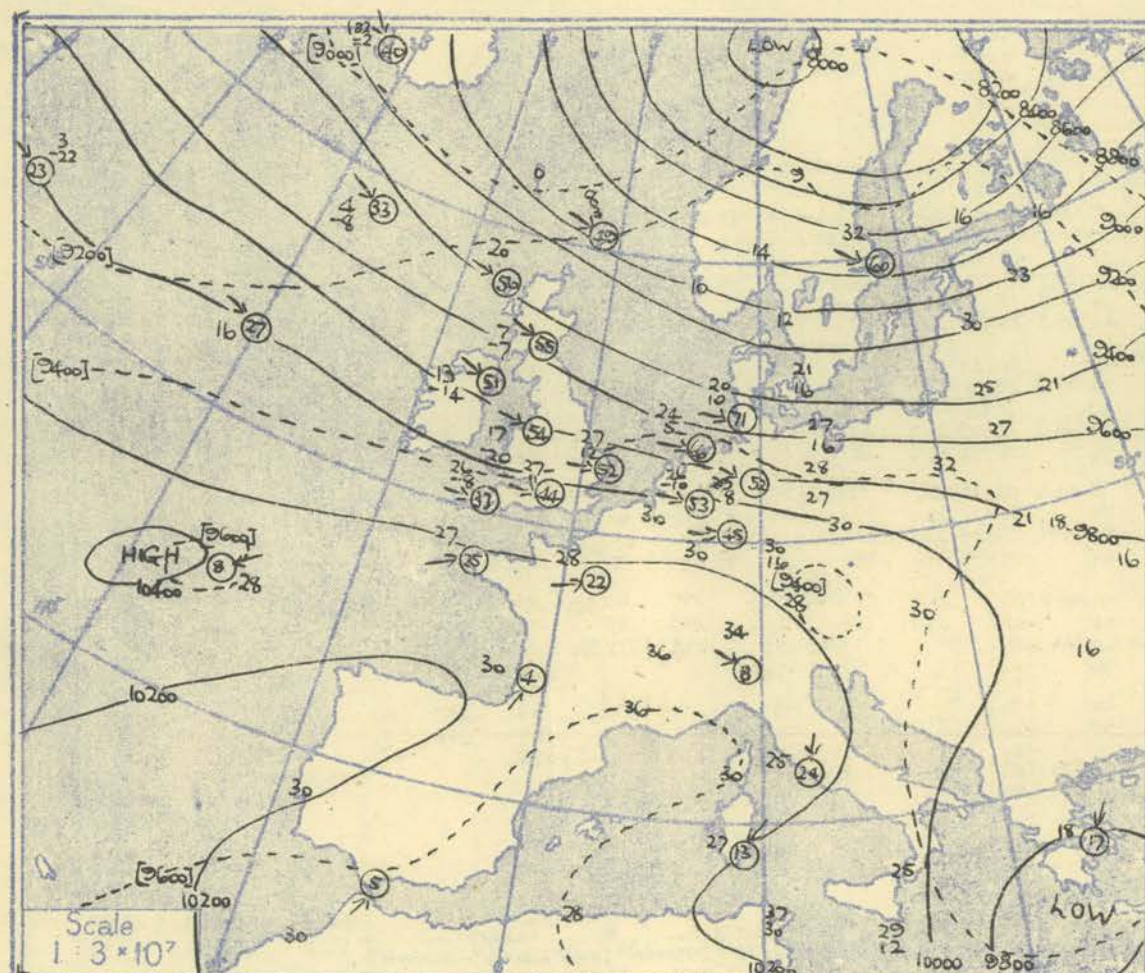


RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

[illegible]

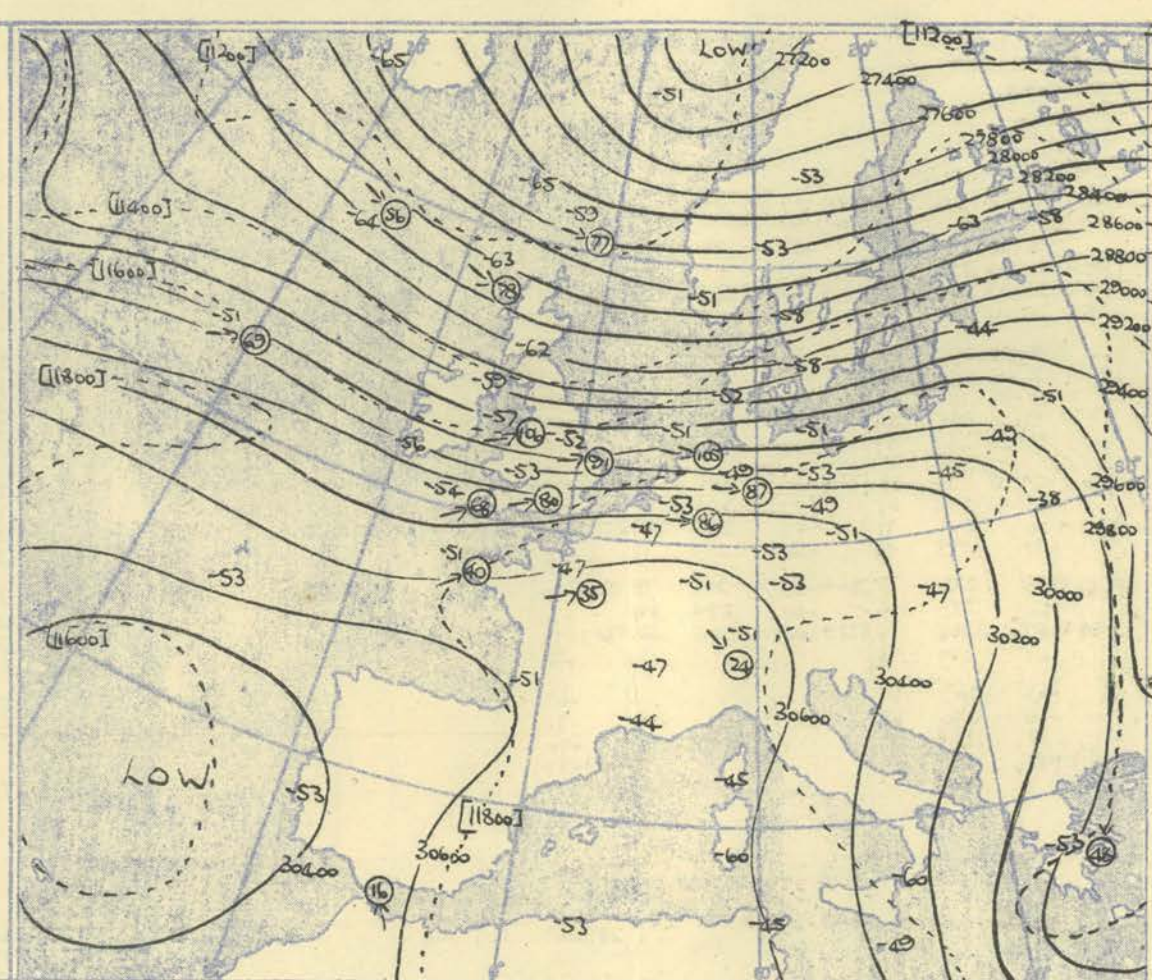
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. 500 mb. and 300 mb. levels at about 03h G.M.T.



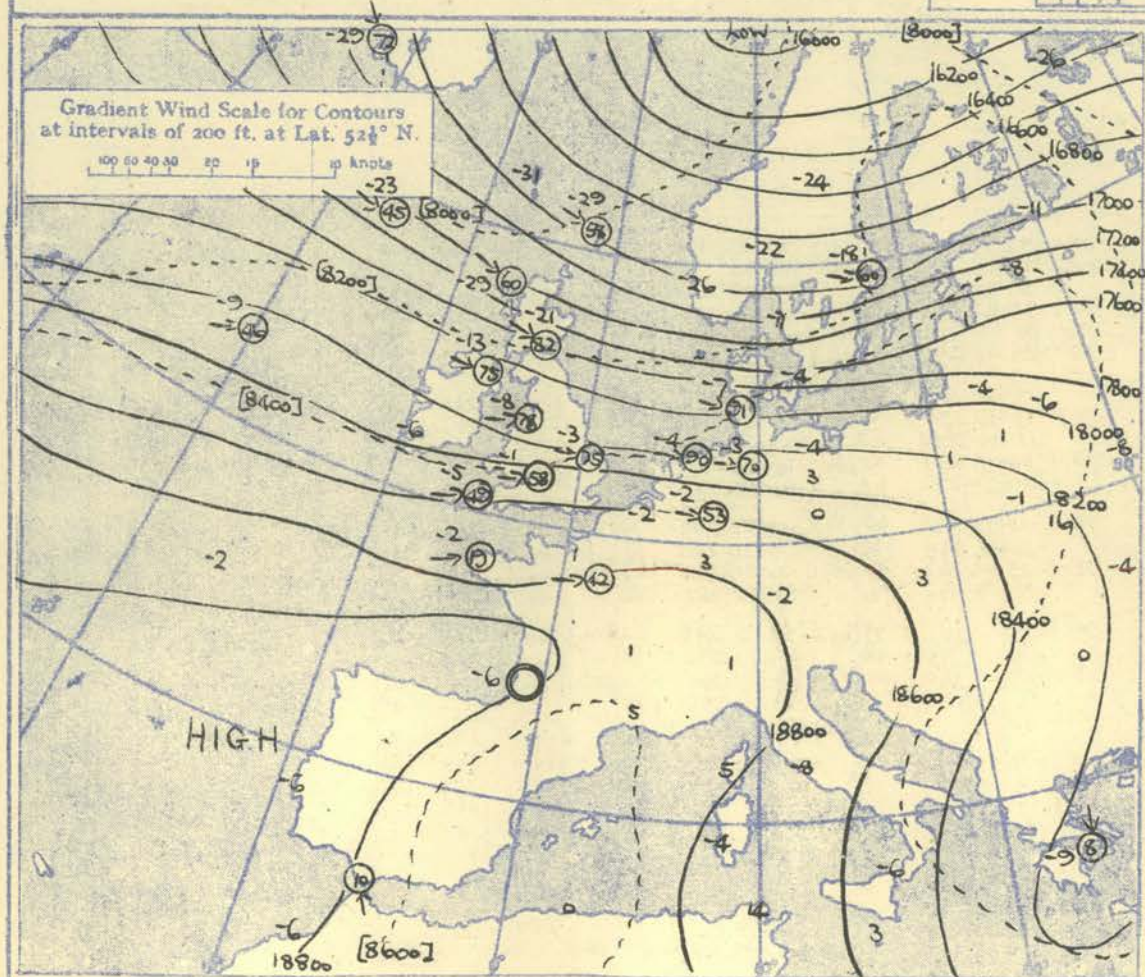
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 2000-700 mb.

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

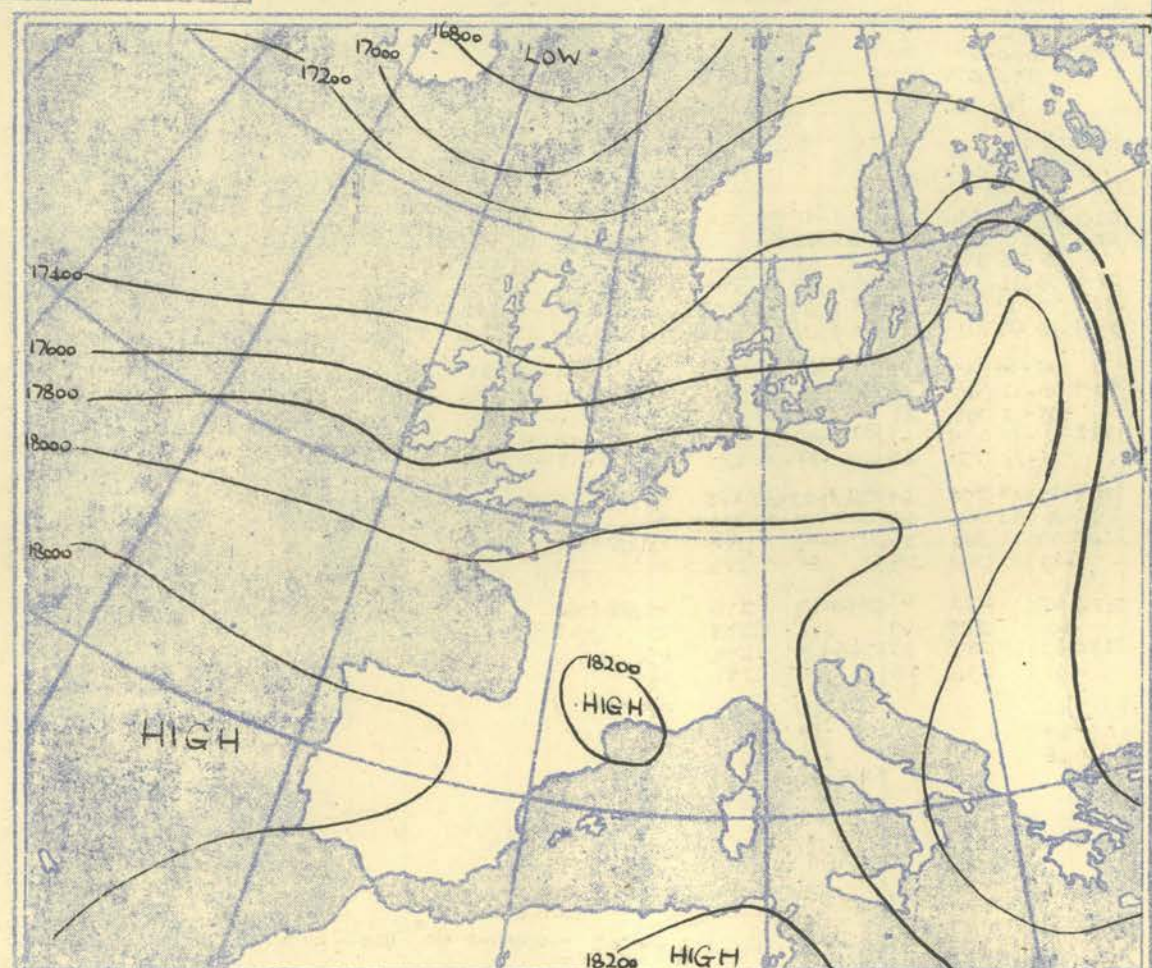
100 60 40 20 10 5 knots



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 300-1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

Pressure mb	Time M.S.L. Surf Forecasting																			Time M.S.L. Surf Forecasting
		Height ft./100	Temp.	Dew	Height ft./100	Temp.	Dew	Height ft./100	Temp.	Dew	Height ft./100	Temp.	Dew	Height ft./100	Temp.	Dew	Height ft./100	Temp.	Dew	
Surf	00-4																			Surf
1000	05-7																			1000
950																				950
900	34.0	34	30																	900
850	49.0	33	11																	850
800	65.0	30	09																	800
750																				750
700	29.5	19	03																	700
650																				650
600	138.5	07	00																	600
550																				550
500	183.1	-11																		500
450																				450
400	235.4	+31																		400
350																				350
300	299.3	+57																		300
250																				250
200																				200
170																				170

cloud:-
4-5/ Sc 900-
2850mb
3-4 1/8 Ci 445-
400mb

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

[illegible]

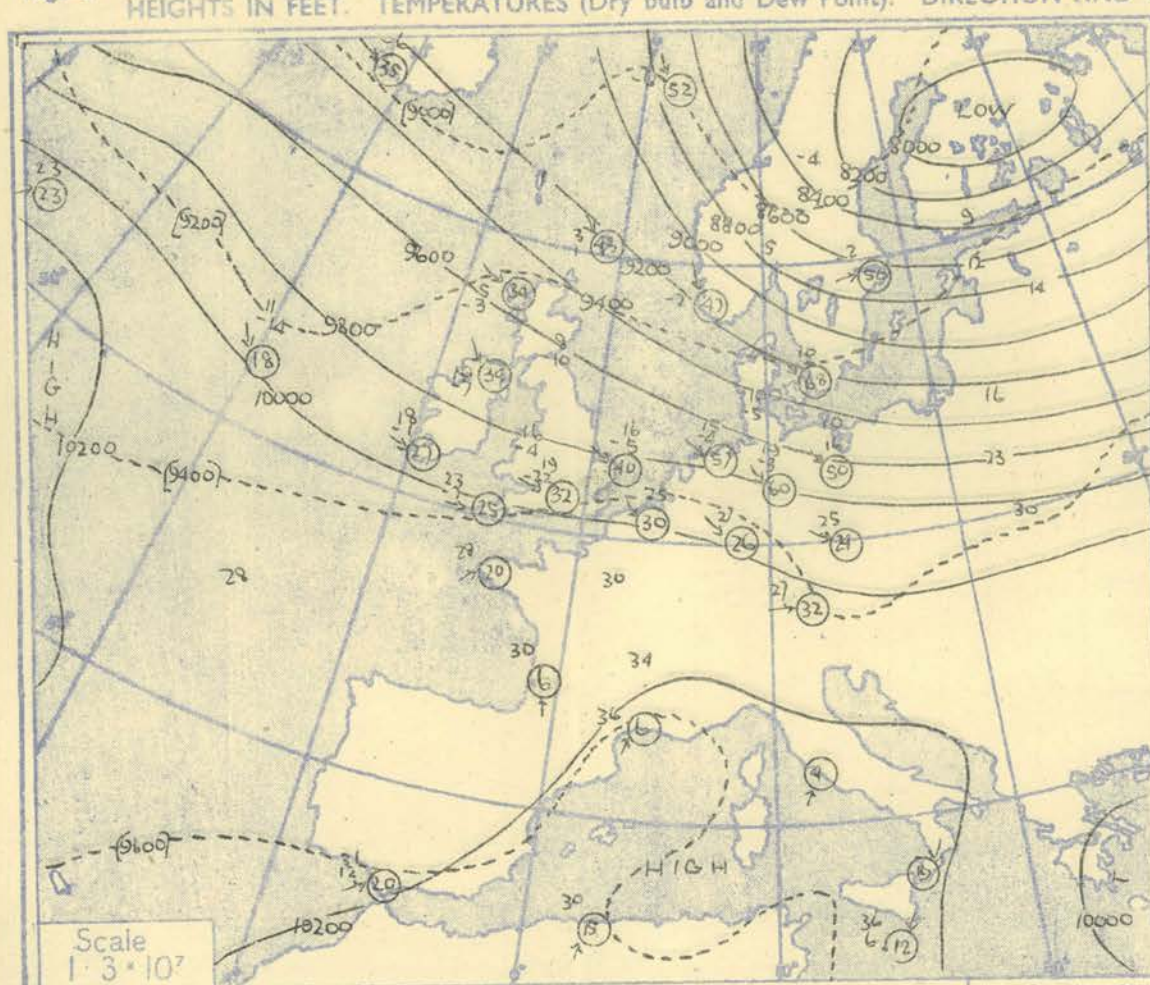
NEPHOSCOPE OBSERVATIONS

Place	Elmdon	Collinstown	Valentia	Honiley	Shawbury					Place
Time Type	12h Ce	12h Ci	12h Ci	15h Ce	15h Ci	15h Ce				Time Type
Dir. Vel.	250 80	260 75	210 25	260 90	270 105	270 80				Dir. Vel.

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

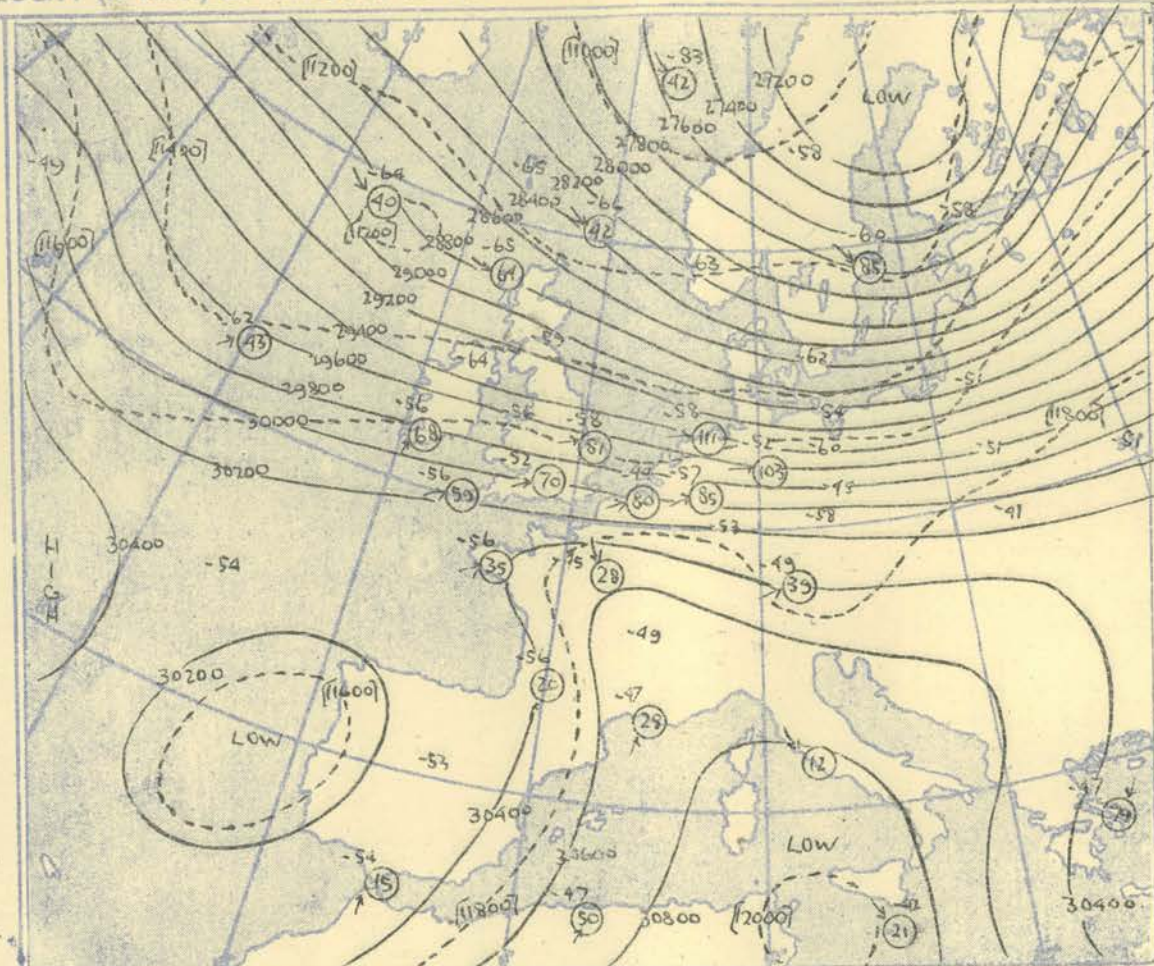
Ship		WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER RECORDER				WEATHER RECORDER				WEATHER RECORDER				WEATHER RECORDER				#		Ship					
Lat/Long		S9-2 N. 15-7 W.				S9-2 N 15-9 W.				S9-1 N 16-0 W.				S9-1 N 16-1 W.				S2-3 N 20-0 W.				S2-3 N 20-1 W.				S2-4 N. 19-8 W.				S2-2 N 20-0 W.						Lat/Long					
Pressure	Time	03h.		G.M.T.		09h.		G.M.T.		15h.		G.M.T.		21k.		G.M.T.		03k.		G.M.T.		09k.		G.M.T.		15k.		G.M.T.		21k.		G.M.T.		Time							
	M.S.L.	1006		mb		1009		mb		1012		mb		1015		mb		1028		mb		1027		mb		1028		mb		1029		mb			M.S.L.						
	Surf	1006		mb		1009		mb		1012		mb		1015		mb		1028		mb		1027		mb		1028		mb		1029		mb				Surf					
	Freezing	910		mb		940		mb		950		mb		940		mb		900		mb		910		mb		905		mb		920		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		46	40	270	40	42	36	280	28	41	32	310	24	42	26	310	20	47	34	280	15	46	36	310	20	46	38	310	17	47	38	320	15	Surf							
1000	01-4					42	36	280	28	41	32	310	24	42	26	310	20	47	34	280	15	46	36	310	20	46	38	310	17	47	38	320	15	1000							
950		38	34	289	35	34	28	290	28	32	23	305	28	33	21	314	19	38	30	280	19	36	29	298	19	37	31	314	18	36	27	321	15	950							
900	29-4	29	25	289	29	27	23	290	28	30-7	27	18	298	31	27	16	315	23	35-5	27	280	22	35-1	31	24	291	20	35-5	31	25	319	20	35-8	29	20	318	16	900			
850		21	11	289	09	21	17	290	29	21	12	286	33	20	06	315	21	25	21	280	24	25	19	290	17	25	18	325	18	24	13	316	17	850							
800	59-8	18	04	287	36	00-5	16	11	290	34	00-9	15	06	287	33	61-8	14	04	309	31	66-1	20	13	280	22	66-7	20	15	284	18	66-0	20	12	324	15	66-3	22	05	314	19	800
750		12	02	290	36	09	01	290	37	09	00	291	30	11	01	305	33	20	16	302	37	16	07	282	23	16	01	325	15	22	06	317	21	750							
700	93-3	04	08	292	33	93-9	03	03	290	36	94-3	05	07	289	29	95-3	05	14	301	36	00-1	16	04	277	27	99-4	13	02	284	23	99-9	11	04	314	18	100-5	17	73	300	21	700
650		03	13	292	32	05	10	290	36	05	15	281	30	03	26	297	38	14	03	271	34	11	01	278	24	07	21	300	22	13	18	345	24	650							
600	10-9	08	18	293	33	10-2	13	19	290	36	13-8	11	23	275	35	13-2	05	32	297	41	13-0	09	03	268	43	13-2	02	07	273	33	13-2	01	27	284	29	13-3	04	26	350	24	600
550		17	28	291	41	18	32	289	41	14	34	283	43	11	32	298	48	01	02	260	46	04	10	256	35	08	05	280	30	07	36	334	27	550							
500	04-0	23	34	286	45	04-2	22	41	278	58	04-9	25	45	294	45	17-8	19	30	296	45	18-7	09	16	256	46	18-4	14	20	246	36	18-1	18	39	295	33	18-3	18	43	321	23	500
450		33	43	286	51	31	50	270	61	37	55	298	42	28	36	292	57	18	25	265	50	25	31	239	34	27	46	261	44	29	54	347	21	450							
400	22-7	45	45	288	49	22-0	44	268	56	22-2	40	296	38	22-0	40	248	61	23-4	26	40	265	54	23-1	36	42	241	44	23-5	37	60	260	48	23-4	42	383	37	400				
350		00		293	52	56		278	50	57		296	41	57		299	70	33	42	257	55	46		231	65	48		262	47	57		328	48	350							
300	286-2	64		290	56	286-9	65	290	54	287-0	64	300	40	290-5	66	293	73	301-1	51	297	69	297-3	60	229	87	296-5	62	262	43	296-4	63	337	56	300							
250		43		287	54		67	284	45	55		306	51	69		301	56				54	70	247	74		63	259	36		62	337	45	250								
200	372-1	59		283	56	372-2	61	280	48	372-6	60	301	45	375-5	62	303	54	Inversion				381-8	68		382-3	65	276	26	382-1	63					200						
170		61		278	55		61	280	42	63		296	45	61		309	46	772 mb 18°-750 mb 20°							61	268	33							170							
150		62		272	57	63		282	48	61		295	48	59		300	60	655 mb 18°-645 mb 15°							60		306	29						150							
130		62		268	50	61		283	40	63		295	48	55		298	49	Isokermol							65	303	28							130							
110		62		276	48	63		282	45	62		295	46	62		288	56	600 - 575 mb 1°							66	292	30							110							
100	\$19-3	63		282	47	\$19-2	64	281	40	\$19-5	61	295	44	\$20-6	62	293	56	750 - 742 mb 20°							528-8	68	290	30						100							
90		65		285	42		64	285	37		61	295	51		64	289	48																	90							
80		66		286	42		66	295	36		65	295	50		65	298	45																	80							
70																																				70					
60																																				60					
		Isokermol																																							
		1006 - 1000 mb 46°																																							
		Inversion																																							
		830 mb 18° - 810 mb 19°																																							

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.



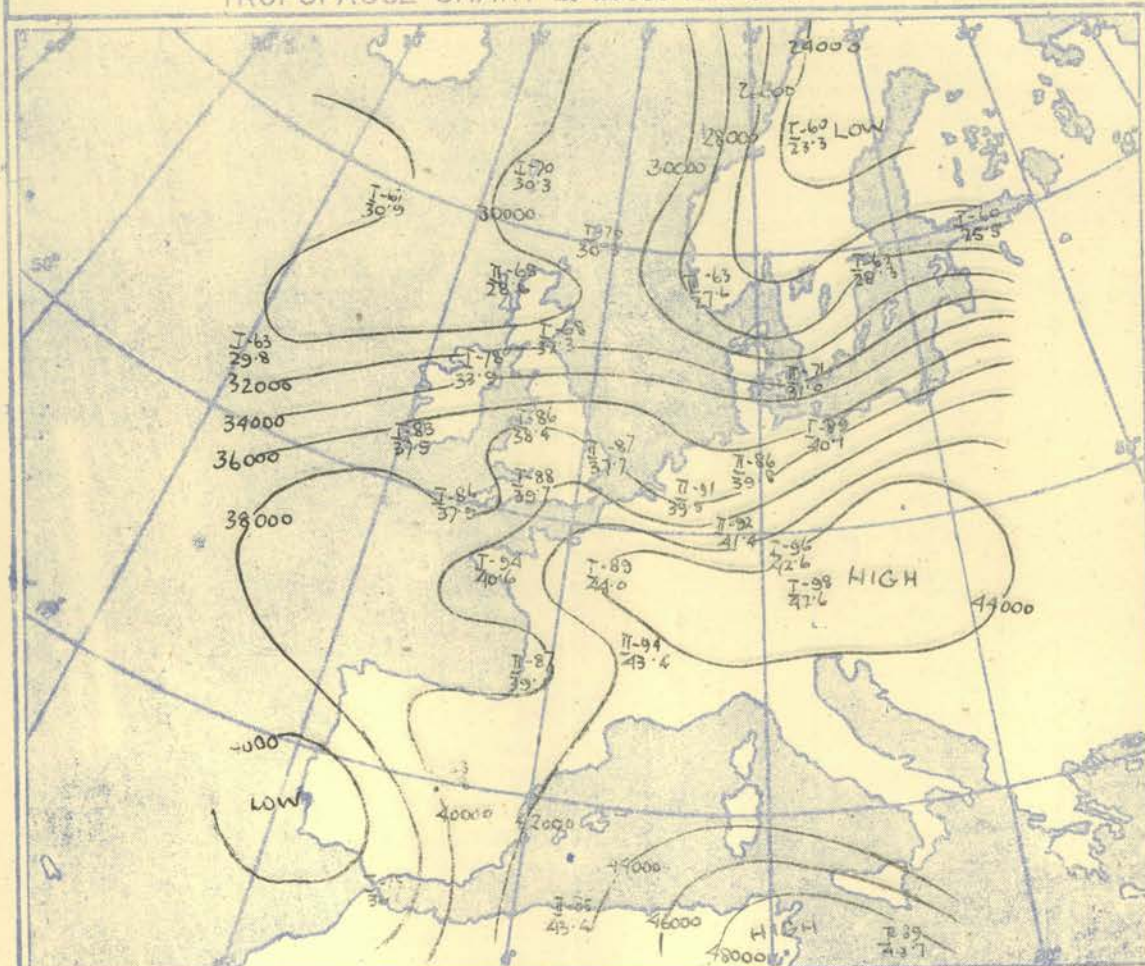
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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.



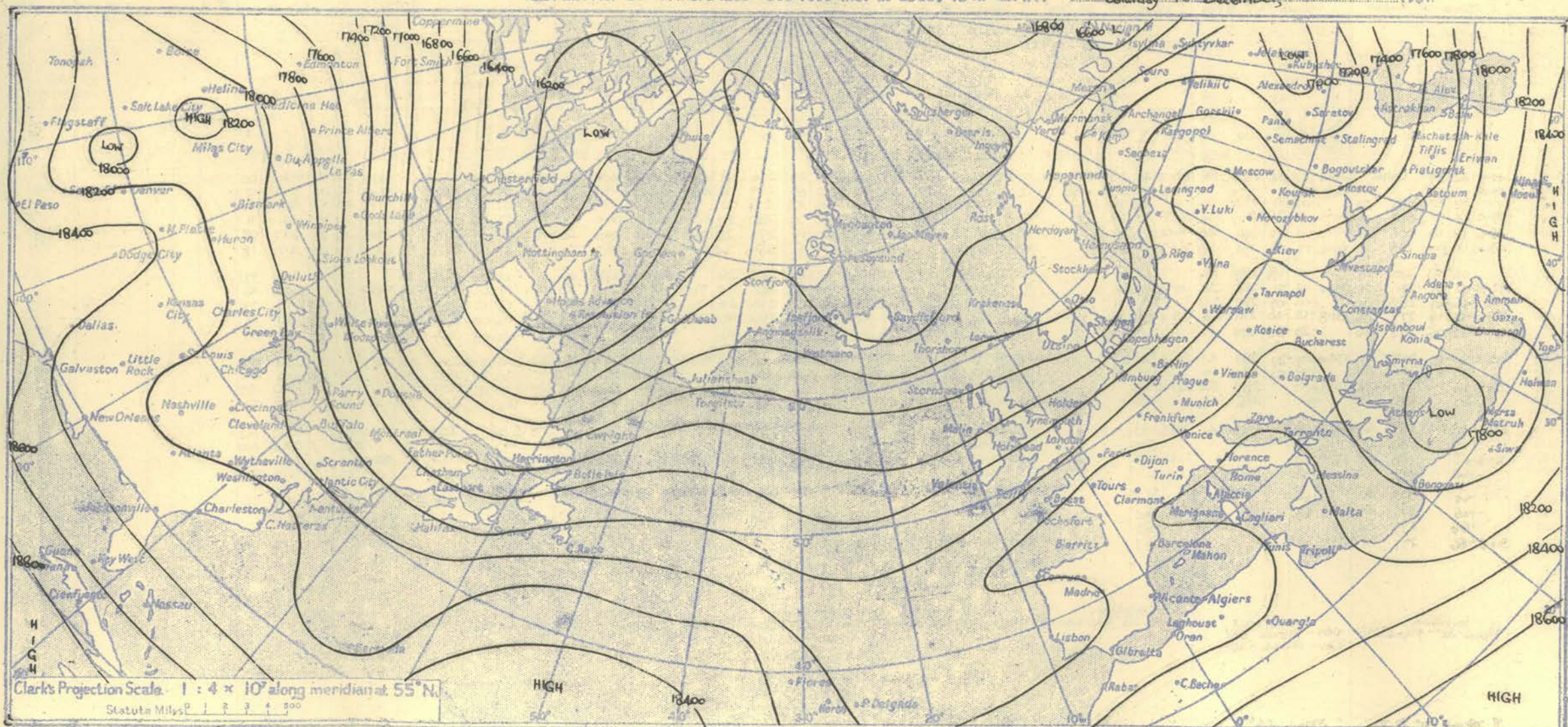
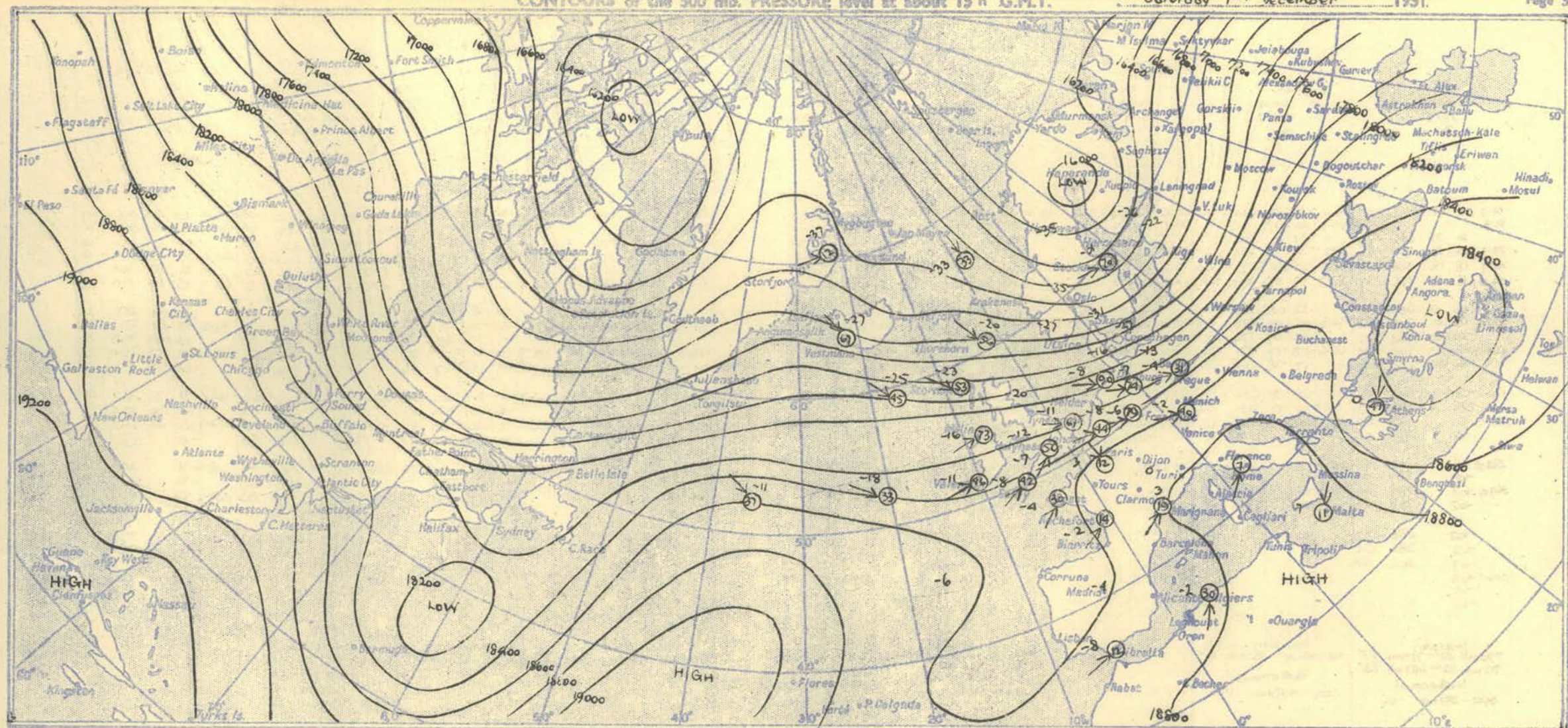
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The Azores cold pool continued to warm out and finally disappeared. Strong advection from the southwest produced a strong warm ridge in the western Atlantic. Little of note elsewhere.

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

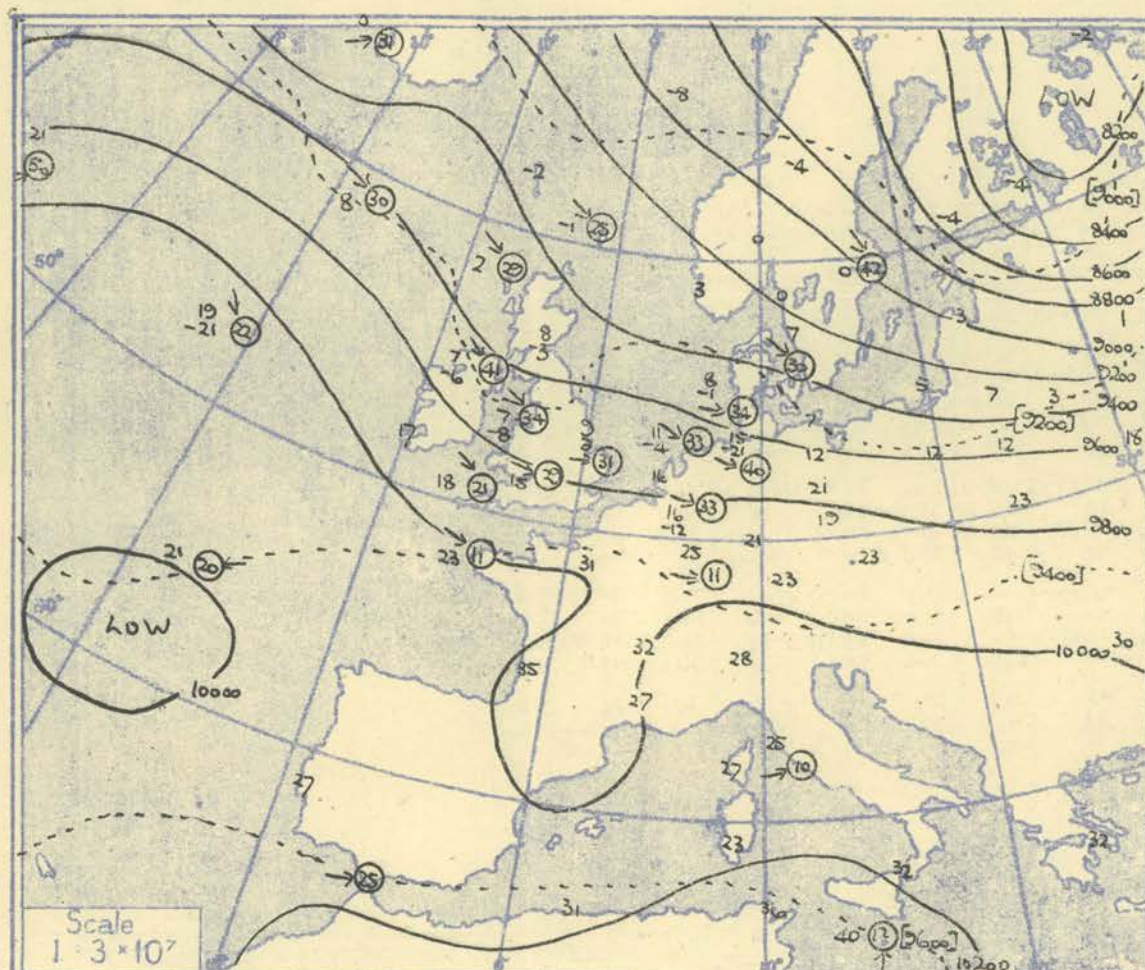
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
Nelson K. Johnson, K.C.B., D.Sc., Director.



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

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				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.				15h. G.M.T.									
	1006.1 995.8 961	mb mb mb			1010.4 1008.7 910	mb mb mb			1011.8 1011.0 900	mb mb mb			1019.0 1009.6 920	mb mb mb			1019.3 1017.3 898	mb mb mb			1019.0 1017.5 870	mb mb mb			1021.9 1005.6 600	mb mb mb			1023.4 1012.6 900, 850, + 840	mb mb mb			1023.0 1022.4 890	mb mb mb								
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb					
Surf 1000 950 900 850 800	02.7 01.6 29.1 43.7 59.1	32 28 25 18 15	32 28 23 18 15	310 314 310 306 296	1 26 26 27 27	00.4 02.7 30.7 45.6 61.2	39 46 37 25 19	37 37 15 14 07	290 283 280 277 277	06 28 28 30 31	00.2 03.1 31.2 46.2 61.8	33 32 24 15 08	290 290 32 26 20	18 18 20 20 12	02.5 05.1 33.0 47.8 63.4	43 42 36 25 20	41 36 31 26 20	270 261 265 283 288	20 22 25 27 34	00.6 05.2 33.3 48.2 63.9	47 45 32 26 21	38 37 32 19 12	00.4 05.1 33.2 48.1 63.9	46 44 38 30 27	38 36 29 25 27	270 270 295 288 284	10 10 27 23 27	04.4 05.9 34.0 49.0 64.9	46 45 32 26 32	37 35 30 27 13	320 323 315 289 279	08 12 14 18 20	02.9 06.3 34.5 49.5 65.4	48 46 40 32 30	40 39 36 31 27	360 328 321 303 269	05 09 12 22 18	00.3 06.2 34.4 49.4 65.1	48 46 39 32 25	40 36 32 27 10	315 309 304 303 290	07 10 14 16 17
750 700 650 600 550	92.3 02.05 12.9 20.23	06 03 10 20	06 01 13 23	300 308 304 294	29 43 52 56	12 05 00 17	02 03 09 28	278 273 271 268	35 34 39 38	14 08 02 11	00 10 03 36	00 10 26 36	00 10 26 36	06 04 04 24	97.3 10.07 05.02 01.26 08.33	43 36 25 20 33	41 36 31 26 33	270 286 280 270 268	20 22 29 47 64	00.6 05.2 33.3 48.2 63.9	47 45 32 26 21	38 37 32 19 12	00.4 05.1 33.2 48.1 63.9	46 44 38 30 27	38 36 29 25 27	270 270 295 288 284	10 10 27 23 27	04.4 05.9 34.0 49.0 64.9	46 45 32 26 32	37 35 30 27 13	320 323 315 289 279	08 12 14 18 20	02.9 06.3 34.5 49.5 65.4	48 46 40 32 30	40 39 36 31 27	360 328 321 303 269	05 09 12 22 18	00.3 06.2 34.4 49.4 65.1	48 46 39 32 25	40 36 32 27 10	315 309 304 303 290	07 10 14 16 17
500 450 400 350	172.6 222.8 282.4 369.5	-30 -47 -66 -62	-33 -41 -58 -62	294 299 289 288	56 52 50 51	175.6 226.5 276.5 374.0	-28 -47 -56 -60	-38 -47 -56 -60	276 278 274 273	53 65 65 63	177.2 228.2 278.2 376.5	-20 -31 -40 -64	-46 -56 -60 -60	179.4 231.0 293.6 377.3	-16 -26 -45 -72	-39 -45 -50 -66	-39 -45 -50 -66	262 268 293.6 377.3	73 79 74 72	181.2 233.4 297.2 380.7	-12 -21 -36 -85	-32 -40 -43 -85	181.3 233.3 297.0 380.6	-11 -22 -33 -68	-21 -30 -40 -87	271 268 271 272	61 66 81 95	183.7 236.5 301.1 385.9	-07 -16 -32 -84	-20 -28 -50 -86	262 261 265 250	50 51 70 83	184.1 236.7 300.7 384.5	-08 -18 -36 -85	-14 -25 -37 -81	252 252 243 245	42 45 60 53	182.4 234.7 298.6 382.2	-11 -20 -36 -79	-20 -30 -41 -70	262 254 250 257	46 51 76 68
300 250 200 170	284.2 369.5 462.1 516.2	-66 -63 -62 -62	-66 -63 -62 -62	290 289 282 288	48 51 55 59	288.4 374.0 462.1 516.2	-66 -60 -60 -63	-66 -60 -60 -63	272 279 275 278	64 57 54 48	291.0 376.5 462.1 516.2	-59 -66 -64 -63	-59 -66 -64 -63	293.6 377.3 462.1 516.2	-64 -72 -66 -63	-64 -66 -66 -63	-64 -66 -66 -63	272 279 275 278	64 57 54 48	291.0 376.5 462.1 516.2	-59 -66 -64 -63	-59 -66 -64 -63	293.6 377.3 462.1 516.2	-64 -72 -66 -63	-64 -66 -66 -63	272 279 275 278	64 57 54 48	291.0 376.5 462.1 516.2	-59 -66 -64 -63	-59 -66 -64 -63	293.6 377.3 462.1 516.2	-64 -72 -66 -63	-64 -66 -66 -63	272 279 275 278	64 57 54 48							
150 130 110 100 90 80 70 60	516.2 516.2 516.2 516.2 516.2 516.2 516.2 516.2	-62 -62 -62 -62 -62 -62 -62 -62	-62 -62 -62 -62 -62 -62 -62 -62	288 286 303 303 303 303 303 303	57 54 58 58 58 58 58 58	516.2 516.2 516.2 516.2 516.2 516.2 516.2 516.2	-62 -62 -62 -62 -62 -62 -62 -62	-62 -62 -62 -62 -62 -62 -62 -62	290 290 290 290 290 290 290 290	40 40 40 40 40 40 40 40	516.2 516.2 516.2 516.2 516.2 516.2 516.2 516.2	-62 -62 -62 -62 -62 -62 -62 -62	-62 -62 -62 -62 -62 -62 -62 -62	290 290 290 290 290 290 290 290	40 40 40 40 40 40 40 40	516.2 516.2 516.2 516.2 516.2 516.2 516.2 516.2	-62 -62 -62 -62 -62 -62 -62 -62	-62 -62 -62 -62 -62 -62 -62 -62	290 290 290 290 290 290 290 290	40 40 40 40 40 40 40 40	516.2 516.2 516.2 516.2 516.2 516.2 516.2 516.2	-62 -62 -62 -62 -62 -62 -62 -62	-62 -62 -62 -62 -62 -62 -62 -62	290 290 290 290 290 290 290 290	40 40 40 40 40 40 40 40	516.2 516.2 516.2 516.2 516.2 516.2 516.2 516.2	-62 -62 -62 -62 -62 -62 -62 -62	-62 -62 -62 -62 -62 -62 -62 -62	290 290 290 290 290 290 290 290	40 40 40 40 40 40 40 40												
Inversion 996mb. 32°-975mb. 33° 712mb. 02°-687mb. 03° Isothermal 300-287mb. -66°				Inversion 1009mb. 39°-985mb. 41° Isothermal 505-495mb. -19°				Inversion 728mb. 11°-715mb. 12° Isothermal 700-687mb. 10°				Inversion 661mb. 11°-647mb. 13° 197mb. -86°-188mb. -82° Isothermal 792-761mb. 20°				Isothermal 204mb. -185mb. -87°				Inversion 871mb. 29°-838mb. 31°				Inversion 870mb. 30°-850mb. 32° Isothermal 850-840mb. 32° 800-780mb. 30°				Inversion 870mb. 30°-850mb. 32° Isothermal 850-840mb. 32° 800-780mb. 30°														
Tropopause	I 273mb. -70° 30,300'				II 403mb. -65° 28,600'				I 255mb. -68° 32,300'				I 240mb. -78° 34,000'				I 197mb. -86° 38,400'				N.R.				I 157mb. -88° 39,700'				I 205mb. -86° 39,700'				I 207mb. -83° 37,500'				Tropopause					
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA				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.				21h. G.M.T.									
	1007.9 995.6 966	mb mb mb			1011.1 1001.4 943	mb mb mb			1012.8 1011.9 900	mb mb mb			1019.1 1009.6 918	mb mb mb			1019.3 1017.2 919	mb mb mb			1019.4 1017.9 900	mb mb mb			1022.4 1005.7 900	mb mb mb			1023.6 1012.7 888 + 800	mb mb mb			1023.6 1012.7 888 + 800	mb mb mb								
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb					
Surf 1000 950 900 850 800	02.7 01.5 29.0 43.6 59.0	32 22 24 18 12	29 22 21 16 09	Calm 328 318 305 299	00.4 02.7 30.5 45.2 60.9	38 33 28 23 17	34 31 26 22 15	200 312 307 296 294	08 25 30 30 28	00.2 03.3 31.3 46.2 61.9	38 39 32 27 21	33 33 24 19 08	280 280 32 27 21	12 15 22 22 10	02.5 05.1 32.9 47.7 63.3	39 34 36 25 20	37 36 33 25 20	230 245 272 286 280	10 15 22 33 33	00.6 05.1 33.1 47.9 63.2	44 42 30 23 17	39 38 27 19 11	260 259 277 287 292	08 18 21 23 24	00.4 05.1 33.1 48.0 63.7	41 38 32 26 23	36 37 32 28 21	250 287 296 300 282	05 24 32 33 21	04.4 05.9 33.9 48.7 64.5	46 45 32 28 27	34 35 28 21 07	Calm 309 324 326 283	10 11 11 12	02.9 06.3 34.5 49.5 65.3	48 46 40 32 32	39 39 36 31 27	360 334 339 341 292	02 12 09 11 18			
750 700 650 600 550	92.3 02.05 12.9 20.23	08 02 06 15	03 01 09 19	295 291 283 277	27 28 30 36	11 04 01 13	08 09 28 30	289 288 289 281	25 26 23 28	14 01 00 16	01 08 00 30	01 11 15 30	14 01 11 30	06 05 13 30	97.0 10.07 05.02 01.26 08.33	43 36 25 20 33	41 36 31 26 33	270 286 280 270 268	20 22 29 47 64	00.6 05.2 33.3 48.2 63.9	47 45 32 26 21	38 37 32 19 12	00.4 05.1 33.2 48.1 63.9	46 44 38 30 27	38 36 29 25 27	270 270 295 288 284	10 10 27 23 27	04.4 05.9 34.0 49.0 64.9	46 45 32 26 32	37 35 30 27 13	320 323 315 289 279	08 12 14 18 20	02.9 06.3 34.5 49.5 65.4	48 46 40 32 30	40 39 36 31 27	360 328 321 303 269	05 09 12 22 18	00.3 06.2 34.4 49.4 65.1	48 46 39 32 25	40 36 32 27 10	315 309 304 303 290	07 10 14 16 17
500 450 400 350	172.6 222.8 282.4 369.5	-30 -47 -66 -62	-33 -41 -58 -62	294 299 289 288	56 52 50 51	175.6 226.5 276.5 374.0	-28 -47 -56 -60	-38 -47 -56 -60	276 278 274 273	53 65 65 63	177.2 228.2 278.2 376.5	-20 -31 -40 -64	-46 -56 -60 -60	179.4 231.0 293.6 377.3	-16 -26 -45 -72	-39 -45 -50 -66	-39 -45 -50 -66	262 268 293.6 377.3	73 79 74 72	181.2 233.4 297.2 380.7	-12 -21 -36 -85	-32 -40 -43 -85	181.3 233.3 297.0 380.6	-11 -22 -33 -68	-21 -30 -40 -87	271 268 271 272	61 66 81 95	183.7 236.5 301.1 385.9	-07 -16 -32 -84	-20 -28 -50 -86	262 261 265 250	50 51 70 83	184.1 236.7 300.7 384.5	-08 -18 -36 -85	-14 -25 -37 -81	252 252 243 245	42 45 60 53	182.4 234.7 298.6 382.2	-11 -20 -36 -79	-20 -30 -41 -70	262 254 250 257	46 51 76 68
300 250 200 170	284.2 369.5 462.1 516.2	-66 -63 -62 -62	-66 -63 -62 -62	290 289 282 288	48 51 55 59	288.4 374.0 462.1 516.2	-66 -60 -60 -63	-66 -60 -60 -63	272 279 275 278	64 57 54 48	291.0 376.5 462.1 516.2	-59 -66 -64 -63	-59 -66 -64 -63	293.6 377.3 462.1 516.2	-64 -72 -66 -63	-64 -66 -66 -63	-64 -66 -66 -63	272 279 275 278	64 57 54 48	291.0 376.5 462.1 516.2	-59 -66 -64 -63	-59 -66 -64 -63	293.6 377.3 462.1 516.2	-64 -72 -66 -63	-64 -66 -66 -63	272 279 275 278	64 57 54 48	291.0 376.5 462.1 516.2	-59 -66 -64 -63	-59 -66 -64 -63	293.6 377.3 462.1 516.2	-64 -72 -66 -63	-64 -66 -66 -									

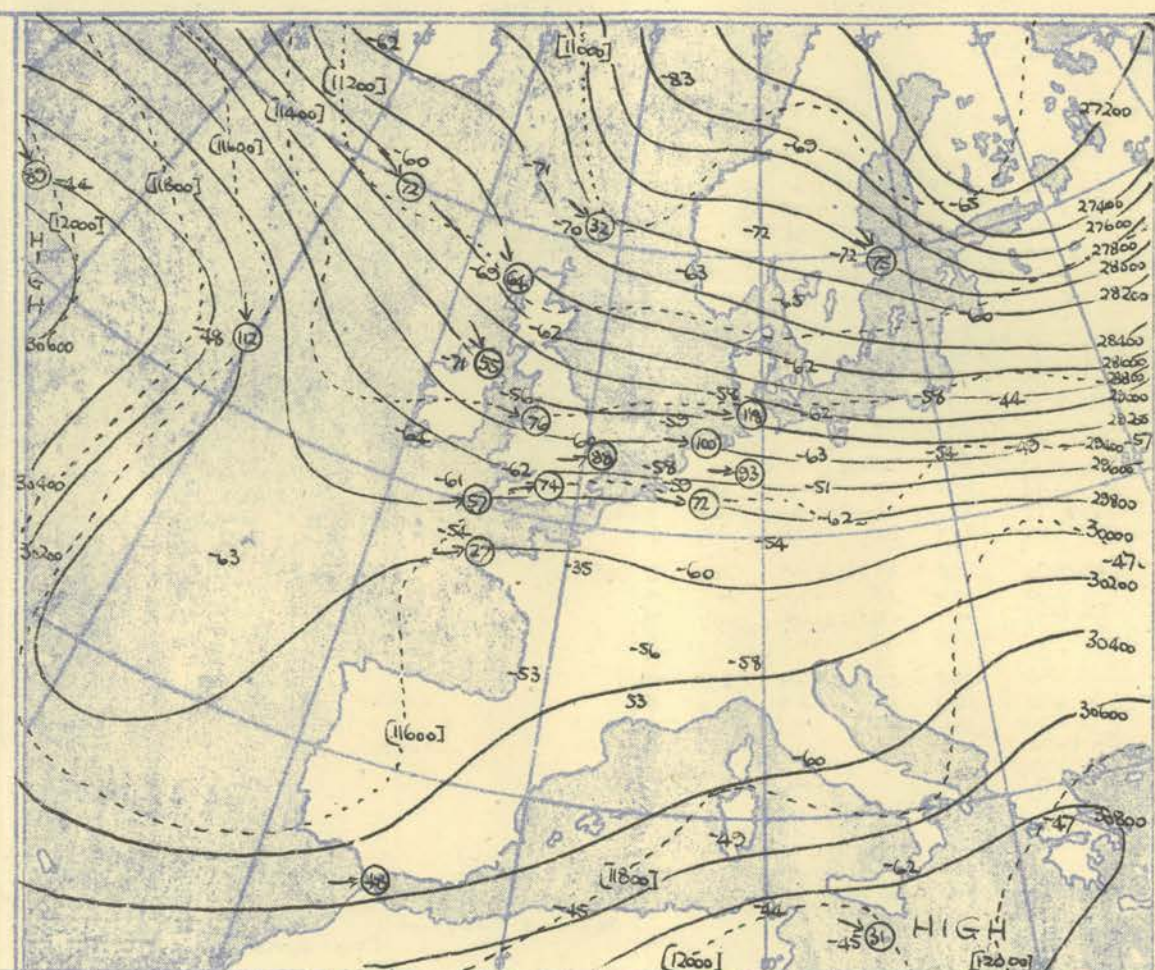
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. 500 mb. and 300 mb. levels at about 03h G.M.T.



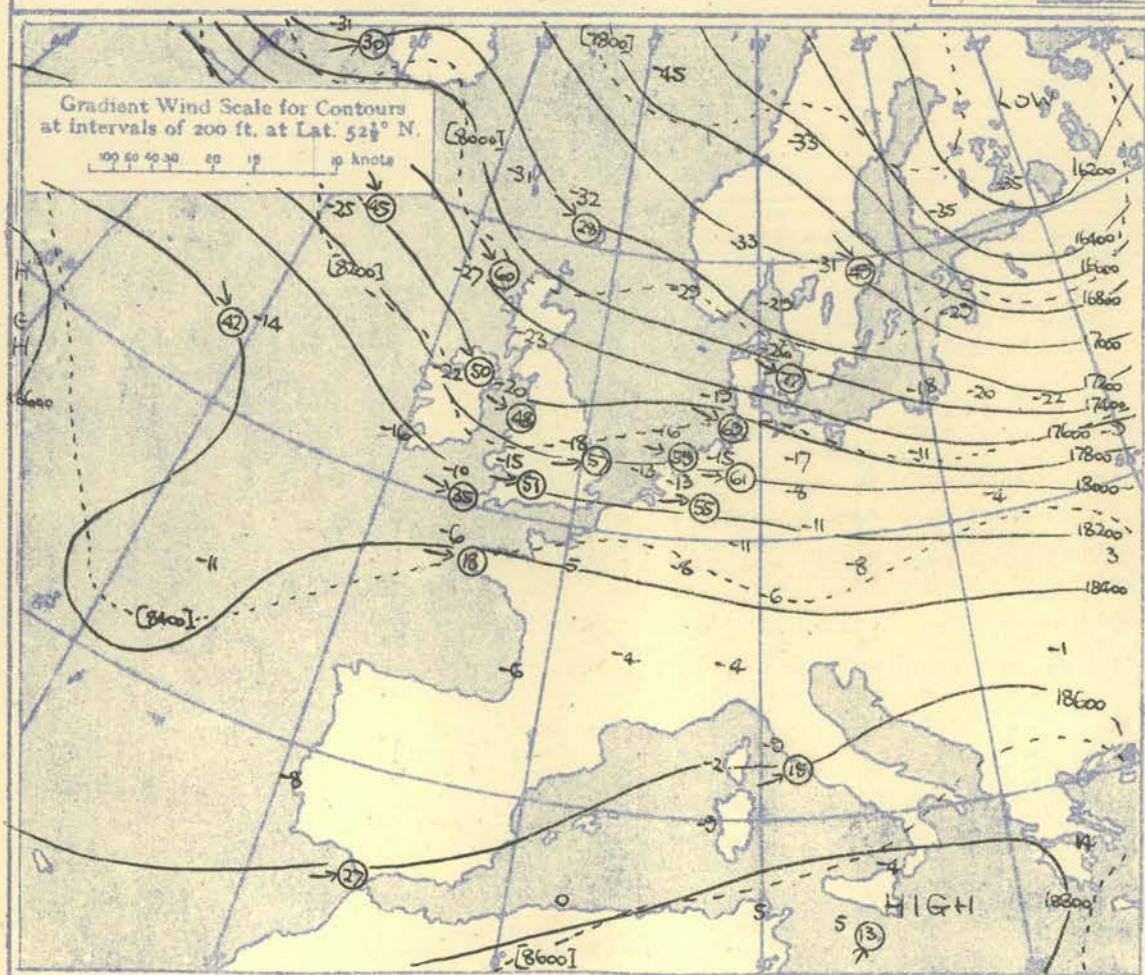
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

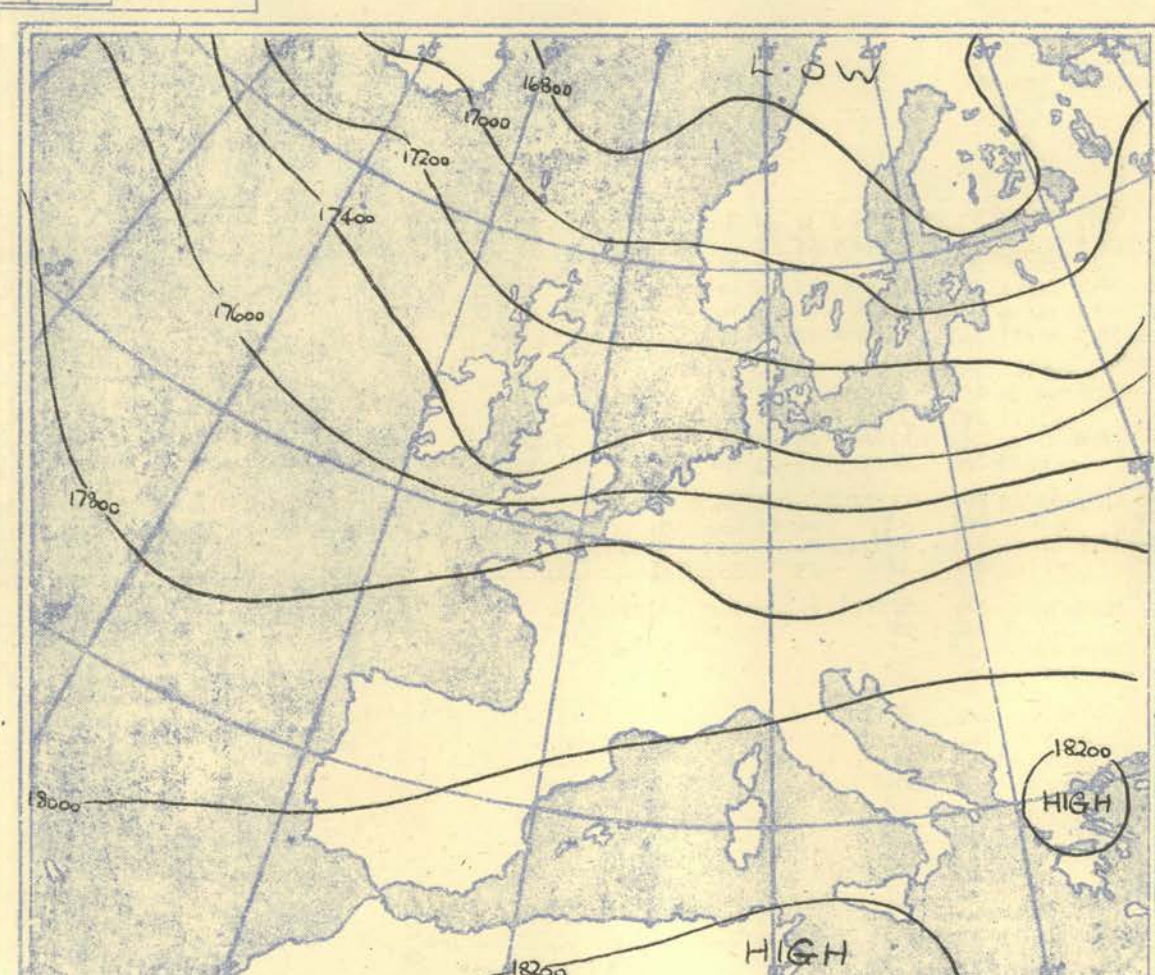
100 80 60 40 20 10 5 knots



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.



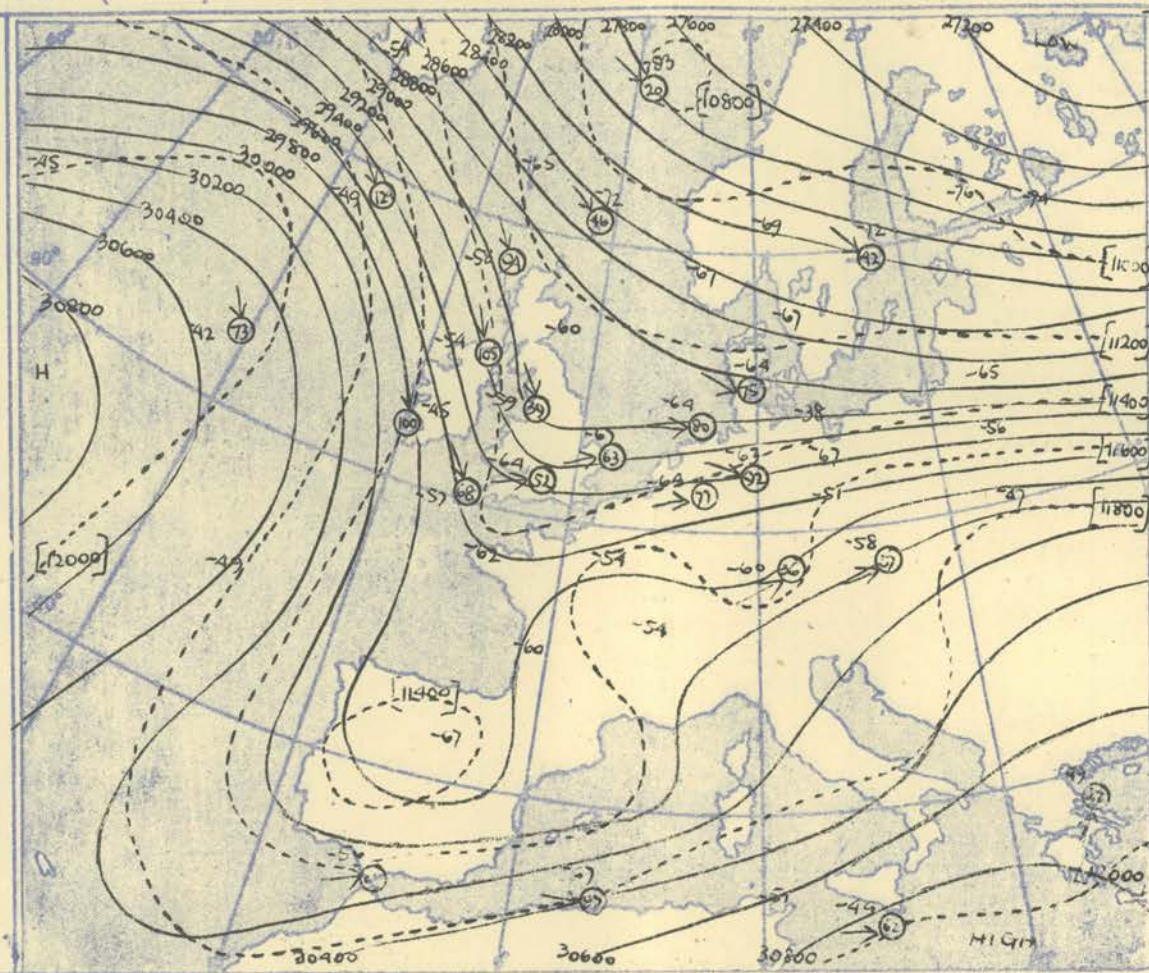
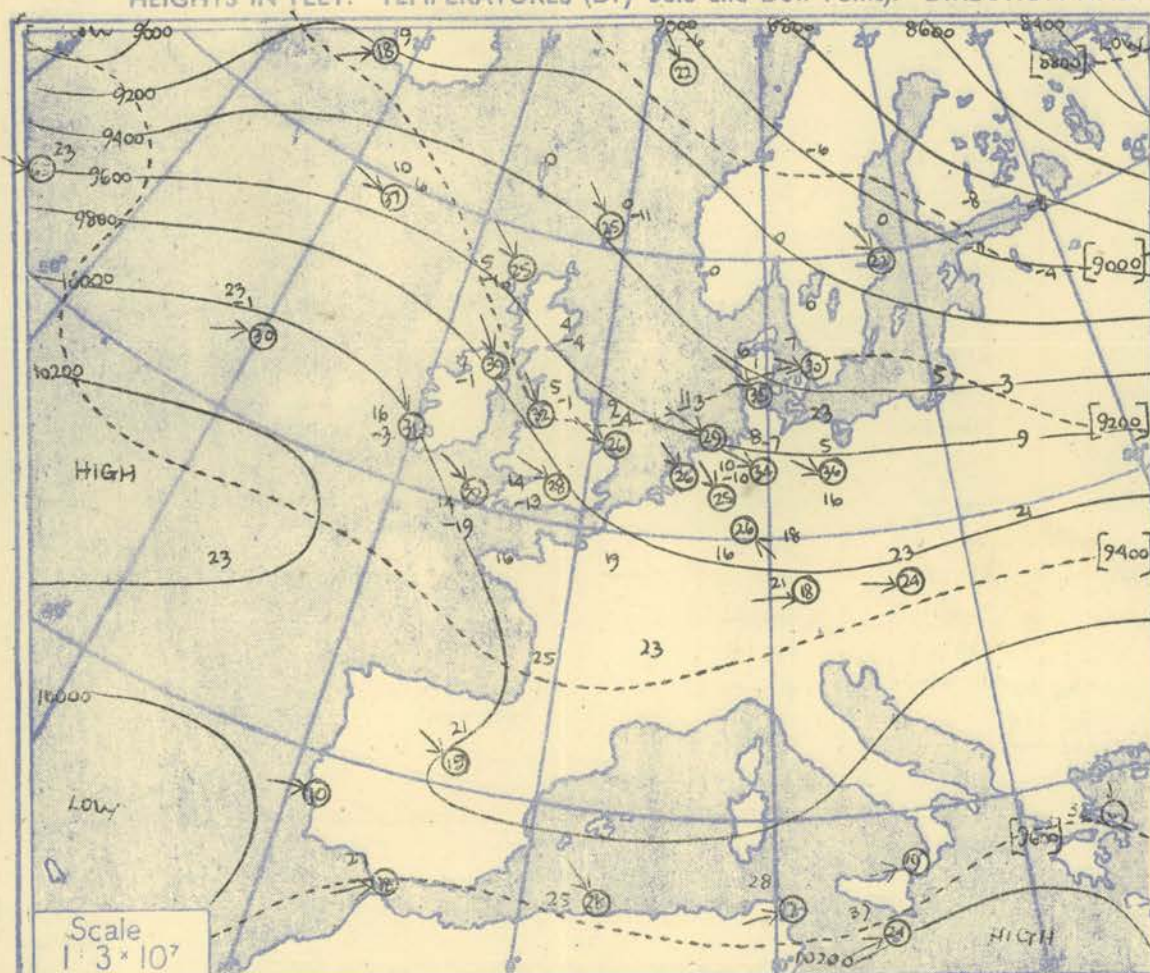
Isopleths of Thickness 500-1000mb.

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				Weather Recorder				Weather Recorder				Weather Recorder				Weather Recorder				Ship																		
Lat/Long	59° 1' N 16° 5' W				59° 0' N 16° 8' W				59° 1' N 16° 7' W				59° 0' N 16° 5' W				52° 2' N 20° 1' W				52° 4' N 20° 1' W				52° 3' N 19° 8' W				52° 4' N 19° 54' 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.	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			Surf										
	Freezing	mb			mb			mb			mb			mb			mb			mb			mb			mb			mb			mb			mb			Freezing													
Pressure	940			920			900			900			920			920			920			890			920			920			920			920			920			Pressure											
Height	ft/100			ft/100			ft/100			ft/100			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			°F			°F			°F			°F			Temp.											
Dew	°F			°F			°F			°F			°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.			Dir. Vel.			Dir. Vel.			Dir. Vel.			Dir. Vel.			Wind											
Vel.	knots			knots			knots			knots			knots			knots			knots			knots			knots			knots			knots			knots			knots			Vel.											
Surf	1000			950			900			850			800			750			700			650			600			550			500			450			400			350			Surf								
1000	46	42	35	290	13	44	37	240	20	97	41	270	28	46	42	220	25	79	43	36	308	18	74	45	34	232	18	67	45	38	234	27	1000																		
950	33	29	289	19	35	25	254	19	38	34	269	28	38	35	244	23	36	30	308	19	39	30	238	22	37	31	238	28	37	31	238	28	950																		
900	32.4	27	24	297	21	31.9	30	22	261	30	31.4	32	28	270	31	30.6	32	28	245	24	35.8	30	25	308	25	35.6	33	26	245	30	34.7	29	24	242	29	900															
850	22	21	288	22	24	16	264	32	25	20	274	33	28	24	241	28	26	21	308	25	25	20	243	24	33	14	252	30	33	14	252	30	850																		
800	62.8	17	16	296	21	62.4	18	09	268	34	61.9	23	15	279	35	61.3	23	19	245	34	66.5	29	02	308	20	66.3	33	10	252	20	65.5	31	19	261	34	800															
750	11	10	292	18	12	03	272	38	17	07	284	38	18	14	250	32	25	09	308	20	For Winds	31	10	256	25	26	25	264	40	26	25	264	40	750																	
700	96.4	08	05	282	30	96.0	06	11	270	35	95.9	10	06	285	37	95.3	13	08	252	35	101.0	19	21	308	22	101.2	23	01	269	30	100.1	18	28	263	42	700															
650	03	00	278	33	00	12	276	41	05	03	288	39	08	02	266	35	12	21	308	25	See Top	19	03	277	35	08	21	272	45	08	21	272	45	650																	
600	139.4	04	10	297	37	133.8	08	20	288	54	139.0	02	04	281	52	133.8	04	02	267	40	39.8	04	43	303	26	140.0	06	06	281	39	38.9	11	05	315	42	600															
550	13	19	310	42	16	26	282	55	07	10	278	48	02	05	279	43	04	43	308	33	Page	01	07	288	36	05	00	310	39	05	00	310	39	550																	
500	77.7	25	29	304	45	77.0	24	33	293	59	77.9	16	19	283	52	78.6	04	11	286	66	189.0	14	48	308	42	184.9	00	05	289	44	189.0	03	08	307	41	500															
450	37	41	289	49	33	42	298	71	21	24	289	64	08	14	292	84	25	49	308	39	07	13	299	58	11	17	320	42	07	13	299	58	11	17	320	42	450														
400	228.0	09	288	44	227.8	42	301	94	230.0	27	30	294	80	232.1	17	24	310	93	235.8	34	238.8	14	24	310	65	237.3	21	28	313	52	238.8	14	24	310	65	237.3	21	28	313	52	400										
350	57	294	54	48	302	101	34	38	296	100	30	38	316	97	90	59	316	70	90	59	316	70	29	38	315	71	35	43	313	50	29	38	315	71	35	43	313	50	350												
300	289.8	60	295	72	290.6	60	306	121	295.0	99	310	124	297.8	46	288	91	300.0	48	341	112	305.0	42	324	73	302.4	49	310	99	310	99	310	99	300																		
250	62	298	85	79	311	113	63	313	132	64	317	126	385.4	82	286	107	63	005	133	62	59	331	78	66	316	51	66	316	51	66	316	51	250																		
200	375.7	64	317	72	373.5	79	316	105	380.5	78	301	114	383.5	77	317	126	385.4	82	75	75	317	126	385.4	82	75	75	317	126	385.4	82	75	75	317	126	385.4	82	200														
170	62	327	70	77	321	75	76	310	90	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	170																	
150	64	338	65	74	314	56	71	313	81	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	150																	
130	67	325	60	78	303	53	68	320	62	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	130																	
110	67	308	57	83	310	45	68	324	99	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	110																	
100	521.7	68	514.4	84	317	44	524.1	69	315	50	525.6	73	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	100																	
90	095.68	mb	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	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	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	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	mb	60																
Tropopause	I 506mb -60° 28,500'				I 227mb -86° 34,900'				II 210mb -78° 37,100'				II 203mb -77° 38,000'				I 190mb -86° 39,500'				N. R.				II 145mb -99° 45,000'				Tropopause																						

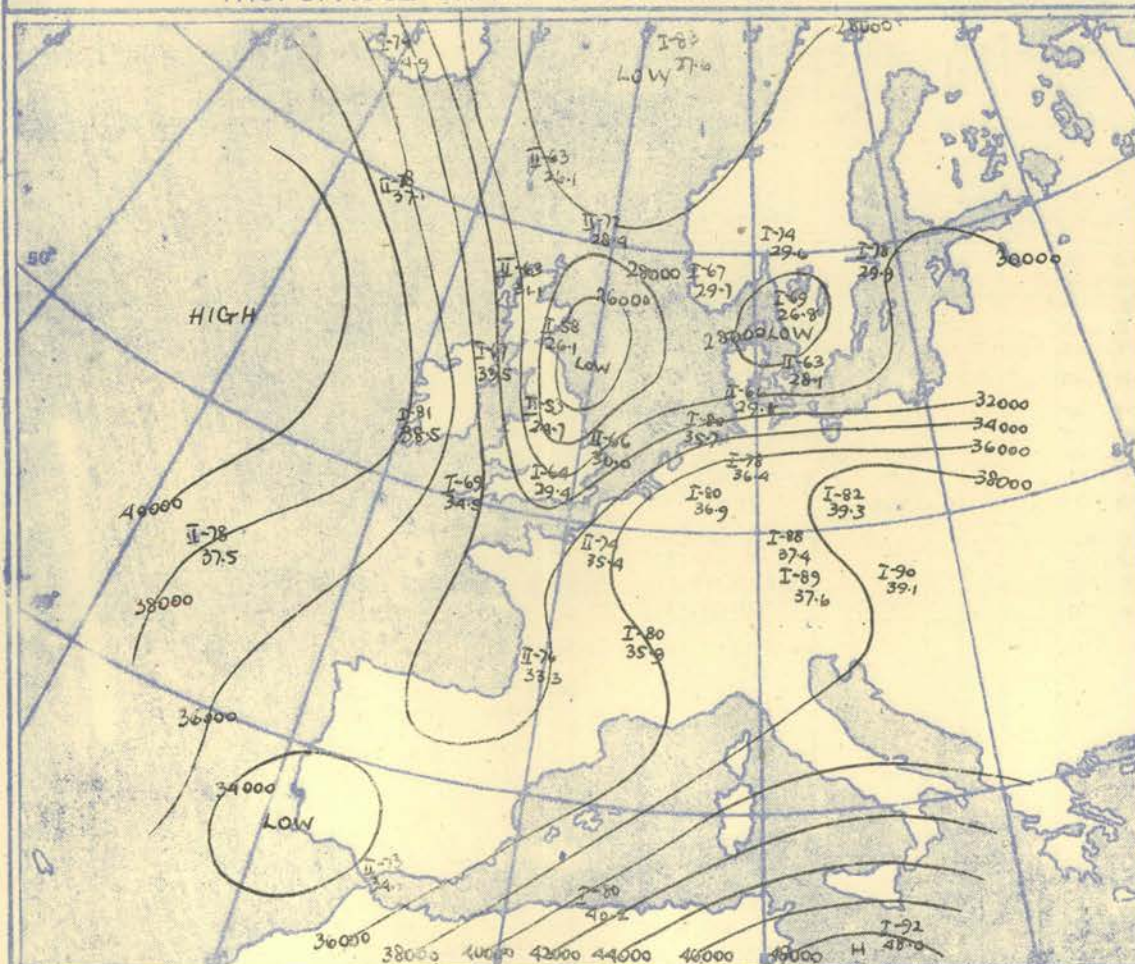
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h G.M.T.



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

100 80 60 40 20 10 knots

TROPOPAUSE CHART at about 15h. GMT

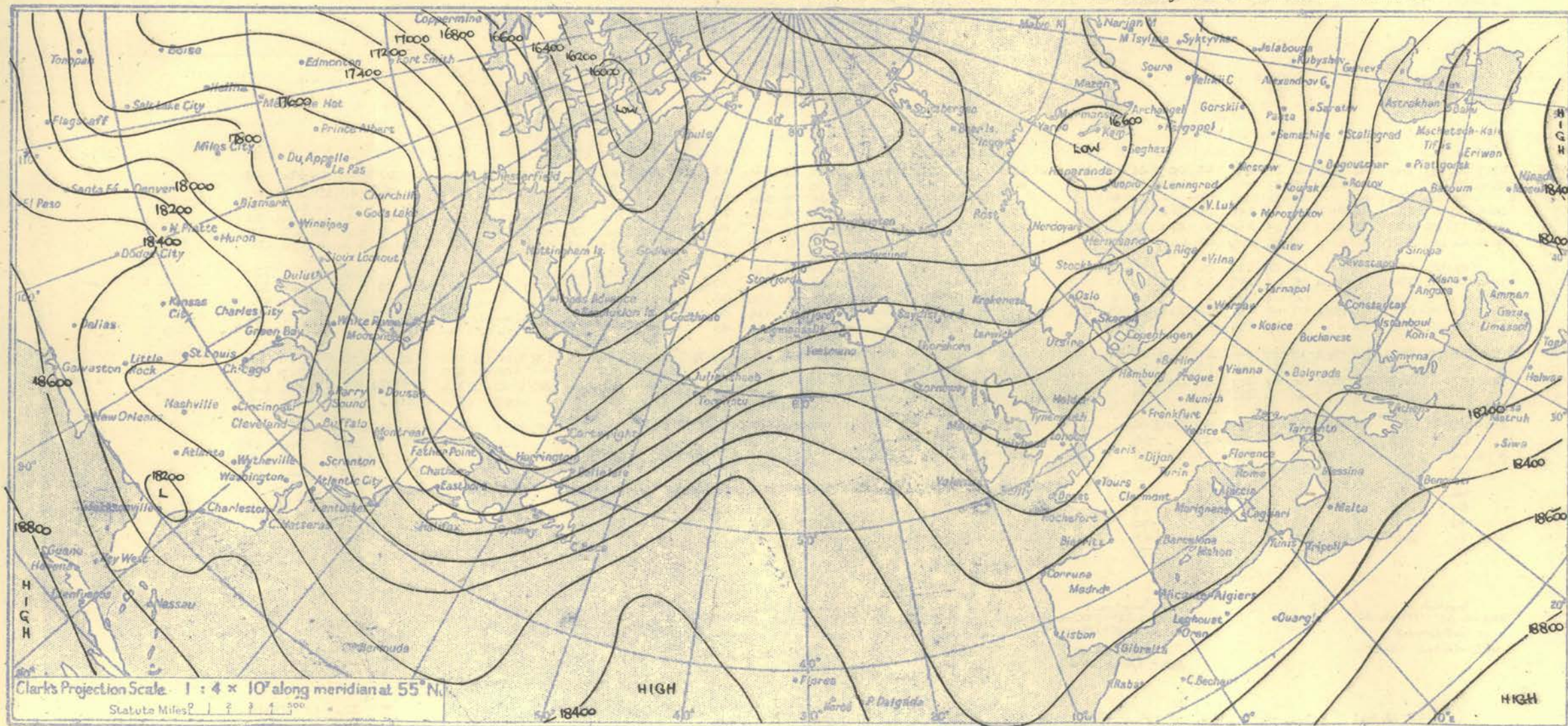
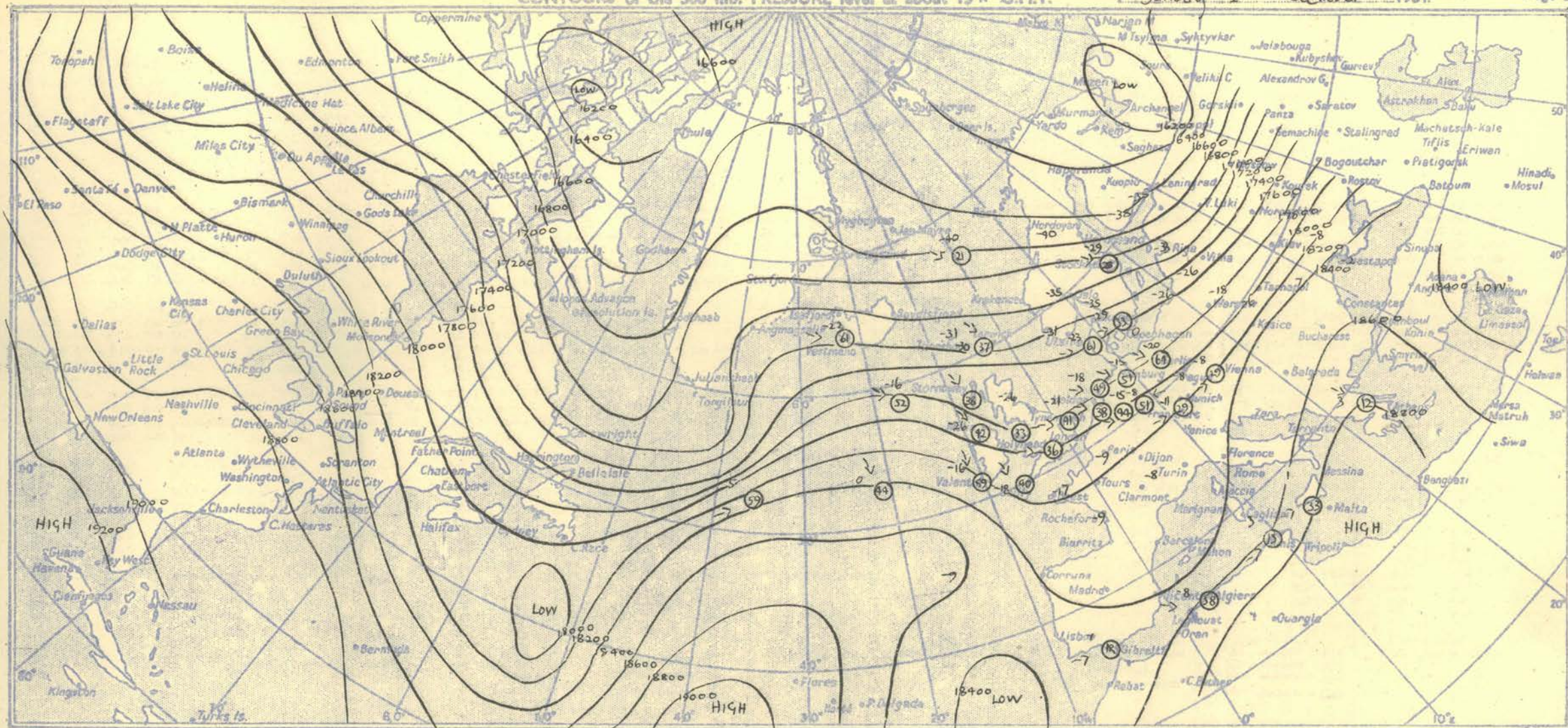


NOTES ON THE AEROLOGICAL SITUATION.

The warm ridge in mid-Atlantic was maintained and moved rather quickly east. A fairly strong penetration of cold air southeastwards into Russia occurred.

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

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



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

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA				STATION
	Time		G.M.T.		Time		G.M.T.		Time		G.M.T.		Time		G.M.T.		Time		G.M.T.		Time		G.M.T.		Time		G.M.T.		Time		G.M.T.						
	M.S.L.	Surf	mb	mb	M.S.L.	Surf	mb	mb	M.S.L.	Surf	mb	mb	M.S.L.	Surf	mb	mb	M.S.L.	Surf	mb	mb	M.S.L.	Surf	mb	mb	M.S.L.	Surf	mb	mb	M.S.L.	Surf	mb	mb					
Pressure	1011.9		mb		1015.9		mb		1015.2		mb		1019.3		mb		1018.1		mb		1016.6		mb		1020.4		mb		1023.6		mb		1025.3		mb		
Height	1001.5		mb		1014.2		mb		1014.2		mb		1009.8		mb		1016.0		mb		1015.0		mb		1003.7		mb		1012.8		mb		1024		mb		
Pressure	970		mb		742		mb		730		mb		718		mb		722		mb		713		mb		712		mb		700		mb		890		mb		
Height	02.7		33		04.2		38		00.2		40		02.5		42		00.6		43		00.4		43		04.4		43		02.9		47		00.3		47		
Temp.	33		30		38		32		40		37		42		35		43		38		43		36		43		36		47		41		42				
Wind	07		04.2		07		04.2		07		04.2		07		04.2		07		04.2		07		04.2		07		04.2		07		04.2		07				
Vel.	300		300		300		300		300		300		300		300		300		300		300		300		300		300		300		300		300				
Temp.	04.2		3.8		04.1		3.8		04.0		3.7		05.1		4.1		04.8		4.1		04.4		4.1		05.4		4.2		06.3		4.5		06.8				
Temp.	30		26		30		26		30		26		30		26		30		26		30		26		30		26		30		26		30				
Temp.	21		17		21		17		21		17		21		17		21		17		21		17		21		17		21		17		21				
Temp.	31.9		29		31.9		29		31.9		29		31.9		29		31.9		29		31.9		29		31.9		29		31.9		29		31.9				
Temp.	23		19		23		19		23		19		23		19		23		19		23		19		23		19		23		19		23				
Temp.	17		13		17		13		17		13		17		13		17		13		17		13		17		13		17		13		17				
Temp.	11		7		11		7		11		7		11		7		11		7		11		7		11		7		11		7		11				
Temp.	05		1		05		1		05		1		05		1		05		1		05		1		05		1		05		1		05				
Temp.	00		-4		00		-4		00		-4		00		-4		00		-4		00		-4		00		-4		00		-4		00				
Temp.	-19		-23		-19		-23		-19		-23		-19		-23		-19		-23		-19		-23		-19		-23		-19		-23		-19				
Temp.	-15		-19		-15		-19		-15		-19		-15		-19		-15		-19		-15		-19		-15		-19		-15		-19		-15				
Temp.	-21		-25		-21		-25		-21		-25		-21		-25		-21		-25		-21		-25		-21		-25		-21		-25		-21				
Temp.	-39		-43		-39		-43		-39		-43		-39		-43		-39		-43		-39		-43		-39		-43		-39		-43		-39				
Temp.	-50		-54		-50		-54		-50		-54		-50		-54		-50		-54		-50		-54		-50		-54		-50		-54		-50				
Temp.	-63		-67		-63		-67		-63		-67		-63		-67		-63		-67		-63		-67		-63		-67		-63		-67		-63				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-70		-74		-70		-74		-70		-74		-70		-74		-70		-74		-70		-74		-70		-74		-70		-74		-70				
Temp.	-61		-65		-61		-65		-61		-65		-61		-65		-61		-65		-61		-65		-61		-65		-61		-65		-61				
Temp.	-66		-70		-66		-70		-66		-70		-66		-70		-66		-70		-66		-70		-66		-70		-66		-70		-66				
Temp.	-66		-70		-66		-70		-66		-70		-66		-70		-66		-70		-66		-70		-66		-70		-66		-70		-66				
Temp.	-67		-71		-67		-71		-67		-71		-67		-71		-67		-71		-67		-71		-67		-71		-67		-71		-67				
Temp.	-71		-75		-71		-75		-71		-75		-71		-75		-71		-75		-71		-75		-71		-75		-71		-75		-71				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72				
Temp.	-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-76		-72		-7										

1951, Page 1.

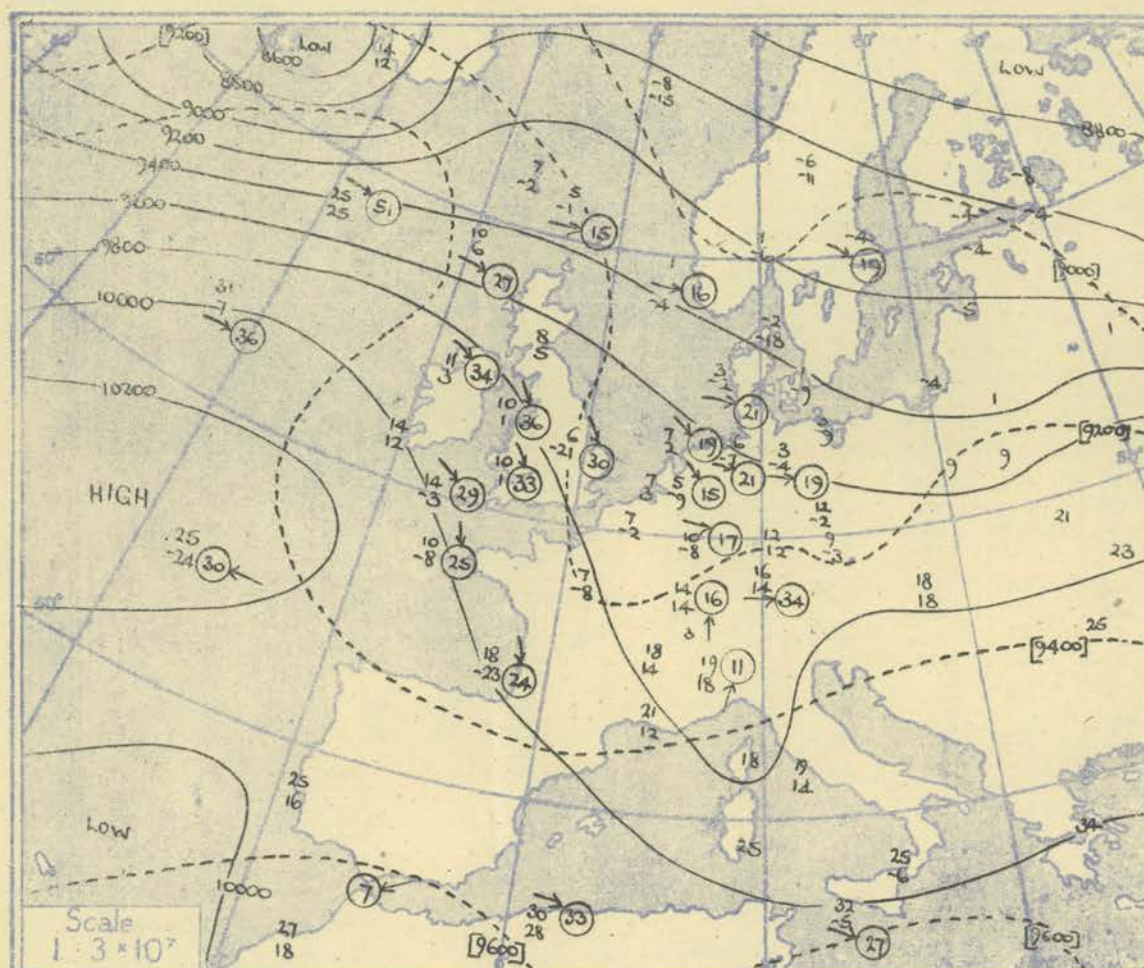
STENOLOGICAL

VALENTIA.

G.M.T.	Time
1024.2	1250-0445
1023	mb Surf
890	mb Forecasting

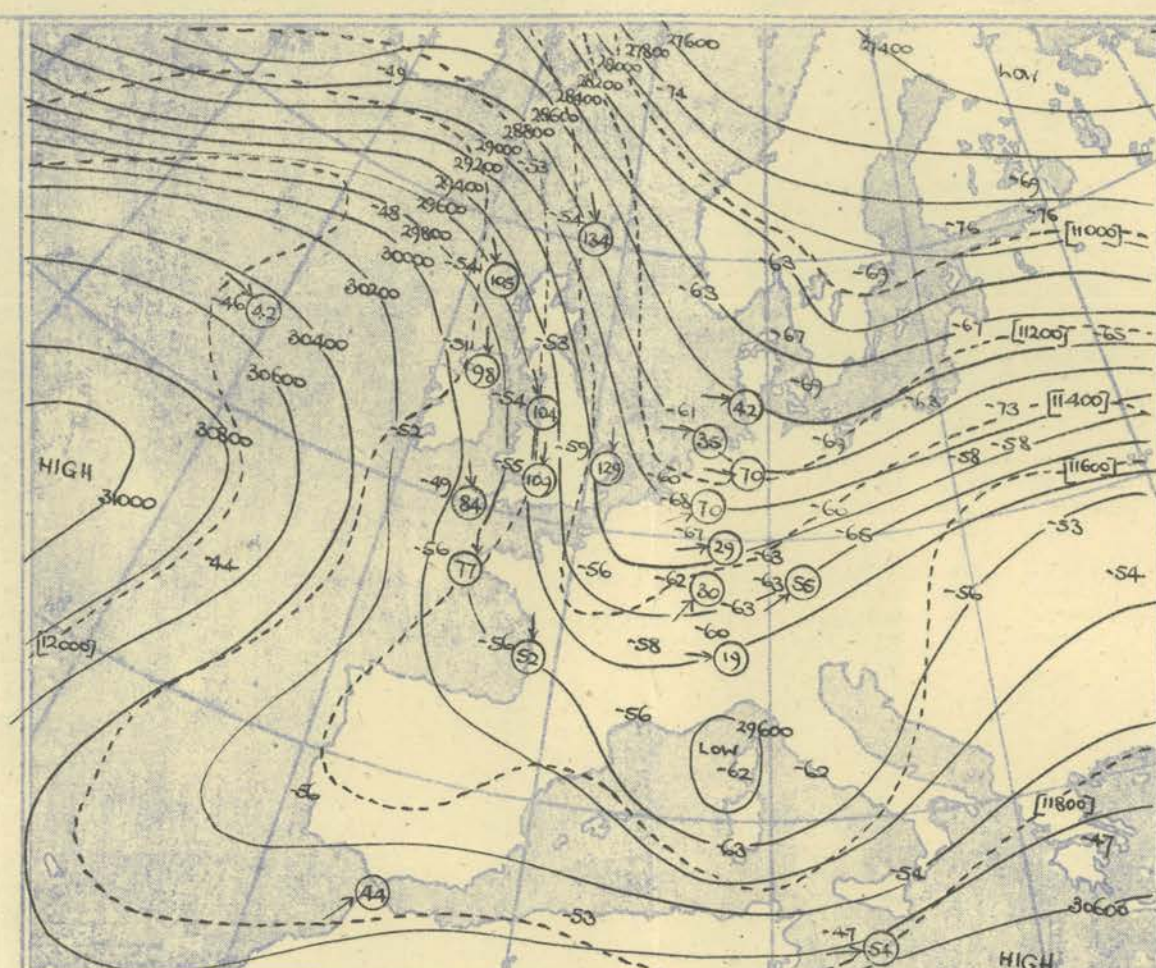
[illegible]

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.

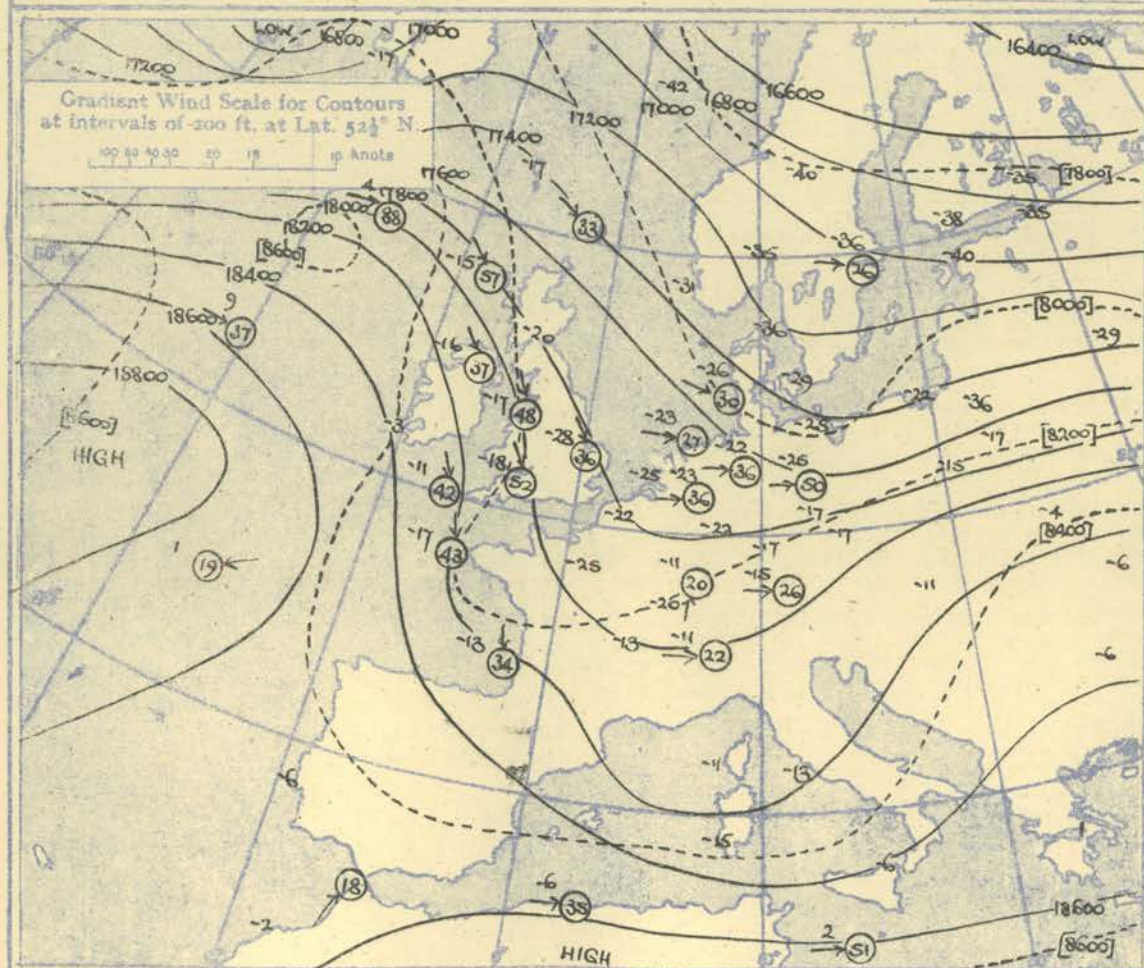


The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

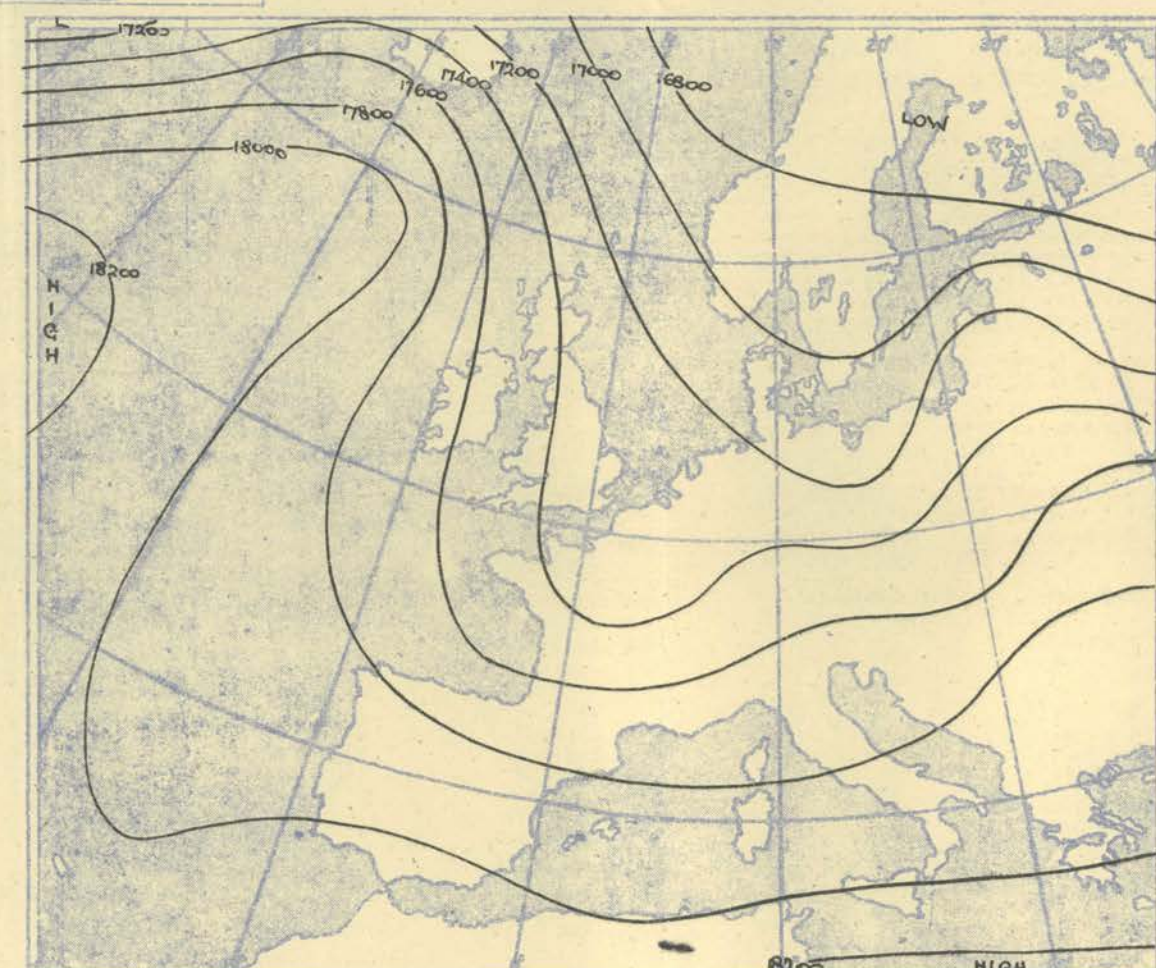
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. $52\frac{1}{2}^\circ$ N
100 80 60 40 20 10 knots



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 800-1000mb.

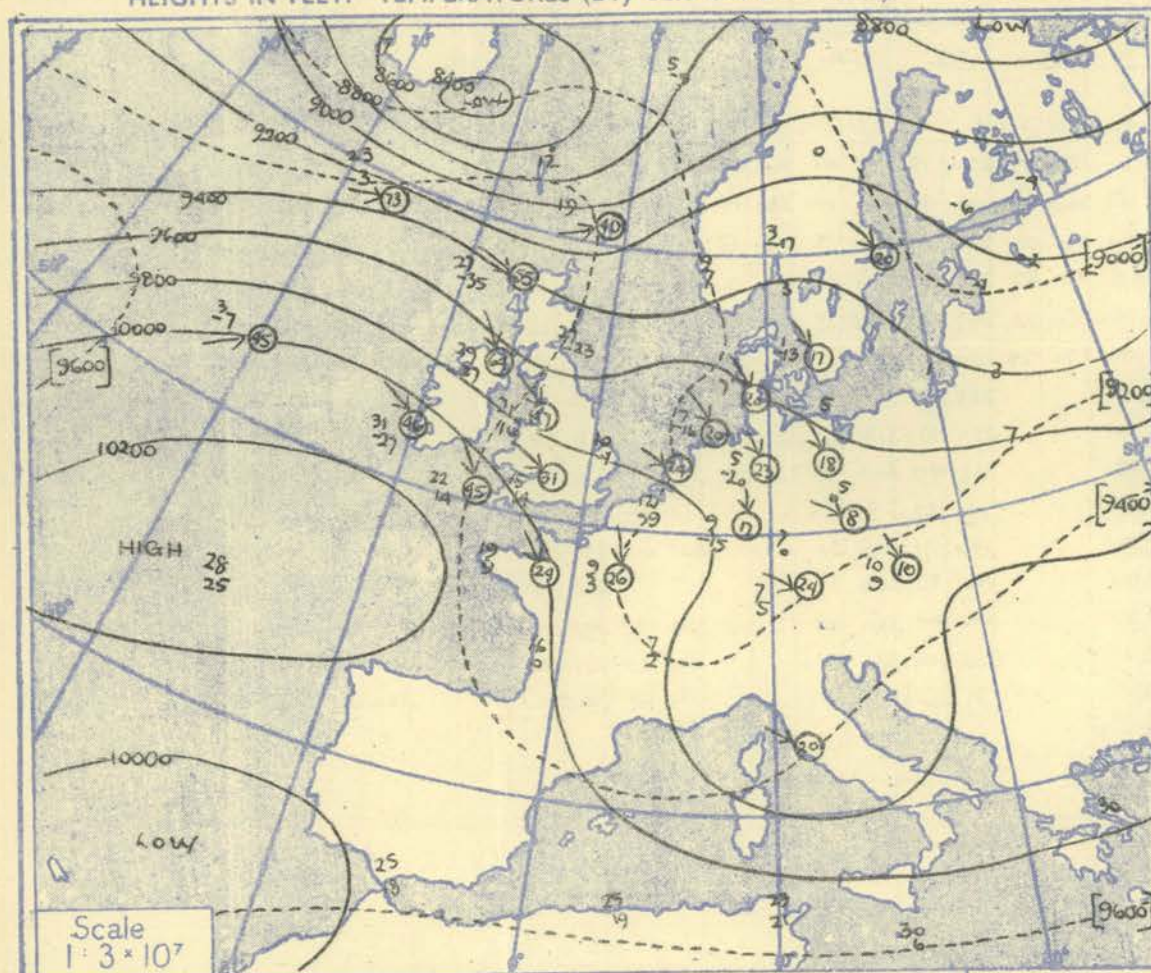
DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

[illegible]

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

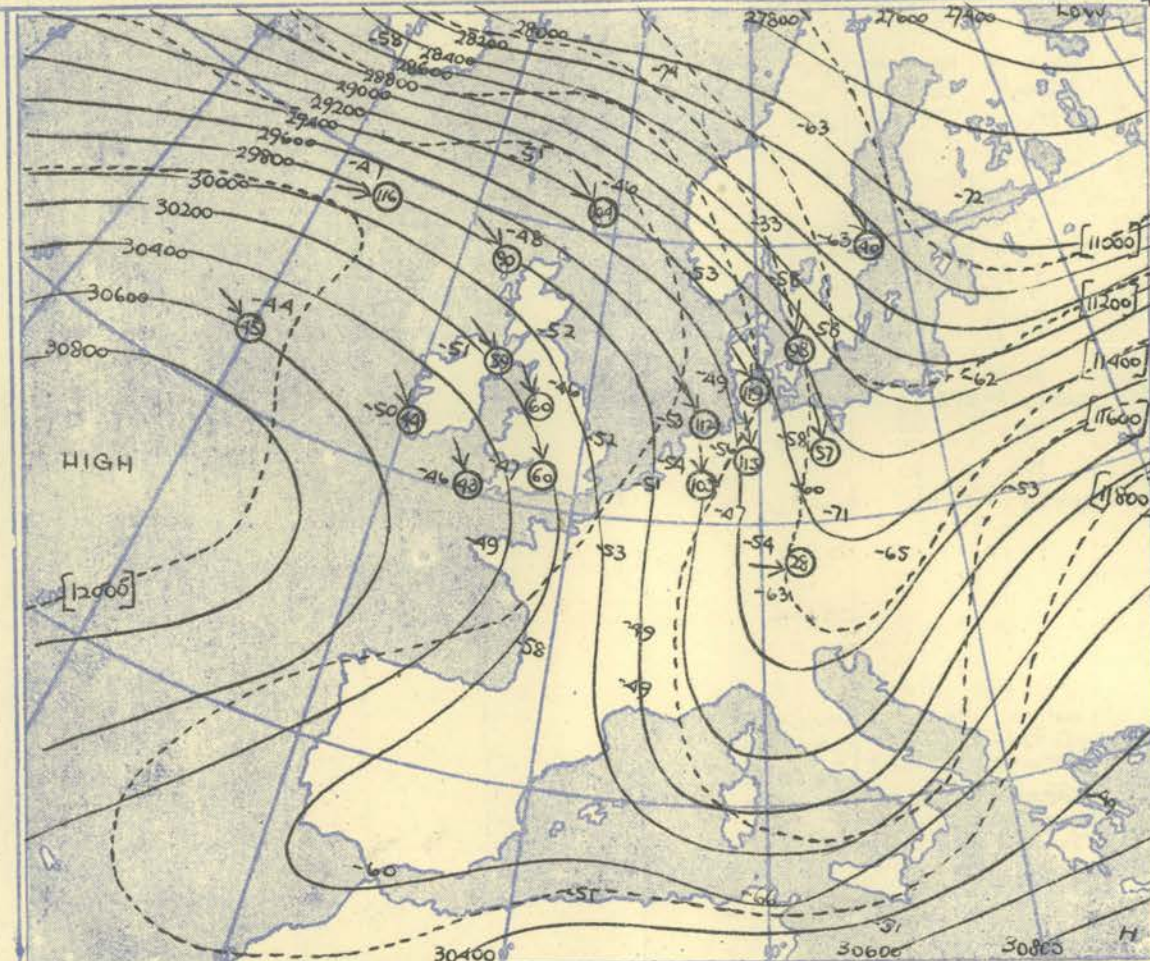
Ship		WEATHER RECORDER				WEATHER RECORDER				WEATHER RECORDER				WEATHER RECORDER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				Ship																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Lat/Long		52.4 N 19.7 W.				52.4 N 20.1 W.				52.6 N 19.9 W.				52.4 N 20.2 W.				59.0 N 16.3 W.				59.1 N 16.2 W.				59.0 N 16.3 W.				59.0 N 16.4 W.				Lat/Long																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Pressure	Time	0300h.		G.M.T.		0900h.		G.M.T.		1500h.		G.M.T.		2100h.		G.M.T.		0300h.		G.M.T.		0900h.		G.M.T.		1500h.		G.M.T.		2100h.		G.M.T.		Time																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
	M.S.L.	1020		mb		1018		mb		1016		mb		1011		mb		995		mb		989		mb		992		mb		995		mb			M.S.L.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	Surf	1020		mb		1018		mb		1016		mb		1011		mb		995		mb		989		mb		992		mb		995		mb			Surf																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	Freezing	710		mb		690		mb		690		mb		680		mb		790		mb		715		mb		850 + 760		mb		770		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	51	45	230	30	52	50	220	31	55	51	220	30	54	51	200	35	49	47	220	31	49	41	250	42	50	43	260	44	48	39	260	45	Surf																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
1000	05.5	50	43	240	37	04.9	49	46	237	39	04.3	52	48	228	35	2.9	52	49	214	48	-1.4	44	44	228	42	51	44	37	250	42	44	37	250	1000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
950		46	37	244	40		44	40	244	45		46	43	235	41		47	43	218	50		44	44	228	42	51	44	37	250	42	44	37	250	950																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
900	33.9	36	30	240	44	33.3	41	35	251	52	32.8	39	36	241	40	31.5	41	35	223	57	27.0	41	41	244	57	25.3	38	29	254	63	26.3	37	30	257	900																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
850		39	28	244	47		40	18	258	49		40	31	231	42		40	30	228	56		35	35	278	30	67	47	02	265	67	32	23	266	850																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
800	65.2	38	20	262	42	64.8	45	22	257	40	64.3	39	32	230	47	63.0	40	23	232	55	58.3	33	33	286	33	56.9	43	07	276	72	57.4	35	07	266	800																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
750		37	15	266	38		39	26	249	38		38	09	231	48		35	07	228	55		38	21	275	72	31	02	266	66	30	26	260	57	750																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
700	100.5	31	07	267	36	100.3	33	31	248	36	99.6	34	07	244	45	90.3	35	16	233	49	93.2	25	25	281	51	92.3	29	21	268	71	92.3	26	03	266	700																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
650		24	16	284	38		25	37	250	39		28	14	257	37		28	03	242	50		23	23	271	70		24	12	266	78		20	15	261	650																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
600	140.2	16	09	277	36	140.2	13	12	358	41	139.7	19	07	238	40	138.4	21	02	243	52	133.0	19	18	272	76	131.7	14	09	257	79	131.9	16	08	269	600																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
550		17	00	271	37		10	05	256	45		09	03	247	39		10	06	243	51		12	09	274	77		10	04	259	90		22	03	269	550																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
500	185.6	01	12	266	37	185.9	02	09	258	40	185.4	04	03	266	40	184.2	04	05	232	54	178.9	04	00	271	88	177.3	04	05	267	104	177.6	04	08	267	87	178.3	02	09	264	500																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
450		07	16	269	38		07	15	267	40		06	15	250	40		06	16	249	52		05	11	279	90		07	17	273	105		08	17	266	95		07	21	266	450																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
400	239.3	17	26	262	35	239.6	20	25	278	42	239.4	17	24	261	42	238.2	16		233	46	232.9	17	23	272	105	231.2	17	27	277	104	231.4	20	28	266	100	232.1	18	36	267	400																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
350		31	39	275	37		31	36	284	46		28	37	280	56		27		238	49		30	37				30	39	267	102		30	42	266	106		31	47	268	350																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
300	305.0	46		288	42	305.2	45		279	44	305.5	44		282	45	304.0	45		254	53	298.6	48					296.9	47		270	111	297.0	47		266	116	297.8	46		270	300																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
250		63		284	38		62		280	46		63		282	62		65				(287.6)	53										266	100		64		266	100		64		270	250																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
200	390.5	80		282	48	390.7	81		280	46	391.1	80		298	56																		266	91		78		266	100		78		273	200																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
170		90		291	53		87		292	49		90		281	57																												170																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
150		92		295	48		83		296	47		81		291	49																												150																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
130		90		298	42		82		306	34		82		285	40																												130																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
110		92		303	42		81		318	37		81																																110																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
100	(1054)-90					530	78		316	33																																100																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
90							80		300	17																																90																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
80																																												80																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
70																																												70																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
60																																												60																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						

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

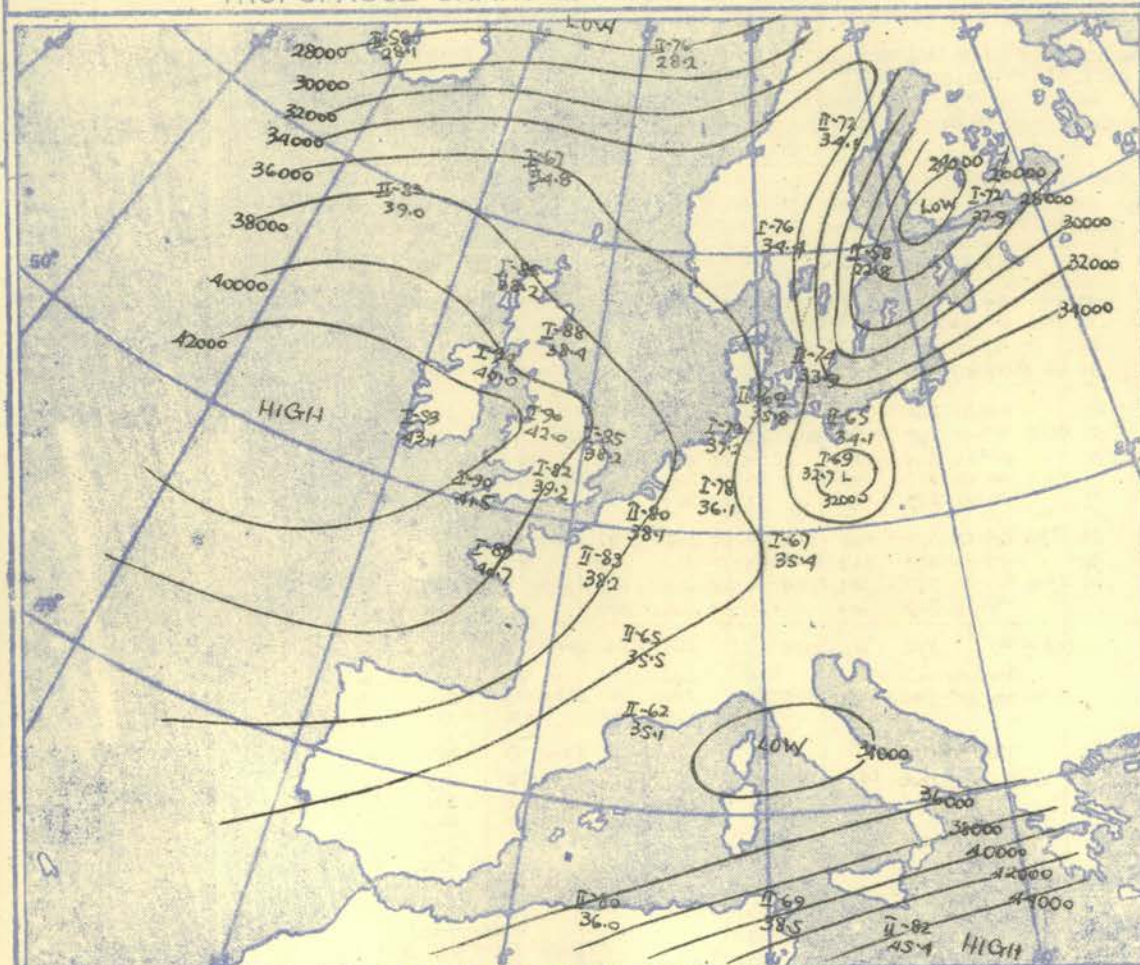


Gradient Wind Scale for Contours at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 20 10 knots



TROPOPAUSE CHART at about 15h. GMT.

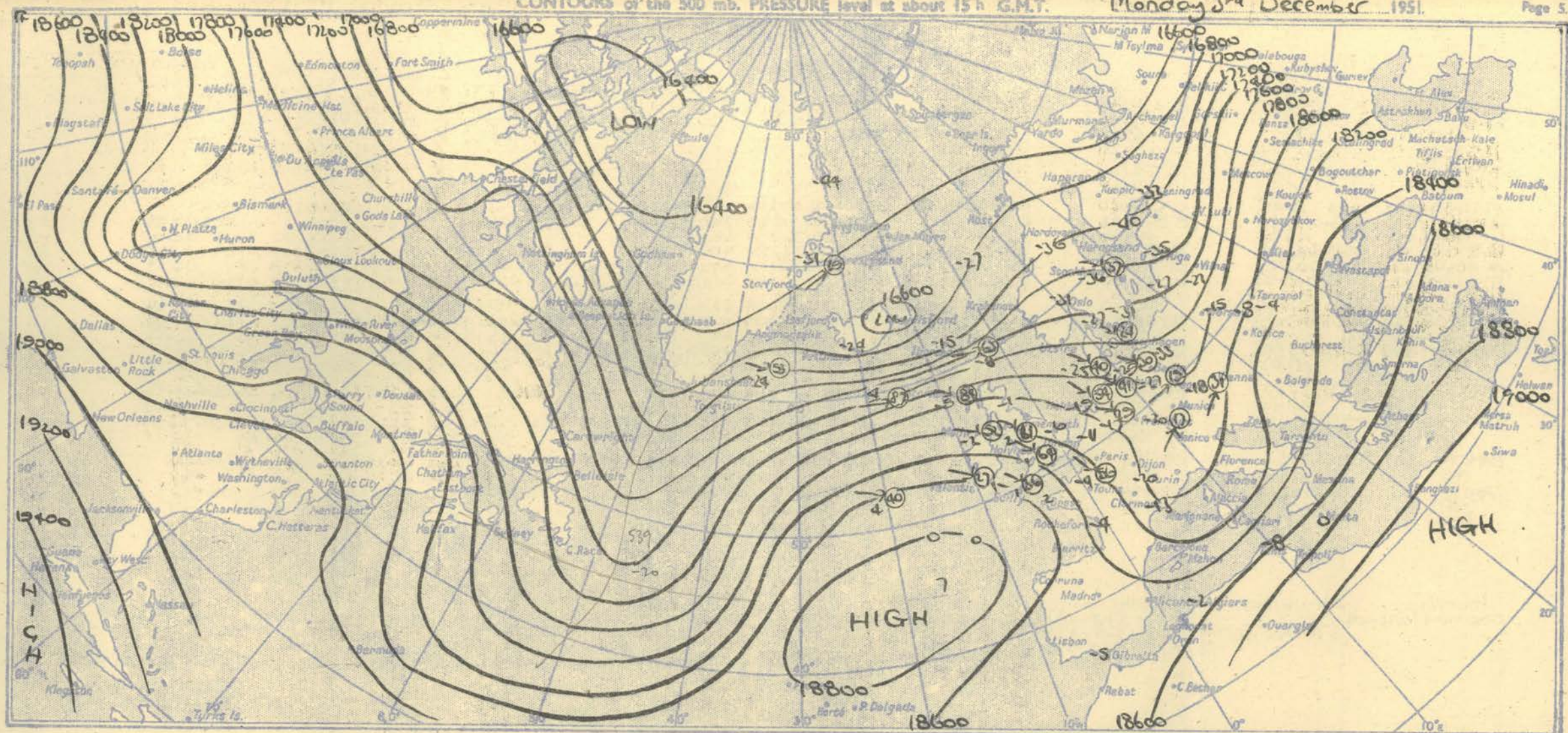


NOTES ON THE AEROLOGICAL SITUATION.

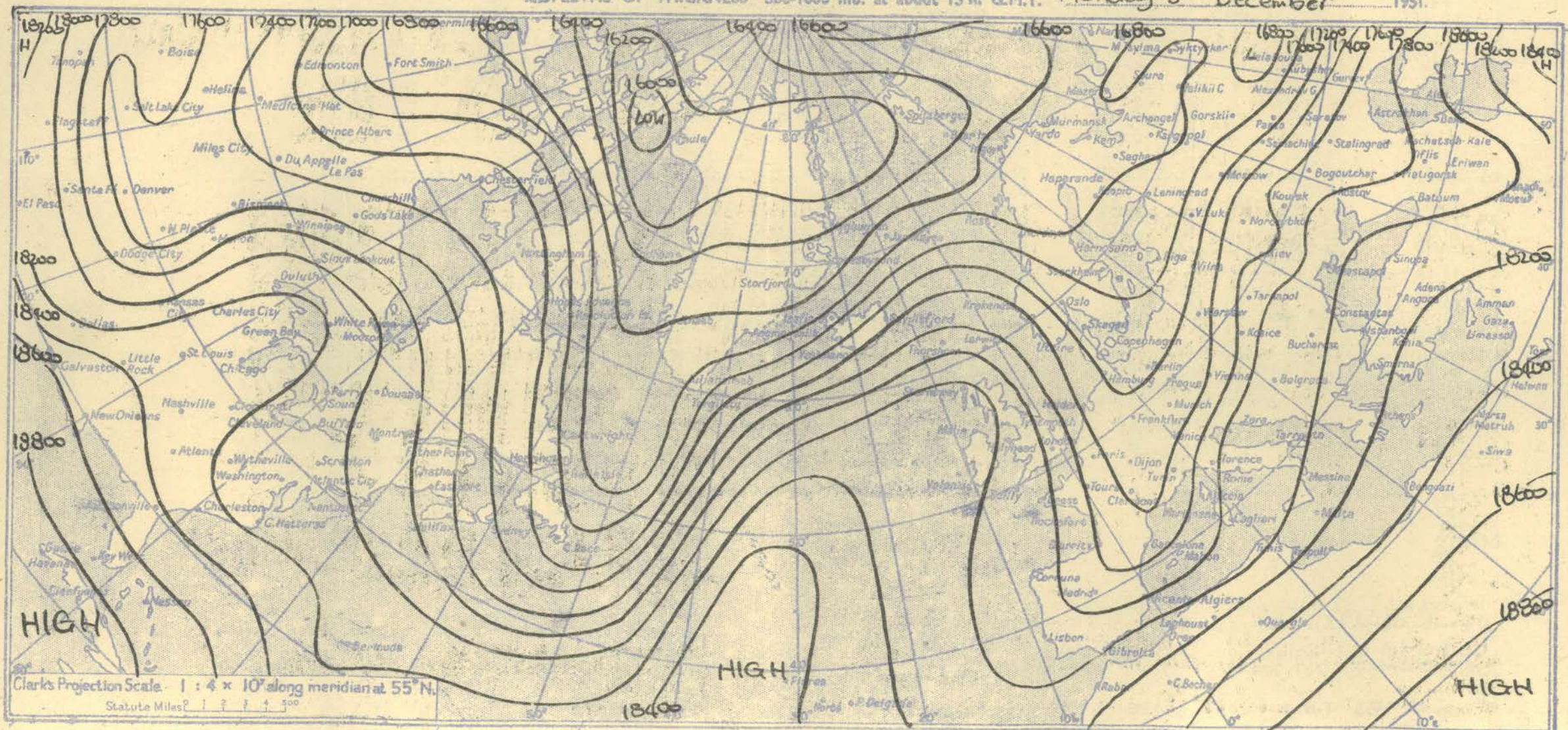
The Atlantic warm ridge became very broad as a result of the rapid eastward advance of warm air and the development of another depression in West Atlantic, which deflected cold air southwards.

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

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



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Monday 3rd December 1951.



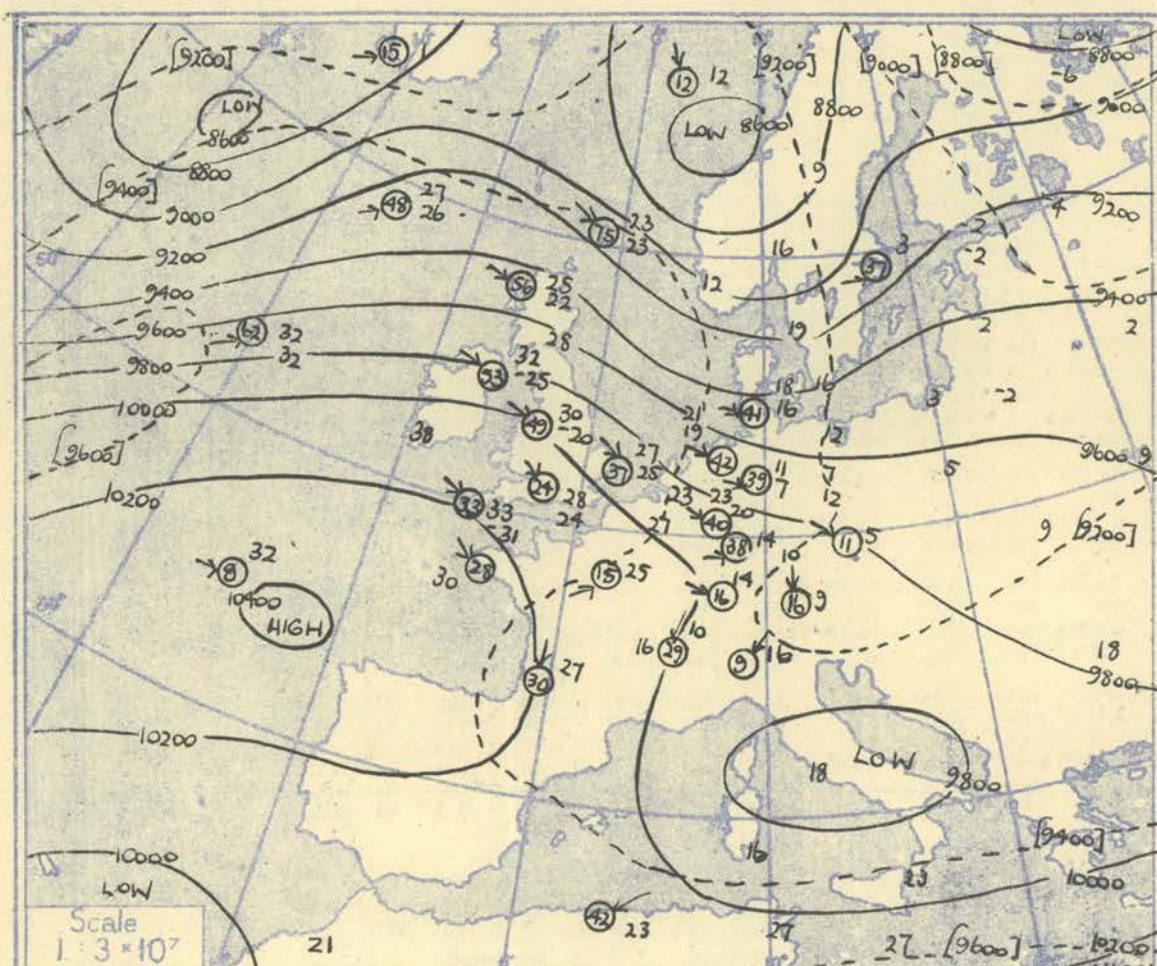
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	HEMSBY	LARKHILL	CAMBORNE	Valentia	STATION
Time	15 hrs	15 hrs	15 hrs	15 hrs	15 hrs	15 hrs	15 hrs	15 hrs	15 hrs	Time
M.S.L.	993.0	995.1	1003.7	1010.4	1015.4	1018.3	1022.3	1024.6		M.S.L.
Surf	983.1	993.4	1002.9	1001.1	1012.4	1017.3	1008.8	1013.6		Surf
Pressure	850	738	822	757	880	900	881	874		Pressure
Pressure	mb	mb	mb	mb	mb	mb	mb	mb		mb
Height	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100		ft./100
Temp.	°F	°F	°F	°F	°F	°F	°F	°F		°F
Dew	°F	°F	°F	°F	°F	°F	°F	°F		°F
Wind	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.		Dir. Vel.
Cloud	knobs	knobs	knobs	knobs	knobs	knobs	knobs	knobs		knobs
Surf	02.74341	05.04251	01.24642	01.54744	02.04643	02.04412	04.44141	01.94445	14.03	Surf
1000	-1.9	-1.3	0.3	0.3	0.3	0.3	0.3	0.3	5.7	1000
950	40.38	41.5	41.5	41.5	41.5	41.5	41.5	41.5	44.4	950
900	26.335	21.5	44.7	24.1	31.1	39.3	21.7	20.3	27.7	900
850	41.432	29.26	39.4	34.3	46.3	34.3	28.4	29.4	28.4	850
800	51.328	24.24	36.5	37.3	62.4	26.3	29.6	29.6	28.4	800
750	24.2	24.6	41	33.31	32.3	29.5	68	21	16.2	750
700	21.7	19.18	25.3	40.3	21.7	23	21	18	21	700
650	14.12	26.3	38	21	25	21	29.3	61	21	650
600	130.8	11.01	26.3	40.1	13.7	17.1	20.6	58.1	24.9	600
550	02.3	27.5	47	07.03	10.0	8.2	20.6	56	11	550
500	175.6	8.13	27.5	6.1	182.9	02.1	30.4	52.1	18.6	500
450	8.1	14.2	81	10.14	8.1	13.2	55	9	18.3	450
400	219.1	8.1	27.5	8.1	236.6	02.1	30.4	52.1	18.6	400
350	23.4	12.9	63	31.25	35.4	12.9	54	30	42.3	350
300	24.6	16	29	10.2	30.6	51	29.6	59	30.1	300
250	65	66	71	61	70	61	66	61	61	250
200	360.7	312.3	382.4	382.4	365.7	288	338.7	41	338.7	200
170	(196)	-12	-81	-81	-86	210	60	-86	-86	170
150					-85			-85	-85	150
130					-80			-80	-80	130
110					-81			-81	-81	110
100					52.0	76	31.9	41.5	20.7	100
90					-75			-75	-75	90
80					-74			-74	-74	80
70										70
60										60
Inversion	500mb-83.4mb	Inversion	900-870mb	Inversion	970mb-962mb	Inversion	970mb-962mb	Isenthal	517-500mb	Inversion
		878mb-850mb	792-765mb	834mb-821mb	850-834mb	717mb-690mb	840-800mb	840-800mb	851mb-800mb	851mb-800mb
		43	538-530mb	4	850-834mb	717mb-690mb	840-800mb	840-800mb	851mb-800mb	851mb-800mb
					690-656mb	22				
Tropopause	NR.	1200mb-85°	1200mb-88°	1186mb-94°	1170mb-90°	1200mb-85°	1196mb-82°	1175mb-90°	1163mb-93°	Tropopause
		38200'	38240'	40000'	41000'	38200'	38200'	41500'	43100'	
STATION	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	HEMSBY	LARKHILL	CAMBORNE		STATION
Time	21 hrs	21 hrs	21 hrs	21 hrs	21 hrs	21 hrs	21 hrs	21 hrs		Time
M.S.L.	984.1	997.1	1001.6	1011.1	1013.6	1016.7	1020.8	1024.9		M.S.L.
Surf	974.3	993.4	1000.8	1001.9	1011.6	1014.6	1004.2	1014.2		Surf
Pressure	858	782	704	756	742	850	743	850,700		Pressure
Pressure	mb	mb	mb	mb	mb	mb	mb	mb		mb
Height	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100		ft./100
Temp.	°F	°F	°F	°F	°F	°F	°F	°F		°F
Dew	°F	°F	°F	°F	°F	°F	°F	°F		°F
Wind	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.		Dir. Vel.
Cloud	knobs	knobs	knobs	knobs	knobs	knobs	knobs	knobs		knobs
Surf	02.74847	04.24943	01.25246	01.54947	02.04643	02.04412	04.44141	01.94445	14.03	Surf
1000	4.4	0.9	0.4	0.3	0.3	0.3	0.3	0.3	5.7	1000
950	46.39	45.39	47	46.43	46.43	46.43	46.43	46.43	46.43	950
900	24.138	27.533	26.6	24.1	31.1	39.3	21.7	20.3	27.7	900
850	39.131	42.739	19.27	39.4	46.3	34.3	28.4	29.4	28.4	850
800	58.024	58.934	21.9	58.6	62.4	26.3	29.6	29.6	28.4	800
750	18.13	30.16	28.0	31.2	32.3	29.5	68	21	16.2	750
700	89.1	33.828	21.83	38.9	21.7	23	21	18	21	700
650	14.25	22.17	24.4	22.1	25	21	29.3	61	21	650
600	128.006	134.16	11.283	13.7	13.7	17.1	20.6	58.1	24.9	600
550	03.13	09.02	28.1	77	12.1	28.6	51	11	06.3	550
500	172.4	178.01	32.85	80	182.9	02.1	30.4	52.1	18.6	500
450	14.26	8.1	14.2	81	8.1	13.2	55	9	18.3	450
400	219.1	231.8	27.5	8.1	236.6	02.1	30.4	52.1	18.6	400
350	23.4	31.39	28.4	31.2	35.4	12.9	54	30	42.3	350
300	290.6	297.4	292	297	301.8	297	473	304	45	300
250	70	67	71	61	70	61	66	61	61	250
200	3750.8	3819.5	3849.7	3849.7	365.7	288	338.7	41	338.7	200
170	-72	-63	-63	-63	-86	210	60	-86	-86	170
150	-74				-85			-85	-85	150
130	-70				-80			-80	-80	130
110	-71				-81			-81	-81	110
100	51.3				52.0	76	31.9	41.5	20.7	100
90	-76				-75			-75	-75	90
80	-78				-74			-74	-74	80
70										70
60										60
Inversion	734mb-708mb	Inversion	788mb-770mb	Inversion	850-834mb	717mb-690mb	840-800mb	840-800mb	851mb-800mb	Inversion
		878mb-850mb	792-765mb	834mb-821mb	850-834mb	717mb-690mb	840-800mb	840-800mb	851mb-800mb	851mb-800mb
		43	538-530mb	4	850-834mb	717mb-690mb	840-800mb	840-800mb	851mb-800mb	851mb-800mb
					690-656mb	22				
Tropopause	1200mb-83°	1200mb-85°	1186mb-92°	NR.	NR.	1175mb-89°	1184mb-91°	1194mb-88°		Tropopause
	37500'	38200'	40000'			41200'	40300'	39500'		

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

STATION	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	HEMSEY	LARKHILL	CAMBORNE	VALENTIA	STATION
Time M.S.L. Surf Pressure	03h G.M.T. 987.2 mb 977.3 mb 86.5	03h G.M.T. 999.8 mb 998.1 mb 79.5	03h G.M.T. 1002.4 mb 1001.4 mb 72.3	03h G.M.T. 1012.9 mb 1003.7 mb 836.815.705	03h G.M.T. 1014.9 mb 1012.9 mb 717.919	03h G.M.T. 1013.8 mb 1012.3 mb 74.5	03h G.M.T. 1020.3 mb 1004.0 mb 72.9	03h G.M.T. 1025.2 mb 1014.5 mb 69.5	03h G.M.T. 1021.2 mb 1020.700	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	Height ft/100 Temp °F Dew °F Wind Dir. Vel. knots	Pressure mb
Surf 1000 950 900 850 800	03.7 46 39 03.5 44 37 24.9 37 31 39.3 31 27 55.8 31 09	00.4 48 47 27.0 12 00.2 53 45 00.6 53 46 44 43 26.3 31 28.3 40 39 26.6 44 29.3 43 39 43.8 36 35 27.4 47 44.6 38 34 59.6 32 31 27.5 49 60.7 40 26	02.5 50 46 26.0 15 00.6 51 48 26.0 18 00.4 49 45 26.0 18 04.4 49 46 27.0 11 02.9 50 45 28.5 20 00.3 51 48 03.4 49 46 26.2 36 03.7 47 44 41 44 42 28.1 47 43 41 28.4 31 43 39 27.5 37 43.8 38 36 29.0 38 35.2 38 34 28.3 28 34.2 41 36 47.1 34 28 27.4 49 47.8 36 29 28.7 41 47.4 45 41 29.6 38 49.0 33 26 29.4 39 50.3 33 27 28.3 30 63.1 33.04 27.8 53 63.8 30 18 29.1 44 63.8 39 36 29.8 36 65.1 41 31 29.9 27 66.4 37 09 28.7 33 65.7 41 32 20	02.5 50 46 26.0 15 00.6 51 48 26.0 18 00.4 49 45 26.0 18 04.4 49 46 27.0 11 02.9 50 45 28.5 20 00.3 51 48 03.4 49 46 26.2 36 03.7 47 44 41 44 42 28.1 47 43 41 28.4 31 43 39 27.5 37 43.8 38 36 29.0 38 35.2 38 34 28.3 28 34.2 41 36 47.1 34 28 27.4 49 47.8 36 29 28.7 41 47.4 45 41 29.6 38 49.0 33 26 29.4 39 50.3 33 27 28.3 30 63.1 33.04 27.8 53 63.8 30 18 29.1 44 63.8 39 36 29.8 36 65.1 41 31 29.9 27 66.4 37 09 28.7 33 65.7 41 32 20	02.5 50 46 26.0 15 00.6 51 48 26.0 18 00.4 49 45 26.0 18 04.4 49 46 27.0 11 02.9 50 45 28.5 20 00.3 51 48 03.4 49 46 26.2 36 03.7 47 44 41 44 42 28.1 47 43 41 28.4 31 43 39 27.5 37 43.8 38 36 29.0 38 35.2 38 34 28.3 28 34.2 41 36 47.1 34 28 27.4 49 47.8 36 29 28.7 41 47.4 45 41 29.6 38 49.0 33 26 29.4 39 50.3 33 27 28.3 30 63.1 33.04 27.8 53 63.8 30 18 29.1 44 63.8 39 36 29.8 36 65.1 41 31 29.9 27 66.4 37 09 28.7 33 65.7 41 32 20	02.5 50 46 26.0 15 00.6 51 48 26.0 18 00.4 49 45 26.0 18 04.4 49 46 27.0 11 02.9 50 45 28.5 20 00.3 51 48 03.4 49 46 26.2 36 03.7 47 44 41 44 42 28.1 47 43 41 28.4 31 43 39 27.5 37 43.8 38 36 29.0 38 35.2 38 34 28.3 28 34.2 41 36 47.1 34 28 27.4 49 47.8 36 29 28.7 41 47.4 45 41 29.6 38 49.0 33 26 29.4 39 50.3 33 27 28.3 30 63.1 33.04 27.8 53 63.8 30 18 29.1 44 63.8 39 36 29.8 36 65.1 41 31 29.9 27 66.4 37 09 28.7 33 65.7 41 32 20	02.5 50 46 26.0 15 00.6 51 48 26.0 18 00.4 49 45 26.0 18 04.4 49 46 27.0 11 02.9 50 45 28.5 20 00.3 51 48 03.4 49 46 26.2 36 03.7 47 44 41 44 42 28.1 47 43 41 28.4 31 43 39 27.5 37 43.8 38 36 29.0 38 35.2 38 34 28.3 28 34.2 41 36 47.1 34 28 27.4 49 47.8 36 29 28.7 41 47.4 45 41 29.6 38 49.0 33 26 29.4 39 50.3 33 27 28.3 30 63.1 33.04 27.8 53 63.8 30 18 29.1 44 63.8 39 36 29.8 36 65.1 41 31 29.9 27 66.4 37 09 28.7 33 65.7 41 32 20	02.5 50 46 26.0 15 00.6 51 48 26.0 18 00.4 49 45 26.0 18 04.4 49 46 27.0 11 02.9 50 45 28.5 20 00.3 51 48 03.4 49 46 26.2 36 03.7 47 44 41 44 42 28.1 47 43 41 28.4 31 43 39 27.5 37 43.8 38 36 29.0 38 35.2 38 34 28.3 28 34.2 41 36 47.1 34 28 27.4 49 47.8 36 29 28.7 41 47.4 45 41 29.6 38 49.0 33 26 29.4 39 50.3 33 27 28.3 30 63.1 33.04 27.8 53 63.8 30 18 29.1 44 63.8 39 36 29.8 36 65.1 41 31 29.9 27 66.4 37 09 28.7 33 65.7 41 32 20	02.5 50 46 26.0 15 00.6 51 48 26.0 18 00.4 49 45 26.0 18 04.4 49 46 27.0 11 02.9 50 45 28.5 20 00.3 51 48 03.4 49 46 26.2 36 03.7 47 44 41 44 42 28.1 47 43 41 28.4 31 43 39 27.5 37 43.8 38 36 29.0 38 35.2 38 34 28.3 28 34.2 41 36 47.1 34 28 27.4 49 47.8 36 29 28.7 41 47.4 45 41 29.6 38 49.0 33 26 29.4 39 50.3 33 27 28.3 30 63.1 33.04 27.8 53 63.8 30 18 29.1 44 63.8 39 36 29.8 36 65.1 41 31 29.9 27 66.4 37 09 28.7 33 65.7 41 32 20	02.5 50 46 26.0 15 00.6 51 48 26.0 18 00.4 49 45 26.0 18 04.4 49 46 27.0 11 02.9 50 45 28.5 20 00.3 51 48 03.4 49 46 26.

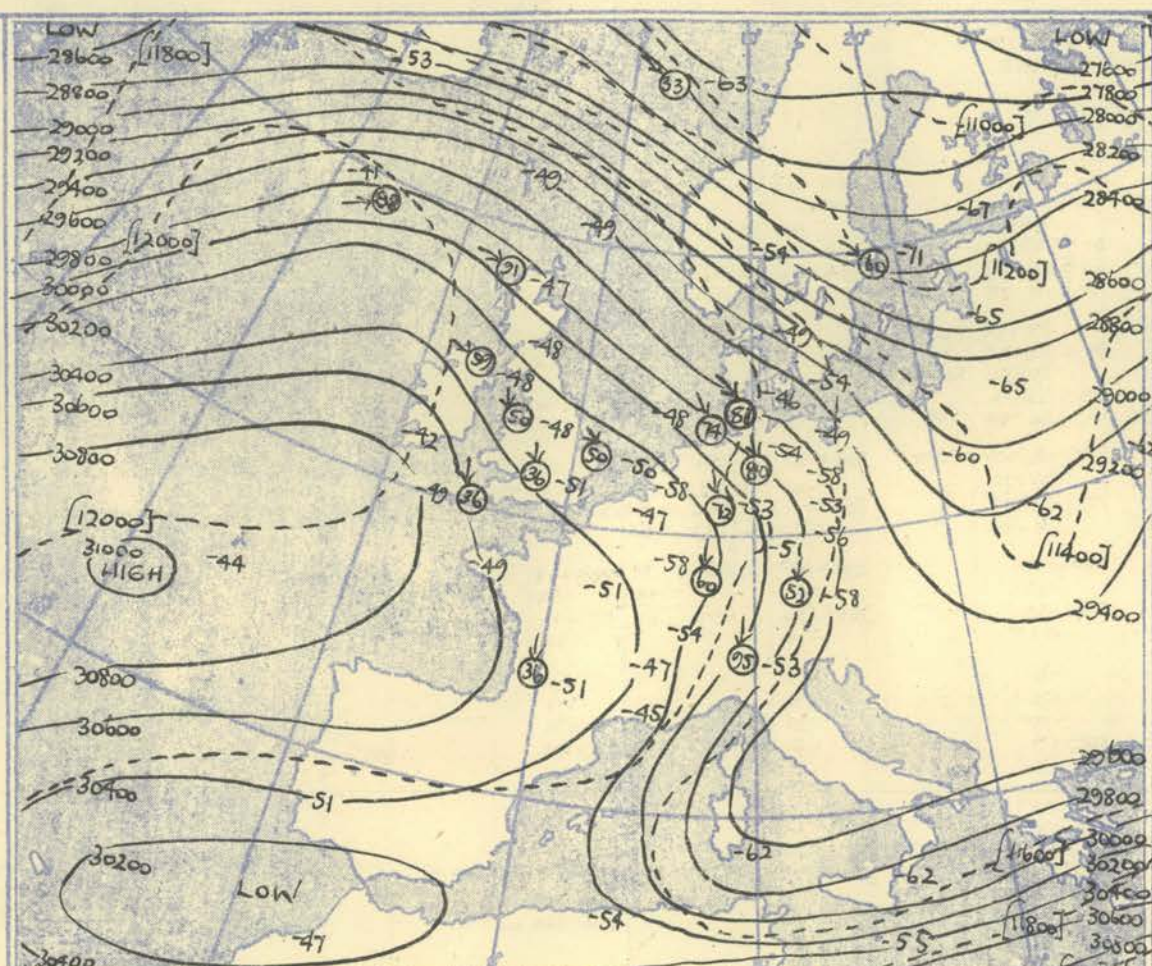
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb, 500 mb, and 300 mb, levels at about 03h G.M.T.



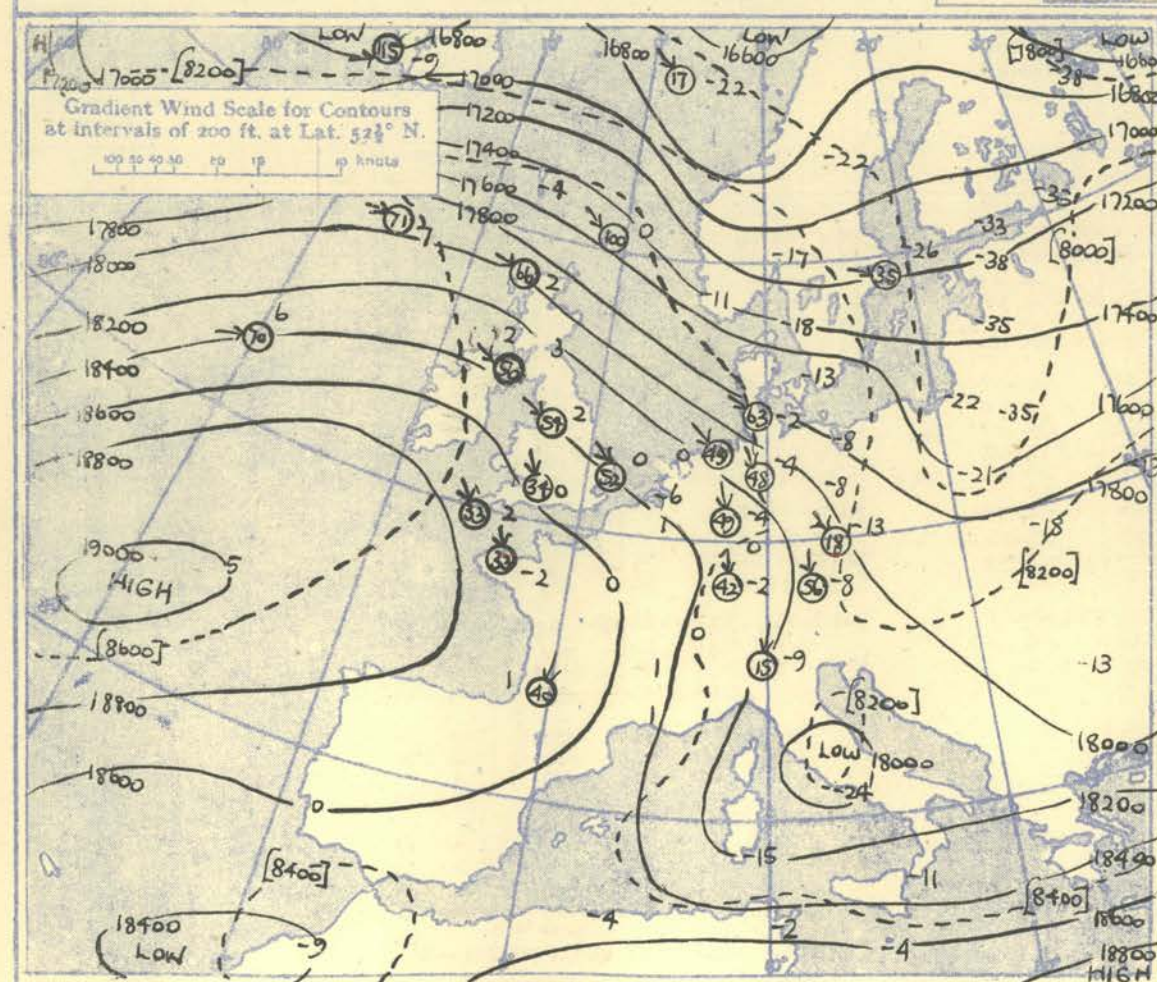
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 3000-700 mb.

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

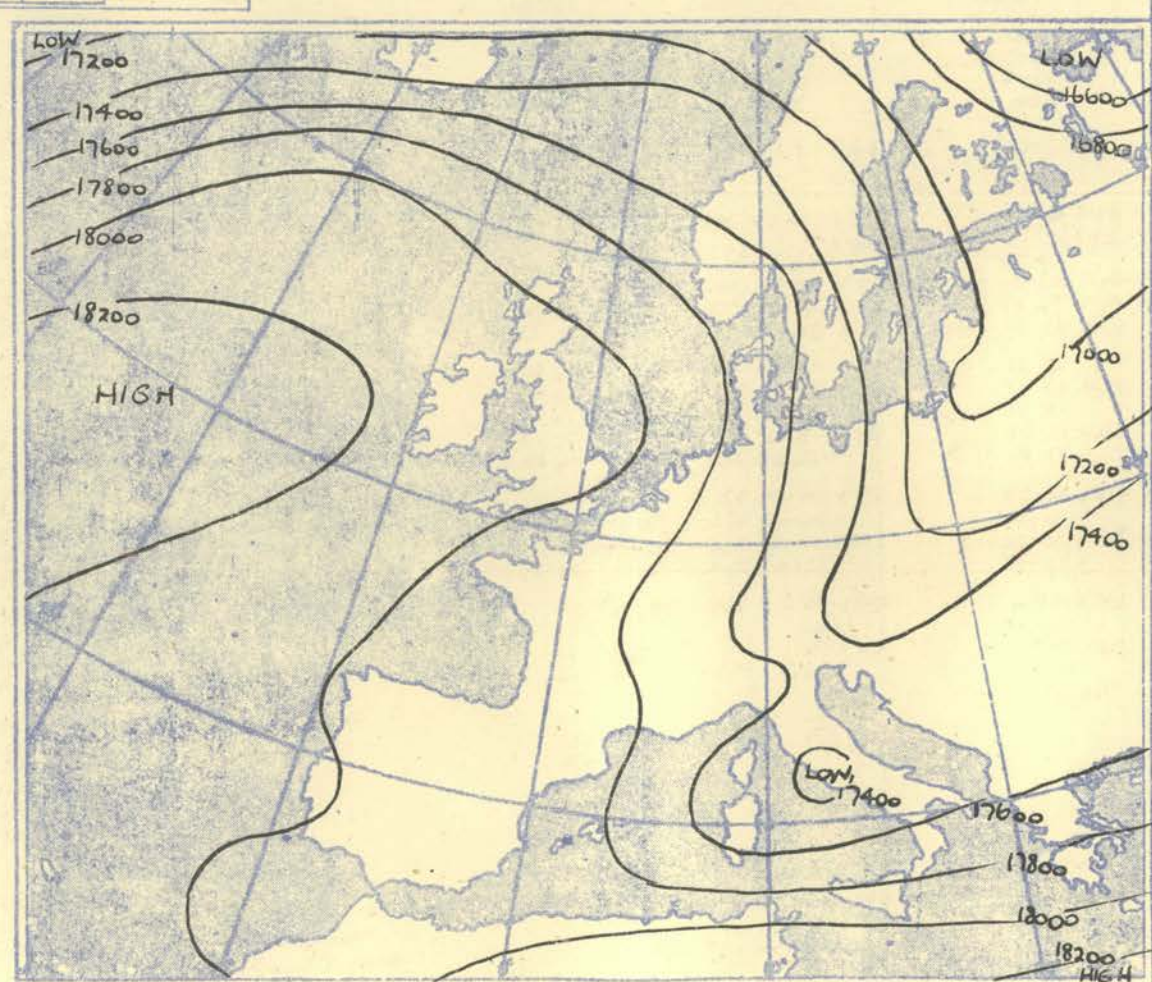
100 80 60 40 20 10 0 knots



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 800-1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

[illegible]

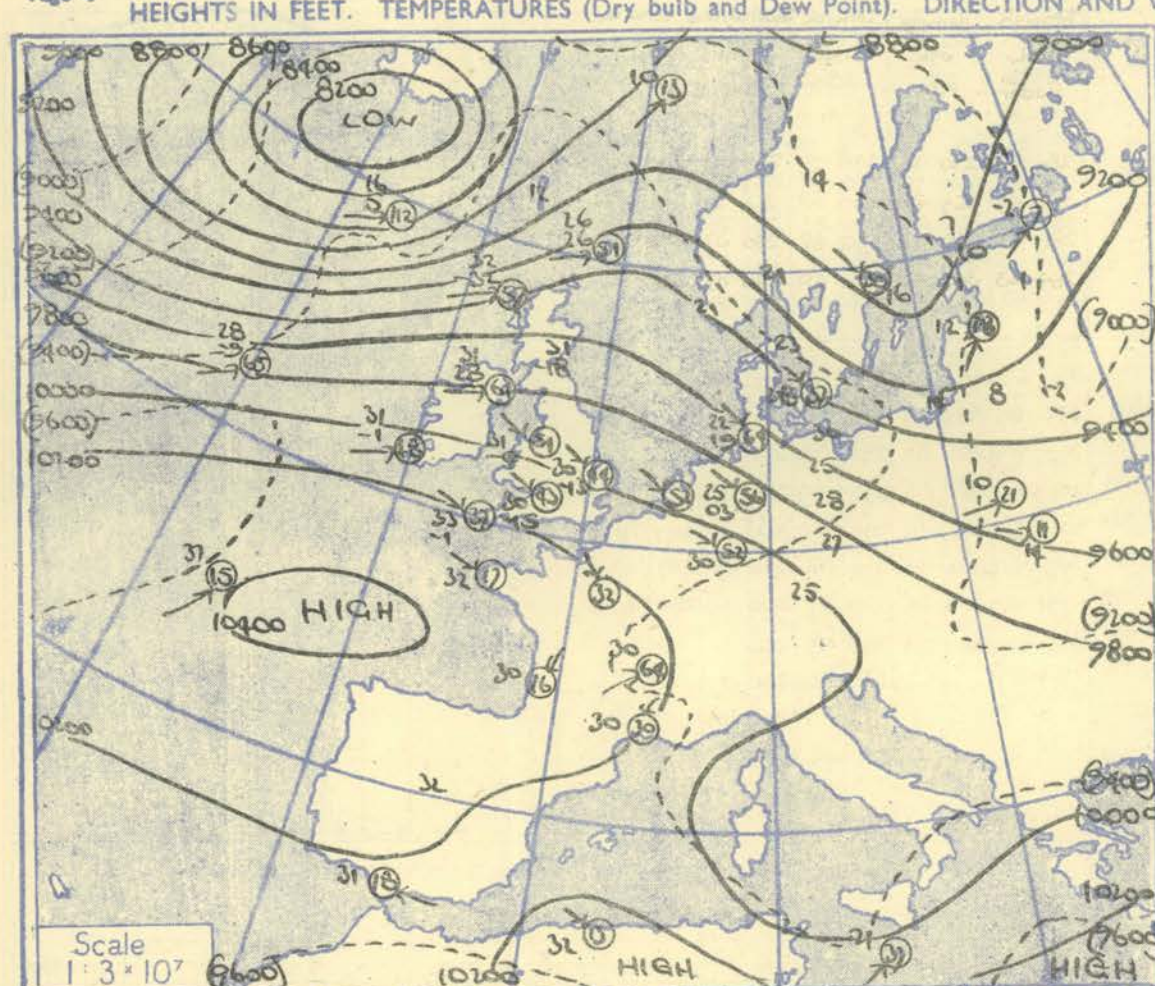
DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

[illegible]

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

Ship	WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				Ship																																																																																																																																																																																																																																																																																																																																																																									
Lat/Long	59.0 N 16.5 W.				59.0 N 16.3 W.				59.1 N 16.1 W.				59.1 N 16.1 W.				52.4 N 20.4 W.				52.2 N 20.5 W.				52.2 N 20.2 W.				52.2 N 20.3 W.												Lat/Long																																																																																																																																																																																																																																																																																																																																																																													
Pressure Time M.S.L. Surf Freezing	03h. G.M.T. 990 mb 990 mb 780 mb				09h. G.M.T. 977 mb 977 mb 650 mb				15h. G.M.T. 969 mb 969 mb 870 mb				21h. G.M.T. 979 mb 979 mb 880 mb				03h. G.M.T. 1005 mb 1005 mb 700 mb				09h. G.M.T. 1004 mb 1004 mb 710 mb				15h. G.M.T. 1011 mb 1011 mb 880 + 760 mb				21h. G.M.T. 1014 mb 1014 mb 910 mb				G.M.T. mb mb mb				Time M.S.L. Surf Freezing																																																																																																																																																																																																																																																																																																																																																																																	
	Pressure	Height	Temp.	Dew	Wind	Pressure	Height	Temp.	Dew	Wind	Pressure	Height	Temp.	Dew	Wind	Pressure	Height	Temp.	Dew	Wind	Pressure	Height	Temp.	Dew	Wind	Pressure	Height	Temp.	Dew	Wind	Pressure	Height	Temp.	Dew	Wind	Pressure																																																																																																																																																																																																																																																																																																																																																																																		
	mb	ft./100	°F.	°F.	Dir. Vel. knots	mb	ft./100	°F.	°F.	Dir. Vel. knots	mb	ft./100	°F.	°F.	Dir. Vel. knots	mb	ft./100	°F.	°F.	Dir. Vel. knots	mb	ft./100	°F.	°F.	Dir. Vel. knots	mb	ft./100	°F.	°F.	Dir. Vel. knots	mb	ft./100	°F.	°F.	Dir. Vel. knots	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																																																																																																																																																																																																																																																																																																																																																																											
	-02.7	50	49	210	25	-06.2	51	49	210	40	-08.4	45	42	230	68	-05.7	46	37	260	60	01.5	53	53	210	66	01.1	53	52	240	40	03.1	51	48	270	35	03.7	49	40	270	28	Surf																																																																																																																																																																																																																																																																																																																																																																													
		47	46	223	45		49	48	205	54		43	39	226	74		42	34	260	66		48	48	211	70		50	49	232	52		41	38	273	29		46	37	274	23	1000																																																																																																																																																																																																																																																																																																																																																																													
	25.8	44	44	228	47	22.5	45	44	211	62	19.9	37	31	227	97	22.6	35	29	260	66	30.1	46	46	220	70	29.7	46	46	238	59	31.4	34	34	276	35	31.7	30	25	270	31	950																																																																																																																																																																																																																																																																																																																																																																													
		40	39	232	43		39	38	218	63		30	26	230	99		28	24	256	72		46	46	232	60		39	37	245	61		29	29	274	30		22	18	268	36	900																																																																																																																																																																																																																																																																																																																																																																													
	57.3	34	33	230	44	54.0	44	32	228	64	50.8	24	19	231	107	53.3	21	17	251	76	61.9	42	42	234	63	61.3	37	28	238	57	62.4	35	07	266	45	62.1	20	02	268	44	850																																																																																																																																																																																																																																																																																																																																																																													
		30	29	232	45		47	36	236	66		22	12	237	104		18	08	247	78		37	37	232	62		35	16	239	60		31	03	251	40		24	37	251	55	750																																																																																																																																																																																																																																																																																																																																																																													
	92.2	27	26	245	48	90.0	41	06	243	67	185.0	16	05	252	112	87.3	10	02	244	77	97.4	32	32	230	62	96.5	31	01	243	62	97.4	28	09	247	65	96.5	22	26	236	49	700																																																																																																																																																																																																																																																																																																																																																																													
		24	23	255	53		33	14	244	69		11	12	222	114		03	08	248	69		28	28	227	61		25	13	243	68		21	06	234	62		16	19	226	76	650																																																																																																																																																																																																																																																																																																																																																																													
	132.1	20	19	253	57	130.4	23	26	233	65	223.7	07	24	239	108	125.4	04	13	254	64	137.5	21	20	222	64	136.3	19	25	239	72	136.9	13	08	236	78	135.6	09	22	228	75	600																																																																																																																																																																																																																																																																																																																																																																													
		16	13	254	61		11	35	229	67		02	33	238	108		10	21	257	66		14	12	220	65		10	31	238	70		06	19	244	76		00	04	241	74	550																																																																																																																																																																																																																																																																																																																																																																													
	178.3	07	02	268	71	176.2	00	44	232	67	168.8	05	40	238	124	169.4	18	33	253	64	183.7	06	04	226	70	182.1	04	52	225	53	182.1	07	22	250	53	180.4	06	22	245	82	500																																																																																																																																																																																																																																																																																																																																																																													
		01	07	276	74		11	53	233	69		10	45	231	144		24	41	248	65		06	07	229	69		07	50	214	80		10	17	251	92		12	21	240	93	450																																																																																																																																																																																																																																																																																																																																																																													
	232.7	13	19	266	75	229.6	23	56	232	83	221.9	20	54	234	134	220.9	32	52	243	70	237.8	16	24	237	81	235.9	17	57	227	75	235.5	19	23	227	112	233.6	21	28	233	108	400																																																																																																																																																																																																																																																																																																																																																																													
		26	23	257	85		33	60	235	98		32	59	232	132		37	55	245	67	(670mb)	25					30.7	45	233	95	301.2	20		236	120	298.8	50	241	126	300																																																																																																																																																																																																																																																																																																																																																																														
	299.0	41		249	98	294.8	47		238	105	287.5	43		231	126	285.7	44		245	75		Inversion					30.7	45	233	95	301.2	20		236	120	298.8	50	241	126	250																																																																																																																																																																																																																																																																																																																																																																														
		58		252	109		64		239	111		51		204	120		51		241	89		910mb	45°-876mb	47°			64	230	78	260mb	62					67	241	135	200																																																																																																																																																																																																																																																																																																																																																																															
	385.6	73		250	98	380.3	71		265	88	376.1	55				374.3	52		239	85						387.0	84	225	88						87	249	118	170																																																																																																																																																																																																																																																																																																																																																																																
		73		247	73		70		265	74		58					54		234	73							85	224	81						76	253	102																																																																																																																																																																																																																																																																																																																																																																																	
		71		245	62		71		257	64		58					56		237	71						(53mb)	84									87	242	75	150																																																																																																																																																																																																																																																																																																																																																																															
		69					70		263	55		63					59		242	58																77	240	69	130																																																																																																																																																																																																																																																																																																																																																																															
		70					69		260	48		67					63		245	54																74	243	51	110																																																																																																																																																																																																																																																																																																																																																																															
	529.6	71				524.3	69		250	46	523.3	69				522.8	65		245	48																					100																																																																																																																																																																																																																																																																																																																																																																													
		69					73		241	43	(92mb)	67					66		245	48																					90																																																																																																																																																																																																																																																																																																																																																																													
		70															67																									80																																																																																																																																																																																																																																																																																																																																																																												
		71															82																									70																																																																																																																																																																																																																																																																																																																																																																												
																																											60																																																																																																																																																																																																																																																																																																																																																																											

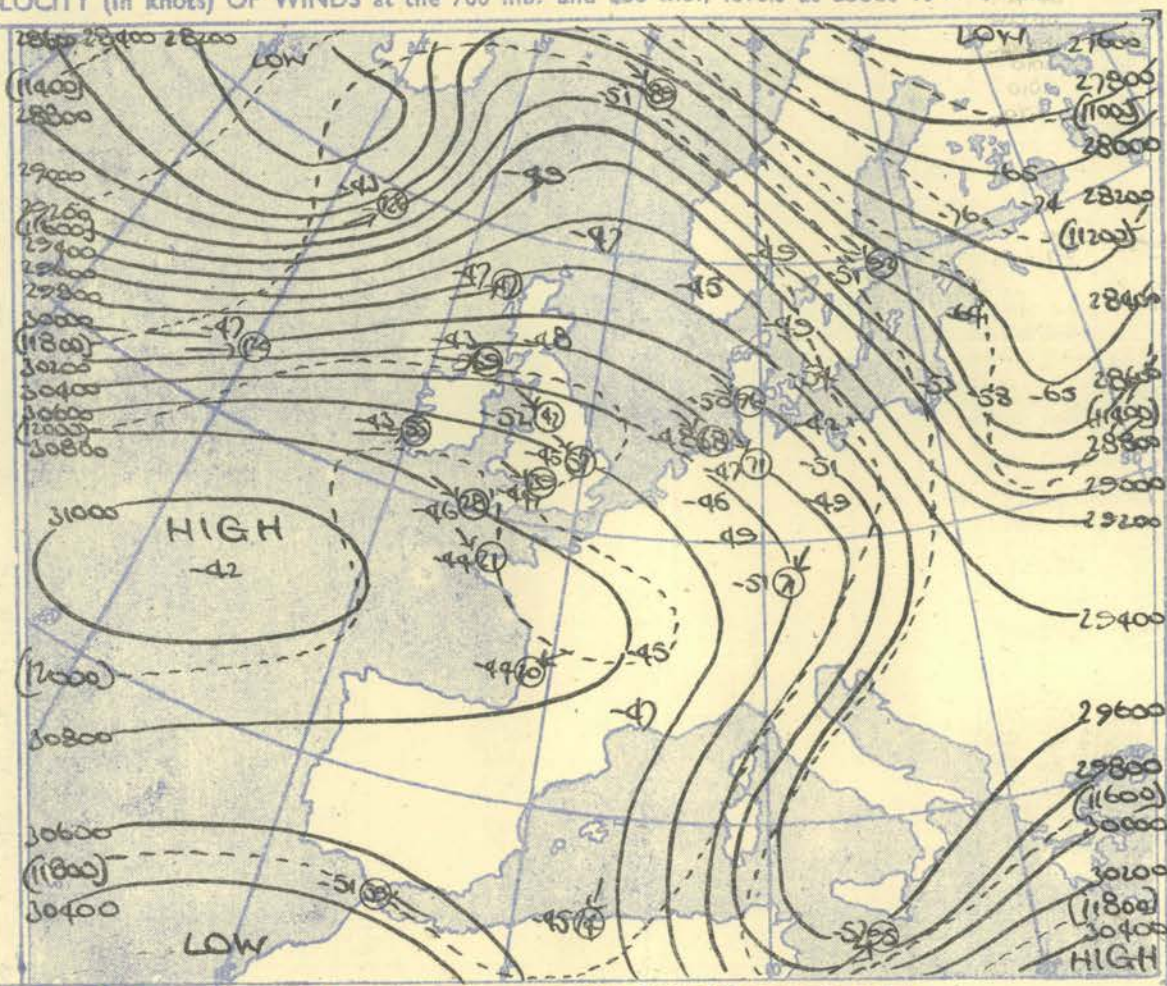
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h G.M.T.



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.

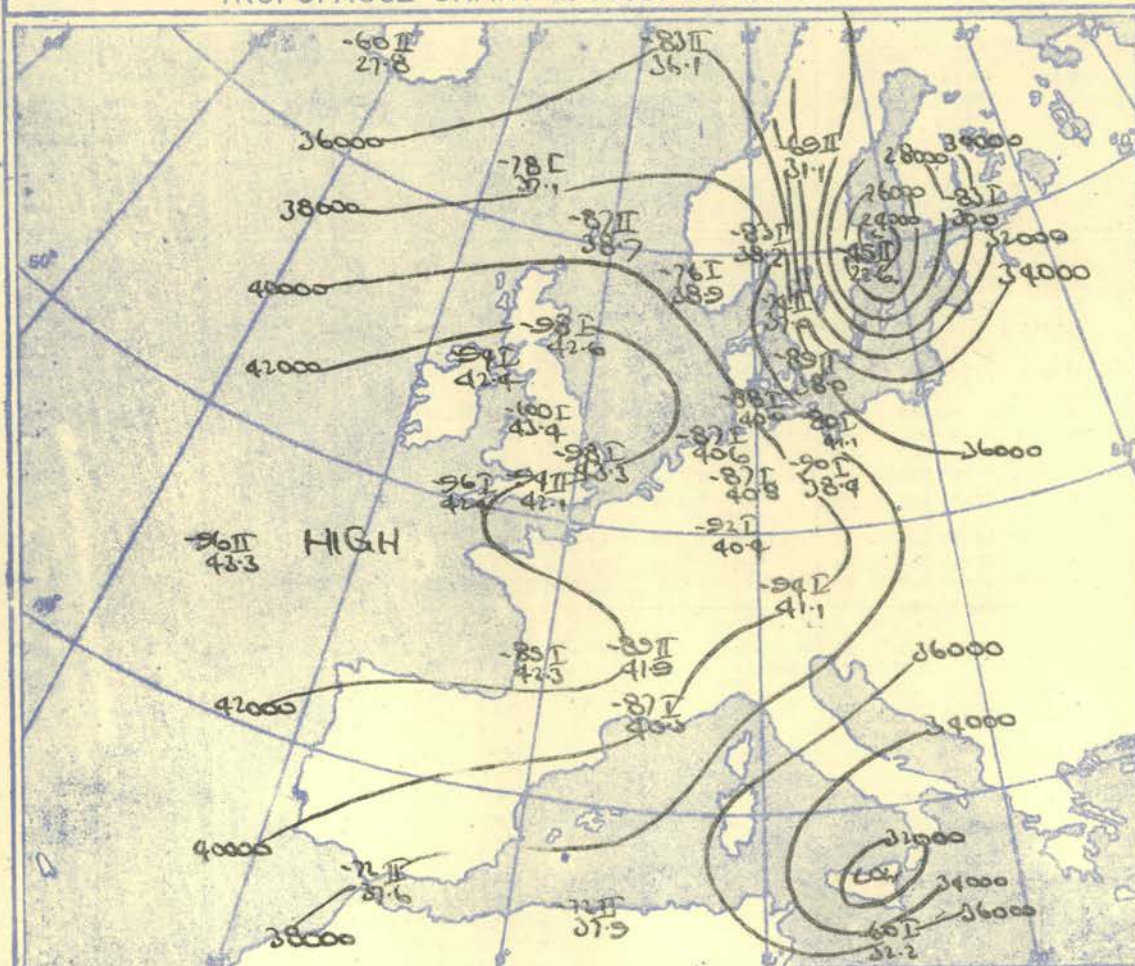
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. $52\frac{1}{2}^\circ$ N.

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 500-300 mb.

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



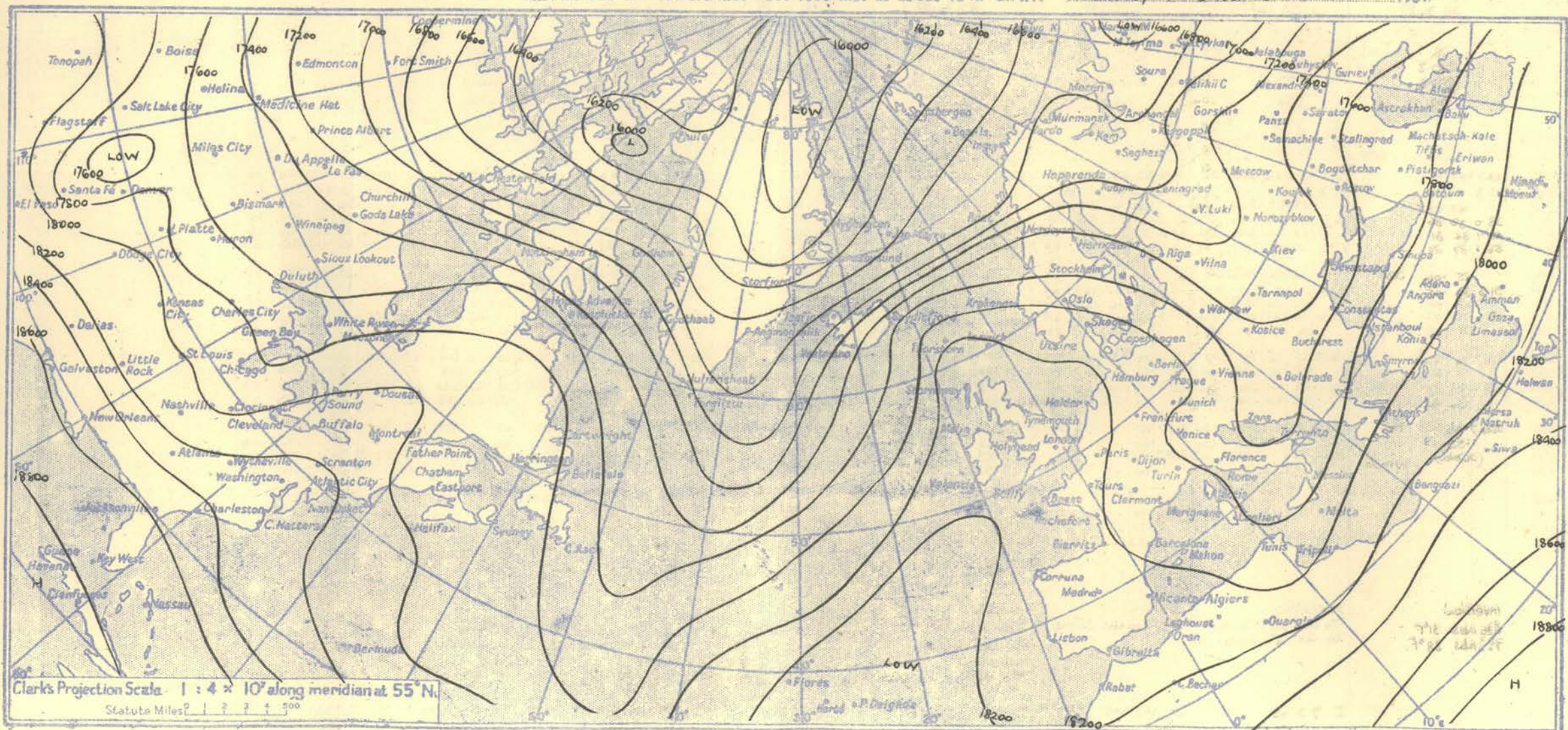
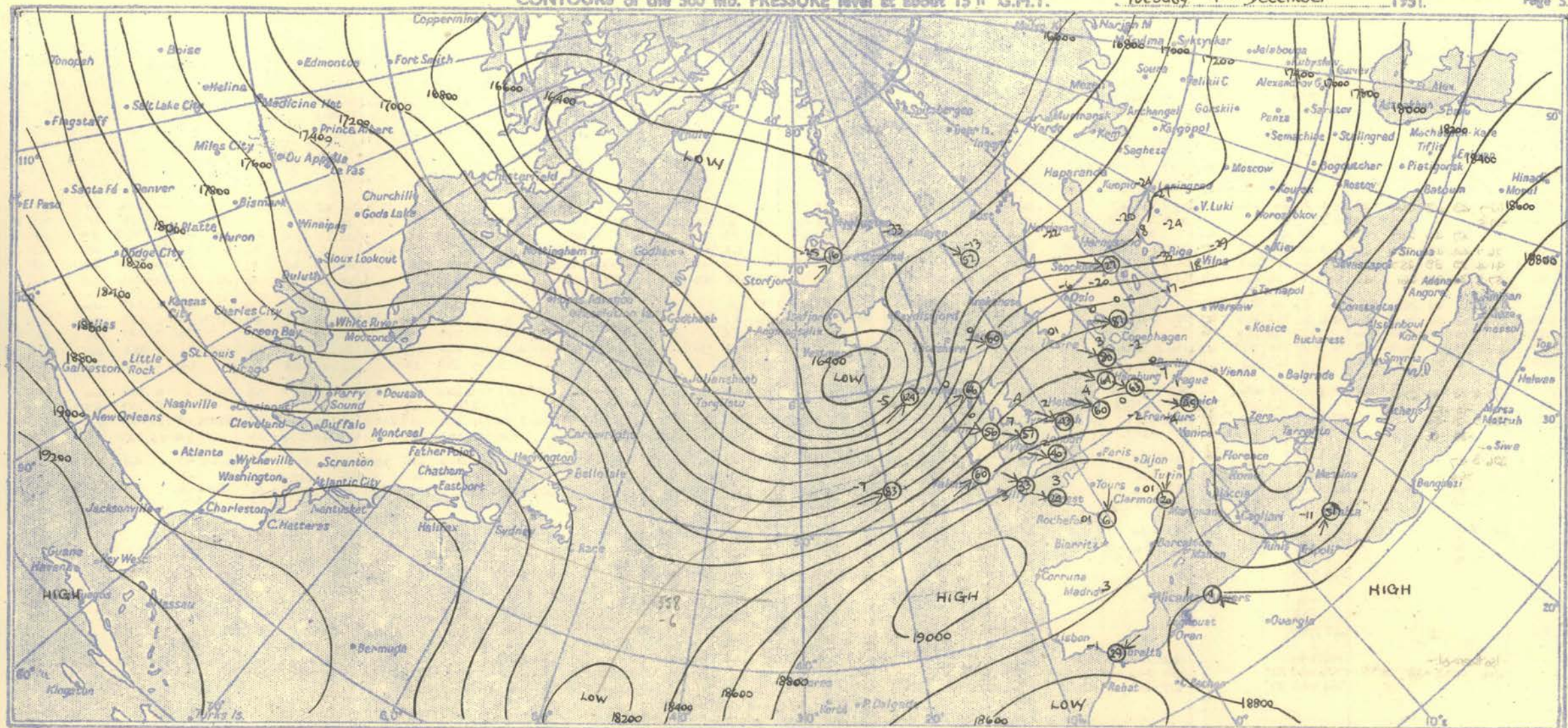
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Rapid deepening of the surface depression near Iceland in association with the Eastward penetration of cold air South of the Centre - note the cooling at the weather vessels in longitude $15-20^\circ$ W.

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

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



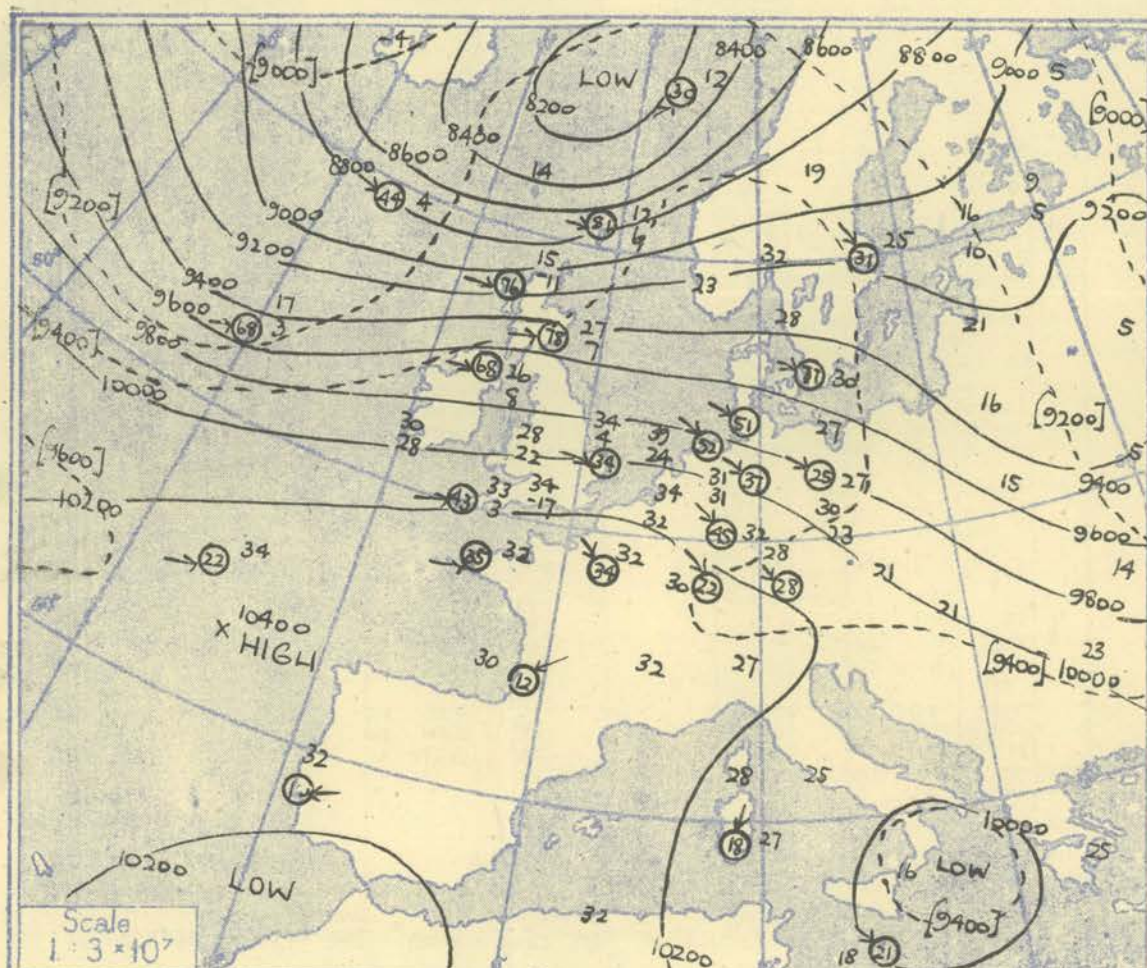
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				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											
	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												
Surf	777				702				720				708				718				720				713				660			1018.5	1017	Surf										
1000	02.7	49	49	260	00.4	54	50	240	00.2	53	47		02.5	51	47	210	20	00.6	53	45	240	14	00.4	50	44	250	20	04.4	50	43	270	20	02.9	50	45	255	20	1000						
950	02.8	47	46	247	01.9	50	47	237	00.9	53	47		02.6	46	43	247	50	04.1	52	44	240	33	04.6	48	43	258	33	05.9	49	42		07.0	48	43		31	950							
900		47	46	247		50	47	237		53	47	44			47	39	255			47	39	255	38		48	40	273	38		44	39	270	33		42	239	46	900						
850	26.1	44	44	252	26.8	45	43	238	29.5	41	43	40	31.1	43	41	256	55	32.7	41	35	265	43	32.9	39	34	288	45	34.3	38	34	273	33	35.3	35	32	260	33	32.5	41	35	255	42	850	
800	41.4	39	39	252	42.1	40	39	243	44.8	38	37	64	46.4	43	40	259	59	47.9	43	28	275	44	48.1	44	21	283	45	49.7	47	15	275	31	50.5	40	33	267	37	42	36	253	34	800		
	57.5	34	34	261	58.3	33	25	253	61.0	39	36		62.7	42	39	261	57	64.2	40	10	277	45	64.6	40	07	288	42	66.0	42	07	278	30	66.7	35	21	273	40	65.0	37	32	246	39	750	
750		30	30	258		37	30	256		35	34			37	34	265	58		35	01	277	48		35	08	289	43		37	03	283	35		36	1	267	38		35	24	249	46	700	
700	22.4	26	26	261	23.6	32	32	256	29.6	31	28	25	29.8	26	23	261	56	29.4	31	24	280	51	29.8	27	13	273	44	30.8	30	15	286	43	31.0	33	1	273	37	30.3	31	1	253	48	650	
650		20	20	270		27	27	258		25	13			26	23	261			27	15	282	54		29	07	298	41		30	04	281	36		30	04	281	36		26	7	251	51	600	
600	31.8	15	5	269	33.6	20	40	249	36.3	21	1	136.3	38.2	20	16	269	57	39.3	20	04	282	59	39.6	19	02	290	41	41.4	22	13	295	39	42.0	21	1	286	33	42.0	21	2	258	61	550	
550		10	28	278		11	47	252		14	16			13	07	286	66		14	05	281	60		08	05	287	42		12	07	293	39		12	10	288	33		14	1	261	32	500	
500	177.4	00	40	276	179.3	00	55	256	182.3	04	33		184.2	06	09	276	56	185.3	07	2	278	57	185.2	02	06	293	43	187.3	02	06	284	40	187.8	03	16	287	33	186.3	6	4	258	60	450	
450		10	52			11	53	259		6	48			05	21	266	51		03	15	278	54		03	10	295	41		07	12	287	43		05	20	279	33		4	15	257	55	400	
400	230.9	21	54		232.7	19	59	255	236.1	19			238.3	18	24	262	60	239.6	15	29	276	50	239.4	14	21	303	48	241.2	15	21	291	43	241.8	17	28	279	35	240.5	15	29	265	53	350	
350		33	60			31	58	259		31				31	37	263	71		29	46	275	50		29	35	305	50		28	36	296	42		28	40	277	36		28	42	235	49	300	
300	296.3	47			298.3	47		259	301.7	48			304.1	43		264	69	305.7	42		286	42	305.4	45		301	57	307.2	44		293	39	307.7	46		277	28	306.5	43		260	55	250	
250		64				65		260		64				60		267	70		60		290	46		62		299	56		63		303	38		65		284	22		62		260	55	200	
200	381.6	81			383.5	81		255	387.0	83			390.1	82		264	72	391.8	80		288	43	391.0	82		309	61	392.6	84		326	36	392.8	84		327	20		392.4	80		260	55	150
170		79				79		255		75				74		268	70		75		291	45		76		296	61		74		317	39		76		312	24		76		260	55	100	
150	439.9	78			441.9	74		255	443.4	94			447.2	82		265	56		86		293	46	447.4	88					449.3	89		307	35		89		302	29		89		260	55	80
130		78				74		255		86				75		266	48		89		290	52			83					81		286	25		88		291	28		88		260	55	70
110		78				76								78		268	27		82		298	46			85					85		311	38		86		300	20		86		260	55	60
100					525.1	78							529.8	81		268	27	528.9	79		300	34</																						

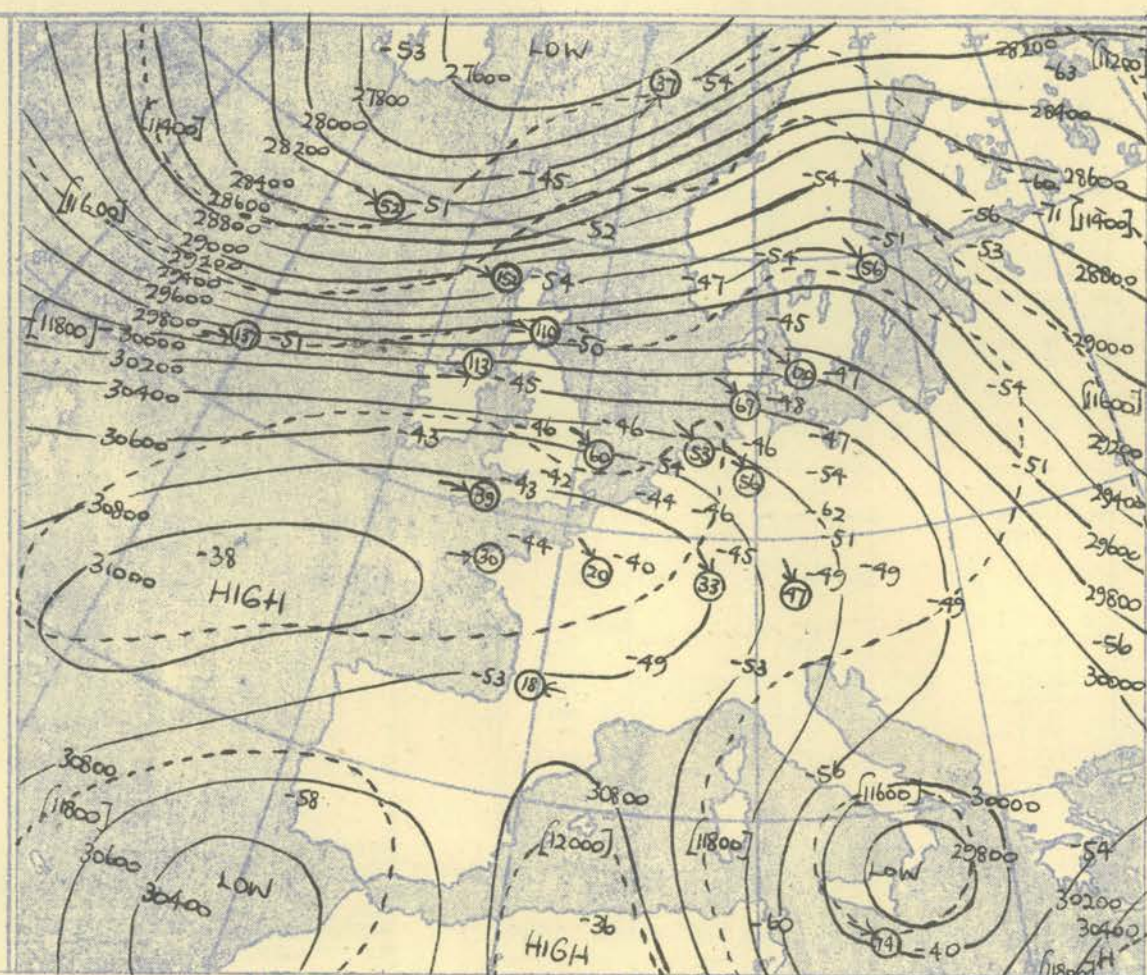
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

[illegible]

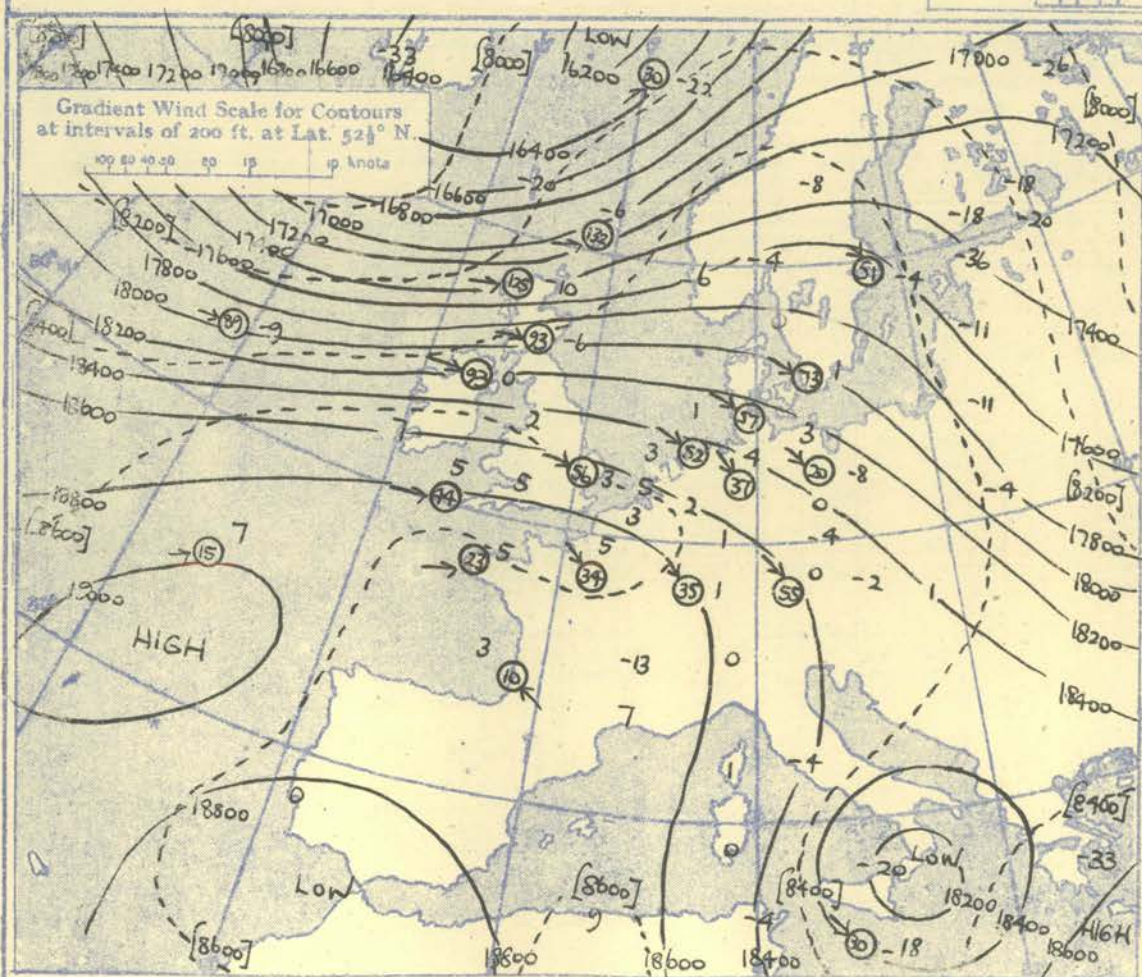
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb, 500 mb, and 300 mb, levels at about 03h G.M.T.



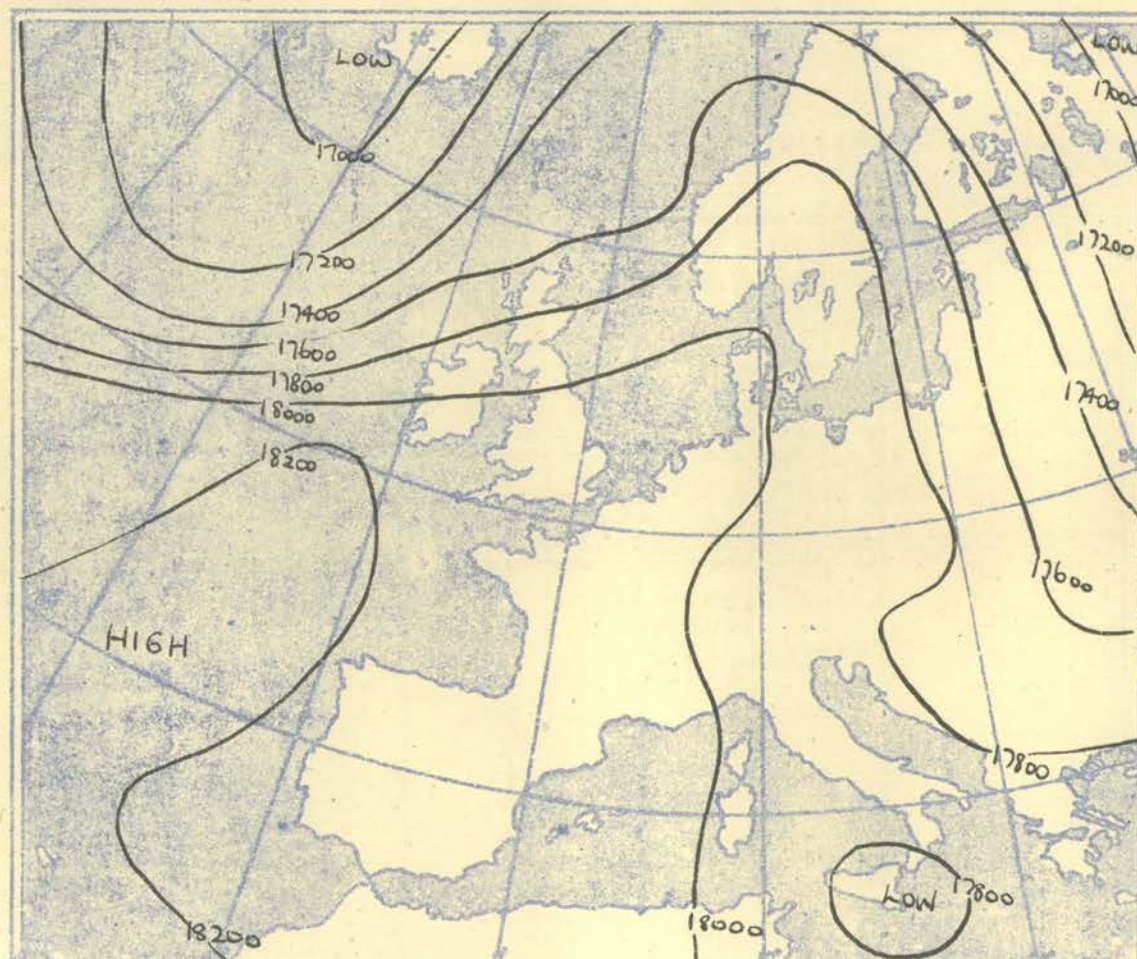
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.



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



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



Isopleths of Thickness 500-1000mb.

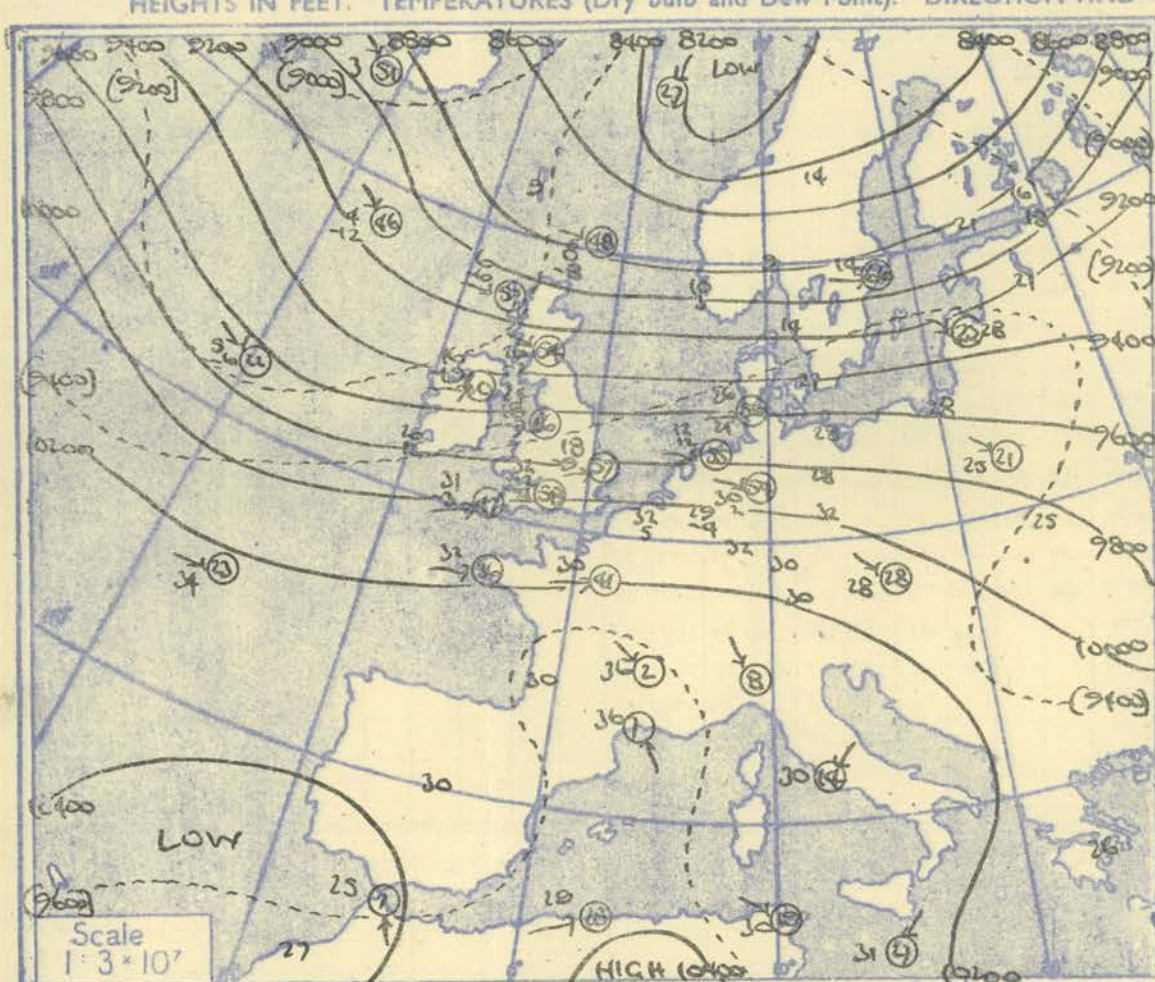
DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

NEPHOSCOPE OBSERVATIONS

NONE REPORTED

Ship	WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER RECORDER				WEATHER RECORDER				WEATHER RECORDER				WEATHER RECORDER				Ship								
Lat/Long	58.9 N 16.3 W.				59.0 N 16.5 W.				58.9 N 16.2 W.				58.8 N 16.1 W.				52.1 N 20.5 W				52.3 N 20.3 W.				52.4 N 20.4 W.				52.3 N 20.1 W				Lat/Long								
Pressure	Time	034. G.M.T.			094. G.M.T.	154. G.M.T.			214. G.M.T.	034. G.M.T.			094. G.M.T.	094. G.M.T.			1016 G.M.T.	094. G.M.T.			1018 G.M.T.	154. G.M.T.			214. G.M.T.	094. G.M.T.			Pressure												
	M.S.L.	mb			mb	mb			mb	mb			mb	mb			mb	mb			mb	mb			mb	mb				M.S.L.											
	Surf	987			994	999			1004	1016			1016	1016			1016	1016			1018	1018			1020	1020				Surf											
	Freezing	910			930	940			940	920			934	920			920	920			920	920			920	920				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	1000	44	41	295	40	42	32	300	33	40	32	290	33	41	27	290	18	48	33	290	29	45	33	300	28	46	40	300	25	44	39	290	20								
850	24.5	38		283	39	35	27	304	30	34	28	302	39	33	22	296	21	44	30	288	21	44	30	298	24	43	37	295	24	42	37	295	25								
900	24.5	30		285	42	26	27	303	30	27	26	302	42	28	14	292	27	35	25	285	28	34	21	290	26	36	30	293	24	35	31	293	26								
850	23	23		283	46	20	17	301	32	19	12	303	42	26	19	292	30	29	20	280	32	28	18	282	30	32	29	23	288	27	33	29	25	293	28						
800	57.9	17		282	46	56	13	09	298	36	57	8	07	303	42	58	9	12	02	293	30	62	6	16	06	270	36	62	5	14	03	278	35	63	1	17	09	294	25		
750	10			282	46	06	01	292	44	06	00	303	46	09	14	293	31	09	00	267	46	07	09	281	36	12	04	294	22	11	06	283	29								
700	88.3	04		282	44	89	7	01	286	44	91	0	72	300	46	92	2	04	25	290	34	96	3	17	03	243	68	95	9	05	17	278	39	96	6	05	06	289	22		
650	04			280	45	08	15	279	43	02	20	300	44	02	28	283	35	13	05	241	72	06	24	272	50	02	13	282	30	01	10	275	28								
600	25.7	73		263	48	126	9	16	22	277	23	128	6	09	19	302	47	129	8	08	27	275	38	135	1	06	25	246	80	134	0	02	23	271	39	134	9	04	20	280	33
550	22			258	51	25	33	273	45	15	22	309	44	17	32	257	44	02	23	236	87	09	39	261	68	11	35	261	39	12	31	286	36								
500	168.3	32		255	52	169	2	32	43	268	49	171	9	21	28	309	44	172	9	25	38	260	39	179	6	09	24	238	89	177	9	14	44	262	100	178	1	21	43	269	38
450	38			264	48	20	40	263	50	30	38	312	42	36	48	256	43	16	39	242	111	19	50	246	105	31	51	277	40	26	45	305	56								
400	218.4	23		273	49	220	1	27	42	223	0	21	318	44	223	4	253	43	232	4	24	237	108	230	2	28	56	338	116	239	1	38	57	264	39	239	9	33	51	302	46
350	245			272	48	251		270	38	253		313	44	256		254	43	36	48	241	122	37	60	237	133	43		253	69	42		312	63								
300	282.0	51		266	52	283	1	51	267	50	285	2	66	310	41	285	3	63		240	44	297	4	51		238	144	293	8	51		250	69	294	0	51		320	66		
250	51			262	60	50		265	48	52		289	36	55		259	40	66		246	139	64		246	138	53		238	75	56		307	57								
200	370.0	54		240	69	371	6	51	264	53	370	0	50	277	42	372	6	52		282	43	382	3	75		237	410	380	7	55		264	60	381	5	55		279	42		
170	58			255	59	53		253	51	53		270	46	52		289	40	73								58		249	57												
150	431.7	61		258	63	434	0	55	257	41	54		247	56	56		288	40	441	4	72																				
130	62			264	51	57		266	40	54		267	43	57		298	36	440	6	73																					
110	64			266	48	61		270	48	60				59		298	38																								
100	517.5	65		266	42	520	7	61	280	43	521	9	60	299	37	860	6	850	6	23																					
80	66			266	40	61		289	36	61				61		305	31	750	6	733	6	09																			
80	(82mb)	69				(84mb)	61																																		
70	Inversion				Inversion				Inversion				Inversion				Inversion				Inversion				Inversion				Inversion												
60	483mb-35°-470mb-34°				503mb-38°-468mb-27°				530mb-512mb-09°				618mb-08°-605mb-07°				733mb-9°-700mb-17°																								
Tropopause	I 418 mb -45° 20,800'				I 340 mb -53° 25,600'				I 298 mb -67° 28,700'				I 307 mb -64° 28,100'				I 177 mb -79° 40,700'				NR. 216 mb -68° 36,500'				III 320 mb -50° 28,000'				II 288 mb -54° 30,200'				Tropopause								

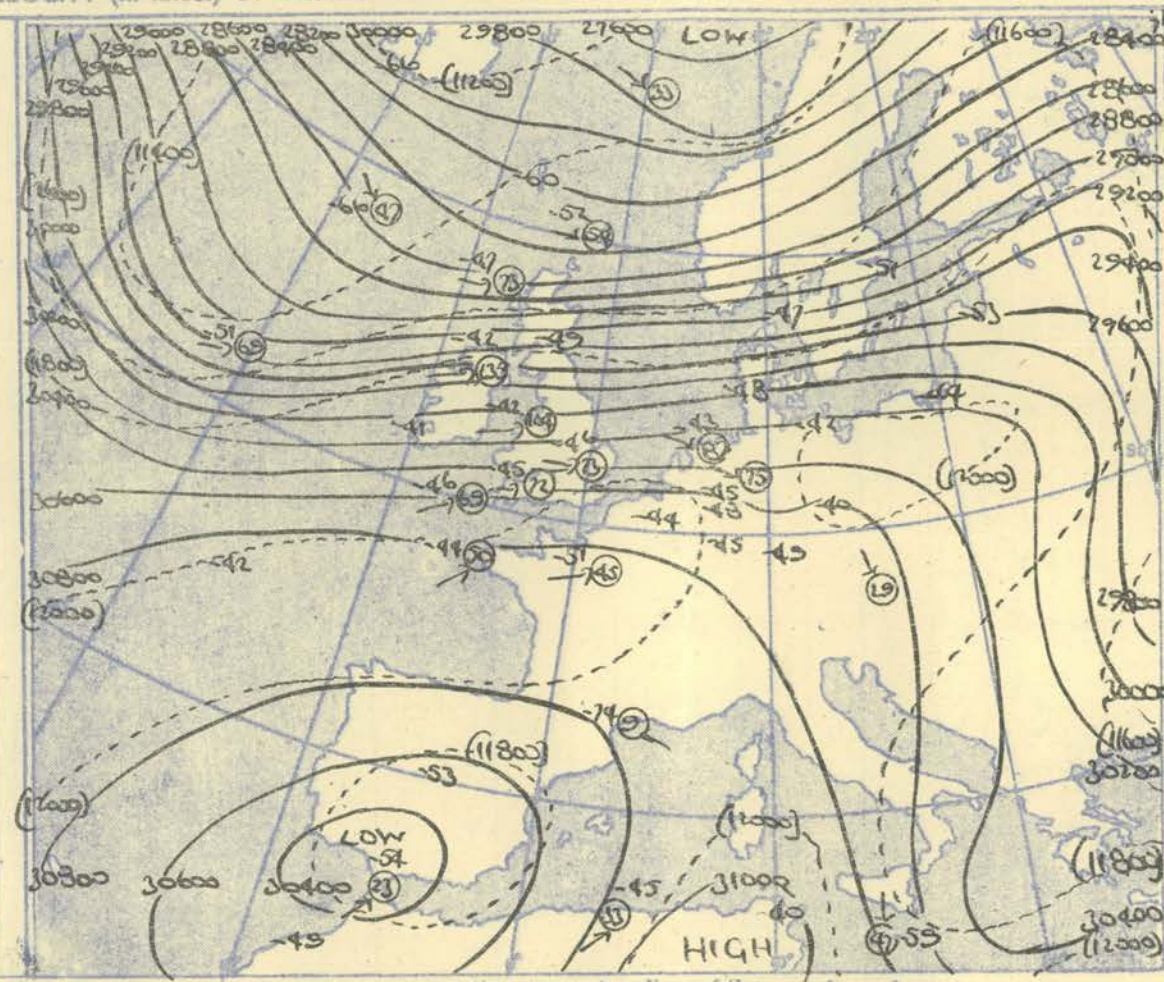
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 800 mb. levels at about 15 h G.M.T.



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.

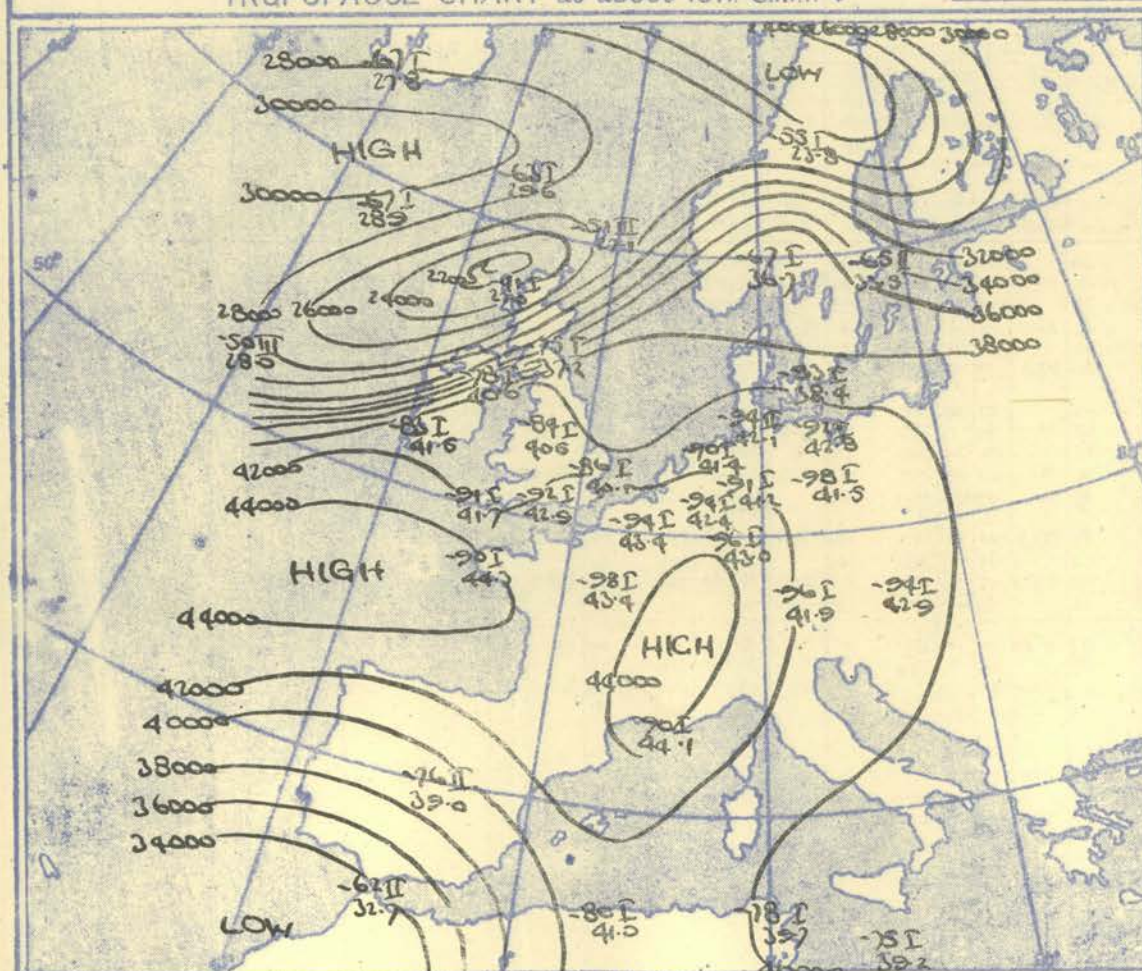
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. $52\frac{1}{2}^\circ$ N

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 500-300 mb.

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



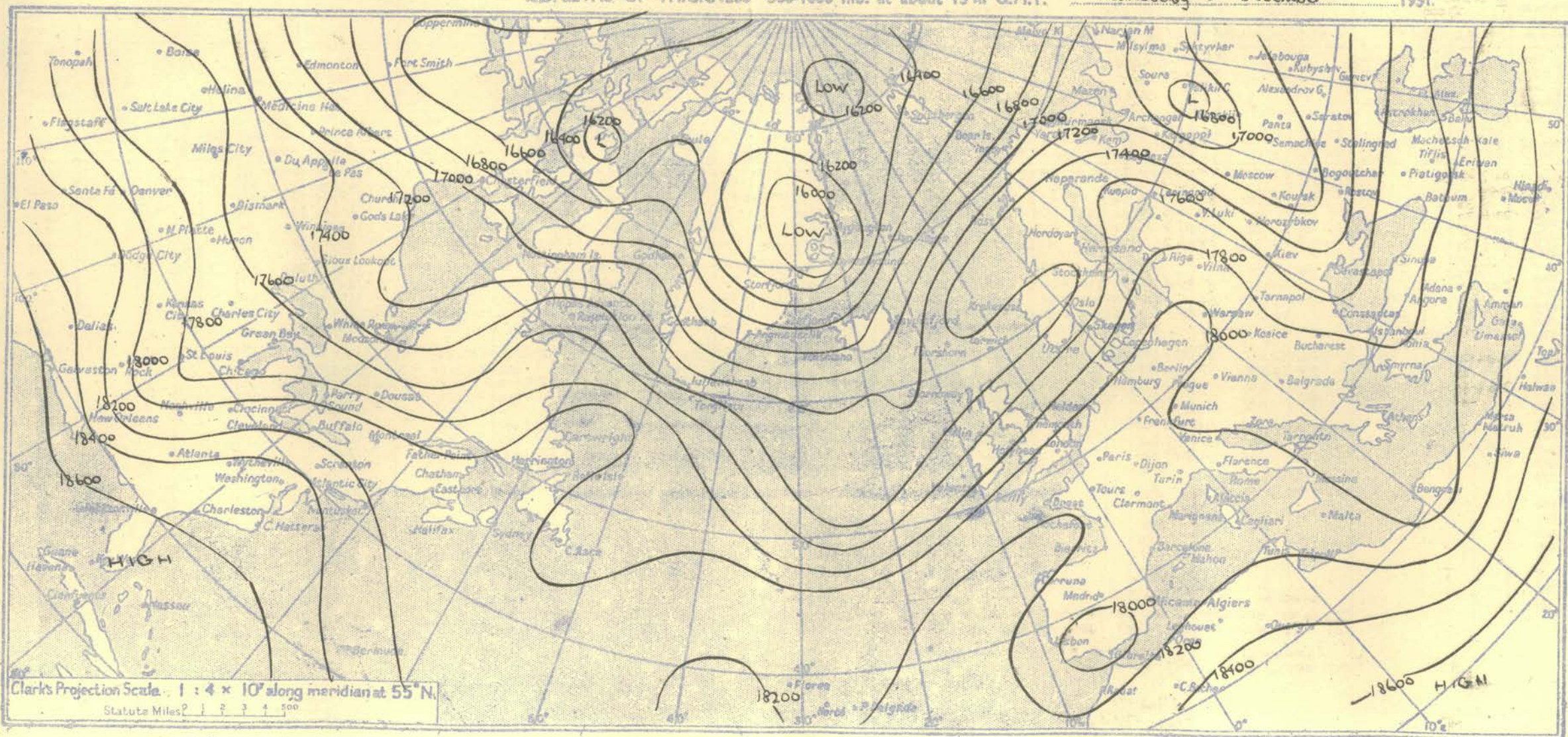
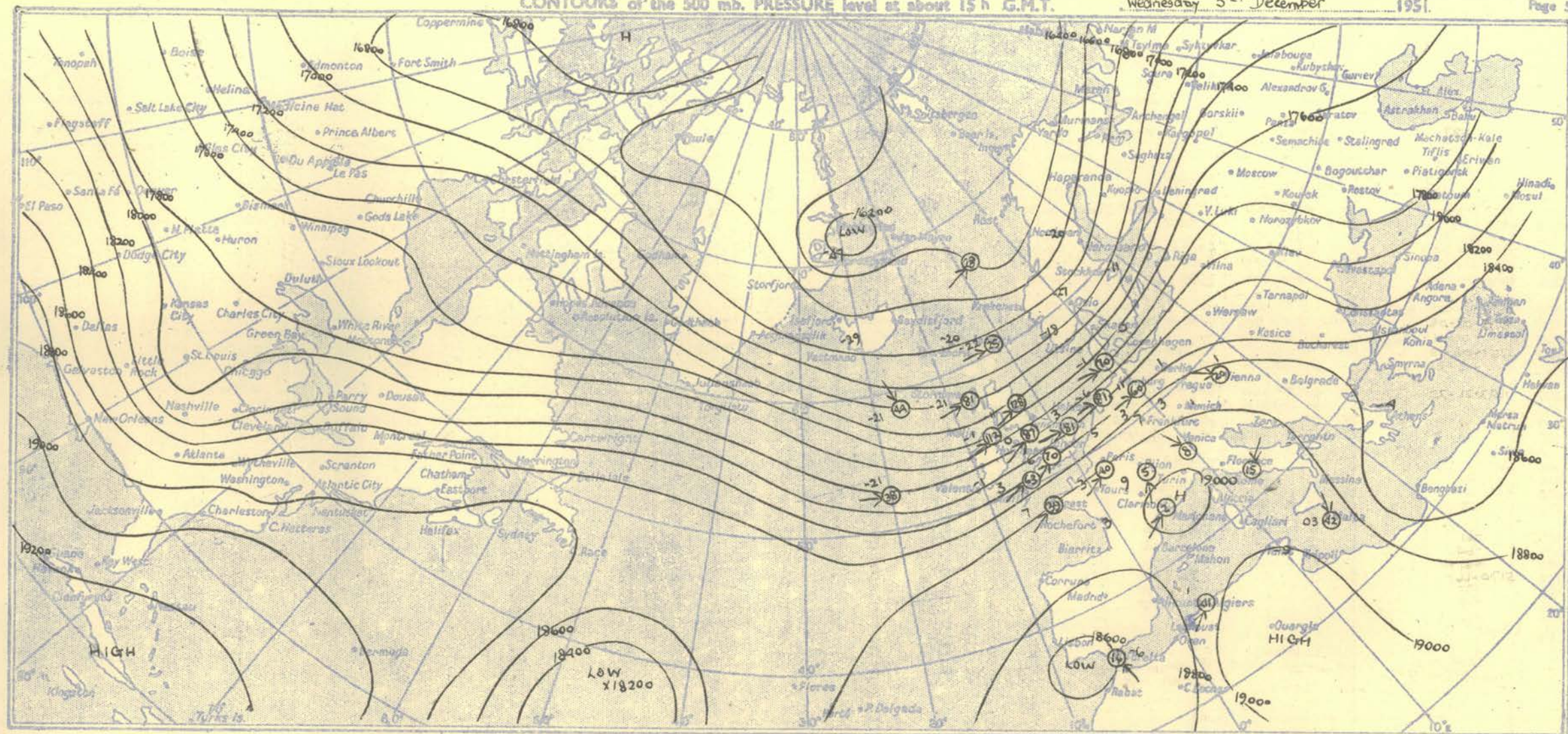
Contour lines of Height of Tropopause.
Temperatures of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Fairly rapid eastward movement of the upper cold trough towards British Isles - Strong Westerly thermal gradient over southern Greenland being maintained by fresh advection of warm air from Eastern Canada.

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

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



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

STATION	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	HEMSBY	LARKHILL	CAMBORNE	VALENTIA	STATION
Time M.S.L.	15L 980.7	15L 995.9	15L 1001.4	15L 1008.4	15L 1010.9	15L 1012.1	15L 1017.7	15L 1019.0	15L 1014.4	Time M.S.L.
Surf	970.8	994.2	1000.5	999.1	1008.9	1010.6	1001.6	1008.3	885	Surf
Pressure	987	929	902	895	890	727	762	710		Pressure
Temp.	15L	15L	15L	15L	15L	15L	15L	15L	15L	Temp.
Wind	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Wind
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
Surf	02.7 42 31	00.4 38 34	00.2 44 37	02.5 44 37	00.6 45 41	00.4 52 45	04.4 51 41	02.9 51 43	00.3 47 36	Surf
1000	05.3	01.3	00.3	02.3	03.0	03.3	04.8	05.2	04.2	1000
950	39 28	34 29	37 33	39 33	39 34	44 38	44 36	45 40	45 34	950
900	22.8 34 25	26.5 29 23	39 28.4	32 28	33 26	31.1 33 25	39 37	38 32	32.3 34 28	900
850	37.8 28 07	41.3 24 16	30 43.3	27 24	45 45.3	26 17	43 46.0	31 26	47 47.9	850
800	53.4 21 11	56.9 18 11	45 59.1	22 14	45 61.0	20 12	46 62.0	27 22	49 63.1	800
750	13 00	12 03	15 06	15 13	15 13	26 20	25 13	26 00	25 13	750
700	08.08	06.06	07.02	07.02	06.07	24 18	26 18	26 18	26 18	700
650	01.11	02.08	00.09	00.09	00.09	25 13	25 13	25 13	25 13	650
600	08.15	10.14	02.14	02.14	03.07	13 06	13 06	13 06	13 06	600
550	15.22	19.24	07.24	07.24	08.04	04 02	04 02	04 02	04 02	550
500	168.3 22 29	171.1 21 31	175.0 11 30	128 78.8	112 81.4	00 10	252	87 183.9	03 19	500
450	229 37	231 42	263	129	115	09 20	258	95	07 23	450
400	219.5 37 45	222.1 41	261	143 32.4	120 35.0	17 23	252	108 237.7	19 30	400
350	48	45	286	141	120	29 41	250	109	31 38	350
300	282.9 52	285.9 47	254	298.1 42	135 30.0	42	245	104 303.1	46	300
250	56	50	255	57	50	50	50	65	65	250
200	370.2 60	374.3 58	256	384.7 74	387.3 75	75	75	391.4 80	80	200
170	59	57	260	71	75	75	75	90	89	170
150	61	57	263	66	68	73	73	86	87	150
130	64	59	272	48	65	77	77	78	81	130
110	67	63	272	45	69	72	72	79	81	110
100	517.0 66	522.1 65	521.3 72	528.9 72	529.2 72	71	71	530.9 80	82	100
90	70		74	72	72	72	72	79	79	90
80	75		76	73	73	73	73	79	79	80
70	76									70
60										60
Tropopause	318 mb -51° 27.000'	404 mb -41° 22.000'	200 mb -76° 37.200'	180 mb -78° 40.600'	185 mb -84° 40.500'	188 mb -88° 40.100'	165 mb -92° 42.900'	175 mb -91° 41.700'	175 mb -83° 41.500'	Tropopause
STATION	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	HEMSBY	LARKHILL	CAMBORNE	STATION	
Time M.S.L.	21L 983.8	21L 997.8	21L 1002.8	21L 1009.4	21L 1010.8	21L 1012.0	21L 1014.8	21L 1016.0	21L 1014.4	Time M.S.L.
Surf	973.9	996.2	1001.9	1000	1008.8	1010.3	998.7	1005.4		Surf
Pressure	900	912	927	920	898	780	770	785		Pressure
Temp.	15L	15L	15L	15L	15L	15L	15L	15L	15L	Temp.
Wind	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Wind
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
Surf	01.7 41 36	00.4 38 30	00.2 39 33	02.5 39 35	00.6 46 40	00.4 46 45	04.4 49 43	02.9 49 43	00.3 47 36	Surf
1000	04.4	00.6	00.7	02.5	02.9	03.2	04.8	05.2	04.2	1000
950	38	37	35	35	35	42	44	45	45	950
900	23.6 32	27.3 30	39 28.5	29 24	35 30.4	32 28	24 31.5	38 38	32.7 40 40	900
850	38.5 27	42.1 24	41 43.3	23 18	45 45.3	23 19	28 46.5	34 34	47 47.9	850
800	54.2 21	57.7 17	40 58.9	17 13	48 60.8	17 10	40 61.3	10 14	49 63.1	800
750	15	10	11	04	12	01	275	48	21 31	750
700	08	02	04	10	04	06	07	272	49 54	700
650	01	04	18	263	50	01	10	267	53	650
600	05	11	20	332	22	29.9	12 25	264	57 32.4	600
550	12	19	26	334	26	13 39	262	75	06 29	550
500	169.4 21	171.5 16	307	29 73.1	15 30	254	81 178.5	06 14	249	500
450	28	34	296	33	28 56	253	111	24 40	250	450
400	220.8 35	222.3 41	285	42 214.7	32 59	250	135 228.4	28 43	240	400
350	44	48	274	51	41	263	149	47	240	350
300	285.7 50	285.9 47	254	298.1 42	135 30.0	42	245	104 303.1	46	300
250	52	50	255	57	50	50	50	65	65	250
200	373.9 53	374.3 58	256	384.7 74	387.3 75	75	75	391.4 80	80	200
170			260	71	75	75	75	90	89	170
150			263	66	68	73	73	86	87	150
130			272	48	65	77	77	78	81	130
110			272	45	69	72	72	79	81	110
100			521.3 72	528.9 72	529.2 72	71	71	530.9 80	82	100
90			74	72	72	72	72	79	79	90
80			76	73	73	73	73	79	79	80
70										70
60										60
Tropopause	318 mb -51° 27.000'	404 mb -41° 22.000'	200 mb -76° 37.200'	180 mb -78° 40.600'	185 mb -84° 40.500'	188 mb -88° 40.100'	165 mb -92° 42.900'	175 mb -91° 41.700'	175 mb -83° 41.500'	Tropopause

October 1951

LIBRARY

1 DEC 1951

VALENTIA

GMT	Time	M.S.L.	Sea level
03h	1015.5	1014	

October 1951

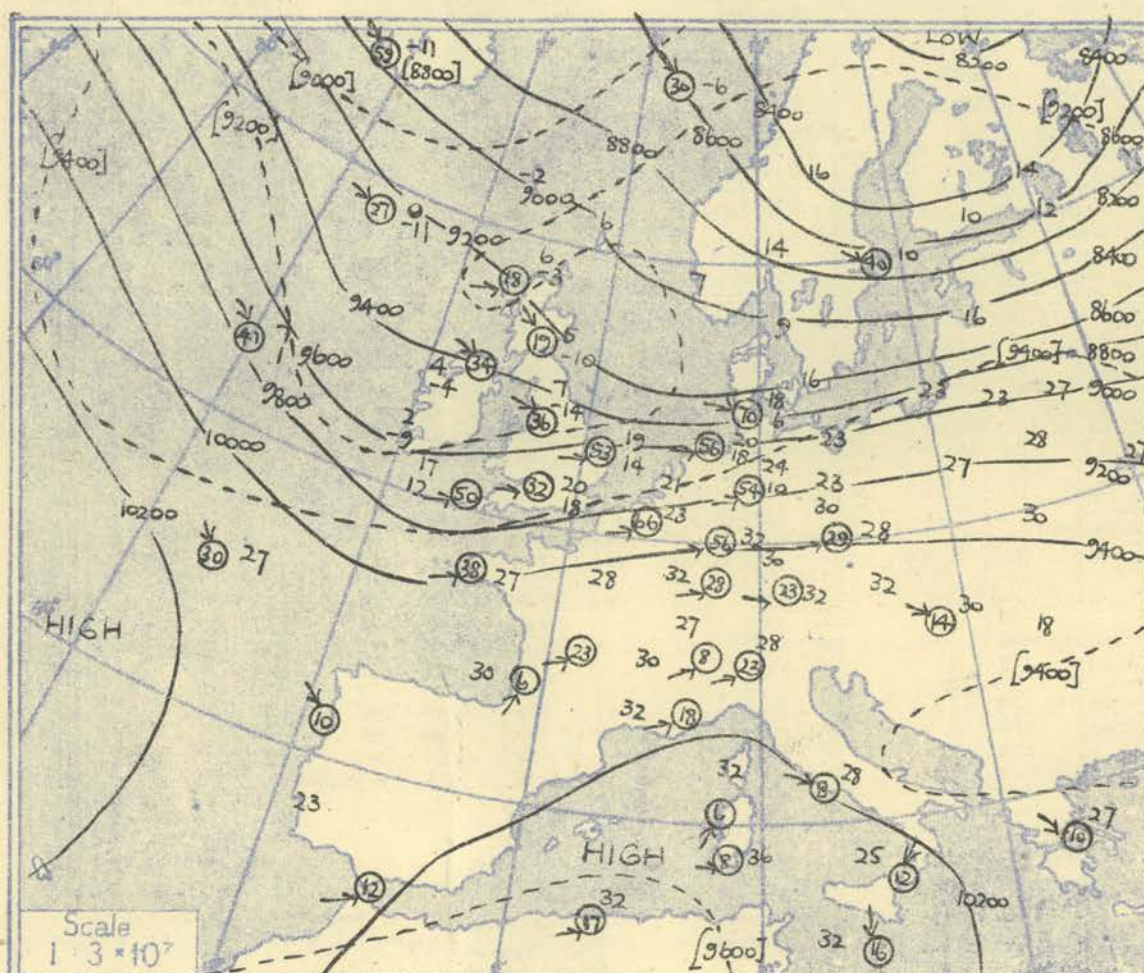
LIBRARY

1 DEC 1951

VALENTIA

GMT	Time	M.S.L.	Sea level
03h	1015.5	1014	

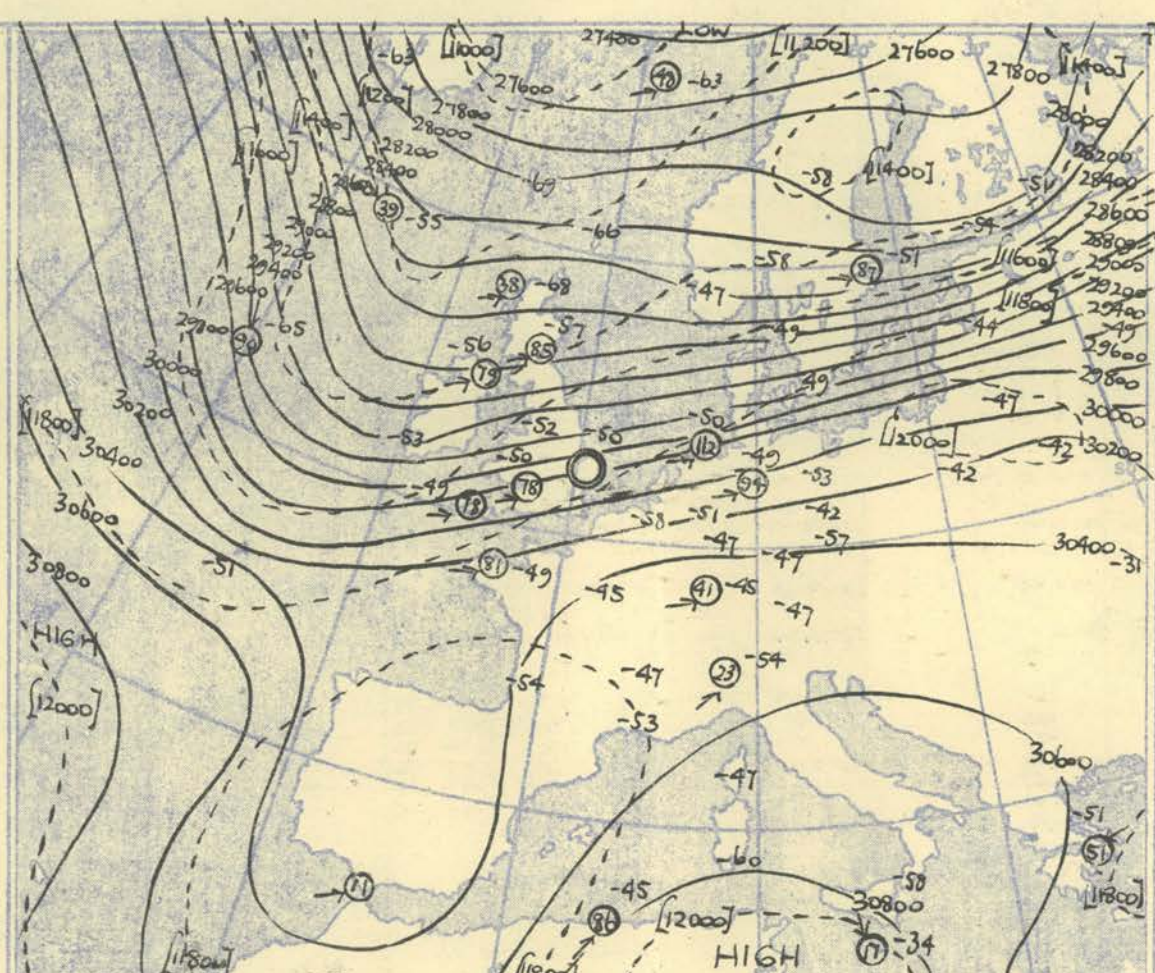
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb, 500 mb, and 300 mb, levels at about 03h G.M.T.



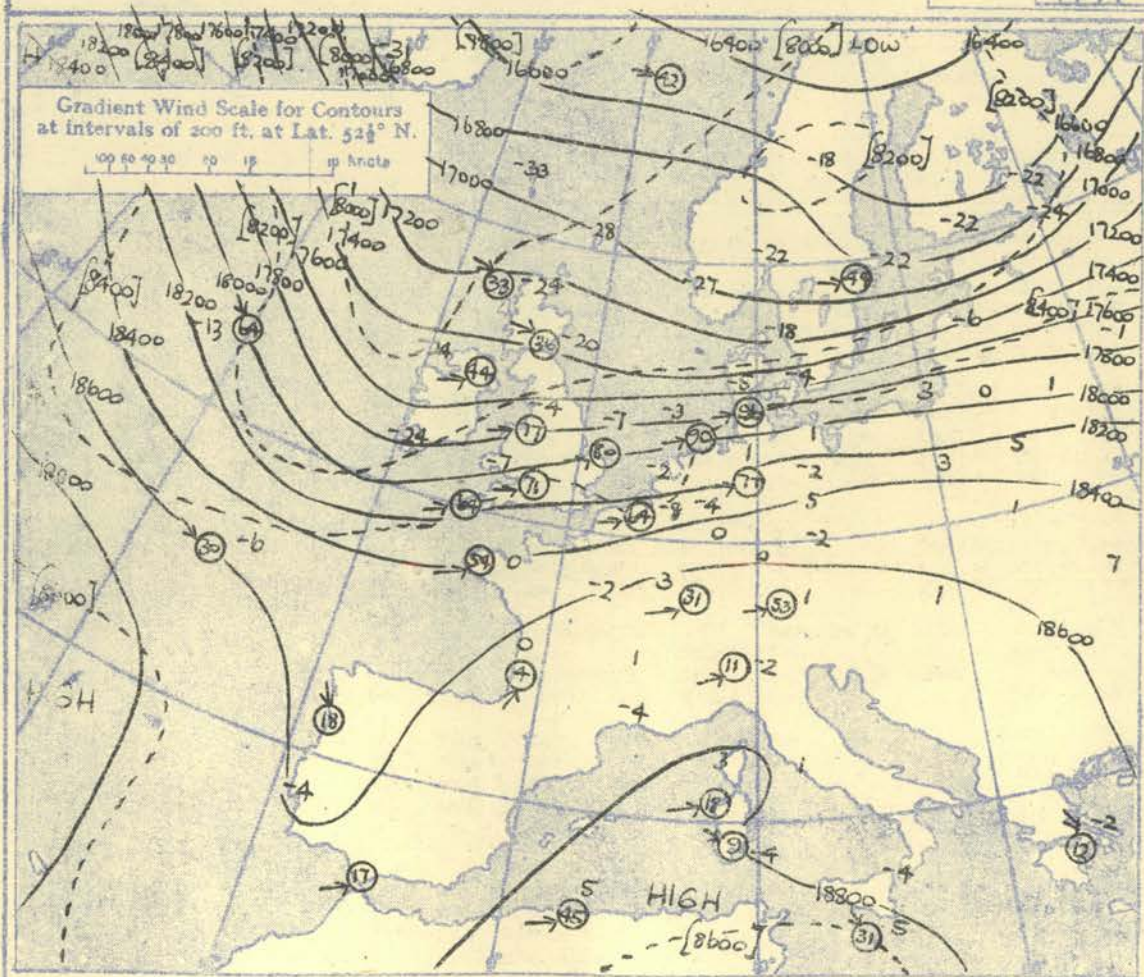
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

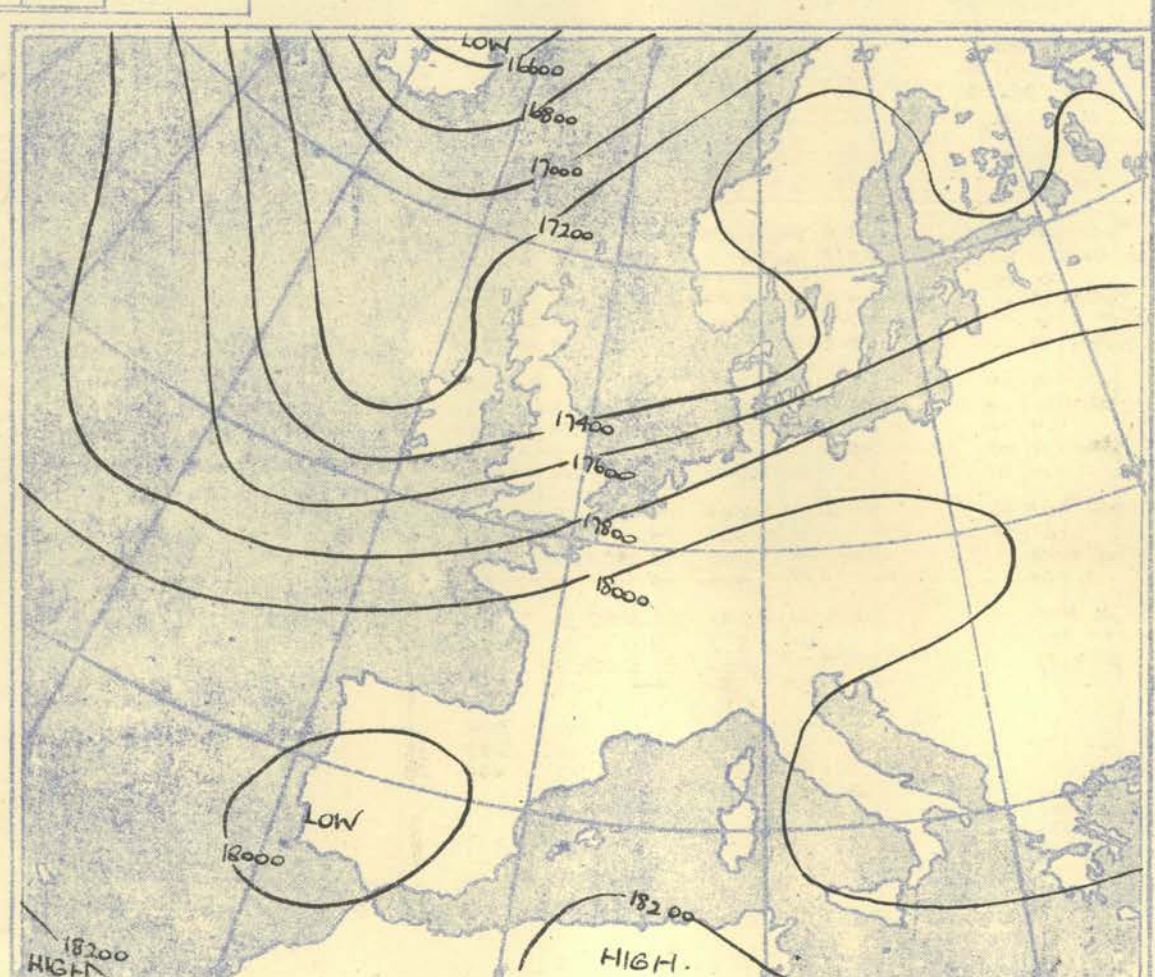
100 80 60 40 20 10 0 10 20 30 40 50 60 70 80 90 100 knots



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.

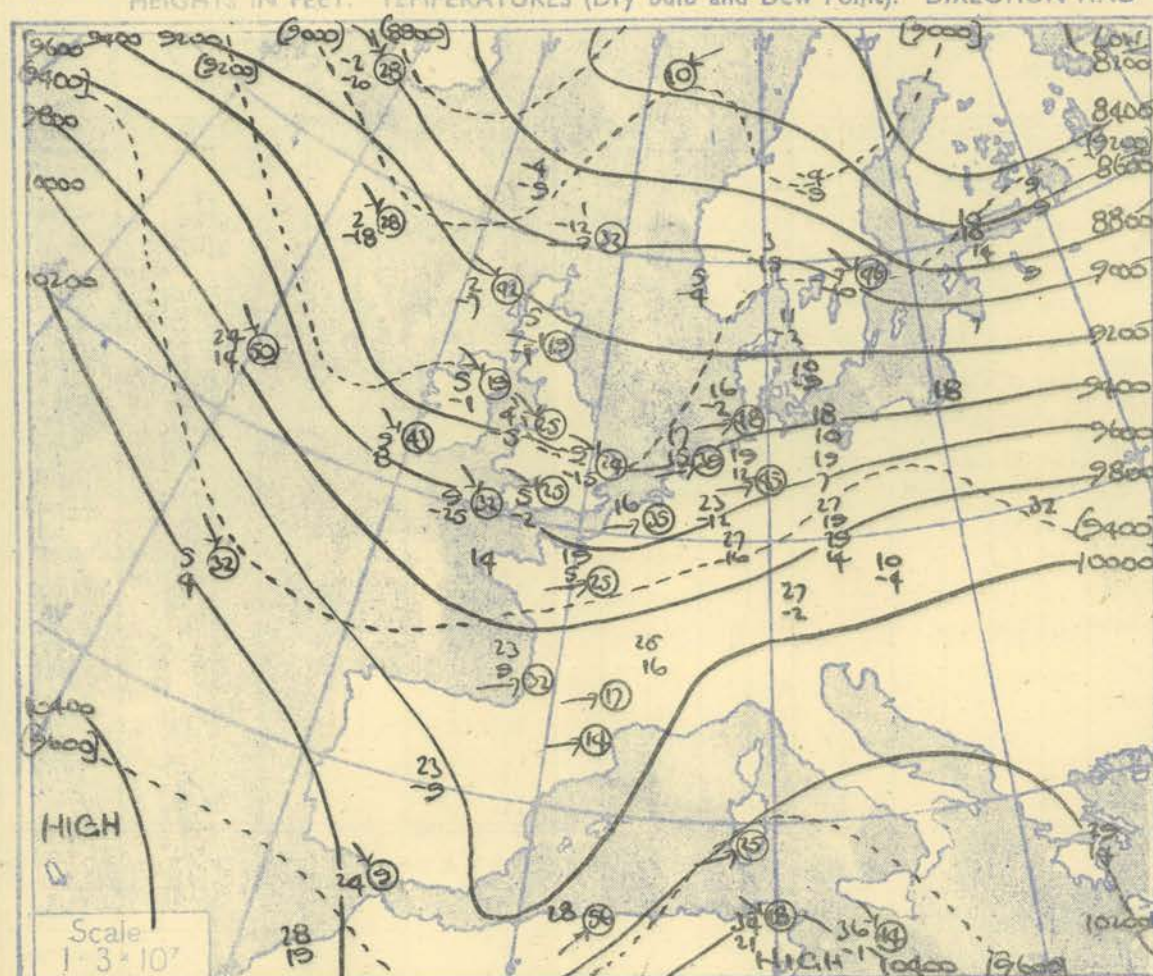


The continuous lines are contour lines of the 500 mb. surface.
The dotted lines are isopleths of the thickness of the layer 700-500 mb.



Isopleths of Thickness 300-1000mb.

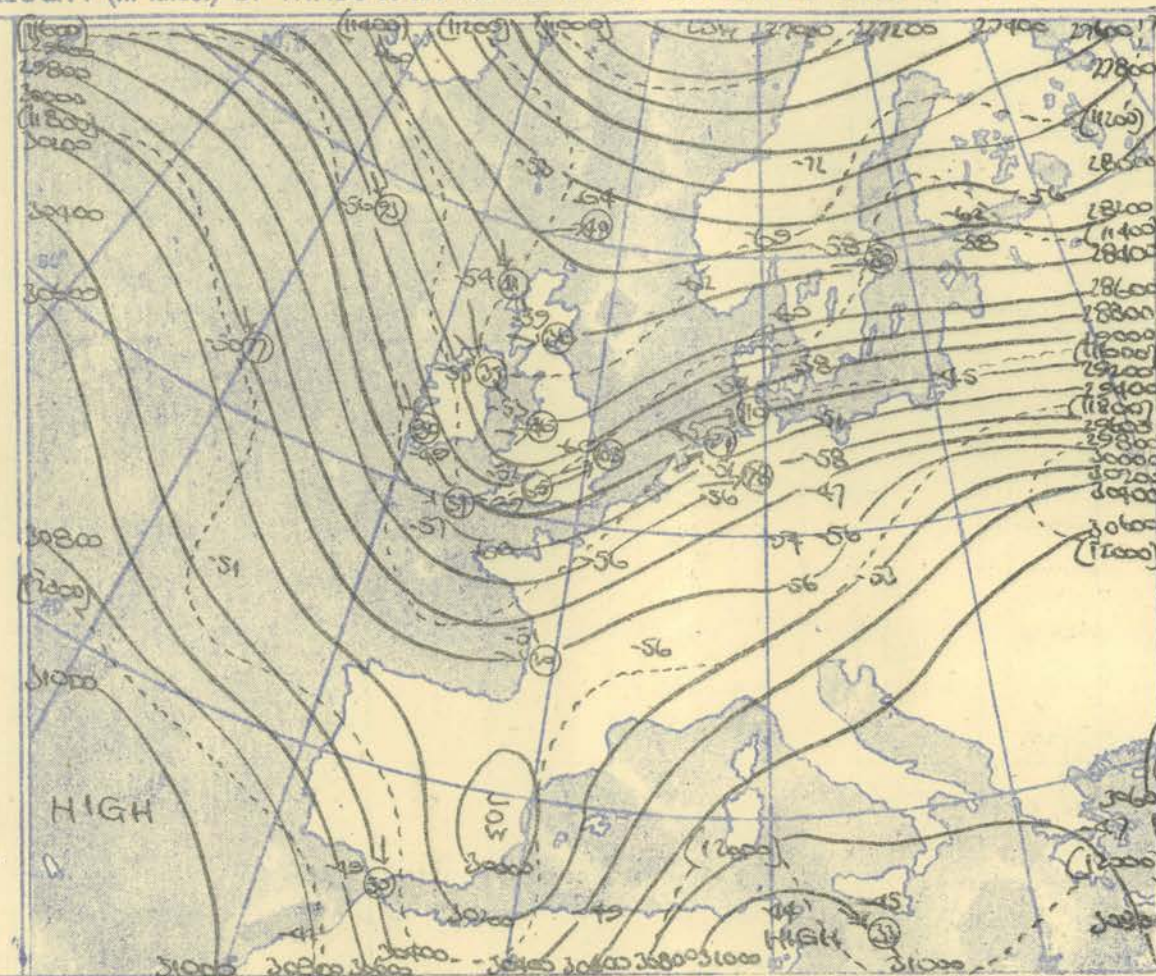
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h G.M.T.



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.

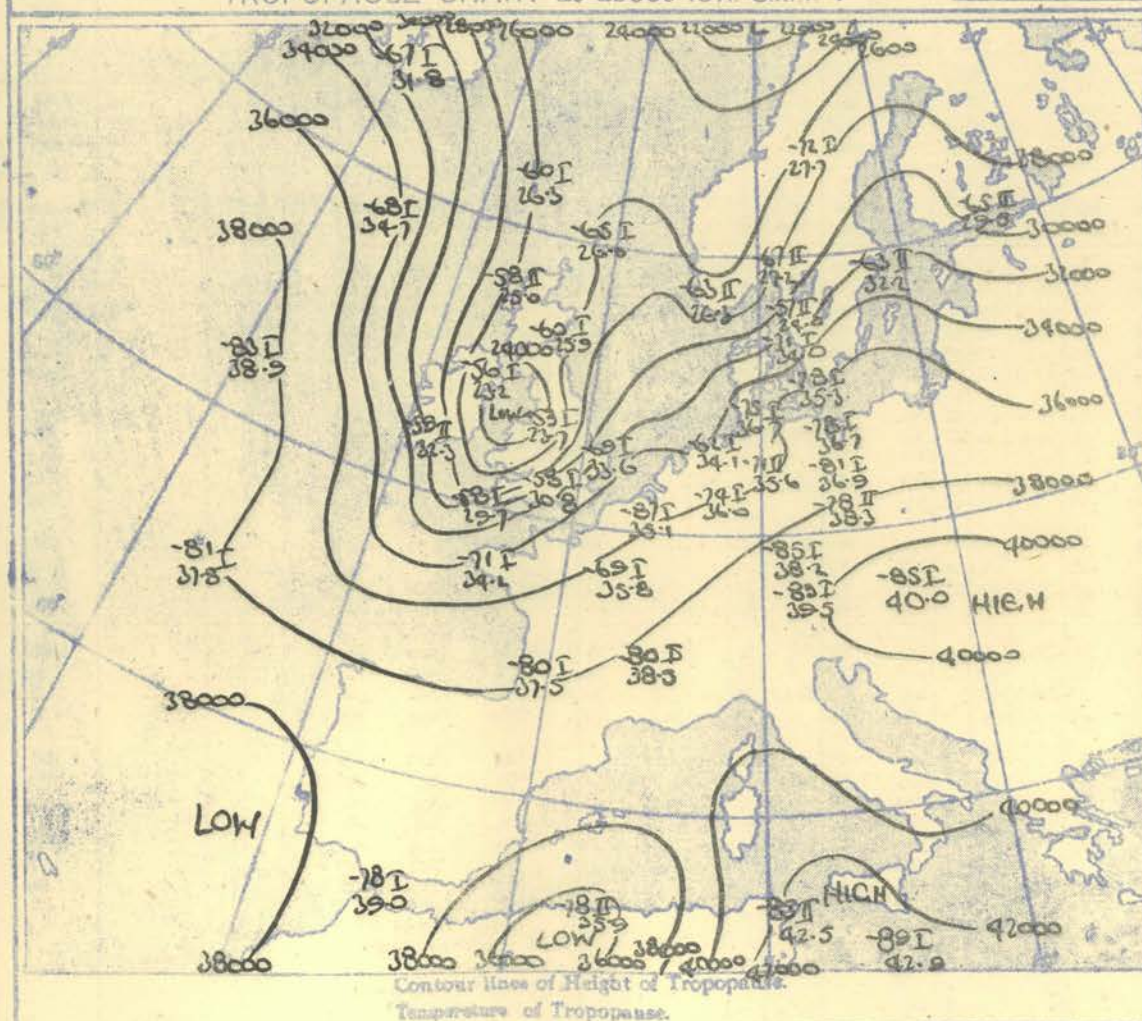
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. $52\frac{1}{2}^\circ$ N.

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 500 - 300 mb.

TROPOPAUSE CHART at about 15h GMT.



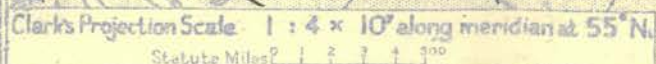
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Steady eastward movement of warm tongue associated with surface low in vicinity of South Greenland. Also steady eastward movement of cold trough across British Isles.

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

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

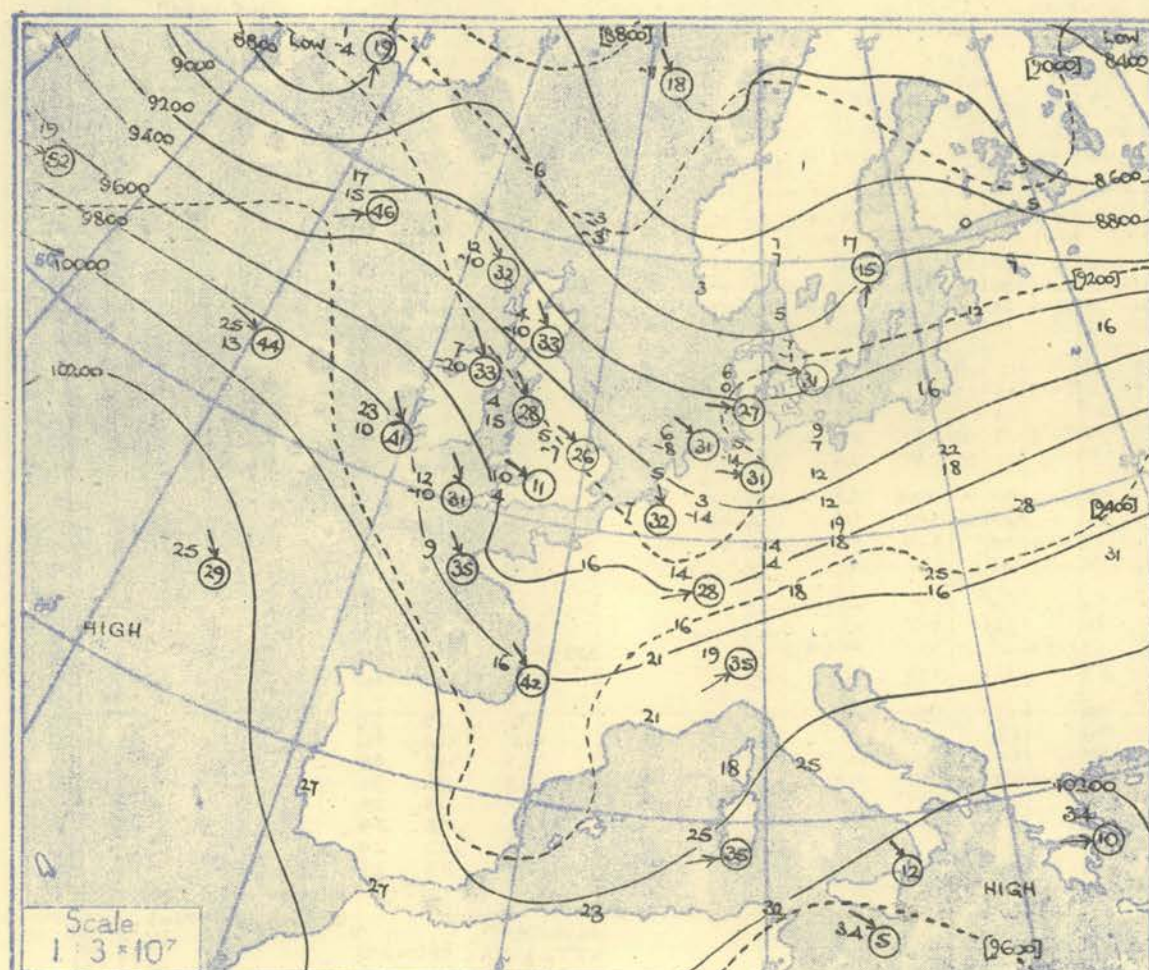


RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				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.		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.		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.		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.		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.		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.		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.		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.		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.		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.		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.		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.		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.		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.		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.		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.		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.		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.		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.		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.		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.		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.		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.		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.		1	

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)																																																						
STATION					LERWICK					STORNOWAY					LEUCHARS					ALDERGROVE					LIVERPOOL					HEMSBY					LARKHILL					CAMBORNE					VALENTIA					STATION				
Time M.S.L. Surf Forecast					03h G.M.T. mb mb mb					03h G.M.T. mb mb mb					03h G.M.T. mb mb mb					03h G.M.T. mb mb mb					03h G.M.T. mb mb mb					03h G.M.T. mb mb mb					03h G.M.T. mb mb mb					03h G.M.T. mb mb mb					03h G.M.T. mb mb mb					03h G.M.T. mb mb mb				
					996.7 986.5 987					1006.0 1004.4 960					1005.2 1004.3 935					1010.7 1001.2 925					1009.7 1007.6 918					1008.8 1007.3 908					1009.8 993.4 927					1012.0 1011.4 900					1015.5 1014 885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908					927					900					885									
					987					960					935					925					918					908																								

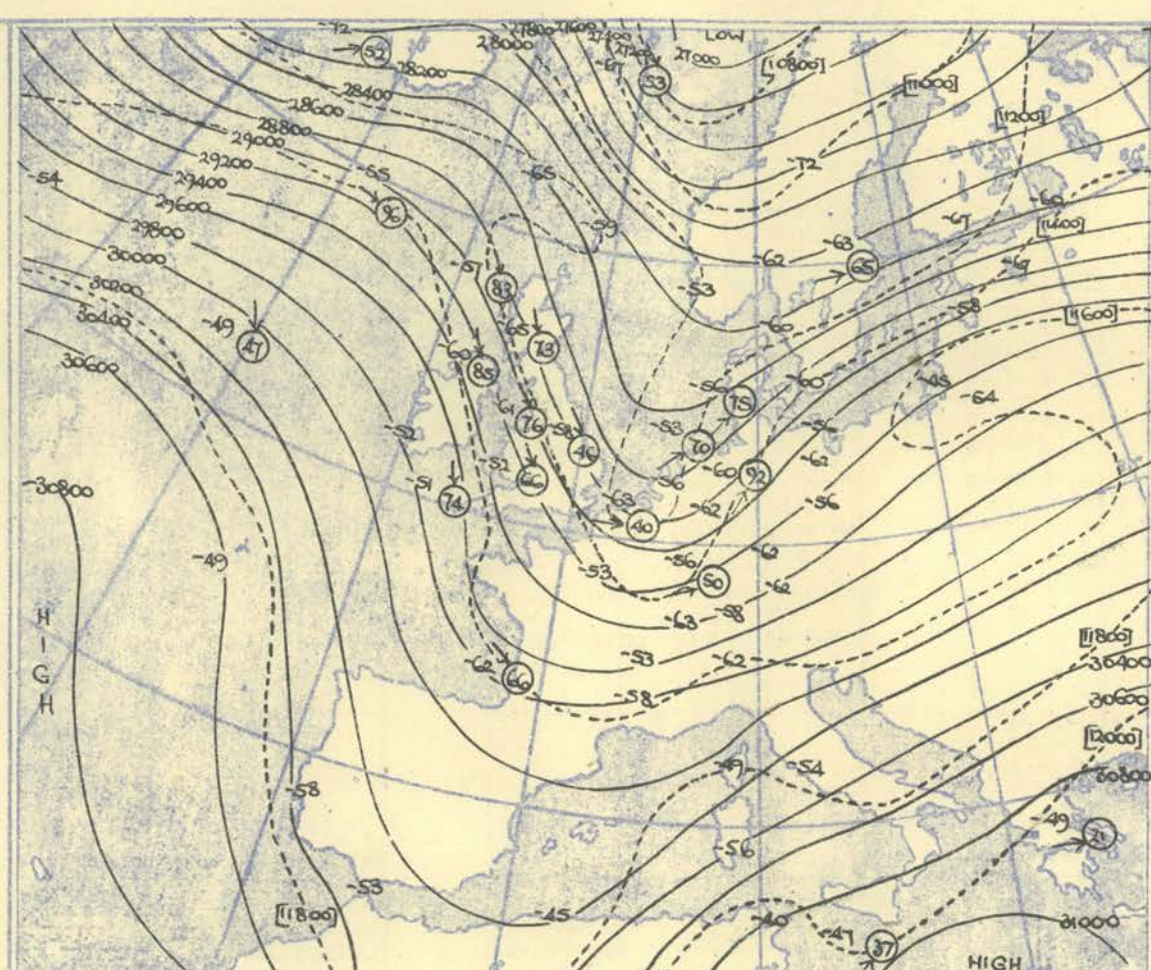
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb, 500 mb, and 300 mb, levels at about 03h G.M.T.



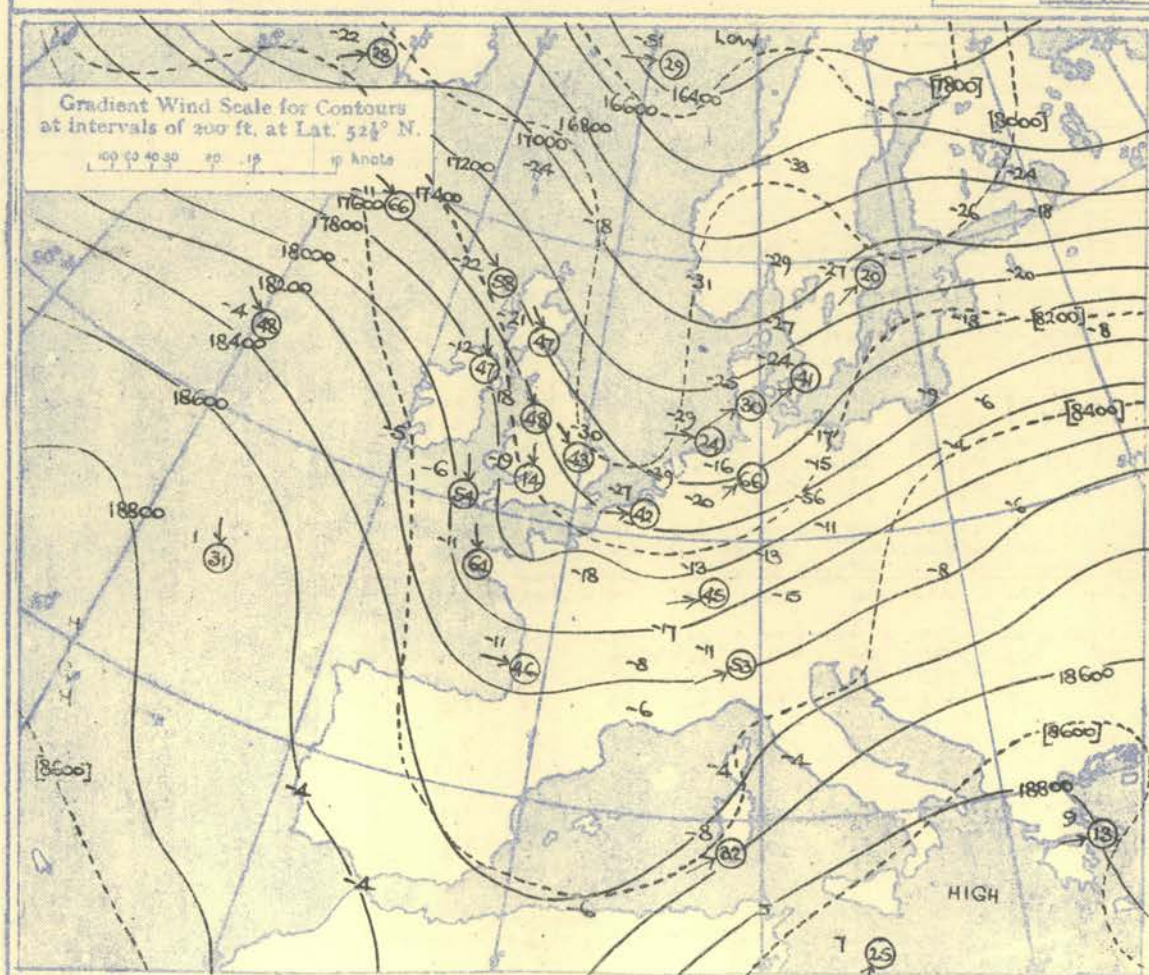
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52¹/₂° N

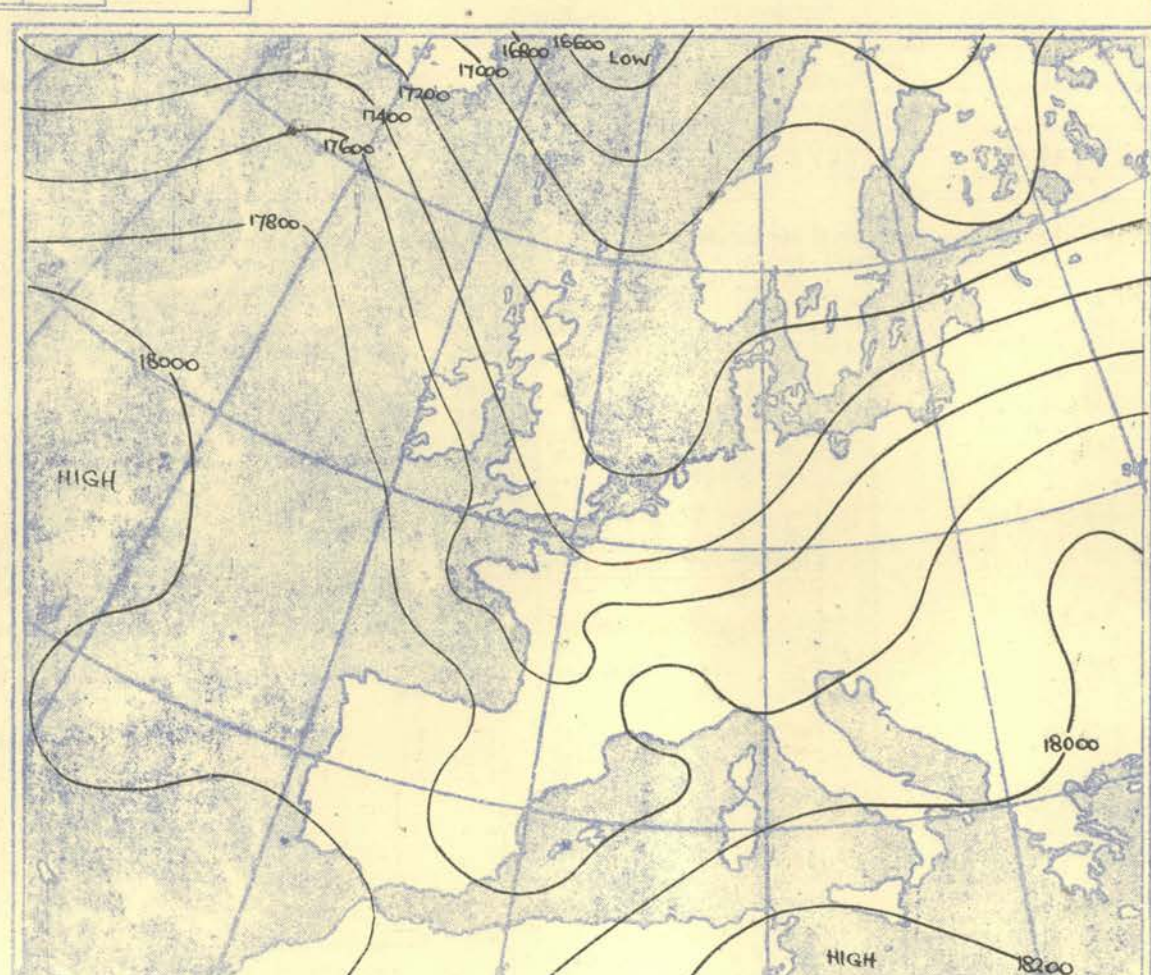
100 50 40 30 20 10 0 knots



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



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



Isopleths of Thickness 500-1000mb.

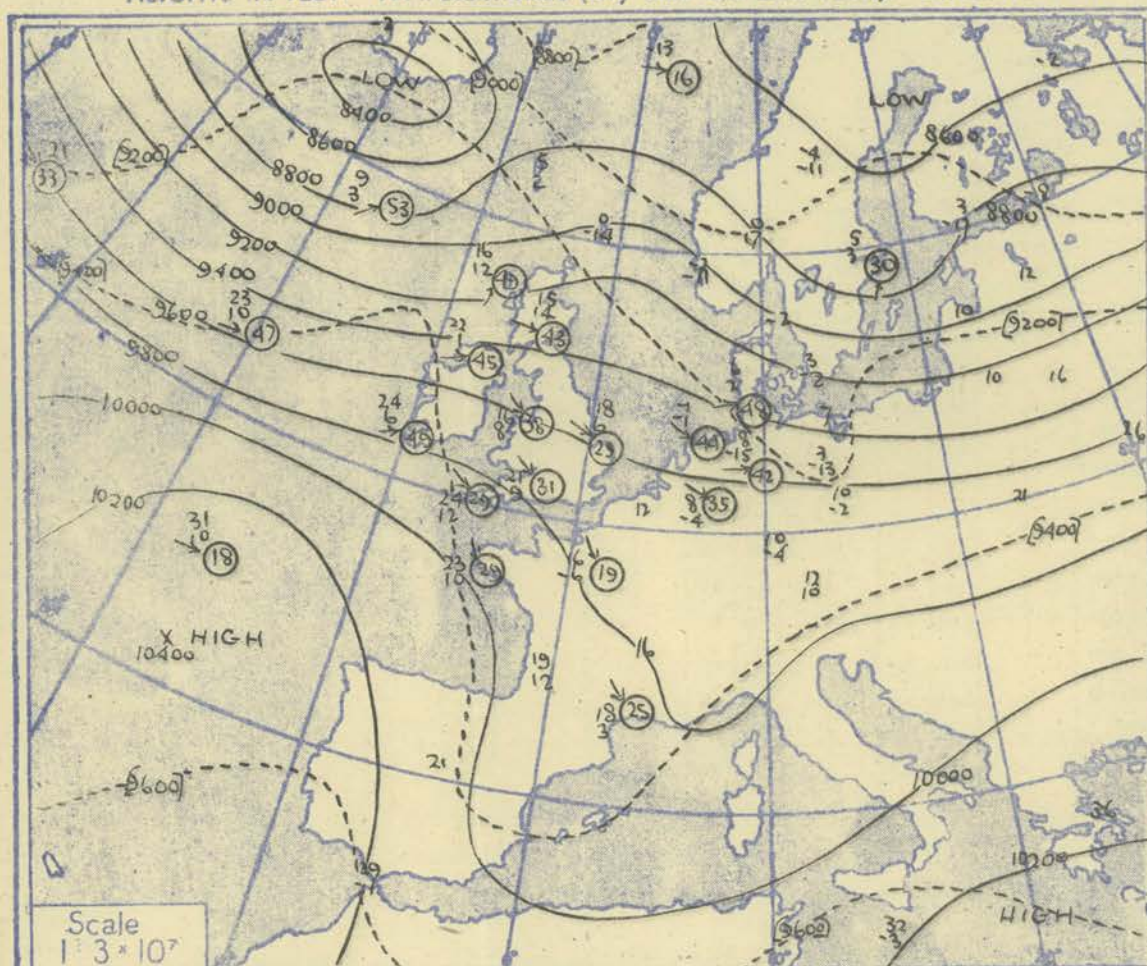
DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

NEPHROSCOPE OBSERVATIONS

None Reported

Ship	WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER RECORDER				WEATHER RECORDER				WEATHER RECORDER				WEATHER RECORDER				Ship			
Lat/Long	58-6 N 16-0 W				58-8 N 15-9 W				58-7 N 15-2 W				58-7 N 15-5 W				52-3 N 19-2 W				52-5 N 18-9 W				52-6 N 19-4 W				53-0 N 17-1 W				Lat/Long			
Pressure	Time	03h. G.M.T.			Time	09h. G.M.T.			Time	15h. G.M.T.			Time	21h. G.M.T.			Time	03h. G.M.T.			Time	09h. G.M.T.			Time	15h. G.M.T.			Time	21h. G.M.T.			Pressure			
	M.S.L.	999 mb			M.S.L.	988 mb			M.S.L.	983 mb			M.S.L.	981 mb			M.S.L.	1016 mb			M.S.L.	1011 mb			M.S.L.	1008 mb			M.S.L.	1003 mb						
	Surf	999 mb			Surf	988 mb			Surf	983 mb			Surf	981 mb			Surf	1016 mb			Surf	1011 mb			Surf	1008 mb			Surf	1003 mb						
	Freezing	900 mb			Freezing	860 mb			Freezing	890 mb			Freezing	900 mb			Freezing	790 mb			Freezing	800 mb			Freezing	830 mb			Freezing	900 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		43	41	180	28	48	44	260	30	46	44	255	35	44	37	260	36	51	47	270	24	50	48	260	25	50	47	250	25	50	48	260	30	Surf		
1000	-00-2	38	36	181	33	43	40	257	33	42	39	256	36	39	32	259	36	49	45	270	30	48	44	260	25	49	46	254	33	49	48	260	30	1000		
950		32	31	187	35	36	33	254	34	33	32	255	40	32	23	260	40	43	40	270	31	42	36	258	38	40	39	263	37	40	39	263	37	950		
900	27-8	27	26	210	37	31	29	247	37	29	24	249	48	25	12	258	49	37	31	271	38	32	27	266	49	28-9	32	31	260	42	27	26	258	44	900	
850		26	24	233	48	25	23	246	40	24	23	242	52	19	05	260	48	33	29	275	45	33	24	267	46	26-6	34	29	266	44	24	21	250	45	850	
800		21	19	250	51	19	17	249	40	15	10	238	53	12	02	262	45	28	21	275	45	27	17	264	55	28	14	264	55	16	11	247	51	750		
750		17	15	256	46	13	09	253	39	88-1	09	03	237	53	06	00	256	46	25	13	277	44	26	14	260	47	93-6	23	10	260	47	12	04	254	57	700
700		14	11	254	43	06	01	260	44	03	02	236	54	-01	-31	243	42	20	02	280	43	19	00	257	59	06	04	259	64	06	04	259	64	650		
650	131-7	08	04	256	52	128-4	01	05	260	63	126-1	04	09	235	54	-12	38	242	48	138-1	12	14	278	40	136-8	14	06	255	49	131-9	01	08	258	69	600	
600		00	-03	280	67	-04	-11	261	64	-13	-19	233	55	-21	-45	249	44	04	-16	281	51	07	-16	255	61	-08	-13	260	73	-08	-13	260	73	550		
550		76-3	11	15	281	66	70-6	12	18	258	76	169-5	23	35	232	57	167-1	28	52	254	48	183-1	04	24	284	48	182-1	02	25	69	175-9	12	16	261	83	500
500		-18	24	272	70	-22	27	257	84	31	48	234	63	36	-59	255	66	-16	35	286	51	-12	34	272	81	-15	25	272	81	-21	25	258	94	450		
450	228-7	30	36	267	66	224-9	27	32	248	39	220-4	39	56	228	96	217-6	43	255	99	236-0	25	36	267	84	233-7	25	36	267	84	228-0	34	39	250	96	400	
400		41		263	84	-40	45	251	100	-46		230	98	-53		260	90	-35	52	294	50	-35	45	262	93	-35	45	262	93	-46		246	105	350		
350		292-7	55	277	96	289-1	55	252	99	283-9	51	232	81	280-4	56	258	78	300-9	49	300	47	Inversion	298-7	48	277	112	291-3	59	264	116	264	116	264	116	300	
300		71	298	120	69	252	98	252	98	52	230	61	230	61	230	61	230	61	230	61	230	61	230	61	230	61	230	61	230	61	230	61	230	61	230	250
250	377-7	63	303	93	374-3	63	252	71	371-9	54	243	70	368-5	51	260	49	385-6	81	272	57	850 mb 32°-830 mb 34°	850 mb 32°-830 mb 34°	850 mb 32°-830 mb 34°	850 mb 32°-830 mb 34°	850 mb 32°-830 mb 34°	850 mb 32°-830 mb 34°	850 mb 32°-830 mb 34°	850 mb 32°-830 mb 34°	850 mb 32°-830 mb 34°	850 mb 32°-830 mb 34°	850 mb 32°-830 mb 34°	850 mb 32°-830 mb 34°	850 mb 32°-830 mb 34°	200		
200		64	295	68	63	252	63	252	63	55	255	52	54	262	41	262	41	262	41	262	41	750 mb 27°-730 mb 29°	750 mb 27°-730 mb 29°	750 mb 27°-730 mb 29°	750 mb 27°-730 mb 29°	750 mb 27°-730 mb 29°	750 mb 27°-730 mb 29°	750 mb 27°-730 mb 29°	750 mb 27°-730 mb 29°	750 mb 27°-730 mb 29°	750 mb 27°-730 mb 29°	750 mb 27°-730 mb 29°	170			
150		65	278	54	59	252	48	434-1	59	261	50	261	50	261	50	261	50	261	50	261	50	Inversion	445-3	62	289	61	434-4	75	272	50	272	50	272	50	150	
130		65																			885 mb 35°-885 mb 37°	885 mb 35°-885 mb 37°	885 mb 35°-885 mb 37°	885 mb 35°-885 mb 37°	885 mb 35°-885 mb 37°	885 mb 35°-885 mb 37°	885 mb 35°-885 mb 37°	885 mb 35°-885 mb 37°	885 mb 35°-885 mb 37°	885 mb 35°-885 mb 37°	885 mb 35°-885 mb 37°	885 mb 35°-885 mb 37°	885 mb 35°-885 mb 37°	130		
110		63																			612-600 mb 14°	612-600 mb 14°	612-600 mb 14°	612-600 mb 14°	612-600 mb 14°	612-600 mb 14°	612-600 mb 14°	612-600 mb 14°	612-600 mb 14°	612-600 mb 14°	612-600 mb 14°	612-600 mb 14°	612-600 mb 14°	110		
100	524-1	63																			688 mb 23°-675 mb 24°	688 mb 23°-675 mb 24°	688 mb 23°-675 mb 24°	688 mb 23°-675 mb 24°	688 mb 23°-675 mb 24°	688 mb 23°-675 mb 24°	688 mb 23°-675 mb 24°	688 mb 23°-675 mb 24°	688 mb 23°-675 mb 24°	688 mb 23°-675 mb 24°	688 mb 23°-675 mb 24°	688 mb 23°-675 mb 24°	688 mb 23°-675 mb 24°	100		
90		65																			180 mb 29°-500 mb 28°	180 mb 29°-500 mb 28°	180 mb 29°-500 mb 28°	180 mb 29°-500 mb 28°	180 mb 29°-500 mb 28°	180 mb 29°-500 mb 28°	180 mb 29°-500 mb 28°	180 mb 29°-500 mb 28°	180 mb 29°-500 mb 28°	180 mb 29°-500 mb 28°	180 mb 29°-500 mb 28°	180 mb 29°-500 mb 28°	180 mb 29°-500 mb 28°	90		
80		68																			855-850 mb 37°	855-850 mb 37°	855-850 mb 37°	855-850 mb 37°	855-850 mb 37°	855-850 mb 37°	855-850 mb 37°	855-850 mb 37°	855-850 mb 37°	855-850 mb 37°	855-850 mb 37°	855-850 mb 37°	855-850 mb 37°	80		
70		69																			750-727 mb 28°	750-727 mb 28°	750-727 mb 28°	750-727 mb 28°	750-727 mb 28°	750-727 mb 28°	750-727 mb 28°	750-727 mb 28°	750-727 mb 28°	750-727 mb 28°	750-727 mb 28°	750-727 mb 28°	750-727 mb 28°	70		
60																																			60	

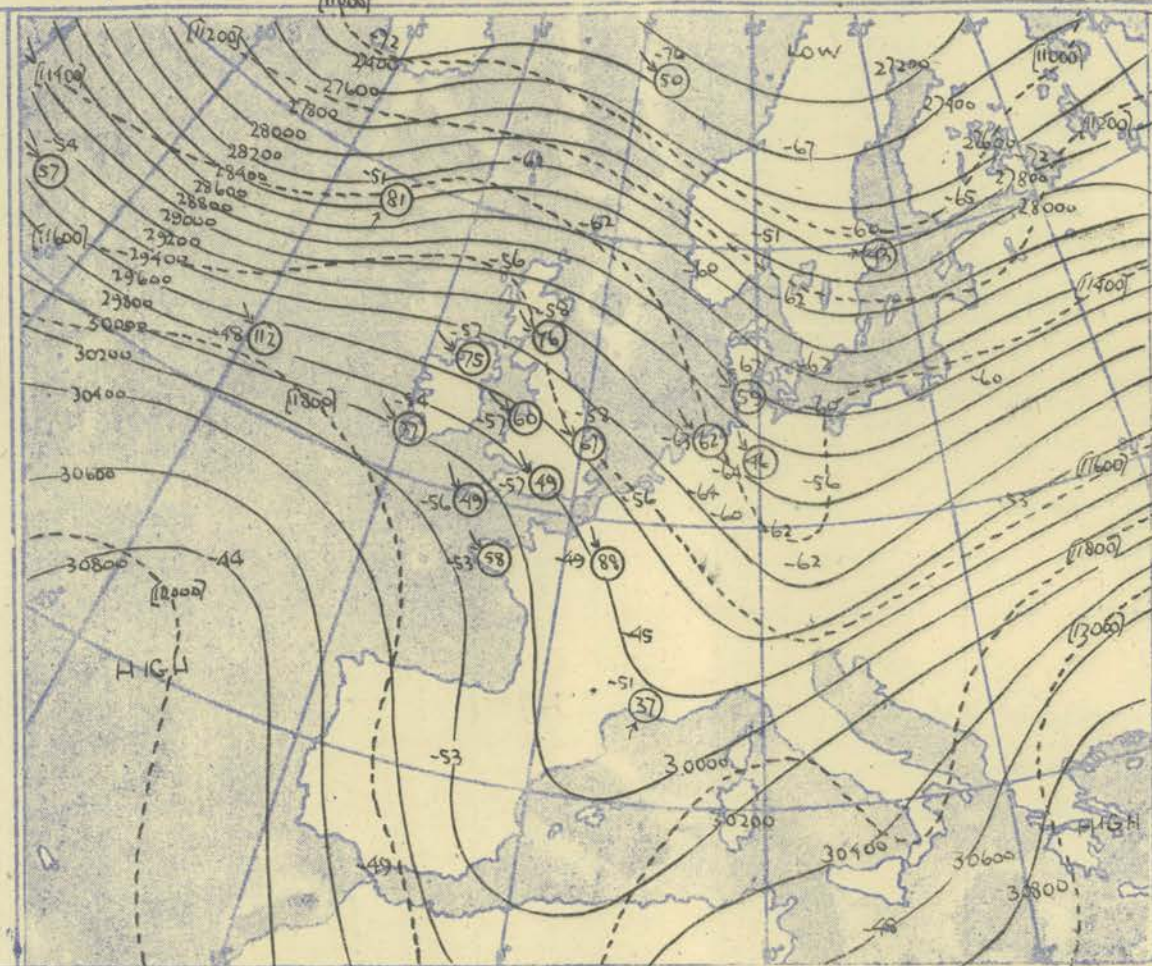
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h G.M.T.



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

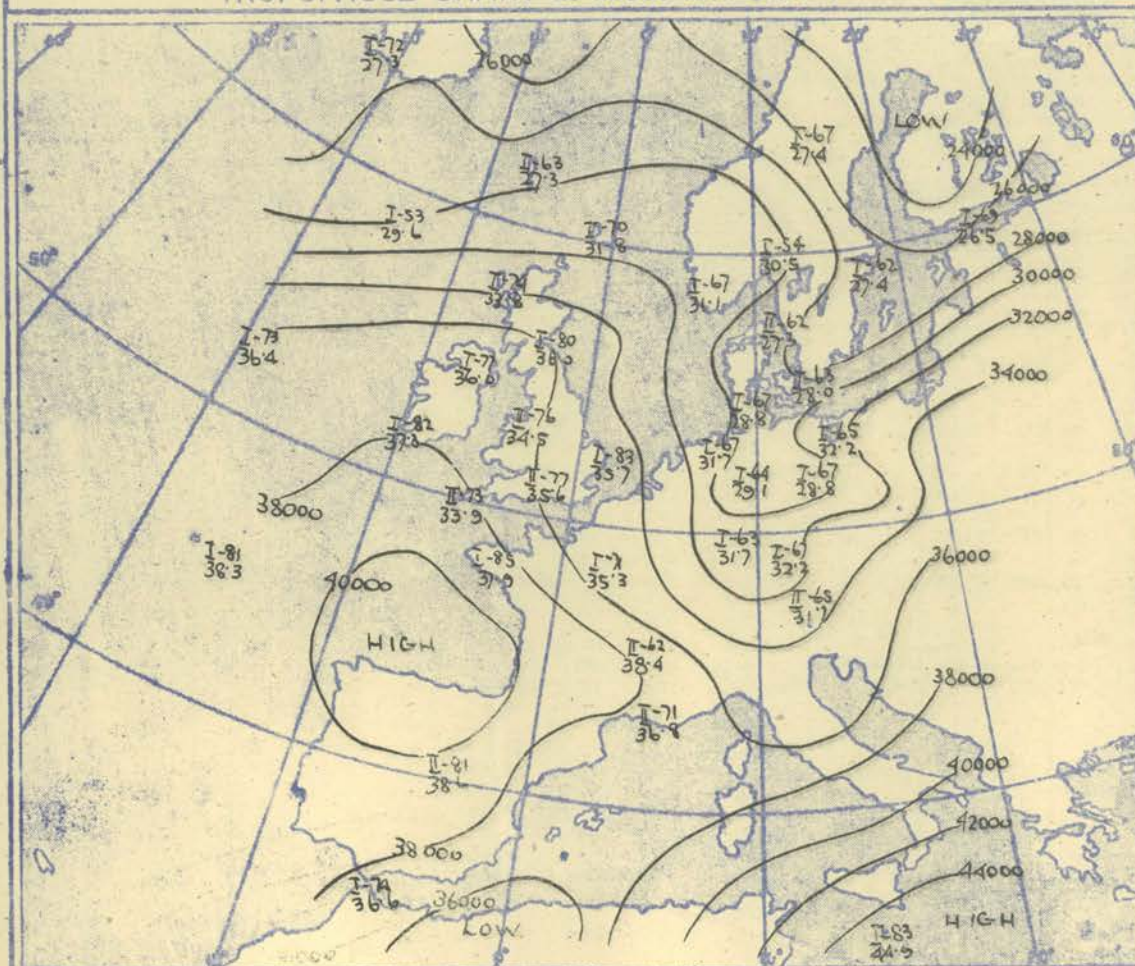
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 20 10 0 knots



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

TROPOPAUSE CHART at about 15h. GMT.



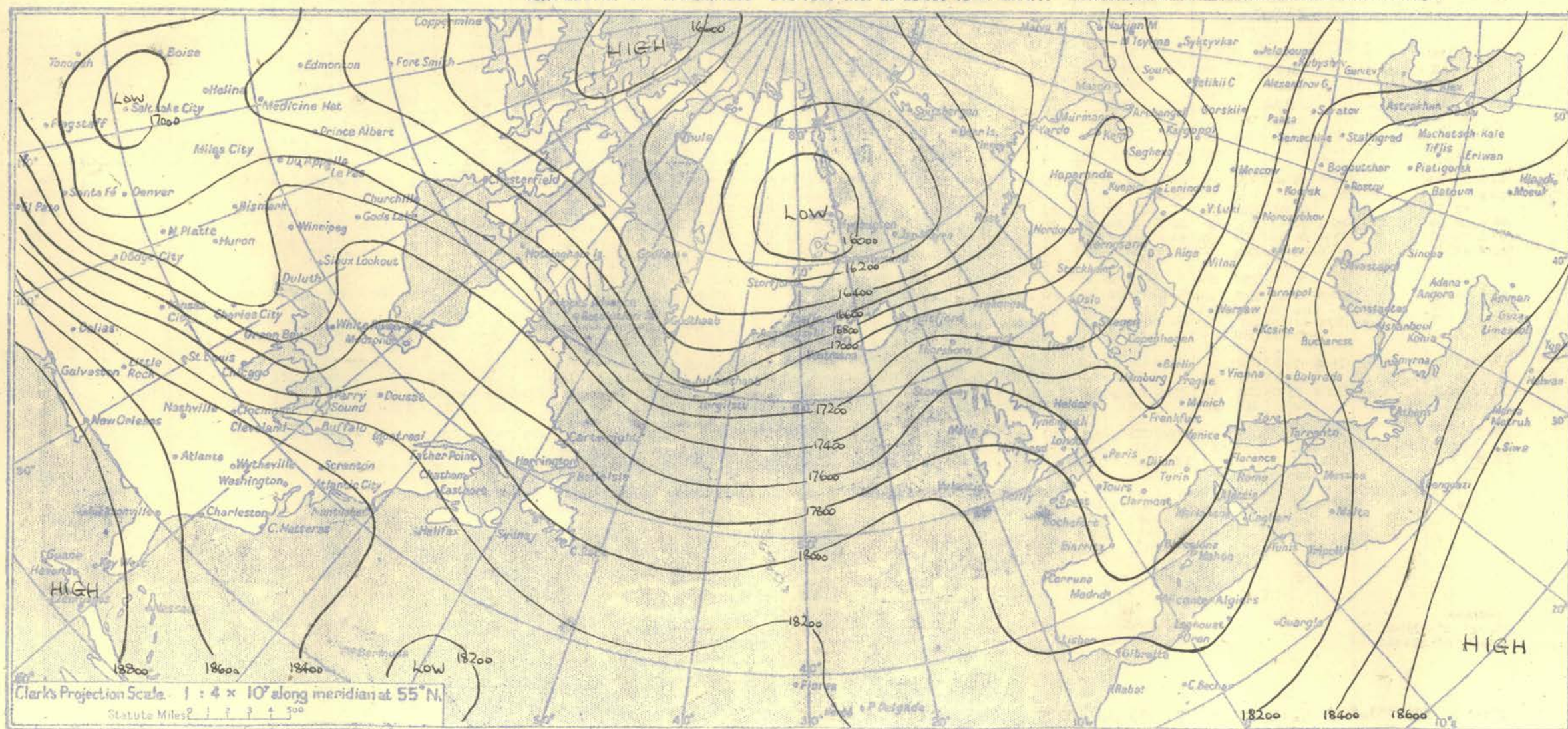
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Steady eastward movement of cold trough continued across North Germany.
Warm tongue moved eastward across the Atlantic to the British Isles
by end of day.

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

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



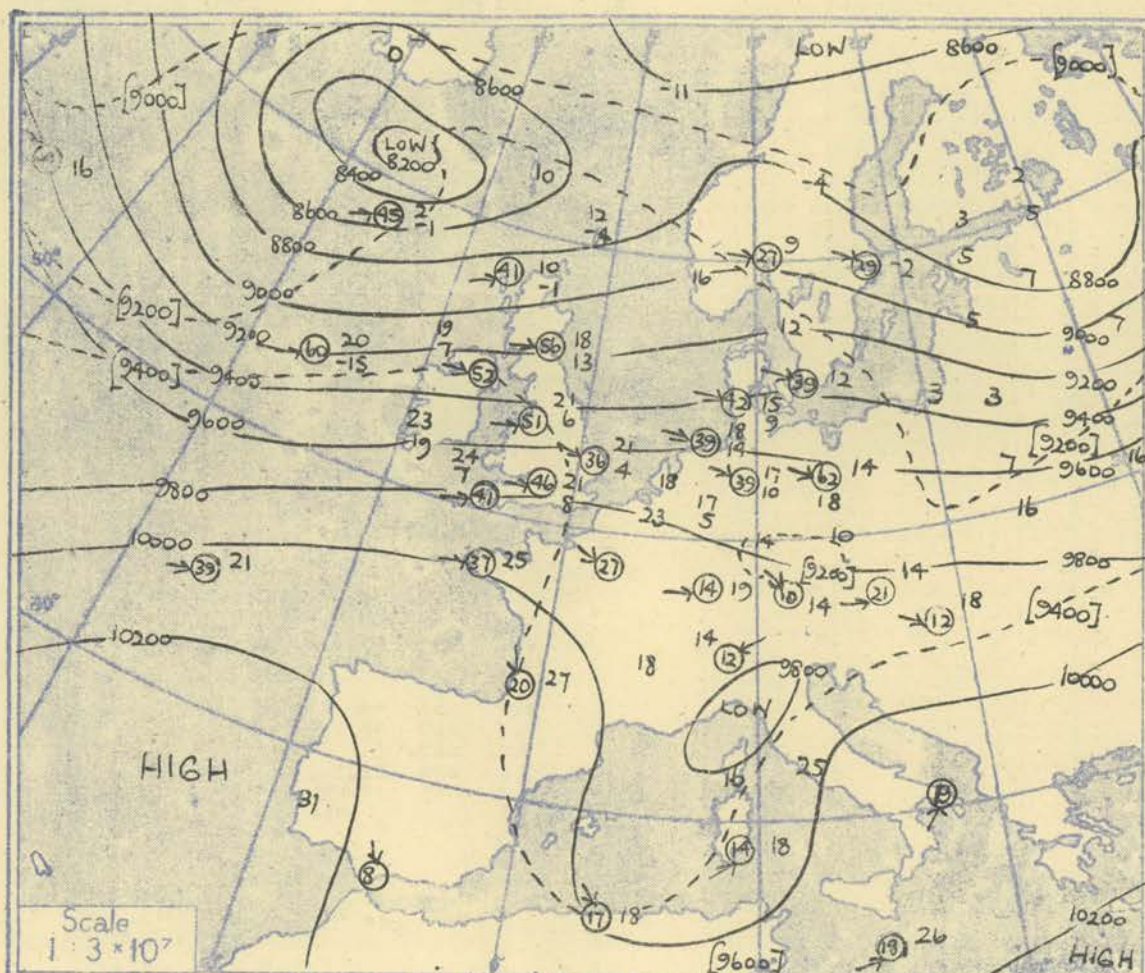
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				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.				15h G.M.T.				Time M.S.L. Surf Pressure
	939.7 mb				930.1 mb				1001.7 mb				1005.0 mb				1010.1 mb				1013.4 mb				1016.0 mb				1018.1 mb				1012.6 mb				
	939.4 mb				938.8 mb				1000.9 mb				995.8 mb				1008.0 mb				1011.6 mb				1013.7 mb				1015.5 mb				1011.0 mb				
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						
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.						
Units	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	Units						
Pressure	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	Pressure						
Height	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	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.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	Temp.						
Dew	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	Dew						
Wind	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Wind						
Vel.	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	Vel.						
Units	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	Units						
Pressure	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	Pressure						
Height	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	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.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	Temp.						
Dew	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	Dew						
Wind	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Wind						
Vel.	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	Vel.						
Units	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	Units						
Pressure	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	Pressure						
Height	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	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.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	Temp.						
Dew	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	Dew						
Wind	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Wind						
Vel.	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	Vel.						
Units	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	knots	Units						
Pressure	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	Pressure						
Height	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100																										

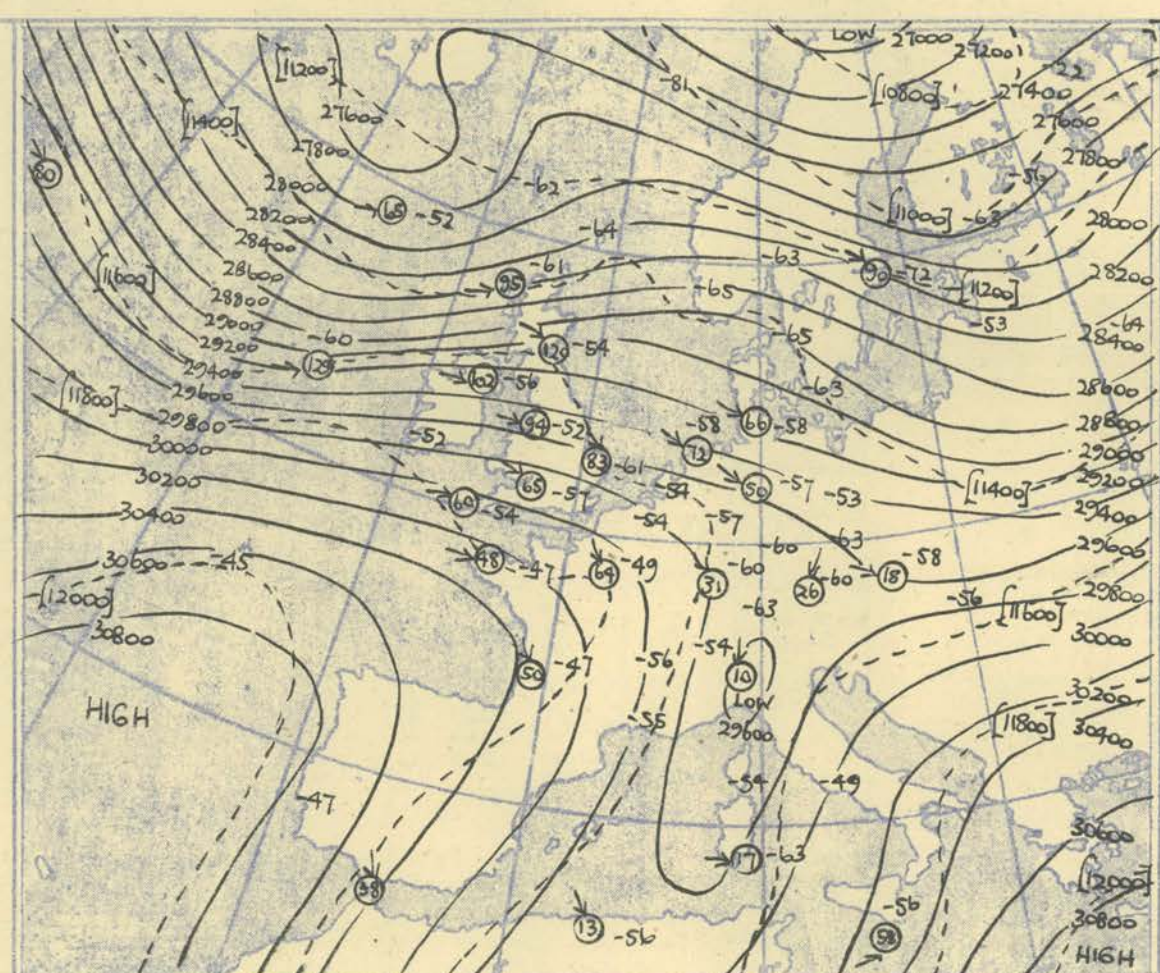
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	HEMSBY	LARKHILL	CAMBORNE	VALENTIA	STATION
Time M.S.L.	03h	03h	03h	03h	03h	03h	03h	03h	03h	03h
Surf	980.6	986.5	992.7	997.7	1003.7	1008.2	1011.7	1013.2	1002.2	1002.2
Pressure	883	880	839	840	837	850	850	837.784	765	765
Pressure mb										
Height ft/100										
Temp. °F										
Dew °F										
Wind Dir.										
Wind Vel. knots										
Surf	02.7 42 37	04.2 40 35 250	05.0 45 41 250	02.5 47 43 220	00.6 50 41 240	07.0 44 46 41 230	18.0 44 48 46 230	17.0 49 49 48 230	18.0 49 49 48 230	18.0 49 49 48 230
1000	05.3	03.7	03.7	00.6	01.0	02.2 44 39	03.1	03.5 49 48	03.5 49 48	03.5 49 48
950	40 36	40 34 251	42 38 252	43 42 241	46 38 251	44 40 251	44 42 242	44 43 222	44 43 222	44 43 222
900	22.8 34 31	24.6 34 28 251	26.2 37 33 256	27.7 38 35 255	29.5 39 32 251	38.0 44 38 37 259	43.1 45 38 36 252	41.3 47 39 38 221	39.2 43 41 38	39.2 43 41 38
850	37.7 27 25	39.5 27 23 250	38.1 33 30 263	45.2 33 29 255	53.4 36 34 254	51.4 35 32 264	43.6 38 31 257	45.4 39 34 223	42.3 38 35	42.3 38 35
800	53.5 25 17	55.2 19 16 253	42.5 27 13 260	51.8 28 25 265	55.6 27 23 257	50.6 27 27 268	48.6 25 28 259	46.6 34 12 225	43.6 30 30	43.6 30 30
750	19 06	15 01 253	24 20 258	22 18 254	23 14 260	26 17 273	26 15 261	28 14 235	30 26	30 26
700	87.5 12 04	89.0 10 01 252	91.7 18 13 254	93.2 19 07 264	95.0 21 06 260	95.9 21 04 276	97.2 21 08 264	97.9 24 07 242	95.5 23 19	95.5 23 19
650	03 71	01 10 250	11 05 252	12 01 268	14 01 263	13 01 275	16 03 268	20 05 243	17 12	17 12
600	25.6 04 18	126.9 07 18 250	56 130.4 04 05 256	57 132.0 06 05 262	65 133.9 06 01 266	54 134.7 04 10 271	36 136.4 12 19 275	53 137.3 13 09 243	44 134.6 10 04	44 134.6 10 04
550	12 25	11 34 251	69 04 17 261	60 00 11 255	68 01 06 263	62 05 19 273	42 03 24 278	52 03 17 242	45 03 05	45 03 05
500	169 1 22 35	170.4 19 44 255	79 74.8 10 27 262	64 76.7 07 19 255	82 78.6 07 12 267	74 78.9 19 28 275	45 181.4 06 20 278	48 182.3 07 21 240	47 79.7 05 14	47 79.7 05 14
450	30 72	31 52 258	81 20 37 263	64 17 30 259	86 18 22 272	85 23 34 282	58 14 24 280	49 15 22 240	51 15 25	51 15 25
400	220.3 38 53	221.4 43 256	82 227.1 31 48 266	73 229.3 39 41 262	92 231.2 28 33 267	81 230.9 33 41 288	67 234.3 27 35 282	49 235.1 25 31 241	52 232.7 25 36	52 232.7 25 36
350	99	53 254	88 43 269	96 42 262	89 40 272	81 47 292	67 40 289	59 38 255	54 37 49	54 37 49
300	283.0 64	283.8 61 253	95 281.0 54 279	120 283.2 56 263	102 295.6 52 275	94 294.0 61 304	83 298.5 57 292	65 299.7 54 257	60 297.3 52	60 297.3 52
250	62	61 257	68 273	82 71 265	100 67 280	93 76 293	94 74 293	72 78 261	59 69	59 69
200	369.1 57	369.9 58 256	375.9 73 268	79 77.8 75 273	101 380.3 81 272	78 377.6 87 298	72 381.9 87 285	383.7 83 267	65 382.2 75	65 382.2 75
170	55	56	65 263	75 263	77 263	75 290	47 285	84 263	50 75	50 75
150	57		61 262	66 262	78 262	77 286	37 276	80 256	48 75	48 75
130	62		61 263	47 263	73 263	79 279	75 275	76 267	38 71	38 71
110	62		65 264	31 264	66 264	76 276	78 278	76 262	35 71	35 71
100	517.5 62	522.1 66 269	35 522.5 67	72 269	74 269	74 269	74 269	74 269	74 269	74 269
90	63		68 269	72 269	74 269	74 269	74 269	74 269	74 269	74 269
80	64		68 269	72 269	74 269	74 269	74 269	74 269	74 269	74 269
70	66		68 269	72 269	74 269	74 269	74 269	74 269	74 269	74 269
60	64		68 269	72 269	74 269	74 269	74 269	74 269	74 269	74 269
Inversion	837 mb 25° 820 mb 26°	985 mb 40° 958 mb 41°	800-778 mb 27°	738-713 mb 20°	1002 mb 50° 985 mb 51°	772 mb 24° 746 mb 27°	800 mb 28° 784 mb 30°	825 mb 31° 800 mb 34°	900-873 mb 41°	900-873 mb 41°
Tropopause	I 288 mb -66° 29,100	I 280 mb -68° 29,700	I 233 mb -72° 34,300	I 250 mb -71° 33,171	I 196 mb -82° 88,500	I 205 mb -90° 37,300	I 210 mb -87° 37,300	I 195 mb -89° 38,800	I 218 mb -76° 36,400	I 218 mb -76° 36,400
STATION	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	HEMSBY	LARKHILL	CAMBORNE	VALENTIA	STATION
Time M.S.L.	09h	09h	09h	09h	09h	09h	09h	09h	09h	09h
Surf	978.9	980.6	987.7	990.2	996.5	1004.1	1006.1	1006.5	996.0	996.0
Pressure	881	888	855	830	820	788	785	843 790		
Pressure mb										
Height ft/100										
Temp. °F										
Dew °F										
Wind Dir.										
Wind Vel. knots										
Surf	02.7 41 36	04.2 39 37 250	05.0 43 41 250	07.0 46 45 240	12.0 49 45 190	18.0 48 45 220	14.0 44 48 45 235	17.0 49 49 47 230	18.0 49 49 47 230	18.0 49 49 47 230
1000	05.7	05.6	03.4	02.6	00.9	01.1	01.7	01.8	01.8	01.8
950	41 34	39 35 247	41 36 244	44 43 248	46 42 230	44 42 233	45 43 236	45 43 227	45 43 227	45 43 227
900	22.4 41 34	22.4 33 29 249	26.2 36 24.8 36 30 244	25 31 25.8 39 37 262	33 27.5 40 36 236	49 29.5 38 37 240	48 30.1 40 38 237	54 30.2 40 39 234	47 33 32 237	47 33 32 237
850	37.4 35 30	37.4 28 25 247	35 39.9 32 30 240	39 40.9 34 31 252	52 44.6 35 31 247	51 45.3 35 31 247	46 61.3 31 20 240	57 61.3 31 15 244	48 57 61.3 31 15 244	48 57 61.3 31 15 244
800	53.0 28 23	53.0 21 16 246	36 55.8 27 24 236	47 55.9 29 25 248	54 58.7 31 27 245	54 58.7 31 27 245	46 61.3 31 20 240	57 61.3 31 15 244	48 57 61.3 31 15 244	48 57 61.3 31 15 244
750	21 16	14 09 246	21 19 236	21 17 250	27 22 245	27 16 248	29 09 244	30 02 244	47 30 02 244	47 30 02 244
700	86.9 16 11	08 03 243	39 90.2 14 12 238	60 91.2 16 08 254	48 93.4 22 17 249	59 95.4 22 21 253	50 96.1 25 03 243	50 96.3 25 08 241	48 51 18 05 241	48 51 18 05 241
650	09 04	01 04 240	06 00 247	10 04 252	15 09 251	16 15 259	20 06 247	18 05 241	51 18 05 241	51 18 05 241
600	124.7 00 04	124.7 06 13 243	56 128.5 01 08 252	60 129.8 07 01 238	55 132.4 08 02 252	57 134.5 09 06 262	97 135.5 11 04 246	47 135.6 14 11 249	55 47 135.6 14 11 249	55 47 135.6 14 11 249
550	07 12	15 26 243	60 08 14 257	62 00 06 238	67 00 07 253	61 01 02 267	47 03 00 248	52 06 04 247	53 06 04 247	53 06 04 247
500	167.9 15 20	168.0 21 37 244	71 72.4 14 20 238	81 74.5 08 15 238	77 77.1 08 17 252	67 79.3 09 11 257	51 80.7 01 07 255	48 80.9 02 04 248	57 48 80.9 02 04 248	57 48 80.9 02 04 248
450	27 32	31 45 244	72 24.2 29 240	84 18 26 240	82 17 25 256	78 18 20 258	52 09 16 261	52 13 16 250	58 52 13 16 250	58 52 13 16 250
400	218.5 33 39	219.1 40 53 240	77 224.2 36 41 247	103 226.9 31 39 238	82 229.7 29 38 262	84 231.8 28 31 272	56 234.2 22 29 268	53 234.0 25 29 256	65 53 234.0 25 29 256	65 53 234.0 25 29 256
350	44	49 243	78 52 257	92 242	97 242	93 242	63 37 43 270	57 38 42 264	68 57 38 42 264	68 57 38 42 264
300	280.7 54	282.1 57 247	85 286.9 64 261	123 290.9 54 248	106 293.5 59 256	97 295.8 57 274	72 299.0 53 273	69 298.6 54 263	86 69 298.6 54 263	86 69 298.6 54 263
250	63	57 244	82 247	76 247	74 247	74 247	74 247	74 247	74 247	74 247
200	366.5 63	321.0 52 244	56 244	76 247	74 247	74 247	74 247	74 247	74 247	74 247
170	60	53 244	59 244	50 244	50 244	50 244	50 244	50 244	50 244	50 244
150	60	53 244	59 244	50 244	50 244	50 244	50 244	50 244	50 244	50 244
130	55	58 244	35 244	64 244	73 244	74 244	74 244	74 244	74 244	74 244
110	61	58 244	35 244	64 244	73 244	74 244	74 244	74 244	74 244	74 244
100	514.7 69	522.3 60	522.3 60	522.3 60	522.3 60	522.3 60	522.3 60	522.3 60	522.3 60	522.3 60
90	67									
80	67									
70	67									
60	67									
Inversion	969-945 mb 41°	978 mb 39° 967 mb 40°	664 mb 09° 650 mb 10°	664 mb 09° 650 mb 10°	995 mb 49° 987 mb 50°	800 mb 31° 785 mb 32°	800 mb 31° 785 mb 32°	822 mb 29° 790 mb 32°	636 15° 623 18°	636 15° 623 18°
Tropopause	I 290 mb -65° 28,800	I 279-61° 29,600	I 273 mb -70° 30,600	I 210 mb -73° 36,600	I 225 mb -77° 35,600	I 200 mb -86° 37,900	I 200 mb -86° 37,900	I 200 mb -86° 37,900	I 200 mb -86° 37,900	I 200 mb -86° 37,900

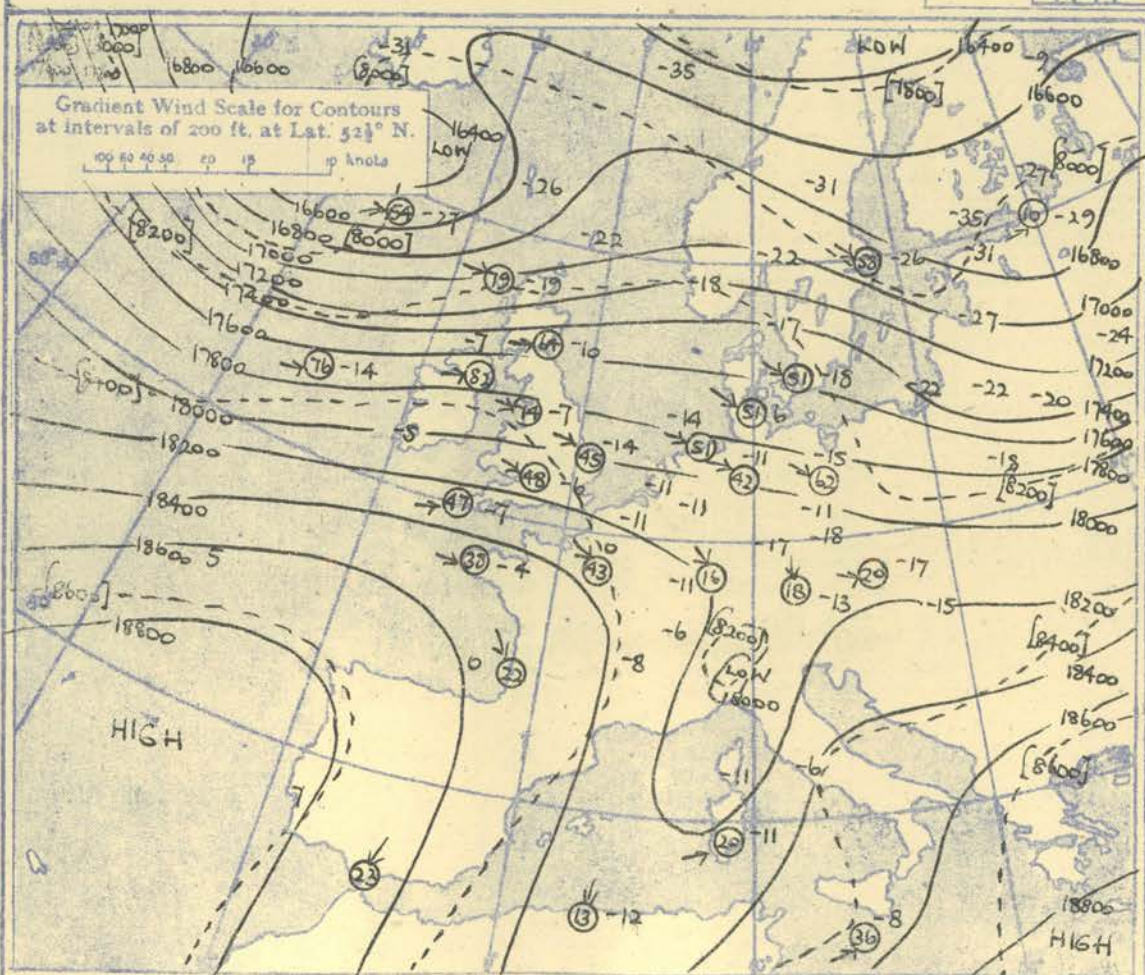
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (In knots) OF WINDS at the 700 mb. 500 mb. and 300 mb. levels at about 03h G.M.T.



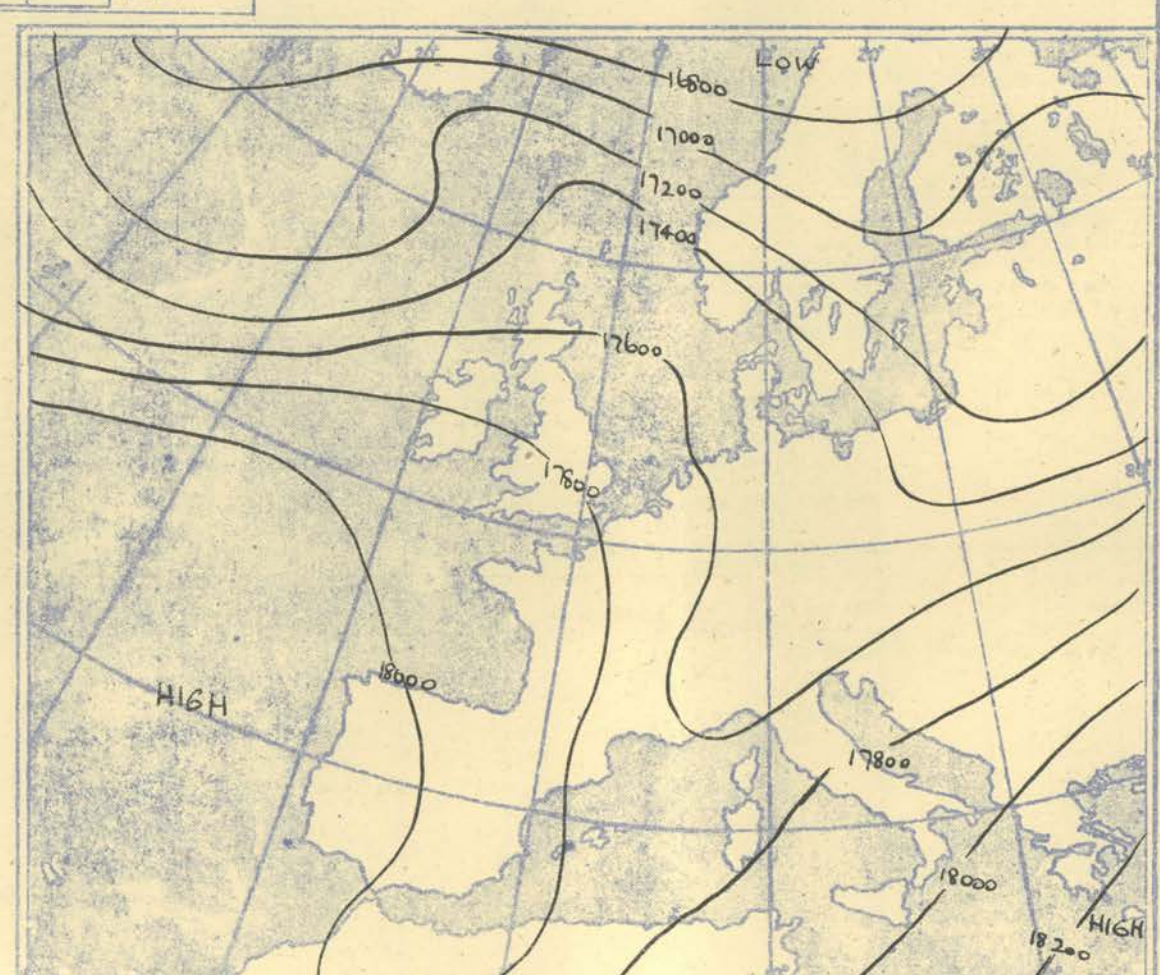
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.



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]

Cloud.
4/8 - 6/8 Cu. Sc 265-820m
6/8 - 8/8 NC. 820-700 ..
6/8 - 8/8 Cs. 400-340 ..
4/8 Cc 280-275 ..

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

[illegible]

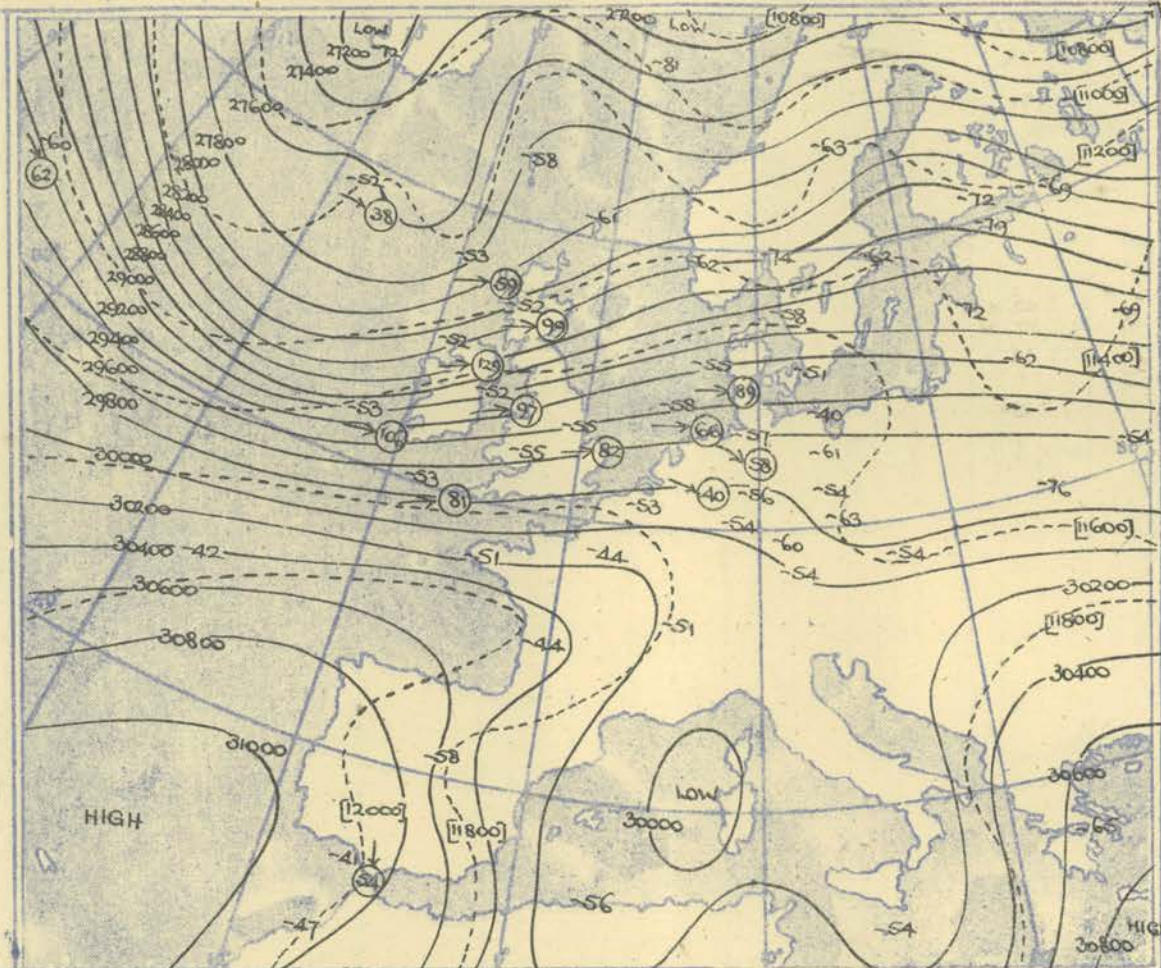
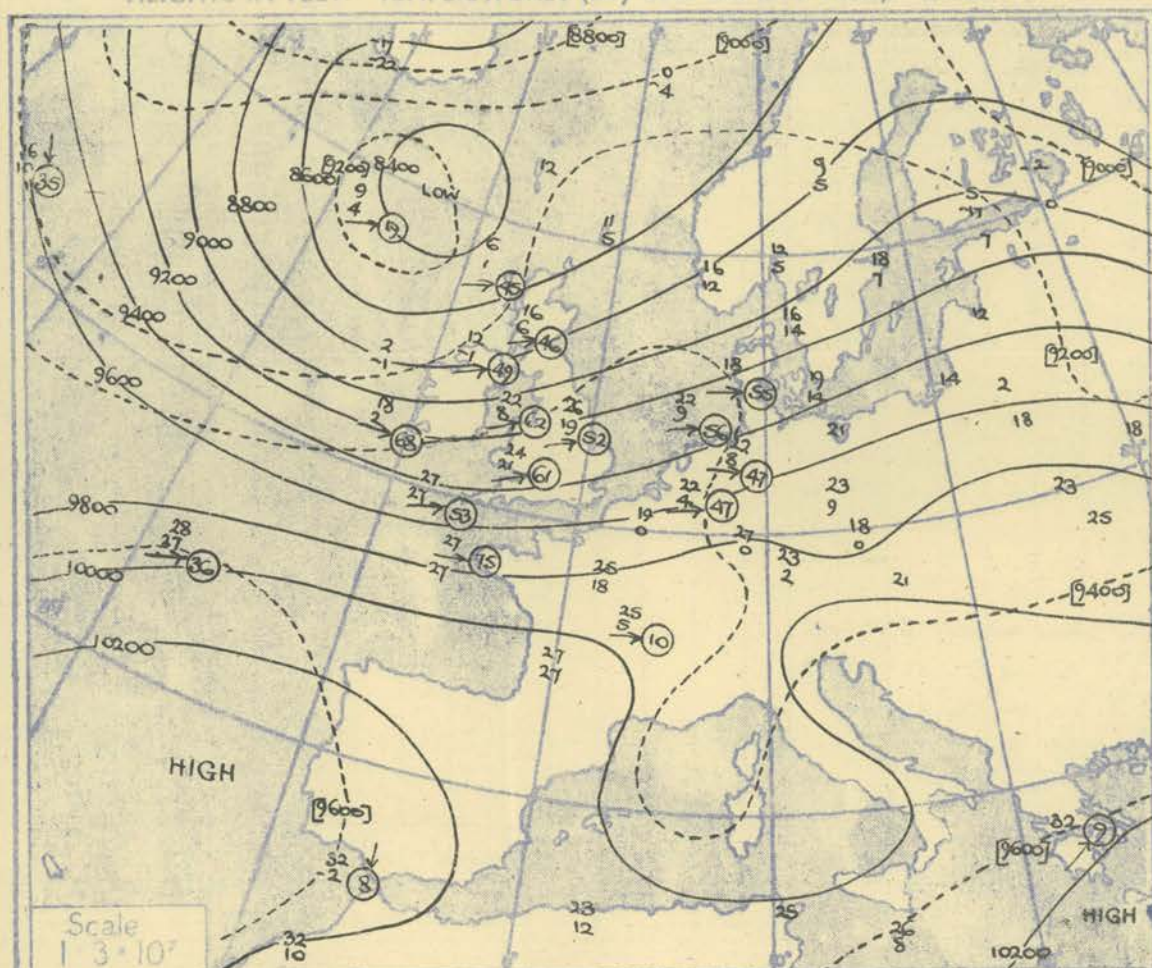
NEPHOSCOPE OBSERVATIONS

[illegible]

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

Ship	WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER RECORDER				WEATHER RECORDER				WEATHER RECORDER				WEATHER RECORDER				Ship		
Lat/Long	58.7 N 15.3 W				58.6 N 15.4 W				58.6 N 15.3 W				58.4 N 16.3 W				53.3 N 15.7 W				53.7 N 14.3 W				54.1 N 13.0 W				54.5 N 11.4 W.				Lat/Long		
Feature (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. mb mb mb Freezing		
	977 mb				971 mb				966 mb				972 mb				994 mb				990 mb				983 mb				979 mb						
	977 mb				971 mb				966 mb				972 mb				994 mb				990 mb				983 mb				979 mb						
	910 mb				915 mb				886 mb				875 mb				900 mb				890 mb				930 mb				870 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	Pressure mb						
Surf		44	34	250	36																							Surf							
1000	06.4																											1000							
950		39	31	242	40																							950							
900	21.7	30	24	247	39	20.2	31	27	249	39	18.9	34	31	237	22	20.6	35	28	316	38	26.7	32	32	265	46	25.5	34	25	258	36	33.3	28	25		900
850		23	19	250	39																							850							
800	52.2	16	14	249	48	50.7	18	16	258	33	49.6	21	19	260	24	51.4	23	10	324	46	57.4	23	13	251	49	56.1	21	06	256	45	53.7	16	11		800
750		09	07	245	45																							750							
700	86.5	02	01	245	45	84.3	06	02	259	29	83.4	09	04	261	19	85.3	10	01	327	49	91.9	20	15	259	60	87.8	08	15	260	60	87.0	02	101		700
650		05	10	238	46																							650							
600	22.9	13	20	233	51	21.9	11	17	248	19	21.2	08	21	263	13	23.3	07	24	325	52	130.7	04	24	259	70	128.0	01	41	256	72	124.3	14	30		600
550		23	23	233	53																							550							
500	65.5	27	41	235	54	64.6	30	38	258	05	64.2	28	40	223	09	66.1	30	48	321	43	174.8	14	34	261	76	171.6	21	54	248	86	166.9	28	56		500
450		35	51	240	55																							450							
400	216.1	41		242	66	214.6	49		253	12	410	51	224	12	42													400							
350		48		245	68	(378 mb)	52			29	214.1	51	241	23	215.9	54												350							
300	279.3	52		250	65					27.7	52		275	38	277.4	60												300							
250		51		252	64					48			260	44		57												250							
200	367.9	47		253	56					365.8	47		263	43	364.7	52												200							
170		51		248	52					45			259	41		53												170							
150		50		244	50								257	44	427.1	53												150							
130		49		244	32					47			257	40	(132 mb)	54												130							
110		56		244	28					50			260	47														110							
100	518.9	57		244	18					(106 mb)	51																	100							
90		89		244	18																							90							
80		64		244	18																							80							
70		64																										70							
60	(65 mb)	74																										60							
Inversion 540 mb - 25° - 515 mb - 24°																																			
Tropopause	I 307 mb - 52° 27,300'				NR. 378 mb 22,500'				I 273 mb - 55° 22,800'				I 380 mb - 58° 23,700'				NR. 288 mb 29,900'				II 372 mb - 42° 23,800'				NR. 370 mb - 39° 23,800'				II 385 mb - 51° 22,600'				Tropopause		

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

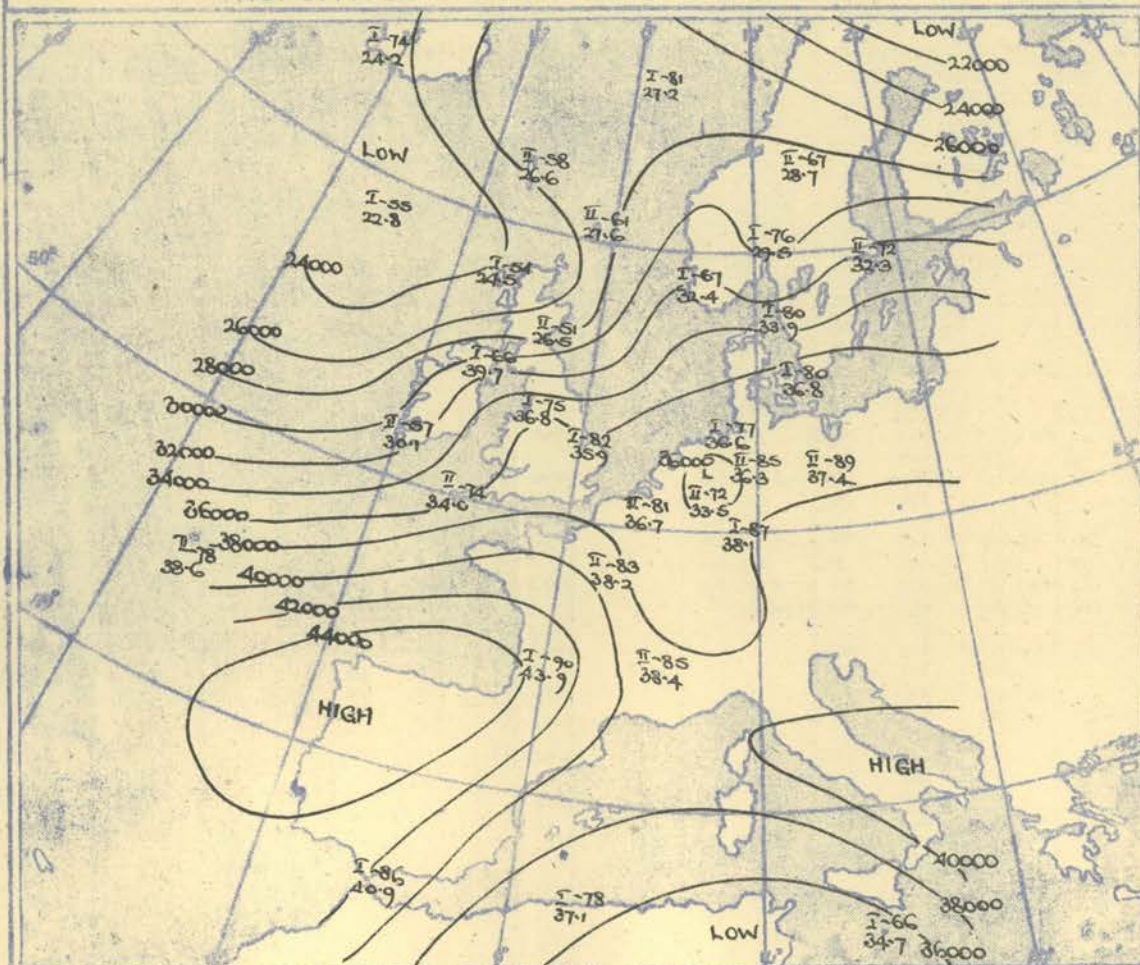


The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isotherms of the thickness of the layer 1000-700 mb.

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 isotherms of the thickness of the layer 500-300 mb.

TROPOPAUSE CHART at about 15h. GMT.



Contour lines of Height of Tropopause.
Temperature of Tropopause.

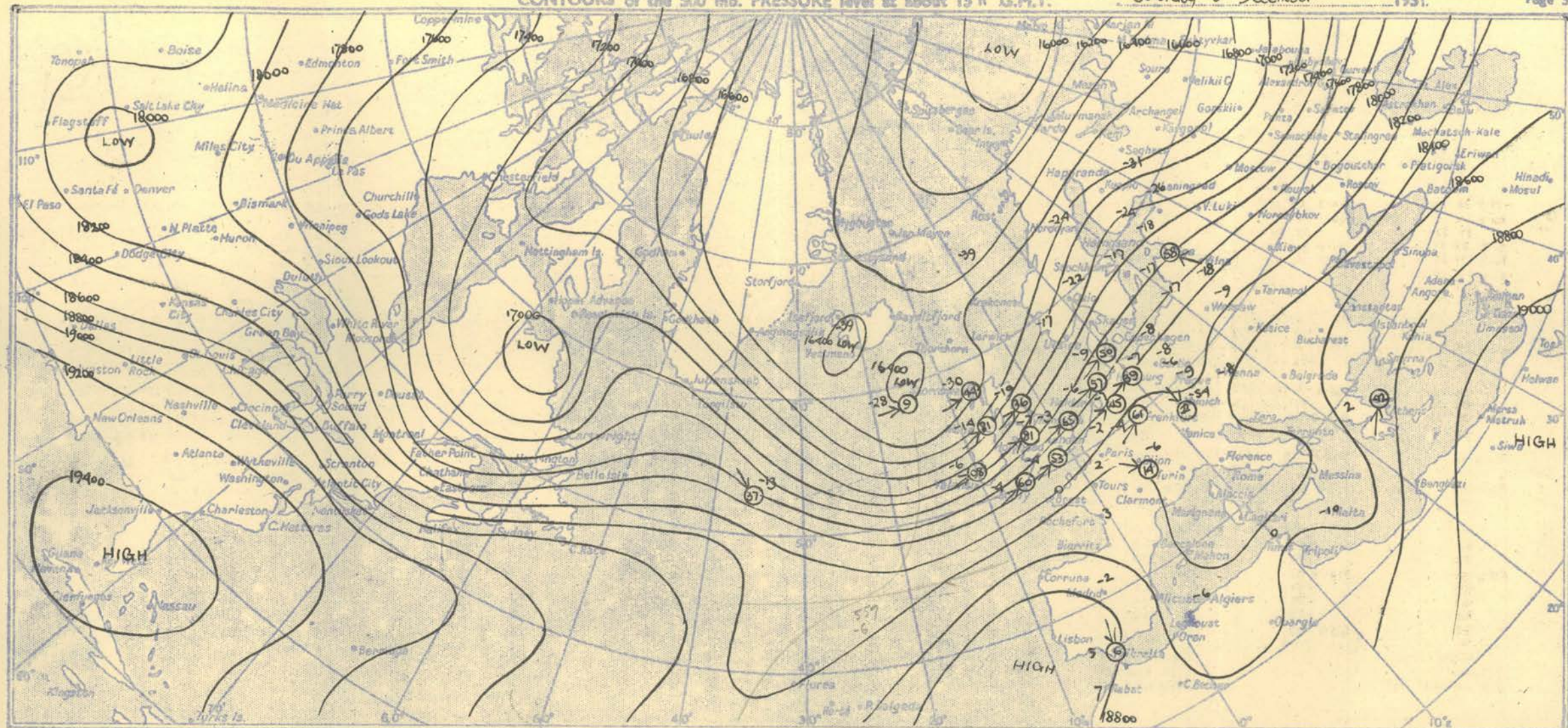
NOTES ON THE AEROLOGICAL SITUATION.

The warm ridge over Britain swept rapidly eastward and a further cold trough advanced towards Ireland from the Denmark Straits.

A curious minor warm ridge or bubble appeared in sea area Rockall. It seems likely that this was formed by a relatively warm area becoming detached in the vicinity of L.D. during the occlusion of OX, and subsequently moving in the circulation of L.D.

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

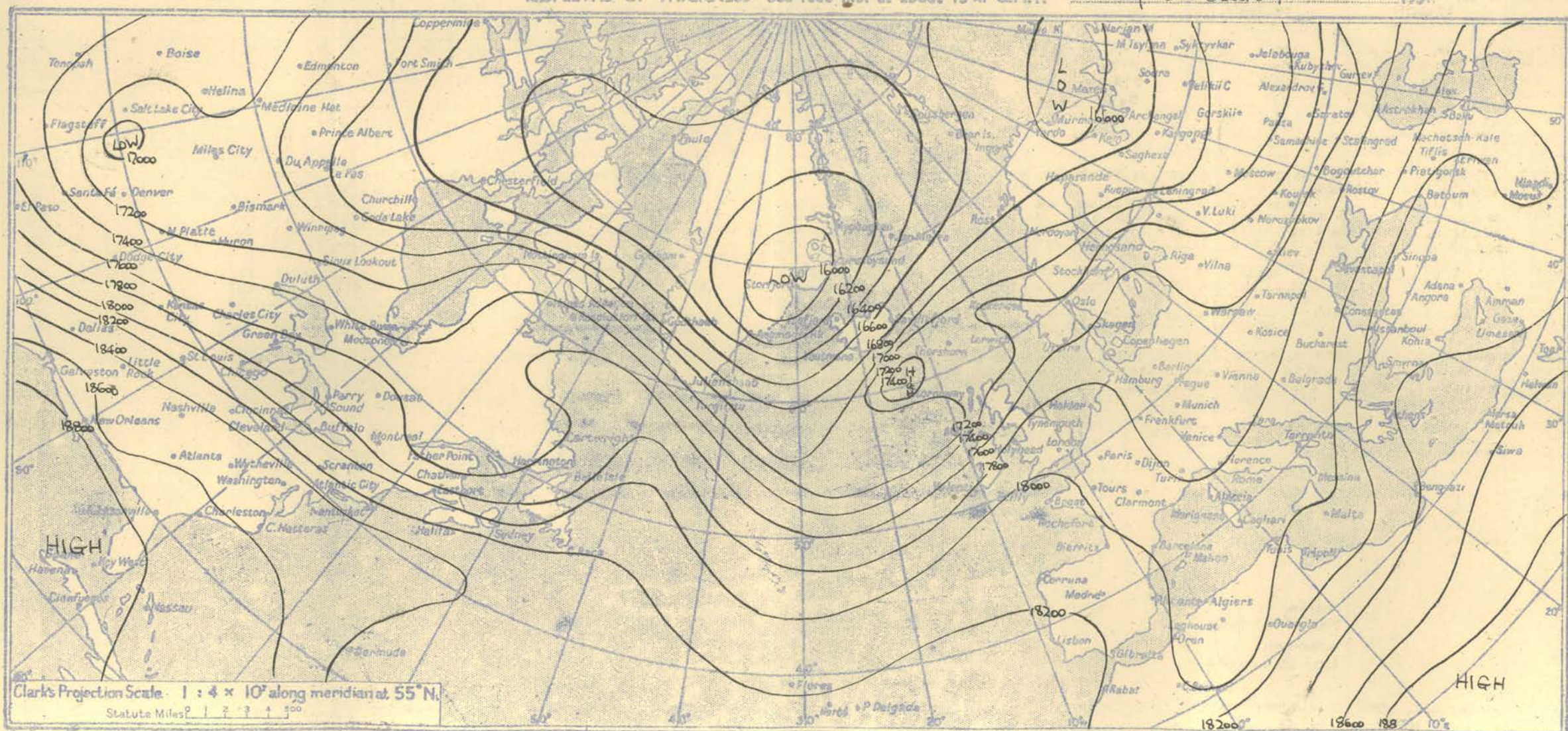
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



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

Saturday 8th December,

1951.



Clark's Projection Scale: 1 : 4 x 10⁶ along meridian at 55° N.

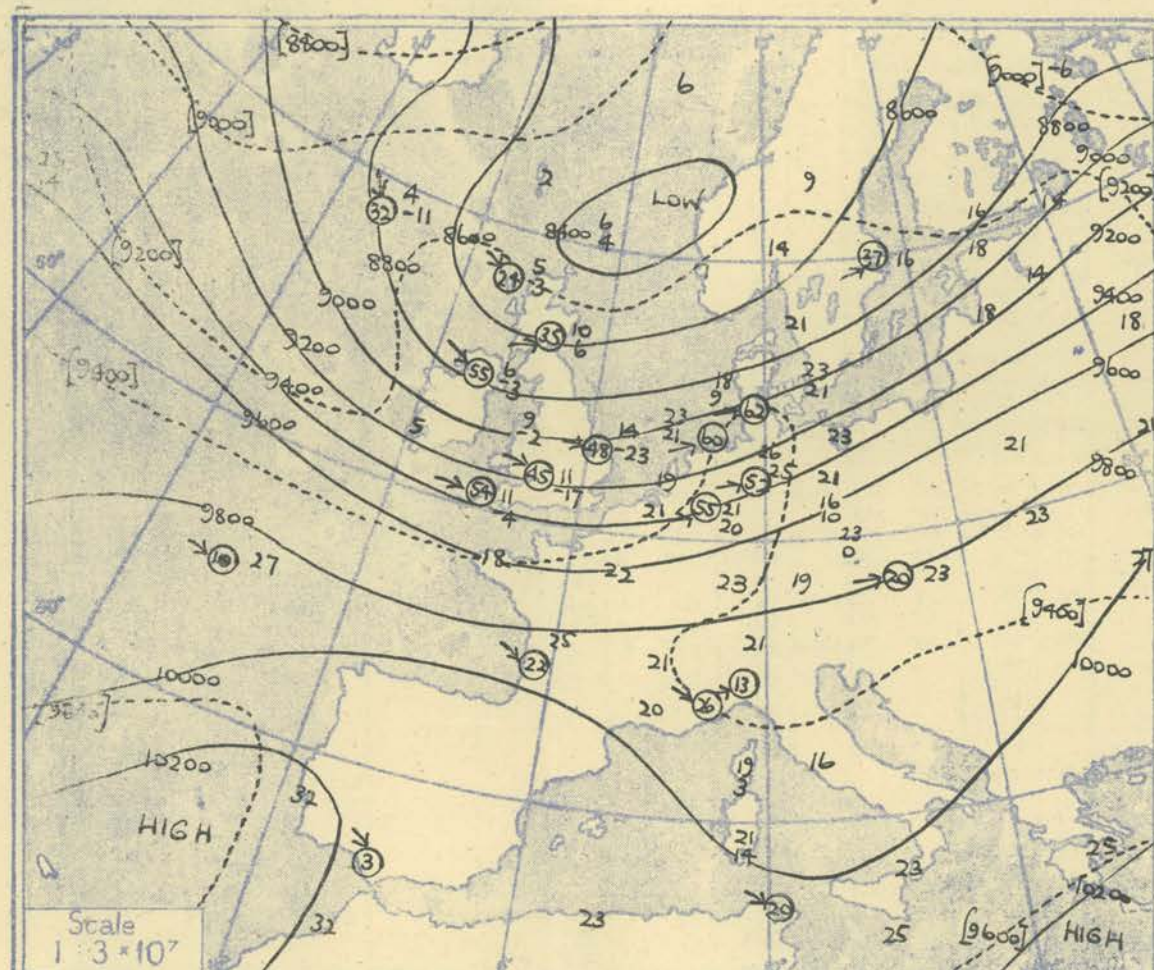
Statute Miles 1 2 3 4 500

At 550/5060 m, 8029 on 20.01.01

Sunday 9th December. 1951. Page 1.

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA			
Pressure mb	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.					
		Surf	mb	Dir.	Vel.	Surf	mb	Dir.	Vel.	Surf	mb	Dir.	Vel.	Surf	mb	Dir.	Vel.	Surf	mb	Dir.	Vel.	Surf	mb	Dir.	Vel.	Surf	mb	Dir.	Vel.	Surf	mb	Dir.	Vel.				
		970.6	970.6	970.6	970.6	970.6	970.6	970.6	970.6	970.6	970.6	970.6	970.6	970.6	970.6	970.6	970.6	970.6	970.6	970.6	970.6	970.6	970.6	970.6	970.6	970.6	970.6	970.6	970.6	970.6	970.6	970.6	970.6				
Surf	02.7	34	32	300	1100.4	34	33	Calm	00.2	38	36	290	18	02.5	40	37		00.6	43	33	240	22	04.4	41	37	260	17	02.9	46	40	280	24	00.3	42	37		
1000	08.6	34	32		106.8	34	32	301	16	37	34	235	36	04.5	38	35		03.4	41	30		00.7	40	36	263	32	00.5	42	34	277	34	00.3	42	37			
950	19.1	30	28		21.0	30	28	296	21	21.1	32	29	244	45	23.6	33	30		24.8	36	27		25.8	34	27	267	45	27.4	34	31	272	37	28.8	35	30		
900	33.9	24	22		35.9	24	22	295	25	36.1	28	24	255	45	38.5	27	24		39.8	28	21		40.8	28	21	275	48	42.3	28	23	280	42	43.8	26	22		
850	49.5	18	16		51.5	18	15	299	24	51.8	22	18	259	42	54.2	20	17		55.5	21	14		56.5	26	09	277	48	58.0	24	07	277	43	59.4	22	07		
800																																					
750																																					
700	83.1	06	04		85.1	05	03	304	24	85.7	10	06	257	35	87.9	06	03		89.3	09	02		90.6	14	23	273	48	92.0	11	17	279	45	93.3	11	09		
650	01.06				03.07	298	31	02.01	259	35	00.06																										
600	20.8	09	15		22.7	11	16	294	30	23.6	08	10	261	38	25.6	08	15		27.1	07	17		28.9	00	40	260	63	30.5	07	29	262	80	32.2	12	21		
550	17.23				20.25	292	32	16.25	269	44	17.25																										
500	63.8	25	32		65.5	30	36	308	30	66.7	27	35	271	45	68.7	27	34		70.2	27	39		73.6	06	51	249	102	75.4	07	43	258	90	77.1	08	38		
450	35.43				41	317	48			40	47	264	47	39	45																						
400	214.2	46			215.3	53	298	38	216.6	53	266	47	218.6	53																							
350	54				57	290	34	55	261	49	53																										
300	276.6	57			277.3	56	277	32	278.4	56	258	51	280.9	53	284.0	50																					
250					52	273	40	51	258	63	55																										
200					365.4	49	274	40			368.5	54			372.1	56																					
170					50	269	42				55				57																						
150					51	265	43								64																						
130					51	265	45								69																						
110					54	271	44								62																						
100					516.2	56	275	42							518.9	54																					
90															58																						
80															63																						
70															69																						
60															79																						
Isothermal		961-925 mb 34°		Isothermal		973-933 mb 34°		Inversion		974 mb 38°-965 mb 40°		360°-58°-351°-55°		Inversion		335 mb 49°-328 mb 47°		200°-56°-189°-54°		Isothermal		42.7-39.3 mb-92°		300-250°-50°		Inversion		0855 mb 27°-835 mb 29°		0856 mb 27°-835 mb 29°		0856 mb 27°-835 mb 29°		0856 mb 27°-835 mb 29°			
Tropopause		N.R.		I 375 mb-58° 22,900		I 321 mb-59° 26,400		I 373 mb-58° 23,400		I 427 mb-92° 20,700		I 335 mb-49° 26,000		I 125 mb-70° 47,400		I 285 mb-61° 20,100		I 228 mb-70° 35,000		N.R.		I 300 mb-61° 28,800		Tropopause													
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA			
Pressure mb	Time M.S.L.	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.					
		Surf	mb	Dir.	Vel.	Surf	mb	Dir.	Vel.	Surf	mb	Dir.	Vel.	Surf	mb	Dir.	Vel.	Surf	mb	Dir.	Vel.	Surf	mb	Dir.	Vel.	Surf	mb	Dir.	Vel.	Surf	mb	Dir.	Vel.				
		962.4	962.4	962.4	962.4	962.4	962.4	962.4	962.4	962.4	962.4	962.4	962.4	962.4	962.4	962.4	962.4	962.4	962.4	962.4	962.4	962.4	962.4	962.4	962.4	962.4	962.4	962.4	962.4	962.4	962.4	962.4	962.4	962.4			
Surf	02.7	35	34		00.4	39	35	350	20	00.2	34	29	270	16	02.5	41	37	240	25	00.6	45	36		00.4	43	32	230	28	04.4	39	34	250	20	02.8	46	34	
1000	07.4				05.5	39	33	349	34	05.9	36	30	285	24	04.1	39	35	252	44	02.9	42	35		02.5	46	31	252	45	00.2	39	33	265	36	01.2	41	34	
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																																					
Isothermal		962-950 mb 35°		Inversion		978 mb 39°-962 mb 40°		979 mb 39°-962 mb 40°		979 mb 39°-962 mb 40°		979 mb 39°-962 mb 40°		979 mb 39°-962 mb 40°		979 mb 39°-962 mb 40°		979 mb 39°-962 mb 40°																			

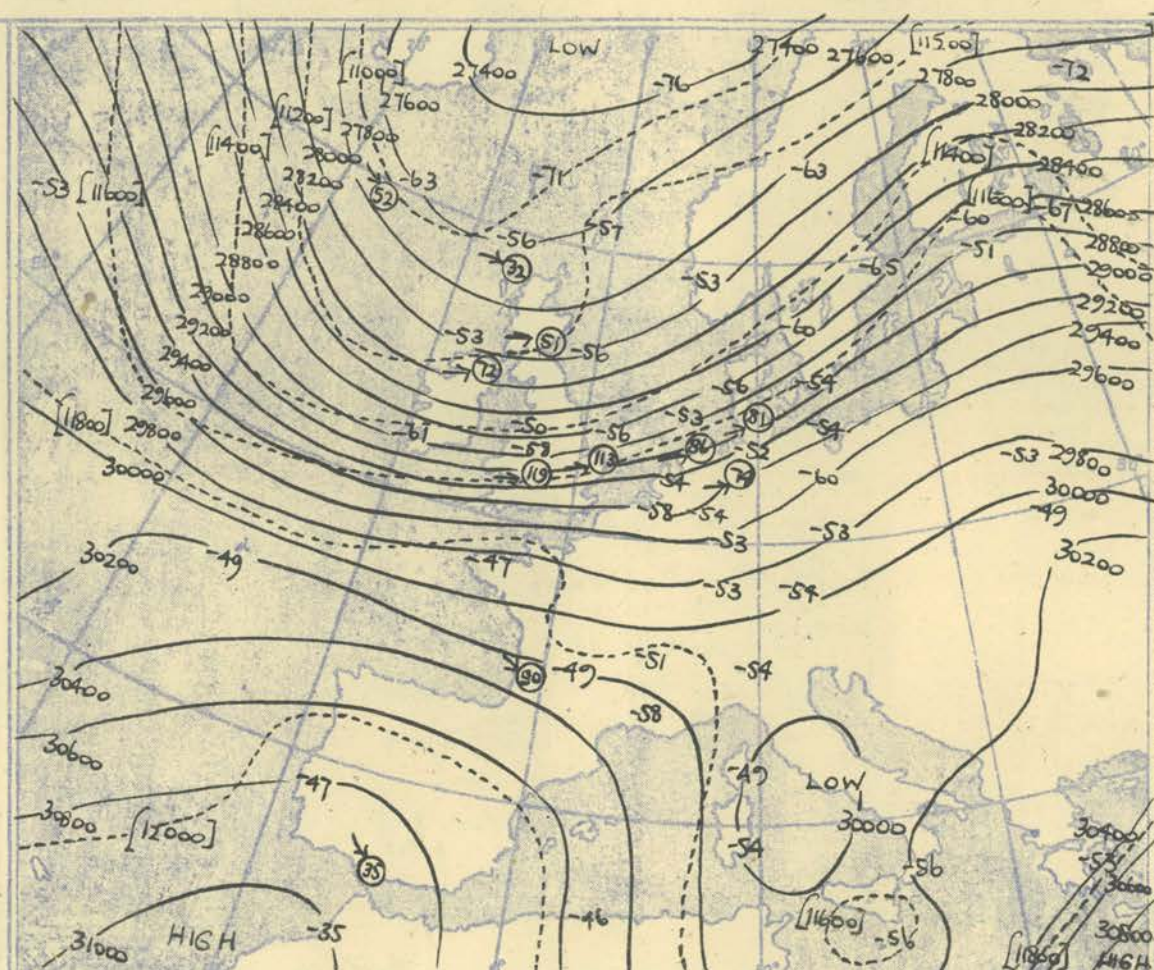
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Points). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb, 500 mb, and 300 mb, levels at about 03h G.M.T.



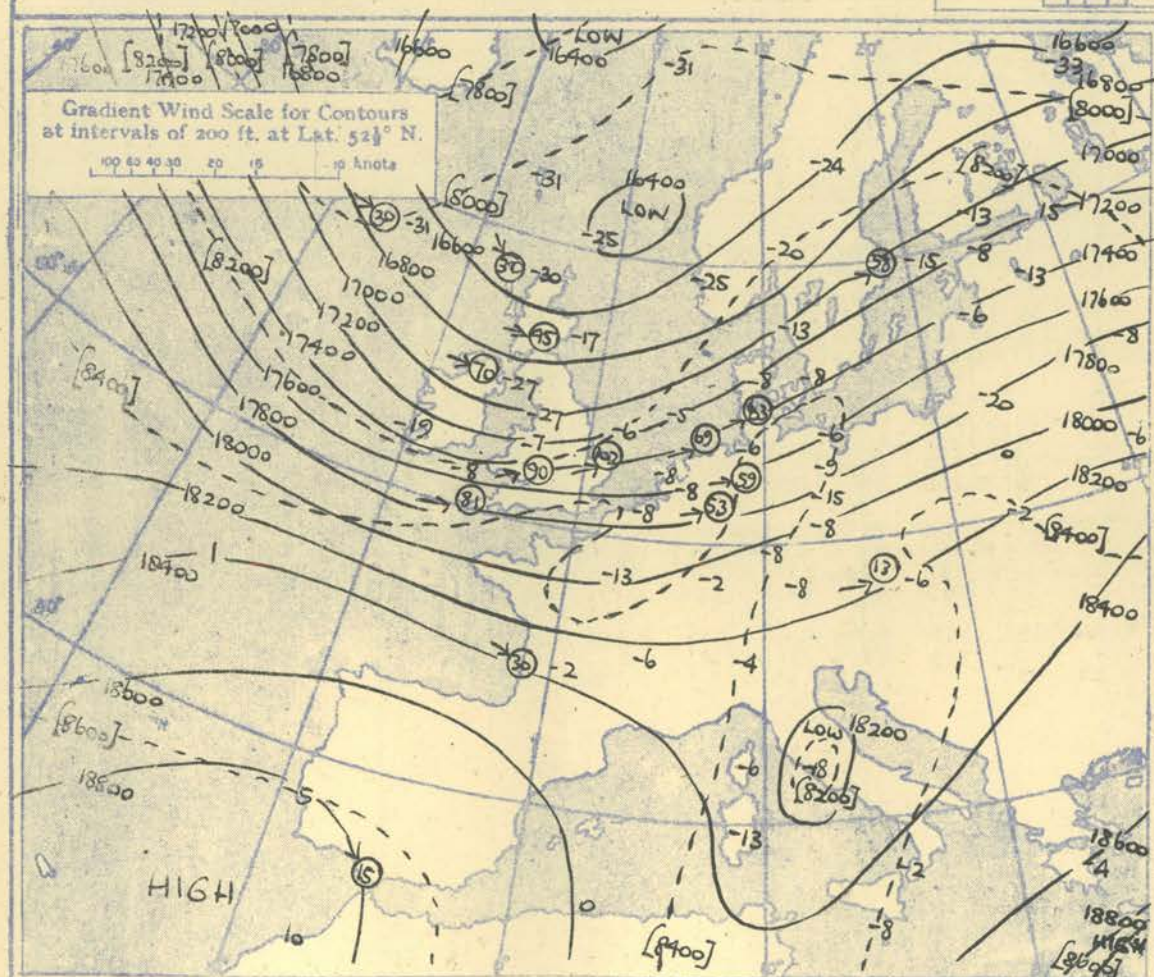
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

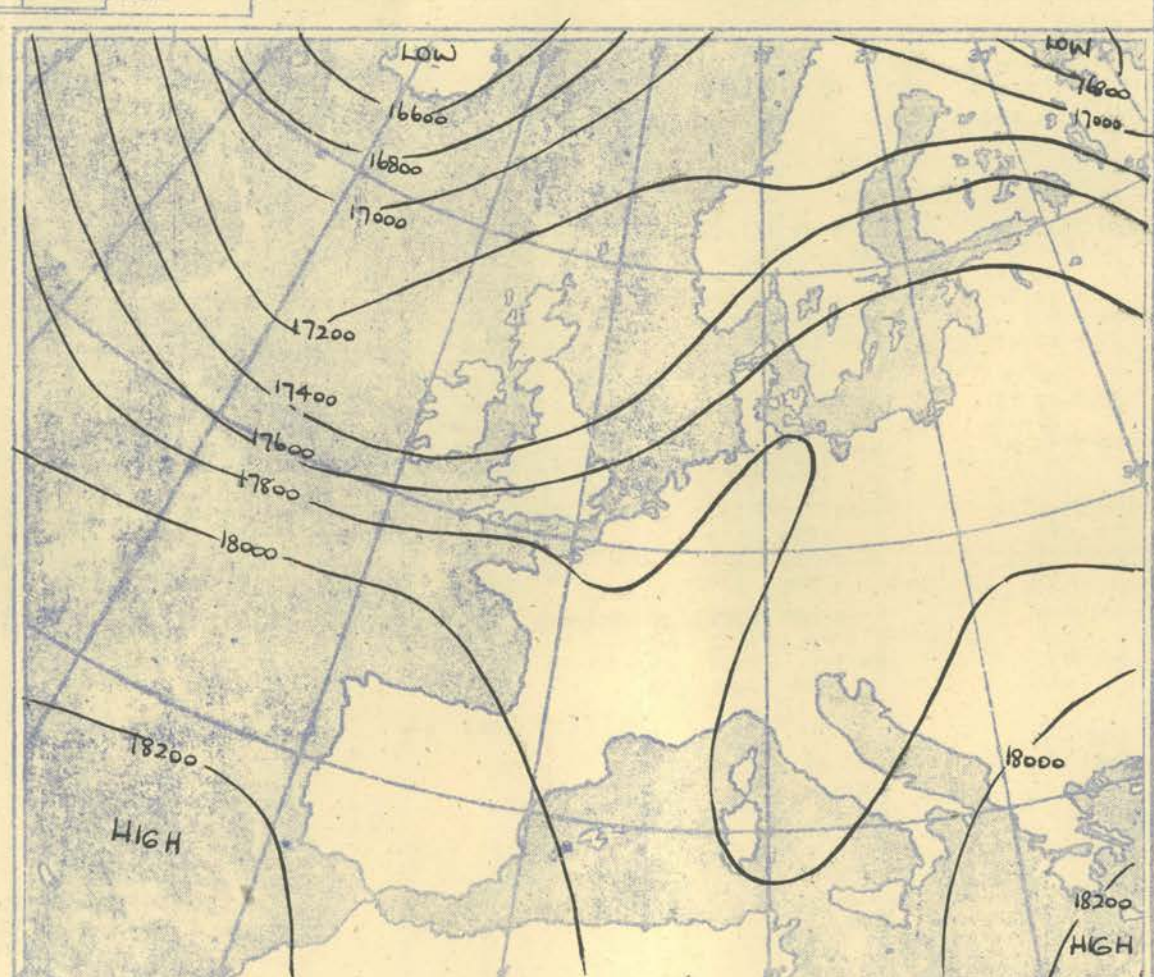
100 80 60 40 20 10 knots



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 300-1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

[illegible]

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

[illegible]

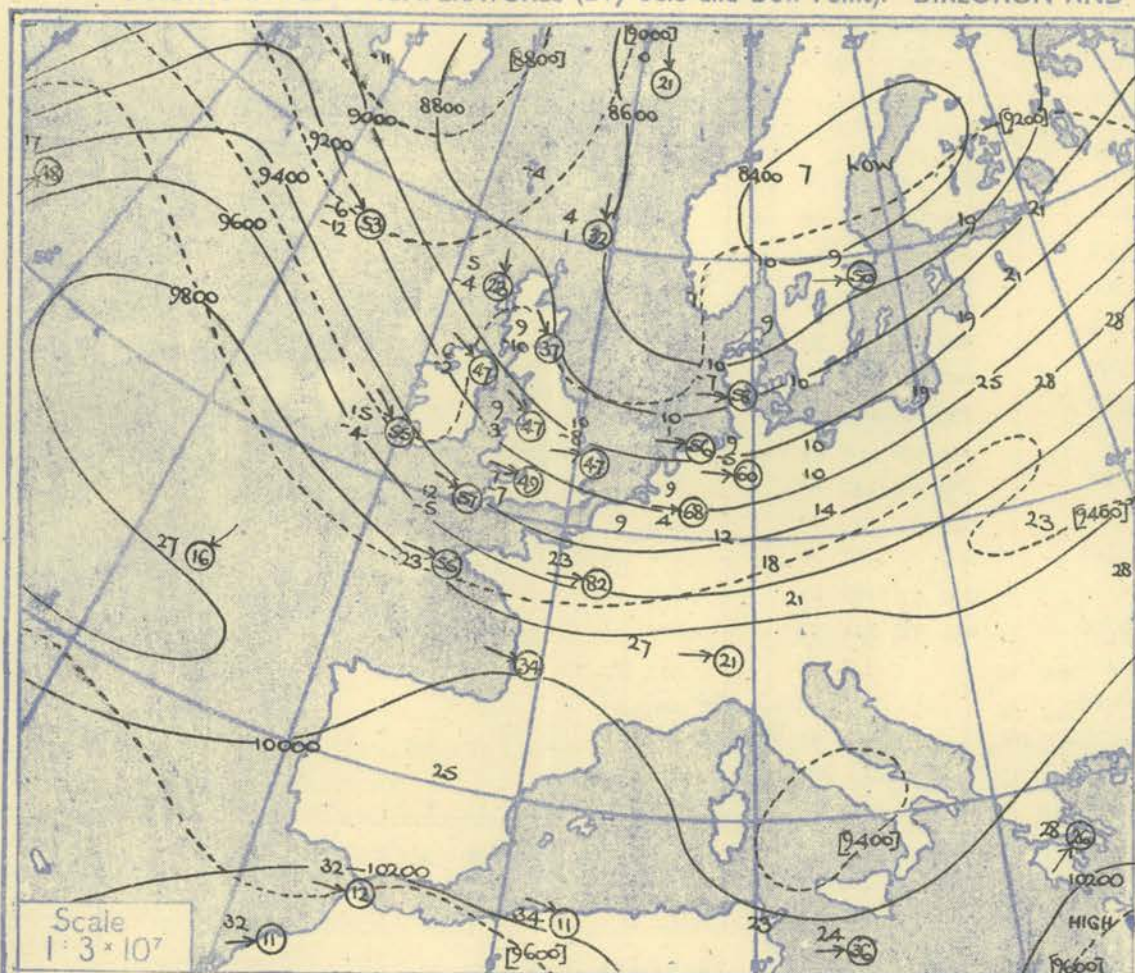
NEPHOSCOPE OBSERVATIONS

[illegible]

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

[illegible]

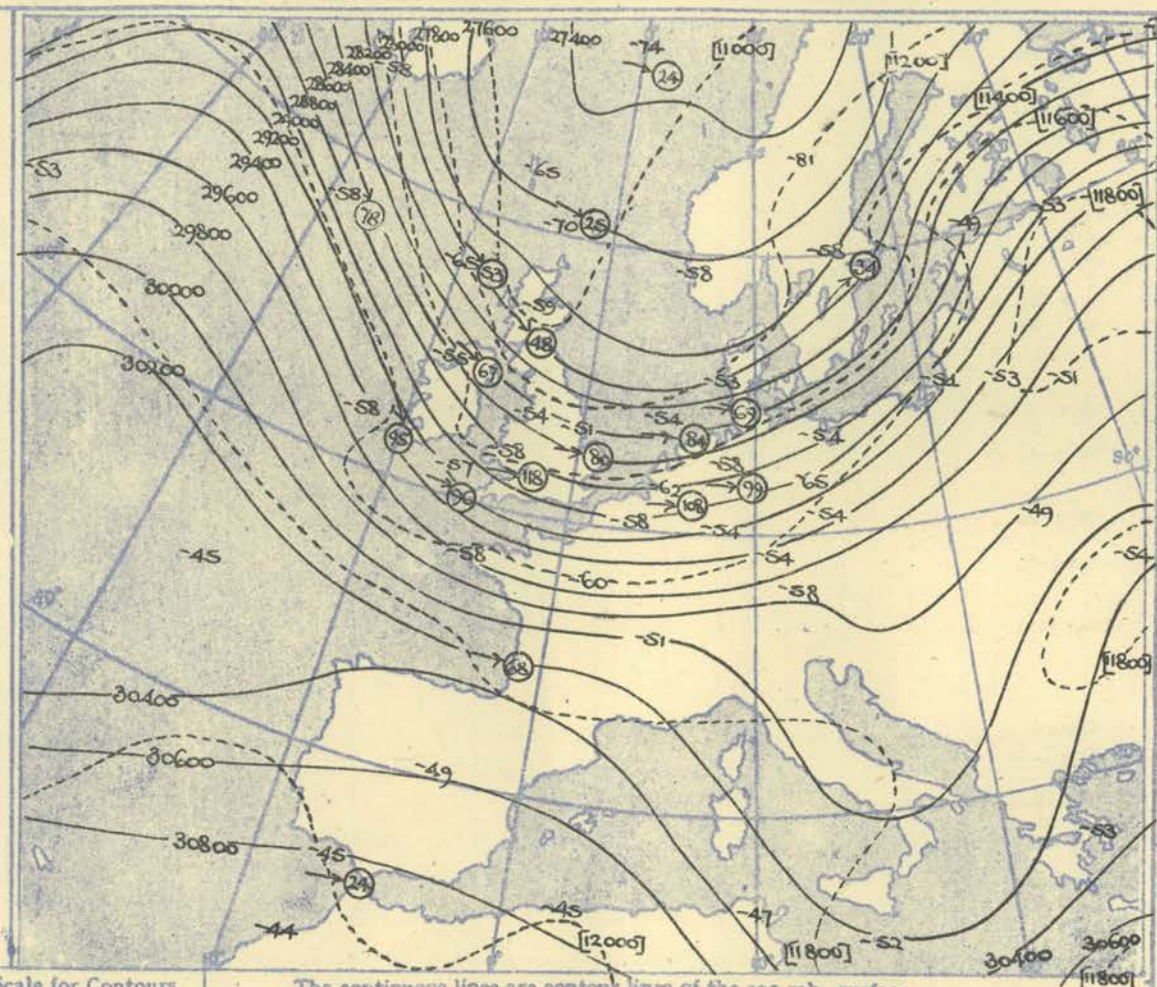
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (In knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h G.M.T.



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

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

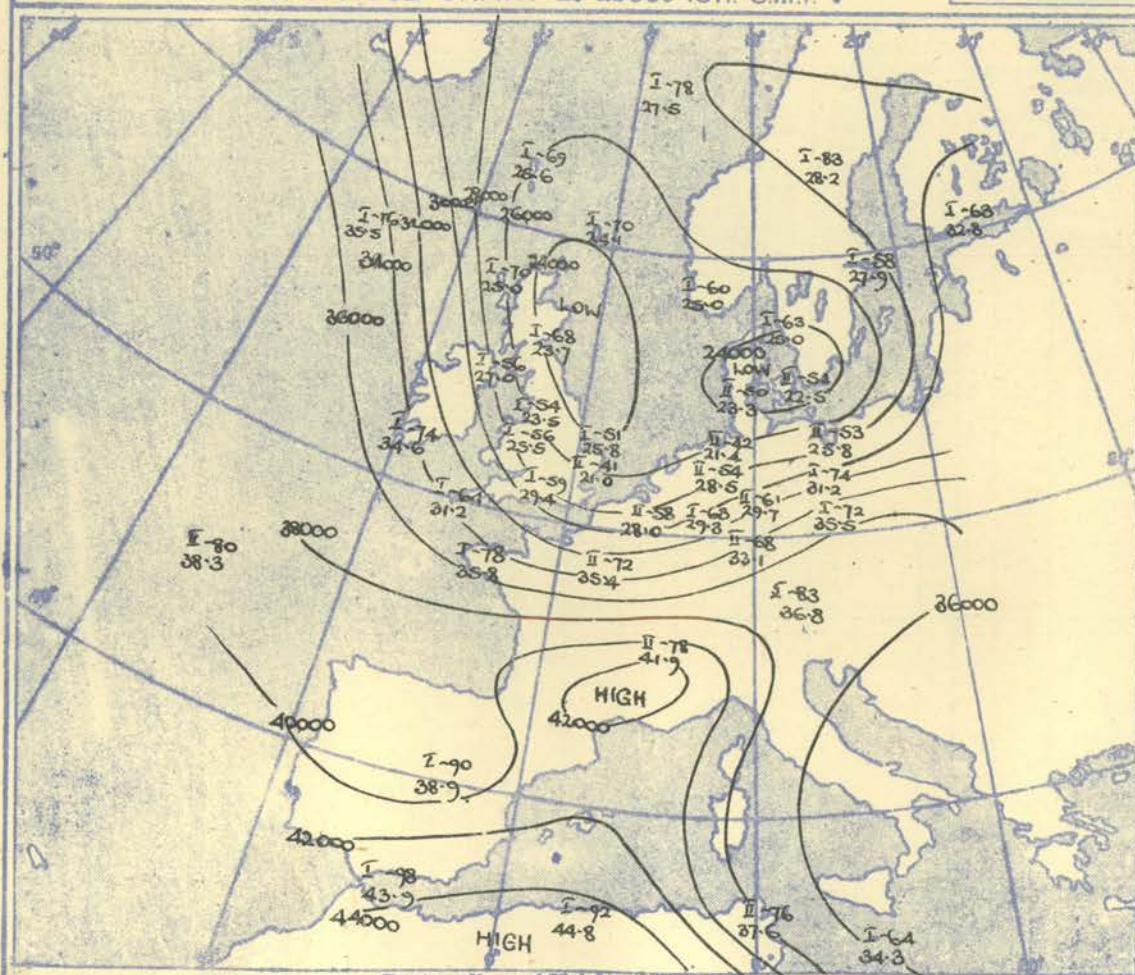
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.
100 80 60 40 20 10 knots



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.

The warm bubble in sea area Rockall moved across the British Isles to the North Sea. Warm air moved northward on the Western Atlantic whilst cold air moved southward off the Northwest Scottish coast. These two developments coupled to form a very tight northwesterly thermal gradient from Greenland to Ireland.



Contour lines of Height of Tropopause.
Temperature of Tropopause.

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

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



1951



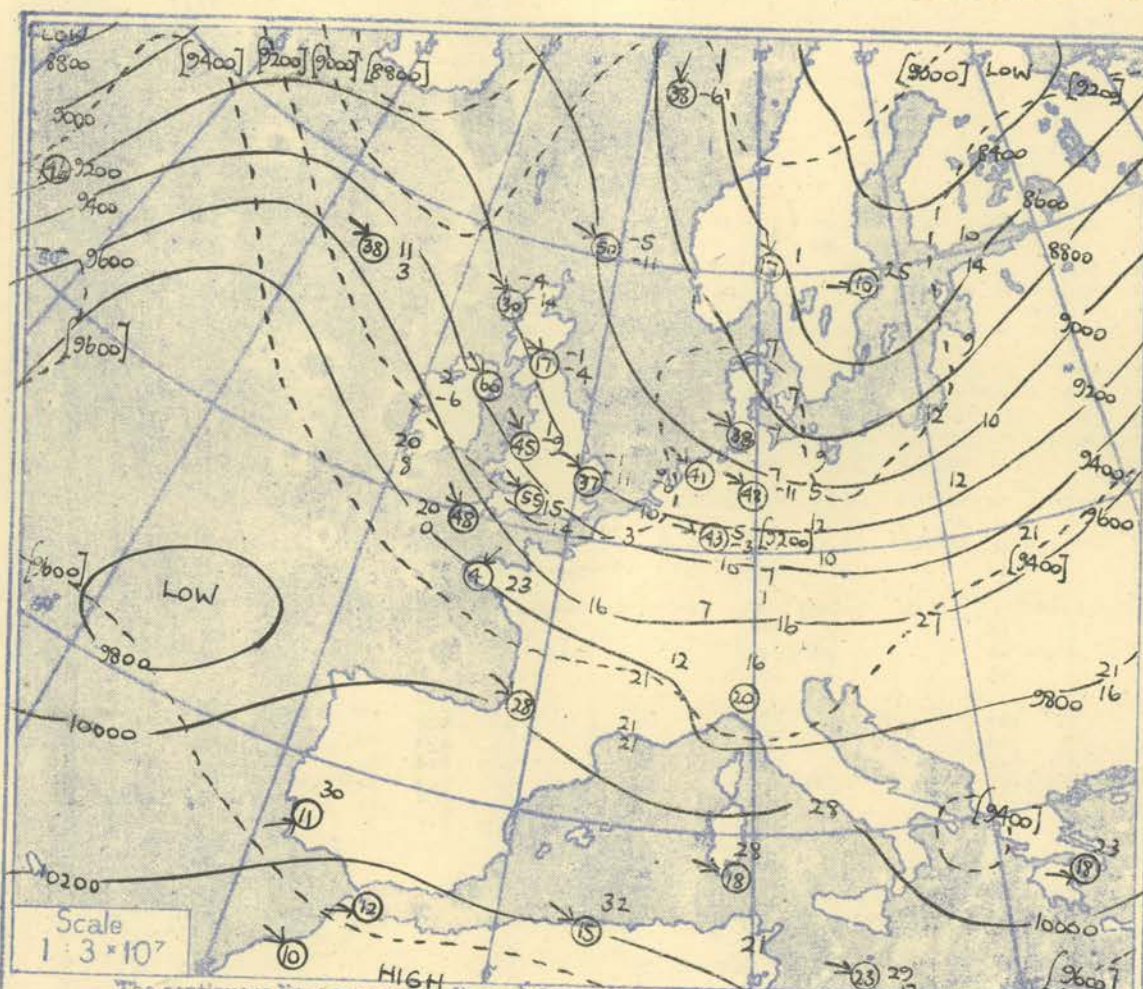
1951.

04.550/50501 8022 04.258/1081

OROLOGIO	VALENTIA	STATION
----------	----------	---------

[illegible]

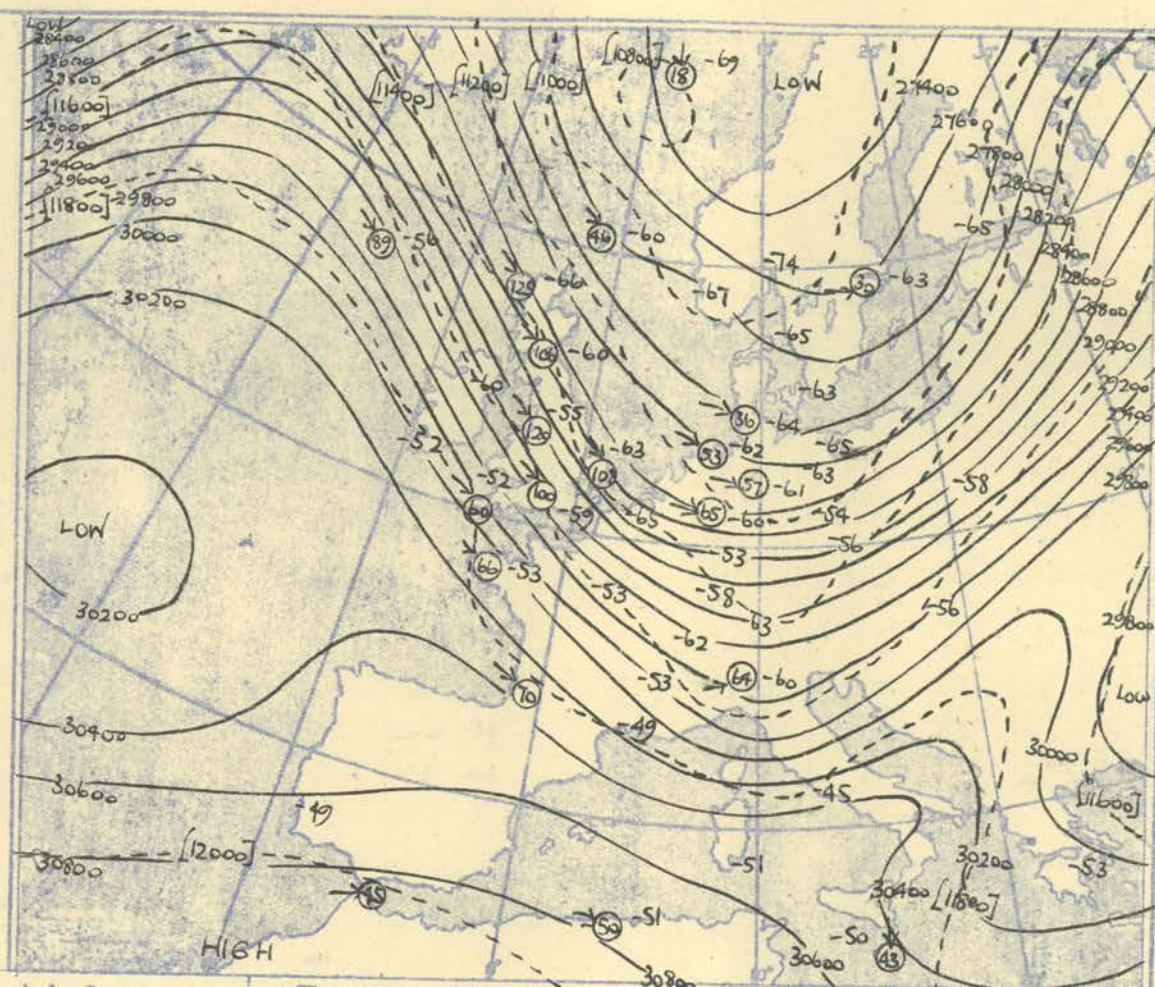
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (In knots) OF WINDS at the 700 mb. 500 mb. and 300 mb. levels at about 03h G.M.T.



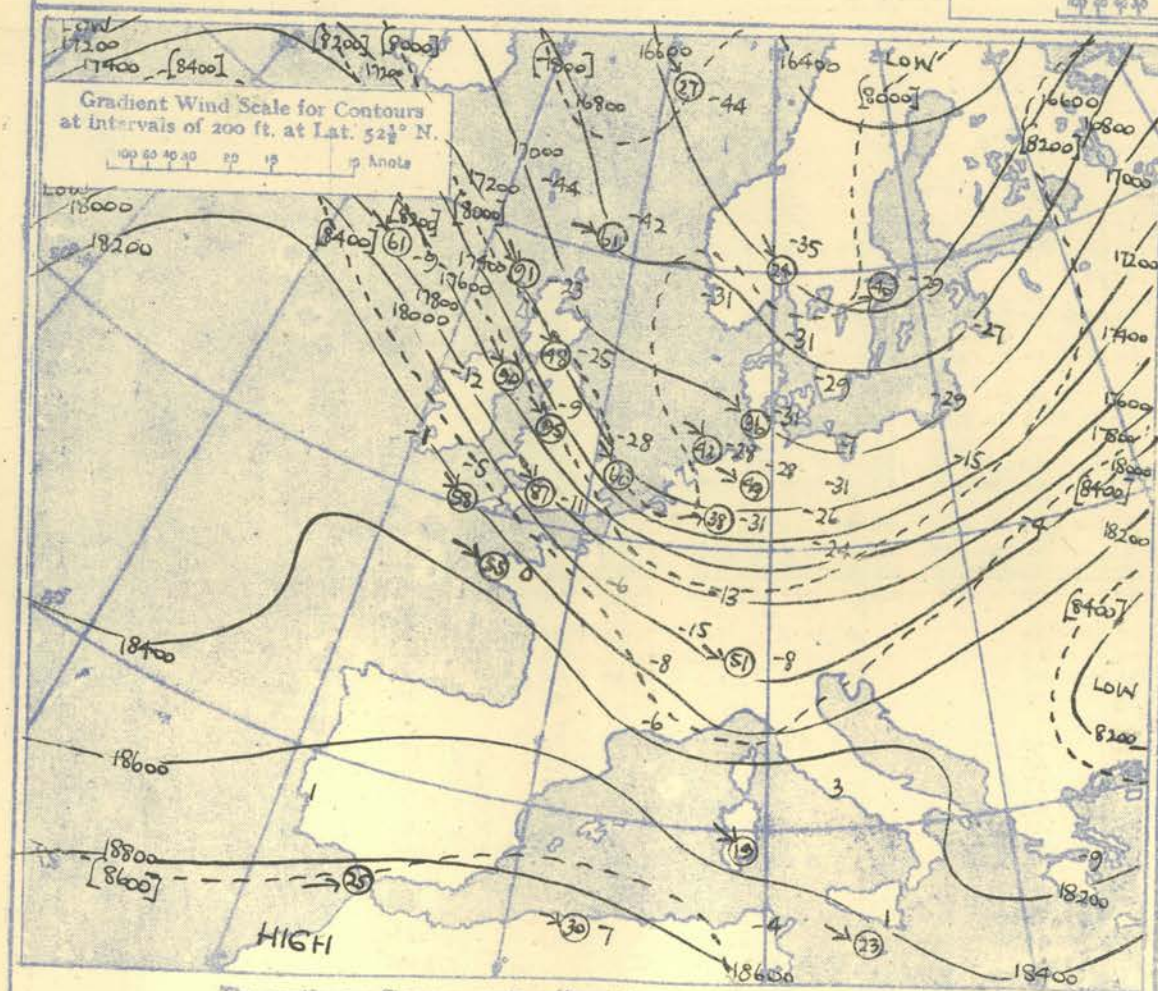
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

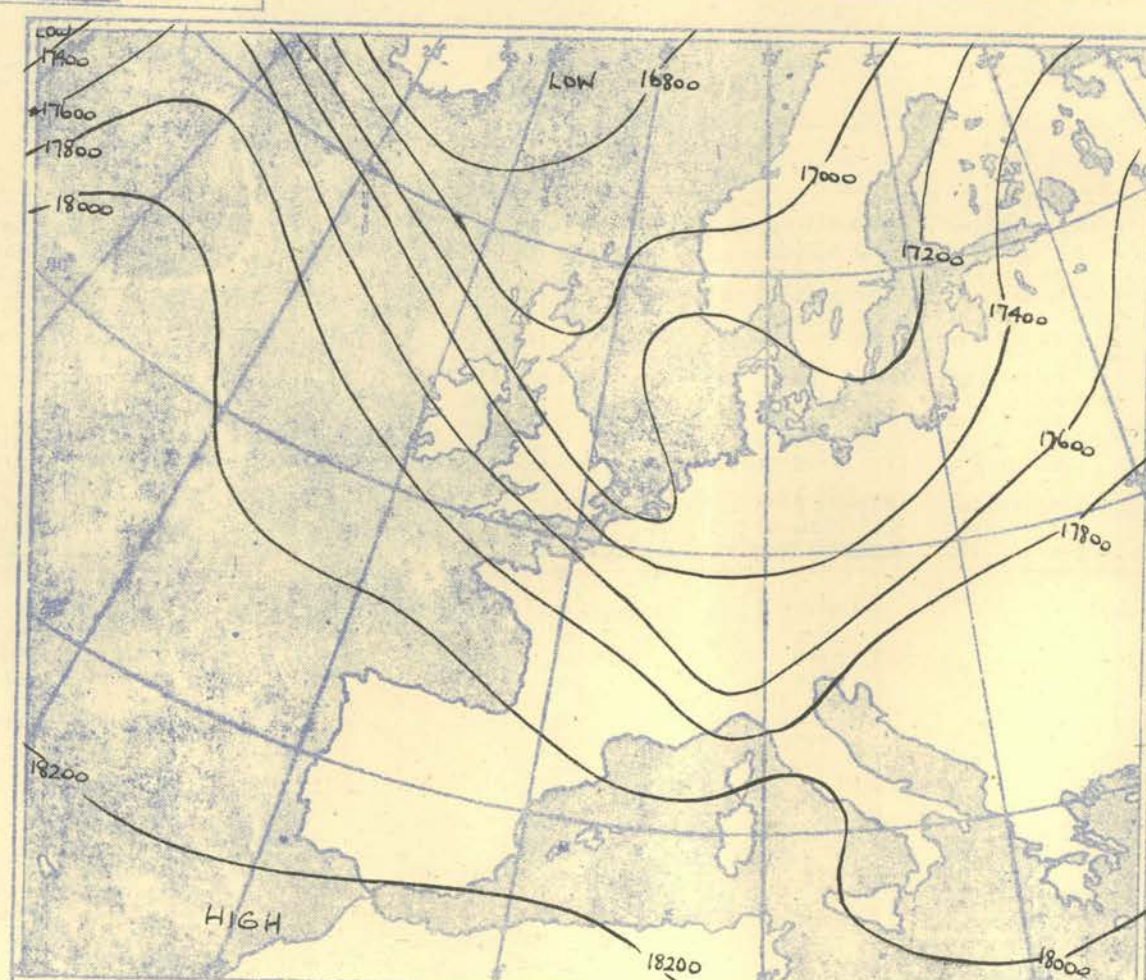
100 80 60 40 20 10 0 knots



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.

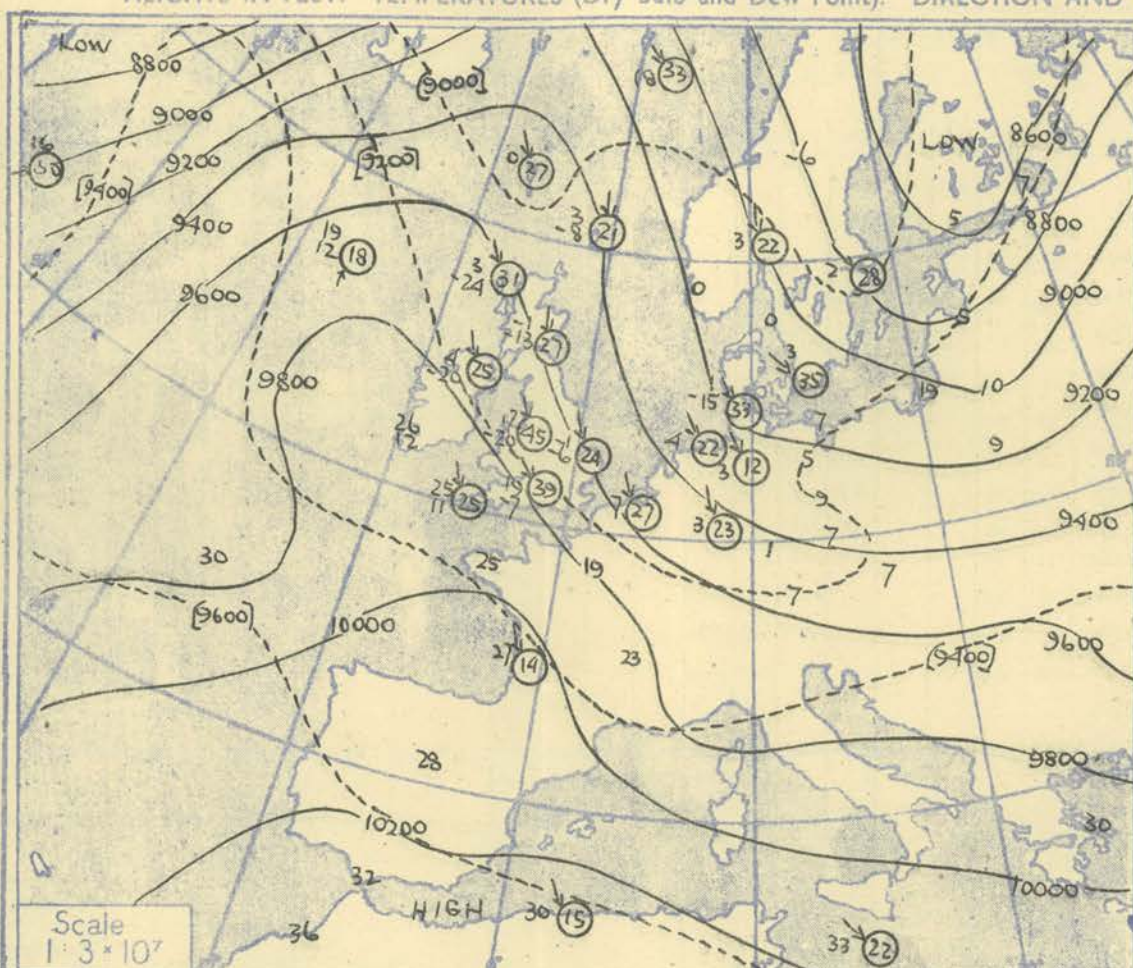


Isopleths of Thickness 500-1000mb.

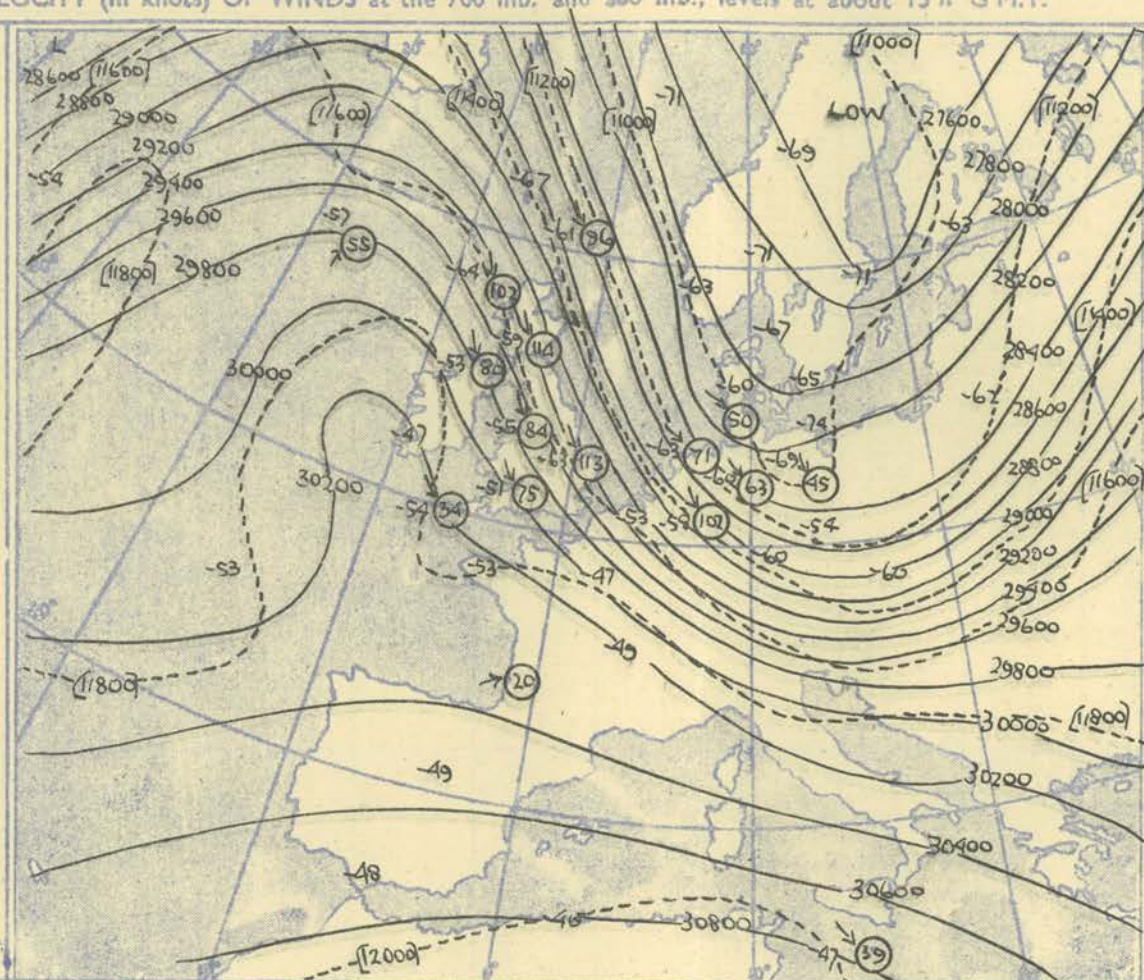
DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

NEPHOSCOPE OBSERVATIONS[illegible]

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

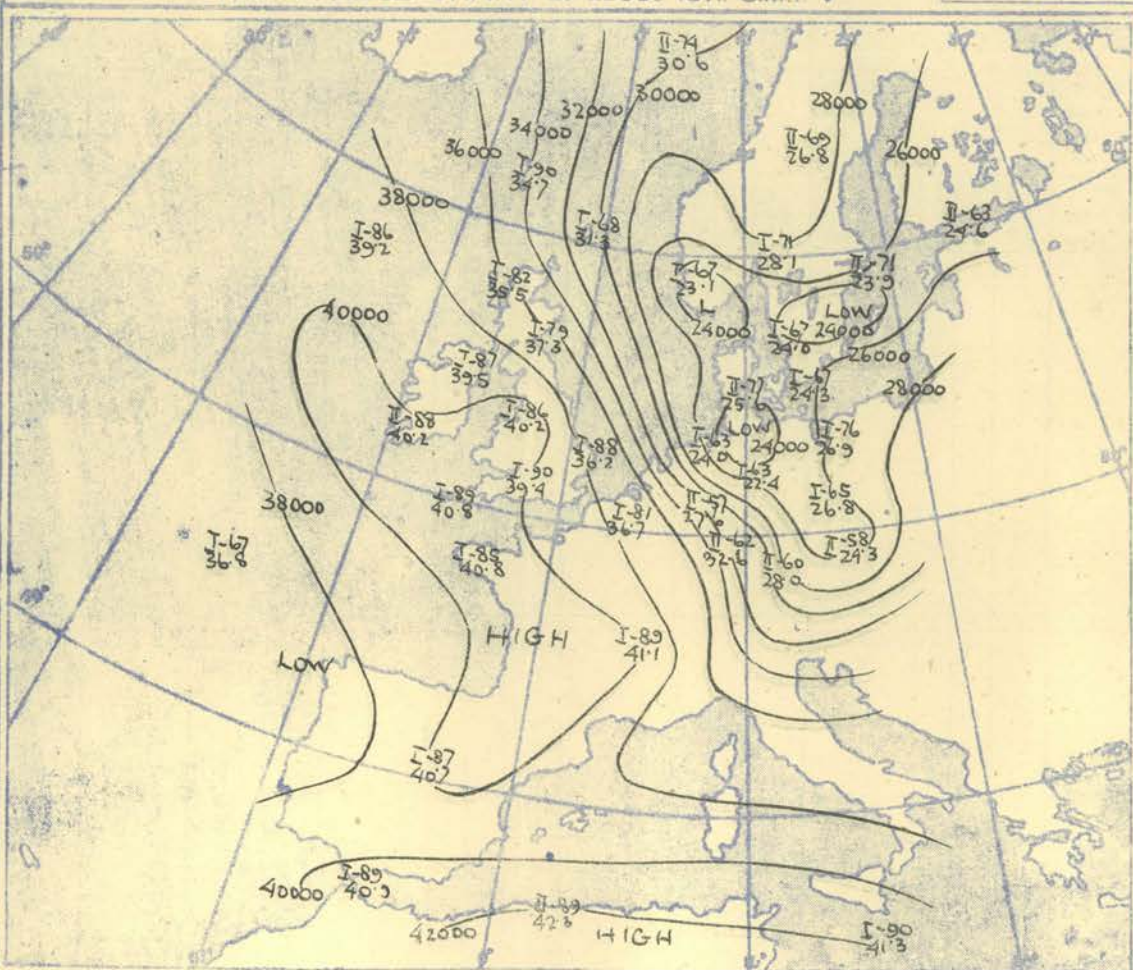


The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.



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.



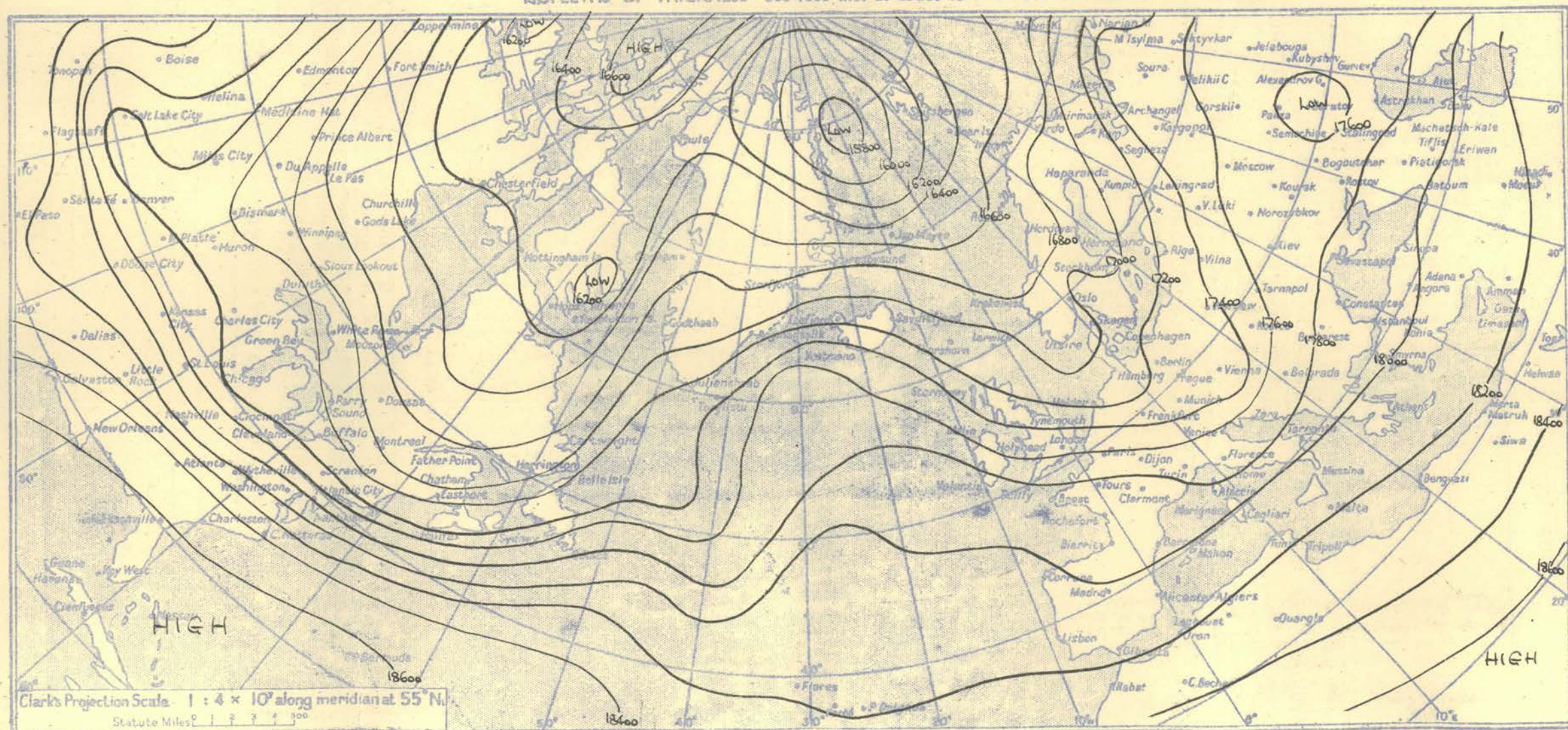
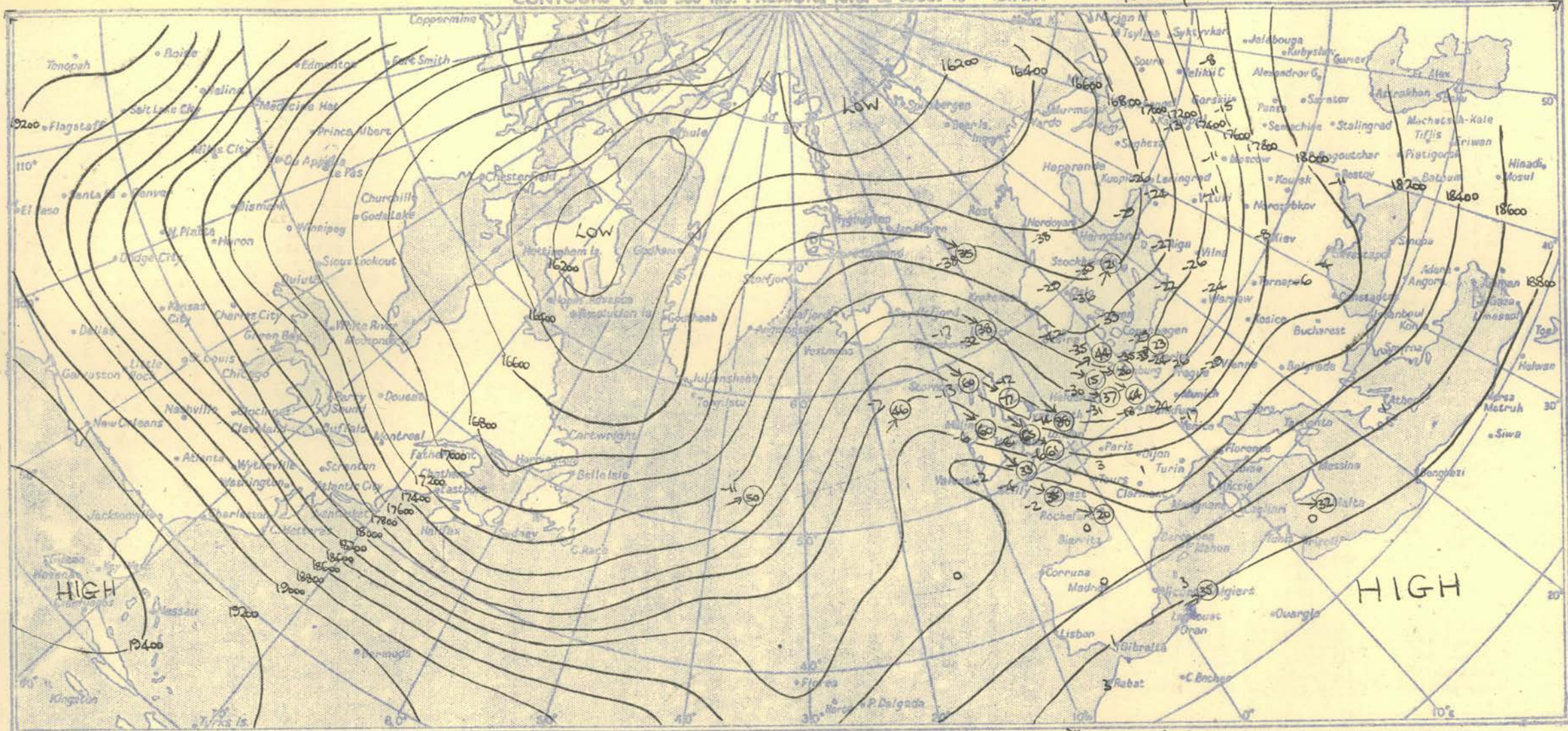
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The strong north westerly thermal gradient advanced east over the British Isles. The warm ridge over the Atlantic also advanced steadily eastwards.

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

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

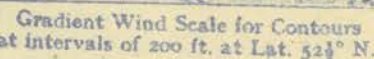
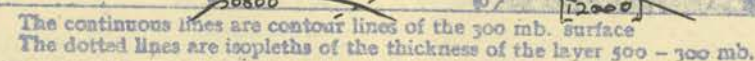
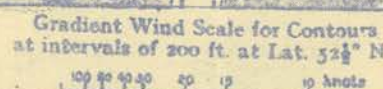
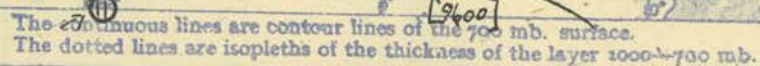


Tuesday 10th December,

Ac 550/5850 Ws 1024 0x268 10/51

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)																																										
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA				STATION				
Pressure mb	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.		Time M.S.L.	Surf	Freezing								
				1022.5	mb	1022.5	mb	1024.7	mb	1024.7	mb	1026.2	mb	1026.2	mb	1026.7	mb	1026.7	mb	1026.1	mb	1026.1	mb	1024.8	mb	1024.8	mb	1026.5	mb	1026.5	mb				1026.6	mb	1026.6	mb	1020.8	mb	1020.8	mb
				965	mb	948	mb	978	mb	1002.940	mb	1013.961	mb	950	mb	978	mb	769	mb	765	mb	765	mb	765	mb	765	mb	765	mb	765	mb				765	mb	765	mb	765	mb		
Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.							
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind							
Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.	Dir.							
Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.	Vel.							
Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.							
Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.							
Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.							
Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.							
Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.							
Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.							
Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.							
Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.							
Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.							
Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.							
Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.							
Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.							
Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.							
Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.							
Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.							
Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.							
Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.																								

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.



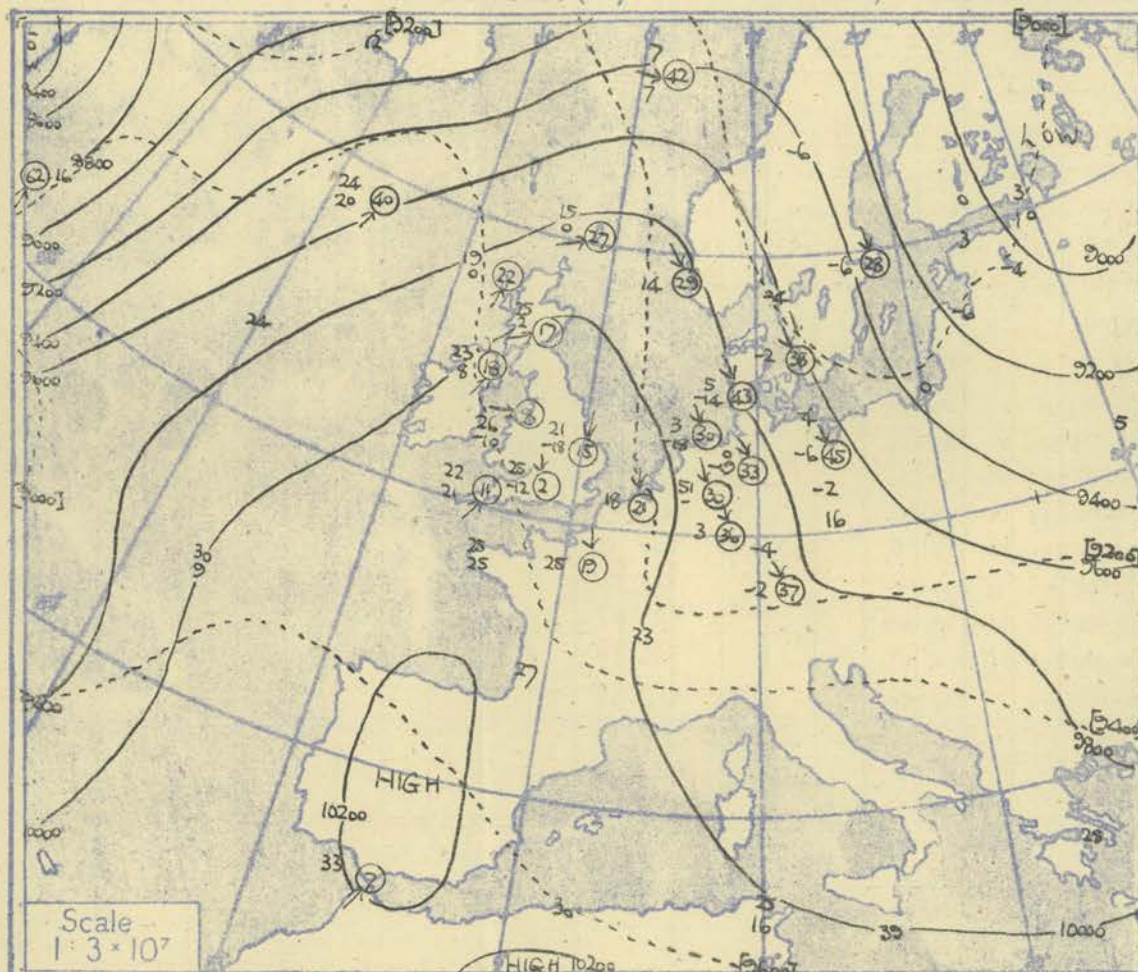
DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

NEPHOSCOPE OBSERVATIONS

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

Thompson

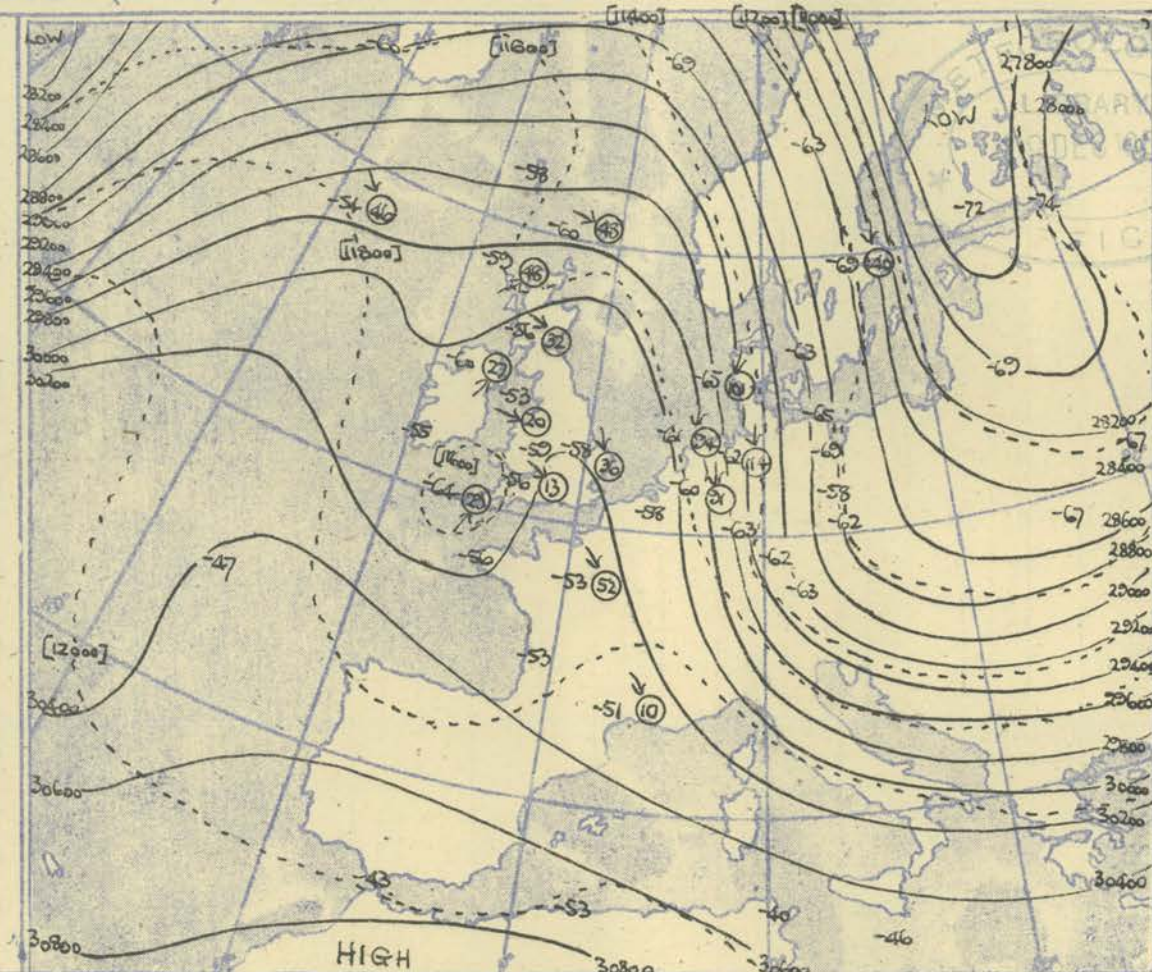
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h G.M.T.



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

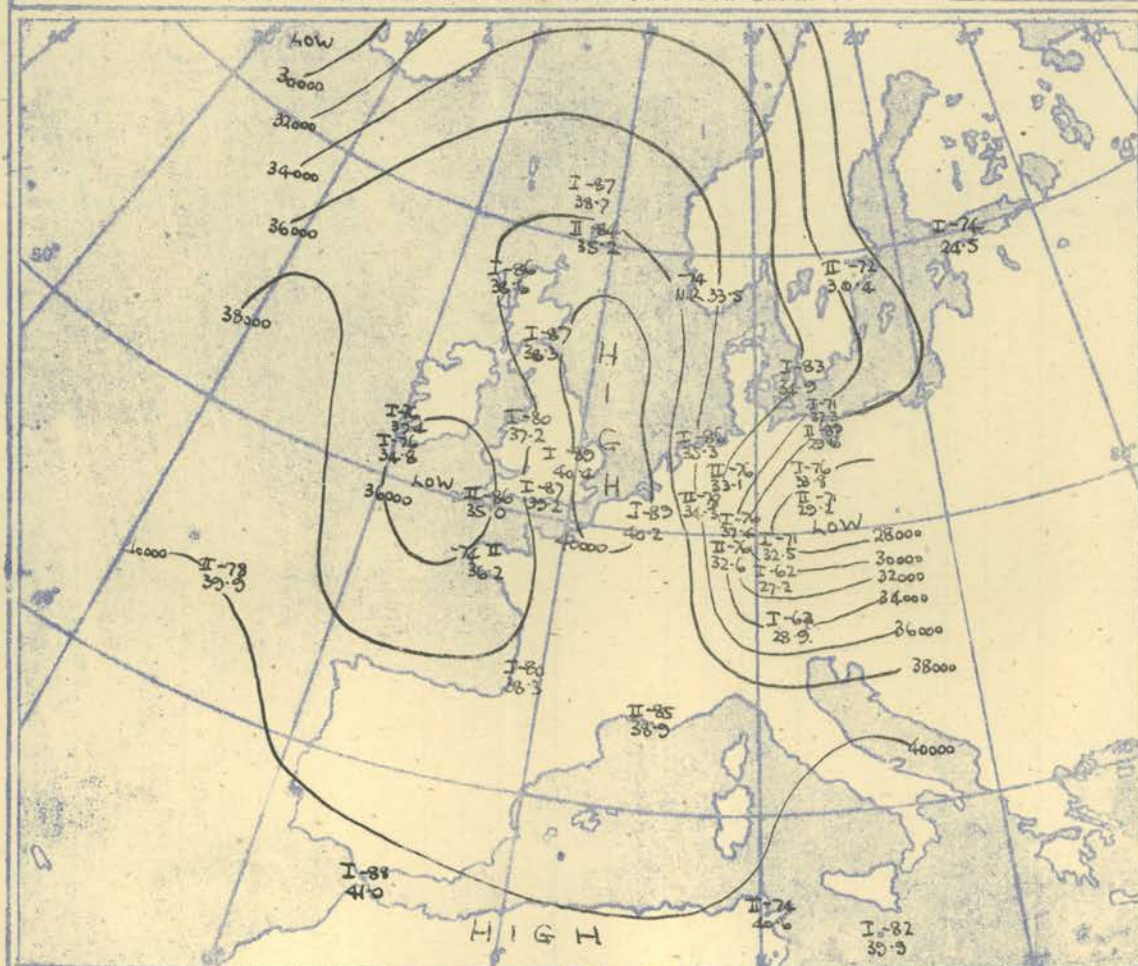
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 20 10 0 knots



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

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



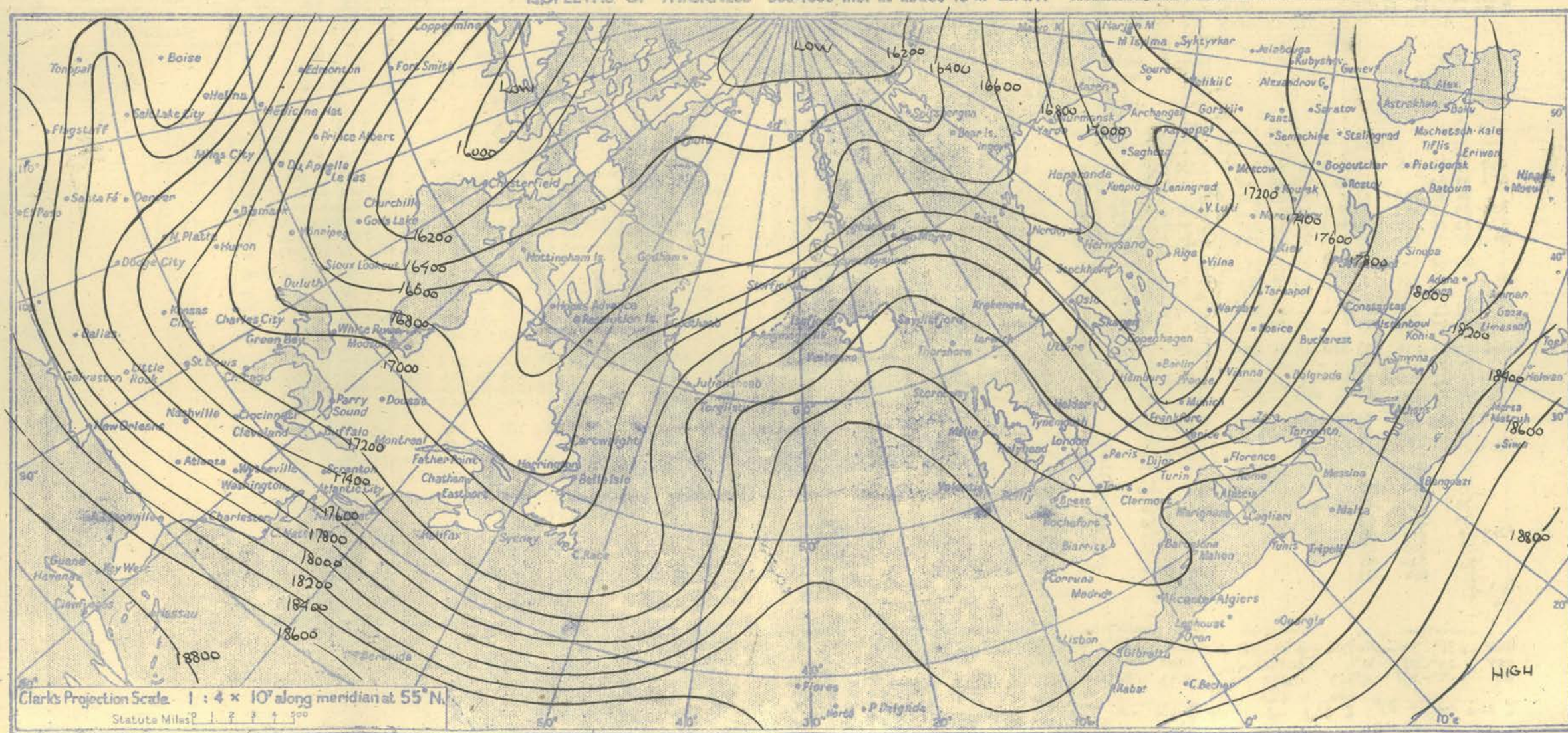
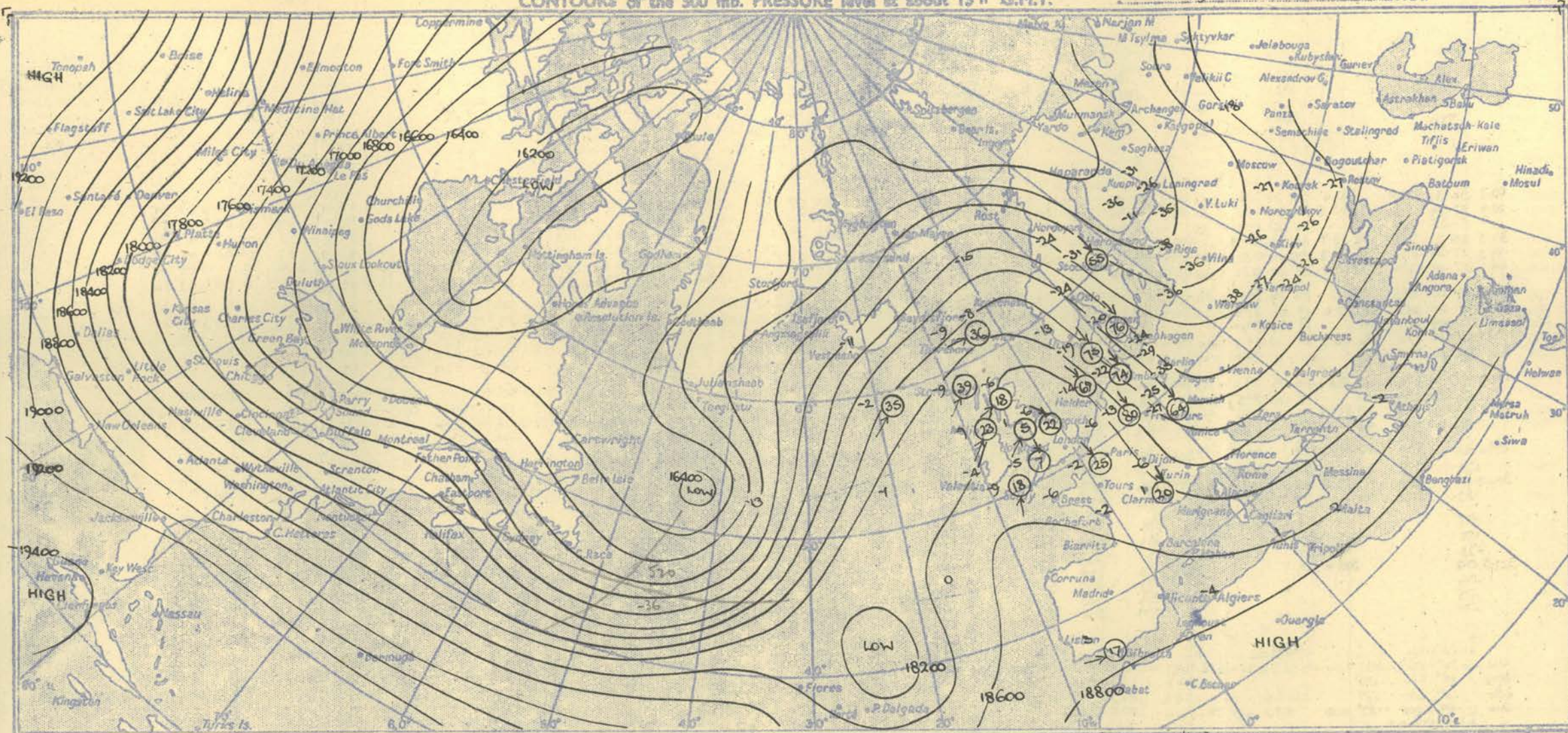
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The Atlantic ridge continued to move east and also developed northwards. A fresh incursion of cold air in the N.W. Atlantic produced a further trough the boundary of the cold air being associated with a very strong thermal gradient.

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

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



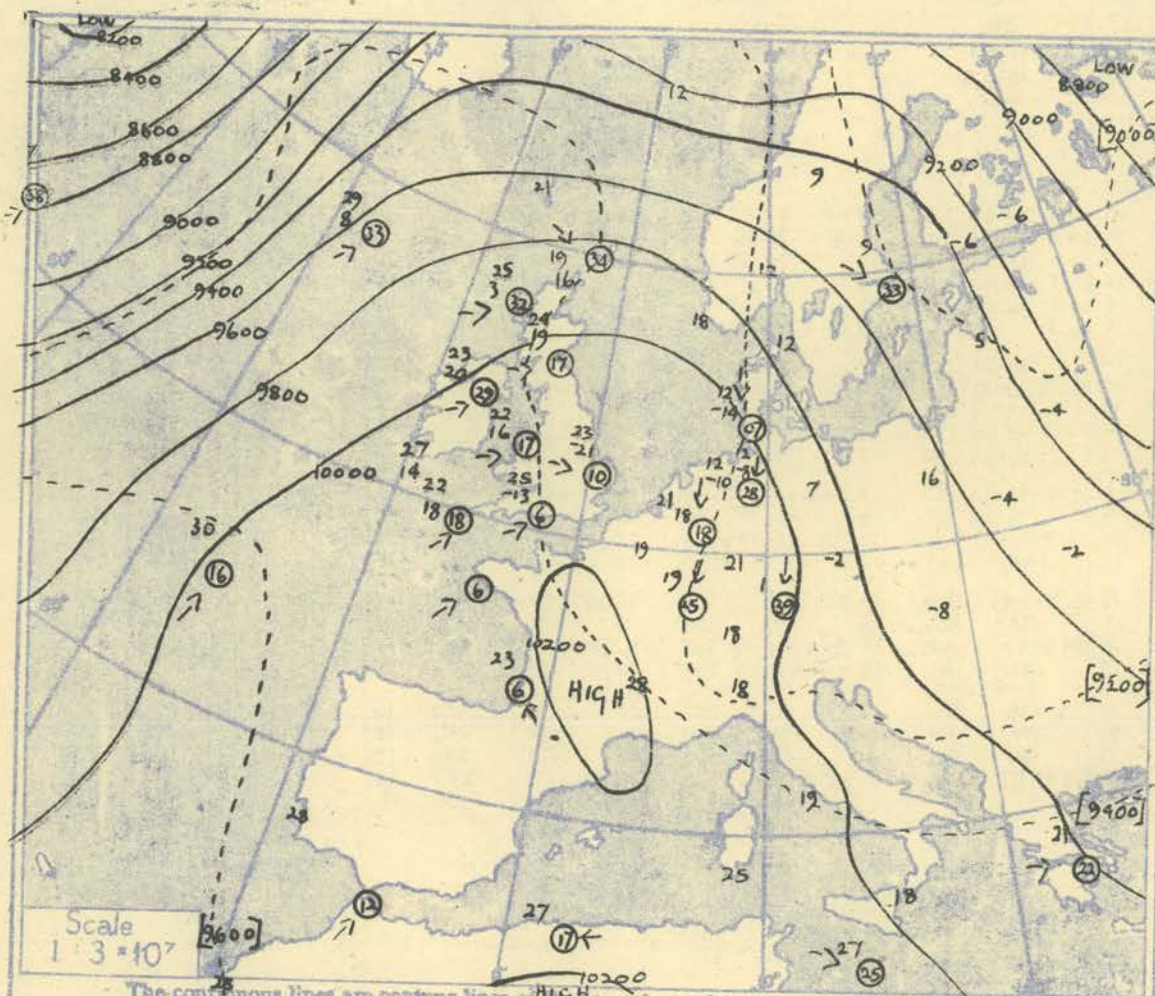
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

MSO Press 140 Durable

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)																																									
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA				METEOROLOGICAL			
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.		Time							
M.S.L.		1017.2		mb		1018.6		mb		1025.0		mb		1012.9		mb		1027.4		mb		1032.1		mb		1030.7		mb		1026.7		mb		M.S.L.							
Surf		1006.9		mb		1017.0		mb		1024.1		mb		1013.5		mb		1025.3		mb		1030.5		mb		1013.7		mb		1015.8		mb		Surf							
Pressure		800		mb		780		mb		790		mb		795		mb		800		mb		950		mb		784		mb		800.763		mb		Pressure							
Height		ft.		Temp.		ft.		Temp.		ft.		Temp.		ft.		Temp.		ft.		Temp.		ft.		Temp.		ft.		Temp.		ft.		Temp.		Height							
Wind		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Wind							
Surf		02.7		41		240		22		00.4		47		200		25		00.2		34		28		01.1		04.4		33		30		170		Surf							
1000		04.5		42		38		32		05.1		46		197		30		06.5		31		30		240		15		06.1		45		42		1000							
950		38		35		256		32		42		39		210		32		38		37		252		24		42		39		190		32		950							
900		32.6		35		32		263		29		33.4		40		34		38		37		284		25		34.5		42		39		194		32		900					
850		47.6		36		31		266		25		48.5		37		30		33		49.4		38		31		250		23		49.7		37		34		850					
800		63.8		32		27		269		27		64.6		38		26		34		65.4		33		29		250		21		65.8		32		29		800					
750		26		22		273		30		30		16		234		32		30		26		252		19		26		23		212		27		27		750					
700		08.3		19		16		273		34		99.4		25		07		32		100.2		24		19		250		17		100.4		23		20		700					
650		16		11		274		36		18		01		243		29		16		10		250		18		18		09		203		30		16		650					
600		13.4		12		02		284		36		138.6		09		12		25		139.4		09		07		260		19		139.6		10		209		16		600			
550		02		10		284		37		03		17		237		24		02		00		262		24		03		13		216		24		03		06		550			
500		182.4		05		24		285		33		183.5		04		223		15		184.2		08		13		263		23		184.6		06		20		226		17		500	
450		15		34		293		37		13		2278		06		15		16		10		250		18		18		09		203		30		16		450					
400		23.5		12		29		44		308		45		236.5		25		55		341		09		236.6		31		36		270		21		237.4		29		400			
350		41		314		48		40		60		345		23		44		288		23		42		214		08		41		237.9		29		21		25		350			
300		299.1		58		324		52		300.7		56		354		34		300.1		61		306		21		301.3		58		340		07		301.9		56		300			
250		77		33		58		72		353		46		78		317		21		71		332		13		72		213		13		74		305		23		250			
200		382.2		83		325		55		384.0		87		331		41		382.7		83		337		23		385.4		78		326		18		305.8		82		289			
170		75		314		39		85		304		30		83		318		28		77		314		18		82		307		17		80		311		27		170			
150		71		300		30		76		292		27		75		297		27		73		292		21		79		305		19		77		317		22		150			
130		71		309		31		73		292		27		77		289		33		72		289		22		76		302		21		77		314		25		130			
110		74		310		32		75		291		25		76		309		34		74		280		19		75		308		22		78		326		34		110			
100		524.8		76		525.3		77		293		24		523.8		77		305		30		527.8		76		284		19		526.8		78		306		27		100			
90		74		310		32		75		291		25		76		309		34		74		280		19		75		308		22		78		326		34		90			
80		71		300		30		76		292		27		75		297		27		73		292		21		79		305		19		77		317		22		80			
70		71		309		31		73		292		27		77		289		33		72		289		22		76		302		21		77		314		25		70			
60		74		310		32		75		291		25		76		309		34		74		280		19		75		308		22		78		326		34		60			
Inversion		1007 mb 41°		995 mb 43°		912 mb 39°		891 mb 41°		995 mb 30°		970 mb 38°		950 mb 30°		970 mb 38°		950 mb 30°		970 mb 38°		950 mb 30°		970 mb 38°		950 mb 30°		970 mb 38°		950 mb 30°		970 mb 38°		1007-1000 mb 51°							
Tropopause		I 211 mb -87°		37.200°		I 208 mb -91°		37.500°		I 205 mb -86°		37.700°		II 235 mb -76°		35.300°		II 219 mb -82°		36.700°		II 211 mb -87°		37.300°		II 247 mb -78°		34.000°		II 236 mb -75°		35.300°		II 217 mb -80°		Tropopause					
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				STATION							
Time		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.		1016.7		mb		1017.3		mb		1013.4		mb		1021.8		mb		1026.7		mb		1031.8		mb		1029.8		mb		1025.5		mb		M.S.L.							
Surf		1006.5		mb		1015.7		mb		1012.5		mb		1012.5		mb		1024.6		mb		1030.2		mb		1013.0		mb		1014.9		mb		Surf							
Pressure		832		mb		769		mb		790		mb		795		mb		819		mb		763		mb		781		mb		797.758		mb		Pressure							
Height		ft.		Temp.		ft.		Temp.		ft.		Temp.		ft.		Temp.		ft.		Temp.		ft.		Temp.		ft.		Temp.		ft.		Temp.		Height							
Wind		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Wind							
Surf		02.7		45		44		10		00.2		37		33		Calu		05.3		49		47		160		15		00.6		37		33		115		Surf					
1000		04.4		44		44		04.7		47		46		32		06.1		37		33		236		12		34		07.0		38		33		147		1000					
950		40		40		40		42		41		207		32		35		36		236		25		45		42		197		23		43		39		950					
900		32.6		37		37		33.1		41		39		221		29		34.3		42		38		243		30		34.4		43		40		218		26		900			
850		47.8		34		34		48.4		41		37		230		35		49.6		39		31		246		30		49.7		38		35		212		28		850			
800		63.7		28		28		64.5		35		28		236		30		65.7		33		24		238		26		65.9		33		20		212		24		800			
750		29		18		For		30		22		237		25		32		17		229		22		28		28		19		239		13		28		13		750			
700		08.5		23		15		99.5		28		16		230		31		100.7		27		06		244		21		100.7		27		15		211		28		700			
650		16		07		Winds		22		05		218		18		20.09		153		20		20		19		19		10		212		24		17		14		650			
600		13.6		10		02		38.1		15		07		221		19		140.1		11		10		251		19		140.1		12		05		201		20		600			
550		02		13		Set		07		21		244		10		01		14		241		17		19		13		01		07		206		13		13		550			
500		182.6		02		23		184.5		00		41		273		09		184.9		08		23		232		17		185.1		05		29		160		12		500			
450		12		32		3		10		52		263		13		16		35		258		07		06		15		32		216		20		18		47		450			
400		235.8		25		32		237.7		25		58		274		16		237.7		25		48		117		09		237.9		27		48		055		11		400			
350		36		42		3		38		58		301		18		39		60		096		24		33		41		39		60		24		33		194		350			
300		300.6		52		3		202.2		53		337		18		302.1		55		064		28		302.2		54		302.4		55		121		08		301.3		62		300	
250		70		3		3		71		340		30		74		042		33		3		31																			

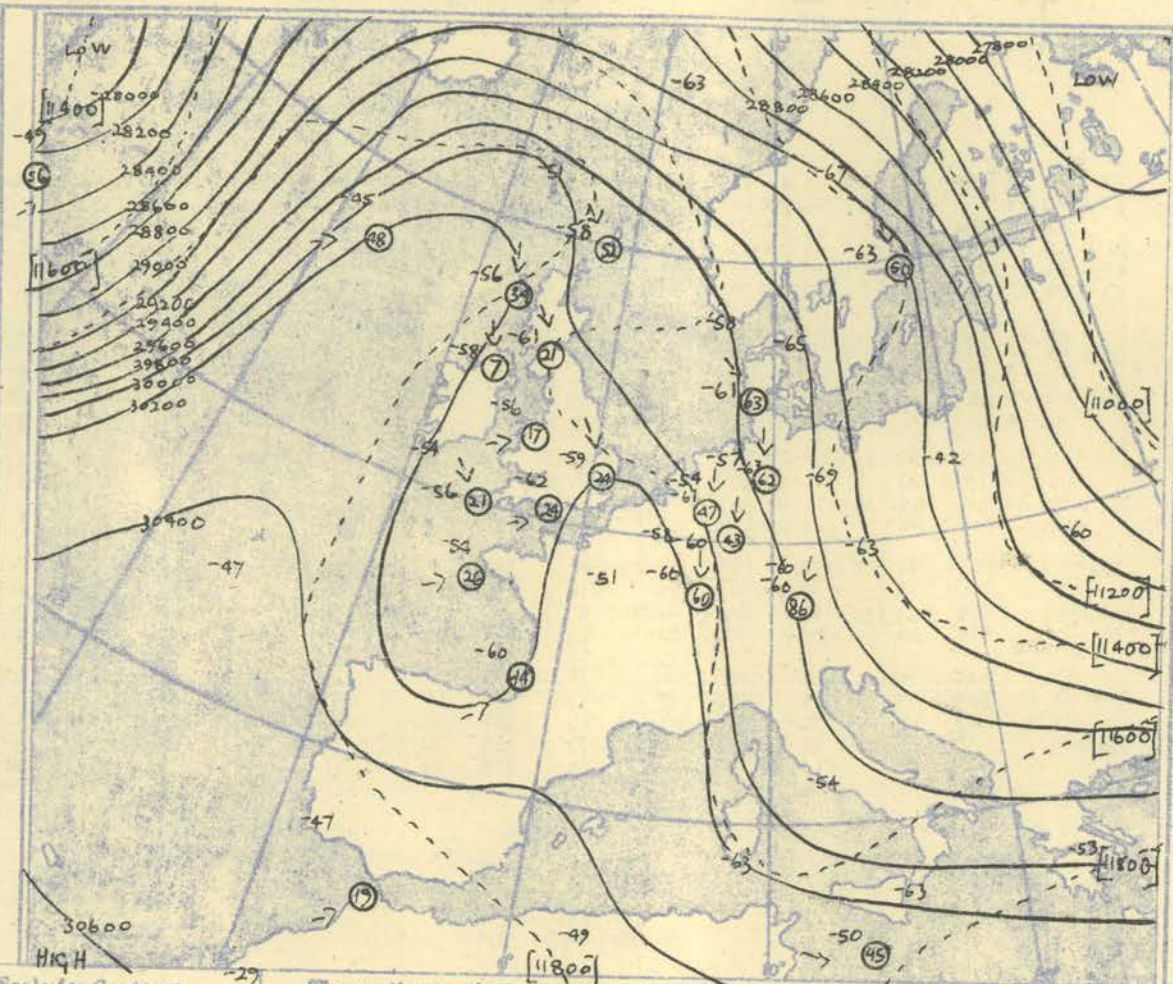
Wednesday 12th December 1951.

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 03h G.M.T.

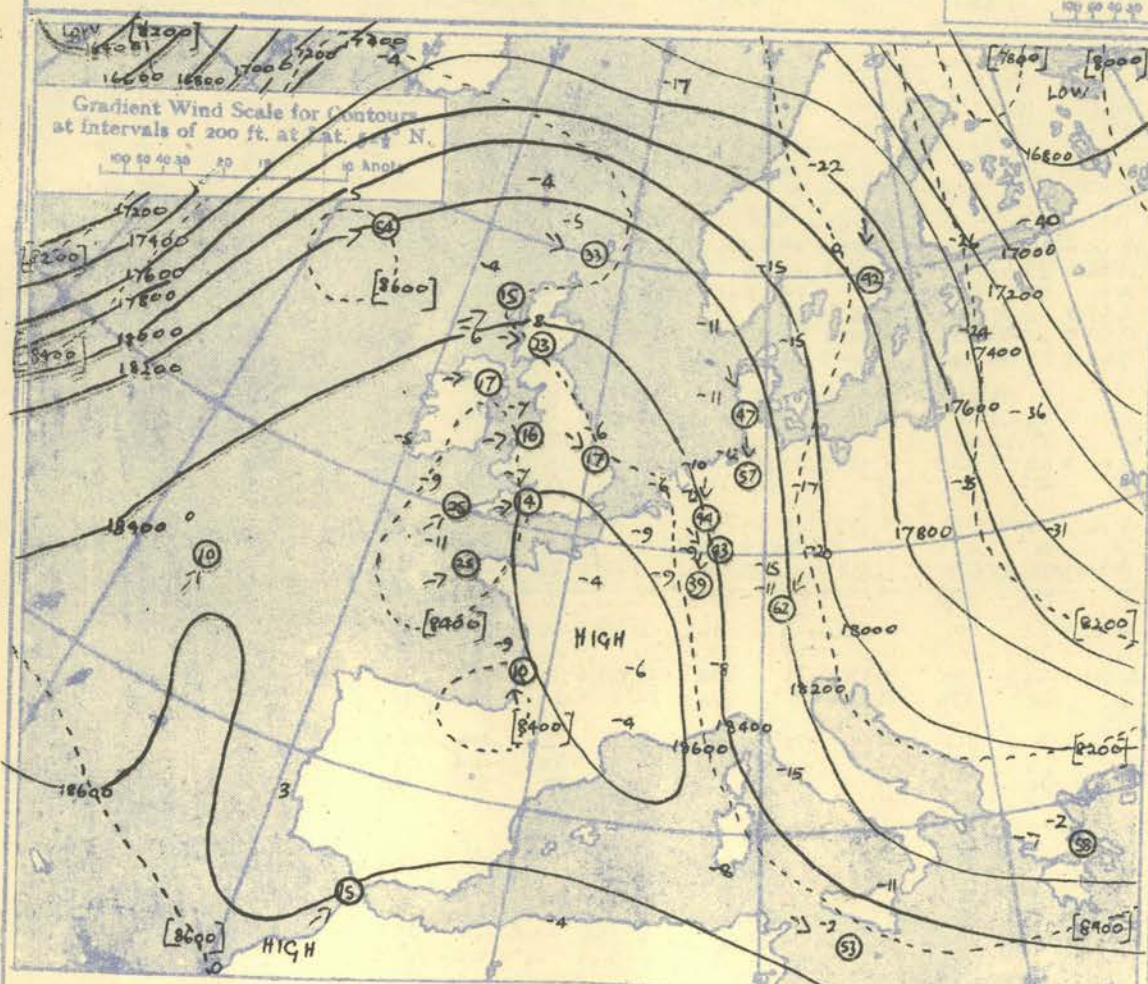


The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

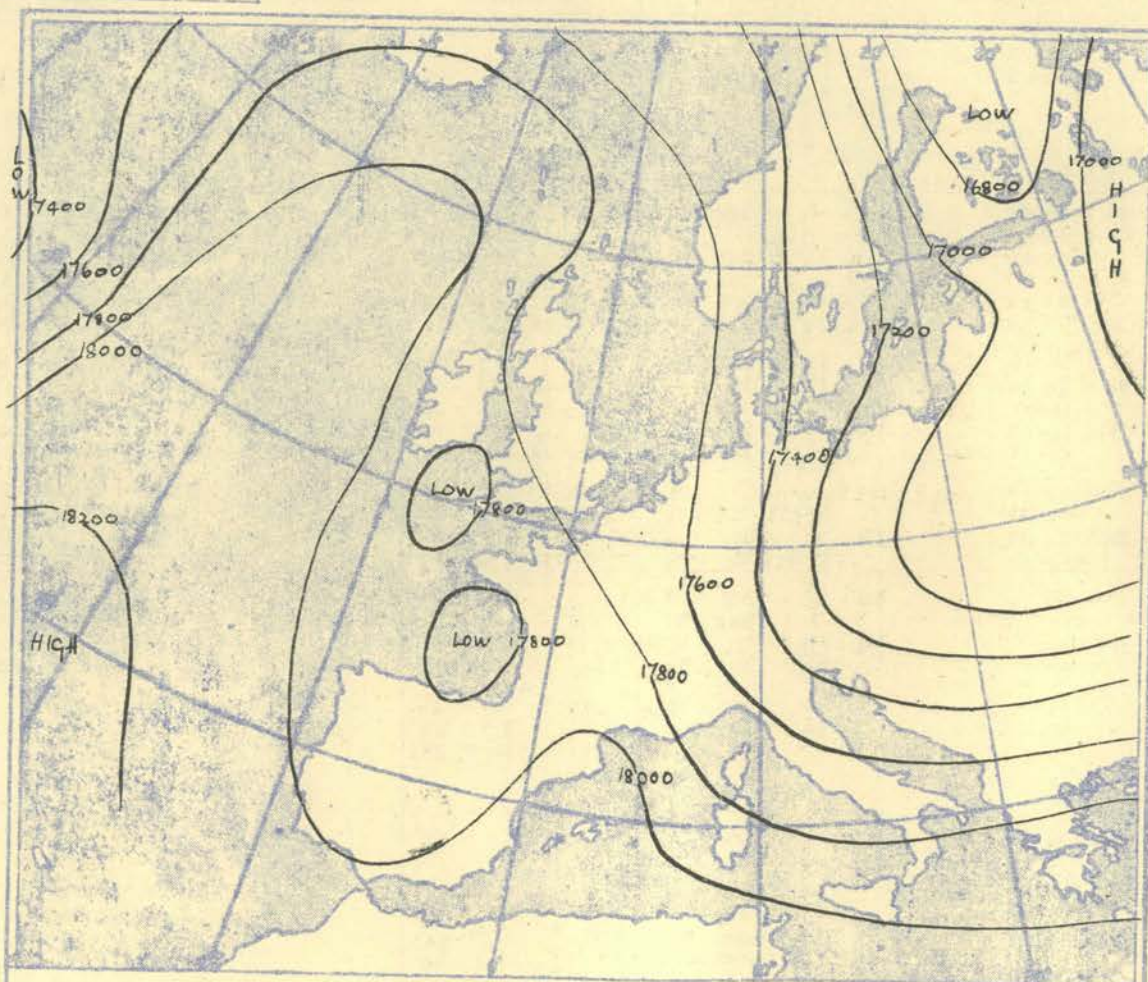
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N



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.

54-42 N 01-12 W 52-5 N 20' 00" 50' 00" 15' 00"																	
Pressure	Time	0830L		1230L		14L											Time M.S.L. Surf Freezing
	M.S.L.	102-0		1003		1010											
	Surf	102-0		999		1007											
	Freezing	775		720		730											
Pressure	Height	Temp.	Dew	Height	Temp.	Dew	Height	Temp.	Dew	Height	Temp.	Dew	Height	Temp.	Dew	Pressure	Surf
mb	ft./100	°F	°F	ft./100	°F	°F	ft./100	°F	°F	ft./100	°F	°F	ft./100	°F	°F	mb	1000
Surf	00-0			01-0	51	51	01-0	52	52							Surf	1000
1000	07-1			00-7			02-9									1000	2,000
950					49	46		51	51							950	3,000
900	35-7	45	37	29-4	46	46	31-7	46	46							900	4,000
850	51-0	42	33	44-8	44	44	47-1	43	33							850	5,000
800	67-3	33	30	61-1	40	37	63-3	40	34							800	6,000
750					35	21		35	26							750	8,000
700	102-2	24	13	96-3	29	19	98-5	27	17							700	10,000
650					22	07		24								650	14,000
600	141-7	12	07	136	16	01	138	16								600	18,000
550					06			11								550	24,000
500	186-8	06		181	01		184	04								500	30,000
450																450	40,000
400	239-5	29														400	50,000
350																350	
300	303-7	-57														300	
250																250	
200																200	
170																170	
	Cloud.			Cloud.			Cloud.										
	6/8 Ac As			8/8 St			8/8 St										
	790-780mb			1000-950mb			1010-960mb										
				6/8 Ac			8/8 Sc										
	Inversion			620-620mb			940-910mb										
	102/mb 32-			6/8 Ns			8/8 Sc										
	930-49			950-870mb			900-860mb										
				9/8 Ac			3/8 Cs										
				480-MR.			430-MR.										
				8/8 Ns													
				860-830 mb													
				3/8 As													
				730-730mb													

Place	Henrick	Shoebury	Stonoway	Ronaldsby	Henrick												Place
Time	11h.	11h	15h	21L	21L												Time
Type	Radar		Pilar		Radar	Pilar											Type
Foot	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Foot
Surf.	220	18	180	10	200	10	170	12	200	65							Surf.
1,000	237	27	190	16	210	24	180	14									1,000
2,000	248	28	190	18	211	30	200	17	207	12							2,000
3,000	250	27	200	20	215	33	180	19	204	12							3,000
4,000	250	27			221	34	190	21	194	10							4,000
5,000	252	28	210	09	226	30			187	09							5,000
6,000	257	29	210	04	233	21			180	07							6,000
8,000	267	29	210	04	247	16			195	07							8,000
10,000	269	27	210	03	242	15			211	07							10,000
14,000	281	30	280	04	203	15			211	05							14,000
18,000	293	38	210	10	204	12			192	09							18,000
24,000	300	46	230	12	271	17			169	12							24,000
30,000	314	43	190	14	268	12			129	32							30,000
40,000	316	47	310	16	306	28			059	08							40,000
50,000	311	28	310	22	281	23			330	21							50,000
	312	24			281	21			341	17							
	(53.000)								(55.000)								

METEOROLOGICAL
LIBRARY
20 DEC 1951
OFFICE

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

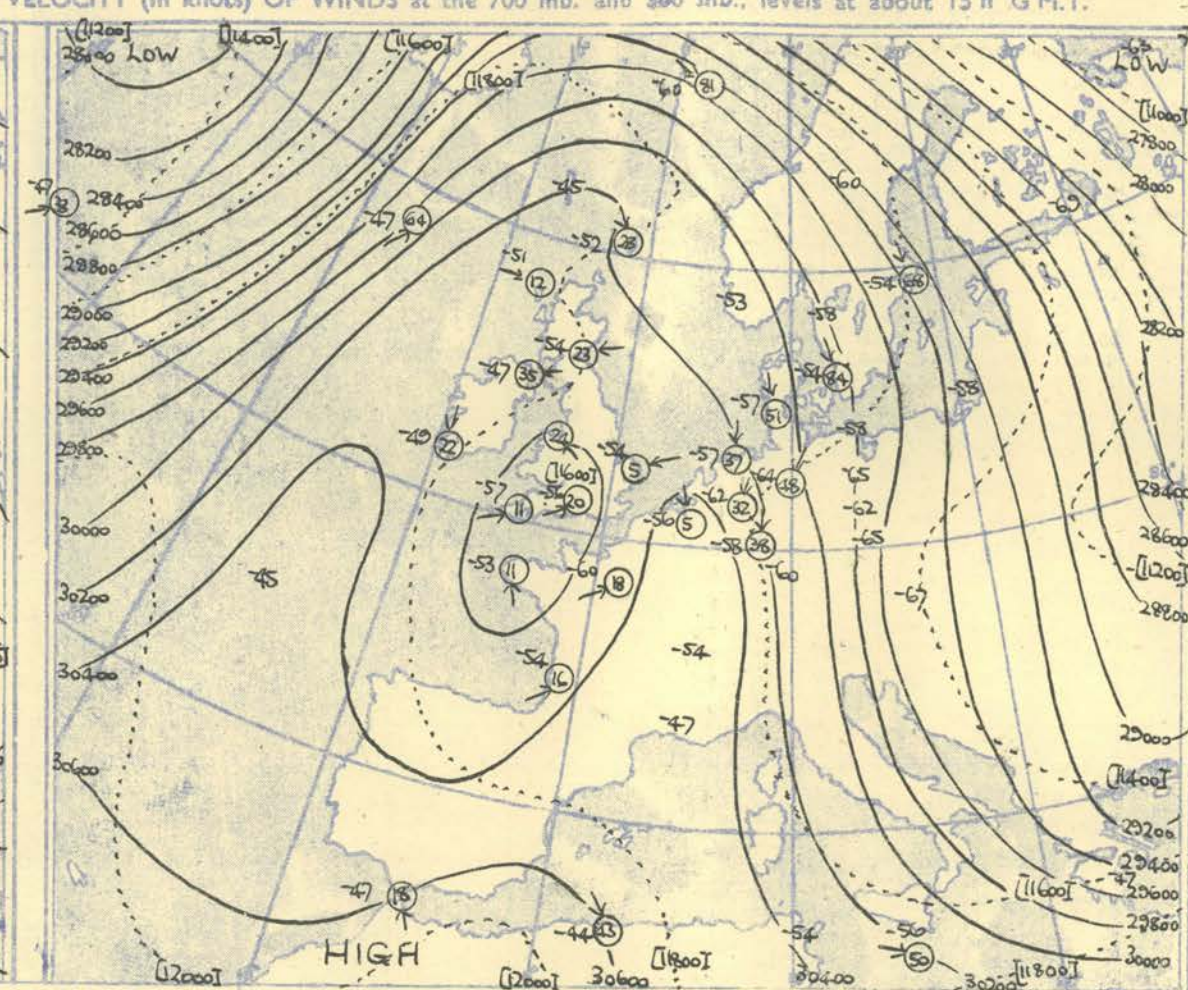
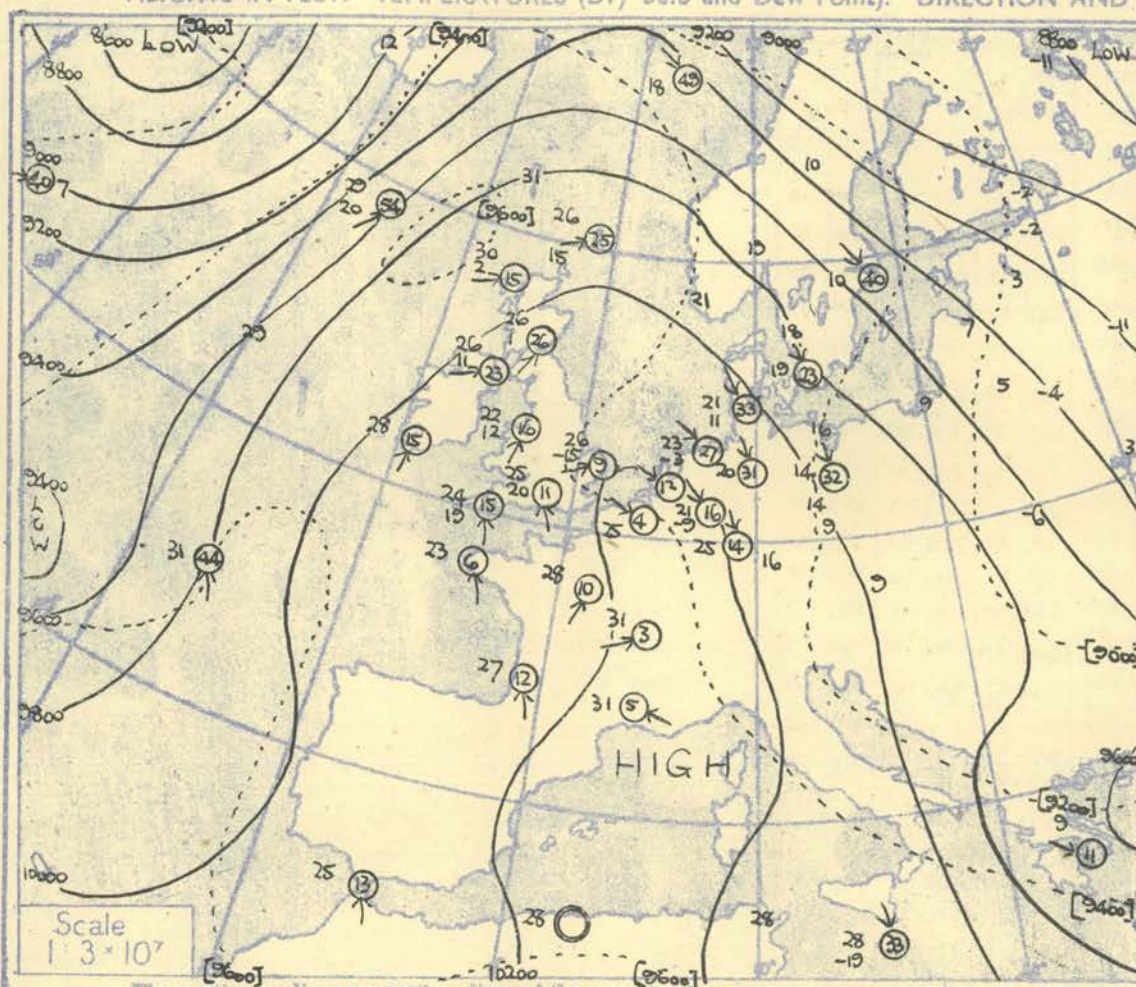
NEPHOSCOPE OBSERVATIONS

[illegible]

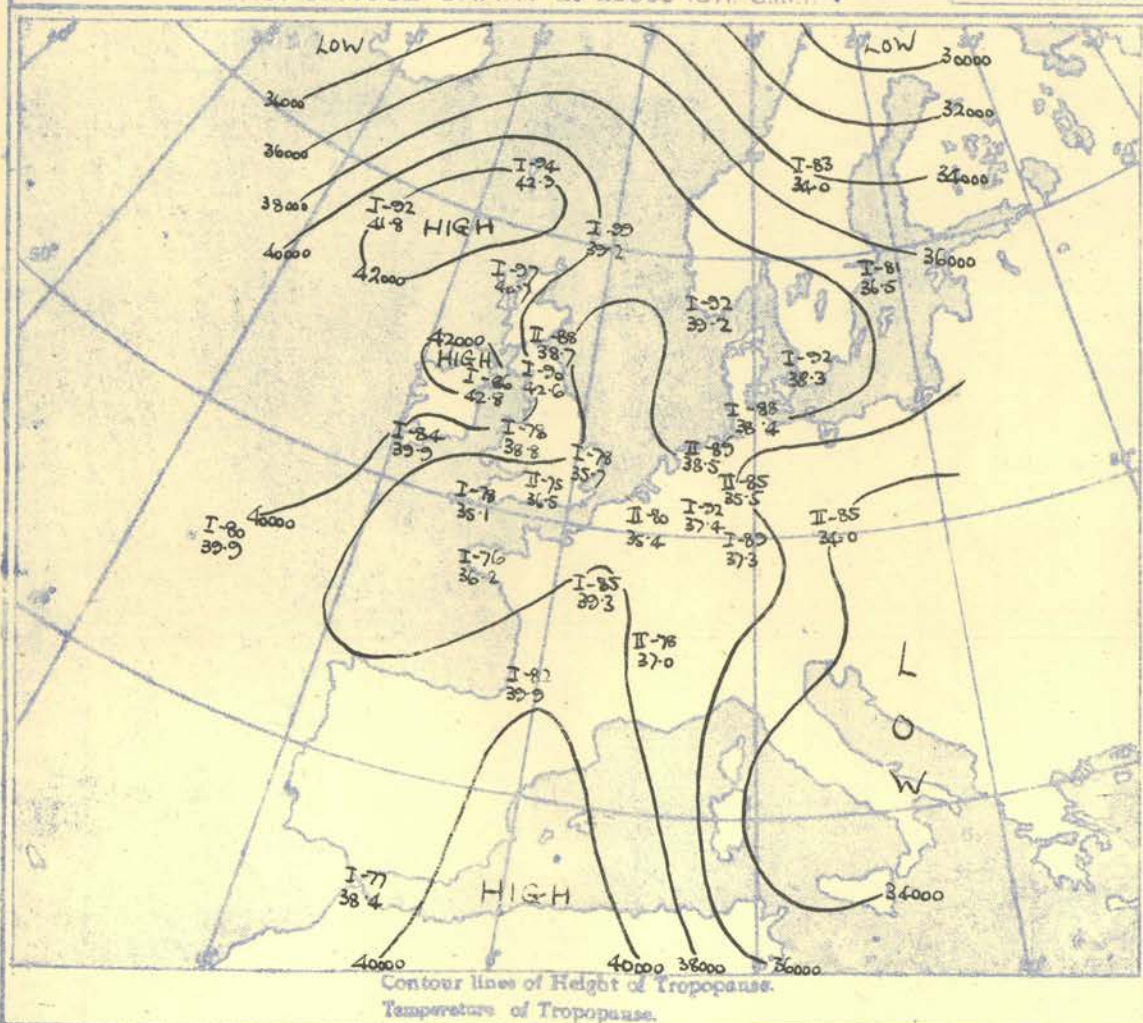
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.

[illegible]

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



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

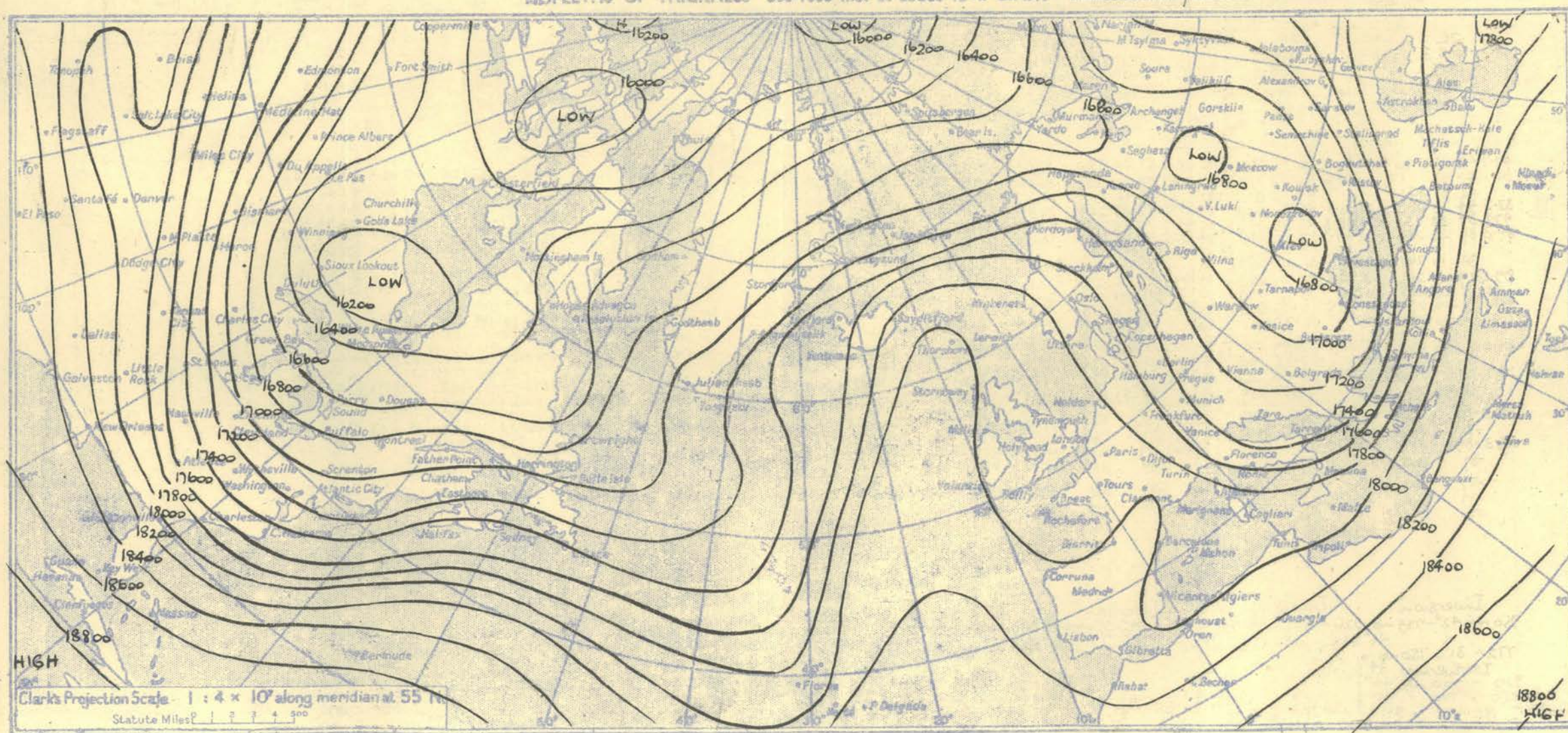
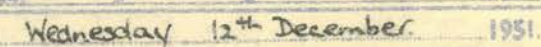


NOTES ON THE AEROLOGICAL SITUATION.

Very rapid penetration of cold air Southeastwards towards the Azores took place in the period.

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

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



Wednesday 12th December. 1951

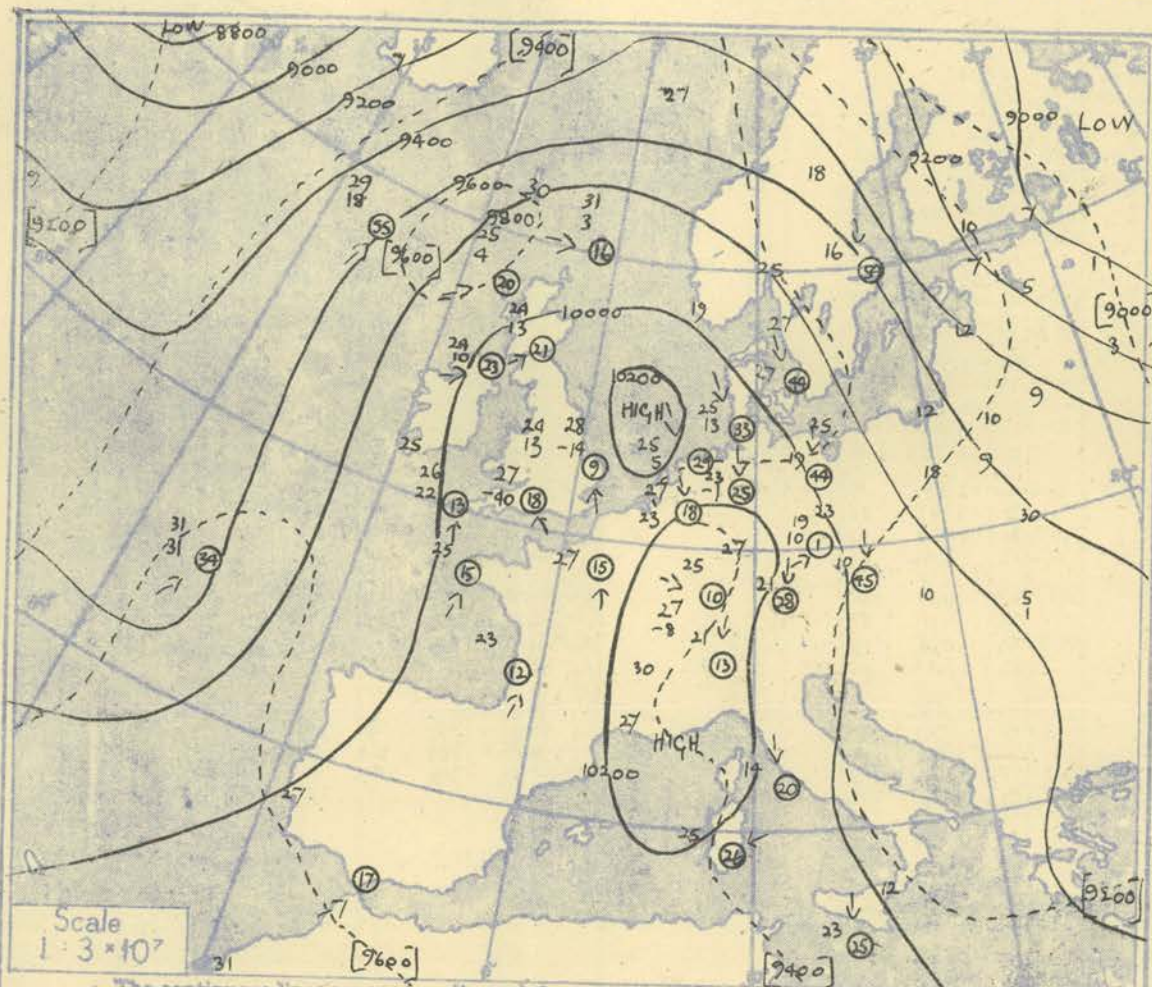
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Height above M.S.L.)

This block contains a detailed table of meteorological data for various stations, including Lerwick, Stornoway, Leuchars, Aldergrove, Liverpool, Hemsby, Larkhill, Camborne, and Valentia. The table is organized into columns for each station, with sub-columns for time, pressure, temperature, wind, and other atmospheric conditions. The data is presented in a structured format, allowing for easy comparison and analysis of weather patterns across different locations and times.

[illegible]

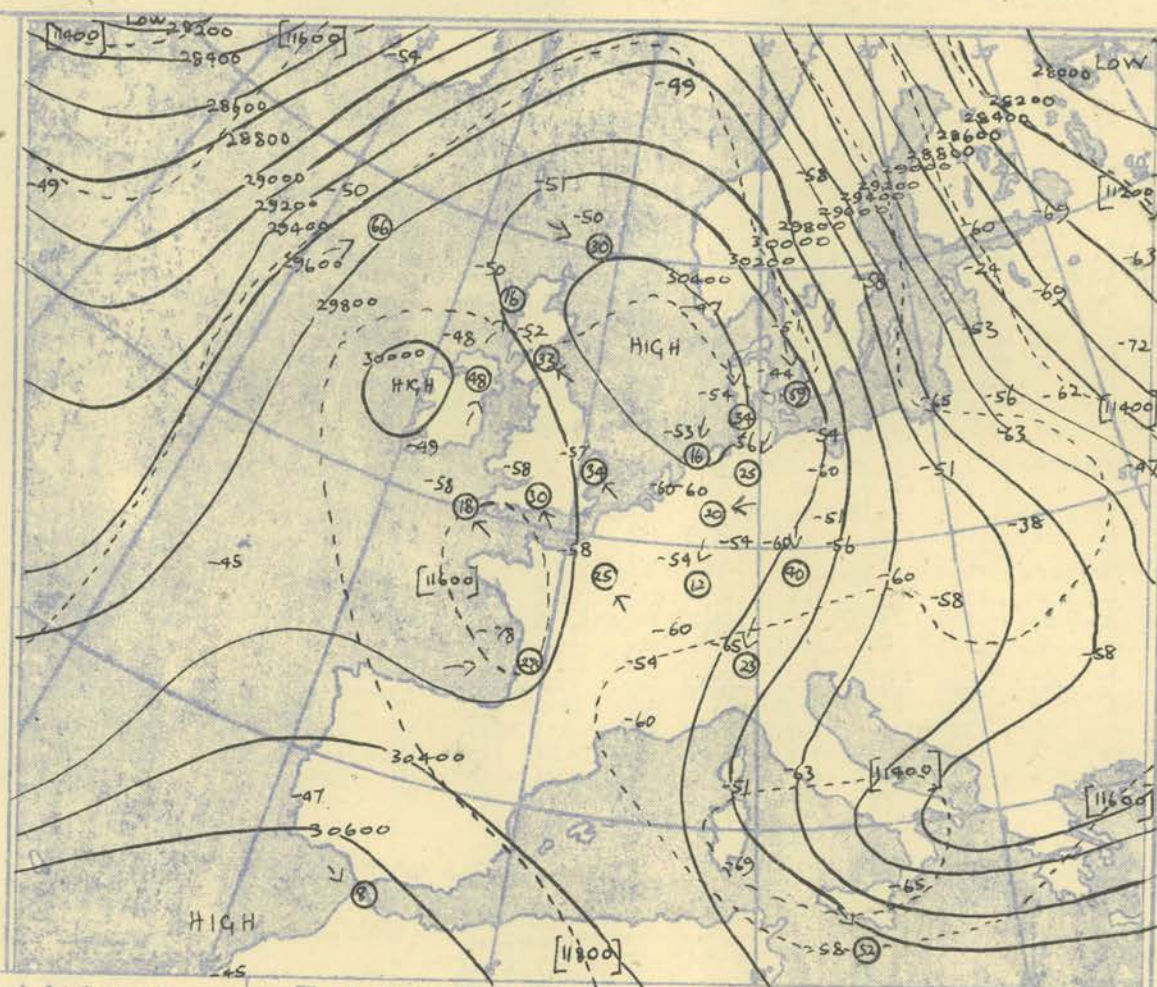
Thursday 13th December 1951.

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 03h G.M.T.

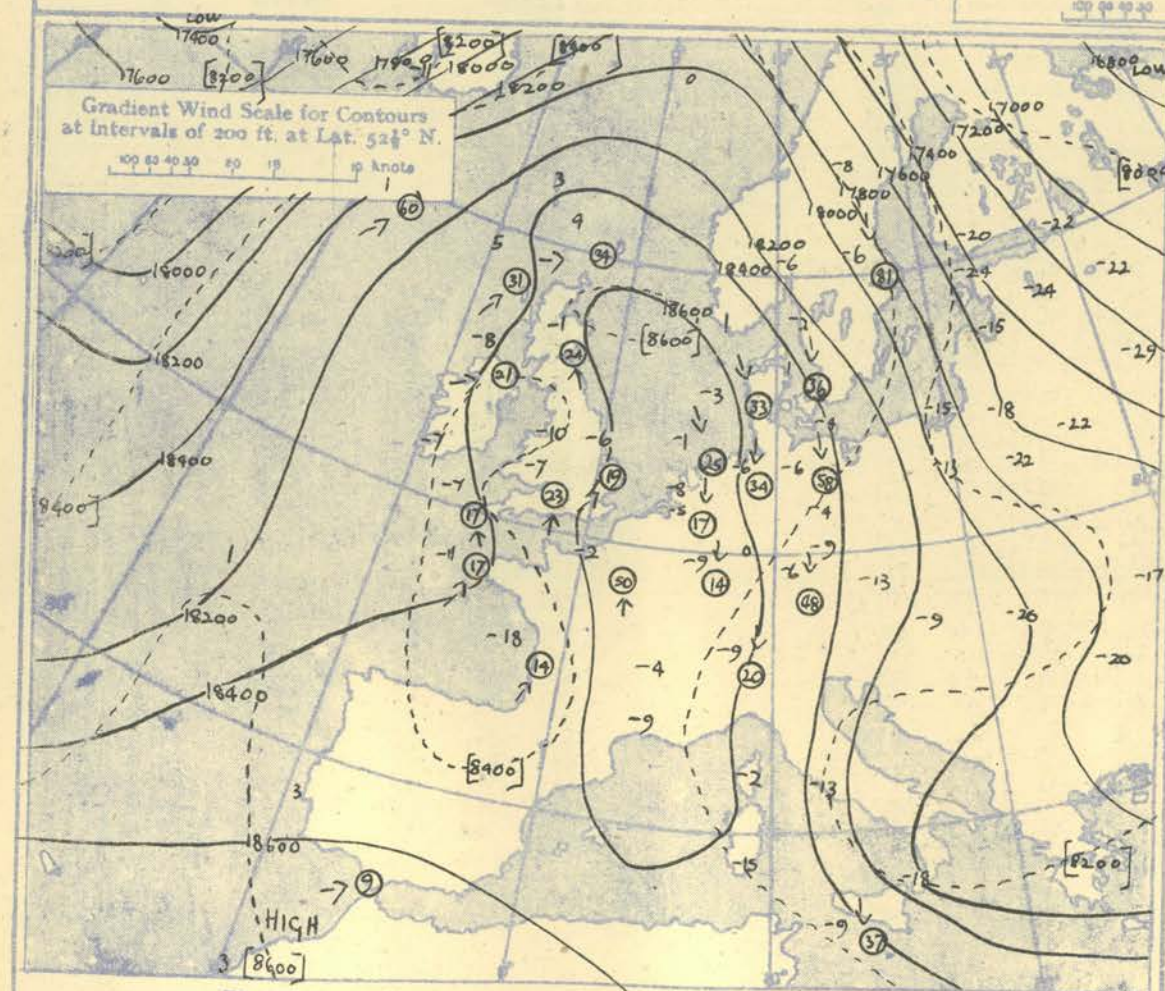


Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N

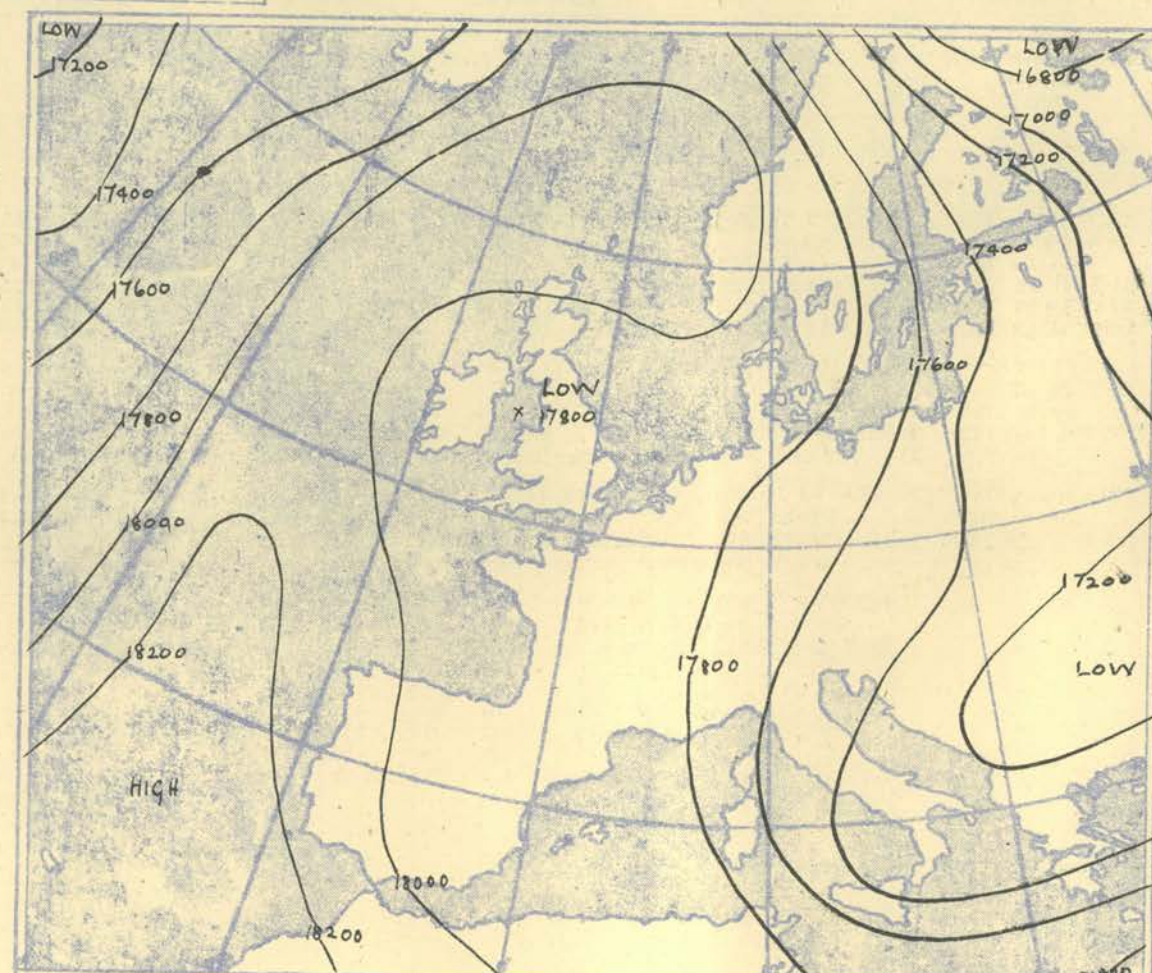
100 80 60 40 20 10 0 knots



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

5442 01 12 W 52.5 N 24.0 W 50.0 N 15.0 W													
Pressure (Processing)	0835L			1130L			1235L						Time
	M.S.L.	Surf										M.S.L.	
	1024	mb		1002	mb		1002	mb		mb	mb	mb	
	736	mb		799	mb		998	mb		mb	mb	mb	
	736	mb		780	mb		740	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	Pressure mb
Surf	0.0			39	39		50	46					Surf
1000	06.3			00	8								1000
950				34	34		51	51					950
900	34.9	49	36	33	33		47	47					900
850	50.3	44	40	33	33		43	43					850
800	66.7	41		33	33		38	38					800
750				30	30		33	33					750
700	101.9	28		27	27		26	26					700
650				19	19		20						650
600	141.5	14		12	12		15						600
550													550
500	186.8	-03		Cloud.			Cloud.						500
450				318 St			518 Ms						450
400	239.8	-27		980-860mb			990-710mb						400
350				818 Ms			216 Ac						350
300	304.3	-54		940-680mb			550-TNR.						300
250				718 As			718 Cs						250
200				550-TNR			500-TNR						200
170				Cloud.									170
	5-48 St			718 Cs			Surf wind.						
	H.N.G.-99Sub			500-TNR			South.						
	Inversion			Surf wind.									
	1024 mb 30°			H.N. 8kts.									
	910.. 50°			Isathermal.									
				900-800mb									
				33°									
				climb abandoned at									
				600mb due to 5/gear									
				U/S.									

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

[illegible]

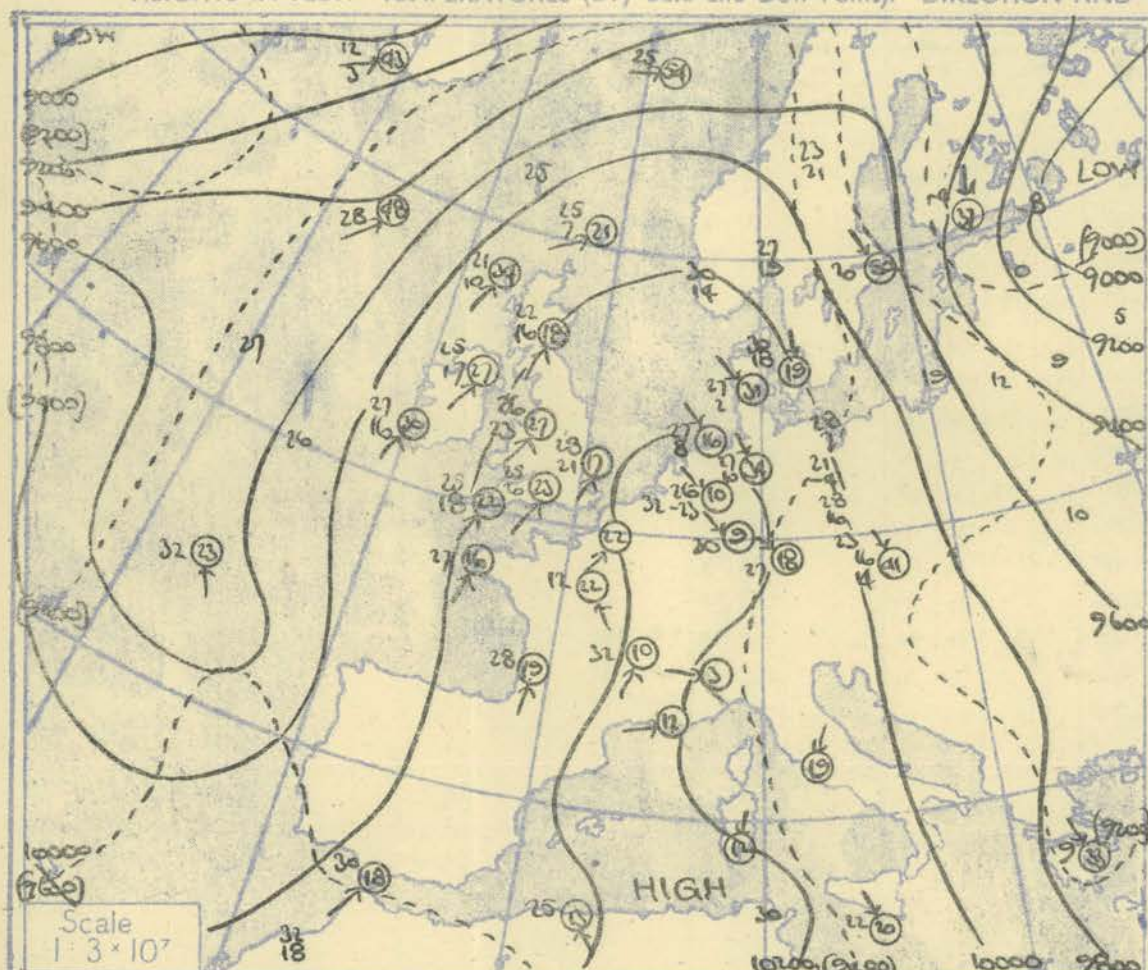
NEPHOSCOPE OBSERVATIONS

[illegible]

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

[illegible]

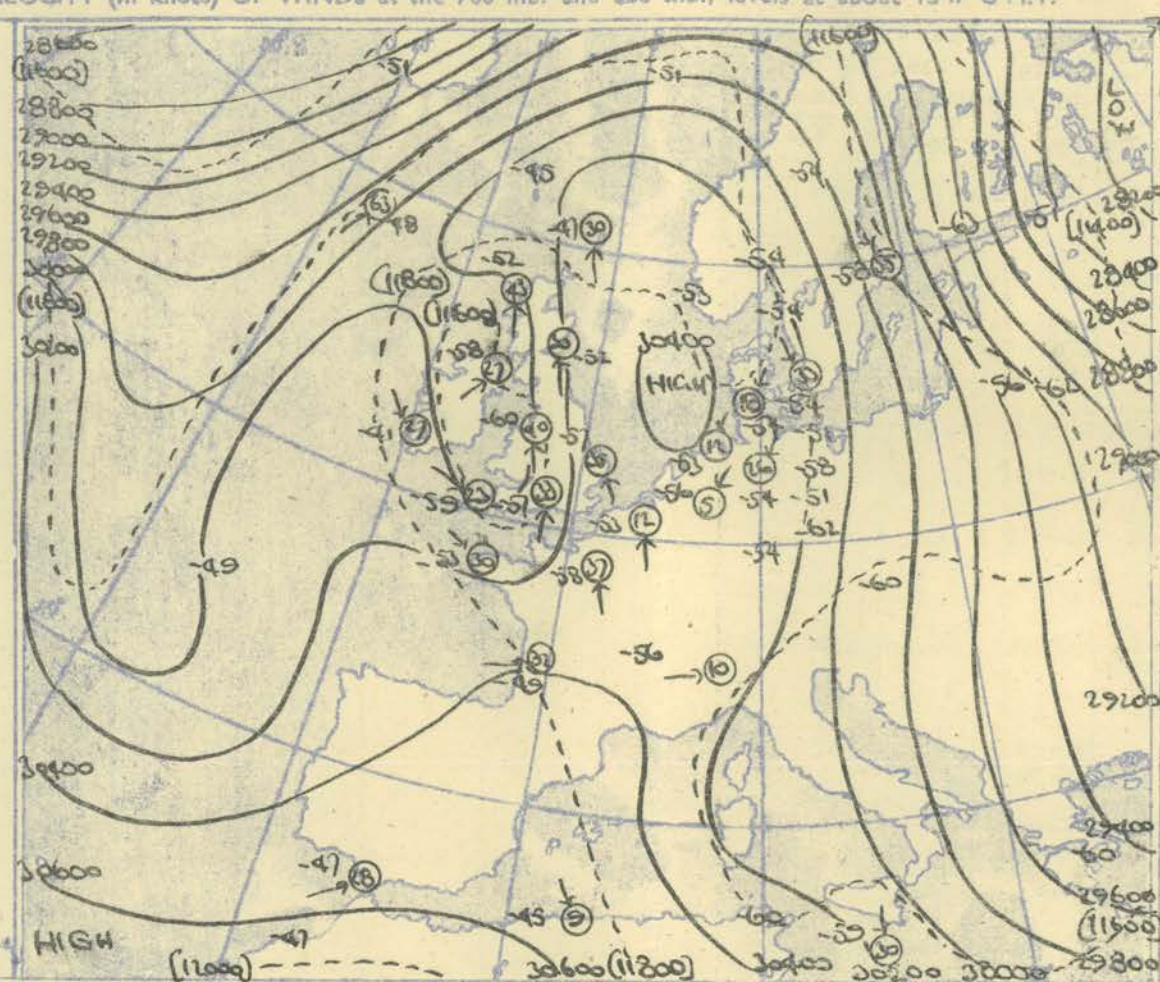
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h G.M.T.



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.

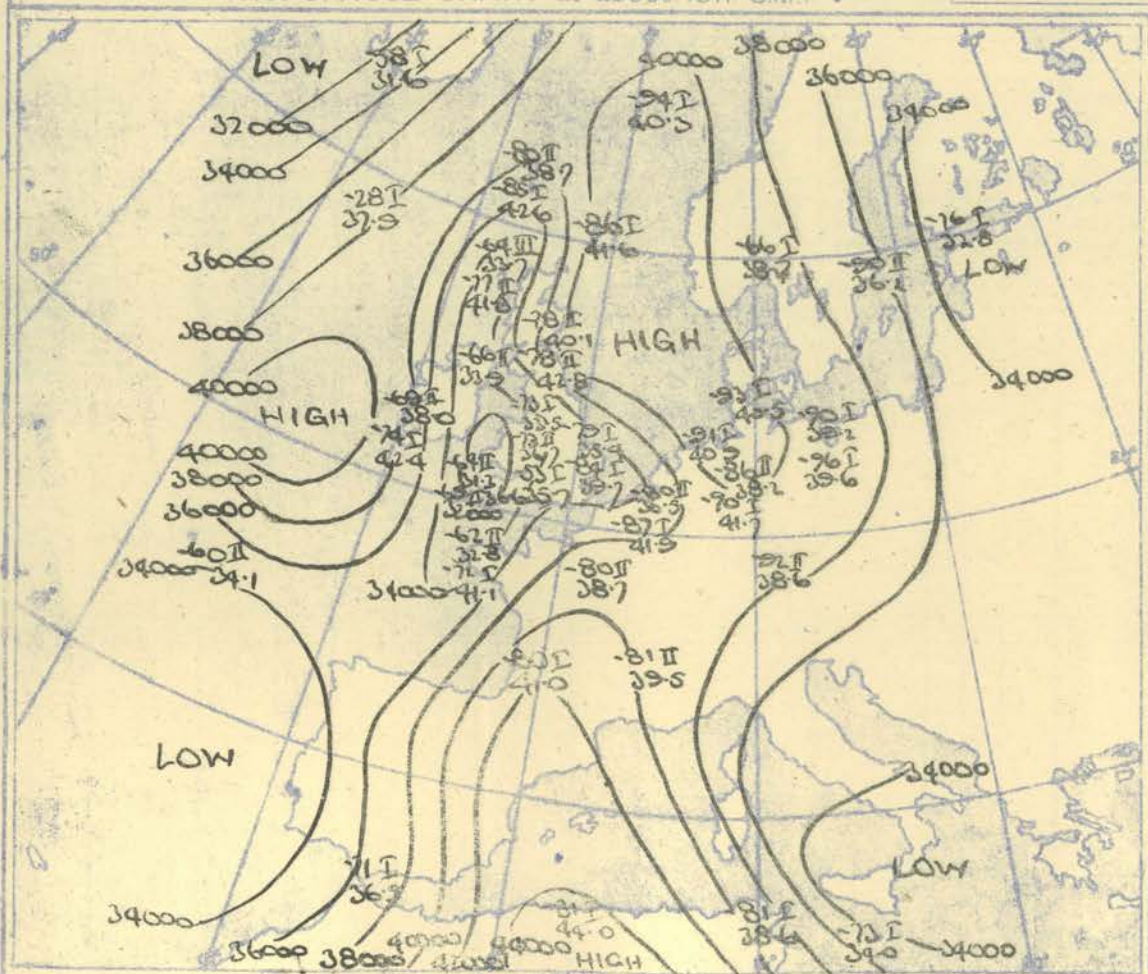
Gradient Wind Scale for Contours
at intervals of 200 ft at Lat. 52° N.

100 50 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 GMT.



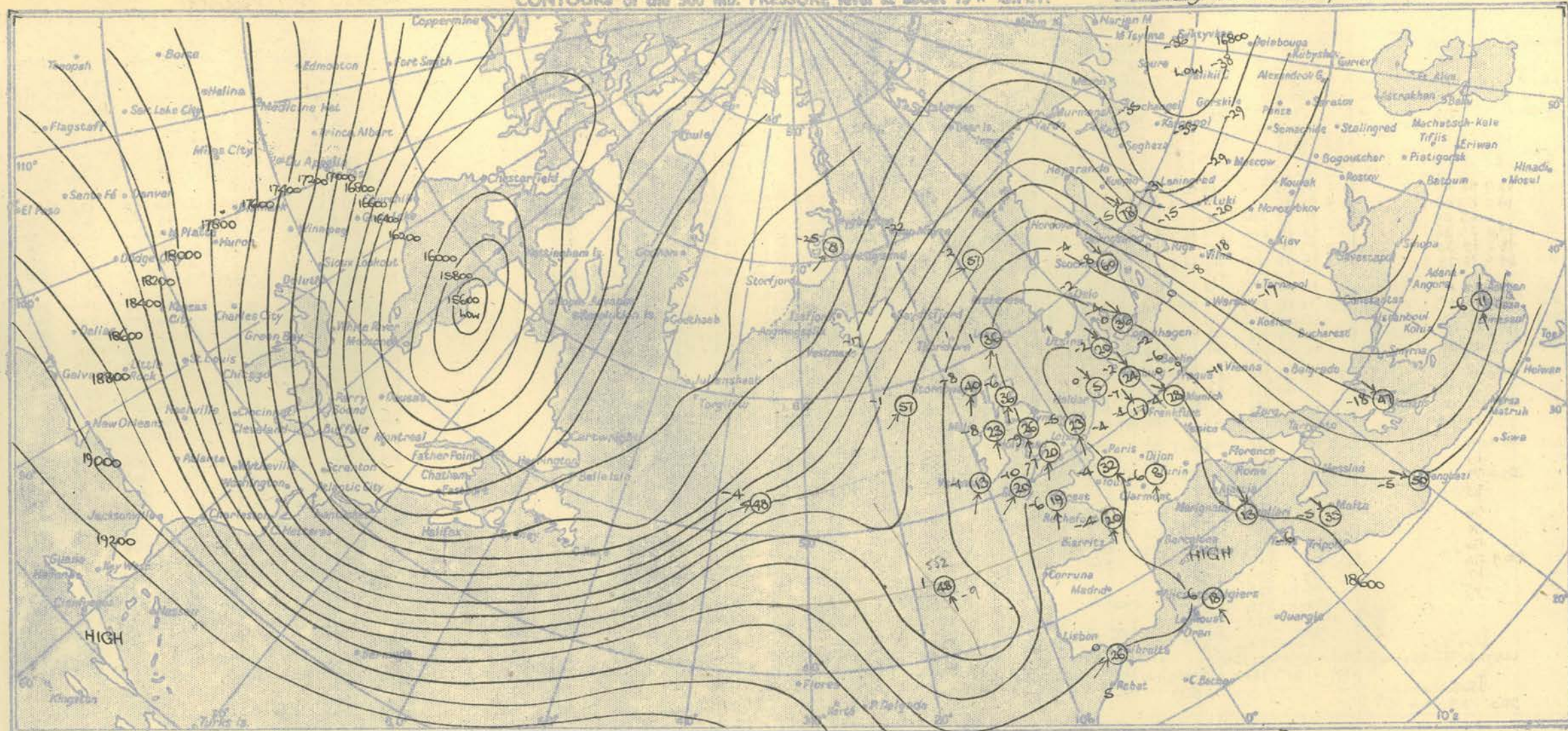
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The rapid advance northeastwards of a depression into Central Atlantic led to weakening of the Atlantic cold trough in the North, but continued southeastward penetration of cold air occurred east of the Azores.

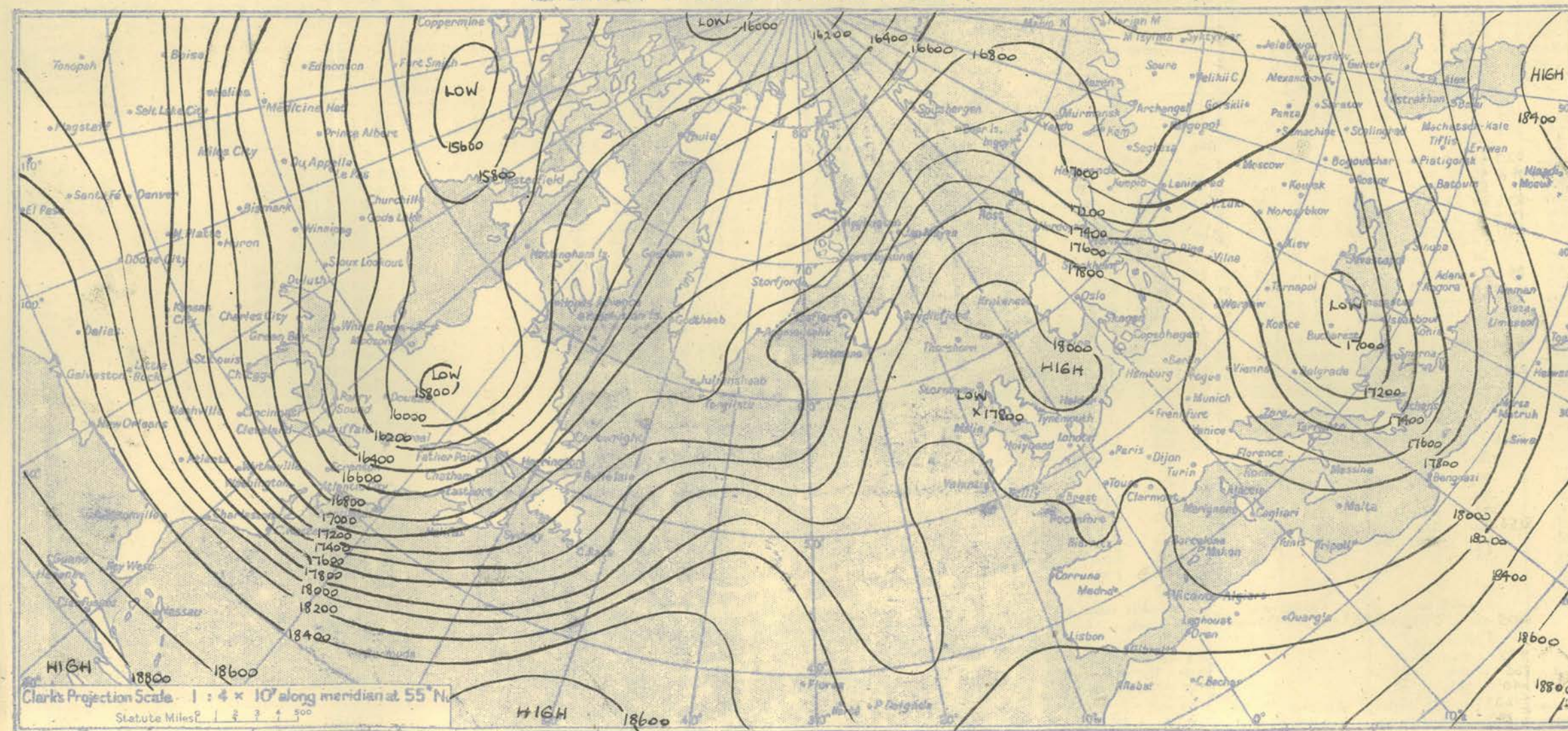
RATES of SUBSCRIPTION: Single copy 2d. or post free 3d. One calendar month 7/- One quarter 18/- One year 70/-
For special arrangements for supply to schools and colleges, see Form 2452.

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



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

Thursday 13th December, 1951.



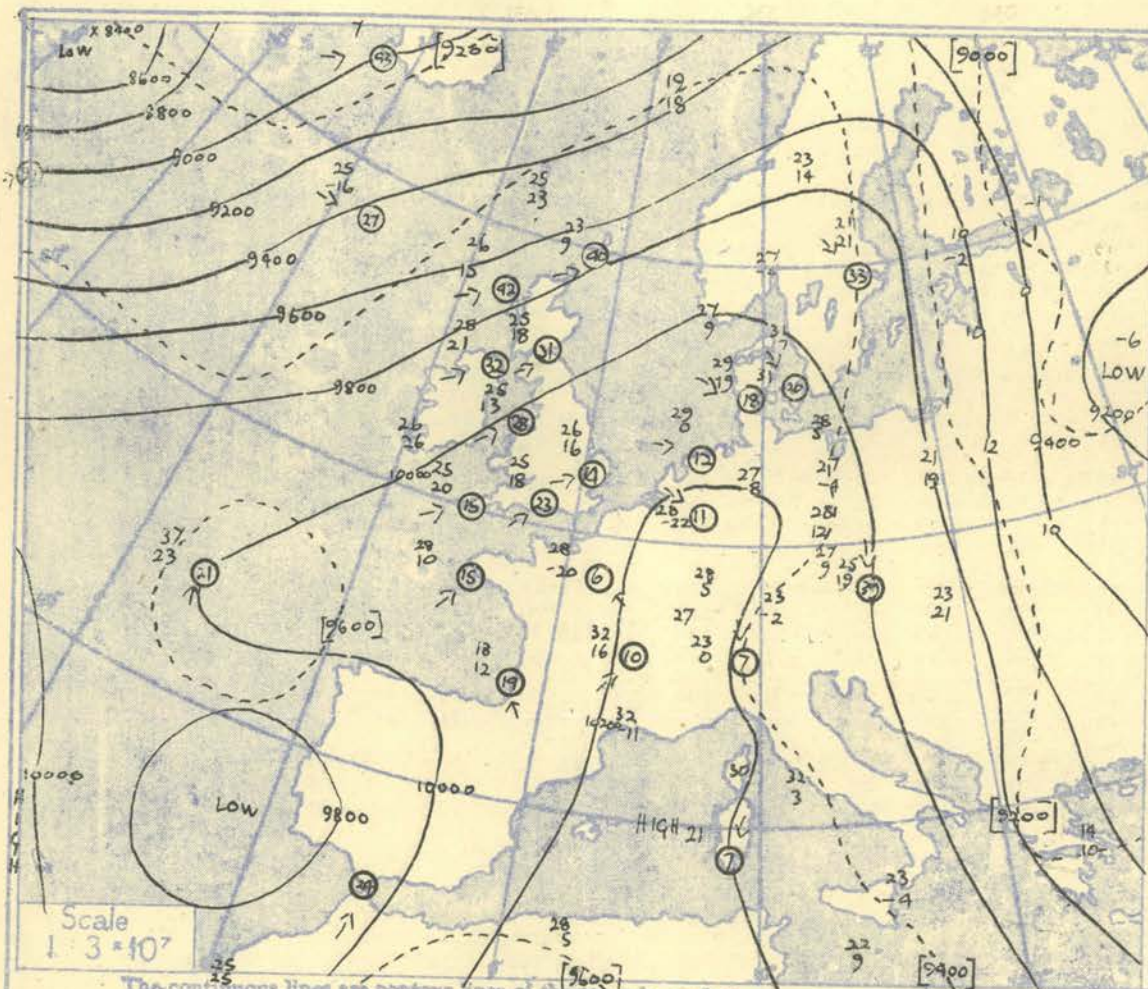
MSO Prosa MC DuMont

VALENTIA		STATION	
032	032	032	032
1015'S	1015'S	1015'S	1015'S
1014	1014	1014	1014
789	789	789	789
27 DEC 1951		27 DEC 1951	
Dir.	Vol.	Pr.	Pr.
knows	knows	knows	knows

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	HEMSBY	LARKHILL	CAMBORNE	VALENTIA	STATION
Pressure	Time	03L	03L	03L	03L	03L	03L	03L	03L	03L
	M.S.L.	1010.3	1008.6	1017.1	1016.3	1020.4	1023.3	1020.3	1015.5	1014.0
	Surf	1000.2	1007.0	1016.2	1007.0	1018.3	1021.7	1006.6	1009.6	1014.0
	Freezing	762	740	775	728	753	743	754	758	780
Pressure	Height	Height	Height	Height	Height	Height	Height	Height	Height	Height
	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100
Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.
	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.
Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew	Dew
	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind	Wind
	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir.				

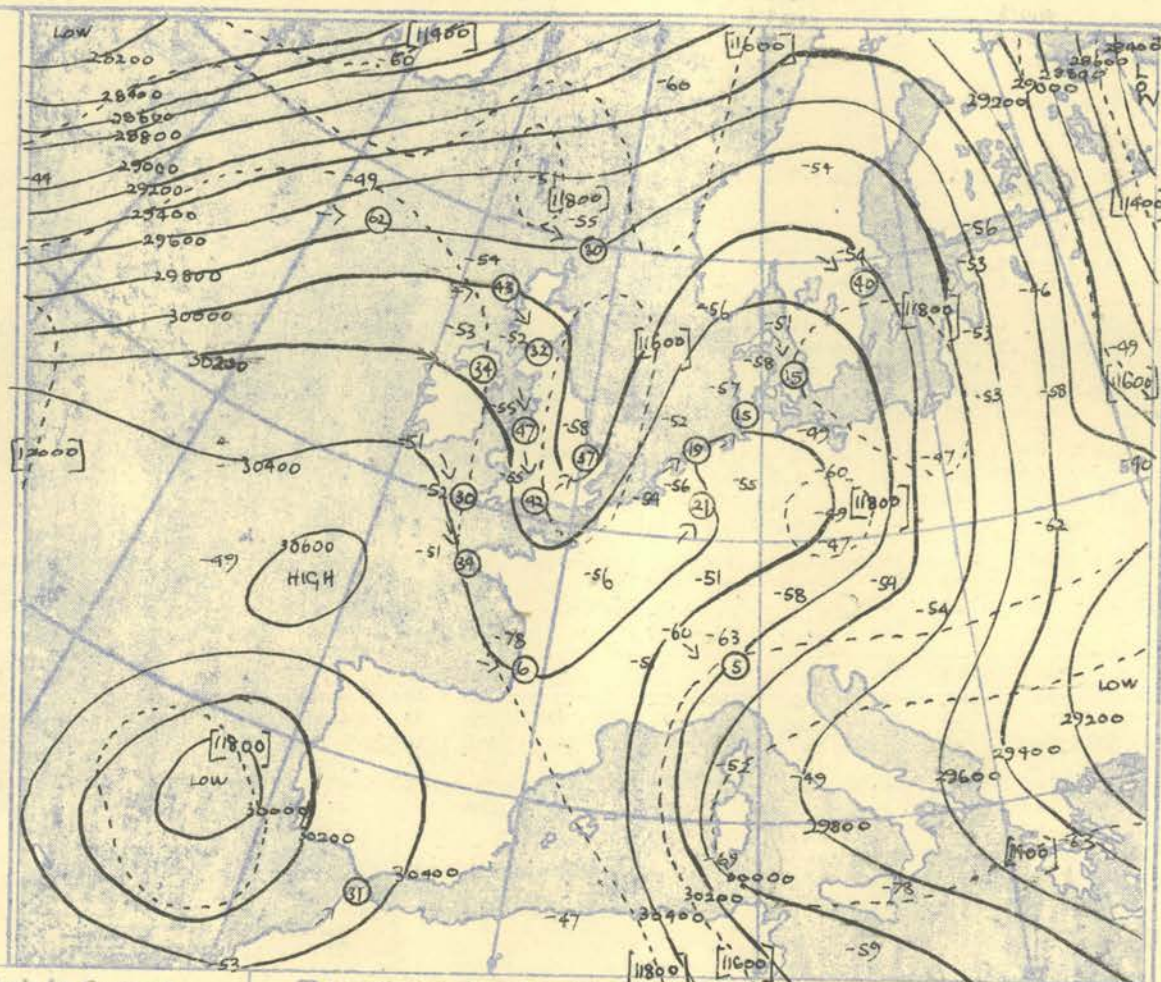
Friday 14th December 1951.

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 03h G.M.T.



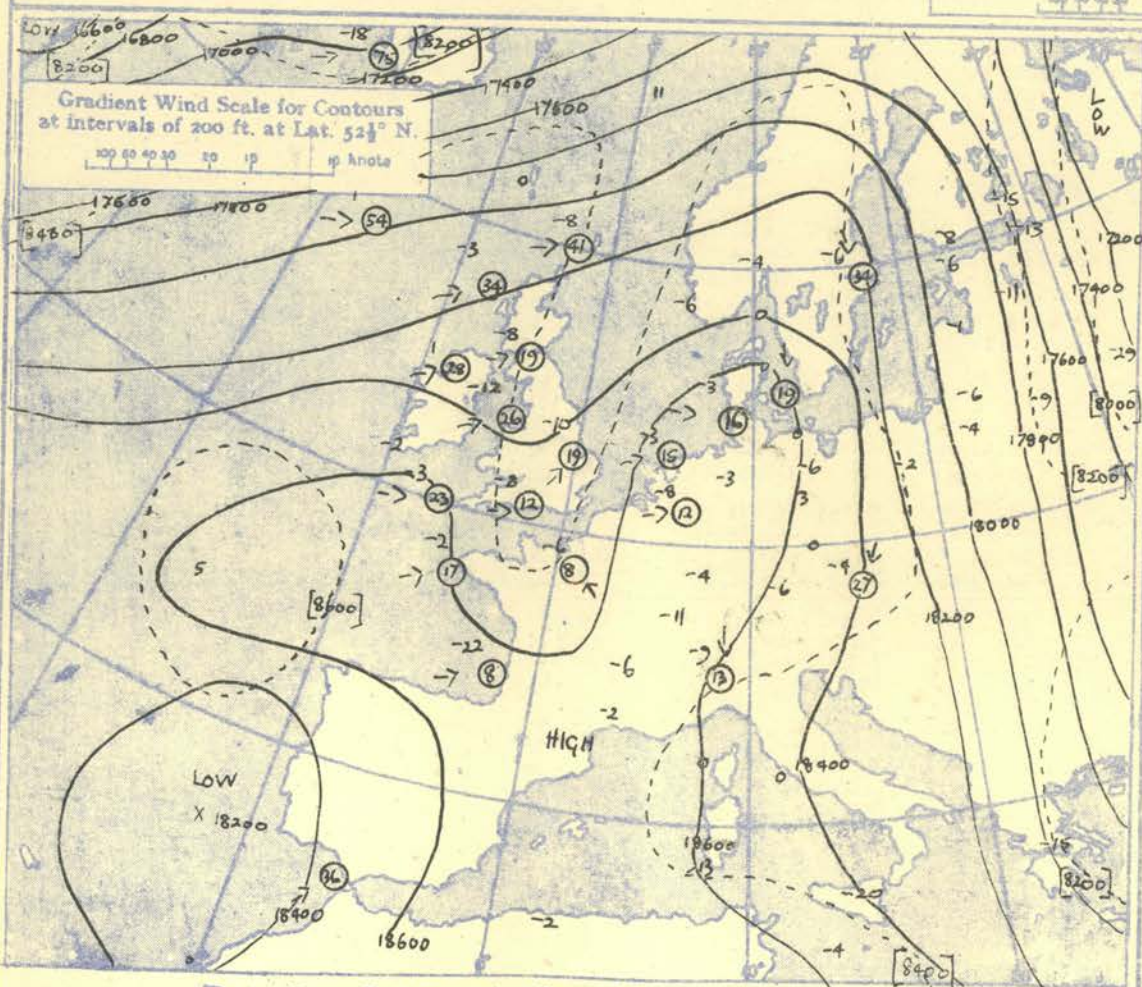
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N -

100 80 60 40 20 10 0 knots

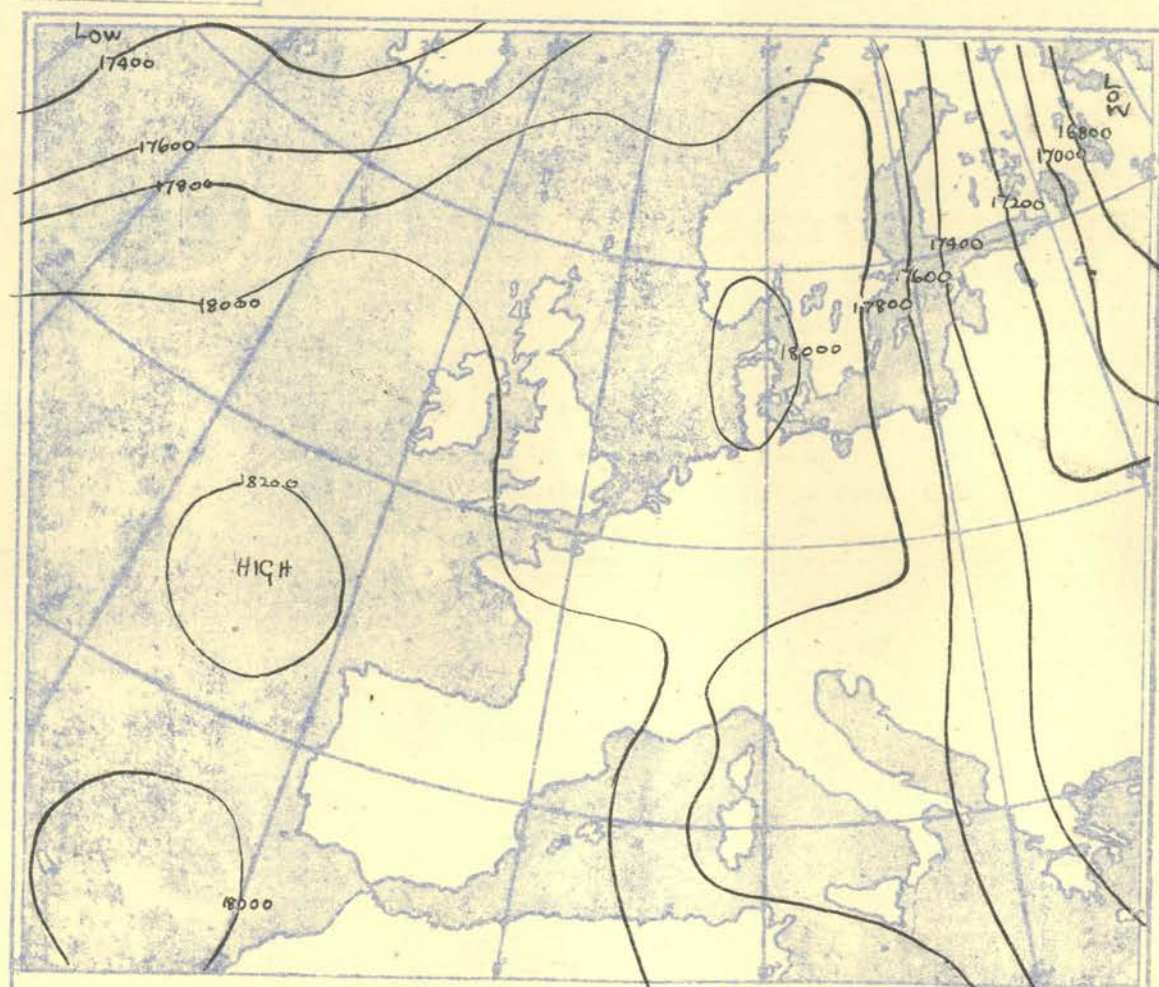


Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N -

100 80 60 40 20 10 0 knots



Isopleths of Thickness 500-1000mb.



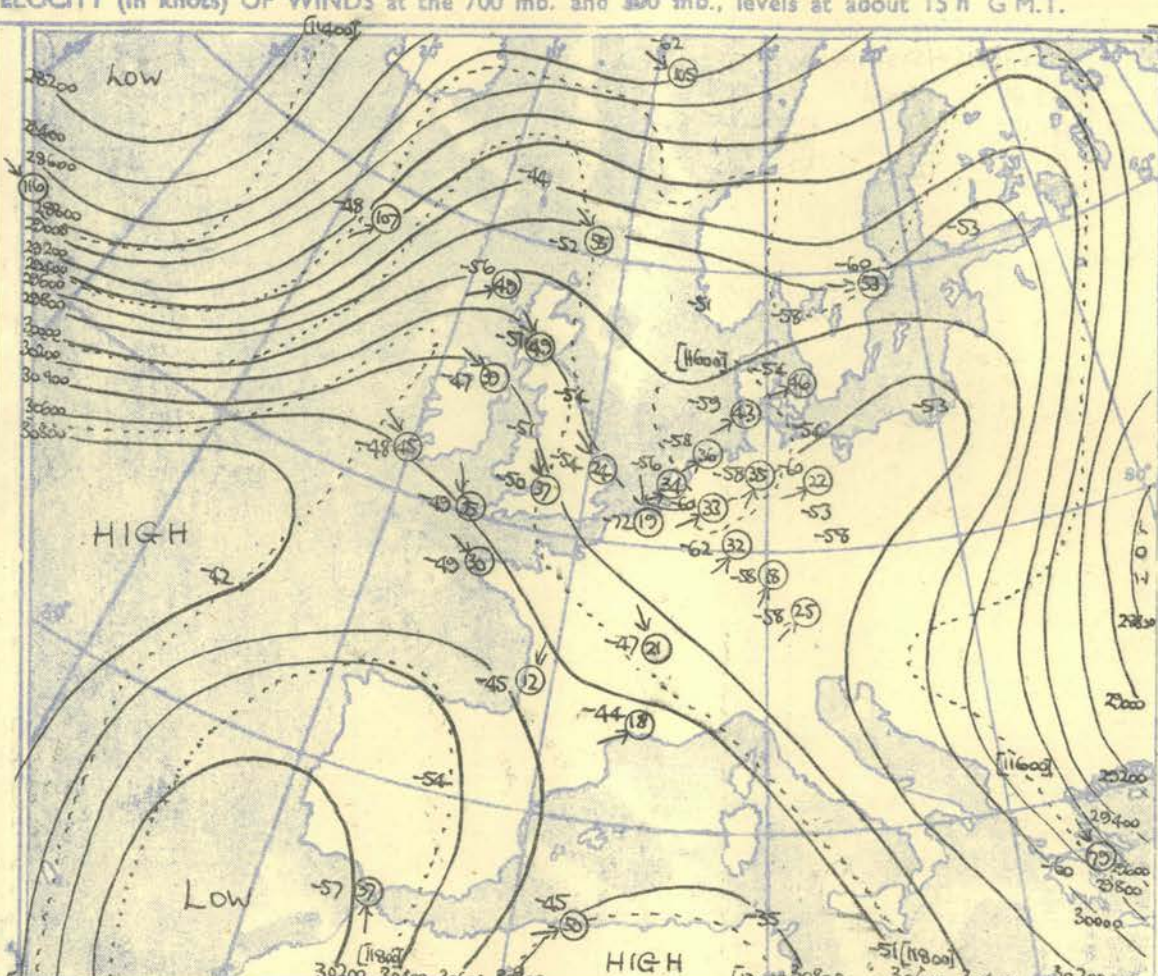
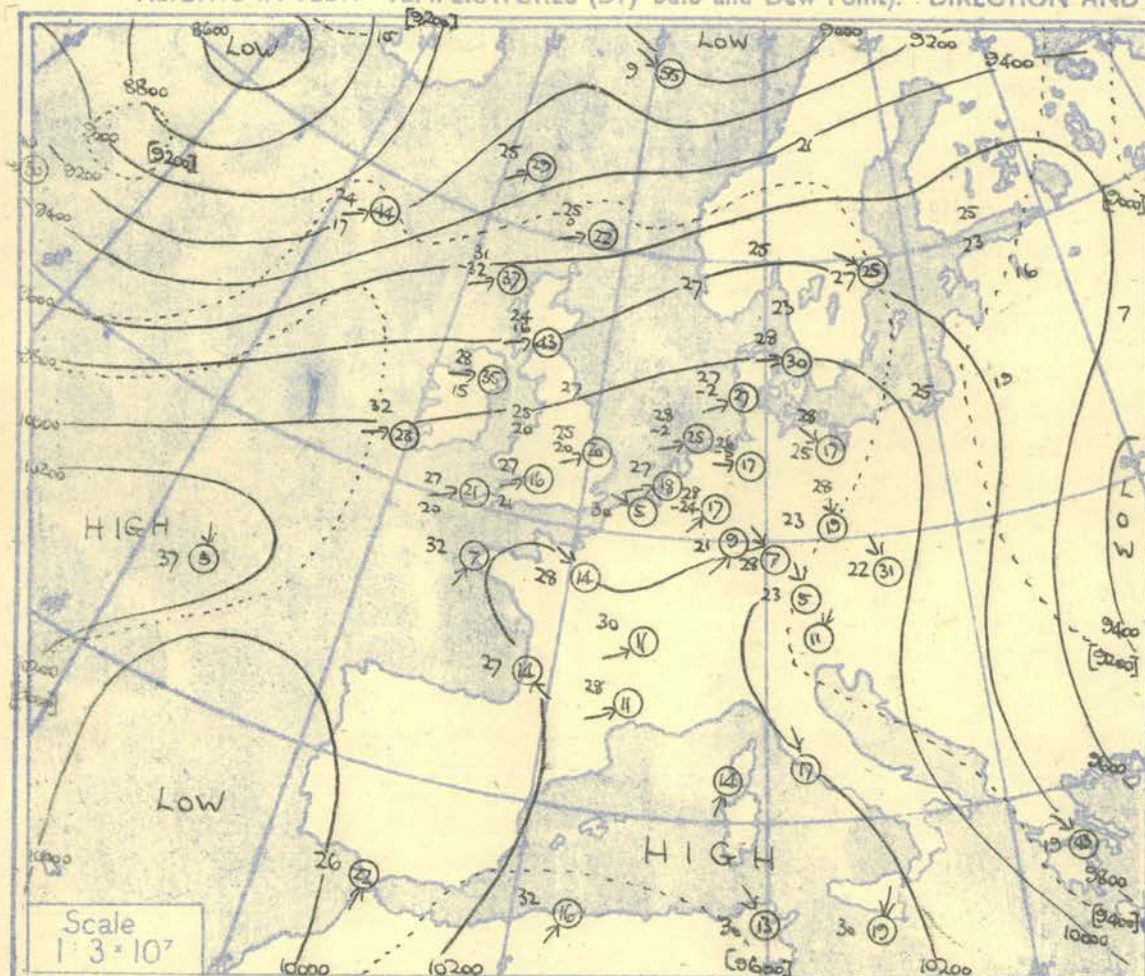
DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

NEPHROSCOPE OBSERVATIONS

WEATHER WATCHER	WEATHER WATCHER	WEATHER OBSERVER
-----------------	-----------------	------------------

[illegible]

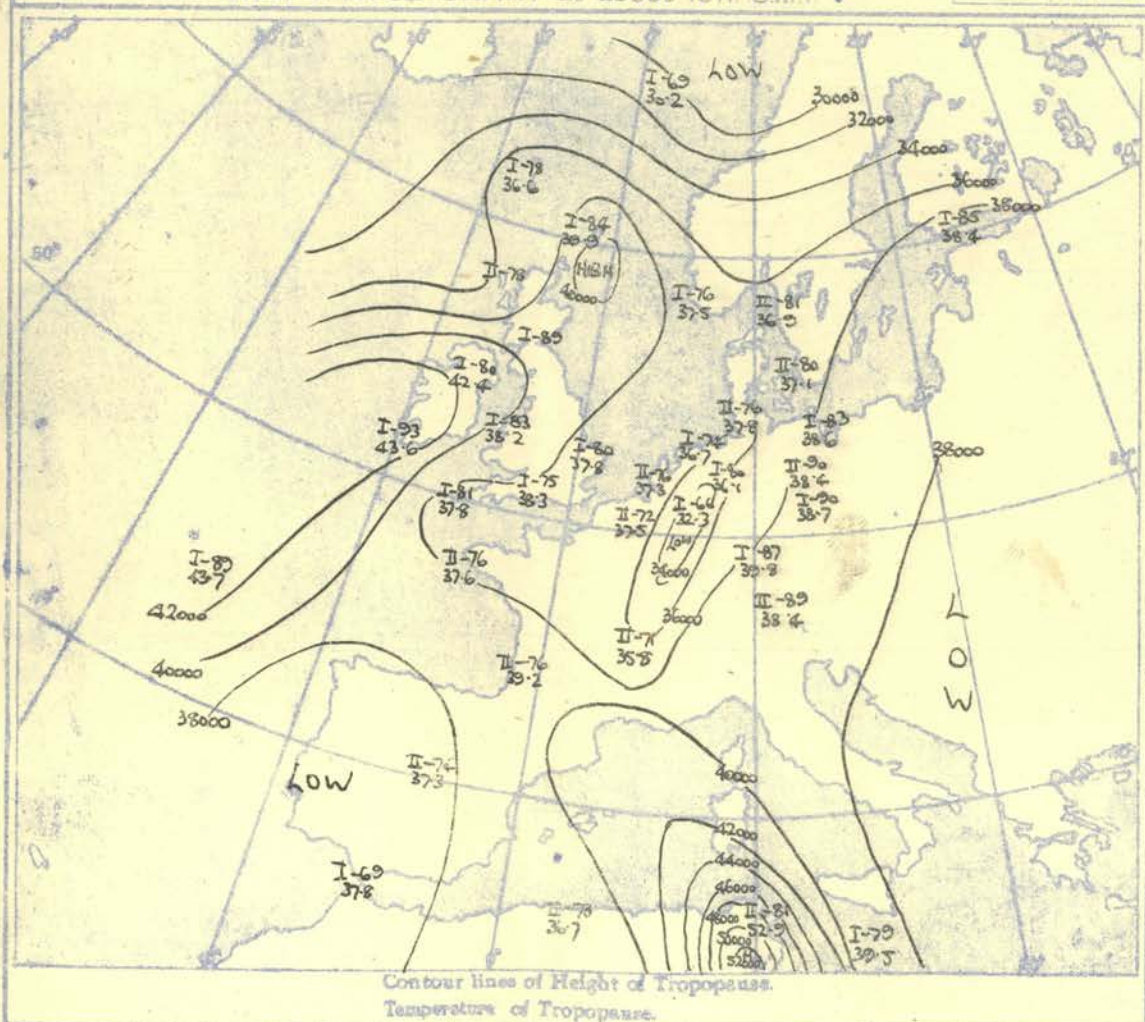
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Points). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 100 mb., levels at about 15 h G.M.T.



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

100 80 60 40 20 10 knots

TROPOPAUSE CHART at about 15h GMT.

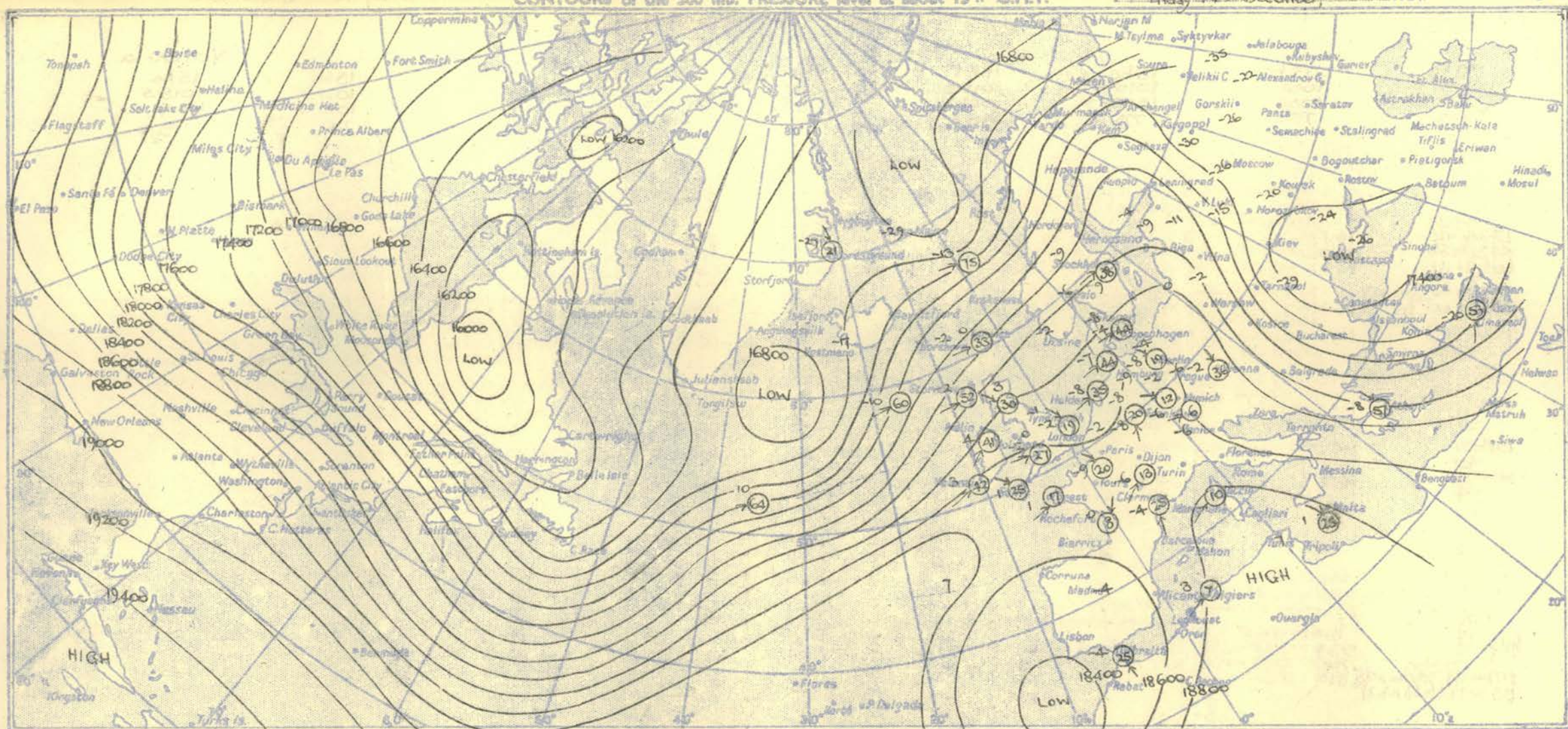


NOTES ON THE AEROLOGICAL SITUATION.

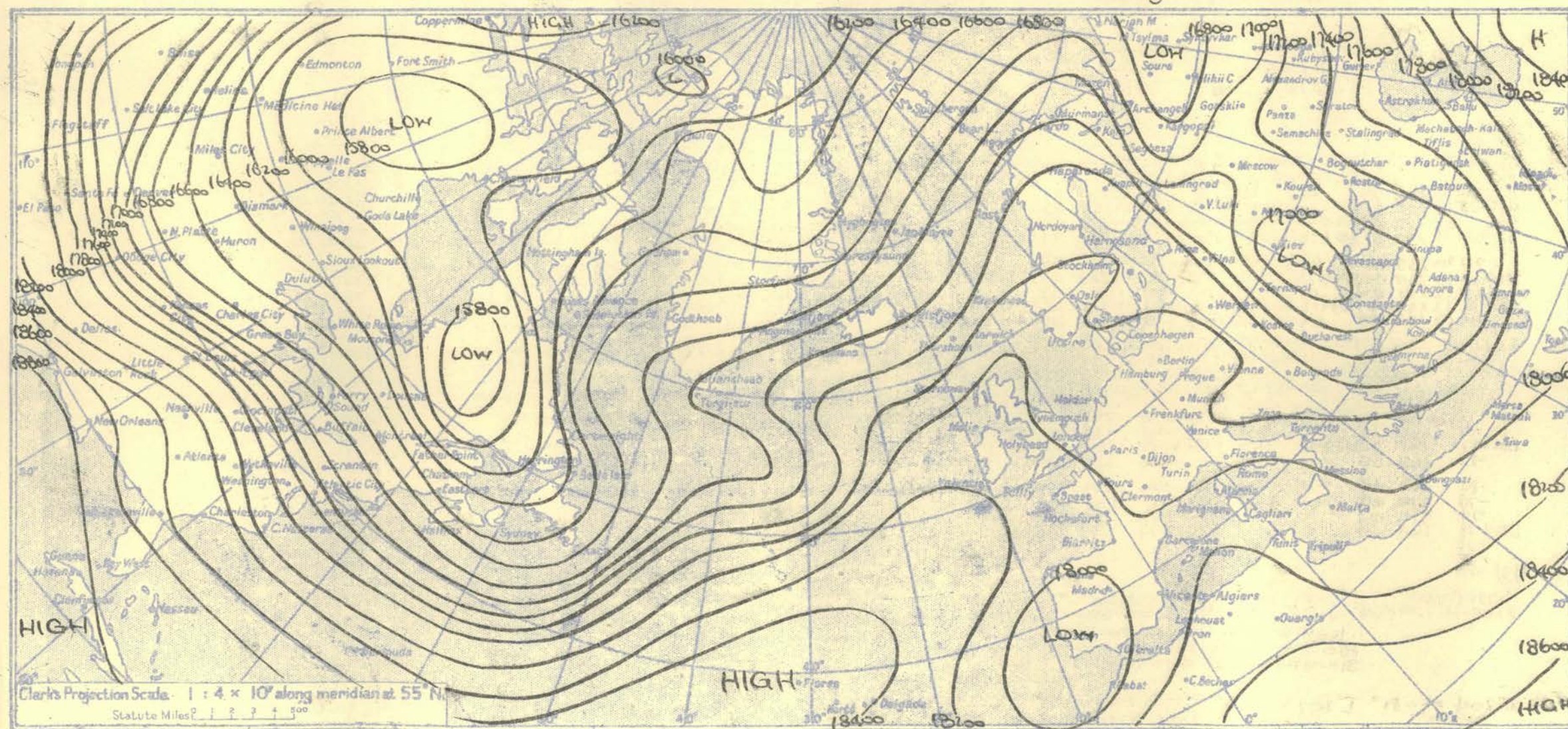
Very cold air over eastern Canada, moving southwards and strengthening the thermal gradient over the western Atlantic.

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

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



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

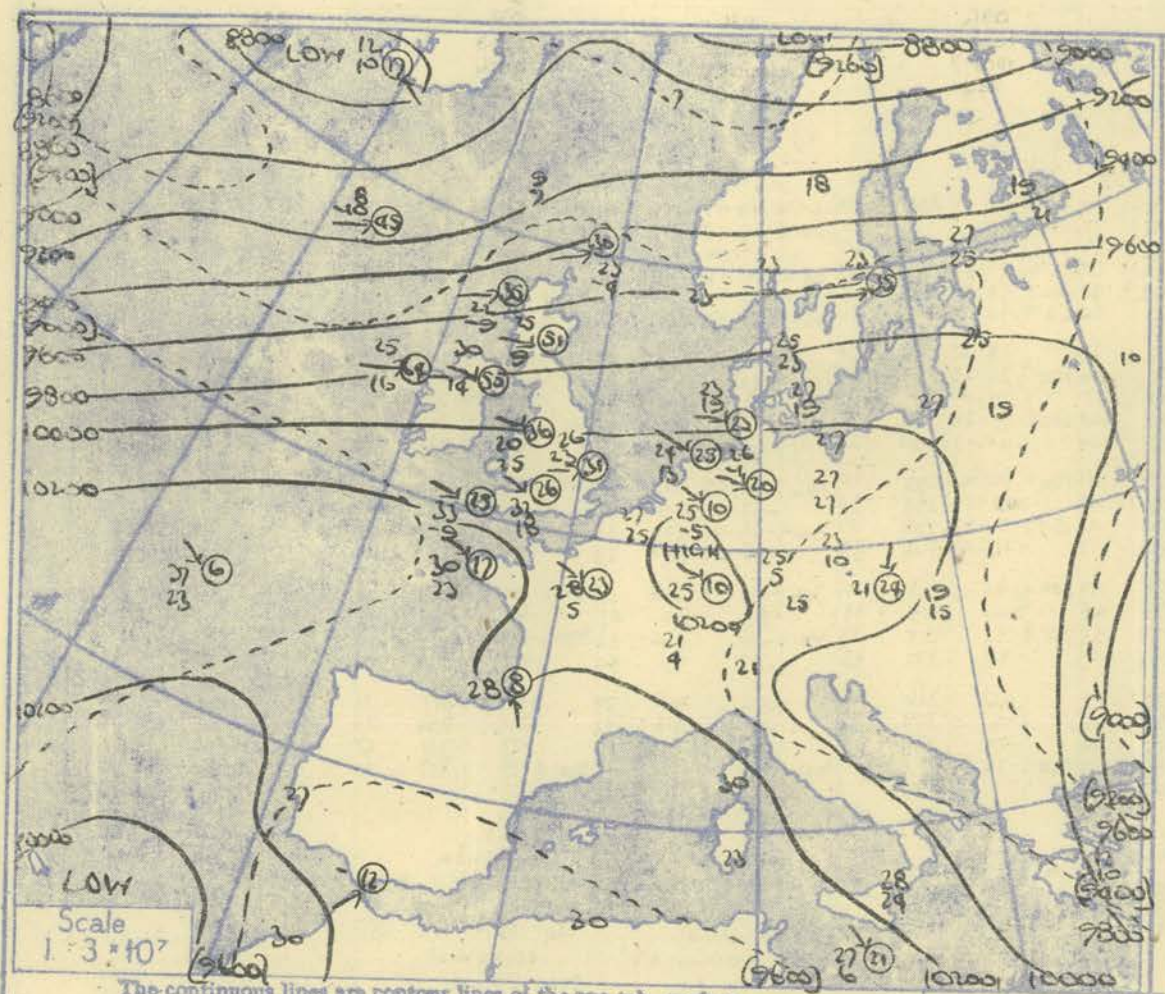


RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				Valentia				Station	
Time	M.S.L.	Surf	Pressure	15 hrs	G.M.T.	15 hrs	G.M.T.	15 hrs	G.M.T.	15 hrs	G.M.T.	15 hrs	G.M.T.	15 hrs	G.M.T.	15 hrs	G.M.T.	15 hrs	G.M.T.	15 hrs	G.M.T.	15 hrs	G.M.T.	15 hrs	G.M.T.	15 hrs	G.M.T.	15 hrs	G.M.T.	Time	M.S.L.						
1000	990	980	970	1000	990	980	970	1000	990	980	970	1000	990	980	970	1000	990	980	970	1000	990	980	970	1000	990	980	970	1000	990	980	970						
02.7	45.45	01.0	01.0	01.6	45.45	01.6	45.45	01.6	45.45	01.6	45.45	01.6	45.45	01.6	45.45	01.6	45.45	01.6	45.45	01.6	45.45	01.6	45.45	01.6	45.45	01.6	45.45	01.6	45.45	01.6	45.45						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44	25.3	44.44						
01.0	44.44	25.3	25.3	25.3	44.44	25.3	44.44	25.3	44.44																												

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)																																							
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA				STATION	
		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		1001.5		mb		1003.2		mb		1008.0		mb		1011.8		mb		1016.2		mb		1020.2		mb		1021.9		mb		1022.3		mb		1017.4		mb		Time	
M.S.L.		991.5		mb		1001.5		mb		1007.2		mb		1014.2		mb		1018.7		mb		1018.7		mb		1018.7		mb		1011.6		mb		1016		M.S.L.			
Surf		780		mb		800		mb		780		mb		721		mb		744		mb		744		mb		700		mb		692		mb		700		Surf			
Pressure																																				Pressure			
		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		1022.3		mb		1011.6		mb		1017.4		mb		1020.2		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		Time			
M.S.L.		1011.6		mb		1017.4		mb		1017.4		mb		1020.2		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		mb		M.S.L.					
Surf		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		Surf					
Pressure																																		Pressure					
		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		1022.3		mb		1011.6		mb		1017.4		mb		1020.2		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		Time			
M.S.L.		1011.6		mb		1017.4		mb		1017.4		mb		1020.2		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		mb		M.S.L.					
Surf		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		Surf					
Pressure																																		Pressure					
		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		1022.3		mb		1011.6		mb		1017.4		mb		1020.2		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		Time			
M.S.L.		1011.6		mb		1017.4		mb		1017.4		mb		1020.2		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		mb		M.S.L.					
Surf		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		Surf					
Pressure																																		Pressure					
		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		1022.3		mb		1011.6		mb		1017.4		mb		1020.2		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		Time			
M.S.L.		1011.6		mb		1017.4		mb		1017.4		mb		1020.2		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		mb		M.S.L.					
Surf		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		Surf					
Pressure																																		Pressure					
		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		1022.3		mb		1011.6		mb		1017.4		mb		1020.2		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		Time			
M.S.L.		1011.6		mb		1017.4		mb		1017.4		mb		1020.2		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		mb		M.S.L.					
Surf		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		Surf					
Pressure																																		Pressure					
		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		1022.3		mb		1011.6		mb		1017.4		mb		1020.2		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		Time			
M.S.L.		1011.6		mb		1017.4		mb		1017.4		mb		1020.2		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		mb		M.S.L.					
Surf		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		Surf					
Pressure																																		Pressure					
		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		1022.3		mb		1011.6		mb		1017.4		mb		1020.2		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		Time			
M.S.L.		1011.6		mb		1017.4		mb		1017.4		mb		1020.2		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		mb		M.S.L.					
Surf		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		Surf					
Pressure																																		Pressure					
		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		1022.3		mb		1011.6		mb		1017.4		mb		1020.2		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		Time			
M.S.L.		1011.6		mb		1017.4		mb		1017.4		mb		1020.2		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		mb		M.S.L.					
Surf		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		Surf					
Pressure																																		Pressure					
		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		1022.3		mb		1011.6		mb		1017.4		mb		1020.2		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		Time			
M.S.L.		1011.6		mb		1017.4		mb		1017.4		mb		1020.2		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		mb		M.S.L.					
Surf		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		Surf					
Pressure																																		Pressure					
		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		1022.3		mb		1011.6		mb		1017.4		mb		1020.2		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		Time			
M.S.L.		1011.6		mb		1017.4		mb		1017.4		mb		1020.2		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		mb		M.S.L.					
Surf		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		Surf					
Pressure																																		Pressure					
		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		1022.3		mb		1011.6		mb		1017.4		mb		1020.2		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		Time			
M.S.L.		1011.6		mb		1017.4		mb		1017.4		mb		1020.2		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		mb		M.S.L.					
Surf		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		Surf					
Pressure																																		Pressure					
		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		1022.3		mb		1011.6		mb		1017.4		mb		1020.2		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		Time			
M.S.L.		1011.6		mb		1017.4		mb		1017.4		mb		1020.2		mb		1021.9		mb		1021.9		mb		1021.9		mb		1021.9		mb		M.S.L.					
Surf		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		700		mb		700									

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 03h G.M.T.



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

100 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360 380 400 420 440 460 480 500 520 540 560 580 600 620 640 660 680 700 720 740 760 780 800 820 840 860 880 900 920 940 960 980 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 10020 10040 10060 10080 10100 10120 10140 10160 10180 10200 10220 10240 10260 10280 10300 10320 10340 10360 10380 10400 10420 10440 10460 10480 10500 10520 10540 10560 10580 10600 10620 10640 10660 10680 10700 10720 10740 10760 10780 10800 10820 10840 10860 10880 10900 10920 10940 10960 10980 11000 11020 11040 11060 11080 11100 11120 11140 11160 11180 11200 11220 11240 11260 11280 11300 11320 11340 11360 11380 11400 11420 11440 11460 11480 11500 11520 11540 11560 11580 11600 11620 11640 11660 11680 11700 11720 11740 11760 11780 11800 11820 11840 11860 11880 11900 11920 11940 11960 11980 12000 12020 12040 12060 12080 12100 12120 12140 12160 12180 12200 12220 12240 12260 12280 12300 12320 12340 12360 12380 12400 12420 12440 12460 12480 12500 12520 12540 12560 12580 12600 12620 12640 12660 12680 12700 12720 12740 12760 12780 12800 12820 12840 12860 12880 12900 12920 12940 12960 12980 13000 13020 13040 13060 13080 13100 13120 13140 13160 13180 13200 13220 13240 13260 13280 13300 13320 13340 13360 13380 13400 13420 13440 13460 13480 13500 13520 13540 13560 13580 13600 13620 13640 13660 13680 13700 13720 13740 13760 13780 13800 13820 13840 13860 13880 13900 13920 13940 13960 13980 14000 14020 14040 14060 14080 14100 14120 14140 14160 14180 14200 14220 14240 14260 14280 14300 14320 14340 14360 14380 14400 14420 14440 14460 14480 14500 14520 14540 14560 14580 14600 14620 14640 14660 14680 14700 14720 14740 14760 14780 14800 14820 14840 14860 14880 14900 14920 14940 14960 14980 15000 15020 15040 15060 15080 15100 15120 15140 15160 15180 15200 15220 15240 15260 15280 15300 15320 15340 15360 15380 15400 15420 15440 15460 15480 15500 15520 15540 15560 15580 15600 15620 15640 15660 15680 15700 15720 15740 15760 15780 15800 15820 15840 15860 15880 15900 15920 15940 15960 15980 16000 16020 16040 16060 16080 16100 16120 16140 16160 16180 16200 16220 16240 16260 16280 16300 16320 16340 16360 16380 16400 16420 16440 16460 16480 16500 16520 16540 16560 16580 16600 16620 16640 16660 16680 16700 16720 16740 16760 16780 16800 16820 16840 16860 16880 16900 16920 16940 16960 16980 17000 17020 17040 17060 17080 17100 17120 17140 17160 17180 17200 17220 17240 17260 17280 17300 17320 17340 17360 17380 17400 17420 17440 17460 17480 17500 17520 17540 17560 17580 17600 17620 17640 17660 17680 17700 17720 17740 17760 17780 17800 17820 17840 17860 17880 17900 17920 17940 17960 17980 18000 18020 18040 18060 18080 18100 18120 18140 18160 18180 18200 18220 18240 18260 18280 18300 18320 18340 18360 18380 18400 18420 18440 18460 18480 18500 18520 18540 18560 18580 18600 18620 18640 18660 18680 18700 18720 18740 18760 18780 18800 18820 18840 18860 18880 18900 18920 18940 18960 18980 19000 19020 19040 19060 19080 19100 19120 19140 19160 19180 19200 19220 19240 19260 19280 19300 19320 19340 19360 19380 19400 19420 19440 19460 19480 19500 19520 19540 19560 19580 19600 19620 19640 19660 19680 19700 19720 19740 19760 19780 19800 19820 19840 19860 19880 19900 19920 19940 19960 19980 20000 20020 20040 20060 20080 20100 20120 20140 20160 20180 20200 20220 20240 20260 20280 20300 20320 20340 20360 20380 20400 20420 20440 20460 20480 20500 20520 20540 20560 20580 20600 20620 20640 20660 20680 20700 20720 20740 20760 20780 20800 20820 20840 20860 20880 20900 20920 20940 20960 20980 21000 21020 21040 21060 21080 21100 21120 21140 21160 21180 21200 21220 21240 21260 21280 21300 21320 21340 21360 21380 21400 21420 21440 21460 21480 21500 21520 21540 21560 21580 21600 21620 21640 21660 21680 21700 21720 21740 21760 21780 21800 21820 21840 21860 21880 21900 21920 21940 21960 21980 22000 22020 22040 22060 22080 22100 22120 22140 22160 22180 22200 22220 22240 22260 22280 22300 22320 22340 22360 22380 22400 22420 22440 22460 22480 22500 22520 22540 22560 22580 22600 22620 22640 22660 22680 22700 22720 22740 22760 22780 22800 22820 22840 22860 22880 22900 22920 22940 22960 22980 23000 23020 23040 23060 23080 23100 23120 23140 23160 23180 23200 23220 23240 23260 23280 23300 23320 23340 23360 23380 23400 23420 23440 23460 23480 23500 23520 23540 23560 23580 23600 23620 23640 23660 23680 23700 23720 23740 23760 23780 23800 23820 23840 23860 23880 23900 23920 23940 23960 23980 24000 24020 24040 24060 24080 24100 24120 24140 24160 24180 24200 24220 24240 24260 24280 24300 24320 24340 24360 24380 24400 24420 24440 24460 24480 24500 24520 24540 24560 24580 24600 24620 24640 24660 24680 24700 24720 24740 24760 24780 24800 24820 24840 24860 24880 24900 24920 24940 24960 24980 25000 25020 25040 25060 25080 25100 25120 25140 25160 25180 25200 25220 25240 25260 25280 25300 25320 25340 25360 25380 25400 25420 25440 25460 25480 25500 25520 25540 25560 25580 25600 25620 25640 25660 25680 25700 25720 25740 25760 25780 25800 25820 25840 25860 25880 25900 25920 25940 25960 25980 26000 26020 26040 26060 26080 26100 26120 26140 26160 26180 26200 26220 26240 26260 26280 26300 26320 26340 26360 26380 26400 26420 26440 26460 26480 26500 26520 26540 26560 26580 26600 26620 26640 26660 26680 26700 26720 26740 26760 26780 26800 26820 26840 26860 26880 26900 26920 26940 26960 26980 27000 27020 27040 27060 27080 27100 27120 27140 27160 27180 27200 27220 27240 27260 27280 27300 27320 27340 27360 27380 27400 27420 27440 27460 27480 27500 27520 27540 27560 27580 27600 27620 27640 27660 27680 27700 27720 27740 27760 27780 27800 27820 27840 27860 27880 27900 27920 27940 27960 27980 28000 28020 28040 28060 28080 28100 28120 28140 28160 28180 28200 28220 28240 28260 28280 28300 28320 28340 28360 28380 28400 28420 28440 28460 28480 28500 28520 28540 28560 28580 28600 28620 28640 28660 28680 28700 28720 28740 28760 28780 28800 28820 28840 28860 28880 28900 28920 28940 28960 28980 29000 29020 29040 29060 29080 29100 29120 29140 29160 29180 29200 29220 29240 29260 29280 29300 29320 29340 29360 29380 29400 29420 29440 29460 29480 29500 29520 29540 29560 29580 29600 29620 29640 29660 29680 29700 29720 29740 29760 29780 29800 29820 29840 29860 29880 29900 29920 29940 29960 29980 30000 30020 30040 30060 30080 30100 30120 30140 30160 30180 30200 30220 30240 30260 30280 30300 30320 30340 30360 30380 30400 30420 30440 30460 30480 30500 30520 30540 30560 30580 30600 30620 30640 30660 30680 30700 30720 30740 30760 30780 30800 30820 30840 30860 30880 30900 30920 30940 30960 30980 31000 31020 31040 31060 31080 31100 31120 31140 31160 31180 31200 31220 31240 31260 31280 31300 31320 31340 31360 31380 31400 31420 31440 31460 31480 31500 31520 31540 31560 31580 31600 31620 31640 31660 31680 31700 31720 31740 31760 31780 31800 31820 31840 31860 31880 31900 31920 31940 31960 31980 32000 32020 32040 32060 32080 32100 32120 32140 32160 32180 32200 32220 32240 32260 32280 32300 32320 32340 32360 32380 32400 32420 32440 32460 32480 32500 32520 32540 32560 32580 32600 32620 32640 32660 32680 32700 32720 32740 32760 32780 32800 32820 32840 32860 32880 32900 32920 32940 32960 32980 33000 33020 33040 33060 33080 33100 33120 33140 33160 33180 33200 33220 33240 33260 33280 33300 33320 33340 33360 33380 33400 33420 33440 33460 33480 33500 33520 33540 33560 33580 33600 33620 33640 33660 33680 33700 33720 33740 33760 33780 33800 33820 33840 33860 33880 33900 33920 33940 33960 33980 34000 34020 34040 34060 34080 34100 34120 34140 34160 34180 34200 34220 34240 34260 34280 34300 34320 34340 34360 34380 34400 34420 34440 34460 34480 34500 34520 34540 34560 34580 34600 34620 34640 34660 34680 34700 34720 34740 34760 34780 34800 34820 34840 34860 34880 34900 34920 34940 34960 34980 35000 35020 35040 35060 35080 35100 35120 35140 35160 35180 35200 35220 35240 35260 35280 35300 35320 35340 35360 35380 35400 35420 35440 35460 35480 35500 35520 35540 35560 35580 35600 35620 35640 35660 35680 35700 35720 35740 35760 35780 35800 35820 35840 35860 35880 35900 35920 35940 35960 35980 36000 36020 36040 36060 36080 36100 36120 36140 36160 36180 36200 36220 36240 36260 36280 36300 36320 36340 36360 36380 36400 36420 36440 36460 36480 36500 36520 36540 36560 36580 36600 36620 36640 36660 36680 36700 36720 36740 36760 36780 36800 36820 36840 36860 36880 36900 36920 36940 36960 36980 37000 37020 37040 37060 37080 37100 37120 37140 37160 37180 37200 37220 37240 37260 37280 37300 37320 37340 37360 37380 37400 37420 37440 37460 37480 37500 37520 37540 37560 37580 37600 37620 37640 37660 37680 37700 37720 37740 37760 37780 37800 37820 37840 37860 37880 37900 37920 37940 37960 37980 38000 38020 38040 38060 38080 38100 38120 38140 38160 38180 38200 38220 38240 38260 38280 38300 38320 38340 38360 38380 38400 38420 38440 38460 38480 38500 38520 38540 38560 38580 38600 38620 38640 38660 38680 38700 38720 38740 38760 38780 38800 38820 38840 38860 38880 38900 38920 38940 38960 38980 39000 39020 39040 39060 39080 39100 39120 39140 39160 39180 39200 39220 39240 39260 39280 39300 39320 39340 39360 39380 39400 39420 39440 39460 39480 39500 39520 39540 39560 39580 39600 39620 39640 39660 39680 39700 39720 39740 39760 39780 39800 39820 39840 39860 39880 39900 39920 39940 39960 39980 40000 40020 40040 40060 40080 40100 40120 40140 40160 40180 40200 40220 40240 40260 40280 40300 40320 40340 40360 40380 40400 40420 40440 40460 40480 40500 40520 40540 40560 40580 40600 40620 40640 40660 40680 40700 40720 40740 40760 40780 40800 40820 40840 40860 40880 40900 40920 40940 40960 40980 41000 41020 41040 41060 41080 41100 41120 41140 41160 41180 41200 41220 41240 41260 41280 41300 41320 41340 41360 41380 41400 41420 41440 41460 41480 41500 41520 41540 41560 41580 41600 41620 41640 41660 41680 41700 41720 41740 41760 41780 41800 41820 41840 41860 41880 41900 41920 41940

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

NEPHOSCOPE OBSERVATIONS

Ship	WEATHER WATCHER	WEATHER WATCHER	WEATHER WATCHER	WEATHER WATCHER	WEATHER OBSERVER	WEATHER OBSERVER	WEATHER OBSERVER	WEATHER OBSERVER	WEATHER OBSERVER	Ship
Lat/Long	58-3N. 15-5W.	58-3N. 15-6W.	57-3N. 13-9W.	57-3N. 13-9W.	54-6N. 11-0W.	54-2N. 12-2W.	52-9N. 14-5W.	53-7N. 14-5W.		Lat/Long
Time M.S.L. Surf Pressure	08h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	15h. G.M.T. mb mb mb	21h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	15h. G.M.T. mb mb mb	21h. G.M.T. mb mb mb		G.M.T. Time M.S.L. Surf Pressure
	996 996 850	1000 1000 880	999 999 730	997 997 685	1009 1009 740	1011 1011 745	1007 1007 710	1004 1004 675		
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	43 37 250 37	47 40 260 36	48 45 155 22	51 50 200 27	51 50 244 26	51 50 240 18	53 53 225 25	53 51 210 24		Surf
1000	-110	-	-	-	-	-	-	-		1000
950	41 30 250 45	41 34 260 30	44 43 159 25	51 50 210 40	47 46 251 31	45 35 245 19	54 54 230 36	51 51 303 40		950
900	27-2 33 24 249 52	34 27 250 33	40 39 167 26	50 47 229 45	42 42 251 41	40 29 249 22	51 51 233 41	45 45 222 53		900
850	26 19 249 54	29 23 245 34	39 34 153 29	44 43 225 42	39 34 251 42	42 19 250 31	48 47 234 45	45 45 222 53		850
800	21-8 21 10 248 53	29 08 240 37	37 36 199 36	43 23 222 40	41 29 252 52	43 2 39 251 37	44 42 237 45	42 36 223 51		800
750	13-08 247 48	25-08 246 43	34 32 206 49	42 19 220 40	33 23 252 60	33 25 259 43	39 34 240 45	39 34 240 45		750
700	91-6 08 10 247 46	24-22 252 55	30 27 234 60	34 11 220 42	25 16 255 64	25 19 265 48	31 27 240 45	29 29 240 39		700
650	11-4 239 53	17-22 262 67	27 24 239 65	27 21 217 53	18 19 254 68	20 10 260 50	25 13 240 39	29 29 240 39		650
600	129-5-65 236 57	130-7 130 7 270 66	134-7 20 16 240 65	135-5 20 63 216 61	137-0 13 62 253 66	137-7 15 06 255 54	138-0 20 67 240 40	137-5 22 17 215 48		600
550	14-38 248 58	05-40 269 69	13 08 253 75	11-10 218 54	04-08 256 70	08-12 256 57	12-11 240 38	15 03 215 56		550
500	172-8-23-4 253 62	177-9-04-37 267 76	180-8-05-01 258 69	181-2-00-74 219 61	182-0-07-17 260 69	183-1-02-19 256 57	183-9-02-06 240 43	183-7-05-72 212 56		500
450	31-57 258 77	13-34 267 82	03-10 245 60	12-23 223 66	19-29 260 74	14-24 256 63	08-76 240 43	06-20 211 54		450
400	223-35-58 257 88	230-9-25-40 271 87	235-0-14-22 240 59	234-7-20-33 226 66	234-5-31-40 265 90	235-1-25-34 256 71	237-7-19-58 241 48	237-6-17-30 212 58		400
350	40-60 254 99	36-52 271 112	24-35 246 72	43-41 239 69	46 260 82	39-51 265 76	32-40 247 53	30-23 212 60		350
300	288-3-12 261 95	295-7-51 272 114	201-4-40-49 248 85	300-1-46 236 66	297-8-61 260 81	300-6-52 274 82	308-4-47 245 52			300
250	279 91	269 126		63 236 69	77 261 100	70 271 96	61 246 65			250
200	377-0-5 262 86	381-5-73 276 82		82 332 78	80-7-84 256 88	84-5-88 269 84	389-0-63 246 54			200
170	58 266 61	65 280 74		84 233 66	72 259 66	74 269 66	39 254 62			170
150	60 261 49	69 284 69		75 245 51	84 261 63	83 271 64	80 263 48			150
130	62 273 43	66 286 54		78 249 45	84 261 63	79 276 39				

F

LOW

8200

8400

8600

8800

9000

9200

9400

9600

9800

10000

LOW

10000

10200

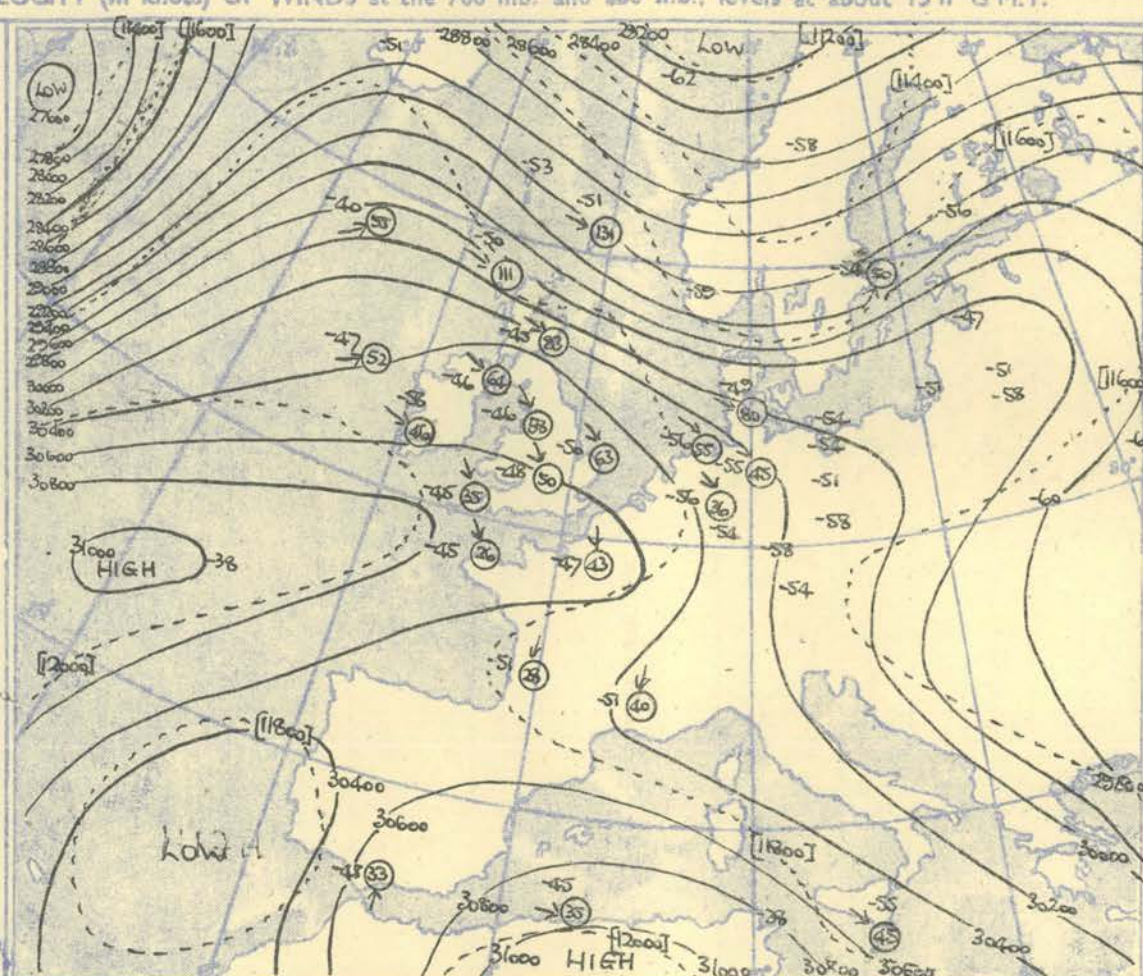
10400

HIGH

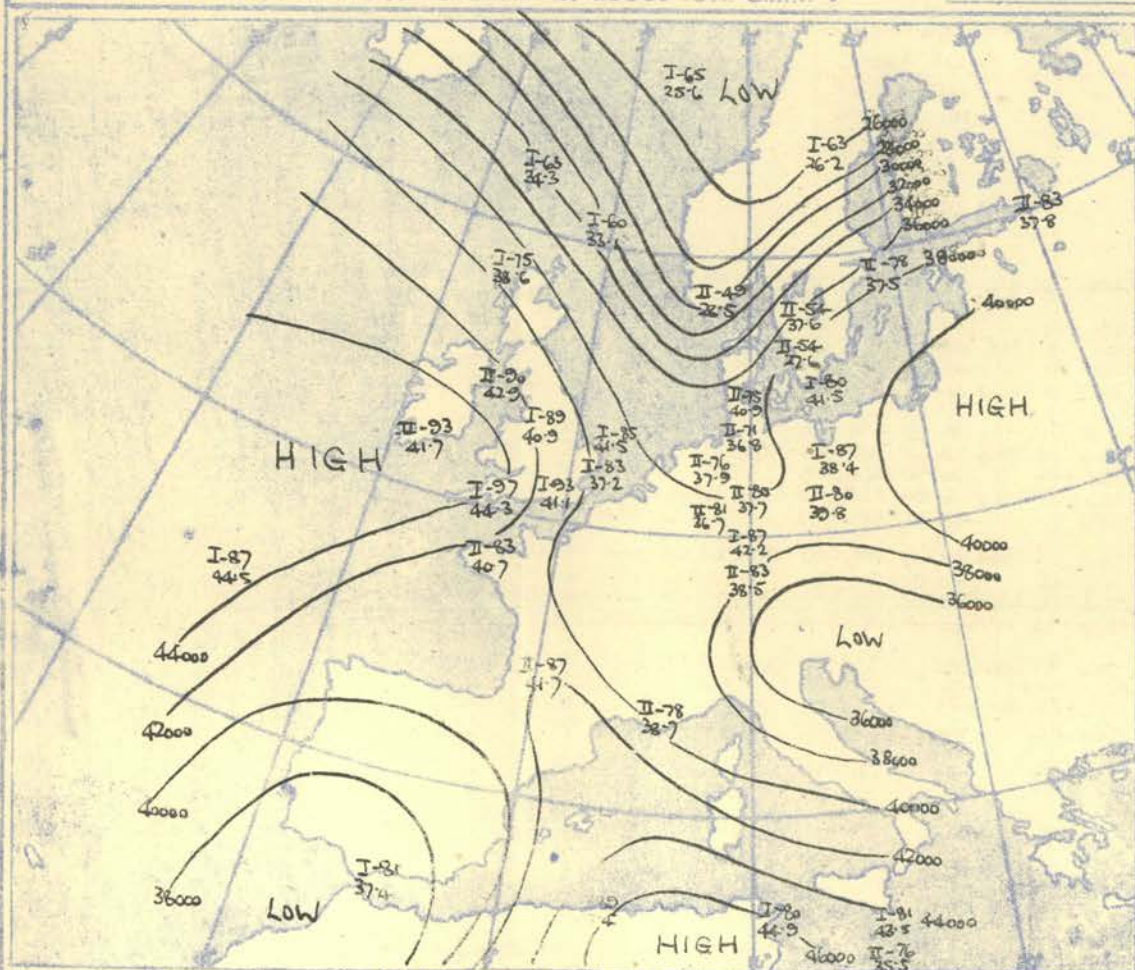
Scale 1:3 x 10⁷

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

100 80 60 40 20 10 0



TROPOPAUSE CHART at about 15h GMT.

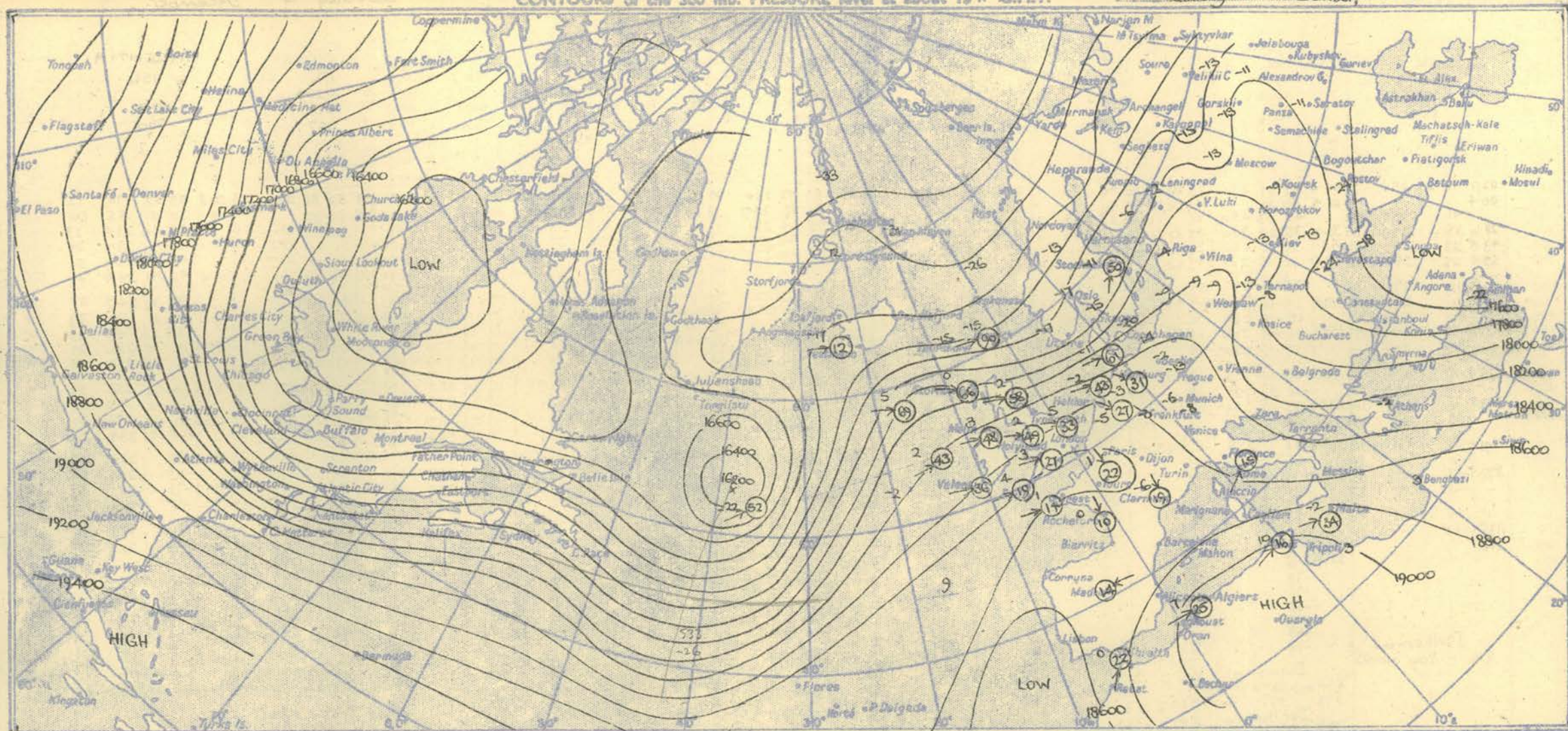


NOTES ON THE AEROLOGICAL SITUATION.

Continued southeastward penetration of very cold air from Canada associated with the deepening of the surface low on the Atlantic. However, the advance of the thermal wedge over the New England States is beginning to cut off the cold supply.

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

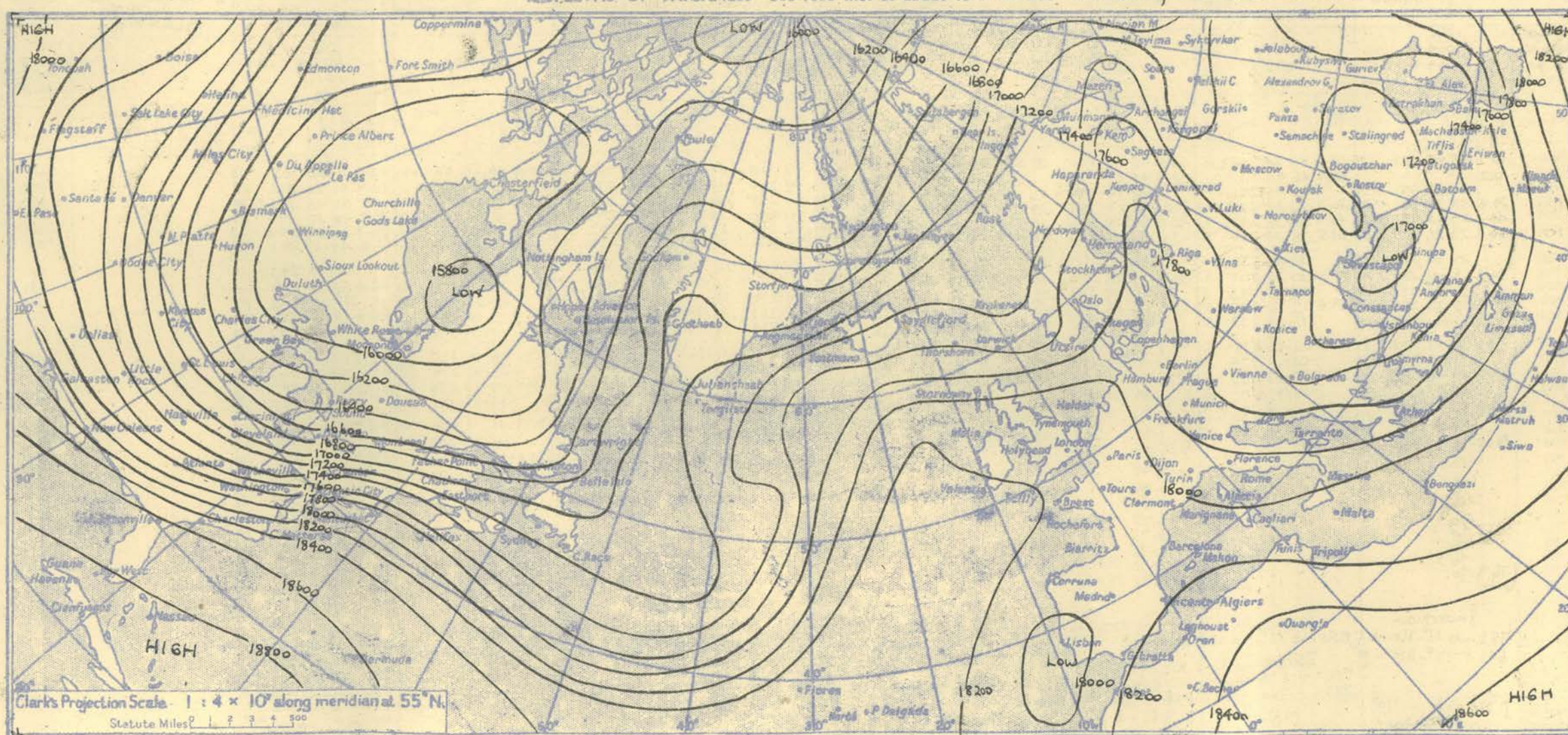
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



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

Saturday 15th December, 1951.

1951.



Clark's Projection Scale 1 : 4 x 10⁶ along meridian at 55° N.

Statute Miles 1 2 3 4 500

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

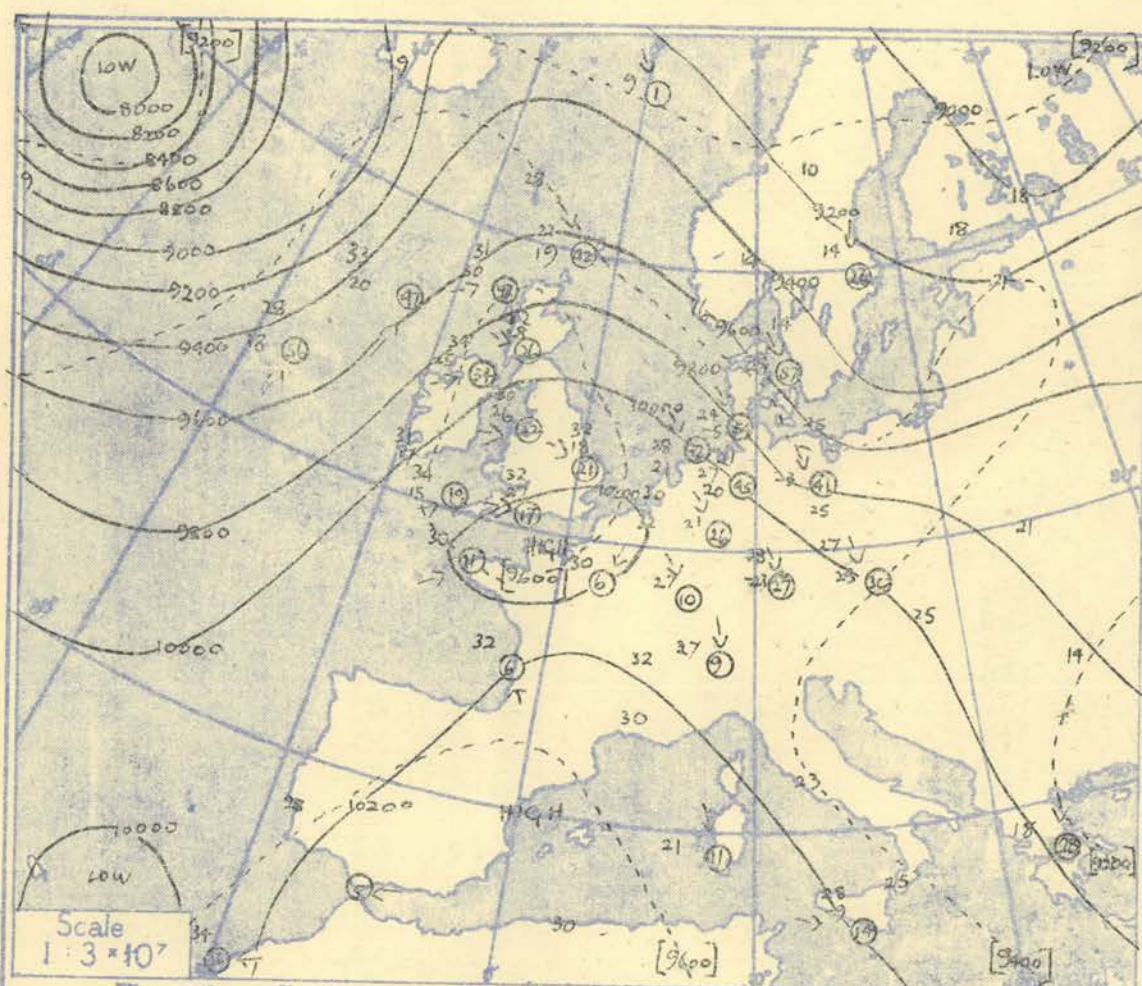
[illegible]

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

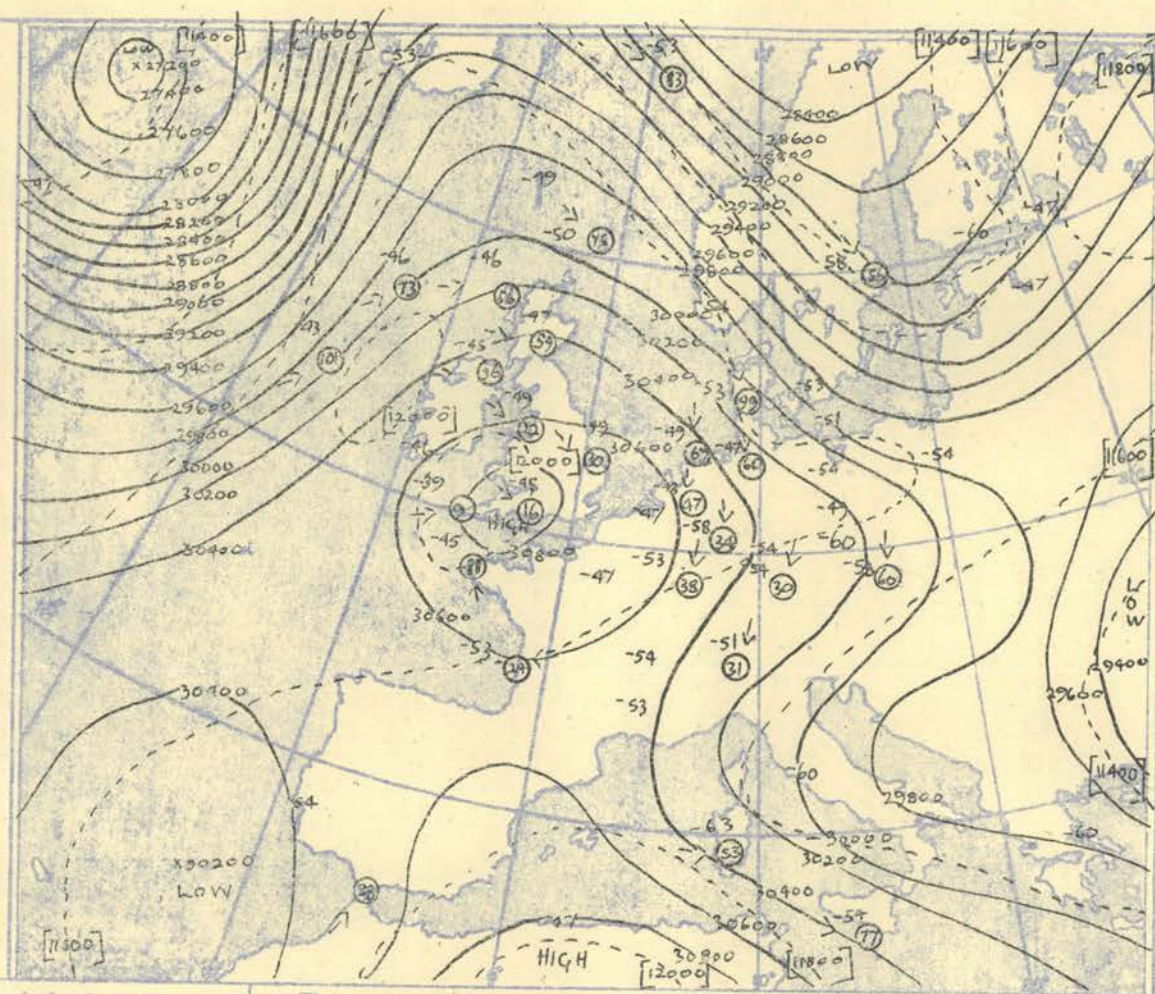
STATION	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	HEMSBY	LARKHILL	CAMBORNE	Valentia	STATION
Time M.S.L.	03hrs 1008.0	03hrs 1005.9	03hrs 1011.1	03hrs 1012.2	03hrs 1015.9	03hrs 1017.5	03hrs 1020.6	03hrs 1021.0	03hrs 1019.4	Time M.S.L.
Surf	997.9	1004.3	1010.3	1008.0	1013.9	1015.8	1004.4	1010.2	1012	Surf
Pressure	872	710	700	686	716	700	700	682	710	Pressure
Height ft/100	Temp. Dir. Vel. Wind	Temp. Dir. Vel. Wind	Temp. Dir. Vel. Wind	Temp. Dir. Vel. Wind	Temp. Dir. Vel. Wind	Temp. Dir. Vel. Wind	Temp. Dir. Vel. Wind	Temp. Dir. Vel. Wind	Temp. Dir. Vel. Wind	Height ft/100
Surf	02.7 45 42 260 09	01.4 51 51 260 06	01.2 46 44 260 03	02.5 53 51	0.6 52 48 230 05	0.4 47 46	04.4 48 250 09	02.5 51 51 225 10	0.3 51 51 225 10	Surf
1000	01.1 41 37 268 15	01.7 48 48 225 23	03.0 47 45 256 27	03.3 50 41	04.3 52 46 226 18	04.7 51 49	05.6 48 43 256 21	05.7 51 51 210 25	3.8 51 49	1000
950	30.3 35 30 265	16.0 47 47 233 28	31.6 46 43 264 31	31.2 50 48	33.1 51 47 264 25	33.4 48 48	34.7 48 43 256 23	34.4 50 47 243 29	32.3 49 35	950
900	45.3 30 25 270	18.5 45 45 237 36	47.1 49 46 270 33	47.8 48 40	48.7 45 43 255 22	48.5 46 43	49.5 50 25 255 19	49.4 46 47 249 27	44.8	900
850	61.2 29 08 282	22.6 41 43 241 38	63.3 44 41 260 31	64.2 44 34	65.0 47 37 259 22	65.3 44 31	66.1 43 37 256 18	66.3 46 27 252 24	62.3 41 18	850
800	28 13 293 31	37 34 241 38	39 35 269 36	42 37	36 37 255 25	38 28	37 34 257 16	40 20 250 26	37 20	800
750	55.8 22 13 292	42 37 31 30 245 38	59.1 32 15 266 26	59.3 34 25	100.4 30 26 266 22	100.3 32 18	101.6 32 27 265 17	101.0 34 15 253 15	99.3 31 17	750
700	70 18 291 63	24 23 243 38	76 19 264 22	27 20	24 18 273 24	26 11	26 20 286 6	20 06 233 13	24 07	700
650	135.1 14 10 296	75 13 41 10 244 42	139.1 15 11 263 19	140.0 21 13	140.3 16 10 277 27	140.3 20 09	141.7 20 13 268 21	142.2 22 5 218 18	139.1 17 3	650
600	07-2 296 75	12-2 241 46	11 03 276 23	11 04	09.0 271 29	11 01	12 03 286 19	12 22 16	12 14	600
550	180.5 11 8 293	67 183 101 8 254 45	184.3 00 5 281 27	185.7 02 3	185.8 01 8 265 33	186 00 8	187 40 2 283 18	188 20 6 5 203 13	184.9 05 2	550
500	233.3 13 20 287	70 206 5 21 26 47	235.3 20 21 274 55	235.3 18 26	235.3 21 21 245 21	240.5 20 33	241.6 18 25 255 13	242.4 18 25 209 16	239.0 18 31	500
450	321 41 287 75	31 31 287 57	34 42 274 49	31 42	36 46 260 28	33 47	32 31 276 10	32 36 207 21	32 44	450
400	298 1 50 293	70 302 0 46 259	56 303 47 273	58 305 43	304.3 49 280 22	305.7 49	307 0 48 284 16	308 39 47 233 08	304.3 46	400
350	354 1 54 292	30 387 8 1 272	67 385 1 79 290	68 390 8 1	353.3 54 300 31	370 7 4	355 7 4 294 14	356 7 4 293 09	350 7 4	350
300	86 82	84 262 38	86 281 43	84	84 298 27	90	84 298 27	84 227 03	81	300
250	82 80	86 263 33	86 281 43	84	84 298 27	90	84 298 27	84 227 03	81	250
200	57 78	81 267 31	86 281 43	84	84 298 27	90	84 298 27	84 227 03	81	200
150	57 78	81 267 31	86 281 43	84	84 298 27	90	84 298 27	84 227 03	81	150
100	57 78	81 267 31	86 281 43	84	84 298 27	90	84 298 27	84 227 03	81	100
50	57 78	81 267 31	86 281 43	84	84 298 27	90	84 298 27	84 227 03	81	50
0	57 78	81 267 31	86 281 43	84	84 298 27	90	84 298 27	84 227 03	81	0
Inversion	99.8 m 45° 980 m 46° 72.9 m 23° 716 m 24°	Inversion 760 m 47° 941 m 49° Isothermal 910-880 m 47° 855-815 m 45°	Inversion 1010 m 45° 970 m 49° Isothermal 900 m 44° 766 m 45°	Inversion 970 m 45° 850 m 49° Isothermal 800 m 44° 766 m 45°	Inversion 970 m 45° 850 m 49° Isothermal 800 m 44° 766 m 45°	Inversion 970 m 45° 850 m 49° Isothermal 800 m 44° 766 m 45°	Inversion 970 m 45° 850 m 49° Isothermal 800 m 44° 766 m 45°	Inversion 970 m 45° 850 m 49° Isothermal 800 m 44° 766 m 45°	Inversion 970 m 45° 850 m 49° Isothermal 800 m 44° 766 m 45°	Inversion 970 m 45° 850 m 49° Isothermal 800 m 44° 766 m 45°
Tropopause	1705 m 84° 3700'	1785 m 87° 40500'	174 m 87° 41600'	1765 m 87° 42700'	1765 m 87° 42700'	1765 m 87° 42700'	NR.	1760 m 88° 44000'	1785 m 89° 40700'	Tropopause
Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	HEMSBY	LARKHILL	CAMBORNE	Valentia	Station
Time M.S.L.	03hrs 1005.4	03hrs 1007.3	03hrs 1011.6	03hrs 1013.2	03hrs 1017.1	03hrs 1017.9	03hrs 1020.6	03hrs 1021.0	03hrs 1019.4	Time M.S.L.
Surf	997.3	1005.6	1010.8	1008.0	1015.1	1015.4	1004.4	1009.4	1012	Surf
Pressure	719	724	692	692	703	700	700	722	710	Pressure
Height ft/100	Temp. Dir. Vel. Wind	Temp. Dir. Vel. Wind	Temp. Dir. Vel. Wind	Temp. Dir. Vel. Wind	Temp. Dir. Vel. Wind	Temp. Dir. Vel. Wind	Temp. Dir. Vel. Wind	Temp. Dir. Vel. Wind	Temp. Dir. Vel. Wind	Height ft/100
Surf	02.7 44 42 190	01.4 52 50 240 13	01.2 51 50 250 08	01.5 51 48 215 10	0.6 51 48 215 10	0.4 48 47 250	12.0 4 49 47 250	02.5 51 51 200 12	0.3 51 51 200 12	Surf
1000	01.5 41 39 201 16	01.3 52 51 223 30	02.1 51 50 235 20	02.3 51 48 215 10	04.7 51 48 215 10	04.8 45 47 243 14	05.3 48 47 250 19	05.5 52 46 211 23	05.5 52 46 211 23	1000
950	30.7 38 37 208	18.0 47 46 216 31	31.8 47 44 238 23	31.1 41 40 233 29	32.2 42 38 261 13	33.7 52 51 253 19	16.3 41 43 271 10	34.3 49 41 242 18	34.3 49 41 242 18	950
900	45.8 36 36 223	16.4 53 41 223 31	47.2 42 35 238 26	47.3 36 29 234 33	48.6 43 30 262 23	49.3 48 47 251 10	20.4 41 43 286 10	49.9 45 35 242 18	49.9 45 35 242 18	900
850	62.0 35 35 245	18.2 1 38 33 222 31	63.3 39 36 240 29	63.7 41 23 230 34	65.1 46 13 251 24	65.4 43 22 250 23	66.1 42 26 261 19	66.6 41 21 262 19	66.6 41 21 262 19	850
800	34 34 269 29	35 13 26 42	40 21 246 33	40 12 227 33	38 13 229 26	37 16 287 28	37 16 287 28	38 24 267 18	38 24 267 18	800
750	57.2 29 29 273	38 27 31 11 219 42	59.1 33 24 243 31	59.3 33 08 220 36	100.6 31 24 218 25	101.1 32 23 285 23	101.3 32 23 285 23	101.4 30 13 201 24	101.4 30 13 201 24	750
700	21 12 273 37	24 08 278 42	26 13 247 24	26 02 212 38	27 15 232 24	26 21 293 20	24 06 226 11	26 3 201 25	26 3 201 25	700
650	136.3 16 14 275	40 13 11 26 219 41	139.1 18 13 257 23	139.3 19 9 217 39	140.3 20 04 236 26	140.3 21 16 309 16	141.3 18 01 226 14	141.3 18 01 226 14	141.3 18 01 226 14	650
600	10-2 275 41	13-8 227 41	10 03 266 23	10 11 219 39	13 7 241 26	11 06 201 18	11 4 219 14	11 24 191 20	11 24 191 20	600
550	17.5 01 13 279	41 18 02 12 225 41	184.3 01 4 263 25	185.0 02 17 215 43	186 10 10 234 23	188 07 3 253 22	187 10 1 3 203 19	187 10 1 3 203 19	187 10 1 3 203 19	550
500	8-13 279 52	9-23 228 44	9-13 259 29	9-21 212 48	8-18 220 16	8-14 254 22	10-13 207 11	8-23 182 24	8-23 182 24	500
450	236.3 20 27 286	54 236 5 23 219 51	238.3 21 16 257 29	238.8 21 19 255 37	240 20 17 217 15	240.6 20 27 256 18	240.6 20 27 256 18	240.6 20 27 256 18	240.6 20 27 256 18	450
400	321 38 285	54 347 234 43	34 35 262 26	34 35 262 26	34 35 262 26	34 35 262 26	34 35 262 26	34 35 262 26	34 35 262 26	400
350	301.7 48 284	57 301 7 49 235	48 303 48 262 39	304 1 48 216 39	305 3 49 247 17	305 3 49 247 17	304 2 49 243 14	305 3 49 243 14	305 3 49 243 14	350
300	68 287 60	66 281 54	66 281 54	66 281 54	66 281 54	66 281 54	66 281 54	66 281 54	66 281 54	300
250	366 1 54 286	65 388 6 1 231	368 6 1 261 36	368 6 1 261 36	368 6 1 261 36	368 6 1 261 36	368 6 1 261 36	368 6 1 261 36	368 6 1 261 36	250
200	83 276 48	82 239 37	82 239 37	82 239 37	82 239 37	82 239 37	82 239 37	82 239 37	82 239 37	200
150	83 276 48	82 239 37	82 239 37	82 239 37	82 239 37	82 239 37	82 239 37	82 239 37	82 239 37	150
100	83 276 48	82 239 37	82 239 37	82 239 37	82 239 37	82 239 37	82 239 37	82 239 37	82 239 37	100
50	83 276 48	82 239 37	82 239 37	82 239 37	82 239 37	82 239 37	82 239 37	82 239 37	82 239 37	50
0	83 276 48	82 239 37	82 239 37	82 239 37	82 239 37	82 239 37	82 239 37	82 239 37	82 239 37	0
Inversion	763-750 m 41° 917 m 41° 910 m 41°	Inversion 752 m 34° 766 m 36° Isothermal 840-815 m 41°	Inversion 752 m 34° 766 m 36° Isothermal 840-815 m 41°	Inversion 752 m 34° 766 m 36° Isothermal 840-815 m 41°	Inversion 752 m 34° 766 m 36° Isothermal 840-815 m 41°	Inversion 752 m 34° 766 m 36° Isothermal 840-815 m 41°	Inversion 752 m 34° 766 m 36° Isothermal 840-815 m 41°	Inversion 752 m 34° 766 m 36° Isothermal 840-815 m 41°	Inversion 752 m 34° 766 m 36° Isothermal 840-815 m 41°	Inversion 752 m 34° 766 m 36° Isothermal 840-815 m 41°
Tropopause	1720 m 92° 40800'	1785 m 89° 40200'	1766 m 93° 42500'	1781 m 85° 39800'	1785 m 87° 42700'	1785 m 87° 42700'	1785 m 87° 42700'	1785 m 87° 42700'	1785 m 87° 42700'	Tropopause

Sunday 16th December 1951.

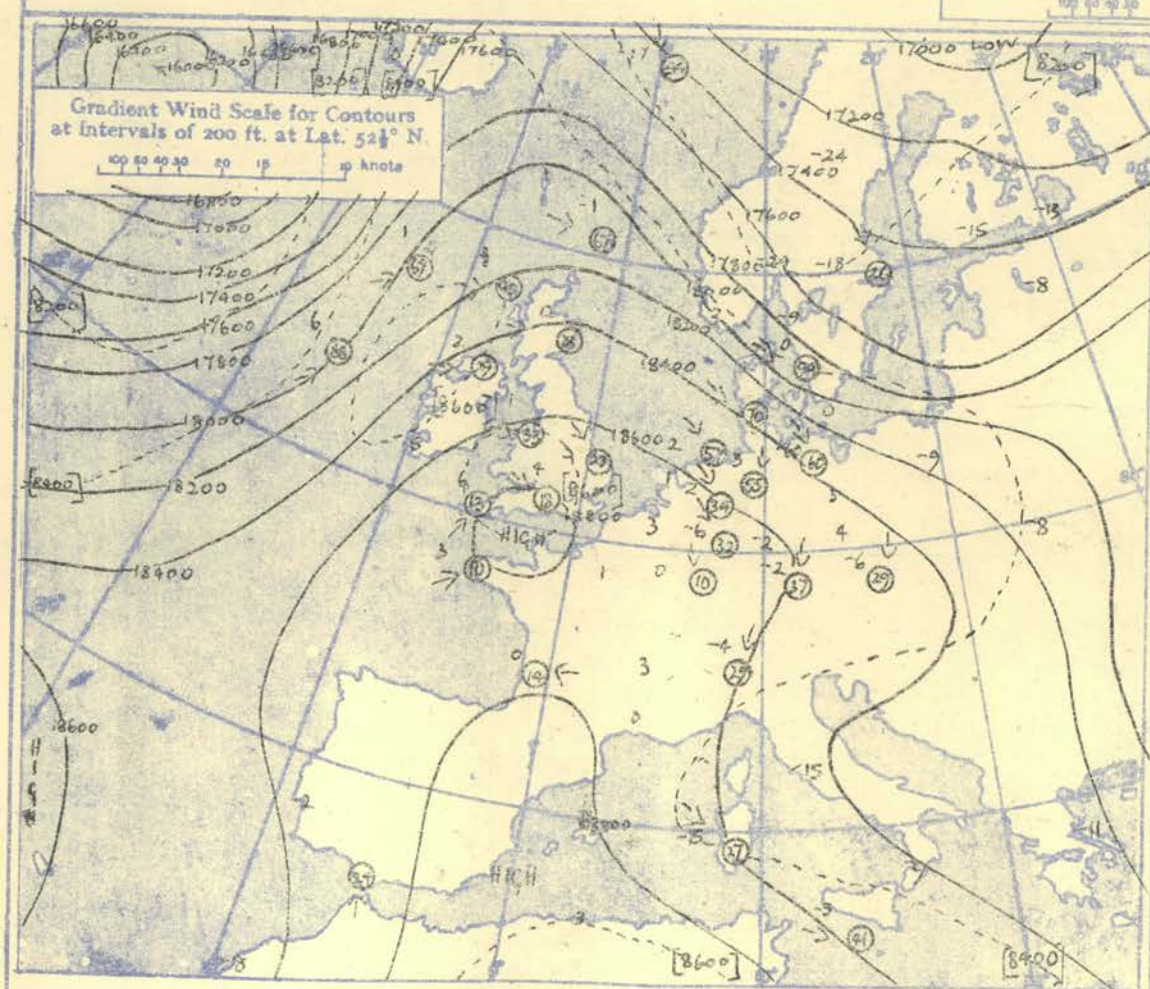
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. 500 mb. and 300 mb. levels at about 03h G.M.T.



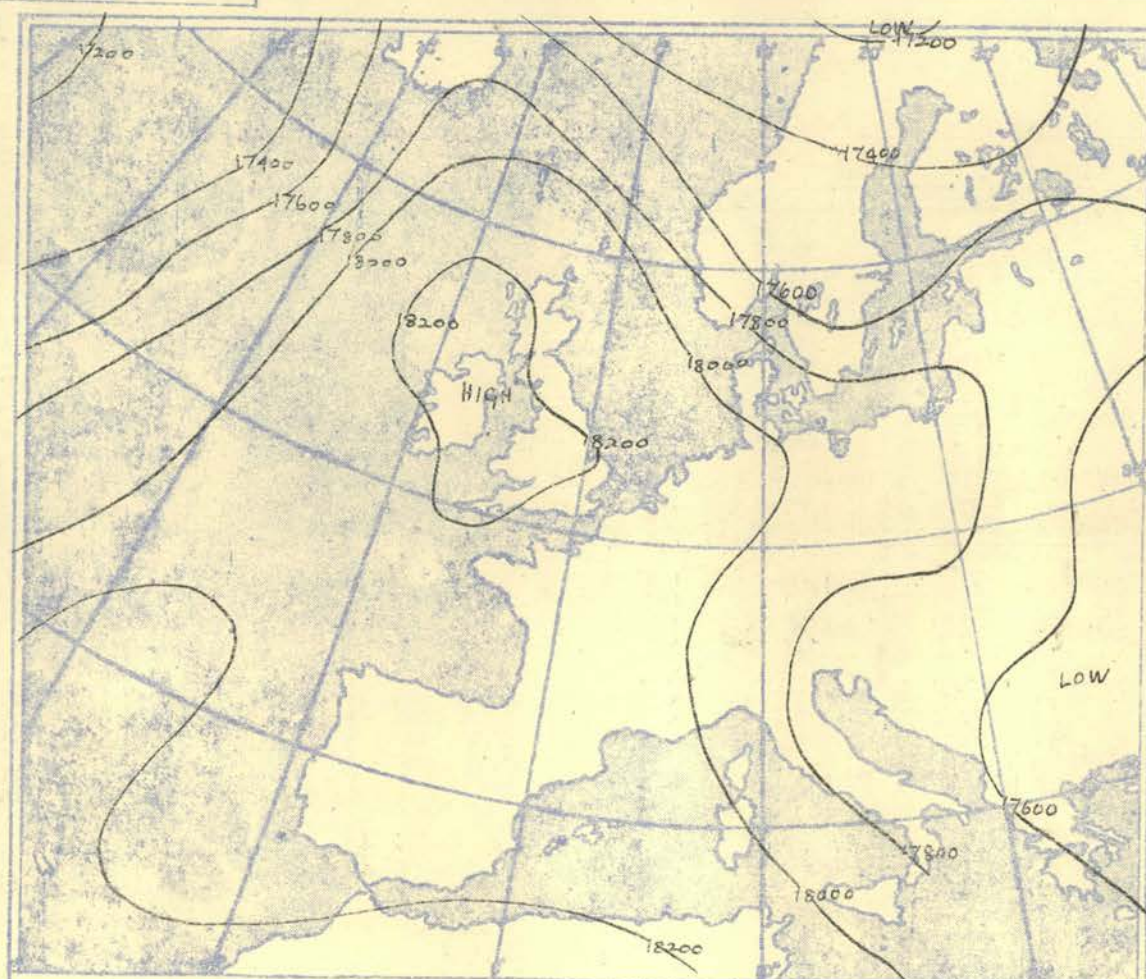
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.



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]

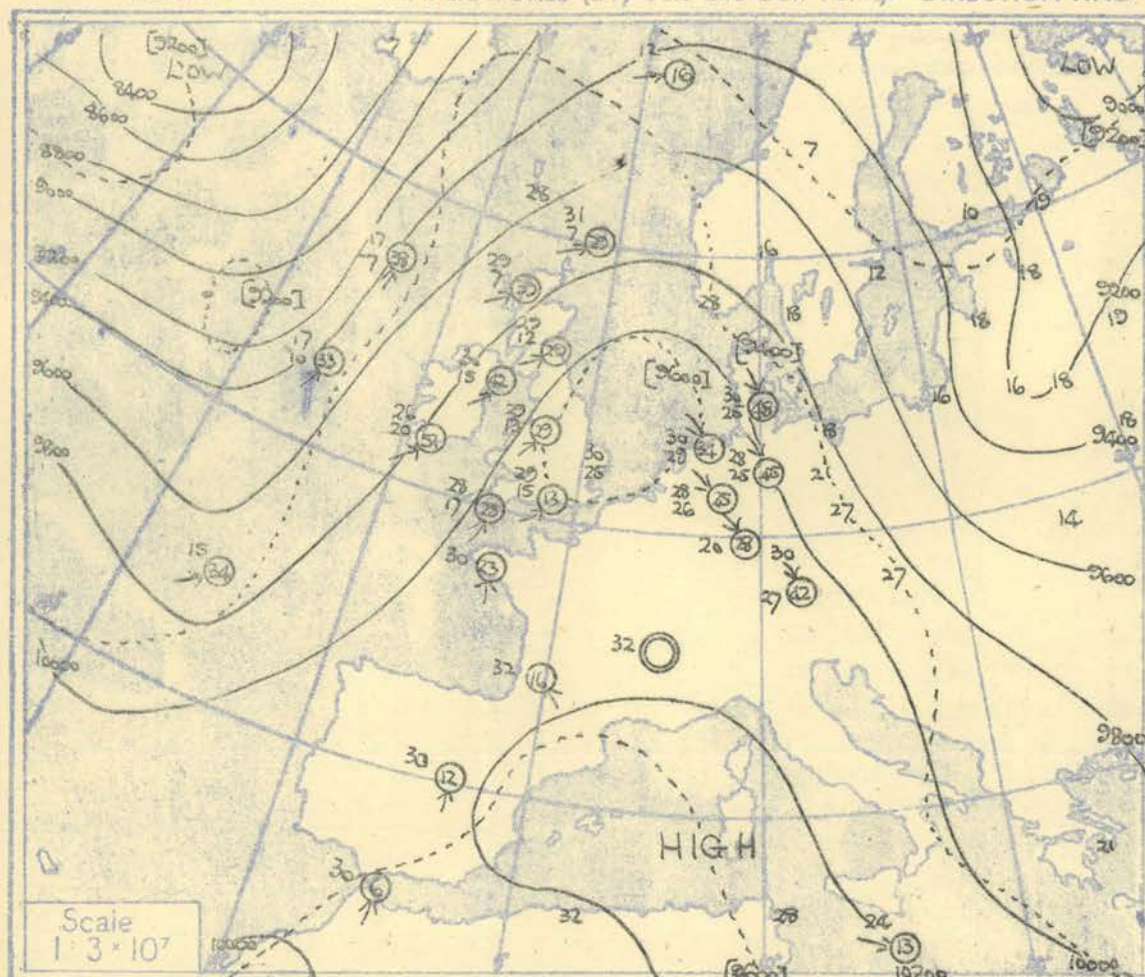
NEPHOSCOPE OBSERVATIONS

[illegible]

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

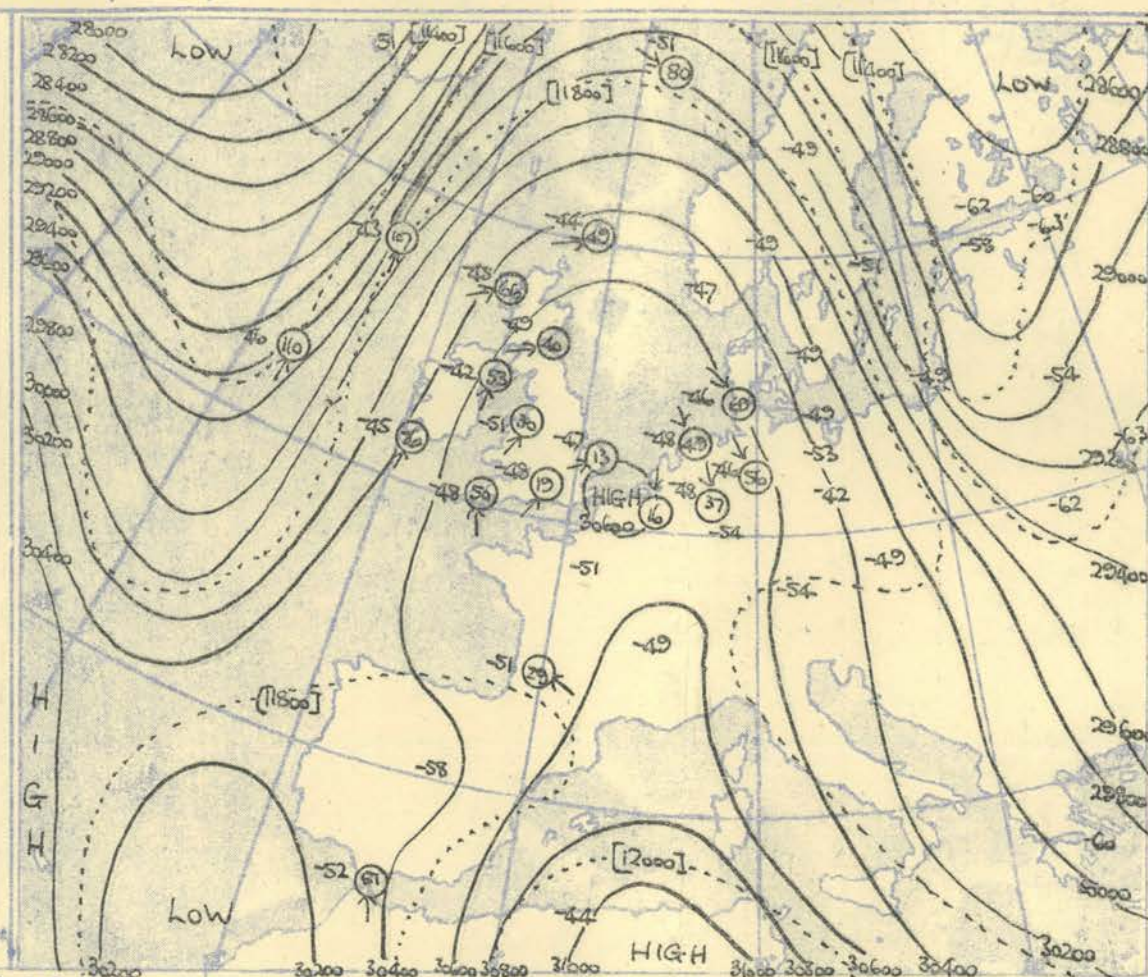
[illegible]

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.

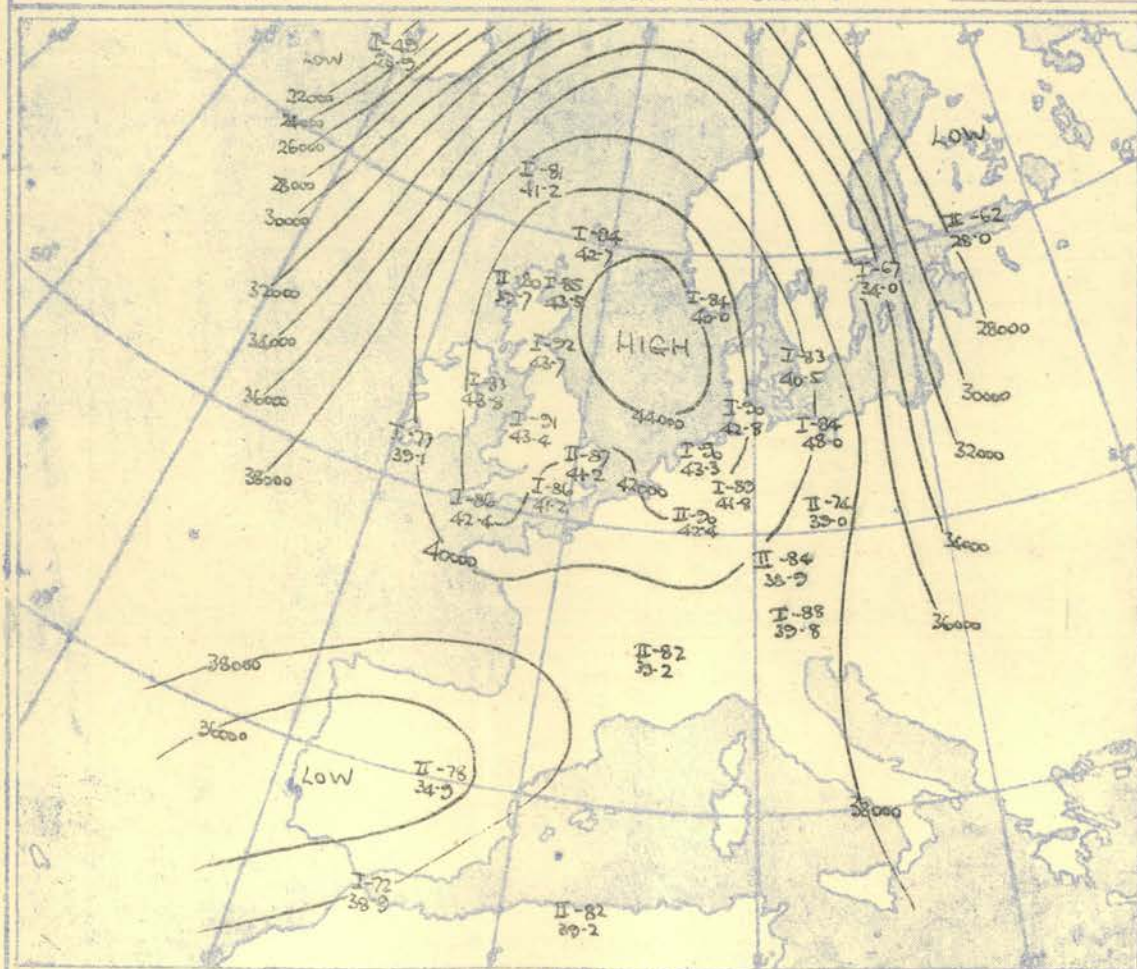


Gradient Wind Scale for Contours at intervals of 200 ft. at Lat. $52\frac{1}{2}^\circ$ N

100 80 60 40 20 10 knots



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



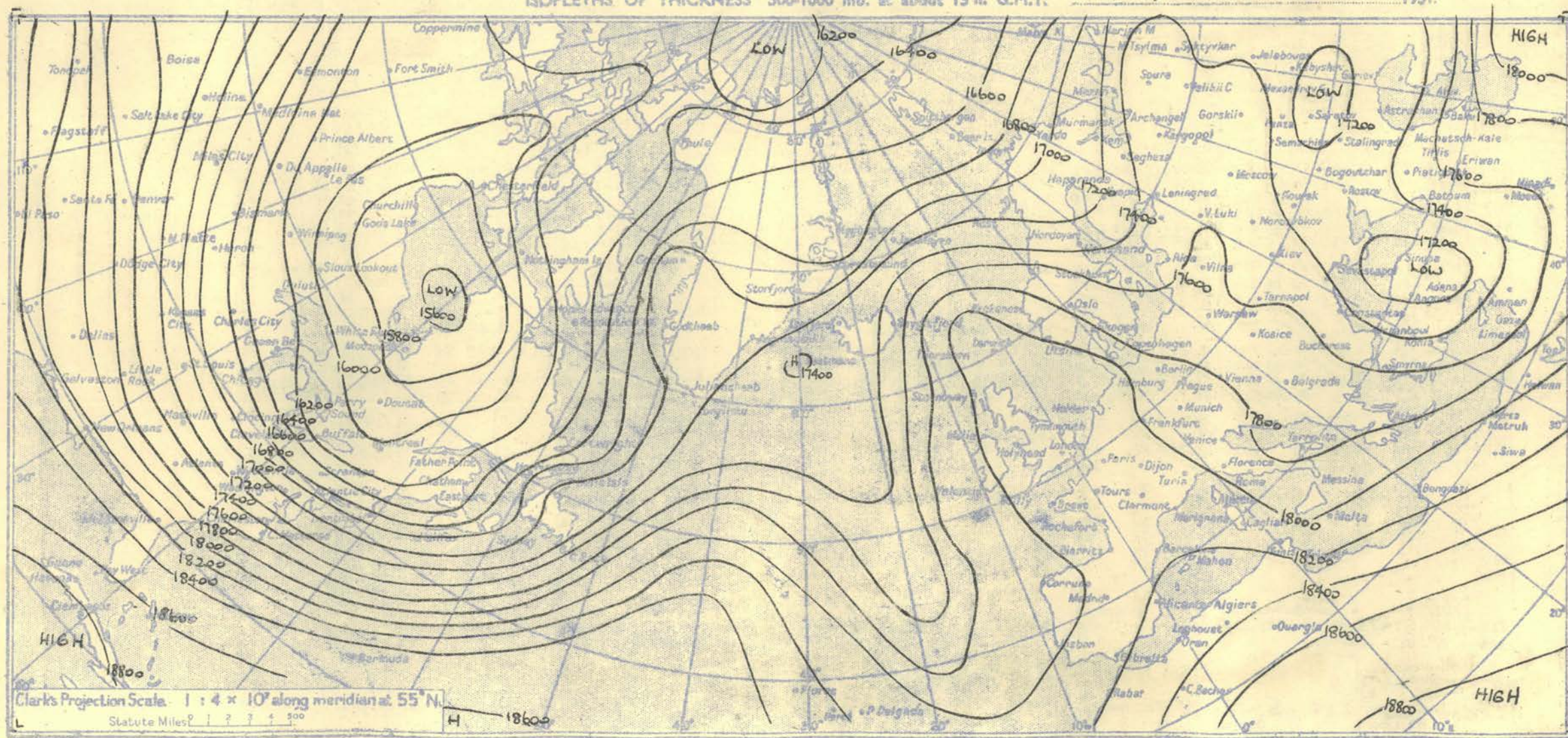
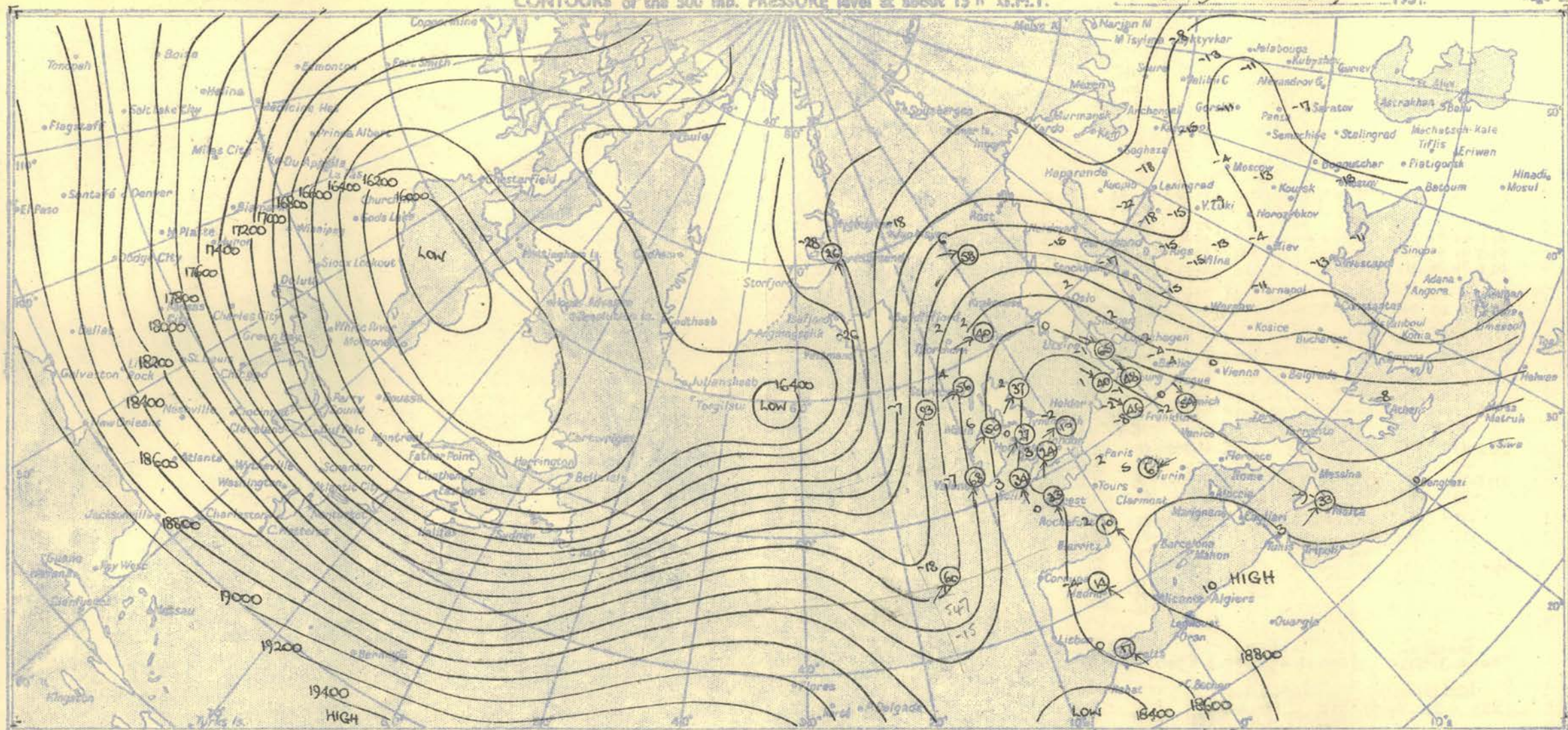
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Rapid warming of the cold air as it moved from East Canada across the North Atlantic resulted in the upper cold trough becoming weak. Another disturbance moved rapidly North-east along the Eastern Seaboard of America where there was a very strong thermal gradient. Persistent cold pool off west Portugal.

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

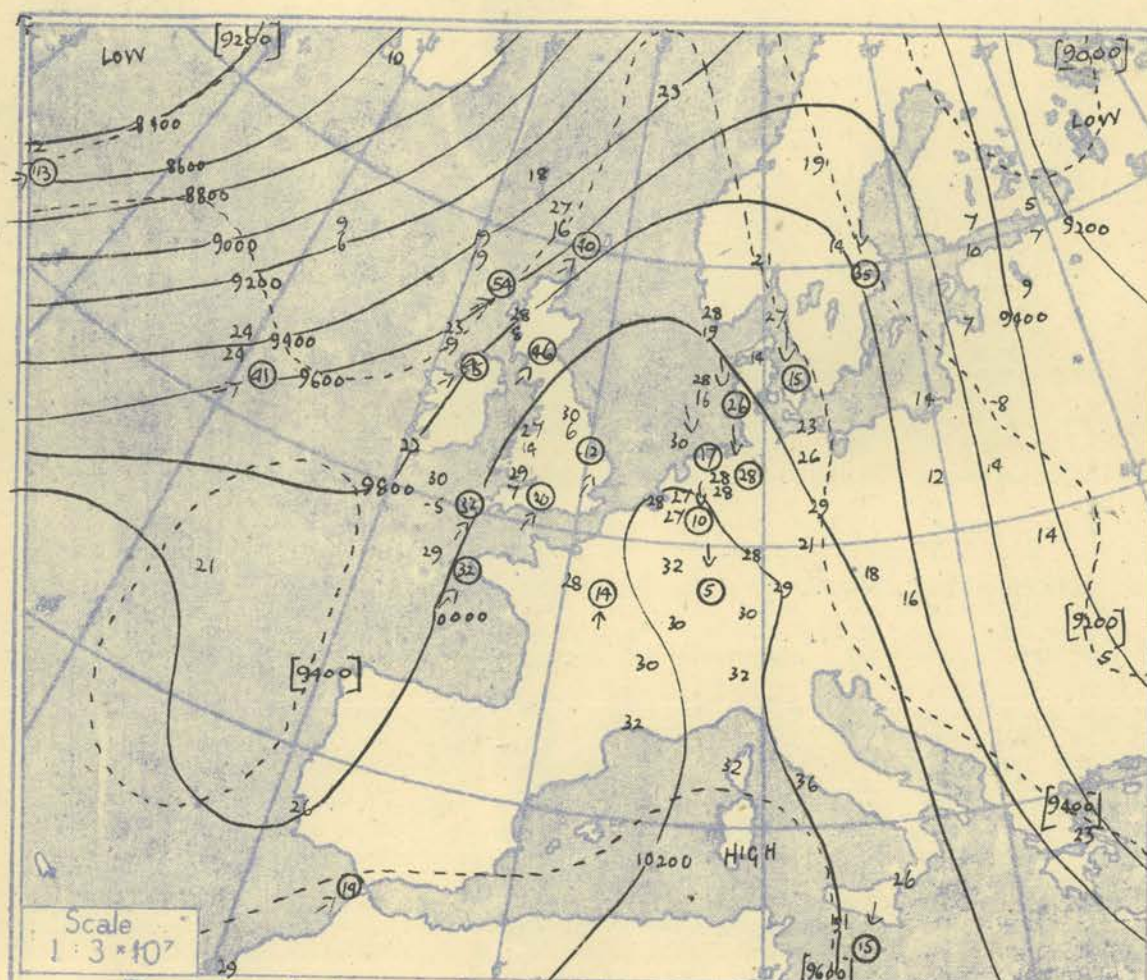
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director



Pressure	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA.				STATION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	Time	M.S.L.	Surf	Pressure	Time	M.S.L.	Surf	Pressure	Time	M.S.L.	Surf	Pressure	Time	M.S.L.	Surf	Pressure	Time	M.S.L.	Surf	Pressure	Time	M.S.L.	Surf	Pressure	Time	M.S.L.	Surf	Pressure	Time	M.S.L.	Surf	Pressure																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
1000	1009.5	1009.4	725		1008.8	1007.2	780		1013.3	1012.5	718		1013.8	1004.7	717		1017.9	1015.9	728		1018.7	1017.1	717		1020.9	1004.8	732		1019.2	1008.6	733		1010																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
950	1009.5	1009.4	725		1008.8	1007.2	780		1013.3	1012.5	718		1013.8	1004.7	717		1017.9	1015.9	728		1018.7	1017.1	717		1020.9	1004.8	732		1019.2	1008.6	733		1010																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
900	1009.5	1009.4	725		1008.8	1007.2	780		1013.3	1012.5	718		1013.8	1004.7	717		1017.9	1015.9	728		1018.7	1017.1	717		1020.9	1004.8	732		1019.2	1008.6	733		1010																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
850	1009.5	1009.4	725		1008.8	1007.2	780		1013.3	1012.5	718		1013.8	1004.7	717		1017.9	1015.9	728		1018.7	1017.1	717		1020.9	1004.8	732		1019.2	1008.6	733		1010																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
800	1009.5	1009.4	725		1008.8	1007.2	780		1013.3	1012.5	718		1013.8	1004.7	717		1017.9	1015.9	728		1018.7	1017.1	717		1020.9	1004.8	732		1019.2	1008.6	733		1010																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
750	1009.5	1009.4	725		1008.8	1007.2	780		1013.3	1012.5	718		1013.8	1004.7	717		1017.9	1015.9	728		1018.7	1017.1	717		1020.9	1004.8	732		1019.2	1008.6	733		1010																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
700	1009.5	1009.4	725		1008.8	1007.2	780		1013.3	1012.5	718		1013.8	1004.7	717		1017.9	1015.9	728		1018.7	1017.1	717		1020.9	1004.8	732		1019.2	1008.6	733		1010																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
650	1009.5	1009.4	725		1008.8	1007.2	780		1013.3	1012.5	718		1013.8	1004.7	717		1017.9	1015.9	728		1018.7	1017.1	717		1020.9	1004.8	732		1019.2	1008.6	733		1010																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
600	1009.5	1009.4	725		1008.8	1007.2	780		1013.3	1012.5	718		1013.8	1004.7	717		1017.9	1015.9	728		1018.7	1017.1	717		1020.9	1004.8	732		1019.2	1008.6	733		1010																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
550	1009.5	1009.4	725		1008.8	1007.2	780		1013.3	1012.5	718		1013.8	1004.7	717		1017.9	1015.9	728		1018.7	1017.1	717		1020.9	1004.8	732		1019.2	1008.6	733		1010																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
500	1009.5	1009.4	725		1008.8	1007.2	780		1013.3	1012.5	718		1013.8	1004.7	717		1017.9	1015.9	728		1018.7	1017.1	717		1020.9	1004.8	732		1019.2	1008.6	733		1010																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
450	1009.5	1009.4	725		1008.8	1007.2	780		1013.3	1012.5	718		1013.8	1004.7	717		1017.9	1015.9	728		1018.7	1017.1	717		1020.9	1004.8	732		1019.2	1008.6	733		1010																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
400	1009.5	1009.4	725		1008.8	1007.2	780		1013.3	1012.5	718		1013.8	1004.7	717		1017.9	1015.9	728		1018.7	1017.1	717		1020.9	1004.8	732		1019.2	1008.6	733		1010																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
350	1009.5	1009.4	725		1008.8	1007.2	780		1013.3	1012.5	718		1013.8	1004.7	717		1017.9	1015.9	728		1018.7	1017.1	717		1020.9	1004.8	732		1019.2	1008.6	733		1010																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
300	1009.5	1009.4	725		1008.8	1007.2	780		1013.3	1012.5	718		1013.8	1004.7	717		1017.9	1015.9	728		1018.7	1017.1	717		1020.9	1004.8	732		1019.2	1008.6	733		1010																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
250	1009.5	1009.4	725		1008.8	1007.2	780		1013.3	1012.5	718		1013.8	1004.7	717		1017.9	1015.9	728		1018.7	1017.1	717		1020.9	1004.8	732		1019.2	1008.6	733		1010																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
200	1009.5	1009.4	725		1008.8	1007.2	780		1013.3	1012.5	718		1013.8	1004.7	717		1017.9	1015.9	728		1018.7	1017.1	717		1020.9	1004.8	732		1019.2	1008.6	733		1010																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
150	1009.5	1009.4	725		1008.8	1007.2	780		1013.3	1012.5	718		1013.8	1004.7	717		1017.9	1015.9	728		1018.7	1017.1	717		1020.9	1004.8	732		1019.2	1008.6	733		1010																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
100	1009.5	1009.4	725		1008.8	1007.2	780		1013.3	1012.5	718		1013.8	1004.7	717		1017.9	1015.9	728		1018.7	1017.1	717		1020.9	1004.8	732		1019.2	1008.6	733		1010																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
90	1009.5	1009.4	725		1008.8	1007.2	780		1013.3	1012.5	718		1013.8	1004.7	717		1017.9	1015.9	728		1018.7	1017.1	717		1020.9	1004.8	732		1019.2	1008.6	733		1010																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
80	1009.5	1009.4	725		1008.8	1007.2	780		1013.3	1012.5	718		1013.8	1004.7	717		1017.9	1015.9	728		1018.7	1017.1	717		1020.9	1004.8	732		1019.2	1008.6	733		1010																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
70	1009.5	1009.4	725		1008.8	1007.2	780		1013.3	1012.5	718		1013.8	1004.7	717		1017.9	1015.9	728		1018.7	1017.1	717		1020.9	1004.8	732		1019.2	1008.6	733		1010																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
60	1009.5	1009.4	725		1008.8	1007.2	780		1013.3	1012.5	718		1013.8	1004.7	717		1017.9	1015.9	728		1018.7	1017.1	717		1020.9	1004.8	732		1019.2	1008.6	733		1010																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Inversion 750 mb 31°-725mb32° Isothermal 999 - 962 mb 47°																																Inversion 570 mb 09°-544mb14° Isothermal 920 - 896 mb 44°																																Inversion 900 mb 38°-833mb48° Isothermal 999 - 962 mb 47°																																Inversion 894 mb 40°-855mb 44° Isothermal 999 - 962 mb 47°																																Inversion 1016 mb 55°-1010mb 56° Isothermal 940 - 47°-930°-48°																																Inversion 943 mb 44°-888mb 33° Isothermal 678 - 663 mb 27°																																Inversion 933 mb 43°-908mb 51° Isothermal 707 - 664 mb 28°																																Inversion 917 mb 47°-950mb 51° Isothermal 707 - 664 mb 28°																																Inversion 884 mb 38°-562mb 40° Isothermal 500 - -07°-486°-05°																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Tropopause I 166 mb - 84°																																Tropopause I 192 mb - 80°-33,700'																																Tropopause I 156 mb - 92°																																Tropopause I 158 mb - 83°																																Tropopause I 160 mb - 91°																																Tropopause I 180 mb - 87°																																Tropopause I 180 mb - 86°																																Tropopause I 170 mb - 86°																																Tropopause																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
LERWICK																																STORNOWAY																																LEUCHARS																																ALDERGROVE																																LIVERPOOL																																HEMSBY																																LARKHILL																																CAMBORNE																																VALENTIA.																																STATION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																Time M.S.L. Surf Pressure																																																															

Monday 17th December. 1951.

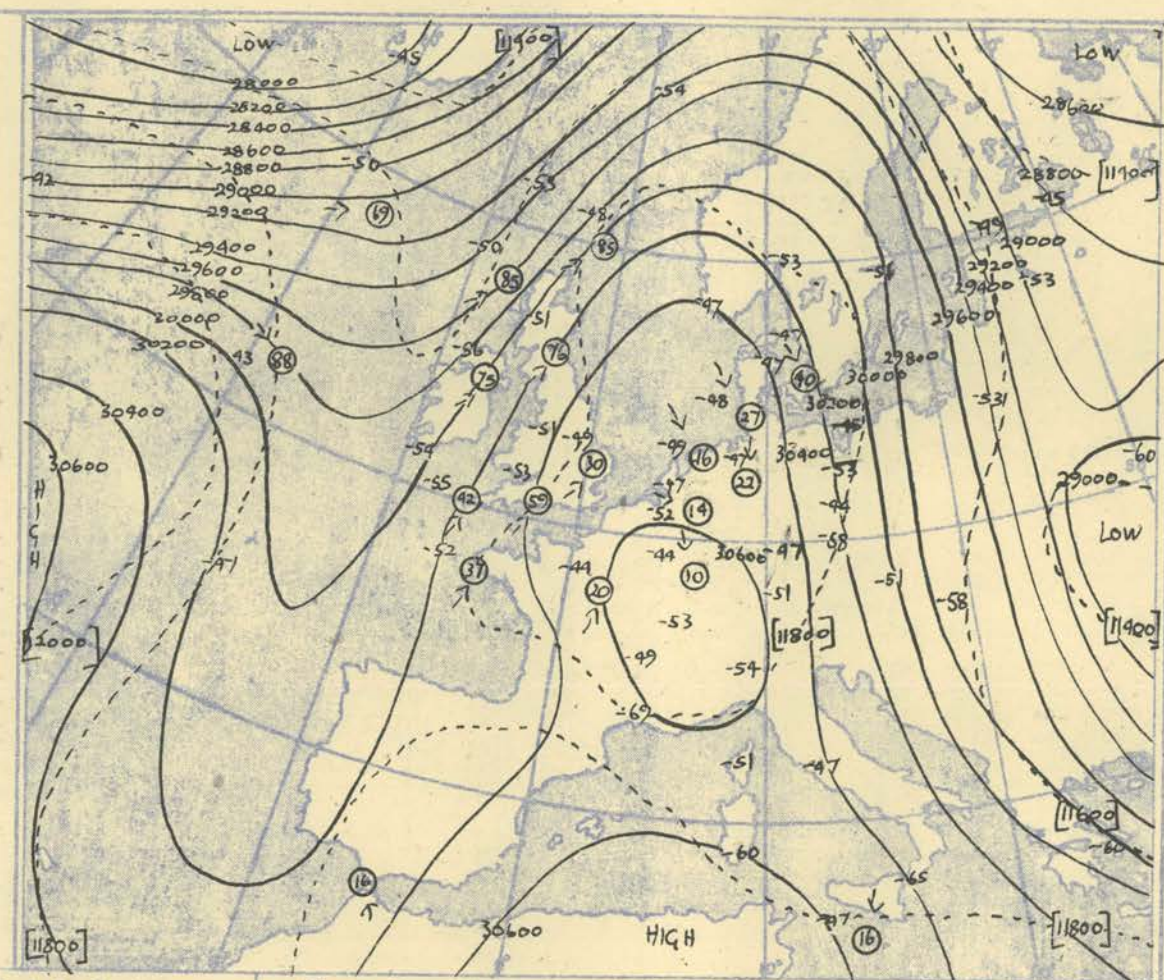
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb, 500 mb, and 300 mb, levels at about 03h G.M.T.



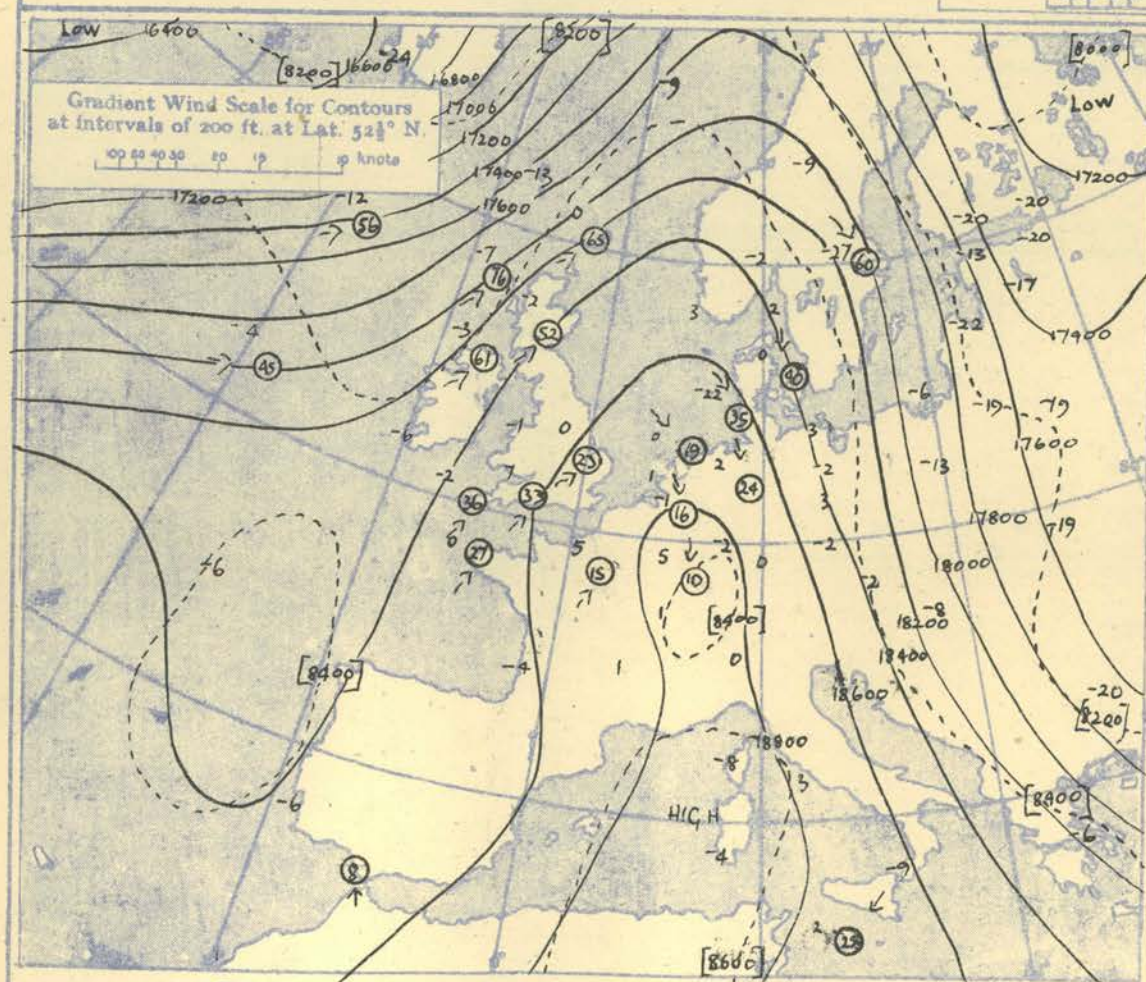
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

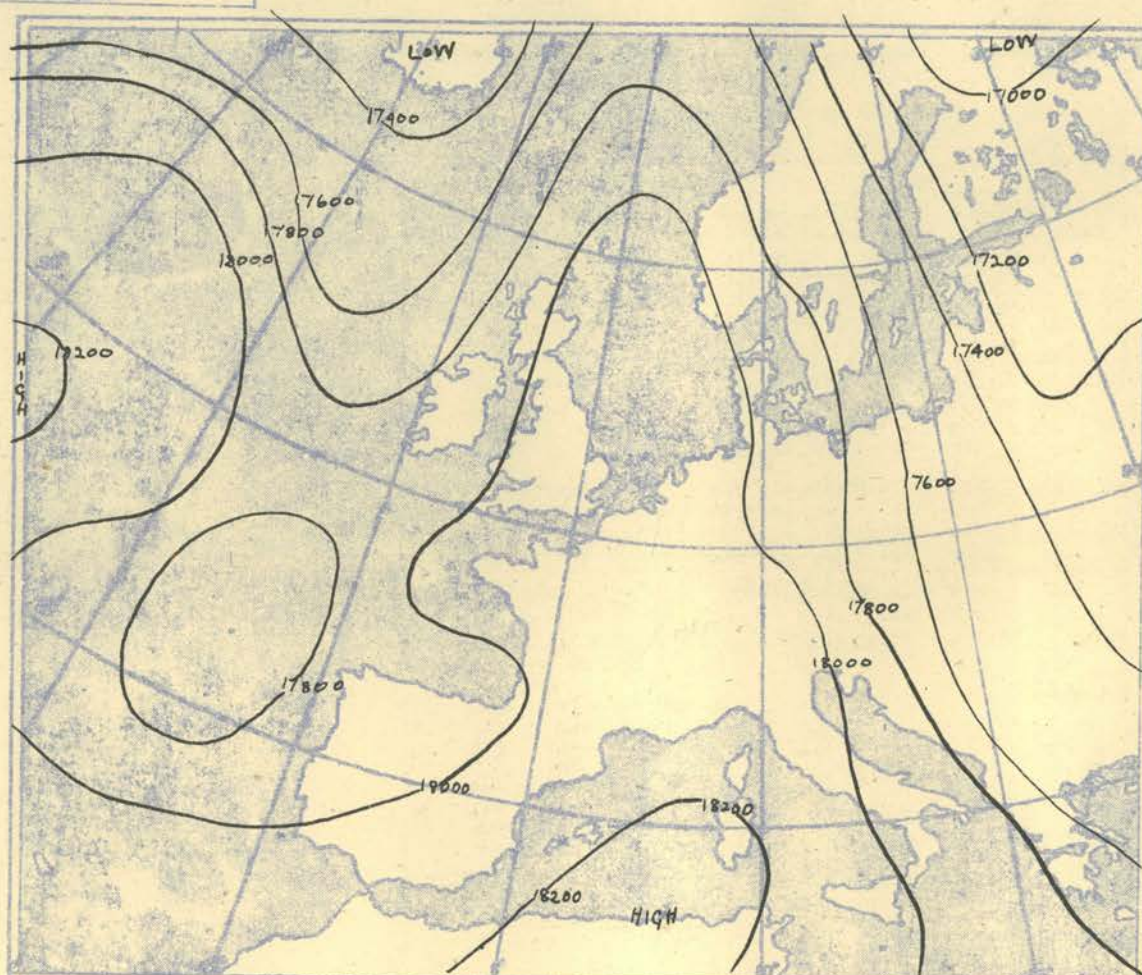
0 10 20 30 40 50 60 70 80 90 100 knots



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

52°12'N 02°2'W 50°5'N 6°9'W 55°6'N 21°4'W													
Time M.S.L.	1424L	1415L	1615L									Time M.S.L.	
Surf	1020.6	1005	979	mb	mb	mb	mb	mb	mb	mb	mb	Surf	
Pressure	1020.5	998	971	mb	mb	mb	mb	mb	mb	mb	mb	Pressure	
Height ft./100	730	745	880									Height ft./100	
Temp.												Temp.	
Dew												Dew	
Surf	00.4	55.55	42.40									Surf	
1000	05.5	01.5	-5.8									1000	
950		50.80	36.36									950	
900	34.0 42.26	48.48	32.32									900	
850	49.3 41.20	44.41	27									850	
800	65.5 39.17	39.37	19									800	
750		33.33	14									750	
700	100.7 28.20	29.25	86.7 08									700	
650		23.23	00									650	
600	140.4 14.05	21	-07									600	
550		14	-09									550	
500	185.8-05	183.1 03	168.3-12									500	
450												450	
400	238.7-26											400	
350												350	
300	302.9-56											300	
250												250	
200												200	
170												170	
Cloud. Cloud. Cloud.													
8/8 Sc 8/8 St 4/8 Ci Nb													
925-905 mb 980-890 mb 940-880 mb													
Inversion 7/8 As 5/8 Cu													
915 mb 36-640-520 mb 940-750 mb													
900-42 7/8 Ce 4/8 Sc													
base 400 mb 900-800 mb													
Sunf wind. Sunf wind													
S 28-33 kts S.W 41-47 kts													
Mod. rimed and frost in cloud.													

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

Place	Shoebury	Lymington	Valentia	Squires Gate	Stornoway	Larkhill	Place
Time	10L	15L	15L	1530L	21L	03L	Time
Type					Pillar	Pillar	Type
Feet	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Feet
Surf.	160 05	180 05	200 17	140 10	180 45		Surf.
1,000	220 15	220 20	210 23	190 16	190 57		1,000
2,000	220 17	200 18	200 33	210 19	194 62		2,000
3,000	230 13	220 14	210 35	210 23	201 72		3,000
4,000	240 15	230 12	210 38	220 24	210 68		4,000
5,000	230 15		210 40	230 18	214 63		5,000
6,000	230 17		220 42	230 19	219 60		6,000
8,000	210 24		230 40		217 65		8,000
10,000	190 18		230 39		213 63		10,000
14,000	210 18		220 34		219 67		14,000
18,000	210 18		250 25		226 60		18,000
24,000	200 40		260 19		219 57		24,000
30,000	200 39		290 46		216 65		30,000
40,000	230 28		280 30		219 67		40,000
50,000	270 09		250 11		(33,000) 258 14		50,000
	(51,000) Calm		(55,000) 230 12		186 03		
					(58,000)		

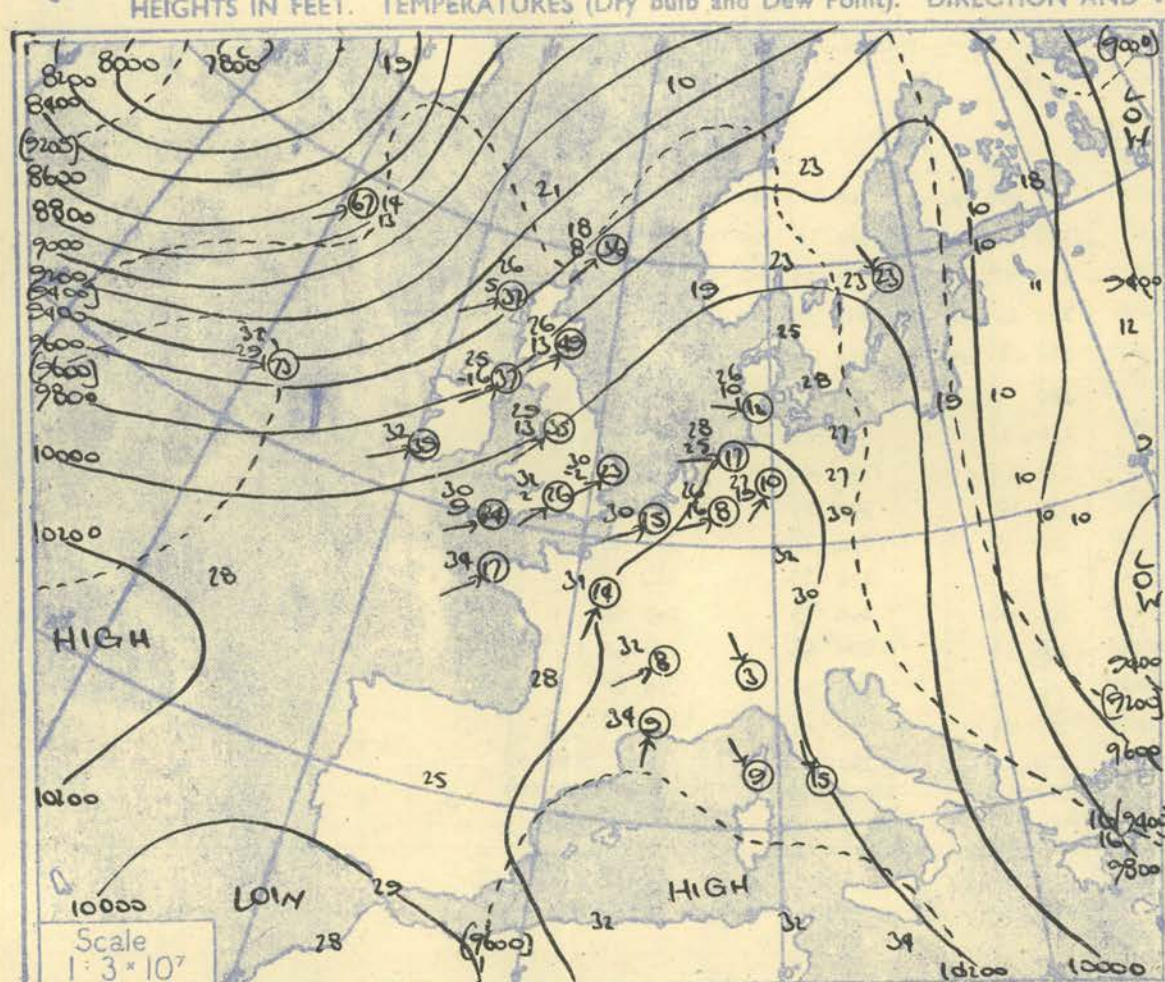
NEPHOSCOPE OBSERVATIONS

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

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

Ship	WEATHER EXPLORER	WEATHER EXPLORER	WEATHER EXPLORER	WEATHER EXPLORER	WEATHER OBSERVER	WEATHER OBSERVER	WEATHER OBSERVER	WEATHER OBSERVER	Ship
Lat/Long	58°6'N 17°5'W	58°7'N 18°2'W	59°0'N 18°6'W	58°9'N 18°9'W	52°7'N 18°5'W	52°7'N 18°4'W	52°3'N 19°0'W	52°2'N 19°0'W	Lat/Long
Time M.S.L.	03 hrs	03 hrs	15 hrs	21 hrs	03 hrs	09 hrs	15 hrs	21 hrs	Time M.S.L.
Surf	994	982	974	971	1002	996	992	997	Surf
Pressure	994	983	974	971	1002	995	992	997	Pressure
Height ft./100	870	770	830	880	800	685	700	850	Height ft./100
Temp.									Temp.
Dew									Dew
Wind									Wind
Dir. Vel.									Dir. Vel.
Surf	4738 197 30	4744 180 42	4745 240 30	4034 230 40	4946 220 35	5351 220 30	5463 220 36	4844 155 37	Surf
1000	46	45	45	47	44	44	43	43	1000
950	267 35 32	23.8 41 40	51 21.4 38 37	4520.3 34 30 21.7	5421.9 39 39 19.1	4427.6 48 48 21.7	5326.6 45 49 21.7	5727.5 37 36 24.4	950
900	25 25	Elevation 40 38 20.5	57 33 31 23.1	42 28 27 23.3	63 36 35 19.1	51 45 40 22.0	43 43 22.3	61 32 32 24.6	900
850	57.5 25 19	too high 55.2 36 33 21.6	54 52.4 28 26 22.2	4756 32.6 15 23.4	60 60.1 32 32 19.5	51 59.3 42 26 22.1	45 58.4 42 42 22.7	67 58.5 27 26 24.1	850
800	16 11	29 25 21.3	54 23 19 21.1	60 14 13 23.0	54 29 19 21.1	46 37 31 22.8	43 38 37 23.2	74 22 26 24.5	800
750	91.3 09 06	30 12 26 21.2	46 8.8 13 20.6	67 84.7 07 03 21.9	56 96.0 24 14 22.3	41 96.0 24 14 22.3	41 93.9 32 23 23.7	73 92.9 17 08 24.0	750
700	03-11 21.6	51 17 11 20.5	55 13 00 21.1	76 06-4 22.9	60 18 11 24.3	40 26 14 22.7	41 26 15 24.3	75 23-7 23.8	700
650	129.4-17 20.9	42 129.3 10 10 20.9	62 125.8 11 18 20.3	84 122.4-8 11 21.5	69 134.3 16 14 24.9	50 135.0 21 15 22.3	45 133.9 26 05 24.2	77 132.3 16 22 24.0	650
600	-6-21 22.8	48 04-4 15.7	56 03-29 19.6	104 -17-23 22.1	63 07-9 25.4	66 13 11 22.7	52 12 10 23.8	78 03-23 23.5	600
550	173.5 12-25 23.2	56 174.4-3 32 26.3	72 170.8-3 35 19.8	113 165.5-24 39 21.6	72 172.9-4 12 25.1	43 181.2 06 04 22.9	56 179.9 04 02 23.2	75 179.0 1-3 21.8	550
500	-4-40 24.8	61 -14 44 27.3	67 -11-50 20.7	113 -22-39 21.8	85 -12-24 25.1	42 -3-6 23.0	54 -4-11 23.2	74 -3-48 22.7	500
450	225.7 30-54 25.7	57 227.4 27 35 27.3	60 224.0-23 56 21.0	117 217.5-25 45 21.7	90 223.0-21 42 27.7	63 223.5 13-17 23.7	63 223.9 17 24 27.7	82 224.5 26 58 22.4	450
400	-40 25.4	51 -38 58 27.0	69 -34 57 19.9	116 -21-52 20.2	86 -32-55 28.7	73 -27-3 12 45	63 -30-43 22.2	74 -29-60 22.4	400
350									350
300	250.1-50	255 62 29.0-50	269 63 28.9-1-46	129 105 28.3 32 54 19.0	80 295.5 43	24.5 88 30.1 74.3	252 78 29.9 41	227 93	300
250	57	-58 27.4	64 -46	202 102	-30-53 21.1	81 -53	254 93	230 80	250
200		379.1-59	286 45 37.8 44	210 74.3 59 39 21.1	42 -48	288 0.6 7	269 72 38.6 76.8	231 77	200
170		52 29.4	60 -48	215 105	-48	211	244 09	231 58	170
150		-58 30.1	50		-50	211	247 35	230 51	150
130		65			-53	211	249 42	230 49	130
110					-56	211	249 42	230 50	110
90					-60	211	249 42	230 48	90
80					-61	211	249 42	230 48	80
70									70
60									60
Isothermal 884-850 mb 40°									
600-589 mb 10°									
Isothermal 856-840 mb 33°									
Inversion 650 mb 13°-624 mb 15°									
Inversion 880 mb 36°-864 mb 37°									
800 mb 31°-793 mb 33°									
Isothermal 806-800 mb 32°									
656-614 mb 18°									
Isothermal 995-980 mb 53°									
Inversion 200 mb 11°-66 mb 24°									
Tropopause	NR.	I 265 mb -59° 31700'	I 266 mb -49° 21500'	I 255 mb -24° 16800'	NR.	I 217 mb -71° 37000'	I 207 mb -70° 38000'	NR.	Tropopause

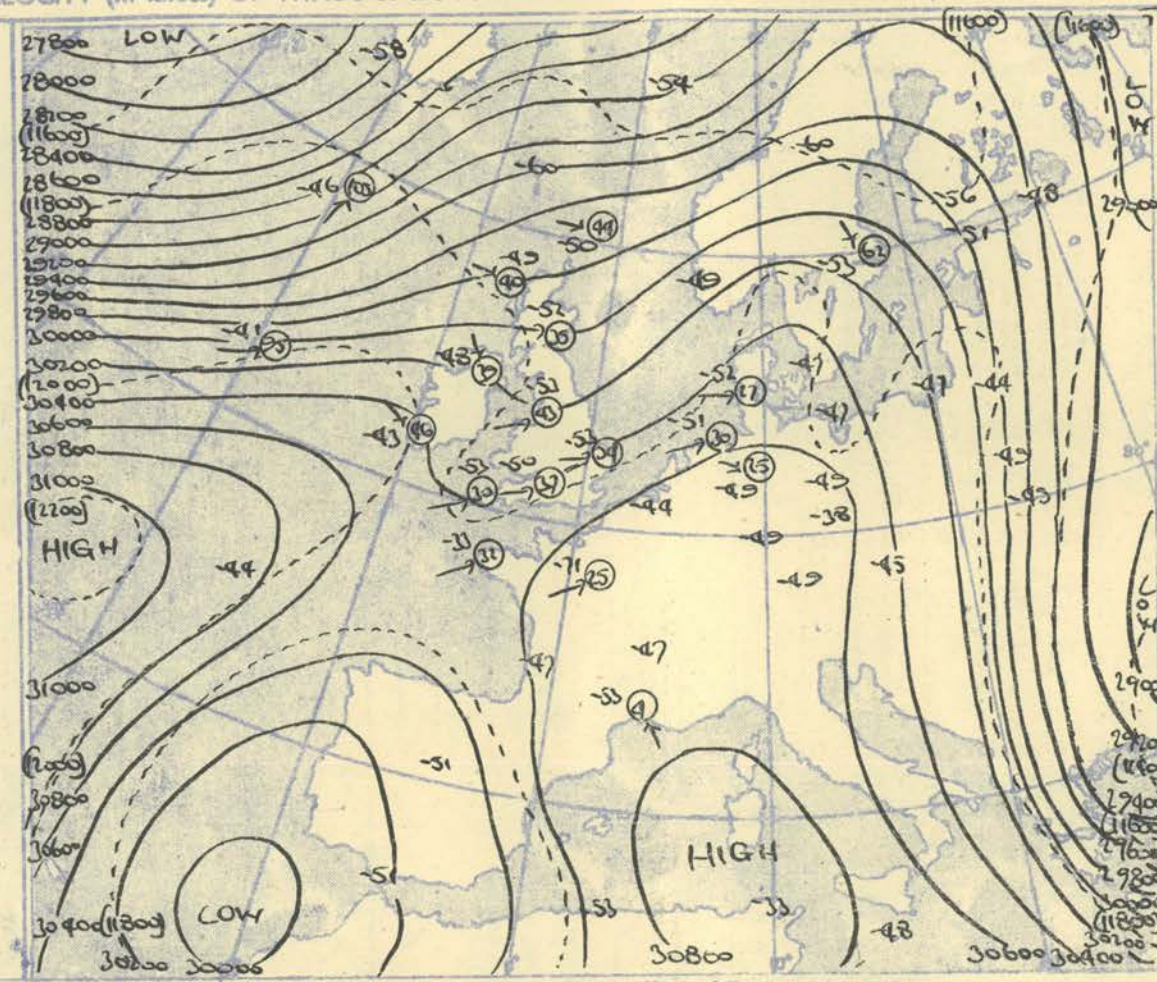
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb. levels at about 15 h G.M.T.



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

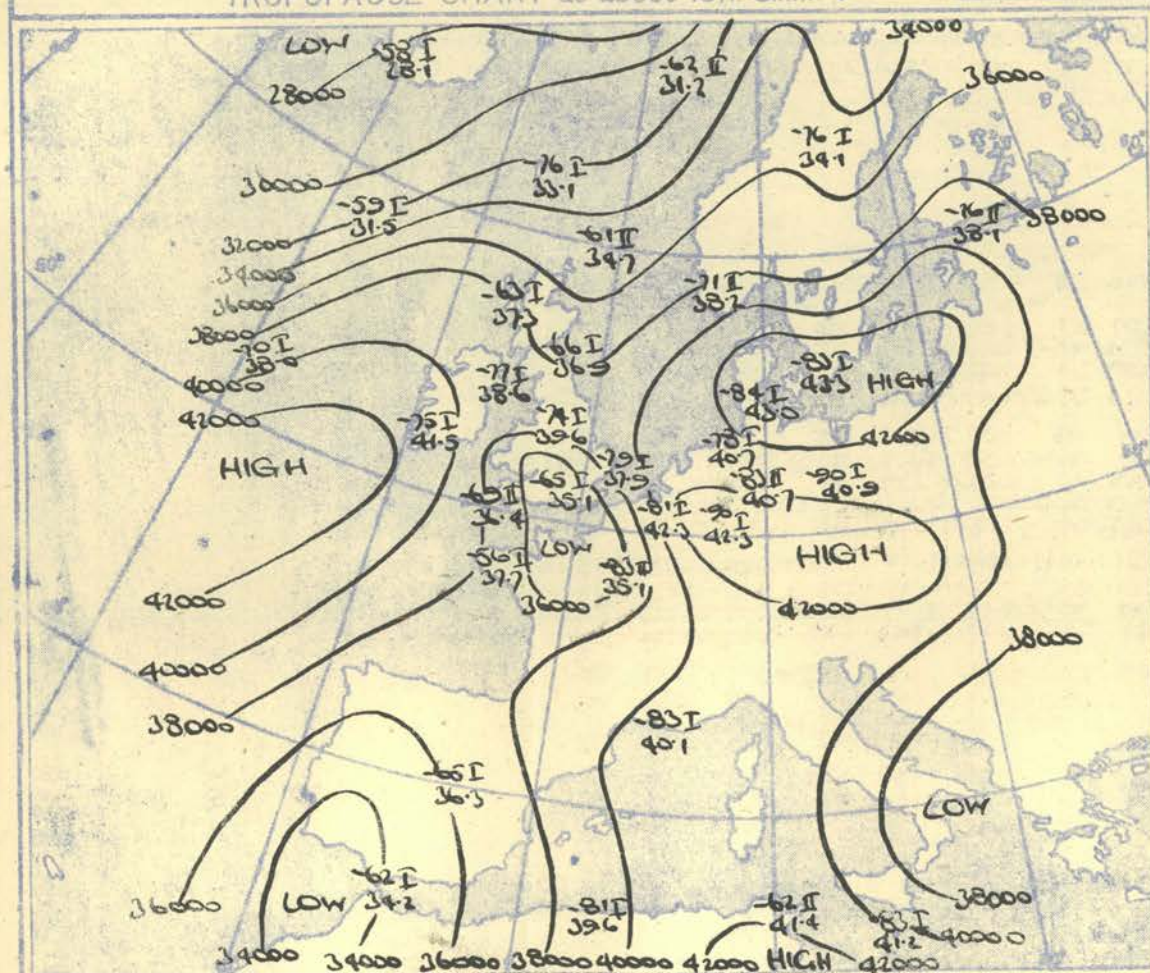
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. $52\frac{1}{2}^\circ$ N.

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.

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



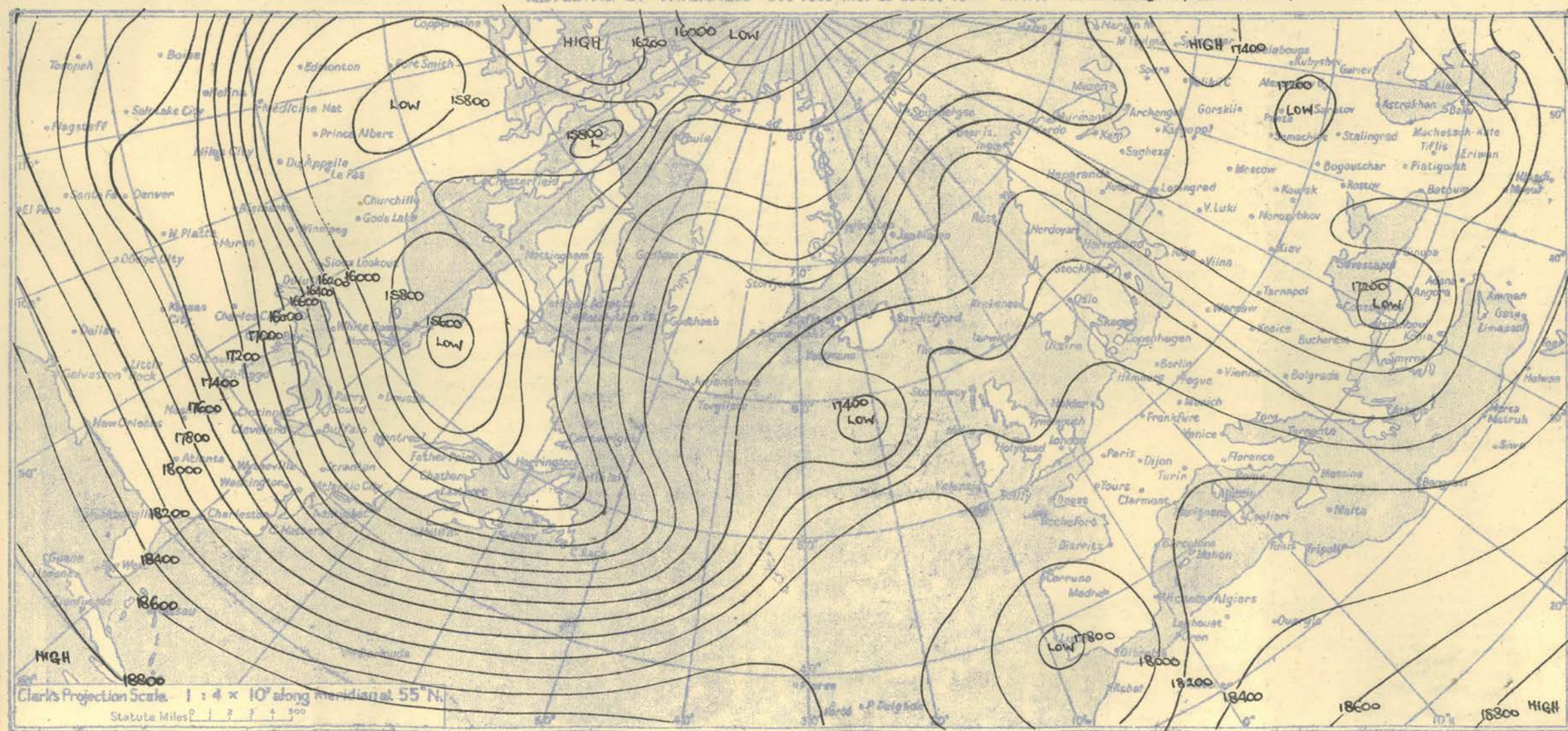
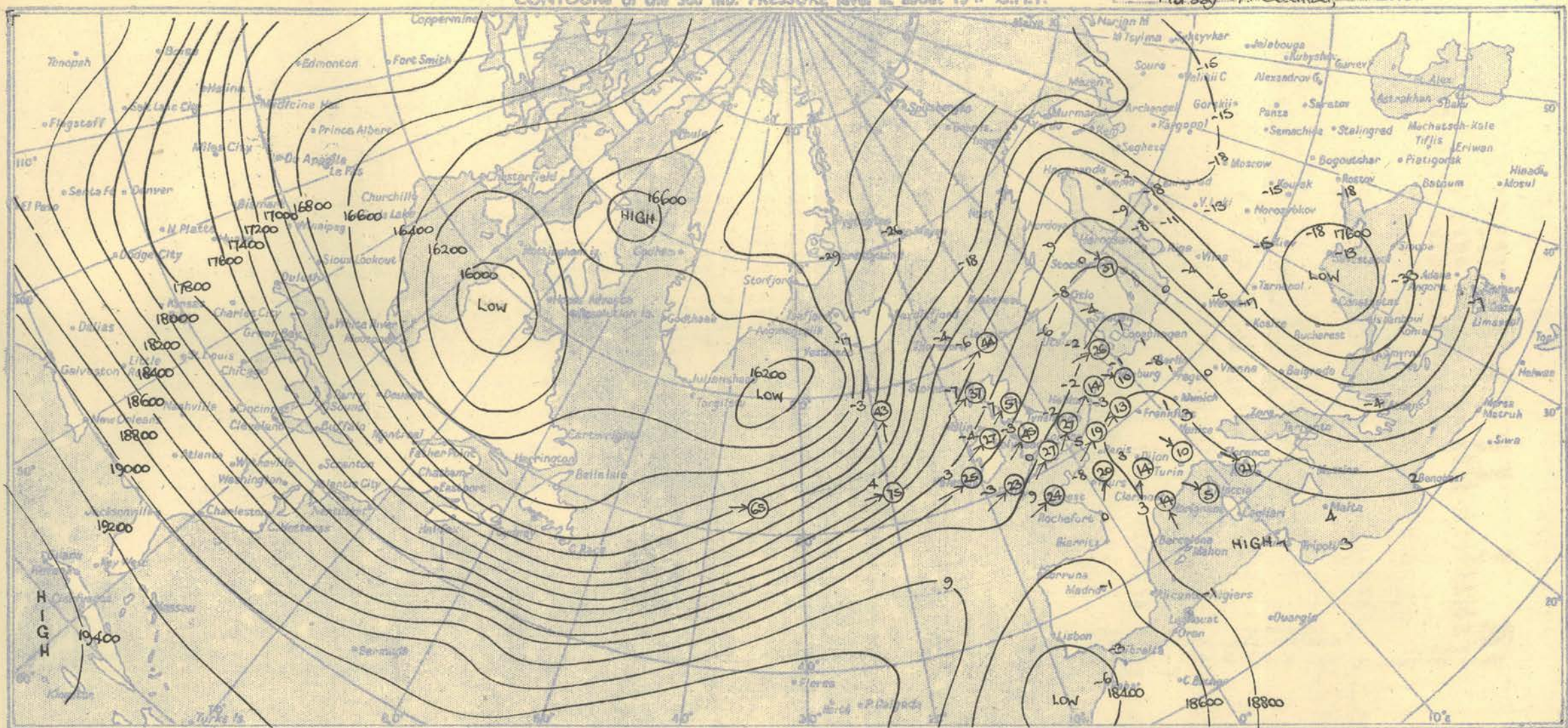
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Probably the most significant features are the persistent cold pool over the Western part of the Iberian Peninsular and the isolation of a cold pool, with intense thermal gradient on East and South side, to the rear of the Iceland depression.

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

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

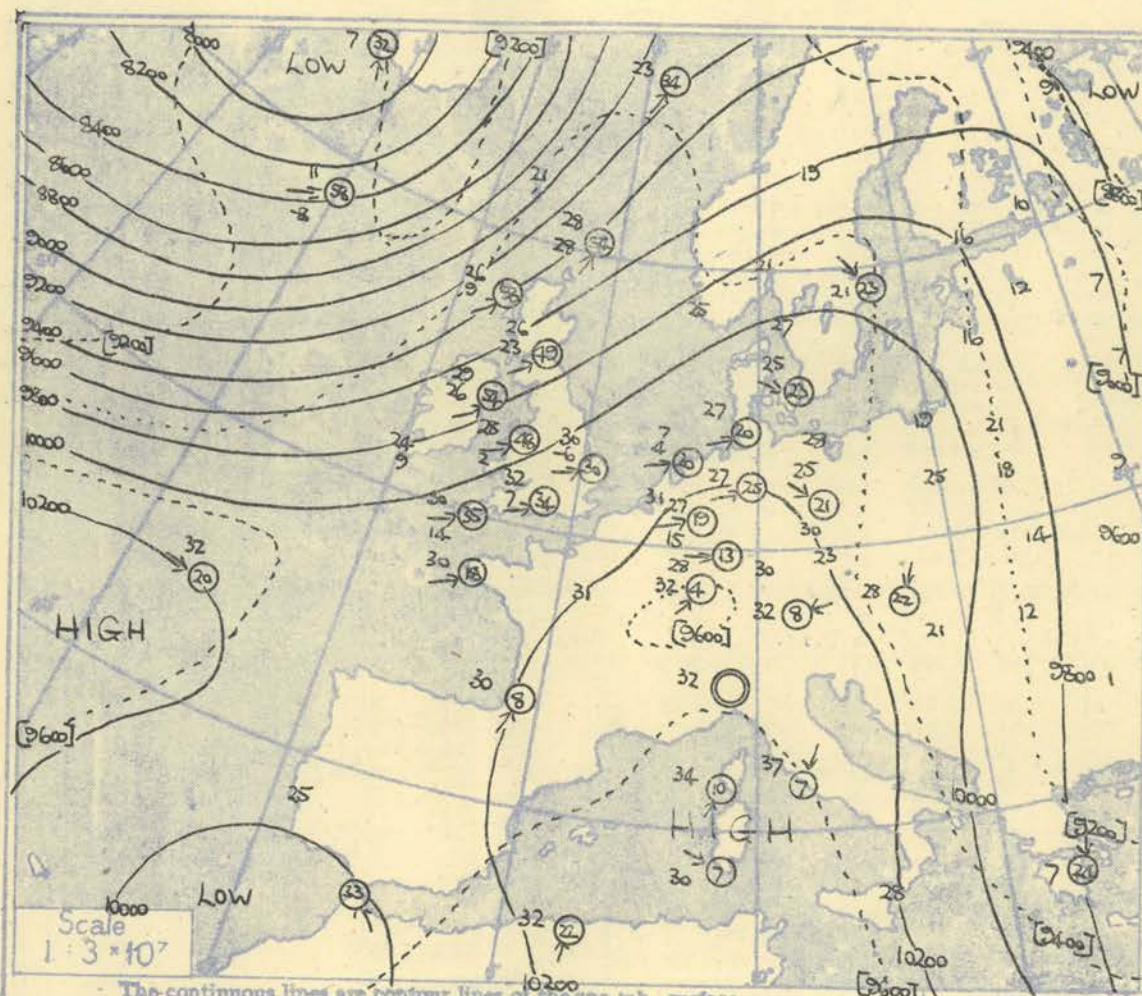


RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				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.	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	1000	999.1	mb	825	mb	1006.2	mb	1004.5	mb	1013.9	mb	1013.1	mb		mb	1018.6	mb	1016.6	mb		mb	1021.5	mb	1019.9	mb		mb	1021.9	mb	1020.8	mb	1012	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf	825	mb		mb	758	mb		mb	823	mb		mb		mb	740	mb		mb		mb	711	mb		mb		mb	700	mb	716	mb	700	mb	Surf	1000				
Pressure	Surf																																						

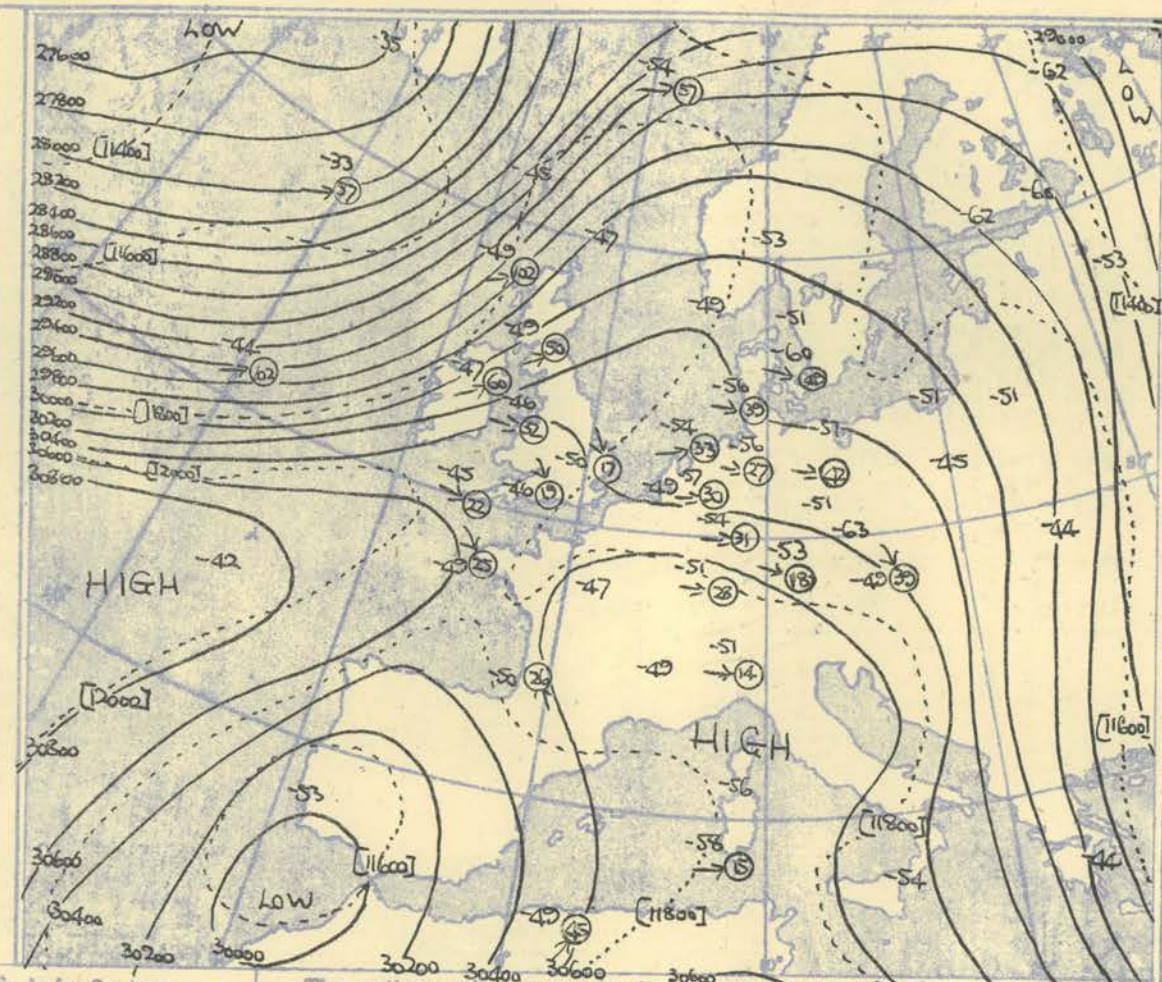
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)																																														
STATION				LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA				STATION						
Time		03L		G.M.T.		03L		G.M.T.		03L		G.M.T.		03L		G.M.T.		03L		G.M.T.		03L		G.M.T.		03L		G.M.T.		03L		G.M.T.		03L		G.M.T.										
M.S.L.		998.4		mb		994.6		mb		1006.0		mb		1005.9		mb		1015.0		mb		1020.4		mb		1021.0		mb		1019.6		mb		1010		mb										
Surf		988.4		mb		993.0		mb		1005.2		mb		996.7		mb		1013.0		mb		1018.8		mb		1004.7		mb		1008.9		mb		1008		mb										
Pressure		774		mb		746		mb		762		mb		840		mb		717		mb		715		mb		700		mb		720		mb		780		mb										
Height		ft/100		ft/100		ft/100		ft/100		ft/100		ft/100		ft/100		ft/100		ft/100		ft/100		ft/100		ft/100		ft/100		ft/100		ft/100		ft/100		ft/100		ft/100										
Temp.		°F.		°F.		°F.		°F.		°F.		°F.		°F.		°F.		°F.		°F.		°F.		°F.		°F.		°F.		°F.		°F.		°F.		°F.										
Dew		°F.		°F.		°F.		°F.		°F.		°F.		°F.		°F.		°F.		°F.		°F.		°F.		°F.		°F.		°F.		°F.		°F.		°F.										
Wind		Dir.		Dir.		Dir.		Dir.		Dir.		Dir.		Dir.		Dir.		Dir.		Dir.		Dir.		Dir.		Dir.		Dir.		Dir.		Dir.		Dir.		Dir.										
Vel.		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots										
Surf		02.7	47	47	190	28	00.4	51	49	180	30	00.2	52	46	250	20	02.5	49	47	190	30	00.6	51	45	210	14	00.4	45	42	230	12	04.4	47	45	210	12	02.9	49	48	220	11	00.3	53	50		
1000		-00.5	44	44	197	48	-01.5	47	44	214	43	01.7	51	45	210	01.6	46	44	211	44	46	40	215	24	05.4	43	42	233	20	05.6	46	44	220	05.3	49	48	220	02.7	52	48						
950		28.0	43	41	213	46	27.0	41	29	220	49	30.2	44	41	226	51	30.1	45	43	230	54	32.7	46	37	233	26	33.7	49	39	235	24	34.0	42	38	228	24	33.8	46	35	235	32	31.4	42	40		
900		43.2	42	39	230	41	42.2	37	30	226	48	45.6	44	39	239	47	45.4	41	39	246	51	48.0	43	26	235	40	49.1	44	20	233	27	49.4	42	29	232	26	49.3	42	23	244	32	40	38			
850		59.5	36	35	219	43	58.3	35	25	224	54	61.8	36	33	233	51	61.6	37	35	240	49	64.3	40	15	235	44	65.3	38	12	236	29	65.6	41	20	232	30	65.6	42	23	243	34	63.8	36	34		
800		73.0	31	31	211	49	73.0	33	24	218	49	81.0	31	28	229	52	81.0	33	31	237	54	84.0	37	04	236	47	86.0	36	02	238	29	88.0	38	13	232	32	85.0	35	17	241	35	82.0	29	26		
750		84.6	28	28	206	54	83.4	26	09	221	58	96.8	26	23	226	49	97.0	29	26	236	49	99.6	30	02	240	49	100.6	30	00	238	30	101.0	32	07	236	34	101.0	30	14	240	35	97.7	24	09		
700		94.6	23	22	211	51	94.6	20	40	221	59	106.8	20	17	223	57	107.0	22	20	240	49	109.6	23	06	238	47	110.6	24	00	240	30	111.0	23	01	240	36	111.0	23	09	242	37	108.0	20	01		
650		104.4	17	16	214	57	102.9	14	45	217	63	116.4	16	08	220	55	116.5	16	12	238	51	119.2	14	15	236	44	120.3	16	18	242	30	120.8	18	05	238	37	120.8	18	02	239	41	117.1	15	07		
600		109.5	09	07	217	60	105.5	05	51	218	75	121.0	02	02	224	50	121.0	02	05	236	51	123.2	08	21	233	44	125.5	07	25	245	33	125.5	08	12	239	39	125.5	08	10	237	41	121.0	08	13		
550		118.1	01	02	224	60	118.1	04	58	218	82	132.1	01	03	228	51	132.1	02	03	230	49	134.7	04	28	234	38	135.7	03	34	249	34	136.3	01	20	242	42	136.4	01	18	237	39	132.6	02	25		
500		123.9	-07	12	217	57	123.9	-12	53	210	87	145.9	-07	12	228	53	145.9	-07	13	228	54	148.8	-05	35	238	32	149.8	-14	46	253	36	150.8	-13	33	242	36	150.8	-13	29	249	29	145.9	-11	28		
450		133.9	-17	22	217	57	133.9	-21	54	207	104	155.9	-19	23	224	57	155.9	-19	25	223	57	158.8	-16	40	236	25	159.8	-26	58	253	37	160.8	-23	45	253	21	160.8	-23	42	260	27	155.9	-20	47		
400		138.9	-31	26	217	57	138.9	-35	58	203	102	160.9	-31	26	217	47	160.9	-32	28	213	65	163.8	-30	48	234	27	164.8	-36	59	271	24	165.8	-31	53	308	16	165.8	-30	48	263	19	160.9	-31			
350		143.9	-47				143.9	-49			102	165.9	-47			50	165.9	-47			225	168.8	-46			286	32	169.8	-50			326	17	170.8	-46			334	19	170.8	-45					
300		148.9	-67				148.9	-61				170.9	-67			231	170.9	-66				225	173.8	-65			261	34			315	18			316	22			316	22			277	28		
250		153.9	-72				153.9	-60				175.9	-72			243	175.9	-70				225	176.8	-70			247	27			298	19			315	17			315	17			280	23		
200		158.9	-63				158.9	-66				180.9	-63			236	180.9	-66				225	181.8	-66			256	21			288	17			303	17			289	29			289	29		
150		163.9	-71				163.9	-71				185.9	-71			238	185.9	-71				225	186.8	-71			273	23			286	15			295	16			295	18			295	18		
130		168.9	-71				168.9	-71				190.9	-71			238	190.9	-71				225	191.8	-71			284	19			286	15			295	14			295	18			295	18		
110		173.9	-75				173.9	-75				195.9	-75			238	195.9	-75				225	196.8	-75			284	19			286	15			295	14			295	18			295	18		
100		178.9	-75				178.9	-75				200.9	-75			238	200.9	-75				225	201.8	-75			284	19			286	15			295	14			295	18			295	18		
90		183.9	-75				183.9	-75				205.9	-75			238	205.9	-75				225	206.8	-75			284	19			286	15			295	14			295	18			295	18		
80		188.9	-75				188.9	-75				210.9	-75			238	210.9	-75				225	211.8	-75			284	19			286	15			295	14			295	18			295	18		
70		193.9	-75				193.9	-75				215.9	-75			238	215.9	-75				225	216.8	-75			284	19			286	15			295	14			295	18			295	18		
60		198.9	-75				198.9	-75				220.9	-75			238	220.9	-75				225	221.8	-75			284	19			286	15			295	14			295	18			295	18		
50		203.9	-75				203.9	-75				225.9	-75			238	225.9	-75				225	226.8	-75			284	19			286	15			295	14			295	18			295	18		
40		208.9	-75				208.9	-75				230.9	-75			238	230.9	-75				225	231.8	-75			284	19			286	15			295	14			295	18			295	18		
30		213.9	-75				213.9	-75				235.9	-75			238	235.9	-75				225	236.8	-75			284	19			286	15			295	14			295	18			295	18		
20		218.9	-75				218.9	-75				240.9	-75			238	240.9	-75				225	241.8	-75			284	19			286	15			295	14			295	18			295	18		
10		223.9	-75				223.9	-75				245.9	-75			238	245.9	-75				225	246.8	-75			284	19			286	15			295	14			295	18			295	18		
0		228.9	-75				228.9	-75				250.9	-75			238	250.9	-75				225	251.8	-75			284	19			286	15			295	14			295	18			295	18		
Surf		02.7	49	45	205	29	00.4	47	38	210	18	00.2	51	47	230	13	02.5	48	45	220	18	00.6	50	46	185	12	00.4	45	43	200	11	04.4	48	47	230	13	00.9	51	49	180	18					
1000		-01.0	47	43	223	45	-00.9	42	35	218	34	01.3	45	42	231	30	03.5	49	46	227	37	03.5	49	46																						

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 03h G.M.T.



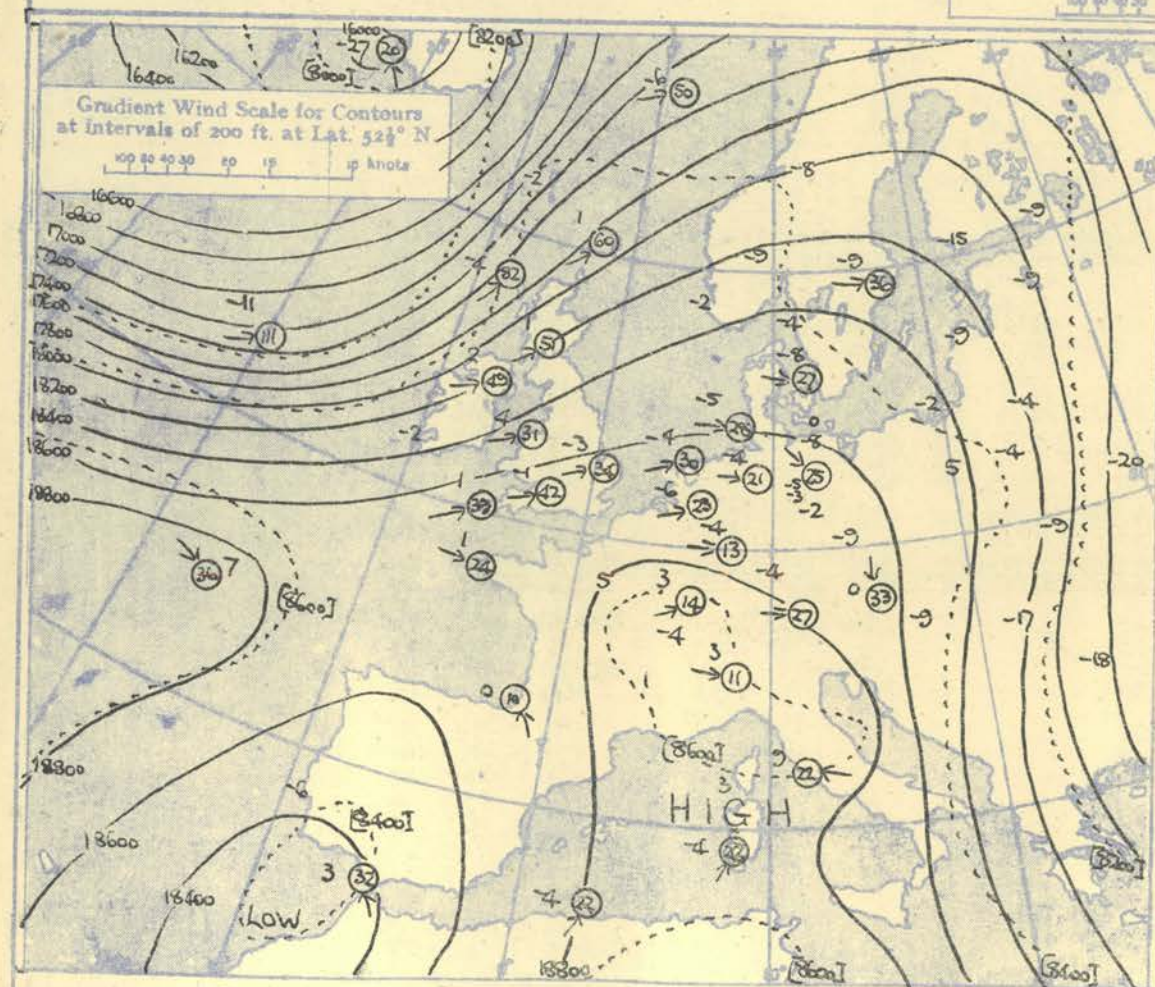
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. $52\frac{1}{2}^\circ$ N

100 80 60 40 20 10
knots



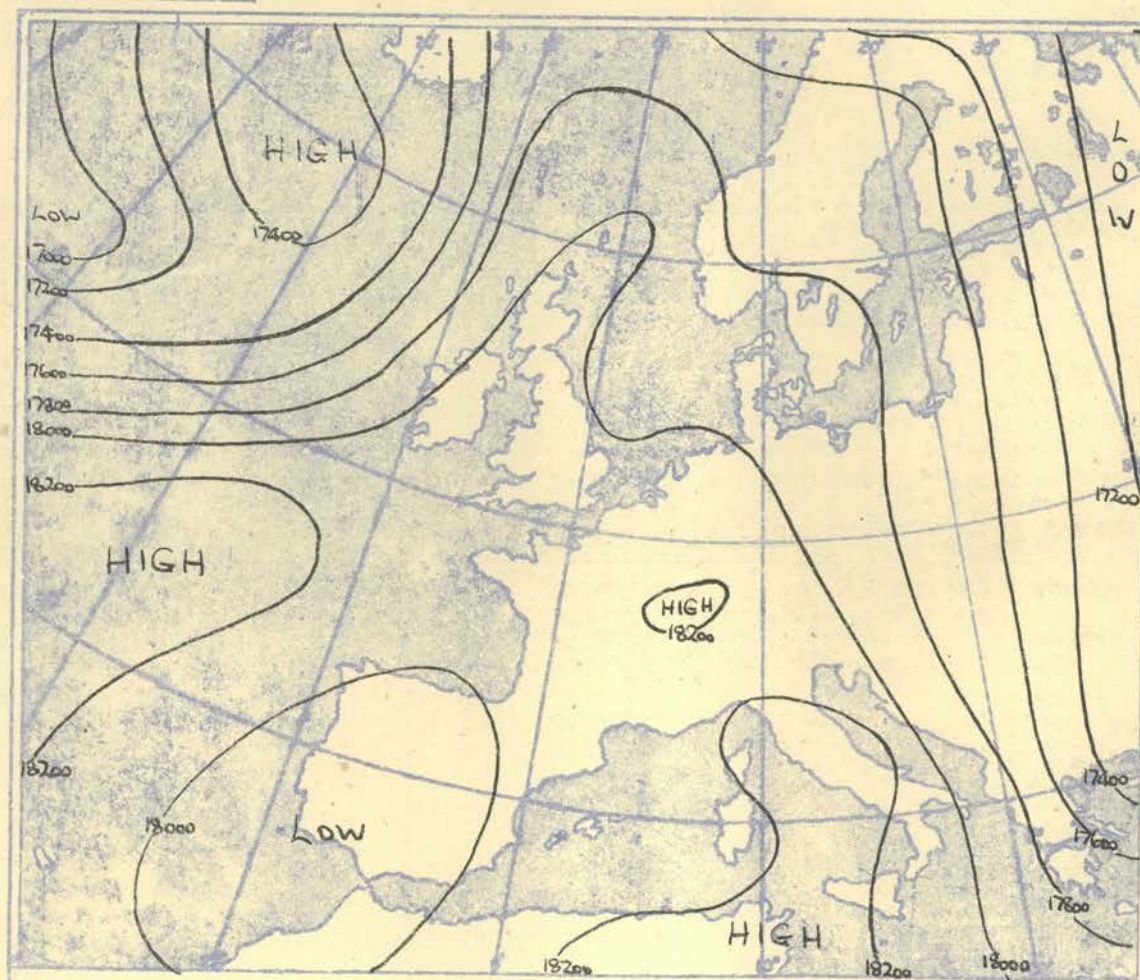
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. $52\frac{1}{2}^\circ$ N

100 80 60 40 20 10
knots



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



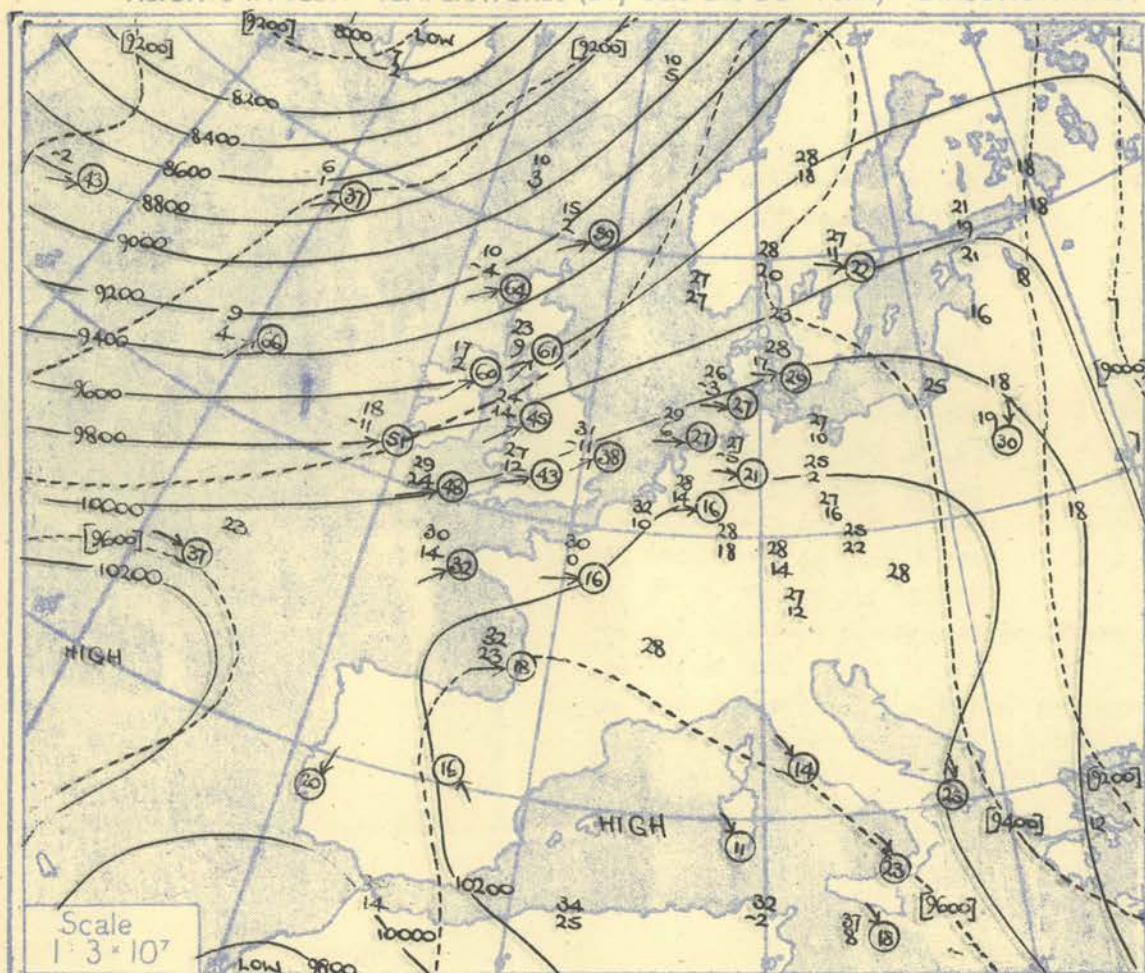
DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

NEPHOSCOPE OBSERVATIONS

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

[illegible]

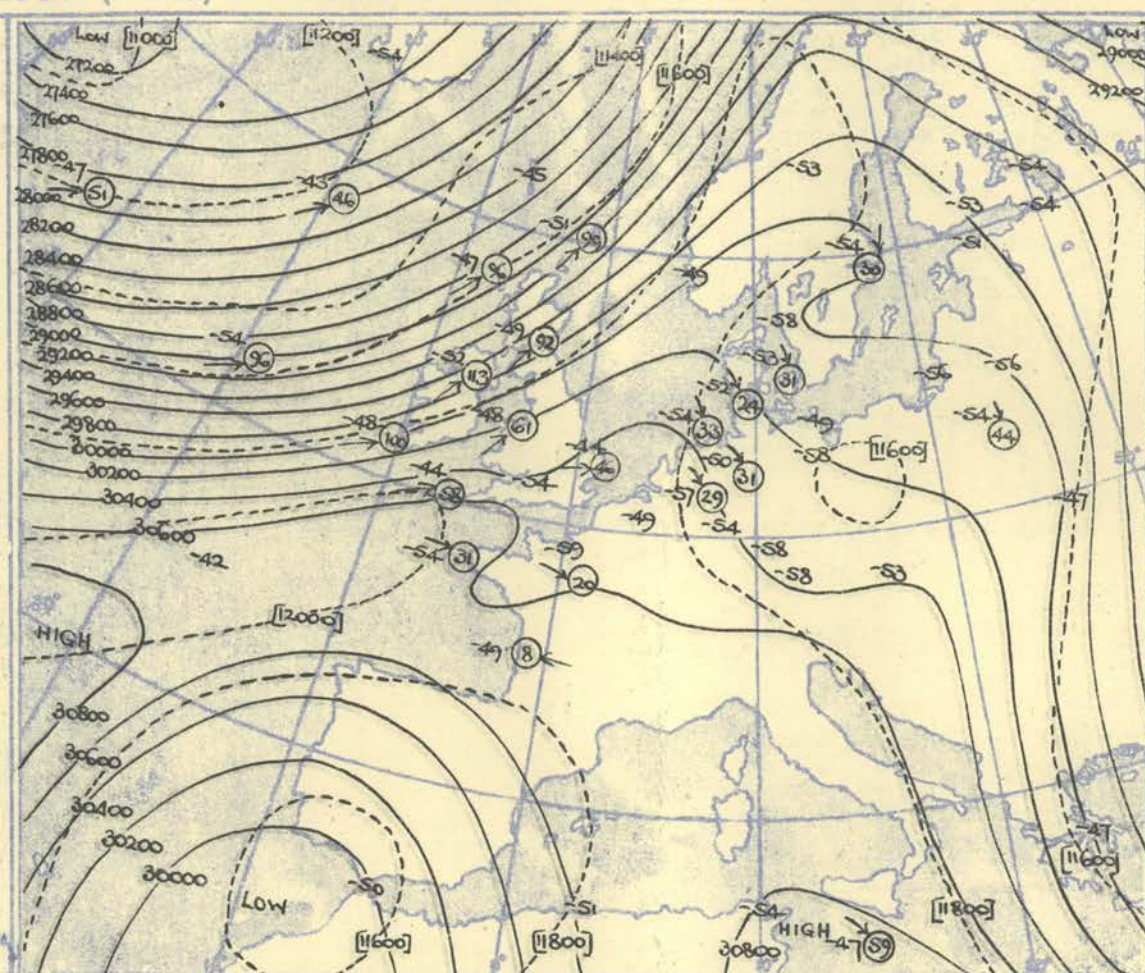
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h G.M.T.



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.

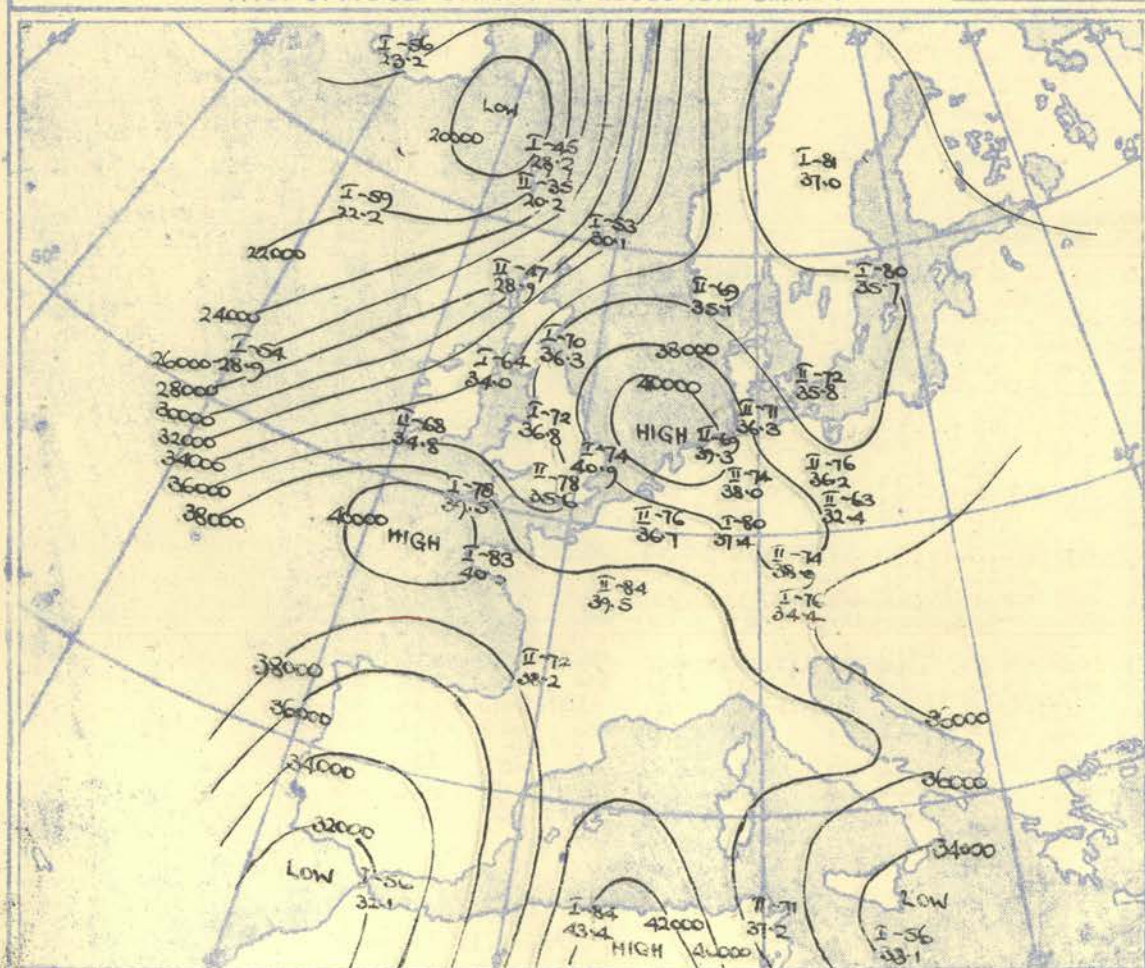
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

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.

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



Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The winds reported at the weather ship on station 49°N. 40°W. at 0300 could not be reconciled with the situation.

The cold air on the Northern Atlantic swept rapidly eastward in the circulation of the Icelandic low pressure system. The zone of tight thermal gradient progressed south-eastward to Scotland and Northern England. The cold pool over the Iberian Peninsula persisted and moved slowly southward.

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

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

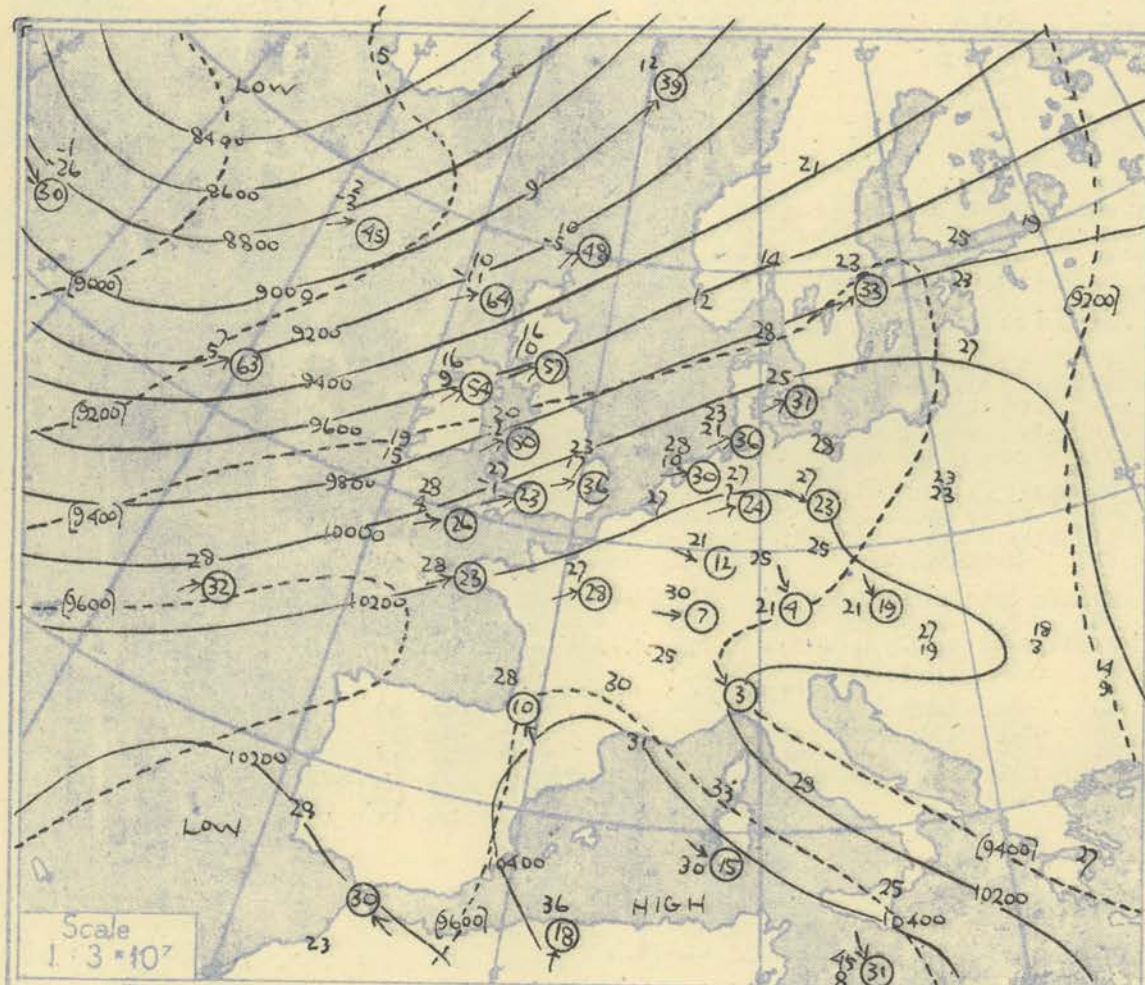
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA				STATION																							
Time M.S.L. Surf Freezing	15h 995.1 988.2 850	G.M.T. mb mb mb	15h 998.3 996.6 880	G.M.T. mb mb mb	15h 1006.1 1005.3 829	G.M.T. mb mb mb	15h 1009.0 999.8 842	G.M.T. mb mb mb	15h 1013.9 1011.9 780	G.M.T. mb mb mb	15h 1018.6 1017.1 738	G.M.T. mb mb mb	15h 1019.9 1003.7 750	G.M.T. mb mb mb	15h 1019.1 1008.4 730	G.M.T. mb mb mb	15h 1012 860	G.M.T. mb mb mb	Time M.S.L. Surf Freezing	15h 1012 860	G.M.T. mb mb mb	Time M.S.L. Surf Freezing	15h 1012 860	G.M.T. mb mb mb	Time M.S.L. Surf Freezing	15h 1012 860	G.M.T. mb mb mb	Time M.S.L. Surf Freezing	15h 1012 860	G.M.T. mb mb mb	Time M.S.L. Surf Freezing																														
																																Pressure mb	Height ft/100	Temp. °F	Dew °F	Wind Dir. Vel. knots	Height ft/100	Temp. °F	Dew °F	Wind Dir. Vel. knots	Height ft/100	Temp. °F	Dew °F	Wind Dir. Vel. knots	Height ft/100	Temp. °F	Dew °F	Wind Dir. Vel. knots	Height ft/100	Temp. °F	Dew °F	Wind Dir. Vel. knots	Height ft/100	Temp. °F	Dew °F	Wind Dir. Vel. knots	Height ft/100	Temp. °F	Dew °F	Wind Dir. Vel. knots	Pressure mb
																																Surf	1000	950	900	850	800	750	700	650	600	550	500	450	400	350	300	250	200	170	150	130	110	90	80	70	60	500	450	400	350
For Winds See Page 3.																																																													
Isothermal 560 - 616 mb 101°																																																													
Isothermal 720 mb 17° 692 mb 25° Isothermal 700 - 680 mb 170° 328 - 310 - -49°																																																													
Isothermal 1000 - 989 mb 51°																																																													
Inversion 954 mb 43° 935 mb 50° Isothermal 935 - 910 mb 45° 668 - 639 - -26°																																																													
Inversion 850 - 825 mb 41°																																																													
Isothermal 850 - 825 mb 41°																																																													
Inversion 800 - 770 mb 28° Isothermal 770 - 750 mb 28°																																																													
Isothermal 650 - 603 - -13°																																																													
Isothermal 822 - 800 mb 27°																																																													
Tropopause I 288 mb - 53° 30', 100' II 300 mb - 47° 28', 900' I 220 mb - 70° 36', 300' I 246 mb - 64° 34', 000' I 220 mb - 72° 36', 800' I 184 mb - 79° 40', 900' II 233 mb - 78° 35', 600' I 197 mb - 78° 39', 500' II 240 mb - 68° 34', 800'																																																													

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

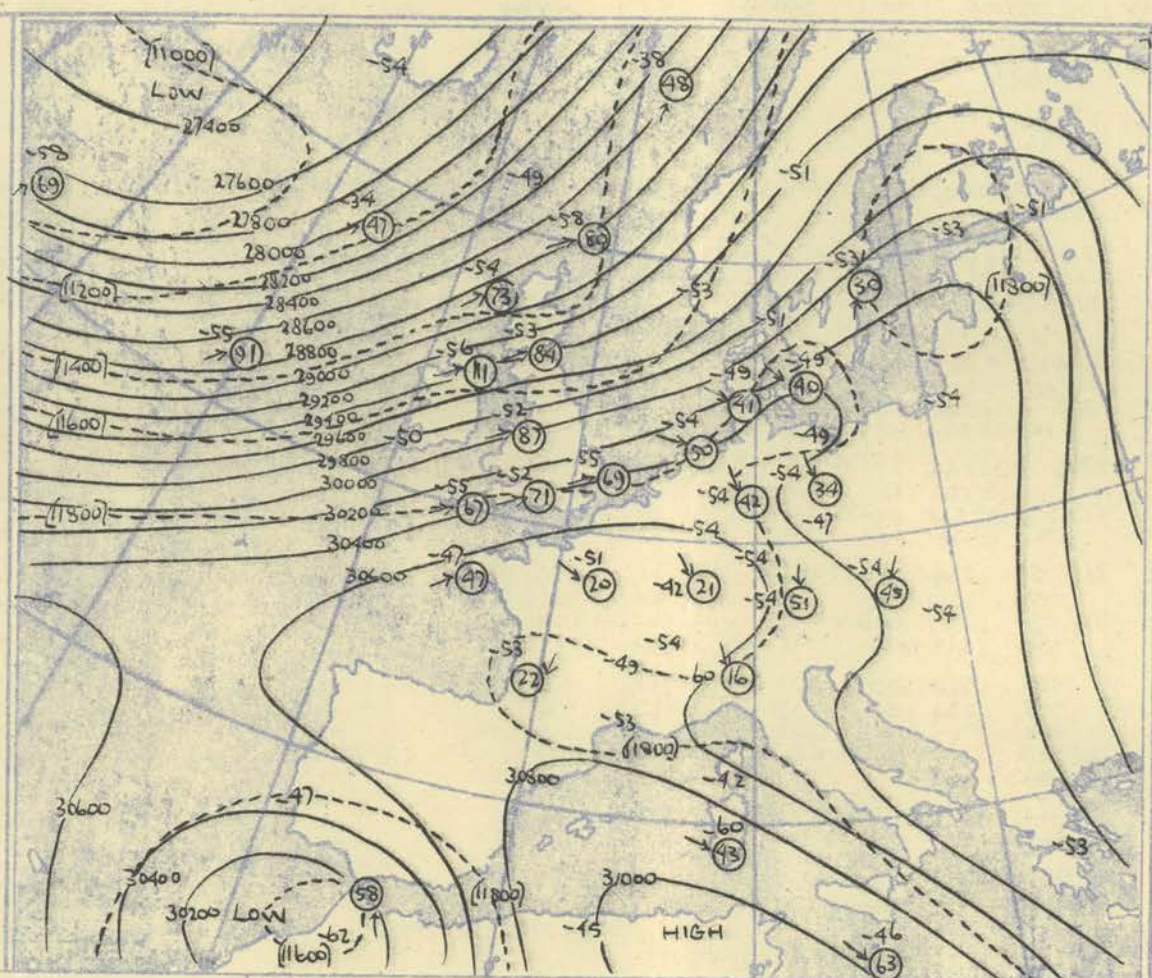
[illegible]

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.

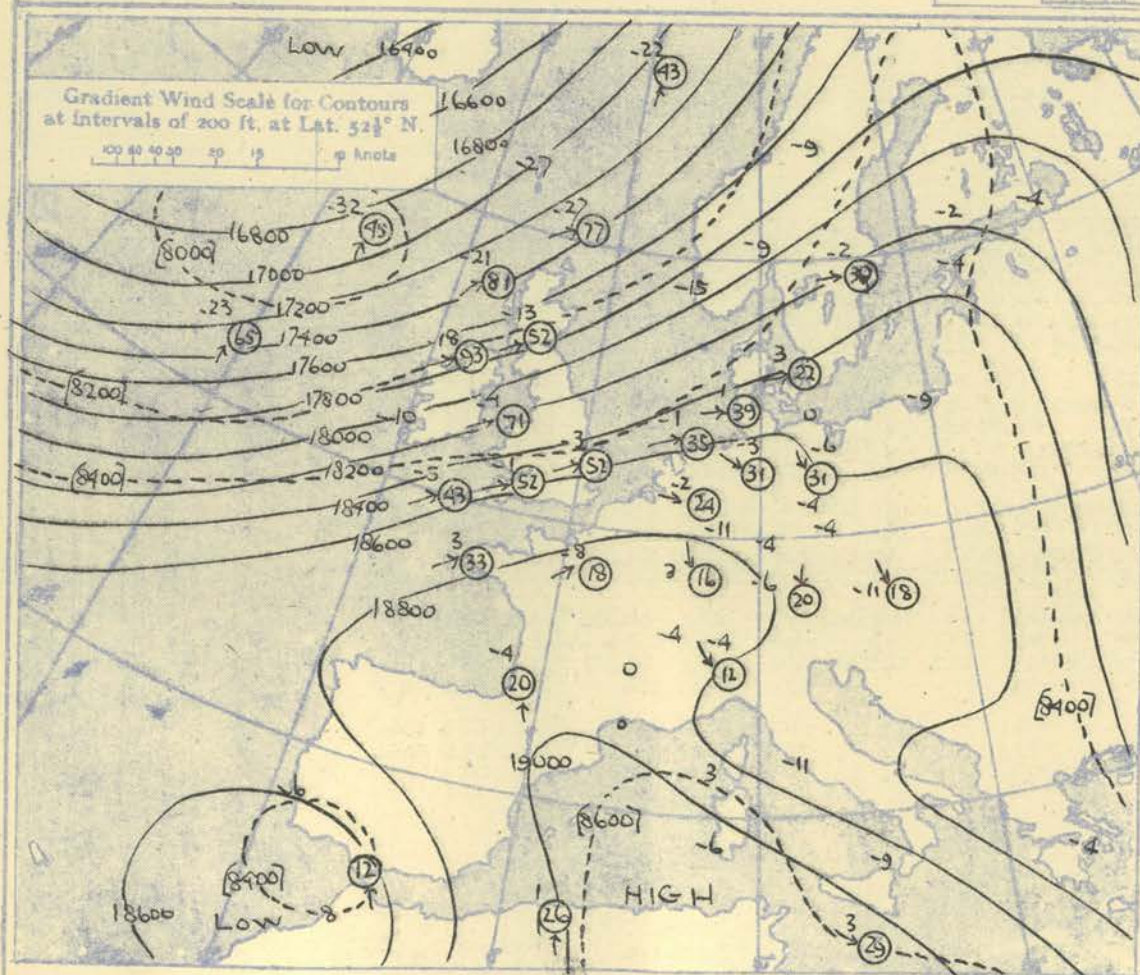


The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

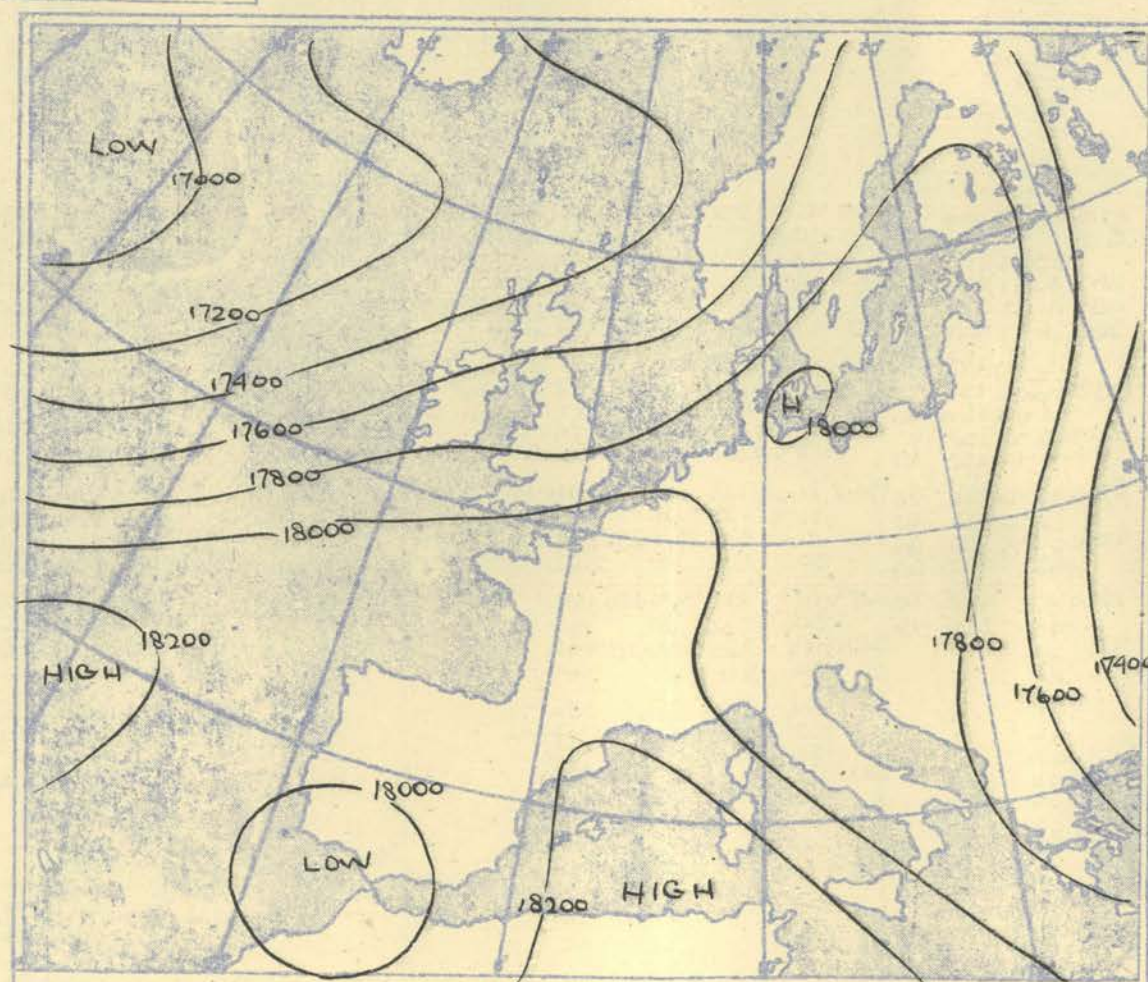
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N
100 80 60 40 20 10 0 knots



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

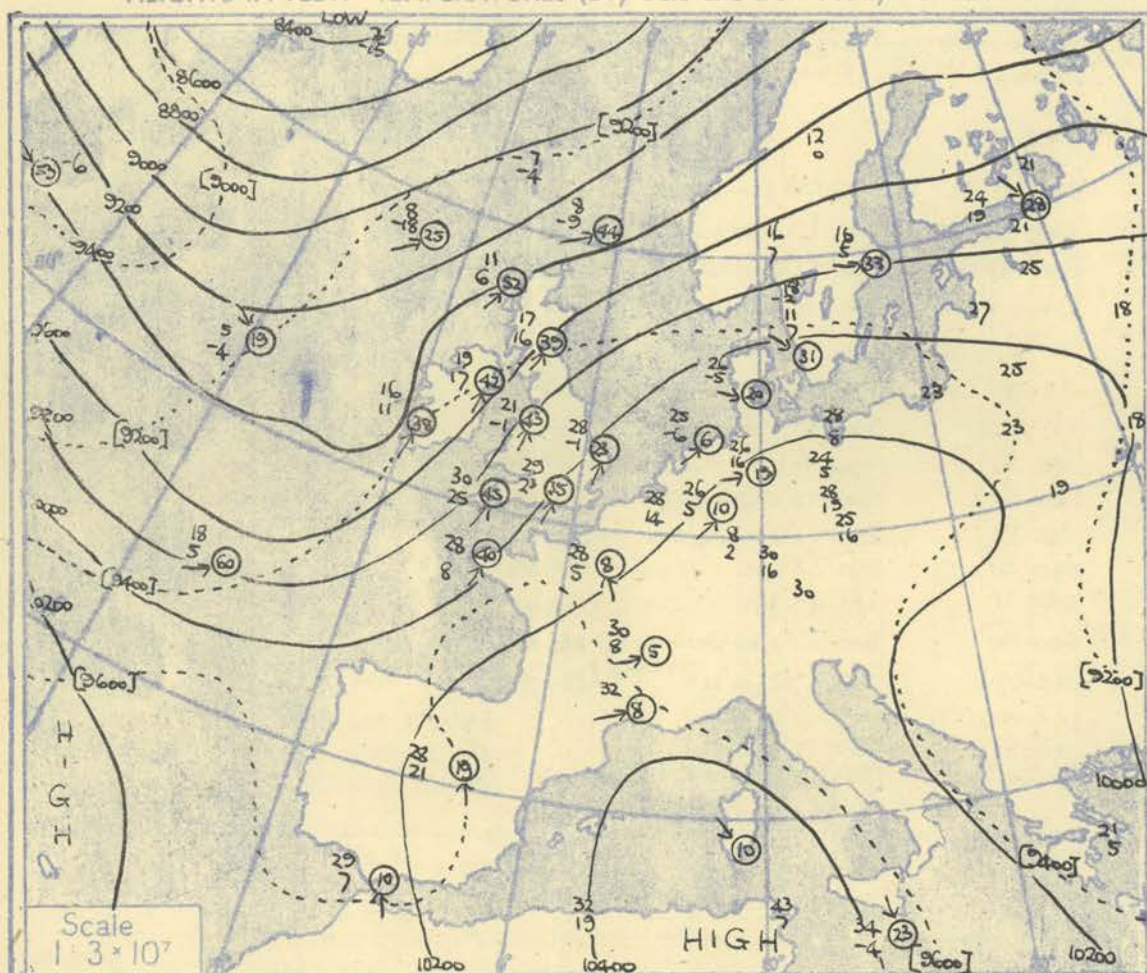
DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

[illegible]

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

[illegible]

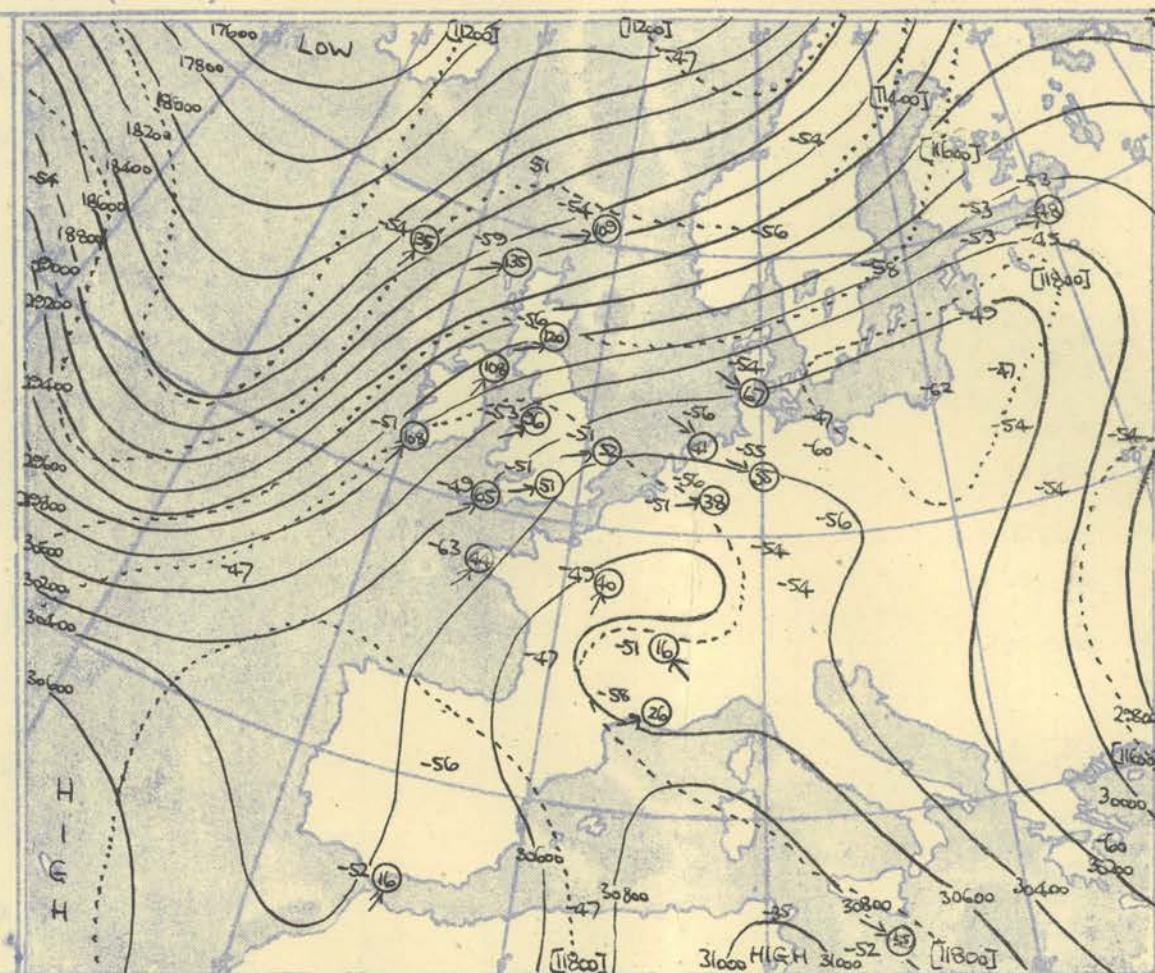
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Points). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb. levels at about 15 h G.M.T.



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

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

100 80 60 40 20 10 knots





Wednesday 19th December, 1951.

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

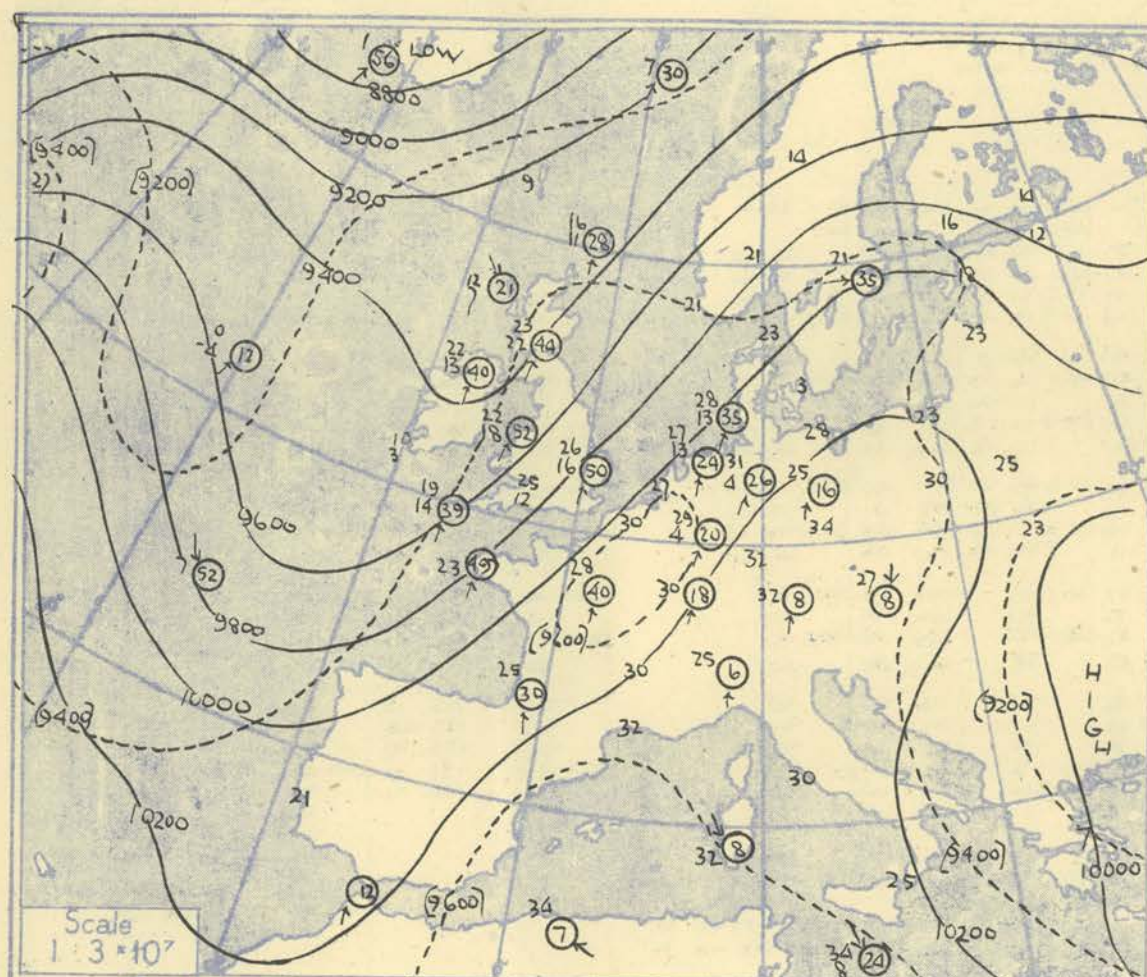
[illegible]

STATION		LERWICK					STORNOWAY					LEUCHARS					ALDERGROVE					LIVERPOOL					HEMSBY					LARKHILL					CAMBORNE					STATION	
Process	Time M.S.L. Surf. Freezing	21h		G.M.T.			21h		G.M.T.			21h		G.M.T.			21h		G.M.T.			21h		G.M.T.			21h		G.M.T.			G.M.T.		Time M.S.L. Surf. Freezing									
		1006.0		mb			1002.9		mb			1005.2		mb			1009.8		mb			1005.6		mb			1015.2		mb			1011.8			mb								
		995.9		mb			1001.2		mb			1004.3		mb			990.6		mb			1003.6		mb			1013.7		mb			995.6			mb								
		884		mb			887		mb			850		mb			828		mb			727		mb			731		mb			734			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	02.7	42.39	200	07	00.4	44.41	180	05	00.2	45.43	170	08	02.5	44.43	145	05	00.6	49.45	135	18	00.4	45.43	170	15	04.4	45.43	150	07	02.9	53.49	180	26	Surf										
1000	01.6	40.36	211	20	00.7	44.41	222	15	01.4	45.43	200	12	00.0	41.38	176	13	01.6	45.42	167	35	04.1	45.42	194	33	03.1	43.41	191	32	01.7	48.45	197	42	1000										
950	20.7	24.28	212	21	28.9	34.30	237	15	29.6	37.36	196	16	28.2	35.32	176	17	30.1	43.36	203	43	32.8	51.28	208	36	31.6	48.37	200	44	30.3	42.39	213	39	950										
900	44.7	28.24	215	25	43.8	29.27	211	15	44.7	32.31	178	22	43.2	35.32	177	23	45.4	43.26	216	48	48.3	47.24	211	36	47.0	43.32	199	47	45.6	38.35	211	44	900										
850	60.3	23.16	213	29	59.7	24.22	203	16	60.6	29.25	196	33	59.2	29.26	176	37	61.6	39.23	217	55	64.7	41.18	213	37	63.3	39.29	202	47	61.7	34.14	206	51	850										
800		17.12	212	33		19.17	203	18		26.25	196	45		28.21	187	43		34.21	212	57		34.11	217	37		34.23	208	50		29.10	202	57	800										
750	24.3	13.05	223	39	33.9	13.11	204	24	00.9	21.20	214	45	33.9	22.18	197	45	26.8	30.11	203	61	39.9	39.08	216	39	38.6	27.17	210	50	26.5	26.11	198	59	750										
700		07.07	230	44		06.03	206	28		16.14	211	54		18.15	197	48		22.14	203	58		24.04	208	38		23.04	211	52		27.08	199	59	700										
650	132.7	01.01	240	51	132.2	02.05	204	33	134.4	10.07	210	60	133.1	12.07	198	54	136.4	17.12	208	55	139.6	17.04	201	38	138.2	17.05	212	48	136.1	17.08	202	57	650										
600		07.10	221	59		09.13	204	46		03.06	210	58		09.05	203	68		10.05	211	55		09.01	204	40		10.10	210	45		09.06	204	54	600										
550		17.14	217	75	174.0	14.18	206	67	179.4	04.08	207	70	178.5	00.15	204	77	182.0	00.03	208	63	185.2	00.04	204	40	184.0	03.04	200	44	181.7	00.07	200	54	550										
500		21.24	226	87		21.25	207	84		12.17	208	83		08.14	208	81		09.12	212	64		11.17	203	44		09.13	194	48		10.20	197	58	500										
450	228.9	31.35	231	95	228.2	29.33	208	96	232.5	24.28	207	90	232.2	19.26	208	88	235.6	20.24	217	68	238.6	21.26	202	48	237.6	21.24	191	50	235.2	22.30	197	60	450										
400		43.232	106			41.208	111			32.41	204	87		32.41	204	87		33.38	215	79		35.45	209	38		35.39	191	52		35.42	189	67	400										
350																																		350									
300	297.7	55.235	130										297.7	48.68	206	70	300.9	49.68	209	73	303.4	53.73	219	35	302.6	51.69	198	47	300.2	50.69	188	66	300										
250		74.238	120											68.74				85.85	76			83.89	73	225	42		69.203	45		69.187	63	250											
200	377.0	68.243	66											61.61				69.69	51			76.76	232	36		70.76	225	33		70.63	208	60	200										
170		58.228	51																															170									
150		58.235	40																															150									
130		63.222	38																															130									
110		64.222	39																															110									
100	524.5	64.236	39																															100									
90		64.236	39																															90									
80		64.270	25																															80									
70		67.212	18																															70									
60		74.212	18																															60									
Inversion.		396 mbs (Surf) 42°								Isothermal.		300-850 mbs 35°		730-708 mbs 23°				Inversion.		875 mbs 42°F -				Inversion.		993 mbs 45°-978 mbs 40°		350 mbs 43° -		978 mbs 46°-959 mbs 53°		910 mbs 49° -											
Max Wind.		234° 159 knots																																									
332 mbs 27,000ft.																																											
I 235 mbs -80°F																				I 200 mbs -85°F						I 200 mbs -85°F		I 205 mbs -84°F															
34,400ft.																				38,600ft.						38,700ft.		38,100ft.															
Tropopause																																				Tropopause							

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

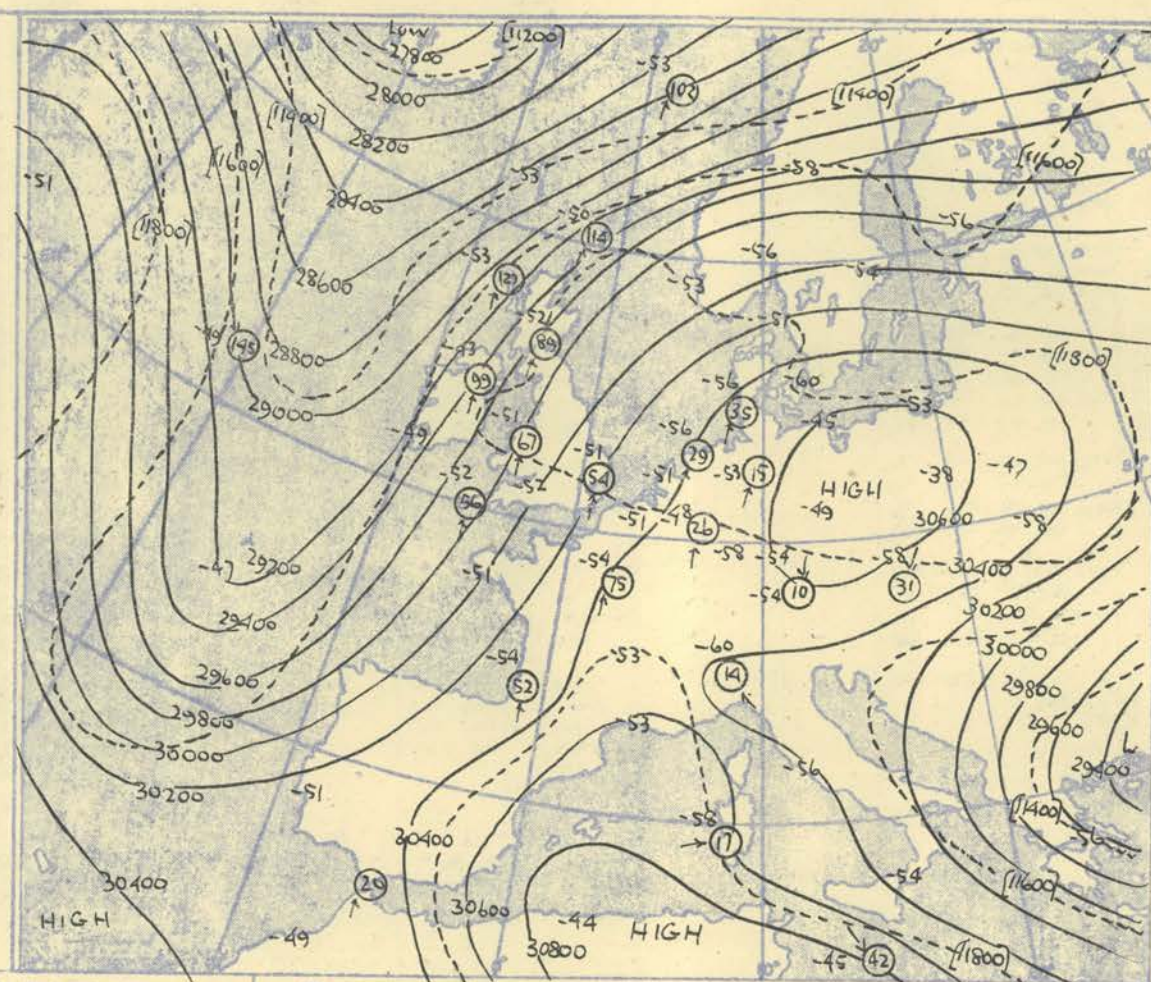
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA				STATION	
Time M.S.L. Surf Pressure		03h. 1001.7 991.7 870		G.M.T. mb mb mb		G.M.T. mb mb mb		03h. 1000.3 999.3 788		G.M.T. mb mb mb		03h. 1000.3 991.0 885		G.M.T. mb mb mb		03h. 1003.5 1001.5 790		G.M.T. mb mb mb		03h. 1012.6 1011.1 746		G.M.T. mb mb mb		03h. 1010.0 993.8 746		G.M.T. mb mb mb		03h. 1006.4 995.8 815		G.M.T. mb mb mb		03h. 1007 1005 885		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	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb		
Surf	02.7	43	42	105 02					00.2	49	45	200 14	02.5	42	41	330 15	00.6	49	45	170 14	00.4	46	42	170 15	00.4	48	47		02.9	49	48	240 10	00.3	43	40		Surf		
1000	00.4								00.1				00.1				01.0				03.4	46	40		02.7				01.7			240 10	01.7	43	40		1000		
950		38	36	138 14						46	42	191 31		38	36	328 34		46	43	196 39		52	39	206 36		45	44			45	42	225 25		40	36		950		
900	28.5	34	31	156 16					28.6	41	38	200 39	28.0	33	31	326 29	29.5	43	40	203 42	32.0	51	33	216 36	31.1	41	40		30.2	40	37	218 29	29.9	34	31		900		
850	43.5	31	27	175 20					43.9	37	36	216 42	43.0	30	27	305 30	44.7	38	34	216 49	47.5	47	28	221 39	46.4	43	25		45.4	36	32	215 32		27	23		850		
800	59.4	26	22	186 24					59.9	33	31	221 43	58.8	27	24	239 21	60.8	33	29	220 48	63.9	40	23	218 43	62.7	40	22		61.4	31	27	207 35	60.7	22	18		800		
750		21	16	182 23						28	27	217 41		26	21	217 33		26	22	220 43		33	21	214 46		33	18			25	21	210 37		16	08		750		
700	70.7	16	11	187 28					74.7	23	22	211 44	73.3	22	13	206 40	75.6	22	18	214 62	79.0	26	16	211 50	77.9	25	12		75.9	19	14	210 39	74.5	10	03		700		
650		11	06	201 40						18	17	204 45		15	09	199 39		16	07	207 62		21	06	210 47		21	06			13	16	215 51		03	03		650		
600	82.5	07	01	208 47					84.0	13	12	204 49	82.3	08	02	200 48	83.5	12	07	201 66	88.4	14	04	211 45	87.1	11	09		84.7	06	12	205 56	82.5	06	15		600		
550		00	07	210 54						06	04	211 60		01	06	204 67		03	27	196 65		05	14	204 42		06	20			01	09	197 64		14	21		550		
500	177.3	06	13	211 70					179.3	00	03	211 69	177.2	03	08	203 73	180.0	06	35	195 61	183.6	05	23	200 45	182.3	04	18		177.4	07	20	194 66	175.8	24	30		500		
450		12	19	220 84						11	15	205 63		12	17	197 81		14	44	193 66		12	32	197 51		15	27			17	34	188 61		33	39		450		
400	230.4	20	28	226 96					232.6	22	27	199 72	230.4	21	26	193 84	233.0	22	54	191 66	236.9	23	44	186 58	235.2	27	43		232.1	28	39	185 58	226.7	36	44		400		
350		36	46	222 106						38	44	203 89		31	37	192 90		35	58	184 71		35	54	180 55		39	55			39	50	187 53		39	49		350		
300	295.4	50		220 114					297.3	52		199 89	296.0	43		187 99	298.0	51		181 67	301.7	51		183 54	299.7	52			296.5	52		178 56	291.0	49			300		
250		67		227 113						70		204 95		61		189 96		68		185 72		67		180 50		67				68		185 63		57			250		
200	380.6	61		219 91					381.6	81		216 75	382.0	77		185 90	382.7	78		206 42	386.5	82		180 43	384.7	70			381.5	57		198 50	378.5	54			200		
170		61		226 66						65		221 53		75		185 66		62		210 45		74		202 36		63				62		195 37		55			170		
150		57		225 45						62		226 50		60		190 51		61		208 46		68		218 31		62				57		215 32		54			150		
130	(135 mb)	55								61		226 47		58		187 42		60		201 39		67		217 18		64				63		193 26		55			130		
110										65		215 41						66		220 20		70		216 13		69				70		180 27		60			110		
90									527.6	68		215 39					528.8	70		245 20	530.1	71		216 05	530.4	72			527.8	73		189 27	527.7	66			90		
80										71								74		238 24		75		213 04		75				74		230 15		67			80		
70									(082 mb)	74							(075 mb)	71						(061 mb)	75				(088 mb)	74				69			70		
60																																						60	
		Isothermal						Inversion						Isothermal				Inversion				Isothermal				Inversion				Isothermal				Inversion					
		847mb.-824mb. 26°						770mb. 25°-765mb. 27°						690mb. 21°-668mb. 28°				978mb. 46°-941mb. 54°				871mb. 40°-850mb. 43°				1000mb. 43°-981mb. 44°				417mb.-39°-385mb.-33°									
		Max wind:-189° 10Skts						555mb. 00°-529mb. 02°																															
		325mb. 27.800'																																					
Tropopause		I 220mb.-76° 26,000'						I 200mb.-77° 38,200'				I 213mb.-78° 37,000'				I 195mb.-83° 39,200'				I 228mb.-75° 35,700'				I 214mb.-78° 36,700'				I 262mb.-57° 32,000'								Tropopause			
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE								STATION	
Time M.S.L. Surf Pressure		09h. 999.6 989.6 887		G.M.T. mb mb mb		G.M.T. mb mb mb		09h. 1003.5 1002.6 855		G.M.T. mb mb mb		09h. 1011.4 1002.0 900		G.M.T. mb mb mb		09h. 1008.9 1006.9 820		G.M.T. mb mb mb		09h. 1013.4 1011.9 765		G.M.T. mb mb mb		09h. 1013.0 996.9 798		G.M.T. mb mb mb		09h. 1011.3 1000.6 852		G.M.T. mb mb mb		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.	D								

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

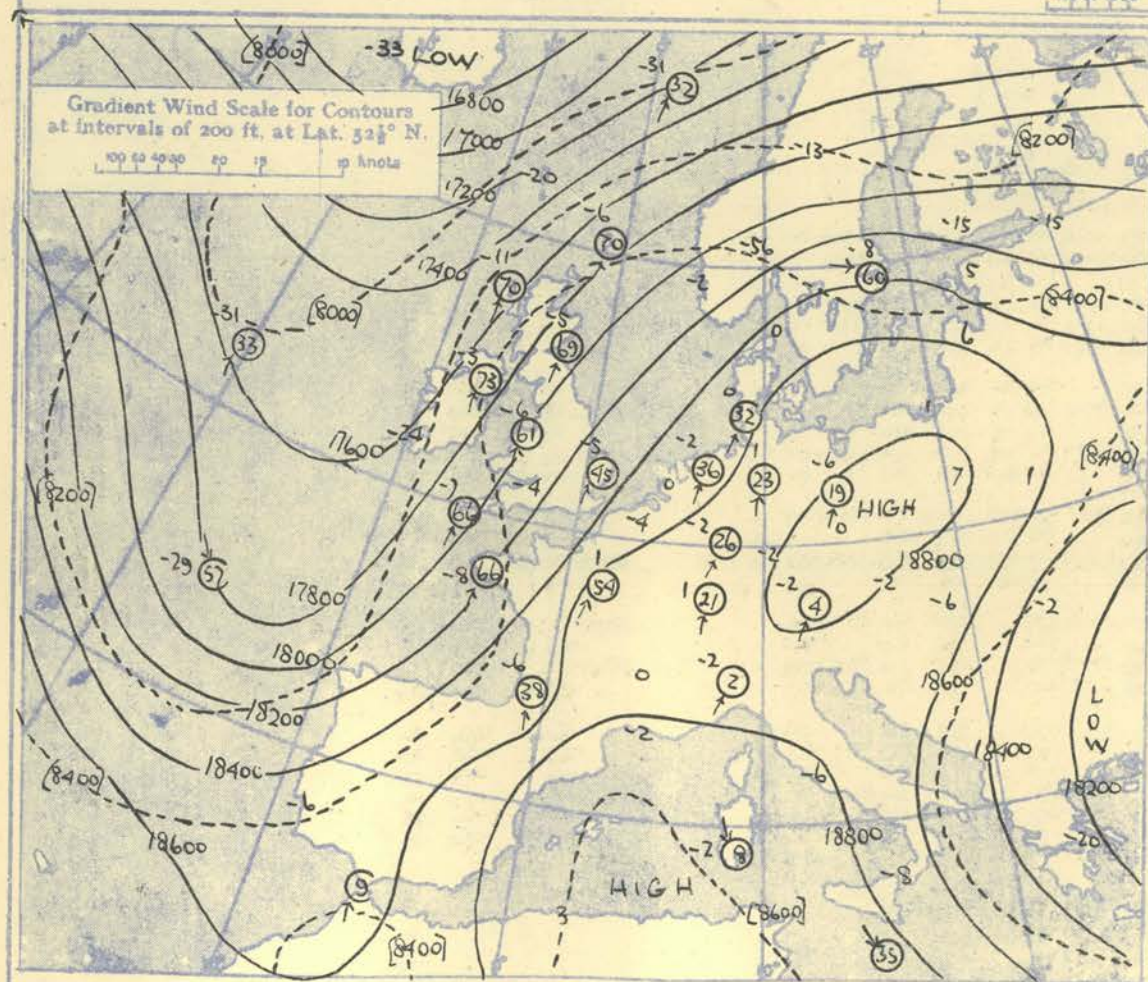


The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

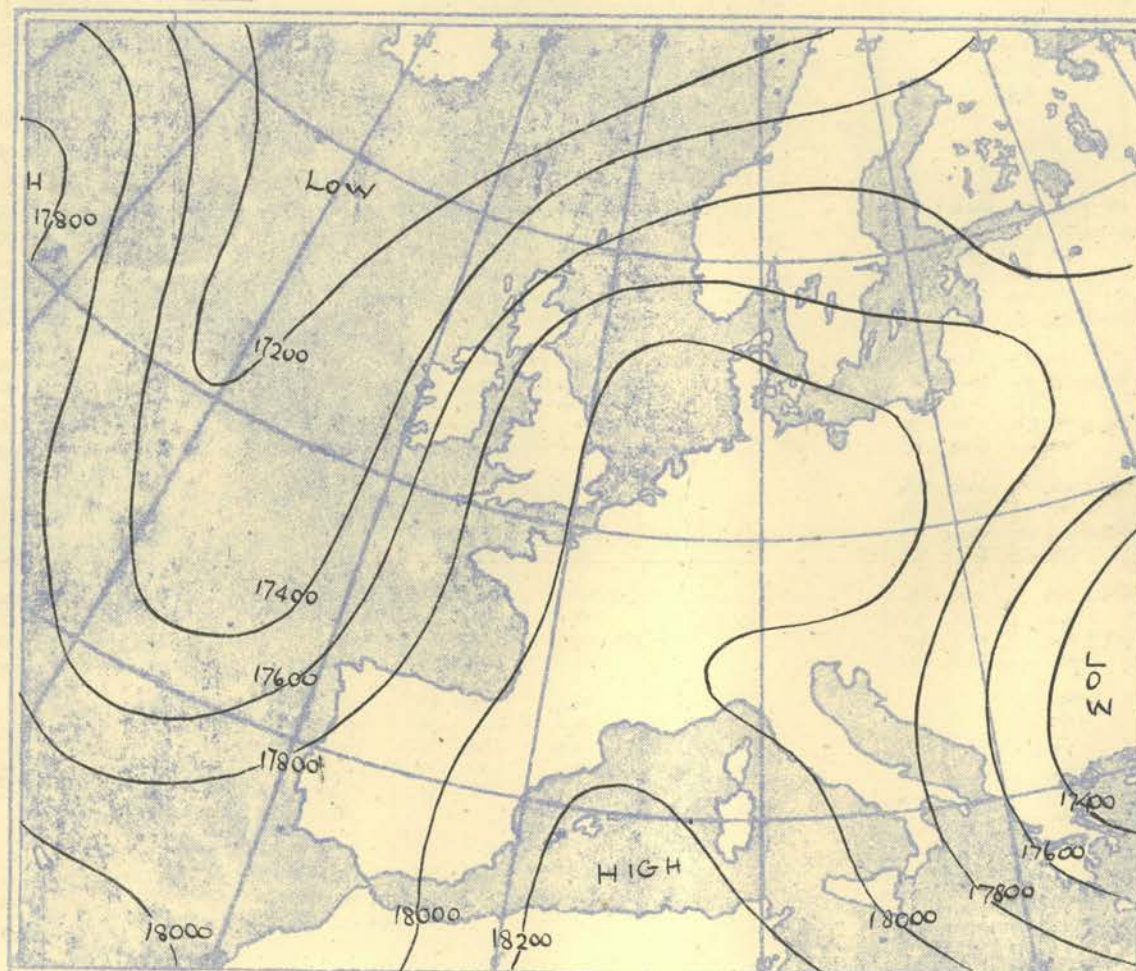
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N
100 80 60 40 20 10 0 knots



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.



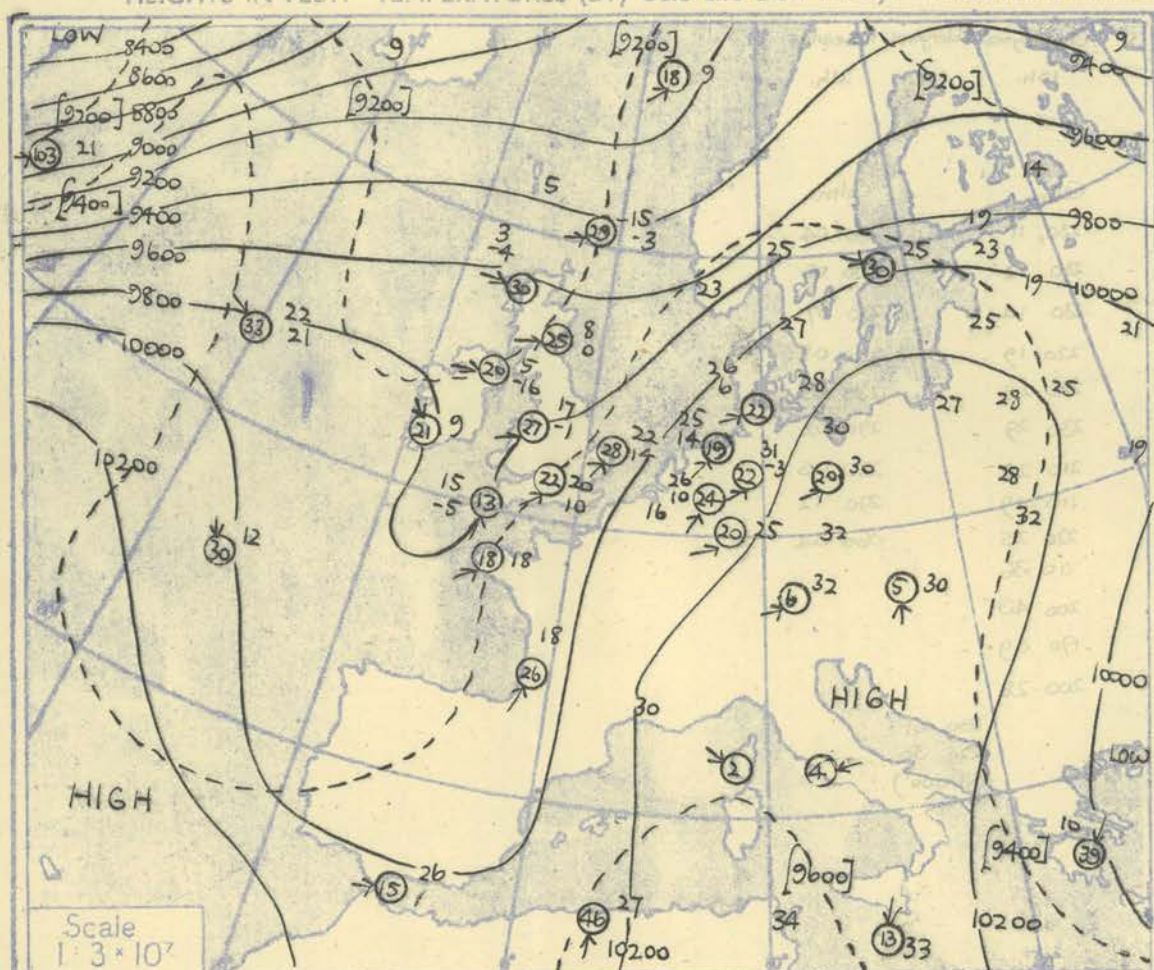
Isopleths of Thickness 500-1000mb.

METEOROLOGICAL			Place
LIBRARY			Time
			Type
Vol.	Dir.	Vol.	Feet
			Surf.
OFF. CE.			1,000
			2,000

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

Ship	WEATHER OBSERVER	WEATHER OBSERVER	WEATHER OBSERVER	WEATHER OBSERVER
Lat/Long	S2-4N- 20-1W.	S2-3N- 18-8'W.	S2-2N- 20-0'W.	S2-2N- 20-1W.
Time M.S.L. Surf Freezing	03h. 1014. mb 930	G.M.T. 09h. 1021 mb 940	G.M.T. 1sh. 1021 mb 930	G.M.T. 2ih. 1015 mb 850 + 760
Precipitation				
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots

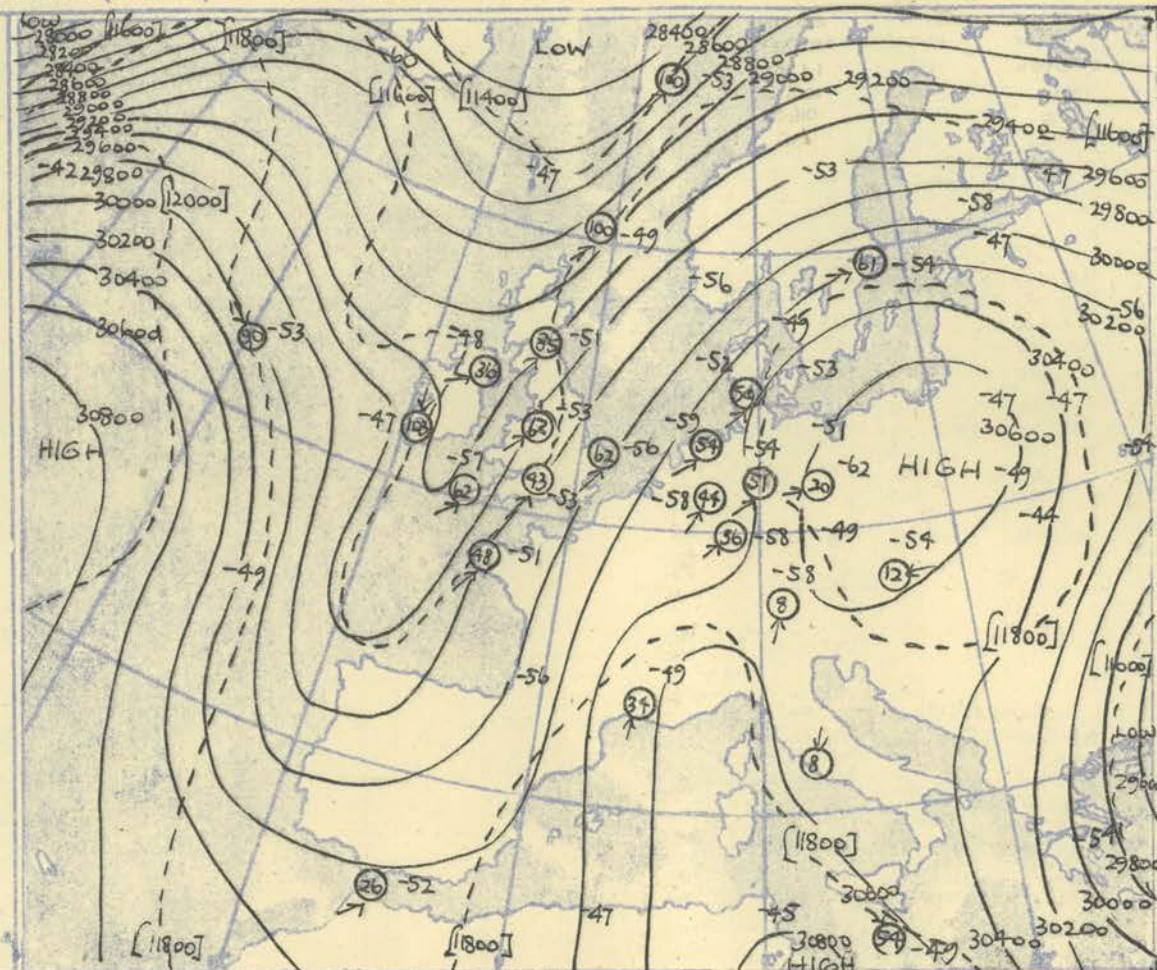
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h G.M.T.



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.

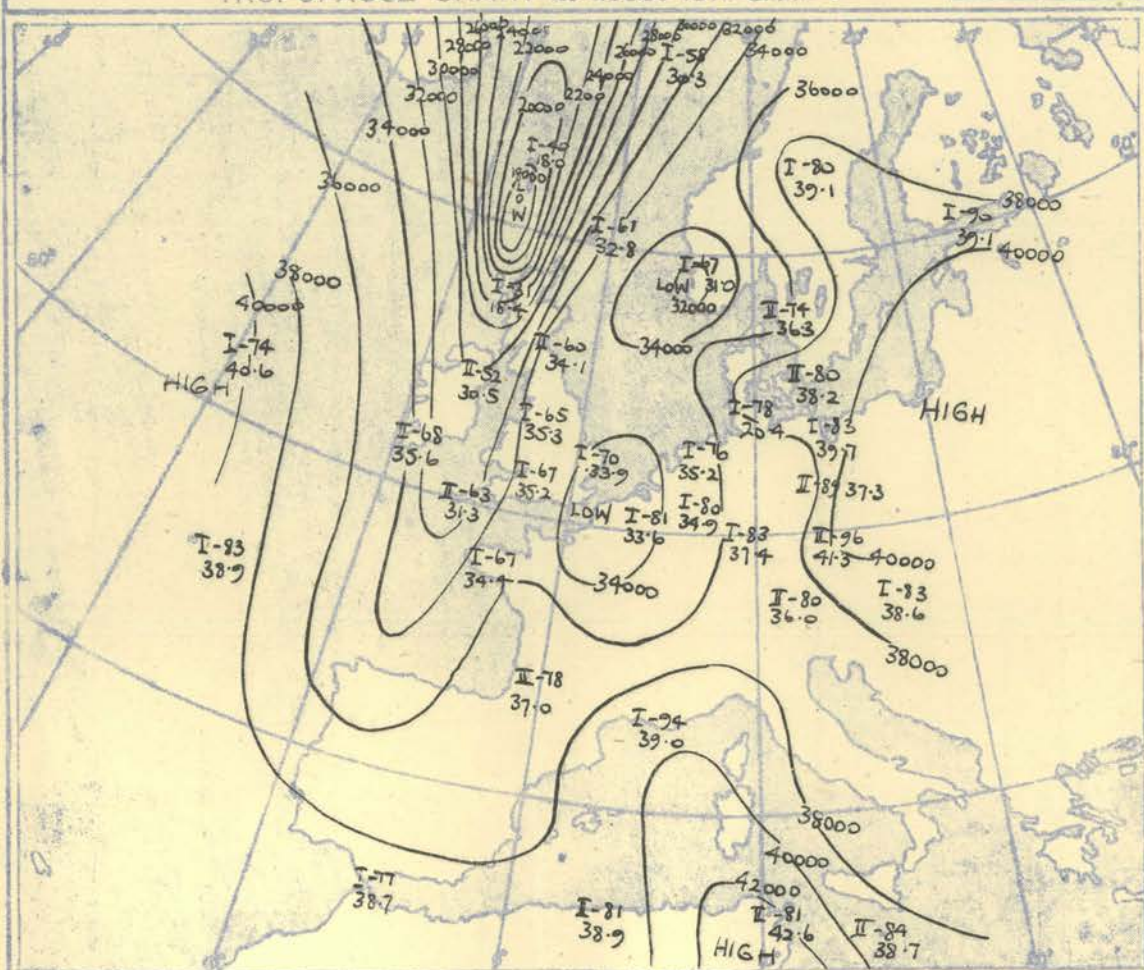
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. $52\frac{1}{2}^\circ$ N.

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 500-300 mb.

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



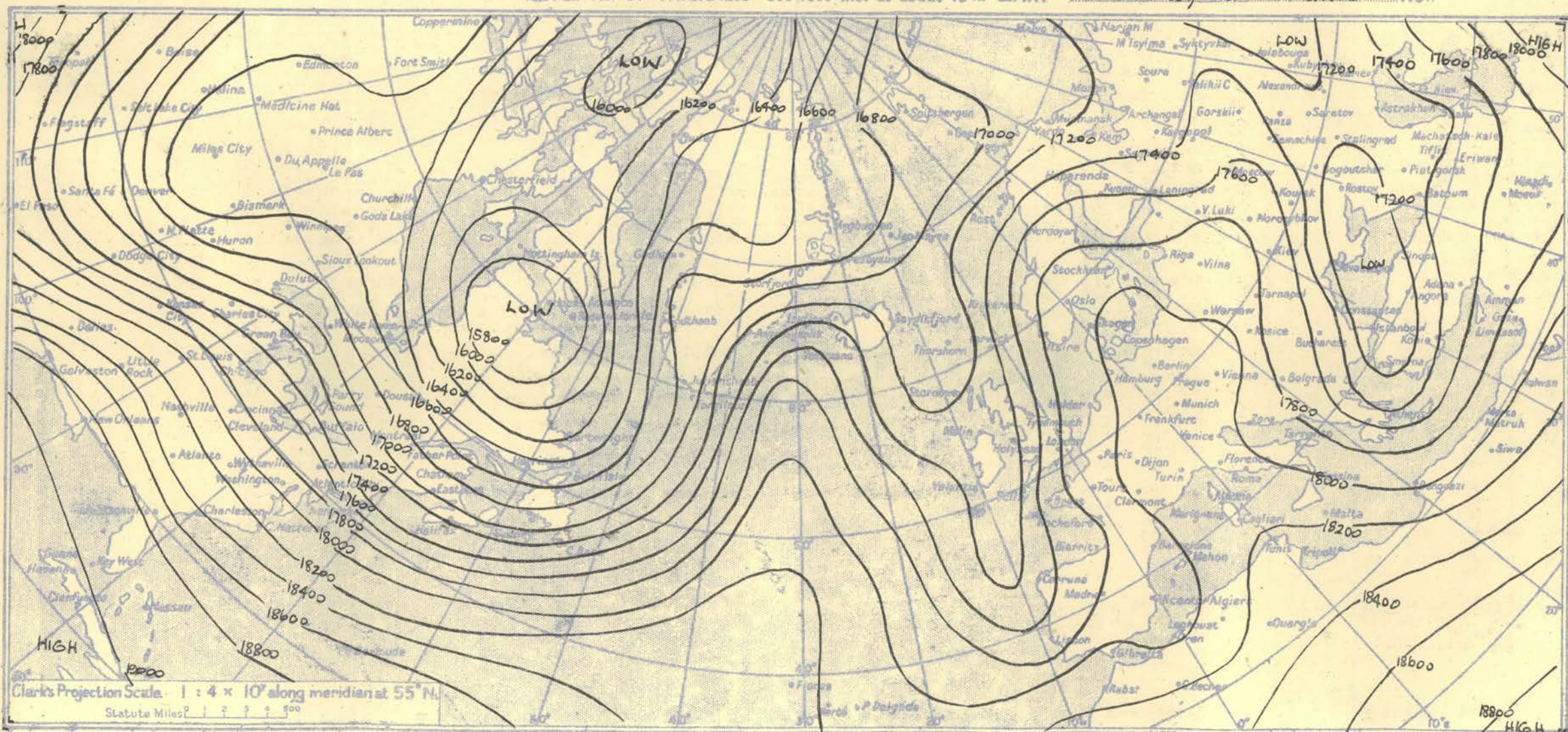
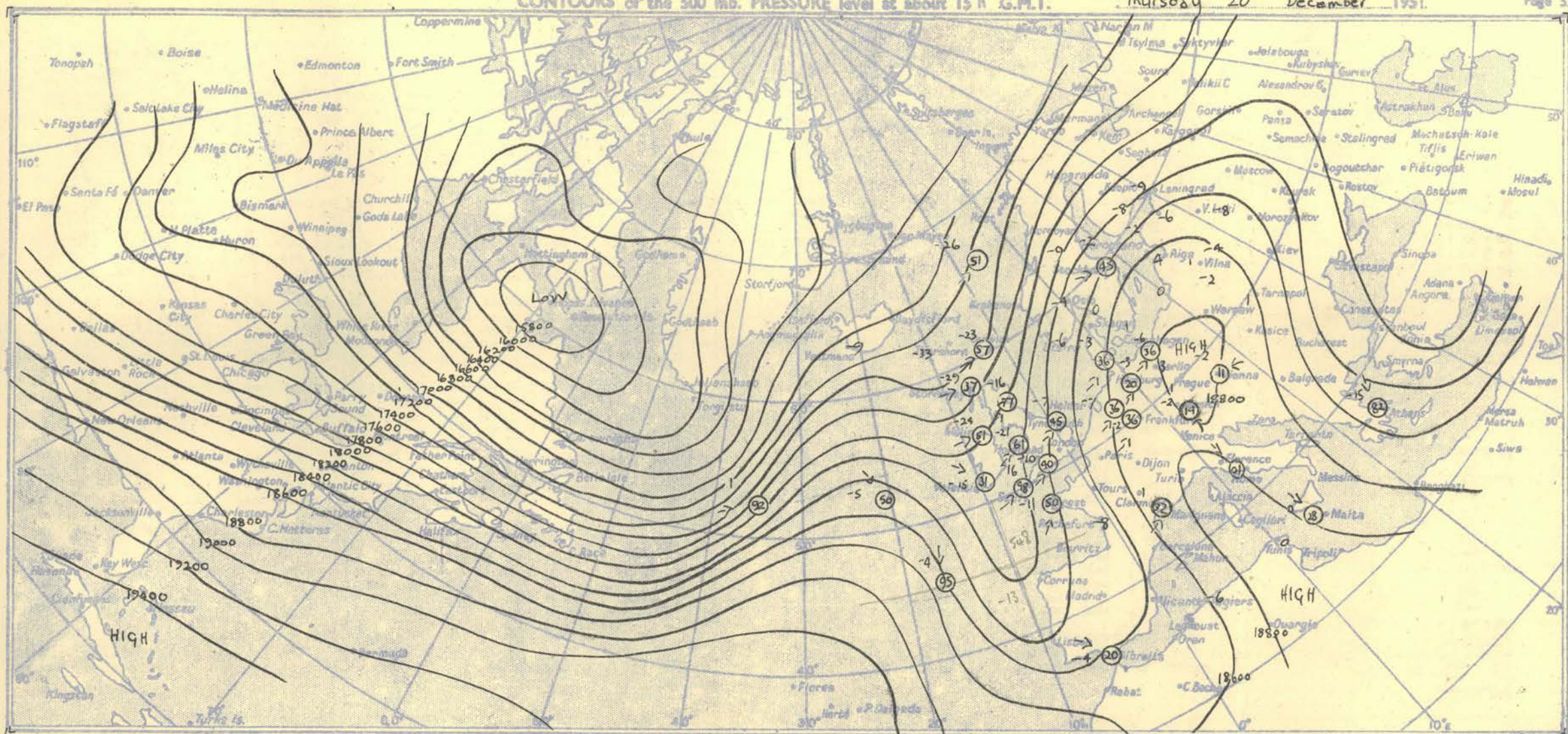
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Rapid eastward movements in northern latitudes carried the northern part of the Atlantic trough across the British Isles. In the south it moved more slowly to Portugal. Warming associated with subsidence, was substantial across the central areas of the trough and a separate cold pool formed to the south.

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

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



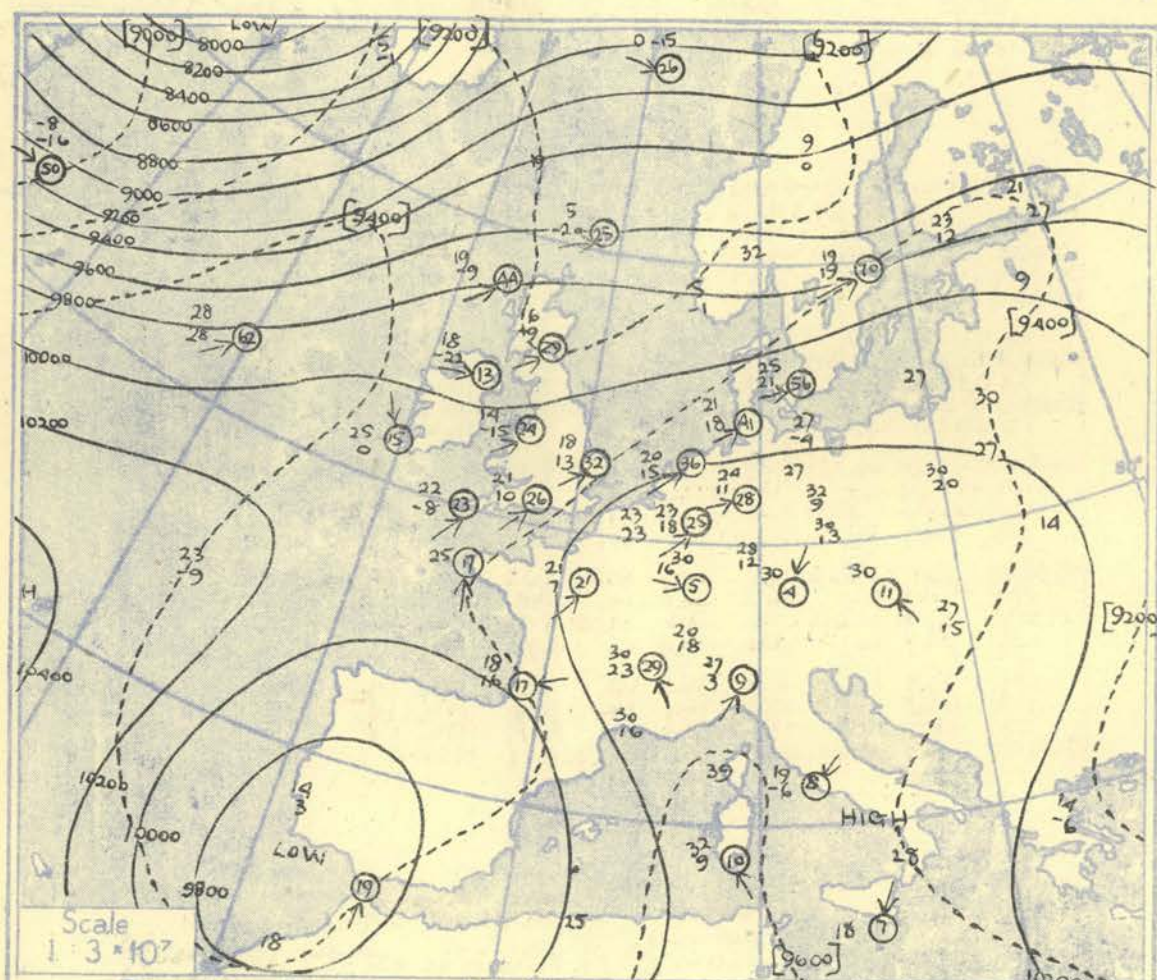
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA				STATION																												
Time M.S.L. Surf Pressure	15h 1007.9 997.7 912				G.M.T. mb mb mb				15h 1016.7 1015.8 918				G.M.T. mb mb mb				15h 1020.3 1011.0 918				G.M.T. mb mb mb				15h 1018.1 1016.1 893				G.M.T. mb mb mb				15h 1017.4 1015.9 792				G.M.T. mb mb mb				15h 1017.2 1001.2 782				G.M.T. mb mb mb				15h 1017.3 1006.6 883				G.M.T. mb mb mb				15h 1023 1022 900				G.M.T. mb mb mb				Time M.S.L. Surf Pressure
	912								918								918								792								782								883								900																
	912								918								918								792								782								883								900																
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	33	290	18				00.2	45	34	310	08.02.5	44	38	Colm	00.6	47	43	330	07.00.4	48	47	240	07.04.4	52	47	Colm	02.9	48	45	030	10.00.3	47	37	355	10	Surf																											
1000	02.1								04.4	43	32		05.5	43	36	352	15.04.9	45	42	316	15.04.7	51	46		04.7	51	46		04.7	47	44		06.2	44	35	356	13	1000																											
950	38.29	290	30						37.26	323	22		37.27	353	14		39.35	325	17		48.40	251	22		45.42	235	07		40.30	032	16		38.33	358	15	950																													
900	30.1	30	23	290	33				32.3	30	21	329	22.33.5	29	21	345	17.33.0	33	28	330	16.52.9	43	37	244	22.33.2	39	36	219	11.42.9	34	30	049	09.34.2	32	28	356	13	900																											
850	44.9	23	15	286	32				47.1	23	15	322	16.48.3	23	16	334	16.47.9	27	22	332	14.48.2	38	32	228	23.48.4	33	29	205	19.48.0	29	25	088	03	25	21	347	12	850																											
800	60.4	17	05	282	30				62.7	20	09	283	12.63.9	18	03	325	15.63.7	23	17	284	09.64.2	33	29	221	27.64.3	33	19	213	23.63.7	24	19	202	06.64.8	22	10	342	21	800																											
750																																							750																										
700	94.0	05	03	261	29				96.5	08	00	246	25.97.5	05	16	259	20.97.9	17	01	237	27.99.0	22	14	215	28.99.1	20	10	210	22.97.9	15	15	186	13	98.7	05	12	316	21	700																										
650	02.03	236	29						03.10	239	33		01.22	248	25		09.24	212	42		16.05	207	33		14.08	215	27		12.34	180	18		01.20	311	17			650																											
600	131.8	06	11	226	34				134.5	06	28	239	42.135.2	03	31	236	31.36.4	01	22	219	52.38.1	10	03	210	42.38.0	07	00	211	31.36.5	02	42	210	34	36.5	08	25	296	21	600																										
550	14.20	223	46						14.29	230	50		16.37	234	35		11.29	217	61		02.14	204	42		01.06	203	34		08.55	207	47		15.33	296	22			550																											
500	175.0	23	28	219	57				178.0	16	29	220	77.178.3	24	39	222	51.80.0	21	38	213	61.183.1	07	23	210	45.182.6	10	17	98	40	180.5	16	20	193	48	180.0	15	34	320	31	500																									
450	27.36	213	87						23.38	216	97		31.45	220	64		30.46	209	67		18.33	207	50		19.28	190	50		27.34	191	57		13.33	002	72			450																											
400	226.5	27	42	211	110				229.9	33	45	213	100.229.4	34	54	223	66.231.2	36	55	201	74.235.8	25	42	204	63.235.1	27	43	196	52.231.9	38	45	193	63.232.8	23	42	360	87	400																											
350	36.50	208	103						43	208	97		40.60	216	52		44	207	71		39.59	198	62		39.52	96	51		48	201	70		34.52	360	90			350																											
300	291.3	49		206	100				293.9	51		206	85.293.8	48		230	36.295.0	53		211	62.300.1	56		196	62.099.5	53		203	43.295.1	57		193	62.297.9	47		355	103	300																											
250	578.4	59		222	58				581.3	56		224	47.381.6	54		223	38.381.6	57		214	40.385.3	64		187	39.385.5	61		211	37.380.9	63		217	22.384.1	65		355	42	250																											
200	58			226	61				52			223	45		58		219	35		215	41		56		202	28		204	24		210	24		62		004	47	200																											
150	53			233	58				56			213	45		55		224	32		203	34		60		205	26		58	205	16		59	209	27		63	019	49	150																										
130	53								59			232	45		60		217	42		198	18		64		205	20		63	190	15		58	206	21		62		130																											
110	61								60			222	42		61		222	40		232	14		69		180	12		65	207	10		62	211	12		65		110																											
100	52.4	62							53.0	65		221	38.530.0	65		206	25.529.7	71		257	14.532.1	68		148	07.533.1	67		199	10.528.5	65		184	07.530.8	67				100																											
90	65								69			203	33		65		211	23		180	07		68		146	06		69	197	08		70	167	07			90																												
80	69								74			199	30		66		224	18		182	13		71		146	06		65	176	09		74	221	06			80																												
70	65								67			228	25		68		217	20		172			72		144	06		67	176	09		77	208	06			70																												
60	65								67			228	25		68		217	20		172			72		144	06		67	176	09		77	208	06			60																												
Inversion 410-490mb 42°				Inversion 840mb 22°-430mb 23°				Inversion 535-550mb 17°-493-550mb 16°				Inversion 805mb 22°-787mb 24°				Inversion 1016mb 48°-965mb 49°				Isothermal 850-791mb 33°				Isothermal 634-721mb 150°				Inversion 550mb 15°-540mb 46°				Isothermal 450-443mb -13°																																	
Tropopause I 253mb-61° 32,800'				II 240mb-60° 34,100'				II 285mb-52° 30,500'				I 228mb-65° 35,300'				I 250mb-70° 33,868'				I 233mb-67° 35,200'				II 275mb-63° 31,300'				II 229mb-68° 35,600'				Tropopause																																	

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

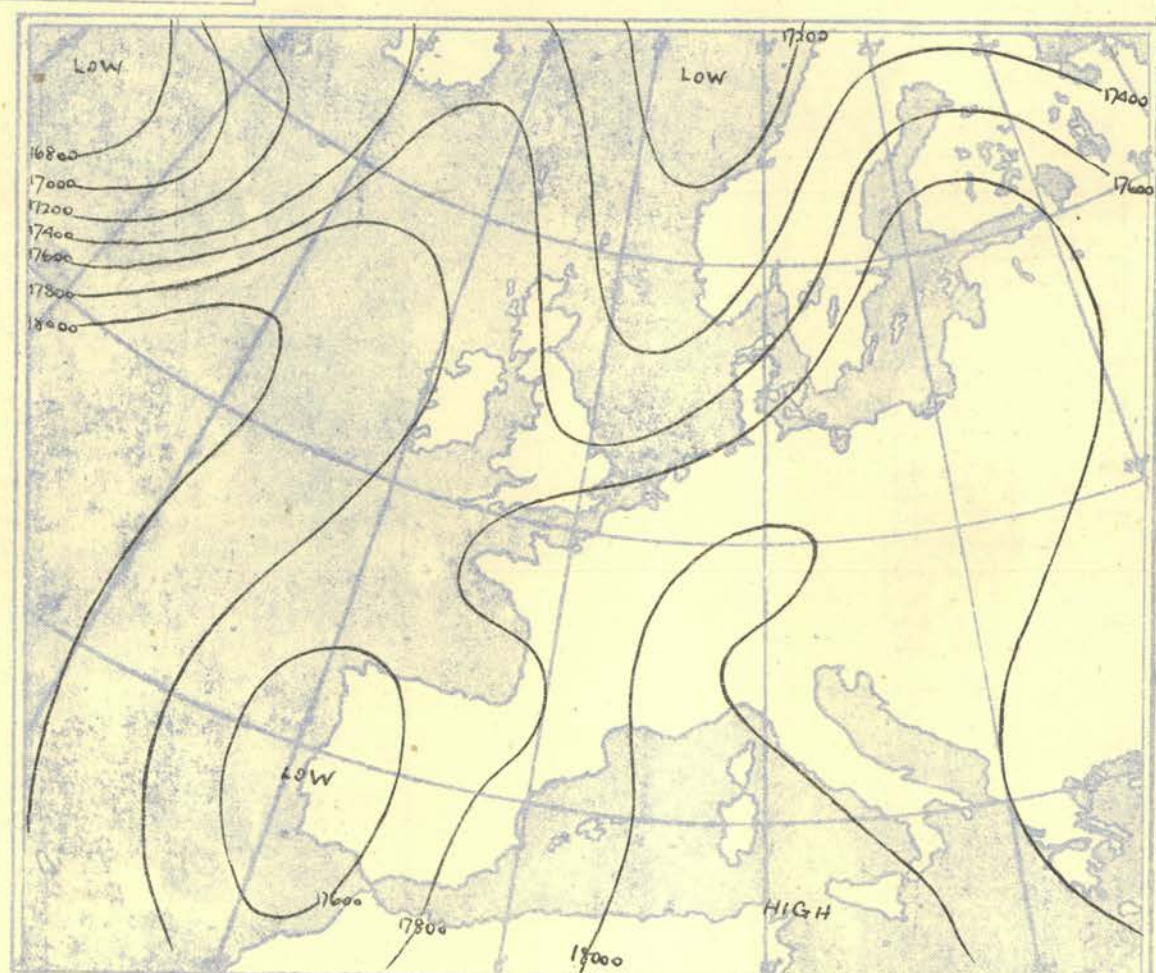
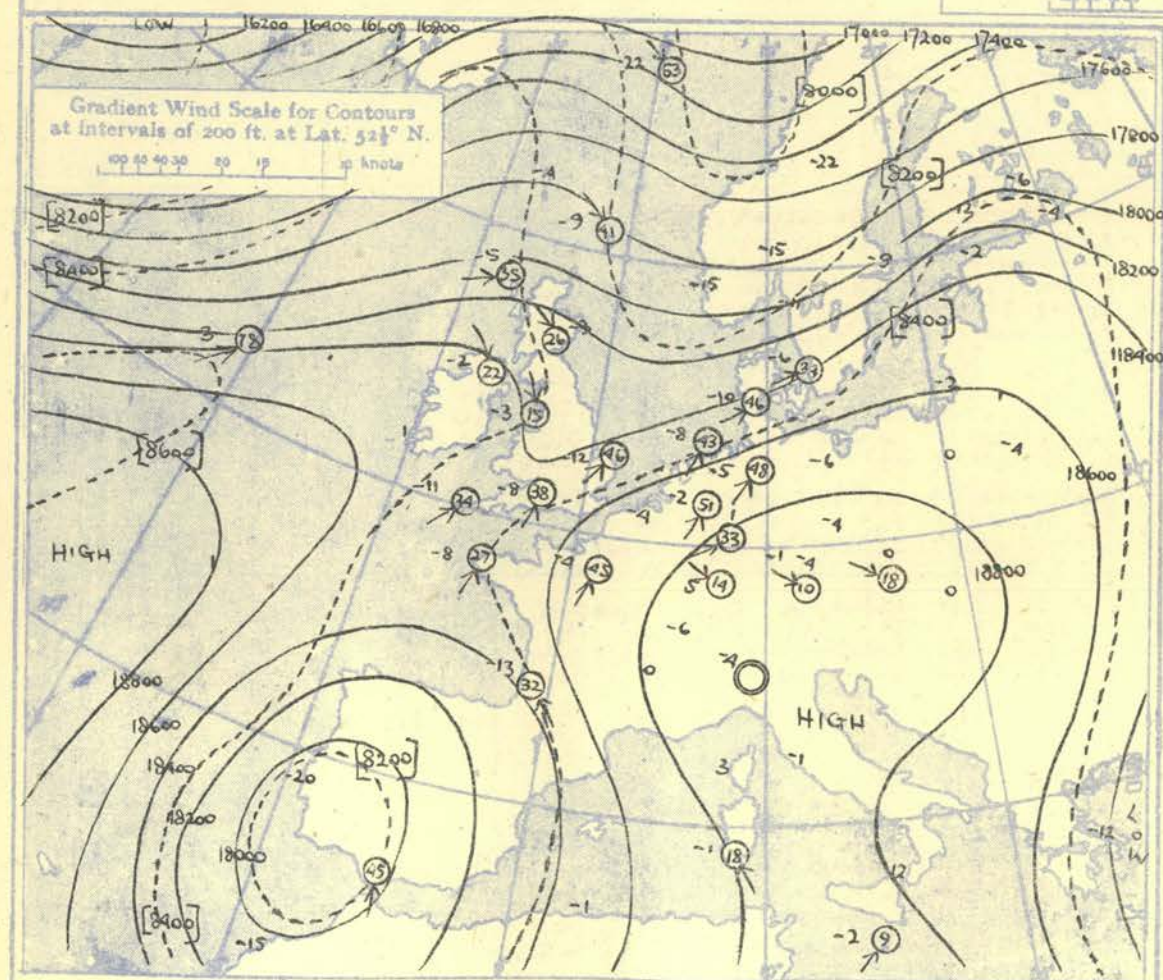
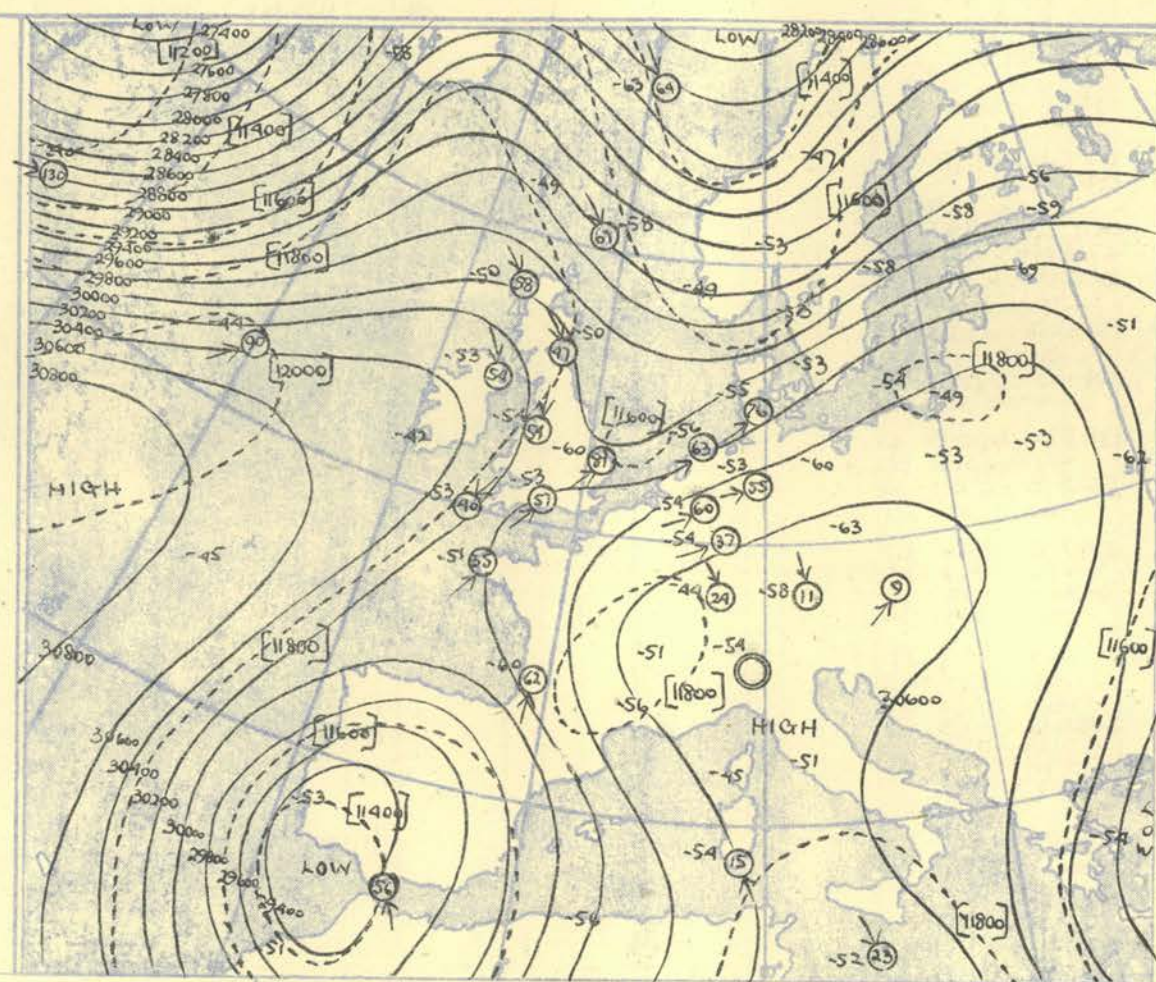
STATION	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	HEMSBY	LARKHILL	CAMBORNE	Valentia
Time M.S.L.	03hrs 1018.1	G.M.T. mb	G.M.T. mb	G.M.T. mb	G.M.T. mb	G.M.T. mb	G.M.T. mb	G.M.T. mb	G.M.T. mb
Surf	1007.9	mb	mb	mb	mb	mb	mb	mb	mb
Pressure	924	mb	mb	mb	mb	mb	mb	mb	mb
Pressure mb	924								
Height ft./100	02741								
Temp. °F	41								
Dew °F	34								
Wind Dir.	235								
Wind Vel. knots	20								
Surf	02741								
1000	04741								
950	3620								
900	34728								
850	47421								
800	62516								
750	10								
700	0520								
650	0121								
600	1413								
550	430300								
500	1783								
450	1844								
400	20329								
350	44								
300	04758								
250	72								
200	3189								
170	71								
150	64								
130	65								
110	65								
100	52406								
90	65								
80	71								
70	72								
60									
Isotermal	500-490ms 29°								
Tropopause	1240 ms -76°								
STATION	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	HEMSBY	LARKHILL	CAMBORNE	Valentia
Time M.S.L.	03hrs 1016.5	G.M.T. mb	G.M.T. mb	G.M.T. mb	G.M.T. mb	G.M.T. mb	G.M.T. mb	G.M.T. mb	G.M.T. mb
Surf	1006.3	mb	mb	mb	mb	mb	mb	mb	mb
Pressure	919	mb	mb	mb	mb	mb	mb	mb	mb
Pressure mb	919								
Height ft./100	02741								
Temp. °F	35								
Dew °F	20								
Wind Dir.	200								
Wind Vel. knots	25								
Surf	02741								
1000	04741								
950	3631								
900	3430								
850	47125								
800	62820								
750	21								
700	96919								
650	12								
600	135809								
550	0500251								
500	1692								
450	1246								
400	234422								
350	3840								
300	299249								
250	65								
200	384288								
170	82								
150	72								
130	65								
110	69								
100	526868								
90									
80									
70									
60									
Inversion	765ms 27°-750ms 21° 630ms 9°-615ms 10° Isotermal 1006-995ms 41° 718-700ms 19°								
Tropopause	1155 ms -87°								

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.



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

100 80 60 40 20 10 0 knots



AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY															DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Time M.S.L. Surf Pressure	mb	mb	mb	mb	mb	mb	mb	mb	mb	Time M.S.L. Surf Pressure	mb	mb	mb	mb	Place	Time	02hs	15hs	15hs	11hs	1420hs	15hs	Type	Alor	Pilar	Pilar	Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.

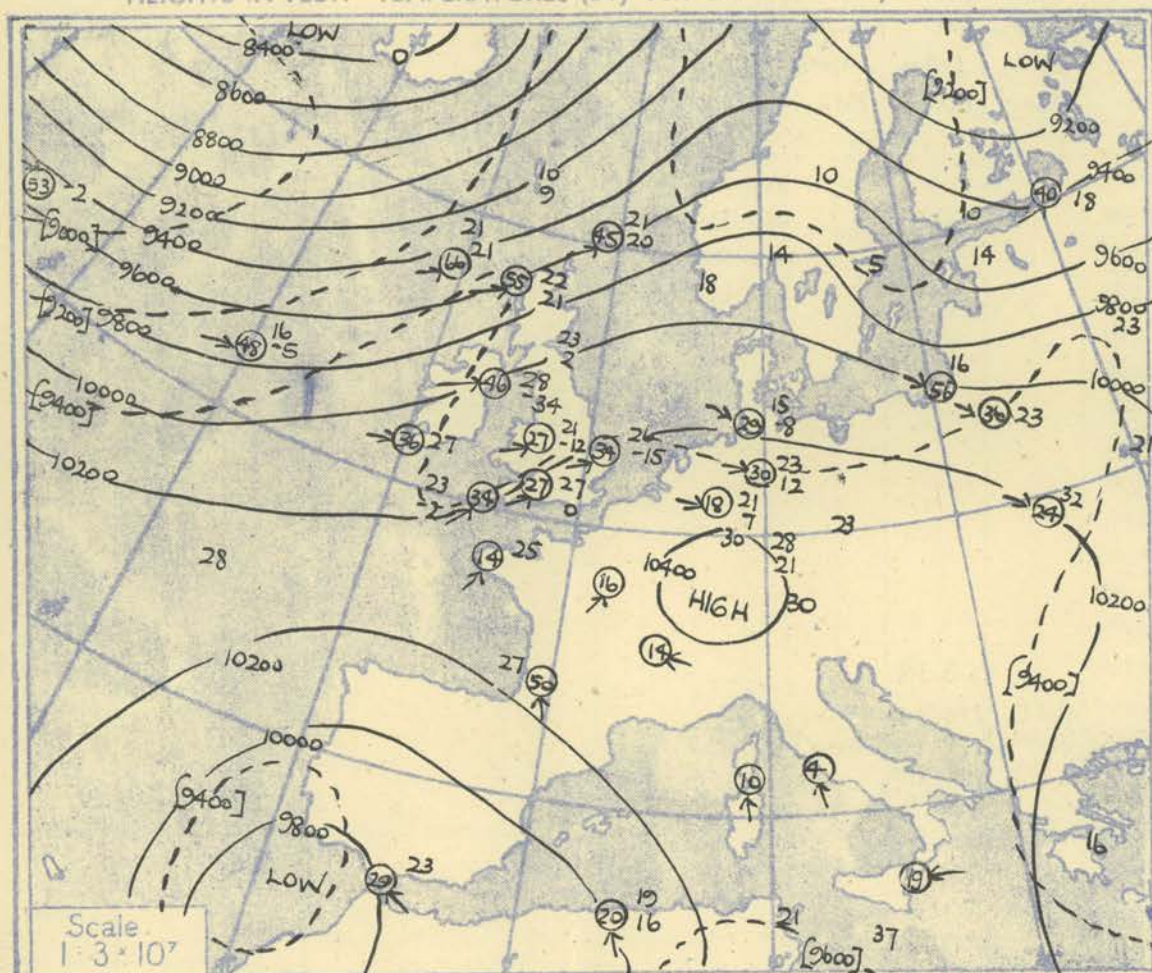
No Flights Available.

NEPHOSCOPE OBSERVATIONS

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

Ship	Weather Explorer	Weather Explorer	Weather Observer	Weather Observer	Weather Observer	Weather Observer	Ship
Lat/Long	57-3°N 10-4°W	57-7°N 11-6°W	52-1°N 20-3°W	52-3°N 20-5°W	52-3°N 20-0°W	52-2°N 20-1°W	Lat/Long
Time M.S.L.	15h	20h	02h	08h	15h	20h	Time M.S.L.
Pressure	Surf	mb	mb	mb	mb	mb	Pressure
Height ft./100	Temp.	Dew	Temp.	Dew	Temp.	Dew	Height ft./100
Surf	47	42	263	29	44	32	Surf
1000	1-8	46	46	2-4	43	32	1000
950	41	35	255	33	37	28	950
900	30-1	34	256	36	30-4	31	900
850	31	28	257	33	23	19	850
800	61-0	28	252	32	60-9	17	800
750	25	25	239	50	4	5	750
700	25-6	21	226	66	94-4	3	700
650	17	5	221	78	0	10	650
600	14-9	11	229	72	132-2	-2	600
550	3	-1	237	69	-7	-29	550
500	173-9	1	-2	85	176-2	-14	500
450	-8	-10	221	97	-21	-42	450
400	233-5	-9	-22	114	228-3	-32	400
350	-31	-34	223	100	-44	217	350
300	209-4	48	224	20	201-8	-59	300
250	-62	223	116	-69	225	120	250
200	324-7	-79	221	106	276-7	-67	200
170	-77	223	78	-68	214	102	170
150	-71	222	66	-66	219	66	150
130	-68	224	60	-68	223	68	130
110	-68	226	51	-67	231	66	110
100	-68			-67	223	52	100
90	(140mb)			-67	223	50	90
80				-67	222	40	80
70				-67	221	45	70
60				-68			60
Inversion:	538 mb 0°						Inversion:
514 mb 03°							673 mb -1°
							638 mb 1°
							600 mb -2°
							590 mb -1°
Tropopause	I 192 mbs -82°F						Tropopause
	39,200ft.						I 230 mbs -73°F
							34,800ft.
							N.R. 238 mbs -72°F
							35,200ft.
							I 198 mbs -94°F
							38,500ft.
							I 225 mbs -77°F
							35,700ft.
							I 240 mbs -79°F
							34,200ft.

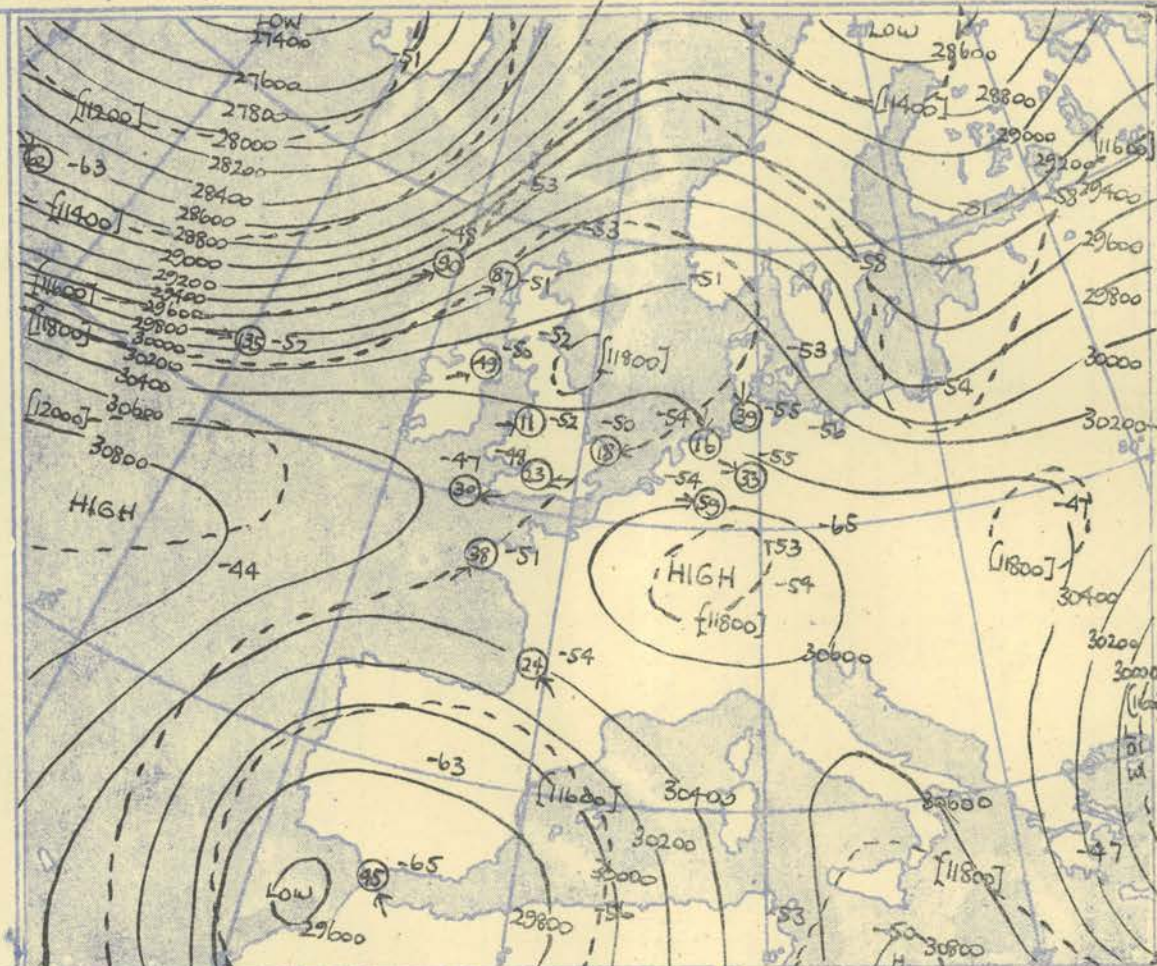
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h G.M.T.



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.

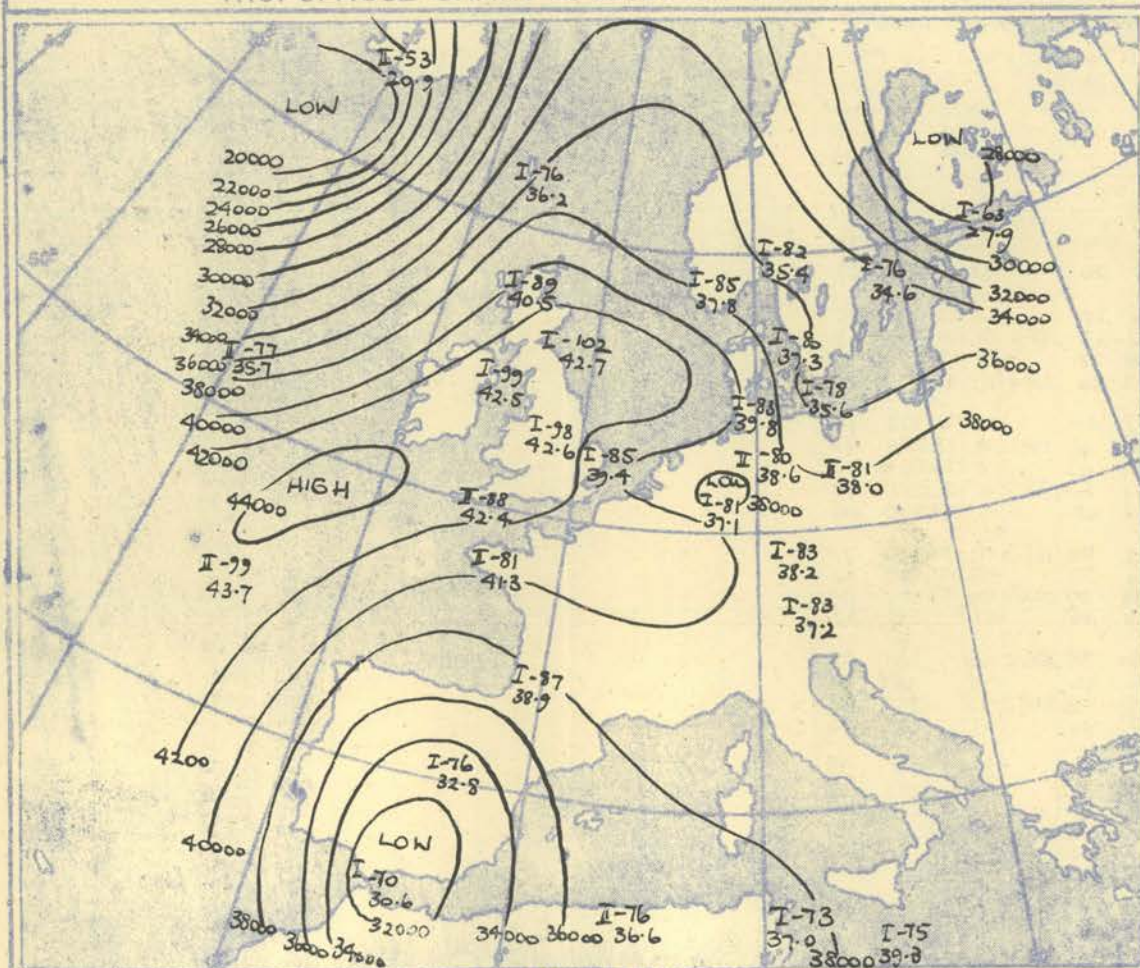
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. $52\frac{1}{2}^\circ$ N.

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 500-300 mb.

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



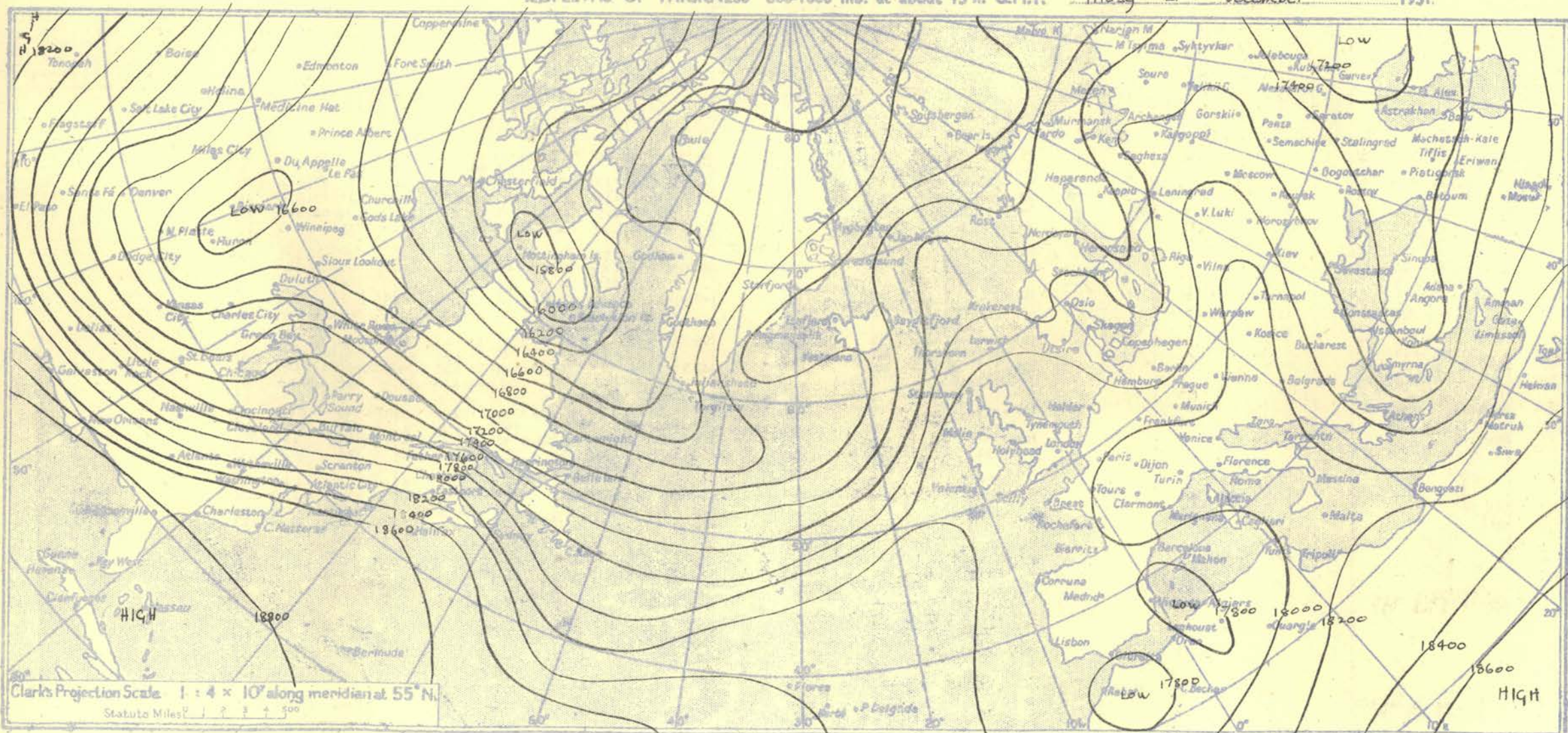
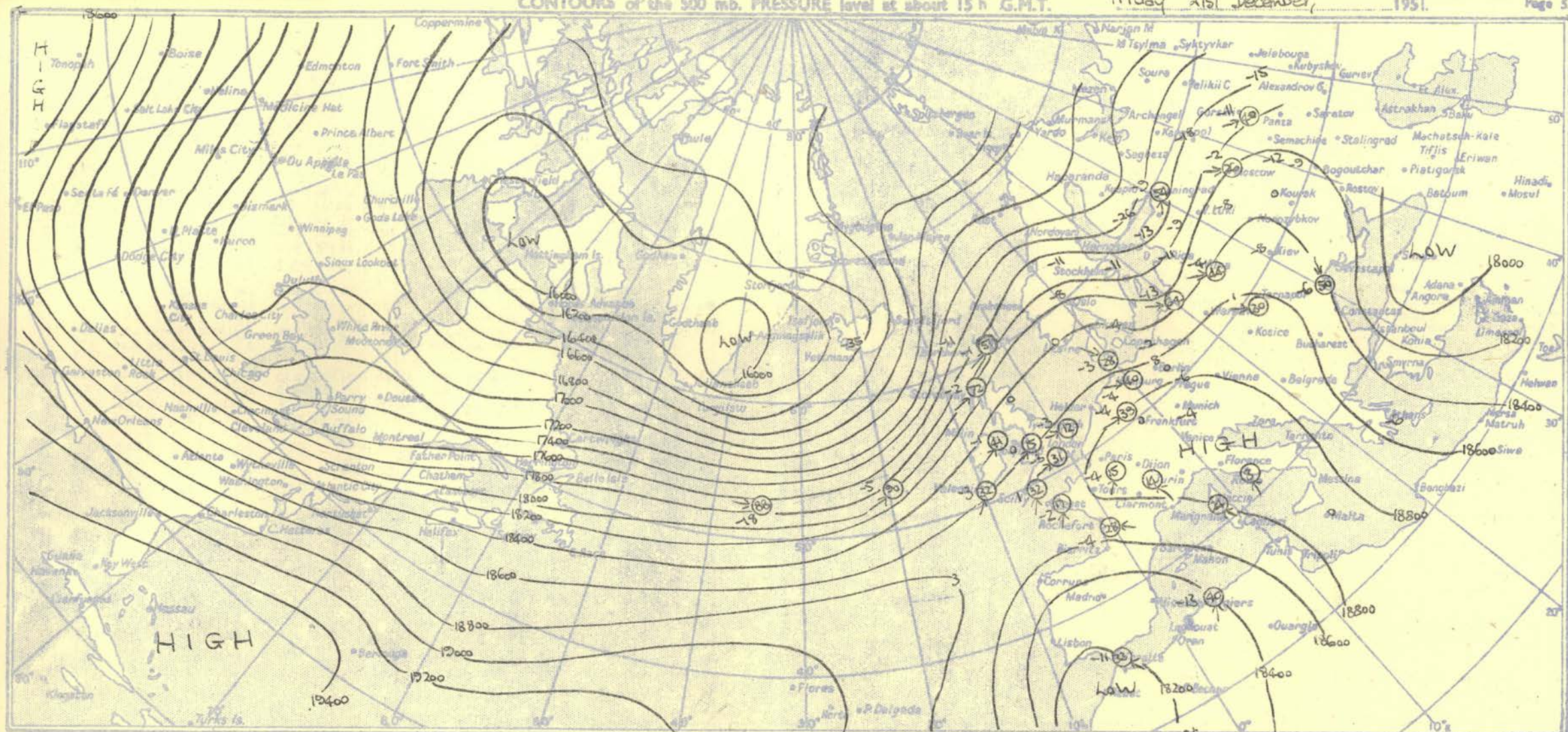
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The relaxation of the cold trough crossing into Western Europe continued exceedingly rapidly, and there was very rapid eastward penetration of cold air into the West Atlantic.

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

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

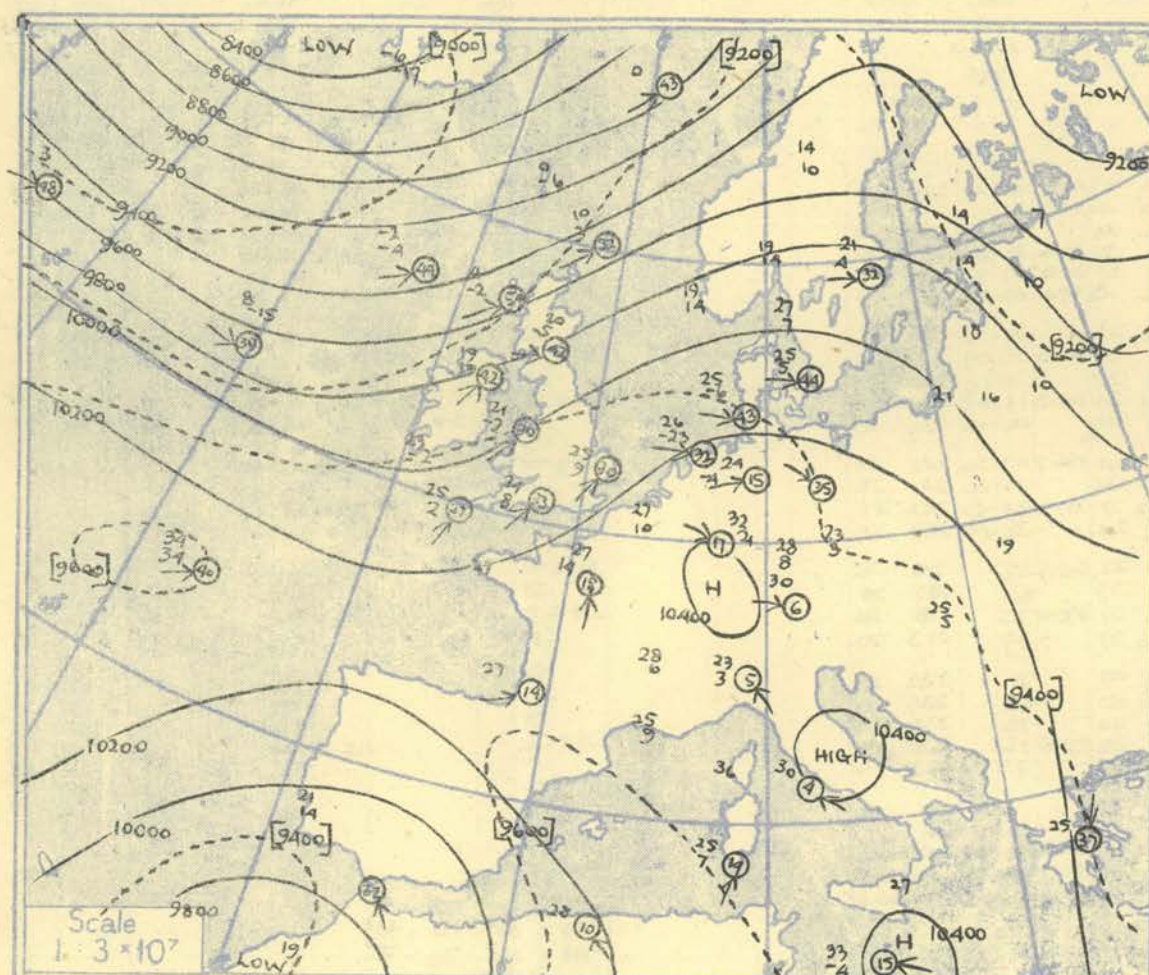


RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

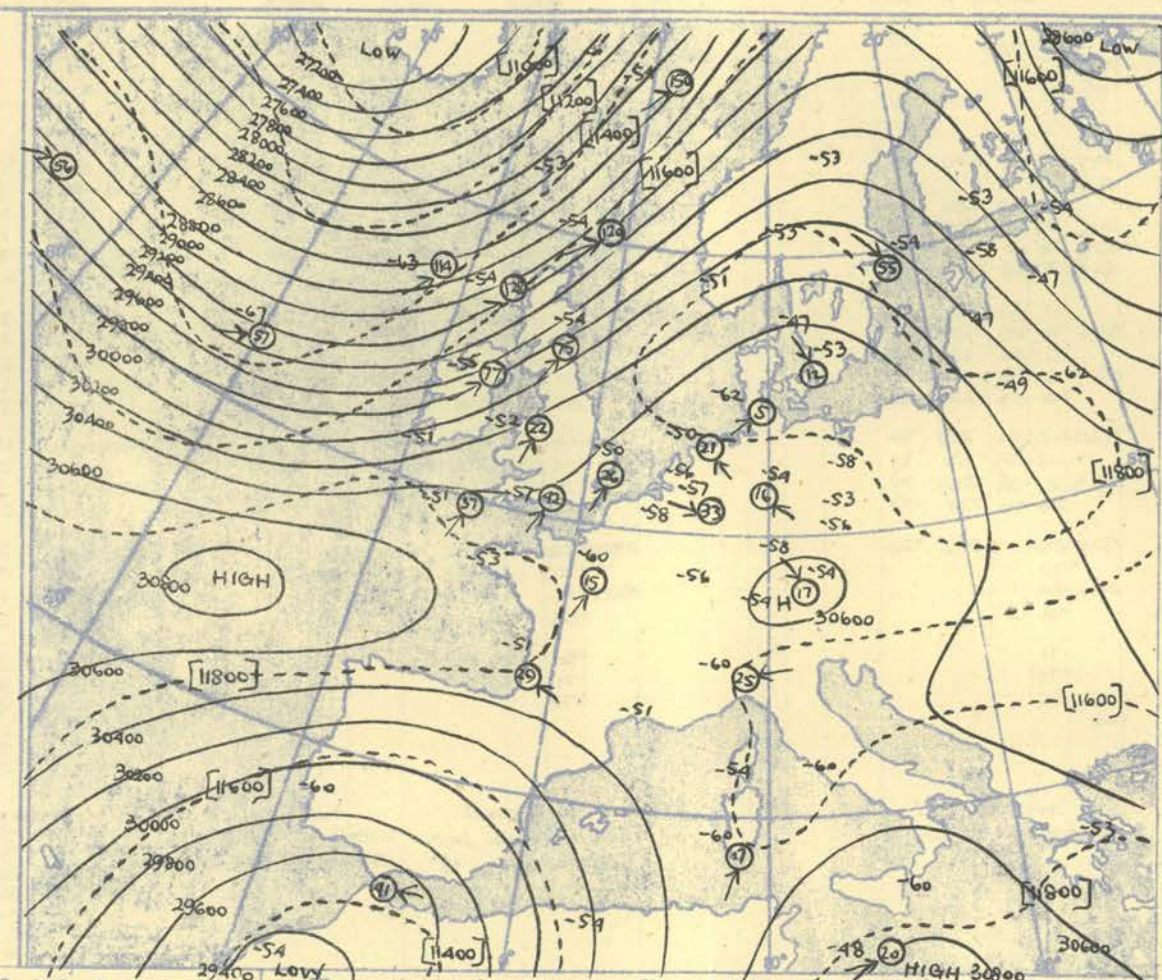
STATION	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	HEMSBY	LARKHILL	CAMBORNE	VALENTIA	STATION																							
Time M.S.L.	15h	G.M.T.	G.M.T.	G.M.T.	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	Time M.S.L.																					
Surf	1012.3	mb	mb	mb	mb	1029.2	mb	1030.3	mb	1029.6	mb	Surf																					
Pressure	1002.1	mb	mb	mb	mb	1027.7	mb	1013.8	mb	1018.8	mb	Surf																					
Freezing	911	mb	mb	mb	mb	750	mb	437	mb	843	mb	Freezing																					
Pressure	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb																				
Surf	02.7	41	37	205	29	02.5	41	31	200	20	02.4	46	45	190	03	04.4	45	45	Ca	m	02.9	50	43	190	07	00.3	49	42	203	20	Surf		
1000	03.2	41	37	205	29	06.0	40	30	203	38	07.8	46	45	206	09	08.1	44	44	235	08	08.0	48	41	199	15	06.2	48	41	201	31	1000		
950	36	33	206	48	39	30	214	41	34	30	36	33	206	48	41	199	15	06.2	48	41	201	31	1000	36	33	206	48	39	30	214	41	950	
900	31.1	31	29	210	50	34.0	34	25	220	42	36.1	38	31	241	19	36.2	35	34	237	12	36.3	36	21	220	14	34.5	35	20	214	41	900		
850	46.0	28	27	237	48	48.9	27	19	230	42	51.6	35	30	232	22	51.4	37	20	223	25	51.3	33	09	220	16	36	28	226	36	850			
800	61.7	27	26	240	40	64.9	33	06	230	44	67.3	34	15	241	22	67.6	37	04	230	25	67.2	29	05	224	22	65.7	33	24	235	37	800		
750	25	24	225	40	28	08	232	46	32	10	246	30	33	05	230	26	33	05	230	26	33	05	230	26	33	05	230	26	33	05	230	26	750
700	96.4	21	20	228	45	99.8	28	34	230	46	102.2	26	15	242	34	102.7	27	00	233	27	101.7	23	02	224	34	100.6	27	19	250	36	700		
650	16	13	243	50	18	21	245	35	20	10	232	27	20	10	232	27	20	10	232	27	20	10	232	27	20	10	232	27	20	10	232	27	650
600	36.5	12	08	247	47	39.4	17	09	238	42	41.5	10	30	249	37	42.1	13	14	238	30	41.1	15	08	214	35	140.2	15	05	236	29	600		
550	06	01	242	47	08	00	236	40	06	39	260	32	05	30	226	31	05	30	226	31	05	30	226	31	05	30	226	31	05	30	226	31	550
500	100.7	01	07	236	51	104.9	01	09	230	41	108.7	03	45	268	11	107.3	03	38	248	31	106.7	01	25	222	32	185.5	03	13	220	72	500		
450	12	19	245	61	09	20	227	42	12	53	253	06	12	47	242	36	12	47	242	36	12	47	242	36	12	47	242	36	12	47	242	36	450
400	233.9	24	32	244	67	238.4	21	31	230	44	239.9	23	56	123	03	240.5	24	58	240	32	240.2	22	53	213	30	238.6	24	35	226	34	400		
350	38	46	247	72	35	44	237	45	30	4	50	239	49	70	244	44	30	4	50	239	49	70	244	44	30	4	50	239	49	70	244	44	350
300	398.6	53				303.4	50		239	49	304.7	50		068	18	305.3	48		085	23	305.4	47		075	30	303.0	56		229	35	300		
250	69					307.7	87		249	48	309.5	84		077	29	310.5	80		060	24	311.3	78		037	32	308.5	92		234	39	250		
200	177	73				387.7	87		242	48	389.5	84		077	29	310.5	80		060	24	311.3	78		037	32	308.5	92		234	39	200		
150	mb)					387.7	87		242	48	389.5	84		077	29	310.5	80		060	24	311.3	78		037	32	308.5	92		234	39	150		
130						387.7	87		242	48	389.5	84		077	29	310.5	80		060	24	311.3	78		037	32	308.5	92		234	39	130		
110						387.7	87		242	48	389.5	84		077	29	310.5	80		060	24	311.3	78		037	32	308.5	92		234	39	110		
100						387.7	87		242	48	389.5	84		077	29	310.5	80		060	24	311.3	78		037	32	308.5	92		234	39	100		
90						387.7	87		242	48	389.5	84		077	29	310.5	80		060	24	311.3	78		037	32	308.5	92		234	39	90		
80						387.7	87		242	48	389.5	84		077	29	310.5	80		060	24	311.3	78		037	32	308.5	92		234	39	80		
70						387.7	87		242	48	389.5	84		077	29	310.5	80		060	24	311.3	78		037	32	308.5	92		234	39	70		
60						387.7	87		242	48	389.5	84		077	29	310.5	80		060	24	311.3	78		037	32	308.5	92		234	39	60		
isothermal	650-816mb	28°				isothermal	650-816mb	28°			isothermal	650-816mb	28°			isothermal	650-816mb	28°			isothermal	650-816mb	28°			isothermal	650-816mb	28°			isothermal	650-816mb	28°
Tropopause	222mb-76°36,200'					Tropopause	165mb-29°42,500'				Tropopause	195mb-85°39,400'				N.R.					Tropopause	170mb-88°42,400'				Tropopause	193mb-94°39,400'				Tropopause		
STATION	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	HEMSBY	LARKHILL	CAMBORNE	VALENTIA	STATION																							
Time M.S.L.	21h	G.M.T.	G.M.T.	G.M.T.	G.M.T.	21h	G.M.T.	21h	G.M.T.	21h	G.M.T.	Time M.S.L.																					
Surf	1008.9	mb	mb	mb	mb	1030.4	mb	1030.6	mb	1029.6	mb	Surf																					
Pressure	998.8	mb	mb	mb	mb	1028.9	mb	1013.8	mb	1018.6	mb	Surf																					
Freezing	815	mb	mb	mb	mb	750	mb	742	mb	759	mb	Freezing																					
Pressure	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb																				
Surf	02.7	43	39	210	29	02.5	42	41	180	18	00.4	46	45	220	10	04.9	45	45	210	08	02.9	44	42	160	07					Surf			
1000	02.4					05.3	41	41	190	32	07.8	44	44	220	10	08.1	44	44	210	08	07.8	47	44	211	15					1000			
950	39	35	215	42	37	37	235	44	39	39	235	18	40	40	222	16	40	40	222	16	40	40	222	16	40	40	222	16	40	40	950		
900	30.5	35	33	227	44	33.4	36	36	247	45	36.0	38	31	238	21	36.3	40	27	227	19	36.1	34	34	212	21					900			
850	48.5	34	33	236	45	48.5	33	33	251	36	51.1	36	17	238	24	51.5	39	06	231	21	41.2	36	06	213	22					850			
800	61.6	31	30	234	45	64.5	31	31	236	30	67.2	38	02	237	28	67.6	37	04	227	22	67.2	36	04	212	25					800			
750	27	25	230	42	28	27	220	40	32	05	235	32	33	06	225	24	33	06	225	24	33	06	225	24	33	06	225	24	33	06	750		
700	96.3	20	18	230	44	99.3	25	23	237	50	102.2	25	12	235	33	102.7	27	00	222	25	102.1	24	04	221	27					700			
650	15	12	234	45	17	18	234	51	21	27	238	32	20	10	217	28	20	10	217	28	20	10	217	28	20	10	217	28	20	10	650		
600	35.5	10	05	232	50	38.8	16	13	230	54	41.5	13	46	247	34	42.1	15	17	225	32	41.4	12	23	213	31					600			
550	02	02	230	57	11	08	228	52	04	52	250	34	06	26	227	35	06	26	227	35	06	26	227	35	06	26	227	35	06	26	550		
500	150.5	03	09	233	76	184.6	01	03	226	52	186.7	04	58	251	35	187.5	02	33	228	32	186.5	04	40	224	33					500			
450	10	16	232	83	09	14	223	53	12	53	245	25	12	52	235	28	12	52	235	28	12	52	235	28	12	52	235	28	12	52	450		
400	233.9	20	25	231	88	238.1	19	25	226	60	239.9	23	56	173	10	240.7	25	53	233	34	239.3	30	57	209	31					400			
350	38	40	228	97	32	38					37	60	122	10	39	60	235	39													350		
300	298.9	54		97	303.6	49					304.7	50		117	17	305.2	52		200	10	303.3	55		060	17					300			
250	74				307.7	87					309.5	84		111	24	310.5	80		118	15	311.3	78		058	20					250			
200	382.5	75			388.2	91					389.5	84		095	12	390.3	81		111	15	391.3	78		354	04					200			
150	69				387.7	87					389.5	84		077	29	310.5	80		060	24	311.3	78		217	23					150			
130					387.7	87																											

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA.				STATION
Pressure Time M.S.L. Surf Pressure	09h.		G.M.T.		09h.		G.M.T.		09h.		G.M.T.		09h.		G.M.T.		09h.		G.M.T.		09h.		G.M.T.		09h.		G.M.T.		09h.		G.M.T.		Time M.S.L. Surf Pressure				
	1009.6	mb			1017.2	mb			1019.8	mb			1024.2	mb			1028.0	mb							1027.2	mb			1021.6	mb							
	999.5	mb			1016.4	mb			1010.4	mb			1022.1	mb			1026.3	mb							1016.2	mb			1020	mb							
900					875				880				829				775								788				820								
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	02.7	43	37	250	20	00.2	46	42	280	12	02.5	44	43	00.6	38	35	150	09	00.4	43	42	230	10	02.9	44	41	220	05	00.3	46	44	Surf					
1000	02.5	39	29	253	33	04.6	44	40	05.3	43	42	06.4	41	37	202	20	07.4	39	36	239	23	07.3	47	43	210	16	05.8	44	42	1000							
950		36	27				40	38	240	36	39	37	38	37	244	24		35	36	237	22		42	38	215	18		40	38	950							
900	30.6	32	23	254	30	32.7	36	35	249	38	33.4	34	33	34.5	37	25	251	35	35.6	42	24	237	22	35.6	35	33	218	20	33.9	36	900						
850	45.5	26	21	250	33	47.7	30	30	255	39	48.4	30	30	49.6	34	11	251	35	50.8	37	16	239	27	50.7	37	00	228	24	33	29	850						
800	61.2	22	14	242	37	63.7	29	27	239	35	64.2	26	26	65.6	29	05	246	28	67.0	35	21	238	34	66.9	33	-02	222	27	64.9	31	800						
750		17	13	236	43		26	22	235	36		24	24		27	06	232	28		29	18	235	32		27	10	214	28		28	750						
700	35.1	10	03	228	52	38.2	20	15	240	42	38.6	19	19	100.2	21	-02	227	30	101.9	25	09	233	30	101.7	25	02	204	27	99.7	23	700						
650		12	-46	226	55		16	09	241	45		15	-09		18	-06	233	32		20	09	238	35		19	-14	217	28		18	650						
600	133.7	06	-50	224	64	137.2	10	02	241	50	137.5	08	-14	139.3	10	-10	230	35	141.3	14	-08	239	35	141.0	13	-21	218	34	138.9	11	600						
550		-01	-56	226	75		03	-06	238	52		05	-15		07	-10	233	29		06	-10	239	40		05	-33	216	33	04	-20	550						
500	178.3	-10	-52	227	87	182.3	-05	-11	230	61	182.5	-03	-17		184.5	-02	-15	246	24	186.7	-03	-20	241	38	186.2	-04	-40	225	35	184.0	-03	450					
450		-19	-59	231	80		-14	-20	227	62		-12	-20		-13	-21	245	24		-12	-32	241	38		-14	-50	221	36		-13	450						
400	230.8	-26	-58	233	99	235.3	-28	-32	225	72	235.7	-26	-33	237.5	-25	-45	242	27	239.9	-24	-43	243	42	239.2	-26	-58	227	37	237.1	-25	400						
350		-40	-60	227	114		-41		224	65		-41		-39	-39	239	24		-38	-56	238	35		-39	-59	237	21		-37	-49	350						
300	295.0	-56		222	120	299.4	-54		223	70	299.8	-55		302.0	-52		217	22	304.3	-58		218	26	303.6	-51		236	13	301.7	-51	300						
250		-70					-70		224	74		-72			-68		196	23		-63		182	20		-67					-68	250						
200	379.0	-84				383.2	-89		222	70	383.3	-91		386.3	-85		196	39	390.0	-75		178	20	388.4	-82				386.0	-86	200						
170		-78					-84					-81			-86		226	37		-79		213	20		-84				-87		170						
150		-71					-80					-76			-78		232	49		-71		232	22		-82					-76	150						
130		-72					-71					-72			-75		225	45		-68		235	26		-75					-79	130						
110	(115)	-66					-72					-72			-76		232	44		-73		234	34		-76					-73	110						
90														527.1	-76		231	38	532.8	-76		233	19	528.8	-80				526.5	-74	90						
80															-77		220	35		-75		225	26		-81					-73	80						
70															-79		218	31		-75					-78					-73	70						
60															075	-80									-78						-73	60					
Inversion 696mb. 09° - 676mb. 15°				Isotermal 850 - 805mb. 30° 688 - 670mb. 18°				Inversion 670mb. 15° - 656mb. 16° 580mb. 06° - 565mb. 07°				Inversion 1022mb. 28° - 991mb. 42° 935mb. 26° - 918mb. 37° 681mb. 18° - 659mb. 19° 569mb. 07° - 560mb. 08° Isotermal 918 - 878mb. 37° 792 - 756mb. 28°				Inversion 1026mb. 43° - 985mb. 44° 932mb. 37° - 900mb. 42° 850mb. 37° - 835mb. 39°				Inversion (58) mb 1016mb. 44° - 990mb. 49° 882 " 34° - 870 " 40° 745 - 26° 730 " 28° Isotermal 825 - 795mb. 33° 39,900'				Inversion 178mb. -91° 41,000'				Tropopause									
Tropopause II 200mb. -84° 37,900'				I 179mb. -93° 40,500'				I 196mb. -93° 38,800'				I 177mb. -91° 41,100'				I 177mb. -80° 41,500'								I 190mb. -86° 39,900'				I 178mb. -91° 41,000'				Tropopause					
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA.				STATION
Pressure Time M.S.L. Surf Pressure	09h.		G.M.T.		09h.		G.M.T.		09h.		G.M.T.		09h.		G.M.T.		09h.		G.M.T.		09h.		G.M.T.		09h.		G.M.T.		09h.		G.M.T.		Time M.S.L. Surf Pressure				
	1011.2	mb			1018.2	mb			1020.9	mb			1022.6	mb			1026.0	mb							1024.5	mb			1013.8	mb							
	1001.0	mb			1017.3	mb			1020.5	mb			1020.5	mb			1024.5	mb							1013.8	mb			800	mb							
920					872+900				910				858				781								800				800								
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	02.7	40	31		00.2	38	37	290	05	02.5	38	38	290	03	00.6	41	40	150	07	00.4	43	42	240	05	02.9	47	47	180	05			Surf					
1000	02.9	40	31		04.8	40	37	287	06	05.5	39	39	287	06	06.0	43	39	216	19	06.9	41	41	237	18	06.0	47	47	219	18			1000					
950		36	27			38	32	251	19		36	32	277	10	40	37	237	22		41	37	230	20		43	40	215	19			950						
900	30.8	29	22		32.8	32	26	264	22	33.5	31	25	269	12	34.2	36	33	251	22	35.0	40	26	228	21	36.0	38	36	213	21			900					
850	45.6	23	18		47.7	28	18	263	27	48.3	25	22	254	17	49.2	31	28	257	19	50.2	38	26	232	23	50.1	35	26	214	20			850					
800	61.2	18	12		63.6	25	10	258	30	64.0	19	17	246	18	65.2	28	25	250	19	66.3	34	22	230	25	66.2	32	13	219	18			800					
750		12	03			21	00	244	37		22	-02	241	28		24	21	240	24		29	20	232	35		29	17	218	28			750					
700	94.7	03	-06		97.7	20	-10	240	42	98.2	19	-14	240	38	99.6	21	17	240	26	101.2	26	18	235	41	101.0	24	11	215	20			700					
650		00	-18			13	-15	239	46		13	-21	241	44		17	13	238	27		20	14	237	45		20	00	210	32			650					
600	132.6	01	-41		136.5	07	-23	239	53	137.1	07	-25	235	48	138.7	11	06	229	29	140.7	14	08	237	42	140.5	16	10	211	34			600					
550		-07	-50			02	-28	235	53		01	-29	235	50		04	-02	235	34		07	-02	240	40		07	-21	217	21			550					
500	176.6	-14	-46		181.3	-06	-35	231	57	181.8	-08	-35	230	56	183.8	-04	-11	236	38	186.1	-02	-10	237	39	185.9	-02	-29	219	34			500					
450		-23	-47			-16	-43	230	60		-17	-41	266	63		-13	-21	236	40		-12	-28	237	44		-13	-40	221	33			450					
400	228.5	-34	-48		234.1	-27	-50	228	60	234.4	-27	-46	224	70	236.8	-26	-35	233	39	239.2	-24	-42	237	47	238.9	-25	-51	219	39			400					
350		-44				-38	-53	222	75		-39	-49	216	81		-39	-50	225	37		-38	-56	241	52		-38	-58	218	46			350					
300	292.5	-57			298.7	-53		234	79	298.8	-54		224	82	30																						

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



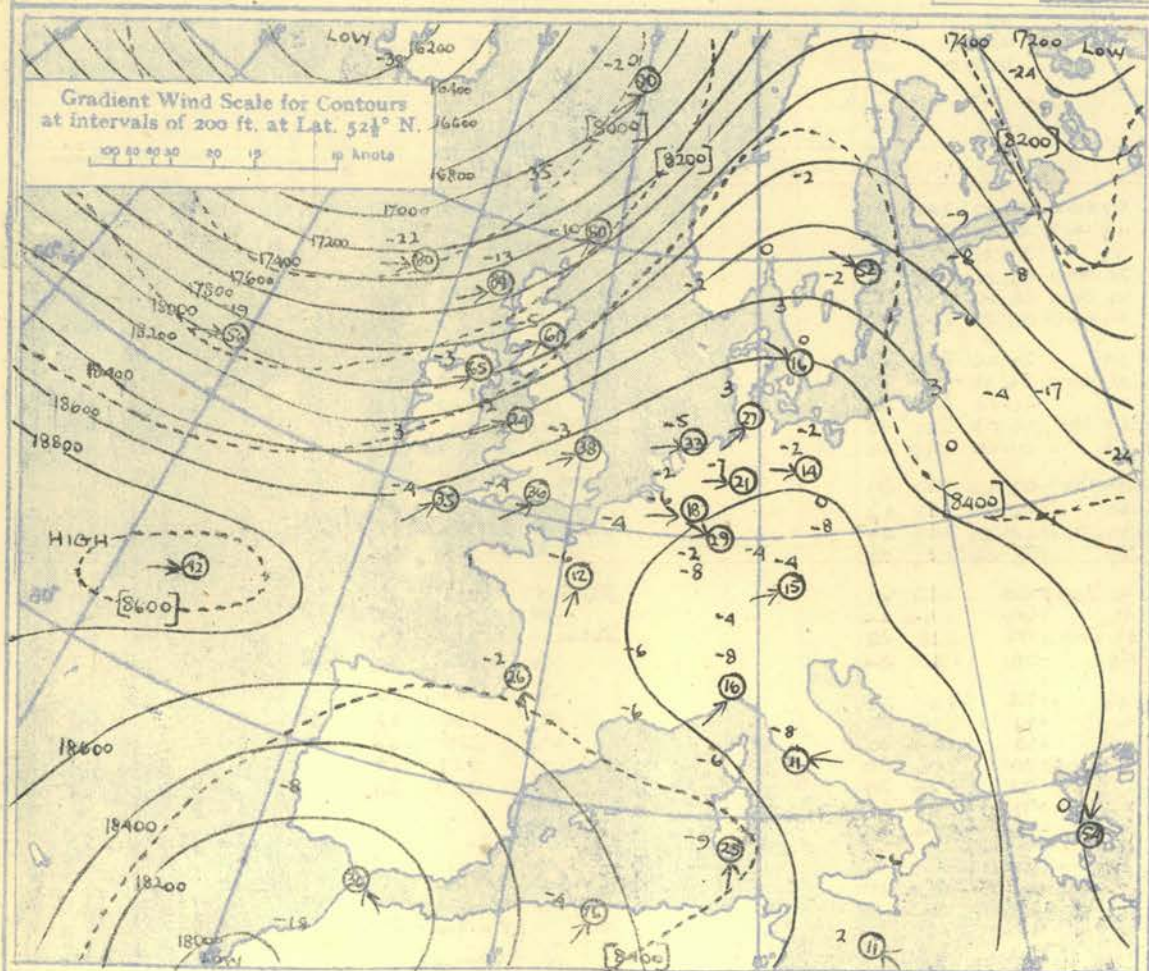
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.



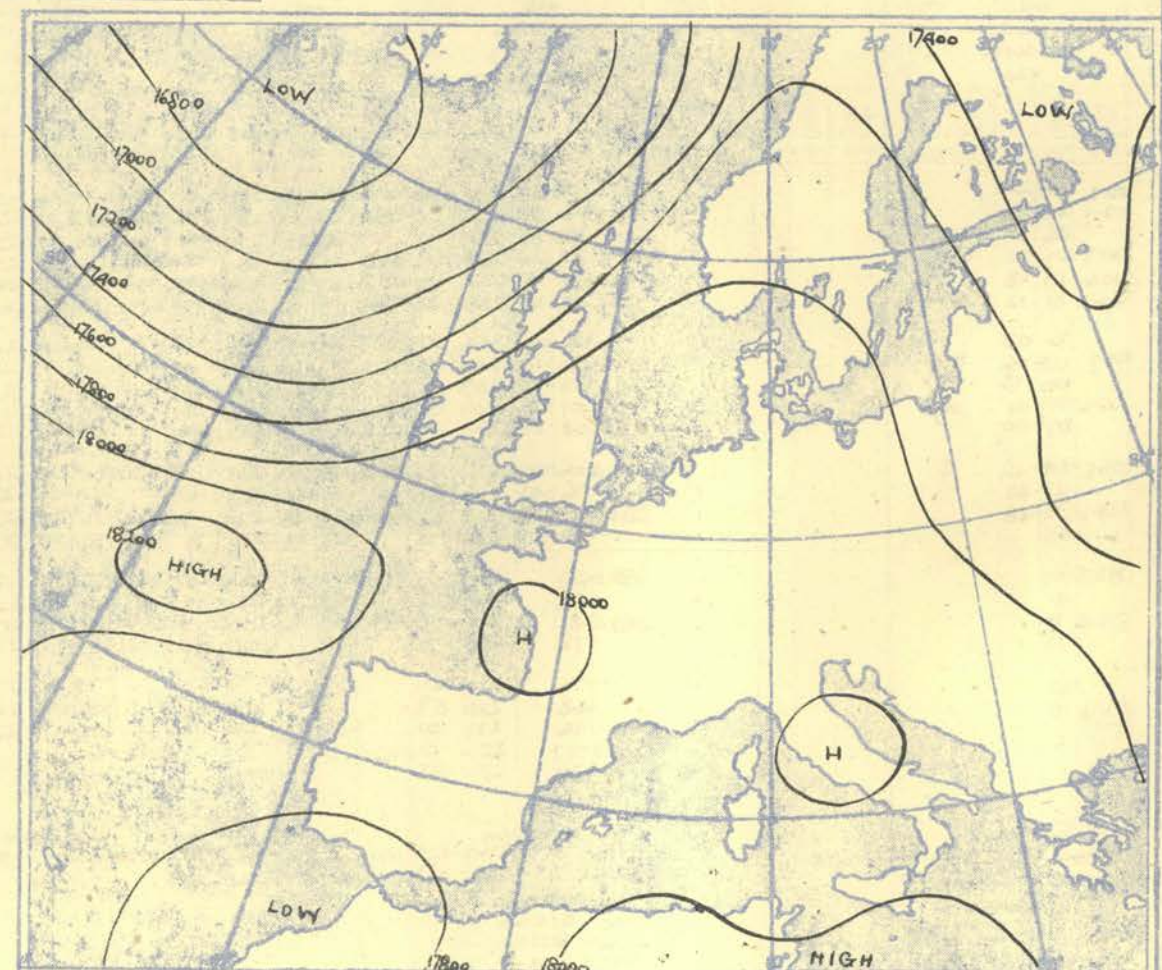
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N

100 80 60 40 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.

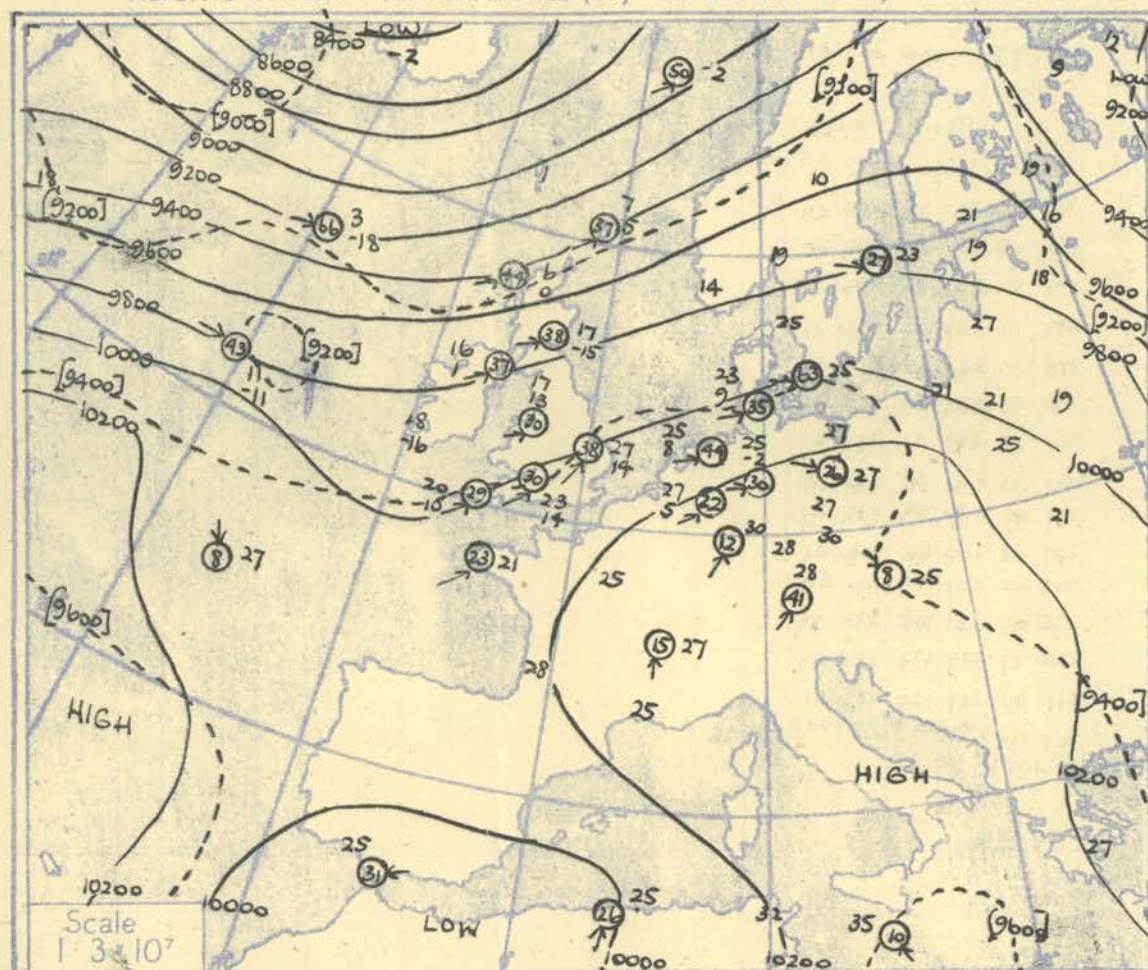
DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

NEPHOSCOPE OBSERVATIONS

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

[illegible]

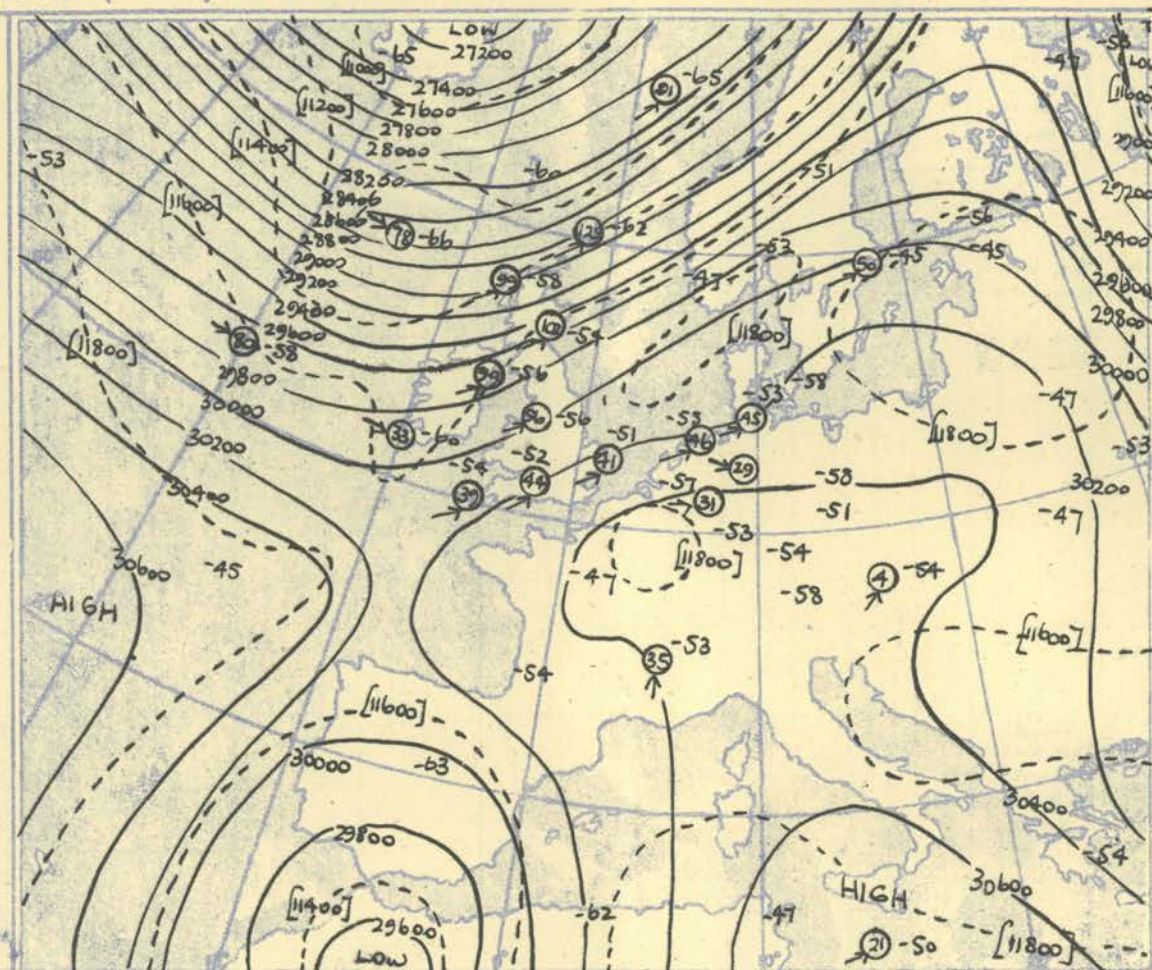
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h G.M.T.



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

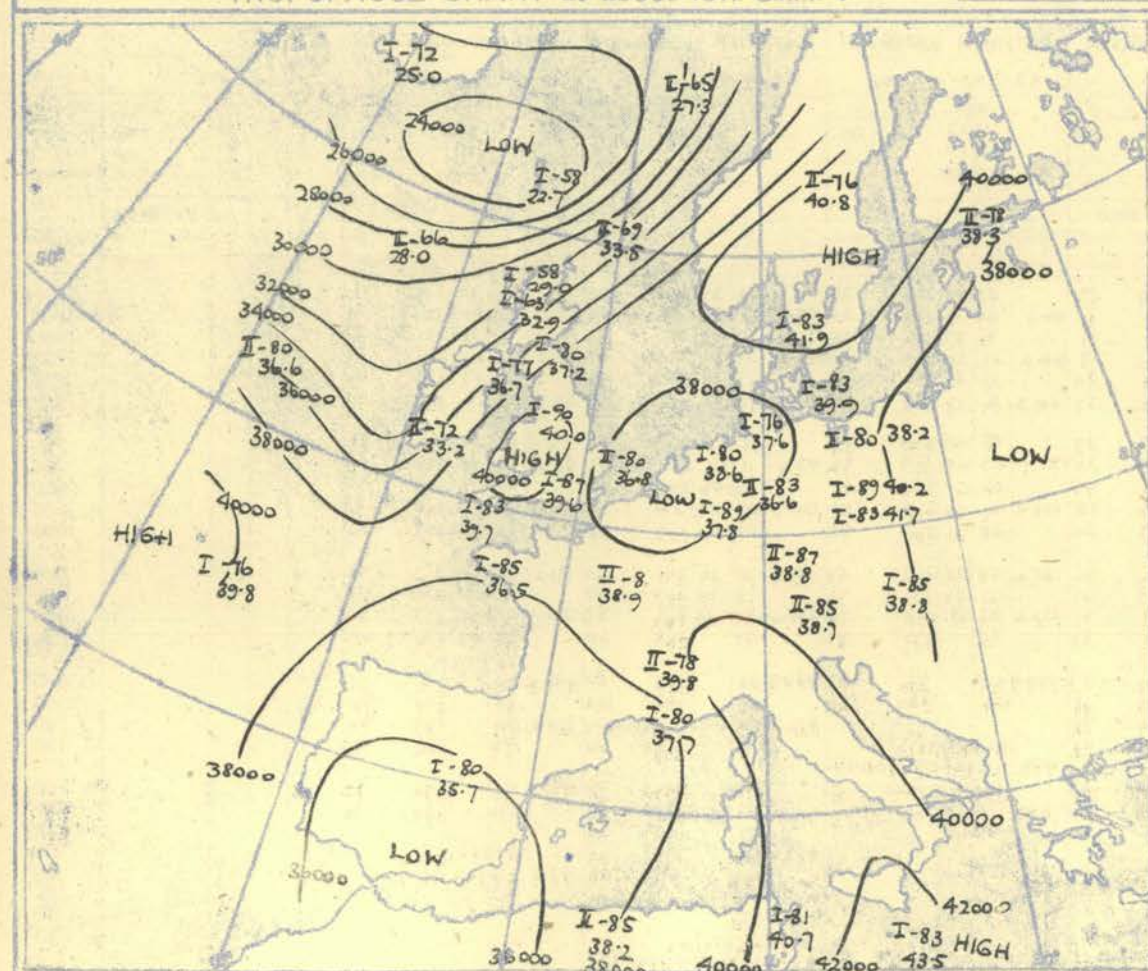
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N

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 GMT.



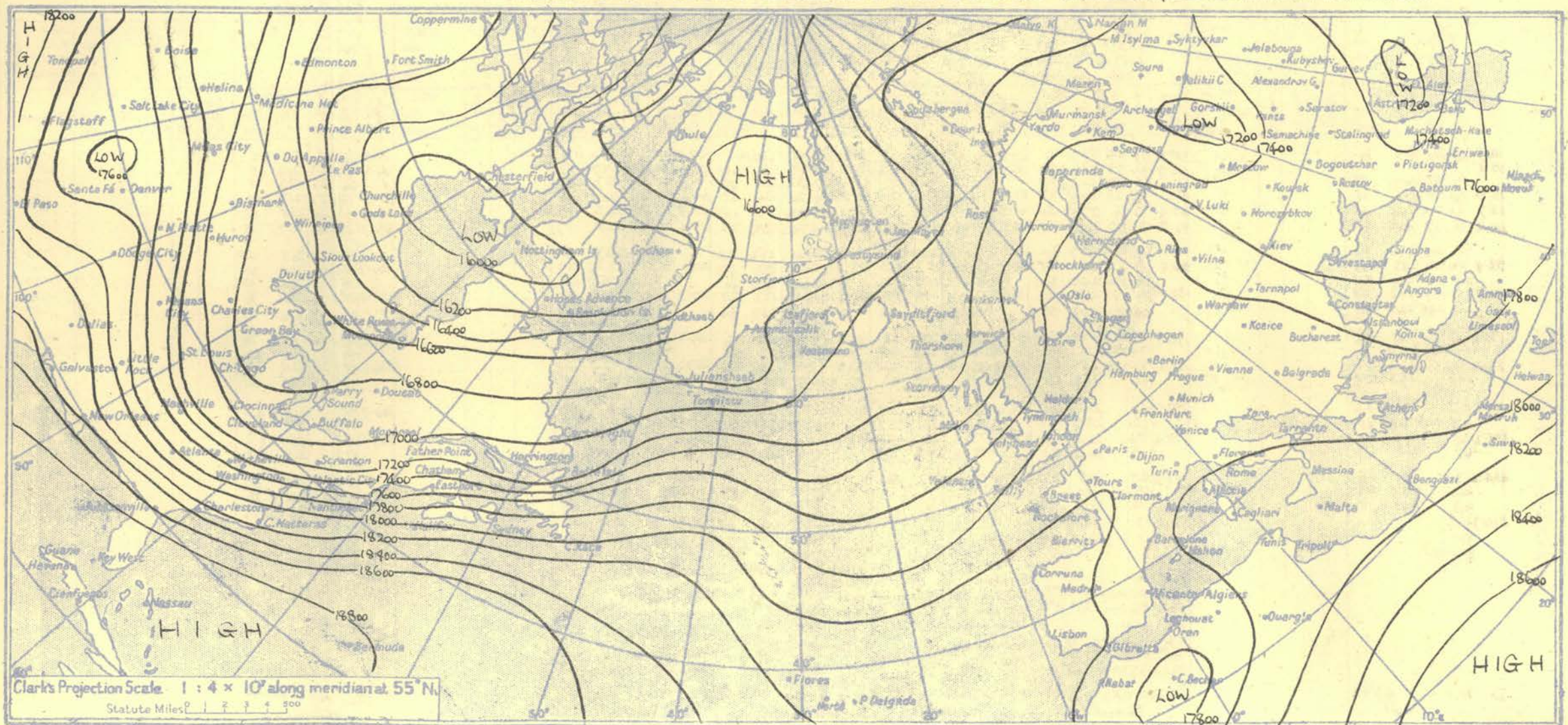
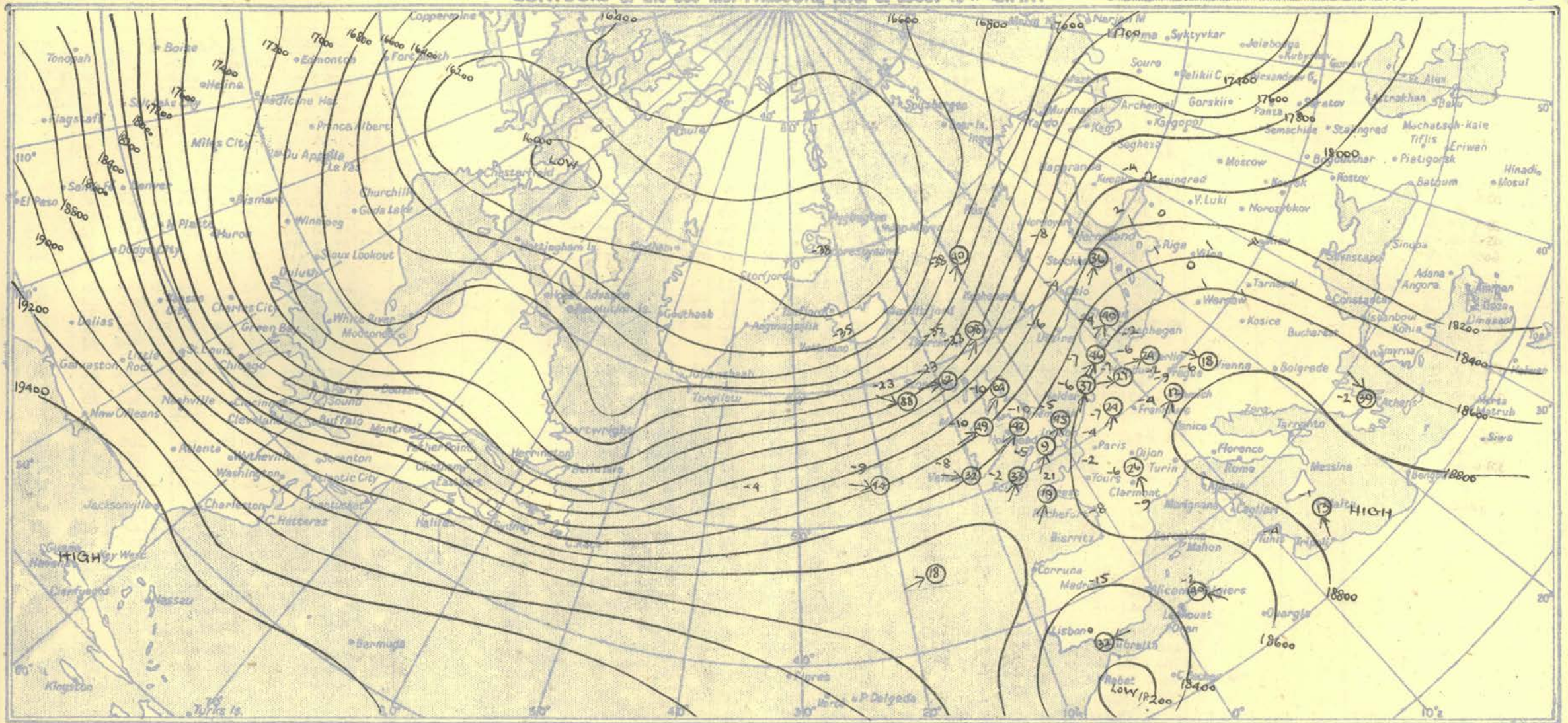
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

A minor warm ridge moved east in the broad westerly thermal gradient on the North Atlantic. A flat irregular cold trough covered Western Europe.

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

Meteorological Office, Air Ministry, Kingsway, London, W.C.1
Nelson K. JOHNSON, K.C.B., D.Sc., Director



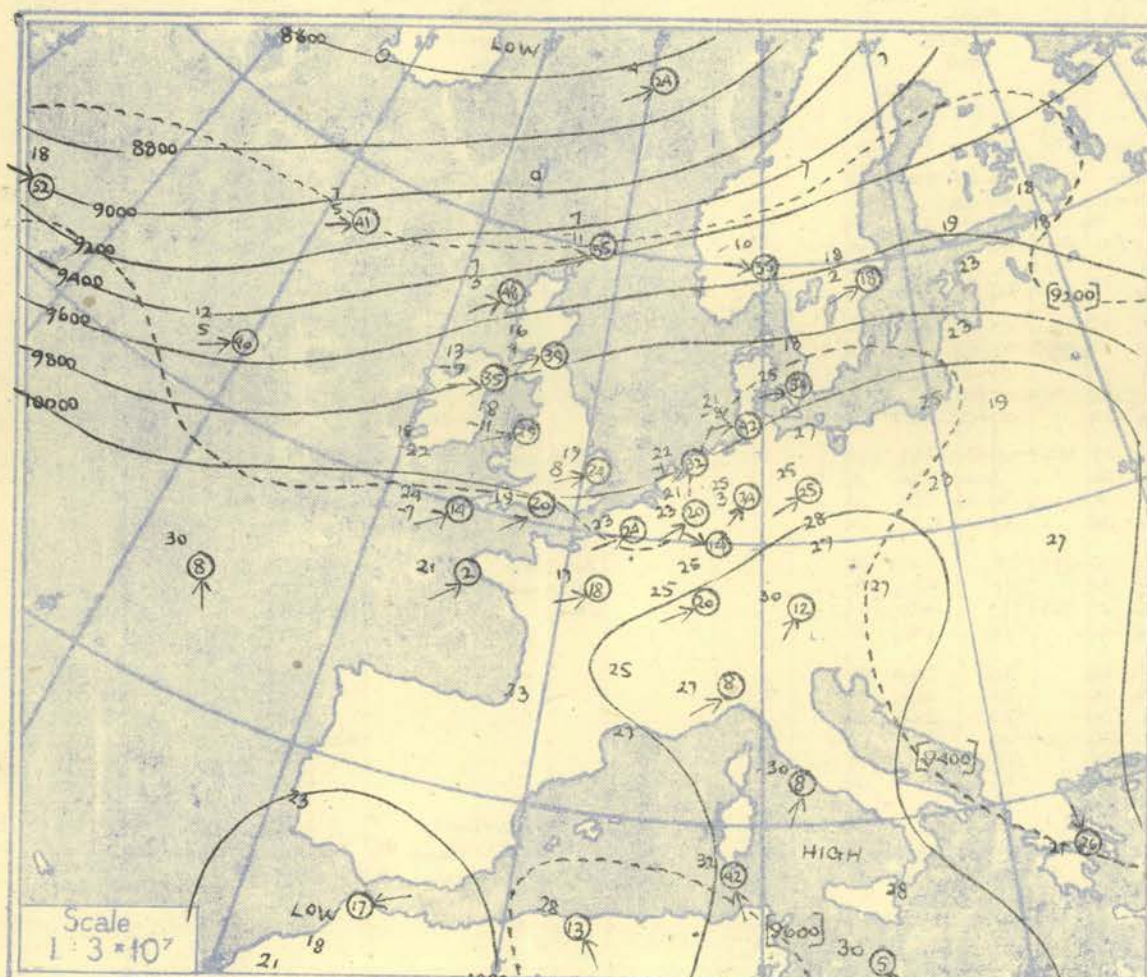
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				Valentia				STATION	
Pressure	Time M.S.L. Surf Pressing	15h		G.M.T.		G.M.T.		15h		G.M.T.		15h		G.M.T.		15h		G.M.T.		15h		G.M.T.		G.M.T.		15h		G.M.T.		15h		G.M.T.		Time M.S.L. Surf Pressing					
		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							
Surf	02-7	38	32						00-2	40	36	260	05	02-5	41	40	254	07	00-6	44	43	160	05	00-4	45	43	230	08					Surf						
1000	02-5	36	31						04-8	40	35	249	14	05-8	40	37	260	12	05-5	43	41	240	18	06-2	42	40	228	14					1000						
950									38-2	25	200	19		38-2	25	200	19		39-3	25	238	23		37-3	24	232	16					950							
900	36-5	29	24						32-8	32	24	261	22	33-7	30	24	280	24	33-7	34	31	253	30	34-3	40	34	232	27					900						
850	45-3	22	17						47-8	26	18	259	26	48-5	23	16	269	26	48-7	31	28	257	26	49-5	36	30	227	25					850						
800	60-9	17	13						63-4	19	11	267	30	64-1	17	12	258	25	64-6	26	23	250	21	65-6	32	25	229	22					800						
750																																	750						
700	24-5	07	05						27-3	17	-15	245	38	28-0	16	01	246	37	28-9	17	13	246	30	100-5	27	14	232	38					700						
650									10	-28	226	42		11	-03	239	44		11	06	240	32		20	11	230	46					650							
600	32-1	-10	-13						35-9	03	-31	256	52	36-8	04	-07	237	45	37-6	06	-1	231	30	139-9	13	02	224	44					600						
550									-3	-24	235	57		-04	-12	240	50		-2	-9	225	35		05	-07	227	44					550							
500	175-2	-23	-30						180-3	-10	-26	232	64	181-1	-10	-19	237	49	182-1	-10	-17	219	42	185-0	-05	-13	232	45					500						
450									20	-24	229	76		21	-28	235	60		18	-27	227	50		13	-18	223	41					450							
400	226-0	-41							232-6	-29	-37	224	84	233-3	-32	-38	234	73	234-5	-29	-40	228	46	238-2	-23	-31	226	40					400						
350									241			90		244			84		244			53		36	-45	230	41					350							
300	288-7	-62							296-8	-54		102	297-1	-56		212	99	298-4	-56		224	56	302-9	-51		233	41					300							
250									68			105		70		220	98		71			222	64		237	52						250							
200	328-6	-69							381-4	-76		225	93	381-4	-74		229	81	382-2	-86		228	63	387-5	-80		229	44					200						
170									70			228	71		-68		231	58		-82		232	56		-73		228	37					170						
150									441-2	-67		237	64	441-2	-71		229	61		-76		232	54	446-7	-69		226	39					150						
130									64			62		66		227	51		-77		232	57											130						
110									64			63		66		232	48		-73		233	46											110						
90									526-6	-63				526-4	-66		225	45	523-2	-71		238	34										90						
80									65					65					-74		239	37											80						
70									66					66					-75														70						
60									64.2	-64									-75														60						
Inversion. 1018-583 mbs 40-41° 780-763 mbs 16-17° 741-712 mbs 15-18° Max Wind. 229 kts. 232 mbs 30 kts.																																							
Tropopause		II 240 mbs -65°F 33,500ft.								I 210 mbs -80°F 37,200ft.				I 215 mbs -77°F 36,700ft.				I 184 mbs -90°F 40,000ft.				II 220 mbs -80°F 36,800ft.								I 190 mbs -83°F 39,700ft.				II 256 mbs -72°F 33,200ft.		Tropopause			
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE								STATION	
Pressure	Time M.S.L. Surf Pressing	21h		G.M.T.		G.M.T.		21h		G.M.T.		21h		G.M.T.		21h		G.M.T.		21h		G.M.T.		G.M.T.		21h		G.M.T.		21h		G.M.T.		Time M.S.L. Surf Pressing					
		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							
Surf	02-7	40	36	230	31				00-2	37	34	230	11	02-5	36	35	240	08	00-6	42	41	Calm	06	00-4	44	43	240	08					Surf						
1000	02-0								04-7	36	33	231	27	05-8	37	35	263	15	05-9	43	39	320	09	06-0	44	44	247	12					1000						
950									24-7	27	262	29		36	23	264	17		37	32	338	09		44	37	195	11					950							
900	29-9	30	28	236	42				32-6	29	23	262	29	33-7	30	22	266	21	33-9	30	26	336	09	34-2	37	36	261	21					900						
850	44-7	24	22	244	45				47-4	23	16	270	30	48-7	24	16	270	23	48-8	28	24	283	14	49-3	36	30	243	23					850						
800	60-2	18	17	245	45				62-9	21	09	269	31	64-2	23	00	270	22	64-5	24	20	245	22	65-4	28	25	225	17					800						
750																																	750						
700	93-8	06	00	242	48				96-8	17	-4	257	31	98-2	17	-13	267	25	98-8	18	-26	282	22	100-1	26	13	232	27					700						
650																																	650						
600	131-5	-9	-19	233	49				135-1	08	-10	246	36	136-8	09	-13	255	26	137-5	12	-23	252	20	139-3	17	10	225	32					600						
550																																	550						
500																																	500						
450	174-4	-28	-36	246	60				179-3	-13	-34	259	58	181-4	-11	-41	263	38	181-8	-13	-27	255	36	184-3	-06	-18	223	43					450						
400																																	400						
350	224-8	-44		242	76				231-1	37	-55	251	62	233-3	-35	-56	284	46	233-8	-12	-44	226	56	237-2	-25	-44	220	43					350						
300																																	300						
250	287-2	-62		238	82				293-9	-67		238	64	296-0	-66		258	42	297-2	-60		224	72	301-9	-50		218	49					250						
200																																	200						
170	373-2	-60		239	70				377-4	-74		246	66	379-5	-73		267	49	380-4	-82		226	51	386-6	-86		230	45					170						
150																																	150						
130	434-4	-62		241	58				437-3	-69		245	55	438-6	-70		257	54		-73		249	47	444-9	-72		238	42					130						
110																																	110						
90																																							

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

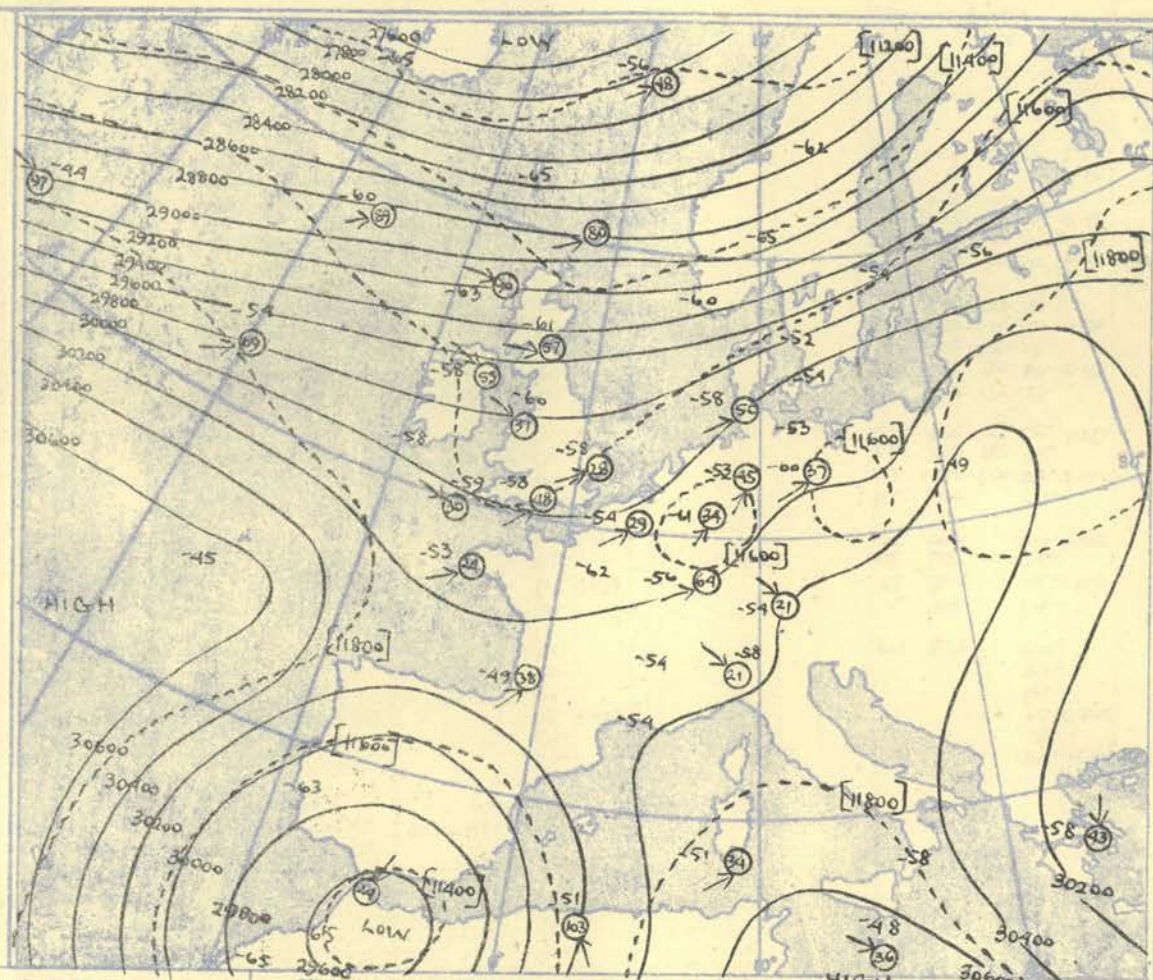
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA				STATION	
Time M.S.L. Surf Pressure	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. G.M.T. mb mb mb	03h. 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
Surf	02-7	39	35	250	29	00-2	38	35	220	12	02-5	35	32	245	12	00-6	37	36	Calm	00-4	43	42	270	08	02-9	46	45	160	05	00-3	40	36	Surf						
1000	01-5					04-6	38	35	223	35	05-5	36	33	251	21	05-8	41	34	343	05	05-9	45	44		05-9	47	45		05	57	40	33	1000						
950		36	30	254	42		35	32	236	26		36	33	250	22		36	30	304	08		40	36	271	09		44	38	220	12		36	22	950					
900	29-5	31	25	255	46		32	31	256	24	33-3	31	27	253	21	33-7	30	26	282	11	34-0	36	27	270	15	34-3	39	36	228	12	33-6	30	25	900					
850	44-3	25	14	255	52		25	24	265	26	48-3	25	15	258	21	48-6	24	15	269	14	49-0	30	14	268	20	49-4	35	34	236	13		22	08	850					
800	59-9	20	09	254	53		21	17	260	31	62-9	21	17	257	20	64-3	24	00	255	18	64-9	26	20	243	18	65-5	32	27	246	12	64-3	30	-11	800					
750		14	00	253	53		15	10	257	37		19	-21	256	32		22	-26	255	23		23	13	225	22		25	22	224	14		25	-17	750					
700	93-6	07	-11	253	55		16	04	246	39	96-8	16	04	246	39	98-0	13	-19	250	35	99-3	19	03	234	24	100-3	24	-07	220	14	98-7	18	-22	700					
650		-01	-23	252	58		10	-04	235	40		09	-08	231	33		14	-23	237	27		13	-05	240	32		17	-11	239	09		13	-19	650					
600	131-3	-08	-26	257	62		04	-12	245	33	135-4	04	-12	245	33	137-5	07	-15	232	21	138-2	07	-10	243	31	139-5	10	-19	286	08	131-8	08	-17	600					
550		-12	-25	261	66		00	-15	254	42		00	-29	246	32		00	-33	263	29		00	-06	247	30		02	-32	315	18		00	-16	550					
500	174-7	-22	-32	260	75		179-9	-12	-25	251	48	181-2	-10	-27	260	37	182-1	-08	-48	277	29	182-9	-09	-30	247	32		184-3	-08	-40	322	23	182-3	-09	-18	500			
450		-30	-38	261	77			-23	-32	252	44		-22	-29	259	41		-20	-58	268	26		-13	-44	238	32			-20	-51	314	21		-18	-25	450			
400	225-8	-40	-49	259	75		231-9	-34	-42	259	39	233-3	-32	-36	267	43	234-3	-33	-60	277	29	235-2	-29	-48	239	35	236-6	-31	-58	295	22	234-8	-28	-34	400				
350		-52		259	73			-45		266	57		-41		273	48		-46		280	34		-43		237	34			-44		293	20		-42	350				
300	288-2	-65		260	80		295-3	-61		275	57	297-1	-58		299	55	297-6	-60		281	37	299-5	-58		233	28		300-2	-59		273	25	298-7	-58	300				
250		-70		259	75			-72		278	55		-76		296	58		-68		277	32		-71		232	46			-72				-75	250					
200	372-1	-71		257	70		379-5	-69		273	56	380-4	-79		285	54	382-2	-75		266	39	383-1	-77		243	41			-76				-77	200					
170		-69		258	71			-68		266	39		-75		297	43		-71		269	41		-76		243	31							-77	170					
150		-65		258	63			-70		263	55		-76		270	45		-73		274	34		-75		244	43							-78	150					
130		-64						-70		265	39		-75		257	48		-72		276	32		-73		240	39							-82	130					
110		-68						-70		263	32		-76		269	46		-75		271	36		-75		256	35							-82	110					
100	517-2	-71					522-8	-70				522-8	-74		278	39	525-4	-73		272	36	525-5	-75		253	30							-82	100					
90		-67						-69					-76					-74		265	37		-74		235	31							-82	90					
80	(682)	-64																-73		264	35		-73		249	30							-84	80					
70																		-73		255	30		-73										-84	70					
60																		-74																	60				
Tropopause		I 282mb. -72° 30,000'				II 245mb. -74° 33,700'				I 220mb. -83° 36,100'				I 212mb. -77° 37,100'				I 250mb. -80° 36,300'								N.R.				I 197mb. -90° 38,500'				Tropopause					
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE								STATION	
Time M.S.L. Surf Pressure	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. G.M.T. mb mb mb	09h. 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
Surf	02-7	40	38	270	14	00-2	39	35	220	20	02-5	35	31	210	10	00-6	35	35	120	05	00-4	42	42	Calm											Surf				
1000	01-5					04-1	38	34	231	30	04-7	36	31			05-3	37	37	157	17	05-7	41	40												1000				
950		36	34	234	25		35	31	233	32		36	29	210	22		36	32	181	17		41	38	238	13										950				
900	29-4	31	30	237	28		32-0	30	23	239	31	32-5	30	215	20	33-1	31	27	204	16	33-9	36	30	228	15										900				
850	44-3	25	23	234	28		46-9	24	17	254	28	47-4	28	16	220	18	48-0	27	24	230	17	49-0	32	25	232	16										850			
800	59-9	20	18	252	30		62-5	18	14	258	27	63-2	26	-05	222	22	63-7	27	-11	236	14	64-8	27	21	247	15										800			
750		15	12	250	37			14	08	256	26		21	-11	226	24		22	-15	237	14		21	16	257	19									750				
700	93-7	10	06	250	39		96-3	10	00	254	34	97-5	16	-10	248	30	98-0	18	-14	245	21	99-1	18	11	268	23									700				
650		02	-03	253	40			05	-04	247	39		09	-13	255	38		14	-18	253	36		13	01	256	27									650				
600	131-7	-05	-10	254	32		134-5	00	-07	239	44	136-0	03	-04	236	42	136-8	06	-26	242	42	137-9	07	-18	248	26										600			
550		-10	-15	247	51			-03	-15	241	47		-01	-06	228	47		-02	-23	239	34		-01	-34	262	19									550				
500	175-3	-18	-24	249	61		178-9	-10	-17	246	36	180-5	-05	-13	234	43	181-3	-10	-28	239	34	182-6	-09	-51	269	22										500			
450		-24	-29	252	67			-20	-25	247	42		-16	-20	241	41		-19	-36	250	39		-21	-54	279	15									450				

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.

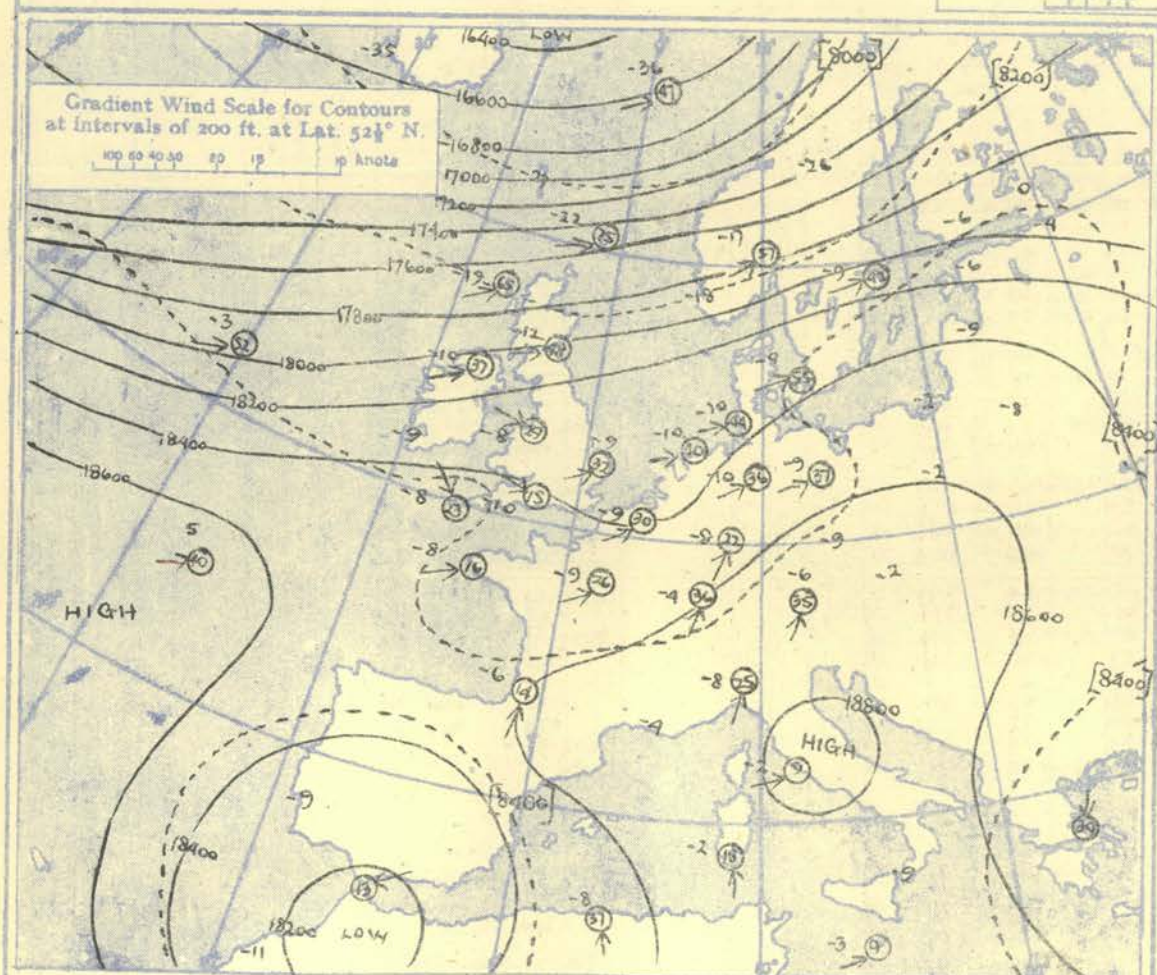


Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52½° N

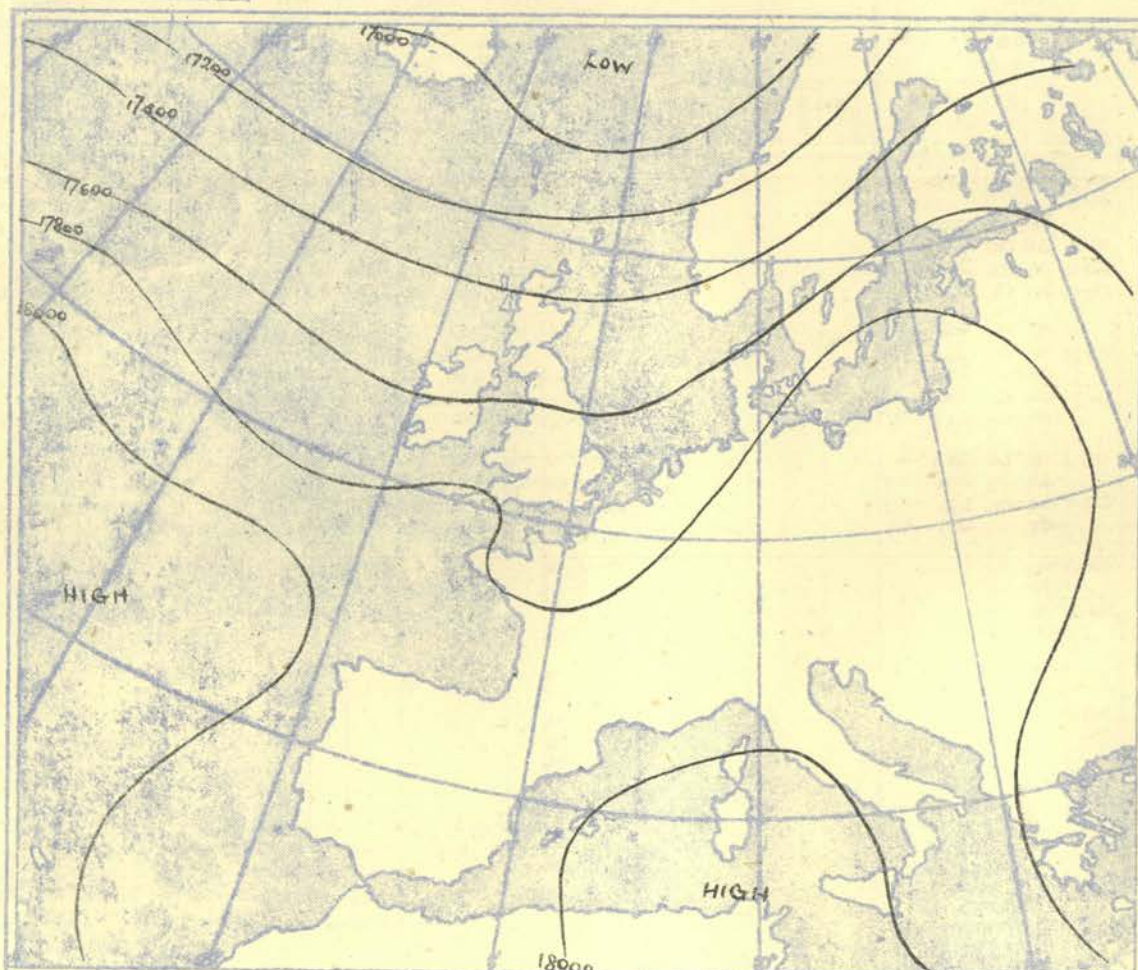
100 80 60 40 20 10
knots



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



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



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 Explorer				Weather Explorer				Weather Explorer				Weather Explorer				Weather Observer				Weather Observer				Weather Observer				Weather Observer				Ship																
Lat/Long	58°3'N 15°0'W				58°4'N 17°0'W				58°6'N 17°9'W				58°9'N 18°7'W				52°5'N 20°0'W				52°4'N 20°1'W				52°6'N 20°3'W				52°4'N 20°2'W				Lat/Long																
Pressure	Time	03h			G.M.T.			03h			G.M.T.			15h			G.M.T.			03h			G.M.T.			15h			G.M.T.			G.M.T.	Time																
	M.S.L.	1001			mb			991			mb			972			mb			20h			963			mb			1011					mb			M.S.L.												
	Surf	1001			mb			991			mb			972			mb			963			mb			1011			mb					985				mb			Surf								
	Freezing	900			mb			880			mb			780			mb			835			mb			200			mb					830				mb				790			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.	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		43	41			46	41	190	30		48	47	193	24		46	36	225	31		48	41	220	32		49	47	210	38		51	47	260	33		49	45	280	38		Surf								
1000	0.3	43	42		-2.3	46	41	190	30	-7.8	48	47	193	24	-10.0	46	36	225	31	30.0	48	41	220	32	-7	49	47	210	38	-4.1	51	47	260	33	-4.3	49	45	280	38	1000									
950		37	36	239	29	42	38	187	34		46	45	189	33		45	36	240	28		40	37	202	35		44	44	201	51		49	46	250	36		45	42	257	37	950									
900	28.1	31	30	242	35	25.9	35	32	130	40	20.7	42	41	192	42	18.1	39	233	26	31.1	32	32	202	39	27.7	39	39	205	60	24.5	43	42	250	45	24.1	39	36	257	51	900									
850		25	24	243	39		29	26	192	53		38	37	195	47		33	29	227	26		29	26	200	40		34	34	210	64		40	39	251	58		30	29	257	65	850								
800	85.5	19	18	246	42	56.7	24	20	196	51	52.1	35	34	213	48	49.2	28	23	231	29	61.7	24	5	210	40	58.8	30	30	223	60	55.9	33	32	251	63	55.0	25	7	258	72	800								
750		13	10	245	44		18	14	203	45		27	25	218	45		22	17	232	28		19	13	217	40		27	27	231	51		28	26	252	60		23	13	257	74	750								
700	72.2	97	95	252	41	20.7	13	08	205	50	86.9	21	9	210	44	83.5	16	11	233	30	75.7	12	05	225	40	93.5	23	12	240	45	90.6	22	16	251	58	89.4	18	7	254	81	700								
650		01	-1	255	44		06	00	201	43		17	-12	209	45		06	04	232	42		06	04	232	42		17	5	247	50		17	2	247	57		10	8	254	81	650								
600	130.1	-3	-6	257	49	28.9	-2	-8	208	50	26.1	9	-24	209	47	22.0	-1	-6	232	32	24.2	08	06	239	50	32.8	11	02	248	57	29.8	10	-3	247	63	28.1	10	-1	255	79	600								
550		-10	-12	257	59		-8	-14	218	48		-1	-38	210	47		-8	-13	235	33		05	03	238	54		03	-4	247	48		5	-27	246	67		2	-12	256	93	550								
500	174.0	-13	-15	256	66	72.9	-12	-18	220	47	70.8	-11	-46	218	52	165.7	-19	-24	229	35	79.3	-3	-7	235	52	177.7	-10	-23	242	54	75.0	-1	-37	247	86	73.0	-6	-20	256	108	500								
450		22	24	257	64		-21	-27	232	41		-21	-50	221	66		-20	-26	207	32		-11	-19	243	56		-20	-29	240	60		-3	-43	248	101		-11	-25	256	125	450								
400	226.0	33	36	260	76	224.9	33	39	235	55	223.0	33	38	218	76	216.9	39	48	208	34	232.7	24	36	253	57	230.0	20	40	245	66	229.3	7	41	253	118	226.2	22	37	256	124	400								
350		44		256	86		48		238	57		45		218	66		45		209	33		38	48	255	63		40	55	246	60		18	44	261	122		34	48	256	128	350								
300	289.5	60		258	89	288.0	63		246	57	286.6	54		220	47	280.6	48		222	28	297.1	54		263	69	294.4	49		242	60	296.9	33	44	262	149	291.5	45		256	93	300								
250		73		256	72		66		243	53		60		210	60		50		243	51		70		258	75		56		243	69		49		269	132		53		256	124	250								
200	573.7	73		263	63	572.9	67		245	64	573.7	53		216	57	569.1	50		247	57	581.9	73		251	69	581.9	59		238	63	588.9	57		284	108	579.8	55		256	80	200								
170		68		258	69		65		245	65		56		228	60		54		251	56		72		256	72		57		242	72						64		256	90	170									
150		67		269	83		73		255	83		56		236	47		56		256	66		73		264	69		64		244	60						68		256	98	150									
130		68		269	59		66		260	66		59		258	60		59		255	66		75		278	72		69		245	63						69		256	69	130									
110		70		268	64		68		267	60							62		261	60		79		286	60		74		249	62						80		256	63	110									
100	518.1	71		268	54	518.7	67									517.9	66		264	56	524.1	81		286	54	527.4	77		252	60						76		256	62	100									
90		72															70		272	60		-80															77		256	50	90								
80		75															70																						76		256	50	80						
70		75															70																								70		70						
60		77															70																								60		60						
Isothermal:-		542		-518 mbs		-10°F		Isothermal.		541		-525 mbs		-9°F		Inversion.		890 mbs		30°		-85 mbs		31°		Isothermal.		875		-850 mbs		40°		Isothermal.		792		-772 mbs		24°F		Tropopause							
II		245 mbs		-74°F		I		280 mbs		-68°F		I		250 mbs		-60°F		II		378 mbs		-43°F		II		251 mbs		-57°F		II		239 mbs		-59°F		I		184 mbs		-60°F		II		260 mbs		-52°F		32,300ft.	
		33,000ft.						30,200ft.						32,600ft.						23,000ft.						34,400ft.				34,400ft.				40,200ft.															

A hand-drawn map of Europe showing isobars and isotherms. The map includes labels for 'LOW' and 'HIGH' pressure systems, isobars (e.g., 9600, 9800, 10000), and isotherms (e.g., 10, 15, 20, 25). A scale bar at the bottom left indicates 1:3 x 10⁷.

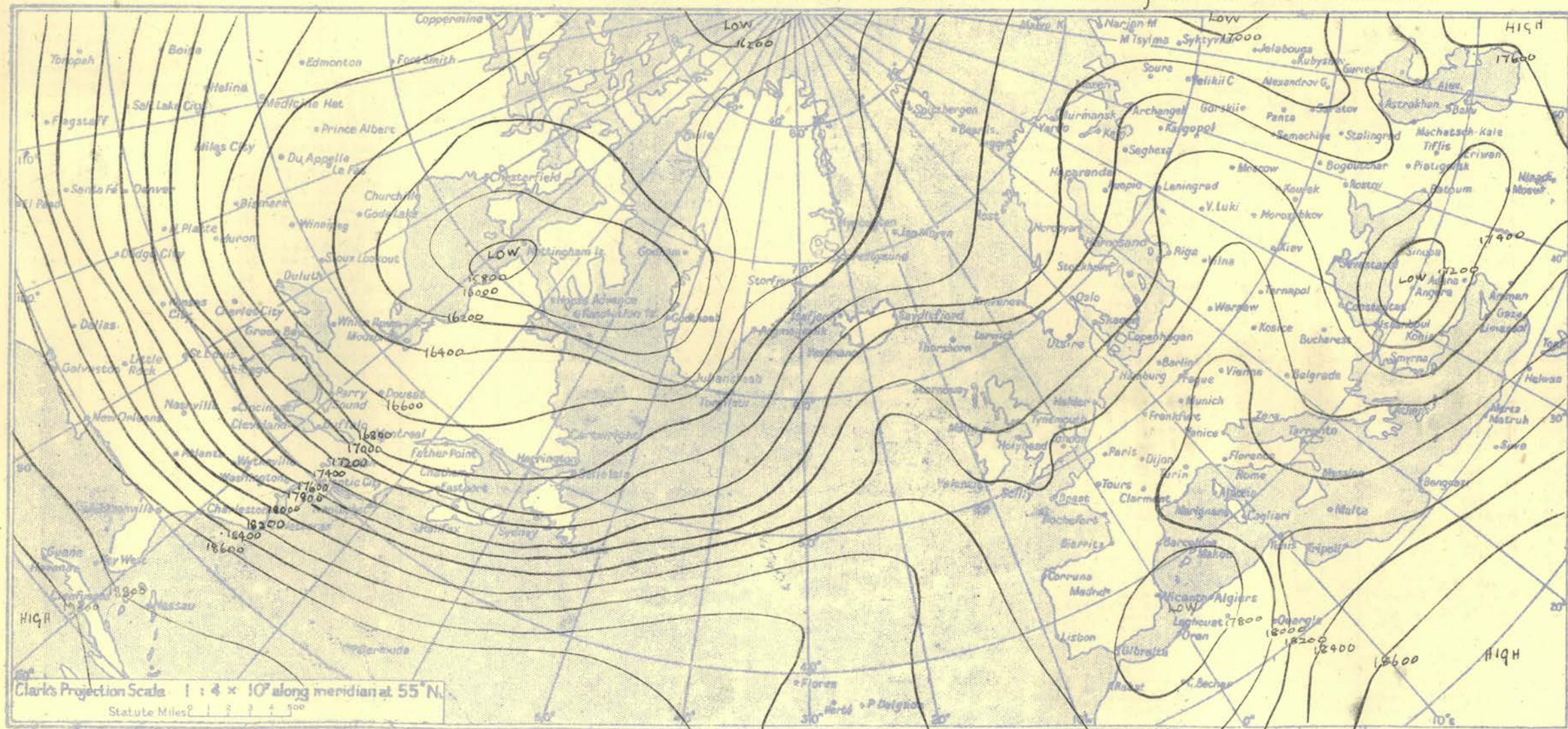
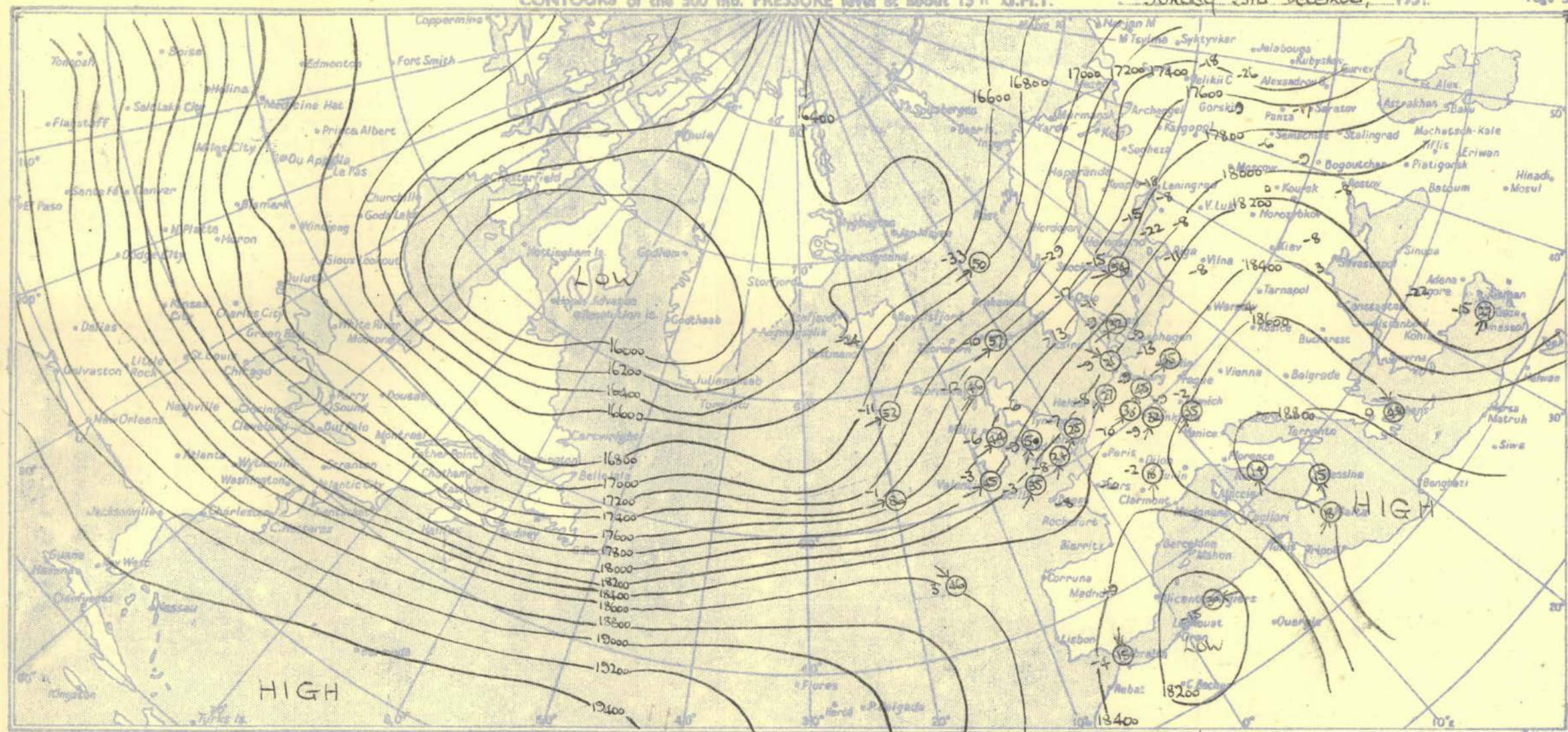
This hand-drawn weather map covers the North Atlantic, Europe, and parts of North America. It features several key elements:

- Isobars:** Solid lines representing pressure levels, with values ranging from 1000 to 1040 mb. A prominent low-pressure system is centered over the North Atlantic, with a minimum of 1000 mb. High-pressure systems are located over the British Isles (1030 mb) and the Gulf of Mexico (1020 mb).
- Isotherms:** Dashed lines representing temperature levels, with values ranging from 10 to 20°C. A cold front is indicated by a dashed line with triangles pointing southward from the low-pressure center.
- Weather Systems:** A cold front extends from the low-pressure center towards the British Isles. A warm front extends from the low-pressure center towards the Gulf of Mexico. A stationary front is shown over the Caribbean Sea.
- Clouds and Precipitation:** Various cloud types are indicated by numbers in circles (e.g., 47, 54, 58, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100). Precipitation is indicated by numbers in circles (e.g., 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100).
- Other Features:** The map includes a latitude and longitude grid, a scale bar, and a title "LOW" at the top center.

A hand-drawn weather map of the North Atlantic region, showing isobars and isotherms. The map includes labels for 'HIGH' and 'LOW' pressure systems, as well as various isobar values (e.g., 30000, 32000, 34000, 36000, 38000, 40000) and isotherm values (e.g., I-71, I-72, I-74, I-76, I-78, I-79, I-80, I-81, I-83, I-85, I-86, I-87, I-88, I-89, I-90, I-91, I-92, I-93, I-94, I-95, I-96, I-97, I-98, I-99, I-100). The map also shows the outlines of North America, Europe, and Africa.

A weak warm ridge moved from the Atlantic to the British Isles. A strong westsouthwesterly thermal gradient persisted in the Atlantic between 45 and 55 degrees north but over Europe the thermal pattern remained very ill defined.

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



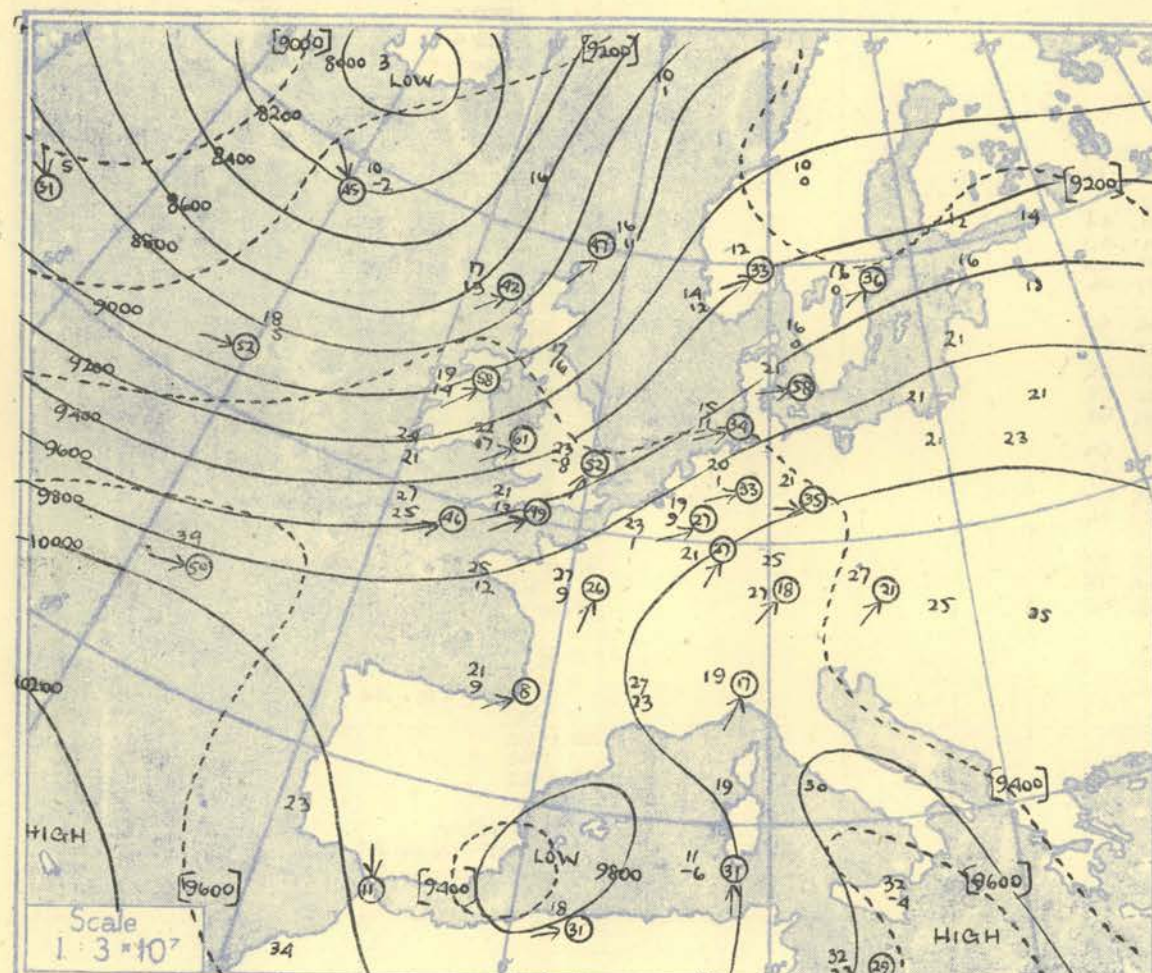
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	HEMSBY	LARKHILL	CAMBORNE	VALENTIA	STATION																										
Time M.S.L. Surf Pressure	15h 1003.9 993.8 890	G.M.T. mb mb mb	15h 1011.5 1016.6 856	G.M.T. mb mb mb	15h 1010.9 1001.5 930	G.M.T. mb mb mb	15h 1017.8 1016.3 828	G.M.T. mb mb mb	15h 1014.8 1009.2 843, 823, 763	G.M.T. mb mb mb	15h 1008.1 1006 880	G.M.T. mb mb mb	Time M.S.L. Surf Pressure																							
Pressure mb	Height ft./100	Temp. °F. °C.	Dir. °	Vel. knots	Height ft./100	Temp. °F. °C.	Dir. °	Vel. knots	Height ft./100	Temp. °F. °C.	Dir. °	Vel. knots	Pressure mb																							
Surf	02.7	42	37	410	24	02.2	41	32	300	05.02.5	37	31	210	1000.6	43	43	150	07.00.4	46	46	150	02	02.9	51	50	170	1000.3	46	39	200	13	Surf				
1000	01.0					02.9	40	32		02.9				03.7	42	41	176	18.04.8	45	44	180	02	01.0	50	49	170	1002.2	45	38	199	15	1000				
950		39	32	219	34		34	27			34	25	210	23	41	39	210	24	43	42	204	19		45	43	204	24	40	35	196	31	950				
900	29.1	33	24	236	35	30.8	28	22	30	28	20	210	23	36	34	224	28.33.1	40	33	213	24	32.4	39	36	213	24	30.4	34	28	203	34	900				
850	44.0	28	21	247	35	45.6	31	15	45	6	22	213	30	47.0	31	28	225	30.49.2	35	31	207	25	47.5	33	32	213	26	29	21	207	36	850				
800	59.7	22	15	257	33	61.4	27	00	61	2	26	214	31	62.9	27	24	227	36.64.2	28	26	223	23	63.5	30	27	211	33	61.2	27	18	219	39	800			
750		16	06	254	32		21	-08		23	-10	214	38	20	15	222	36	27	23	227	25		30	14	217	35	25	12	231	35	750					
700	93.6	10	04	252	31	95.6	14	-15	95	6	17	-17	213	44	97.2	19	-12	216	36	98.6	22	05	230	23	98.4	24	-06	221	34	95.6	19	12	244	39	700	
650		02	-03	257	37		06	-25		09	-08	215	48	15	-19	223	37	17	-11	239	22		20	-08	225	33	13	08	249	45	650					
600	131.6	-04	-10	260	41	134.0	03	-10	134	1	02	-08	216	54	136.2	10	-30	231	45	137.7	10	-33	249	21	137.8	14	-15	222	38	134.6	12	-22	246	45	600	
550		-08	-14	251	40		01	-05		02	-08	222	63	01	-36	231	51	02	-33	249	24		05	-22	225	37	05	-04	248	46	550					
500	175.5	-10	-17	245	47	178.8	-06	-12	178	6	-06	-12	222	46	181.0	-09	-27	231	50	182.7	-07	-42	253	25	183.0	-03	-25	228	36	179.8	-03	-17	241	45	500	
450		-19	-24	246	54		-16	-22		-14	-20	221	56	-13	-21	236	48	-17	-50	256	27		-13	-29	229	40	-13	-25	241	58	450					
400	227.9	-31	-38	250	54	231.5	-27	-35	231	5	-24	-29	222	64	234.0	-24	-31	240	42	235.5	-27	-57	257	22	236.1	-24	-32	235	36	232.8	-26	-43	242	56	400	
350		-44		260	67		-38	-44		-37	-43	228	54	-37	-45	243	42	-39	-59	274	18		-37	-43	247	33	-40	-55	240	52	350					
300	291.5	-59		261	81	295.9	-54		296	4	-53		224	51	298.7	-52		244	39	299.5	-55		300	21	300.9	-51		249	28	297.2	-50		238	59	300	
250		-74		264	88		-71			-71		232	56		-70		250	39		-71		295	19		-67		253	32		-60		252	58	250		
200	375.5	-73		261	63	380.7	-72		381	4	-67		244	61	383.6	-71		249	44	383.9	-77		283	25	386.0	-72		277	33	384.1	-55		278	69	200	
170		-68		257	49		-69			-67		265	47		-67		268	35		-70		290	27		177	-66		285	27		-57		274	55	170	
150		-67		255	57		-66			-68		252	51		-68		279	43		-69		285	33		mb)									150		
130		-69		258	52		-66			-70		264	54		-70		289	47		-71		287	28											130		
110		-70		271	51		-64			-72		278	51		-64		302	35		-75		289	24											110		
100	519.9	-70		267	57	525.7	-66		525	9	-71		282	48	528.7	-67		300	27	527.1	-73		288	27										100		
90		-70		270	58		-65			-70		290	43		-71		293	21		-71		276	29											90		
80		-68					-73			-72		290	36		-74		291	37		-75		271	20											80		
70							-75			-75		277	36		-70		274	30		-70		275	25											70		
60																																			60	
Inversion	523mb -02°	511mb -08°																																		

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

[illegible]

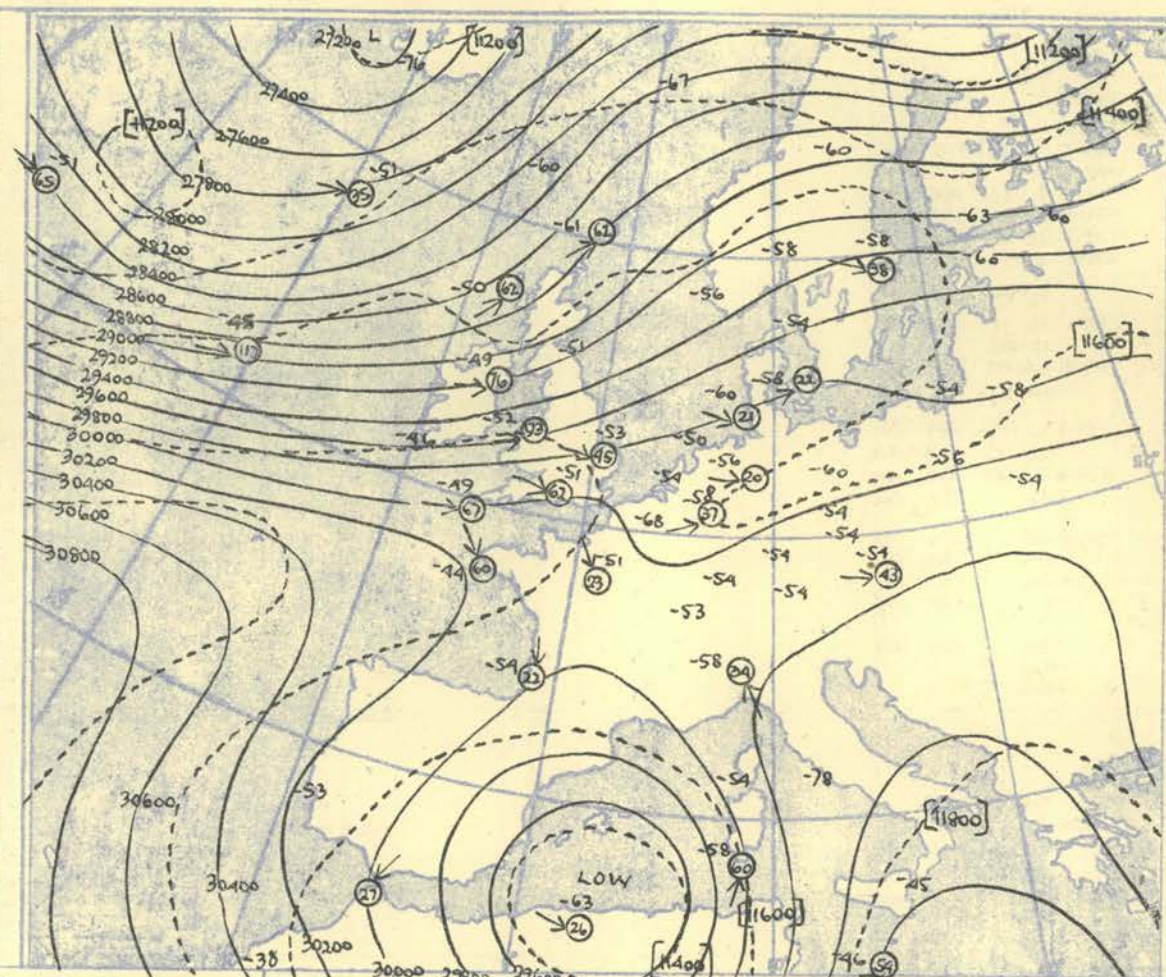
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb, 500 mb, and 300 mb, levels at about 03h G.M.T.



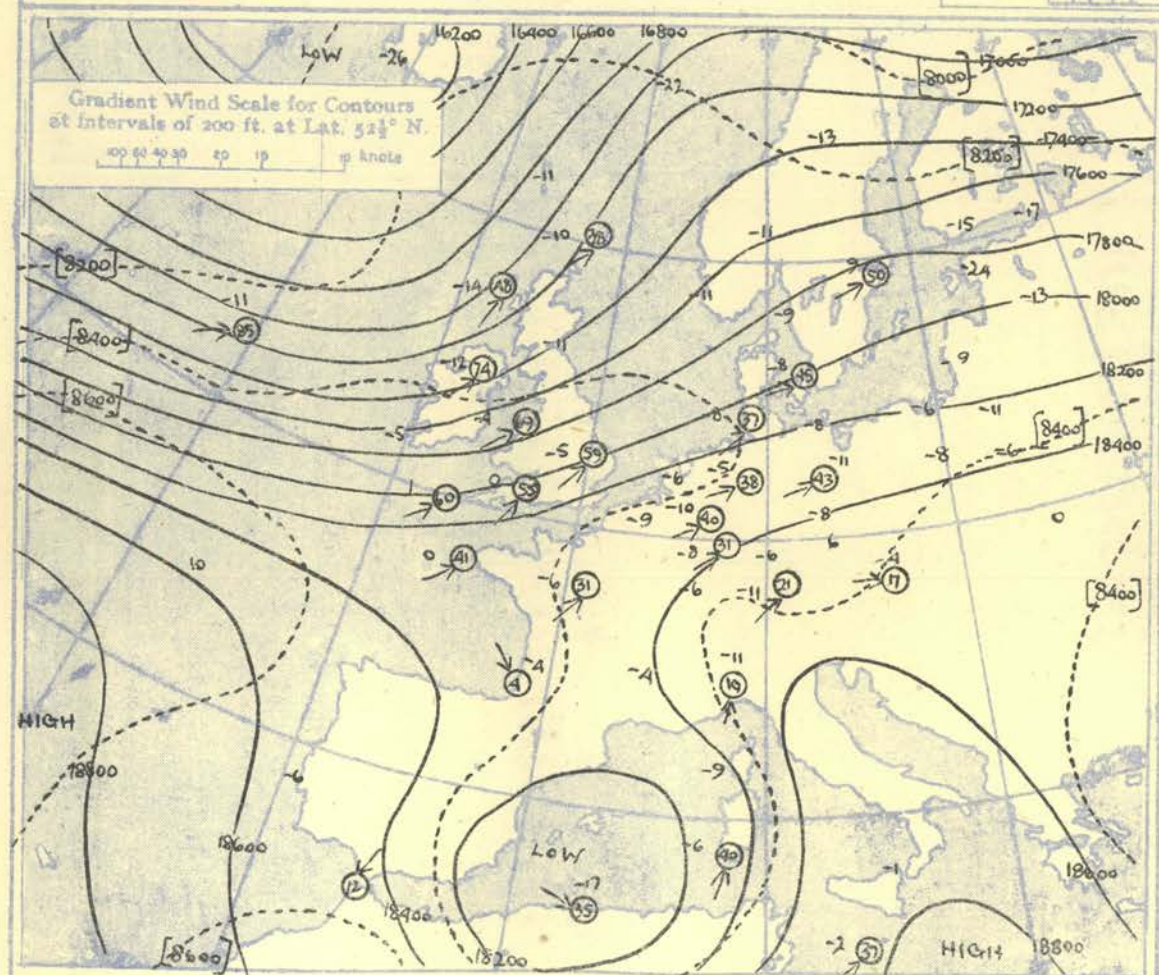
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

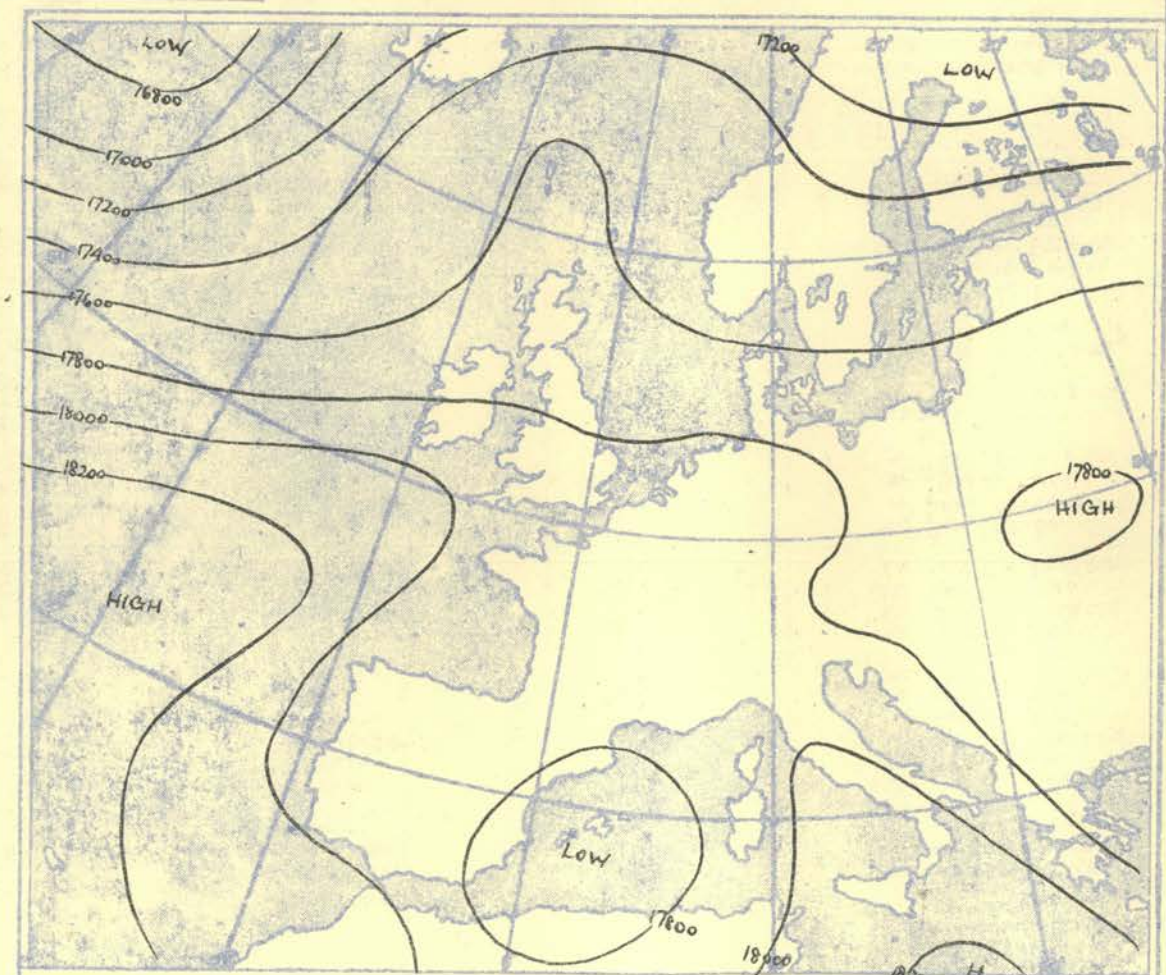
100 80 60 40 20 10 0 knots



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

Time	mb	mb	mb	mb	mb	mb	mb	mb	mb	Time
M.S.L.	mb	mb	mb	mb	mb	mb	mb	mb	mb	M.S.L.
Pressure	mb	mb	mb	mb	mb	mb	mb	mb	mb	Pressure
Height	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	Height
Temp.	°F	°F	°F	°F	°F	°F	°F	°F	°F	Temp.
Dew	°F	°F	°F	°F	°F	°F	°F	°F	°F	Dew
Surf										Surf
1000										1000
950										950
900										900
850										850
800										800
750										750
700										700
650										650
600										600
550										550
500										500
450										450
400										400
350										350
300										300
250										250
200										200
170										170

None reported.

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

Place	Camborne	Hemby	Hemby	Larkhill																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								</
-------	----------	-------	-------	----------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	----

NEPHOSCOPE OBSERVATIONS

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

None reported.

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

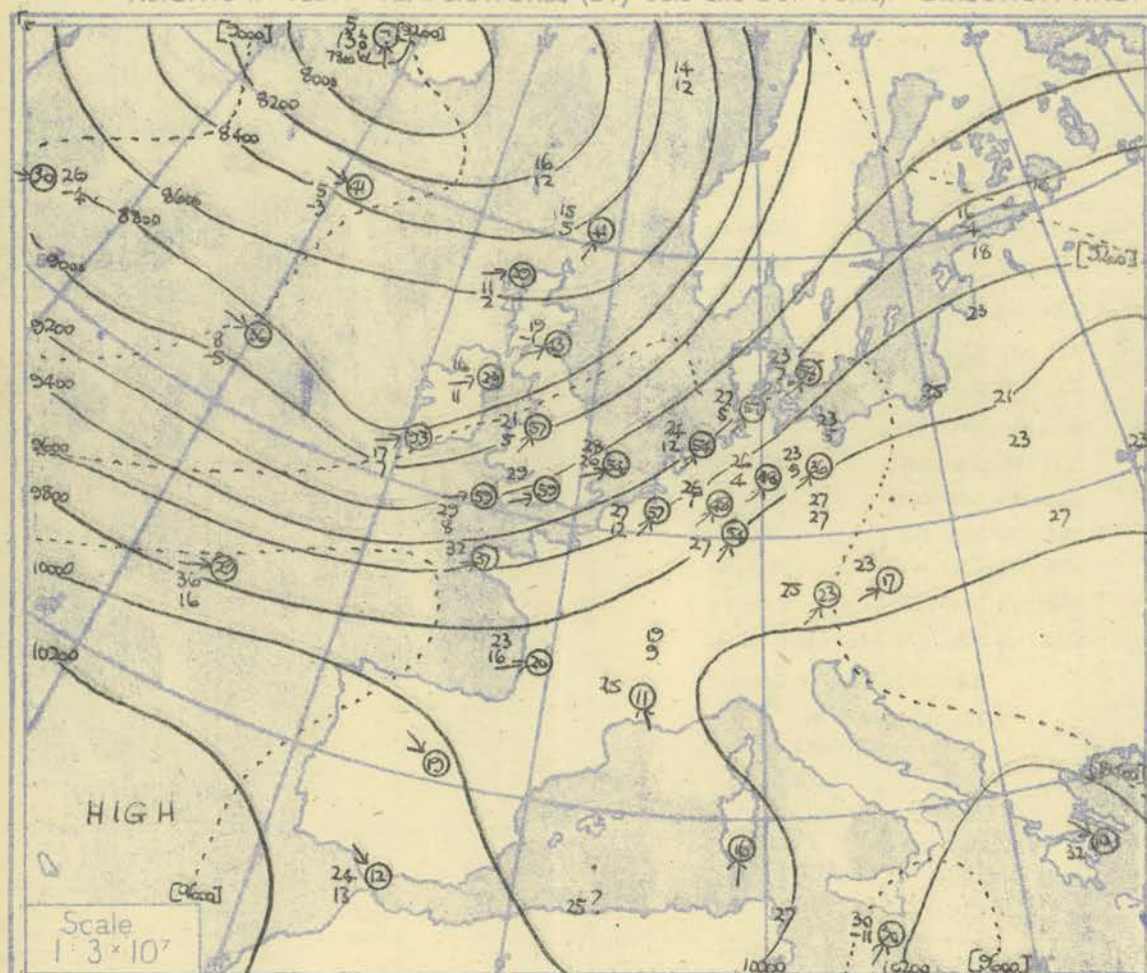
Ship	Weather Observer				Weather Observer				Weather Observer				Weather Observer				Weather Explorer				Weather Explorer				Weather Explorer				Weather Explorer				Ship			
Lat/Long	52.3°N		20.3°W		52.4°N		20.4°W		52.2°N		19.7°W		52.3°N		20.1°W		58.9°N		18.8°W		58.9°N		18.7°W		59.0°N		19.2°W		59.1°N		19.0°W		Lat/Long			
Pressure	Time	03h		G.M.T.		03h		G.M.T.		15h		G.M.T.		21h		G.M.T.		03h		G.M.T.		09h		G.M.T.		15h		G.M.T.		20h		G.M.T.				
	M.S.L.	03h		mb		03h		mb		03h		mb		03h		mb		06h		mb		06h		mb		07h		mb		07h		mb				
	Surf	03h		mb		03h		mb		03h		mb		03h		mb		06h		mb		06h		mb		07h		mb		07h		mb				
	(Pressing)	890		mb		900		mb		900		mb		910		mb		880		mb		925		mb		910		mb		915		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				
	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				
Surf	47	44	305	22	43	41	320	25	44	35	310	26	43	35	300	26	43	40	290	40	38	23	280	38	38	31	280	32	38	31	270	28				
1000	42	36	279	20	39	33	314	22	39	33	295	24	38	33	288	24	41	38	299	45	36	22	36	29	270	27	36	29	270	27	36	29				
950	24	3	277	25	32	32	314	21	24	6	32	296	24	34	28	295	39	19	7	30	24	282	34	20	2	282	34	20	2	282	34					
900	28	21	277	32	27	27	314	21	25	18	294	27	23	21	279	30	22	15	24	19	285	36	23	21	285	36	23	21	285	36	23	21				
850	33	1	275	42	54	2	22	315	17	55	1	292	30	55	4	274	34	48	3	21	18	300	49	49	1	285	40	50	6	264	39					
800	24	03	275	38	17	17	311	12	13	9	284	32	10	2	268	33	14	10	302	50	9	1	281	40	9	8	264	40	9	8	264	40				
750	18	05	265	52	88	2	11	305	16	88	7	274	36	88	9	270	30	82	1	10	2	308	45	82	7	9	10	84	0	9	1	262	44			
700	09	00	261	54	5	2	297	30	8	5	274	36	3	77	274	30	04	10	306	45	3	19	264	47	0	17	264	47	6	7	262	43				
650	128	1	261	66	126	4	3	270	38	126	6	274	46	126	4	276	33	120	2	4	12	302	33	120	7	5	269	45	122	2	273	43				
600	4	11	261	81	11	14	263	36	16	26	273	49	19	30	278	40	12	20	285	29	13	33	281	43	11	40	281	43	10	36	274	40				
550	172	4	255	85	170	0	20	263	36	169	8	263	271	50	169	2	292	45	163	8	19	30	274	34	164	1	22	289	45	165	9	272	43			
500	23	34	248	98	32	38	262	33	35	45	272	46	40	40	280	45	30	41	270	24	30	48	270	24	215	1	40	296	49	216	0	282	46			
450	224	2	248	108	221	2	37	262	65	220	3	270	60	219	4	272	54	214	9	43	281	54	214	9	215	1	40	298	48	216	9	282	46			
400	41	252	105	82	40	52	257	82	43	273	72	47	280	60	47	280	60	55	248	36	48		248	36	57		298	48	56		285	47				
350	238	4	255	117	235	4	258	92	234	1	268	84	232	7	278	72	277	5	249	35	278	3	252	39	277	9	284	39	277	9	284	39				
300	47	256	98	47	256	96	47	256	96	47	256	96	47	256	96	47	256	96	47	256	96	47	256	96	47	256	96	47	256	96	47	256	96			
250	577	4	257	87	573	0	260	87	571	0	260	87	571	0	260	87	571	0	260	87	571	0	260	87	571	0	260	87	571	0	260	87	571	0		
200	58	257	90	58	257	90	58	257	90	58	257	90	58	257	90	58	257	90	58	257	90	58	257	90	58	257	90	58	257	90	58	257	90			
170	53	257	90	53	257	90	53	257	90	53	257	90	53	257	90	53	257	90	53	257	90	53	257	90	53	257	90	53	257	90	53	257	90			
150	59	251	84	59	251	84	59	251	84	59	251	84	59	251	84	59	251	84	59	251	84	59	251	84	59	251	84	59	251	84	59	251	84			
130	71	252	66	71	252	66	71	252	66	71	252	66	71	252	66	71	252	66	71	252	66	71	252	66	71	252	66	71	252	66	71	252	66			
110	72	254	63	72	254	63	72	254	63	72	254	63	72	254	63	72	254	63	72	254	63	72	254	63	72	254	63	72	254	63	72	254	63			
90	73	254	48	73	254	48	73	254	48	73	254	48	73	254	48	73	254	48	73	254	48	73	254	48	73	254	48	73	254	48	73	254	48			
80	75	254	48	75	254	48	75	254	48	75	254	48	75	254	48	75	254	48	75	254	48	75	254	48	75	254	48	75	254	48	75	254	48			
70	77	256	51	77	256	51	77	256	51	77	256	51	77	256	51	77	256	51	77	256	51	77	256	51	77	256	51	77	256	51	77	256	51			
60	78	256	59	78	256	59	78	256	59	78	256	59	78	256	59	78	256	59	78	256	59	78	256	59	78	256	59	78	256	59	78	256	59			
50																																				
40																																				
30																																				
20																																				
10																																				
0																																				
Tropopause	II 312 nbs -45°F				I 427 nbs -38°F				I 415 nbs -43°F				I 444 nbs -41°F				I 347 nbs -55°F				I 308 nbs -52°F				I 312 nbs -66°F				N-R 350 nbs 24,000ft.				Tropopause			
	28,000ft.				20,500ft.				21,100ft.				19,600ft.				24,400ft.				27,100ft.				27,000ft.											

Inversion.

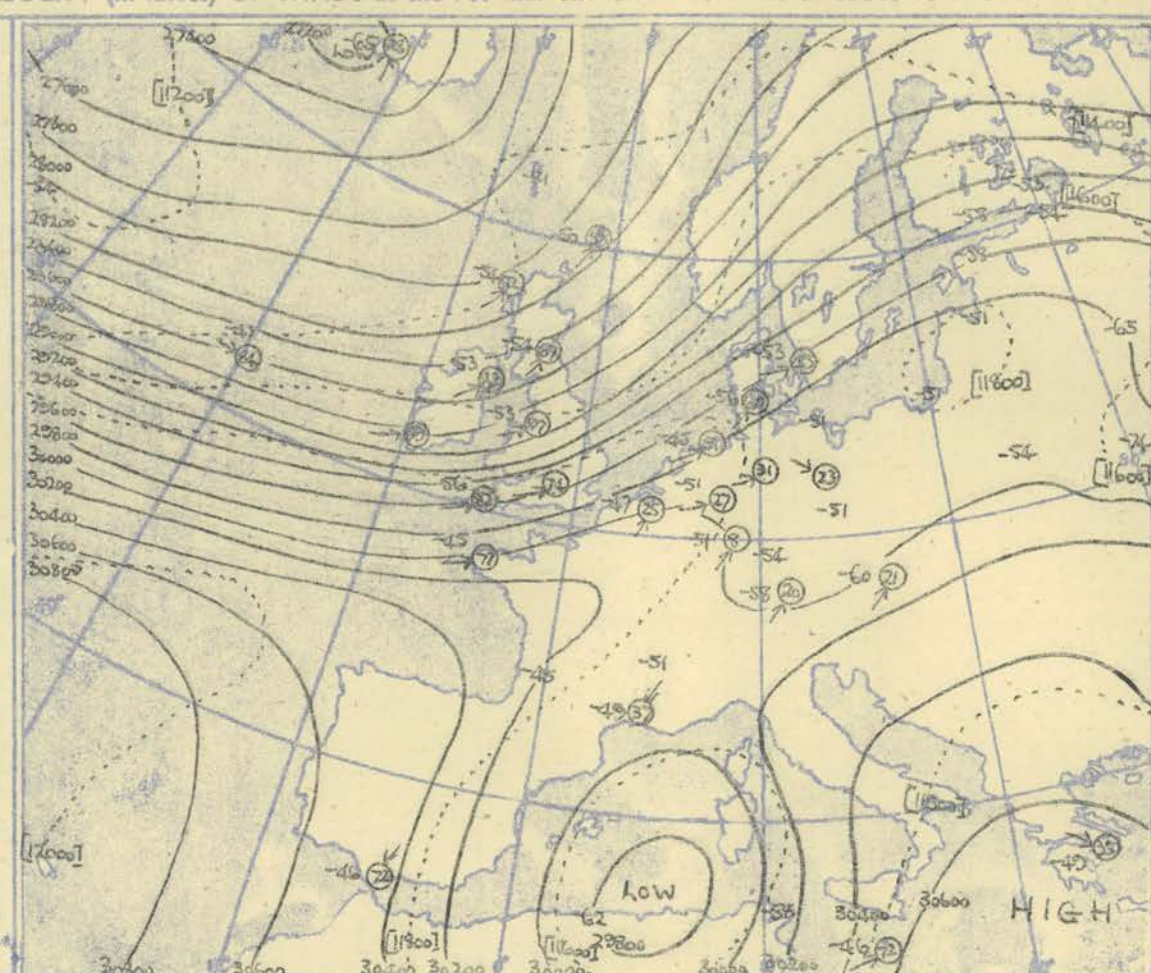
806 mbs -25°

78

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



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

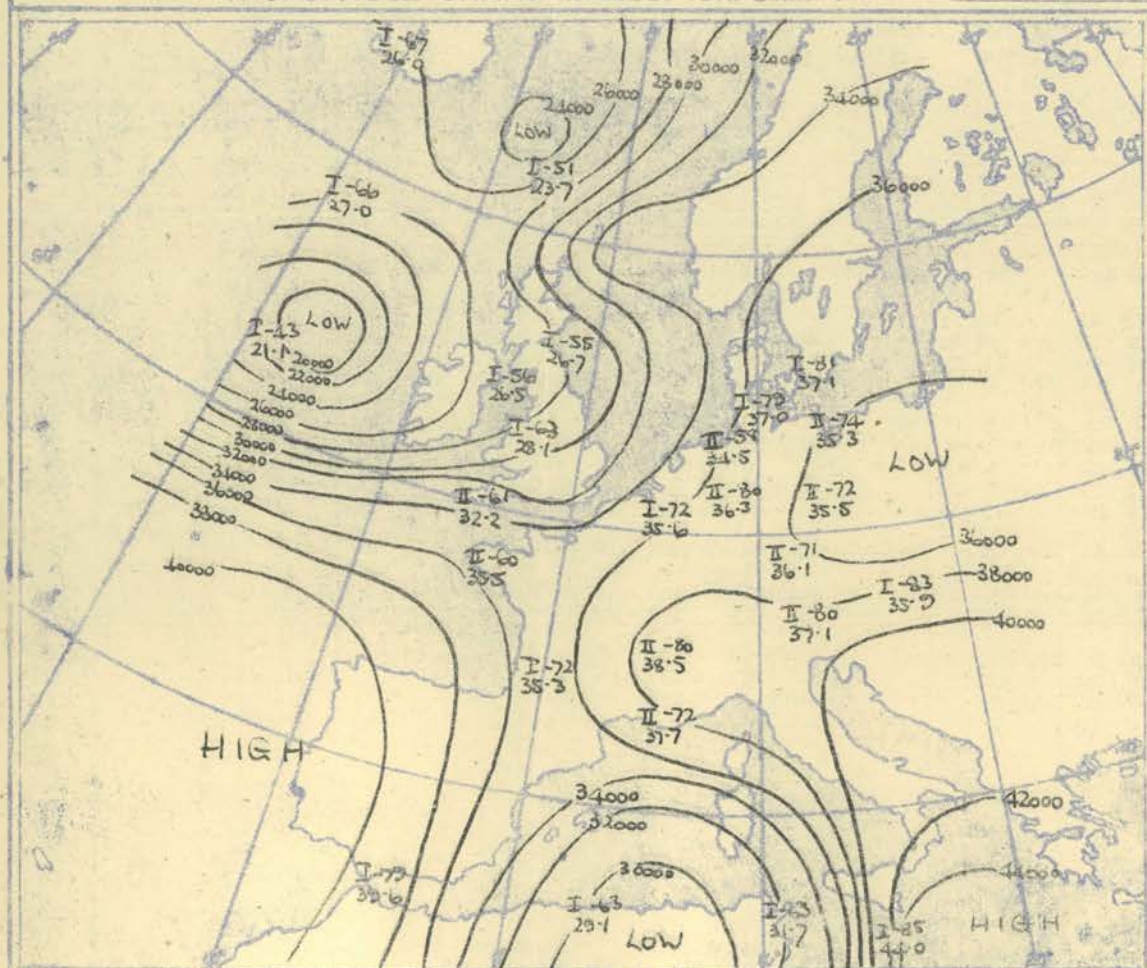


The continuous lines are contour lines of the 300 mb. surface.
The dotted lines are isopleths of the thickness of the layer 500—300 mb.

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

100 80 60 40 20 10 knots

TROPOPAUSE CHART at about 15h. GMT.



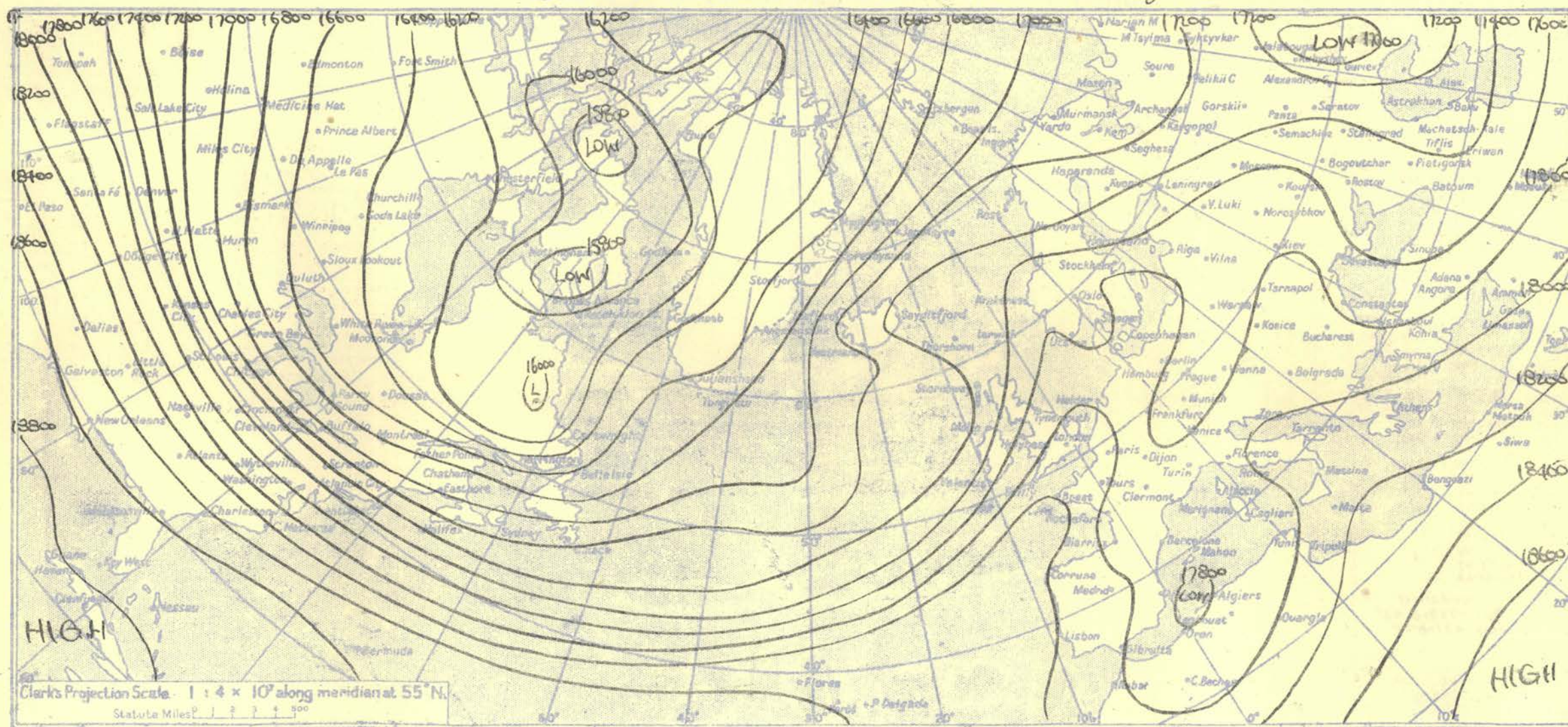
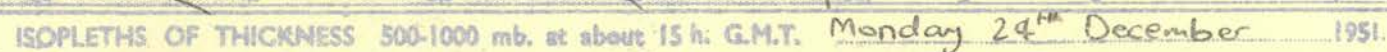
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Cold air was advected rapidly into the west of the British Isles and the strong southwesterly current ahead of the cold occlusion advected warm air quickly over the Baltic and Scandinavia, more or less obliterating the broad cold trough existing over these regions 24 hours earlier.

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

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



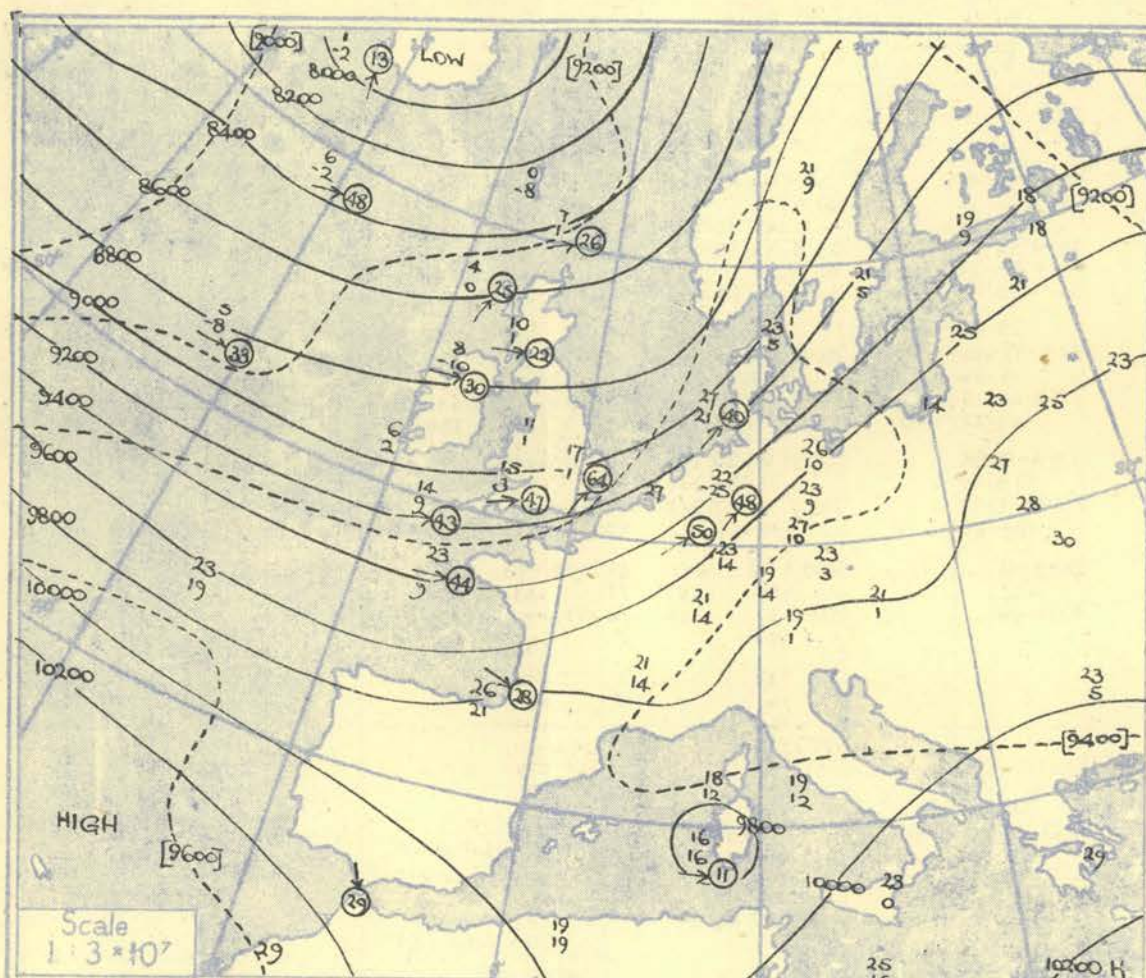
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				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.		Time	M.S.L.				
		Surf	Pressure	Surf	Pressure	Surf	Pressure	Surf	Pressure	Surf	Pressure	Surf	Pressure	Surf	Pressure	Surf	Pressure	Surf	Pressure	Surf	Pressure	Surf	Pressure	Surf	Pressure	Surf	Pressure	Surf	Pressure	Surf	Pressure	Surf	Pressure						
Surf	1000	96.3	mb	95.8	mb	95.0	mb	94.2	mb	93.5	mb	92.8	mb	92.1	mb	91.4	mb	90.7	mb	90.0	mb	89.3	mb	88.6	mb	87.9	mb	87.2	mb	86.5	mb	85.8	mb	85.1	mb	84.4	mb		
1000	980	95.8	mb	95.3	mb	94.8	mb	94.3	mb	93.8	mb	93.3	mb	92.8	mb	92.3	mb	91.8	mb	91.3	mb	90.8	mb	90.3	mb	89.8	mb	89.3	mb	88.8	mb	88.3	mb	87.8	mb	87.3	mb		
900	980	95.3	mb	94.8	mb	94.3	mb	93.8	mb	93.3	mb	92.8	mb	92.3	mb	91.8	mb	91.3	mb	90.8	mb	90.3	mb	89.8	mb	89.3	mb	88.8	mb	88.3	mb	87.8	mb	87.3	mb	86.8	mb		
800	980	94.8	mb	94.3	mb	93.8	mb	93.3	mb	92.8	mb	92.3	mb	91.8	mb	91.3	mb	90.8	mb	90.3	mb	89.8	mb	89.3	mb	88.8	mb	88.3	mb	87.8	mb	87.3	mb	86.8	mb	86.3	mb		
750	980	94.3	mb	93.8	mb	93.3	mb	92.8	mb	92.3	mb	91.8	mb	91.3	mb	90.8	mb	90.3	mb	89.8	mb	89.3	mb	88.8	mb	88.3	mb	87.8	mb	87.3	mb	86.8	mb	86.3	mb	85.8	mb		
700	980	93.8	mb	93.3	mb	92.8	mb	92.3	mb	91.8	mb	91.3	mb	90.8	mb	90.3	mb	89.8	mb	89.3	mb	88.8	mb	88.3	mb	87.8	mb	87.3	mb	86.8	mb	86.3	mb	85.8	mb	85.3	mb		
650	980	93.3	mb	92.8	mb	92.3	mb	91.8	mb	91.3	mb	90.8	mb	90.3	mb	89.8	mb	89.3	mb	88.8	mb	88.3	mb	87.8	mb	87.3	mb	86.8	mb	86.3	mb	85.8	mb	85.3	mb	84.8	mb		
600	980	92.8	mb	92.3	mb	91.8	mb	91.3	mb	90.8	mb	90.3	mb	89.8	mb	89.3	mb	88.8	mb	88.3	mb	87.8	mb	87.3	mb	86.8	mb	86.3	mb	85.8	mb	85.3	mb	84.8	mb	84.3	mb		
550	980	92.3	mb	91.8	mb	91.3	mb	90.8	mb	90.3	mb	89.8	mb	89.3	mb	88.8	mb	88.3	mb	87.8	mb	87.3	mb	86.8	mb	86.3	mb	85.8	mb	85.3	mb	84.8	mb	84.3	mb	83.8	mb		
500	980	91.8	mb	91.3	mb	90.8	mb	90.3	mb	89.8	mb	89.3	mb	88.8	mb	88.3	mb	87.8	mb	87.3	mb	86.8	mb	86.3	mb	85.8	mb	85.3	mb	84.8	mb	84.3	mb	83.8	mb	83.3	mb		
450	980	91.3	mb	90.8	mb	90.3	mb	89.8	mb	89.3	mb	88.8	mb	88.3	mb	87.8	mb	87.3	mb	86.8	mb	86.3	mb	85.8	mb	85.3	mb	84.8	mb	84.3	mb	83.8	mb	83.3	mb	82.8	mb		
400	980	90.8	mb	90.3	mb	89.8	mb	89.3	mb	88.8	mb	88.3	mb	87.8	mb	87.3	mb	86.8	mb	86.3	mb	85.8	mb	85.3	mb	84.8	mb	84.3	mb	83.8	mb	83.3	mb	82.8	mb	82.3	mb		
350	980	90.3	mb	89.8	mb	89.3	mb	88.8	mb	88.3	mb	87.8	mb	87.3	mb	86.8	mb	86.3	mb	85.8	mb	85.3	mb	84.8	mb	84.3	mb	83.8	mb	83.3	mb	82.8	mb	82.3	mb	81.8	mb		
300	980	89.8	mb	89.3	mb	88.8	mb	88.3	mb	87.8	mb	87.3	mb	86.8	mb	86.3	mb	85.8	mb	85.3	mb	84.8	mb	84.3	mb	83.8	mb	83.3	mb	82.8	mb	82.3	mb	81.8	mb	81.3	mb		
250	980	89.3	mb	88.8	mb	88.3	mb	87.8	mb	87.3	mb	86.8	mb	86.3	mb	85.8	mb	85.3	mb	84.8	mb	84.3	mb	83.8	mb	83.3	mb	82.8	mb	82.3	mb	81.8	mb	81.3	mb	80.8	mb		
200	980	88.8	mb	88.3	mb	87.8	mb	87.3	mb	86.8	mb	86.3	mb	85.8	mb	85.3	mb	84.8	mb	84.3	mb	83.8	mb	83.3	mb	82.8	mb	82.3	mb	81.8	mb	81.3	mb	80.8	mb	80.3	mb		
170	980	88.3	mb	87.8	mb	87.3	mb	86.8	mb	86.3	mb	85.8	mb	85.3	mb	84.8	mb	84.3	mb	83.8	mb	83.3	mb	82.8	mb	82.3	mb	81.8	mb	81.3	mb	80.8	mb	80.3	mb	79.8	mb		
150	980	87.8	mb	87.3	mb	86.8	mb	86.3	mb	85.8	mb	85.3	mb	84.8	mb	84.3	mb	83.8	mb	83.3	mb	82.8	mb	82.3	mb	81.8	mb	81.3	mb	80.8	mb	80.3	mb	79.8	mb	79.3	mb		
130	980	87.3	mb	86.8	mb	86.3	mb	85.8	mb	85.3	mb	84.8	mb	84.3	mb	83.8	mb	83.3	mb	82.8	mb	82.3	mb	81.8	mb	81.3	mb	80.8	mb	80.3	mb	79.8	mb	79.3	mb	78.8	mb		
110	980	86.8	mb	86.3	mb	85.8	mb	85.3	mb	84.8	mb	84.3	mb	83.8	mb	83.3	mb	82.8	mb	82.3	mb	81.8	mb	81.3	mb	80.8	mb	80.3	mb	79.8	mb	79.3	mb	78.8	mb	78.3	mb		
90	980	86.3	mb	85.8	mb	85.3	mb	84.8	mb	84.3	mb	83.8	mb	83.3	mb	82.8	mb	82.3	mb	81.8	mb	81.3	mb	80.8	mb	80.3	mb	79.8	mb	79.3	mb	78.8	mb	78.3	mb	77.8	mb		
80	980	85.8	mb	85.3	mb	84.8	mb	84.3	mb	83.8	mb	83.3	mb	82.8	mb	82.3	mb	81.8	mb	81.3	mb	80.8	mb	80.3	mb	79.8	mb	79.3	mb	78.8	mb	78.3	mb	77.8	mb	77.3	mb		
70	980	85.3	mb	84.8	mb	84.3	mb	83.8	mb	83.3	mb	82.8	mb	82.3	mb	81.8	mb	81.3	mb	80.8	mb	80.3	mb	79.8	mb	79.3	mb	78.8	mb	78.3	mb	77.8	mb	77.3	mb	76.8	mb		
60	980	84.8	mb	84.3	mb	83.8	mb	83.3	mb	82.8	mb	82.3	mb	81.8	mb	81.3	mb	80.8	mb	80.3	mb	79.8	mb	79.3	mb	78.8	mb	78.3	mb	77.8	mb	77.3	mb	76.8	mb	76.3	mb		
Tropopause		I 223 mb - 59°												I 330 mb - 56°				I 312 mb - 55°												II 264 mb - 61°				N.R.				Tropopause	
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE								STATION	
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	Surf	Pressure	Surf	Pressure	Surf	Pressure	Surf	Pressure	Surf	Pressure	Surf	Pressure	Surf	Pressure	Surf	Pressure	Surf	Pressure	Surf	Pressure	Surf	Pressure	Surf	Pressure	Surf	Pressure	Surf	Pressure	Surf	Pressure						
Surf	1000	970.5	mb	960.8	mb					979.5	mb	970.4	mb	981.5	mb	979.5	mb	976.5	mb							990.1	mb	979.7	mb										
1000	980	960.8	mb	950.0	mb					970.4	mb	960.8	mb	979.5	mb	970.4	mb	976.5	mb							979.7	mb	969.9	mb										
900	980	950.0	mb	940.0	mb					960.8	mb	950.0	mb	970.4	mb	960.8	mb	970.4	mb							969.9	mb	959.9	mb										
800	980	940.0	mb	930.0	mb					950.0	mb	940.0	mb	960.8	mb	950.0	mb	960.8	mb							959.9	mb	949.9	mb										
750	980	930.0	mb	920.0	mb					940.0	mb	930.0	mb	950.0	mb	940.0	mb	950.0	mb							949.9	mb	939.9	mb										
700	980	920.0	mb	910.0	mb					930.0	mb	920.0	mb	940.0	mb	930.0	mb	940.0	mb							939.9	mb	929.9	mb										
650	980	910.0	mb	900.0	mb					920.0	mb	910.0	mb	930.0	mb	920.0	mb	930.0	mb							929.9	mb	919.9	mb										
600	980	900.0	mb	890.0	mb					910.0	mb	900.0	mb	920.0	mb	910.0	mb	920.0	mb							919.9	mb	909.9	mb										
550	980	890.0	mb	880.0	mb					900.0	mb	890.0	mb	910.0	mb	900.0	mb	910.0	mb							909.9	mb	899.9	mb										
500	980	880.0	mb	870.0	mb					890.0	mb	880.0	mb	900.0	mb	890.0	mb	900.0	mb							899.9	mb	889.9	mb										
450	980	870.0	mb	860.0	mb					880.0	mb	870.0	mb	890.0	mb	880.0	mb	890.0	mb							889.9	mb	879.9	mb										
400	980	860.0	mb	850.0	mb					870.0	mb	860.0	mb	880.0	mb	870.0	mb	880.0	mb							879.9	mb	869.9	mb										
350	980	850.0	mb	840.0	mb					860.0	mb	850.0	mb	870.0	mb	860.0	mb	870.0	mb							869.9	mb	859.9	mb										
300	980	840.0	mb	830.0	mb					850.0	mb	840.0	mb	860.0	mb	850.0	mb	860.0	mb							859.9	mb	849.9	mb										
250	980	830.0	mb	820.0	mb					840.0	mb	830.0	mb	850.0	mb	840.0	mb	850.0	mb							849.9	mb	839.9	mb										
200	980	820.0	mb	810.0	mb					830.0	mb	820.0	mb	840.0	mb	830.0	mb	840.0	mb							839.9	mb	829.9	mb										
170	980	810.0	mb	800.0	mb					820.0	mb	810.0	mb	830.0	mb	820.0	mb	830.0	mb							829.9	mb	819.9	mb										
150	980	800.0	mb	790.0	mb					810.0	mb	800.0	mb	820.0	mb	810.0	mb	820.0	mb																				

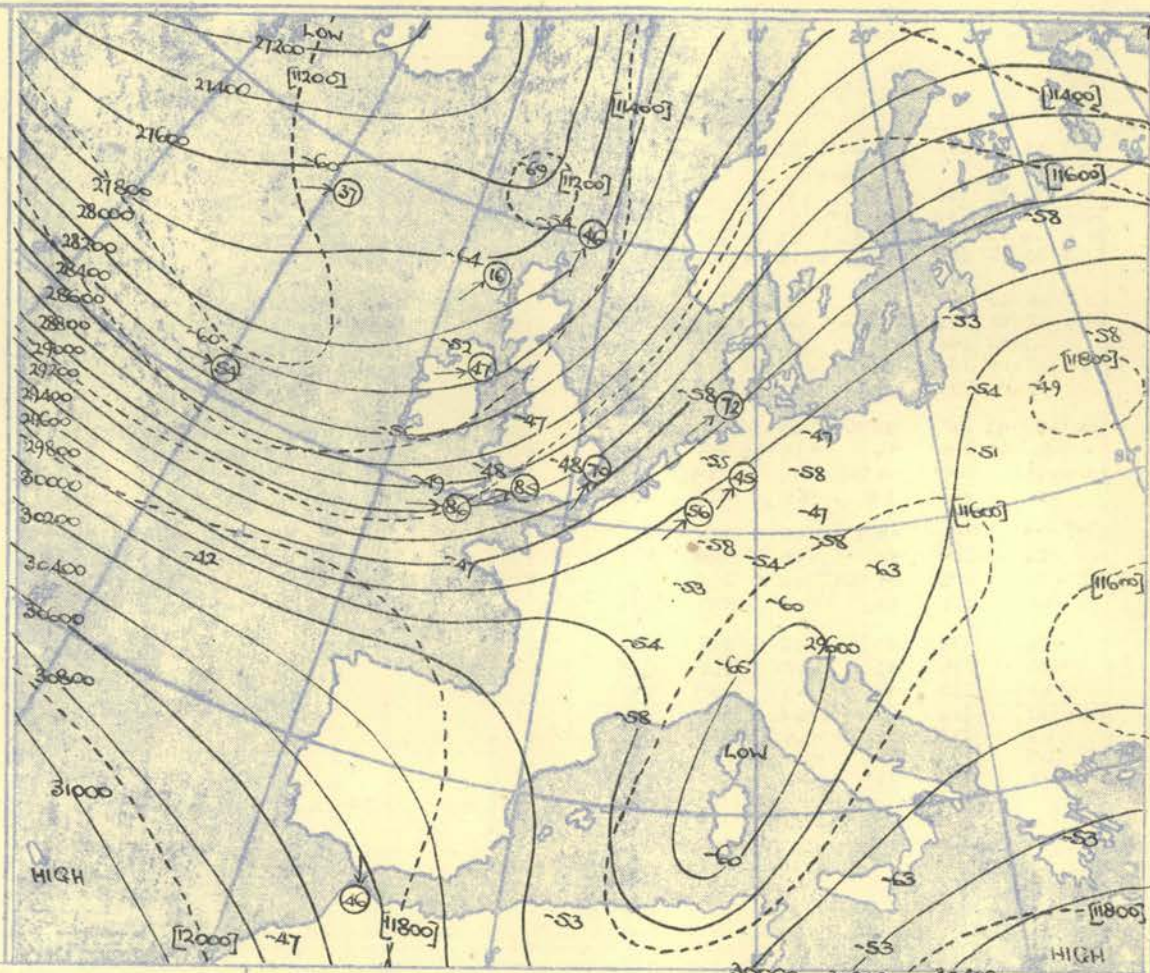
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

[illegible]

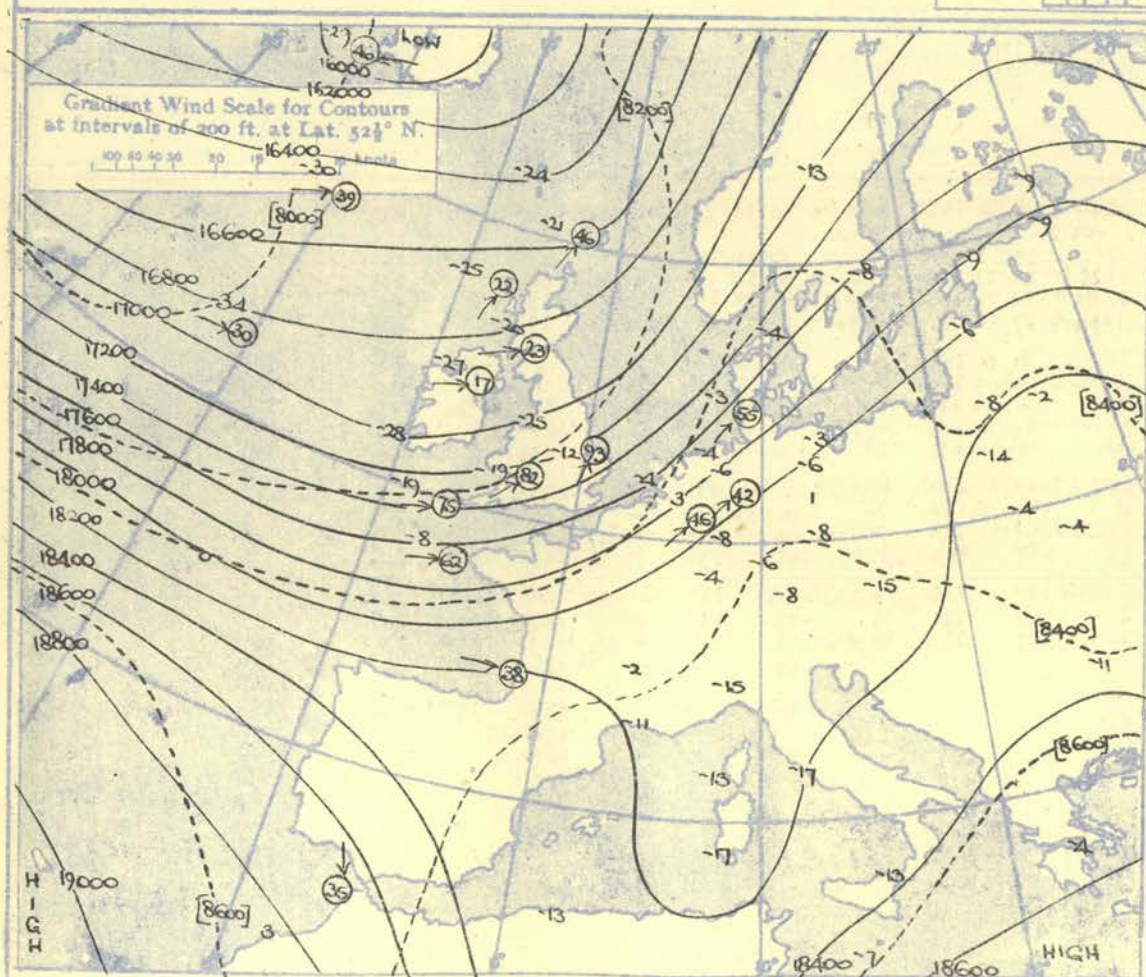
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (In knots) OF WINDS at the 700 mb. 500 mb. and 300 mb. levels at about 03h G.M.T.



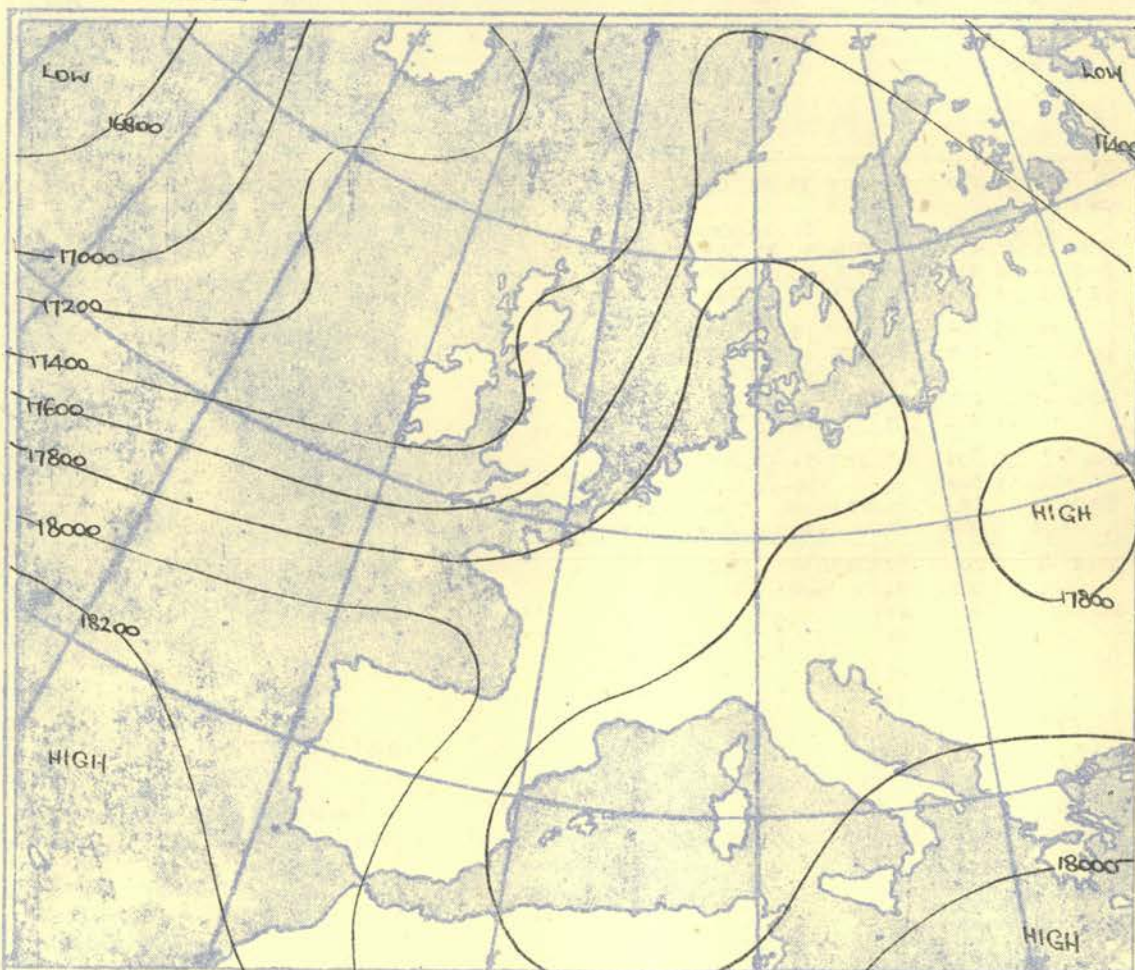
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.



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



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



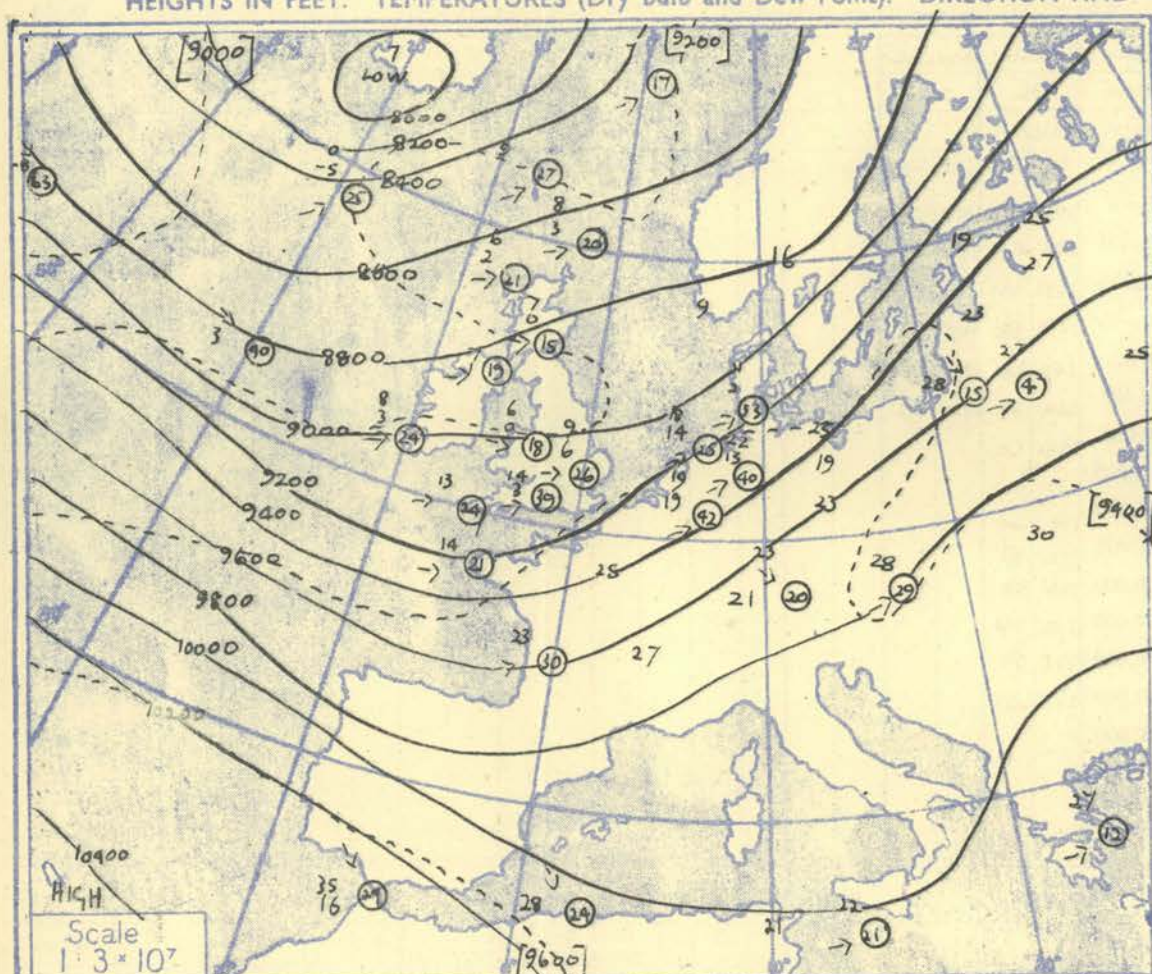
Isopleths of Thickness 500-1000mb.

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 Explorer				Weather Explorer				Weather Explorer				Weather Observer				Weather Observer				Weather Observer				Weather Observer				Ship							
Lat/Long	53-1°N		18-7°W		53-1°N		18-9°W		53-2°N		19-0°W		52-2°N		20-3°W		52-3°N		20-3°W		52-5°N		20-4°W		52-6°N		20-0°W		Lat/Long							
Pressure (Freezing)	Time	02h		G.M.T.		Time	08h		G.M.T.		Time	14h		G.M.T.		Time	02h		G.M.T.		Time	08h		G.M.T.		Time	14h		G.M.T.							
	M.S.L.	071		mb		M.S.L.	071		mb		M.S.L.	072		mb		M.S.L.	073		mb		M.S.L.	088		mb		M.S.L.	089		mb							
	Surf	071		mb		Surf	071		mb		Surf	072		mb		Surf	073		mb		Surf	088		mb		Surf	089		mb							
	Freezing	030		mb		Freezing	010		mb		Freezing	240		mb		Freezing	200		mb		Freezing	015		mb		Freezing	010		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	Pressure mb							
Surf																													Surf							
1000	7-9	38 30	270	32	8-0	40 29	280	34	7-7	38 30	270	43	7-3	38 29	260	35	3-2	43 35	320	28	3-2	41 37	260	23	-2-9	42 35	305	28	-2-1	42 32	295	40	1000			
950		24 27	269	30		37 33	255	33		34 27	271	36		34 25	258	33		38 32	277	11		38 34	248	17		37 31	278	24		38 31	270	42	950			
900	20-1	26 21	269	38	9-9	30 27	255	31	20-2	27 20	265	33	20-5	27 17	257	31	24-9	30 27	275	25	24-8	32 28	251	17	25-0	30 26	278	24	26-0	31 27	280	46	900			
850		18 15	267	38		23 21	255	29		22 17	257	29		20 10	256	50		23 22	274	30		27 24	252	24		23 21	278	32		24 22	280	51	850			
800	50-1	12 10	264	38	50-2	15 4	255	24	51-5	15 11	247	25	50-6	14 05	254	51	55-2	7 26	272	20	55-4	20 19	252	24	55-3	16 4	278	36	56-4	17 17	281	49	800			
750		08 06	263	39		9 5	255	39		7 1	244	23		08 07	250	44		11 7	271	30		13 12	252	27		10 7	283	36		10 09	281	42	750			
700	83-4	06 2	259	48	83-7	4 5	250	35	83-7	0 5	244	25	83-9	00 5	244	40	88-7	5 8	270	33	89-0	6 5	252	33	88-8	2 0	283	40	89-0	04 13	278	42	700			
650		2 17	258	45		4 16	244	32		8 22	241	30		8 22	241	30		2 1	271	34		1 2	252	42		1 2	252	42		10 3	257	29	650			
600	21-3	7 29	259	39	121-2	12 22	244	39	120-9	17 34	250	36	21-1	16 29	243	38	26-3	11 21	271	36	26-7	8 10	252	44	126-1	13 16	268	45	127-5	10 34	267	38	600			
550		18 38	261	37		20 27	247	41		26 41	245	33		28 38	249	39		22 35	271	31		19 21	252	40		19 21	252	40		18 43	266	39	550			
500	14-3	30 48	252	39	63-9	29 37	243	42	63-0	36 51	246	31	63-4	33 46	249	37	68-8	34 43	270	30	69-5	36 32	252	43	68-7	32 36	250	42	170-4	27	260	39	500			
450		28 54	232	40		30 47	237	45		42 250	32	40		40 53	249	34		43 270	42		39 42	252	48		41 268	44		38 254	44		38 254	44	450			
400	24-5	46 219	52	231	213-2	7-48	248	32	213-2	60 249	27	249	248-4	50 270	42	270	219-6	46 254	45	219-5	51 258	46	258	46	219-5	51 258	46	258	46	220-5	48 254	52	400			
350		53	233	48		58	223	36		60 246	29			59	249	29		56 260	50		56 260	50			56 260	50		58 262	44		52 254	59	350			
300	27-9	60 249	37		63 222	36	274-1	63 252	37	274-7	66 249	33	280-6	54 270	54	270	281-6	57 258	62	280-7	53 263	56	263	56	280-7	53 263	56	263	56	281-1	53 257	69	300			
250		62 228	36		57 229	30		58 263	34		60 249	29		58 265	71			52 266	16		52 266	16			52 266	16		54 263	42		53 264	72	250			
200	36-3	55 232	45		55 226	26	360-9	53 254	33	361-0	57 238	39	369-1	48 263	63	263	369-9	46 271	73											370-9	54 266	72	200			
170		56 239	39		54 239	44		55 252	42		55 233	37		50 263	76																54 269	74	170			
150	425-4	53 245	44		55 258	44		56 254	39		56 259	39		431-9	52 269	72															54 266	72	150			
130					55 260	40																									54 269	74	130			
110					59 262	54																									54 269	71	110			
100					511-6	60 259	66																								54 266	43	100			
90					63																										54 266	54	90			
80																															54 266	54	80			
70																															54 266	44	70			
60																																	60			
	-52 inversion:-				Isothermal.												(134 mbs)																			
	816 mbs 11° -				345 - 334 mbs -59°F.																															
	800 mbs 12°																																			

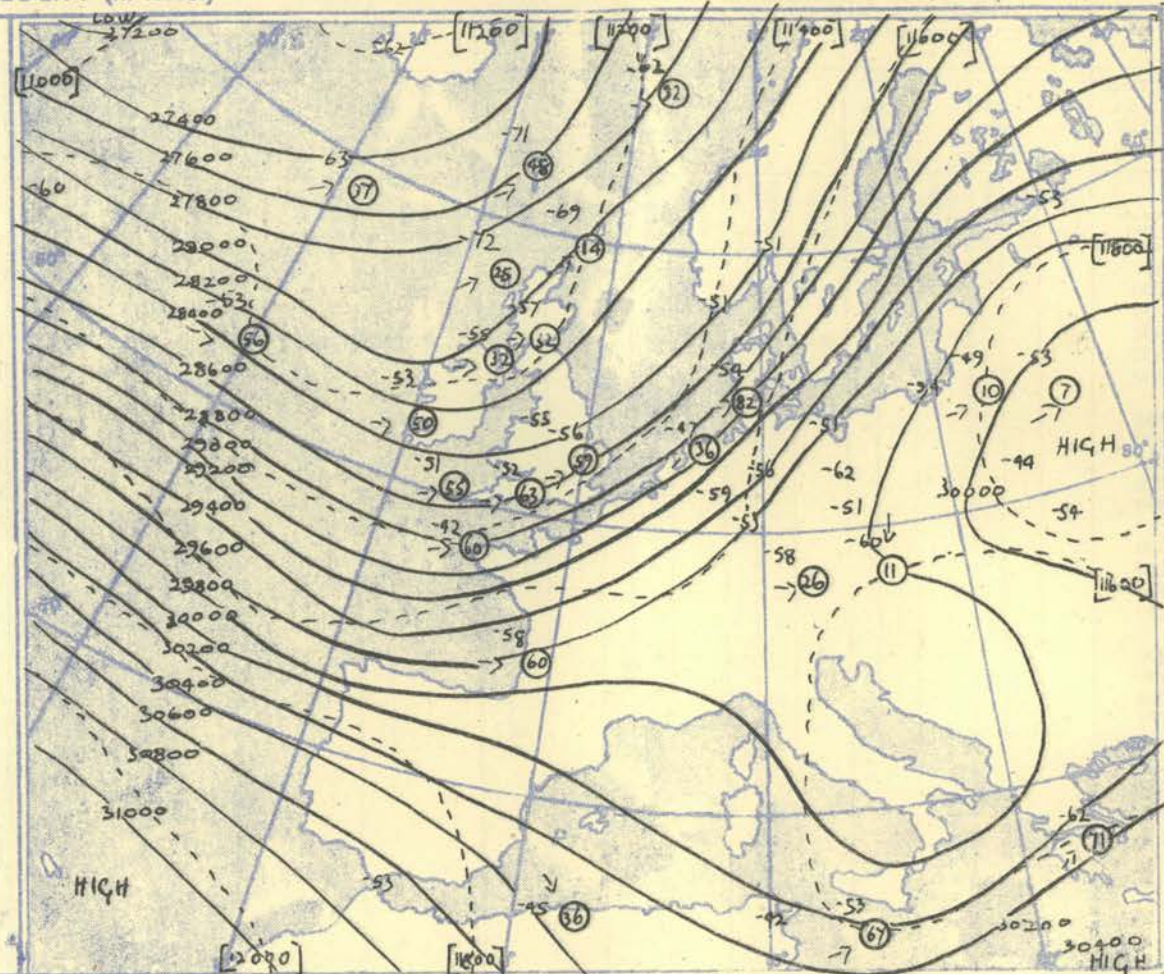
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h G.M.T.



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.

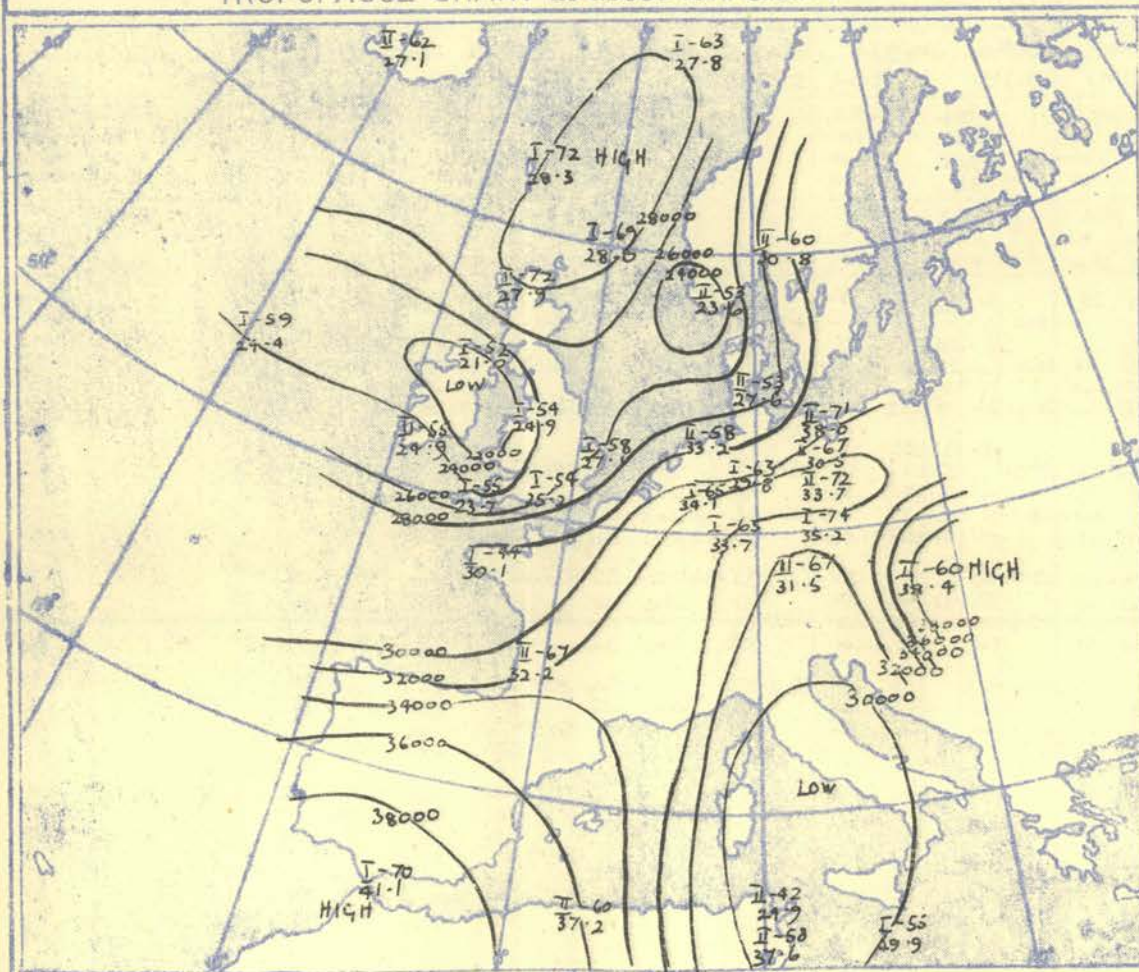
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. $52\frac{1}{2}^\circ$ N.

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 500—300 mb.

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



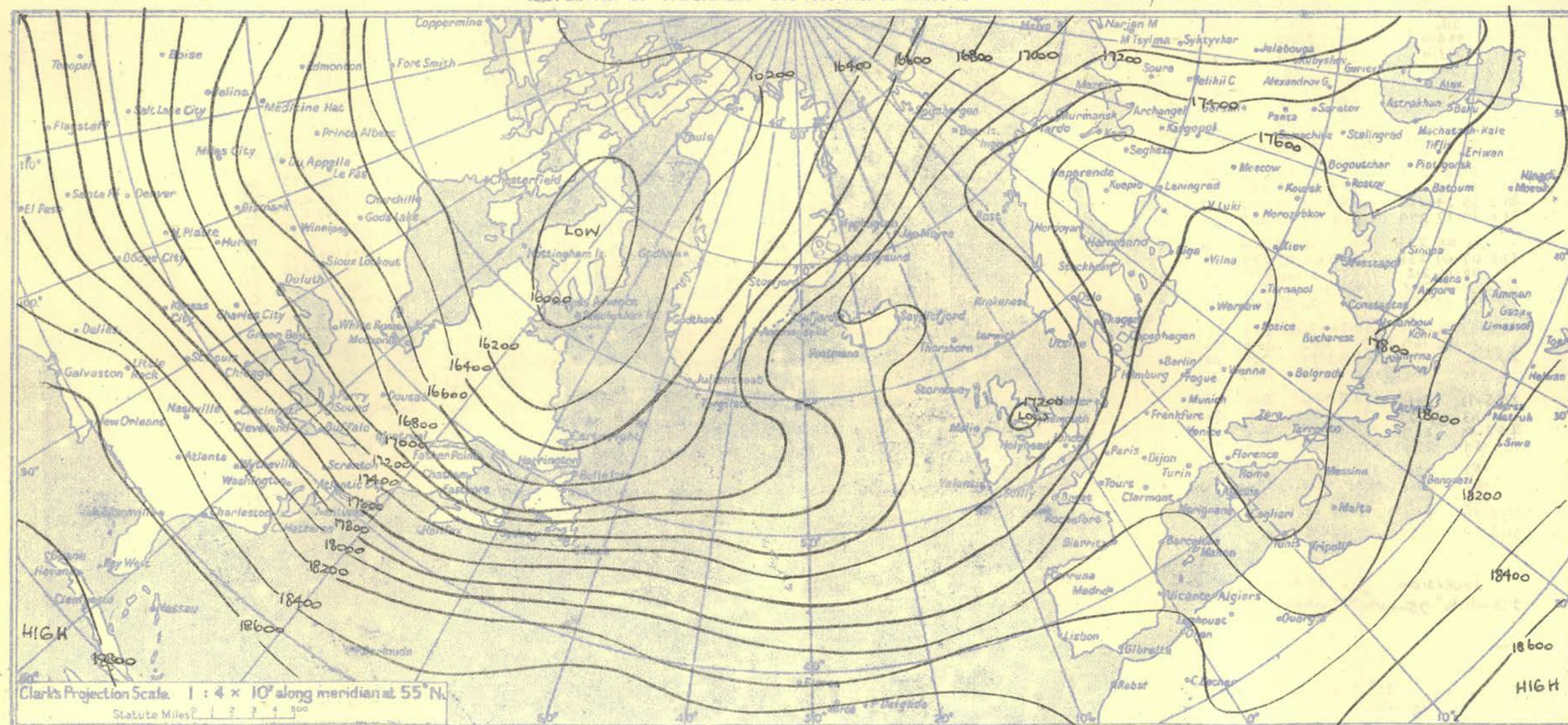
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Little of note.

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

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

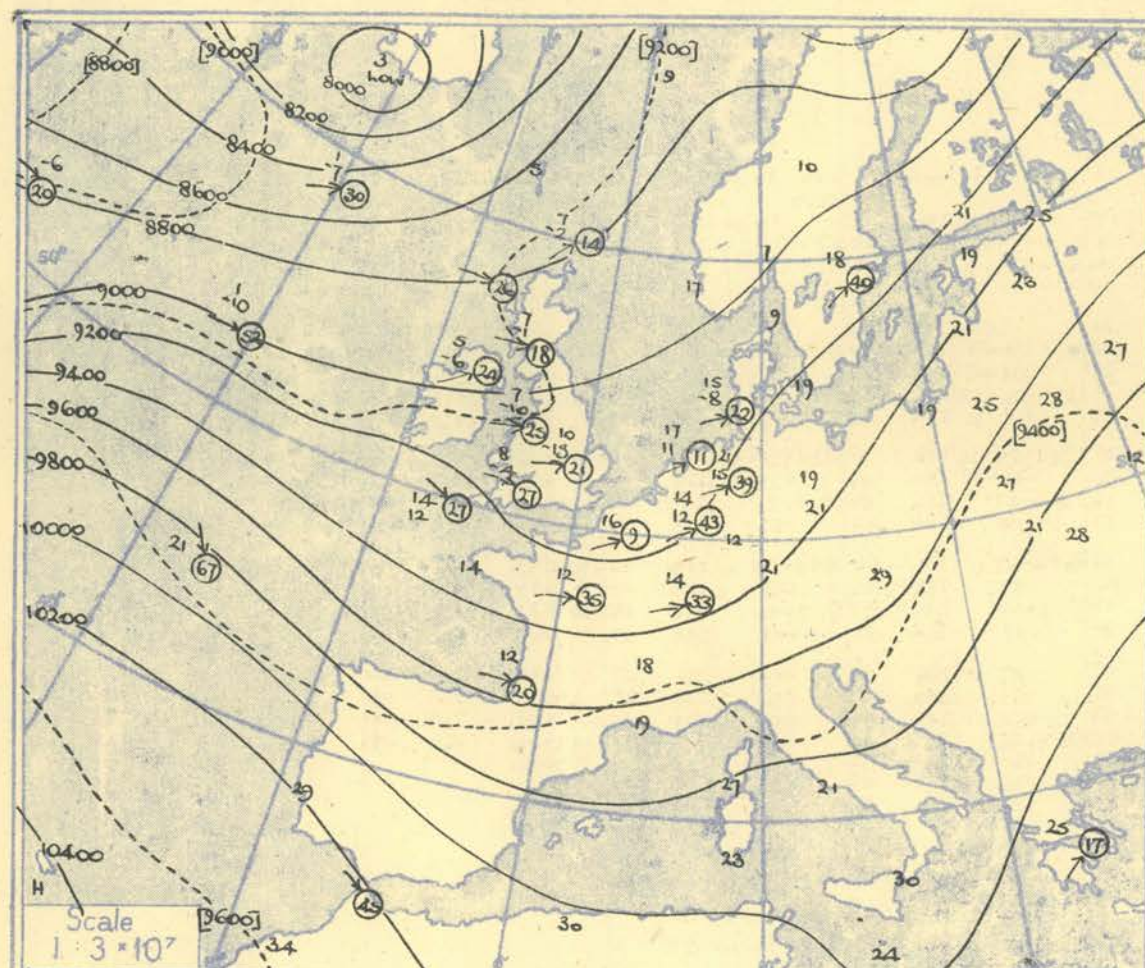


RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA				STATION								
Time	15h				15h				G.M.T.				15h				15h				15h				15h				15h				15h				Time								
M.S.L.	980.3				981.0				G.M.T.				986.6				989.0				990.6				992.0				992.7				990.5				M.S.L.								
Surf	970.4				979.4				mb				977.3				986.9				989.2				976.1				982.2				989				Surf								
Freezing	900				900				mb				950				900				871				885				872				900				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	38	33	CALM	00.4	39	34	180	08				02.5	36	34	220	12	00.6	39	36	170	02	00.4	46	37	230	06	04.4	42	39	290	05	04.9	46	43	280	10	00.3	44	37	280	13	Surf		
1000	-05.3	37	36	223	12	-05.1	37	31	230	18			-03.5	32	31	231	17	-03.0	37	29	256	15	-02.5	41	37	228	09	-02.1	39	36	282	09	-02.0	46	43	280	10	-02.6	44	37	280	13	1000		
950	22.7	32	31	231	11	22.8	32	25	240	18			24.2	27	28	238	18	25.0	37	29	256	15	21.5	41	37	228	09	26.0	39	36	282	09	26.2	46	43	280	10	26.5	39	33	271	18	950		
900	31.6	26	25	246	10	31.7	26	19	237	19			34.0	24	21	245	17	37.9	26	21	260	23	40.7	29	22	238	16	40.9	29	26	278	22	41.3	29	25	281	18		27	23	277	23	900		
850	53.3	21	20	254	13	53.5	20	15	233	19			54.6	18	15	252	16	55.5	19	12	261	22	56.8	23	19	234	17	56.8	25	22	274	25	57.1	24	16	274	24	56.1	20	16	276	25	850		
800																																												800	
750																																												750	
700	87.1	08	03	252	20	87.2	06	02	239	21			88.4	07	01	257	19	89.1	06	00	259	18	90.4	09	06	237	26	90.9	14	03	250	39	91.2	13	04	253	24	89.8	08	03	270	24	700		
650	00.15	248	13		01.12	244	24						02.08	257	18		01.13	258	24		02.03	240	36		08.10	254	36		08.10	254	36		08.10	254	36		08.10	254	36		08.10	254	36		650
600	24.9	06	28	253	08	24.9	09	25	240	22			26.0	11	20	253	17	26.7	10	24	251	26	28.4	05	08	236	39	29.3	01	22	266	34	29.4	04	12	238	19	27.7	07	12	273	32	600		
550	-15	37	254	07	-16	33	237	19					-21	28	264	14	-20	35	250	27	-15	23	237	43	-11	31	267	41	-14	21	253	25	-16	22	271	34	-16	22	271	34	550				
500	68.6	25	46	212	04	67.8	27	43	223	20			68.6	32	38	265	12	69.5	30	42	251	30	71.8	26	38	233	44	72.9	21	39	260	50	72.7	24	31	254	41	70.9	26	33	262	33	500		
450	-35	55	185	04	-39	54	216	19					-44	51	258	12	-41	51	250	43	-35	47	228	50	-32	46	246	62	-34	40	246	62	-34	40	246	62	-34	40	246	62	-34	40	450		
400	218.6	46	177	04	217.9	50	203	19					218.2	51	246	27	219.5	45	247	42	222.3	42	230	55	223.7	45	243	67	223.3	47	239	48	221.1	49	261	33	400								
350	-58	140	05	-60	187	20							-55	248	27	-54	243	44	-52	243	44	-52	243	44	-52	243	44	-52	243	44	-52	243	44	-52	243	44	-52	243	44	-52	243	44	350		
300	280.2	69	210	142	70	72	190	25					280.3	55	246	32	282.1	55	-52	244	41	288	55	284.9	56	281	59	286.2	52	242	63	285.8	51	245	55	283.3	53	264	50	300					
250	-61	221	35	-60	231	32							-52	244	41	288	55	-52	244	41	288	55	284.9	56	281	59	286.2	52	242	63	285.8	51	245	55	283.3	53	264	50	250						
200	366.6	53	229	37	365.1	55	232	37					368.5	50	250	48	368.5	50	250	48	368.5	50	250	48	368.5	50	250	48	368.5	50	250	48	368.5	50	250	48	368.5	50	250	48	368.5	50	250	48	200
170	-52	226	37	-52	237	38							-45	250	48	368.5	50	-45	250	48	368.5	50	250	48	368.5	50	250	48	368.5	50	250	48	368.5	50	250	48	368.5	50	250	48	368.5	50	250	48	170
150	-56	229	42	-52	242	45							-44	257	50			-44	257	50			-54	247	45	-52	258	52	-47	260	58			271	59							150			
130	-50	228	48	-53	247	48							-48	252	54			-48	252	54			-59	243	50	-54	259	45	-51	271	59											130			
110	-57	233	50	-54	241	51							-53	263	49			-53	263	49			-60	243	42	-56	255	52	-56	266	63											110			
100	516.1	59	239	51	515.6	54	241	52					520.7	55	276	58			520.7	55	276	58			521.6	53	247	45	526.1	59												100			
90	(85)	-65		-58	246	57							-56	269	56			-56	269	56			-72	256	38	-61																90			
80				-59	246	57							-59	271	56			-59	271	56																						80			
70				-60	257	58							-64	262	58			-64	262	58																							70		
60				-68	256	54							-68	256	54			-68	256	54																							60		
Inversion 970 mb 38°-959 mb 40°																																													
Tropopause I 300 mb - 69° 28,000' I 300 mb - 72° 27,902'																																													
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA				STATION								
Time	21h				21h				G.M.T.				21h				21h				21h				21h				21h				G.M.T.				Time								
M.S.L.	983.0				983.2				mb				989.1				990.7				992.2				993.5				995.4				mb				M.S.L.								
Surf	973.0				981.5				mb				977.8				988.6				990.7				997.3				984.7				mb				Surf								
Freezing	900				920				mb				924				906				881				888				883				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.																							

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA				STATION	
Pressure mb	Time M.S.L. Surf Forecast	03L		G.M.T.		03L		G.M.T.		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.					
		Surf	mb	mb	mb	Surf	mb	mb	mb	mb	mb	mb	Surf	mb	mb	mb	Surf	mb	mb	mb	Surf	mb	mb	mb	Surf	mb	mb	mb	Surf	mb	mb	mb	Surf	mb	mb	mb			
		Surf	mb	mb	mb	Surf	mb	mb	mb	Surf	mb	mb	Surf	mb	mb	mb	Surf	mb	mb	mb	Surf	mb	mb	mb	Surf	mb	mb	mb	Surf	mb	mb	mb	Surf	mb	mb	mb			
Surf	02.7	34	32	205	05	00.4	36	34	270	05																													
1000	04.0					04.1																																	
950		39	33	220	16		35	31	276	10																													
900	24.0	31	28	220	12	23.8	30	25	276	12																													
850	38.8	24	19	219	14	38.7	24	17	277	14																													
800	54.4	19	13	219	16	54.3	19	13	274	14																													
750		14	07	220	16		12	07	274	26																													
700	88.1	07	02	217	14	87.9	05	00	266	26																													
650		01	09	215	12		03	07	245	21																													
600	125.8	10	17	217	09	125.5	12	15	230	23																													
550		18	25	241	08		21	28	273	25																													
500	168.7	29	40	239	10	168.1	31	39	212	25																													
450		40	51	231	09		43		201	23																													
400	218.5	52		197	10	217.6	57		208	24																													
350		63		198	13		66		229	24																													
300	279.5	69		207	19	278.0	72		237	26																													
250		64		218	26		64		233	30																													
200	365.2	57		211	34	363.5	60		232	39																													
170		57		227	39		56		230	39																													
150		56		232	39		57		239	42																													
130		56		233	31		59		239	44																													
110		58		233	43		61		234	47																													
100	514.2	59		230	49	511.9	62																																
90		60		233	55																																		
80		60		238	60																																		
70		62		237	69																																		
60		67		239	63																																		
Inversion		975 mb 34°-958 mb 40°		Isothermal.		984°-967 mb 36°						Inversion		963 mb 32°-950 mb 33°		981 mb 34°-962 mb 40°		Inversion		993 mb 34°-969 mb 39°		980 mb 36°-960 mb 39°		Isothermal.		960°-950 mb 39°													
Tropopause		I 306 mb -70° 27.500°		II 310 mb -72° 27.100°								I 330 mb -66° 25.900°		II 362 mb -59° 24.300°		I 340 mb -61° 25.700°		II 386 mb -56° 23.000°		I 360 mb -45° 24.800°		I 300 mb -48° 23.700°		Tropopause															
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE								STATION	
Pressure mb	Time M.S.L. Surf Forecast	09L		G.M.T.		09L		G.M.T.		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.					
		Surf	mb	mb	mb	Surf	mb	mb	mb	Surf	mb	mb	Surf	mb	mb	mb	Surf	mb	mb	mb	Surf	mb	mb	mb	Surf	mb	mb	mb	Surf	mb	mb	mb	Surf	mb	mb	mb			
		Surf	mb	mb	mb	Surf	mb	mb	mb	Surf	mb	mb	Surf	mb	mb	mb	Surf	mb	mb	mb	Surf	mb	mb	mb	Surf	mb	mb	mb	Surf	mb	mb	mb	Surf	mb	mb	mb			
Surf	02.7	38	34	220	10	00.4	35	34	Calim																														
1000	03.3					02.4																																	
950		38	34	245	15		35	31	227	19																													
900	24.7	32	30	245	16	25.4	29	24	222	15																													
850	39.5	26	23	244	16	40.1	22	19	223	17																													
800	55.1	19	16	242	15	55.8	15	14	217	17																													
750		13	09	245	18		08	07	221	20																													
700	88.8	08	01	244	18	89.1	02	00	229	20																													
650		01	07	242	15		05	09	227	19																													
600	126.5	10	17	244	15	126.4	13	20	234	20																													
550		18	25	251	17		23	30	238	17																													
500	169.4	30	38	253	15	168.9	34	40	233	15																													
450		43		245	10		45		222	22																													
400	219.0	54		235	14	218.2	55		225	30																													
350		65		221	17		62		227	26																													
300	279.8	69		205	18	279.1	67		241	31																													
250		61		228	24		60		253	35																													
200	365.7	58		225	30	365.5	56		247	40																													
170		56		225	38		54		244	39																													
150		58		225	42		56		247	42																													
130		58		225	41		57		237	43																													
110		61		225	51		58		237	47																													
100	514.1	60		222	48	514.6	61																																
90		65		230	53																																		
80		67																																					
70																																							
60																																							
Inversion		978 mb 38°-964 mb 40°		Inversion		989 mb 35°-960 mb 36°		Isothermal.		373-358 mb -61°				Inversion		932-910 mb 30°		Isothermal.		990 mb 33°-964 mb 39°		999 mb 32°-963 mb 35°		Isothermal.		800-793 mb 19°													
Tropopause		II 340 mb -67° 25.300°		II 327 mb -67° 26.000°								I 365 mb -58° 23.900°		I 365 mb -61° 24.000°		II 363 mb -60° 24.300°		I 317 mb -57° 27.600°																					

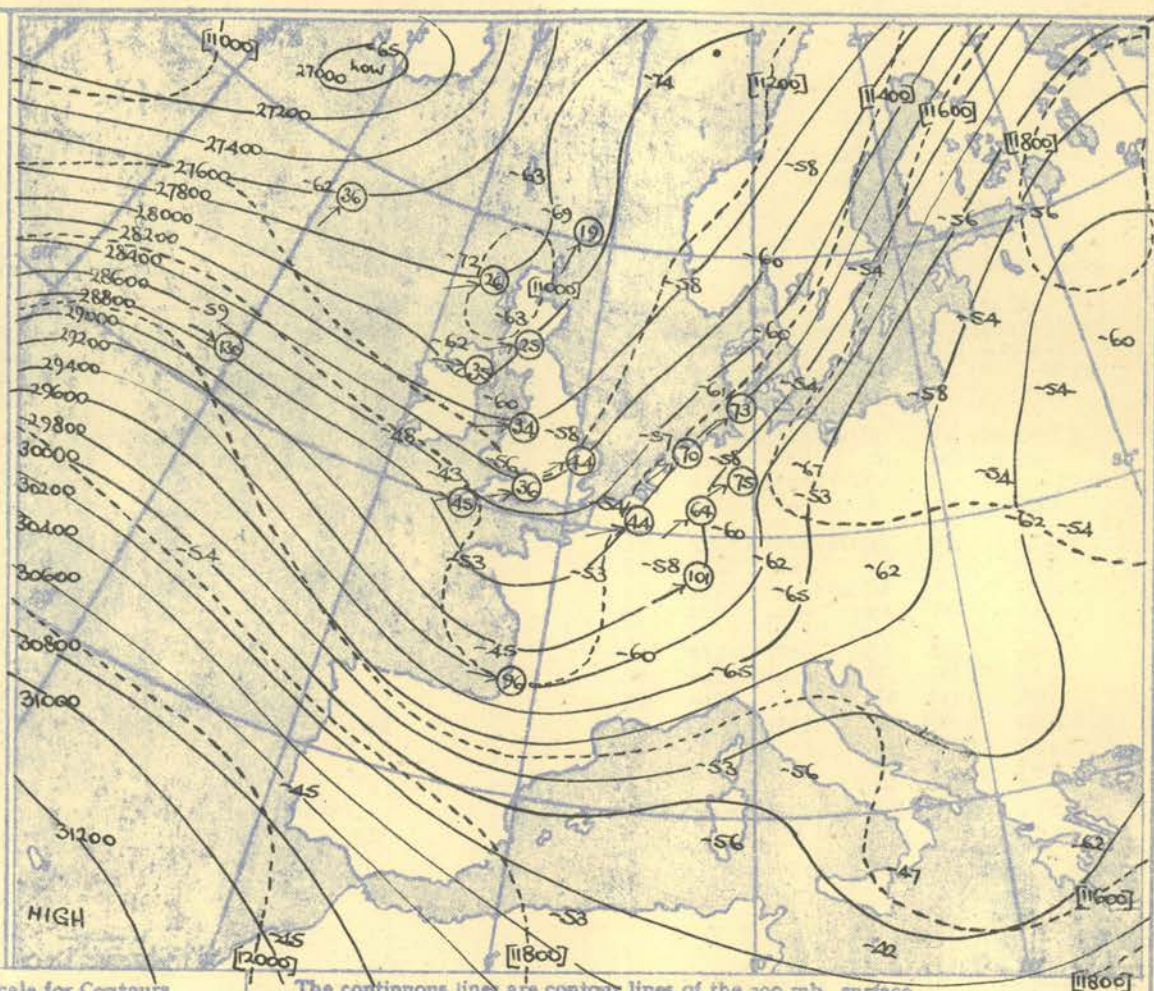
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. 500 mb. and 300 mb. levels at about 03h G.M.T.



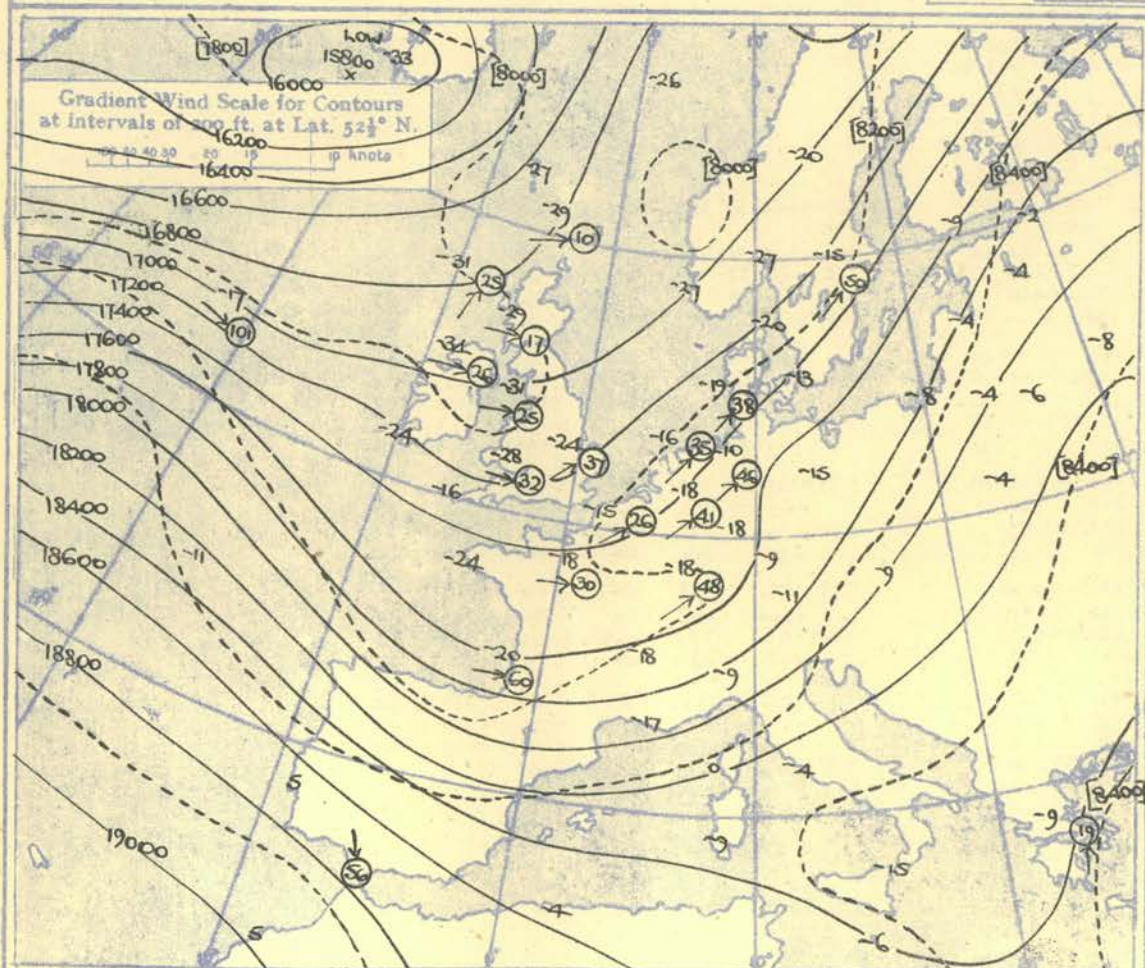
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

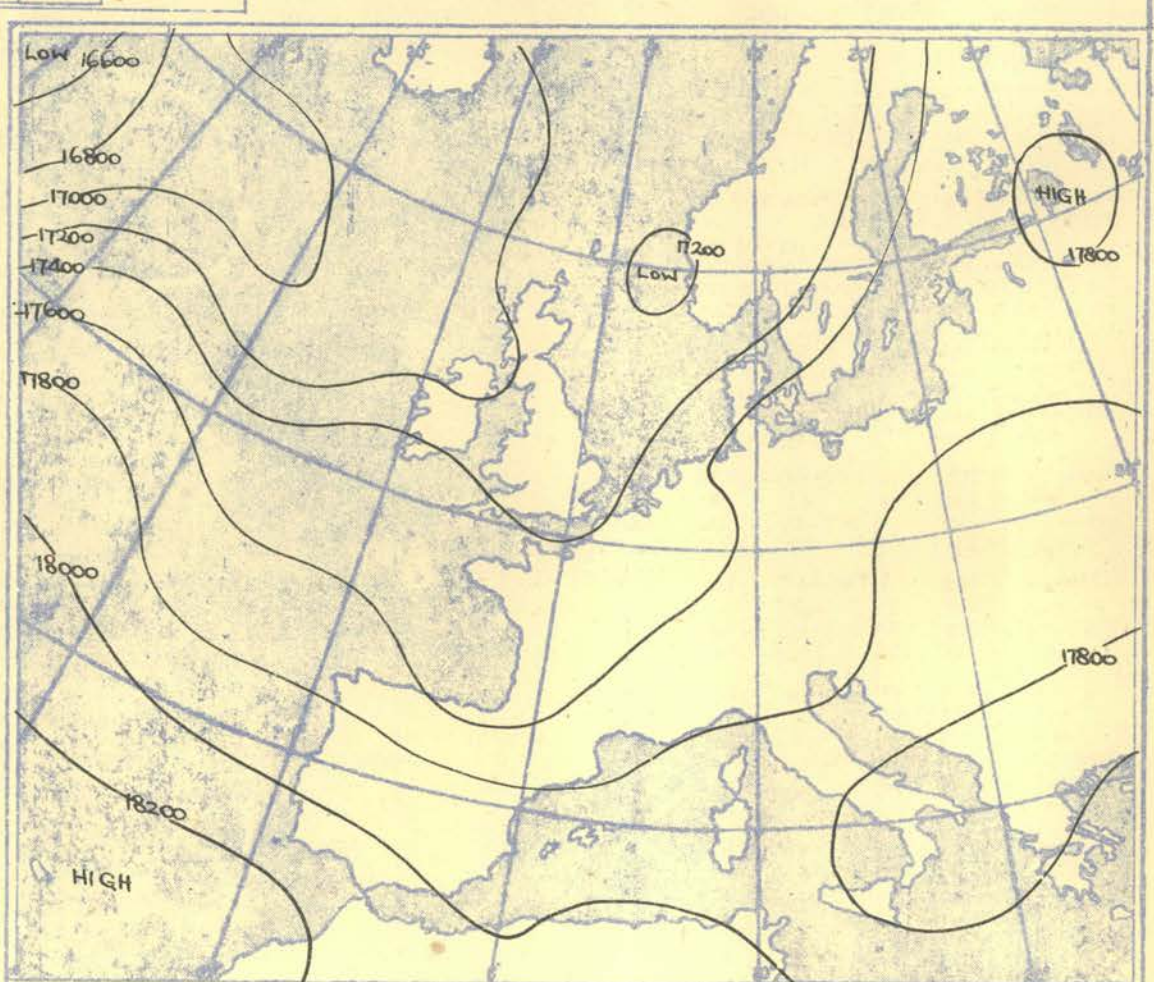
100 80 60 40 20 10 0 knots



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.

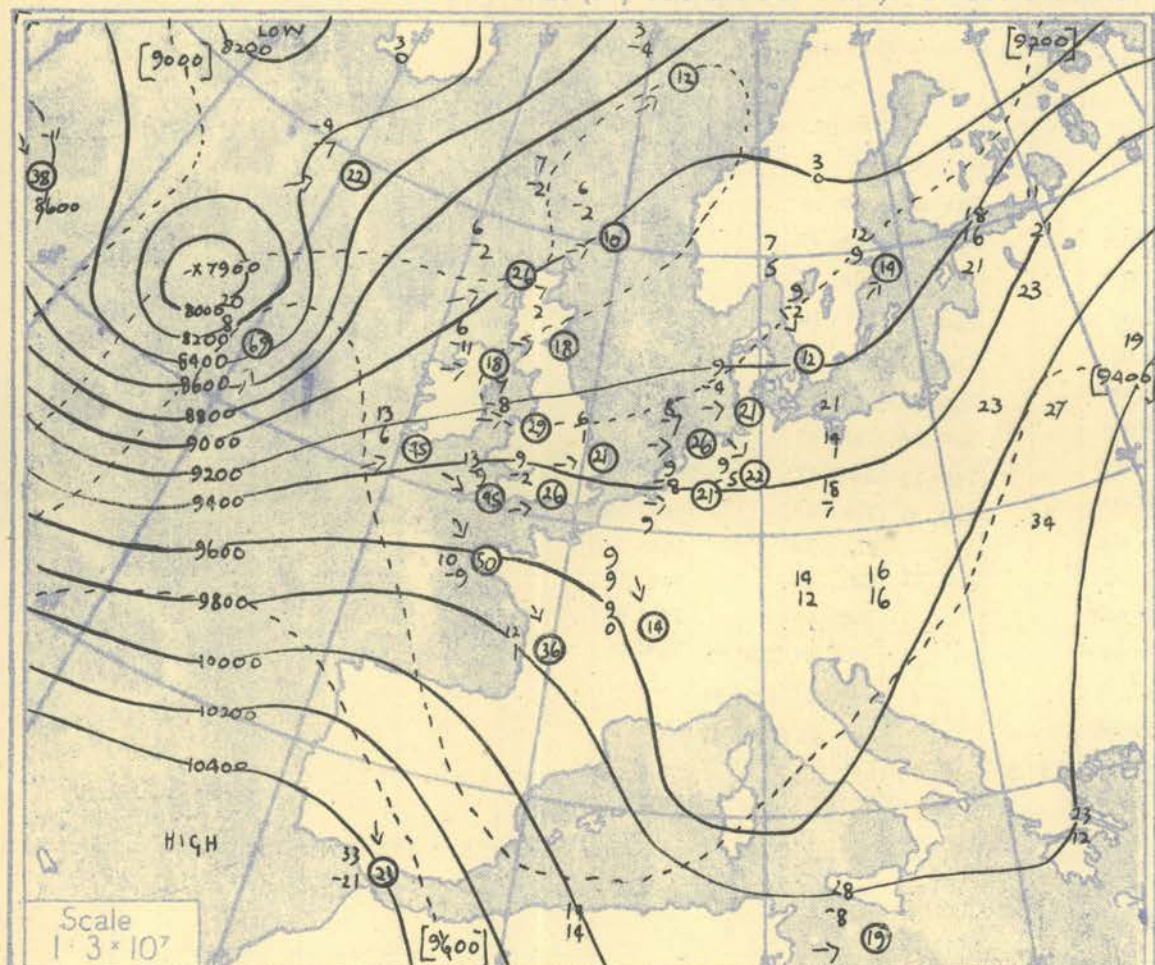


Isopleths of Thickness 500-1000mb.

WINDS at heights above

METROLOGICAL LIBRARY
4 - JAN 1952
Dir. Vel. Dir. Vel. Dir. Vel.
OFFICE

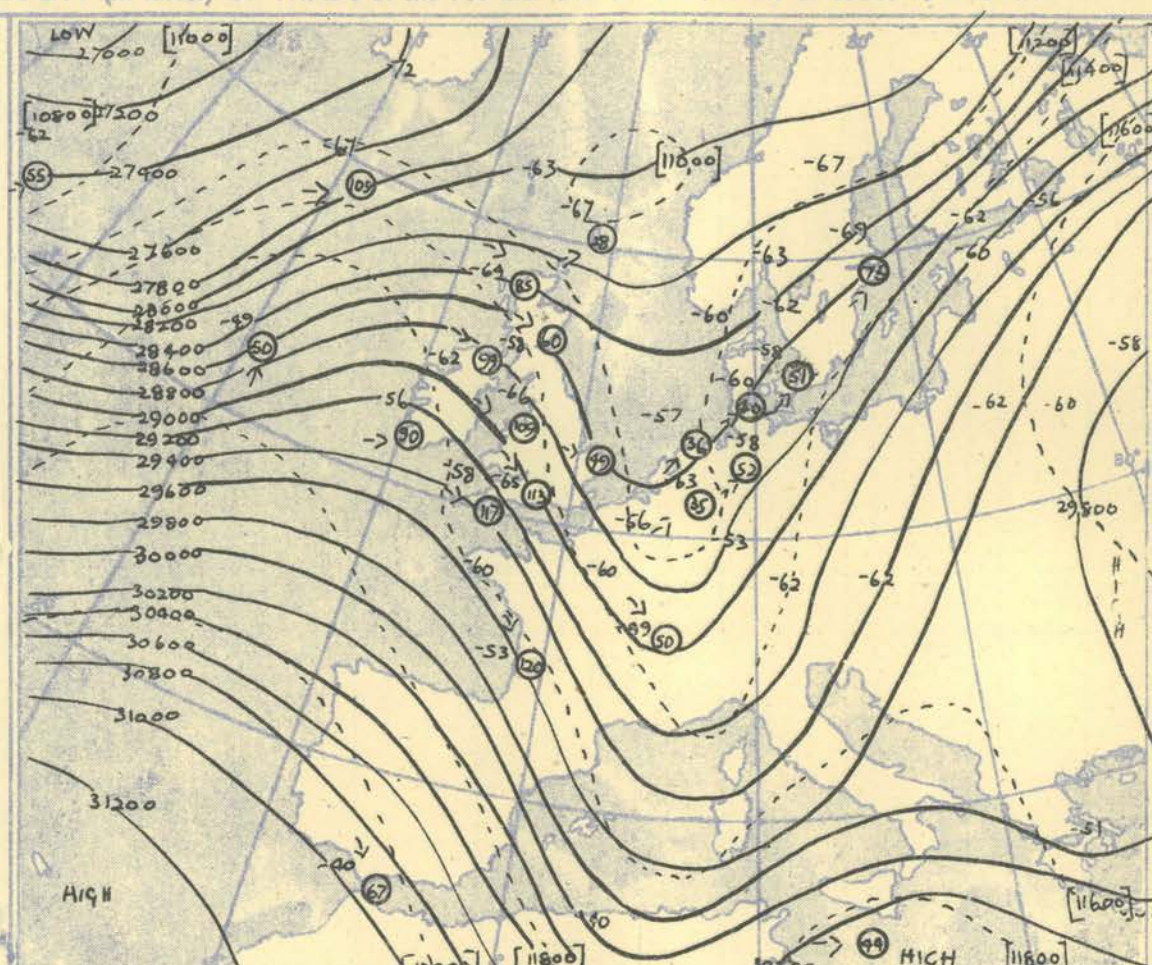
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h G.M.T.



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

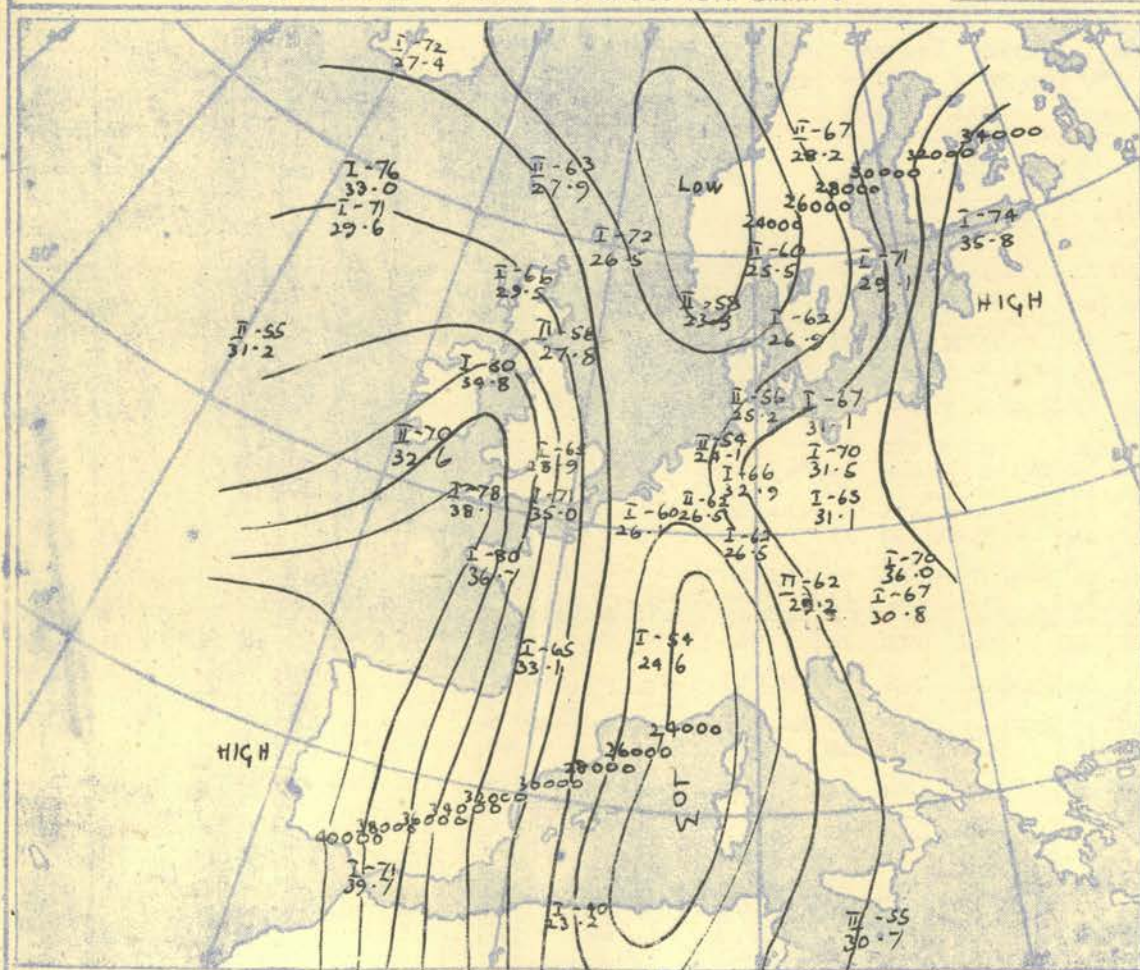
100 80 60 40 20 10 knots

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



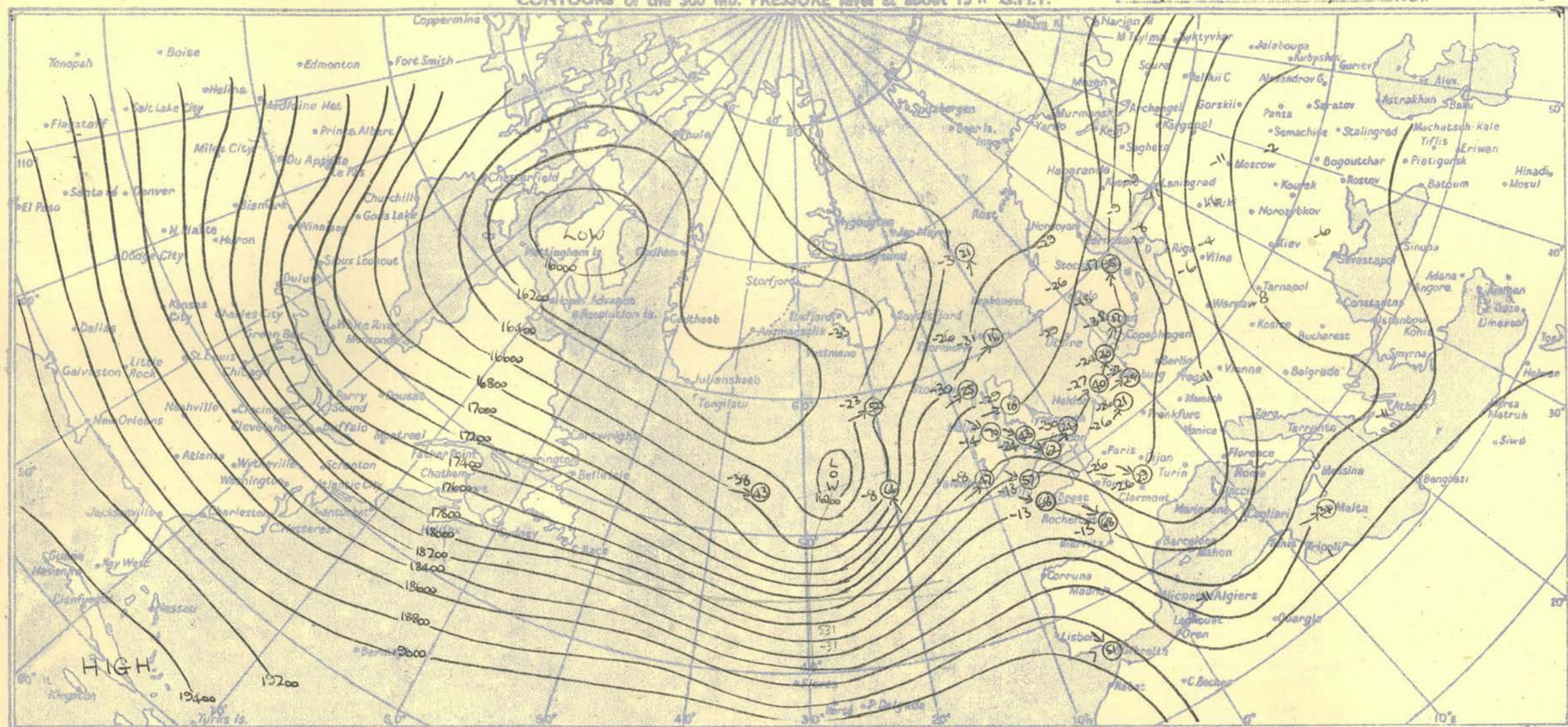
NOTES ON THE AEROLOGICAL SITUATION.

Marked distortion of the thermal pattern quickly occurred in the eastern Atlantic in association with the exceptionally rapid deepening of low LY. The deepening began (and most of it occurred) whilst the depression was running in a strong thermal gradient before the main area of diffluence was reached.

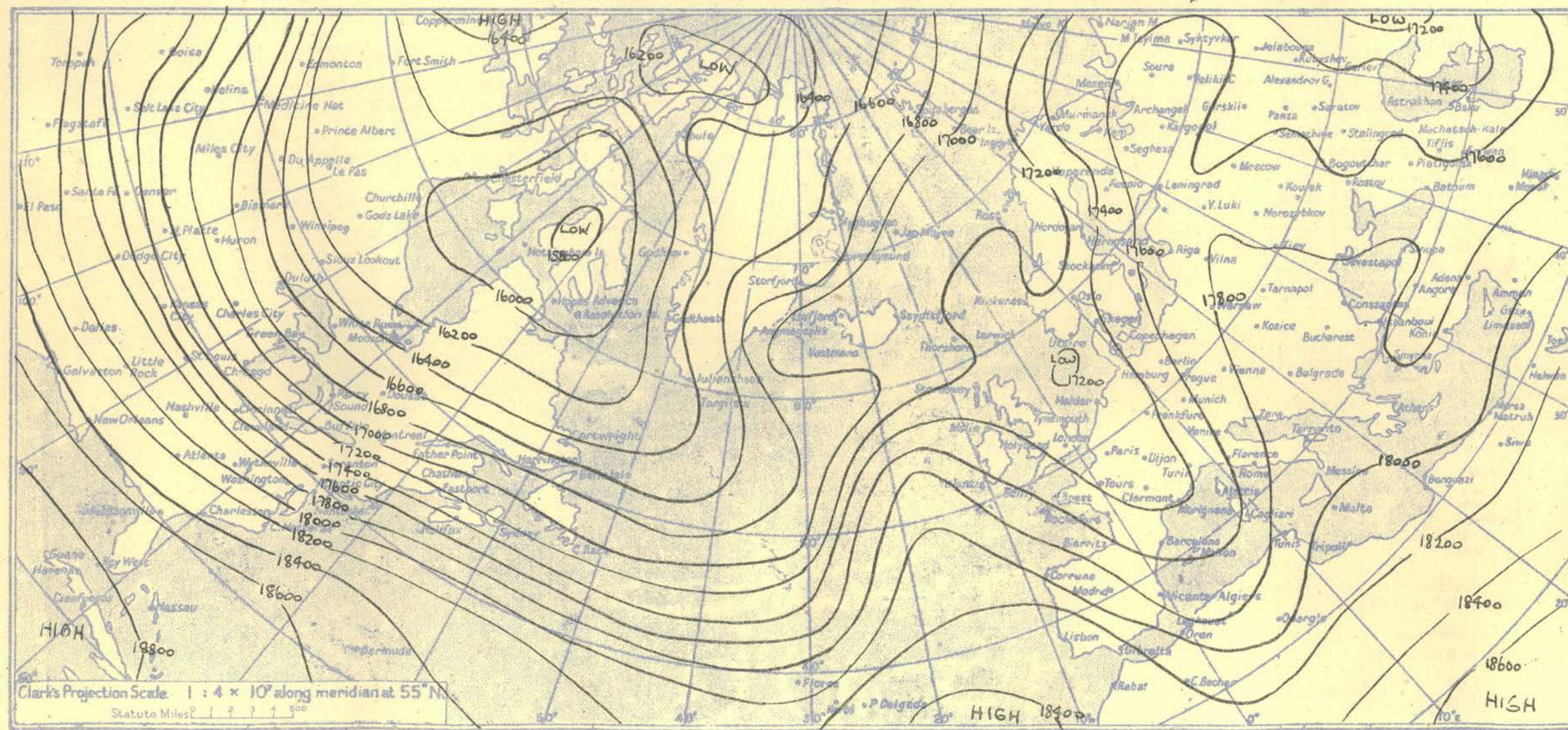


RATES of SUBSCRIPTION: Single copy 2d. or post free 3d. One calendar month 7/- One quarter 18/- One year 70/-
For special arrangements for supply to schools and colleges, see Form 2452.

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



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Wednesday 26th December, 1951.



Clark's Projection Scale 1 : 4 x 10⁶ along meridian at 55° N.
Statute Miles 1 2 3 4 5

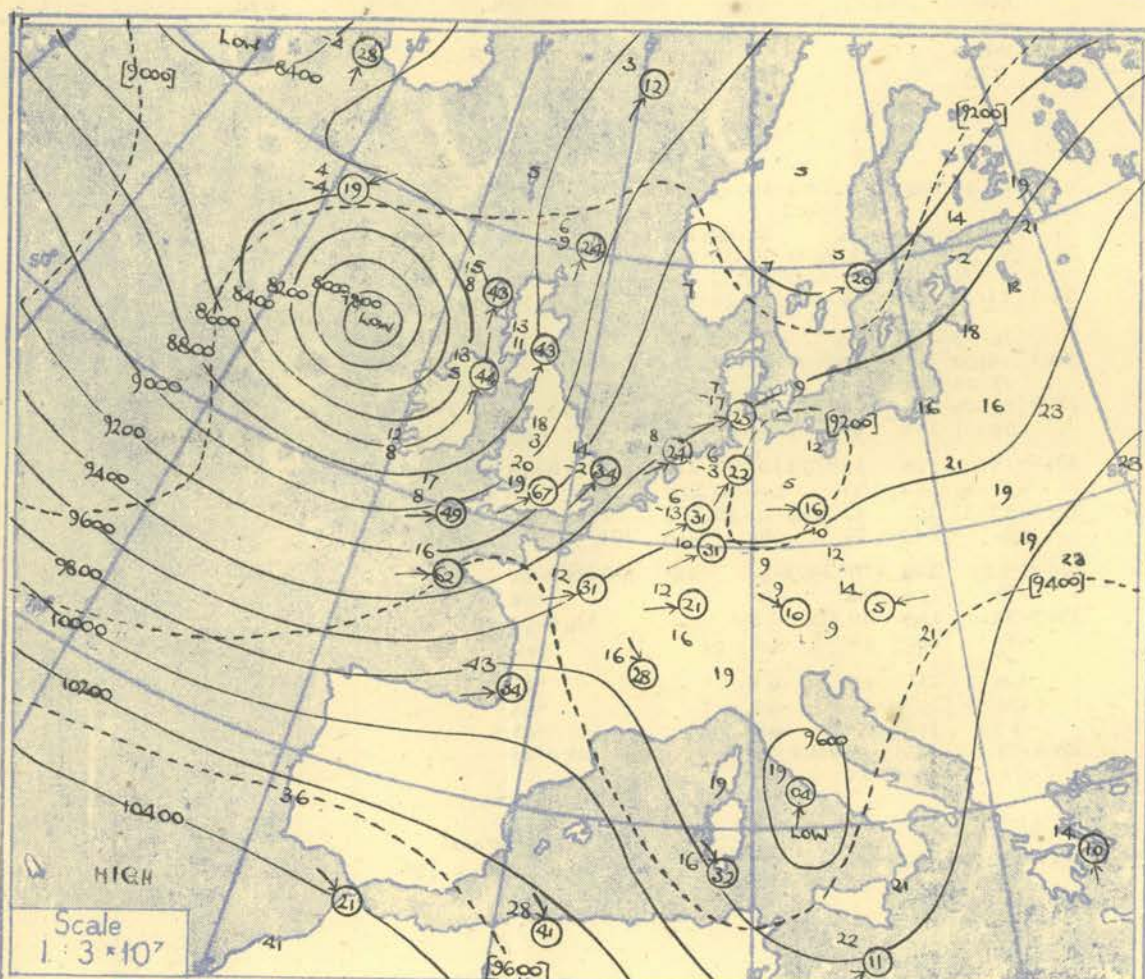
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

[illegible]

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

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA				STATION																																																																																																																																																																																																																																																										
Pressure Time M.S.L. Surf Forecast	034 G.M.T.				03 G.M.T.				034 G.M.T.				034 G.M.T.				034 G.M.T.				034 G.M.T.				034 G.M.T.				034 G.M.T.				034 G.M.T.				034 G.M.T.																																																																																																																																																																																																																																																										
	981.2 mb				980.5 mb				986.0 mb				977.1 mb				982.4 mb				1000.6 mb				991.9 mb				988.6 mb				988.6 mb				988.6 mb																																																																																																																																																																																																																																																										
	981.2 mb				978.3 mb				985.1 mb				966.2 mb				980.3 mb				999.1 mb				975.9 mb				978.1 mb				978.1 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	02.7	40	33	150	17	00.4	39	29	120	20	00.2	38	36	130	16	02.5	44	41	170	16	00.6	43	40	160	10	04.4	44	42	180	33	02.9	45	43	225	35	Surf																																																																																																																																																																																																																																																											
1000	02.4				00.3					00.3					00.8						00.4					00.2					00.1				1000																																																																																																																																																																																																																																																												
980	38	29	165	27	35	24	124	27	35	24	124	27	35	24	124	30	21.5	39	30	200	25	23.4	41	37	36	32	39	32	190	36	41	40	180	48	980																																																																																																																																																																																																																																																												
900	25.6	30	24	166	30	22.7	29	21	125	28	24.0	30	29	125	28	21.5	39	30	200	25	23.4	41	37	36	32	39	32	190	36	41	40	180	48	900																																																																																																																																																																																																																																																													
880	40.4	24	12	169	27	37.5	25	19	127	35	38.9	24	23	152	42	36.6	33	24	203	39	38.4	31	27	31	27	43	30	16	205	37	41.0	32	32	194	60	880																																																																																																																																																																																																																																																											
800	56.1	21	05	173	24	53.3	23	16	132	40	54.5	24	23	167	42	52.5	26	16	203	40	54.4	29	25	29	25	59	22	14	207	35	56.9	28	28	202	68	800																																																																																																																																																																																																																																																											
750		15	01	185	22		20	13	149	40		20	19	181	44		18	10	200	42		24	20			16	03	208	33		24	23	217	78	750																																																																																																																																																																																																																																																												
700	89.8	06	09	187	24	87.4	15	08	168	43	88.7	13	11	183	45	86.6	13	05	202	44	88.8	18	13			93.1	14	02	218	34	91.4	20	19	227	67	700																																																																																																																																																																																																																																																											
650	03	18	187	28		08	01	175	48		08	04	192	46		05	08	203	49		12	07				13	03	220	34		15	14	227	55	650																																																																																																																																																																																																																																																												
600	12.4	09	25	193	21	125.8	00	07	177	39	12.3	01	08	194	46	12.8	03	15	195	49	12.6	07	05			13.7	03	06	217	42	13.4	08	05	216	54	600																																																																																																																																																																																																																																																											
550	12	36	272	14		07	15	167	30		07	13	196	32		11	26	195	52		03	18				05	11	223	37		02	01	216	60	550																																																																																																																																																																																																																																																												
500	170.8	20	44	272	21	169.8	15	24	152	34	171.3	15	21	189	28	168.4	21	38	191	57	172.2	13	32			176.0	13	49	229	32	175.2	07	12	220	69	500																																																																																																																																																																																																																																																											
450	30	52	285	21		25	34	165	40		26	33	185	40		28	40	193	60		23	34				21	26	244	37		19	26	216	71	450																																																																																																																																																																																																																																																												
400	22.9	40	57	261	36	22.5	36	45	162	45	22.9	37	41	193	48	21.6	39	50	185	60	22.4	33	41			228.1	32	37	251	42	22.6	31	39	214	78	400																																																																																																																																																																																																																																																											
350	52			257	45	50		159	46		53		193	65		50		187	66		47					46		245	55		46		229	103	350																																																																																																																																																																																																																																																												
300	28.4	64		259	48	28.4	2	67	161	57	28.5	1	70	193	60	28.2	56		187	67	28.3	61				29.4	62	249	71	29.4	54		227	100	300																																																																																																																																																																																																																																																												
250	74			259	55	74		188	65		83		191	60		NR		195	62		63					78		254	96		70		227	100	250																																																																																																																																																																																																																																																												
200	36.3	70		243	39	36.8	5	64	204	39	36.7	5	72	203	38	NR	58		217	48	37.2	62				37.4	75	269	60	37.6	1	72		376	0	200																																																																																																																																																																																																																																																											
170	64			282	45	63		215	37		74		203	38		59		212	48		65					77		250	46		64		250	46	170																																																																																																																																																																																																																																																												
150	66			244	49	64		231	59		73		203	38		55		230	44		61					68		237	45		64		257	41	150																																																																																																																																																																																																																																																												
130	66			235	45	64		231	59		68		203	38		58		245	42		61					70		257	41		62		257	41	130																																																																																																																																																																																																																																																												
110	68			228	42	66		237	59		68		203	38		64		247	37		67					69		254	38		66		254	38	110																																																																																																																																																																																																																																																												
100	5/33	69		231	45	5/47	67		59		73		203	38		64		220	47		67					5/18.4	73	242	36	5/21.0	70		67		242	36	100																																																																																																																																																																																																																																																										
90	71			232	50				59		73		203	38		65		213	47		65						69		240	35		65		240	35	90																																																																																																																																																																																																																																																											
80	73			228	50				59		73		203	38		66					66							73					66		73		80																																																																																																																																																																																																																																																										
70	73			228	50				59		73		203	38		66					66							73					66		73		70																																																																																																																																																																																																																																																										
60	73			228	50				59		73		203	38		66					66							73					66		73		60																																																																																																																																																																																																																																																										
Inversion 981 mb 40° 962 mb 41° Isothermal 534-566 mb 10°																																Inversion 850 mb 25° 837 mb 26° Isothermal 750-734 mb 20°																																Inversion 907 mb 29° 897 mb 30° Isothermal 810-77° 796-25° 278-77° 170-76° Max. Wind:- 233mb. 33,600' 201° 84kts.																																Isothermal 714 mb -700 mb 13°																																Isothermal 980-970 mb 43°																																Inversion 682 mb 13° 667 mb 14° Isothermal 990-975 mb 41° 750-726-16°																																(85mb) Isothermal 869-838 mb 32° 241-235-73°																																Isothermal 978-950 mb 45°																																																															
Tropopause II 268 mb -73° 30-700'																																Tropopause I 272 mb -78° 30-500'																																Tropopause I 238 mb -86° 33-200'																																MIR.																																Tropopause I 246 mb -70° 32-900'																																Tropopause I 237 mb -81° 34-000'																																Tropopause I 209 mb -77° 36-500'																																Tropopause I 235 mb -60° 38-500'																																Tropopause																															
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE								STATION																																																																																																																																																																																																																																																										
Pressure Time M.S.L. Surf Forecast	096 G.M.T.				096 G.M.T.				096 G.M.T.				096 G.M.T.				096 G.M.T.				096 G.M.T.				096 G.M.T.				096 G.M.T.				096 G.M.T.				096 G.M.T.																																																																																																																																																																																																																																																										
	984.8 mb				969.0 mb				973.4 mb				961.6 mb				977.4 mb				988.0 mb				988.2 mb				987.5 mb				987.5 mb				987.5 mb																																																																																																																																																																																																																																																										
	974.9 mb				967.4 mb				972.5 mb				962.8 mb				975.3 mb				986.6 mb				972.2 mb				977.1 mb				977.1 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	34	140	32	00.4	41	35		00.2	40	36		02.5	43	36	170	33	00.6	41	36	190	14	00.4	43	41		04.4	40	38	230	15	02.9	44	43	240	25	Surf																																																																																																																																																																																																																																																									
1000	04.1				00.5					07.3				10.5					06.1					03.3				03.2					03.3				1000																																																																																																																																																																																																																																																										
980	40	33	142	39	40	32			38	35			For	43	35			40	31	209	28		40	39		For	42	37	236	23		42	33	252	42	980																																																																																																																																																																																																																																																											
900	24.0	32	27	142	37	19.7	35	29	20.8	35	30			17.7	36	29	174	52	22.1	35	28	221	35	24.9	35	34	Winds	25.0	36	31	243	34	24.9	36	30	253	45	900																																																																																																																																																																																																																																																									
880	38.9	26	22	146	43	44.7	29	24	35.9	32	25			32.5	30	25	183	57	37.1	30	20	225	39	39.9	30	28	see	40.1	30	24	247	41	39.9	27	23	252	54	880																																																																																																																																																																																																																																																									
800	54.5	20	13	148	44	55.5	24	17	51.7	27	19			48.5	26	18	200	54	51.9	25	10	225	49	55.8	25	22	see	55.9	26	18	248	47	55.6	19	14	253	60	800																																																																																																																																																																																																																																																									
750		14	03	149	44		21	07		20	15				21	11	204	50		19	03	224	53		21	15	page		18	06	243	49		13	06	255	61	750																																																																																																																																																																																																																																																									
700	88.3	09	07	149	41	84.8	16	02	85.8	13	08			82.7	14	01	199	45	87.0	12	03	223	55	89.9	16	11	3	89.9	10	00	240	47	89.3	07	13	254	59	700																																																																																																																																																																																																																																																									
650	09	12	151	29		07	06			05	00				03	06	194	41		03	09	224	57		03	01			03	06	239	51		00	20	250	53	650																																																																																																																																																																																																																																																									
600	12.6	04	21	149	30	123.2	03	15	124.0	03	05			12.2	01	13	196	40	12.5	05	15	224	57	12.5	02	03		12.9	04	15	231	60	12.1	09	27	247	53	600																																																																																																																																																																																																																																																									
550	05	26	149	34		12	21			11	14				09	26	196	43		15	25	217	52		06	13			14	24	234	64		19	46	245	44	550																																																																																																																																																																																																																																																									
500	170.9	14	25	161	32	166.7	21	34	167.6	20	23			165.0	19	37	192	42	168.3	26	36	214	49	172.7	14	22			17.2	26	35</																																																																																																																																																																																																																																																																

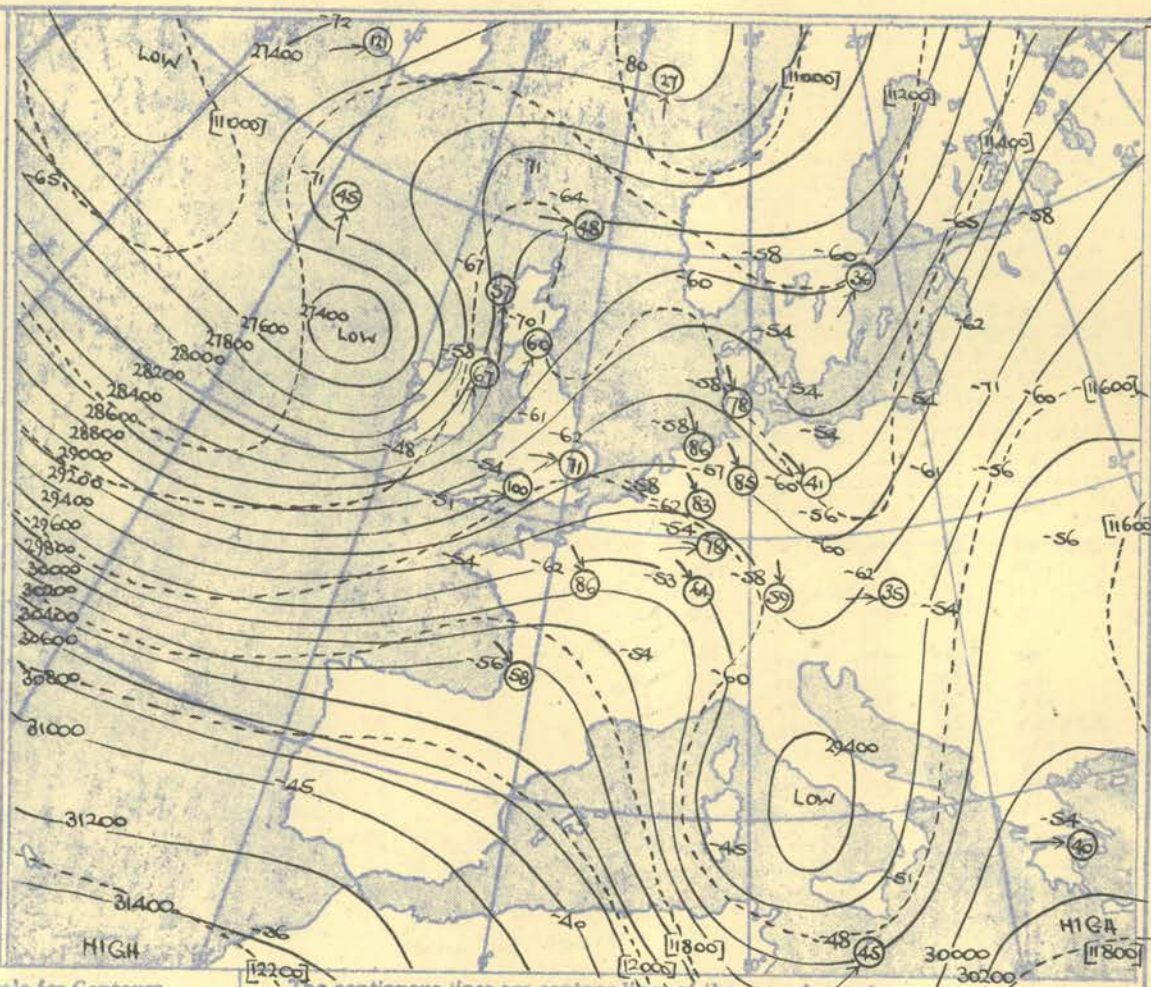
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb, 500 mb, and 300 mb, levels at about 03h G.M.T.



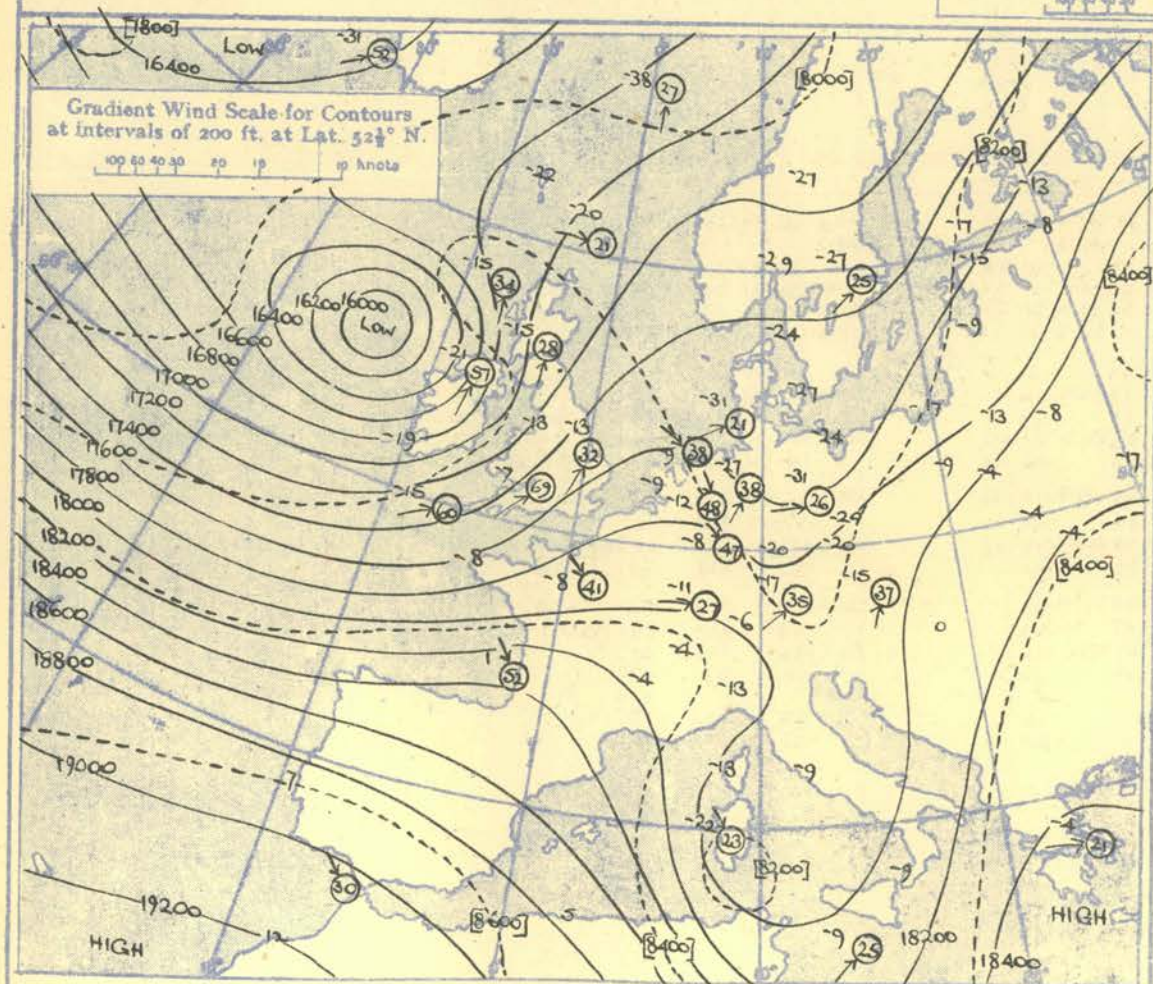
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 3000-700 mb.

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

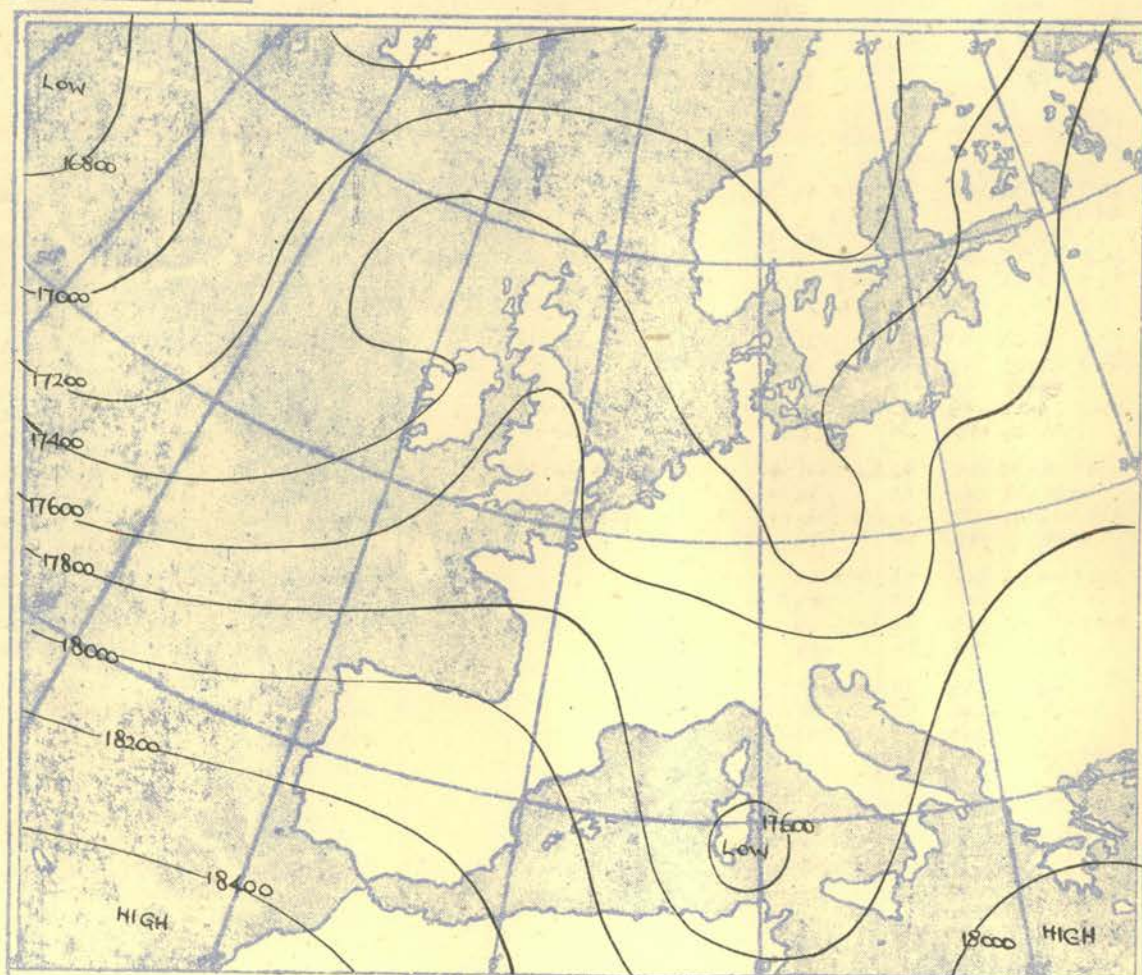
100 80 60 40 20 10 0 10 20 30 40 50 60 70 80 90 100 knots



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.



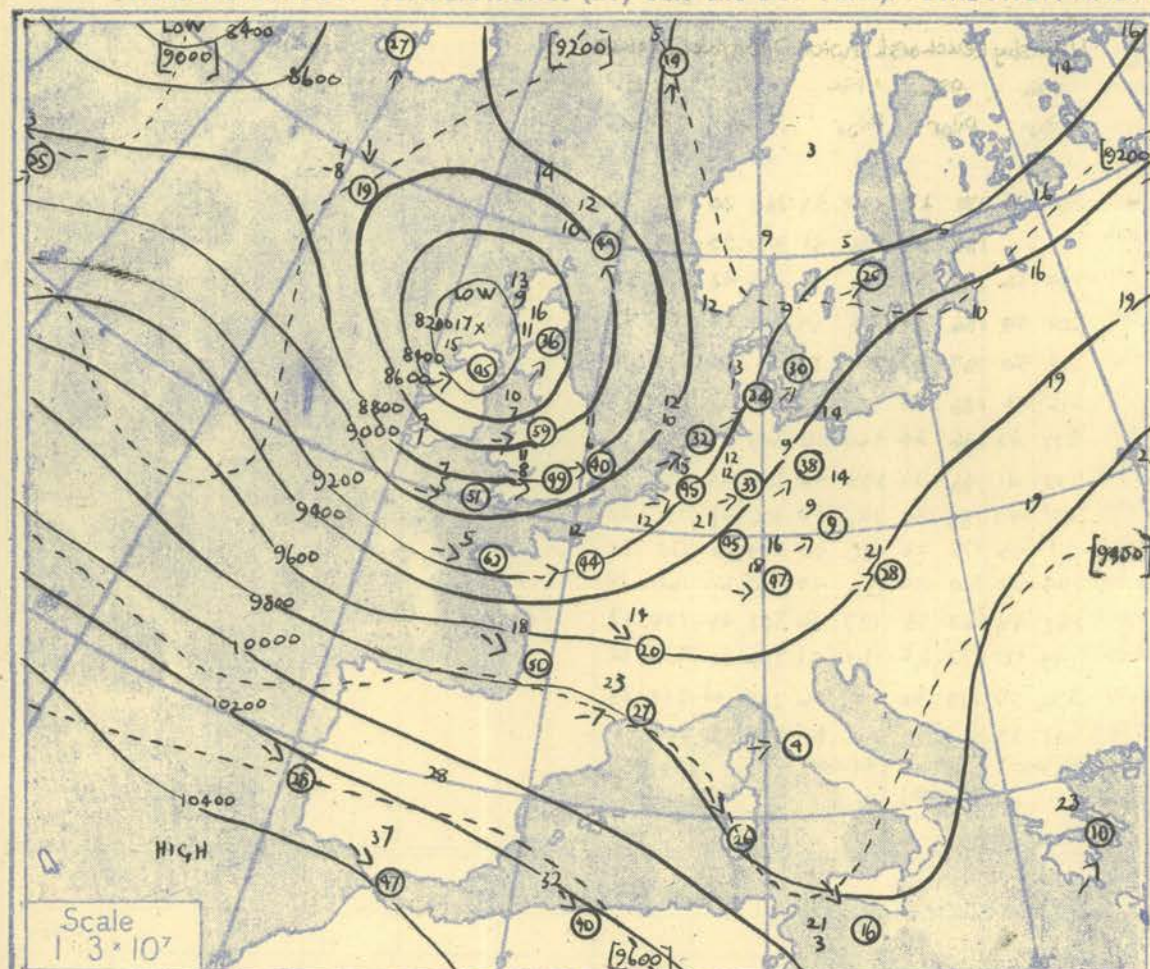
Isopleths of Thickness 500-1000mb.

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]

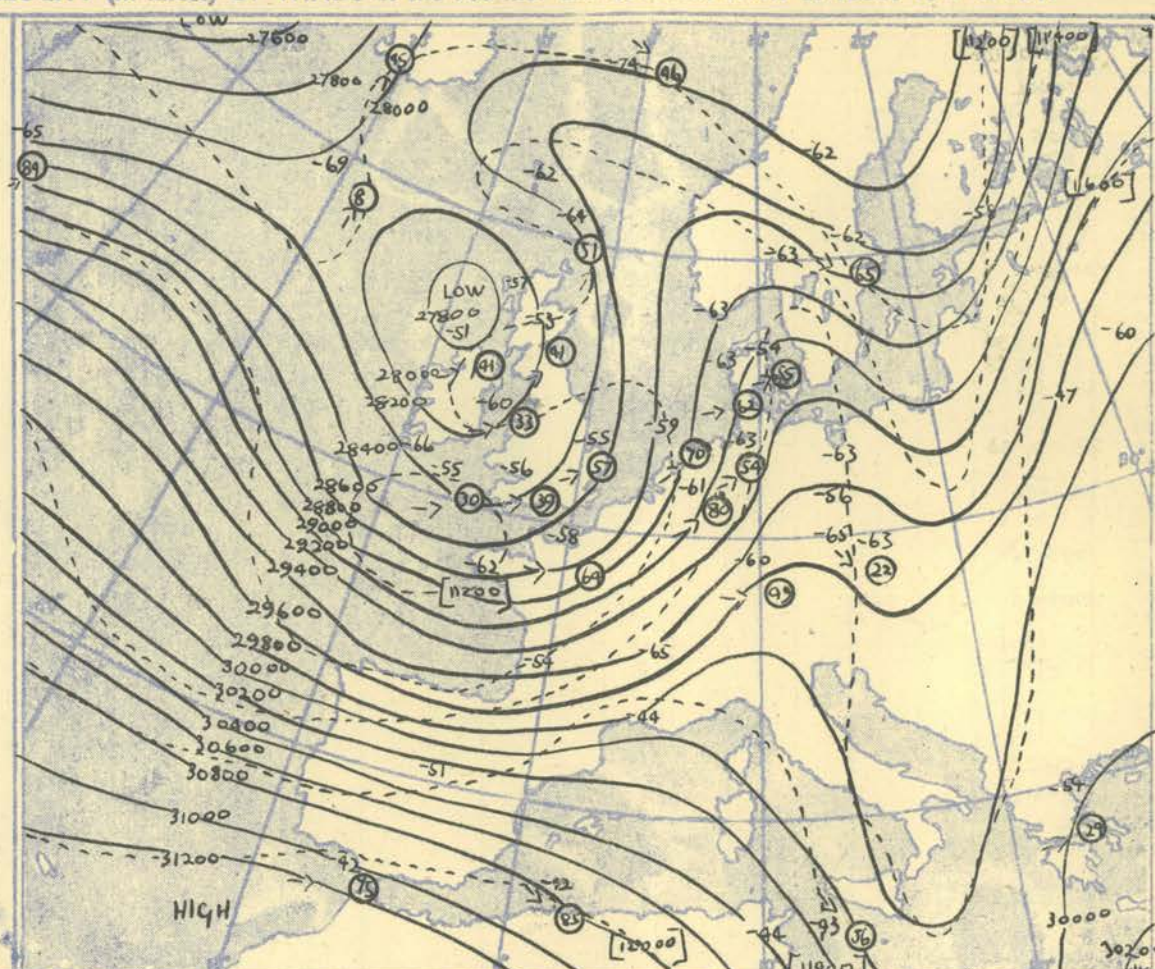
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb. levels at about 15 h G.M.T.



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.

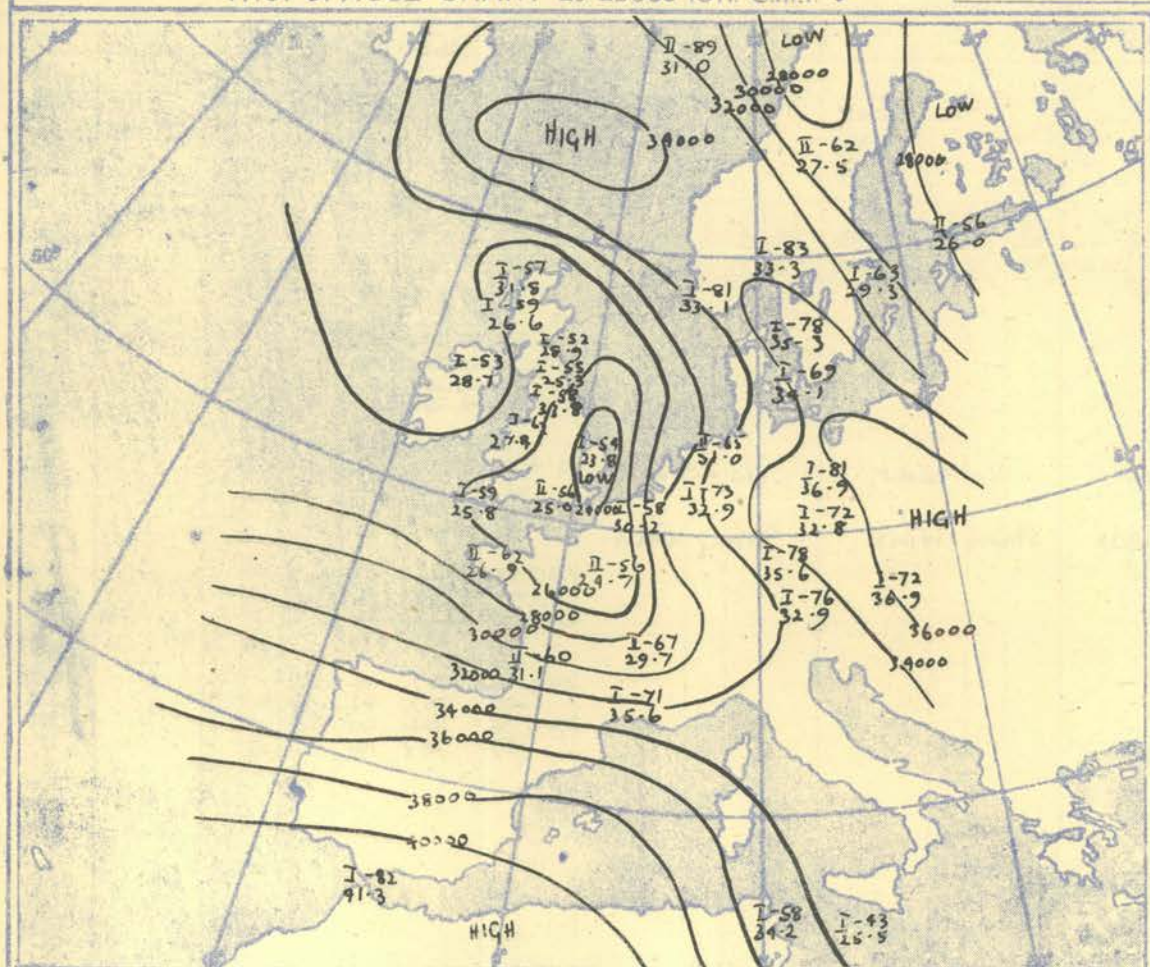
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. $52\frac{1}{2}^\circ$ N.

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 500—300 mb.

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



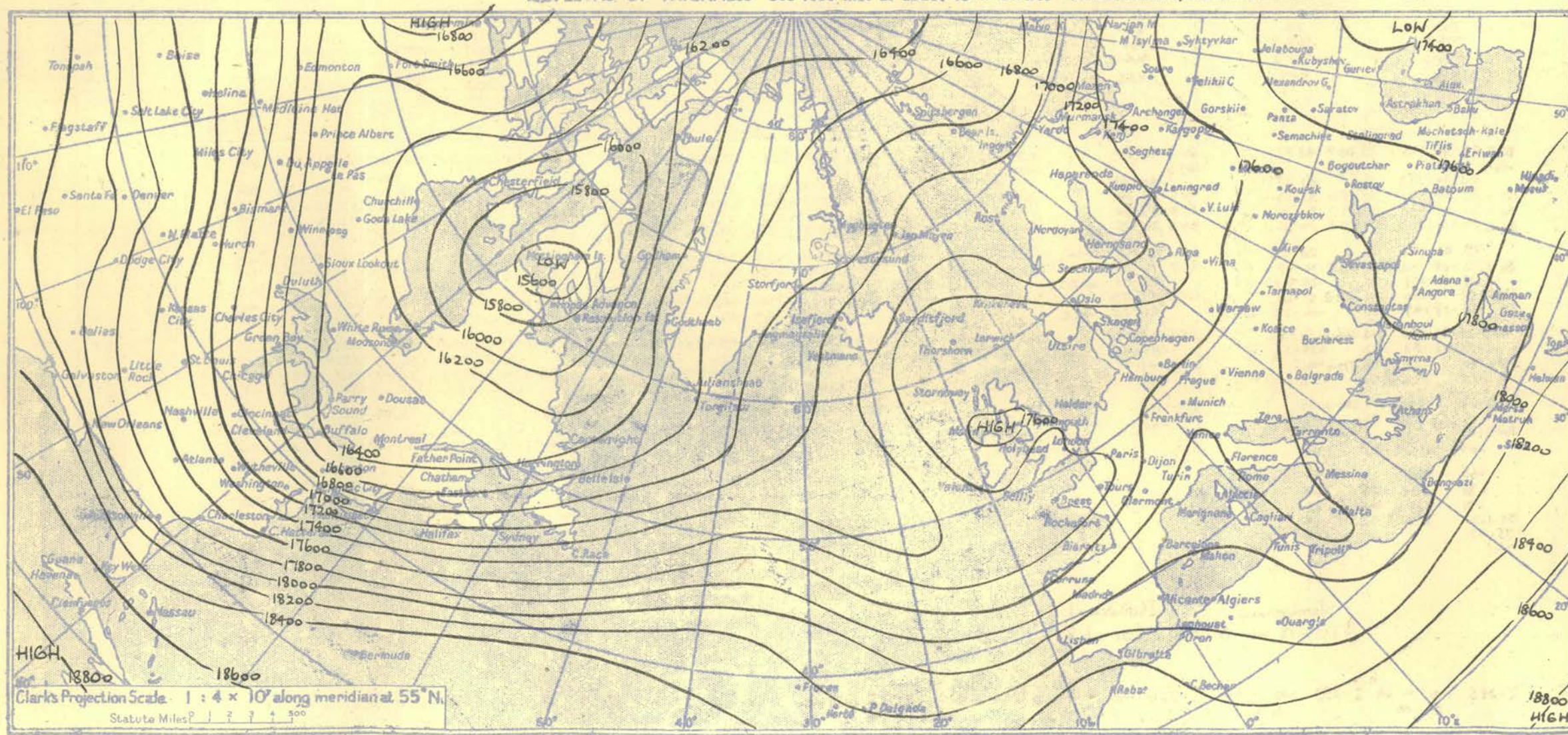
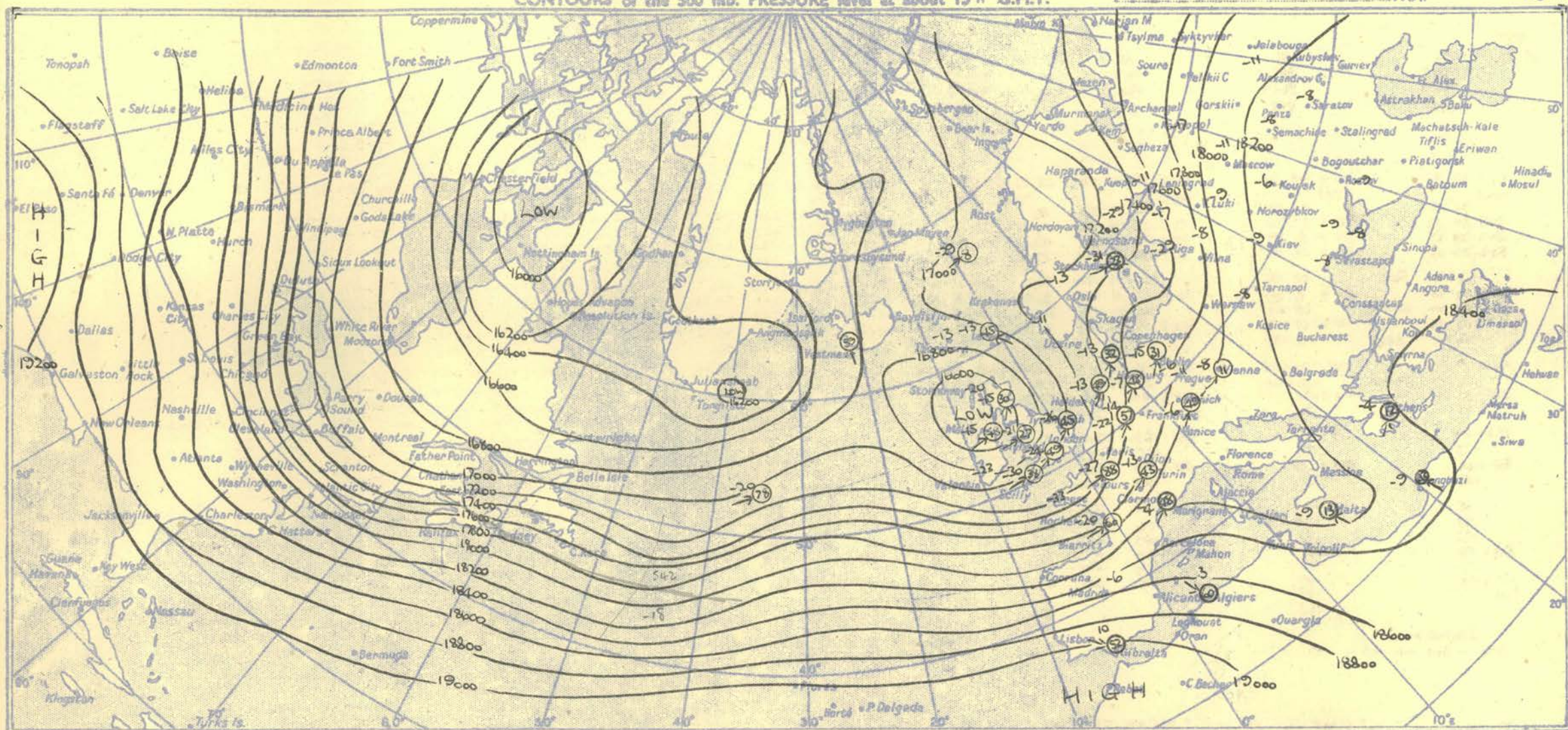
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The cold trough in the eastern Atlantic swept into north France and the low near Scotland in an area of slack thermal gradient. A further warm ridge developed on the Western Atlantic and advanced rapidly eastward.

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

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

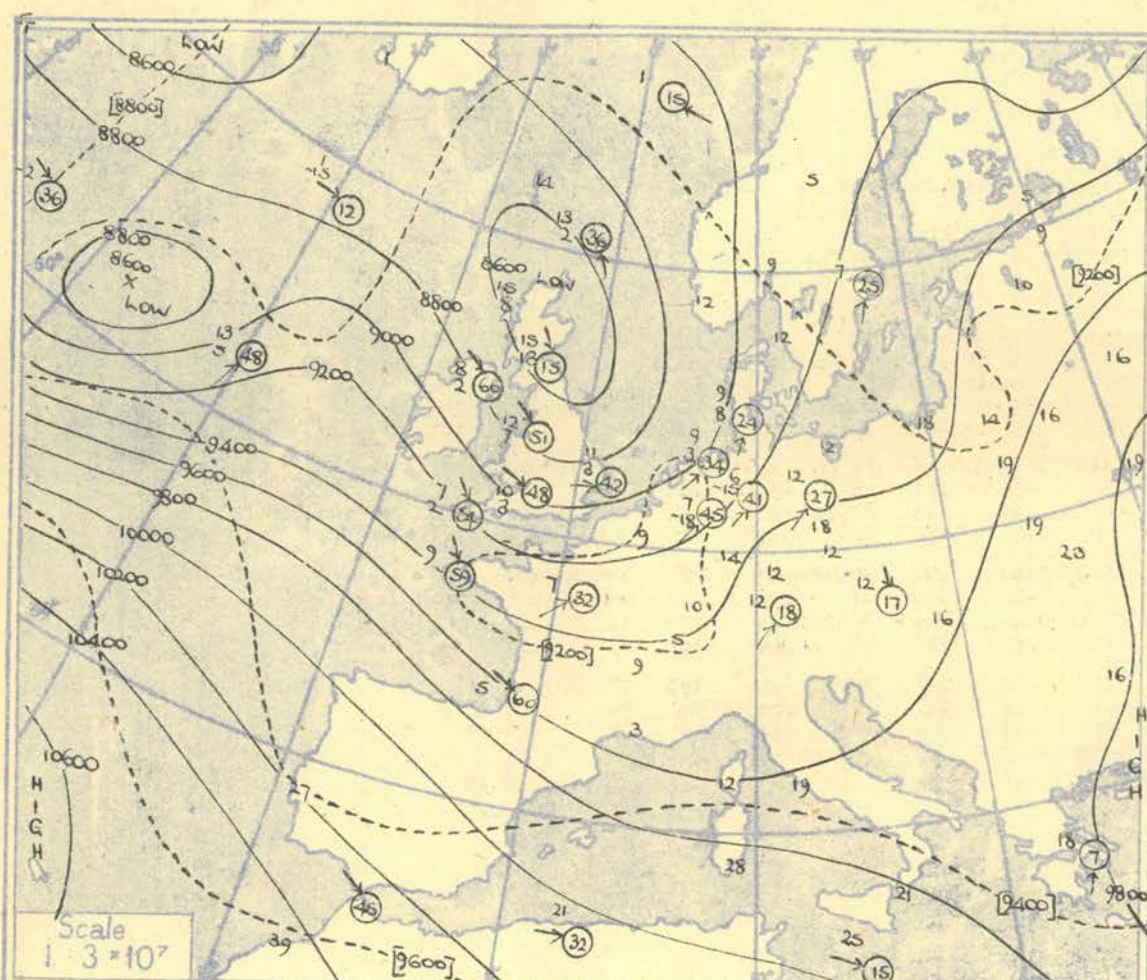


RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

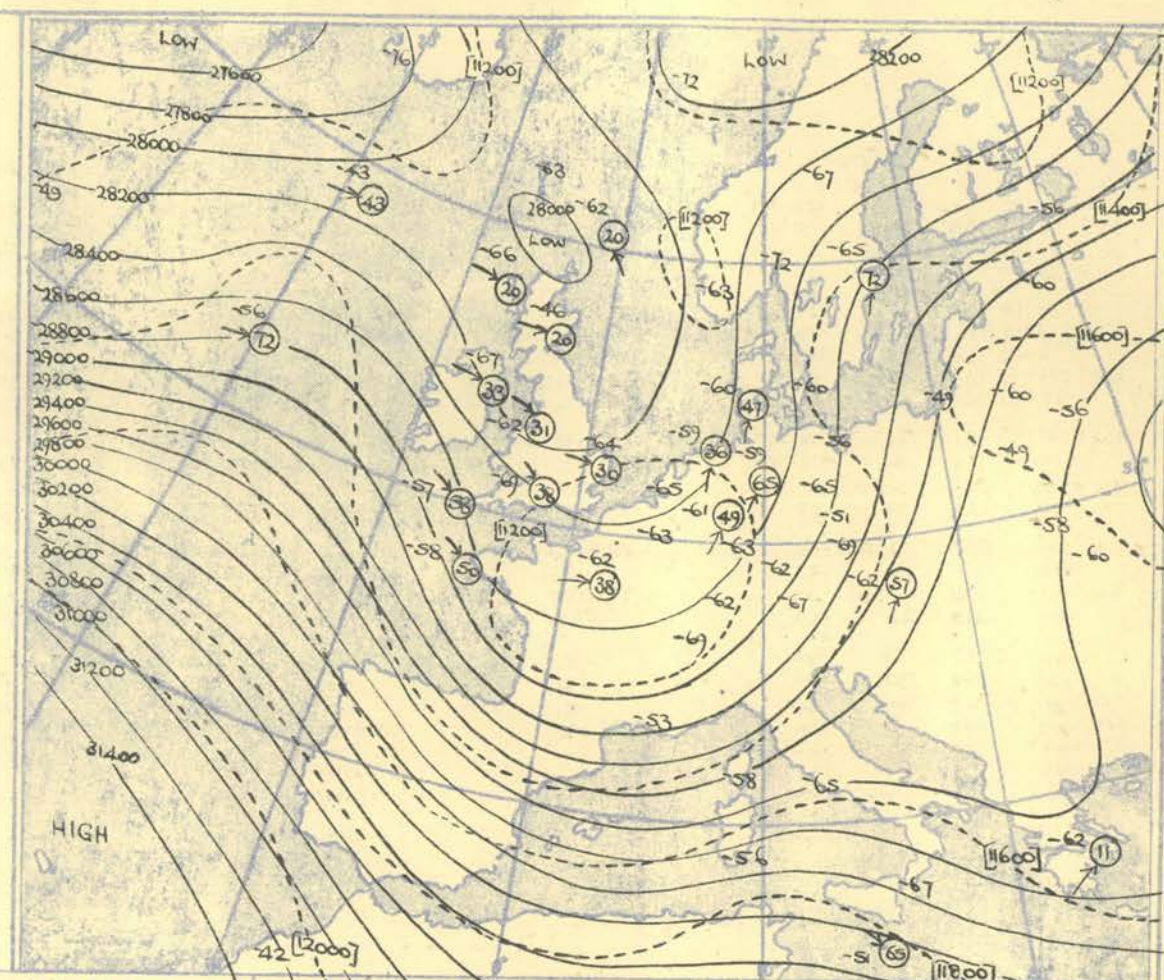
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA.				STATION				
Time M.S.L. Surf (Pressure)	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	Time M.S.L. Surf (Pressure)								
884	976.7	mb	966.9	mb	964.0	mb	962.4	mb	967.1	mb	966.2	mb	957.3	mb	948.6	mb	973.7	mb	971.6	mb	986.3	mb	984.9	mb	986.9	mb	971.9	mb	988.8	mb	978.8	mb	988.8	mb	Surf						
1000	02.7	42	41		00.4	44	35		00.2	43	37	170	23	02.5	44	39	190	24	00.6	44	38	220	15	00.4	45	37	200	12	04.4	44	37	240	15	02.9	44	35	250	28	Surf		
950	-06.3				-09.8				-09.0				-11.6				-07.2		-03.7		-03.7		-03.7		-03.5		-03.1		-03.1		-03.1		-03.1		-03.1		1000				
900	41	38			42	34			41	37	153	30	41	35	221	44	41	35	221	44	42	33	224	35	41	33	238	25	41	32	254	42	41	32	254	42	950				
850	21.8	34	32		18.4	37	30		19.2	35	32	160	39	16.6	39	36	220	43	21.0	35	31	222	57	24.5	36	25	238	39	24.7	35	30	237	38	25.2	35	30	262	46	900		
800	36.7	28	27		33.4	31	24		34.2	31	27	172	42	31.7	33	31	233	39	36.0	29	26	223	62	39.5	30	18	239	39	39.7	28	23	252	50	40.1	27	24	265	48	850		
750	52.6	24	23		49.3	26	18		50.1	26	23	186	37	47.7	29	27	239	49	51.8	23	20	230	58	55.4	23	09	238	37	55.3	23	14	255	52	55.9	20	17	269	51	800		
700	18	17	For		20	15			21	17	180	36	24	21	236	44	17	15	233	56	17	04	235	39	17	04	235	39	17	04	235	39	17	04	235	39	17	04	235	39	750
650	86.6	12	10		83.4	13	09		84.3	16	11	175	36	82.1	17	15	229	45	85.7	10	07	233	59	89.3	11	06	234	40	89.3	10	08	251	49	89.5	07	05	265	51	700		
600	07	04	winds		05	01			09	01	178	33	10	05	227	45	03	01	237	62	04	15	233	39	04	15	233	39	01	10	252	51	00	20	266	51	650				
550	124.9	00	-03		121.6	03	-08		122.8	01	06	169	31	120.7	04	-01	233	45	123.7	05	-11	240	53	127.4	05	-19	229	39	127.2	07	-20	248	52	127.2	09	-26	264	47	600		
500	-06	-11	see		-11	-19			-07	-13	177	33	-04	-12	235	45	-12	-19	240	46	-15	-30	223	41	-17	-31	245	52	-20	-35	264	44	-20	-35	264	44	550				
450	169.0	-13	-19		165.2	-20	-30		166.9	-15	-22	193	30	165.0	-15	-25	229	45	167.2	-21	-29	240	37	170.8	-26	-41	219	45	170.3	-26	-34	247	49	170.0	-30	-43	263	38	500		
400	-23	-30	page		-30	-40			-27	-35	192	84	-27	-35	231	48	-31	-40	237	36	-36	-50	215	47	-38	-50	244	48	-39	-51	263	27	-39	-51	263	27	450				
350	220.9	-35	-41		216.2	-42			218.3	-41	199	85	216.5	-40	-53	225	47	218.1	-44	237	39	221.1	-47	189	43	220.5	-49	236	39	220.0	-48	267	23	220.0	-48	267	23	400			
300	-48		3.		-57				-51		202	34	-46		225	40	-52		235	36	-53		193	53	-56		250	36	-57		264	30	-57		264	30	350				
250	283.9	-64			278.4	-57			281.1	-53	214	41	279.9	-51		232	41	280.5	-60	237	33	283.4	-55	267	57	282.7	-56	239	39	282.1	-55	256	39	282.1	-55	256	39	300			
200	-73				-58				-55		197	15	-50				-53		238	27	-53		213	47	-54		240	37	-53		260	49	-53		260	49	250				
170	368.1	-65			365.2	-58			368.7	-53	200	32	368.1	-53			368.3	-55	229	37	371.4	-52	221	39	370.4	-51	241	42	370.1	-47	263	60	370.1	-47	263	60	200				
150	-63				-59				-53		226	37	-53				-52		237	46	-55		237	39	-53		248	48	-53		265	45	-53		265	45	170				
130	-65				-61				-53		220	27	-52				-50		247	40	-54		238	36	-56		241	49	-56		254	44	-56		254	44	150				
110	-69				-64				-56		211	26	-55				-53		256	32	-56		233	37	-57		253	51	-57		257	53	-57		257	53	130				
100	-72				-63				-59		232	51	-63				-59		243	33	-58		203	48	-52		251	43	-52		264	43	-52		264	43	110				
90	513.2	-73			512.3	-65			518.4	-59	249	45					518.1	-60					250	49	521.1	-53	257	40	521.4	-51	268	44	521.4	-51	268	44	100				
80	-72				-67				-58		251	51					-62						252	40	-54		257	40	-54		266	60	-54		266	60	80				
70	(85)	-72			-63				-58		251	51					(88)	-62					234	46	-55		257	40	-54		266	60	-55		266	60	70				
60					-63				-63																												60				
Isothermal 276 - 260 mb -69°																																									
Isothermal 620 - 609 mb 05° 374 - 357 mb -51°																																									
Isothermal 734 - 718 mb 09°																																									
Tropopause 246 mb -74° 32,500' I 348 mb -57° 24,700' I 341 mb -52° 25,300' I 289 -55° 28,900' I 230 -58° 33,800'																																									
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA.				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.	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)								
875	975.7	mb	966.0	mb	964.8	mb	963.2	mb	965.1	mb	964.2	mb	964.7	mb	958.7	mb	974.0	mb	971.9	mb	986.4	mb	984.9	mb	986.4	mb	972.6	mb	988.7	mb	982.2	mb	982.2	mb	Surf						
1000	02.7	44	39	125	23	00.4	43	37	00.2	42	40		02.5	43	40		00.6	43	37	210	17	00.4	40	33	180	20	04.4	38	36	230	23	02.9	40	36	270	30	Surf				
950	-06.7				-09.6				-09.6				-09.7				-07.1		-03.7		-03.7		-03.7		-03.3		-01.9		-01.9												

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA				STATION	
Pressure	Time M.S.L. Surf Pressing	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 Pressing					
		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							
		ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100							
Pressure mb	Height ft/100	Temp. °F.	Dir.	Vel. knots	Temp. °F.	Dir.	Vel. knots	Temp. °F.	Dir.	Vel. knots	Temp. °F.	Dir.	Vel. knots	Temp. °F.	Dir.	Vel. knots	Temp. °F.	Dir.	Vel. knots	Temp. °F.	Dir.	Vel. knots	Temp. °F.	Dir.	Vel. knots	Temp. °F.	Dir.	Vel. knots	Temp. °F.	Dir.	Vel. knots	Pressure mb							
Surf	02.7	43	39	120	24	00.4	41	37	00.2	41	39	340	20	02.5	43	38	280	31	00.6	45	41	280	32	00.4	41	32	200	22	04.4	41	38	240	20	02.9	44	38	290	30	
1000	06.5				08.2				08.8					05.6					05.8					03.8				02.5					00.7						
950		41	37	133	40		42	38		39	37	318	25		40	35	277	42		42	38	289	48		38	31	221	45		38	36	258	30		40	36	290	43	
900	21.7	35	32	135	41	20.1	37	31	19.3	34	33	320	20	22.6	33	29	289	51	22.5	35	32	294	52	24.3	32	27	237	51	25.6	32	30	272	48	27.5	34	31	293	47	
850	36.7	29	25	140	42	35.1	31	24	34.3	29	28	324	19	37.5	26	22	298	59	37.5	29	26	296	55	39.2	30	24	247	49	40.5	27	25	278	55	42.4	26	25	295	51	
800	52.5	23	21	139	41	51.0	24	17	50.1	26	25	342	14	53.3	21	17	303	62	53.2	24	21	295	55	55.0	24	19	245	46	56.2	23	21	283	54	58.1	18	16	303	56	
750		18	10	139	37		21	13		20	19	330	13		15	10	304	63		18	14	296	52		17	11	242	42		17	15	285	50		13	07	302	55	
700	86.5	13	02	138	36	85.1	15	08	84.4	15	13	311	15	87.2	08	02	299	60	87.2	12	07	296	51	88.9	11	03	248	42	90.1	10	03	284	48	91.8	07	02	300	54	
650		06	08	135	33		07	02		09	06	299	18		03	06	297	54		05	03	292	45		04	06	253	39		04	08	285	47		01	03	298	47	
600	24.7	03	17	134	37	23.5	00	11	22.9	02	01	302	12	25.2	04	22	298	53	25.4	01	09	289	48	27.0	03	13	257	36	28.2	04	16	284	44	29.7	06	12	295	40	
550	-12	-26	134	32		-07	-25		-06	-10	304	18		-12	-38	293	48		-12	-20	290	44		-13	-23	254	36		-13	-26	281	40		-14	-20	288	35		
500	168.2	-22	-35	131	24	167.5	-18	-37	167.0	-15	-21	318	18	168.6	-22	-50	287	47	168.9	-22	-31	291	45	170.5	-24	-31	254	38	171.6	-24	-37	286	40	173.0	-24	-31	293	43	
450	-33	-43	124	16		-22	-47		-25	-32	305	16		-33	-60	270	36		-33	-43	282	45		-36	-43	255	38		-35	-47	284	38		-34	-43	286	40		
400	218.8	-45	080	10	218.7	-41			218.6	-35	-42	316	16	219.3	-45		249	29	219.6	-46		277	45	221.0	-48		265	33	222.1	-47		276	35	223.5	-48		293	34	
350	-58		122	10		-53			-45		301	14		-57		263	26		-60		274	43		-59		272	30		-61		280	36		-56		290	45		
300	280.7	-62	150	22	281.0	-66			282.6	-46		277	20	281.1	-67		275	33	281.1	-62		284	31	282.5	-64		274	30	283.4	-69		297	38	285.6	-57		297	58	
250	-62		153	16		-53			-48		265	24		-60		285	45		-61		285	34		-60		252	21		-59		298	44		-57		304	66		
200	366.7	-61	200	17	367.2	-59			371.6	-50		272	30	367.5	-55		293	39	367.5	-56		286	39	369.0	-54		266	27	370.0	-56		296	42		-56				
170	-64		219	22		-59			-49		263	24		-59		296	47		-57		290	36		-57		267	25		-59		307	43	(208 mb)						
150	-66		223	28		-60			-50		267	32		-59		293	54		-60		295	37		-58		267	29		-57		292	47							
130	-66		244	30		-60			-51		282	36		-58		290	52		-59		290	49		-55		267	32		-50		301	39							
110	-65		260	40		-60			-51		286	42		-58		290	52		-58		294	47		-57		271	34		-56		303	38							
100	512.7	-64	264	41	515.0	-61			523.1	-50				515.9	-60		293	48	515.8	-58		297	49	518.4	-55		275	31	519.3	-57		292	44						
90	-64		264	43		-60								-61		295	53		-59		301	49		-60					-59										
80	-65					-59								-62		298	46		-60																				
70	(83 mb)					-60								-60																									
60						-60								-60																									
		Inversion 965 mb -41° 958 mb 43° Isothermal. 792-765 mb 22°								Isothermal. 357-338 mb -57°																													
Tropopause		I 332 mb -62° 25.900°				I 282 mb -69° 29.400°				I 348 mb -45° 24.900°				I 305 mb -67° 27.700°				I 319 mb -68° 26.800°				I 319 mb -65° 27.000°				I 304 mb -70° 28.000°				I 350 mb -56° 25.200°				Tropopause					
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				STATION					
Pressure	Time M.S.L. Surf Pressing	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 Pressing					
		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							
		ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100	ft/100							
Surf	02.7	42	37	120	27	00.4	41	38	00.2	41	37	270	19	02.5	38	29		00.6	43	37		00.4	44	35	250	24	04.4	40	34	290	20	02.9	41	36	290	17			
1000	06.4				07.1				06.6					03.3				02.6				00.5					00.8					00.8							
950		40	34	136	37		42	42		39	34	276	33		35	26			39	34		40	33	267	40		37	31	284	44		36	32	275	30				
900	21.8	35	31	132	36	21.1	37	37	21.5	35	31	281	36	24.6	30	22		25.6	33	29		25.7	35	29	278	47	27.4	32	27	286	45	28.7	30	26	274	32			
850	36.8	29	25	130	35	36.2	31	31	36.5	30	24	297	39	39.4	23	13		40.5	26	23		40.7	29	25	287	48	42.3	25	21	283	46	43.6	25	20	274	33			
800	52.6	24	20	123	33	52.0	25	25	52.4	26	18	307	36	55.0	17	05		56.2	20	16		56.4	22	18	291	41	57.9	17	15	282	46	59.3	21	14	273	34			
750		19	12	125	27		18	18		20	13	308	33		10	03			14	09		20	09	289	35		12	09	292	41		13	09	269	32				
700	86.7	14	07	131	25	86.2	13	08	86.6	13	08	305	31	88.4	04	11		89.9	07	01		90.4	12	02	281	33	91.5	06	01	270	38	93.0	08	04	275	37			
650		07	01	141	24		04	02		06	01	304	29		01	16			00	10		05	04	275	32		02	09	258	37		04	14	286	46				
600	25.0	02	08	153	26	24.3	03	10	24.8	05	12	302	29	26.1	05	32		27.7	08	23		28.6	02	18	268	34	29.1	09	19	249	35	31.0	02	15	285	52			
550	-10	-16	159	30		-13	-18		-12	-18	294	29		-14	-44			-17	-29			-12	-25	265	32		-16	-28	251	36		-08	-19	289	58				
500	168.7	-21	-29	158	27	167.8	-23	-28	168.3	-22	-24	290	26	169.4	-22	-54		170.8	-27	-39		172.2	-24	-36	252	33	172.2	-23	-38	279	41	174.9	-17	-26	292	65			
450	-33	-42	157	16		-33	-4																																

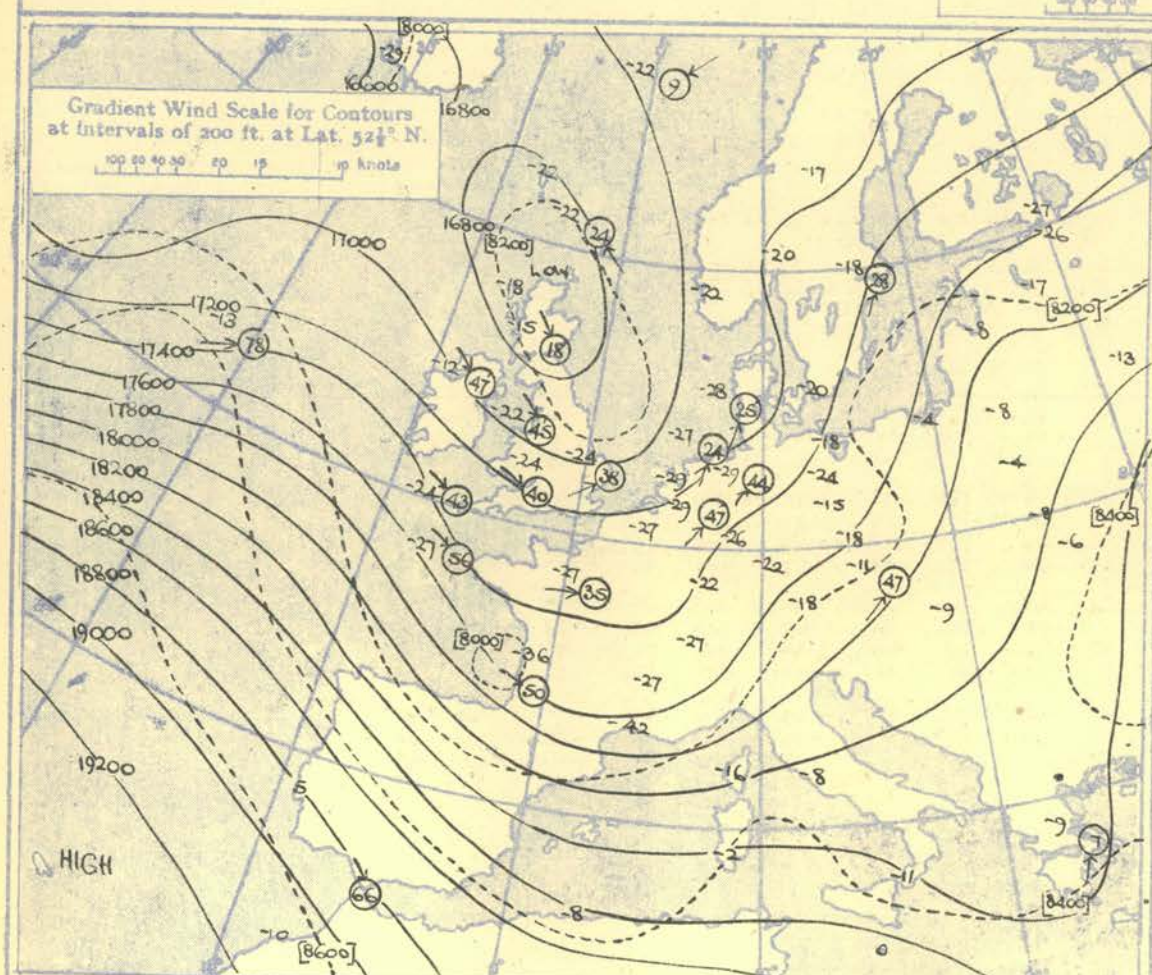
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb, 500 mb, and 300 mb, levels at about 03h G.M.T.



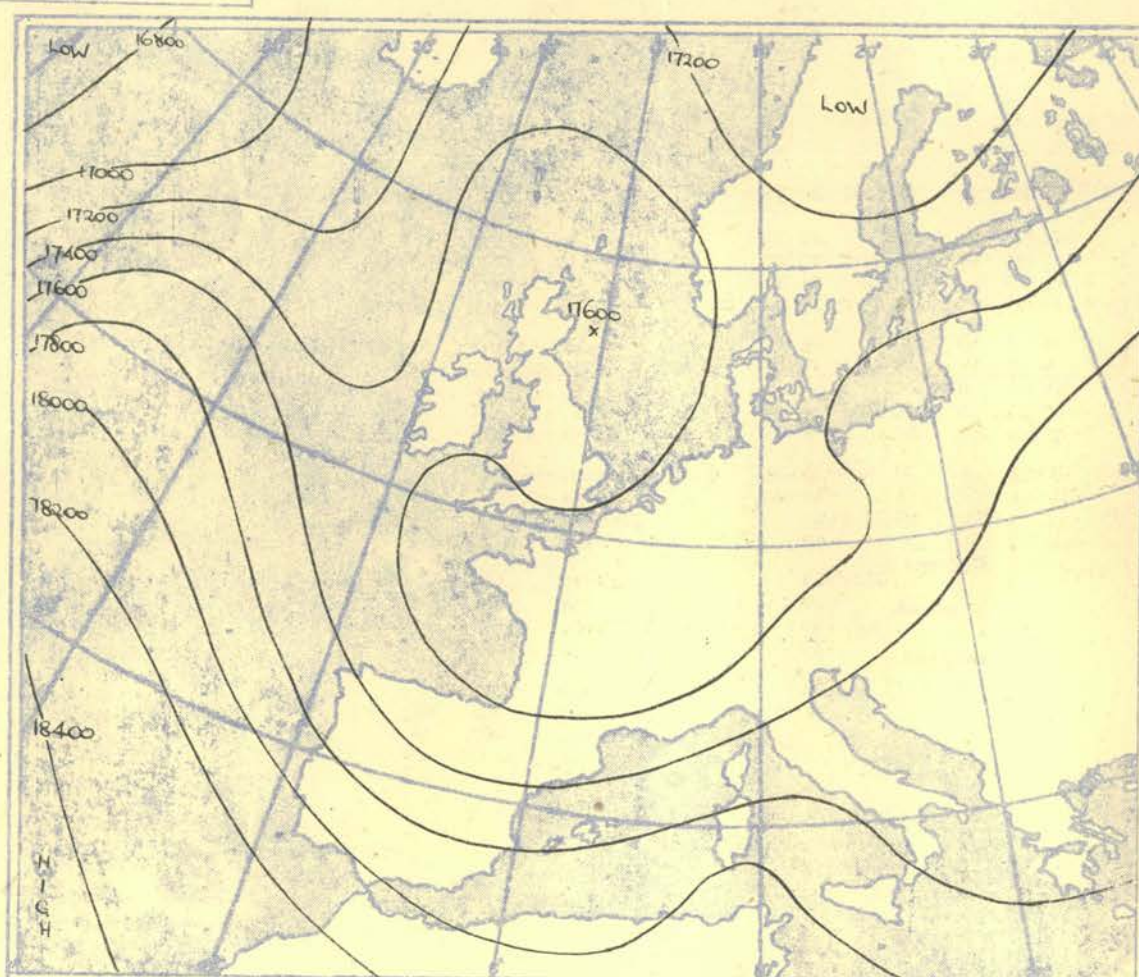
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.



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.



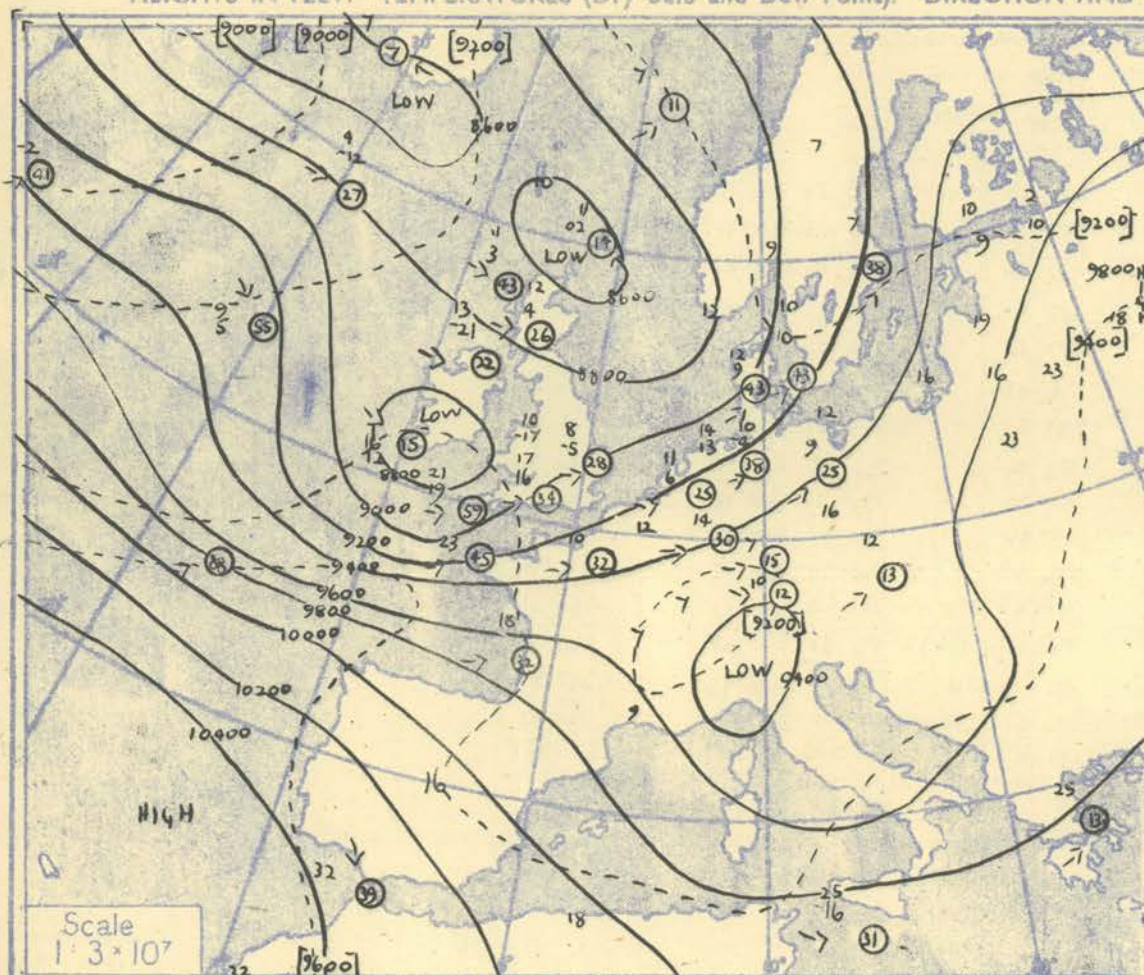
The continuous lines are contour lines of the 500 mb. surface.
The dotted lines are isopleths of the thickness of the layer 700-500 mb.



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.																			
52°12'N 02°12'W 48°11'N 07°47'W 47°12'N 12°31'W																				Place Aldersgrove Lerwick Stornoway Shetland Lymphe Aldersgrove																			
Time M.S.L. 931 mb 989.5 890										Time M.S.L. 993 mb 982 850										Time M.S.L. 993 mb 982 850										Time M.S.L. 993 mb 982 850									
Pressure mb 890										Pressure mb 865										Pressure mb 850										Pressure mb 850									
Height ft. 100 25.7 33 25 40.5 27 56.3 23 18										Height ft. 100 46 40 37 36 26.5 39 37 30 28 41.4 32 32 26 14 57.5 28 26										Height ft. 100 46 40 37 36 26.5 39 37 30 28 41.4 32 32 26 14 57.5 28 26										Height ft. 100 46 40 37 36 26.5 39 37 30 28 41.4 32 32 26 14 57.5 28 26									
Temp. 90.5 17 12 12.2 03 12.2 12										Temp. 90.5 17 12 12.2 03 12.2 12										Temp. 90.5 17 12 12.2 03 12.2 12										Temp. 90.5 17 12 12.2 03 12.2 12									
Dew 90.5 17 12 12.2 03 12.2 12										Dew 90.5 17 12 12.2 03 12.2 12										Dew 90.5 17 12 12.2 03 12.2 12										Dew 90.5 17 12 12.2 03 12.2 12									
Wind 1735-12 2253-37 288-066										Wind 1735-12 2253-37 288-066										Wind 1735-12 2253-37 288-066										Wind 1735-12 2253-37 288-066									
Cloud. 1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										Cloud. 1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										Cloud. 1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										Cloud. 1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb										1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805mb 8/8 As-Cs 530-310mb									
1-2/8 Sc 6/8 Cu 7/8 Cu 920-915mb 5-7/8 Sc 935-805																																							

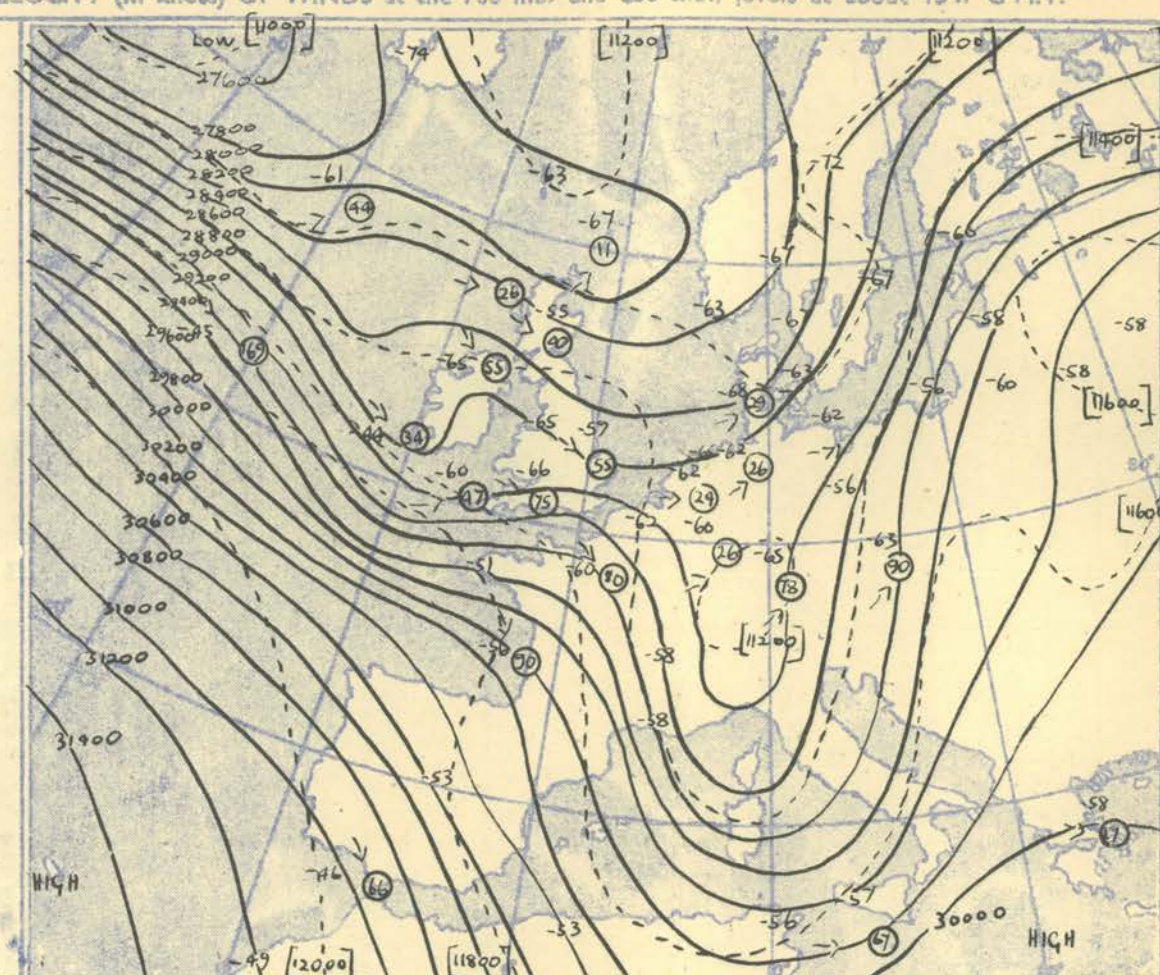
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h G.M.T.



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

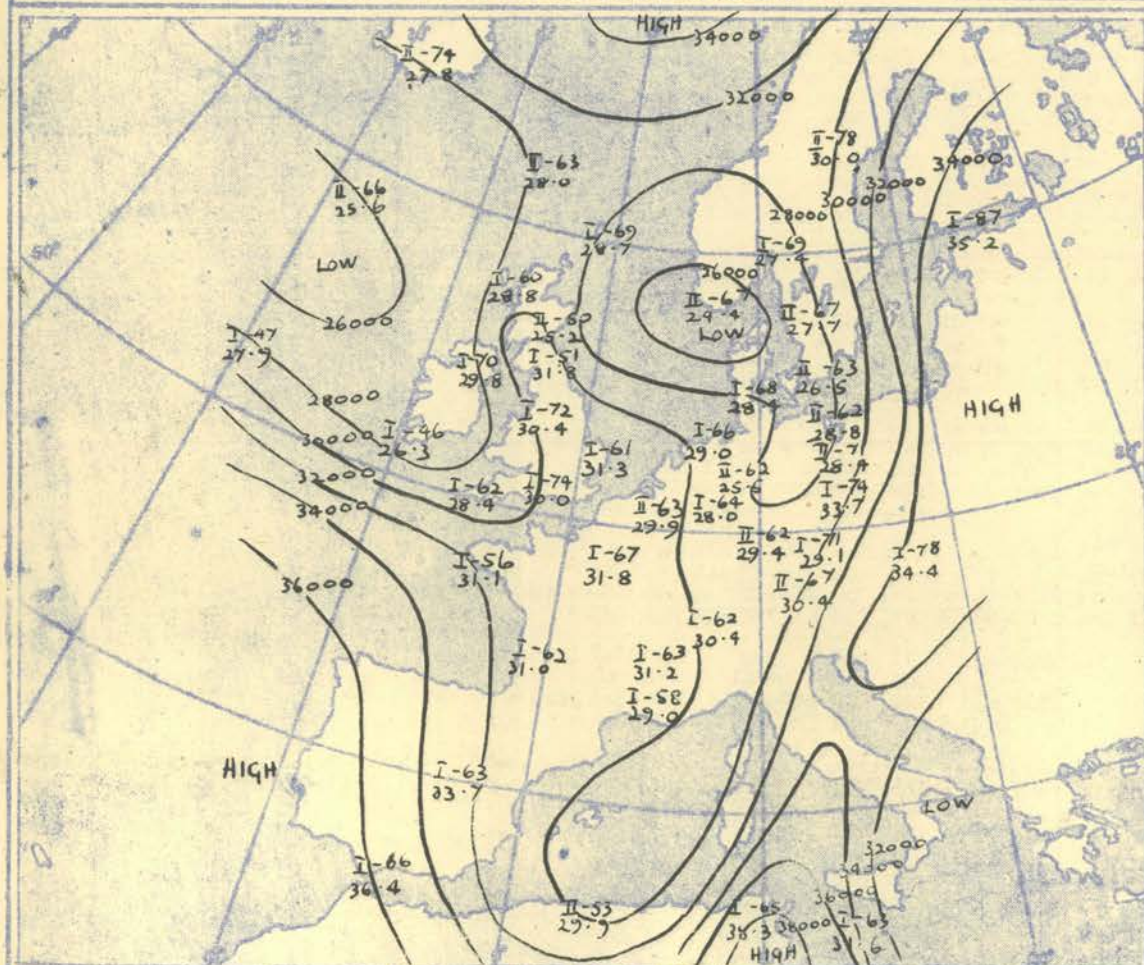
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

100 50 40 30 20 10 knots



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

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



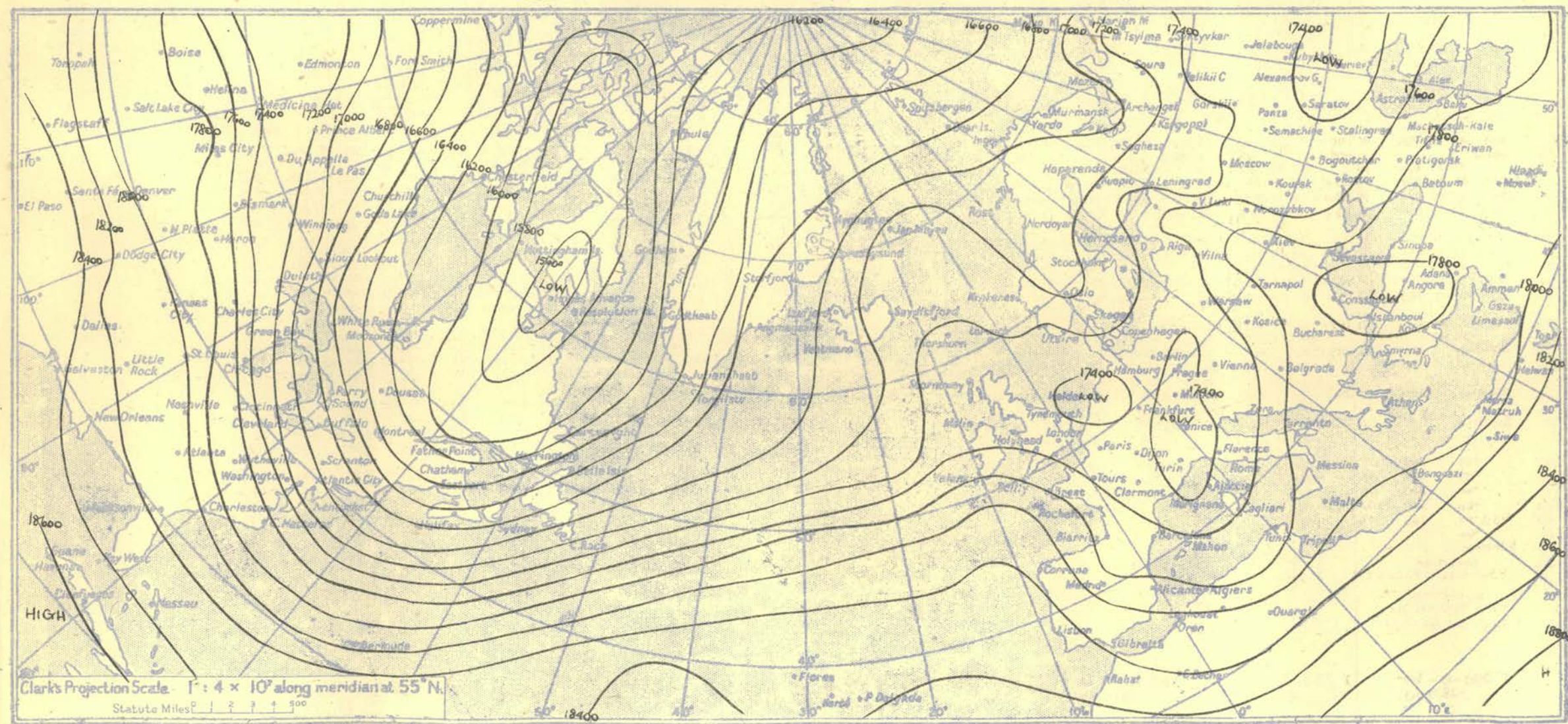
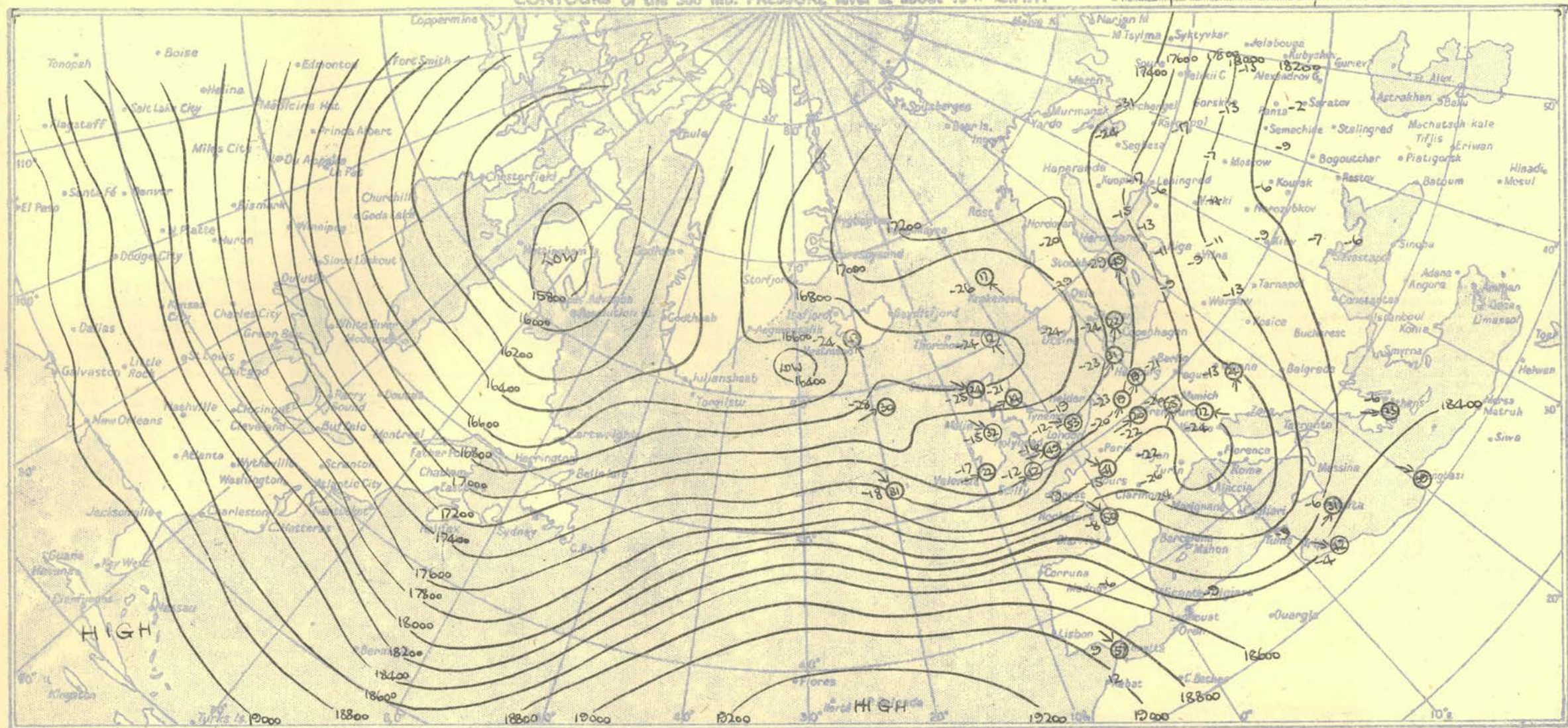
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Unusual movement of surface low which moved rapidly towards British Isles from mid Atlantic and then turned southeastward to English Channel area.

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

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



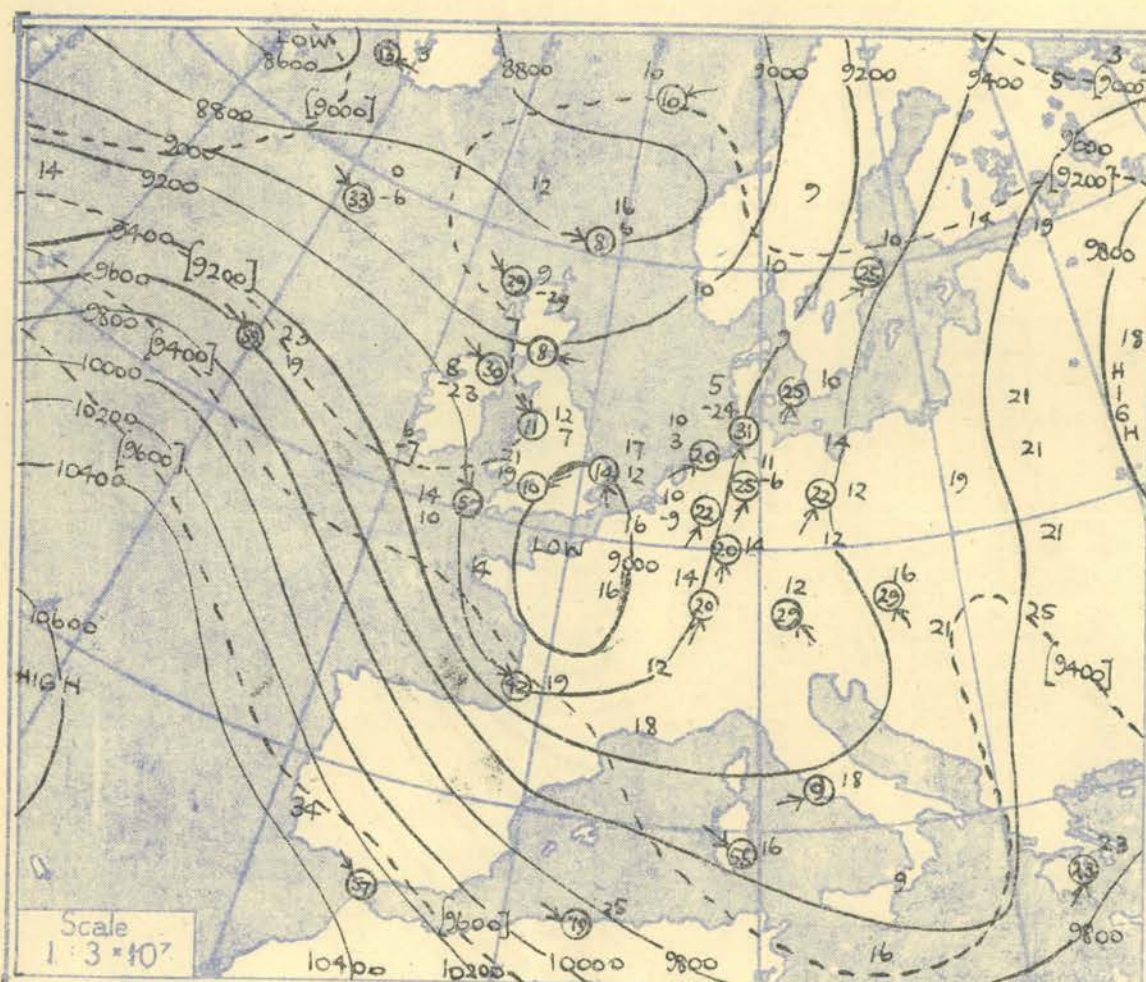
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

[illegible]

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

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA				STATION																																																																																																																																																																																																																																																									
Pressure mb	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.		Time M.S.L.																																																																																																																																																																																																																																																													
		Surf	Freezing	980.6	mb	989.7	mb	991.6	mb	997.3	mb	992.1	mb	990.8	mb	983.3	mb	993.7	mb	983.1	mb	983.3	mb	993.7	mb	983.1	mb	983.3	mb	993.7	mb																																																																																																																																																																																																																																																																
																																970.7	mb		988.1	mb	990.7	mb	987.9	mb	992.1	mb	989.3	mb	967.5	mb	983.1	mb	983.3	mb	983.1	mb	983.3	mb	993.7	mb	983.1	mb	983.3	mb	993.7	mb																																																																																																																																																																																																																																	
973.0		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.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft/100	Temp.

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



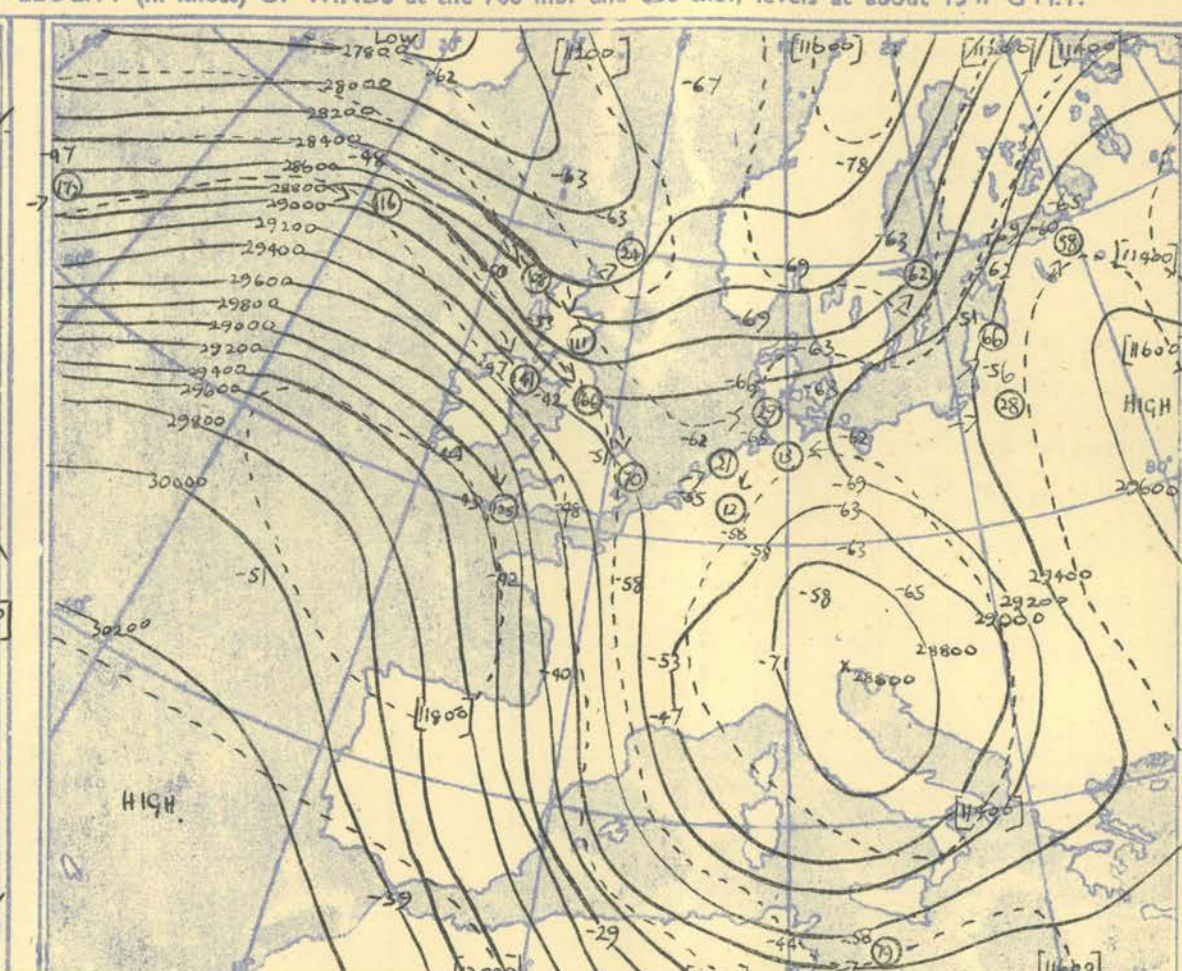
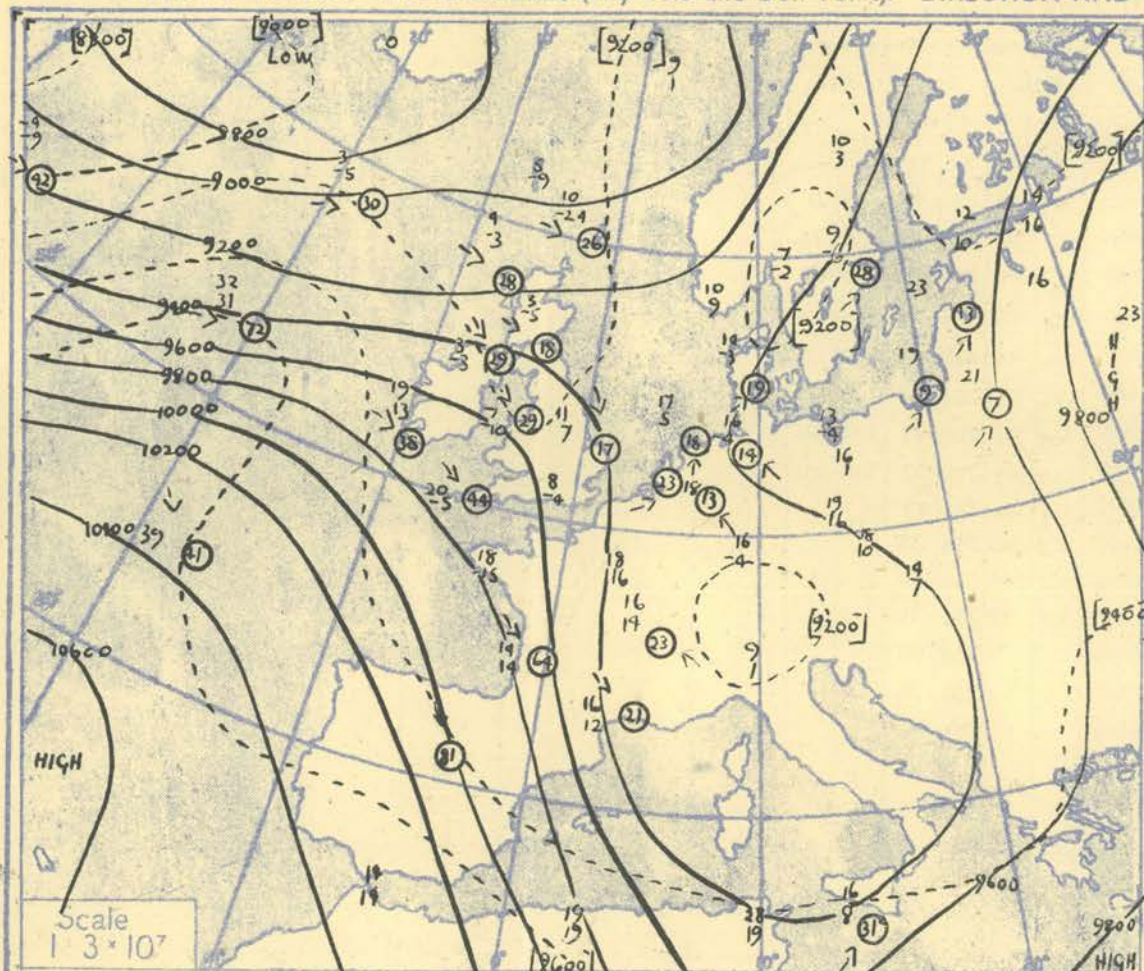
DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

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.



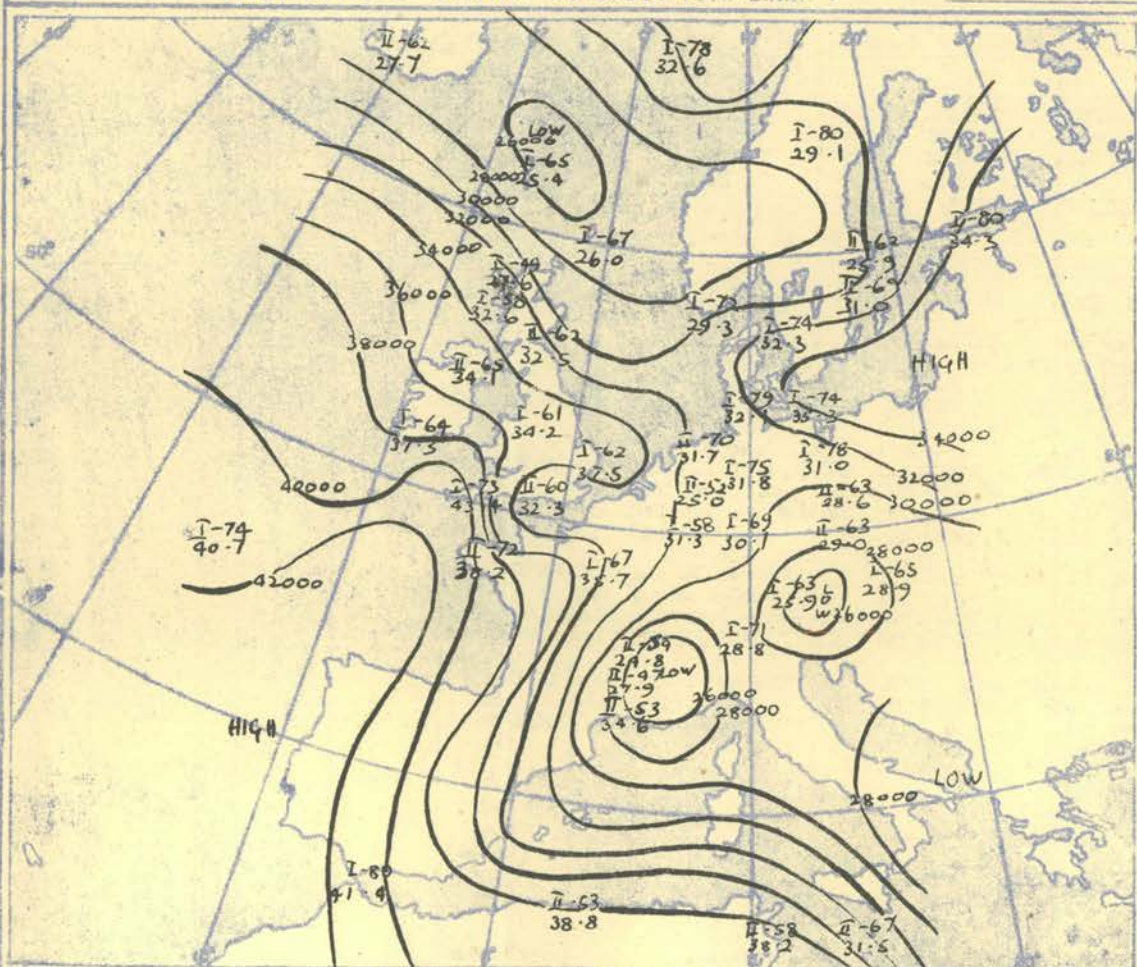
TROPOPAUSE CHART at about 15h. GMT.

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

100 60 40 20 10 knots

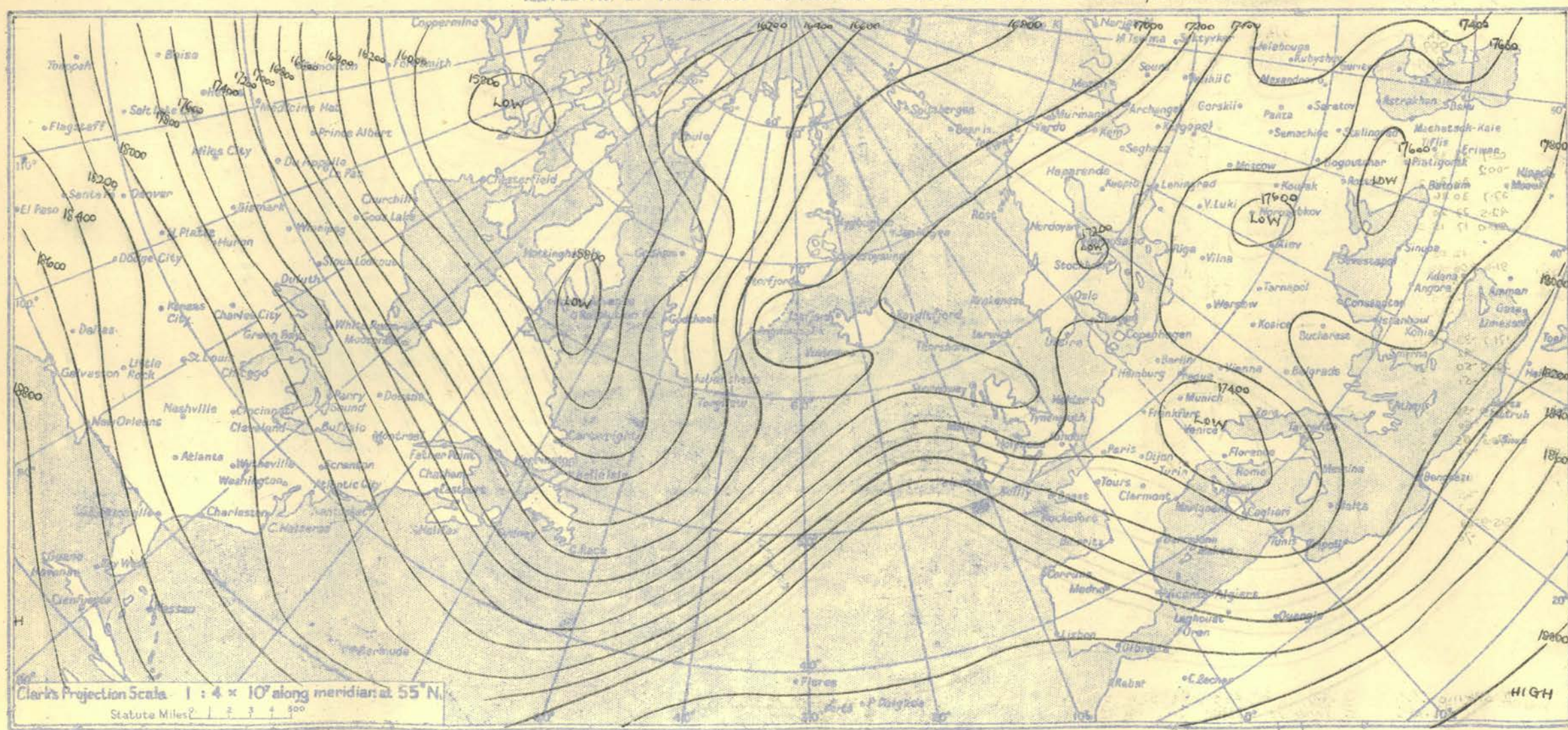
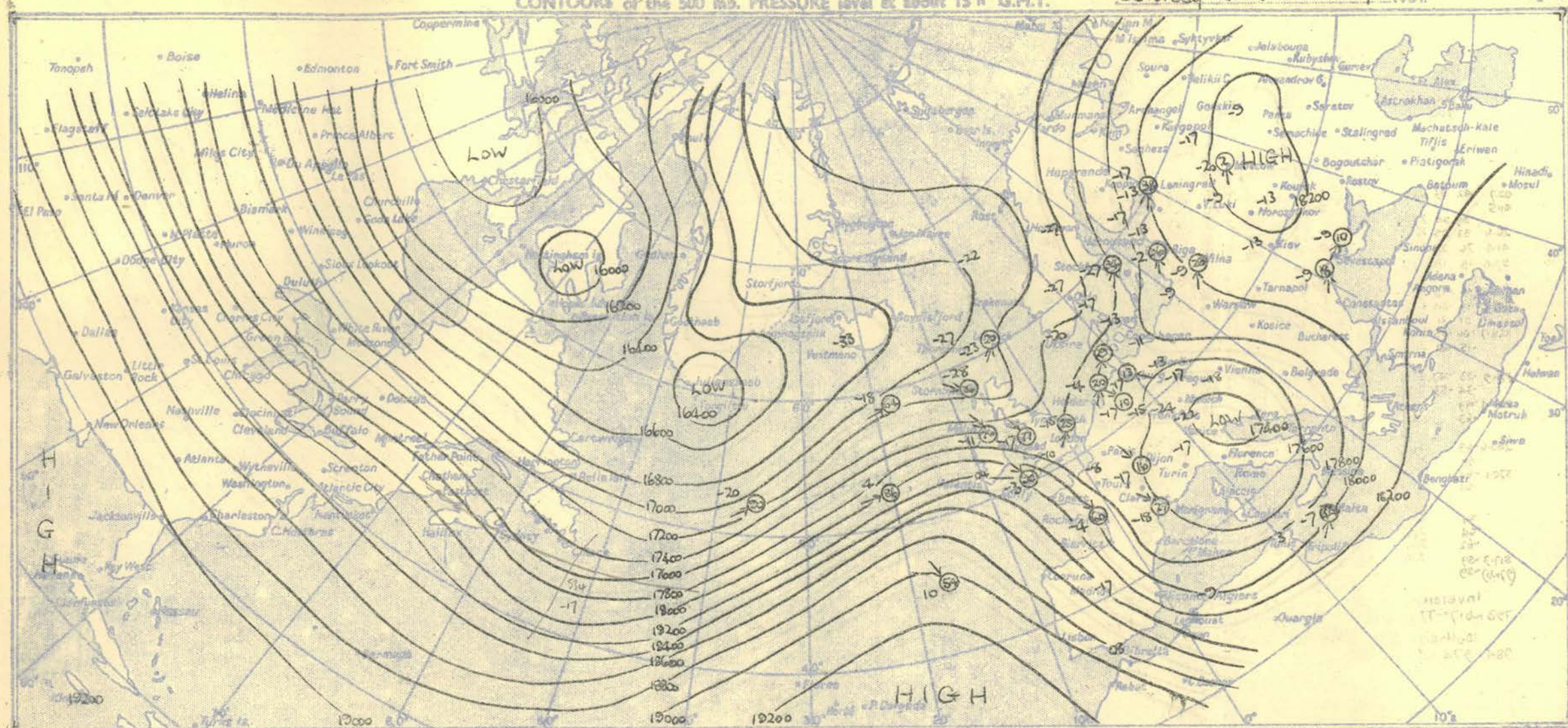
NOTES ON THE AEROLOGICAL SITUATION.

With a very similar thermal pattern to that prevailing on the 28/Dec, a surface low approached British Isles from mid-Atlantic but, in spite of a more pronounced northwesterly thermal gradient ahead of it, due to a colder upper air trough, the surface low continued moving rapidly east-northeast and deepened considerably.



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

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

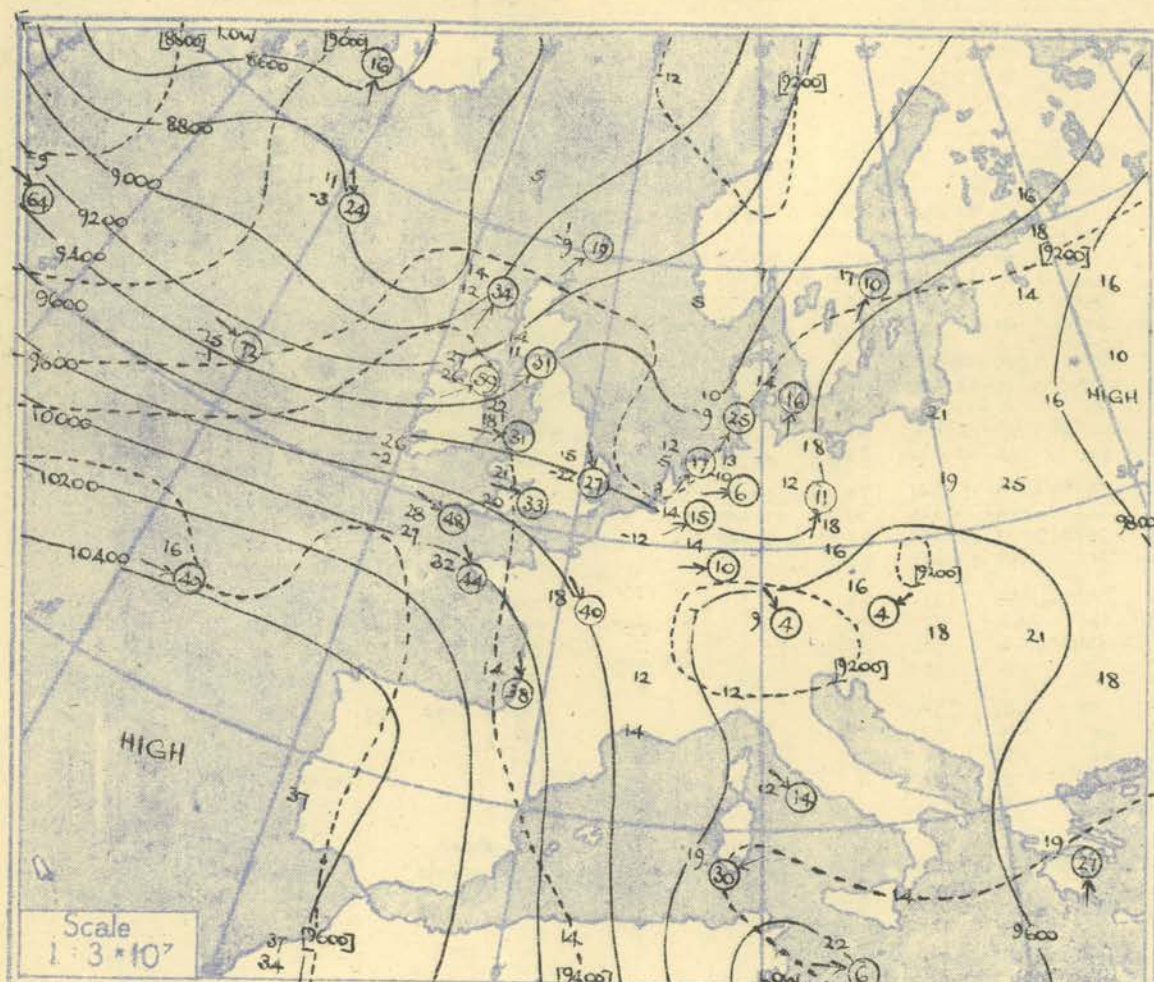


RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

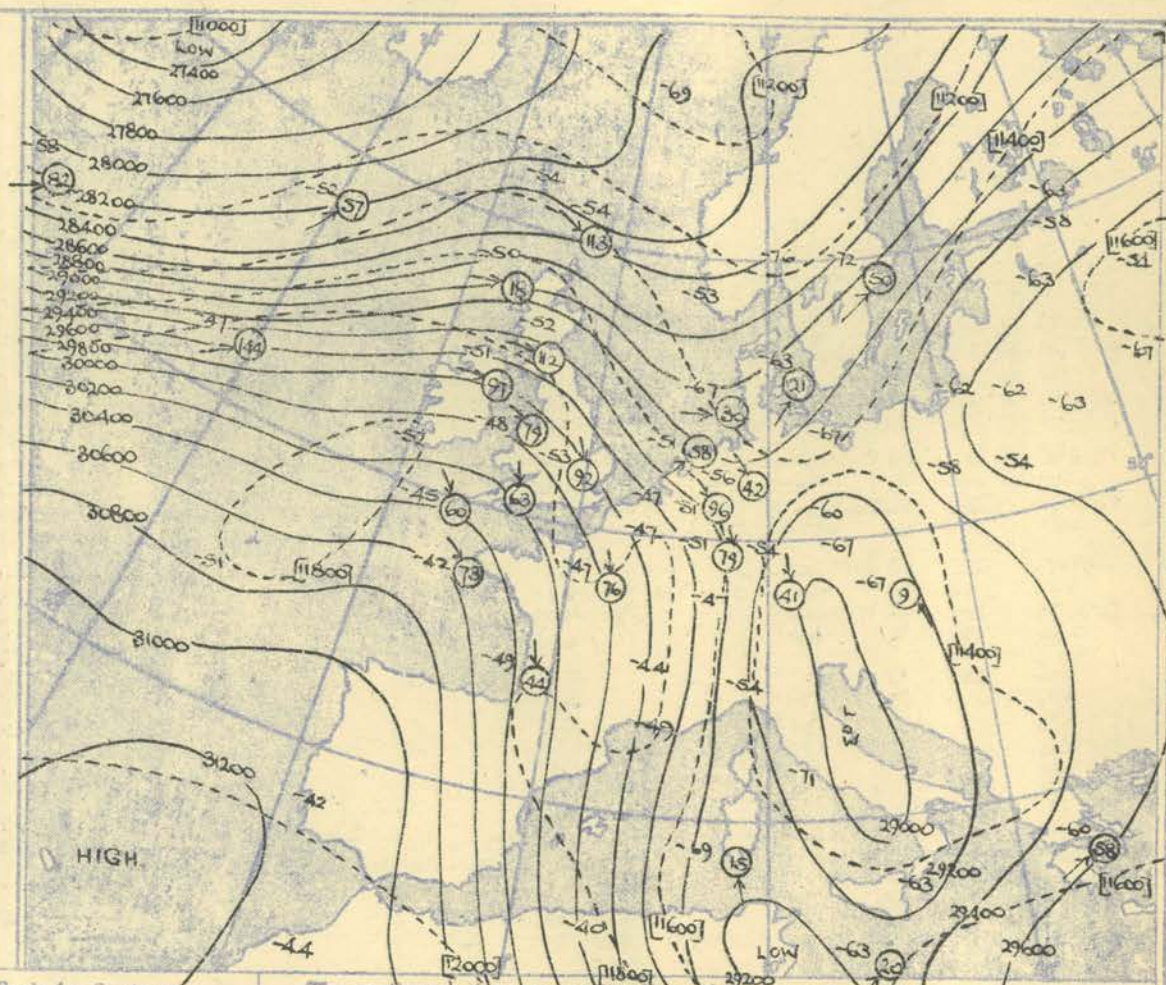
Station	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA				Station																																		
Time M.S.L. Surf Pressure	15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		Time M.S.L. Surf Pressure																																						
	994.1		mb		1000.9		mb		1004.1		mb		1009.5		mb		1006.7		mb		1004.1		mb		1009.3		mb		1004.8		mb																																								
	984.1		mb		999.2		mb		1003.2		mb		1000.0		mb		1006.6		mb		1002.6		mb		993.0		mb		1004.8		mb																																								
900		mb		920.0		mb		930		mb		931		mb		910		mb		908		mb		910		mb		915		mb		900		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	02.7	42	33	280	23	00.4	40	33	270	08	00.2	40	34	250	05	02.5	37	34	270	12	00.6	44	35	310	12	00.4	41	39	330	16	04.4	42	32																																						
1000	01.5					00.4					01.1					02.5						02.3					01.0							Surf																																					
980		39	20	275	31		36	30	263	27		34	28	279	15		34	30	278	26		37	30	303	27		35	34	333	30		39	31																																						
960		32	25	280	30		29	24	265	27		29	23	295	20		30	28	281	28		30	30	302	27		29	31	303	27		30	31																																						
940		26	20	282	29		43	18	259	28		43	25	294	21		43	22	282	25		45	25	300	26		43	28	27	337	22		45	25																																					
920		18	13	279	28		58	7	258	29		59	19	292	18		60	8	280	27		60	7	290	27		59	7	291	22		61	0	09																																					
750		16	16	273	28		10	05	258	29		11	02	285	20		10	05	278	30		12	00	304	28		17	15	331	21		15	02																																						
700		10	14	274	26		04	03	261	28		03	05	277	18		04	03	279	29		07	10	301	29		11	07	323	17		05	04																																						
650		01	31	270	22		04	06	266	32		04	12	269	16		04	11	295	40		00	23	300	29		06	01	311	15		01	15																																						
600		12	17	263	18		12	13	271	33		12	13	267	16		12	12	304	59		13	11	311	36		13	11	311	16		13	11																																						
550		15	12	244	18		23	31	274	29		26	35	265	24		26	20	306	58		14	28	322	59		16	12	250	22		00	24																																						
500		17	19	233	20		17	22	282	26		17	23	281	32		17	24	312	76		17	15	327	77		17	15	325	25		17	11	31																																					
450		33	33	213	21		33	31	291	60		34	31	307	60		33	31	308	107		33	31	323	103		33	31	323	31		33	31																																						
400		19	19	206	22		38	38	297	84		38	37	312	78		38	37	307	124		38	37	325	107		38	37	325	31		38	37																																						
350		63	205	28		45		295	98		45		308	98		44	312	153				44	312	153			44	312	153			44	312																																						
300		28	246	24		28	24	295	108		28	24	295	108		28	24	295	108				28	24	295	108		28	24	295	108		28	24																																					
250		40	280	40		58		299	111		58		299	111		58		299	111				58		299	111		58		299	111		58																																						
200		45	283	45		61		296	95		61		296	95		61		296	95				61		296	95		61		296	95		61																																						
170		51	285	51		62		295	83		62		295	83		62		295	83				62		295	83		62		295	83		62																																						
150		54	289	54		60					60					60						60						60																																											
130		53	286	53		66					66					66						66						66																																											
110		59	280	59		65					65					65						65						65																																											
100		62	276	62		63					63					63						63						63																																											
90		63				63					63					63						63						63																																											
80		63				63					63					63						63						63																																											
70		63				63					63					63						63						63																																											
60		63				63					63					63						63						63																																											
Tropopause																																I 333 mb - 67° 26,000'				I 315 mb - 49° 27,600'				II 250 mb - 62° 32,500'				II 240 mb - 65° 34,100'				I 241 mb - 61° 34,200'				I 203 mb - 62° 37,500'				II 263 mb - 60° 32,300'				I 160 mb - 73° 42,400'				I 215 mb - 64° 37,300'				Tropopause			
Station	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				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.		Time M.S.L. Surf Pressure																																						
	999.1		mb		1002.3		mb		1007.5		mb		1009.7		mb		1012.1		mb		1010.9		mb		1015.9		mb		1017.4		mb																																								
	989.1		mb		1000.7		mb		1006.6		mb		1000.2		mb		1010.0		mb		1009.4		mb		999.3		mb		1006.7		mb																																								
920		mb		922		mb		920		mb		920		mb		917		mb		911		mb		908		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	Pressure mb																																						
Surf	02.7	40	33	260	17	00.4	38	32	210	12	00.2	33	30	250	10	02.5	36	33	180	06	00.6	40	35	240	06	00.4	36	33	310	07	04.4	35	32	200	05																																				
1000	00.2					00.6					01.9					02.5						03.2					02.9																																												
980		36	31	254	27		36	32	236	21		35	28	257	23		34	29	230	15		36	32	270	19		35	29	318	23		36	30	315	18																																				
960		27	30	254	24		28	25	242	22		29	21	269	22		30	29	249	23		31	30	26	276	20		30	31	22	321	23		32	31	315	20																																		
940		42	23	250	18		43	3	246	23		44	25	269	22		45	23	18	254	24		45	23	21	278	20		45	26	14	318	26		47	26	12	311	23																																
920		58	0	246	17		58	9	252	24		60	3	270	17		60	8	15	254	27		61	3	15	290	21		61	3	21	318	24		62	6	21	06	305	25																															
750		12	05	236	16		10	02	252	26		12	04	277	16		14	10	258	27		14	05	290	29		15	02	318	21		15	01	306	30																																				
700		06	06	233	19		03	06	253	27		05	08	283	18		04	10	272	29		05	08	290	34		08	08	310	31		09	06	308	33																																				
650		03	15	230	21		04	16	243	30		04	12	284	21		04	06	288	36		11	05	304	33		01	19	299	19		13	03	309	37																																				
600		12	24	230	17		13	0	272	38		13	4	292	35		13	05	00	294	46		13	03	308	39		13	03	317	44		13	04	317	40																																			
550		21	33	226	19		14	21	276	45		11	22	298	44		00	04	294	65		02	11	307	53		06	33	326	55		01	06	319	60																																				
500		17	17	217	23		13	3	281	66		17	4	299	61		17	9	04	296	84		17	1	311	81		17	1	329	65		18	02	318	87																																			
450		42			24		28	33	291	70		27	33	302	75		11	15	300	99		13	20	312	100		18	30	330	105		11	17	322	105																																				
400		22	15	265	22		24	7	290	126		26	14	304	106		23	27	304	102		23	11	317	112		22	27	334	110		23	25	322	108																																				
350		51			33		40	45	294	148		34	44	309	132		33	38	300	107		34	43	315	112		36	47	331	136		32	40	329	105																																				
300		28	35	286	62		2																																																																

Station	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA				Station										
Time	03h				03h				03h				03h				03h				03h				03h				03h				03h				Time										
M.S.L.	999.4				999.4				1004.1				998.3				1008.2				1013.2				1015.1				1011.5				1004.5				M.S.L.										
Surf	989.4				992.6				1003.2				989.0				1006.1				1011.6				998.5				1000.8				1003				Surf										
Pressure	958				920				911				750				903				927				894				735				740				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.										
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	36	34	210	05	00.4	41	39	160	28	00.2	37	33	200	10	02.5	40	39	180	25	00.6	38	34	170	11	00.4	32	31	260	03	04.4	35	33	230	07	02.9	48	48	195	12	00.3	53	52	Surf			
1000	-0.1				-01.6					01.1	37	32			01.1	37	32			02.2	38	32	171	25	03.4	33	32			04.0	35	33	230	07	03.1	48	48			01.3	53	52	1000				
950		31	27	211		18	35	34	178	24		35	29	197		18	35	29	197			37	28	191	29		34	22	276	12		37	32	225	21		48	48	255	37		49	47	950			
900	27.5	25	21	207		18	26.3	30	30	33	29.0	31	23	198		27	27.7	39	38	220	45	30.1	32	28	202	30	31.2	29	12	276	15	31.9	33	27	236	23	31.6	44	44	274	45	30.0	45	43	900		
850	42.1	19	15	214		18	41.2	25	25	173	33	43.9	26	18	205		27	42.9	40	39	242	45	45.1	28	24	228	28	46.0	25	01	278	19	46.9	28	27	249	29	47.1	41	41	277	35		42	39	850	
800	57.5	13	07	219		17	56.9	20	20	178	34	59.5	21	11	213		32	59.1	36	35	255	45	60.9	26	22	236	30	61.7	21	-17	279	16	62.7	29	27	264	28	63.2	37	36	275	35	61.6	38	35	800	
750		07	-02	221		16		15	14	190	30		19	13	217		32		32	31	252	48		24	20	247	28		15	-18	232	19		24	21	281	30		34	33	283	44		33	27	750	
700	30.7	01	-09	218		19	30.8	14	13	206	34	33.5	14	11	221		31	34.2	27	26	256	59	35.3	22	18	259	31	35.5	15	-22	300	27	37.3	21	20	286	33	38.4	28	27	284	48	36.7	26	22	700	
650		-07	-16	224		20		09	07	216	33		11	08	236		32		21	20	260	65		18	14	267	-41		11	-12	301	33		19	18	295	43		19	14	290	49		20	13	650	
600	28.0	-13	-21	242		20	29.3	06	04	235	51	32.1	05	01	252		35	33.8	16	14	263	64	34.5	13	09	272	54	34.2	07	-15	312	42	36.7	16	15	296	51	36.9	15	-07	293	50		17	07	600	
550		-19	-32	278		32		01	-02	240	56		-02	-04	264		42		08	05	268	63		07	02	282	66		03	-23	323	58		06	07	307	60		07	-19	297	48		08	00	550	
500	70.8	-27	-36	286		44	74.1	-07	-10	249	48	176.4	-08	-11	266		64	179.2	-01	-04	273	66	179.8	-02	-08	286	72	179.3	-03	-17	321	72	182.1	00	-03	308	63	182.3	-01	-29	294	53	181.7	-02	-11	500	
450		-30	-43	287		72		-16	-20	248	67		-15	-18	273		81		-10	-14	276	72		-10	-17	286	66		-13	-28	326	87		-10	-15	309	58		-10	-40	291	54		-11	-21	450	
400	221.7	-40	-49	285		86	226.8	-26	-31	256	89	229.3	-26	-30	277		98	232.6	-23	-27	280	76	233.1	-22	-31	294	70	232.3	-25	-39	322	87	235.6	-21	-27	314	64	235.7	-23	-41	297	52		-23	-34	400	
350		-45		284		109		-37	-42	261	123		-40	-44	281		99		-35	-40	280	87		-35	-44	300	78		-38	-53	327	93													350		
300	285.1	-54		287		113	291.5	-50		259	118	293.7	-52		286		112	297.6	-51		266	97	298.1	-48		300	79	296.7	-53		324	92													300		
250		-66		286		121		-64		259	136		-63		283		123		-69		266			-62		294	83		-68		319	95													250		
200	370.3	-75		292		88	377.3	-65				380.0	-60		294		79	383.2	-62						-61		305	82	381.7	-76		336	87													200	
170		-79		284		76		-64					-65		293		76		-64						-67		297	70		-81		324	79													170	
150		-76		284		72		-67					-75		302		74		-70						-70		299	70		-81		321	92													150	
130		-74		278		75		-71					-63					-79						-79		298	63		-78		321	79														130	
110		-75						-69					-71					-74						-78		296	63		-78																	110	
100	512.1	-75				522.1	-70					524.1	-74					528.1	-76					528.1	-76			65	522.5	-80															100		
90		-74						-72					-74						-73						-73																					90	
80		-77											-69																																	80	
70		-78																																													70
60																																															60
	(67mb) Inversion				750mb 15° 740mb 17°				Inversion				772mb 17° 750mb 19° 938mb 37° 865mb 41°				Inversion				(88mb) Inversion				Inversion				Inversion				Inversion				Isothermal				(92mb) Inversion						
	466mb 30° 450mb 30°												1003-980mb 37°								850mb 28° 840mb 29°				1012mb 32° 972mb 36°				999mb 35° 970mb 39°				1001-945mb 48°				650mb 20° 629mb 22°										
	373° -46° -343° -45°												860° 845° 26°								740° 23° 730° 24° 858° 25° 842° 26°				831° 26° 808° 30°				908° 885° 44°																		
	232° -70° -220° -69°																				240° -65° 223° -60° 755° 15° 712° 16°				688° 20° 675° 21°				232° 175° -64°																		
Tropopause	I 185mb -80°				I 224mb -70°				I 240mb -67°				I 236mb -74°				I 240mb -65° 34.500°				I 234mb -73° 35.000°				NR.				I 232mb -64° 35.800°				I 229mb -75° 35.600°				Tropopause										
	38.600°				35.300°				34.100°				35.000°				I 128° -80° 47.700°				I 170mb -81° 41.300°								I 140° -80° 46.200°				I 110° -93° 50.300°														
Station	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA				Station										
Time	09h				09h				09h				09h				09h				09h				09h				09h				09h				Time										
M.S.L.	986.8				961.9								993.8				998.9				1008.5				1007.4				1012.0				1001.4				M.S.L.										
Surf	976.9				960.3								984.6				996.8				1007.1				991.4				1001.4				991.4				Surf										
Pressure	950				842								888				795				847				736				732				732				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.										
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	37	35	150	29	00.4	45	43																																				Surf			
1000	-03.5					-01.6																																					1000				
950		32	30	154		54		44	42																																		950				
900	24.1	28	25	154		51	17.9	39	37																																		900				
850	38.9	23	20	155		48	33.0	33	31																																		850				
800	54.5	18	14	153		45	46.9	27	23																																		800				
750																																															

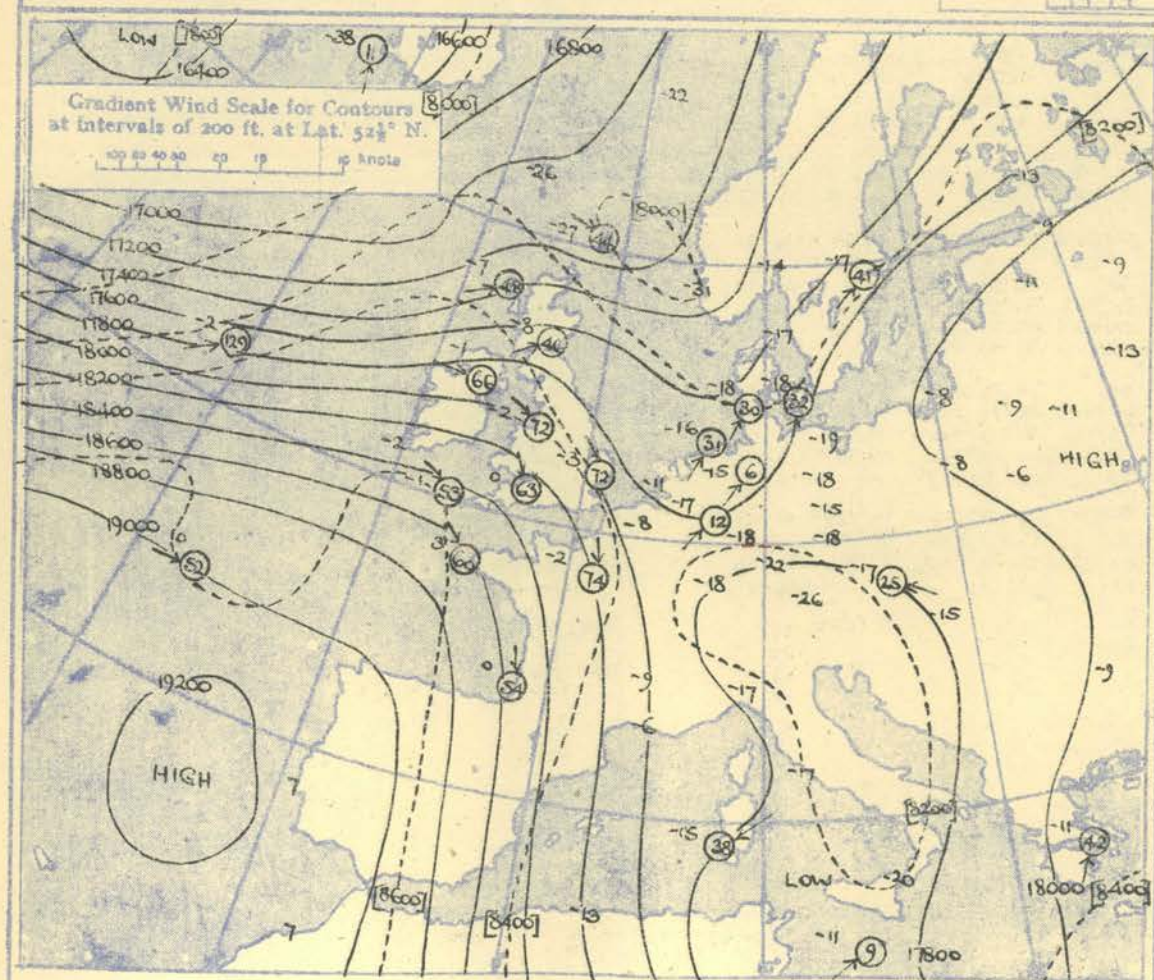
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Points). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb, 500 mb, and 300 mb. levels at about 03h G.M.T.



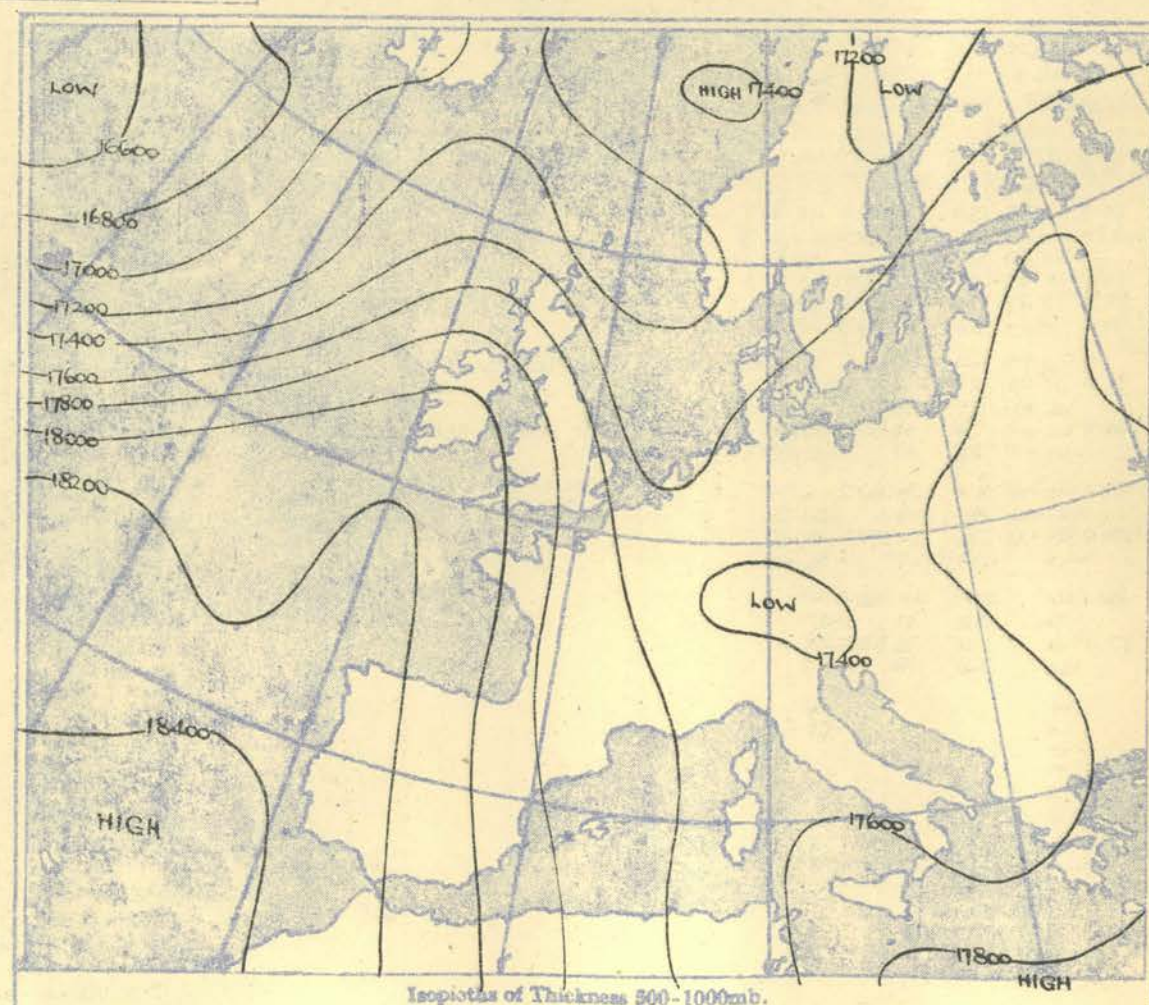
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 2000-700 mb.



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 300-1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

52.12.102.12W															
Time	1435L														
M.S.L.	1009	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb
Surf	1007.5	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb
Freezing	880	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb
Pressure															
Height	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100
Temp.	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F
Dew	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F
Surf	00.4														
1000	02.4														
950															
900	30.6	35	25												
850	45.5	28													
800	61.3	21	18												
750															
700	95.3	23	08												
650															
600	134.8	11	04												
550															
500															
450	180.1	-03													
400															
350	233.2	-23													
300															
250	298.3	-51													
200															
170															
Cloud.															
2/8-4/8															
Cu 860-															
840mb.															
4/8-6/8 Sc															
810-765mb															
Inversion															
770 mb 18°															
720-24°															

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

Place	harkhill	Hemsby	Stornoway	hemsby	Aldergrove	Place
Time	03L	09L	09L	09L	15L	Time
Type	Pilar	Radar	Pilar	Pilar		Type
Feet	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Feet
Surf.	230 07		180 20	220 20	270 30	Surf.
1,000			203 27	229 45	269 43	1,000
2,000			207 30	239 51	278 52	2,000
3,000			217 30	247 57	281 56	3,000
4,000			221 33	254 67	284 64	4,000
5,000			224 33	252 69	284 66	5,000
6,000			221 28	247 68	280 67	6,000
8,000			216 26	234 65	280 69	8,000
10,000			217 29	226 67	276 69	10,000
14,000			230 34	236 77	270 87	14,000
18,000			242 33	246 99	271 106	18,000
24,000			249 48	246 106	273 136	24,000
30,000	317 63	296 71	251 60	241 119		30,000
40,000	318 66	294 69	247 90	266 96		40,000
50,000	308 62	(24 000)	264 70			50,000
310 55						
(53 000)						

NEPHOSCOPE OBSERVATIONS

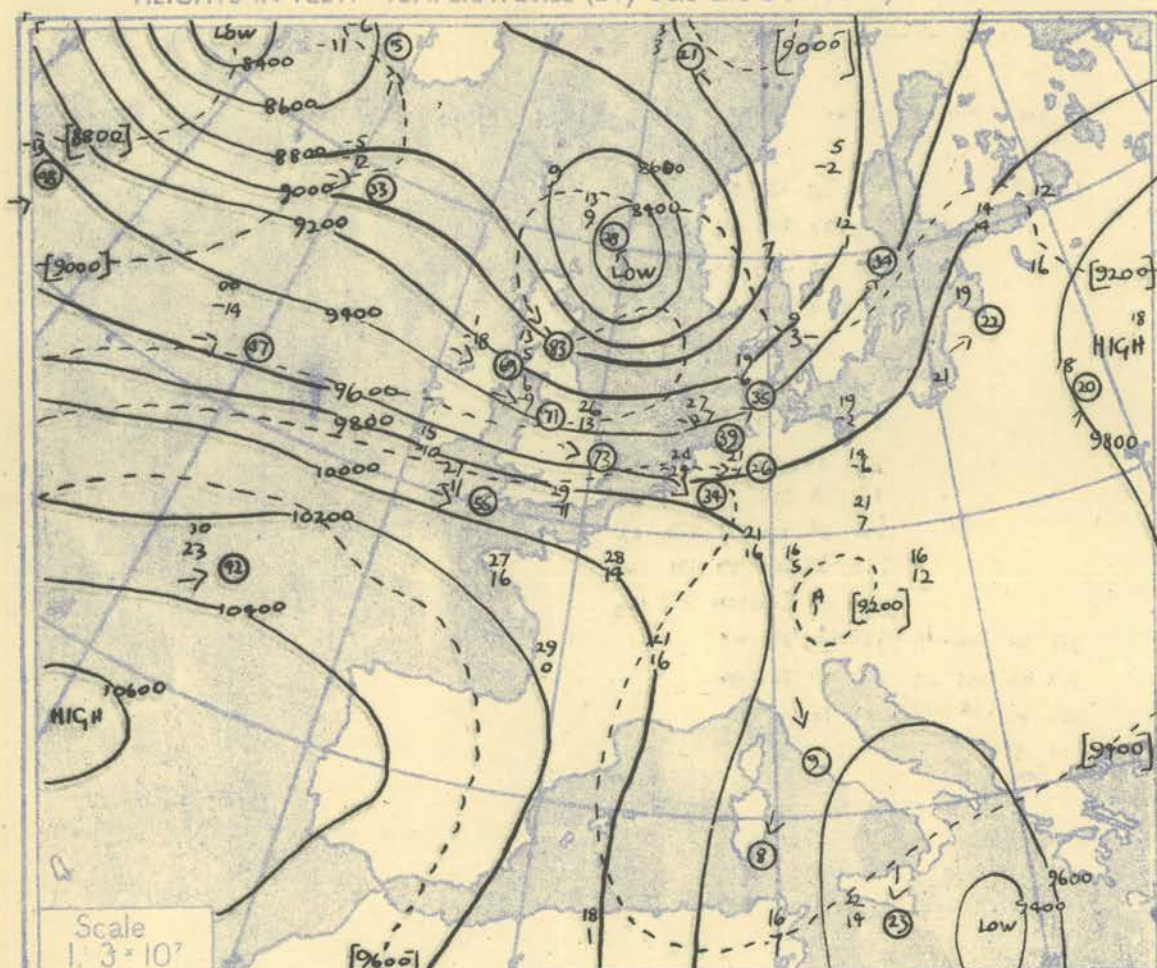
Place						Place
Time Type						Time Type
Dir. Vel.						Dir. Vel.

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

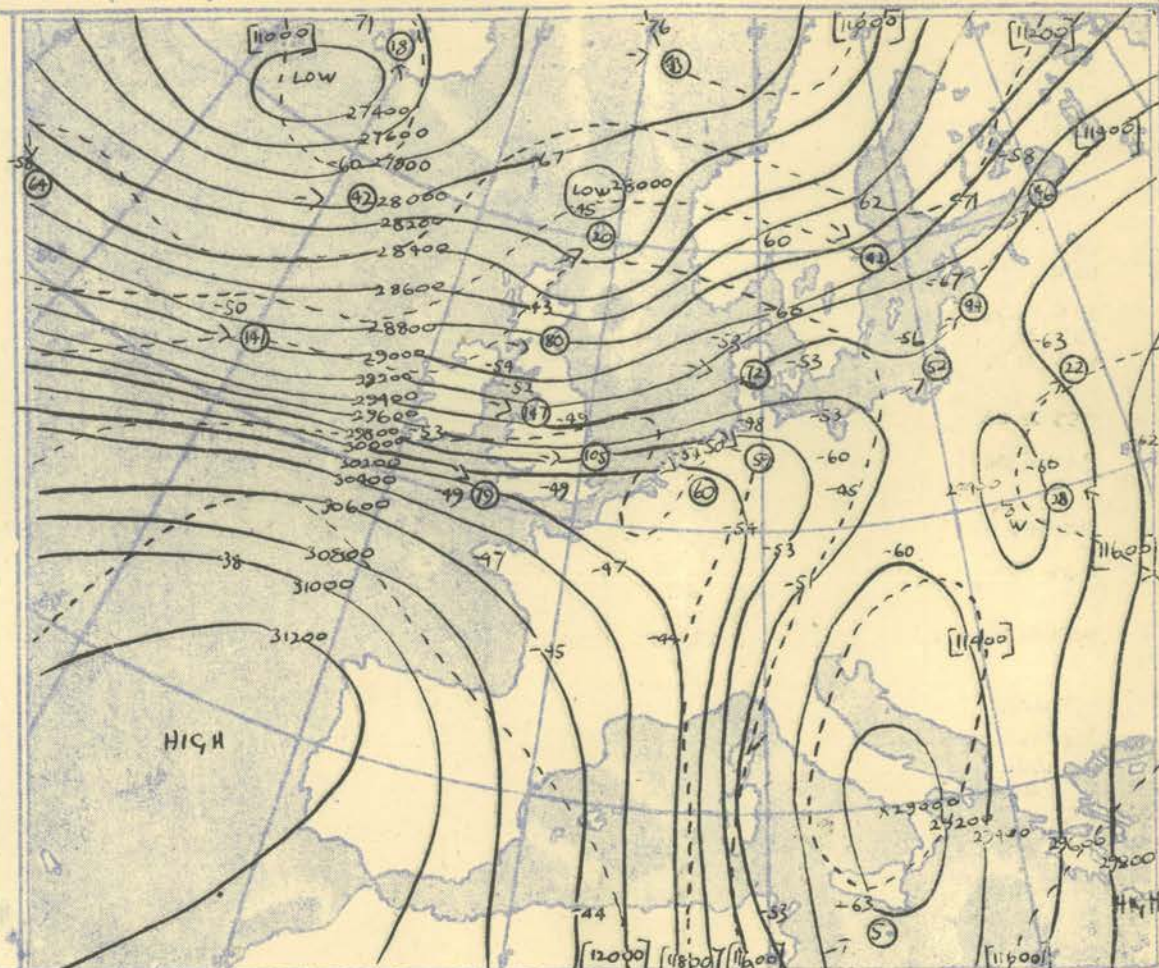
Ship	Weather Explorer	Weather Explorer	Weather Explorer	Weather Explorer	Weather Observer	Weather Observer	Weather Observer	Weather Observer	Ship
Lat/Long	59.10N 18.20W	59.10N 18.60W	59.10N 19.10W	59.10N 19.10W	52.00N 20.60W	52.00N 21.00W	52.00N 20.00W	52.00N 20.10W	Lat/Long
Time	02h	03h	15h	22h	08h	09h	15h	20h	Time
M.S.L.	983	994	999	997	1008	1016	1019	1015	M.S.L.
Surf	988	994	999	997	1008	1016	1019	1015	Surf
Freezing	950	955	980	950	920	935	930	920	Freezing
Pressure									Pressure
Height	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	ft./100	Height
Temp.	°F	°F	°F	°F	°F	°F	°F	°F	Temp.
Dew	°F	°F	°F	°F	°F	°F	°F	°F	Dew
Wind	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Wind
Surf	37 31 310 27	38 31 270 33	34 28 260 30	33 31 310 24	45 38 295 40	44 35 300 40	44 29 280 22	44 30 260 12	Surf
1000	3.2	1.7	0.3	0.8	4.4 35 300 40	4.4 35 300 40	4.4 29 280 22	4.4 30 260 12	1000
950	32 29 329 36	31 26 286 35	29 24 259 24	32 22 253 35	4.4 35 300 40	4.4 35 300 40	4.4 29 280 22	4.4 30 260 12	950
900	24.5 26 22 337 18	26.1 25 20 284 38	27.3 23 18 264 25	27.0 25 17 254 36	30.1 29 28 282 51	32.1 27 23 285 36	32.0 28 21 266 28	31.0 29 25 216 10	900
850	20 16 335 18	19 9 282 39	17 11 268 30	15 10 252 42	22 20 282 51	19 18 285 37	21 11 261 33	22 18 267 15	850
800	54.8 14 12 335 22	56.1 12 4 282 36	57.2 10 4 268 34	57.1 14 06 252 42	60.5 18 11 282 59	62.2 11 0 285 38	63.1 14 1 261 35	62.1 15 13 211 18	800
750	08 04 334 24	4 -4 279 35	3 -7 268 34	07 -1 251 39	14 -3 282 63	2 -1 286 42	8 -9 260 42	09 -4 222 27	750
700	08.1 01 -3 335 24	09.2 -2 -9 272 32	10.1 -5 -12 267 33	10.3 00 -19 239 33	14.1 08 -1 282 76	15.3 -1 -12 286 44	16.4 0 -14 265 47	15.5 05 -9 233 33	700
650	08 -12 329 22	-1 -18 261 34	-13 -21 289 32	-8 -17 245 40	01 -7 279 78	-4 -17 286 48	-8 -24 276 47	-3 -15 235 39	650
600	123.5 -11 -17 303 18	126.1 -20 -25 249 42	126.8 -22 -31 259 28	127.4 -17 -25 240 30	132.2 02 -19 261 97	132.9 -6 -22 282 64	133.6 -9 -25 273 66	133.1 -10 -17 237 54	600
550	-18 -25 280 25	-29 -33 245 39	-32 -44 263 24	-27 -36 250 36	02 -22 256 116	-11 -15 265 76	-12 -21 265 81	-17 -24 250 69	550
500	168.2 -28 -34 248 22	168.0 -39 45 242 33	168.3 -42 251 23	169.4 -34 43 240 35	177.1 -2 -26 252 129	176.5 -17 -20 256 104	177.1 -16 -24 260 93	176.1 -25 -32 255 93	500
450	-38 -45 229 24	-44 244 29	-51 236 28	-45 241 36	-10 -33 242 147	-24 -27 248 115	-22 -39 247 92	-24 -43 252 88	450
400	218.4 -48 222 31	217.4 -49 243 23	217.0 -56 235 33	218.7 -55 242 43	230.5 -20 -36 238 141	228.3 -31 -36 246 135	229.1 -30 -48 244 133	226.9 -38 -48 243 107	400
350	-55 230 50	-57 240 33	-60 246 45	-59 246 46	-34 -48 241 138	-41 246 150	-40 -55 245 145	-47 243 120	350
300	280.8 -52 225 57	279.4 -58 241 47	278.5 -60 254 42	280.5 -57 246 41	296.1 -47 247 144	292.4 -53 247 143	293.5 -50 247 141	290.1 -58 243 125	300
250	-52 240 84	-56 243 52	-58 252 54	-54 246 43	-60 250 128	-65 241 140	-63 248 147	-61 243 120	250
200	368.8 -55 241 70	366.8 -54 257 72	365.2 -62 247 47	362.6 -65 248 126	378.4 -61 244 107	379.5 -66 241 107	379.5 -66 241 107	376.7 -60 243 90	200
170	-56 247 90	-57 260 65	-60 240 48	-59 240 48	-65 242 107	-60 253 107	-65 238 120	-63 243 95	170
150	-55 241 98	-62 256 66	-61 250 34	-61 250 34	443.1 -67 240 112	-60 240 120	-64 243 90		150
130	-58 237 100	-65 250 75	-61 257 30	-61 257 30	-66 243 93	-60 253 94			130
110	-67 243 98	-60 247 91	-62 258 28	-62 258 28	-69 245 68				110
100	516.8 -66 245 75	514.8 -62 248 101	512.3 -60 256 32	512.3 -60 256 32	527.9 -72 247 62				100
90	-67 245 75	-61 248 101	-60 256 32	-60 256 32					90
80	-65 245 75	-61 248 101	-60 256 32	-60 256 32					80
70	-65 245 75	-61 248 101	-60 256 32	-60 256 32					70
60	(95 mbs)								60
Isotherm. 827 -816 mbs 16°F									
Inversions. 650 mbs 01° - 615 mbs 02°									
600 mbs 02° - 586 mbs 06°									
Isotherm. 544 -517 mbs 0°F									
Isotherm. 780 -724 mbs 2°									
679 -630 mbs -4°									
Isotherm. 650 -615 mbs -8°F									
Inversion. 432 mbs -28°F									
415 mbs -36°F									
Tropopause	I 359 mbs -56°F	I 330 mbs -59°F	II 417 mbs -55°F	I 355 mbs -60°F	I 235 mbs -67°F	I 243 mbs -66°F	I 215 mbs -70°F	I 295 mbs -59°F	Tropopause
	24,200ft.	26,000ft.	20,700ft.	24,400ft.	34,800ft.	33,600ft.	36,300ft.	29,300ft.	



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



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

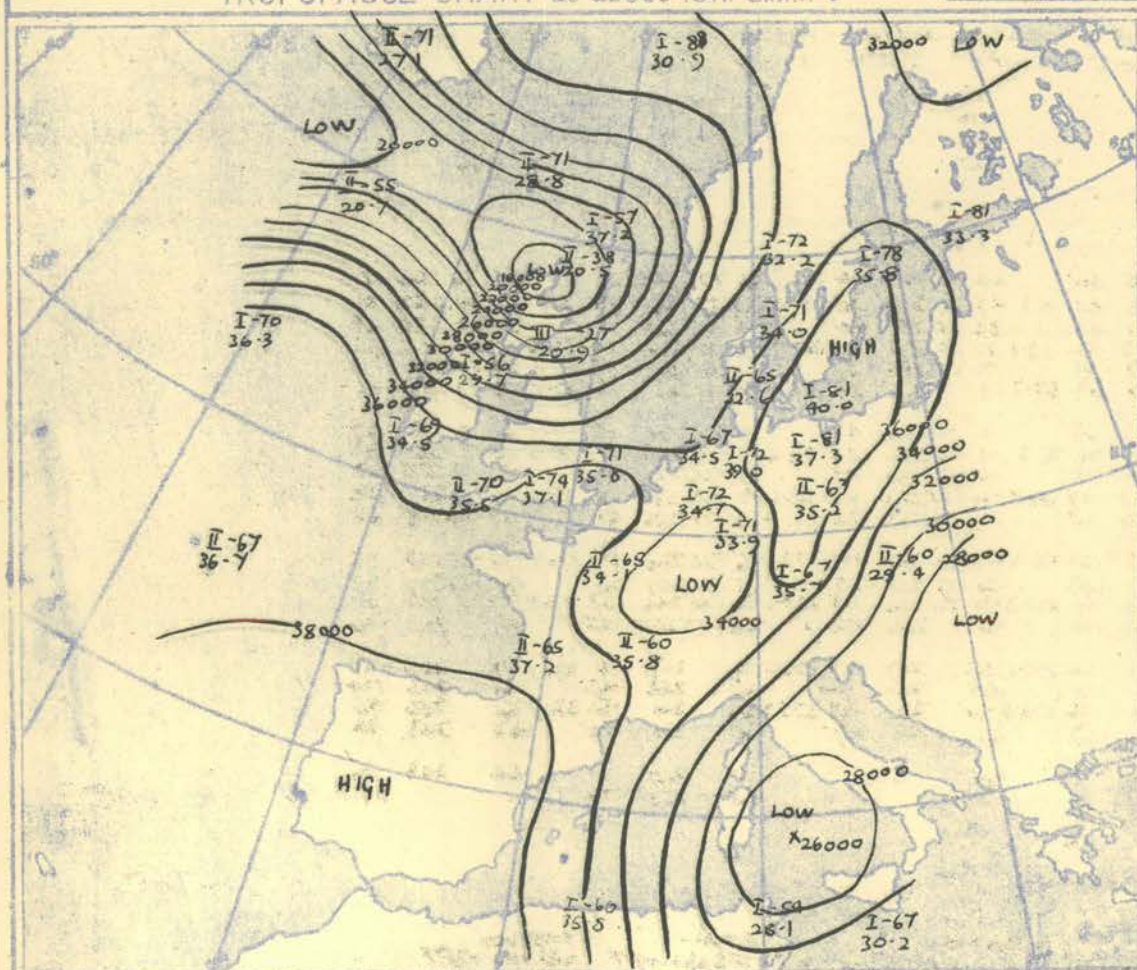


The continuous lines are contour lines of the 300 mb. surface.
The dotted lines are isopleths of the thickness of the layer 500-300 mb.

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

100 80 60 40 20 10 knots

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



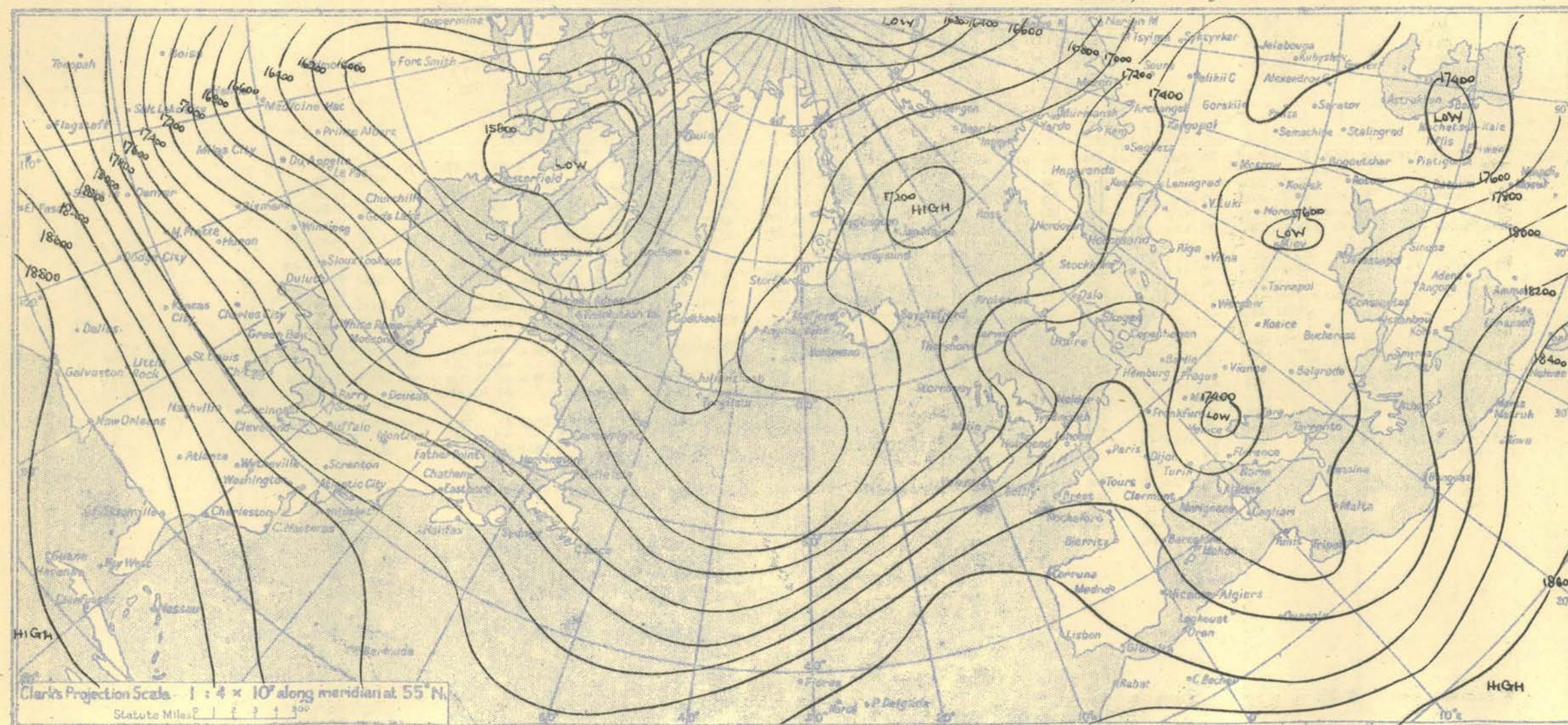
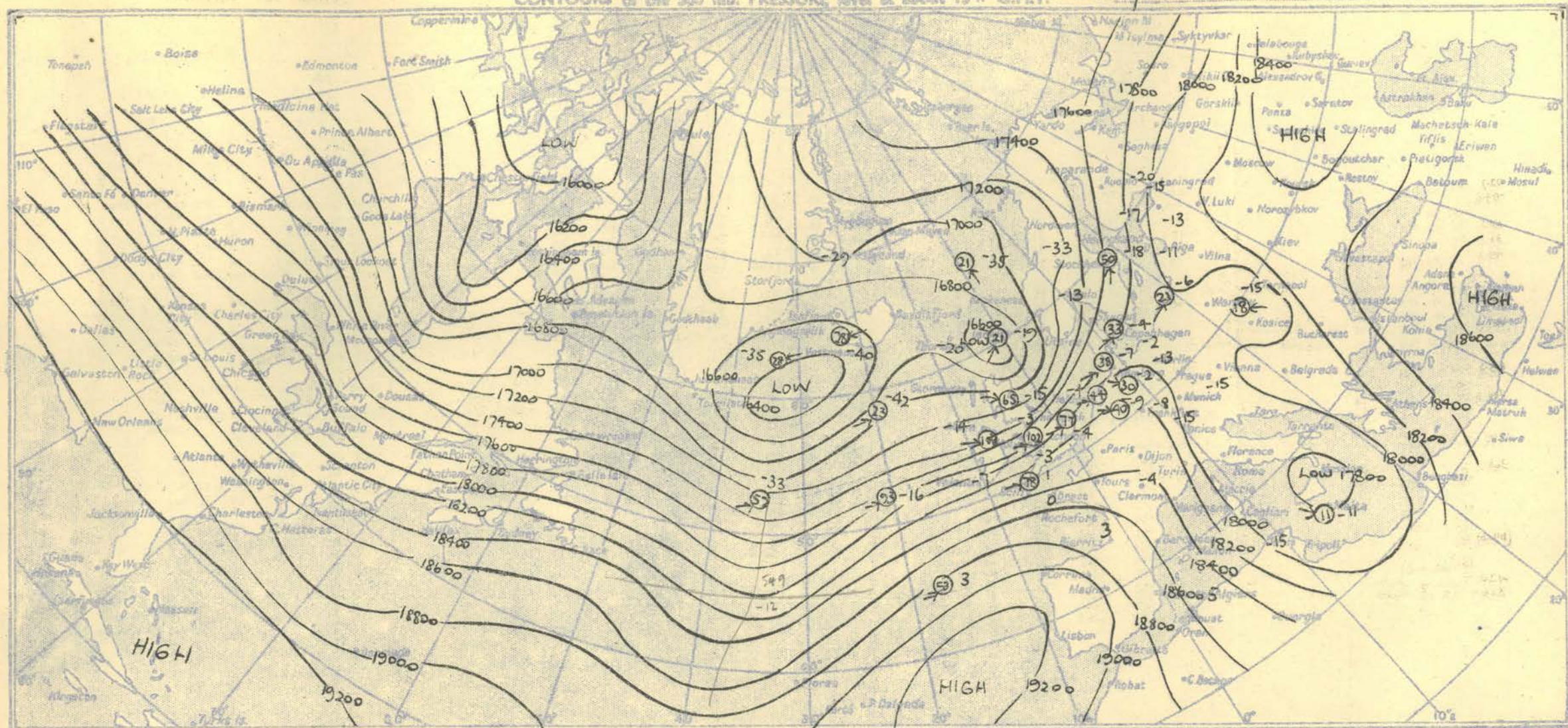
Contour lines of Height of Tropopause.
Temperature of Tropopause

NOTES ON THE AEROLOGICAL SITUATION.

Warm tongue associated with an intense surface depression, moved east across the British Isles and a secondary moved east-northeast in the strong thermal gradient which stretched from first north of the Azores to southern England.

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

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



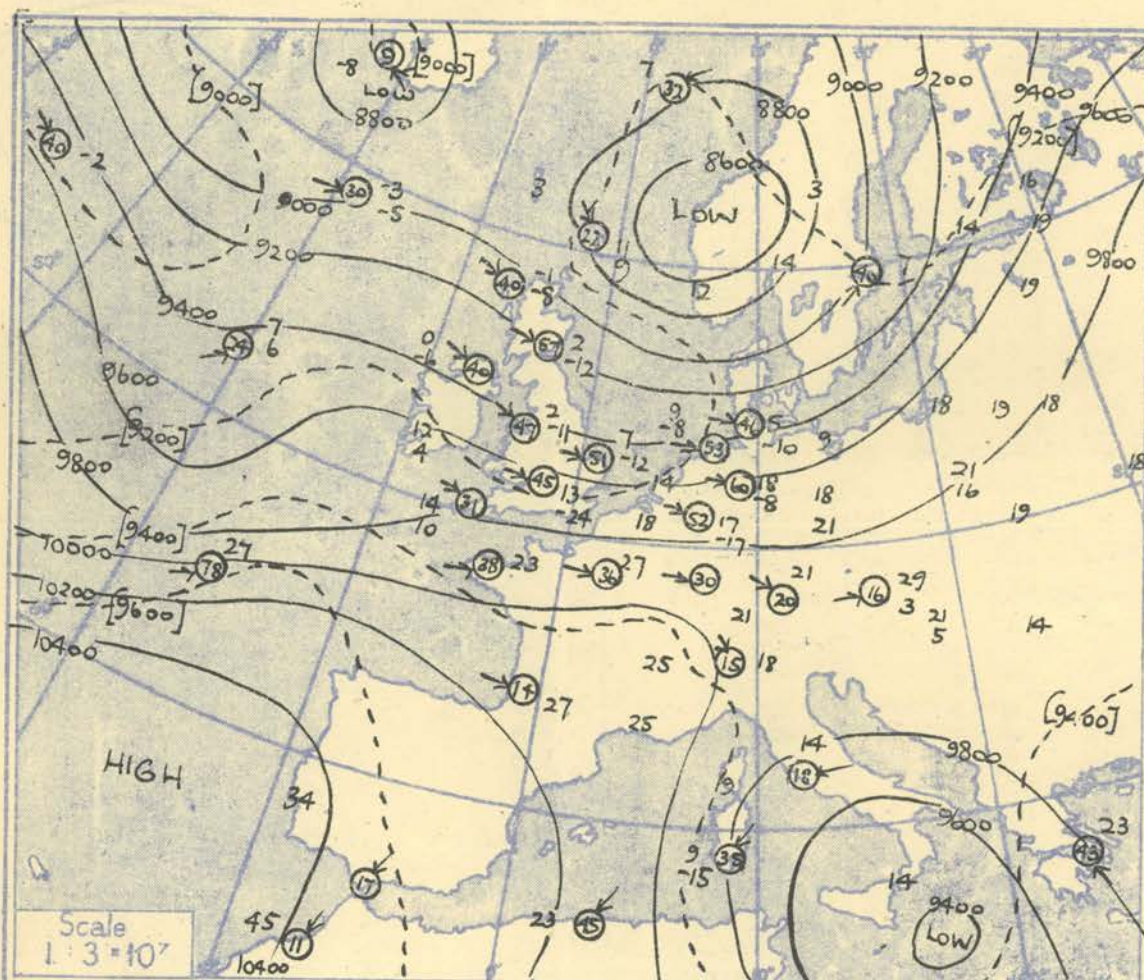
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

Station	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA				STAYTON
	Time M.S.L.	ISk.	G.M.T.	mb	ISk.	G.M.T.	mb	ISk.	G.M.T.	mb	ISk.	G.M.T.	mb	ISk.	G.M.T.	mb	ISk.	G.M.T.	mb	ISk.	G.M.T.	mb	ISk.	G.M.T.	mb	ISk.	G.M.T.	mb	ISk.	G.M.T.	mb						
Surf	02.7	963.9	mb					981.8	mb		1003.5	mb		1004.7	mb		1004.2	mb		1010.9	mb		1015.9	mb		1015	mb		1014	mb							
1000	09.8	954.2	mb					980.9	mb		1003.5	mb		1002.7	mb		1004.2	mb		994.7	mb		1005.3	mb		1015	mb		1014	mb							
950	18.3	868	mb					888	mb		994.2	mb		910	mb		800	mb		756	mb		888	mb		900	mb		900	mb							
900	25.2																																				
850	33.3																																				
800	49.2																																				
750																																					
700	83.3																																				
650	121.6																																				
600																																					
550																																					
500	165.3																																				
450																																					
400	216.4																																				
350																																					
300	280.5																																				
250																																					
200	368.9																																				
170																																					
150																																					
130																																					
110																																					
90																																					
80																																					
70																																					
60																																					
Tropopause																																					
STATION																																					
Time M.S.L.	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA				STAYTON
	ISk.	G.M.T.	mb		ISk.	G.M.T.	mb	ISk.	G.M.T.	mb	ISk.	G.M.T.	mb	ISk.	G.M.T.	mb	ISk.	G.M.T.	mb	ISk.	G.M.T.	mb	ISk.	G.M.T.	mb	ISk.	G.M.T.	mb	ISk.	G.M.T.	mb						
Surf	21k.	967.2	mb		21k.	993.1	mb	21k.	996.1	mb	21k.	1008.5	mb	21k.	1009.9	mb	21k.	1010.1	mb	21k.	1015.7	mb	21k.	1019.8	mb												
1000	957.5	mb		991.4	mb	995.2	mb	1008.5	mb	1009.9	mb	1010.1	mb	1015.7	mb	1019.8	mb																				
950	871	mb		927	mb	922.	mb	970	mb	930	mb	910	mb	922	mb	890	mb																				
900																																					
850																																					
800																																					
750																																					
700																																					
650																																					
600																																					
550																																					

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

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA				STATION																																			
Pressure	Time	03L			G.M.T.			03L			G.M.T.			03L			G.M.T.			03L			G.M.T.			03L			G.M.T.			03L			G.M.T.			Time																																		
	M.S.L.	978.1			mb			999.2			mb			1002.3			mb			1011.5			mb			1012.8			mb			1017.9			mb				1018.8			mb			M.S.L.																											
	Surf	968.3			mb			997.6			mb			1001.4			mb			1002.0			mb			1010.1			mb			1011.4			mb				1001.3			mb				Surf																										
Forecasting	894			mb			950			mb			950			mb			980			mb			940			mb			937			mb			928			mb			909				mb			Forecasting																						
Pressure	Height	ft/100			Temp.			ft/100			Temp.			ft/100			Temp.			ft/100			Temp.			ft/100			Temp.			ft/100			Temp.			ft/100			Temp.			Pressure																												
	Dir.	Vel.			Dir.			Vel.			Dir.			Vel.			Dir.			Vel.			Dir.			Vel.			Dir.			Vel.			Dir.			Vel.			Dir.				Vel.			Wind																								
Surf	02.7	39	33	325	15	00.4	36	29	290	30	00.2	35	30	280	25	02.5	33	33	280	14	00.6	41	30	270	20	00.4	38	30	250	14	04.4	37	34	270	09	02.9	45	35	280	05	00.3	37	31	270	02	01.0																										
1000	05.9					00.2					00.6	35	31			03.0					03.2	40	30	269	36	03.4	37	30	250		04.7	37	34	270		03.1	44	38	280		04.2	42	35	280		04.4																										
950		37	36	324	27		32	26	293	41		32	28			30.5	25	25	274	24		34	26	274	37		33	26	277	36		35	30	283	22		38	34	292	14		37	30	264	07		950																									
900	22.1	33	32	342	25	27.4	26	20	298	42	28.3	27	20			31.0	27	21	278	31	31.0	27	21	278	37	31.2	28	20	286	34	32.6	29	25	283	26	33.2	31	28	301	16	32.2	30	26	280	07		900																									
850	37.0	19	28	343	24	42.1	19	12	296	42	43.1	22	13			45.2	18	18	280	39	45.7	20	13	280	38	45.9	22	12	287	33	47.4	22	19	285	31	48.0	25	21	294	17		35	12	285	08		850																									
800	52.3	24	24	344	26	57.5	12	06	293	42	58.5	17	04			60.5	12	12	285	44	61.1	14	09	282	40	61.6	18	04	290	37	62.9	16	14	280	34	63.8	20	15	283	25	62.6	20	12	293	07		800																									
750		18	17	349	24		05	02	290	42		10	05				07	03	285	42		06	00	286	45		11	02	287	47		19	06	270	41		18	13	277	29		17	04	312	05		750																									
700	86.3	11	09	351	22	30.6	01	08	286	40	31.3	02	12			33.7	00	06	282	40	34.3	02	11	287	47	35.2	07	12	276	51	36.8	13	14	271	45	37.7	14	10	274	31	36.5	12	19		700																											
650		04	02	341	22		08	15	273	37		08	21				08	14	278	42			01	25	279	52		08	22	271	63		07	02	276	46		09	05	261	40		07	08		650																										
600	125.0	05	08	321	29	12.7	16	24	270	29	12.9	16	31			13.9	07	36	274	51	13.9	07	36	274	56	13.3	08	11	270	67	13.5	03	01	267	59	13.6	03	01	253	54	13.4	02	07		600																											
550		14	17	313	31		26	34	267	22		23	42				22	32	274	61			14	39	273	64		06	22	273	72		02	04	263	73		00	03	250	70		06	09		550																										
500	168.3	24	28	313	36	16.9	36	43	266	27	17.4	31	55			17.3	29	39	273	75	17.5	19	43	273	84	17.4	13	26	273	84	17.9	09	12	263	83	18.0	06	09	253	70	17.9	04	19		500																											
450		36	40	299	34		43		284	33		40	60				35	44	273	96			23	49	269	97		21	28	272	104		18	22	267	89		16	20	256	79		23	30		450																										
400	218.7	48		292	34	21.9	4		280	42	23.5	43				22.4	0	42	267	108			22	4	266	111		22.9	5	32	272	107	23.2	2	32	268	102	23.8	2	25	255	93	23.1	1	30	41		400																								
350		55		291	29		53		277	47		49					50		265	117			42		264	130		34	37	270	117		39	57	267	109		39	44	261	99		40	52		350																										
300	38.0	65		280	27	28.4	59		272	56		53				28.6	7	59	258	119			55		266	144	29.4	57					29.6	53		268	110		29.8	53		263	108	29.5	52		300																									
250		62				36.8	61		259	69						37.2	1	67	265	110			62		266	127		69						69		260	113		68		260	113		61		250																										
200	(26.5 mb)						59		264	61							67						65		267	89	37.3	68					38.6	69		38.3	69		38.3	69		266	106	38.1	59		200																									
170																	67						65		267	76		67						66		67		66		67		265	94			170																										
150																	70						70		261	81		62										71		261	72			150																												
130																	73						73		260	82		63										63						130																												
110																	75						75					66											66						110																											
90																	77						77					68											68						90																											
70																	79						79					70											70						70																											
60																	81						81					72											72						60																											
Isothermal				938-986 mb 36°								Isothermal				518-490 mb 29°								Isothermal				825-809 mb 19°				Inversion				765 mb 16°-743 mb 19°				Inversion				1014 mb 37°-1000 mb 42°																												
Tropopause				I 295 mb -66° 28.400°				II 494 mb -54° 22.200°								I 256 mb -67° 32.000°				I 227 mb -64° 31.700°				I 242 mb -70° 33.800°				I 230 mb -75° 35.200°				I 223 mb -77° 36.100°				I 274 mb -59° 31.500°				Tropopause																																
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA				STATION																																			
Pressure	Time	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.	988.0			mb			1002.1			mb			1005.9			mb			1010.6			mb			1012.5			mb			1014.2			mb				1016.4			mb			1018.8			mb			M.S.L.																					
	Surf	977.9			mb			1000.4			mb			1005.0			mb			1001.1			mb			1010.4			mb			1012.7			mb				1014.4			mb			1017.9			mb				Surf																				
Forecasting	943			mb			935			mb			950			mb			940			mb			950			mb			939			mb			925			mb			900			mb			Forecasting																							
Pressure	Height	ft/100			Temp.			ft/100			Temp.			ft/100			Temp.			ft/100			Temp.			ft/100			Temp.			ft/100			Temp.			ft/100			Temp.			Pressure																												
	Dir.	Vel.			Dir.			Vel.			Dir.			Vel.			Dir.			Vel.			Dir.			Vel.			Dir.			Vel.			Dir.			Vel.			Dir.				Vel.			Wind																								
Surf	02.7	35	34			00.4	36	28	260	08	00.2	33	28	270	07	02.5	33	31	250	12	00.6	37	30	210	07	00.4	35	30	250	08	04.4	35	33																																							

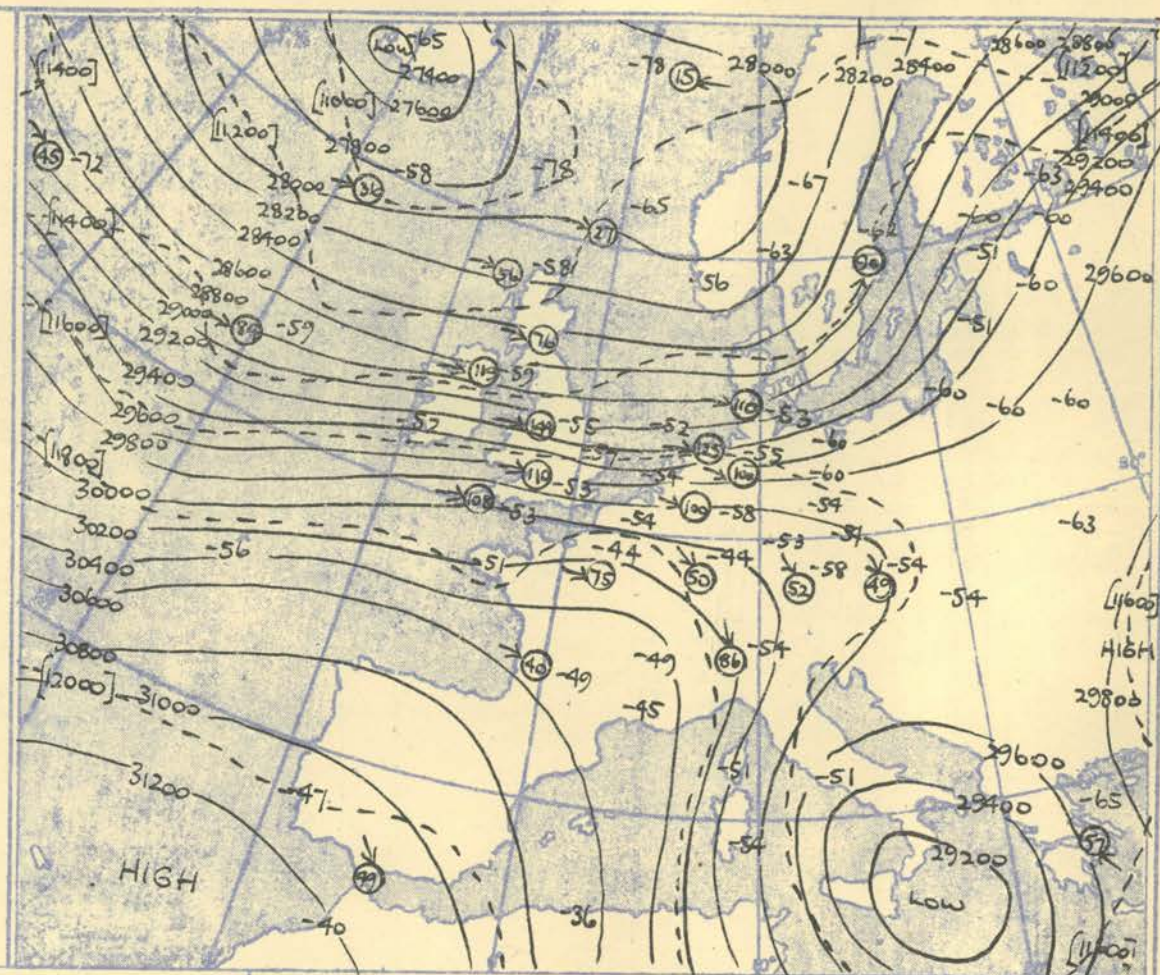
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. 500 mb. and 300 mb. levels at about 03h G.M.T.



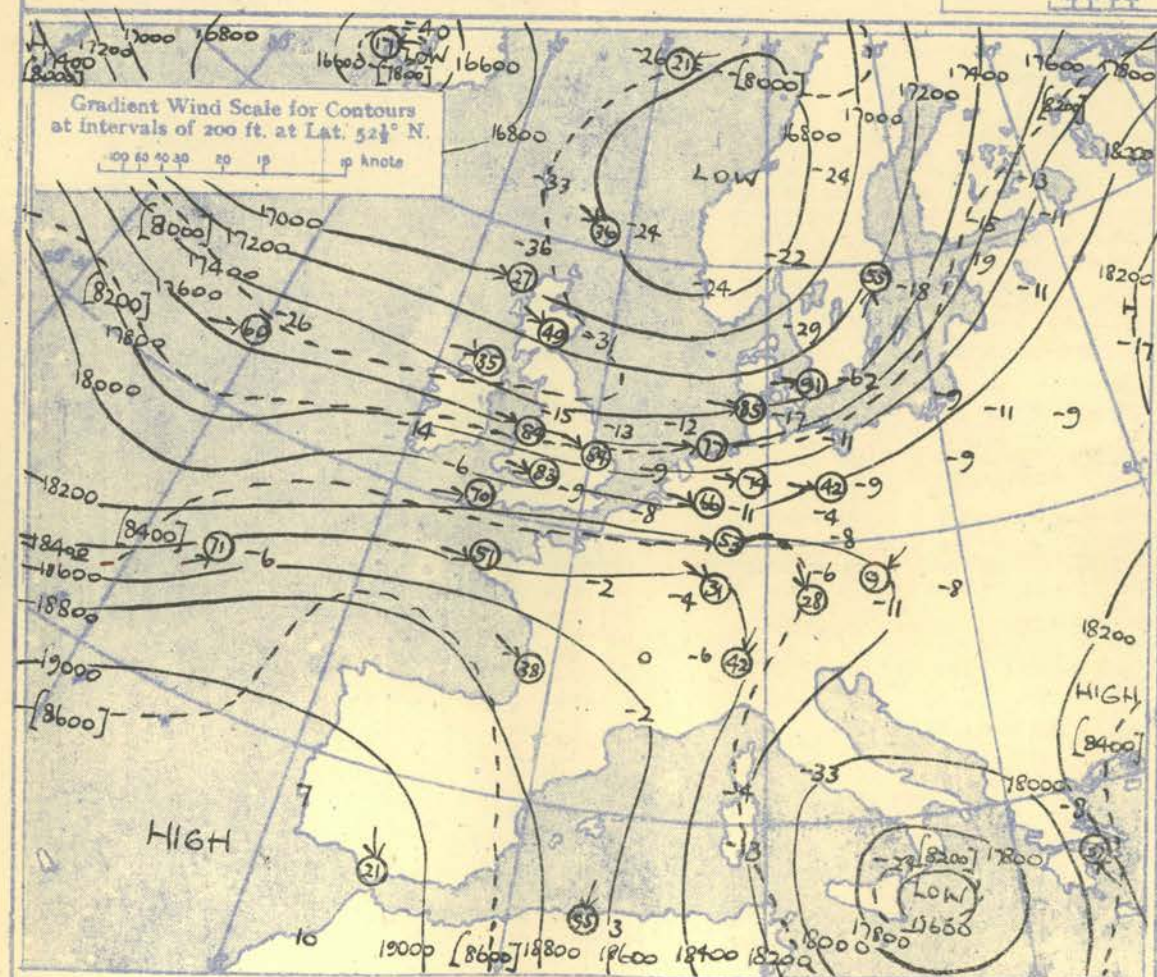
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

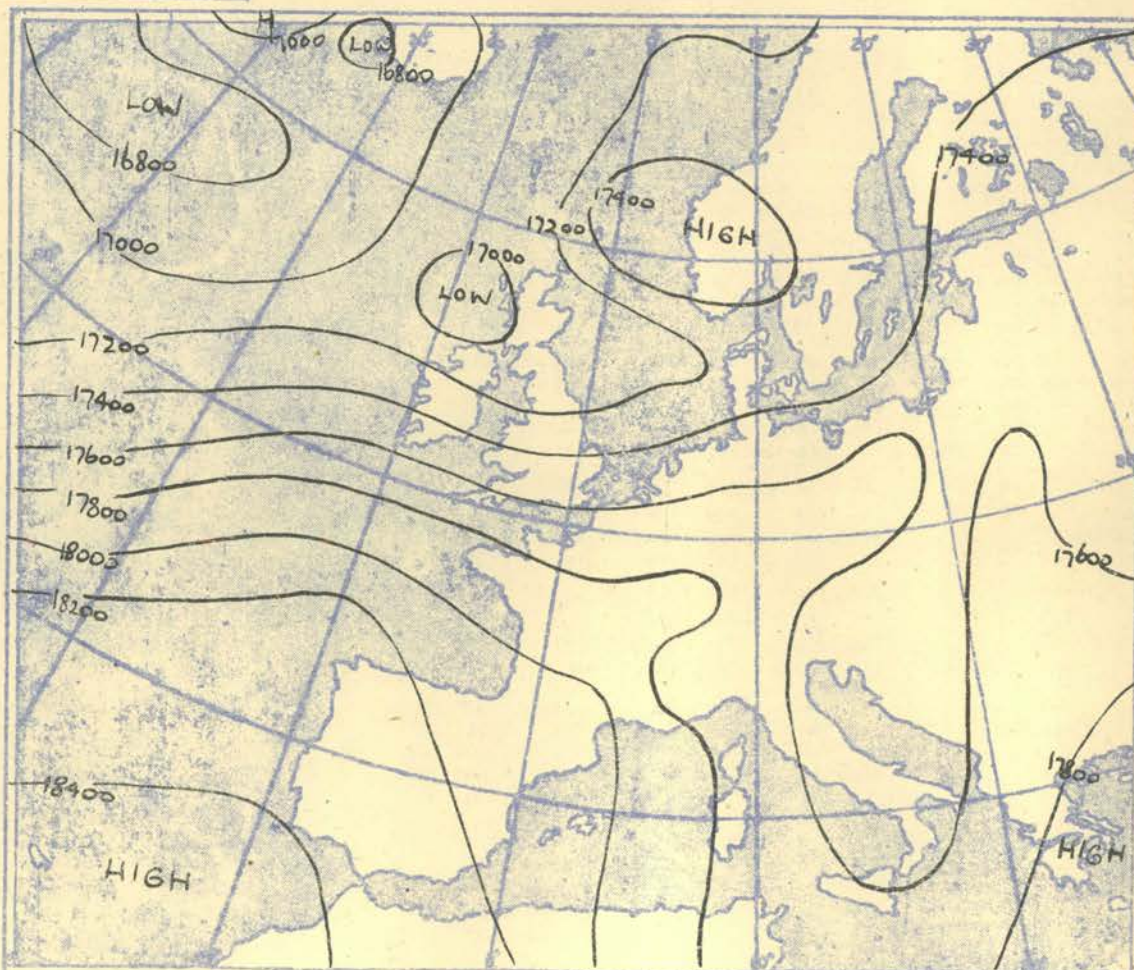
100 80 60 40 20 10 0 10 20 30 40 50 60 70 80 90 100



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.

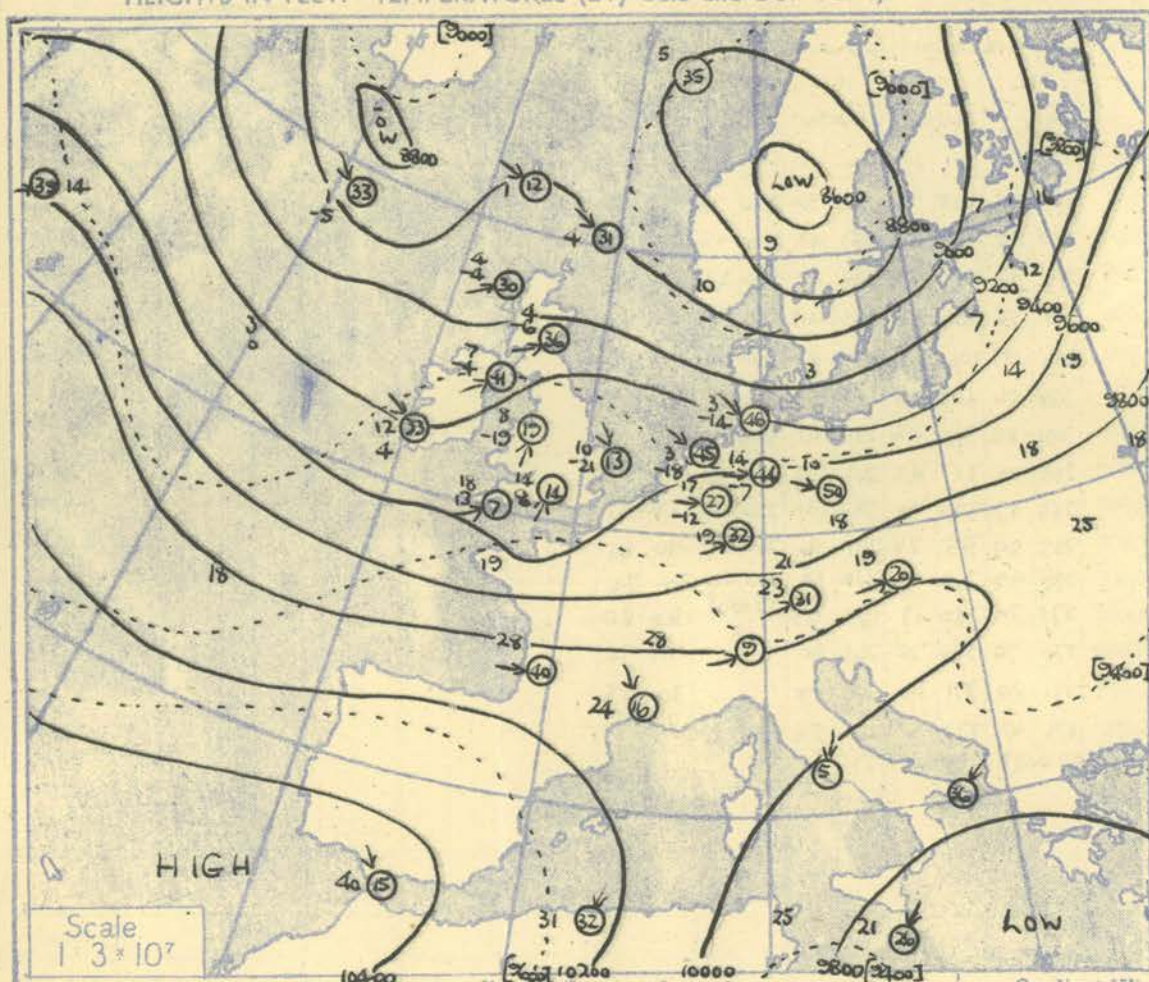


Isopleths of Thickness 500-1000mb.

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

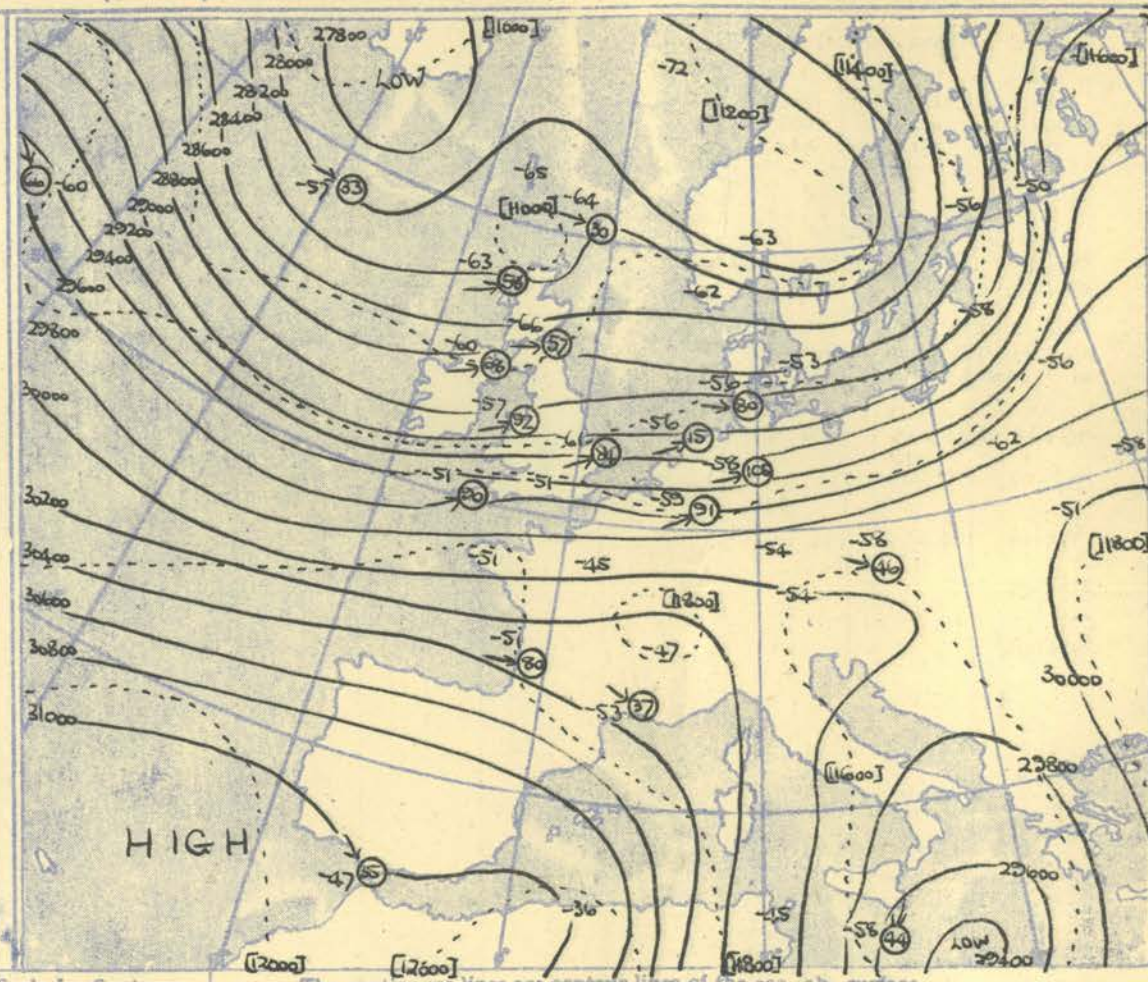
[illegible]

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



The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 2000-700 mb.

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



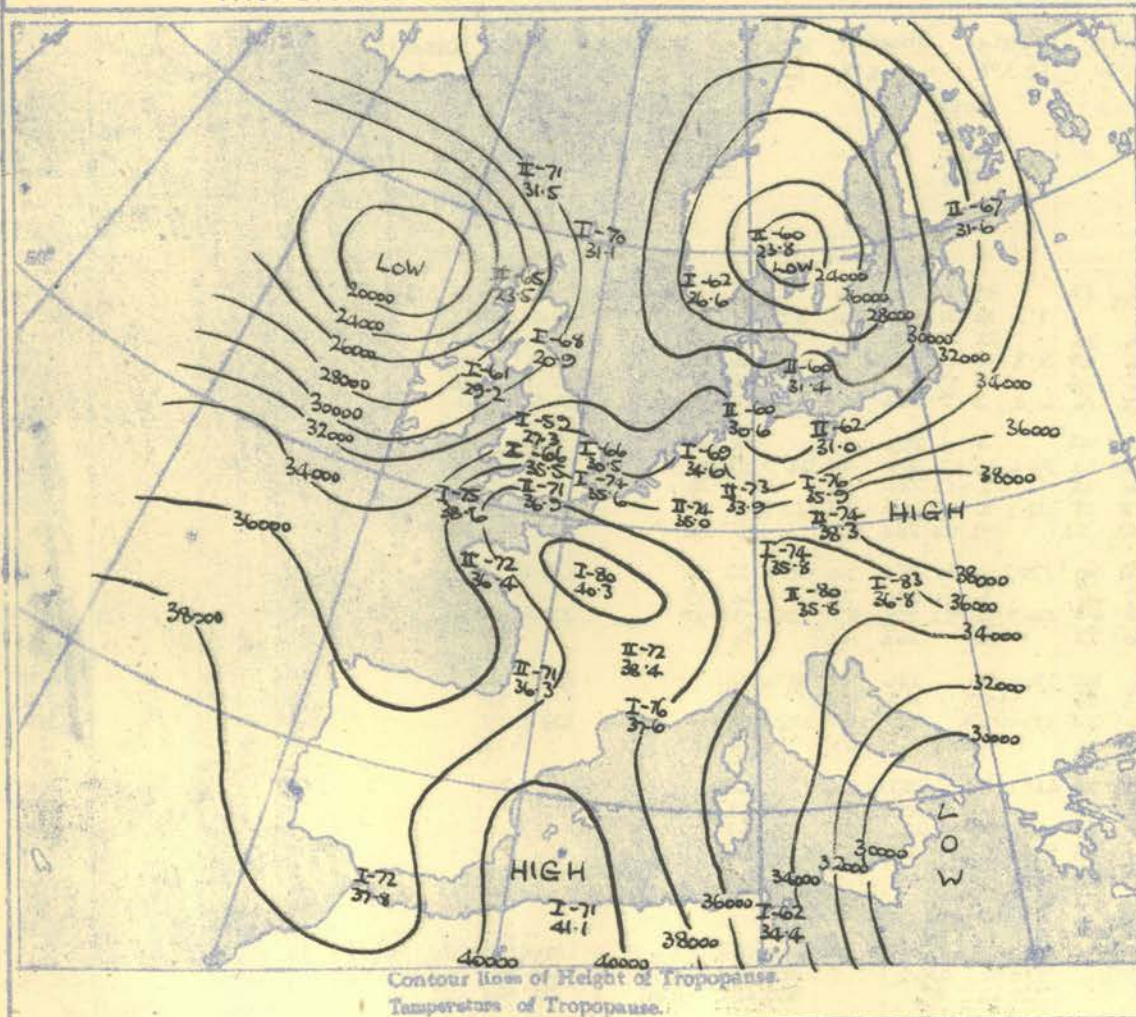
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. $52\frac{1}{2}^\circ$ N.

100 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.

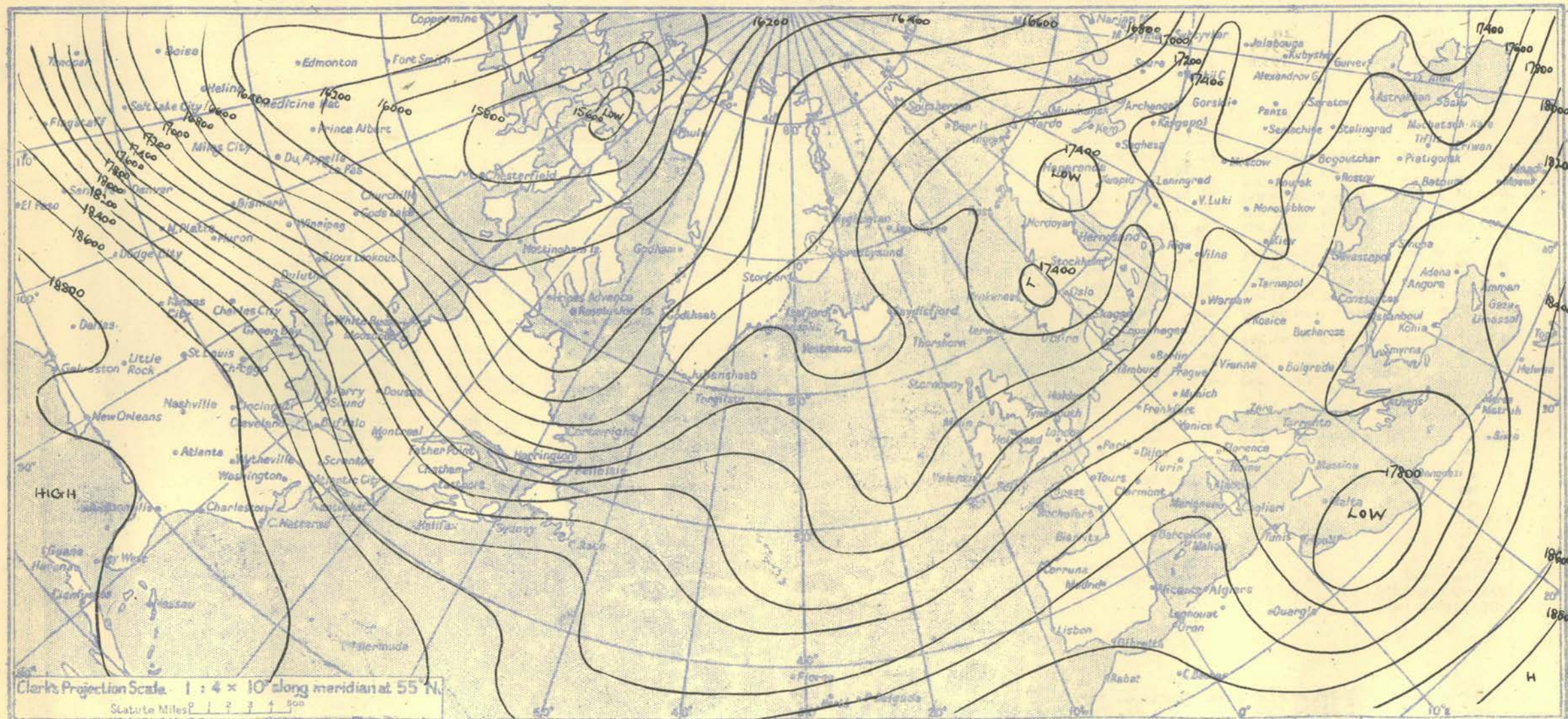
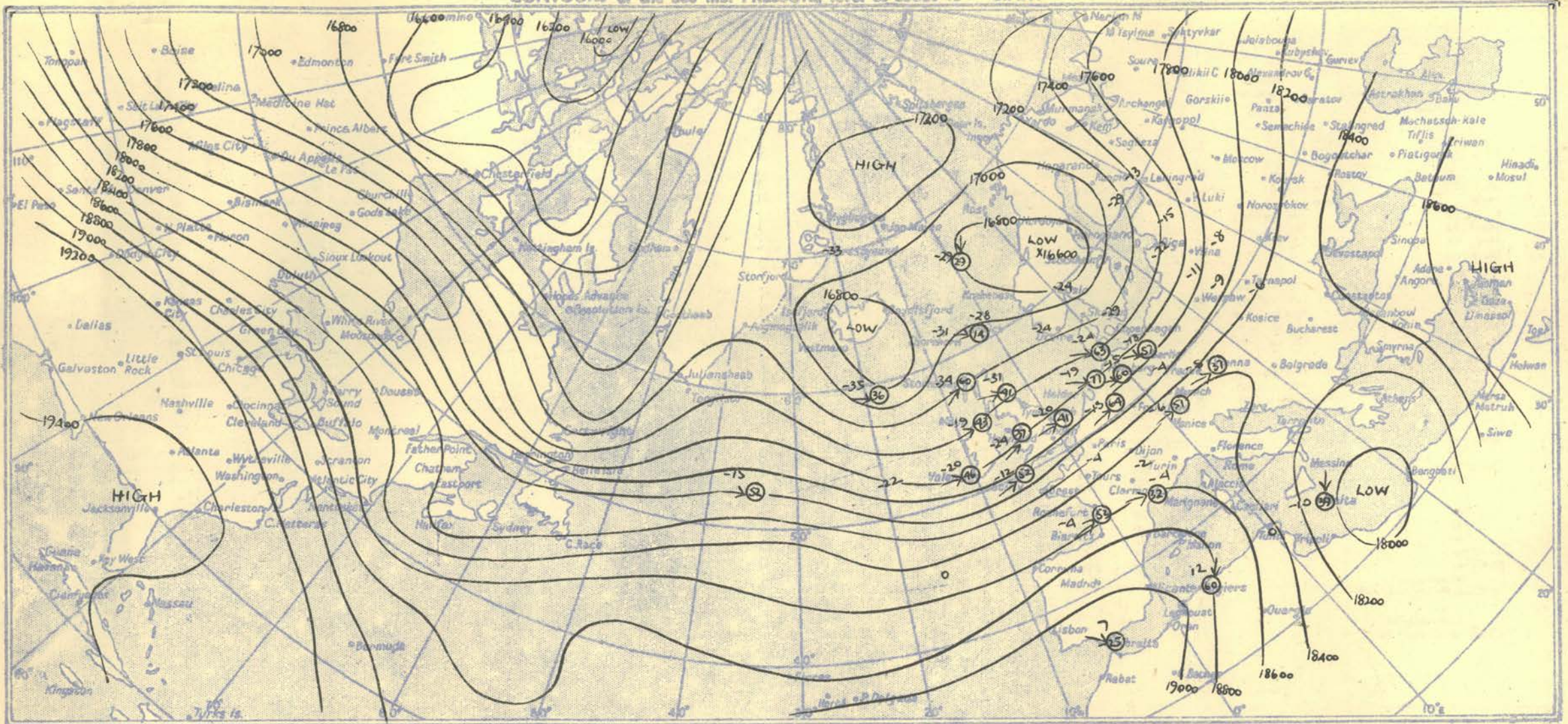
The broad cold trough on the Atlantic was greatly reduced in size by convective warming in the east, and advection of warm air from the west. The strong circulation associated with the surface low which crossed North Britain on 30th seems to have been responsible for the isolation of a pool of warm air to the west of the centre.



Contour lines of Height of Tropopause.
Temperature of Tropopause.

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

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



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

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				HEMSBY				LARKHILL				CAMBORNE				VALENTIA				STATION					
Time	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.	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	Pressure										
M.S.L.		993.3	mb	1000.1	mb	1005.7	mb	1007.1	mb	1009.0	mb	1011.9	mb	1010.0	mb	1008.9	mb	1007.5	mb													M.S.L.											
Surf		983.3	mb	998.4	mb	1004.8	mb	997.6	mb	1006.9	mb	1010.4	mb	993.7	mb	998.1	mb	1006	mb													Surf											
Freezing		900	mb	970	mb	940	mb	915	mb	939	mb	922	mb	912	mb	890	mb	930	mb													Freezing											
Pressure	Height	Temp.	Dir.	Vel.	Temp.	Dir.	Vel.	Temp.	Dir.	Temp.	Dir.	Temp.	Dir.	Temp.	Dir.	Temp.	Dir.	Temp.	Dir.	Temp.	Dir.	Temp.	Dir.	Temp.	Dir.	Temp.	Dir.	Temp.	Dir.	Temp.	Dir.	Temp.	Dir.										
mb	ft./100	°F.	°F.	knots	°F.	°F.	knots	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	mb											
Surf	02.7	39			00.4	33	33	CALM	00.2	37	32	270	09	02.5	35	31	200	12	00.6	39	31	150	05	00.4	37	32	220	03	04.4	39	34	090	07	02.9	44	43	135	05	00.3	36	36	Surf	
1000	01.8	39			00.0	31	30	208	14	01.4	37	32	259	28	01.9	36	25	205	25	02.4	38	30	194	07	03.1	36	31	284	10	02.7	36	34	106	10	02.4	38	37	134	13	01.9	35	35	1000
980	26.3	32	No Dew		27.7	26	27	215	15	29.2	28	22	258	29	29.7	30	17	206	26	30.1	28	12	186	06	30.3	30	14	280	10	30.6	31	29	119	12	30.5	33	33	140	12	29.8	29	29	980
960	41.1	24	points		42.5	22	20	211	21	44.0	23	12	255	29	44.6	25	04	203	27	45.0	25	01	163	12	45.7	25	02	277	10	45.5	26	24	133	10	45.5	29	29	156	10	44.8	24	23	960
940	56.7	16			58.1	16	12	213	26	59.6	18	07	254	30	60.2	19	07	202	27	60.6	21	13	172	15	61.4	23	02	315	08	61.1	21	10	129	10	61.3	27	20	217	06	60.3	19	18	940
760		08	For Winds		91.5	10	05	224	29	93.1	11	01	251	33	93.8	11	12	211	33	94.5	15	20	183	19	95.3	17	13	354	11	95.1	17	11	159	10	95.8	23	21	248	12	94.1	18	15	760
700	90.0	04	See		91.5	04	04	224	30	93.1	04	04	224	36	93.8	07	04	220	41	94.5	08	19	217	29	95.3	10	21	333	13	95.1	14	08	208	14	95.8	18	13	250	07	94.1	12	04	700
680		03	Page		91.5	04	11	224	36	93.1	03	12	216	35	93.8	07	04	224	41	94.5	08	19	217	29	95.3	10	21	333	13	95.1	14	08	208	14	95.8	18	13	250	07	94.1	12	04	680
660	127.6	11	3		129.0	13	21	235	45	130.7	10	20	259	35	131.6	04	09	227	35	132.3	08	17	235	25	133.3	04	37	283	23	133.6	01	07	289	14	134.6	04	05	266	22	132.2	04	27	660
640		18			129.0	13	21	235	45	130.7	10	20	259	35	131.6	04	09	227	35	132.3	08	17	235	25	133.3	04	37	283	23	133.6	01	07	289	14	134.6	04	05	266	22	132.2	04	27	640
500	170.5	28			171.4	34	44	238	60	173.4	31	40	270	41	175.2	31	34	243	43	175.4	24	30	262	37	176.9	20	37	275	41	177.6	17	22			178.9	12	32	259	52	175.8	20	39	500
480		29			171.4	34	44	238	60	173.4	31	40	270	41	175.2	31	34	243	43	175.4	24	30	262	37	176.9	20	37	275	41	177.6	17	22			178.9	12	32	259	52	175.8	20	39	480
460	220.5	50			220.5	60		239	75	223.4	46		263	77	224.6	35	40	252	65	224.6	35	40	252	65	224.6	35	40	252	65	224.6	35	40	252	65	224.6	35	40	252	65	224.6	35	40	460
440		58			220.5	60		239	75	223.4	46		263	77	224.6	35	40	252	65	224.6	35	40	252	65	224.6	35	40	252	65	224.6	35	40	252	65	224.6	35	40	252	65	224.6	35	40	440
300	282.2	60			283.3	63		255	58	285.3	66		258	51	289.7	60		250	68	288.4	57		263	92	291.3	61		256	84	293.7	51				295.9	51		267	90	285.8	20	48	300
280		69			283.3	63		255	58	285.3	66		258	51	289.7	60		250	68	288.4	57		263	92	291.3	61		256	84	293.7	51				295.9	51		267	90	285.8	20	48	280
260	367.2	62			367.4	60		258	52	371.2	58		261	59	376.6	57		261	74	374.4	62		267	102	376.1	71		276	84	379.5	71				381.2	74		261	92	367.2	62		260
240		62			367.4	60		258	52	371.2	58		261	59	376.6	57		261	74	374.4	62		267	102	376.1	71		276	84	379.5	71				381.2	74		261	92	367.2	62		240
180		66			428.8	61		269																																			