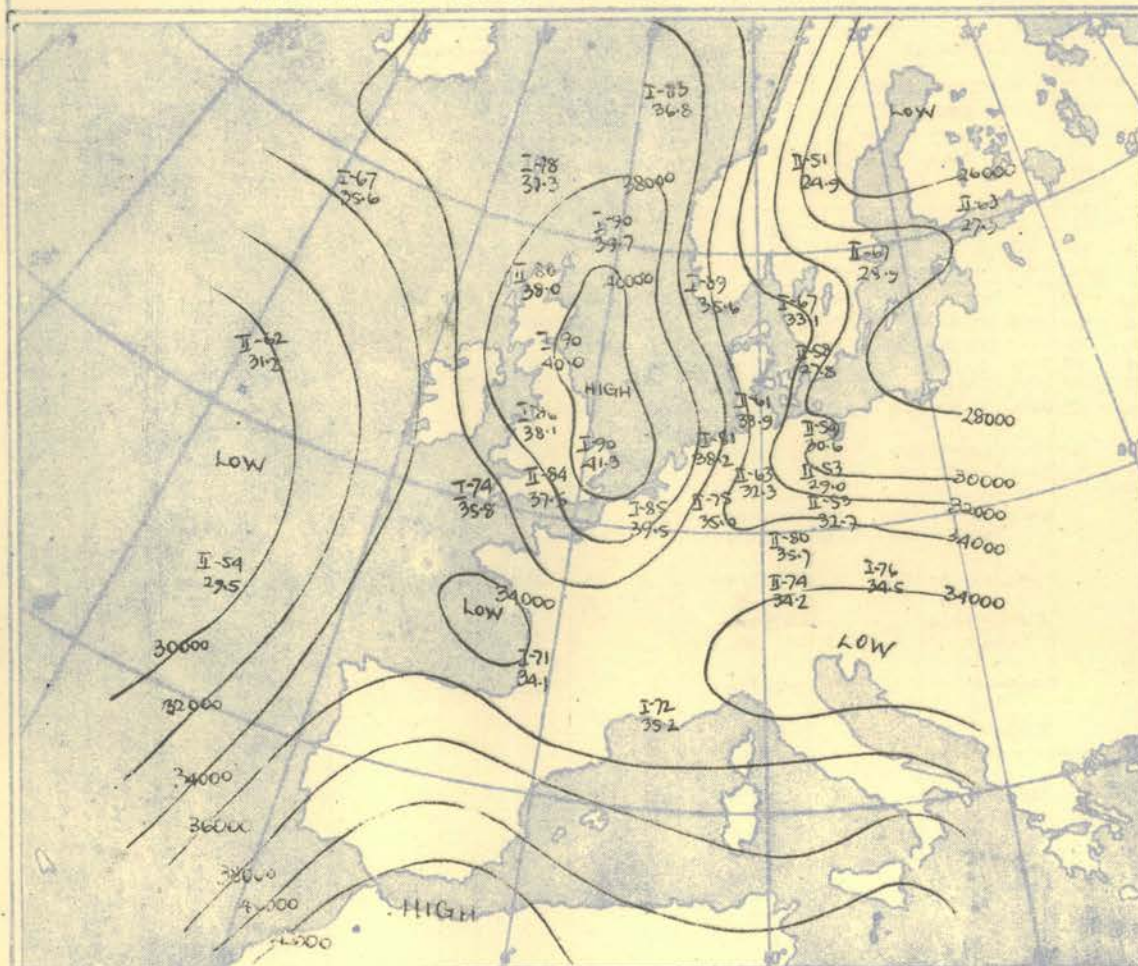


The continuous lines are contour lines of the 700 mb. surface.  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

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 warm ridge extending from France to Ireland moved slowly across the western districts of Great Britain. The cold trough in eastern Europe intensified somewhat whilst the Atlantic trough shrank owing to warm advection associated with the developing depression in the Atlantic.

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



## AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

Pressure				Time				M.S.L.				Surf				Freezing			
mb	ft./100	Temp.	Dew	mb	ft./100	Temp.	Dew	mb	ft./100	Temp.	Dew	mb	ft./100	Temp.	Dew	mb	ft./100	Temp.	Dew
Surf	03.1	44	36																
1000	06.2																		
950																			
900	34.0	27	21																
850		37	10																
800	65.0	35	12																
		32	06																
750																			
700	10.1	28	17																
650		20	10																
600	14.1	11																	
550		06																	
500	18.6	-03																	
450		-14																	
400	23.9	-25																	
350		-39																	
300	30.3	-56																	
250																			
200																			
170																			

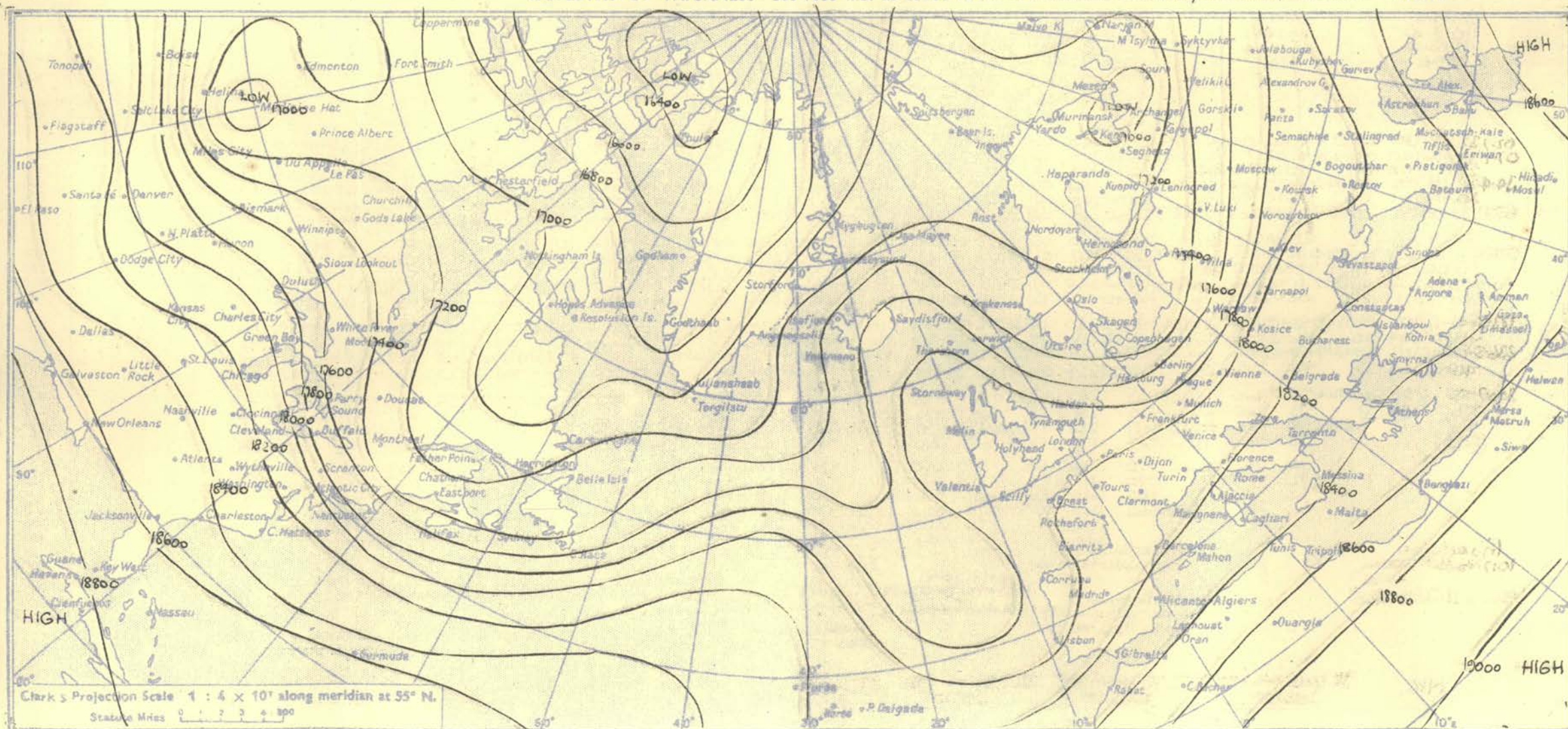
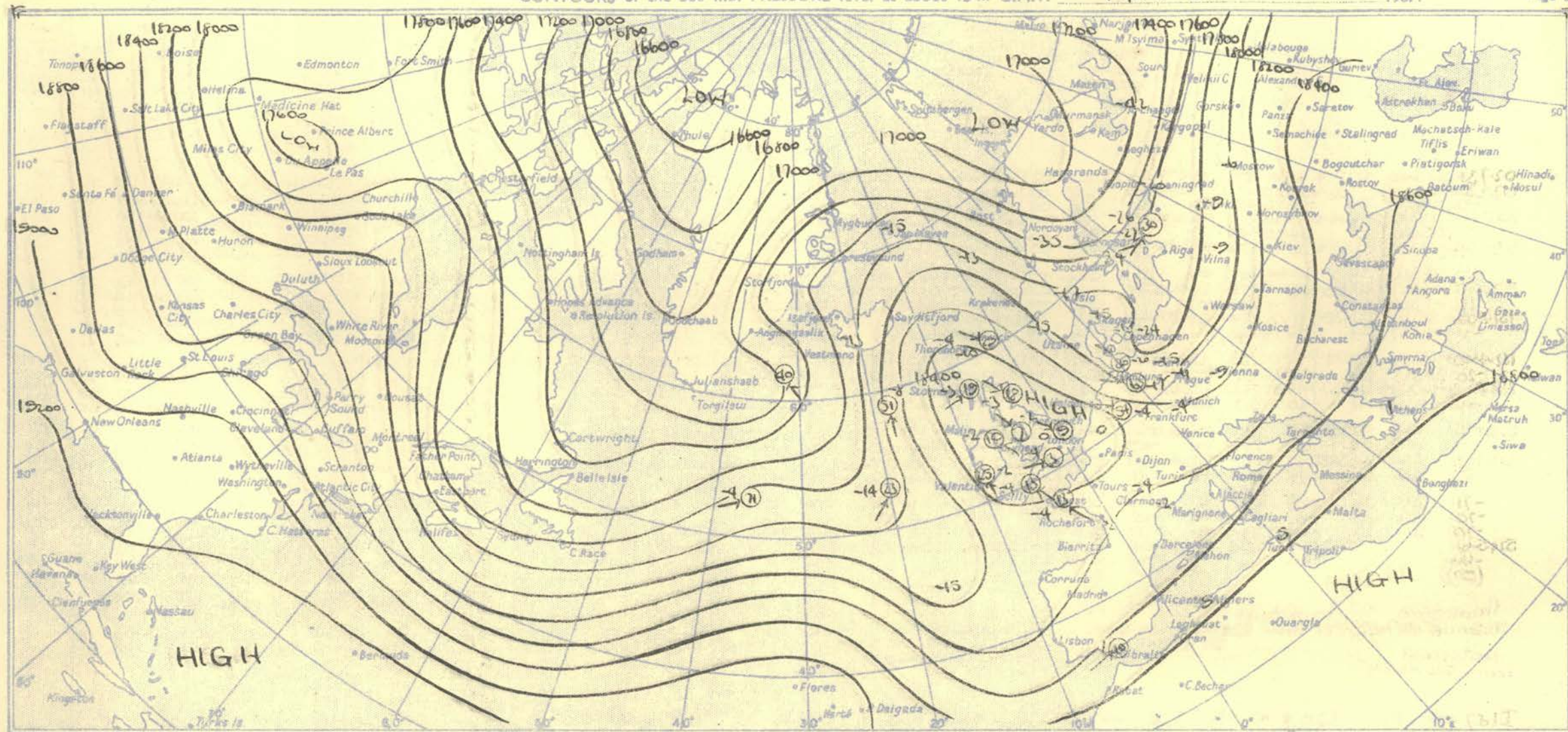
## DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

[illegible]

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

Ship	WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				CUMULUS				CUMULUS				CUMULUS				CUMULUS				Ship										
Lat/Long	59.2 N. 19.5 W.				59.2 N. 19.6 W.				59.3 N 19.5 W				59.4 N 19.4 W.				62.5 N. 20.0 W				62.5 N 20.0 W				62.5 N. 20.0 W				62.5 N 20.0 W				Lat/Long										
Pressure	Time	03L. G.M.T.			Time	07L. G.M.T.			Time	15L. G.M.T.			Time	21L. G.M.T.			Time	03L. G.M.T.			Time	09L. G.M.T.			Time	15L. G.M.T.			Time	21L. G.M.T.			G.M.T.										
	M.S.L.	1008 mb			M.S.L.	1009 mb			M.S.L.	1011 mb			M.S.L.	1010 mb			M.S.L.	1011 mb			M.S.L.	1012 mb			M.S.L.	1014 mb			M.S.L.	1015 mb			mb										
	Surf	1008 mb			Surf	1009 mb			Surf	1011 mb			Surf	1011 mb			Surf	1011 mb			Surf	1012 mb			Surf	1014 mb			Surf	1015 mb			mb										
	Freezing	800 mb			Freezing	800 mb			Freezing	900 mb			Freezing	880 mb			Freezing	850 mb			Freezing	890 mb			Freezing	880 mb			Freezing	880 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	18 17	160	24		45 44	300	12		45 35	300	06		46 37	245	07		46 44	340	25		47 42	330	12		48 40	280	08		48 41	150	04	Surf											
1000	02.2	47 46	150	27	02.3	44 43	300	18	02.8	44 35	277	05	03.0	44 37	244	07	03.0	44 43	336	20	03.4	45 40	325	13	04.0	46 37	280	08	04.1	46 39	150	04	1000										
950		44 44	159	31		41 40	278	17		39 34	275	05		38 32	245	08		38 37	321	19		38 30	299	14		38 29	278	09		40 33			950										
900	30.7	41 41	166	36	30.6	39 35	214	15	31.0	32 27	275	06	31.1	33 23	245	12	31.1	35 35	304	18	31.5	31 20	279	15	32.1	33 21	276	09	32.4	34 26			900										
850		37 37	180	38		35 33	201	16		31 21	280	10		30 11	245	13		32 32	307	18		28 10	320	20		28 11	274	10		29 23			850										
800	62.0	32 31	185	43	61.7	32 31	211	25	61.9	24 18	242	09	61.8	25 07	245	13	62.1	28 28	306	12	62.2	26 00	325	12	62.9	23 01	272	10	63.2	24 18			800										
750		28 25	183	43		29 28	200	35		24 20	187	23		19 05	245	13		24 24	230	10		20 02	319	17		18 10	270	09		19 14			750										
700	96.7	22 18	190	39	96.5	24 23	183	42	96.3	21 17	185	36	95.9	14 13	243	15	96.7	20 20	147	26	96.5	12 02	240	19	97.0	12 27	250	14	97.4	14 01			700										
650		14 12	178	26		18 16	168	46		16 12	185	47		09 24	239	17		14 14				11 05	210	17		08 37	227	20	66.0	09 09			650										
600	135.7	08 03	178	40	135.7	11 08	174	42	135.4	10 06	182	49	134.4	03 29	232	22	135.8	07 07			135.2	04 04	206	14	135.4	03 11	220	19					600										
550		00 05	177	43		03 00	189	40		04 02	178	47		05 32	209	30		00 00				08 10	193	16		05 11	211	20					550										
500	180.3	09 45	176	41	180.7	9 49	175	48	180.3	08 16	181	51	178.6	14 37	197	42	180.4	10 10			179.6	12 20	185	17	179.7	14 22	23					Balloon Burst.	500										
450		21 26	178	48		19 23	182	48		19 29	181	52		23 38	191	57		22 23				21 31				25 23	27						450										
400	232.6	30 40	184	54	233.3	28 33	180	49	232.7	31 42	180	57	230.5	35 45	179	77	232.5	34 40			231.8	33 44			231.4	36 46							400										
350		39 53	193	66		40 46	183	59		44 18	180	61		49 176	82			45				47				46							350										
300	296.8	55 193	51	297.5	54 178	64	296.4	56 178	58	293.6	59 189	79	296.1	47 189	79	296.1	47 189			295.1	58 69			295.1	56 62							300											
250		71 191	48		65 172	61		63 183	58		61 185	55		72 185	55																		250										
200	381.0	79 168	45	382.7	70 181	40	380.4	60 193	40	380.1	57 193	34	380.1	75 201	29					379.5	77 68											200											
170		64 147	24		58 182	25		56 203	36		58 201	29																					170										
150	441.4	60 147	25	444.0	58 182	24		52 206	27		53 223	33								439.1	68 68												150										
130		62 155	17		54 182	21		55 216	27		57 234	37																					130										
110		67 120	08		58 187	21		56 220	23		60 228	22																					110										
100	527.1	66 531.3	58		58 252	21		56 214	12		59 210	12								523.8	67 67												100										
90					60 259	21		54 217	4		61 201	08																					90										
80																																		80									
70																																		70									
60																																		60									
Isothermal				Isothermal				Isothermal				Isothermal				Isothermal				Isothermal				Isothermal				Isothermal				Isothermal				Isothermal							
750-737 mb 28°				873-834 mb 35°				(68mb)-56				Inversion				883mb-850mb 28°				Inversion				703mb12°-672mb14°																			
Tropopause				Tropopause				Tropopause				Tropopause				Tropopause				Tropopause				Tropopause				Tropopause				Tropopause				Tropopause				Tropopause			
I 204 mb -82°				I 225 mb -72°				I 226 mb -67°				I 280 mb -63°				I 227 mb -77°				I 208 mb -79°				I 276 mb -62°				N.R.															
37 700'				35 800'				35 600'				30 900'				35 400'				37 100'				31 200'																			







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 (Pressure)	15hrs 1027.5 1017.1 985	15hrs 1024.7 1013.1 974	15hrs 1027.6 1016.7 818	15hrs 1023.9 1014.4 921, 761	15hrs 1023.7 1012.7 750	15hrs 1024.3 1019.6 753	15hrs 1020.3 1004.8 769	15hrs 1018.2 1007.5 791	15hrs 1017.8 1016 760	Time M.S.L. Surf (Pressure)
Pressure mb	Height ft./100 Temp. °F. °C Dew °F. °C Wind Dir. Vel. knots	Height ft./100 Temp. °F. °C Dew °F. °C Wind Dir. Vel. knots	Height ft./100 Temp. °F. °C Dew °F. °C Wind Dir. Vel. knots	Height ft./100 Temp. °F. °C Dew °F. °C Wind Dir. Vel. knots	Height ft./100 Temp. °F. °C Dew °F. °C Wind Dir. Vel. knots	Height ft./100 Temp. °F. °C Dew °F. °C Wind Dir. Vel. knots	Height ft./100 Temp. °F. °C Dew °F. °C Wind Dir. Vel. knots	Height ft./100 Temp. °F. °C Dew °F. °C Wind Dir. Vel. knots	Height ft./100 Temp. °F. °C Dew °F. °C Wind Dir. Vel. knots	Pressure mb
Surf	02.7 36 23 200	02.0 4 46 21 190	05.0 2 46 32 110	10.0 2 6 50 33 130	12.0 6 51 31 100	08.0 1 2 52 39 060	16.0 4 4 53 34 090	17.0 2 9 49 38 120	25.0 2 58 43 100	Surf
1000	07.2 35 21	06.6 44 30	07.3 40	13.6 09 06 42 27 128	15.0 6 4 47 28 110	18.0 6 3 45 25 065	15.0 5 7 52 34 090	16.0 4 9 48 37 111	39.0 4 8 50 41 100	1000
950	26 16 221	06 39 16 148	07 30	15.2 08 26 24 131	17 40 24 114	19 35 28 070	14 42 27 074	16 35 28 106	38 48 50 41 100	950
900	34.5 18 112 80	06 34 6 33 16 170	08 35 0 25	18.0 05 24 3 38 16 140	18 34 4 32 21 103	14 34 4 28 24 071	14 34 0 34 23 076	26 35 7 46 32 114	11 33 6 44 36 137	900
850	22 05 322	07 34 00 180	09 23	10.6 02 39 5 142	06 26 13 048	10 30 19 060	13 38 03 078	12 39 20 108	07 41 21 135	850
800	64.7 24 -11 333	12 65 6 33 01 153	08 65 8 31	03.1 02 36 5 166	08 65 5 24 12 041	06 65 2 25 -11 039	13 65 1 35 04 066	10 65 2 35 28 072	15 65 2 38 23 126	800
750	23 -4 326	16 30 -4 211	06 27	35.6 03 31 -11 168	07 32 09 009	06 31 -10 025	15 31 04 064	08 32 25 057	10 31 17 133	750
700	99.0 12 01 327	18 100 025 -14 229	08 100 5 22	34.5 05 100 6 27 -9 167	07 100 4 25 09 243	06 100 2 27 -12 017	15 100 0 26 00 052	06 100 1 28 03 116	18 100 2 13 01 144	700
650	12 -1 328	15 17 -1 238	07 17	34.1 09 26 -3 163	03 18 04 005	06 22 -13 011	13 19 00 010	05 23 40 115	16 17 05 150	650
600	137.8 06 -5 330	22 139 7 11 -3 274	09 139 6 11	34.1 08 140 0 3 -4 164	13 9 7 12 -5 014	10 13 9 7 15 -11 343	10 13 9 4 12 -3 359	09 13 9 7 13 -18 128	11 13 9 4 10 03 164	600
550	-1 -12 327	24 05 -14 263	16 04	33.6 16 06 -16 168	05 12 -11 013	09 07 -15 314	09 04 -12 314	09 05 -10 132	10 04 -4 165	550
500	161.4 -10 -21 323	29 184 7 -3 -22 250	19 184 7 -3	34.3 18 185 2 -2 -29 140	10 184 9 -2 -19 329	07 185 100 -2 12 37	09 184 5 -4 -20 264	05 184 8 -4 -20 139	13 184 5 -2 -13 166	500
450	-20 -31 323	36 -13 -26 254	18 -12	35.5 21 -13 -26 147	10 -13 -32 037	06 -10 -30 305	10 -15 -32 251	02 -14 -28 133	14 -13 -25 168	450
400	234.8 28 -46 330	43 257 7 -27 38 235	17 257 8 -23	35.3 26 258 2 -26 46 152	14 257 9 -25 40 046	06 258 5 -23 43 329	11 257 4 -27 44 179	03 257 8 -27 40 140	16 257 6 -25 38 170	400
350	-40 -60 321	48 -40 51 218	15 -38	33.7 13 -40 -35 140	16 -37 -53 093	05 -34 54 343	16 -41 085	06 -42 135	13 -32 49 116	350
300	295.9 57 324	48 301 5 56	218	00.5 12 302 5 55	14.7 21 302 5 53	17 07 303 5 51	35.2 17 301 6 55	10.5 15 301 8 57	13.2 21 301 7 56	300
250	-71 307	44 -73	216	33.0 19 -70	16.4 30 -71	12.7 10 -67	22 22 31 17	16 23 28 129	23 27 30 174	250
200	382.5 45 326	34 385 5 87	221	00.3 08 386 5 84	17.0 22 386 5 85	09.4 07 386 5 83	23 383 4 84	06.0 07 386 3 73	13.4 28 386 7 69	200
170	-83 326	32 -74	261	31.0 10 -71	22.4 09 -78	21.6 09 -83	34.0 16	-70 285	16 -67	174 33
150	-71 324	31 -67	273	30.9 15 -67	26.5 12 -66	29.2 16 -73	32.5 21 -63	-62 25.6 09	-59 26.1 09	150
130	-70 322	30 -63	291	31.8 18 -63	25.4 09 -65	30.6 16 -67	31.6 22 -63	-68 25.6 10	-61 25.6 10	130
110	-70 321	23 -64	294	31.8 18 -63	29.8 14 -67	30.8 15 -68	31.6 21 -63	-68 25.6 10	-61 25.6 10	110
100	514.5 61 (57)	52 55 63	293	31.4 20 55 10 61	79.8 10 53 0 65	10 53 0 65	30.1 15 53 0 69	31.6 21 -63	31.6 21 -63	100
90	-66	-63	-68	31.5 22 -68	32.2 22 -68	32.1 17 -69	31.1 20 -70	31.6 21 -63	31.6 21 -63	90
80	-67	-63	-68	31.2 22 -68	32.3 20 -69	32.3 14 -69	31.4 23 -69	31.6 21 -63	31.6 21 -63	80
70	-67	-63	-68	31.3 20 -68	-69	-69	-69	31.6 21 -63	31.6 21 -63	70
60	-68	-63	-68	31.3 20 -68	-69	-69	-69	31.6 21 -63	31.6 21 -63	60
Inversion	865 m 14.2 847 m 25	Inversion	888 m 32.1 850 m 35	Inversion	890 m 32.1 841 m 37	Inversion	883 m 25.2 81 m 33	Inversion	895 m 32.1 841 m 37	Inversion
Isothermal	828-752 m 24°	Isothermal	835-752 m 24°	Isothermal	835-752 m 24°	Isothermal	870-850 m 36°	Isothermal	870-850 m 36°	Isothermal
Tropopause	1187 m -90° 35700'	1204 m -88° 38000'	1187 m -90° 40000'	1193 m -85° 39100'	1205 m -86° 39100'	1177 m -90° 41300'	1210 m -84° 37800'	1220 m -74° 35000'	1260 m -71° 33200'	Tropopause
STATION	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	STATION	
Time M.S.L. Surf (Pressure)	21hrs 1016.4 1006.5 990	21hrs 1022.4 1012.4 975	21hrs 1027.3 1016.3 810	21hrs 1023.3 1013.3 770	21hrs 1024.1 1012.1 716	21hrs 1025.0 1010.4 738	21hrs 1022.1 1005.6 750	21hrs 1019.1 1008.2 763	21hrs 1017.8 1016 760	Time M.S.L. Surf (Pressure)
Pressure mb	Height ft./100 Temp. °F. °C Dew °F. °C Wind Dir. Vel. knots	Height ft./100 Temp. °F. °C Dew °F. °C Wind Dir. Vel. knots	Height ft./100 Temp. °F. °C Dew °F. °C Wind Dir. Vel. knots	Height ft./100 Temp. °F. °C Dew °F. °C Wind Dir. Vel. knots	Height ft./100 Temp. °F. °C Dew °F. °C Wind Dir. Vel. knots	Height ft./100 Temp. °F. °C Dew °F. °C Wind Dir. Vel. knots	Height ft./100 Temp. °F. °C Dew °F. °C Wind Dir. Vel. knots	Height ft./100 Temp. °F. °C Dew °F. °C Wind Dir. Vel. knots	Height ft./100 Temp. °F. °C Dew °F. °C Wind Dir. Vel. knots	Pressure mb
Surf	02.7 32 27 180	04.0 4 43 36 calm	0.2 37 31 140	06.0 2 6 41 34 120	03.0 6 45 30 120	15.0 1 2 38 31 010	08.0 4 41 32 070	08.0 2 9 45 41 100	20.0 2 58 43 100	Surf
1000	07.1 33 16 143	06.0 6 44 38	2.6 35 29 122	06.0 6 42 34 144	13.0 6 5 42 27 116	24.0 6 7 26 29 063	18.0 5 8 41 31	05.0 1 45 40 115	36.0 4 8 50 41 100	1000
950	27 12 163	06 39 16 148	07 30	15.2 08 26 24 131	17 40 24 114	19 35 28 070	14 42 27 074	16 35 28 106	38 48 50 41 100	950
900	34.4 13 152	06 34 6 33 16 170	08 35 0 25	18.0 05 24 3 38 16 140	18 34 4 32 21 103	14 34 4 28 24 071	14 34 0 34 23 076	26 35 7 46 32 114	11 33 6 44 36 137	900
850	30 10 261	06 38 10 156	23	10.6 02 39 5 142	06 26 13 048	10 30 19 060	13 38 03 078	12 39 20 108	07 41 21 135	850
800	65.1 28 02 321	08 65 7								

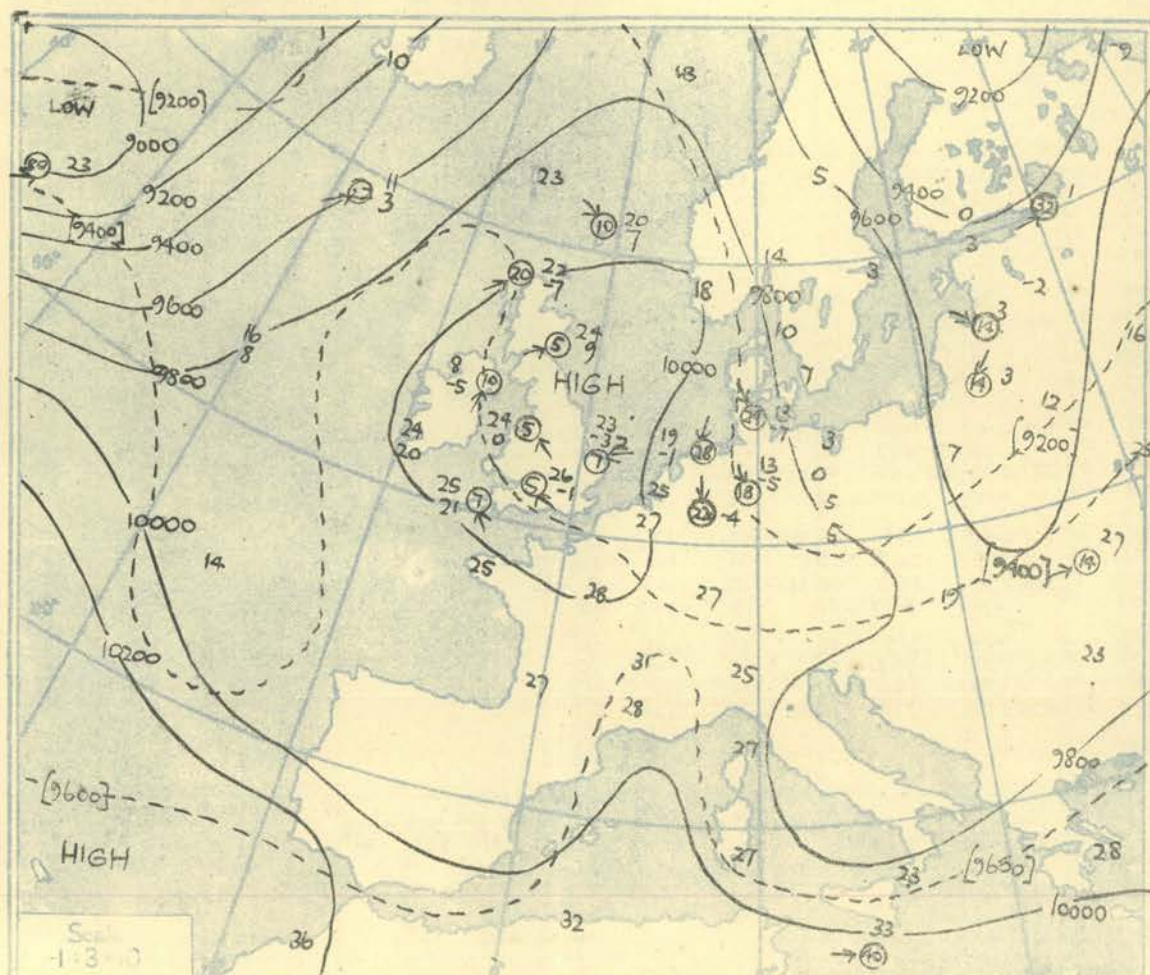


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[illegible]



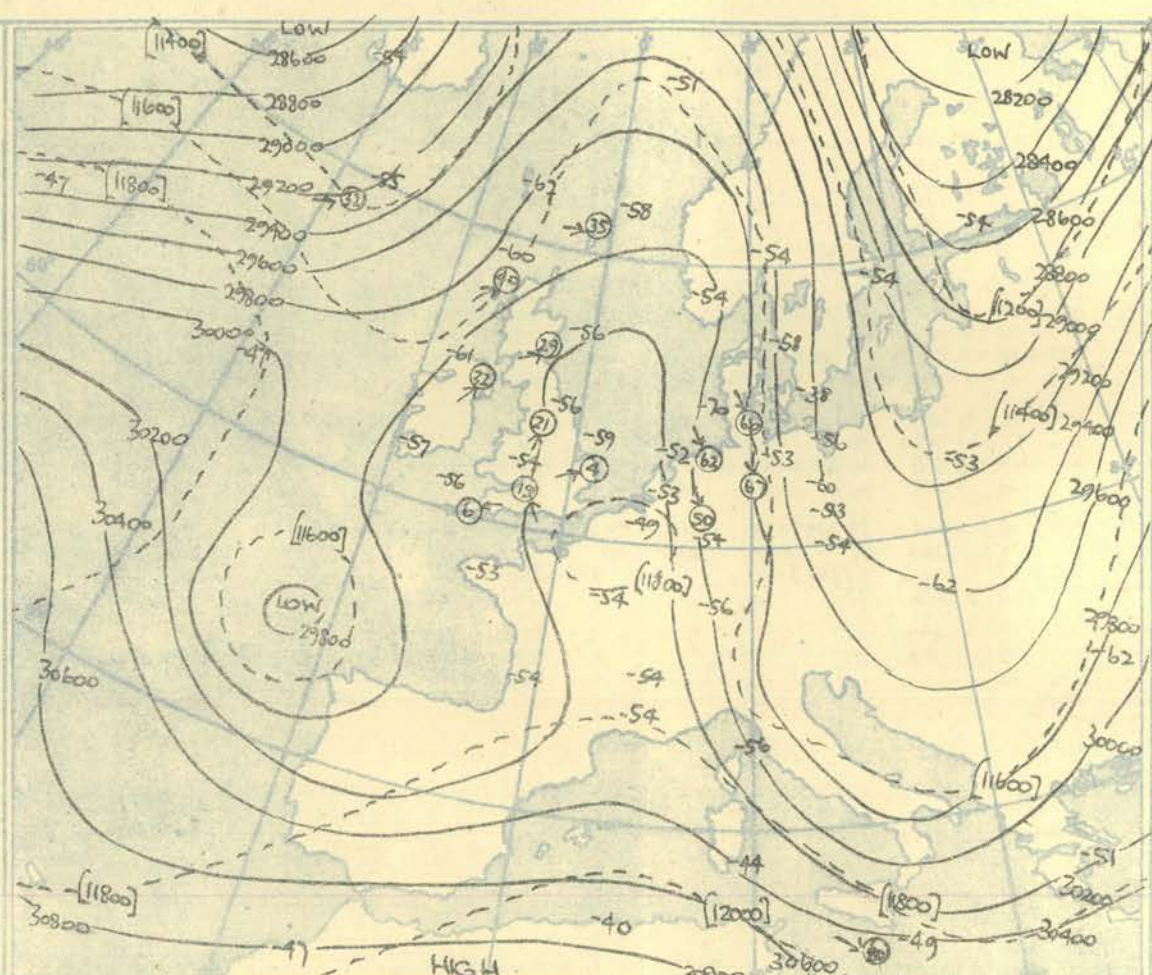
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



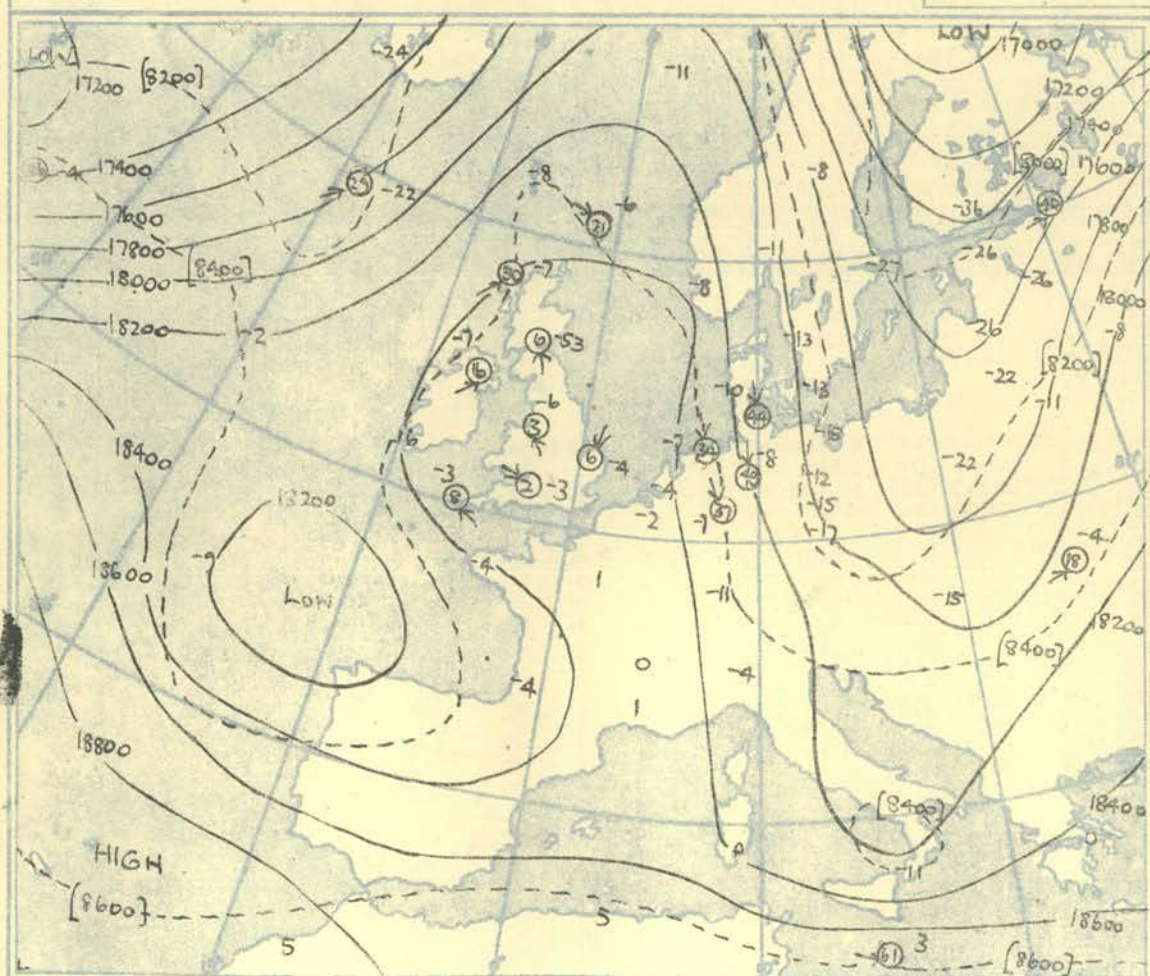
The continuous lines are contour lines of the 700 mb. surface  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

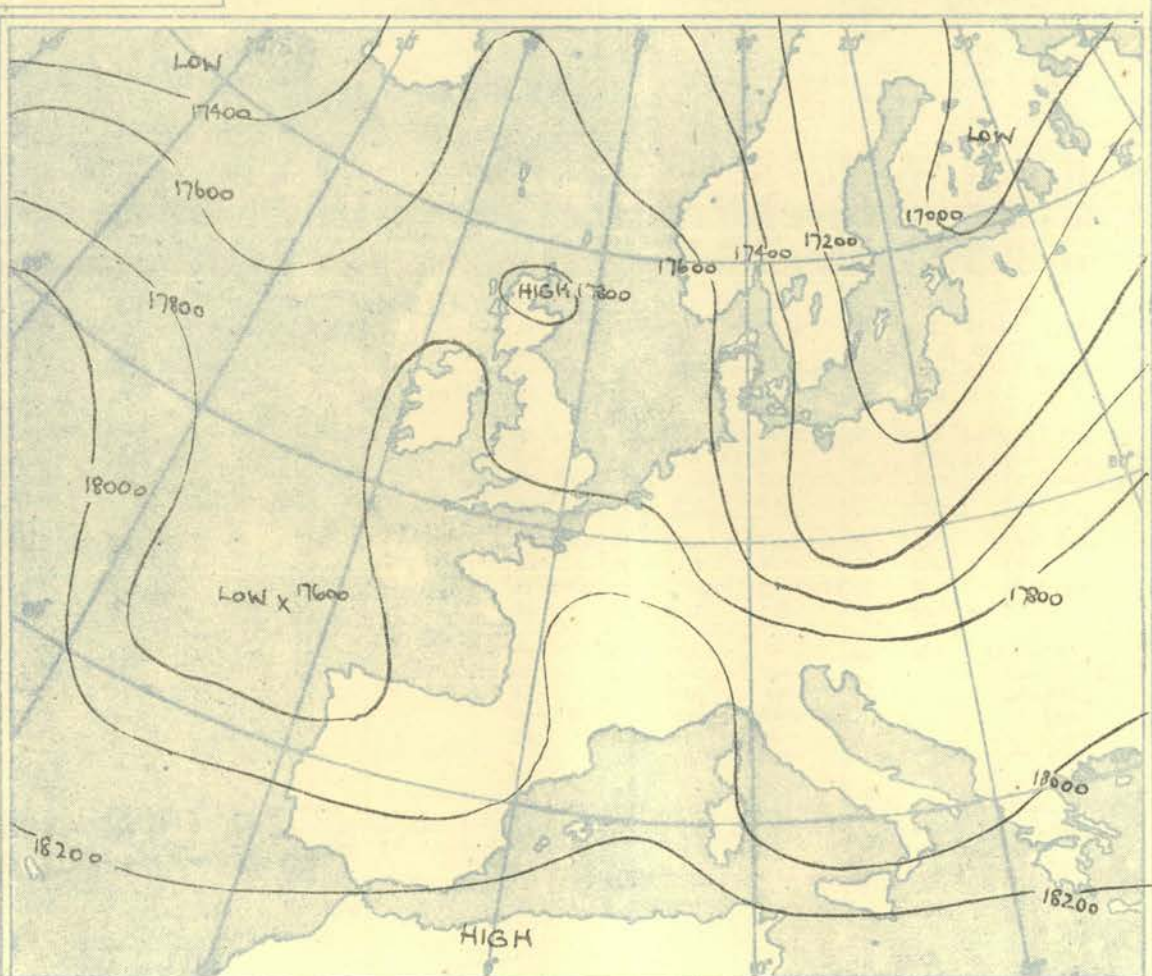
100 80 60 40 20 10 knots



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



The continuous lines are contour lines of the 300 mb. surface  
The dotted lines are isopleths of the thickness of the layer 700-300 mb.



Isopleths of Thickness 500-1000mb.



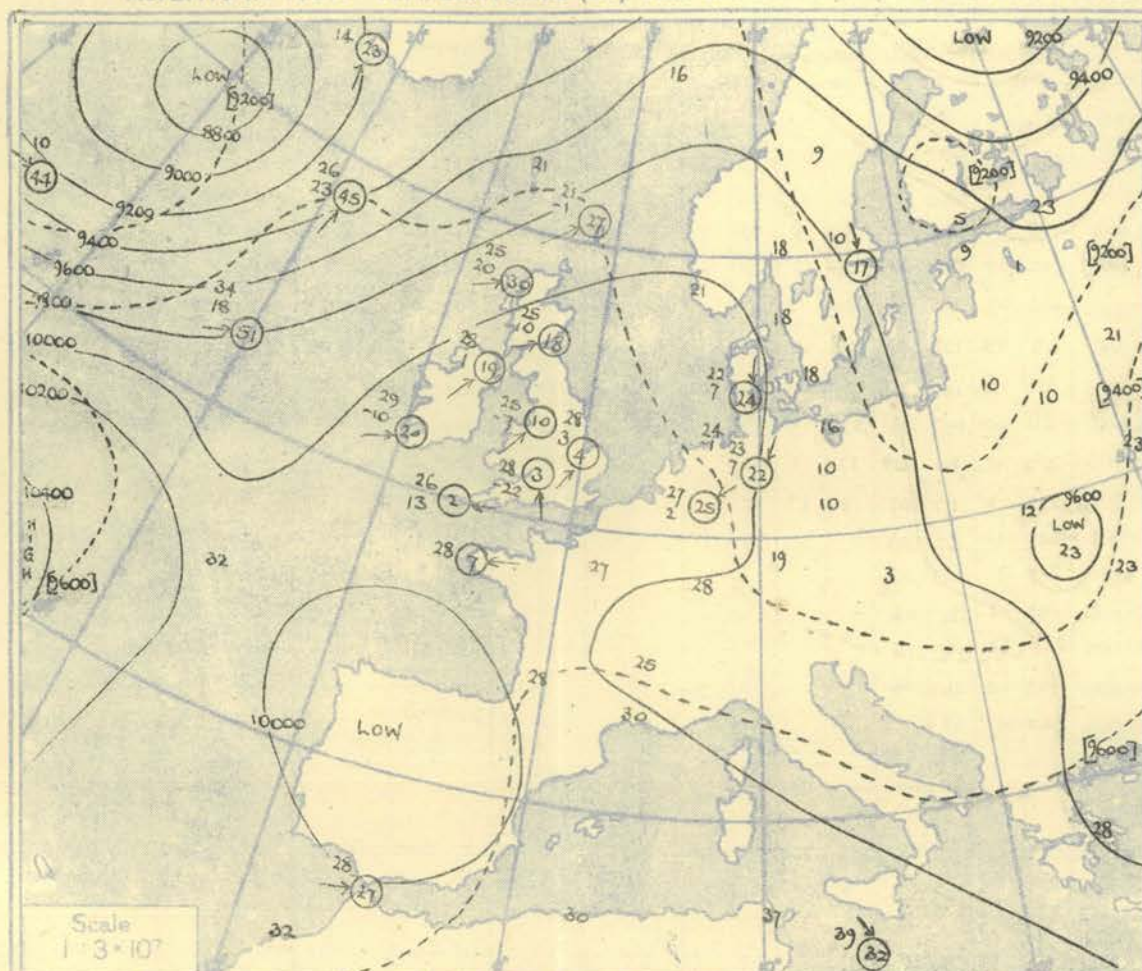
## DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

NEPHOSCOPE OBSERVATIONS

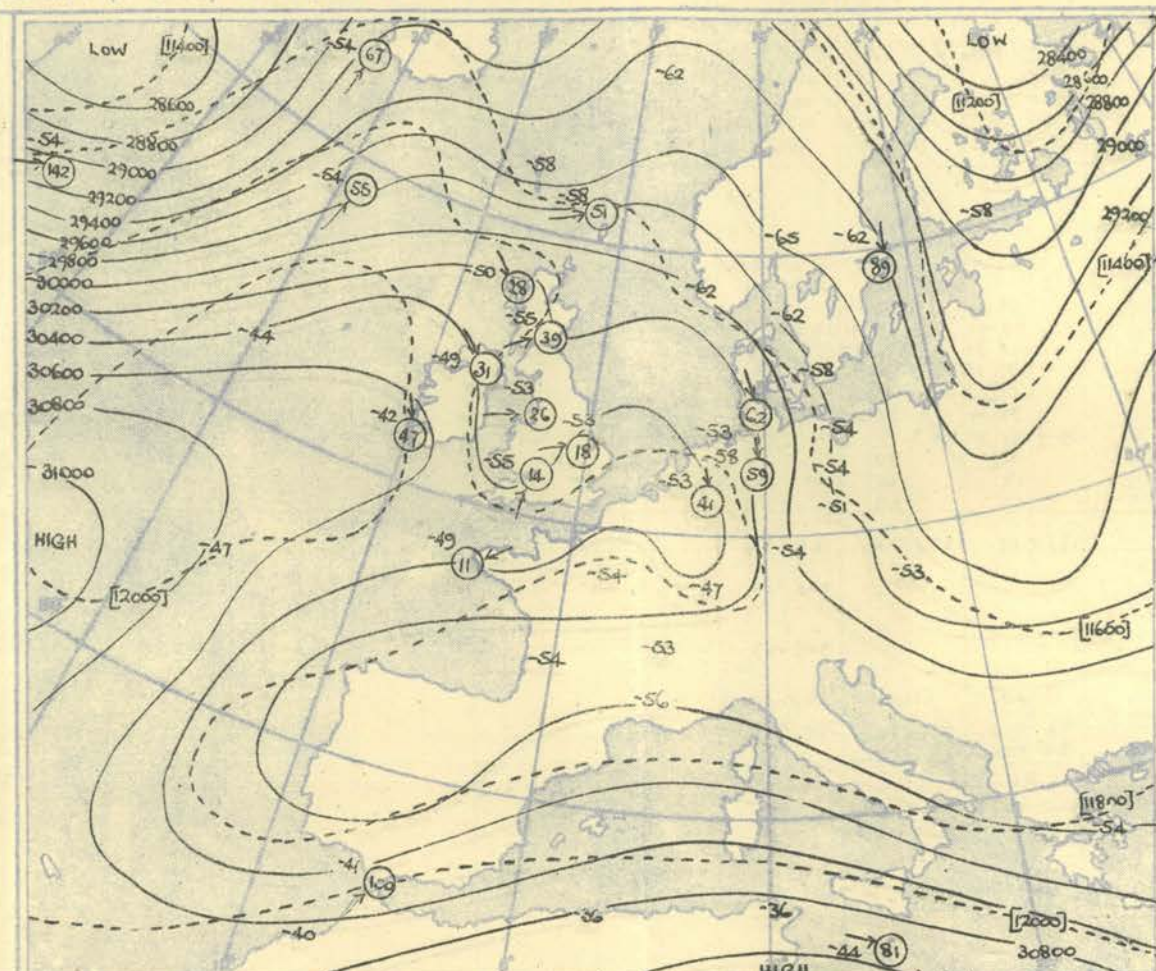
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.

Ship	WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				CUMULUS				CUMULUS				CUMULUS				CUMULUS				Ship			
Lat/Long	59°54'N 20°04'W				59°44'N 19°14'W				59°44'N 19°14'W				59°44'N 19°14'W				52°54'N 20°04'W				52°54'N 20°04'W				52°54'N 20°04'W				52°54'N 20°04'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.	1011	mb		1008	mb		999	mb		987	mb		1016	mb		1012	mb		1008	mb		1012	mb						mb	M.S.L.					
	Surf	1011	mb		1008	mb		999	mb		987	mb		1016	mb		1012	mb		1008	mb		1012	mb						mb	Surf					
	Freezing	880	mb		855	mb		850	mb		825	mb		855	mb		795	mb		680	mb		725	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		46	39	095	18	47	44	180	26	45	44	150	43	47	46	180	28	48	45	170	28	50	46	200	28	45	22	240	24	Surf						
1000	03.0	44	38	196	18	46	44	183	30	42	45	150	43	47	46	180	28	48	45	170	28	50	46	200	28	45	22	240	24	1000						
950		37	36	200	17	41	40	183	31	41	40	156	44	44	41			42	40			50	49	235	34	43	37	257	34	950						
900	31.1	33	30	206	17	30	36	185	31	28	35	33	160	51	39	38	35	32	36	27			48	48	249	45	31	37	268	43	900					
850		29	20	212	21	31	29	193	34	32	30	160	52	33	30			31	22			45	45	239	44	40	12	269	56	850						
800	61.9	24	10	216	24	25	24	200	33	59	0	28	26	55	8	29	27	63	6	19			42	42	233	54	62	9	269	52	800					
750		17	09	220	28	21	16	200	35	28	28	193	45	23	21			21	13			38	30	233	49	33	03	255	58	750						
700	95.9	11	03	225	24	17	02	200	33	26	23	203	45	20	17	14	197	39	97	9	16	08	34	18	240	51	29	08	255	58	700					
650		05	01	226	24	14	20	202	32	22	18	225	60	11	06	191	43		12	02			29	12	243	59	24	10	265	66	650					
600	134.1	02	06	218	26	13	43	206	32	13	3	214	44	128	9	06	201	48	136	6	08	06	139	1	24	06	247	66	137	8	600					
550		11	14	213	24	02	37	216	30	69	03	203	44	03	10	211	39		04	22			15	02		09	22	255	55	550						
500	177.7	22	26	213	29	17	3	205	38	178	8	01	06	191	42	173	3	181	8	02	20			185	4	05	11		183	4	500					
450		31	36	214	32	16	34	247	31	09	17	192	46	24	31	200	38		10	22			03	24		11	24		11	24	450					
400	228.7	40	47	218	26	23	2	243	33	23	2	215	49	225	1	35	43	215	42	235	2	20		15	44		21	32		21	32	400				
350		48	230	25	25	34	54	256	56	36	47	198	75	40	36	47	198	75	213	54			19			19		32		32	350					
300	291.8	55	240	37	297	3	47	258	75	207	3	51	194	55	289	4	43	202	44	300	6	47			305	7	44		302	3	300					
250		62	254	44	265	9	65	198	75	46	722	34			46	722	34		63					61				53		250						
200	378.2	62	269	44	383	5	70	251	53	383	8	56		378	8	49	202	57	386	3	77			391	6	62		389	0	200						
170		62	248	31	403	45	55			57	263	49		84			263	49	84					92				84		170						
150					58	246	76	53		55	272	39																	92		150					
130					59	245	21	52																					89		130					
110					56	239	16	51																					86		110					
100					53	235	55			53	235	55																	83		100					
90					55					52																				80		90				
80					55					52																				79		80				
70					54					53																				72		70				
60					54					52																				71		60				
	Isothermal.																																			
	365-350mb 52°				Isothermal					69.6-52				Isothermal																						
					100-685mb 17°					795mb 27°-750mb 28°				850-839mb 33°																						
					Inversion.					Isothermal.				667-630° 11°																						
					685mb 17°-674mb 18°					750-731mb 28°																										





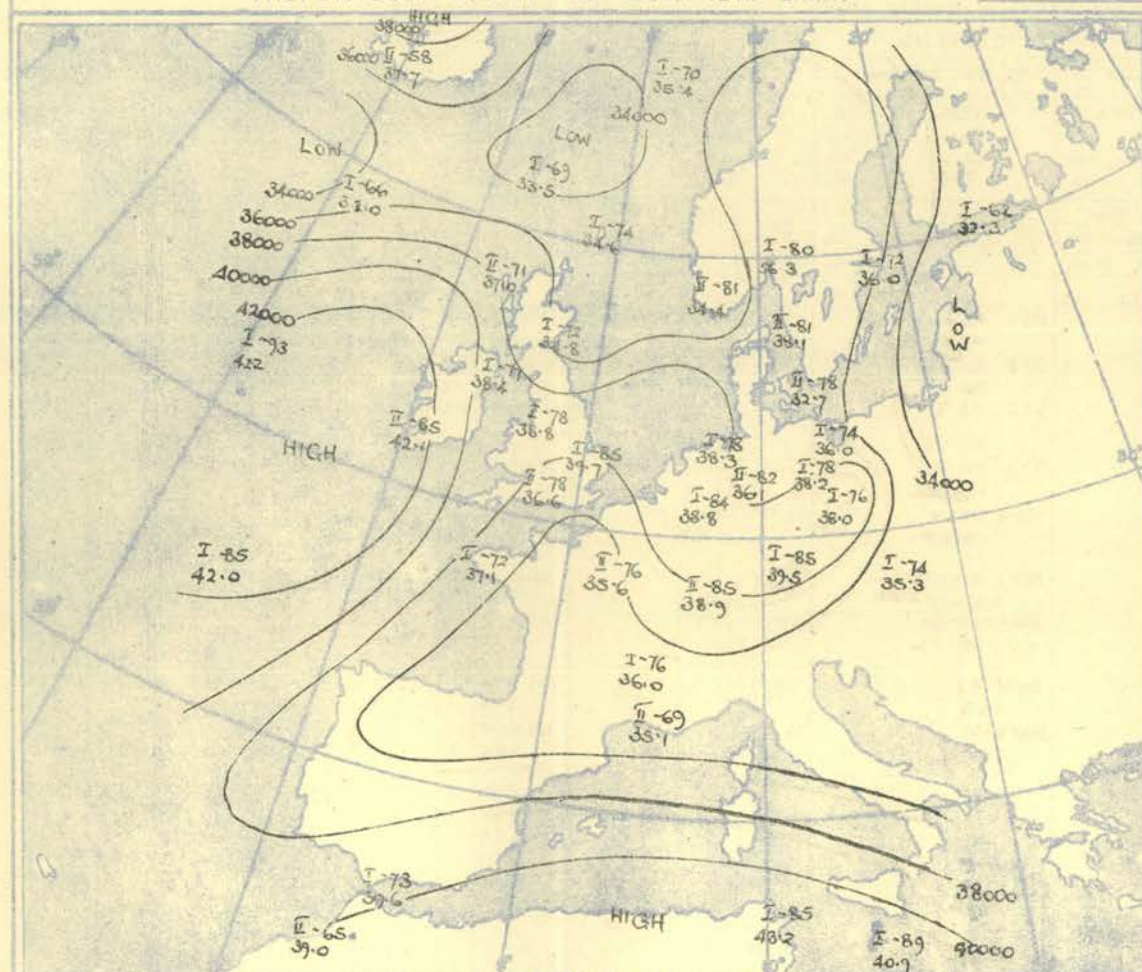
The continuous lines are contour lines of the 700 mb. surface.  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.



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° N.  
100 80 60 40 20 10 0 knots.

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

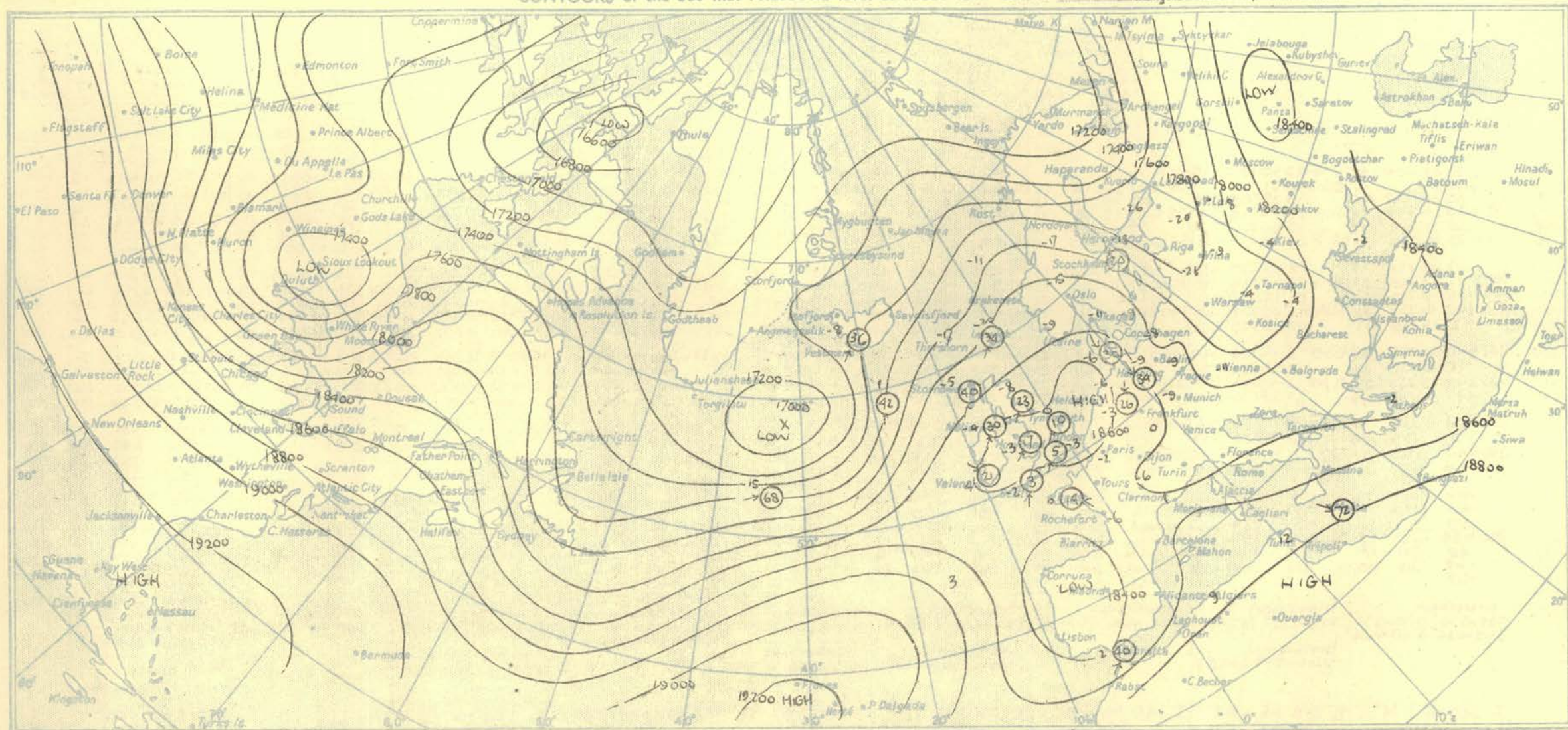


Contour lines of Height of Tropopause.  
Temperature of Tropopause.

### NOTES ON THE AEROLOGICAL SITUATION.

The warming in the East Atlantic resulted in the separation of a cold pool over Portugal. The East European trough continued to intensify. In the West Atlantic a further cold trough developed.

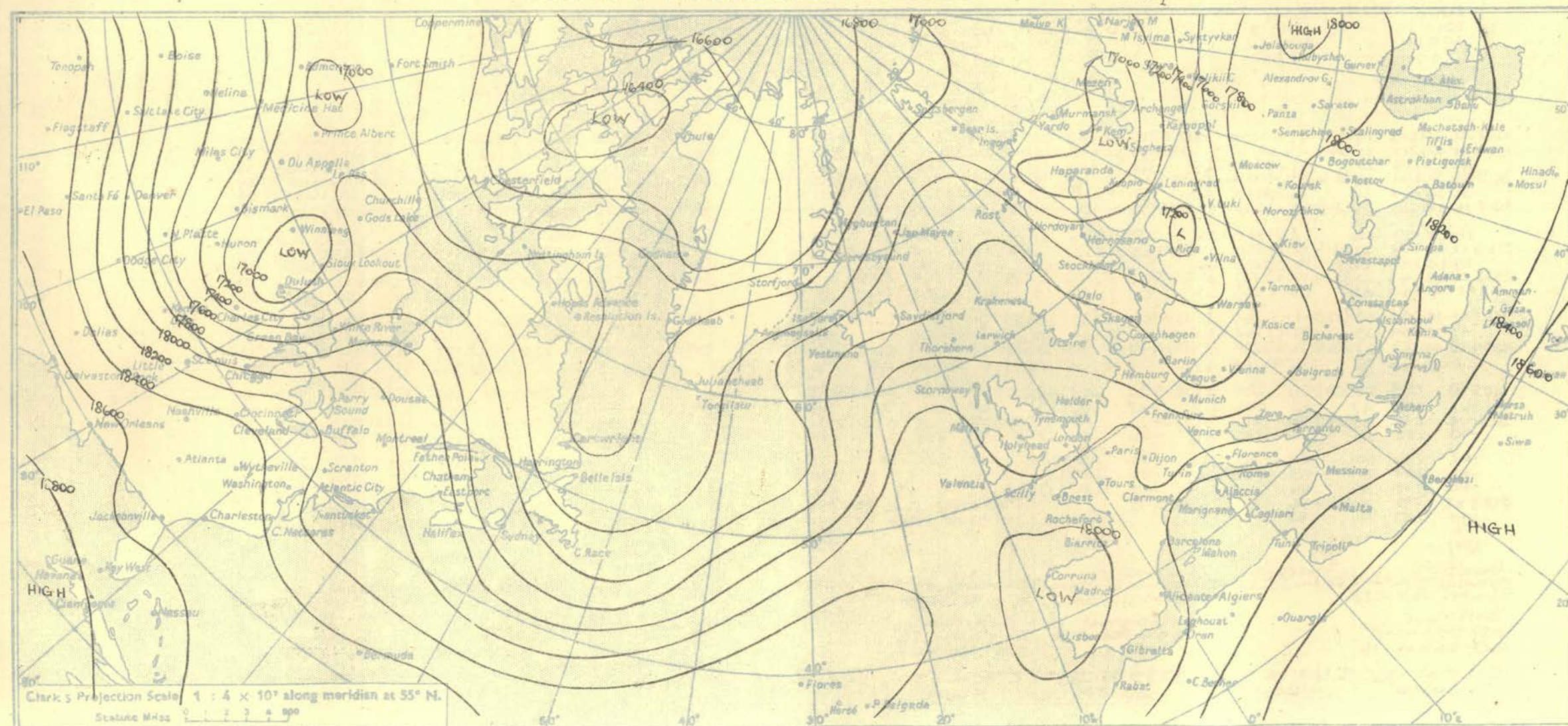




ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T.

Sunday 22<sup>nd</sup> April

1951.



Clark's Projection Scale 1 : 4 x 10<sup>6</sup> along meridian at 55° N.

Statute Miles 0 1 2 3 4 5 6 7 8 9 10



## 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 Pressure	15hrs 1020.4 1010.3 791	G.M.T. mb mb mb	15hrs 1019.7 1018.0 777	G.M.T. mb mb mb	15hrs 1022.5 1022.6 747	G.M.T. mb mb mb	15hrs 1023.0 1014.3 754	G.M.T. mb mb mb	15hrs 1024.7 1022.7 770	G.M.T. mb mb mb	15hrs 1025.6 1021.0 752	G.M.T. mb mb mb	15hrs 1023.9 1007.8 752	G.M.T. mb mb mb	15hrs 1022.8 1012.1 740	G.M.T. mb mb mb	15hrs 1022.7 1021.7 735	G.M.T. mb mb mb	Station																		
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 43.37	200	18	0.4 45.39	190	15	0.2 58.38	calm	02.6 57.39	150	10	0.6 55.34	160	18	01.2 57.47	120	07	04.4 55.29	100	08	01.9 45.38	080	03	0.3 52.44	180	15	Surf										
1000	05.4 42.36			05.2 43.37			06.3 51.34	218	12	06.5 52.36	164	17	06.7 48.29	167	15	06.9 53.43	103	09	06.3 53.28		08	06.2 48.38	112	12	6.1 50.42	177	16	1000									
950	35.3 31.217	21		35.3 32.209	30		43.25 22.3	12	13	45.34 17.6	14	14	40.23 16.7	12	12	44.37 11.0	10	10	43.22 09.1	11	09	47.33 11.5	09	47.39 16.7	16	950											
900	38.4 35.26	220	18	38.4 37.32	214	40	34.6 37.25	231	10	35.0 37.26	210	10	34.9 41.12	172	12	35.3 38.32	11.6	13	34.9 39.13	099	09	34.6 47.20	109	06	34.7 44.25	184	15	900									
850	35.11 22.5	17		35.31 23.1	34		39.0 23.6	16	29	39.1 18.6	13	29	39.1 18.6	13	13	40.16 12.7	11	11	39.2 11.9	12	12	45.10 10.8	04	41.27 15.7	16	850											
800	64.6 33.14	230	21	64.5 32.28	236	31	65.9 36.12	245	18	66.4 37.5	220	26	66.8 35.4	208	12	66.6 35.13	126	09	66.2 35.11	114	09	66.2 40.02	063	02	66.2 37.29	207	17	800									
750	27.0 23.1	24		29.25 23.9	29		32.13 23.7	18	19	32.13 24.6	19	19	29.8 20.8	11	11	34.10 13.7	04	03	35.18 13.6	03	03	33.07 00.4	03	33.29 21.0	20	750											
700	21.1 22.9	27		29.4 25.236	30		100.9 7.8	1024.0	18	101.4 28.1	223	19	101.6 25.7	212	10	101.7 28.03	216	04	101.4 28.22	167	03	101.3 26.13	093	03	101.3 29.10	231	20	700									
650	15.8 21.6	30		19.14 23.8	33		18.02 22.3	21	24	24.2 22.4	24	24	15.3 24.4	08	08	22.00 24.7	03	03	21.28 18.7	03	03	19.08 17.2	06	101.3 29.10	231	19	650										
600	13.8 20.8	33		13.8 20.8	33		14.0 10.9	231	19	14.0 13.9	222	24	14.0 13.9	222	09	14.3 14.5	26.8	06	14.0 15.19	214	03	14.0 13.1	174	07	14.3 18												

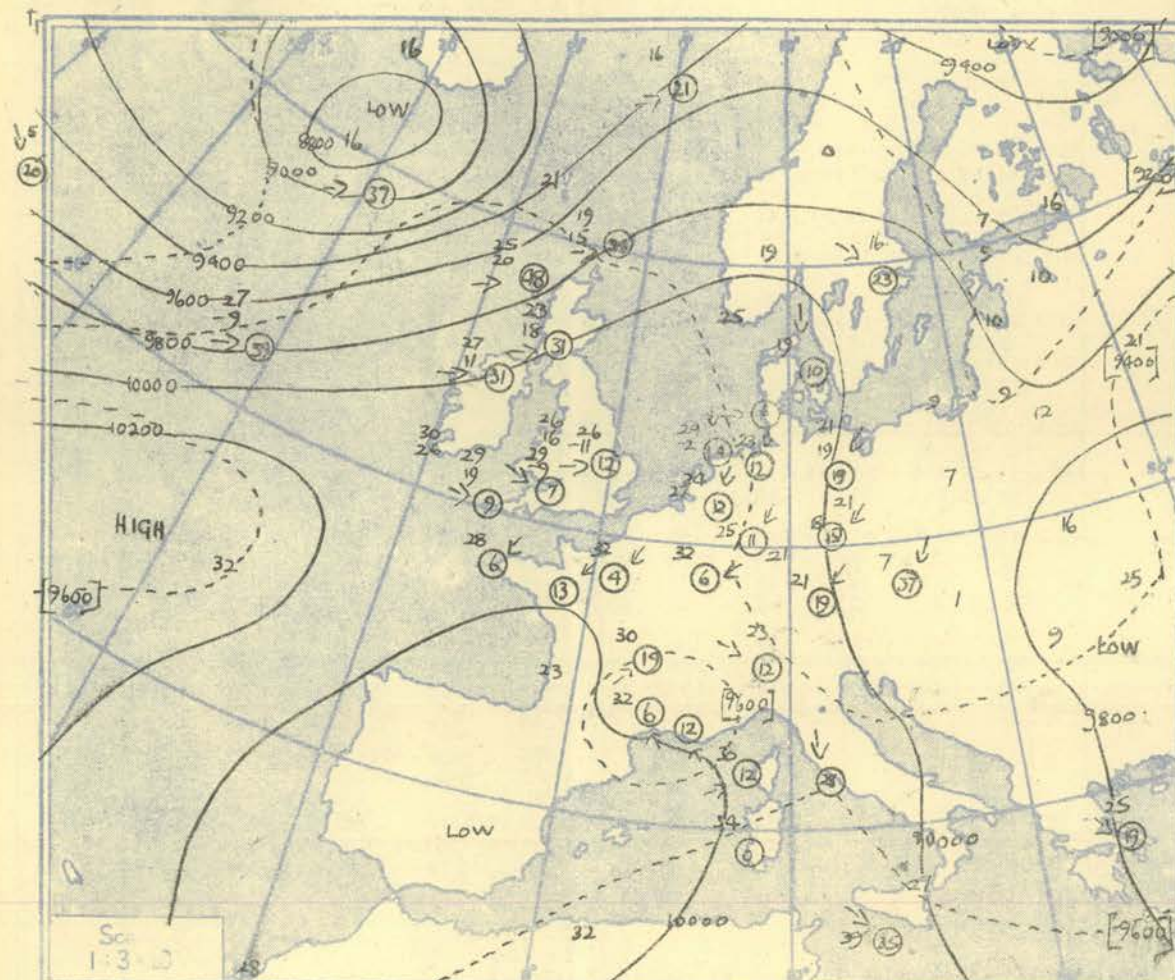


TEOROLO

Table with 10 columns: STATION, LERWICK, STORNOWAY, LEUCHARS, ALDERGROVE, LIVERPOOL, DOWNHAM MARKET, LARKHILL, CAMBORNE, VALENTIA, STATION. Each column contains a vertical list of meteorological data including pressure, temperature, wind, and other observations at various altitudes.



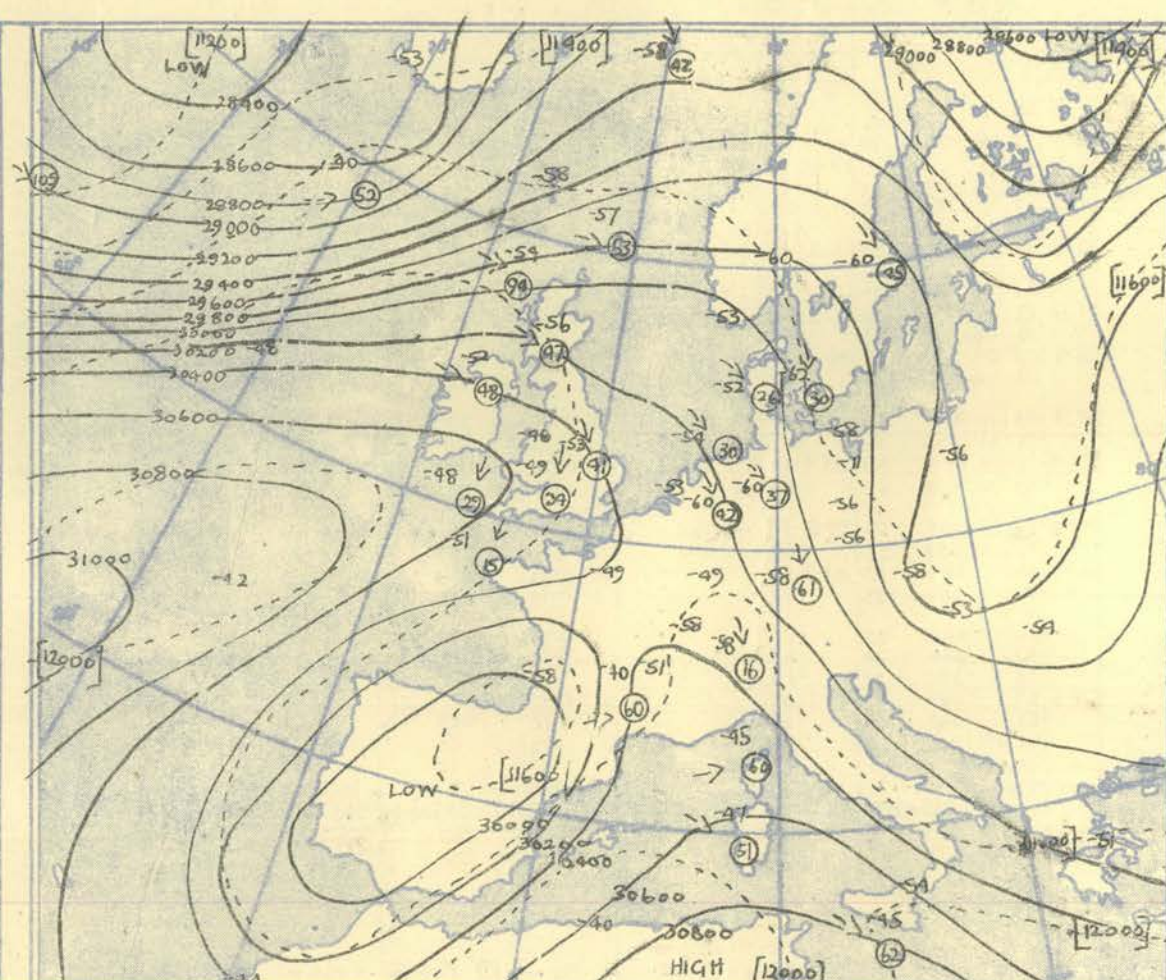
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



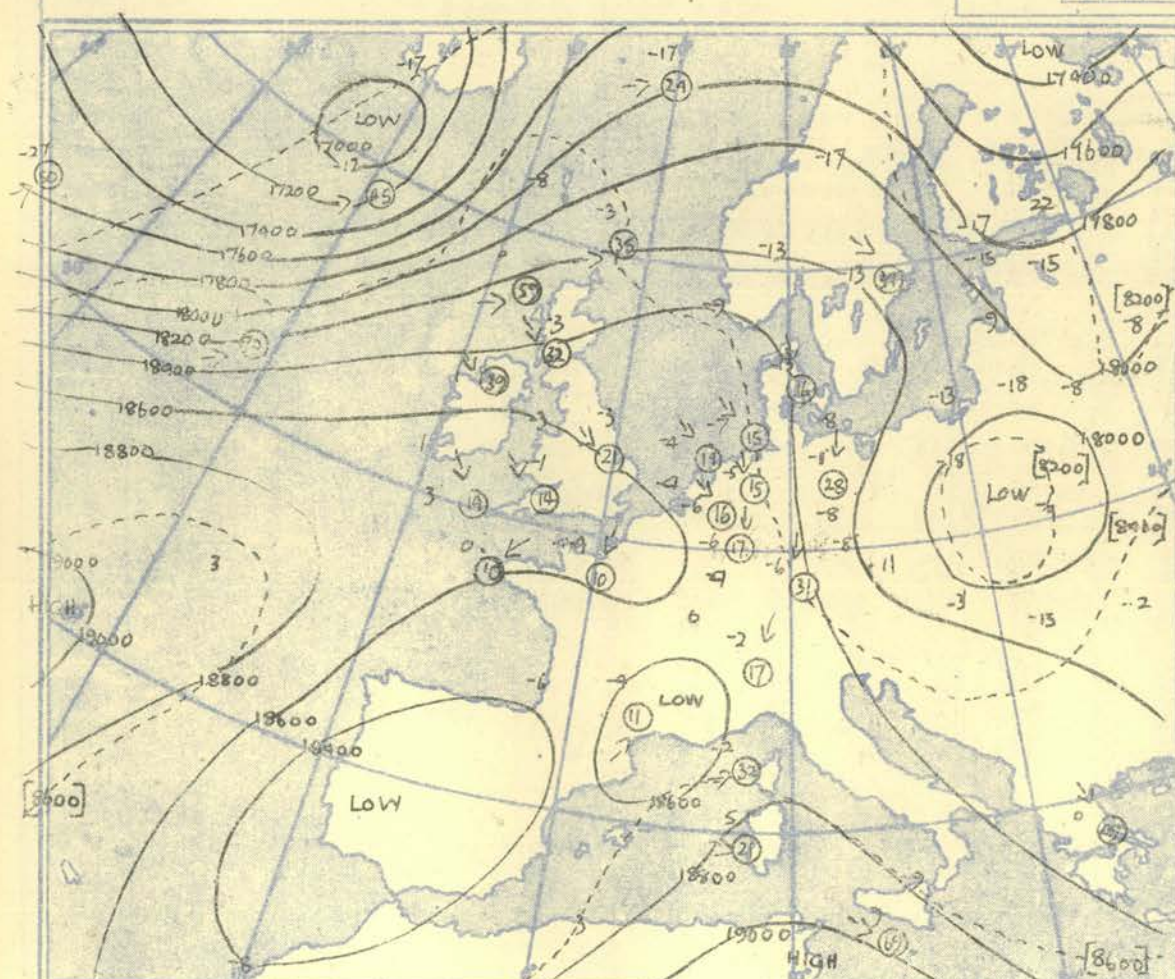
The continuous lines are contour lines of the 700 mb. surface  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

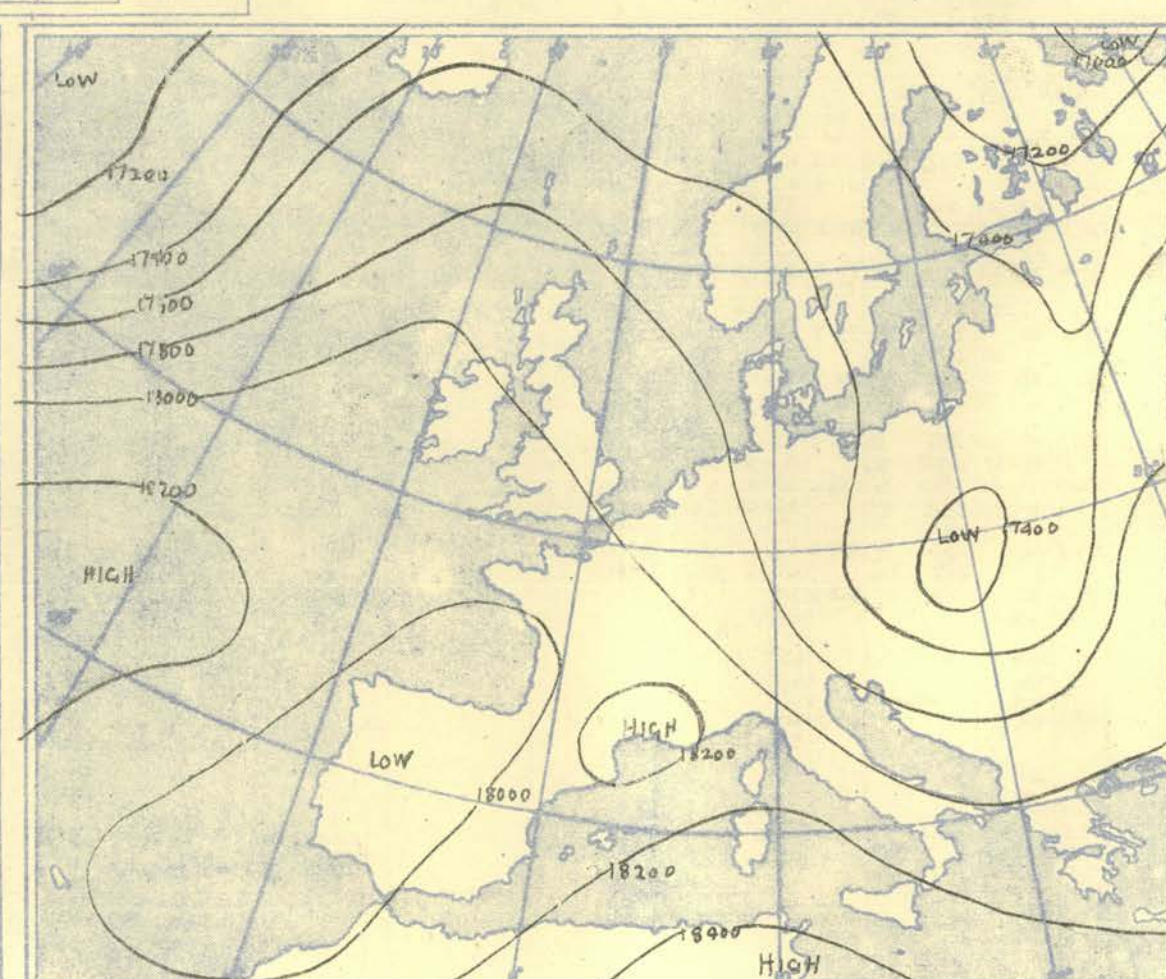
100 80 60 40 20 10 knots



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.

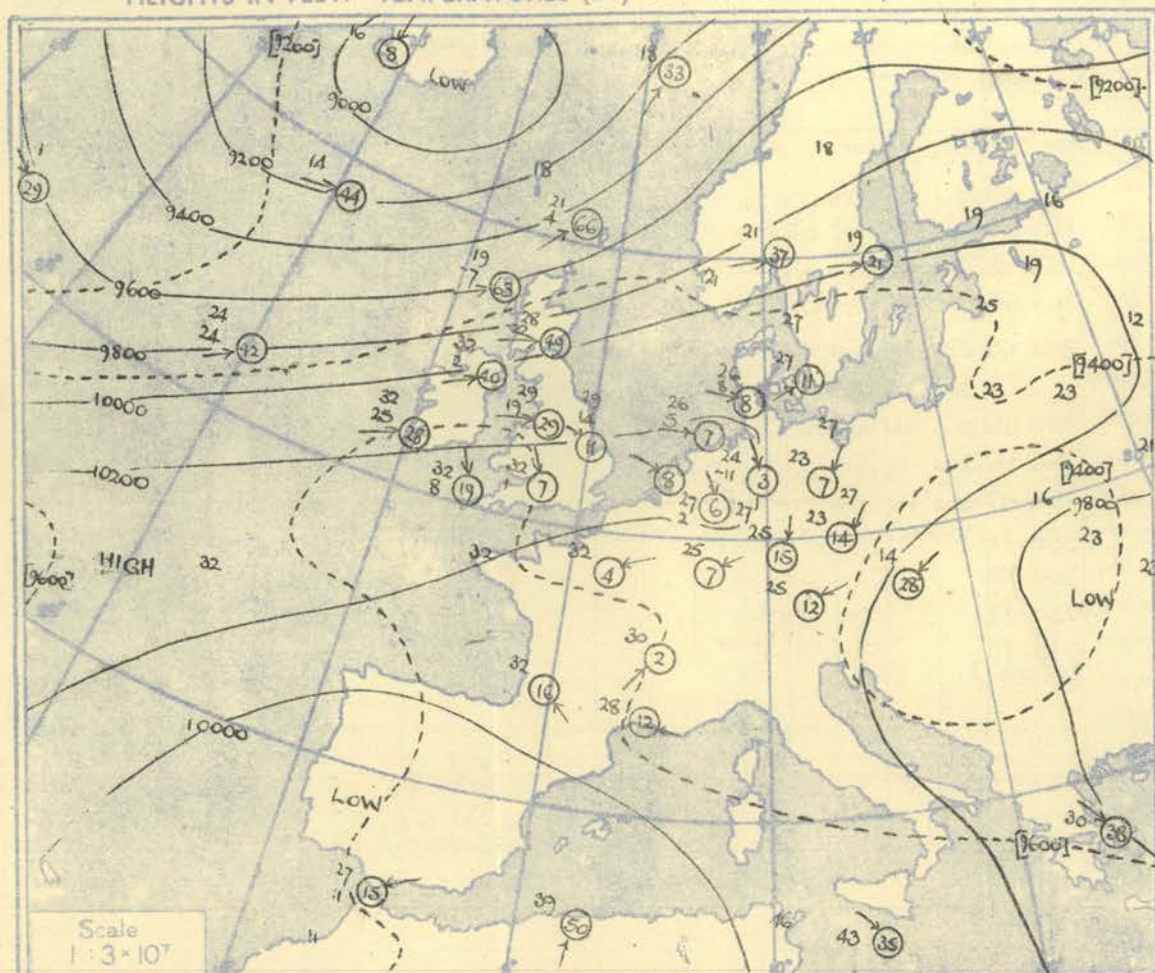


## DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

NEPHOSCOPE OBSERVATIONS[illegible]

Ship	WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				CUMULUS				CUMULUS				CUMULUS				CUMULUS				Ship	
Lat/Long	S9.7N. 19.1W.				S9.7N. 19.0W.				S9.7N. 18.7W.				S9.7N. 18.5W.				S2.8N. 20.0W.				S2.5N. 20.0W.				S2.5N. 20.0W.				S2.5N. 20.0W.				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.		Time M.S.L. Surf Freezing	
	980		mb		985		mb		993		mb		999		mb		1014		mb		1015		mb		1015		mb		1012		mb			
	980		mb		985		mb		993		mb		999		mb		1014		mb		1015		mb		1015		mb		1012		mb			
	835		mb		860		mb		890		mb		890		mb		880 + 800		mb		840		mb		850 + 800		mb		760		mb			
Pressure Height Temp. Dew Wind Dir. Vel.	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	4.4	225 40		46	42	250 45		46	36	250 38		44	37	240 38		49	41	250 16		49	41	250 16		49	45	160 10		48	48	04.0 08	Surf	
1000	05.2				04.2				01.8				00.3				00.9	48	39	251 24	04.1	47	40	248 18	04.2	47	44	163 11	03.2	47	46	05.2 09	1000	
950		43		224 46		42	39	252 51		41		252 45		39	34	240 41		41	33	252 31		41	33	240 24		41	39	175 13		44	41	09.4 15	950	
900	22.9	39		235 45	24.1	37	34	252 48	26.5	33		253 49	27.8	33	29	239 41	32.1	34	26	255 37	32.4	36	21	236 32	32.5	36	33	173 16	317	41	35	138 21	900	
850		34		239 43		31	28	253 43		31		255 51		28	23	229 40		34	16	252 42		33	13	250 31		32	31	215 25		39	31	187 28	850	
800	54.0	28		236 46	55.1	26	23	256 43	57.2	23		260 50	58.6	23	15	239 39	63.2	32	08	252 44	63.4	27	12	254 38	63.5	32	32	241 32	63.1	35	22	237 35	800	
750		22		237 39		21	17	259 45		18		262 47		19	01	240 39		30	00	244 55		27	21	253 49		28	28	223 42		31	12	242 46	750	
700	88.3	16		236 37	89.3	14	08	264 44	91.2	14		256 44	92.6	13	13	235 39	98.1	27	09	242 59	98.1	21	14	253 61	98.4	24	24	226 42	98.2	26	04	244 48	700	
650		09		234 44		08	00	267 44		06		256 40		07	22	230 35		23	04	234 57		22	14	253 58		20	20	238 42		20	01	235 51	650	
600	126.8	02		232 43	127.8	02	10	267 46	129.5	00		256 36	131.0	01	31	236 34	137.8	15	00	237 61	137.7	15	05	253 57	138.0	15	15	245 52	137.7	14	01	240 58	600	
550		03		227 45		06	17	257 43		06		250 33		07	40	241 33		08	05	244 64		08	00	253 60		10	10	246 58		07	04	231 62	550	
500																																		500
450	171.1	12		231 45	171.8	17	28	257 44	173.6	15		249 31	175.0	16	48	244 29	183.3	01	12	244 70	183.2	00	10		183.8	05	03	240 66	184.1	02	13	240 57	450	
400		24		240 42		29	42	257 45		26		246 34		27	57	249 24		10	21														400	
350	232.9	38		242 48	233.1	38	52	253 52	225.2	36		237 34	226.5	37	58	253 18	236.8	21							238.2	11				226.4	23	32	240 66	350
300		37		241 57		45		254 55		47		240 43		50		259 25		24															300	
250	287.5	40		242 52	286.8	47		251 52	288.5	51		244 44	289.9	49		255 43	302.0	48															250	
200		43		252 54		48		255 55		49		236 54		48		235 47		63															200	
170	377.4	49		246 40	375.7	51		249 42	377.2	49		230 45	378.9	49		240 42	387.4	80							388.6	79				388.5	76		170	
		52				53		249 34		53		246 39	(175) 50					92																
150	(165)	53				52		256 28		51		250 34						88															150	
130						50		258 26		53		233 28						79															130	
110						53		260 24		52		202 19						78															110	
100						53		261 18	527.8	52		206 23					526.6	78							528.0	78							100	
90						55				55		229 20						77															90	
80										51		241 15						78															80	
70										57		242 09						78															70	
60									(65) 58									79															60	
									isothermal									Inversion																
									882 - 850mb. 31°									870mb. 30° - 850mb. 34°																
									737 - 710mb. 16°									isothermal																
									600 - 587mb. 00°									850 - 848mb. 34°																
												</																						

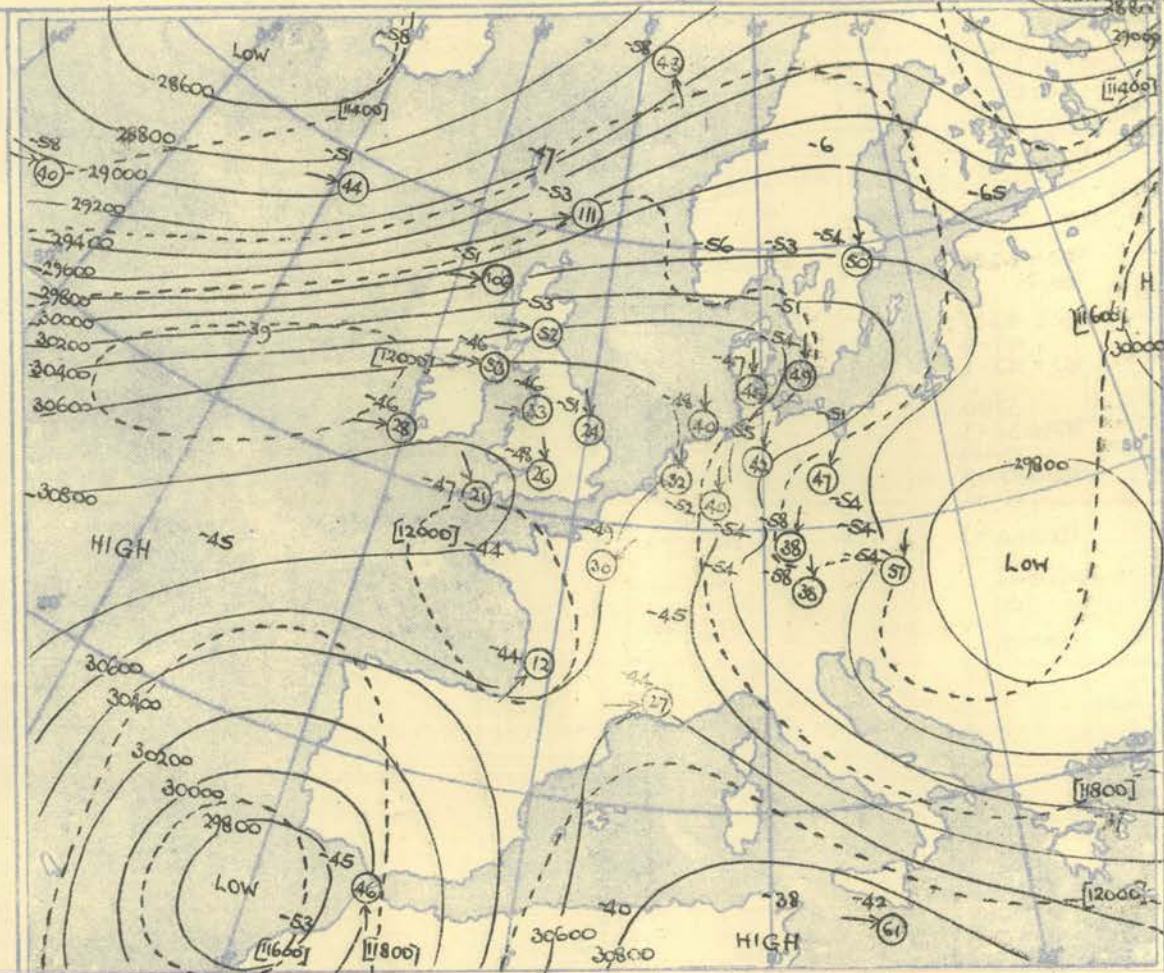




The continuous lines are contour lines of the 700 mb. surface.  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

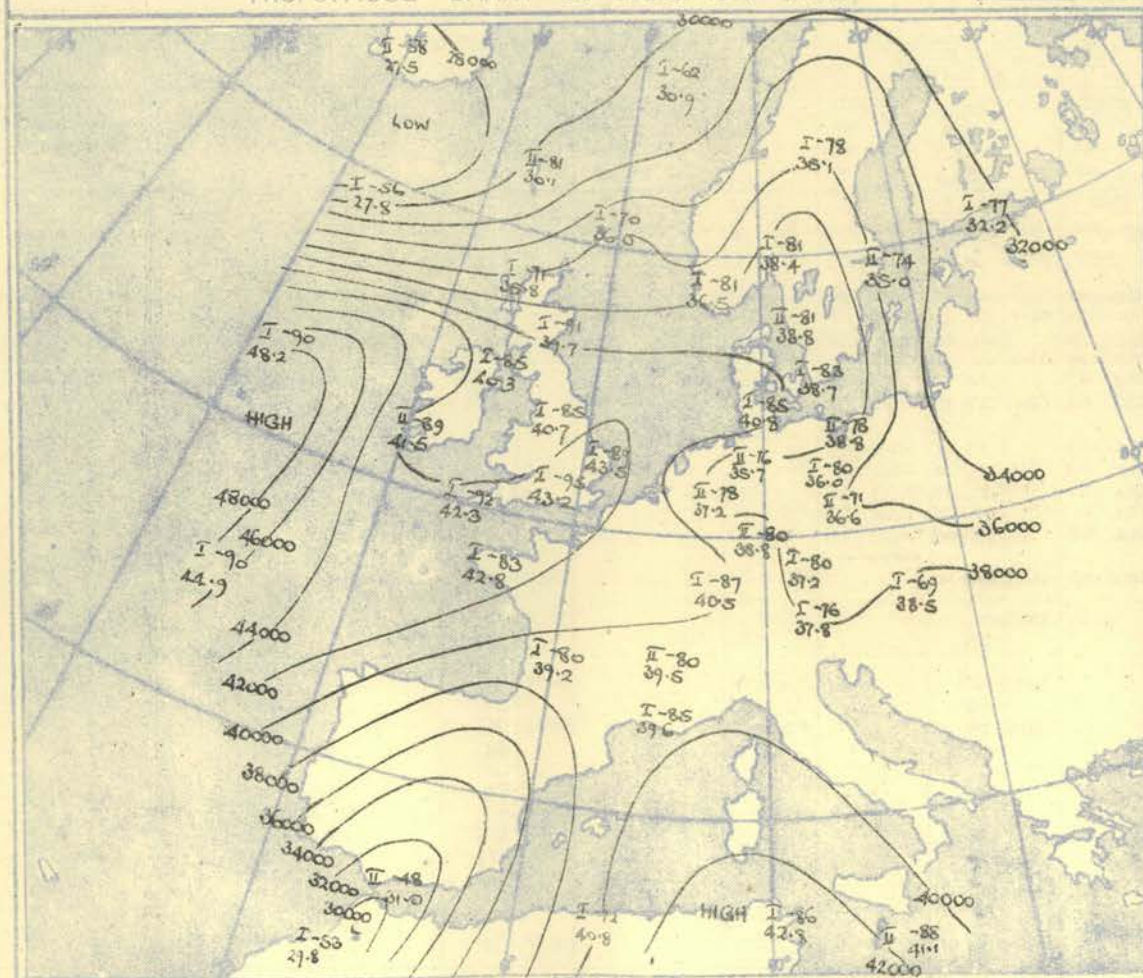
Gradient Wind Scale for Contours  
at intervals of 200 ft. at Lat.  $52\frac{1}{2}^\circ$  N.

100 80 60 40 20 10 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.

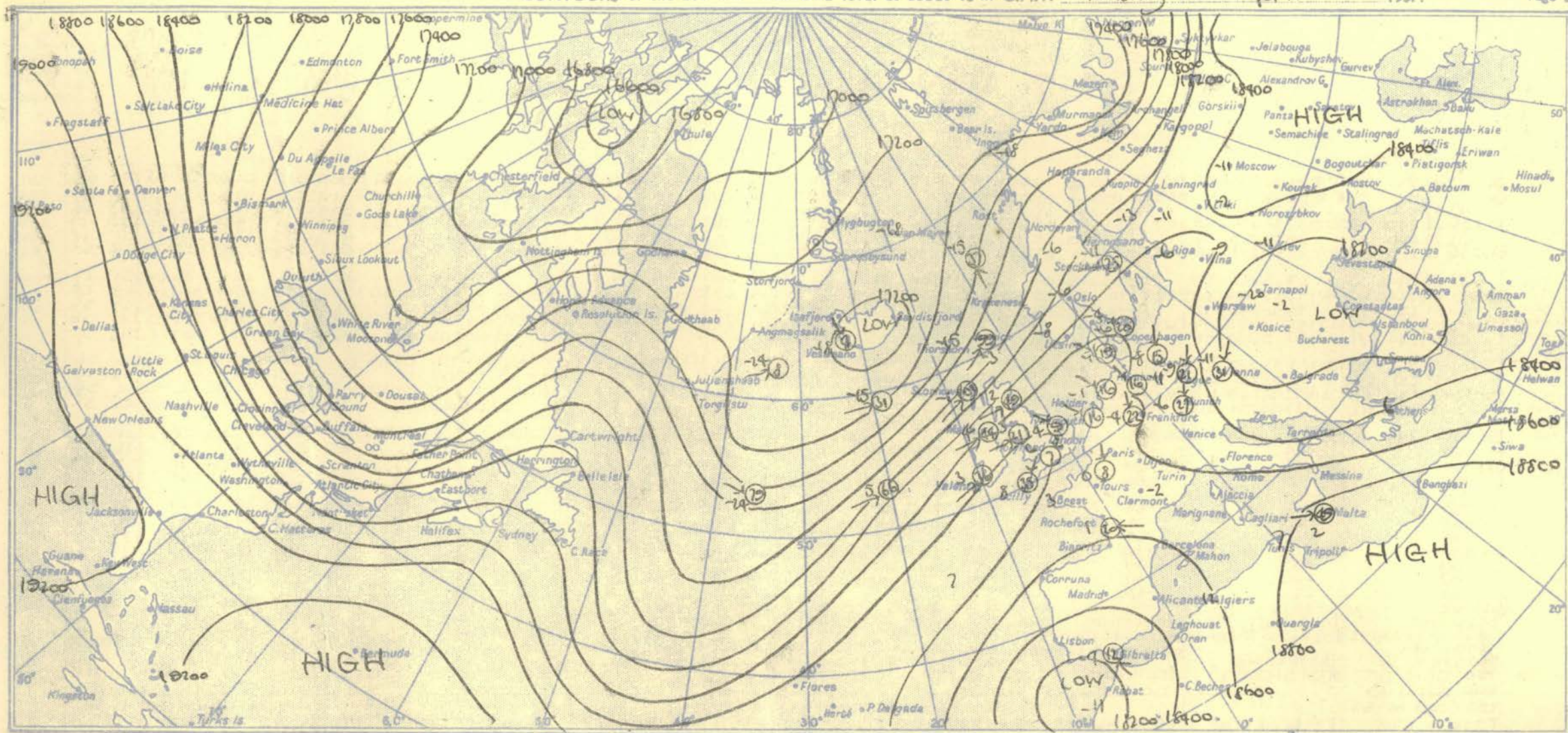


Contour lines of Height of Tropopause.  
Temperature of Tropopause.

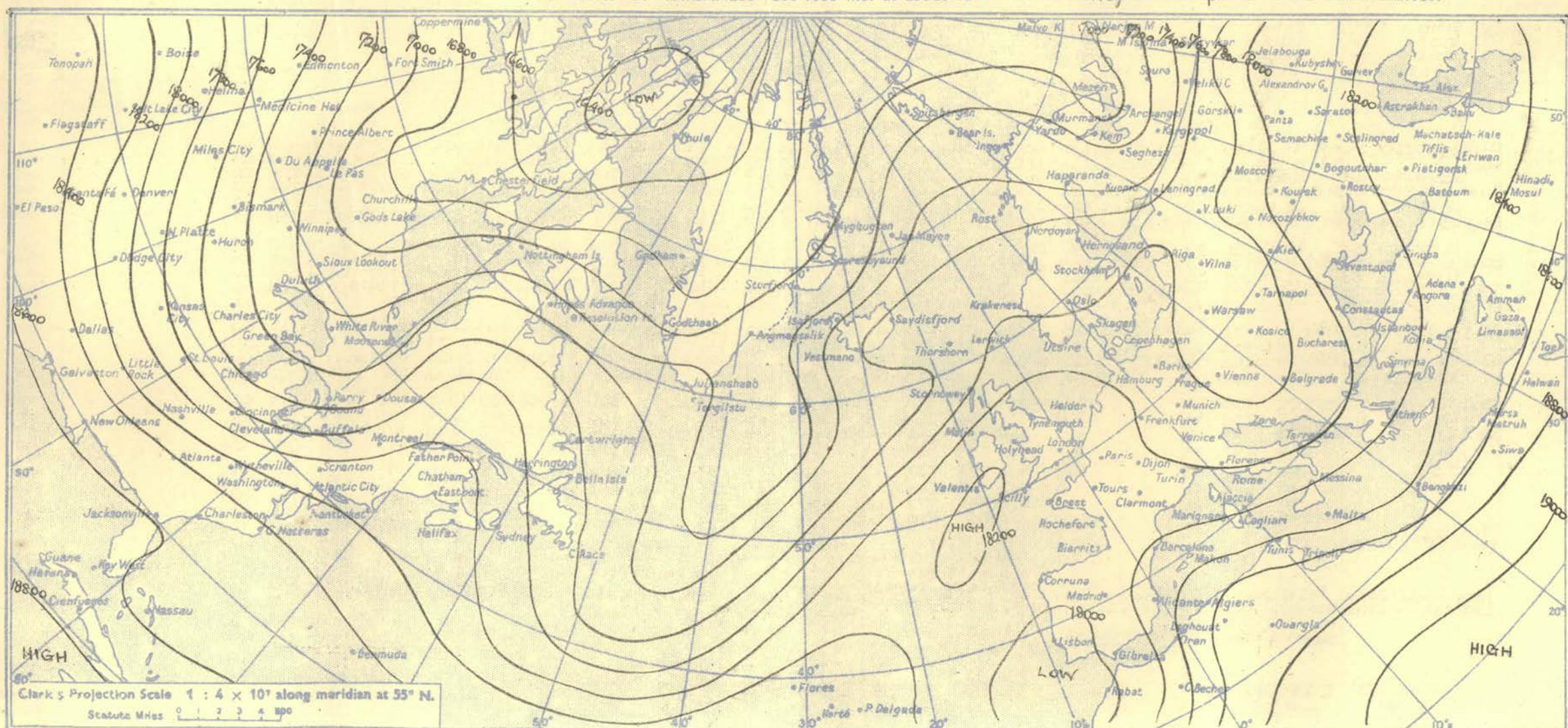
### NOTES ON THE AEROLOGICAL SITUATION.

Warming to the Southwest of the British Isles caused a new upper ridge to develop there whilst the cold pool over Portugal receded to the south. The Atlantic trough moved east slowly and a very strong thermal gradient was ahead of this trough.





ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Monday 23<sup>rd</sup> April





STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				Valentia				STATION
Time M.S.L. Surf (Freezing)	15 hrs		G.M.T.	mb	15 hrs		G.M.T.	mb	15 hrs		G.M.T.	mb	15 hrs		G.M.T.	mb	15 hrs		G.M.T.	mb	15 hrs		G.M.T.	mb	15 hrs		G.M.T.	mb	15 hrs		G.M.T.	mb	Time M.S.L. Surf (Freezing)				
	1006.8	830	mb		1009.2	872	mb		1015.9	768	mb		1015.5	698	mb		1021.4	723	mb		1022.2	731	mb		1022.1	700	mb		1023.8	705	mb			1021.9	700	mb	
Pressure mb	Height ft./100	Temp. °F.	Dir.	Vel. knots	Height ft./100	Temp. °F.	Dir.	Vel. knots	Height ft./100	Temp. °F.	Dir.	Vel. knots	Height ft./100	Temp. °F.	Dir.	Vel. knots	Height ft./100	Temp. °F.	Dir.	Vel. knots	Height ft./100	Temp. °F.	Dir.	Vel. knots	Height ft./100	Temp. °F.	Dir.	Vel. knots	Height ft./100	Temp. °F.	Dir.	Vel. knots	Pressure mb				
Surf	01.7 48 42 220	29 0.4 51 41 240	25	0.2 54 46 250	25	0.6 56 46 240	15	0.6 57 57 240	05	01.2 63 45 195	10	04 46 340 220	03	02.9 56 47 215	02	03 55 48 280	07	Surf																			
1000	01.7	2.5 50 41	04.3 52 45 244	32	05.1 55 43	05.9 53 35 241	09	06.1 60 44 206	14	06.1 62 39	06.5 51 43 210	10	5.9 51 46 270	07	1000																						
950	43 37 236	49 43 36 240	39 44 40 247	31	45 38 248	21 46 30 236	11	47 21 218	12	48 12 233	07 49 12 214	13	45 40 265	12	950																						
900	30.1 36 31 240	50 30.9 36 31 233	39 32.7 37 33 248	34	33.7 43 30 252	23 34.4 47 34 241	16	35.0 47 34 228	11	34.9 46 32 250	07 35.3 51 32 251	14	34.3 48 29 235	17	900																						
850	32 28 240	51 29 26 237	43 32 31 250	38	40 19 252	29 42 35 261	20	43 03 251	11	47 21 231	06 47 32 285	18	44 16 258	18	850																						
800	61.0 26 22 235	54 61.7 23 19 238	49 63.8 35 18 252	43	65.3 41 03 253	30 66.0 41 37 244	22	66.8 40 12 253	13	66.7 42 12 304	06 67.3 42 27 294	17	66.3 39 25 264	20	800																						
750	22 17 242	55 25 13 243	59 30 12 256	44	39 13 260	32 35 34 248	26	34 21 262	13	36 16 316	06 36 20 311	15	36 25 251	27	750																						
700	55 42.1 04 244	66 56.1 13 7 244	63 58.7 28 2 259	49	100.7 32 02 254	40 101.2 29 19 264	29	102.1 29 14 278	11	102.0 32 01 343	07 102.7 32 08 381	19	101.3 32 13 249	28	700																						
650	20 1 230	78 14 20 249	69 26 2 261	43	23 12 252	43 28 08 268	28	24 12 257	11	23 7 343	09 27 18 347	24	25 21 245	32	650																						
600	134 10 10 233	77 135 103 102 53	76 136 15 6 262	43	140.7 21 06 258	46 141.2 21 10 268	28	141.9 20 13 315	10	141.9 19 04 342	06 142.6 19 11 356	24	144.4 17 03 236	36	600																						
550	06 17 243	80 03 9 253	91 11 14 265	43	13 2 257	43 13 05 271	20	11 53 27	11	13 00 003	06 15 02 025	30	07 8 236	37	550																						
500	17 8 3 26 242	99 180.2 1 13 253	103 184.4 02 17 262	49	186.6 04 12 250	44 187.2 03 1 270	21	187.7 04 11 324	09	187.9 06 10 025	07 188.7 08 20 43	35	188.9 03 27 236	36	500																						
450	10 31 237	106 11 23 251	100 9 27 266	52	16 21 246	44 17 12 265	24	17 20 322	10	18 25 008	12 18 42 050 30	38	18 51 235	25	450																						
400	23 21 23 248	102 23 6 23 249	103 28 0 21 40 264	53	24 05 17 248	45 24 10 19 23 262	32	24 16 19 30 328	13	24 20 48 39 012	09 24 28 18 35 070	32	24 0 720 42 238	24	400																						
350	36 50 250	112 37 46 251	105 36 54 267	55	30 47 256	49 31 37 264	32	34 42 328	18	35 54 348	16 32 46 351	24	31 53 248	32	350																						
300	29 51 23	249 111 258 4 51	259 106 30 2 53	261	52 30 6 46	257 53 30 6 46	261	33 30 6 8 51	331	24 30 7 48	338 26 30 8 3 47	313	21 30 6 1 46	251	300																						
250	65	64	70 261	65	62 259	58 62 259	67	283 36	37	64 340 22	65 00 5 14	61	246 27	250																							
200	35 37 64	38 41 66	36 7 53	263	73 39 1 80	264 64 39 2 1 81	255	43 39 1 6 81	330	33 39 1 6 82	336 19 39 3 5 8	314	25 39 1 80	253	200																						
170	56	60	64	60	74 267	50 74 267	83	42 87	317	32 32 323	25 309 24	29	248 38	170																							
150	59	67	71 273	36	74 271	39 77 280	33	73 308	21	71 308	14 77 300	23 83 254	35	150																							
130	61	69	72 260	34	73 260	24 73 280	24	76 303	20	75 290	13 70 274	31 76 256	25	130																							
110	63	71	73 258	28	71 258	15 71 272	15	77 284	17	77 284	14 77 264	27 80 242	22	110																							
100	65	73	74 256	22	69 256	11 69 256	11	75 309	14	75 309	13 75 321	11 75 321	11	100																							
90	66	74	75 256	11	70 256	11 70 256	11	76 318	10	76 318	10 76 318	10 76 318	10	90																							
80	67	75	76 256	11	71 256	11 71 256	11	77 327	9	77 327	9 77 327	9 77 327	9	80																							
70	68	76	77 256	11	72 256	11 72 256	11	78 336	8	78 336	8 78 336	8 78 336	8	70																							
60	69	77	78 256	11	73 256	11 73 256	11	79 345	7	79 345	7 79 345	7 79 345	7	60																							
Inversion 750ms-750ms 22° Isothermal 900-884ms 26° Isothermal 750-731ms 22° Isothermal 600-581ms 10° Isothermal 155-243ms 65°																																					
Tropopause 1224ms-70° 36000'																																					
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				Valentia				STATION
Time M.S.L. Surf (Freezing)	21 hrs		G.M.T.	mb	21 hrs		G.M.T.	mb	21 hrs		G.M.T.	mb	21 hrs		G.M.T.	mb	21 hrs		G.M.T.	mb	21 hrs		G.M.T.	mb	21 hrs		G.M.T.	mb	21 hrs		G.M.T.	mb	Time M.S.L. Surf (Freezing)				
	1008.1	883	mb		1012.5	800	mb		1017.5	868	mb		1019.7	718	mb		1021.0	697	mb		1022.7	698	mb		1022.8	707	mb		1024.0	716	mb			1013.1	716	mb	
Surf	02.7 44 40 230	32 0.4 46 37 240	8	0.2 49 43 150	10	0.6 50 42 220	07	0.6 49 42 calm	01	2 54 40 165	08	04 45 33 calm	02	9 45 43 calm	Surf																						
1000	02.1	3.3 45 34	04.7 49 43 236	18	05.3 51 42	06.0 49 40 239	09	06.1 54 34	09	06.1 52 39	06.4 46 43 258	03	06.4 46 43 258	03	1000																						
950	39 36 240	48 40 29 244	37 44 39 248	12	46 39 267	13 48 34 265	10	54 34 218	10	53 30 01	03 52 30 333	04	52 30 333	04	950																						
900	30.3 33 30 250	51 31.5 32 23 245	38 33.0 38 34 258	22	33.8 40 35 254	18 34.6 45 38 248	15	31.9 31 22 242	09	31.5 33 33 8	02 32 50 40 263	03	32 50 40 263	03	900																						
850	28 24 254	50 26 18 246	39 41 24 256	38	35 20 254	25 41 35 243	20	43 25 267	10	47 25 calm	46 33 282	05	46 33 282	05	850																						
800	61.0 24 18 254	48 61.2 27 18 249	44 64.3 39 7 258	45	65.0 36 14 266	29 66.2 41 10 249	23	66.7 42 27 257	07	66.9 40 28 336	02 67.1 42 26 286	05	67.1 42 26 286	05	800																						
750	22 03 250	51 26 12 251	54 34 6 263	39	37 19 257	33 37 16 251	23	38 14 301	04	35 14 003	02 36 11 339	04	36 11 339	04	750																						
700	55 41 6 249	57 56.7 13 04 242	57 59.5 14 12 264	38	100.2 19 16 256	35 101.7 32 13 263	21	102.1 32 13 263	04	102.3 32 13 263	03 102.6 30 11 339	06	102.6 30 11 339	06	700																						
650	11 16 250	63 13 2 247	55 29 12 262	42	24 16 254	37 24 14 276	22	26 14 276	07	24 13 020	07 24 18 024	06	24 18 024	06	650																						
600	134 00 1 19 250	70 135 6 03 11 257	62 139.3 19 11 238	51	139.7 10 250	43 141.7 15 06 266	21	142.1 15 12 306	13	143.1 16 06 358	07 144.1 17 09 036	08	144.1 17 09 036	08	600																						
550	4 25 253	90 3 13 257	81 12 16 255	53	09 03 253	42 10 2 256	26	14 3 286	15	12 3 327	04 12 00 022	03	12 00 022	03	550																						
500	17 8 3 29 256	105 180.1 3 11 253	96 185.1 02 5 255	51	185.3 01 4 253	41 187.4 01 12 250	29	188.1 06 12 268	15	188.1 05 10 286	04 188.2 04 12 133	05	188.2 04 12 133	05	500																						
450	15 31 252	120 12 12 252	97 128 4 248	51	127 13 249	44 128 4 256	22	129 16 267	17	129 15 294	06 129 15 294	06	129 15 294	06	450																						
400	23 1 27 251	116 23 3 24 35 250	96 239.8 10 24 253	50	239.2 20 27 250	43 241.0 21 43 256	30	241.9 21 43 279	14	241.9 21 43 279	06 242.0 21 37 133	06	242.0 21 37 133	06	400																						
350	38 6 255	125 36 250	105 34 37 258	59	34 37 258	59 36 51 257	26	38 41 272	14	36 44 287	06 36 48 128	06	36 48 128	06	350																						
300	29 55 52	249 120 29 51 52	250 102	304	550	252 54 30 6 51	268	30 30 6 53	301	18 30 6 50	313 10 30 7 0 47	202	09	300																							
250	67	65	70 250	127	66	254 58	67	269	37	65 30 6	65 30 6	227	17	250																							
200	38 9 68	376 0 75	251 76	38	187	258 66 39 0 85	279	39 39 0 85	310	32 39 17 83	305 17 39 17 83	305	08	200																							
170	61	66	71 251	51	78	259 51	79	283	44	84 303	22 89 317	19	245	170																							
150	(182)	68	73 251	43	78	257 40	79	284	29	82 300	20 84 318	19	81 325	09	150																						
130		70	74 250	42	75	264 38	77	281	23	77 281	16 77 281	16	75 255	11	130																						
110		72	75 251	33	77	271 28	79	282	20	79 282	13 79 282	13	73 284	07	110																						
100		73	76 251	23	78	270 23	80	281	17	80 281	12 80 281	12	71 284	05	100																						
90		74	77 251	13	79	270 23	81	281	12	81 281	11 81 281	11	70 284	04	90																						
80		75	78 251	3	80	270 23	82	281	11	82 281	10 82 281	10	69 284	03	80																						
70		76	79 251	2	81	270 23	83	281	10	83 281	9 83 281	9	68 284	02	70																						
60		77	80 251	1	82	270 23	84	281	9	84 281	8 84 281	8	67 284	01	60																						
Inversion 800ms-750ms 26° Isothermal 900-884ms 26° Isothermal 750-731ms 22° Isothermal 600-581ms 10° Isothermal 155-243ms 65°																																					
Tropopause 1225ms-70° 34000'																																					

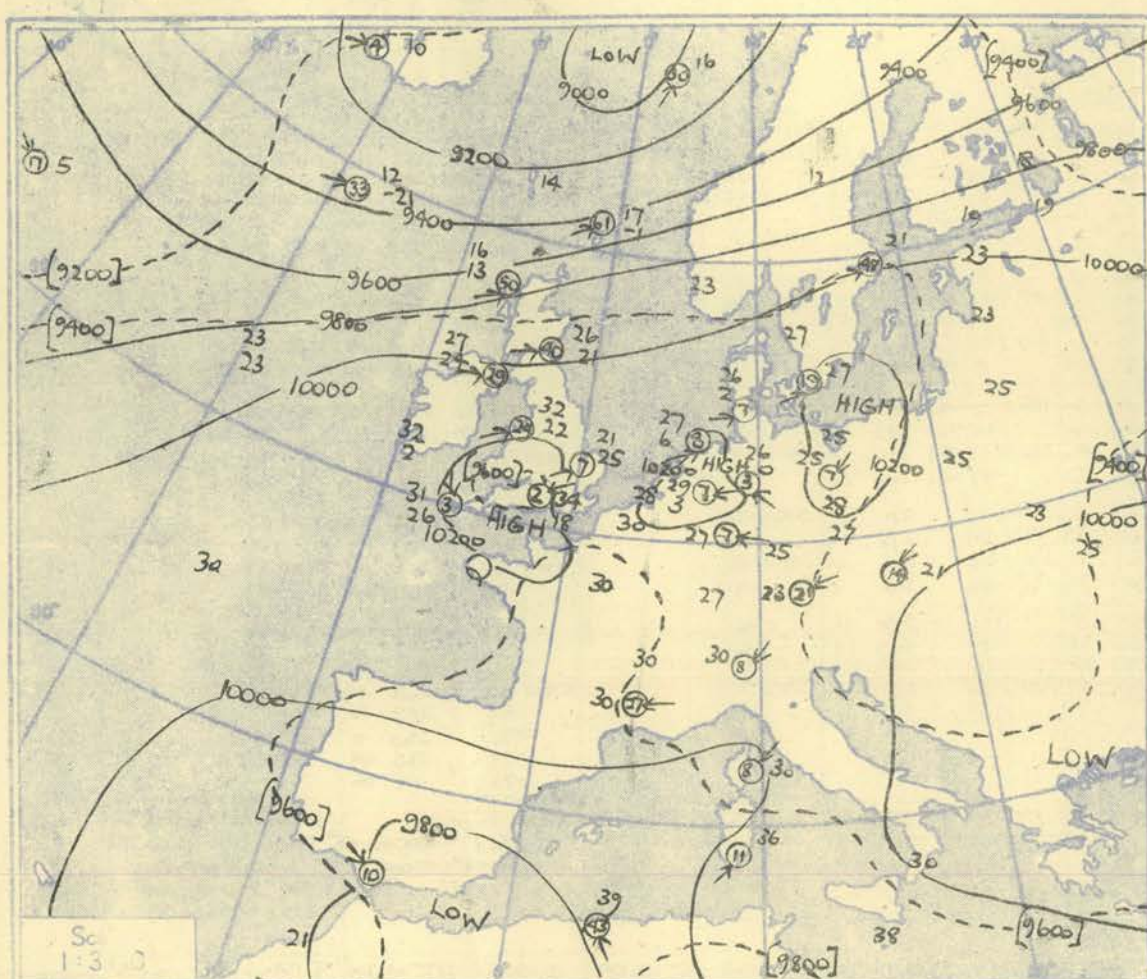


## RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

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																																																																																																																																																																																																																																																																																																																																																																																																																			
		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	02-7	42	40			00-4	47	41	220	20	00-2	45	41	270	05	02-6	42	39			00-6	48	44			01-2	46	34	150	06	04-4	43	34			02-9	42	39	Calm	00-3	47	46																																																																																																																																																																																																																																																																																																																																																																																																											
1000	02-5	42	40			03-7	46	40			05-0	44	40	253	22	05-5	45	41			06-0	50	42	245	04	06-1	54	41	196	12	06-2	45	33			06-4	42	39	Calm	06-0	45	44																																																																																																																																																																																																																																																																																																																																																																																																											
950	30-6	39	36			31-9	38	30	246	41	33-2	37	29	261	28	33-9	40	36	For		34-6	42	38	242	16	35-0	49	31	232	09	34-9	49	23	For		35-1	48	26	187	04	34-4	45	44																																																																																																																																																																																																																																																																																																																																																																																																										
900	29-2	32	28			27-2	24	24	249	43	41	20	272	31		41	34			47	21	250	15		47	22	248	09		47	21			46	33	222	05	41	37																																																																																																																																																																																																																																																																																																																																																																																																														
850	61-2	24	11	winds		62-5	22	16	252	43	64-5	36	29	262	34	65-4	38	32	winds		66-3	42	10	254	18	66-9	41	29	251	10	66-8	42	27	winds		66-9	43	25	334	03	66-0	39	30																																																																																																																																																																																																																																																																																																																																																																																																										
800																																																																																																																																																																																																																																																																																																																																																																																																																																																					
750	23	06				22	16	247	48		24	18	250	38		32	29			37	23	254	21		37	23	254	10		38	13			35	31	330	04	33	23																																																																																																																																																																																																																																																																																																																																																																																																														
700	95-6	17	-01	see		96-7	16	13	248	50	99-6	26	21	256	40	100-6	27	24	see		101-8	32	22	243	24	102-3	31	25	250	07	102-2	34	18	see		102-3	31	26	350	03	101-3	32	02																																																																																																																																																																																																																																																																																																																																																																																																										
650	11	-04				11	09	242	35		18	16	255	39		23	17			25	14	244	27		24	19	255	07		24	12			24	18	035	02	24	-11																																																																																																																																																																																																																																																																																																																																																																																																														
600	134-3	08	-10	page		135-4	06	03	245	47	138-9	11	09	252	40	140-2	18	08	page		141-7	16	01	252	29	142-2	18	13	259	07	142-1	18	02	page		142-2	17	10	072	08	141-0	15	-21																																																																																																																																																																																																																																																																																																																																																																																																										
550	-03	-12				-02-08	251	79			06	01	256	46		10	01			09	-01	253	26		11	06	283	12		11	-06			09	02	085	07	06	-21																																																																																																																																																																																																																																																																																																																																																																																																														
500	178-7	-11	-17	3.		180-0	-07	-13	253	92	184-1	00	-08	257	55	185-8	00	-05	3.		187-2	00	-14	251	39	188-0	02	-06	280	17	187-8	03	-15	3.		187-8	-01	-10	128	06	186-3	-06	-27																																																																																																																																																																																																																																																																																																																																																																																																										
450	-15	-22				-15	-25	253	100		-11	-18	257	46		-11	-16			-08	-27	254	40		-10	-18	273	23		-08	-23			-11	-21	140	10	-15	-34																																																																																																																																																																																																																																																																																																																																																																																																														
400	231-3	-25	-33			232-8	-25	-39	249	106	237-4	-24	-28	250	48	239-3	-18	-25			240-8	-22	-39	255	46	241-5	-23	-36	280	22	241-6	-21	-35			241-1	-23	-35	152	12	239-1	-23	-39																																																																																																																																																																																																																																																																																																																																																																																																										
350	-37	-45				-35	-58	255	107		-36	-40	255	66		-30	-39			-32	-51	247	33		-37	-46	265	20		-36	-49			-37	-48	165	22	-40	-56																																																																																																																																																																																																																																																																																																																																																																																																														
300	295-9	-52				297-2	-54		248	112	302-4	-47		257	66	305-1	-45			306-0	-49		243	33	306-2	-57		271	30	306-6	-50			305-9	-51		204	12	303-3	-53																																																																																																																																																																																																																																																																																																																																																																																																													
250	-66					-69			253	126	-65			257	76	-64				-67			260	33		-69		272	24		-66			-67			229	09	-69																																																																																																																																																																																																																																																																																																																																																																																																														
200	381-3	-68				382-3	-67		256	70	387-6	-81		261	82	390-5	-80			390-6	-84		269	41	390-4	-88		305	25	391-4	-83			390-6	-82		234	09	387-5	-88																																																																																																																																																																																																																																																																																																																																																																																																													
170	-64					-66			283	57	-92			266	81	-88				-88			265	34		-88		302	20		-92			-93			235	10	-82																																																																																																																																																																																																																																																																																																																																																																																																														
150	-57					-69			312	78	-96			266	48	-76				-79			255	31		-81		292	21		-85			-97			238	06	-80																																																																																																																																																																																																																																																																																																																																																																																																														
130	-59					-69			335	93	-68			269	36	-75				-79			285	26		-77		295	17		-82			-87			293	09	-78																																																																																																																																																																																																																																																																																																																																																																																																														
110						-70					-70			272	29	-73				-77			275	16		-75					-78			-83			268	10	-75																																																																																																																																																																																																																																																																																																																																																																																																														
100						-70					-70			268	28	-71				-78			268	17	530-3	-75					-74			-82			263	09	(108)	-75																																																																																																																																																																																																																																																																																																																																																																																																													
90						-74					-74									-78			278	07		-75					-75			-81			260	11																																																																																																																																																																																																																																																																																																																																																																																																															
80						-75					-75									-78													-79			285	09																																																																																																																																																																																																																																																																																																																																																																																																																
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60																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Inversion		795 mb. 23°-764 mb. 26°		479 mb. 14°-470 mb. 13°		Isothermal		1000-990 mb. 42°		489-479 mb. 14°		Inversion		792 mb. 21°-778 mb. 25°		521 mb. 7°-508 mb. 6°		Isothermal		655-640 mb. 11°		487-475 mb. 10°		Inversion		888 mb. 37°-865 mb. 42°		Isothermal		910-888 mb. 37°		800-763 mb. 36°		Inversion		1011 mb. 42°-995 mb. 46°		900 mb. 40°-880 mb. 42°		806 mb. 37°-800 mb. 38°		Inversion		1020 mb. 48°-1003 mb. 50°		884 mb. 20°-844 mb. 48°		Isothermal		1003-957 mb. 50°		Inversion		1018 mb. 46°-992 mb. 57°		886 mb. 48°-867 mb. 49°		Isothermal		1007 mb. 43°-971 mb. 53°		911-879 mb. 49°		772-750 mb. 38°		721-700 mb. 34°		Inversion		950 mb. 44°-915 mb. 46°		735 mb. 31°-716 mb. 34°		Isothermal		990-950 mb. 44°		822-800 mb. 39°																																																																																																																																																																																																																																																																																																																																																																							
Tropopause		I 218 mb. -78° 36,200'		I 235 mb. -74° 34,900'		I 166 mb. -73° 42,500'		I 090 mb. -82° 55,000'		I 172 mb. -89° 42,000'		I 173 mb. -91° 42,000'		I 180 mb. -93° 41,100'		I 160 mb. -94° 43,500'		I 150 mb. -97° 44,700'		I 189 mb. -92° 40,000'		Tropopause																																																																																																																																																																																																																																																																																																																																																																																																																															
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				STATION																																																																																																																																																																																																																																																																																																																																																																																																																			
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.		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	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots																																																																																																																																																																																																																																																																																																																																																																																																																				
Surf	02-7	46	42	230	29	00-4	47	40	230	06	00-2	53	43	280	07	02-6	48	43	210	08	00-6	53	46	Calm		01-2	55	41	Calm		04-4	53	34	050	02	02-9	51	43			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06-4	54	45	Calm			06



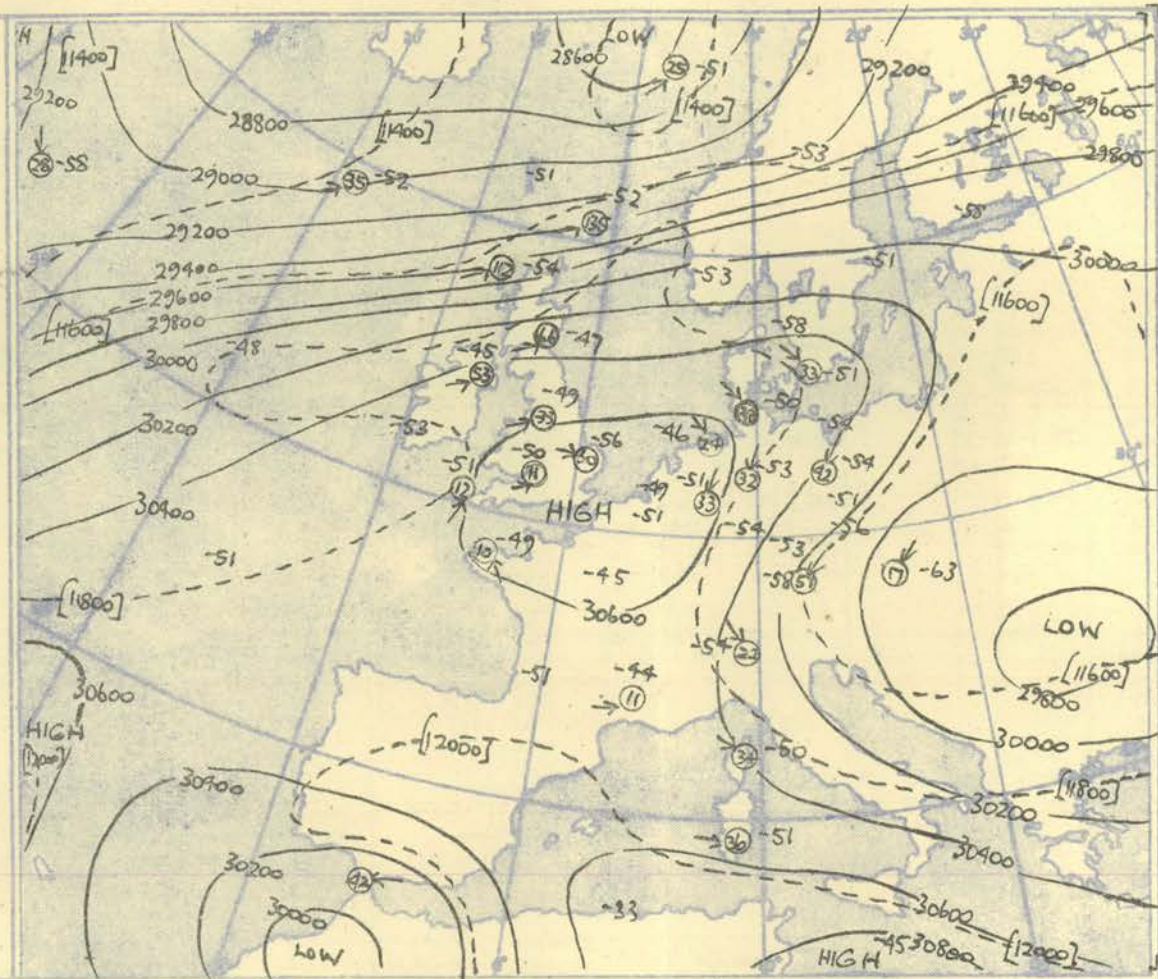
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



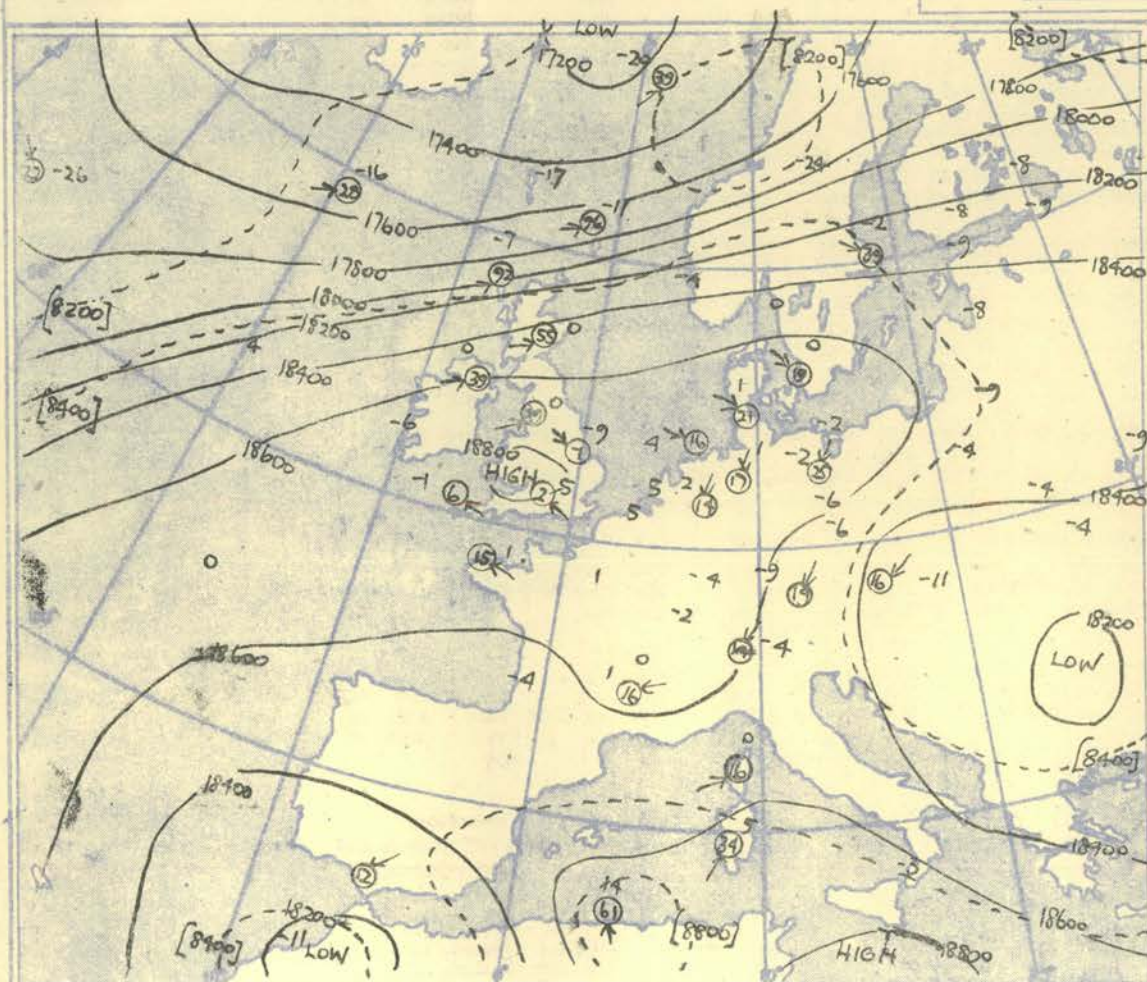
The continuous lines are contour lines of the 700 mb. surface  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

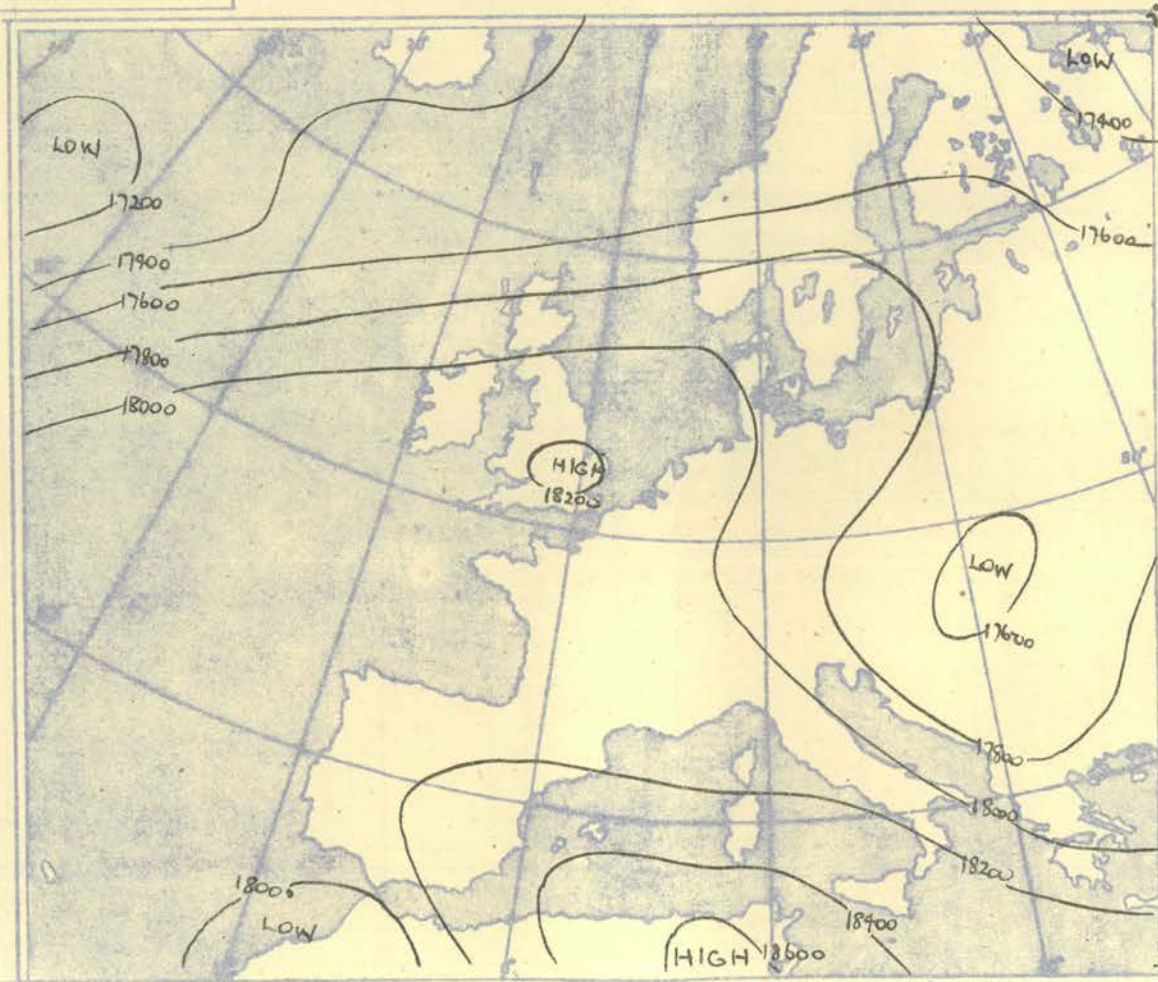
100 50 40 30 20 10 knots



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.



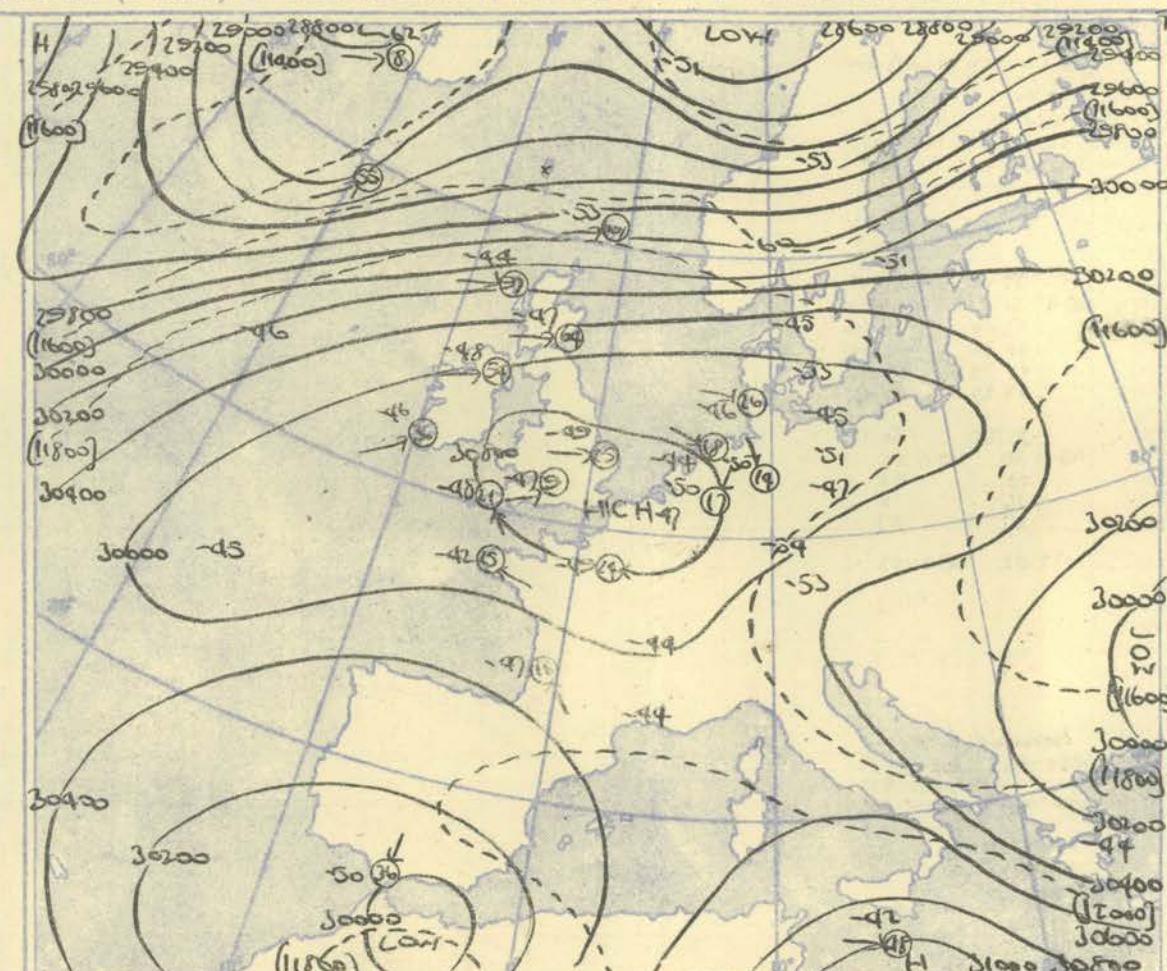
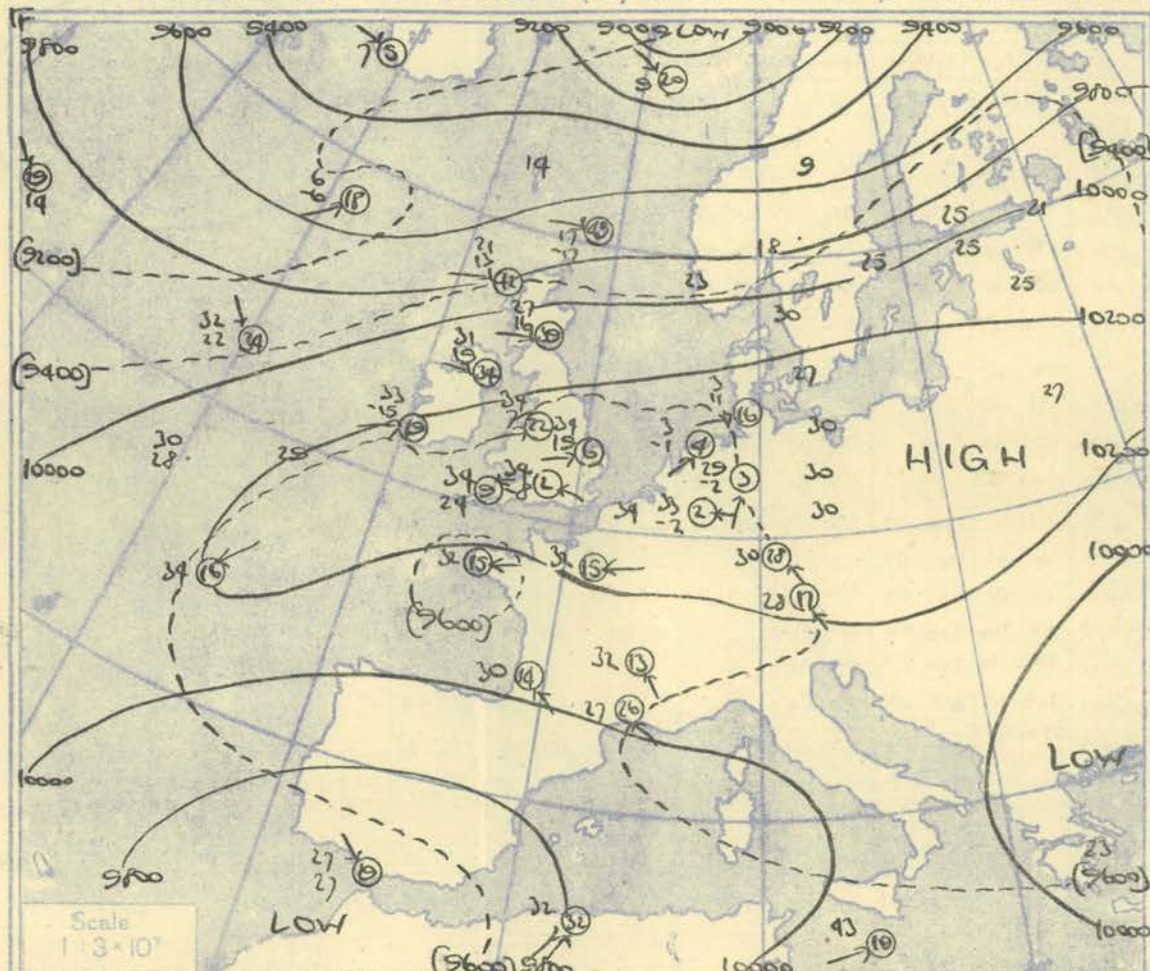
## DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above 10000 ft.

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				CUMULUS -				CUMULUS				CUMULUS				CUMULUS				CUMULUS				Ship
Lat/Long	59°N 18°W				59°4N 18°W				59°4N 18°W				59°W 18°S				52°5N 20°W				52°5N 20°W				52°5N 20°W				52°5N 20°W				52°5N 20°W				Lat/Long
Pressure mb	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.						G.M.T.	Time						
	M.S.L.	1004		mb	1009		mb	1011		mb	1013		mb	1014		mb	1017		mb	1021		mb	1024		mb					mb	M.S.L.						
	Surf	1004		mb	1009		mb	1011		mb	1013		mb	1014		mb	1017		mb	1021		mb	1024		mb					mb	Surf						
	Freezing	910		mb	910		mb	925		mb	915		mb	790		mb	860		mb	890		mb	930		mb					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		45 37	260	33		44 37	250	25		45 36	230	28		44 37	260	24		46 40	040	15		46 45	010	13		48 45	350	08		46 38	030	07		Surf			
1000	01'0	44 36			02'3	43 36			02'9	43 35	238	27	03'5	42 35	259	24	04'0	46 40	040	15	04'8	45 43			05'8	46 42	329	09	06'4	43 36	012	08		1000			
950		38 31	242	34		37 31	265	27		35 30	238	26		36 30	262	26		42 34				10 38				46 42	329	09	06'4	43 36	012	08		950			
900	29'1	30 27	244	35	30'3	31 27	263	27	30'8	29 25	240	26	31'4	30 25	264	27	32'3	40 40			33'0	36 33			34'0	34 32	232	12	34'4	32 27	294	11		900			
850		26 22	247	37		25 20	259	25		24 19	239	26		22 15	266	28		37 37				31 28				31 28	162	14		28 25	265	12		850			
800	59'6	21 08	250	36	60'9	20 11	257	23	61'1	18 13	237	22	61'8	17 08	267	30	63'6	33 33	231	28	63'9	26 22			64'9	26 23	100	07	65'2	25 24	241	16		800			
750		16 -10	255	34		16 01	250	27		12 04	233	20		13 00	268	30		28 28	227	36		22 16	For			25 25	055	16		24 23	229	32		750			
700	93'5	12 -21	255	33	94'7	11 -14	243	31	94'7	06 -06	226	18	95'4	05 -08	265	30	98'6	23 23	222	54	99'3	17 12			99'4	22 22	225	34	99'7	20 19	231	31		700			
650		07 -36	251	33		05 -26	237	31		01 -18	212	22		02 -16	260	30		17 17	244	46		16 05	Winds			16 16	240	47		16 15	233	28		650			
600	131'9	-01 -42	240	32	132'9	-02 -23	241	28	132'5	-05 -27	212	26	133'0	-10 -23	258	31	137'8	09 09	239	52	137'4	09 -05			138'7	12 08	230	54	138'9	08 04	234	44		600			
550		-08 -47	234	36		-12 -30	241	31		-14 -34	221	30		-17 -37	259	32		03 02	238	50		02 -16	See			06 -04	232	61		02 -20	231	44		550			
500	175'8	-16 -54	230	28	176'5	-20 -38	240	35	175'7	-24 -43	225	35	176'0	-26 -52	259	33	183'0	-04 -08			182'4	-06 -27	top			184'0	00 -16	232	68	193'9	-04 -35	243	62		500		
450		-26 -57	230	24		-29 -47	238	39		-32 -50	224	42		-35 -58	256	38		-13 -20				-15 -33	of			-11 -24	237	70		-14 -37	243	57		450			
400	227'3	-33 -57	230	27	227'6	-41	223	47	228'6	-41	220	50	226'7	-42	252	45	236'1	-23			235'4	-24 -40	page			237'5	-21	236	68	236'9	-25 -40	243	56		400		
350		-51	227	18		-48	220	55		-47	209	55		-47	245	51		-36				-37				-33				-38				350			
300	290'3	-52	227	35	290'7	-51	222	70	290'1	-47	211	55	290'1	-49	235	59	301'2	-48			300'2	-50				302'8	-46			301'4	-51			300			
250		-53	228	45		-50	228	61		-49	244	65		-50	231	52		-66				-63				-61				-67				250			
200	578'3	-54	235	47	579'1	-53	230	46	578'9	-48			578'8	-50	243	44	586'2	-84			585'7	-79				588'8	-77			586'5	-79			200			
170		-53	232	42		-52	230	37		(195mb)				-53	254	34						-89				-83				-77				170			
150		-57	227	40		-56	233	31						-56	252	32		-82				-77				-77				-76				150			
130		-59	217	34		-52	234	27						-57	246	25		-76				-84				-71				-76				130			
110		-58	196	40		-53	252	25						-58	248	21	(1135mb)					-91				-67				-74				110			
100	527'3	-58	188	38	529'3	-56	290	25					528'3	-58							524'4	-80				581'4	-66			-74				100			
90		-59				-57								-58								-78				-66				-73				90			
80		-60																				-76				-66				-72				80			
70		-60																				-74				-65				-72				70			
60	(677mb)																					-72				-64				(76mb)				60			
																																	</				



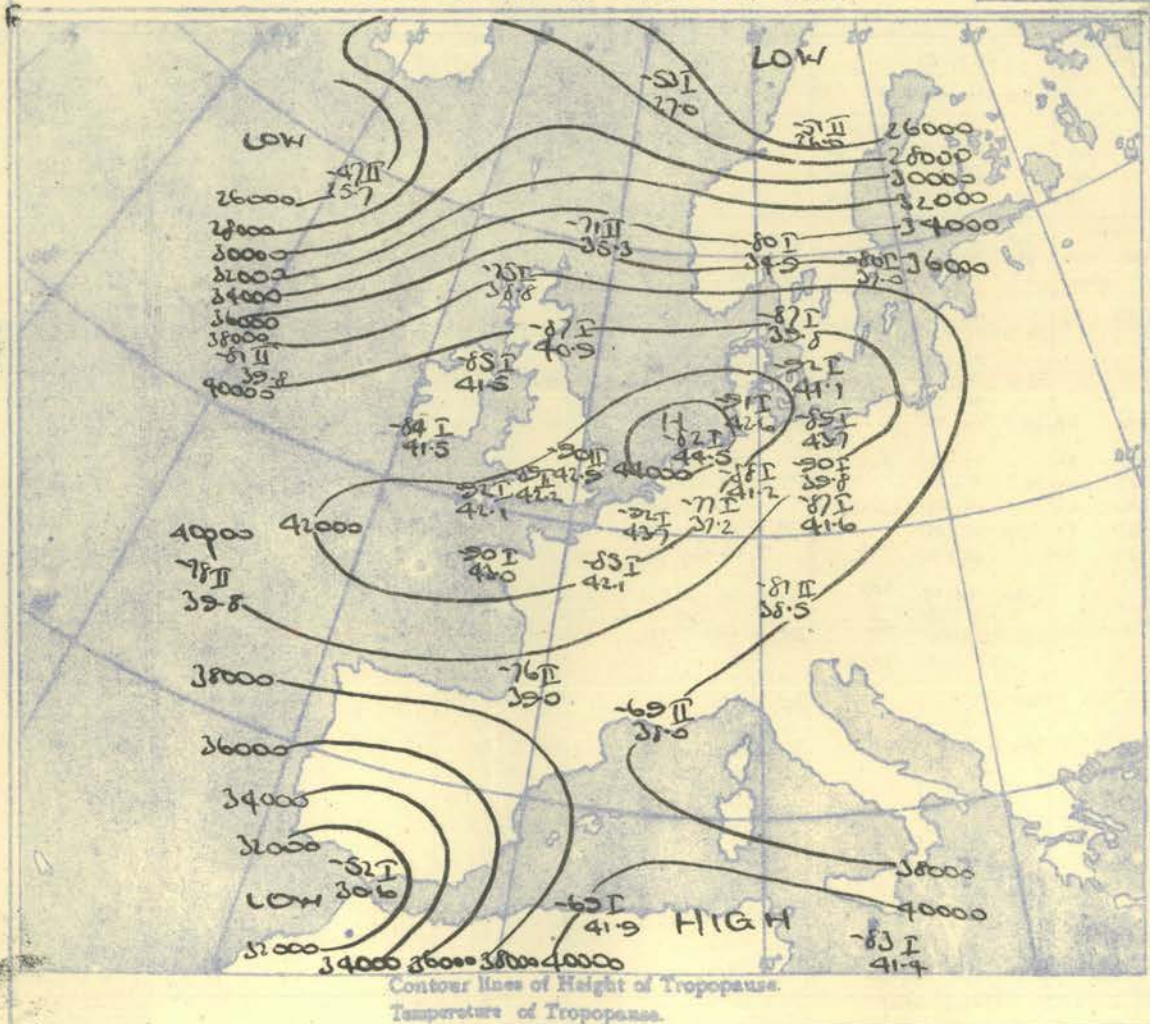


The continuous lines are contour lines of the 700 mb. surface.  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

The continuous lines are contour lines of the 300 mb. surface.  
The dotted lines are isopleths of the thickness of the layer 300-700 mb.

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



Contour lines of Height of Tropopause.  
Temperature of Tropopause.

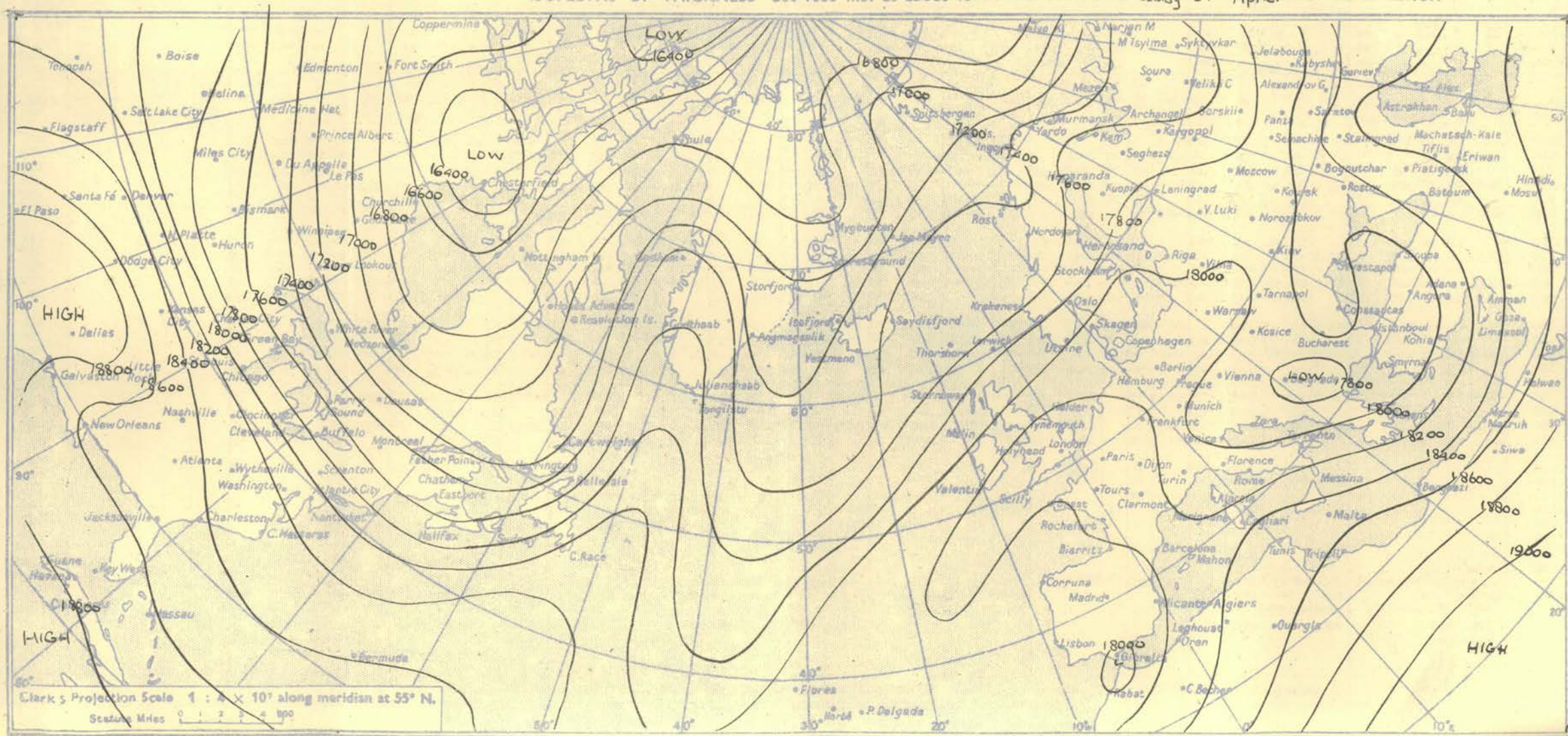
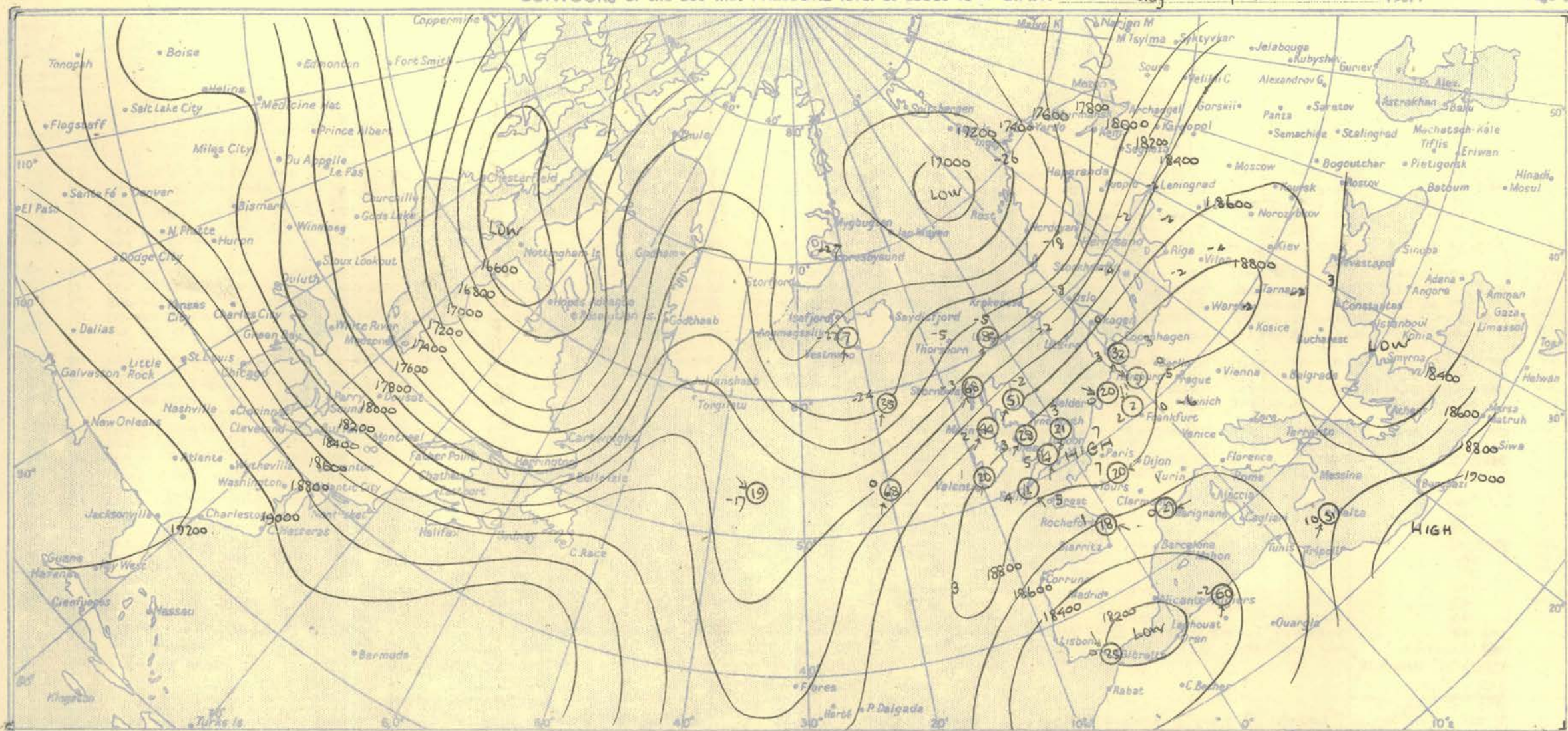
### NOTES ON THE AEROLOGICAL SITUATION.

Rapid warming over the Western Atlantic and Greenland - otherwise no significant change during the day.

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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.				15h G.M.T.				15h G.M.T.				Time M.S.L. Surf Freezing						
	1015.2 mb				1018.1 mb				1020.1 mb				1020.9 mb				1022.6 mb				1021.7 mb				1021.6 mb				1023.7 mb				1024.2 mb														
	1005.1 mb				1016.5 mb				1019.3 mb				1011.4 mb				1020.6 mb				1017.3 mb				1006.1 mb				1013.1 mb				1022 mb														
Pressure	876				850				777				758 730 702				688				688				684				685				695				Pressure										
Height ft./100																																					Height ft./100										
Temp.																																					Temp.										
Dew																																					Dew										
Wind																																					Wind										
Dir.																																					Dir.										
Vel.																																					Vel.										
knots																																					knots										
Surf	02.7	48	42	255	27.0	47	45	190	07.0	2.2	57	49	220	06.0	2.6	61	51	200	08.0	0.6	60	49	330	03.0	1.2	71	38	Calm	04.4	69	39	090	02.0	2.9	55	43	045	00.3	53	50	185	07	Surf				
1000	04.1	47	41		04.8	45	43	233	09.0	5.5	55	47	217	15.0	5.7	59	49	220	14.0	6.3	57	46	327	07.0	6.1	68	37	Land V	06.1	67	31		06.5	54	40	Calm	06.5	51	48	196	09	1000					
950		39	32	255		31	40	37	234	09.0	48	40	228	18.0	45	52	45	232	19.0		54	43	267	04.0	34	53	34	148	04.0	59	20	102	04.0	55	46	045	03.0	48	45	226	12	950					
900	32.2	34	24	262	33.3	30	33	231	10.0	34.1	41	38	241	22.3	34.6	45	42	250	19.0	35.2	49	34	198	07.0	35.4	58	32	135	04.0	59	20	102	05.0	35.5	55	46	055	03.0	46	41	246	13	900				
850		28	18	261		33	30	29	241	19.0	39	38	253	25.0	44	38	256	20.0	48	32	221	08.0	48	26	215	06.0	49	20	129	04.0	49	36	065	04.0	49	36	065	04.0	40	32	264	14	850				
800	62.9	28	02	259	35.6	40	29	26	243	33.6	35	34	254	30.6	33	32	252	25.6	43	28	236	14.0	67.4	42	22	224	10.0	67.1	44	01	158	04.0	67.5	45	28	071	04.0	66.8	44	01	268	16	800				
750		22	15	260		42	26	22	240	38.0	27	22	252	34.0	31	26	244	27.0	36	17	233	20.0	40	23	227	06.0	40	23	03	156	03.0	37	30	081	07.0	39	08	265	23	750							
700	97.1	17	17	260	43.9	21	13	238	42.0	100.5	27	16	248	39.0	101.4	32	20	247	34.0	102.7	34	07	252	22.0	103.0	34	19	253	06.0	102.6	34	08	100	02.0	103.1	34	24	076	09.0	102.3	33	15	258	19	700		
650		09	24	262		45	18	06	242	56.0	21	14	252	40.0	27	13	255	35.0	27	01	259	23.0	27	11	251	07.0	26	01	105	03.0	26	01	105	03.0	27	17	082	09.0	27	21	253	19	650				
600	135.7	03	32	262	56.1	18	04	242	61.0	140.0	13	03	256	43.0	141.4				39.0	142.7	20.0	10	255	23.0	143.1	21.0	09	249	08.0	142.8	22.0	04	130	04.0	143.1	20.0	10	094	12.0	142.2	20.0	28	254	19	600		
550		02	38	254		66	04	04	245	62.0	07	06	262	45.0	12	46	248	41.0	12	10	254	24.0	14	03	249	13.0	15	14	180	05.0	15	05	129	07.0	12	33	243	21	550								
500	180.3	05	20	258	85.1	03	09	251	68.1	85.3	02	11	258	51.1	87.2	02	54	245	44.1	88.5	03	21	251	28.0	89.0	03	11	231	21.0	168.7	05	27	184	12.0	189.0	04	14	155	12.0	188.1	01	40	232	20	500		
450		16	27	260		92	10	19	254		11	23	259		11	23	259		11	23	259		11	23	259		11	23	259		11	23	259		11	23	259		11	23	259		11	23	259		450
400	233.1	26	37	260	89.2	36	5	22	33	255	76.2	38	7	19	35	256	55.2	40	3	37	254	43.2	42	19	244	19.0	41	19	244	21.0	242.7	18.0	41	19	244	21.0	243.0	19.0	36	177	20.0	241.7	20.0	51	243	18	400
350		39	49	258		96	36	46	248		89	33	46	255		59	33	47	248		48																									350	
300	297.5	53		258	107.3	01	7	44		248	97.3	04	1	47		252	64.3	06	1	48		240																								300	
250		65		259		120		59		248		104		63		252		69		63		244																									250
200	392.7	73		259	83.3	88	0	75		248	98.3	89	4	80		254	66.3	91	6	79		243																								200	
170		61				67				248		56		80		254		57		80		246																								170	
150		60				67				248		47		73		257		32		73		248																								150	
130		60				64								70		258		34		72		252																								130	
110		63				61								72		270		28		68		256																									110
100	529.9	57				53	8	59						68		273		18		53		264																								100	
90		60												64		278		06		65		247																									90
80		61												67		285		05		64		246																									80
70		62												64						61		249																								70	
60		63												60						60		249																									60
				Inversion				Inversion				Inversion				Inversion				Inversion				Inversion				Inversion				Inversion															
				808mb 28°-775mb 30°				890mb 39°-873mb 41°				918mb 49°-904mb 50°				900mb 49°-880mb 51°				771mb 39°-750mb 40°				1000mb 54°-985mb 55°				839mb 39°-808mb 44°																			
				670 - 17°-645 - 18°				750 - 29°-730 - 30°				745 - 30°-725 - 33°				750 - 36°-735 - 38°												808 - 800mb 44°																			
				Isothermal				Isothermal				Isothermal				Isothermal				Isothermal				Isothermal				Isothermal				Isothermal															
				725 - 713mb 33°				783 - 941mb 54°																																							
				527 - 2° - 520 - 1°																																											
				555 - 527mb 2°																																											
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				002 - 63																																											
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				825mb 25°-800mb 28°																																											
				527 - 2° - 520 - 1°																																											
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				825mb 25°-800mb 28°																																											
				527 - 2° - 520 - 1°																																											
				Isothermal																																											
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				825mb 25°-800mb 28°																																											
				527 - 2° - 520 - 1°																																											
				Isothermal																																											
				555 - 527mb 2°																																											
				002 - 63																																											
				mb Inversion																																											
				825mb 25°-800mb 28°																																											
				527 - 2° - 520 - 1°																																											
				Isothermal																																											

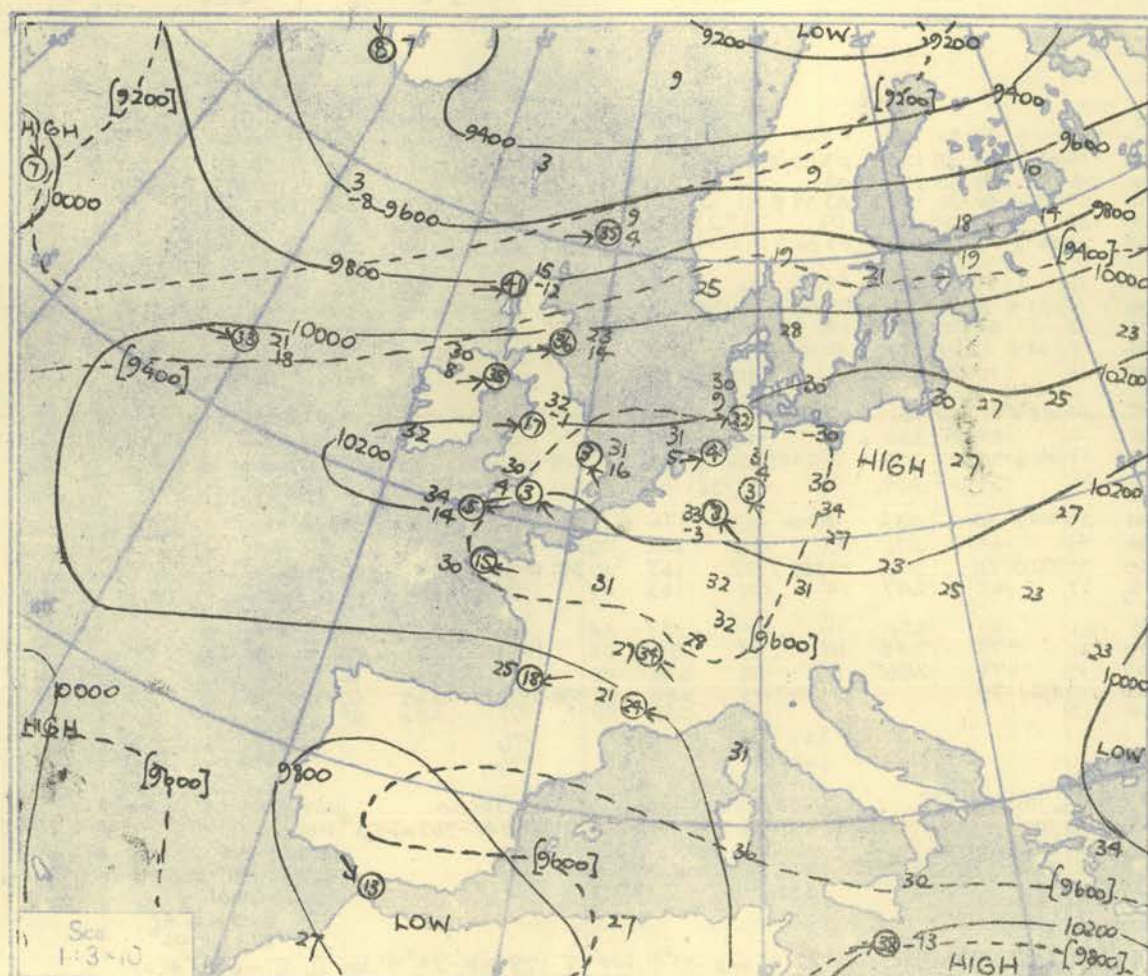


VALENTIA  
 03h  
 4 - MAY 1951  
 1024  
 G.M.T.  
 Time  
 M.S.L.  
 Sort  
 Frequency

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.				03h G.M.T.				03h G.M.T.								
	1016.6 mb				1020.6 mb				1021.1 mb				1023.1 mb				1023.4 mb				1022.0 mb				1022.0 mb				1023.3 mb				1023.3 mb				1024.4 mb								
	1006.4 mb				1018.9 mb				1020.2 mb				1013.4 mb				1021.3 mb				1017.4 mb				1005.6 mb				1012.6 mb				1024.4 mb												
910 mb				900 mb				793 mb				760, 730, 714 mb				699 mb				709 mb				720 mb				696 mb				700 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	42	41	260	16	00.4	42	38	240	05	00.2	50	47	260	04	02.6	52	50	Calm	00.6	39	38	Calm	01.2	47	36	130	05	04.4	16	40	Calm	02.9	44	44	030	03	00.3	50	49					
1000	04.4	42	41		05.4	43	39		05.7	48	47	270	15	06.2	51	50	270	06	06.3	46	44	340	06	05.9	54	38	125	03	05.8	49	41		06.2	48	43	068	06	06.8	48	45					
950		37	32	258	26		37	30	263	24		45	43	272	18		46	44	270	07		51	40	328	08		58	25	125	03		58	36	063	08		54	39	070	06		47	39		
900	32.4	31	26	256	24	33.4	32	23	260	24	34.3	43	38	266	26	34.7	41	38	266	10	34.9	46	42	308	07	35.0	60	30	127	03	34.8	51	32	067	08	34.9	50	13	074	06	35.3	42	30		
850		26	13	254	25		26	21	254	28		39	32	264	27		36	33	266	11		44	27	249	09		44	24	161	03		47	23	058	04		44	16	062	06		44	05		
800	62.9	24	03	252	29	64.0	24	09	249	34	65.7	33	29	263	27	66.0	33	28	265	20	66.6	40	27	234	13	66.9	43	19	196	03	66.6	42	14	029	03	66.6	47	06	099	07	66.9	42			
750		17	07	252	31		20	04	251	39		26	25	257	30		31	17	261	26		38	09	242	16		39	10	216	04		36	10	112	03		39	05	089	07		38			
700	96.8	09	04	253	35	98.1	15	12	250	41	100.3	23	14	259	36	101.0	30	08	253	38	102.1	32	01	246	17	102.5	31	16	163	03	101.9	30	04	128	03	102.1	34	14	078	05	102.3	32			
650		06	16	253	42		10	24	248	46		21	17	252	39		24	37	251	40		25	00	245	18		26	10	181	03		27	01	087	02		27	12	089	05		26			
600	35.0	01	26	251	52	36.8	07	36	250	61	39.8	15	28	251	43	140.8	16	44	251	44	141.9	17	04	246	17	142.4	19	04	221	06	141.7	16	01	155	03	142.1	20	28	120	05	142.2	18			
550		05	34	253	76		02	18	252	77		07	38	254	48		08	52	249	44		10	06	250	16		10	10	225	11		10	11	149	07		11	32	121	04		08			
500	179.3	09	27	253	92	181.7	04	13	247	84	185.2	01	52	253	52	186.3	02	57	247	43	187.5	00	16	247	24	188.0	01	20	231	18	187.4	03	22	194	03	187.9	02	38	194	04	187.7	01			
450		16	26	249	103		14	24	245	87		11	53	251	55		12	53	243	47		10	27	248	22		08	31	250	18		10	34	237	05		08	50	206	10		10			
400	231.8	29	38	250	109	234.7	24	35	245	92	238.4	24	57	250	70	239.5	24	57	245	51	241.0	21	39	252	27	241.6	20	42	250	8	240.8	24	36	189	06	241.6	20	58	182	16	241.1	29			
350		43		251	114		40	50	246	95		38	58	243	66		38	58	243	50		34	53	239	35		33	55	254	21		38	58	165	11		35	58	174	17		35			
300	295.7	57		247	117	299.1	53		246	108	303.0	52		243	70	304.2	54		243	52	306.1	51		244	39	304.8	50		246	18	305	53		176	11	306.6	52		170	18	306.1	48			
250		67		250	111		67		245	111		68		255	71		70		243	59		67		246	41		64		271	19		68		212	02		67		178	18		63			
200	381.4	62			384.1	71		245	76	387.5	78		252	54	388.6	82		241	59	390.7	83		245	39	392.0	80		256	14	389.7	87		167	10	391.0	85		149	12	391.6	78				
170		61				67		243	70		79		263	54		79		246	60		83		245	27		88		247	14		88		162	07		91		134	12		85				
150		63									76		282	39		73		249	37		80		250	21		82					250	11		79		157	04		82		168	09		76	
130		61									75		243	35		72		242	25		78		246	22		79					248	10		80		195	05		81		121	07		73	
110		62									75		226	32		71		265	17		75		247	15		76					286	11		74		264	05		79		242	12		76	
100	528.4	62									529.2	76		223	27	531.1	70		268	13		531.2	73		258	10	532.1	75				529.7	75		75		266	08	530.0	78		269	10		74
90		62									71		266	33		69		270	11		71		266	12																					
80	108.5	63									71		337	20		70		275	10		72																								
70											71		309	21																															
60	Inversion																																												
	43mb-76°-522mb-5°																																												



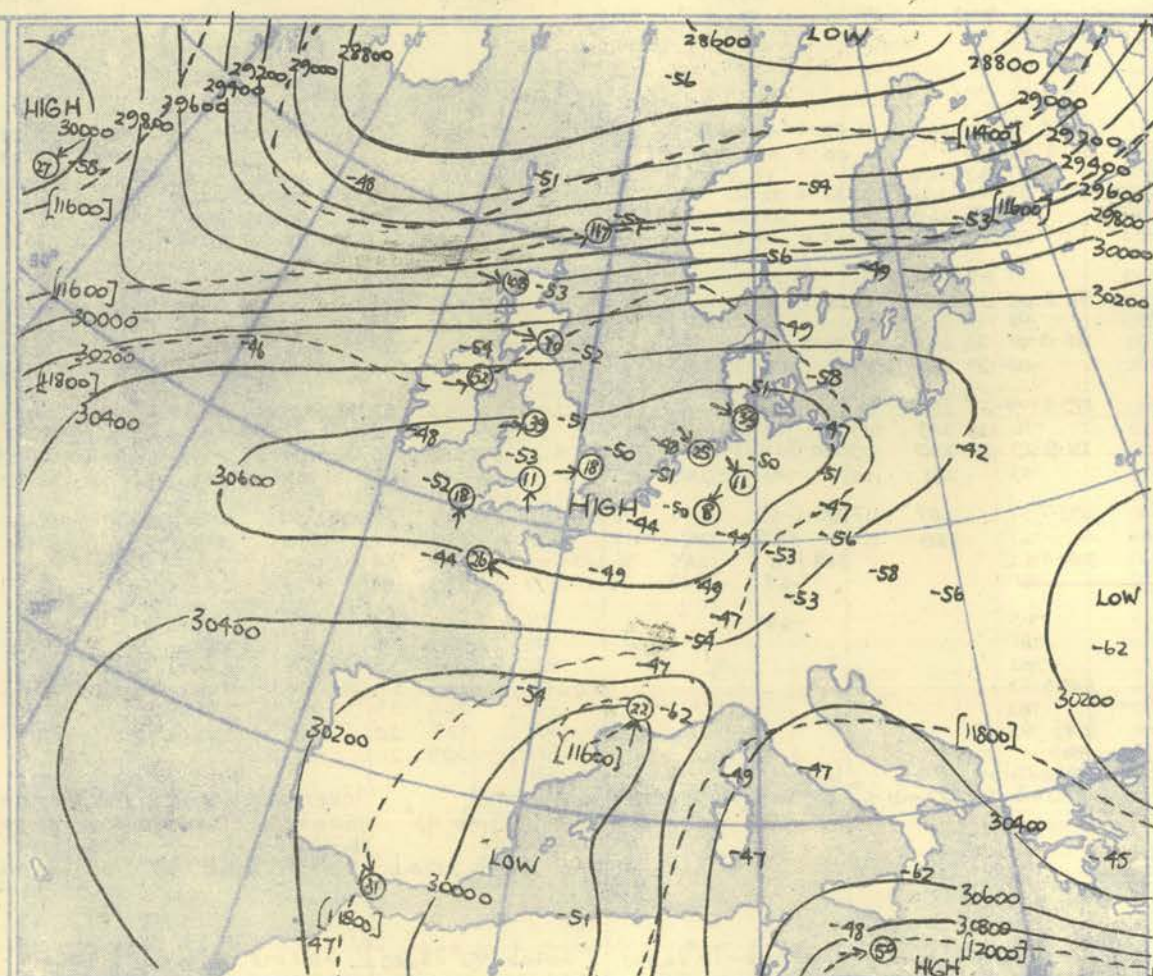
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



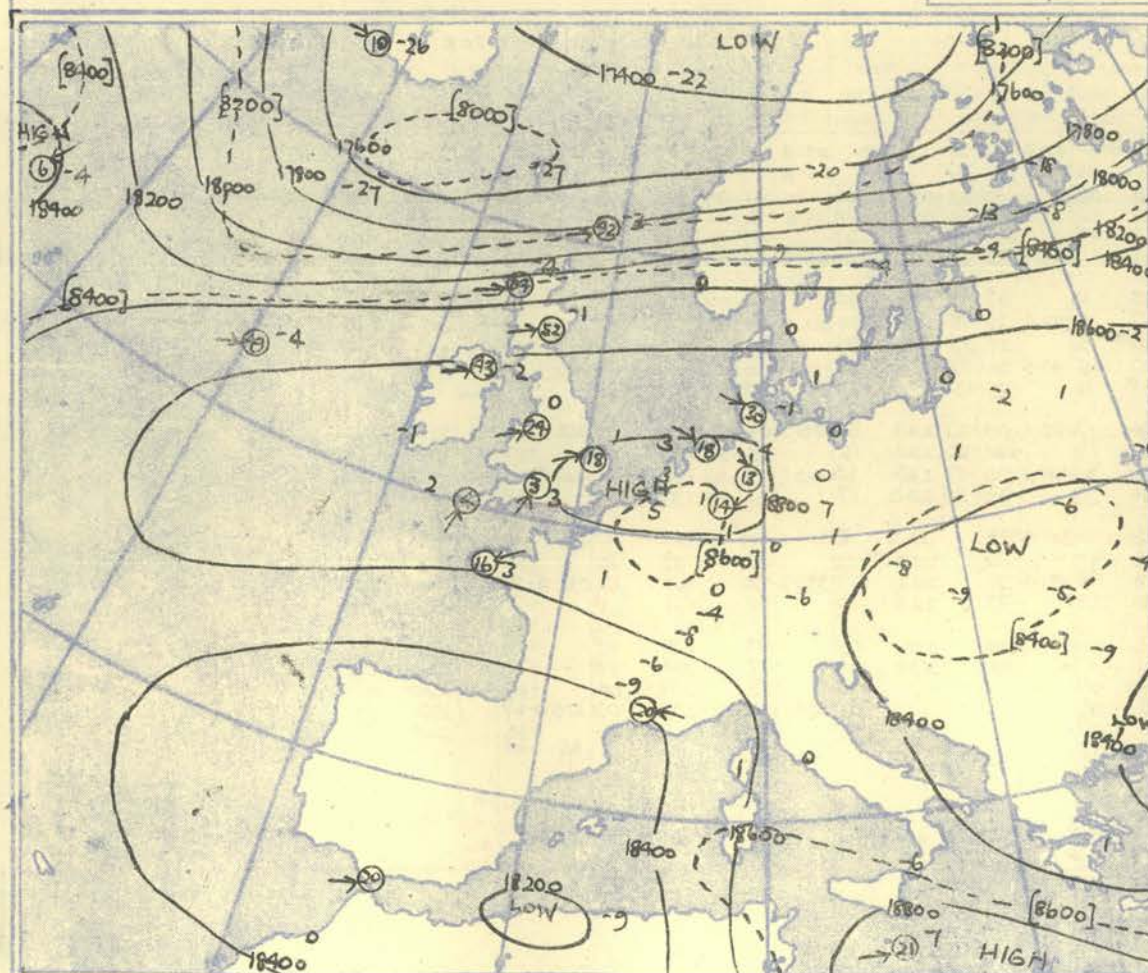
The continuous lines are contour lines of the 700 mb. surface  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

Gradient Wind Scale for Contours  
at intervals of 200 ft. at Lat. 53° N.

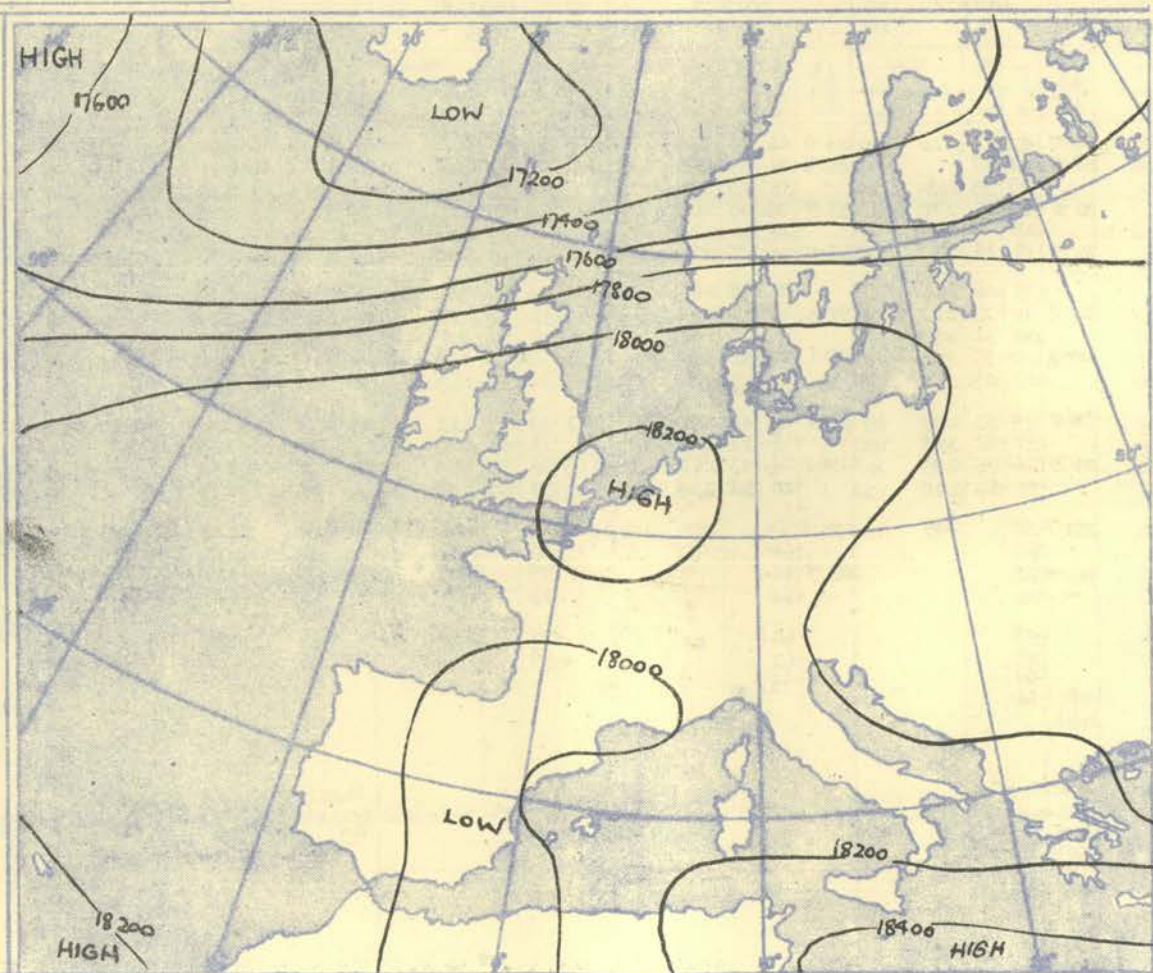
100 80 60 40 20 10 0 knots



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.



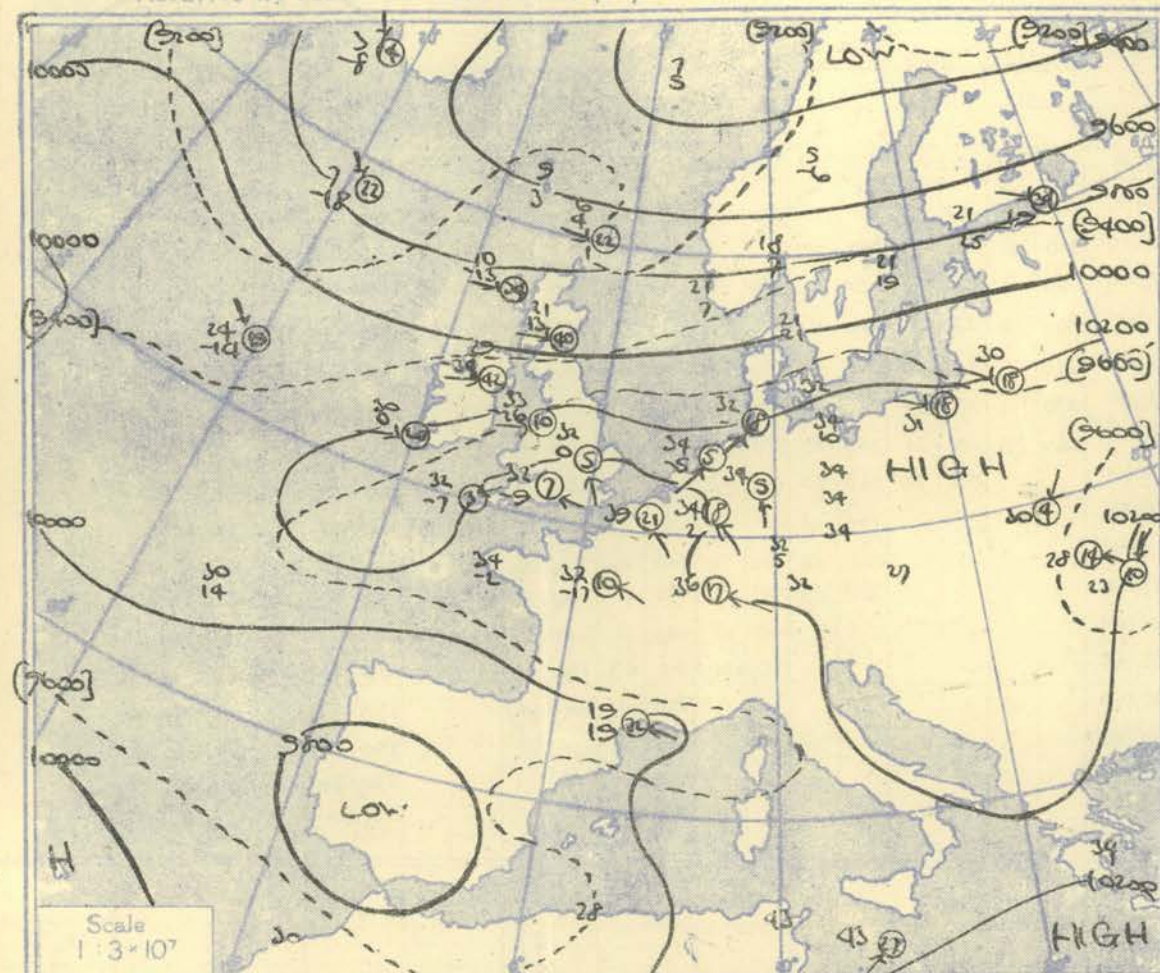
## DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WIND at heights above M.S.L.

[illegible]

## NEPHOSCOPE OBSERVATIONS

Ship	Weather Watcher				Weather Watcher				Weather Watcher				Weather Watcher				Cumulus				Cumulus				Cumulus				Cumulus				Ship											
Lat/Long	59°N 18°W				59°N 18°W				58°N 18°W				58°N 18°W				52°N 20°W				52°N 20°W				52°N 20°W				52°N 20°W				Lat/Long											
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.	G.M.T.			Time							
	M.S.L.	1018			mb	1020			mb	1023			mb	1024			mb	1026			mb	1028			mb	1030			mb	1030			mb	mb			M.S.L.							
	Surf	1018			mb	1020			mb	1023			mb	1024			mb	1026			mb	1028			mb	1030			mb	1030			mb	mb			Surf							
	(Freezing)	930			mb	-			mb	940			mb	935			mb	903			mb	-			mb	920			mb	930			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	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	-	44	35		-	43	28	24	-	44	34	310	28	-	41	33	315	24	-	46	37	010	07	-	46	34	026	10	-	47	32	360	12	-	46	31	010	09	Surf					
1000	4.7	42	35		5.3	40	24	24	6.1	40	32	300	24	6.3	39	31	324	32	0	44	35	002	07	7.5	42	33	026	10	8.1	41	30	348	14	7.9	42	28	005	12	1000					
950		35	32			32	24	28	25		33	26	29	25		34	25	326	33		37	31	348	06		34	30	039	12		36	28	327	17		35	23	359	15	950				
900	26.6	28	24		28.1	27	20	287	26	28.9	27	22	300	28	24	128	26	329	31	35	1.31	27	334	06	35	4.27	27	052	13	36	0.29	26	302	20	35	9	28	17	281	76	900			
850		22	15			20	14	303	26		21	14	303	26		23	16	331	24		30	18	326	06		29	25	260	12		31	05	280	22		30	01	319	20	850				
800	69.9	16	12		63.3	14	01	290	27	64.2	15	06	309	23	64.4	17	09	323	22	65	9	28	26	305	05	66	1	24	24	330	06	66	8	29	22	70	24	66	6	26	9	308	16	800
750		10	05			07	-5	290	24		10	02	316	20		11	-2	317	28		28	23	283	05		20	13	312	05		25	-3	289	25		26	-14	301	18	750				
700	26.3	03	-8		96.8	01	-18	289	24	97.7	07	-18	309	22	97.9	07	-24	317	30	100	5	1.8	284	32	100	4	18	312	07	101	4	24	-14	285	13	101	2	-22	-16	295	19	700		
650		-6	-17			-7	-27	285	25		00	-20	306	26		01	-31	317	37		16	12	239	52		14	09	210	20		19	-13	293	22		18	-18	293	24	650				
600	133.7	-11	-29		133.7	-17	-28	28	25	135.5	-16	311	30	35.7	-7	39	314	47	109	7	11	06	235	48	139	4	03	07	248	26	140	8	14	-2	286	24	140	6	14	-22	289	21	600	
550		-19	-34			-22	-41	280	26		-15	-23	320	33		-9	-47	311	71		03	-2	242	49		03	-2	248	47		06	-2	257	23		05	-26	302	18	550				
500	176.6	-27	-43		176.2	-30	-51	272	26	178.7	-25	-36	325	42	176	-8	-50	308	82	184	7	-4	248	49	184	5	-11	251	49	186	1	-5	-36	300	28	185	9	-17	-34	309	20	500		
450		-36	-51			-39	-59	265	32		-33	-46	333	43		-15	-56	312	96		-12	-26	248	48		-21	-22	252	51		-13	-45	300	32		-14	-45	319	22	450				
400	221.0	-47			226.3	-42	253	35	229.5	-40	54	331	61	231.5	-23	-58	322	106	237	9	-22	32		236	63	1	260	52	239	2	23	300	26	239	9	-26	319	17	400					
350		-46				-48	253	34		-44	328	74		239	59	330	23		236							-41						-28			39				39		350			
300	280.1	-48			290.1	-46	262	34	290	-250	334	65	296	54	327	102	301	46						200	8	52					304	0	-49				209	6	54		300			
250		-49				-47	265	37		-50	346	56		-59	340	79		-43								-65						-65				-70			250					
200	278.9	-53			375.5	-50	268	34	301	-7	32	335	33	303	56	323	33	389	177					386	1	79					389	3	38				388	7	80		200			
170		-53				-52	264	32		-55	328	28		-54	325	24		-82								-78						-78				-80			170					
150		-55				-52	267	27		-57	324	16		-57	321	20		-85								-74						-78				-76			150					
130		-55				-56	263	20		-55	301	12		-58	320	18		-80								-73						-75				-75			130					
110		-59				-57	257	16		-57	299	19		-59	320	08		-76								-72						-72				-74			110					
100	328.1	-60				-57	257	13	53	18	33	208	11		-60			-82					329	4	73						328	2	71				-73			100				
90		-59				-57				-56	310	06		(103)																			-69				-73			90				
80																																							-72			80		
70																																									70			
60																																									60			

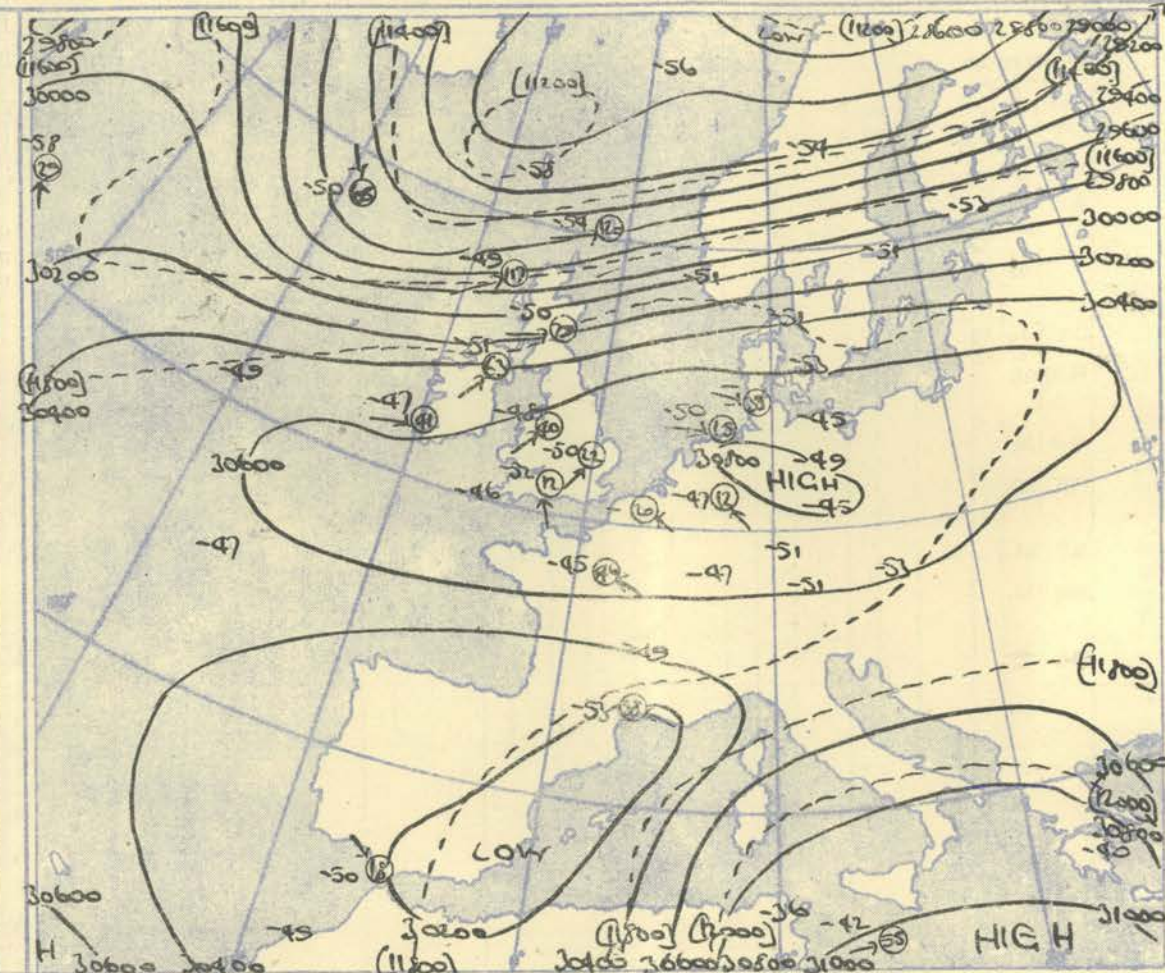




The continuous lines are contour lines of the 700 mb. surface.  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

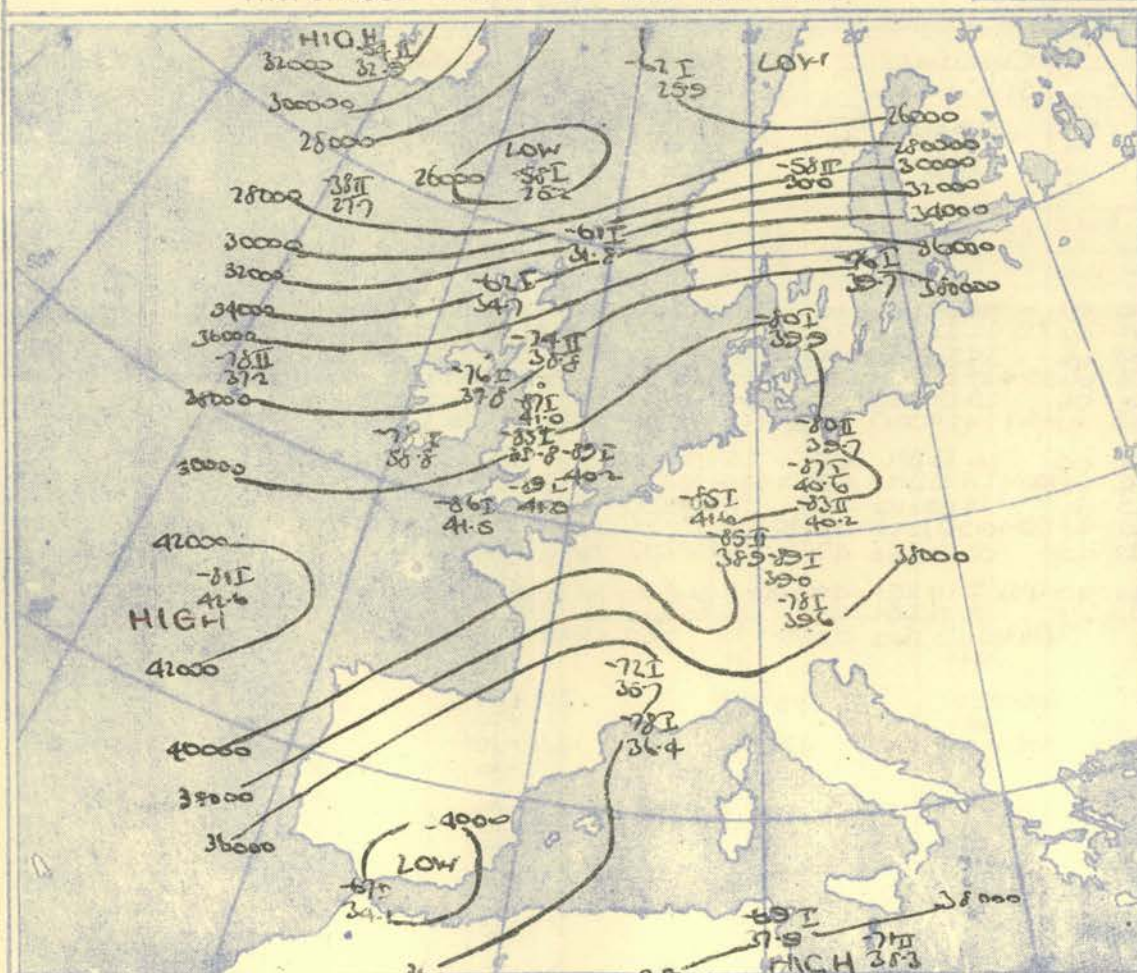
Gradient Wind Scale for Contours  
at intervals of 200 ft. at Lat. 52° N.

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.

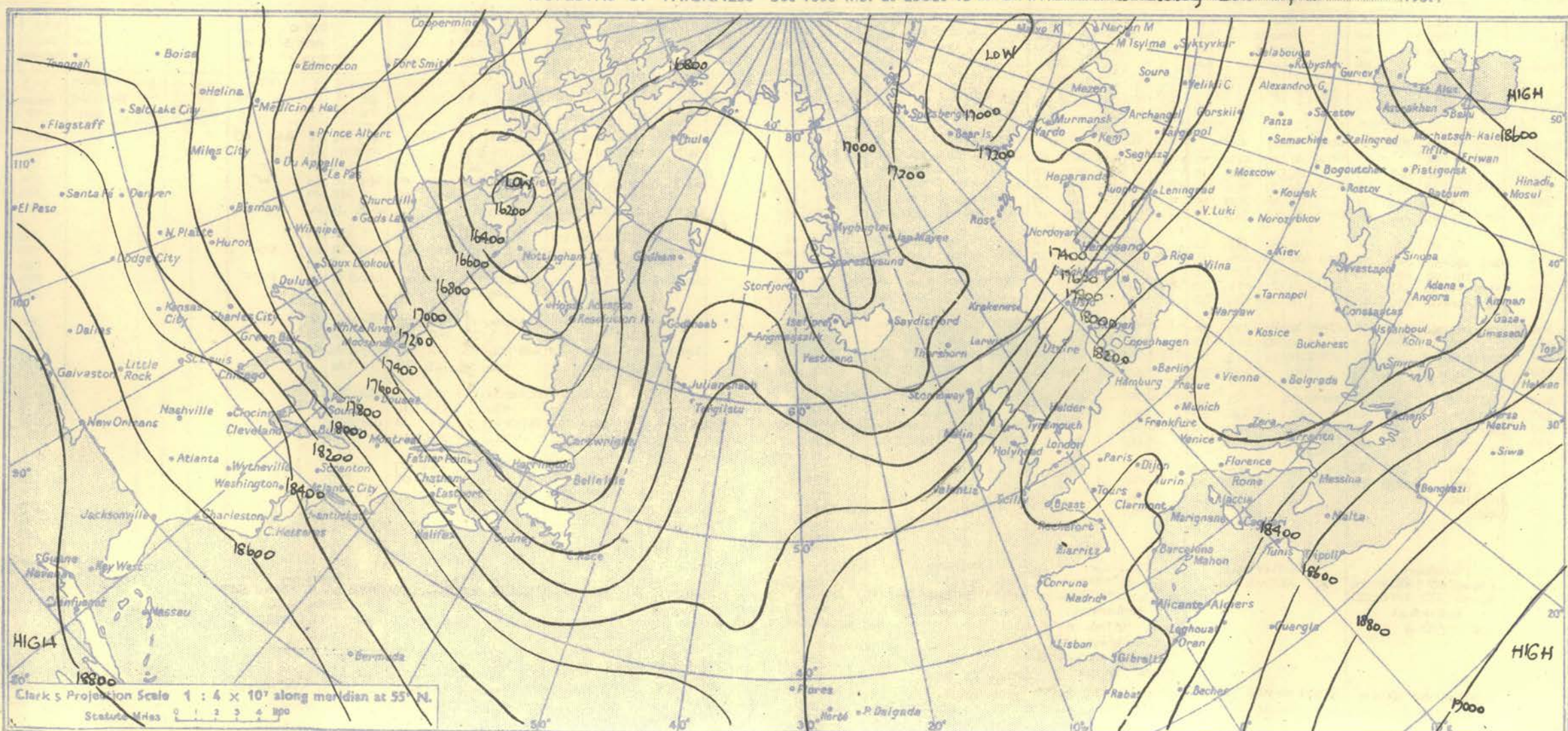
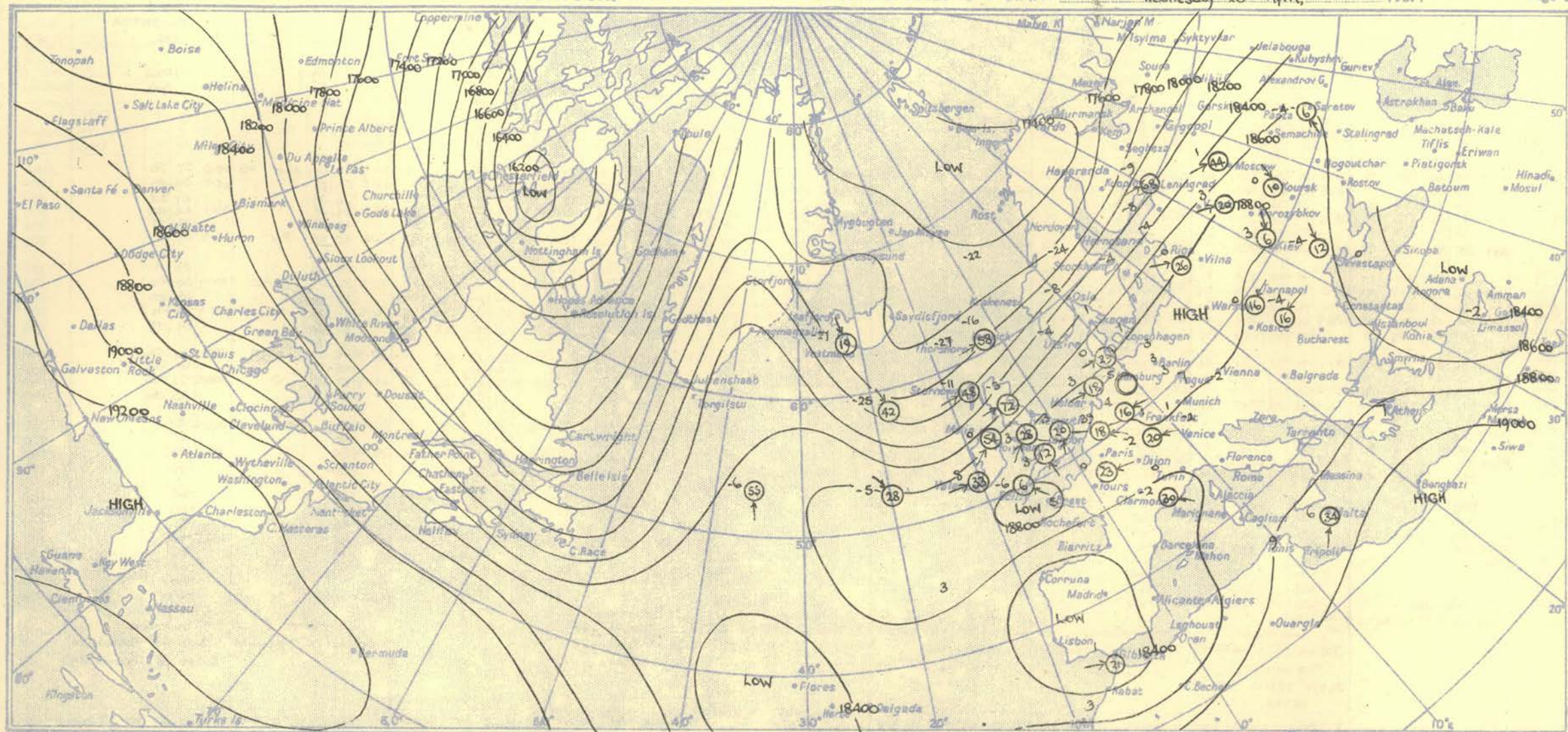


Contour lines of Height of Tropopause.  
Temperature of Tropopause.

### NOTES ON THE AEROLOGICAL SITUATION.

Note the tendency to sharpening of the thermal trough between Scotland and Iceland, due to warming from the West.







## 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 (Pressure)	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 (Pressure)										
	1017.8	mb			1021.6	mb			1021.7	mb			1023.8	mb			1021.4	mb			1019.6	mb			1017.8	mb			1020.3	mb			1022	mb									
Pressure mb	1007.6	mb			1020.0	mb			1020.9	mb			1014.1	mb			1019.4	mb			1015.2	mb			1002.3	mb			1009.7	mb			710	mb									
	913	mb			890	mb			862	mb			800, 750, 720	mb			695	mb			698	mb			700	mb			700	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	02.7	47	40	275 22	00.4	51	39	270 07	00.2	57	41	250 05	02.6	51	45	340 04	00.6	61	52	360 08	01.2	66	50	018 16	04.4	70	42	030 10	02.9	51	49	360 05	00.3	57	50		Surf						
1000	04.7	45	38		05.8	45	34	280 15	05.9	54	40	255 09	06.4	50	47	340 04	05.9	57	48	358 14	05.4	63	47	042 21	05.0	70	42	05.5	50	46		06.5	54	49		1000							
950		36	31	268 26		39	39	267 17		46	36	256 07		44	40	296 06		52	39	357 11		56	43	057 12		60	31	071 10		60	39		47	44		950							
900	32.7	31	26	272 26	34.0	33	24	260 15	34.4	38	31	258 08	34.8	38	34	262 06	34.8	48	38	270 03	34.5	52	41	074 07	34.3	53	27	079 10	34.5	54	31		35.1	44	42		900						
850		25	19	272 21		27	19	250 21		30	26	264 10		34	30	256 10		44	29	216 07		49	29	017 02		46	18	069 08		47	18		38	31		850							
800	63.1	20	12	269 23	64.7	20	15	251 17	65.3	24	20	269 16	66.0	32	25	254 21	66.7	45	00	227 07	66.4	43	15	238 15	66.2	42	03	080 05	66.4	43	05	For	66.5	39	23		800						
750		14	02	271 24		14	02	253 16		24	20	259 23		31	22	247 32		41	15	241 08		38	09	183 03		37	00	105 06		38	04		38	11		750							
700	96.8	06	04	272 22	98.5	10	13	254 24	99.6	21	13	249 40	101.0	29	34	244 42	102.3	33	26	247 10	101.9	32	00	165 05	101.6	32	09	107 07	101.8	32	07	winds	101.9	30	00		700						
650		01	09	263 34		06	28	250 30		18	07	244 51		22	39	243 45		25	01	232 18		25	01	194 07		26	09	132 09		27	13		24	05		650							
600	134.8	01	19	260 42	136.8	01	37	244 42	138.9	13	02	247 58	140.7	17	43	240 50	142.2	19	36	237 19	141.8	22	11	203 09	141.4	19	09	132 06	141.8	21	14	see	141.9	17	11		600						
550		07	28	255 51		08	45	240 39		05	24	249 63		09	49	234 53		11	17	242 23		15	21	218 14		13	16	168 09		13	20		09	18		550							
500	178.7	16	37	257 58	181.1	11	52	240 48	184.1	03	39	243 72	186.3	00	55	232 54	187.9	03	19	230 28	187.8	03	23	210 20	187.3	03	23	158 12	187.8	06	27	page	187.2	02	26		500						
450		26	43	254 70		19	55	243 70		12	50	244 72		09	51	229 56		08	36	234 34		07	30	199 21		10	35	128 11		05	37		10	34		450							
400	230.2	38	54	253 91	233.4	30	57	240 72	237.3	23	56	234 73	239.6	22	55	224 60	241.7	18	53	234 39	241.6	20	41	206 20	240.9	22	46	136 13	241.8	19	51	3.	240.6	22	45		400						
350		44		249 119		38	58	233 108		26	59	242 77		26	39	232 61		34	57	229 42		36	55	203 18		37	59	140 15		34	57		35	56		350							
300	293.7	54		246 120	298.0	49		234 117	302.2	50		240 79	304.5	51		236 63	307.0	48		232 40	306.6	50		199 22	305.7	52		162 12	307.1	46			305.6	47		300							
250		58		247 90		61		234 103		64		245 80		65		230 69		65		224 43		67		198 21		67		162 15		61			391.4	78		250							
200	380.4	61		249 61	384.8	60		243 65	387.7	74		244 73	389.7	76		234 63	391.9	84		230 44	391.2	86		219 18	390.1	85		161 14	392.9	80			391.4	78		200							
170		59		250 43		55		254 46		66		245 80		64		236 40		82		235 28		81		211 15		76		177 10		81			70		170								
150		59		250 38		55		247 34		68		248 44		67		233 29		75		239 24		79		217 16		76		181 11		72			65		150								
130		60		257 32		57		249 30		67				64				70		252 16		75		216 10		73		224 09		69			65		130								
110		59		264 29		56		246 30		62				62				72		240 14		74		263 10		70		252 11		68			61		110								
100	(107) mb	59			533.9	83		239 29	532.9	61			535.6	62				70		252 16	532.3	71		255 10	532.3	68		284 09	535.5	69			536.6	63		100							
90						56		276 24		64				62				67		268 11		71		265 06		71				63			63		90								
80						55		263 19		64				59				66		258 08		72		337 04		72				64			64		80								
70						55		250 09		61								66		289 06		72								59			60		70								
60						55		250 10		64								65		291 06										59			59		60								
				Inversion 650mb. 01° - 641mb. 02°				Inversion 755mb. 13° - 744mb. 15° Max wind 1 - 31,000' 283mb. 239° 142 kts.				Inversion 772mb. 21° - 756mb. 25°				Inversion 764mb. 26° - 749mb. 32° Isothermal 850 - 817mb. 34° 749 - 720mb. 32°				Inversion 852mb. 43° - 832mb. 46° 198mb. -85° - 193mb. -83°				Isothermal 822 - 800mb 43° 633 - 610mb 23°				Inversion 1000mb. 50° - 950mb 60°				Inversion 928mb. 43° - 900mb. 44° 850mb. 38° - 800mb. 39°											
Tropopause				I 267mb. -61° 31,800'				I 238mb. -62° 34,700'				I 200mb. -74° 38,800'				I 212mb. -76° 37,800'				I 198mb. -85° 39,300'				I 189mb. -89° 40,200'				I 182mb. -89° 41,000'				I 180mb. -86° 41,500'				I 203mb. -78° 38,800'				Tropopause			
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE								STATION						
Time M.S.L. Surf (Pressure)	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.			G.M.T.	Time M.S.L. Surf (Pressure)									
	1017.7	mb			1020.2	mb			1020.9	mb			1022.6	mb			1019.2	mb			1017.8	mb			1016.4	mb			1019.0	mb													
Pressure mb	1007.5	mb			1018.5	mb			1019.1	mb			1012.7	mb			1017.2	mb			1013.2	mb			1000.7	mb			1008.3	mb													
	912	mb			917	mb			888	mb			865	mb			740	mb			727	mb			742	mb			739	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	02.7	41	39	280 11	00.4	42	38	Calm	00.2	46	43	Calm	02.6	44	42	360 08	00.6	48	45		01.2	51	46	050 10	04.4	59	39	Calm	02.9	48	48	340 03				Surf							
1000	04.7	41	38		05.4	41	37	272 12	05.2	47	44	227 04	06.0	43	40	350 12	05.2	51	47		04.8	51	46	049 18	04.6	59	39		05.1	49	48					1000							
950		37	33	268 19		36	32	266 11		41	34	259 05		39	35	325 12		50	41			55	39	049 13		58	36	075 07		54	46				950								
900	32.6	30	23	272 19	33.3	30	27	261 10	33.3	34	31	277 06	34.1	35	29	293 14	33.9	48	37		33.8	51	41	050 03	33.7	52	33	078 09	34.0	52	34	For			900								
850		24	16	268 17		23	20	253 10		26	26	260 07		31	23	270 18		42	32			45	35	007 03		47	25	097 06		45	39				850								
800	63.1	19	06	263 16	63.7	16	13	248 12	64.1	22	20	228 11	65.0	27	19	250 20	65.5	35	25		65.5	38	27	312 03	65.5	40	22	082 04	65.8	38	26	winds			800								

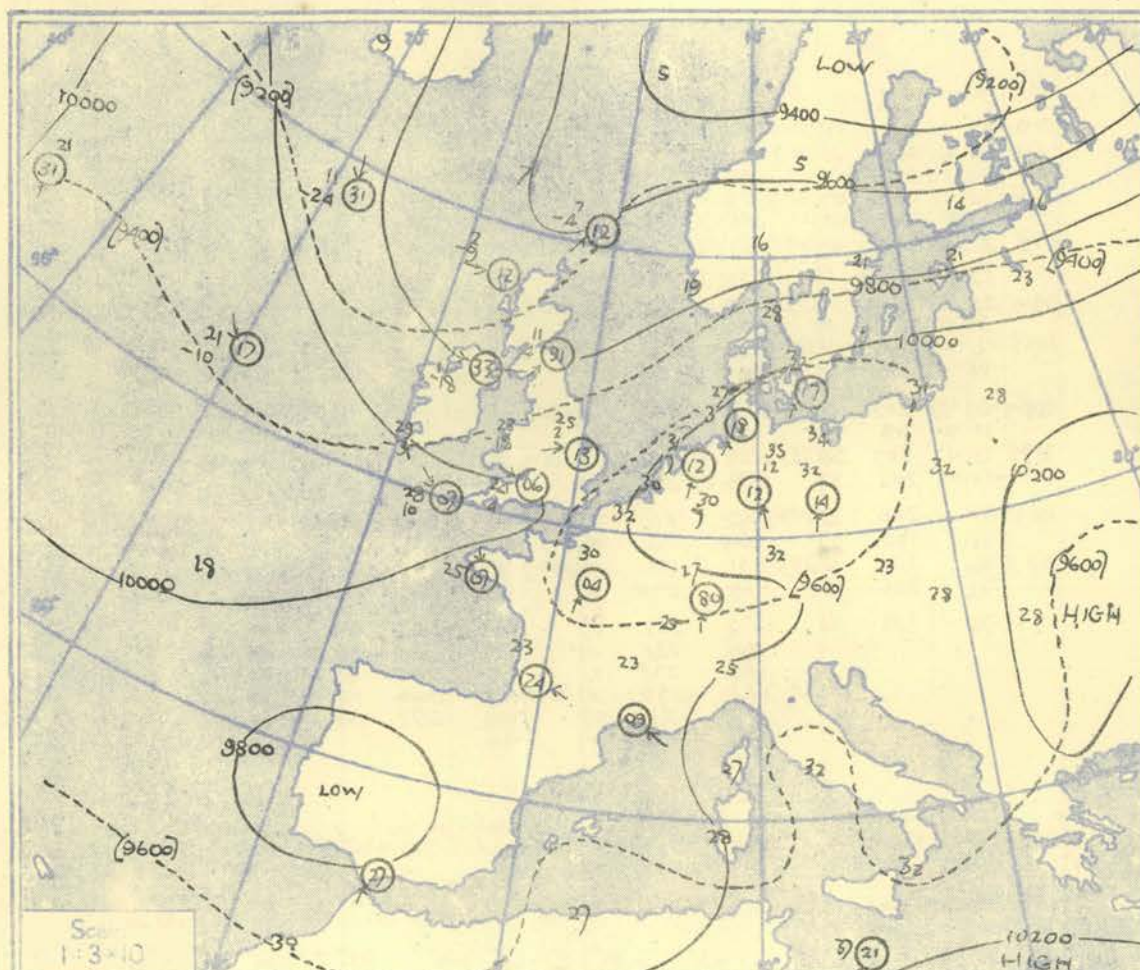


## RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION																																																																																																																																																																																																																																																										
Time M.S.L. Surf Freezing	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																																																																																																																																																																																																																																																														
	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																																																																																																																																																																																																																																																																	
Pressure	1016.8		1016.5		1016.9		1016.9		1015.8		1015.8		1021.3		1011.8		1015.4		1015.4		1017.7		1011.2		1015.1		998.9		1006.6		1023.1		Pressure																																																																																																																																																																																																																																																														
Freezing	919		919		939		939		900		900		925		925		809		809		750		750		750		745		745		919		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.	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.	mb																																																																																																																																																																																																																																																														
Surf	02.7	36	35	290	0600.4	36	34	CALM	00.2	43	42	CALM	02.6	39	35	326	0500.6	46	43		01.2	42	41	310	0804.4	47	44	CALM	02.9	47	47	360	0300.3	45	36	Surf																																																																																																																																																																																																																																																											
1000	4.4	38	34		4.8	37	36	296	12.4	42	42	269	10.6	38	34		4.7	44	40		4.2	46	40	060	084.1	57	35	230	034.6	47	47	360	6.2	42	34	1000																																																																																																																																																																																																																																																											
950		36	29	269		33	29	291		37	36	269		35	31	318		45	27			54	36	055	07	57	35	230	034.6	47	47	360		42	34	950																																																																																																																																																																																																																																																											
900	32.3	30	25	268	15.32.6	27	23	288	10.32.4	32	31	269	09.33.9	29	26	312	17.33.1	40	36		33.0	50	31	044	07.32.9	52	31	285	04.33.2	51	38	341	09.34.2	36	26	900																																																																																																																																																																																																																																																											
850		23	16	268		21	16	286		26	25	265		24	19	304		22	37			45	38	358	07	45	37	298	04	45	38	311	09.29.09	29	09	850																																																																																																																																																																																																																																																											
800	62.7	17	08	259	14.62.8	15	08	283	13.63.0	20	12	264	10.64.4	18	11	304	20.64.3	31	24		64.8	28	27	294	09.64.7	37	22	326	08.65.0	39	24	290	07.65.0	30	15	800																																																																																																																																																																																																																																																											
750		13	03	251		10	09	00	276		12	16	01	247		22	14	01	295			32	16	276	13	32	13	323	06	33	22	294	06	30	37	750																																																																																																																																																																																																																																																											
700	96.3	07	06	260	12.96.2	02	09	267	12.96.8	11	04	226	31.98.1	11	18	287	33.99.0	23	18		99.9	25	02	260	13.99.7	24	04	282	06.100.2	28	10	307	07.99.8	29	31	700																																																																																																																																																																																																																																																											
650		03	14	252		13	07	14	261		15	09	05	208		31	03	32	277			25	01	242	14	20	02	276	09	22	14	340	11	21	35	650																																																																																																																																																																																																																																																											
600	133.9	08	26	223	19.133.4	14	18	257	16.135.2	06	04	207	36.136.2	04	40	266	30.138.2	12	17		139.5	16	06	239	18.138.9	13	06	286	11.139.8	15	02	338	15.139.3	14	35	600																																																																																																																																																																																																																																																											
550		-17	-34	220		25	-27	248		19	-08	13	199	46	-10	49	264	49	05	40			08	-21	224	18	07	-11	272	09	08	-10	334	15	07	-36	550																																																																																																																																																																																																																																																										
500	177.0	-23	40	218	36.175.7	-36	41	235	20.179.1	-16	23	192	48.180.0	-12	53	266	60.183.3	-05	56			184.9	-03	33	213	20.184.3	-01	24	266	07.185.2	-01	21	341	11.184.7	-03	40	500																																																																																																																																																																																																																																																										
450		-33	-48	219		51	-42	251		18	-27	35	203	58	-20	60	271	112	-16	57			-14	-39	208	22	-12	-36	233	06	-13	-27	308	09	-14	-48	450																																																																																																																																																																																																																																																										
400	227.8	-40	54	218	76.225.6	-43	245	20.230.6	-35	46	211	78.232.2	-31	58	262	120.236.1	-28	56			237.8	-28	47	209	24.237.6	-24	45	220	05.238.4	-25	35	315	06.237.7	-26	58	400																																																																																																																																																																																																																																																											
350		-48				85	-48	248		25	-41	218	89	-42		272	93	-42				-40	-58	202	27	-39	-58	247	04	-38	-48	297	06	-39	350																																																																																																																																																																																																																																																												
300	291.0	-53		220	68.288.8	-50	251	24.299.9	-45	219	84.296.2	-54	268	82.300.1	-56						302.0	-56		200	23.302.1	-52		185	07.303.0	-51		305	06.302.0	-53		300																																																																																																																																																																																																																																																											
250		-53		225	46	-49	252	24	-53	226	78	-63	251	71	-69							-73	190	22	-68		173		06	-67	302	09	-69	250																																																																																																																																																																																																																																																													
200	378.6	-55		240	35.77.9	-52	263	24.382.3	-54	227	9.382.7	-63	260	51.384.6	-71						385.3	-86		222	18.286.7	-81		156	06.387.7	-82		278	10.386.7	-73		200																																																																																																																																																																																																																																																											
170		-57		248	29	-55	263	20			-63	258	31	-65								-72	226	18	-69		244	10	-76	291	07	-66	170																																																																																																																																																																																																																																																														
150		-55		248	18	-58	267	20			-65	255	33	-66								-76	228	15	-72		232	09	-71	248	05	-64	150																																																																																																																																																																																																																																																														
130		-58		249	16						-65			-67													233	11	-69	248	11	-64	130																																																																																																																																																																																																																																																														
110		-61		250	16						-65			-67													275	13	-69	284	15	-66	110																																																																																																																																																																																																																																																														
100	527.1	-67		254	16						-65			-67													274	10	530.9	-68	260	12.532.4	-67		100																																																																																																																																																																																																																																																												
90		-61		261	14						-65			-67														237	08	-67	232	08	-64	90																																																																																																																																																																																																																																																													
80		-68		274	09									-67														246	07					80																																																																																																																																																																																																																																																													
70	(74)	-62												-67																					70																																																																																																																																																																																																																																																												
60														-67																					60																																																																																																																																																																																																																																																												
Inversion 1007 mb 36° - 995 mb 41°																																Inversion 1017 mb 34° - 984 mb 38°																																Inversion 1018 mb 18° - 697 mb 13°																																Isothermal 726 - 708 mb 12°																																Inversion 982 mb 43° - 945 mb 46°																																Inversion 1011 mb 42° - 950 mb 54°																																Inversion 999 mb 47° - 960 mb 59°																																Inversion 984 mb 46° - 928 mb 51°																																Inversion 865 mb 26° - 800 mb 30°																															
Isothermal 450 - 416 mb - 42°																																Isothermal 800 - 780 mb 20°																																Isothermal 524 - 499 mb - 12°																																Isothermal 888 - 856 mb 38°																																Isothermal 608 - 592 mb 16°																																Isothermal 928 - 900 mb 51°																																Isothermal 800 - 750 mb 30°																																																																																															
Tropopause II 317 mb - 53° 28,000'																																Tropopause I 812 mb - 52° 25,700'																																Tropopause II 260 mb - 53° 30,250'																																Tropopause I 245 mb - 74° 37,000'																																Tropopause I 218 mb - 79° 36,700'																																Tropopause I 196 mb - 87° 38,900'																																Tropopause II 203 mb - 81° 38,200'																																Tropopause I 194 mb - 87° 37,200'																																Tropopause I 210 mb - 78° 37,600'																															
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION																																																																																																																																																																																																																																																										
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.		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																																																																																																																																																																																																																																																																	
Pressure	1015.5		1005.4		1017.9		1016.2		1015.9		1015.0		1019.6		1010.1		1016.8		1014.8		1013.7		1009.2		1014.5		1006.6		785		1006.6		Pressure																																																																																																																																																																																																																																																														
Freezing	915		915		928		928		924		924		921		921		903		903		784		784		755		755		755		755		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.	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.	mb																																																																																																																																																																																																																																																														
Surf	02.7	44	37	290	0600.4	45	36	350	00.2	43	39	360	02.6	44	39		00.6	45	38	350	12.01.2	47	46	325	0604.4	50	47	020	14.02.9	48	44	020	20	Surf																																																																																																																																																																																																																																																													
1000	4.1	42	36		4.8	43	34		4.2	41	38	345	12.5.3	43	38		4.5	43	37	350	12.3.7	47	46	335	10.3.9	48	43	010	18.4.7	47	45	029	33	1000																																																																																																																																																																																																																																																													
950		36	30	300		38	29	356		35	32	343		36	32			36	30	337		46	45	332		48	43	010		40	39	009	28	950																																																																																																																																																																																																																																																													
900	32.1	30	23	302	08.32.6	28	23	342	12.32.0	29	28	329	11.33.2	30	26		32.5	32	22	323	23.32.1	41	34	308	07.32.5	47	42	339	08.33.0	42	36	354	24	900																																																																																																																																																																																																																																																													
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800	62.6	19	08	316	05.62.8	16	08	323	13.62.4	19	12	334	11.63.6	19	10		63.1	25	01	290	19.63.3	34	32	250	16.64.1	37	31	247	10.64.7	41	37	274	10	800																																																																																																																																																																																																																																																													
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700	96.2	06	08	263	09.96.3	04	05	326	17.96.0	06	19	321	13.99.3	08	04		97.4	19	37	262	31.98.1	23	21	236	16.99.2	26	14																																																																																																																																																																																																																																																																				



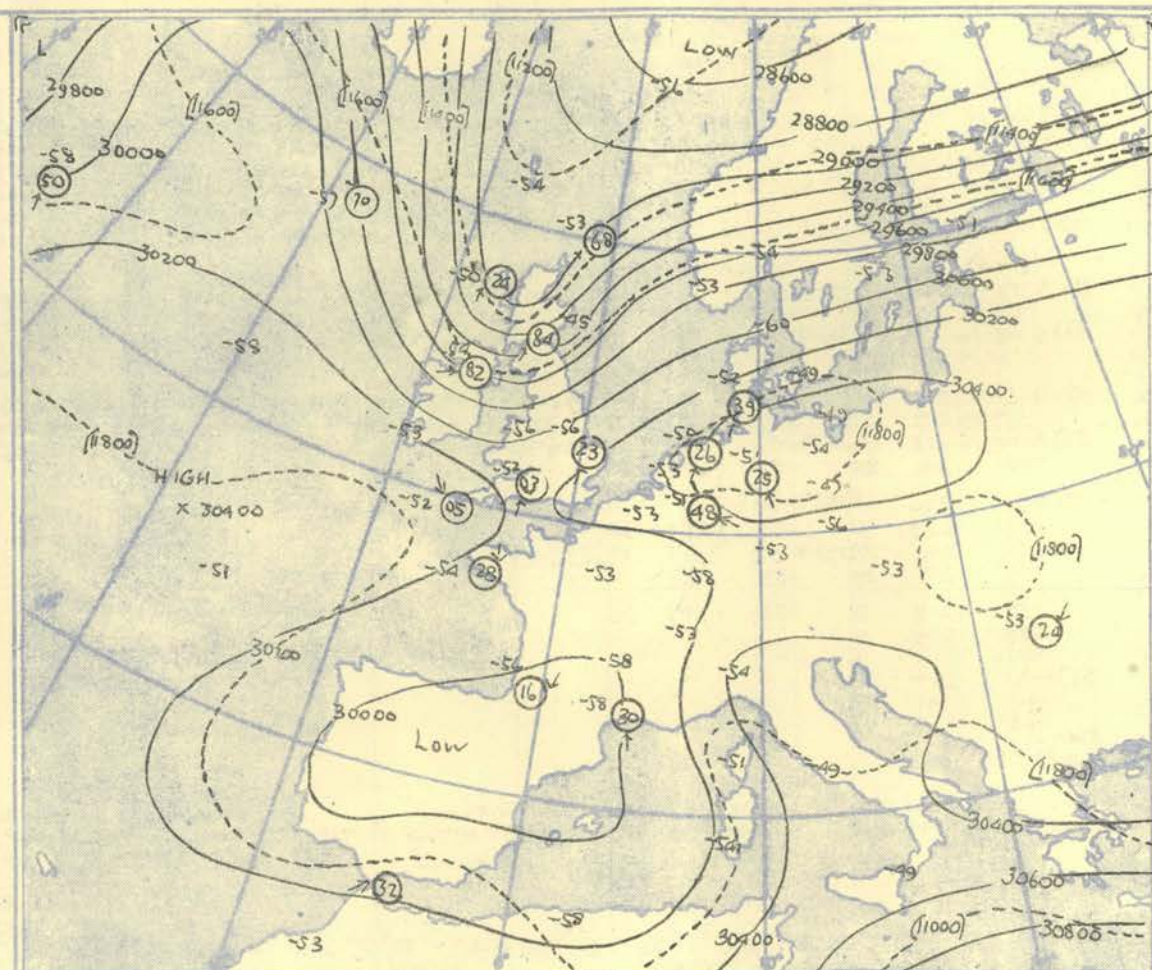
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03h G.M.T.



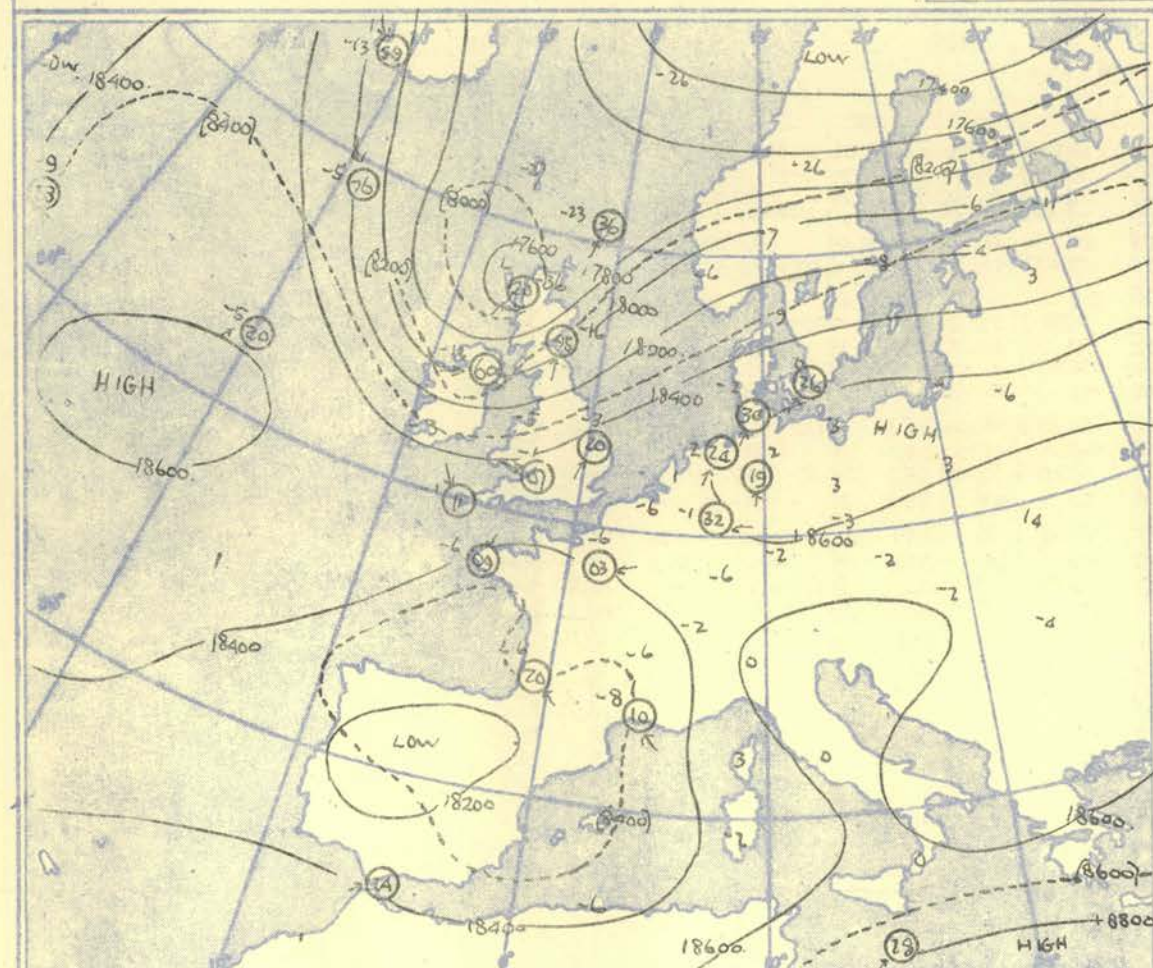
The continuous lines are contour lines of the 700 mb. surface  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

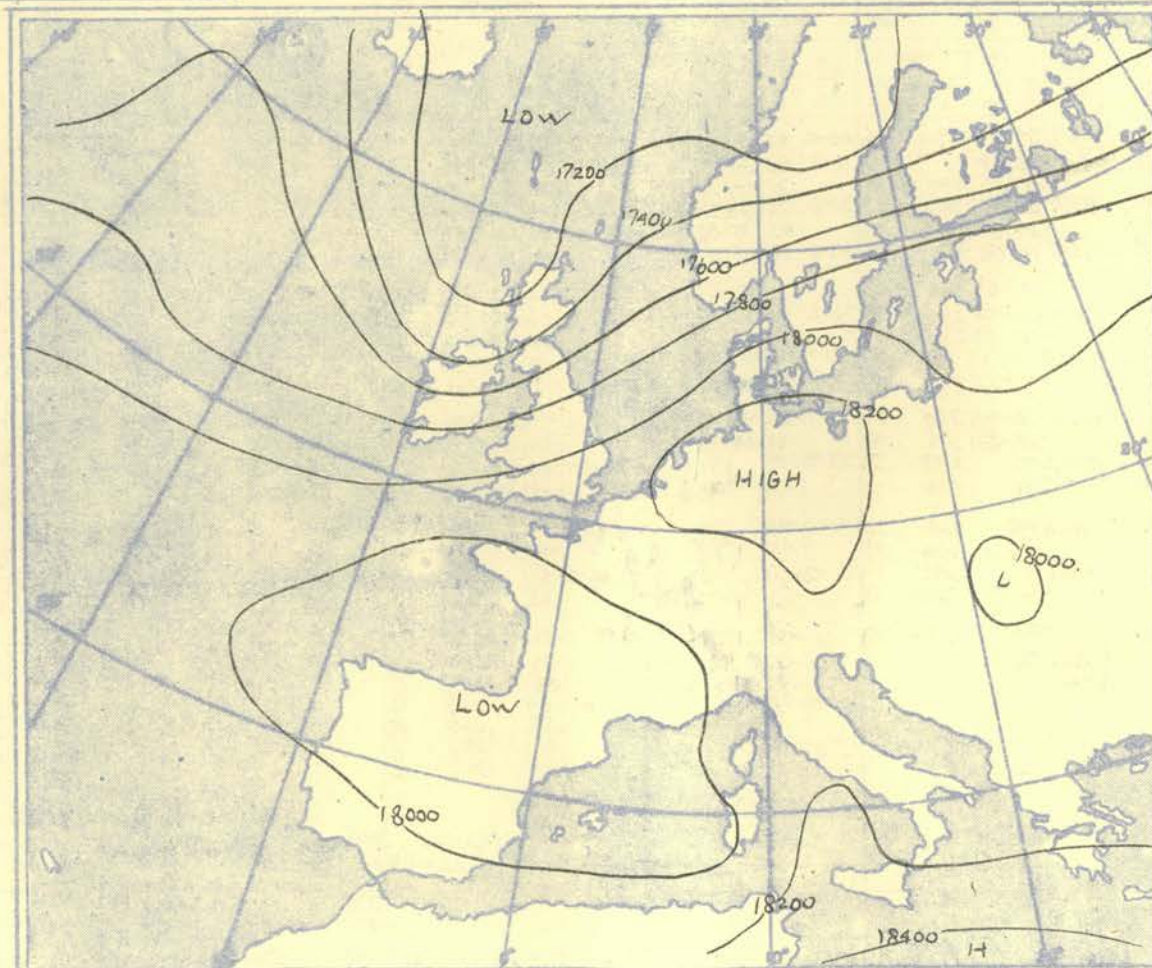
100 80 60 40 20 10 5 knots



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.



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.

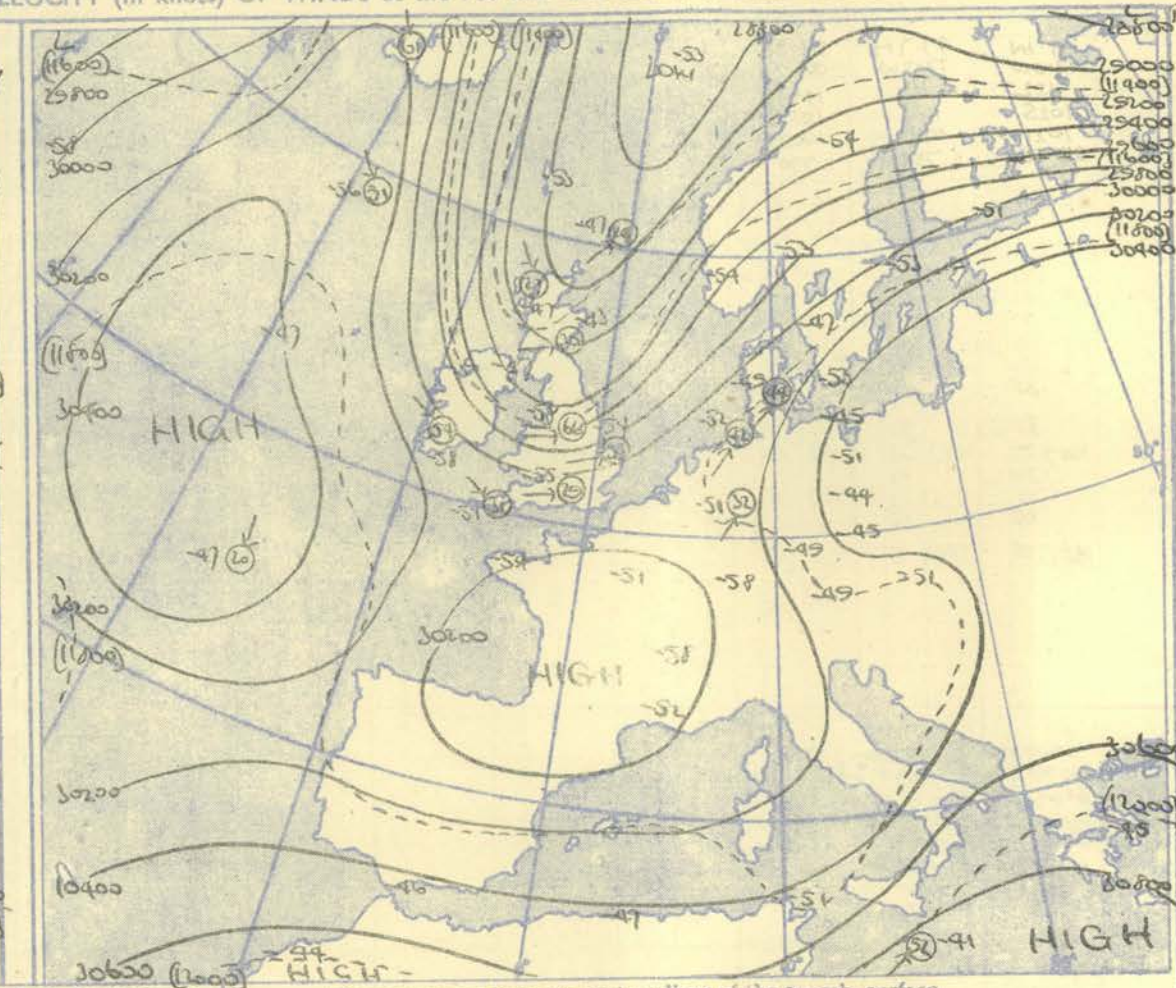
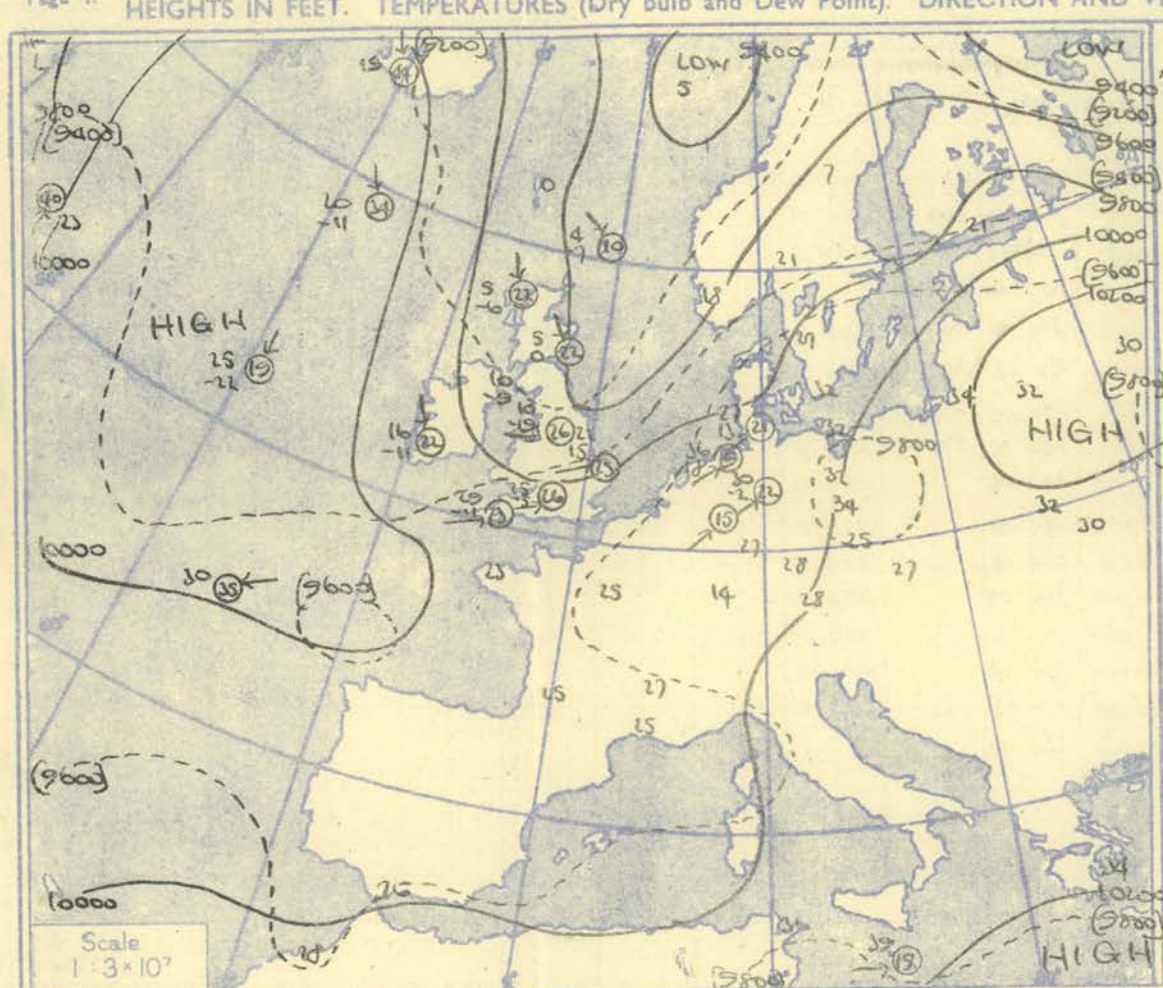


Isopleths of Thickness 500-1000mb.



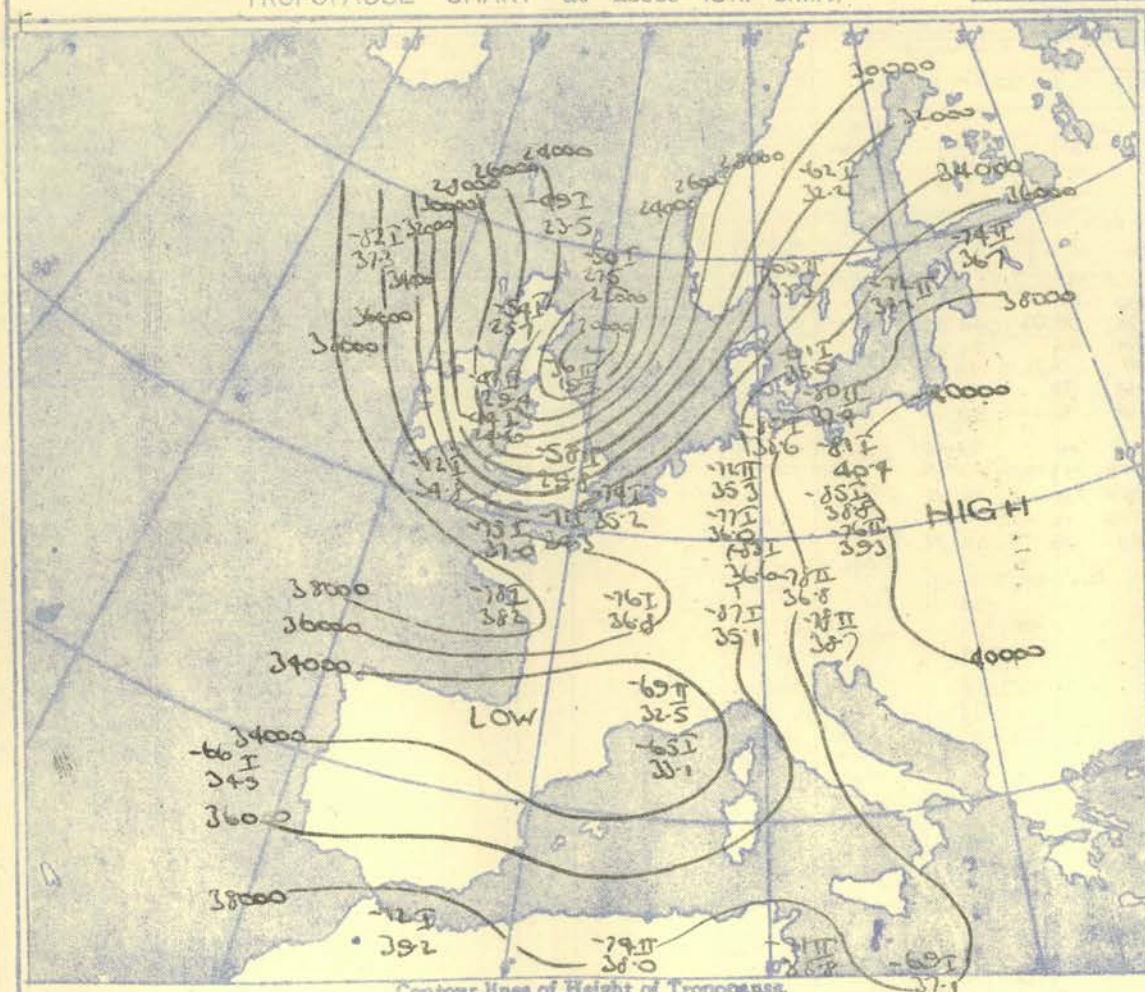
AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY																	DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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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.



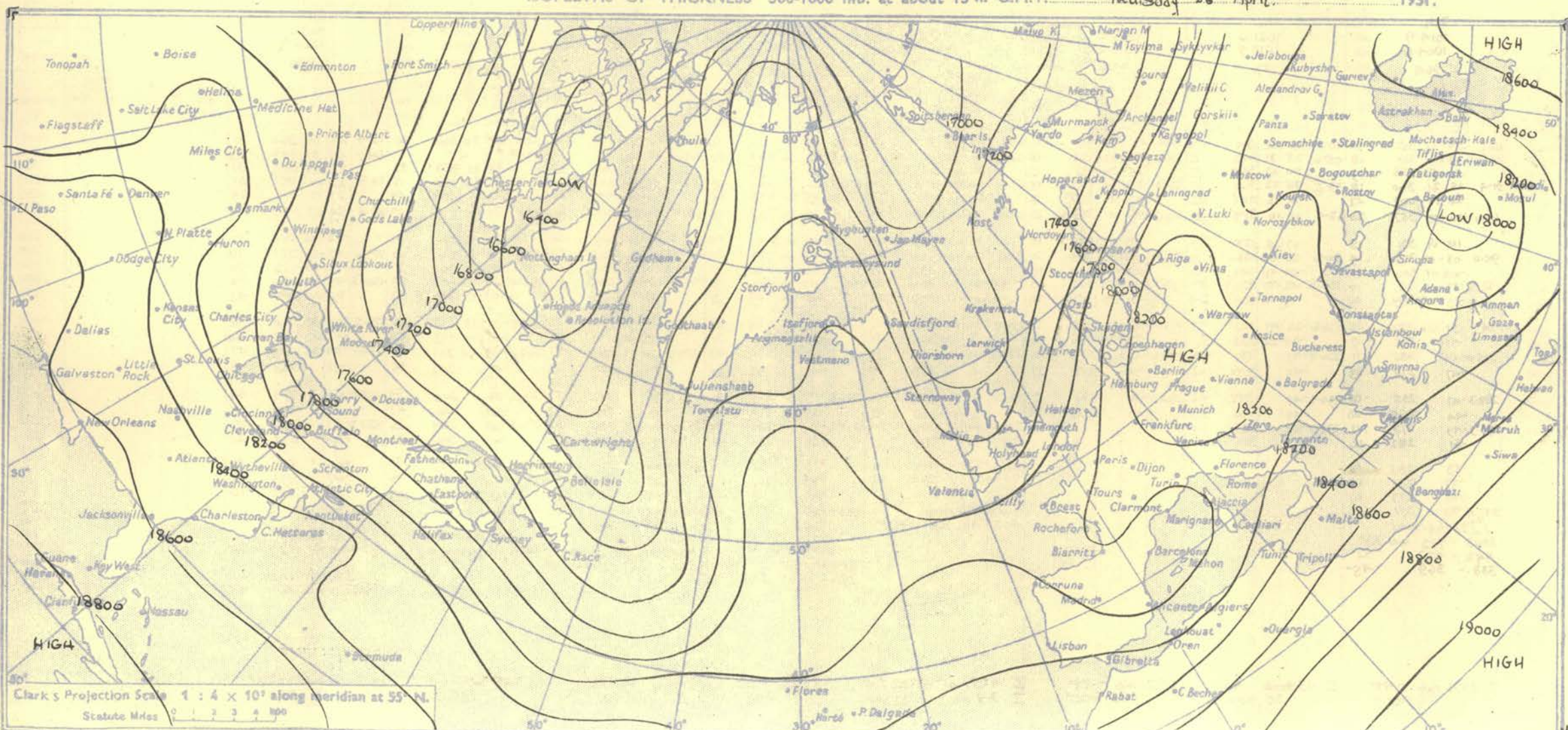
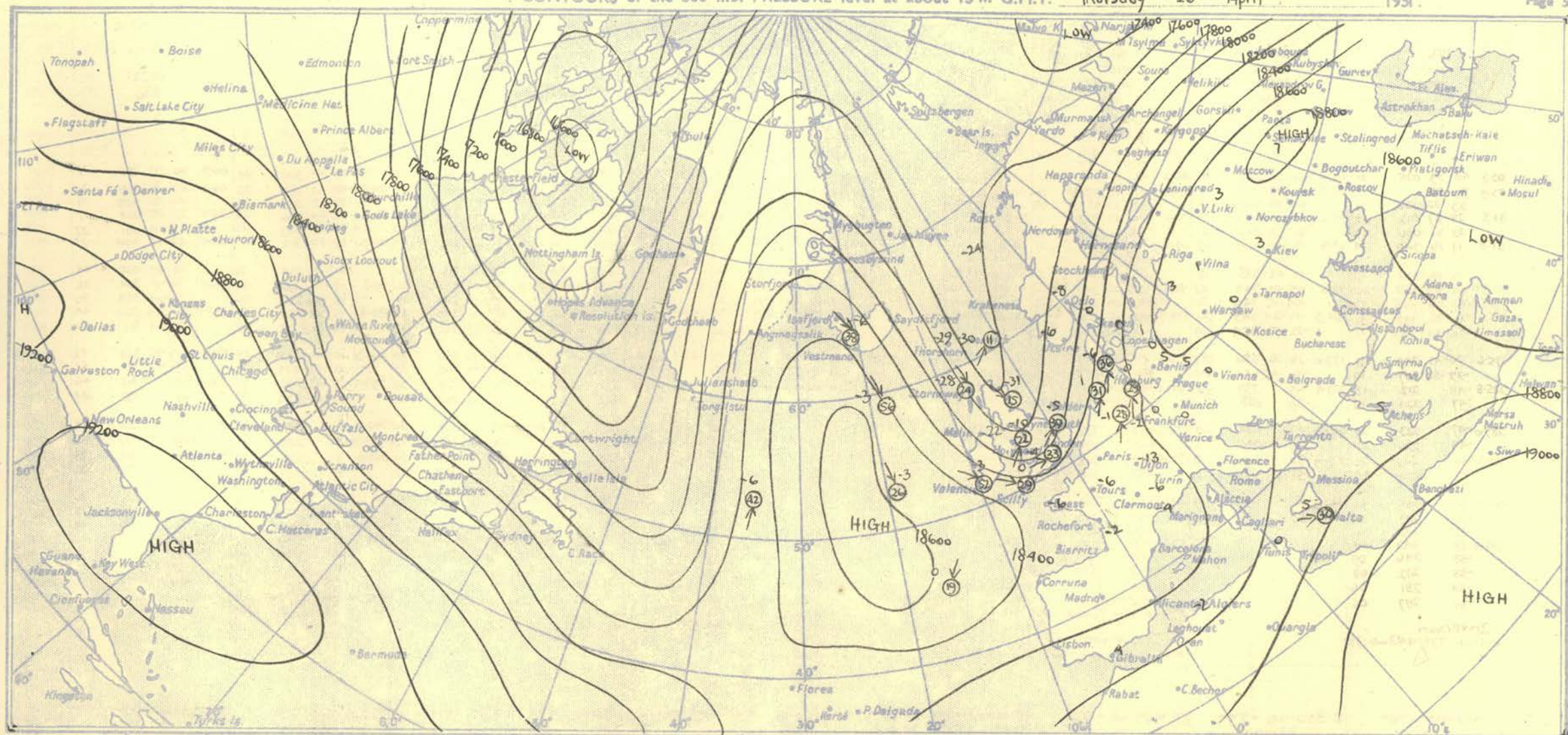
### NOTES ON THE AEROLOGICAL SITUATION.

Rapid warming continues over the area south of Iceland.

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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.)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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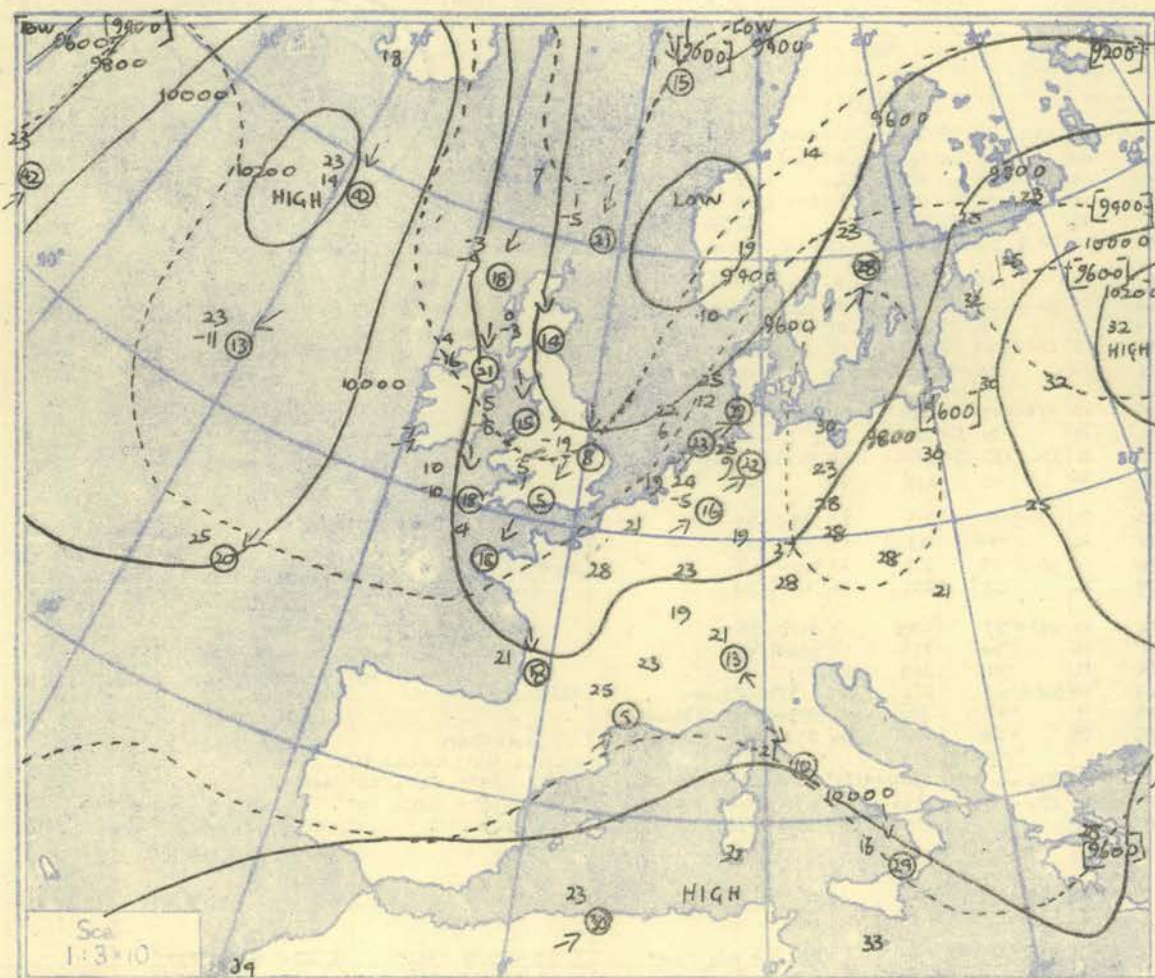


## RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

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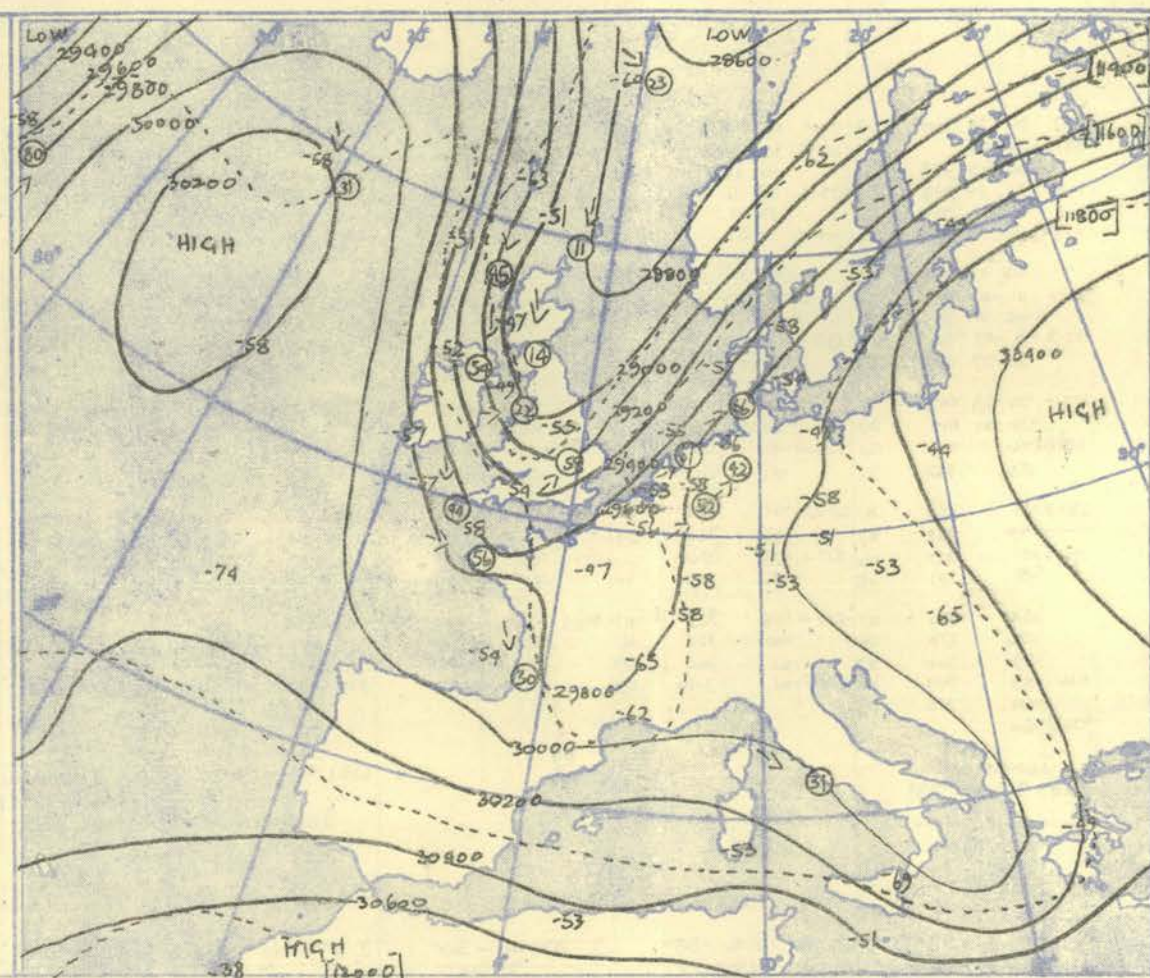
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



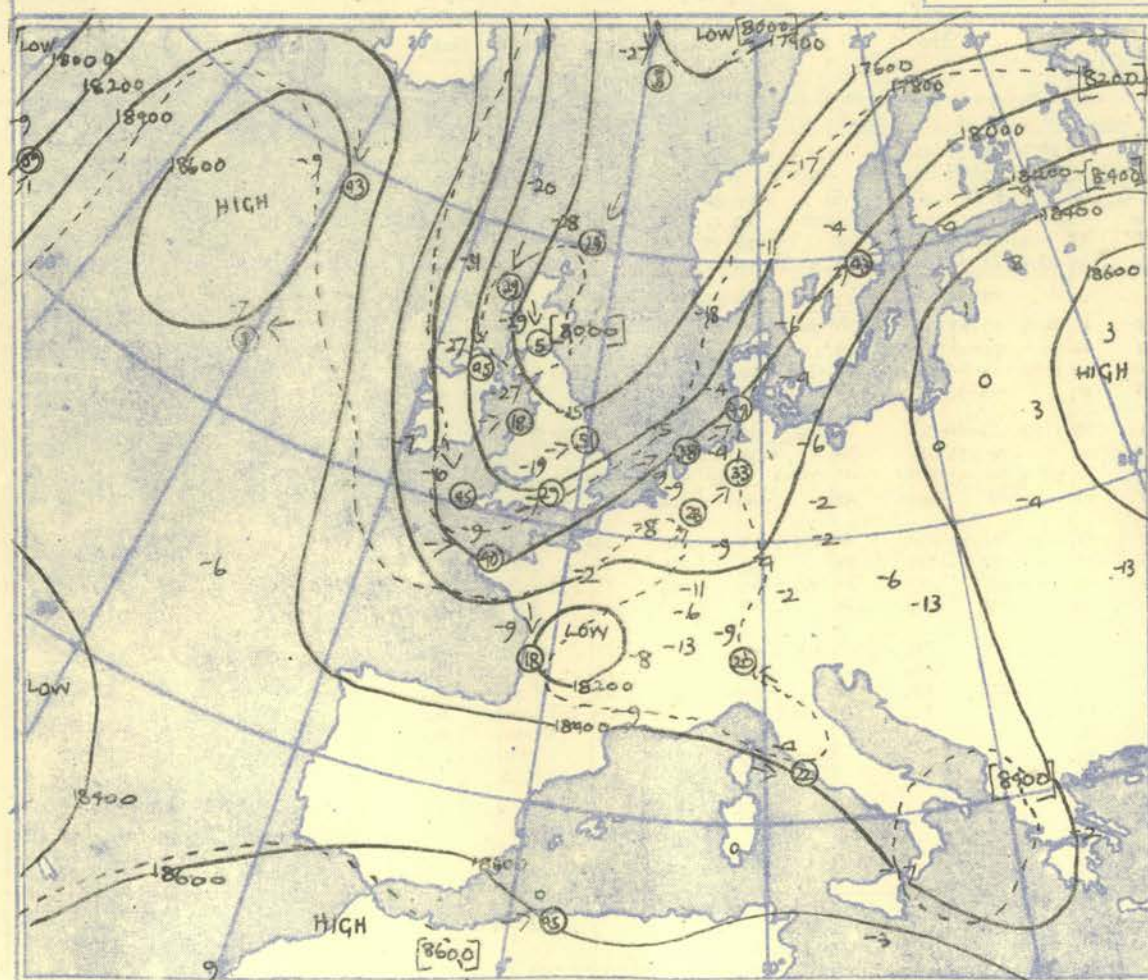
The continuous lines are contour lines of the 700 mb. surface  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

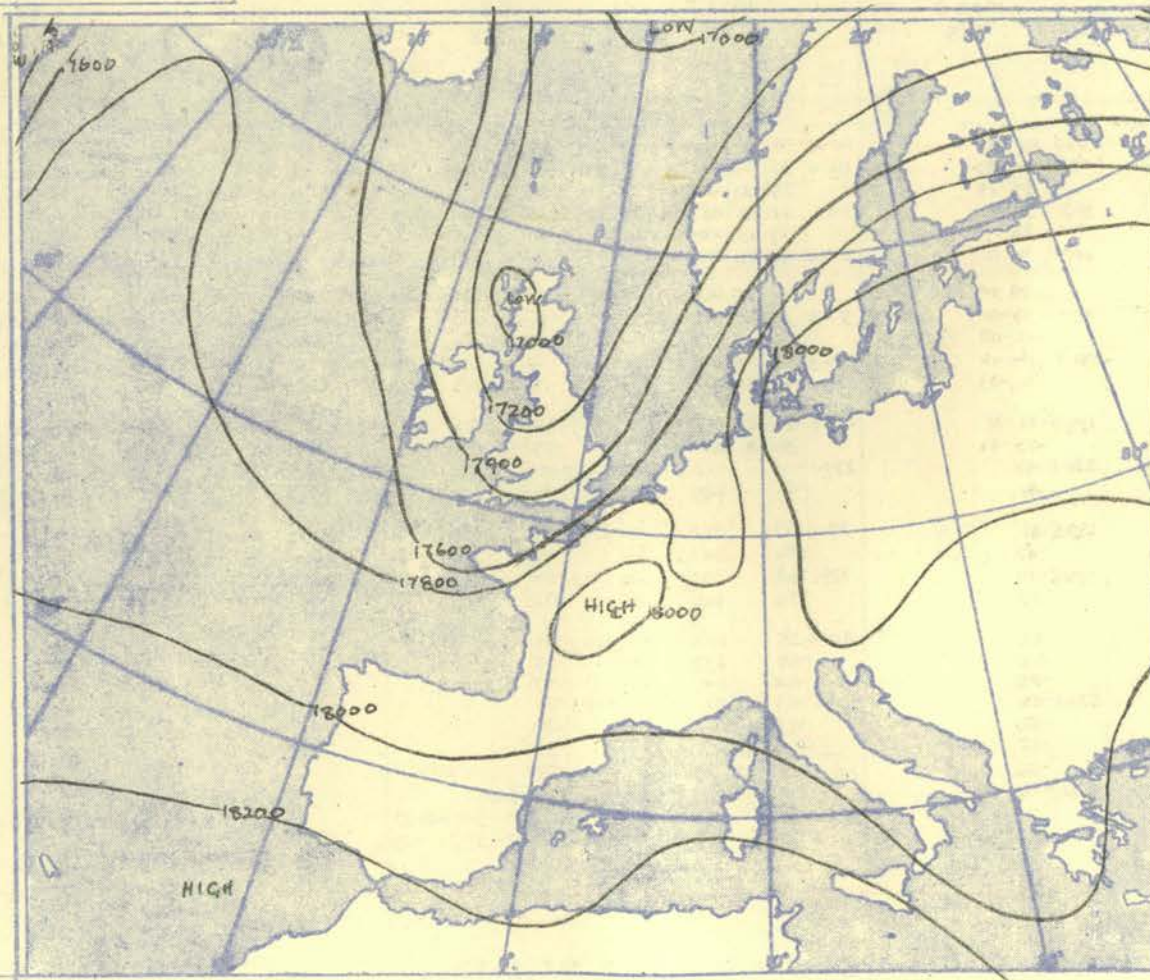
100 80 60 40 20 10 0 knots



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 500-1000mb.



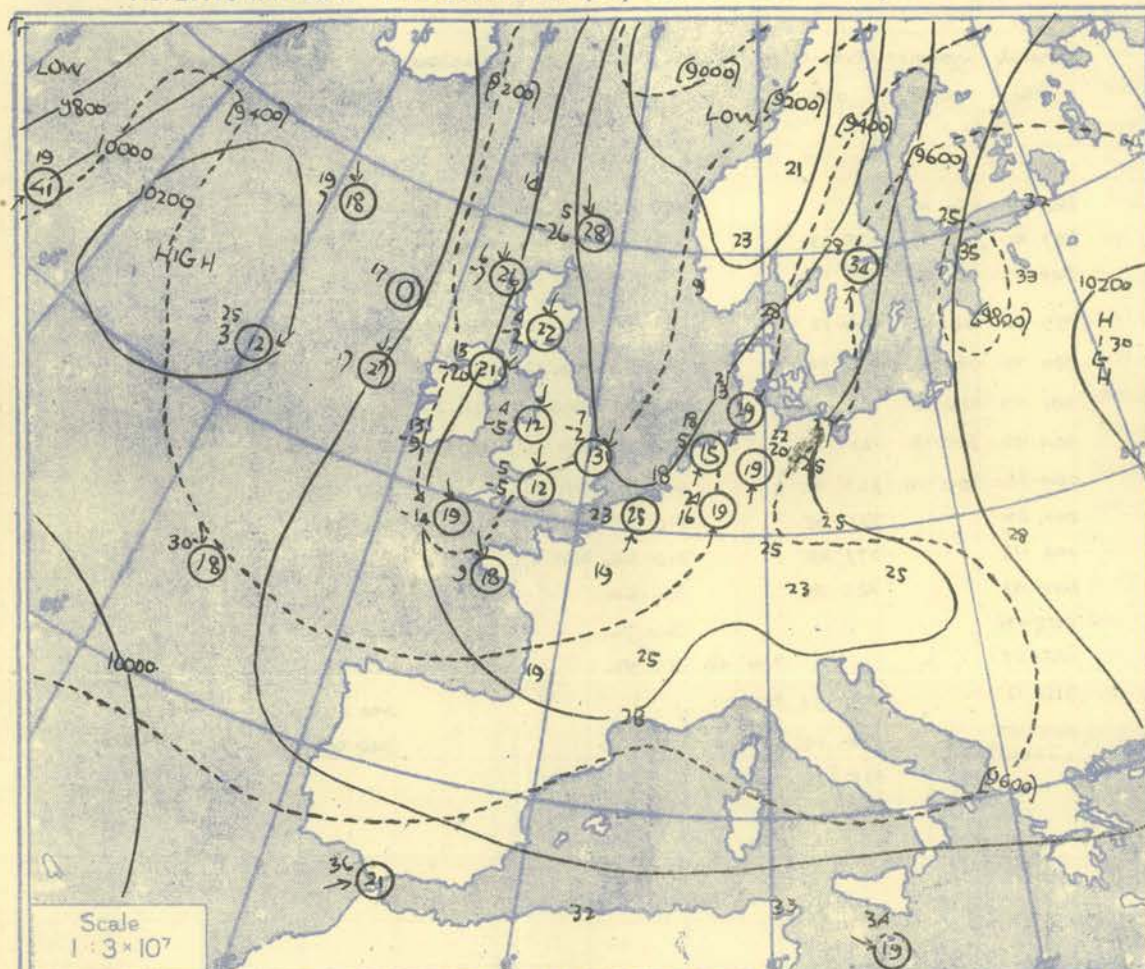
## DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WIND at heights above M.S.L.

NEPHOSCOPE OBSERVATIONS

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

[illegible]



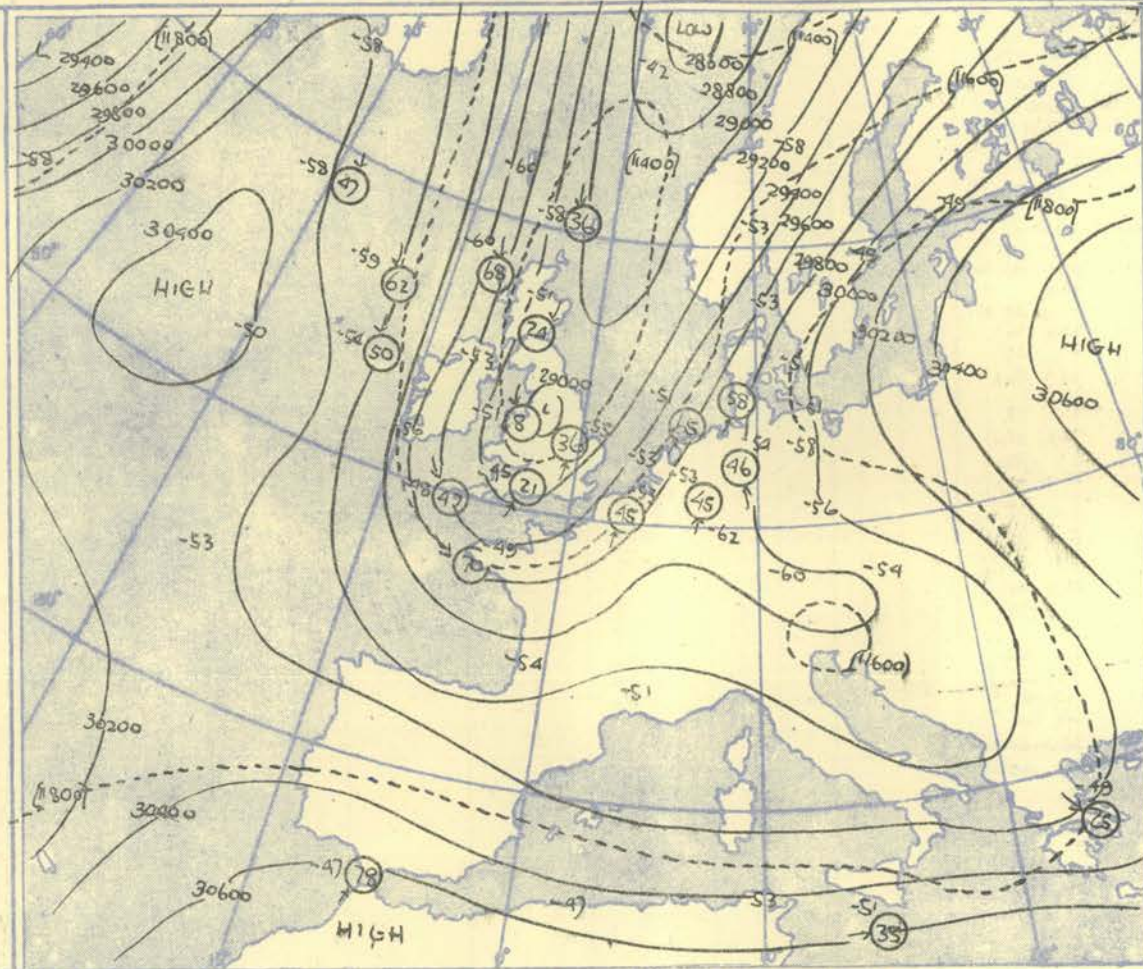


Scale  
1:3x10<sup>7</sup>

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.

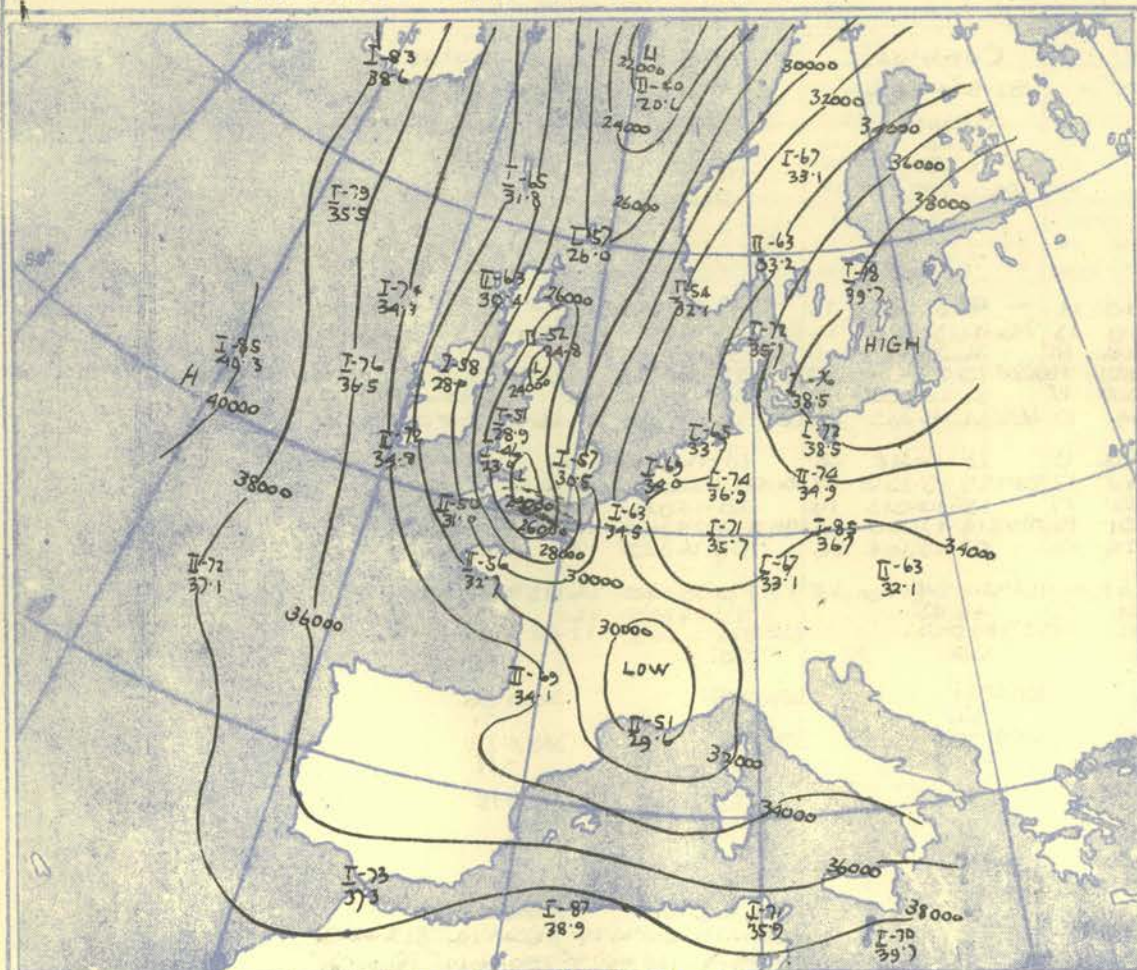
Gradient Wind Scale for Contours  
at intervals of 200 ft. at Lat. 52° N.

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.

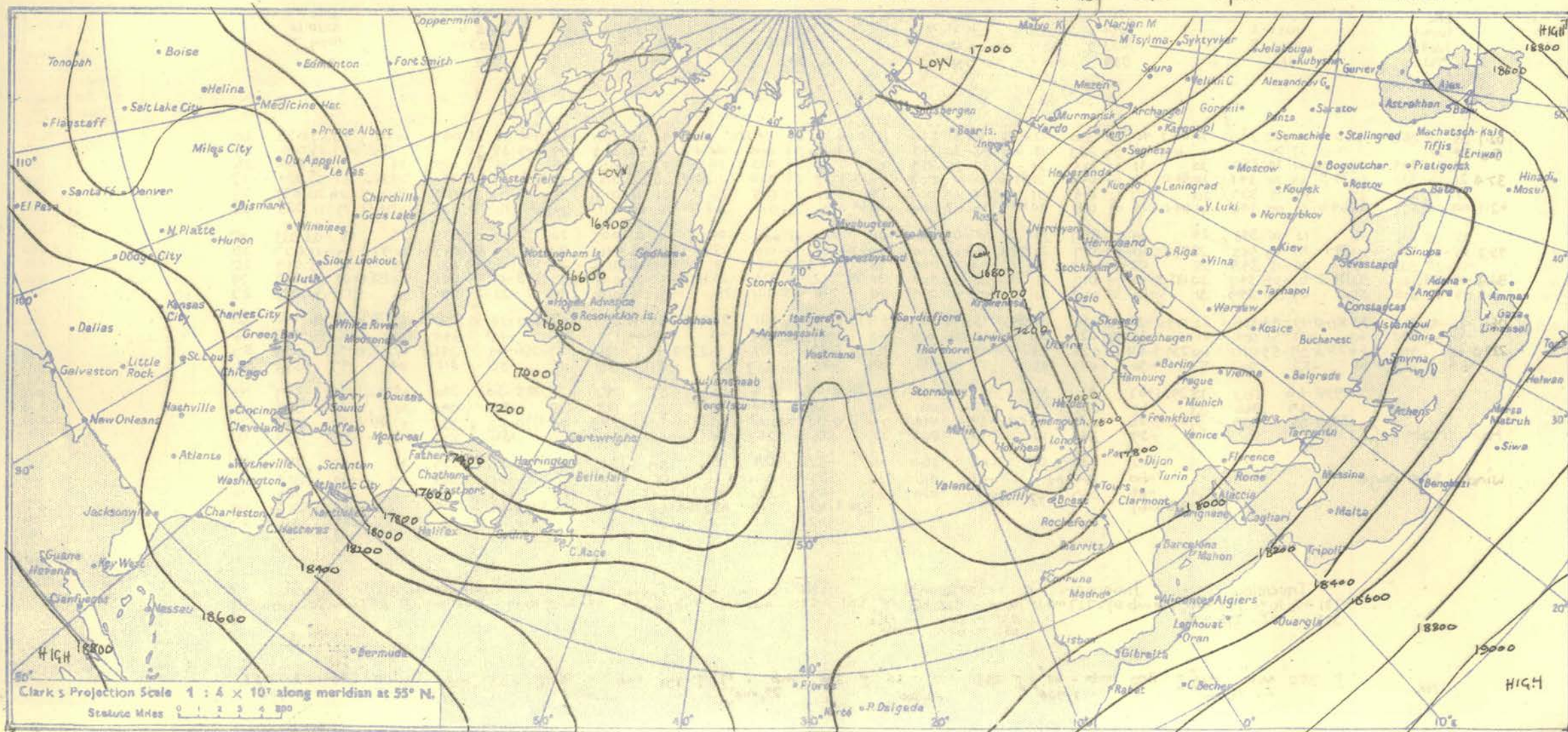
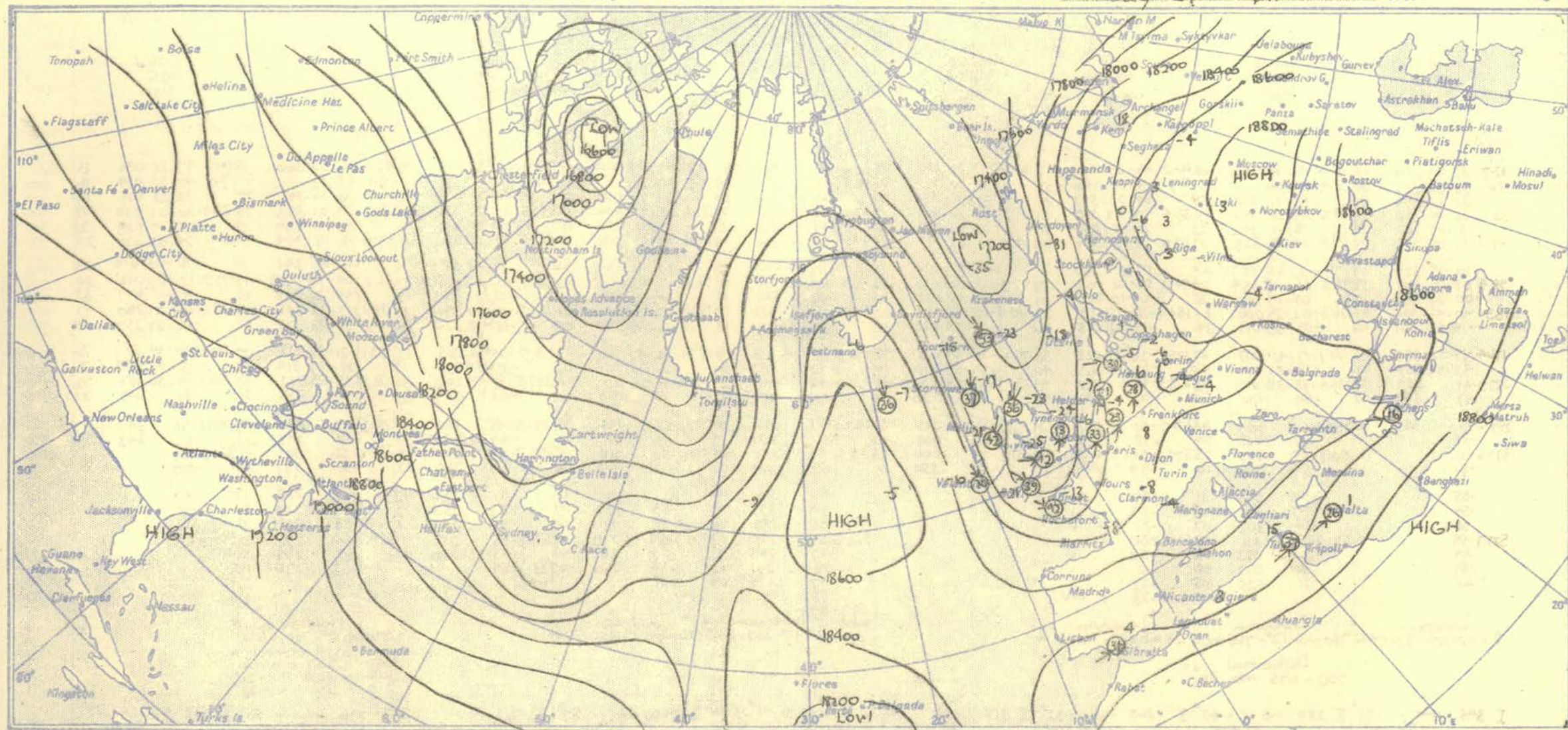
### NOTES ON THE AEROLOGICAL SITUATION.

The cold trough over the British Isles became very elongated  
and has moved very little.

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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.	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 Pressure																																																																																																																																																																																																																																										
		1017.5		mb		1026.5		mb		1021.4		mb		1023.8		mb		1018.8		mb		1016.2		mb		1015.3		mb		1018.7		mb				1026.2		mb																																																																																																																																																																																																																																							
		1007.3		mb		1024.8		mb		1020.6		mb		1014.0		mb		1016.8		mb		1011.6		mb		999.2		mb		1008.2		mb				1025		mb																																																																																																																																																																																																																																							
		963		mb		957		mb		940		mb		916		mb		915		mb		942		mb		900		mb		923		mb				910		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	02.7	39	29	360	28	00.4	42	30	360	08	00.2	46	35	360	17	02.6	47	30	330	15	00.6	44	29	030	18	01.2	49	37	015	13	04.4	48	33	025	08	02.9	46	33	360	15	00.3	49	35	030	13	Surf																																																																																																																																																																																																																															
1000	4.6	38	32	342	29	6.7	38	26	360	5.7	40	30	346	21	6.3	45	30	344	20	5.1	43	27	027	24	4.2	44	31	015	13	4.1	48	33	025	08	5.1	45	32	360	7.0	45	32	024	16	1000																																																																																																																																																																																																																																	
950		30	22	346	27		31	21	358	17		34	27	347	21		37	24	353	22		37	24	010	26		34	24	028	21		40	27	031	16		36	26	348	25		38	28	021	19	950																																																																																																																																																																																																																															
900	32.1	22	16	350	27	34.6	24	16	353	17	33.4	27	22	352	21	34.3	20	20	002	19	33.0	30	22	013	21	32.0	28	21	024	15	32.3	32	21	030	16	33.1	29	21	353	25	35.0	30	22	030	18	900																																																																																																																																																																																																																															
850		15	09	351	27		18	11	342	22		20	18	353	21		22	10	012	15		23	17	008	16		24	18	030	15		25	18	019	16		23	13	349	24		25	19	039	22	850																																																																																																																																																																																																																															
800	62.0	11	05	241	26	64.8	14	09	339	27	63.6	13	12	356	22	64.6	14	03	014	14	63.3	16	11	360	14	62.4	19	14	031	17	62.7	18	10	011	15	63.4	16	08	344	24	65.6	21	05	027	25	800																																																																																																																																																																																																																															
750		10	-15	329	27		05	347	24		07	04	360	21		08	-02	020	17		11	03	005	13		13	06	030	14		12	03	009	14		11	-06	341	21		16	-03	014	25	750																																																																																																																																																																																																																																
700	95.4	05	-26	339	28	98.3	06	-07	354	24	96.9	04	-02	007	22	97.9	03	-20	032	22	96.8	04	-05	013	12	96.1	07	-02	027	13	96.3	05	-05	006	12	96.8	04	-14	338	19	99.5	13	-09	012	30	700																																																																																																																																																																																																																															
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600	133.1	-07	-40	346	41	136.3	-02	-27	008	31	184.4	-11	-25	012	33	135.7	-05	-35	024	32	134.3	-11	-19	030	12	133.9	-07	-22	002	08	133.9	-10	-20	341	12	134.2	-12	-25	346	14	138.0	-05	-21	360	43	600																																																																																																																																																																																																																															
550		-14	-42	351	46		-09	-35	011	34		-17	-32	015	36		-13	-43	022	32		-20	-31	027	18		-16	-34	333	04		-18	-28	320	13		-20	-33	327	21		-02	-27	357	54	550																																																																																																																																																																																																																															
500	176.4	-23	-50	355	53	180.1	-17	-42	013	37	177.5	-23	-42	022	36	179.1	-21	-44	018	42	176.9	-32	-44	030	18	177.1	-24	-42	210	13	176.9	-25	-34	285	12	177.1	-21	-38	315	39	182.6	-10	-34	351	70	500																																																																																																																																																																																																																															
450		-32	-59	358	57		-28	-52	010	40		-32	-51	021	40		-29	-53	010	46		-42		037	15		-26	-45	205	32		-35	-44	225	17		-28	-49	314	54		-18	-41	348	70	450																																																																																																																																																																																																																															
400	227.2	-44		359	57	231.4	-38	-58	009	48	228.3	-43		022	43	230.3	-40	-53	022	48	226.8	-45		036	18	228.4	-34	-54	203	40	227.5	-38	-48	207	30	228.5	-35	-57	312	55	235.1	-23	-50	351	72	400																																																																																																																																																																																																																															
350		-56		359	48		-49		010	61		-53		021	42		-50		020	54		-49		017	11		-45		199	40		-43		207	33		-42		323	52		-41		348	81	350																																																																																																																																																																																																																															
300	289.5	-58		357	36	294.4	-60		009	68	290.9	-51		017	24	293.1	-56		013	50	290.0	-51		342	08	292.1	-55		194	36	291.5	-48		232	21	292.5	-48		324	49	299.1	-56		349	77	300																																																																																																																																																																																																																															
250		-51					-63		006	54		-48		013	18		-52		008	40		-51		331	09		-53		211	23		-47		245	18		-51		298	32		-69		348	75	250																																																																																																																																																																																																																															
200	377.6	-51				380.8	-54		005	25	379.2	-51		008	09	381.2	-53		006	23	378.6	-51		336	07	380.0	-52		218	15	380.7	-49		261	18	380.7	-56		301	31	384.2	-64					200																																																																																																																																																																																																																														
170		-51					-54		005	16		-54		009	07		-52		350	15		-52		308	06		-52		238	18		-47		260	12		-58		277	25		-59				170																																																																																																																																																																																																																															
150		-55					-56		348	11		-56		L.V							-56		313	06		-55		245	13		-51		255	12		-57		287	17		-60				150																																																																																																																																																																																																																																
130		-54					-59		319	07		-54									-54		277	09		-55		232	09		-53		253	12		-56		289	20		-63				130																																																																																																																																																																																																																																
110		-56					-50		308	07		-51									-55		288	06		-58		286	09		-54		249	11		-58		267	11		-61				110																																																																																																																																																																																																																																
100	527.7	-55				530.8	-52		311	08	529.6	-50									528.6	-54		250	07	529.9	-58		272	08	531.7	-55		251	11	529.5	-60		272	10	106	-59				100																																																																																																																																																																																																																															
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Inversion 811 mb 10° - 770 mb 12° Isothermal 700 - 675 mb 06°																														Inversion 396 mb 46° - 382 mb 45° Isothermal 300 - 285 mb 38°																														Inversion 790 mb 15° - 780 mb 16° Isothermal 550 - 557 mb -20° 518 - 500 mb -21° 310 - 290 mb -48°																																																																																																																																																																																																																	
Tropopause I 345 mb -51° 26,000'																														Tropopause I 286 mb -63° 30,400'																														Tropopause I 365 mb -52° 24,800'																														Tropopause I 318 mb -58° 28,000'																														Tropopause I 396 mb -46° 23,000'																														Tropopause I 280 mb -57° 30,500'																														Tropopause I 462 mb -35° 19,400'																														Tropopause I 276 mb -50° 31,000'																														Tropopause I 238 mb -72° 34,800'																													
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION																																																																																																																																																																																																																																							
Pressure mb	Time M.S.L.	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 Pressure																																																																																																																																																																																																																																										
		1019.1		mb		1026.3		mb		1024.1		mb		1025.9		mb		1021.7		mb		1018.0		mb		1018.6		mb		1020.6		mb																																																																																																																																																																																																																																													
		1008.8		mb		1024.8		mb		1023.2		mb		1018.9		mb		1019.8		mb		1013.4		mb		1002.0		mb		1009.7		mb																																																																																																																																																																																																																																													
		983		mb		960		mb		959		mb		948		mb		932		mb		945		mb		910		mb		910		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	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb																																																																																																																																																																																																																																				
Surf	02.7	35	28	350	15	00.4	40	32	340	10	00.2	40	29	350	12	02.6	39	31	340	18	00.6	41	37	CALM	01.2	41	39	360	12	04.4	38	35	040	10	02.9	43	37	023	20					Surf																																																																																																																																																																																																																																	
1000	5.0	34	27			7.0		37	28		6.3		38	27	333	18	6.8		38	30	342	30	5.9	40	34	004	06	4.8	39	37	008	24	4.9	38	35		5.5	42	37	014	29					1000																																																																																																																																																																																																																															
950		28	23	324	27		31	24	350	20		31	22	335	21																																																																																																																																																																																																																																																														

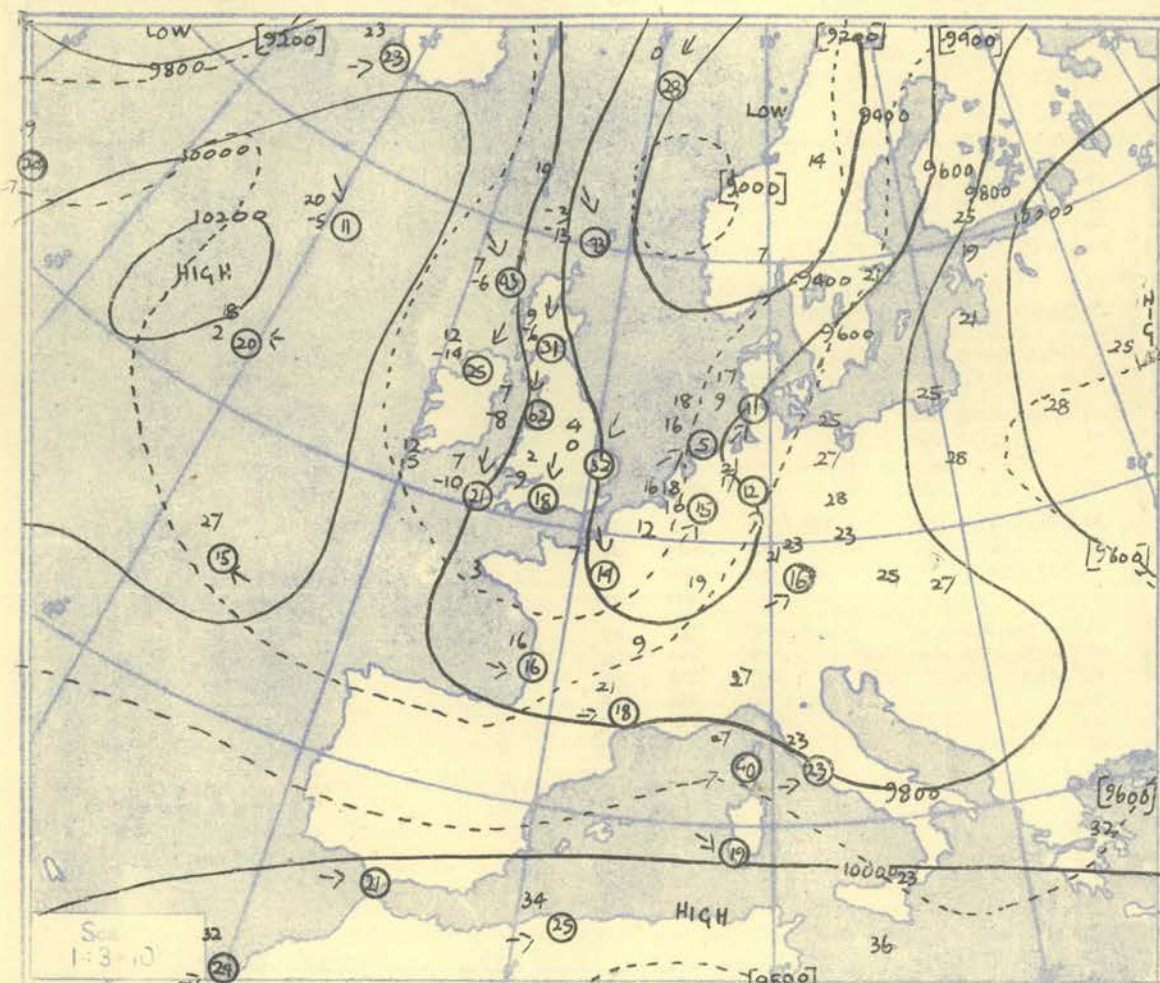


## RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK					STORNOWAY					LEUCHARS					ALDERGROVE					LIVERPOOL					DOWNHAM MARKET					LARKHILL					CAMBORNE					VALENTIA																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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	1006.3 mb					1023.0 mb					1022.9 mb					1016.7 mb					1021.2 mb					1014.4 mb					1004.2 mb					1012.6 mb					1028.9 mb																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
	978 mb					938 mb					968 mb					947 mb					950 mb					939 mb					962 mb					920 mb					940 mb																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
Pressure Height Temp. Dew Wind Dir. Vel.	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°F.	°F.	knots	mb	ft./100	°



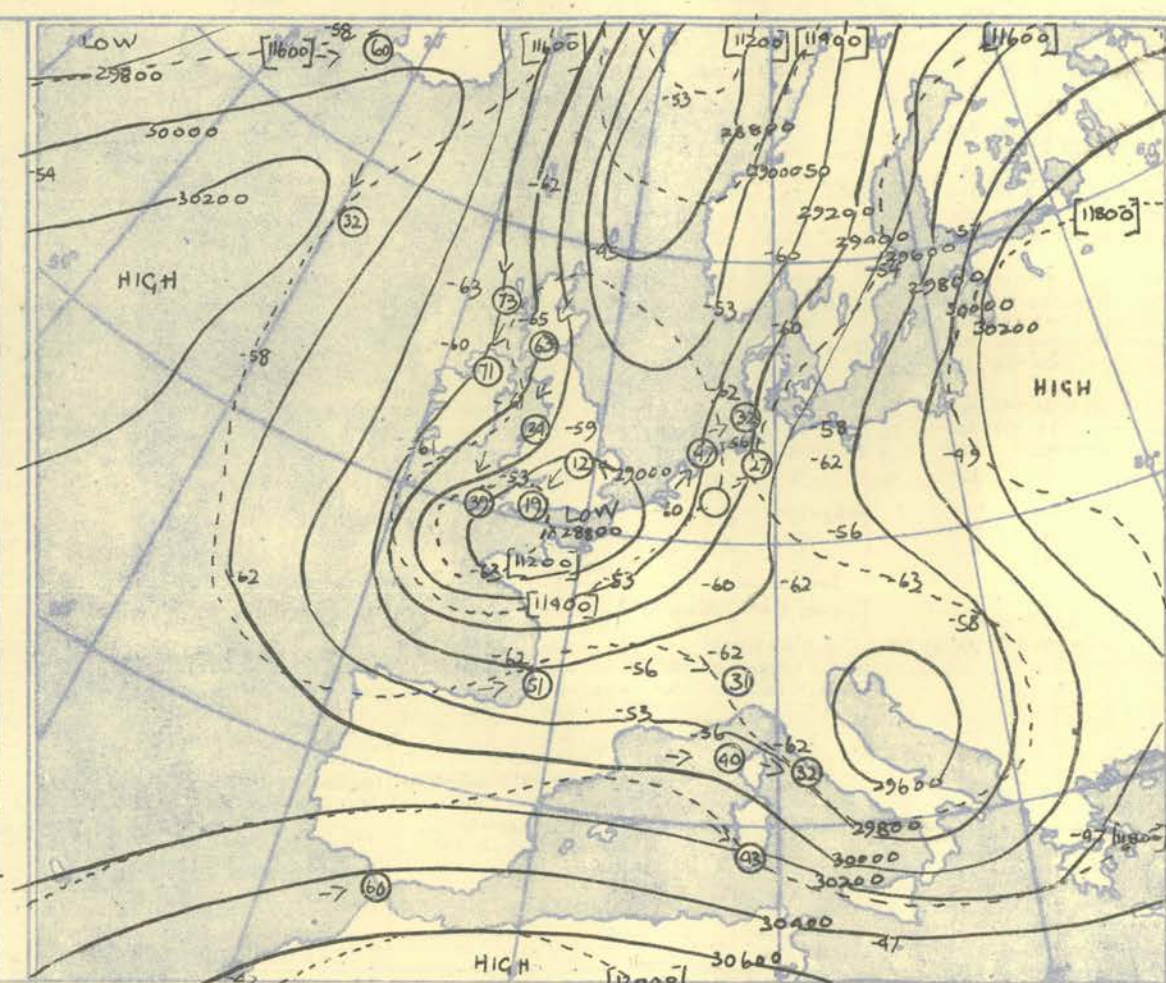
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



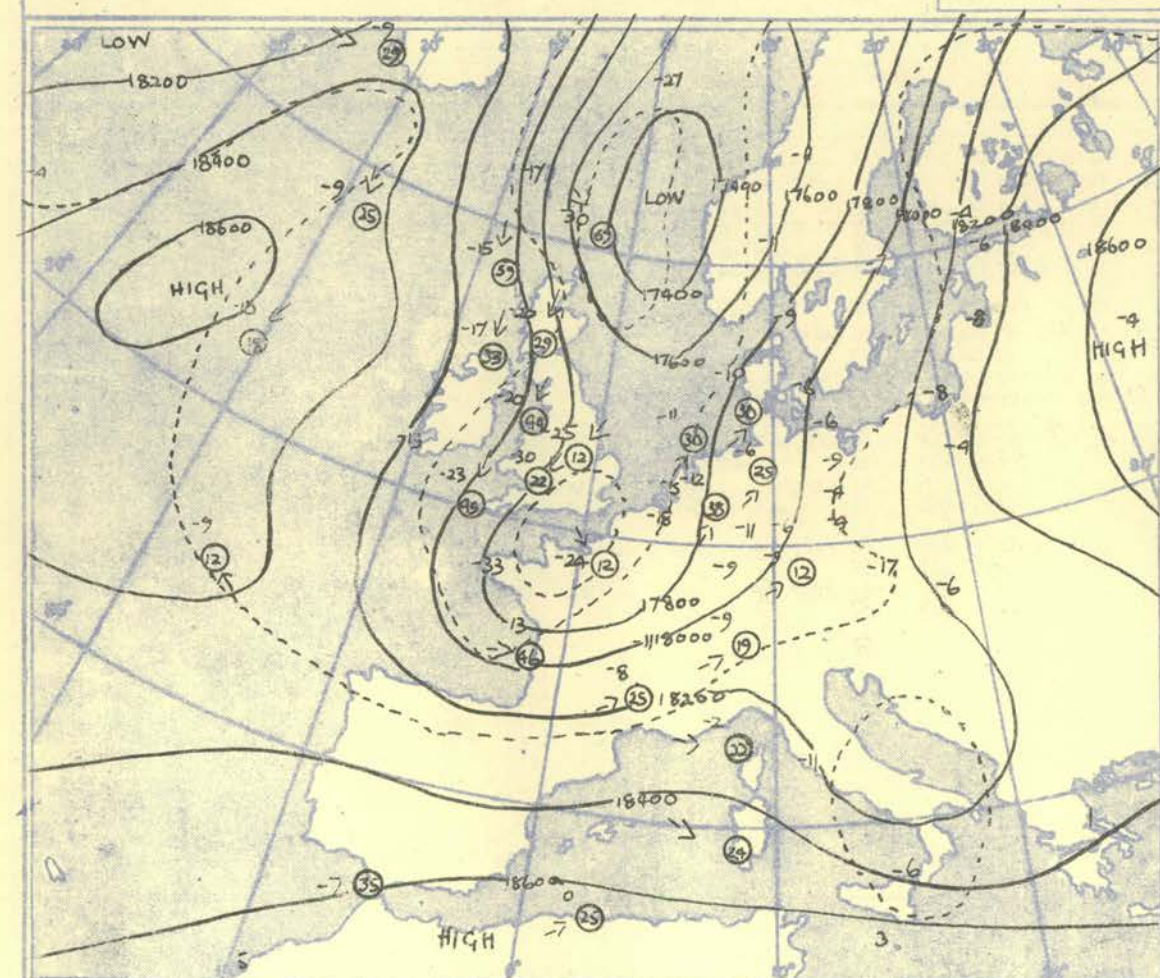
The continuous lines are contour lines of the 700 mb. surface  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

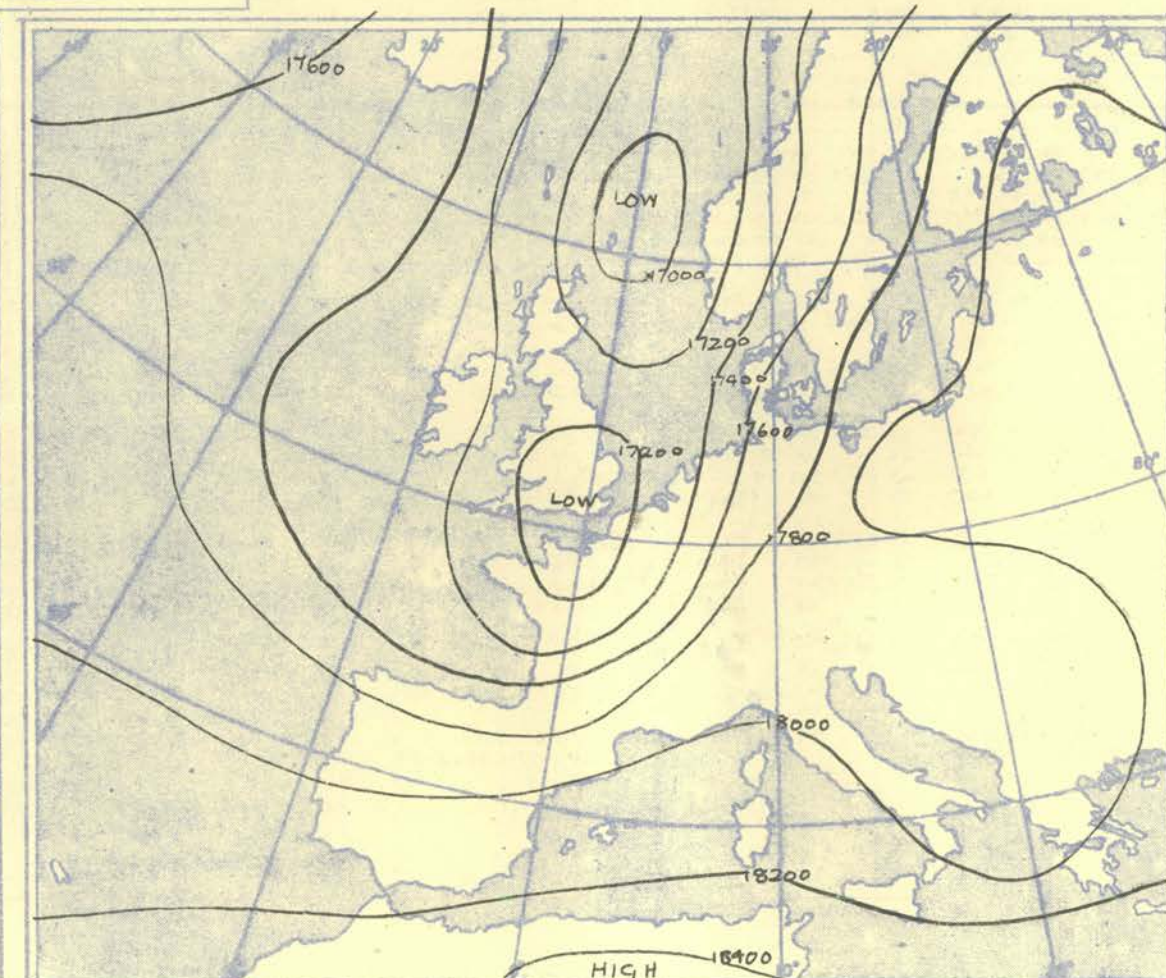
100 80 60 40 20 10 0 knots



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.



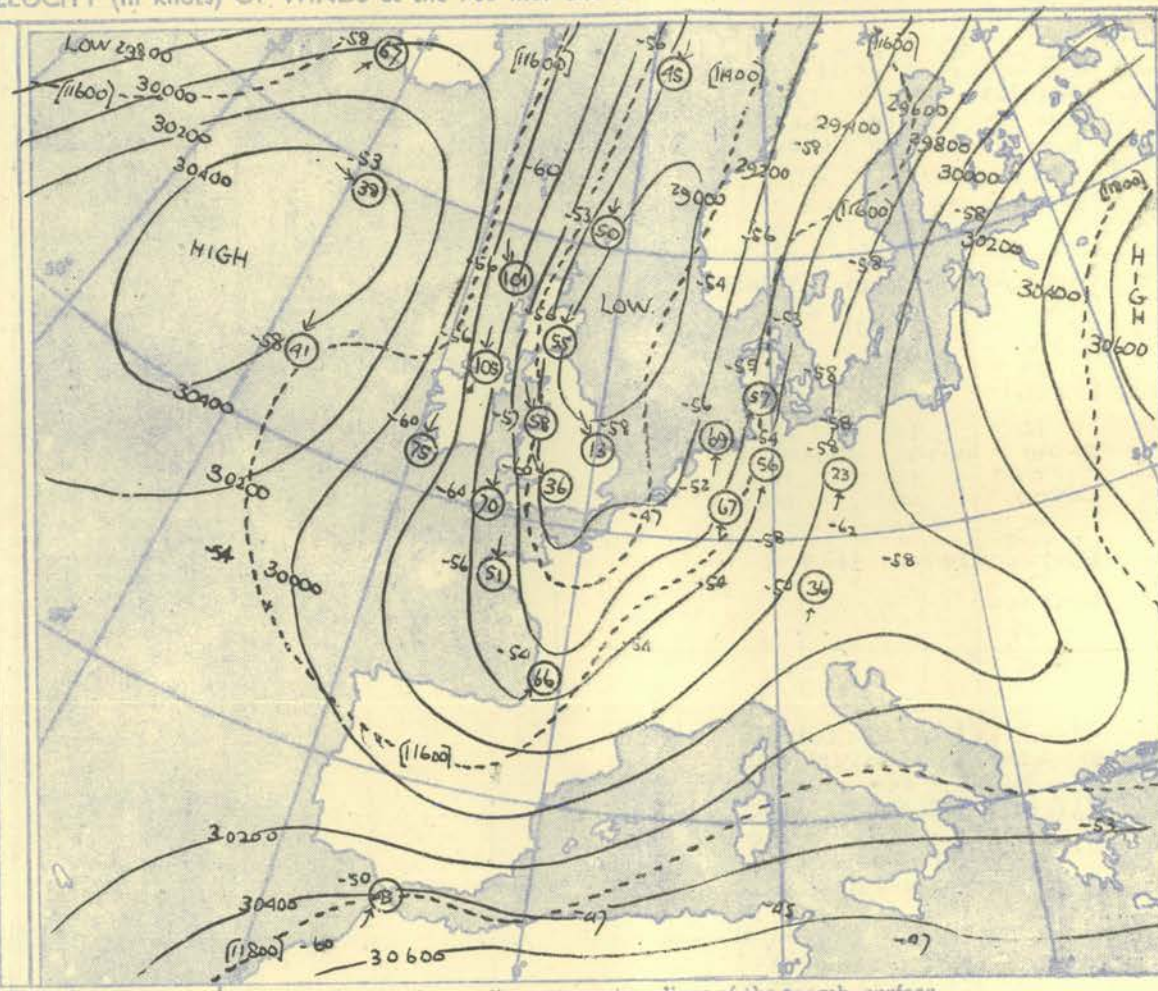
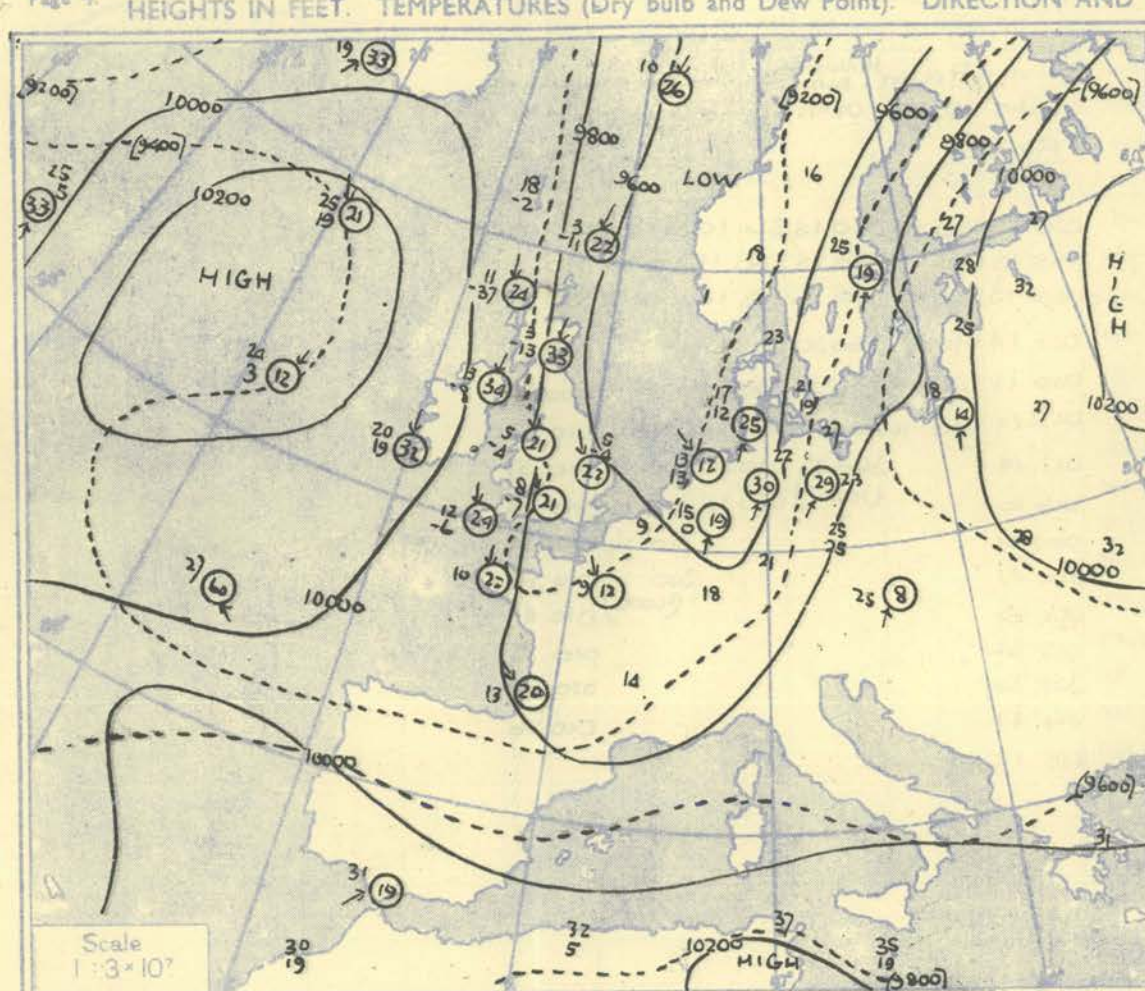
## DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above 8500'

NEPHOSCOPE OBSERVATIONS

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

Ship	WEATHER WATCHER.										WEATHER WATCHER.										WEATHER RECORDER.										WEATHER RECORDER.										CUMULUS										CUMULUS										WEATHER EXPLORER.										WEATHER EXPLORER.										Ship		
Lat/Long	58° 51' 17.9 W.										58° 34' 16.9 W.										59° 04' 19.1 W.										58° 64' 17.6 W.										52° 54' 20.0 W.										52° 64' 18.6 W.										52° 54' 17.7 W.										52° 54' 18.0 W.										Lat/Long		
Pressure	Time	03L G.M.T.									09L G.M.T.									21L G.M.T.									15L G.M.T.									03L G.M.T.									09L G.M.T.									21L G.M.T.									G.M.T.																		
	M.S.L.	1032 mb									1032 mb									1031 mb									1032 mb									1032 mb									1032 mb									1034 mb									1034 mb									G.M.T.									
	Surf	1032 mb									1032 mb									1031 mb									1032 mb									1032 mb									1032 mb									1034 mb									1034 mb									mb									
	Freezing	935 mb									910.770 mb									880 mb									800.900 mb									930 mb									920 mb									780.990 mb									910.770 mb									mb									
Pressure	Height	ft./100									ft./100									ft./100									ft./100									ft./100									ft./100									ft./100									ft./100									ft./100									Pressure
	Temp.	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Temp.
Surf	Dew	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Dew
	Wind	Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Wind									
Surf	Temp.	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Temp.
	Dew	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Dew
Surf	Wind	Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Wind									
	Vel.	knots									knots									knots									knots									knots									knots									knots									knots									Vel.									
Surf	Temp.	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Temp.
	Dew	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Dew
Surf	Wind	Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Wind									
	Vel.	knots									knots									knots									knots									knots									knots									knots									knots									Vel.									
Surf	Temp.	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Temp.
	Dew	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Dew
Surf	Wind	Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Wind									
	Vel.	knots									knots									knots									knots									knots									knots									knots									knots									Vel.									
Surf	Temp.	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Temp.
	Dew	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Dew
Surf	Wind	Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Wind									
	Vel.	knots									knots									knots									knots									knots									knots									knots									knots									Vel.									
Surf	Temp.	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Temp.
	Dew	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Dew
Surf	Wind	Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Wind									
	Vel.	knots									knots									knots									knots									knots									knots									knots									knots									Vel.									
Surf	Temp.	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Temp.
	Dew	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Dew
Surf	Wind	Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Wind									
	Vel.	knots									knots									knots									knots									knots									knots									knots									knots									Vel.									
Surf	Temp.	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Temp.
	Dew	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Dew
Surf	Wind	Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Wind									
	Vel.	knots									knots									knots									knots									knots									knots									knots									knots									Vel.									
Surf	Temp.	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Temp.
	Dew	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Dew
Surf	Wind	Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Wind									
	Vel.	knots									knots									knots									knots									knots									knots									knots									knots									Vel.									
Surf	Temp.	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Temp.
	Dew	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Dew
Surf	Wind	Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Wind									
	Vel.	knots									knots									knots									knots									knots									knots									knots									knots									Vel.									
Surf	Temp.	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Temp.
	Dew	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Dew
Surf	Wind	Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Wind									
	Vel.	knots									knots									knots									knots									knots									knots									knots									knots									Vel.									
Surf	Temp.	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Temp.
	Dew	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Dew
Surf	Wind	Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Wind									
	Vel.	knots									knots									knots									knots									knots									knots									knots									knots									Vel.									
Surf	Temp.	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Temp.
	Dew	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Dew
Surf	Wind	Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Wind									
	Vel.	knots									knots									knots									knots									knots									knots									knots									knots									Vel.									
Surf	Temp.	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Temp.
	Dew	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Dew
Surf	Wind	Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Wind									
	Vel.	knots									knots									knots									knots									knots									knots									knots									knots									Vel.									
Surf	Temp.	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Temp.
	Dew	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Dew
Surf	Wind	Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Wind									
	Vel.	knots									knots									knots									knots									knots									knots									knots									knots									Vel.									
Surf	Temp.	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Temp.
	Dew	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Dew
Surf	Wind	Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Wind									
	Vel.	knots									knots									knots									knots									knots									knots									knots									knots									Vel.									
Surf	Temp.	°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									°F.									Temp.
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Surf	Wind	Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Dir. Vel. knots									Wind									
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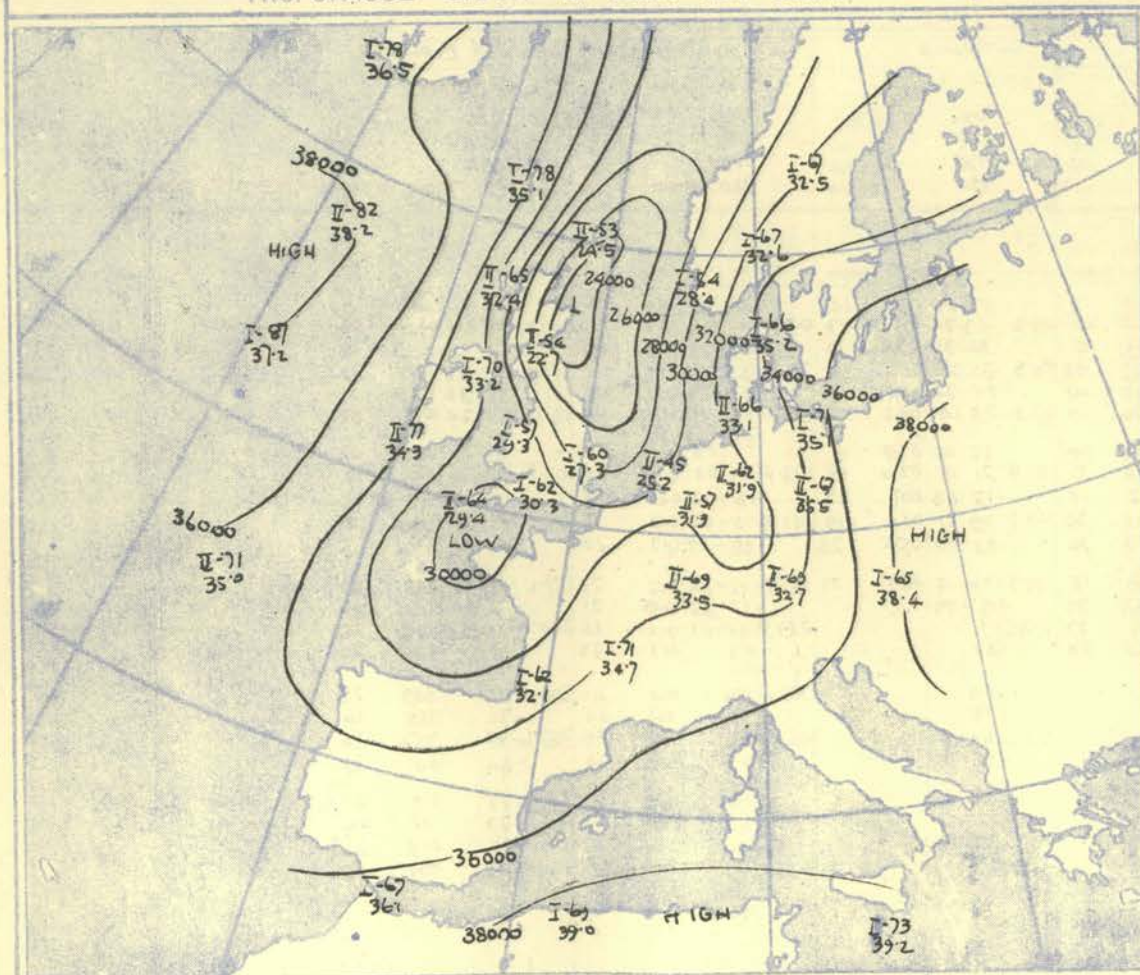


The continuous lines are contour lines of the 700 mb. surface.  
The dotted lines are isotherms of the thickness of the layer 1000-700 mb.

Gradient Wind Scale for Contours  
at intervals of 200 ft. at Lat. 52 1/2° N.

The continuous lines are contour lines of the 300 mb. surface.  
The dotted lines are isotherms 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.

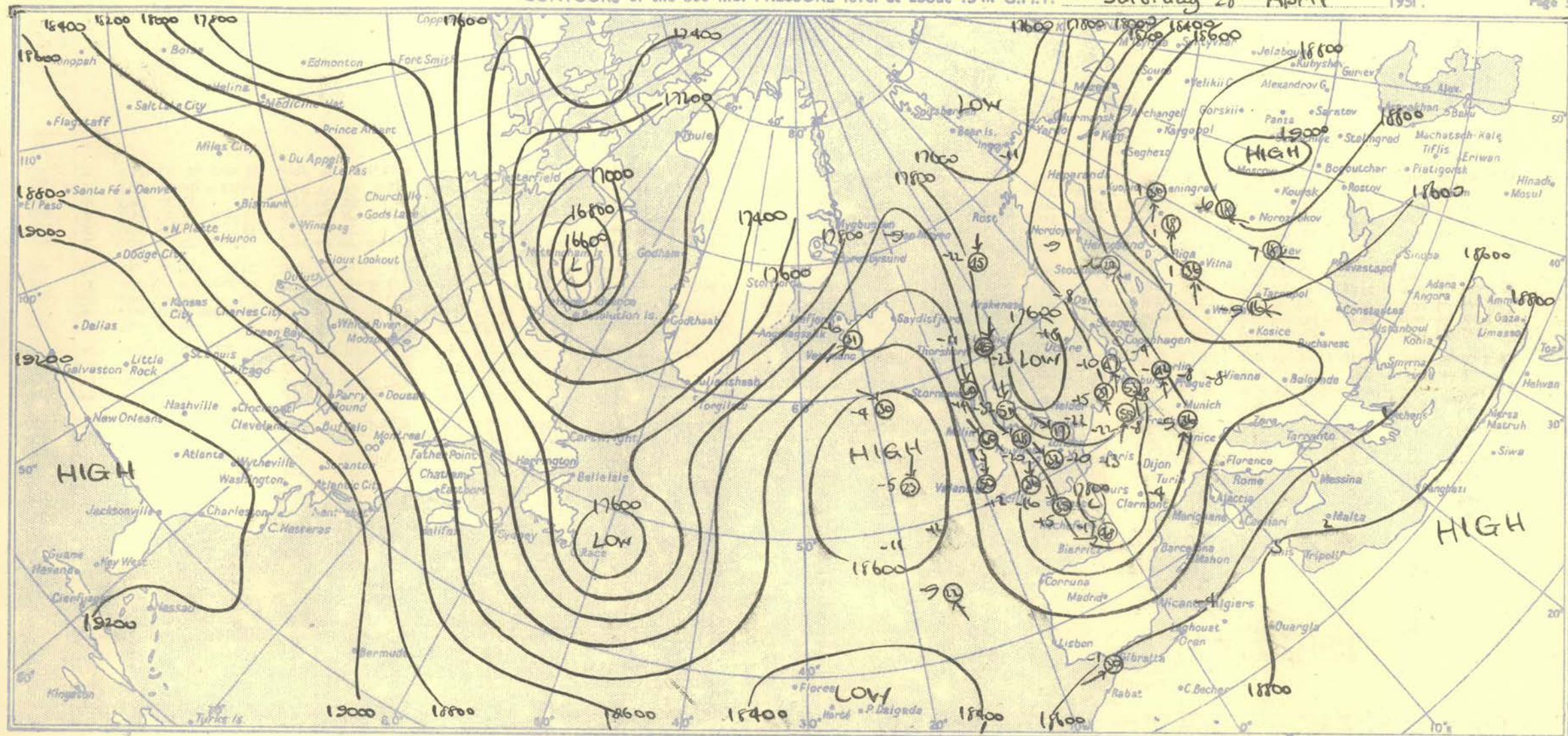
### NOTES ON THE AEROLOGICAL SITUATION.

Considerable dynamic warming occurred in the Norwegian Sea  
leading to the isolation of a cold pool over the North Sea.

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

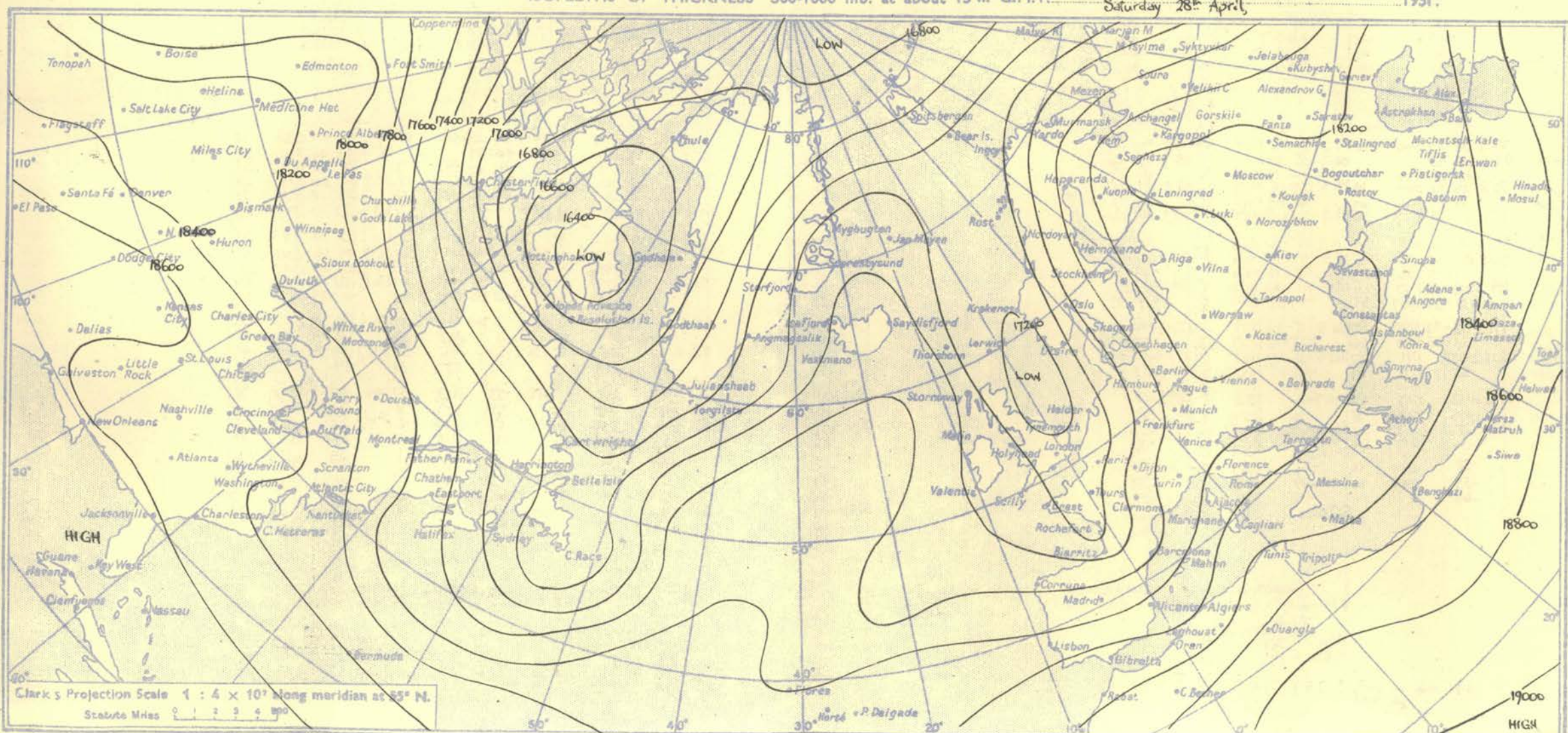




ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T.

Saturday 28<sup>th</sup> April,

195f.





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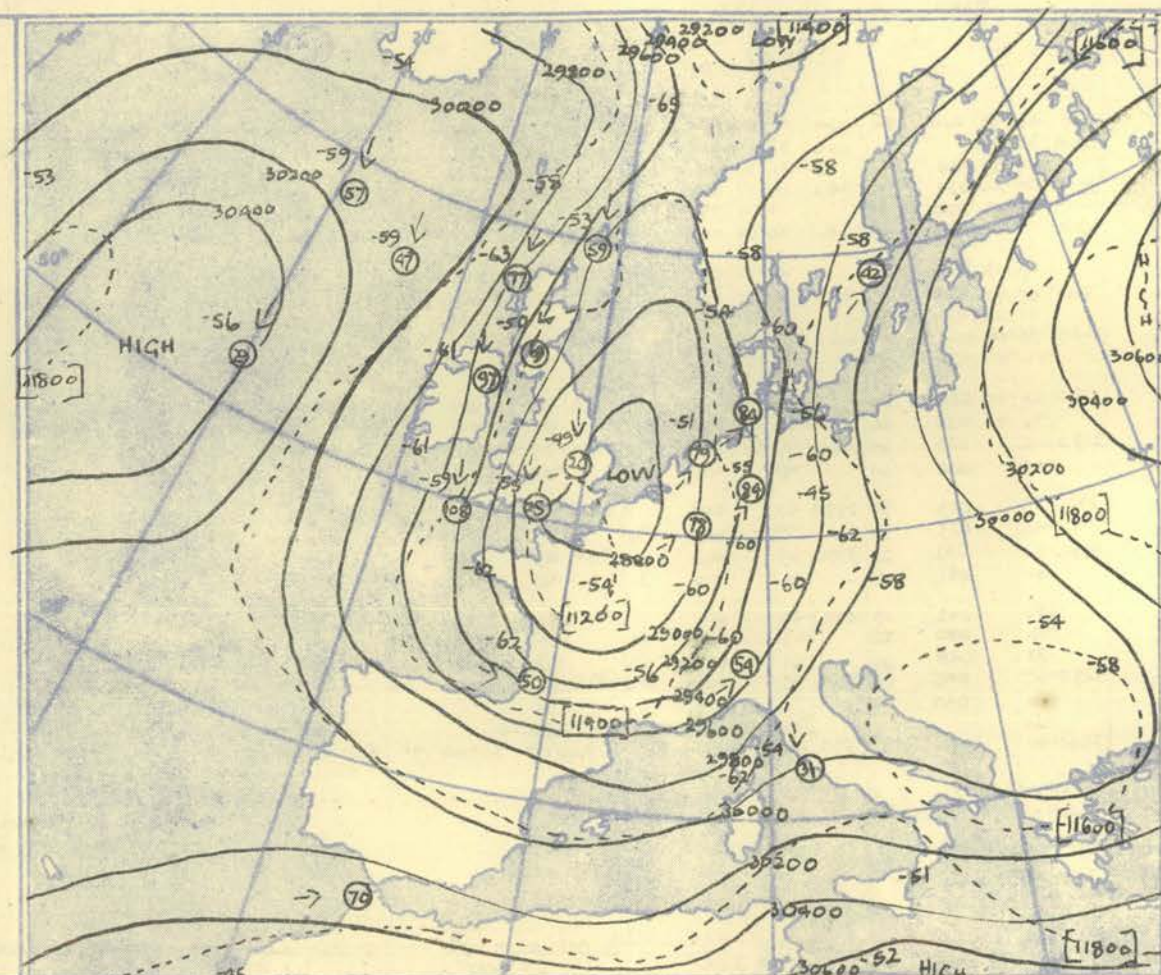


## RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

[illegible]



100 80 60 40 30 20 15 10 knots



This is a hand-drawn weather map of Europe and the North Atlantic. The map features several key elements:

- Isobars:** Solid lines representing pressure levels, with values such as 1000, 1020, 1040, 1060, 1080, 1100, 1120, 1140, 1160, 1180, 1200, 1220, 1240, 1260, 1280, 1300, 1320, 1340, 1360, 1380, 1400, 1420, 1440, 1460, 1480, 1500, 1520, 1540, 1560, 1580, 1600, 1620, 1640, 1660, 1680, 1700, 1720, 1740, 1760, 1780, 1800, 1820, 1840, 1860, 1880, 1900, 1920, 1940, 1960, 1980, 2000, 2020, 2040, 2060, 2080, 2100, 2120, 2140, 2160, 2180, 2200, 2220, 2240, 2260, 2280, 2300, 2320, 2340, 2360, 2380, 2400, 2420, 2440, 2460, 2480, 2500, 2520, 2540, 2560, 2580, 2600, 2620, 2640, 2660, 2680, 2700, 2720, 2740, 2760, 2780, 2800, 2820, 2840, 2860, 2880, 2900, 2920, 2940, 2960, 2980, 3000, 3020, 3040, 3060, 3080, 3100, 3120, 3140, 3160, 3180, 3200, 3220, 3240, 3260, 3280, 3300, 3320, 3340, 3360, 3380, 3400, 3420, 3440, 3460, 3480, 3500, 3520, 3540, 3560, 3580, 3600, 3620, 3640, 3660, 3680, 3700, 3720, 3740, 3760, 3780, 3800, 3820, 3840, 3860, 3880, 3900, 3920, 3940, 3960, 3980, 4000, 4020, 4040, 4060, 4080, 4100, 4120, 4140, 4160, 4180, 4200, 4220, 4240, 4260, 4280, 4300, 4320, 4340, 4360, 4380, 4400, 4420, 4440, 4460, 4480, 4500, 4520, 4540, 4560, 4580, 4600, 4620, 4640, 4660, 4680, 4700, 4720, 4740, 4760, 4780, 4800, 4820, 4840, 4860, 4880, 4900, 4920, 4940, 4960, 4980, 5000, 5020, 5040, 5060, 5080, 5100, 5120, 5140, 5160, 5180, 5200, 5220, 5240, 5260, 5280, 5300, 5320, 5340, 5360, 5380, 5400, 5420, 5440, 5460, 5480, 5500, 5520, 5540, 5560, 5580, 5600, 5620, 5640, 5660, 5680, 5700, 5720, 5740, 5760, 5780, 5800, 5820, 5840, 5860, 5880, 5900, 5920, 5940, 5960, 5980, 6000, 6020, 6040, 6060, 6080, 6100, 6120, 6140, 6160, 6180, 6200, 6220, 6240, 6260, 6280, 6300, 6320, 6340, 6360, 6380, 6400, 6420, 6440, 6460, 6480, 6500, 6520, 6540, 6560, 6580, 6600, 6620, 6640, 6660, 6680, 6700, 6720, 6740, 6760, 6780, 6800, 6820, 6840, 6860, 6880, 6900, 6920, 6940, 6960, 6980, 7000, 7020, 7040, 7060, 7080, 7100, 7120, 7140, 7160, 7180, 7200, 7220, 7240, 7260, 7280, 7300, 7320, 7340, 7360, 7380, 7400, 7420, 7440, 7460, 7480, 7500, 7520, 7540, 7560, 7580, 7600, 7620, 7640, 7660, 7680, 7700, 7720, 7740, 7760, 7780, 7800, 7820, 7840, 7860, 7880, 7900, 7920, 7940, 7960, 7980, 8000, 8020, 8040, 8060, 8080, 8100, 8120, 8140, 8160, 8180, 8200, 8220, 8240, 8260, 8280, 8300, 8320, 8340, 8360, 8380, 8400, 8420, 8440, 8460, 8480, 8500, 8520, 8540, 8560, 8580, 8600, 8620, 8640, 8660, 8680, 8700, 8720, 8740, 8760, 8780, 8800, 8820, 8840, 8860, 8880, 8900, 8920, 8940, 8960, 8980, 9000, 9020, 9040, 9060, 9080, 9100, 9120, 9140, 9160, 9180, 9200, 9220, 9240, 9260, 9280, 9300, 9320, 9340, 9360, 9380, 9400, 9420, 9440, 9460, 9480, 9500, 9520, 9540, 9560, 9580, 9600, 9620, 9640, 9660, 9680, 9700, 9720, 9740, 9760, 9780, 9800, 9820, 9840, 9860, 9880, 9900, 9920, 9940, 9960, 9980, 10000.
- Isotherms:** Dashed lines representing temperature levels, with values such as 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 128, 130, 132, 134, 136, 138, 140, 142, 144, 146, 148, 150, 152, 154, 156, 158, 160, 162, 164, 166, 168, 170, 172, 174, 176, 178, 180, 182, 184, 186, 188, 190, 192, 194, 196, 198, 200, 202, 204, 206, 208, 210, 212, 214, 216, 218, 220, 222, 224, 226, 228, 230, 232, 234, 236, 238, 240, 242, 244, 246, 248, 250, 252, 254, 256, 258, 260, 262, 264, 266, 268, 270, 272, 274, 276, 278, 280, 282, 284, 286, 288, 290, 292, 294, 296, 298, 300, 302, 304, 306, 308, 310, 312, 314, 316, 318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338, 340, 342, 344, 346, 348, 350, 352, 354, 356, 358, 360, 362, 364, 366, 368, 370, 372, 374, 376, 378, 380, 382, 384, 386, 388, 390, 392, 394, 396, 398, 400, 402, 404, 406, 408, 410, 412, 414, 416, 418, 420, 422, 424, 426, 428, 430, 432, 434, 436, 438, 440, 442, 444, 446, 448, 450, 452, 454, 456, 458, 460, 462, 464, 466, 468, 470, 472, 474, 476, 478, 480, 482, 484, 486, 488, 490, 492, 494, 496, 498, 500, 502, 504, 506, 508, 510, 512, 514, 516, 518, 520, 522, 524, 5

Isopleths of Thickness 500-1000mb



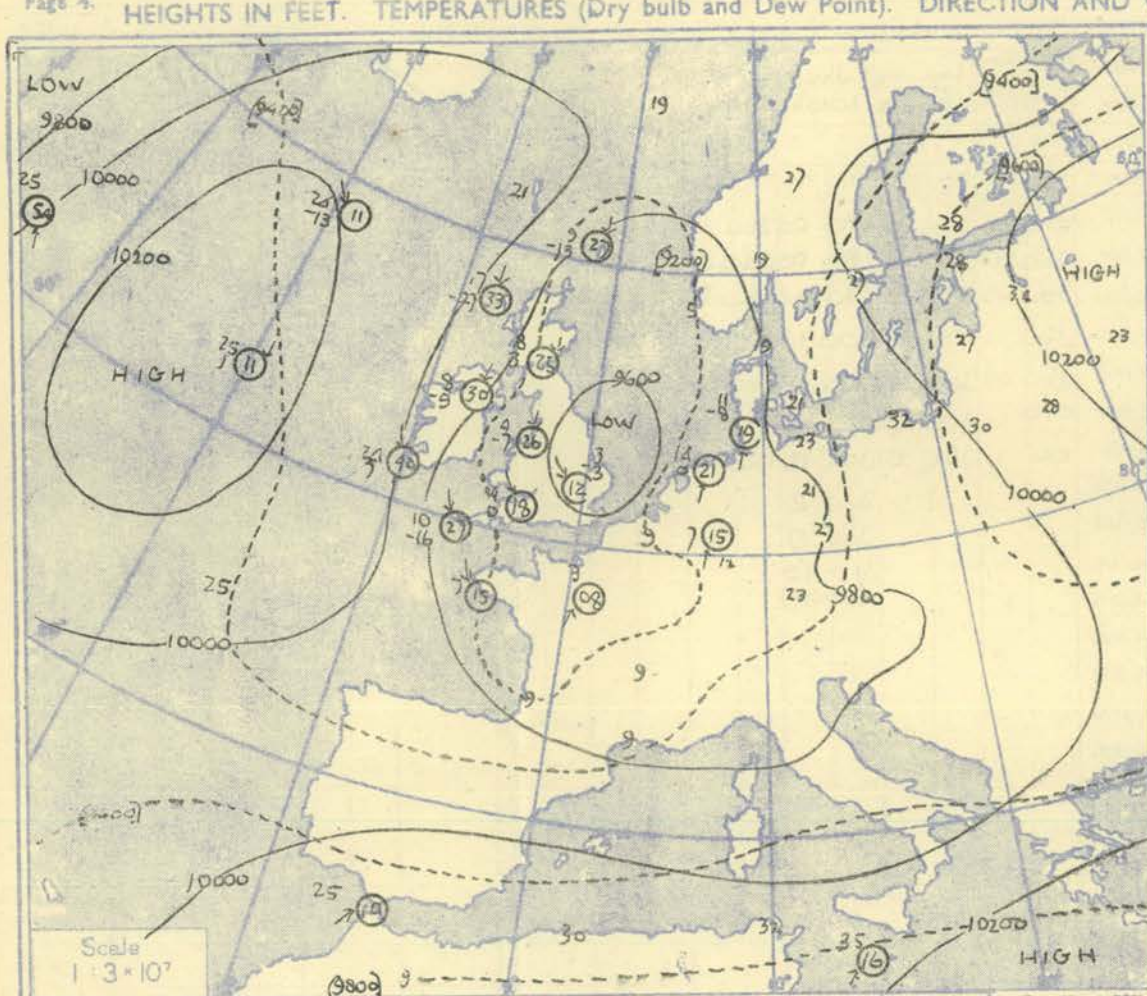
## DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

NEPHOSCOPE OBSERVATIONS[illegible]

Ship	WEATHER EXPLORER				WEATHER EXPLORER				WEATHER EXPLORER				WEATHER EXPLORER				WEATHER RECORDER				WEATHER RECORDER				WEATHER RECORDER				WEATHER RECORDER				WEATHER WATCHER				Ship
Lat/Long	52-6N. 20-0W.				52-6N. 19-8W.				52-6N. 19-8W.				52-5N. 20-0W.				59-1N. 18-9W.				59-1N. 18-8W.				59-1N. 18-4W.				58-9N. 18-9W.				57-0N. 12-5W.				Lat/Long
Features Time M.S.L. Surf Freezing	03h. G.M.T. 1034 mb 1034 mb 905 + 765 mb				09h. G.M.T. 1033 mb 1033 mb mb 750 mb				15h. G.M.T. 1034 mb 1034 mb mb 750 mb				21h. G.M.T. 1033 mb 1033 mb mb 900 + 760 mb				03h. G.M.T. 1031 mb 1031 mb mb 900 mb				09h. G.M.T. 1031 mb 1031 mb mb 890 mb				15h. G.M.T. 1033 mb 1033 mb mb 890 mb				21h. G.M.T. 1032 mb 1032 mb mb 900 mb				03h. G.M.T. 1029 mb 1029 mb mb 890 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	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb				
Surf		48 39		Calm	08-9	48 34		360 05	07-0	48 38		060 07	08-9	49 38	030 03		42 45	270 15		44 40	270 07	08-7	48 44	270 10		48 44	270 12		46 37	330 13		46 37	330 13	Surf			
1000	09-0	44 37				47 35		No			45 38					47 38	022 07		41 41	296 17			44 41	242 09		45 39	323 09		46 37	303 13		43 38	338 24		43 38	338 24	1000
950		38 34		Mean		40 31		winds		39 35		Max		39 33	017 07		38 35	290 14		38 37	248 06		39 32	323 09		40 37	306 13		39 36	342 27		39 36	342 27	950			
900	37-0	31 30			37-1	33 27		balloon	37-1	33 31			37-2	31 28	013 06		36-3	32 27	285 13		36-4	33 33	252 07		36-8	33 29	323 08		36-8	33 23	317 12		35-7	33 30	348 29	900	
850		37 26		Wind		34 24				41 25		elevation		41 21	010 04		29 25	279 11		30 30	254 07		27 22	323 08		25 17	319 09		25 17	319 09		28 27	360 22		28 27	360 22	850
800	68-3	36 21			68-3	38 14		above	68-5	39 14			68-4	38 08	012 06		67-0	24 21	264 11		67-3	30 20	257 06		67-6	30 11	322 08		67-4	32 13	318 10		66-6	27 25	004 36	800	
750		30				33 05		max		32 05				31 01	009 10		22 16	276 11		27 00	265 07		28 14	318 10		31 05	324 09		23 13	008 32		23 13	008 32	750			
700	103-3	28 11			103-4	26 02			103-5	25 01	026 11		103-4	24 13	001 15		101-3	16 10	296 11		101-9	22 01	281 09		102-3	24 13	316 11		102-3	26 03	340 10		100-3	19 02	009 30	700	
650		16 03		320 05		19 02		elevation		19 12	010 14			20 18	350 19		13 13	295 11		17 03	301 13		15 16	316 14		21 08	344 15		15 11	009 29		15 11	009 29	650			
600	142-4	10 07		(above max	142-8	15 16		of radar	142-9	13 20	001 17		142-8	13 31	360 21		140-1	05 14	299 13		141-1	10 10	313 21		141-7	13 21	318 17		141-8	21 18	344 26		139-9	08 15	003 29	600	
550		04 18				08 24				07 25	005 20			06 23	018 25		03 20	307 22		05 12	318 24		07 18	324 22		06 28	340 21		03 18	358 30		03 18	358 30	550			
500	187-4	05 17		elevation	188-3	00 34	355 24		188-1	03 27	011 24		188-0	03 20	034 29		184-5	09 26	313 27		186-3	02 14	328 27		187-0	01 12	324 22		187-0	04 30	330 23		184-4	10 28	352 36	500	
450		-17 39		322 24		-09 48	347 22			-15 35	011 29			-13 26	044 34		-18 32	318 28		-11 21	342 35		-10 17	327 19		-12 39	332 22		-12 39	332 22		-18 38	351 40		-18 38	351 40	450
400	240-0	29 50		336 33	241-9	20 32	354 30		241-2	24 35	014 35		241-1	24 39	058 37		237-0	31 42	318 30		239-6	22 33	350 35		240-9	20 25		240-4	25 46	355 20		236-8	31 47	352 43	400		
350		-43		003 33		-23 55	005 30			-38 48	024 34			-35 52	047 38			335 49			27 47	357 34		(375) 25 29					357 24				355 46	350			
300	304-0	56		012 29	307-3	47	035 31		305-7	55	034 34		305-6	54	036 40		300-7	59	344 57		304-3	55	341 42							330 25		300-6	59	352 47	300		
250		-73		027 35		-63	049 38			-72	063 45			-72	050 36			-75	346 59			-70	353 43						304-1	-57			-74	350 54	250		
200	387-5	86		013 30	392-2	79	035 36		389-7	81	046 39		389-4	82	057 30		388-8	83	322 41		388-0	88	351 32						(280) 64			384-5	73	342 49	200		
170		-77		011 20		-76	027 22			-71	030 17		(198) 82				-70	343 22			-74	358 24									-67	352 31		-67	352 31	170	
150		-73		004 16		-69	018 13			-66	030 13			-72	325 19			-71	321 14			-69	340 19									-67	004 25		-67	004 25	150
130		-70		356 14		-66	018 16			-63	030 11			-71	321 14			-70	324 10			-66	019 14									-63	005 18		-63	005 18	130
110		-70		356 10		-64	018 15			-57	030 09			-70	324 10			-65	006 11			-65	006 11													110	
100	330-0	68		356 06	336-9	63				-56	030 09			526-6	68			526-6	68		531-9	65														100	
90		-67		356 04					(091) 53					-68	003 11			-68	041 10																90		
80	(082) 65													-68	047 06																				80		
70				Inversion				Inversion					Inversion				(068) 68																		70		
60				887mb. 29°-841mb. 39°				865mb. 28°-838mb. 41°					898mb. 32°-850mb. 41°				872mb. 30°-864mb. 42°																		60		
								Isotermal									Isotermal																				
								838-825mb. 21°									790-755mb. 23°																				
																	695-665mb. 15°																				
																											</										



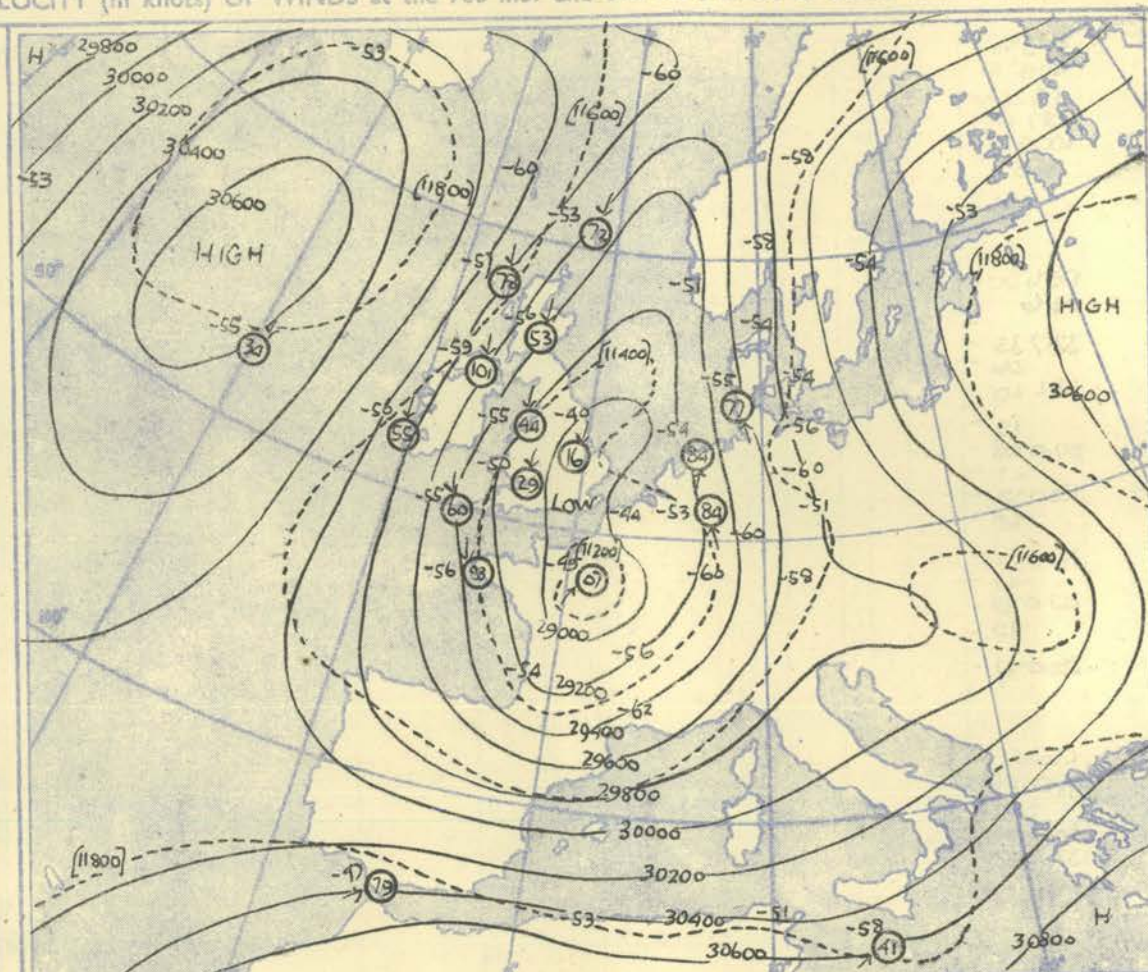
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15h G.M.T.



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.

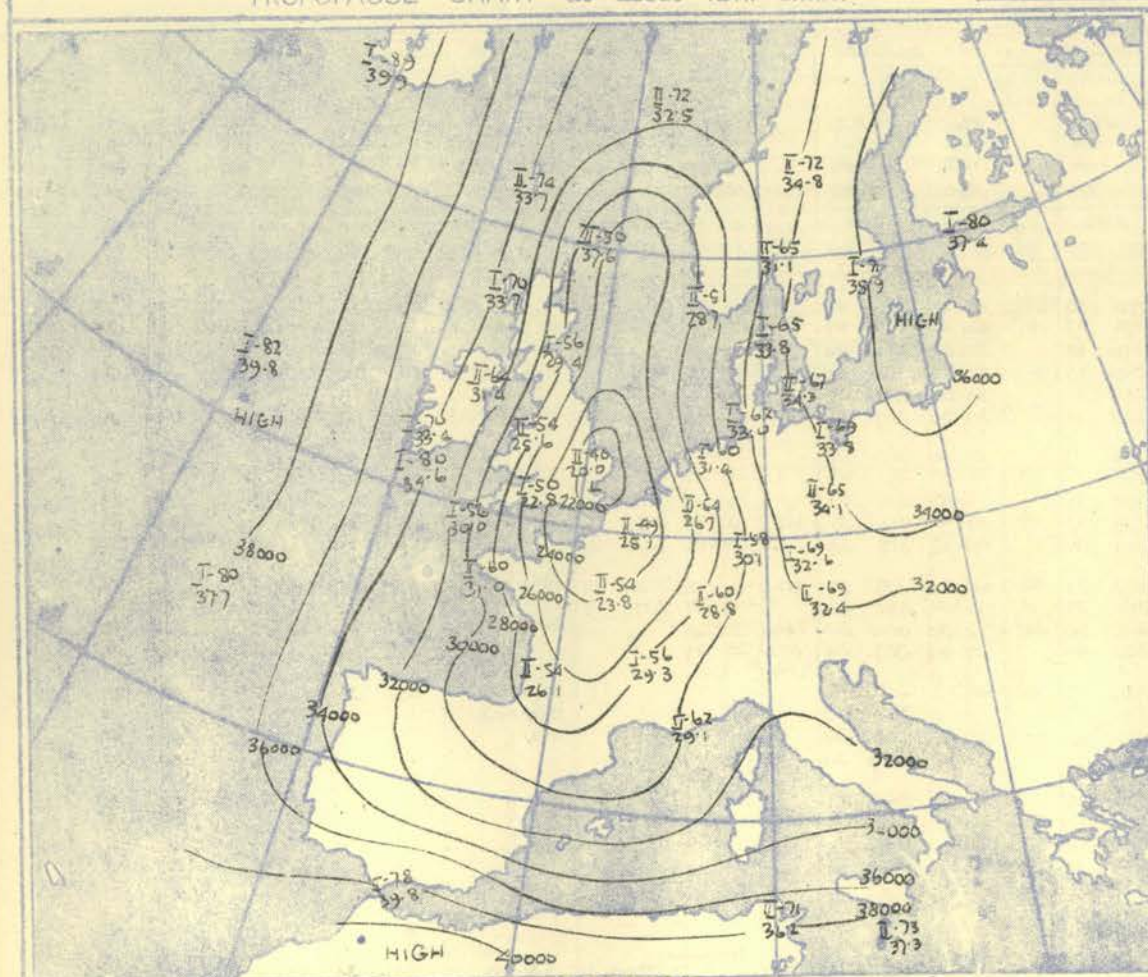
Gradient Wind Scale for Contours  
at intervals of 200 ft. at Lat.  $52\frac{1}{2}^\circ$  N.

100 80 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.

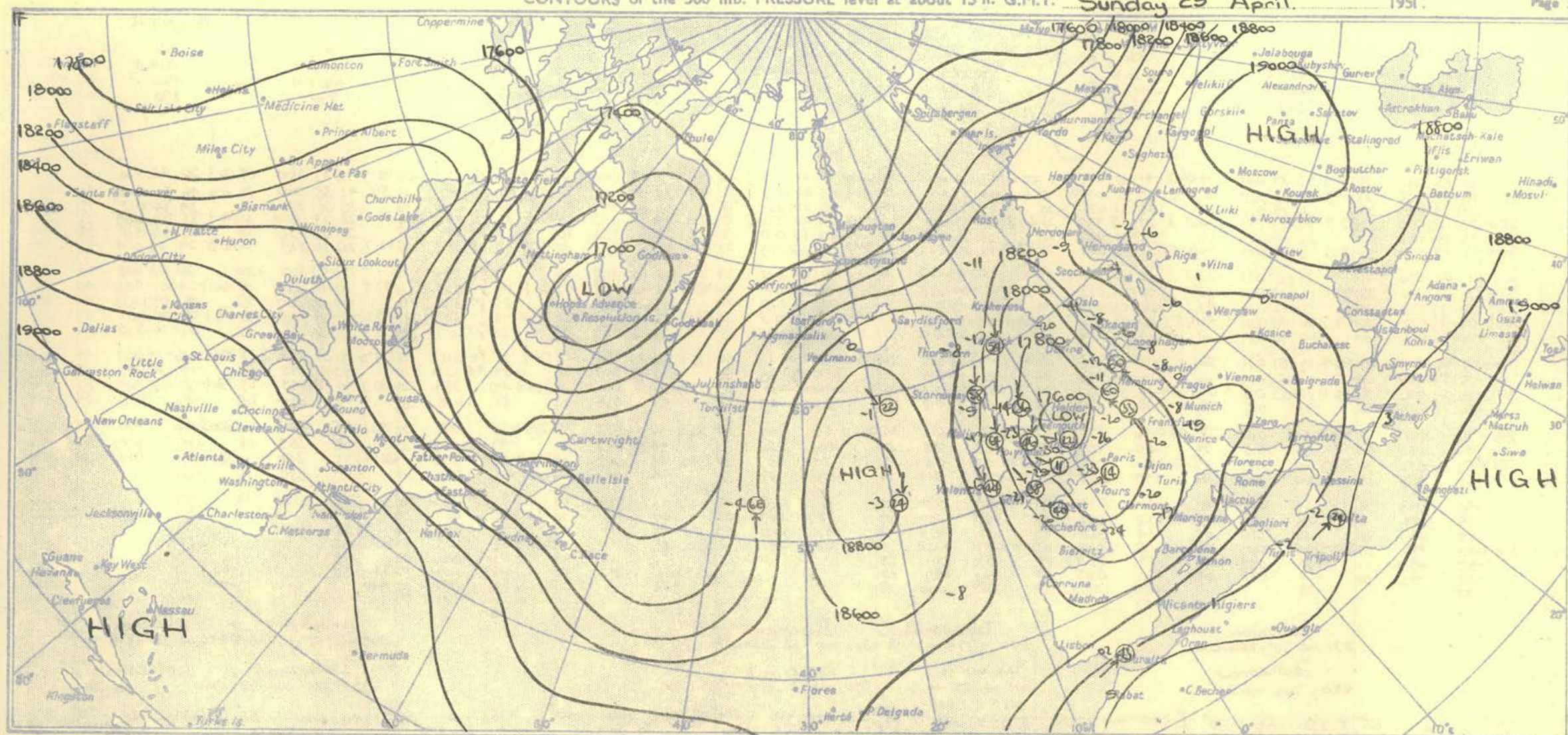
### NOTES ON THE AEROLOGICAL SITUATION.

The dynamic warming over the Norwegian Sea continued and the cold pool moved slightly southwards while maintaining its strength.

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

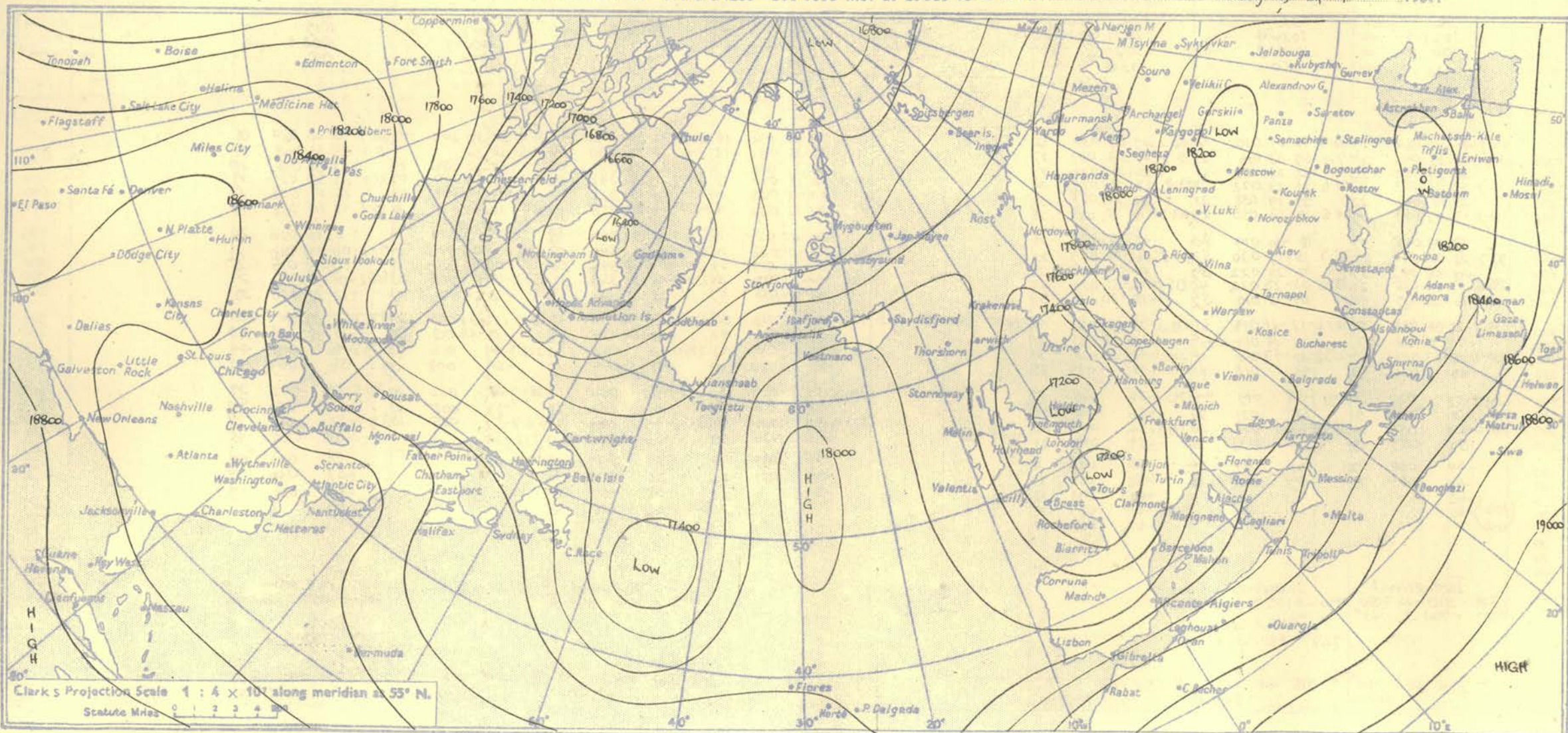




ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T.

Sunday 29<sup>th</sup> April.

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 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													
	1021.9	mb			1026.0	mb			1020.6	mb			1022.3	mb			1018.3	mb			1015.5	mb			1017.2	mb			1019.9	mb			1024.5													
	1011.6	mb			1024.3	mb			1019.7	mb			1012.7	mb			1016.3	mb			1010.9	mb			1000.8	mb			1009.0	mb			1023													
	933	mb			922	mb			930	mb			912	mb			935	mb			941	mb			913	mb			930	mb			890													
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	41	35	08.0	14	00.4	45	34	02.0	14	00.2	41	38	CALM	02.6	47	31	01.0	12	00.6	46	32	31.5	10	01.2	39	38	36.0	04	04.4	41	35	24.0	08	02.9	42	37	36.0	08	00.3	50	42	03.0	12	Surf	
1000	5.7	40	33	02.8	27	6.9	42	32	02.0	15	5.4	39	36	02.8	18	6.3	44	27	01.1	15	4.9	43	30	31.7	18	4.1	38	37		4.6	41	35		5.3	41	35	35.0	21	6.6	46	40	02.2	16	1000		
950		34	28	02.0	23		36	28	02.0	16		34	31	02.8	20		37	24	03	14		35	26	32.1	18		33	32	36.0	10		36	29	2.9	03		35	31	35.0	21		33	34	01.2	19	950
900	33.6	23	23	03.0	26	34.8	23	23	02.1	16	23.3	23	25	02.7	23	34.3	30	19	01.4	14	32.8	28	20	33.0	18	31.9	29	29	33.3	10	32.5	31	25	35.0	10	33.2	28	27	35.0	21	34.7	33	29	00.9	22	900
850		22	14	03.5	27		23	19	02.4	17		23	21	02.2	26		16	01.7		16		22	14	01.0	16		23	21	32.3	10		25	20	34.9	15		24	22	32.6	15		27	24	01.1	28	850
800	63.8	17	09	03.6	22	65.2	22	03	02.3	24	63.5	19	18	01.8	28	64.8	18	07	02.2	22	68.0	15	10	01.9	27	62.2	16	12	3.21	12	62.9	19	15	34.9	18	63.7	20	16	31.0	15	65.5	29	09	01.4	42	800
750		11	02	03.6	21		21	15	02.1	27		14	09	01.3	28		15	05	02.7	26		11	03	02.1	24		10	05	31.8	13		12	08	34.6	16		13	09	32.7	20		26	03	00.8	41	750
700	07.4	09	13	03.6	28	07.4	17	21	02.1	33	07.2	08	03	02.3	25	08.6	08	09	02.5	20	06.5	04	0	02.1	26	06.6	03	03	31.2	17	06.5	04	00	32.7	13	07.4	10	16	33.9	27	100.1	24	07	00.3	40	700
650		06	27	03.8	35		12	46	02.0	42		03	06	03.0	30		06	13	02.0	37		04	13	02.3	24		04	07	30.3	20		04	09	31.2	13		04	19	33.7	35		16	05	00.3	44	650
600	35.7	00	23	03.7	44	38.2	06	48	02.0	46	35.3	01	18	01.6	33	36.8	01	13	01.7	52	34.0	12	24	02.8	23	33.0	12	47	27.2	23	34.0	12	17	30.7	11	35.6	03	25	33.5	40	39.1	09	00	00.1	47	600
550		08	10	03.3	50		00	50	02.4	51		08	31	02.6	34		08	25	01.8	57		16	31	03.8	35		22	28	28.2	24		20	25	31.7	09		12	30	33.6	42		01	12	00.5	44	550
500	179.6	17	56	02.9	54	182.8	09	51	02.1	58	179.2	14	41	02.3	36	180.7	17	33	01.5	64	177.0	23	40	03.2	46	176.6	20	35	28.3	22	176.8	20	34	33.1	11	179.1	21	34	34.6	38	184.0	06	24	00.7	44	500
450		25	58	02.5	50		20	50	01.9	66		26	44	02.0	37		25	46	01.5	81		23	46	03.3	50		20	49	30.3	20		20	44	32.6	18		30	48	34.5	53		17	34	00.7	48	450
400	231.2	36	59	02.2	83	235.1	31	52	01.8	67	230.8	38	52	02.3	44	232.4	35	53	01.8	91	227.6	45	53	03.1	52	225.9	41	51	01.0	20	226.8	44	50	35.4	24	230.2	40	50	34.9	59	236.6	29	48	00.9	52	400
350		46		02.2	85		43		01.5	78		48		03.0	45		49		01.8	96		54		03.9	51		43		02.4	23		51		00.8	33		47		35.0	65		42		01.0	54	350
300	294.6	53		02.5	72	299.0	50		01.6	78	294.0	56		03.4	53	295.6	59		01.8	101	290.2	55		01.9	44	289.7	46		03.7	16	289.6	50		00.8	20	293.3	55		35.1	60	300.5	56		01.3	55	300
250		56		03.2	40		50		01.8	74		50		02.1	42		65		01.8	66		50		02.8	30		44		04.7	12		47		35.2	21		52		35.3	48		69		00.9	56	250
200	382.4	52		05.2	24	384.5	60		02.1	45	382.2	51		01.9	31	382.0	58		01.8	42	378.7	50		03.1	20	379.8	44		04.8	09	378.7	47		35.8	13	381.3	53		34.9	30	385.7	61		01.4	38	200
170		52		03.7	14		60		02.7	36		49		02.5	21		57		01.9	26		53		03.4	13		44		04.5	07		49		01.1	14		35.6	15		60				170		
150		53		05.8	11		58		03.8	9		50		07.6	19		54		02.6	15		51		03.3	14		47		08.4	09		51		03.3	10		35.3	13		59				150		
130		54		08.8	11		57		08.0	14		53		04.8	14		57		04.9	07		53		04.4	08		49		11.4	10		51		03.7	04		35		57				130			
110		55		06.5	05		58		06.5	09		54		06.8	12		58		02.9	15		51		09.1	09		49		11.4	07		51		06.7	06		35		55				110			
100	532.7	55		09.5	09	532.9	60		05.7	09	533.0	55		06.8	15	530.8	58		02.8	10	519.3	55		09.1	08	532.0	52		11.3	05	530.3	52		10.3	05	531.8	55		534.2	55		57			100	
90		55		09.7	11		58		05.3	08		54		06.5	14		56		07.1	08		53		08			51		11.2	04		53		01.6	02		35		55				90			
80		55			06		58		04.8	07		53		06.5	13		53		06.7	13		53		08			51		11.2	05		54		05.1	02		35		55				80			
70		55					58					56		09.0	05		53		07.0	11		50					50					52		09.8	04		35		55				70			
60												57																						50									60			

Inversion  
821 mb 20° - 800 mb 22°

Isothermal  
800-760 mb 22°

Isothermal  
800 - 776 mb 18°

Max. wind.  
301 mb 29,500

Inversion  
332 mb - 55° - 325 mb - 55°

591 Isothermal - 563 mb - 14°

Inversion  
364 mb - 48° - 350 mb

Isothermal  
390 - 380 mb - 4

o Inversion  
7840 mb 26° - 814 mb 30°

• Isothermal  
750 - 718 mb 26

	I 270 mb - 55° 22,800'	I 250 mb - 70° 33,400'	I 300 mb - 56° 29,400'	018° 120 Kts. I 275 mb - 64° 31,400'	I 332 mb - 55° 26,800' I 303 .. - 55° 28,800'	I 450 mb - 40° 20,000'	I 398 mb - 50° 22,800'	I 290 mb - 55° 30,000'	I 256 mb - 70° 33,400'	Tropopause
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STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA.				STATION
Pressure mb	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.		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		M.S.L.				
	Surf		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		Surf				
	Forecast		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		Forecast				
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. knots	Pressure mb				
Surf	02.7	41	37	06.0	17	00.4	42	37	010	12	00.2	39	37	030	12		00.6	40	36	030	08	01.2	38	34	04.1	04.4	38	36	36.0	07	02.9	43	33	020	08	Surf	
1000	5.8	41	37	04.3	25	7.0	39	33	016	27	5.7	39	33	027	27		4.7	39	35	031	15	4.4	38	33	040	06	4.6	38	36		5.1	43	33	008	21	1000	
950		35	31	050	23		32	29	022	21		35	31	030	27			35	32	038	17		32	26	021	05		33	30	356	15		37	31	018	20	950
900	33.7	29	23	053	23	34.6	26	23	022	21	33.5	28	27	039	29		32.5	28	25	041	18	32.0	27	20	348	06	32.3	29	27	350	09	33.1	37	25	024	19	900
850		23	18	049	22		21	19	038	21		22	21	024	32			22	20	038	16		20	15	332	10		21	19	341	06		25	17	028	17	850
800	64.1	17	09	049	19	64.8	15	10	033	22	63.8	16	15	029	28		62.8	16	12	032	16	62.2	14	09	355	10	62.5	16	15	351	10	63.8	18	10	038	18	800
750		12	08	048	19		18	-10	019	30		10	08	028	27			09	05	029	16		08	-01	002	09		09	07	348	14		11	06	026	20	750
700	91.7	01	02	046	27	98.7	15	-17	020	37	91.3	06	-02	027	22		96.2	02	-01	022	20	95.5	01	-10	342	08	95.9	03	01	346	14	97.2	06	-09	016	21	700
650		00	-05	042	27		10	-25	022	39		00	-14	025	20			-08	-19	019	29		-07	-14	344	08		-06	-09	359	15		02	-15	016	25	650
600	135.5	-07	-14	035	29	137.3	03	-23	022	49	135.0	-08	-31	029	29		133.7	-09	-27	020	31	132.7	-16	-21	353	12	133.2	-14	-18	004	13	135.2	-04	-21	015	29	600
550		-16	-23	029	45		-04	-25	019	52		-15	-30	026	34			-16	-26	015	29		-25	-33	009	13		-23	-28	003	19		-12	-31	008	32	550
500	178.7	-22	-34	025	56	181.6	-12	-21	014	61	178.3	-23	-38	022	43	NOT AVAILABLE	176.8	-22	-32	013	35	178.0	-32	-46	018	13	175.7	-32	-37	013	24	178.7	-21	-29	007	40	500
450		-27	-43	021	71		-20	-38	014	64		-33	-45	021	51			-34	-44	011	42		-40	-56	015	22		-38	-44	018	39		-32	-38	006	45	450
400	230.1	-35	-53	019	84	233.8	-30	-47	016	74	229.1	-41		023	70		227.4	-45		015	47	225.0	-40		012	24	225.7	-49		016	43	229.5	-46		008	44	400
350		-44		020	81		-43		018	81		-48		024	85			-54		022	60		-48		015	7		-59		008	39		-56		009	47	350
300	295.8	-52		020	77	297.1	-55		019	94	292.2	-56		024	72		289.7	-57		022	50	288.1	-50		036	14	287.7	-58		005	30	291.5	-59		002	39	300
250		-58		030	41		-65		021	96		-56		032	44			-51		021	35		-48		050	12		-52		005	21		-57		357	40	250
200	381.0	-58		056	29	383.3	-63		028	55	379.5	-54		045	30		377.4	-53		036	25	371.1	-49		061	13	375.8	-52		025	15	378.5	-53		010	28	200
170		-57		059	15		-63		033	36		-54		047	21			-55		19		-51		082	11	173.1	-55						-56		008	13	170
		-60		058	12		-61		041	24		-56		042	18			-55		034	19		-54		079	09						-58		001	09	150	
150		-62		064	12		-59		048	18		-58		056	13			-57		051	16		-56		074	10						-57		036	15	130	
110		-62										-62		073	13			-59					-58		103	09						-60		029	09	110	
100	(103)	-62									528.3	-61		067	11							526.7	-62									527.2	-63				100
90	mb											-61		061	11																				90		
80																																				80	
70																																				70	
																																				60	

Isothermal  $\circ$  Inversion  
 321 - 310 mb - 50 790 mb 14° - 768 mb 2

727 - 690 - 41° Isothermal

Isothermal  
1012 - 1000 mb 38

100

Inversion  
607mb-05-96mb-03

Isothermal  
1008 - 1000 mb

$\pi$  274 mb - 58°    I 218 mb - 71°    I 290 mb - 58°    II 313 mb - 56°    II 366 mb - 48°    I 350 mb - 59°    I 329 mb - 60°  
24. 22'    24. 22'    25. 12'

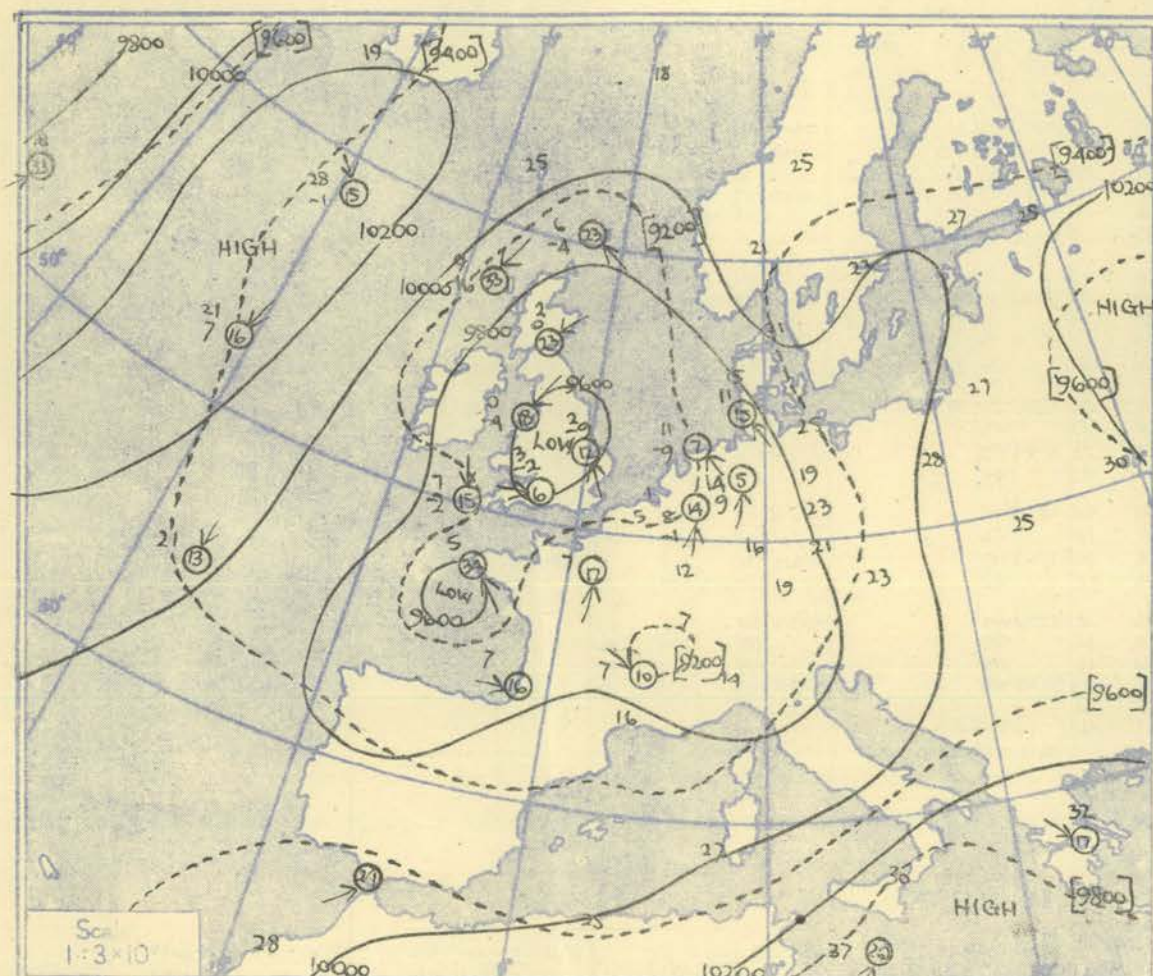


RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				STATION											
Pressure Time M.S.L. Surf Pressing	03h. G.M.T. 1025.8 mb 1015.5 mb 950 mb				03h. G.M.T. 1026.3 mb 1024.6 mb 932 mb				03h. G.M.T. 1022.9 mb 1022.0 mb 966 mb				03h. G.M.T. 1022.0 mb 1012.0 mb 924 mb				03h. G.M.T. 1018.0 mb 1015.9 mb 961 mb				03h. G.M.T. 1017.5 mb 1012.8 mb 967 mb				03h. G.M.T. 1016.6 mb 1000.0 mb 961 mb				03h. G.M.T. 1018.6 mb 1007.8 mb 908 mb				03h. G.M.T. 1021.9 mb 1021.9 mb 925 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	02.7	39	34	115	11	00.4	41	36	030	12	00.2	38	36	050	06	02.6	39	34			01.2	33	32			04.4	35	35	010	04	02.9	43	35	36.0	10	00.3	43	34						
1000	06.8	39	34	105	21	06.9	39	34	022	21	05.7	33	32	064	14	05.8	40	34			04.6	33	32			04.4	35	35	010	04	04.9	43	36	353	18	05.9	41	34						
950		32	28	110	15		34	29	030	23		30	29	072	11		35	30				31	27				31	30	284	07		38	23	355	18		34	27						
900	34.4	24	22	109	20	34.8	28	24	036	21	33.3	25	25	082	11	33.7	29	23			32.1	25	21			30.0	27	26	283	06	33.0	31	28	357	18	33.8	28	23						
850		22	15	109	21		22	18	034	20		21	16	084	14		23	16			20	16				22	20	283	07		24	19	359	21		21	17							
800	64.6	18	06	118	21	65.0	16	12	032	19	63.6	14	13	069	18	64.1	17	10			62.3	15	07			62.2	16	14	287	08	63.5	18	12	358	21	64.0	13	11						
750		11	00	120	23		11	05	029	22		08	09	057	23		10	05			09.01						10	07	284	09		14	04	358	20		20	05						
700	98.2	06	04	112	23	98.6	09	14	025	33	96.9	02	00	058	23	97.5	02	01			95.6	02	09			95.6	03	02	273	06	97.2	07	02	360	15	98.0	15	09						
650		02	13	107	19		04	23	023	43		04	06	064	23		01	07			08.17						05	11	246	07		00	08	001	15		09	13						
600	136.1	03	20	106	20	136.7	02	33	020	54	134.4	10	14	083	21	135.4	03	17			132.8	14	21	030	27	132.8	16	23	253	09	135.0	06	14	360	21	136.5	02	19						
550		12	31	112	20		07	36	016	60		17	21	075	21		12	30			120	25	018	33		121	18	308	07		14	31	357	28		05	22							
500	179.6	24	39	114	19	180.6	16	38	011	69	177.4	28	33	086	19	179.1	18	32			175.5	30	36	010	33	175.5	29	36	324	10	178.3	23	42	350	26	180.8	14	27						
450		34	53	115	23		25		015	88		38	44	111	21		28	38				39	45	008	33		38	45	338	18		31	46	347	32		23	39						
400	230.4	37	60	119	19	232.3	36		014	92	227.5	44		079	24	230.5	36	43			225.4	48		013	38	224.4	49		347	25	229.1	43		353	46	232.7	33	44						
350		43		083	26		48		017	99		50		034	28		47				50		021	45		50		353	24		51		004	50		45		350						
300	294.2	49		069	33	295.7	56		020	110	290.4	50		041	43	293.7	60				288.4	51		031	40	287.5	47		004	18	291.8	58		007	48	296.1	60		300					
250		53		067	33		64		022	71		51		043	37		59				51		028	28		51		028	28		010	14		57	001	42	260.8	58	250					
200	382.2	58		067	30	381.8	61		027	39	378.6	54		052	28	380.4	57				376.7	51		038	20	376.8	47		007	11	379.0	54		354	18			200						
170		58		072	20		61		032	24		55		059	25		57				56		042	20		51		037	10		55		360	17			170							
150		59		082	15	443.1	61		043	21	440.8	57		060	21	442.2	57				57		046	18	439.5	54		54		071	07		57	006	14			150						
130		60		072	12		63		070	19		58		068	20		57				57		072	12		57		072	12		55		074	06		58	021	09	800 mb 130-762 mb 20°	130				
110		60		088	12							60		089	19		62				61		082	18		58		59		064	07		60						110					
100	530.4	62		121	10						527.5	60		077	12	528.6	62				525.6	62		082	09	527.0	50		59		078	07							100					
90		63										61		081	12		63				62		077	10		64		082	12									90						
80	(82mb) 62											62		103	11		64				66																	80						
70																																							70					
60																																							60					
Inversion 441 mb 36°-420 mb 35°					Isothermal 765-747 mb 11°				Inversion 1000 mb 33°-987 mb 35°				Inversion 1009 mb 39°-1009 mb 41°				Inversion 1016 mb 35°-1000 mb 36°				Isothermal 1013-982 mb -33°																							
250-53°-237°-50°					350-333°-48°				910-889 mb 25°				691° 00°-638° 02°				611° 15°-598° 13°																											
Isothermal 1015-1000 mb 39°					278-264 mb 51°																																							
I 207 mb -59°					II 268 mb -64°				II 350 mb -50°				II 300 mb -60°				II 392 mb -49°				II 450 mb -47°				II 352 mb -57°				I 289 mb -60°				I 273 mb -64°											
37,400'					31,900'				25,600'				29,370'				23,200'				19,900'				25,500'				29,200'				31,600'											
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				STATION											
Pressure Time M.S.L. Surf Pressing	09h. G.M.T. 1030.1 mb 1019.8 mb 927 mb				09h. G.M.T. 1026.6 mb 1024.9 mb 940 mb				09h. G.M.T. 1025.3 mb 1024.4 mb 950 mb				09h. G.M.T. 1025.3 mb 1024.4 mb 950 mb				09h. G.M.T. 1017.7 mb 1015.6 mb 976 mb				09h. G.M.T. 1018.2 mb 1013.8 mb 922 mb				09h. G.M.T. 1016.1 mb 999.3 mb 980 mb				09h. G.M.T. 1016.2 mb 1005.4 mb 932 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 																					



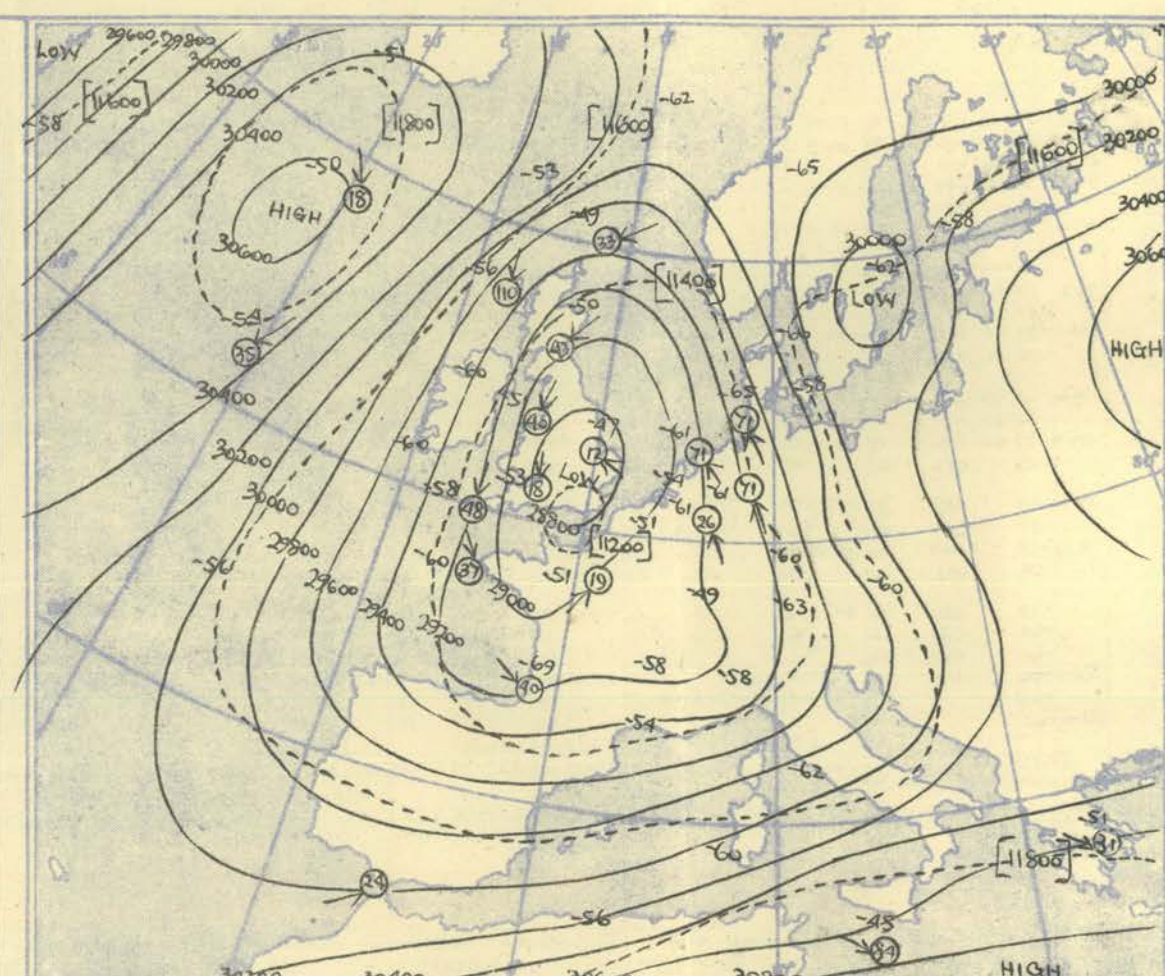
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



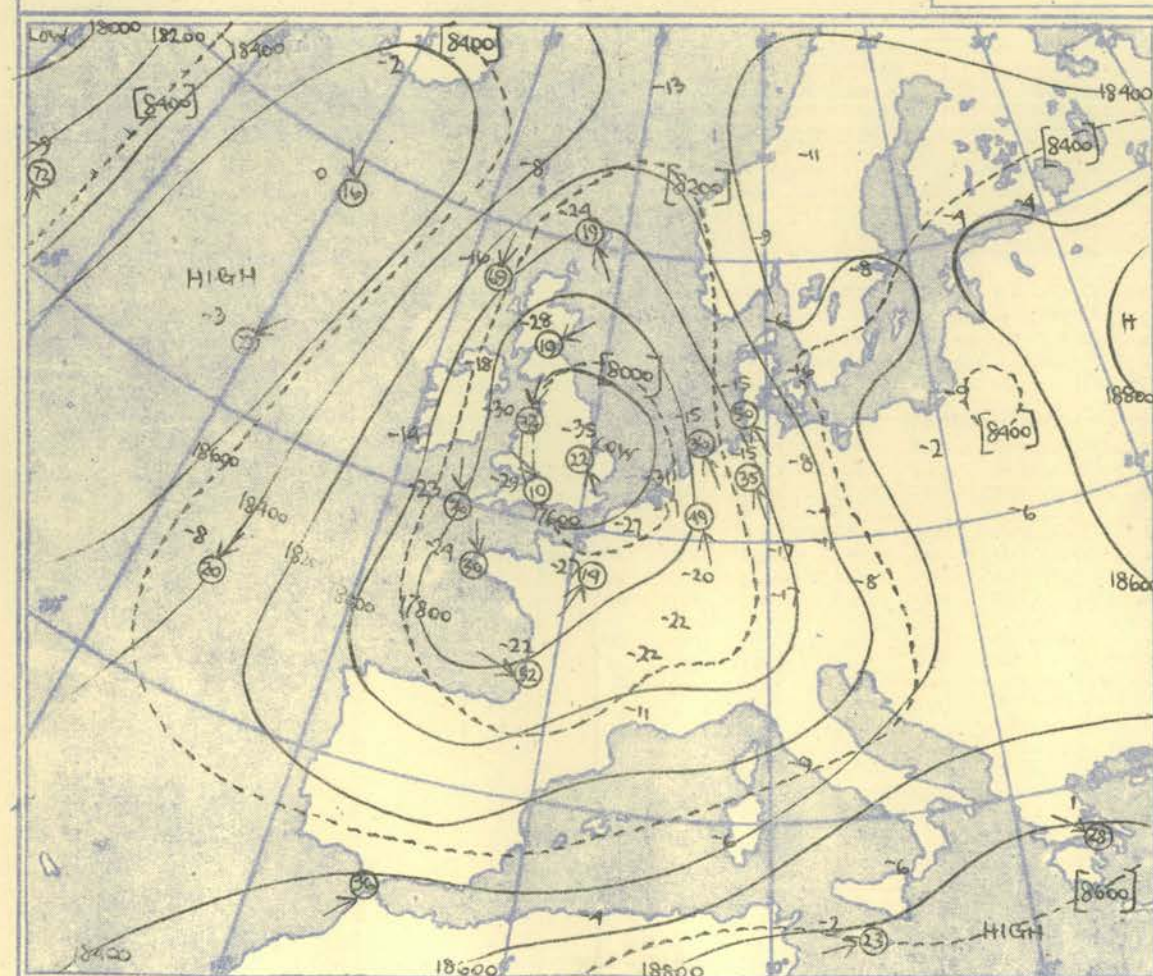
The continuous lines are contour lines of the 700 mb. surface  
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

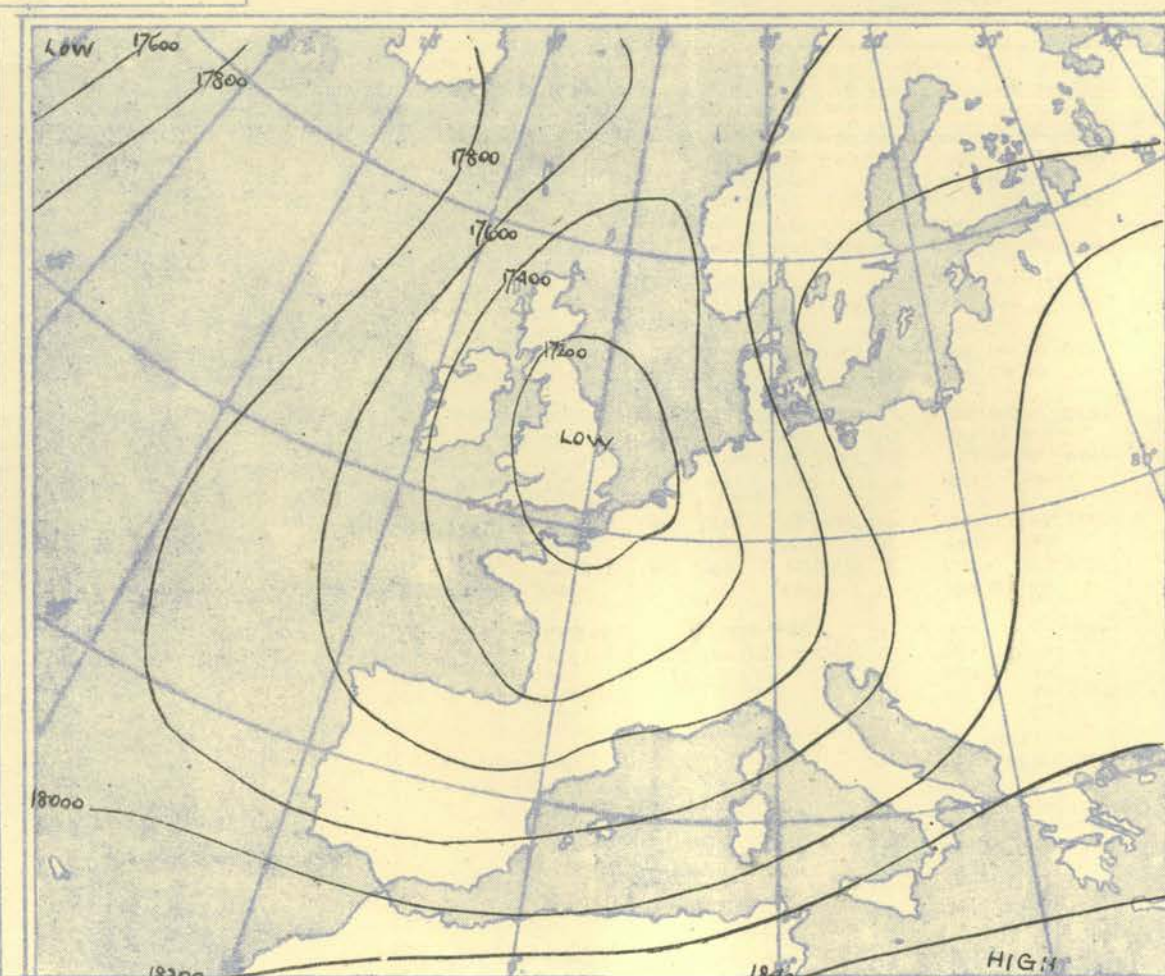
100 80 60 40 20 10 knots



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.



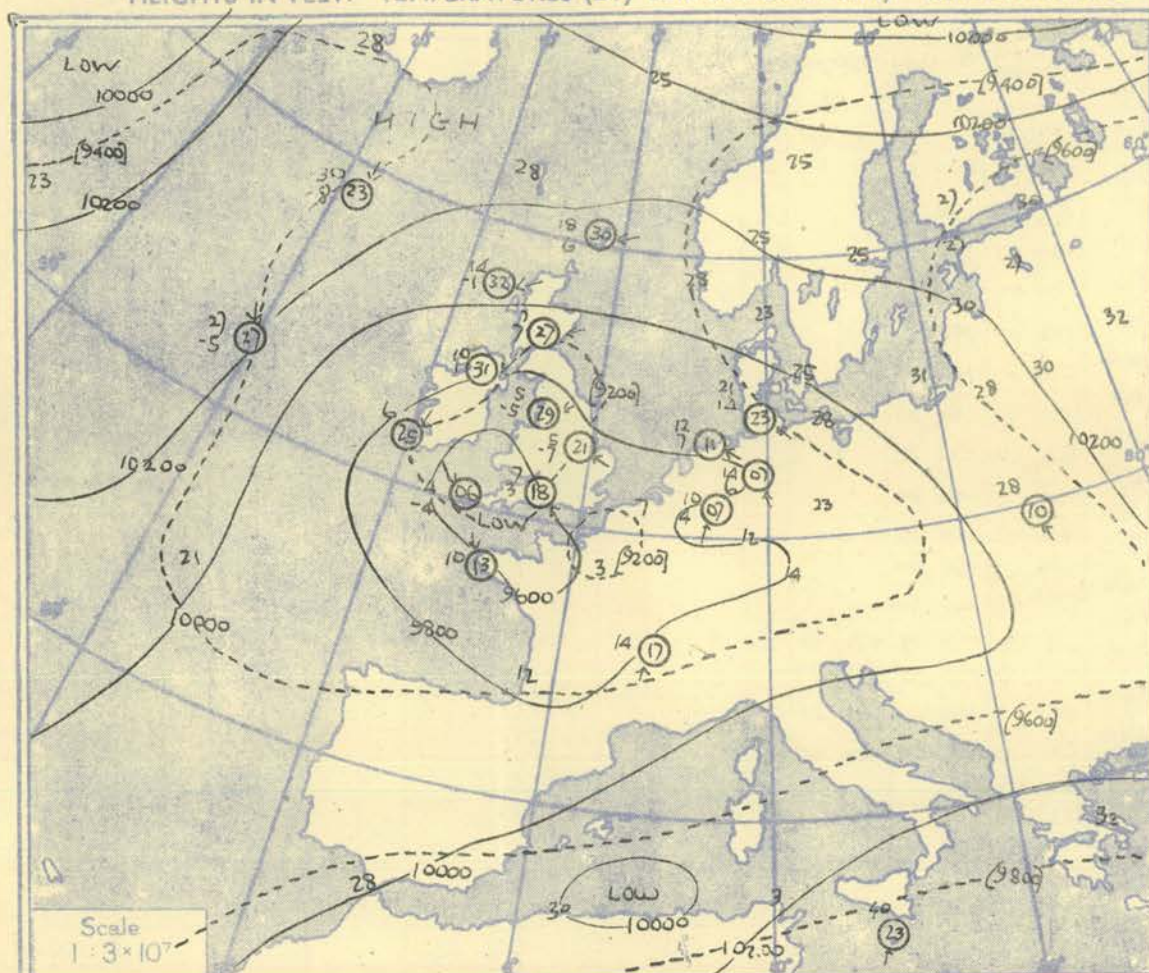
## DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

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	58° 8' N 18° 2' W				59° 0' N 18° 2' W				58° 9' N 18° 2' W				58° 9' N 18° 2' W				52° 5' N 20° 1' W				52° 5' N 20° 1' W				52° 4' N 20° 4' W				52° 2' N 20° 4' W				Lat/Long																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
Pressure	Time	031	G.M.T.		091	G.M.T.		151	G.M.T.		211	G.M.T.		031	G.M.T.		091	G.M.T.		151	G.M.T.		211	G.M.T.			G.M.T.	Time	Pressure																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
	M.S.L.	1033	mb		1033	mb		1035	mb		1035	mb		1033	mb		1032	mb		1031	mb		1029	mb			mb	M.S.L.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
	Surf	1033	mb		1033	mb		1035	mb		1035	mb		1033	mb		1032	mb		1031	mb		1029	mb			mb	Surf																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
	Freezing	87.5, 76.0	mb		88.0, 76.0	mb		84.0	mb		83.5	mb		90.5, 77.0	mb		90.5, 77.0	mb		82.0	mb		70.0, 84.0	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	Height	Temp.	Dew	Wind	Pressure																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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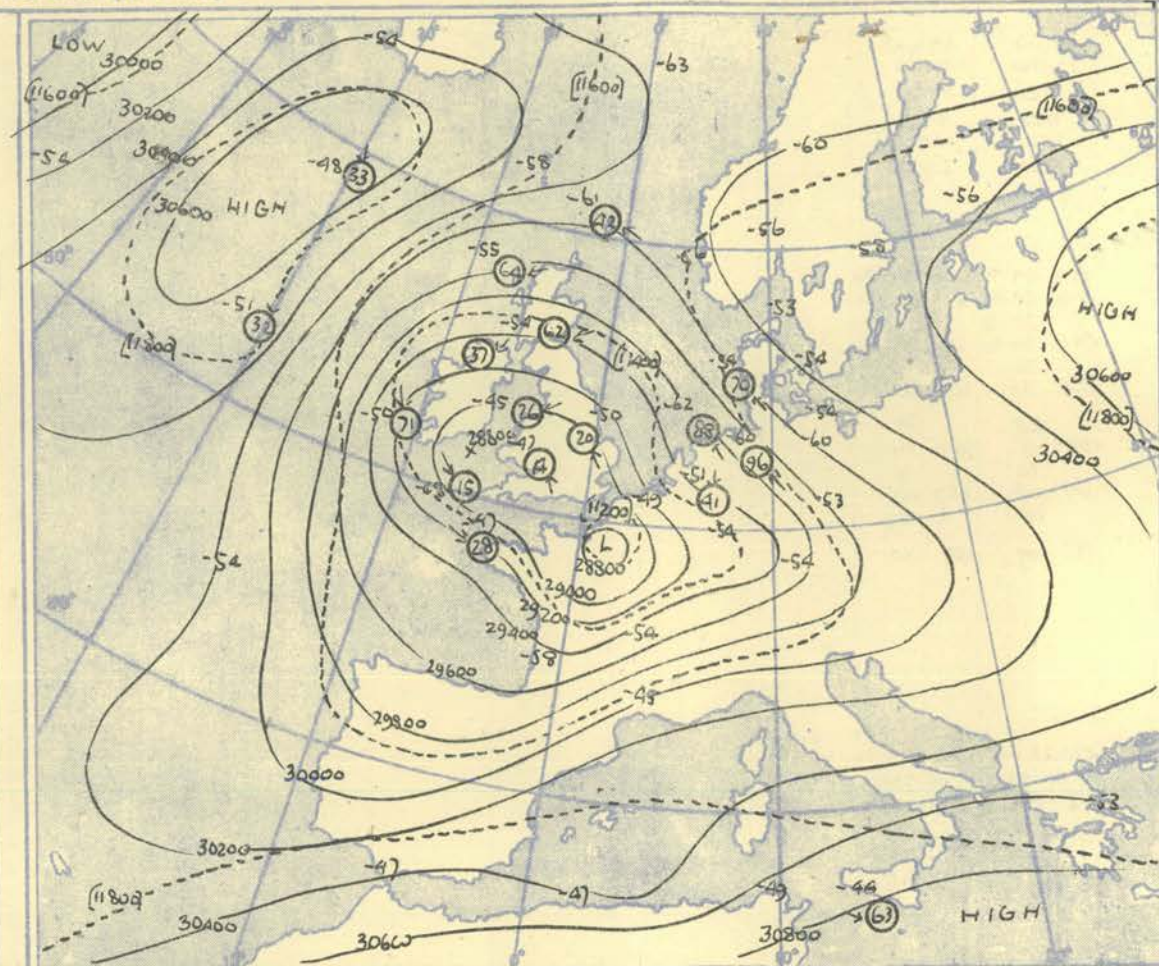
Page 4. HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h G.M.T.



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

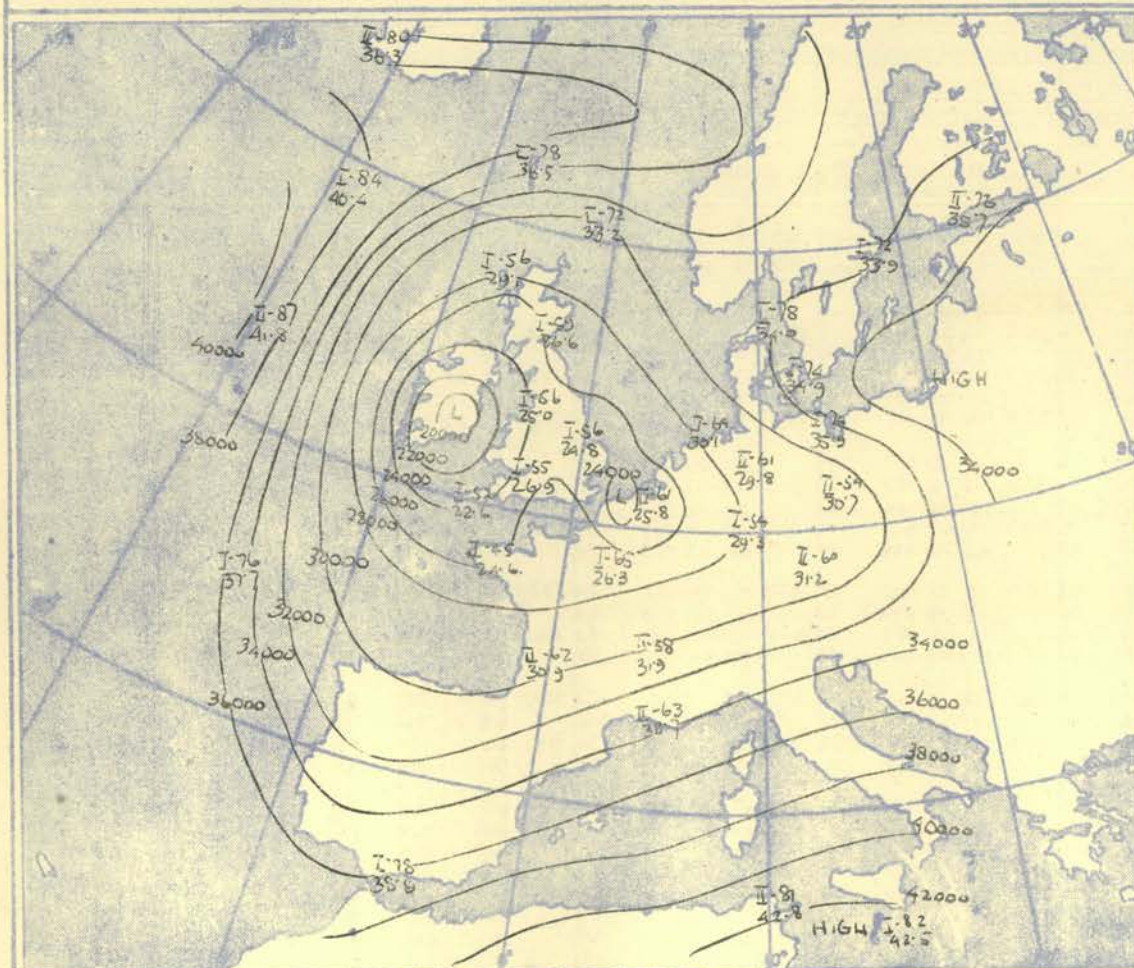
Gradient Wind Scale for Contours  
at intervals of 200 ft. at Lat. 52 1/2° N.

100 80 60 40 20 10 knots



NOTES ON THE AEROLOGICAL SITUATION.

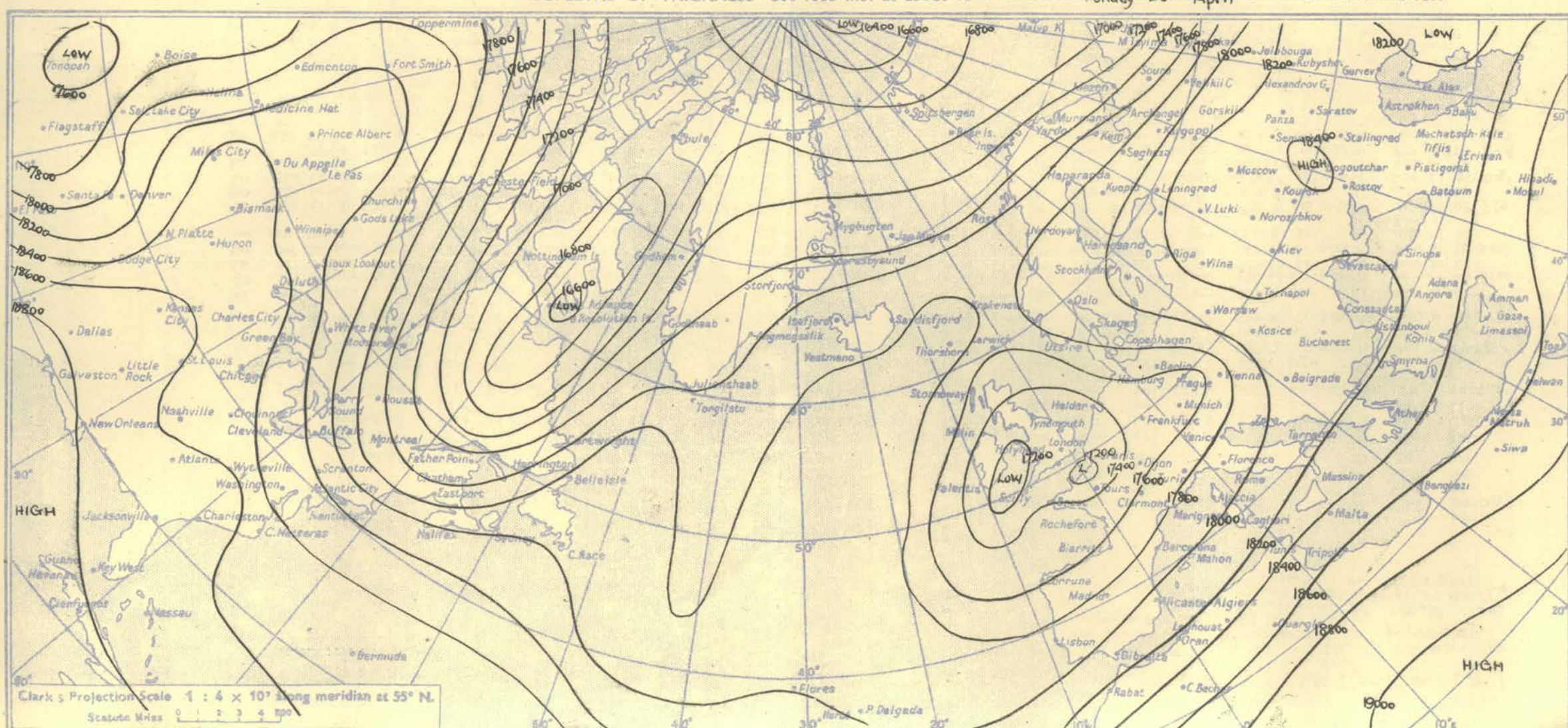
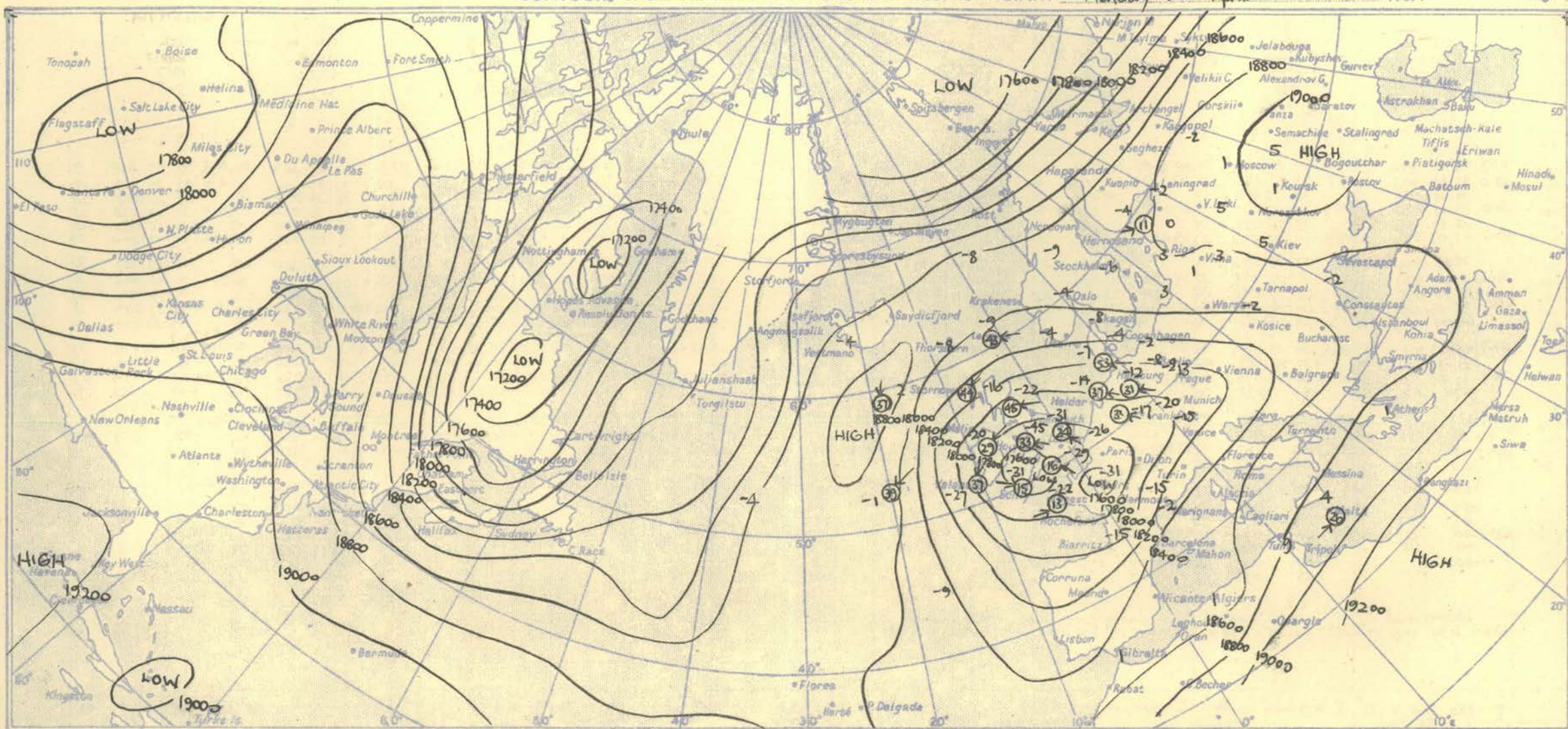
Note the well marked frontal characteristics of the upper troughs across the southern North Sea and Northwest Germany on the 500 mb. chart.



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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	15h				15h				15h				15h				15h				15h				15h				15h				15h				15h				Time M.S.L. Surf Freezing																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
	1030.0				1029.1				1027.4				1021.6				1018.7				1018.3				1015.2				1013.9				1018.3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
	1019.8				1027.5				1026.5				1011.9				1016.6				1013.7				998.8				1003.2				1017																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. knots	Pressure mb																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
Surf	02.7	47	41	040	23	00.4	50	35	060	12	00.2	45	34	080	20	02.6	47	36	090	20	00.6	43	37	100	18	01.2	50	35	100	15	04.4	41	39	140	02	02.9	45	37	33.7	08	00.3	50	49	020	13	Surf																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
1000	08.0	45	34	043	30	07.8	46	31	060	16	07.2	39	30	074	12	05.7	45	35	088	24	05.0	41	34	102	18	04.9	48	32	113	24	04.1	41	37	140	02	03.7	45	37	34.8	05	4.9	47	37	019	14	1000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
950	36.0	39	19	048	27	36.9	28	25	093	17	35.0	31	24	074	11	33.7	38	31	084	31	32.8	35	26	098	30	33.0	39	23	111	22	32.0	37	34	131	14	30.7	38	30	348	05	4.9	47	37	019	14	950																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
900	36.0	33	13	055	24	36.9	29	18	101	15	35.0	26	21	072	18	33.7	32	26	080	30	32.8	30	23	108	30	33.0	32	117	23	32.0	37	34	131	14	30.7	38	30	348	05	4.9	47	37	019	14	900																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
850	36.0	28	07	063	23	36.9	23	11	098	19	35.0	23	12	073	21	33.7	28	23	079	24	32.8	24	17	108	30	33.0	25	11	120	23	32.0	37	34	131	14	30.7	38	30	348	05	4.9	47	37	019	14	850																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
800	66.7	27	-03	077	20	66.3	20	00	097	21	65.4	21	00	076	21	64.3	23	18	080	28	63.2	18	11	102	31	63.4	18	04	129	21	62.4	18	15	127	22	62.1	18	08	024	05	63.5	19	11	040	26	800																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
750	25	18	3	094	27	17	-13	092	24	14	03	087	22	17	12	079	30	11	04	094	29	11	04	094	29	12	00	138	21	14	10	131	19	11	08	036	05	13	01	037	27	750																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
	101.1	18	06	097	20	100.3	14	-09	085	32	99.2	07	-01	060	22	98.2	10	01	080	31	96.7	05	-05	093	29	97.0	05	-07	141	21	96.1	07	03	135	18	95.6	04	-04	320	06	97.1	06	-08	042	25	700																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
	700	14	03	098	36	08	-09	080	35	00	-10	099	32	03	-11	079	30	-03	-12	101	28	-03	-12	101	28	-02	-14	143	23	00	-09	136	20	-05	-12	200	07	-03	-17	041	27	650																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
	650	140.0	08	-06	096	41	138.7	00	-14	076	36	137.0	-06	-15	101	35	136.2	-05	-08	2	29	134.2	-12	-22	123	30	134.7	-10	-21	146	22	133.9	-09	-16	143	17	133.0	-13	-20	280	09	136.4	-13	-27	034	28	600																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	600	00	-14	099	41	-08	-20	070	40	-14	-24	100	49	-14	082	29	-14	082	29	-21	131	30	-20	-32	155	25	-19	-26	142	15	-19	-26	142	15	-22	-30	270	15	-19	-33	024	30	550																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
550	184.7	-09	-23	101	43	182.7	-16	-27	070	44	180.3	-22	-34	105	49	178.5	-26	-08	1	29	176.8	-32	-41	128	33	177.4	-31	-42	154	24	176.7	-29	-35	137	16	175.5	-31	-39	270	15	177.5	-21	-40	019	37	500																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
450	236.9	-32	-50	110	52	234.4	-36	-47	094	50	231.3	-44	-56	101	52	226.5	-52	-83	076	83	226.5	-52	-83	132	31	227.2	-50	-82	154	21	226.8	-49	-84	144	19	225.2	-51	-84	275	10	227.9	-44	-84	004	53	450																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
400	300.1	-61		117	52	297.6	-55		087	64	293.7	-54		100	62	289.1	-58			62	289.1	-58		108	26	289.6	-50		134	26	289.2	-49		148	14	288.1	-48		309	15	291.2	-50		359	71	300																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
250	384.7	-62		090	44	388.3	-53		080	46	382.2	-48		100	43	379.0	-44			43	379.0	-44		102	27	378.9	-47		130	24	379.1	-44		146	06	377.7	-49		359	12	379.1	-48		357	48	250																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
200	384.7	-62		090	44	388.3	-53		080	46	382.2	-48		100	43	379.0	-44			43	379.0	-44		102	27	378.9	-47		130	24	379.1	-44		146	06	377.7	-49		359	12	379.1	-48		357	48	200																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
170	384.7	-57		082	21	384.7	-54		067	25	384.7	-54		100	25	384.7	-54			25	384.7	-54		102	27	378.9	-47		133	19	379.1	-47		115	08	377.7	-51		356	09	377.7	-51		356	09	170																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
150	60	097	19	55	078	22	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084	23	51	084